Duke Alabama and Palmetto Warehouse

Draft Environmental Impact Report

COUNTY OF SAN BERNARDINO

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Duke Realty Alabama and Palmetto Warehouse Project

Draft Environmental Impact Report

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County of San Bernardino

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1.0 Introduction

1.1 PURPOSE OF THE EIR

The County of San Bernardino (County) is processing an application for the Duke Realty Alabama and Palmetto Warehouse Project (Project). The proposed warehouse and logistics center constitutes a "project" that is subject to review under the California Environmental Quality Act (CEQA) (California Public Resources Code, Division 13, Section 21000, *et seq*.), and the State CEQA Guidelines (Title 14 of the California Code of Regulations, Division 6, Chapter 3, Section 15000, et seq.). The County, as the CEQA Lead Agency, has already determined that an Environmental Impact Report (EIR) is clearly required for the Project. Therefore, in accordance with CEQA Guidelines Section 15060(d) (Preliminary Review), the City did not prepare an Initial Study for the Project.

An EIR is a public document designed to:

- provide decision makers and the public with an analysis of the environmental effects of a proposed project,
- indicate possible ways to reduce or avoid environmental damage, and
- identify alternatives to a project.

This EIR has been prepared to assess the short-term, long-term, and cumulative environmental impacts that could result from the implementation of the proposed Project. Furthermore, this EIR has been prepared in accordance with CEQA and the CEQA Guidelines and was prepared by professional planning consultants under contract to the County. The content of this document reflects the independent judgment of the County.

The controlling law is CEQA, which was originally enacted in 1970 and has been amended a number of times since then. The legislative intent of these regulations is established in Section 21000 of the California Public Resources Code:

> The Legislature finds and declares as follows:
>
> a) The maintenance of a quality environment for the people of this state now and in the future is a matter of statewide concern.
> b) It is necessary to provide a high-quality environment that at all times is healthful and pleasing to the senses and intellect of man.
> c) There is a need to understand the relationship between the maintenance of high-quality ecological systems and the general welfare of the people of the state, including their enjoyment of the natural resources of the state.
> d) The capacity of the environment is limited, and it is the intent of the Legislature that the government of the state take immediate steps to identify any critical thresholds for the health and safety of the people of the state and take all coordinated actions necessary to prevent such thresholds being reached.
> e) Every citizen has a responsibility to contribute to the preservation and enhancement of the environment.

f) The interrelationship of policies and practices in the management of natural resources and waste disposal requires systematic and concerted efforts by public and private interests to enhance environmental quality and to control environmental pollution.

g) It is the intent of the Legislature that all agencies of the state government which regulate activities of private individuals, corporations, and public agencies which are found to affect the quality of the environment, shall regulate such activities so that major consideration is given to preventing environmental damage, while providing a decent home and satisfying living environment for every Californian.

Furthermore, Section 21001 states that the Legislature further finds and declares that it is policy of the State to:

a) Develop and maintain a high-quality environment now and in the future, and take all action necessary to protect, rehabilitate, and enhance the environmental quality of the state.

b) Take all action necessary to provide the people of the state with clean air and water, enjoyment of aesthetic, natural, scenic, and historic environmental qualities, and freedom from excessive noise.

c) Prevent the elimination of fish or wildlife species due to man's activities, ensure that fish and wildlife populations do not drop below self-perpetuating levels, and preserve for future generations representations of all plant and animal communities and examples of major periods of California history.

d) Ensure that the long-term protection of the environment, consistent with the provision of a decent home and suitable living environment for every Californian, shall be the guiding criterion in public decisions.

e) Create and maintain conditions under which man and nature can exist in productive harmony to fulfill the social and economic requirements of present and future generations.

f) Require governmental agencies at all levels to develop standards and procedures necessary to protect environmental quality.

g) Require governmental agencies at all levels to consider qualitative factors as well as economic and technical factors and long-term benefits and costs, in addition to short-term benefits and costs and to consider alternatives to proposed actions affecting the environment.

A concise statement of legislative policy, with respect to public agency consideration of projects for some form of approval, is found in Section 21002 of the Public Resources Code, quoted below.

> *The Legislature finds and declares that it is the policy of the state that public agencies should not approve projects as proposed if there are feasible alternatives or feasible mitigation measures available which would substantially lessen the significant environmental effects of such projects, and that the procedures required by this division are intended to assist public agencies in systematically identifying both the significant effects of proposed projects and the feasible alternatives or feasible mitigation measures which will avoid or substantially lessen such significant effects. The Legislature further finds and declares that in the event specific economic, social, or other conditions make infeasible such project alternatives or such mitigation measures, individual project may be approved in spite of one or more significant effects thereof.*

1.2 PROPOSED PROJECT

The Project includes the development of an approximate 1,192,671 square-foot high-cube, non-refrigerated warehouse and logistics center building on approximately 55.8 acres (54.8 net acres after right-of-way dedications along roadway frontages) at the northwestern corner of Alabama Street and Palmetto Avenue, in unincorporated San Bernardino County, California.

1.3 SCOPING AND PUBLIC REVIEW

1.3.1 SCOPING MEETING

A scoping meeting was held on February 7, 2019 at 2:00 p.m. in the temporary Covington Chambers of the Board of Supervisors to receive agency and public input regarding the content of this Draft EIR. Pursuant to CEQA Guidelines Sections 15082 (c) and 15083, the scoping meeting helps to consult directly with agencies and the community regarding concerns related to the environmental effects of the Project. Notice of the scoping meeting was published by the County Land Use Services Department and in The San Bernardino Sun newspaper. No members of the public or public agency representatives attended the meeting.

1.3.2 NOTICE OF PREPARATION

The County distributed a Notice of Preparation (NOP) on February 6, 2019 to neighboring cities, the State Clearinghouse for distribution to State agencies; other public agencies; and interested private organizations and individuals (attached as Appendix A). The purpose of the NOP was to identify agency and public concerns regarding potential impacts of the proposed Project and to request suggestions concerning ways to avoid significant impacts (CEQA Guidelines § 15082). As previously mentioned, the County has already determined that an EIR is clearly required for the Project. Therefore, in accordance with CEQA Guidelines Section 15060(d) , the City did not prepare an Initial Study for the Project. Copies of written comments received during the public review period for the NOP are included in Appendix A of this EIR. Six comment letters were submitted in response to the NOP and have been summarized in Table 1-1 (NOP Comments).

Table 1-1
NOP Comments

Commenter	Summary
Municipal Utilities and Engineering Department (MUED), City of Redlands	● Requests project engineer to submit additional information to the City of Redlands for conceptual review and the sewer relocation and justification for removal of existing water main. ● At the time of comment, MUED staff could not recommend to the City Council for relinquishment of the utility easement. ● MUED will prepare Potable Water, Non-Potable and Sewer Development/Connection Requirements as more information is made available from the developer.
Development Services Department , City of Redlands	● Requests that traffic impacts that would affect intersections and freeway access points in the City of Redlands be thoroughly analyzed and addressed. ● Request a copy of the Traffic Impact Analysis, upon completion, for review and comment while the document is still in draft form. ● Notes that traffic mitigation language should be sufficiently precise to clearly i dentify the locations and consequences of

	necessary traffic improvements, in particular any roadways in the City of Redlands. ● Notes that the EIR Air Quality analysis must adequately address how air quality impacts may affect the City of Redlands. ● Notes the EIR analysis must thoroughly address the hydrology and drainage of the Project site as well as potential effects on adjacent land uses. ● Requests a copy of the Hydrology/Drainage Report, upon completion, for review and comment while the document is still in draft form. ● Notes the EIR analysis must adequately address how the potential long-term operational noise impacts may affect transportation corridors and land uses in the City of Redlands. ● Notes the EIR analysis must adequately address any potential impacts on the current and future provision of Police and Fire services by the City of Redlands. ● Notes the EIR analysis must adequately address the issue of relocation of existing public sewer and water facilities on the project site as well as adjacent to the project site. ● Requests coordination for early review of draft environmental documents prior to public circulation.
South Coast Air Quality Management District (SCAQMD)	● Requests copy of environmental documents, when available. ● Provides information and guidance on air quality analysis and modeling. ● Recommends Health Risk Assessment. ● Provides recommendations for truck trip generation rates for high cube warehouse projects. ● Suggest additional mitigation measures.
California Air Resources Board (CARB)	● Notes that CARB is currently engaged in statewide efforts to identify actions that minimize emissions and community health impacts from freight facilities, including warehouse/distribution facilities such as the Project. ● Notes the Project site is in close proximity of existing warehouses and is approximately 4,000 feet southeast of the San Bernardino International Airport. ● Notes that Packinghouse Christian Academy is located approximately 2,700 feet south of the Project site. ● Notes the nearest residences to the Project site are approximately one mile east of the Project boundary. ● Notes that the operation of other warehouse/distribution centers within the vicinity of these sensitive receptors will increase air pollution impacts in the community. ● Lists Project impacts as noted in the Health Risk Assessment and discusses Project mitigation measures. ● Comments on Air Quality Technical Memorandum and Health Risk Assessment. ● Recommends additional analysis and mitigation measures.
Department of Public Works, San Bernardino County	● Notes that any road improvements associated with the Project will require a permit from County Transportation. ● Notes that the Project will disturb more than one acre of land and is within the Santa Ana River Watershed. Notes the applicant will be required to obtain a WDID number in accordance with the General Construction Permit from the state as well as ensure that a Water Quality Management Plan is prepared and implemented per NPDES permit R8-2010-0036.

Southern California Association of Governments	● Requested environmental documentation, when available. ● Provides suggested format for comparing SCAG goals and the Project. ● Provides links to further information pertaining to SCAG. ● Recommends applicant review Final Program EIR for 2016 RTP/SCS for guidance, as appropriate, and points to a list of approved project-level performance standards-based mitigation measures that may be considered for adoption and implementation.

1.3.3 Notice of Completion and Public Review of the Draft EIR

Pursuant to CEQA Guidelines Section 15085, a Notice of Completion (NOC) was filed with the State Office of Planning and Research (OPR) on August 29, 2019, and the Draft EIR (DEIR) circulated for public and agency review for a period of 48-days. A copy of the DEIR can be viewed at the of San Bernardino County Land Use Services Department, located at 385 N. Arrowhead Avenue, 1st Floor, San Bernardino, California, 92415. The DEIR can also be viewed online at:

http://cms.sbcounty.gov/lus/Planning/Environmental/Valley.aspx.

For further information or to obtain a copy, call 909-387-8311. Electronic copies of the DEIR were sent to responsible agencies, local agencies, and concerned agencies and individuals, as requested.

1.3.4 Response to Comments on the Draft EIR

Comments from all agencies and individuals are invited regarding the information contained in the DEIR. Such comments should explain any perceived deficiencies in the assessment of impacts and identify the information that is purportedly lacking in the DEIR or indicate where the information may be found. All comments on the DEIR are to be submitted to:

Aron Liang, Senior Planner
County of San Bernardino, Land Use Services Department
385 North Arrowhead Avenue
San Bernardino, California 92415
Aron.Liang@lus.sbcounty.gov

Following a 48-day period of circulation and review of the DEIR, all comments and the responses to the comments shall be incorporated into a Final EIR prior to certification of the document by the County .

1.4 AVAILABILITY OF EIR MATERIALS

All materials related to the preparation of this EIR are available for public review at the following locations:

County of San Bernardino
Land Use Services Department
385 North Arrowhead Avenue
San Bernardino, California 92415

1.5 ORGANIZATION OF THE EIR

The EIR contains the primary analysis of potential environmental impacts discussed in the following seven sections:

Section 1 Introduction
Section 2 Executive Summary
Section 3 Project Description
Section 4 Environmental Impact Analysis
Section 5 Alternatives
Section 6 CEQA Mandated Sections
Section 7 Preparation Team

These seven sections are identified as Volume 1.

Appendices are also provided which include the NOP as well as several technical reports and data used in the analysis of potential environmental impacts. The appendices documents will be identified as Volume 2.

In compliance with Public Resources Code Section 21081.6, a mitigation monitoring and reporting program (MMRP) will be prepared as a separately bound document that will be adopted in conjunction with the certification of the Final EIR. The MMRP, responses to public comments, any revisions to the Draft EIR, and findings will be identified as Volume 3.

1.6 CITATION

Preparation of this EIR relied on information from many sources including the appendices materials previously listed and numerous other references. Pursuant to CEQA Guidelines Section 15148, citations from the appendix materials and other sources are provided throughout the EIR. Citations are listed at the end of each section of this EIR. Resources are referenced in the following manner:

Government Resources
Agency. Document Title. Prepared by [Author]. Publication City: Publisher, Publication year.

State Laws
"Title of Act/Bill/Etc" (AB/SB #, Approval Date), Code Reference, P. ##.

Books and Technical Reports
Author. Agency. Department. Document Title. Publication Date

Internet Resources
Author. Agency. Department. Webpage Title, Access Date. Web Address

Persons Consulted
Name. Agency. Department. "Personal Communication". Date Consulted

2.0 EXECUTIVE SUMMARY

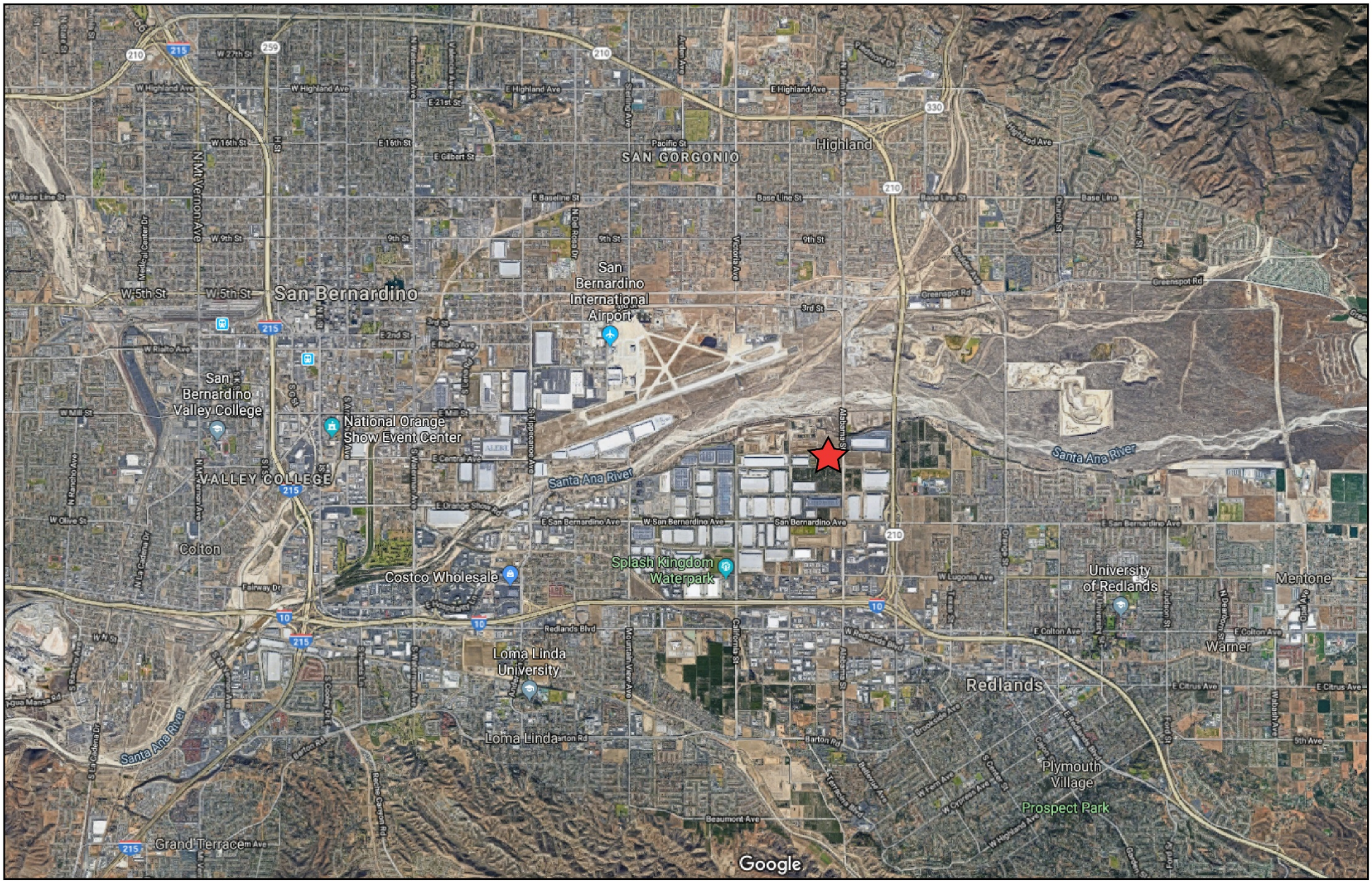
This Draft Environmental Impact Report (DEIR) has been prepared to inform decision-makers and the public of the potentially significant environmental effects associated with the project approvals for the Duke Warehouse at Palmetto Avenue and Alabama Street (Project) in the County of San Bernardino. This study has been prepared pursuant to the California Environmental Quality Act, known as CEQA, (California Public Resources Code, Sections 21000 et seq.) and the State CEQA Guidelines (California Code of Regulations, Sections 15000 et seq.) and the Guidelines for Implementation of the Environmental Quality Act (State CEQA Guidelines) (California Code of Regulations, Sections 15000, et seq.). The County of San Bernardino is the Lead Agency for the proposed Project under CEQA and is responsible for the preparation of this DEIR. This summary should not be relied upon for a thorough understanding of the details of the project, its individual impacts, and related mitigation needs. Please refer to Chapter 3 for a complete description of the Project, and Chapters 4.1 through 4.19 for complete descriptions of environmental impacts and associated mitigation measures.

2.1 PROJECT LOCATION

The proposed site for the Duke Warehouse at Palmetto Avenue and Alabama Street Project is at the northwest corner of Palmetto Avenue and Alabama Street in what is known as the “Redlands Donut Hole” in unincorporated San Bernardino County and is within the East Valley Area Plan (EVAP) plan area. As shown in Exhibit 2-1, the Project site is west of State Route 210 (SR 210), between Interstate 10 (I-10) and the Santa Ana River. The present channel of the Santa Ana River is less than 0.13 miles north of the Project Area. Specifically, the subject property is on the northwest corner of the Palmetto Avenue and Alabama Street intersection, with Palmetto Avenue the south boundary and Alabama Street the east boundary.

2.2 PROJECT SUMMARY

The Project includes the development of an approximate 1,192,671 square-foot high-cube, non-refrigerated warehouse building on approximately 54.8 net acres of land located at the northwestern corner of Alabama Street and Palmetto Avenue, in unincorporated San Bernardino County, California. The building will have a maximum height of 50 feet and occupy a footprint area of 1,116,934 square feet. Onsite improvements will include approximately 293,739 square feet of landscaped area and approximately 974,669 square feet of Portland cement concrete paving for parking areas, loading areas, truck courts, and circulation drives.



Source: Google Maps

Not to Scale

Exhibit 2-1 Regional Vicinity Map

Duke Realty Alabama and Palmetto Warehouse

County of San Bernardino, California

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2.3 REQUIRED APPROVALS

Implementation of the Project would require, but is not limited to, the following discretionary approvals by the County of San Bernardino (lead agency):

- Certification of the Final EIR
- Adoption of a Mitigation Monitoring and Reporting Program
- Airport Land Use Commission approval
- Site Plan Approval
- Approval of a Conditional Use Permit (CUP) to allow the construction of the 1,192,671-square foot high cube warehouse building.
- Approval of a Tentative Parcel Map (TPM) to consolidate four parcels into one large parcel.

Other Potential Government Agency Approvals (Responsible Agencies)

- South Coast Air Quality Management District (SCAQMD)
- California Department of Transportation (Caltrans)
- Santa Ana Regional Water Quality Control Board (RWQCB)

2.4 ENVIRONMENTAL IMPACTS

As required by the CEQA Guidelines, this EIR addresses the following areas of potential environmental impact or controversy known to the Lead Agency (the City of Covina), including those issues and concerns identified by the County in its Notice of Preparation (NOP) of this EIR (dated February 6, 2019) and by other agencies, organizations, and individuals in response to the NOP.

Summary of Significant Impacts and Mitigation Measures

The Draft EIR is a comprehensive EIR and covers all of the following topics:

- Aesthetics and Visual Resources
- Agriculture and Forestry Resources
- Air Quality
- Biological Resources
- Cultural
- Energy
- Geology and Soils
- Greenhouse Gas Emissions and Global Climate Change
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use and Planning
- Mineral Resources
- Noise
- Population and Housing
- Public Services
- Recreation
- Transportation and Traffic
- Tribal Cultural Resources

- Utilities and Service System
- Wildfire

For each of the 20 environmental topics listed above, any ***"significant"*** project or cumulative impact and associated mitigation measure or measures identified in this EIR are summarized in Table 2-2, Summary of Potentially Significant Impacts and Recommended Mitigation Measures, which follows. The summary chart has been organized to correspond with the more detailed impact and mitigation discussions in chapters 4.1 through 4.19 of this EIR. The chart is arranged in 4 columns: 1) impacts, 2) significance without mitigation, 3) mitigation measures, and 4) the level of impact significance after implementation of the mitigation measure(s). In addition, potential impacts which cannot be mitigated and that are significant, adverse and unavoidable are also listed.

The specific issues areas where mitigation measures are required include:

- Air Quality
- Biological Resources
- Cultural Resources
- Geology and Soils
- Greenhouse Gases
- Transportation and Traffic
- Tribal Cultural Resources

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Table 2-2:
Summary of Potentially Significant Impacts and Recommended Mitigation Measures

Impacts	Significance Without Mitigation	Mitigation Measures	Significance With Mitigation
AIR QUALITY			
Conflicts with Local Air Quality Plans **Impact AQ-1 – Would the Project conflict with or obstruct implementation of the applicable air quality plan?** Emissions from construction of the Project are below the SCAQMD daily construction thresholds for all the criteria pollutants, except VOC resulting from architectural coatings (painting). Mitigation Measure AQ-1 would reduce VOC emission to levels that are less than significant. Criteria pollutant emissions from operation of this Project will exceed the SCAQMD regional daily thresholds for Nitrogen Oxides (NO_X) during summer and winter. This is a potentially significant impacts before mitigation and there are no feasible mitigation measures available to reduce NOx emissions to less than significant levels.	S	*The following mitigation measure is recommended to reduce VOC emissions from Project construction:* **AQ-1:** To reduce VOC emissions associated with architectural coating, the Project designer and contractor shall reduce the use of paints and solvents by utilizing pre-coated materials (e.g. bathroom stall dividers, metal awnings), materials that do not require painting, and require coatings and solvents with a VOC content lower than required under Rule 1113 to be utilized. The construction contractor shall be required to utilize "Super-Compliant" VOC paints (less than 10% VOC content), which are defined in South Coast Air Quality Management District's Rule 1113. Construction specifications shall be included in building specifications that assure these requirements are implemented. The specifications shall be reviewed by the County of San Bernardino's Building and Safety Division for compliance with this mitigation measure prior to issuance of the Project's building permit. *The following mitigation measures will be implemented by the Lead Agency to reduce NOX emissions from Project operation:* **AQ-2:** In order to promote alternative fuels, and help support "clean" truck fleets, the developer/successor-in-interest shall provide building occupants and businesses with information related to SCAQMD's Carl Moyer Program, or other state programs that restrict	LTS for Construction (VOC); SU for Operation (NO_X)

Table 2-2:
Summary of Potentially Significant Impacts and Recommended Mitigation Measures

Impacts	Significance Without Mitigation	Mitigation Measures	Significance With Mitigation
		operations to "clean" trucks, such as 2007 or newer model year or 2010 compliant vehicles and information including, but not limited to, the health effect of diesel particulates, benefits of reduced idling time, CARB regulations, and importance of not parking in residential areas. If trucks older than 2007 model year will be used, the developer/successor-in-interest shall require, within one year of signing a lease, future tenants to apply in good-faith for funding for diesel truck replacement/retrofit through grant programs such as the Carl Moyer, Prop 1B, VIP, HVIP, and SOON funding programs, as identified on SCAQMD's website (http://www.aqmd.gov). Tenants will be required to use those funds, if awarded. **AQ-3:** Service equipment (i.e., yard hostlers and forklifts) used within the site shall be electric or compressed natural gas-powered. Compliance with this mitigation measure shall be required prior to certificate of occupancy. **AQ-4:** Although the Project does not include refrigerated warehouse space, trucks accessing the Project site may have auxiliary power units (APU) and/or transport refrigeration units (TRUs). Therefore, electrical hookups shall be installed at all loading docks to allow trucks with APU and/or TRUs with electric standby capabilities to plug in when APU/TRUs are in use. The County shall verify electrical hookups have been installed prior to occupancy.	

Table 2-2:
Summary of Potentially Significant Impacts and Recommended Mitigation Measures

Impacts	Significance Without Mitigation	Mitigation Measures	Significance With Mitigation
Cumulatively Considerable Net Increase of Criteria Pollutants **Impact A2-3 – Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?** Emissions from construction of the Project are below the SCAQMD daily construction thresholds for all the criteria pollutants, except VOC resulting from architectural coatings (painting). Criteria pollutant emissions from operation of this Project will exceed the SCAQMD regional daily thresholds for NO_X during summer and winter. This is a potentially significant impacts before mitigation and there are no feasible mitigation measures available to reduce NOx emissions to less than significant levels.	S	*The following mitigation measure is recommended to reduce VOC emissions from Project construction:* **AQ-1:** To reduce VOC emissions associated with architectural coating, the Project designer and contractor shall reduce the use of paints and solvents by utilizing pre-coated materials (e.g. bathroom stall dividers, metal awnings), materials that do not require painting, and require coatings and solvents with a VOC content lower than required under Rule 1113 to be utilized. The construction contractor shall be required to utilize "Super-Compliant" VOC paints (less than 10% VOC content), which are defined in South Coast Air Quality Management District's Rule 1113. Construction specifications shall be included in building specifications that assure these requirements are implemented. The specifications shall be reviewed by the County of San Bernardino's Building and Safety Division for compliance with this mitigation measure prior to issuance of the Project's building permit. *The following mitigation measures will be implemented by the Lead Agency to reduce NOX emissions from Project operation:* **AQ-2:** In order to promote alternative fuels, and help support "clean" truck fleets, the developer/successor-in-interest shall provide building occupants and businesses with information related to SCAQMD's Carl Moyer Program, or other state programs that restrict operations to "clean" trucks, such as 2007 or newer model year or 2010 compliant vehicles and	LTS for Construction (VOC); SU for Operation (NO_X)

Table 2-2:
Summary of Potentially Significant Impacts and Recommended Mitigation Measures

Impacts	Significance Without Mitigation	Mitigation Measures	Significance With Mitigation
		information including, but not limited to, the health effect of diesel particulates, benefits of reduced idling time, CARB regulations, and importance of not parking in residential areas. If trucks older than 2007 model year will be used, the developer/successor-in-interest shall require, within one year of signing a lease, future tenants to apply in good-faith for funding for diesel truck replacement/retrofit through grant programs such as the Carl Moyer, Prop 1B, VIP, HVIP, and SOON funding programs, as identified on SCAQMD's website (http://www.aqmd.gov). Tenants will be required to use those funds, if awarded. **AQ-3:** Service equipment (i.e., yard hostlers and forklifts) used within the site shall be electric or compressed natural gas-powered. Compliance with this mitigation measure shall be required prior to certificate of occupancy. **AQ-4:** Although the Project does not include refrigerated warehouse space, trucks accessing the Project site may have auxiliary power units (APU) and/or transport refrigeration units (TRUs). Therefore, electrical hookups shall be installed at all loading docks to allow trucks with APU and/or TRUs with electric standby capabilities to plug in when APU/TRUs are in use. The County shall verify electrical hookups have been installed prior to occupancy.	

Table 2-2:
Summary of Potentially Significant Impacts and Recommended Mitigation Measures

Impacts	Significance Without Mitigation	Mitigation Measures		Significance With Mitigation
BIOLOGICAL RESOURCES				
Special Status Species Protections **Impact BIO-1 – Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the CDFW or U.S. Fish and Wildlife Service?** Impacts to sensitive plant and animal species, including bats, Burrowing Owl, and SBKR will be less than significant before mitigation. Impacts to migratory birds will be potentially significant before mitigation.	S	**BIO-1**	Avoidance of Nesting Migratory Birds: If possible, all vegetation removal activities shall be scheduled from September 1 to February 1, which is outside the general avian nesting season. This would ensure that no active nests would be disturbed and that removal could proceed rapidly. If vegetation is to be cleared during the nesting season, all suitable habitat will be thoroughly surveyed within 72 hours prior to clearing for the presence of nesting birds by a qualified biologist (Project Biologist). The Project Biologist shall be approved by the County and retained by the Applicant. The survey results shall be submitted by the Project Applicant to the County Land Use Services Department. If any active nests are detected, the area shall be flagged and mapped on the construction plans along with a minimum 300-foot buffer, with the final buffer distance to be determined by the Project Biologist. The buffer area shall be avoided until, as determined by the Project Biologist, the nesting cycle is complete or it is concluded that the nest has failed. In addition, the Project Biologist shall be present on the site to monitor the vegetation removal to ensure that any nests, which were not detected during the initial survey, are not disturbed.	LTS

Table 2-2:
Summary of Potentially Significant Impacts and Recommended Mitigation Measures

Impacts	Significance Without Mitigation	Mitigation Measures		Significance With Mitigation
CULTURAL RESOURCES				
Historic Resources **Impact CUL-1 – Would the project cause a substantial adverse change in the significance of a historic resource pursuant to Section 15064.5?** An evaluation of the two historical resources suggests that they are eligible for listing on the CRHR under Criteria 1 and 3. These resources may also be a contributing element to a larger citrus historic district. This is considered a potentially significant impact.	S	**CUL-1**	*HABS Survey*. Prior to ground-disturbing activities, the project proponent shall prepare Historic American Building Survey (HABS)/Historic American Engineering Record (HAER)-like documentation of the segment of the flume (CA-SBR-32488H) within the Project boundaries. The project proponent shall also conduct additional research on the citrus industry and prepare documentation in the form of a district record to be filed at the South Central Coastal Information Center SCCIC.	LTS
Archaeological Resources **Impact CUL-2 – Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?** Although no archaeological resources were observed during the cultural resources assessment, the project may reveal unknown cultural resources in the course of construction. This is considered a potentially significant impact.	S	**CUL-2**	*Conduct Archaeological Sensitivity Training for Construction Personnel*. The project proponent shall retain a qualified professional archaeologist who meets U.S. Secretary of the Interior's Professional Qualifications and Standards, to conduct Archaeological Sensitivity Training for construction personnel prior to commencement of excavation activities. The training session shall be carried out by a cultural resources professional with expertise in archaeology, who meets the U.S. Secretary of the Interior's Professional Qualifications and Standards. The training session will include a handout and will focus on how to identify archaeological resources that may be encountered during earthmoving activities and the procedures to be followed in such an event, the duties of archaeological monitors, and the general steps a qualified professional archaeologist would follow in conducting a salvage investigation if one is necessary.	LTS

Table 2-2:
Summary of Potentially Significant Impacts and Recommended Mitigation Measures

Impacts	Significance Without Mitigation	Mitigation Measures	Significance With Mitigation
		CUL-3 *Cease Ground-Disturbing Activities and Implement Treatment Plan if Archaeological Resources Are Encountered.* In the event that archaeological resources are unearthed during ground-disturbing activities, ground-disturbing activities shall be halted or diverted away from the vicinity of the find so that the find can be evaluated. A buffer area of at least 50 feet shall be established around the find where construction activities shall not be allowed to continue until a qualified archaeologist has examined the newly discovered artifact(s) and has evaluated the area of the find. Work shall be allowed to continue outside of the buffer area. All archaeological resources unearthed by project construction activities shall be evaluated by a qualified professional archaeologist, who meets the U.S. Secretary of the Interior's Professional Qualifications and Standards. Should the newly discovered artifacts be determined to be prehistoric, Native American Tribes/Individuals should be contacted and consulted and Native American construction monitoring should be initiated. The Applicant and City shall coordinate with the archaeologist to develop an appropriate treatment plan for the resources. The plan may include implementation of archaeological data recovery excavations to address treatment of the resource along with subsequent laboratory processing and analysis.	

Table 2-2:
Summary of Potentially Significant Impacts and Recommended Mitigation Measures

Impacts	Significance Without Mitigation	Mitigation Measures	Significance With Mitigation
GEOLOGY AND SOILS			
Paleontological Resources **Impact GEO-6 - Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?** Project-related ground disturbance to a maximum depth of 13 feet may impact buried older Quaternary deposits with potentially significant paleontological resources. This is considered a potentially significant impact.	S	**GEO-1** Conduct Paleontological Sensitivity Training for Construction Personnel. The applicant shall retain a professional paleontologist, who meets the qualifications set forth by the Society of Vertebrate Paleontology and shall conduct a paleontological sensitivity training for construction personnel prior to commencement of excavation activities. The training will include a handout and will focus on how to identify paleontological resources that may be encountered during earthmoving activities and the procedures to be followed in such an event, the duties of paleontological monitors, notification and other procedures to follow upon discovery of resources, and the general steps a qualified professional paleontologist would follow in conducting a salvage investigation if one is necessary. **GEO-2** Conduct Periodic Paleontological Spot Checks during Grading and Earth-moving Activities. The applicant shall retain a professional paleontologist who meets the qualifications set forth by the Society of Vertebrate Paleontology and shall conduct periodic Paleontological Spot Checks beginning at depths below six feet to determine if construction excavations have extended into older Quaternary deposits. After the initial paleontological spot check, further periodic checks will be conducted at the discretion of the qualified paleontologist. If the qualified paleontologist determines that construction excavations have extended into the older Quaternary deposits, construction monitoring for paleontological resources will be required. The applicant shall	

Table 2-2:
Summary of Potentially Significant Impacts and Recommended Mitigation Measures

Impacts	Significance Without Mitigation	Mitigation Measures	Significance With Mitigation
		retain a qualified paleontological monitor, who will work under the guidance and direction of a professional paleontologist, who meets the qualifications set forth by the Society of Vertebrate Paleontology. The paleontological monitor shall be present during all construction excavations (e.g., grading, trenching, or clearing/grubbing) into the older Pleistocene alluvial deposits. Multiple earth-moving construction activities may require multiple paleontological monitors. The frequency of monitoring shall be based on the rate of excavation and grading activities, proximity to known paleontological resources and/or unique geological features, the materials being excavated (native versus artificial fill soils), and the depth of excavation, and if found, the abundance and type of paleontological resources and/or unique geological features encountered. Full-time monitoring can be reduced to part-time inspections if determined adequate by the qualified professional paleontologist. **GEO-3** Cease Ground-Disturbing Activities and Implement Treatment Plan if Paleontological Resources Are Encountered. If paleontological resources and or unique geological features are unearthed during ground-disturbing activities, ground-disturbing activities shall be halted or diverted away from the vicinity of the find so that the find can be evaluated. A buffer area of at least 50 feet shall be established around the find where construction activities shall not be allowed to continue until appropriate paleontological treatment plan has been approved by the applicant and the County. Work shall be allowed to continue outside of the	

Table 2-2:
Summary of Potentially Significant Impacts and Recommended Mitigation Measures

Impacts	Significance Without Mitigation	Mitigation Measures	Significance With Mitigation
		buffer area. The applicant and County shall coordinate with a professional paleontologist, who meets the qualifications set forth by the Society of Vertebrate Paleontology, to develop an appropriate treatment plan for the resources. Treatment may include implementation of paleontological salvage excavations to remove the resource along with subsequent laboratory processing and analysis or preservation in place. At the paleontologist's discretion and to reduce construction delay, the grading and excavation contractor shall assist in removing rock samples for initial processing. **GEO-4** All significant fossils collected, if any, will be prepared in a properly equipped paleontology laboratory to a point ready for curation. Preparation will include the careful removal of excess matrix from fossil materials and stabilizing and repairing specimens, as necessary. Following laboratory work, all fossils specimens will be identified to the lowest taxonomic level, cataloged, analyzed, and delivered to a regionally-accredited museum repository, such as the SBCM in Redlands or the NHMLAC in Los Angeles, for permanent curation and storage. The cost of curation is assessed by the repository and is the responsibility of the landowner. A final report should be prepared to describe the results of the paleontological mitigation monitoring efforts. The report will include a summary of the field methods, laboratory methods (if any), an overview of the geology and paleontology of the construction site, a list of taxa recovered (if any), an analysis of fossils recovered (if any) and their scientific	

Table 2-2:
Summary of Potentially Significant Impacts and Recommended Mitigation Measures

Impacts	Significance Without Mitigation	Mitigation Measures	Significance With Mitigation
		significance, and recommendations. If the monitoring efforts produce fossils, then a copy of the report also will be submitted to the curation facility.	
GREENHOUSE GASES			
Greenhouse Gas Emissions **Impact GHG-1 - Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?** As shown in Chapter 4.8.4, the Project's GHG emissions are expected to exceed the 3,000 $MTCO_2e$ per year significance threshold without mitigation. This is considered a potentially significant impact.	S	**GHG-1** Prior to issuance of building permit, the Project applicant shall provide documentation to the County of San Bernardino Building and Safety Division demonstrating that the following measures or any other combination thereof are incorporated from the County's 2015 Development Review Processes Greenhouse Gas Emissions Screening Tables, as needed to achieve the required 100 points. Documentation may include measures incorporated into construction plans and specifications, development agreements, and/or other mechanisms.	
TRANSPORTATION AND TRAFFIC			
Conflict with Program Plan, Ordinance or Policy Addressing the Circulation System The traffic generated by the Project will have the potential to significantly impact several Project area intersections in such a way that Levels of Service could be deteriorated to below acceptable levels in local policies addressing the circulation system. The following intersections that would operate at an unacceptable LOS as a result of Project implementation are subject to the jurisdiction of Caltrans, the City of Highland or the City of Redlands: 1. California Street (NS) I-10 WB Ramps (EW) - Caltrans	S	Caltrans, the City of Highland and the City of Redlands either do not have any plans to improve the impacted intersections or if they do have plans, those plans are either not funded or on a construction schedule that would allow for those improvements to be operational by the Project's opening year. Furthermore, the County has no independent control or jurisdiction over the implementation of those mitigation measures. Accordingly, the recommended mitigation measures needed to mitigate the identified impacts are not economically and legally feasible. As a result, impacts would be significant and unavoidable.	SU

Table 2-2:
Summary of Potentially Significant Impacts and Recommended Mitigation Measures

Impacts	Significance Without Mitigation	Mitigation Measures	Significance With Mitigation
2. California Street (NS) I-10 Eastbound Ramps (EW) - Caltrans 3. Alabama Street (NS) / 5th Street (EW) - City of Highland 4. Alabama Street (NS) / 3rd Street (EW) - City of Highland 8. Alabama Street (NS) / Lugonia Avenue (EW) - City of Redlands 9. Alabama Street (NS) I-10 WB Ramps (EW) - Caltrans 10. Alabama Street (NS) / I-10 EB Ramps (EW) - Caltrans 14. SR-210 NB Ramps (NS) / San Bernardino Avenue (EW) - Caltrans This is a potentially significant impact.			
TRIBAL CULTURAL RESOURCES			
Listing for Eligible Resources **Impact TRC-1 – Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is: i) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k); or ii) A resource determined by**	S	**TCR-1** Prior to the issuance of a grading permit and/or action that would permit project site disturbance (whichever occurs first), the Applicant shall provide written evidence to the County of San Bernardino that the Applicant has retained a qualified archaeologist and Native American monitor to observe grading activities and to salvage and catalogue historic and archaeological resources, as necessary. A Tribal monitor representing the Morongo Band of Mission Indians shall be present for all ground-disturbing activities that occurs within the proposed project area (which includes, but is not limited to, tree/shrub removal and planting, clearing/grubbing, grading, excavation, trenching, compaction, fence/gate removal and installation, drainage and irrigation removal and	LTS

Table 2-2:
Summary of Potentially Significant Impacts and Recommended Mitigation Measures

Impacts	Significance Without Mitigation	Mitigation Measures		Significance With Mitigation
the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe. As shown in Chapter 4.18.4, impacts to Tribal Cultural Resources are potentially significant.			installation, hardscape installation [benches, signage, boulders, walls, seat walls, fountains, etc.], and archaeological work). The Project developer/applicant shall provide compensation (hourly wages, per diem, mileage, lodging, etc.) for the Tribal monitor as part of the monitoring effort for the Project.	
		TCR-2	A pre-construction meeting shall be held with the contractors, archaeologist, and American tribal monitor/representative prior to the start of construction. This meeting shall outline all processes for monitoring on the project and information regarding how the Project Archaeologist and the Tribe will provide a weekly construction schedule identifying all ground disturbing activities within the monitoring area, and the specific cultural concerns associated with the Project area.	
		TCR-3	If human remains or funerary objects are encountered during any activities associated with the project, work in the immediate vicinity (within a 100-foot buffer of the find) shall cease and the County Coroner shall be contacted pursuant to State Health and Safety Code §7050.5 and that code enforced for the duration of the project.	
		TCR-4	In the event that Native American cultural resources are discovered during project activities, all work in the immediate vicinity of the find (within a 60-foot buffer) shall cease and a qualified archaeologist meeting Secretary of	

Table 2-2:
Summary of Potentially Significant Impacts and Recommended Mitigation Measures

Impacts	Significance Without Mitigation	Mitigation Measures	Significance With Mitigation
		Interior standards shall be hired to assess the find. Work on the other portions of the project outside of the buffered area may continue during this assessment period. Additionally, San Manuel Band of Mission Indians will be contacted if any such find occurs and be provided information and permitted/invited to perform a site visit when the archaeologist makes his/her assessment, so as to provide Tribal input.	

2.5 ISSUES TO BE RESOLVED

Pursuant to Section 15123(b)(3) of the CEQA Guidelines, an EIR summary must identify "Issues to be resolved including the choice among alternatives and whether or how to mitigate the significant effects." This EIR identifies and resolves issues related to project alternatives in Chapter 5. Potentially significant impacts are identified in the analysis provided in Chapter 4 and mitigation is considered for all impacts.

2.6 SUMMARY OF ALTERNATIVES

Alternatives to the Proposed Project

To provide a basis for further understanding of the environmental effects of a proposed project and possible approaches to reducing its identified significant impacts, the CEQA Guidelines require an EIR to also "…describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project, but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives."

Identified Alternatives

Alternative 1: No Project/No Build

Under Alternative 1 (No Project/No Build), the Project would not be implemented and the site would remain the same. None of the proposed on-site and off-site improvements would be implemented. Under the No Project alternative, the site would remain in its existing condition and no development would occur. In contrast, the proposed Project would include development of a 1,192,671 square foot industrial warehouse, associated landscaping and parking, and off-site circulation improvements.

Alternative 2: Reduced Project Size

Under Alternative 2, development of the Project site would be reduced by 25 percent overall (or roughly by 13.95 acres), resulting in approximately 731,002 square feet of concrete paving and 220,304 square feet of landscaping. The high-cube warehouse building would decrease in size by 25 percent to 894,503 square feet. Assumedly there would be a corresponding decrease in the number of dock doors, trailer parking stalls, automobile parking stalls, and ADA–compliant parking stalls. On-site features such as the water quality basin would also be reduced in size. This alternative would have reduced impacts to air quality because it would generate fewer emissions of VOC and NOx. However, it is expected that emissions of NOx from Alternative 2 could still exceed standards. Alternative 2 would have the same traffic impacts as the Project because the exceedance of Caltrans LOS E would still occur.

Environmentally Superior Alternative

The State CEQA Guidelines, Section 15126.6(e)(2), requires the identification of the environmentally superior alternative. Of the alternatives evaluated above, the No Project alternative is the environmentally superior alternative with respect to reducing impacts created by the proposed Project. The State CEQA Guidelines also require the identification of another environmentally superior alternative if the No Project alternative is selected as the environmentally superior alternative.

Of the remaining alternatives, the Reduced Project Size Alternative (Alternative 2) is the most environmentally superior alternative to the proposed Project. This alternative would reduce the size of the warehouse building by approximately 25 percent. When compared to the proposed Project, implementation of this alternative would result in lesser impacts to air quality, greenhouse gas emissions, noise, utilities and traffic impacts. Impacts related to aesthetics, biological resources, cultural resources and hazards and hazardous materials would be similar to the proposed Project.

While the County has examined a reasonable range of alternatives to the proposed Project site, one of which both meets some of the Project objectives and is environmentally superior to the proposed Project, the outcomes offered by Alternative 2 are limited when compared to the proposed Project, to the extent that:

- The Reduced Project Size Alternative will not optimize the economic potential of the undeveloped parcel within the EVAP, and
- The Reduced Project Size Alternative will not improve the economic development potential of the County of San Bernardino by reducing the potential sales tax revenue generated by development within the project site.

The Reduced Project Size Alternative would not result in maximum utilization of the land use as compared to the proposed Project. Therefore, although Alternative 2 is an environmentally superior alternative, it is not feasible for the economic, social, technological, and other factors identified above and thus is not being further considered for development in lieu of the proposed Project. Development of a reduced intensity project would also increase the demand for development at other sites in the area.

3.0 PROJECT DESCRIPTION

The Project includes the development of an approximate 1,192,671 square-foot high-cube, non-refrigerated, warehouse and logistics center on approximately 55.8 acres (54.8 net acres after right-of-way dedications along roadway frontages) at the northwestern corner of Alabama Street and Palmetto Avenue, in unincorporated San Bernardino County, California. The project applicant is Duke Realty Limited Partnership located in Irvine CA. The EIR is to be used by the County, other regulatory agencies, and the public in reviewing of the potential environmental impacts of the Project, alternatives for accomplishing the project's objectives, and the development of any mitigation measures that may minimize, avoid, or eliminate potential environmental impacts.

3.1 PROJECT LOCATION

The Project site is west of the State Route 210 freeway (SR 210), between Interstate 10 (I-10) and the Santa Ana River. The present channel of the Santa Ana River is less than 0.13 miles north of the Project Area. Specifically, the subject property is on the northwest corner of the Palmetto Avenue and Alabama Street intersection, with Palmetto Avenue the south boundary and Alabama Street the east boundary. According to the San Bernardino County Assessor, the subject property is identified by the following Assessor Parcel Numbers (APNs):

- 0292-041-42-0000;
- 0292-041-47-0000;
- 0292-041-48-0000;
- 0292-041-43-0000.

The site is relatively flat with minimal topographical variation; site topography varies from an elevation of approximately 1,199 to 1,226 feet above mean sea level (msl) and generally slopes gently in a northerly direction toward the Santa Ana River. In the northeast corner of the site is a natural drainage course that is 20± feet lower in elevation than the adjacent site grades. With the exception of this drainage course, the site topography slopes gently downward to the northwest at a gradient of 1± percent. The project site grades slope downward into the drainage course in the northeast corner of the property.

The project is in an unincorporated area of San Bernardino County surrounded by the City of Redlands known as the “Donut Hole.” The Cities of San Bernardino (to the north and west) and Highland (to the north and east) are also in close proximity to the Project site. The Redlands Wastewater Treatment Facility bounds the site to the north and west. The San Bernardino International Airport (SBIA) is located less than one-mile to the northwest of the Project. The Project is located within the San Bernardino County East Valley Area Plan. The Plan, adopted in 2007 and revised in 2008, contains land use regulations and guidelines for growth and development in the area. The Plan reflects findings and determinations of the County Board of Supervisors concerning “the future size, shape and character of this specific area.” The Project site is also located within the SBD Airport Influence Area. Exhibits 3-1, 3-2, and 3-3 show the location of the project site and the local jurisdictional delineations.

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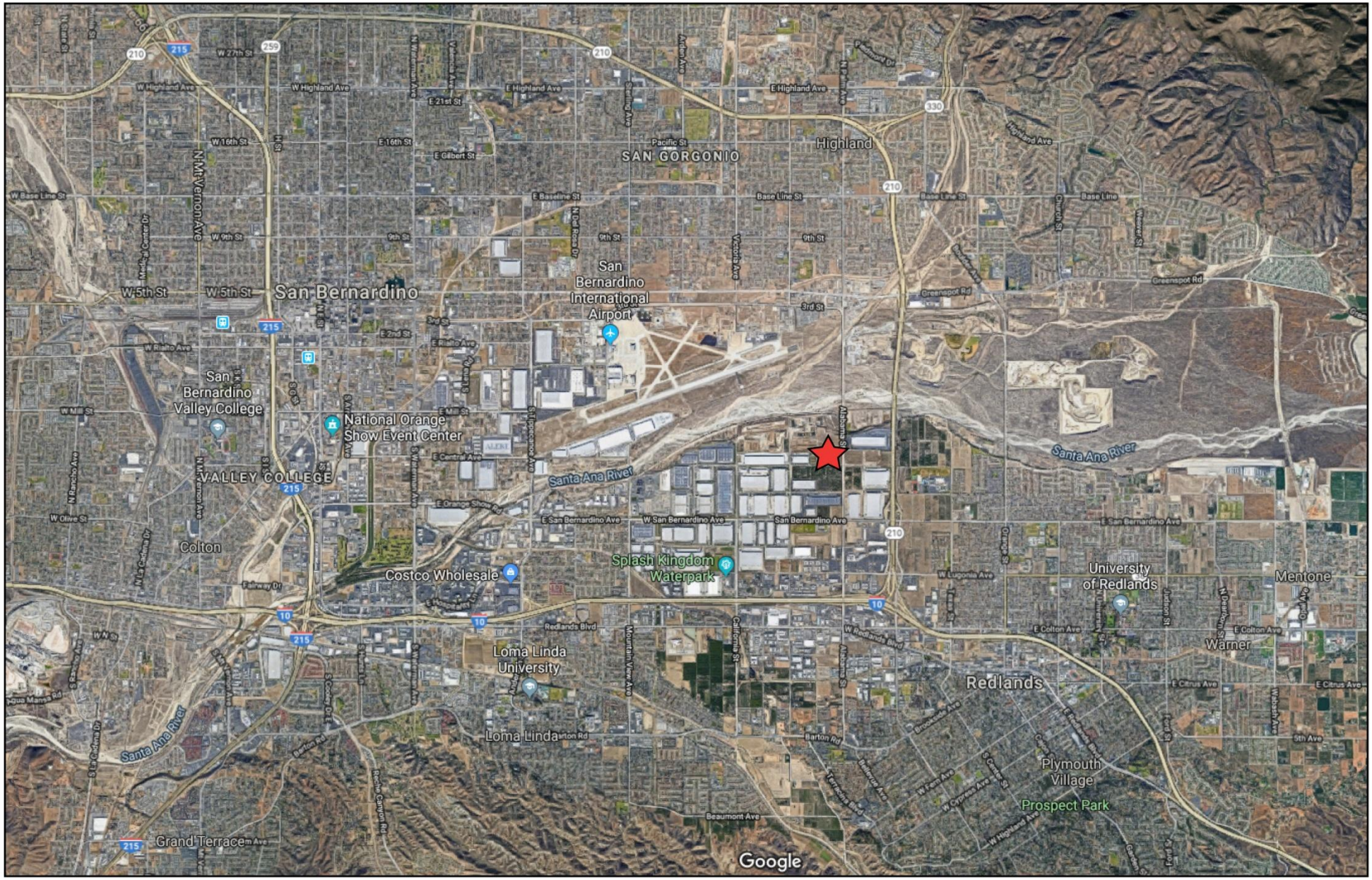

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Exhibit 3-1 Regional Vicinity Map

Duke Realty Alabama and Palmetto Warehouse

County of San Bernardino, California

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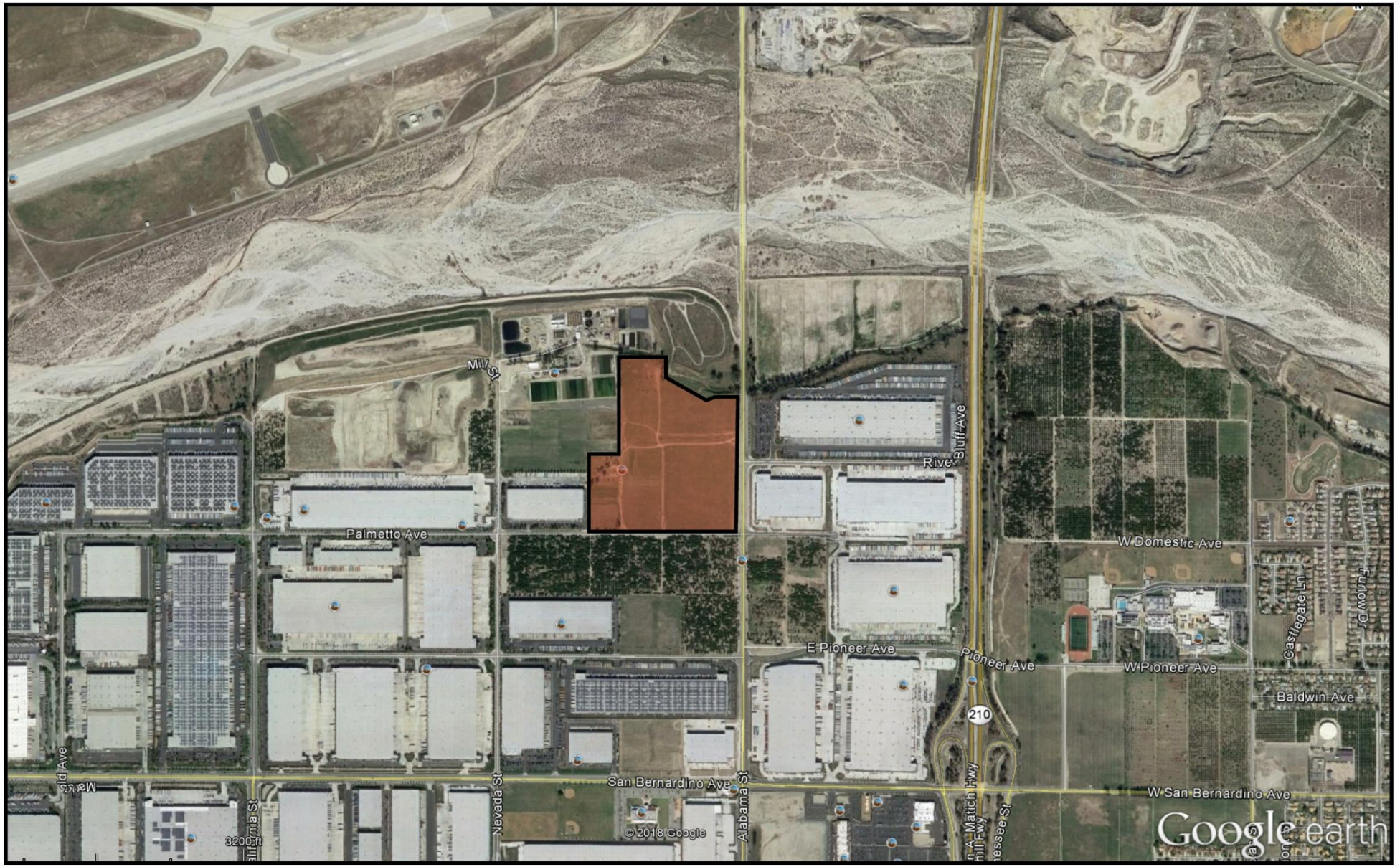

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Exhibit 3-2 Project Location Map

Duke Realty Alabama and Palmetto Warehouse

County of San Bernardino, California

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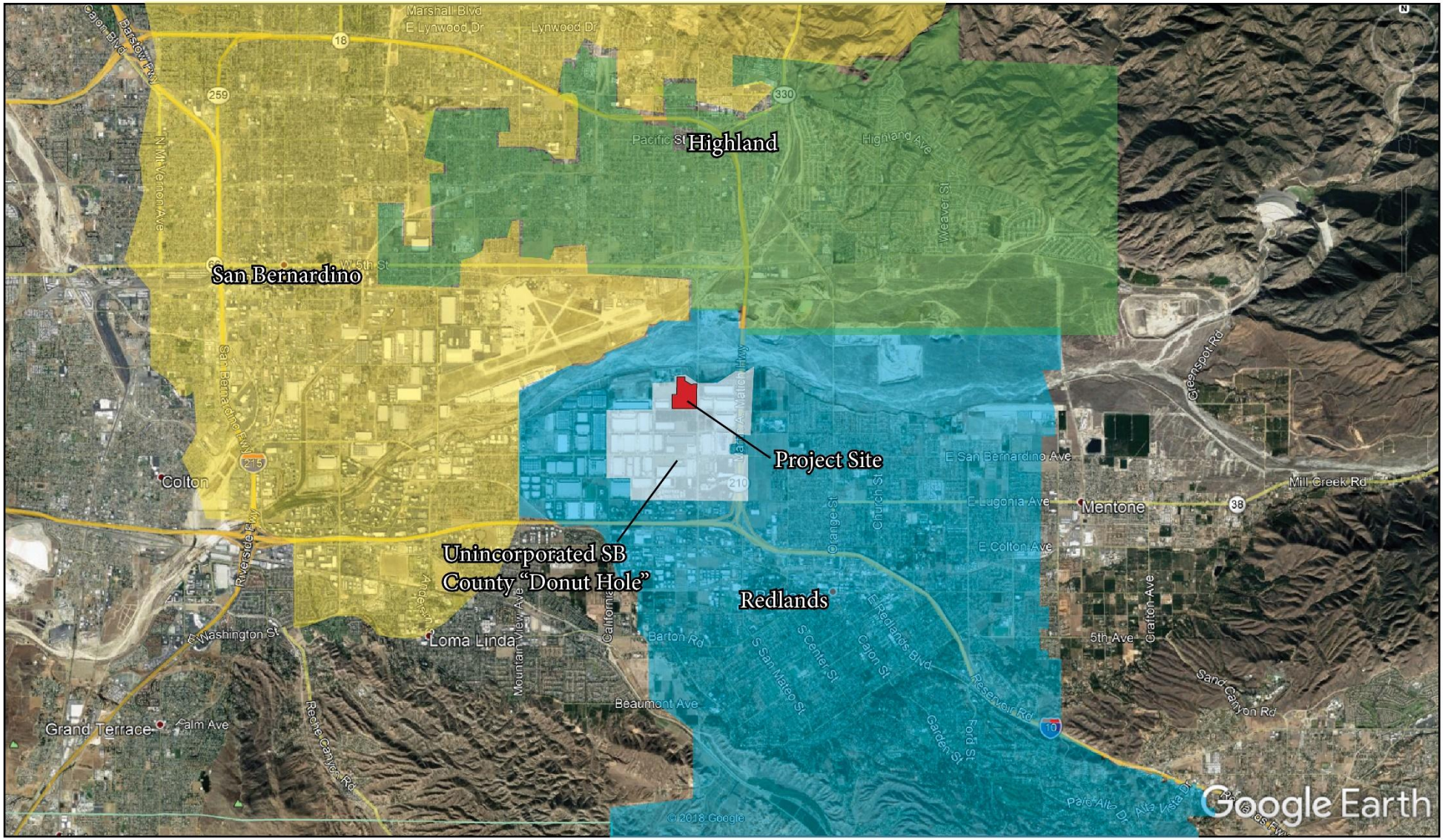

Source: Google Maps

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Exhibit 3-3 Jurisdictional Boundaries

Duke Realty Alabama and Palmetto Warehouse
County of San Bernardino, California

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3.2 ENVIRONMENTAL SETTING/EXISTING CONDITIONS

The Project is in a generally urbanized environment with both industrial and agricultural uses. The Project is situated near the present channel of the Santa Ana River. The Project site has historically been used as an orchard. Currently, the subject property is primarily vacant/fallow agricultural land with the exception of a small, vacant manufactured trailer along the western portion of the subject property and beehive fixtures along the northern portion of the subject property. The site contains some abandoned irrigation piping (potentially containing asbestos), a few consumer sized motor oil containers, several used automobile tires, other limited amounts of miscellaneous debris, and a few remaining foundations from former small buildings. Existing sanitary sewer facilities run through the site toward the adjacent wastewater treatment facility with manholes visible on the surface. Unimproved and unpaved dirt paths extend in a few directions across the site.

The surrounding area is generally developed with a mix of land uses including agricultural and warehousing (typical of the area). Table 3-1 summarizes the land uses and zoning at the project site along with the properties that surround the Project.

Table 3-1
Existing Land Uses and Zoning Surrounding the Project Site

Direction	Land Uses	Zoning
Project site	Vacant agricultural land	Regional Industrial (EV/IR)
North	A fallow agricultural field and The Redlands Wastewater Treatment Facility (1950 Nevada Street), composting facility, and undeveloped woodland and grassland.	City of Redlands: Public/ Institutional
South	Palmetto Avenue to the south with citrus orchards, and agricultural land.	Special Development (EV/SD)
East	Alabama Street to the east and a vacant field with fallow agricultural land. An industrial warehouse building owned by Prologis and occupied by Home Depot (27352 River Bluff Avenue).	Regional Industrial (EV/IR)
West	A fallow agricultural field and an industrial warehouse building occupied by Performance Team Freight (26940 Palmetto Avenue).	Regional Industrial (EV/IR) and City of Redlands: Public/ Institutional (northwest boundary)

The East Valley Area Plan designates the project site Regional Industrial (EV/IR). The following land uses are permitted EV/IR zone: research and development, manufacturing and industrial, supportive services and commercial and other similar uses, if permitted by the Planning Commission. Existing agricultural uses are also allowed under this zone; these include orchards, groves, nurseries, field crops, tree crops, berry crops, bush crops, truck gardening and commercial flower growing, and all necessary structures and appurtenances thereof.

The Project site is served by local and regional utilities. A public water system (delivered by City of Redlands operated pipelines) provides water by Division V of the San Bernardino Valley Municipal Water District (SBVMWD). The site is served by the Redlands Wastewater Treatment Plant and existing sewer lines also managed by the City of Redlands transect the property. Electricity is provided by Southern California Edison (SCE) and natural gas service is provided by the Southern California Gas Company. Stormwater management facilities are managed by the San Bernardino County Flood Control District.

3.3 PROJECT OBJECTIVES

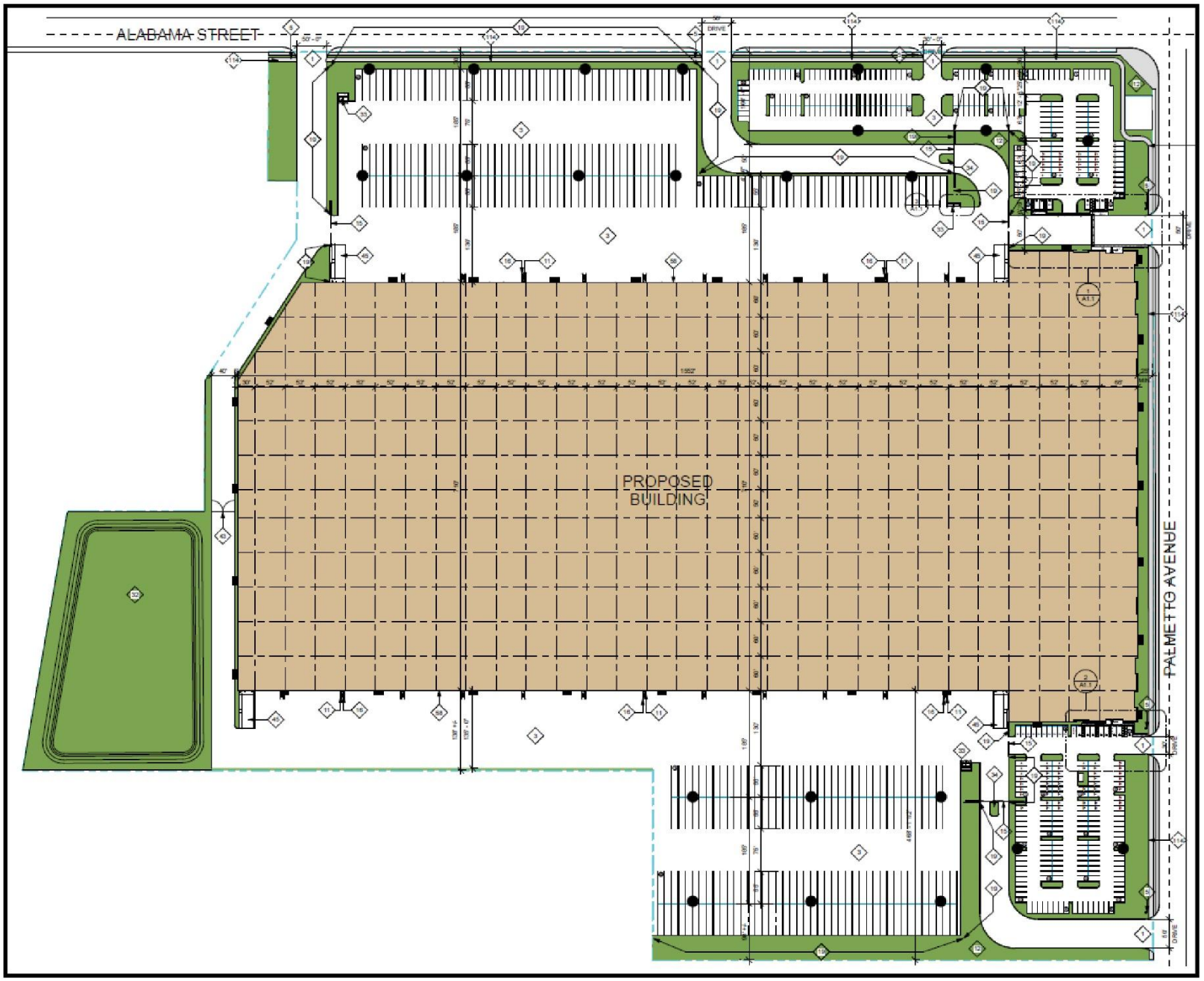
The objectives for the Project are as follows:

1. Develop a warehouse and logistics center similar in scale to such uses in the surrounding area and in accordance with the East Valley Area Plan.
2. Develop a center that takes advantage of the existing infrastructure and support systems including the local workforce.
3. Positively contribute to the economy of the region through new capital investment and the creation of new employment opportunities.
4. Expand the local and regional tax base.
5. Develop and operate a large format logistics center that will attract quality tenants and will be competitive with other similar regional facilities.
6. Operate a large format logistics center consistent with industry standards for operational design.
7. Implement the East Valley Area Plan through the development of a land use consistent with the development standards and criteria relevant to the site.
8. Facilitate the development of underutilized land currently planned for industrial uses that, maximizes the use of the site and responds to regional market demand.

3.4 PROJECT CHARACTERISTICS

The Project includes the development of an approximate 1,192,671 square-foot high-cube, non-refrigerated warehouse and logistics center on approximately 54.8 net acres of land located at the northwestern corner of Alabama Street and Palmetto Avenue, in unincorporated San Bernardino County, California (see Exhibit 3-3). The building will have a maximum height of 50 feet and occupy a footprint area of 1,116,934 square feet. Onsite improvements will include approximately 293,739 square feet of landscaped area and approximately 974,669 square feet of Portland cement concrete paving for parking areas, loading areas, truck courts, and circulation drives. In order to accommodate the ultimate roadway typical cross-section, right-of-way will be dedicated along the Project frontage to provide 60 feet of width on the westerly half of Alabama Street and 33 feet of width on the northerly half of Palmetto Avenue. Proposed offsite road improvements consist of 30 feet of street widening along the westerly side of Alabama Street, 12 feet of street widening along the northerly side of Palmetto Avenue, new curbing, new sidewalks, and a new multipurpose trail extending along the entire Project frontage.

Construction is expected to begin in October 2019 and be completed by December of 2020. The existing limited amounts of old foundations, irrigation piping, and miscellaneous debris would be demolished and removed from the site. Grading and earthwork operations are expected to disturb approximately 255,000 cubic yards of onsite soil. However, no import or export of soil material is anticipated as the cut and fill volumes on site are expected to balance assuming a soil material shrinkage rate of 20 percent.



SITE LEGEND

- LANDSCAPE AREA
- PROPOSED BUILDING
- CONCRETE PAVING
- STANDARD PARKING STALL
- TYP. HANDICAP PARKING STALL W/ 8' LOADING ZONE
- TYP. HANDICAP PARKING STALL W/ 5' LOADING ZONE
- PROPERTY LINE
- DOCK HIGH DOOR
- DRIVE THRU. DOOR
- PROPOSED WALL PACK LOCATION
- PROPOSED LIGHT POLE LOCATION
- ADA PATH OF TRAVEL

*NO PROPOSED SIGNAGE *NO PROTECTED PLANTS

PROJECT INFORMATION			12/17/2018
GROSS SITE AREA	50.76 AC	2,385,342 SF	
TOTAL BUILDING AREA		1,192,671 SF	
FOOTPRINT		1,115,934 SF	
WAREHOUSE		1,091,934	
OFFICE		25,000	
MEZZANINE		75,737	
OFFICE		25,000	
STORAGE		50,737	
NET COVERAGE		50.00%	
LANDSCAPE PROVIDED		23.2%	269,739
LANDSCAPE REQUIRED	15% EXCL. OF BUILDING		190,261
PARKING REQUIRED			
WAREHOUSE @ 1/1,000 <40K		40	
WAREHOUSE @ 1/4,000 >40K		276	
OFFICE @ 1/250		200	
TOTAL REQUIRED		516	
PARKING PROVIDED		737	
STANDARD		280	
ADA		14	
CLEAN AIR		59	
EVC		42	
ADA EVC		1	
VAN EVC		1	
AMBULATORY EVC		1	
TRAILER		339	

Not to Scale

Source: Herdman Architecture Design

Exhibit 3-4 Site Plan

Duke Realty Alabama and Palmetto Warehouse
County of San Bernardino, California

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The building will be constructed in a cross-dock configuration with loading docks along both the east and west sides of the building. All onsite parking areas, drive aisles, loading areas, and truck court areas will be paved with Portland cement concrete. Several landscape planters and concrete flatwork are expected to be included throughout the site. The site grading design will allow for positive drainage away from the building and directed toward the onsite storm drain collection system.

The building will be divided into three functional spaces as follows: 1,091,934 square feet for the warehouse; 50,737 square feet of mezzanine storage; and 50,000 square feet of office space. Approximately 161 loading dock doors and 339 trailer stall spaces will be provided.

The Project's sewer, water, and storm water drainage lines will connect to the existing publicly-maintained lines located within Alabama Street and Palmetto Avenue.

Development of the Project will include the construction of an eight-foot wide, asphalt, continuous multi-use trail along the entire Palmetto Avenue and Alabama Street Project frontages, in accordance with the East Valley Area Plan.

Approximately 85% of the Project site will be composed of impervious surfaces with approximately 15% composed of landscaping. The proposed development will include one onsite stormwater quality basin located in the northwest corner of the site and a stormwater quality infiltration trench along the southwest portion of the Project site.

3.5 REQUIRED APPROVALS

Discretionary Actions and Approvals

Implementation of the Project would require, but is not limited to, the following discretionary approvals by the County (lead agency):

- Certification of the Final EIR
- Adoption of a Mitigation Monitoring and Reporting Program
- Airport Land Use Commission approval
- Site Plan Approval
- Approval of a Conditional Use Permit (CUP) to allow the construction of the 1,192,671-square foot high cube warehouse and logistics center
- Approval of a Tentative Parcel Map (TPM) to consolidate four parcels into one parcel

Other Potential Government Agency Approvals (Responsible Agencies)

- South Coast Air Quality Management District (SCAQMD)
- California Department of Transportation (Caltrans)
- Santa Ana Regional Water Quality Control Board (RWQCB)
- City of Redlands (water and sewer)

4.1 Aesthetics

This EIR chapter addresses potential impacts to scenic vistas and scenic resources, the potential of the Project to degrade the visual character of the site and surrounding area, and the potential to create substantial and adverse light and glare.

4.1.1 ENVIRONMENTAL SETTING

Scenic Vistas

The San Bernardino County General Plan (URS Corporation, 2007) does not designate any scenic vistas but has identified several scenic routes within the county. The General Plan identifies a scenic route as a roadway that has scenic vistas and other scenic and aesthetic qualities that have been found to add beauty to the county. As shown in the General Plan Circulation and Infrastructure Background Report Figures 2-4A to 2-4C, (County of San Bernardino, 2006) the closest scenic route to the Project site is San Timoteo Canyon Road, which is approximately 2.5 miles south of the Project site.

Scenic Highways

The General Plan identifies scenic routes within the County. As noted above, the closest scenic route to the Project is San Timoteo Canyon Road, which is approximately 2.5 miles south of the Project site.

The California Department of Transportation (Caltrans) maintains the California Scenic Highway Program (California Department of Transportation) and identifies segments of California highways and adjacent corridors as containing outstanding natural beauty. Near the Project site, the closest eligible state scenic highways, but not officially designated, include State Routes 210, 330, and 38. The nearest designated state scenic highway is a segment of State Route 38 located approximately 14 miles east of the Project site.

Visual Character

The majority of the Project site is vacant and fallow agricultural land. As noted in the geotechnical report prepared for the Project site (Southern California Geotechnical, 2017), the site topography ranges from 1,199 feet mean sea level (msl) in the northern area of the site to 1,224 feet msl in the southeastern area of the site. However, the bottom of the existing drainage course, located at the northeast corner of the site, has an elevation of 1,181 feet msl. With the exception of the drainage course, the site topography slopes gently downward to the northwest at a gradient of one percent.

A small portion of the southwestern area of the Project site (along Palmetto Avenue) includes an active agricultural field and a trailer. Remnants of building foundations are also located within this area. Bee hive boxes are located within the northern portion of the Project site.

The Project site is located within an area which includes both warehouse and agricultural uses. Alabama Street, a two lane road with a center turn lane, forms the eastern boundary of the Project site. Across Alabama Street are two large warehouse buildings, landscaping, and surface parking areas. Palmetto Avenue, a two lane paved road, forms the southern boundary of the Project site. South of Palmetto Avenue is a citrus grove. A large distribution warehouse, agricultural fields, and a wastewater treatment facility are located to the west of the Project site. Part of the wastewater treatment facility, as well as the Santa Ana River, are located north of the Project site.

Light and Glare

The Project site is within an area that includes a mix of agricultural and warehouse uses. While there are light and glare sources associated within street lights, building lights and materials, and parking lot lights, the areas that are in current agricultural production include limited lighting. Vehicles traveling on adjacent roads and parking lots are also a source of nighttime lighting.

4.1.2 REGULATORY FRAMEWORK

State

California Scenic Highway Program

The purpose of the California Scenic Highway Program is to protect and enhance California's natural beauty and to protect the social and economic values provided by the State's scenic resources. A highway may be designated “scenic” based on the natural landscape visible to travelers, the scenic quality of the landscape, and the extent to which development intrudes on the views of the highway. The California Scenic Highway Program includes both officially designated scenic highways and highways that are eligible for designation.

Local

San Bernardino County General Plan

The policies and programs of the General Plan are intended to inform land use decisions. Preparing, adopting, implementing, and maintaining a general plan serves to identify the community’s land use, transportation, environmental, economic, and social goals and policies as they relate to land use and development. The following policies of the General Plan pertain to scenic resources and/or aesthetic character and therefore are applicable to an aesthetics analysis of the Project:

- Policy LU 1.2: The design and siting of new development will meet locational and development standards to ensure compatibility of the new development with adjacent land uses and community character.
    - Program 1: Discourage linear commercial development of shallow depth along streets or highways when it can be shown that such development impairs traffic flow or detracts from the aesthetic enjoyment of the surroundings, or if it can be demonstrated that equally effective services can be provided in an alternative configuration.
- GOAL OS 5: The County will maintain and enhance the visual character of scenic routes in the County.

- Policy OS 5.1: Features meeting the following criteria will be considered for designation as scenic resources:

  a. A roadway, vista point, or area that provides a vista of undisturbed natural areas.
  b. Includes a unique or unusual feature that comprises an important or dominant portion of the viewshed (the area within the field of view of the observer).
  c. Offers a distant vista that provides relief from less attractive views of nearby features (such as views of mountain backdrops from urban areas).

- Policy OS 5.2: Define the scenic corridor on either side of the designated route, measured from the outside edge of the right-of-way, trail, or path. Development along scenic corridors will be required to demonstrate through visual analysis that proposed improvements are compatible with the scenic qualities present.

- Policy OS 5.3: The County desires to retain the scenic character of visually important roadways throughout the County. A "scenic route" is a roadway that has scenic vistas and other scenic and aesthetic qualities that over time have been found to add beauty to the County. Therefore, the County designates the following routes as scenic highways and applies all applicable policies to development on these routes (see Figures 2-4A through 2-4C of the Circulation and Infrastructure Background Report):

  VALLEY REGION:

  a. Beaumont Avenue within the Loma Linda SOI.
  b. Citrus Avenue within the Redlands SOI.
  c. Colton Avenue within the Redlands SOI.
  d. Crafton Avenue within the Redlands SOI.
  e. Fifth Avenue within the Redlands SOI.
  f. Highland Avenue within the Redlands SOI.
  g. I-10 from the City of Redlands to the City of Yucaipa.
  h. Mentone Boulevard within the Redlands SOI.
  i. San Bernardino Avenue within the Redlands SOI.
  j. Sand Canyon Road between Crafton Avenue and the City of Yucaipa.
  k. San Timoteo Canyon Road in the Loma Linda SOI.
  l. State Route 71 — All of the route in unincorporated County area.

4.1.3 SIGNIFICANCE THRESHOLDS

Per the CEQA Guidelines, construction or operation of the Project would have a significant impact related to aesthetics if it would:

a) Have a substantial adverse effect on a scenic vista;
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway;
c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings (Public views are those that are experienced

from publicly accessible vantage points). If the Project is in an urbanized area, would the Project conflict with applicable zoning and other regulations governing scenic quality?; or

d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.

4.1.4 IMPACTS AND MITIGATION MEASURES

This section describes potential impacts related to aesthetics, which could result from construction of the Project, and recommends mitigation measures as needed to reduce significant impacts.

Scenic Vistas

Impact AES-1: Would the Project have a substantial adverse effect on a scenic vista?

Analysis of Impacts

The General Plan does not identify scenic vistas, but does identify scenic routes as roadways that have scenic vistas and other scenic and aesthetic qualities. The closest scenic route to the Project site is San Timoteo Canyon Road, located approximately 2.5 miles south of the Project site. The Project site is not visible from this scenic route. Additionally, similar warehouse development is located immediately east and west of the Project site. Given the developed nature of the area in the vicinity of the Project site, and that the Project site is not visible from the scenic route, the Project would not have a substantial adverse effect on a scenic vista.

Level of Significance Before Mitigation

Less than significant.

Mitigation Measures

No mitigation required.

Scenic Resources/Scenic Highways

Impact AES-2: Would the Project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

Analysis of Impacts

The nearest designated segment of state scenic highway is State Route 38 located approximately 14 miles east of the Project site. The Project site is not visible from this scenic highway.

Near the Project site, the closest eligible state scenic highways, but not officially designated, include State Routes 210, 330, and 38. State Route 210 is approximately 2,400 feet east of the Project site.

The majority of the Project site is largely fallow agricultural land and does not include scenic features such as trees, rock outcroppings, or historic buildings. Furthermore, the view from State

Route 210 is largely obscured by intervening development, including warehouses and parking lots similar to what is included in the Project. The Project would not result in a significant impact to a scenic resource within a state scenic highway.

Level of Significance Before Mitigation

Less than significant.

Mitigation Measures

No mitigation required.

Existing Visual Character

Impact AES-3: In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings (Public views are those that are experienced from publicly accessible vantage points). If the Project is in an urbanized area, would the Project conflict with applicable zoning and other regulations governing scenic quality

Analysis of Impacts

The Project site is largely undeveloped land with some remnants of now abandoned agricultural uses. The Project site is located in an area with a variety of land uses, including warehouse uses to the east and west of the site, agricultural uses to the south and the east, and a wastewater facility to the north and northwest of the Project site.

The dominant visual features of the Project would include the warehouse building and associated parking and landscaping. The Project would develop the site with a 1,192,671 square-foot, high-cube, non-refrigerated warehouse and logistics center that would have a maximum height of 50 feet. The building will be constructed in a cross-dock configuration with loading docks along both the east and west sides of the building. The southern frontage along Palmetto Avenue would include glass, recessed areas, and architectural details indicating the front of the building.

The building would be surrounded by asphaltic concrete pavement for automobile parking, truck trailer parking, drive lanes and Portland cement concrete pavement for the loading dock areas. Parking areas would be located along the Alabama Street and Palmetto Avenue Project site frontage. The parking areas would include landscaping and parking lot lighting. An onsite water retention basin would be installed in the northern portion of the Project site.

The Project would also include off-site road improvements consisting of partial-width improvements to Alabama Street and Palmetto Avenue along the Project frontage.

The Project would change the visual character of the Project site from fallow agricultural land to a developed site with a warehouse and associated development. This development would be very similar in size, character, and use to warehouse development east of the Project site (across Alabama Street) and immediately west of the Project site. The Project site is zoned East Valley/Regional Industrial, and warehouse and distribution centers are an allowed use at the Project site. While the Project would change the visual quality of the Project site, it would not degrade the existing visual character or quality of the site or surroundings. The building will be

developed in compliance with County site design and architecture guidelines and requirements that will make the proposed development visually attractive and, therefore, the Project will not degrade the visual quality of the site or surrounding areas.

Level of Significance Before Mitigation

Less than significant.

Mitigation Measures

No mitigation required.

Light and Glare

Impact AES-4: Would the Project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

Analysis of Impacts

The Project would include new sources of light within the Project site, including interior and exterior warehouse lighting and safety lighting in the parking lots as well as potential street lighting associated with street improvements on Alabama Street and Palmetto Avenue. Additionally, building materials associated with the warehouse (glass) could create new sources of glare at the Project site.

While the Project site is located within an area that includes agricultural uses, there are several warehouse and distribution centers within the immediate area; new light associated with the Project would be similar to light that currently exists. Additionally, the Project would need to adhere to the glare and outdoor lighting standards described in Chapter 83.07 of the San Bernardino County Development Code.[1] Outdoor lighting standards include shielding exterior light to prevent light pollution or light trespass. With implementation of existing county requirements, potential impacts with respect to light and glare would be less than significant.

Level of Significance Before Mitigation

Less than significant.

Level of Significance After Mitigation

No mitigation required.

Cumulative Impacts

Impact AES-5: Would the Project cause substantial adverse cumulative impacts with respect to aesthetics?

Analysis of Impacts

[1] County of San Bernardino, 2007. *County of San Bernardino 2007 Development Code,* March 13 (Amended April 20, 2018).

A cumulative impact to scenic vistas would occur if cumulative Projects if the Project, combined with cumulative Projects in the surrounding area, resulted in the substantial degradation of quality or obstruction of particularly scenic views available from a recognized scenic vista. As noted above, the General Plan does not identify scenic vistas, but does identify scenic routes as roadways that have scenic vistas and other scenic and aesthetic qualities that over time have been found to add beauty to the County. The closest scenic route to the Project site is located approximately 2.5 miles south and the Project site is not visible from this route. The Project would not contribute to a cumulative impact to a scenic vista.

The majority of the Project site is largely fallow agricultural land and does not include scenic features such as trees, rock outcroppings, or historic buildings. Furthermore, the view from State Route 210 (an eligible state scenic highway) is largely obscured by intervening development, including warehouses and parking lots similar to what is included in the Project. As the Project would result in development anticipated at the site, and be similar to development already within the area, the Project would not result in a significant cumulative impact to a scenic resource within a state scenic highway.

As noted above, the Project would not substantially degrade the visual character of the Project site. Future Projects would generally be subject to the County's underlying zoning standards that include regulations pertaining to permitted uses, minimum lot dimensions, and maximum building height. Future development within the vicinity of the Project site would be located where similar existing uses occur, and as such, would not entail a significant visual change such that the existing visual character or quality of Project sites and their surroundings would be substantially degraded. The Project would not contribute to a significant cumulative impact that would degrade the existing visual character or quality of the area and its surroundings.

Project related impacts with respect to light and glare were determined to be less than significant. Lighting and building materials associated with cumulative development would be subject to review and approval by the San Bernardino County Planning Department and subject to the provisions of the Section 83.07.040, Glare and Outdoor Lighting, of the San Bernardino County Development Code. The cumulative impact would be considered less than significant.

Level of Significance Before Mitigation

Less than significant.

Mitigation Measures

No mitigation required.

4.1.5 REFERENCES

California Department of Transportation. *California Scenic Highway Mapping System* (*http://www.dot.ca.gov/hq/LandArch/16_livability/scenic_highways/* accessed December 23, 2018).

County of San Bernardino, 2006. *Figure 2-6A, Circulation and Infrastructure Background Report,* February 21.

County of San Bernardino, 2007. *County of San Bernardino 2007 Development Code,* March 13 (Amended April 20, 2018).

Southern California Geotechnical, 2017. *Geotechnical Investigation, Proposed Commercial/Industrial Building, NWC Alabama Street and Palmetto Avenue, San Bernardino, California, for Duke Realty,* December 15.

URS Corporation, 2007. *County of San Bernardino 2007 General Plan,* March 13 (Amended April 24, 2014).

4.2 – Agriculture and Forestry Resources

This EIR chapter addresses agriculture and forest resources impacts associated with the Project. Issues of interest are agriculture and forestry resources impacts identified by the CEQA Guidelines: whether the Project will convert farmland of local or statewide importance, conflict with existing zoning for agricultural use and forest land, result in the loss of forest land, or cause other changes to the environment that would convert farmland or forest land to non-agricultural or non-forest use, respectively.

4.2.1 – ENVIRONMENTAL SETTING

Regional Setting

San Bernardino County supports a number of large-acreage national forests. The United States Department of Agriculture (USDA) through the United States Forest Service (USFS) manages the majority of the geographic area in the County's Mountain Region, totaling more than 671,000 acres in the San Bernardino Mountains and a portion of the San Gabriel Mountains (County of San Bernardino 2007a). The Angeles National Forest is approximately 14 miles to the northwest of the project site, with the San Bernardino National Forest approximately 4.25 miles to the northeast of the site. In the San Bernardino County portion of the San Bernardino National Forest are the Cucamonga Wilderness, San Gorgonio Wilderness, and Bighorn Mountain Wilderness.

As indicated in the County General Plan EIR, agricultural use in the County has declined over the last several decades as the result of urban expansion and economic conditions. Agricultural development is generally located in areas where relatively level terrain and stable soil conditions are present. However, for these reasons, such lands are also desirable (and economically valuable) for urban development. As urban growth encroaches into agricultural areas, the remaining agricultural operations have often become surrounded by urban-type activities and/or have been converted to other nonagricultural uses.

The General Plan Land Use Designation for the Project site and surrounding properties is Regional Industrial (EV/IR). Lands surrounding the project site are not mapped by the California Department of Conservation (DOC) (2016b) Farmland Mapping and Monitoring Program (FMMP) as Prime Farmlands, Farmlands of Statewide Importance, Unique Farmlands, or Grazing Lands. According to the County General Plan EIR, the Valley Region, in which the Project site is located, contains considerable agricultural development, predominantly in the vicinity of the cities of Chino and Ontario in the west end of the valley, and in the cities of Highland and Redlands in the east end of the valley. There are approximately 19,706 acres of agricultural land located within the valley.

Project Setting

In addition to the existing Redlands Wastewater Treatment Facility, land uses surrounding the project site generally include transportation infrastructure, agricultural lands, undeveloped land, and industrial and commercial development. The Santa Ana River is adjacent to the Project site to the north. The State Route 210 freeway (SR 210) is 0.6 miles to the east and Interstate 10 (I-10) is located 1.4 miles to the south. Union Pacific railroad tracks are located 1.6 miles to the south of the Project site. In the Project area, agricultural areas consist of active and abandoned

citrus orchards. The Project site does not contain any active agriculture. The Project site does not contain important state and local agricultural resources. Refer also to discussion of the California DOC FMMP in the Regulatory Framework subsection, below.

4.2.2 – REGULATORY FRAMEWORK

Federal

Farmland Protection Policy Act

The USDA administers the Farmland Protection Policy Act of 1981. The act is intended to minimize the extent to which federal programs contribute to the unnecessary conversion of farmland to nonagricultural uses. The act also requires these programs to be compatible with state, local, and private efforts to protect farmland.

State

California Civil Code Section 3482.5 (Right to Farm Act)

The Right to Farm Act is designed to protect commercial agricultural operations from nuisance complaints that may arise when an agricultural operation is conducting business in a "manner consistent with proper and accepted customs." The code specifies that established operations that have been in business for three or more years that were not nuisances at the time they began are not to be considered a nuisance as a result of a new land use.

California Land Conservation Act (Williamson Act)

The Williamson Act of 1965 was designed as an incentive to retain prime agricultural land and open space in agricultural use, thereby slowing its conversion to urban and suburban development. The program requires a 10-year contract between the County and the landowner, which is structured to automatically renew each year unless the landowner files a Notice of Non-Renewal. While in contract, the land is taxed on the basis of its agricultural use rather than its market value. The land becomes subject to certain enforceable restrictions, and certain conditions need to be met prior to approval of an agreement. The goal of the Williamson Act is to protect agriculture and open space.

The Project site is not covered by a Williamson Act land conservation contract or a Farmland Security Zone contract. Therefore, no such contract aimed at retaining prime agricultural land and/or open space as agricultural use in order to slow its conversion to urban and suburban development affects the project site.

California Land Evaluation Site Assessment (LESA) Model

The USDA National Resources Conservation Service (NRCS) developed the LESA to assist state and local officials in making sound decisions regarding land use. Combined with forest measures and rangeland parameters, a LESA can provide a technical framework to numerically rank land parcels through local resource evaluation. In determining whether impacts to agricultural resources are significant environmental effects, the CEQA Guidelines reference the California Agricultural LESA Model prepared by the California Department of Conservation (DOC) as an optional methodology that may be used to assess the relative value of agriculture and farmland.

The LESA model evaluates land resources based upon two main factors: land evaluation and site assessment. Land evaluation considers two categories: land capability and storie index which rate the suitability of soils to support a diverse range of crops and their potential for intensive agricultural use, respectively. Site assessment considers three categories: project size, water resources availability and surrounding agricultural rating. Project size rates the acreage of the project to determine whether the proposed converted farmland could be a viable commercial agricultural operation. Water resource availability rates the project site based on available water sources in the area and whether the water supply would be consistent in periods of drought and non-drought. Surrounding agricultural land rating measures the level of agricultural land use for lands within the *zone of influence* of the project area; the LESA model assigns a greater significance rating of converted farmland if a project is surrounded by a high percentage of agricultural lands.

For a given project, the factors are rated, weighted, and combined, resulting in a single numeric score. The project score then becomes the basis for determining a project's potential significance relative to the loss or conversion of agriculture or farmland. The California DOC encourages local agencies to develop local agricultural models to account for the variability of local agricultural resources and conditions.

Farmland Monitoring and Mapping Program (FMMP)

The FMMP, established in 1982, and implemented by and mapped by the California DOC, produces maps and statistical data used for analyzing impacts to the state's agricultural resources. Agricultural land is rated according to soil quality and irrigation status, with the best quality land called Prime Farmland. Maps are updated every two years, with current land use information gathered from aerial photographs, a computer mapping system, public review, and field reconnaissance. The minimum mapping unit is 10 acres. The DOC Prime Farmlands, Farmlands of Statewide Importance, and Unique Farmlands are referenced in CEQA Guidelines Appendix G, as resources to consider in an evaluation of agricultural impacts. According to available data from the FMMP, the Project site is mapped as Urban and Built-Up Land. There are approximately 54 acres of Prime Farmland located on the south side of Palmetto Avenue, opposite the Project site.

Local

San Bernardino County General Plan

The General Plan includes policies and programs that are intended to address agricultural and forestry resources and to guide future development in a way that lessens potential impacts. The Renewable Energy and Conservation Element of the General Plan includes relevant goals and policies aimed at the protection of such resources.

Conservation Element

GOAL CO 6 The County will balance the productivity and conservation of soil resources.

Policy CO 6.1 Protect prime agricultural lands from the adverse effects of urban encroachment, particularly increased erosion and sedimentation, trespass, and non-agricultural land development.

Policy CO 6.2 The County will allow the development of areas of prime agriculture lands supporting commercially valuable agriculture to urban intensity when it can be demonstrated that there is no long-term viability of the agricultural uses due to encroaching urbanization, creating incompatible land uses in close proximity to each other.

Policy CO 6.3 Preservation of prime and statewide important soils types, as well as areas exhibiting viable agricultural operations, will be considered as an integral portion of the Open Space element when reviewing development proposals.

Renewable Energy and Conservation Element

GOAL RE 5 Renewable energy facilities will be located in areas that meet County standards, local values, community needs and environmental and cultural resource protection priorities.

RE Policy 5.2 Utility-oriented RE generation projects on private land in the unincorporated County will be limited to the site-types below, in addition to meeting criteria established herein and in the Development Code:

i. Private lands adjacent to the federal Development Focus Areas supported by the Board of Supervisors that meet siting criteria and development standards
ii. Waste Disposal Sites
iii. Mining Sites (operating and reclaimed)
iv. Fallow, degraded and unviable agricultural lands
v. Airports (existing and abandoned or adaptively re-used)
vi. Brownfields
vii. California Department of Toxic Substance Control Cleanup Program Sites
viii. Resource Conservation and Recovery Act Sites
ix. Sites within or adjacent to electric transmission and utility distribution corridors
x. Industrial zones proven to not conflict with economic development needs
xi. Other sites proven by a detailed suitability analysis to reflect the significantly disturbed nature or conditions of those listed above

RE Policy 5.8 Discourage conversion of productive or viable prime agricultural lands to RE generation facilities.

San Bernardino County Zoning Ordinance

The project site is not located within a County-designated forestry or timberland production zone.

Community Plans and Action Plans

The project site is not located within an area for which a community plan in support of the County's General Plan has been adopted.

4.2.3 – SIGNIFICANCE THRESHOLDS

Per the CEQA Guidelines, implementation of the Project would have a significant impact related to aesthetics if it would:

a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use;
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract;
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g));
d) Result in the loss of forest land or conversion of forest land to non-forest use; or
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use;

4.2.4 – IMPACTS AND MITIGATION MEASURES

This section describes potential impacts related to agricultural resources, timberland, and forest range lands.

Convert Farmland

Impact AG-1 – Would the project convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?

Analysis of Impacts

The FMMP map for the Project area does not identify the Project site as being Prime Farmland, Unique Farmland, or Farmland of Statewide Importance. There is Prime Farmland located to the south of the site, on the opposite side of Palmetto Avenue. However, that property has a General Plan Land Use Designation of Regional Industrial. Therefore, there will be no conversion of Prime Farmland, Unique Farmland, and Farmland of Statewide Importance to a non-agricultural use as a result of this project.

Level of Significance Before Mitigation

No Impact.

Williamson Act Conflict

Impact AG-2 – Would the project conflict with existing zoning for agricultural use, or a Williamson Act contract?

Analysis of Impacts

The Map of San Bernardino County Williamson Act Lands (2004) identifies the Project site as being on non-enrolled land. In addition, the Project site and surrounding area has a General Plan Land Use Designation of Regional Industrial which discourage agricultural uses. Therefore, there will be no conflict with existing zoning for agricultural use or a Williamson Act contract.

Level of Significance Before Mitigation

No Impact.

Mitigation Measures

No mitigation is required.

Conflict with existing zoning

Impact AG-3 – Would the project conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?

Analysis of Impacts

Public Resources Code Section 12220(g) identifies forest land as land that can support 10-percent native tree cover of any species, including hardwoods, under natural conditions, and that allows for management of one or more forest resources, including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefits. The Project site and surrounding properties are not currently being managed or used for forest land as identified in Public Resources Code Section 12220(g). The California Department of Forestry and Fire Protection vegetation maps for the Project site identify it as *non-forest* type, indicating that is not capable of growing industrial wood tree species. The Project site has a General Plan Land Use Designation and zoning for industrial uses. Development of the Project will have no impact to any timberland zoning.

Level of Significance Before Mitigation

No impact.

Mitigation Measures

No mitigation is required.

Result in the loss of forest land

Impact AG-4 – Would the project result in the loss of forest land or conversion of forest land to non-forest use?

Analysis of Impacts

As indicated in Impact AG-3 above, the area is designated as non-forest land; thus, there will be no loss of forest land or conversion of forest land to non-forest use as a result of the Project.

Level of Significance Before Mitigation

No impact.

Mitigation Measures

No mitigation is required.

Other Changes

Impact AG-5 – Would the project involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?

Analysis of Impacts

The Project site is currently undeveloped, and was previously used for agriculture. The Project is surrounded by other similar industrial uses. While there is Prime Farmland located to the south of the site, that property has a General Plan Land Use Designation of Regional Industrial. Development of the Project will not change the existing environment in a manner that will result in the conversion of farmland to non-agriculture use or forest land to a non-forest use.

Level of Significance Before Mitigation

No impact.

Mitigation Measures

No mitigation is required.

Cumulative Impacts

Would the project cause substantial adverse cumulative impacts with respect to Agriculture and Forestry Resources?

Analysis of Impacts

The Project would have a less than significant impact on agricultural and forestry resources. Development of the Project would not preclude or hinder existing or future agricultural operations in the surrounding area. Therefore, the Project would not contribute to a cumulatively considerable impact.

Level of Significance Before Mitigation

No impact.

Mitigation Measures

No mitigation is required.

4.2.5 REFERENCES

California Important Farmland Maps. 2010. South San Bernardino County ftp://ftp.consrv.ca.gov/pub/dlrp/FMMP/pdf/2010/ [Accessed April 2019].

Department of Conservation. Division of Land Resources Protection. Map of San Bernardino County Williamson Act Lands. ftp://ftp.consrv.ca.gov/pub/dlrp/wa/sanbernardino_so_12_13_WA.pdf [Accessed April 2019].

California Department of Forestry and Fire Protection. Fire and Resource Assessment Program. http://frap.fire.ca.gov/data/frapgismaps/pdfs/fvegwhr13b_map.pdf [Accessed April 2019].

4.3 – Air Quality

This Chapter describes the existing air quality setting of the Project area, evaluates Project impacts with respect to project specific and cumulative impacts on air quality including consistency with the 2016 South Coast Air Quality Management Plan This chapter also identifies mitigation measures related to construction and operation of the Project. Air quality modeling data and associated information in this chapter comes from the Air Quality Analysis Technical Memorandum and a Health Risk Assessment were prepared for the Project by Albert A. Webb Associates. Both documents are included as part of Appendix B of this EIR.

4.3.1 – ENVIRONMENTAL SETTING

Climate and Meteorology

The Project is in unincorporated San Bernardino County at an elevation of approximately 1,200 feet above mean sea level. The project site is located within the South Coast Air Basin (SCAB), which includes all of Orange County and the non-desert portions of Los Angeles, Riverside, and San Bernardino Counties, and is within the jurisdictional boundaries of the Southern Coast Air Quality Management District (SCAQMD). The SCAB is a 6,745-square-mile area bounded by the Pacific Ocean to the west and the San Gabriel, San Bernardino, and San Jacinto Mountains to the north and east, and is characterized as having a Mediterranean climate (typified as semiarid with mild winters, warm summers, and moderate rainfall).

The general region lies in the semi-permanent high-pressure zone of the eastern Pacific; as a result, the climate is mild and tempered by cool sea breezes. The usually mild climatological pattern is interrupted infrequently by periods of extremely hot weather, winter storms, or Santa Ana winds. The extent and severity of the air pollution problem in the SCAB is a function of the area's natural physical characteristics (e.g., weather and topography) and of manufactured influences (e.g., development patterns and lifestyle). Factors such as wind, sunlight, temperature, humidity, rainfall, and topography all affect the accumulation and/or dispersion of pollutants throughout the SCAB.

Climate

Moderate temperatures, comfortable humidity, and limited precipitation characterize the climate in the SCAB. The average annual temperature varies little throughout the SCAB, averaging 75 degrees Fahrenheit (°F). However, with a less pronounced oceanic influence, the eastern inland portions of the SCAB show greater variability in annual minimum and maximum temperatures.

All portions of the SCAB have recorded temperatures over 100°F in recent years. Although the SCAB has a semiarid climate, the air near the surface is moist because of the presence of a shallow marine layer. Except for infrequent periods when dry air is brought into the SCAB by offshore winds, the ocean effect is dominant. Periods with heavy fog are frequent, and low stratus clouds, occasionally referred to as "high fog," are a characteristic climate feature. Annual average relative humidity is 70% at the coast and 57% in the eastern part of the SCAB. Precipitation in the SCAB is typically 9 to 14 inches annually and is rarely in the form of snow or hail because of typically warm weather. The frequency and amount of rainfall is greater in the coastal areas of the SCAB.

In this region of the County, the average temperatures range from a high of 96.2 degrees °F in July and August to a low of 38.5 °F in January. Annual precipitation is approximately 16.12 inches, falling mostly from November through April (WRCC 2019).

Sunlight

The presence and intensity of sunlight are necessary prerequisites for the formation of photochemical smog. Under the influence of the ultraviolet radiation of sunlight, certain "primary" pollutants (mainly reactive hydrocarbons and oxides of nitrogen (NO_x)) react to form "secondary" pollutants (primarily oxidants)). NO_x is a general term pertaining to compounds of nitric oxide (NO), nitrogen dioxide (NO_2) and other oxides of nitrogen. Since this process is time dependent, secondary pollutants can be formed many miles downwind of the emission sources. Due to the prevailing daytime winds and time-delayed nature of photochemical smog, oxidant concentrations are highest in the inland areas of Southern California.

Temperature Inversions

Under ideal meteorological conditions and irrespective of topography, pollutants emitted into the air mix and disperse into the upper atmosphere. However, the Southern California region frequently experiences temperature inversions in which pollutants are trapped and accumulate close to the ground. The inversion, a layer of warm, dry air overlaying cool, moist marine air, is a normal condition in coastal Southern California. The cool, damp, and hazy sea air capped by coastal clouds is heavier than the warm, clear air, which acts as a lid through which the cooler marine layer cannot rise. The height of the inversion is important in determining pollutant concentration. When the inversion is approximately 2,500 feet above mean sea level (amsl), the sea breezes carry the pollutants inland to escape over the mountain slopes or through the passes. At a height of 1,200 feet amsl, the terrain prevents the pollutants from entering the upper atmosphere, resulting in the pollutants settling in the foothill communities. Below 1,200 feet amsl, the inversion puts a tight lid on pollutants, concentrating them in a shallow layer over the entire coastal basin. Usually, inversions are lower before sunrise than during the daylight hours.

Mixing heights for inversions are lower in the summer and inversions are more persistent, being partly responsible for the high levels of ozone, referred to herein as O_3, observed during summer months in the SCAB. Smog in Southern California is generally the result of these temperature inversions combining with coastal day winds and local mountains to contain the pollutants for long periods, allowing them to form secondary pollutants by reacting in the presence of sunlight. The SCAB has a limited ability to disperse these pollutants due to typically low wind speeds and the surrounding mountain ranges. The project site is located in an area that is susceptible to air temperature inversions. This traps a layer of stagnant air near the ground where pollutants are further concentrated. These inversions produce haziness, which is caused by moisture, suspended dust, and a variety of chemical aerosols emitted by trucks, automobiles, furnaces, and other sources.

Pollutants and Effects

Criteria Air Pollutants

Criteria air pollutants are defined as pollutants for which the federal and state governments have established ambient air quality standards, or criteria, for outdoor concentrations to protect public health. The federal and state standards have been set, with an adequate margin of safety, at

levels above which concentrations could be harmful to human health and welfare. These standards are designed to protect the most sensitive persons from illness or discomfort. Pollutants of concern include O_3, nitrogen dioxide (NO_2), carbon monoxide (CO), sulfur dioxide (SO_2), particulate matter with an aerodynamic diameter equal to or less than 10 microns (PM_{10}), particulate matter with an aerodynamic diameter equal to or less than 2.5 microns ($PM_{2.5}$), and lead. These pollutants, as well as toxic air contaminants (TACs), are discussed in the following text. In California, sulfates, vinyl chloride, hydrogen sulfide, and visibility-reducing particles are also regulated air pollutants.

Ozone. O_3 is a strong-smelling, pale blue, reactive, toxic chemical gas consisting of three oxygen atoms. It is a secondary pollutant formed in the atmosphere by a photochemical process involving the sun's energy and O_3 precursors, such as hydrocarbons and NO_x. These precursors are mainly NO_x and volatile organic compounds (VOCs). The maximum effects of precursor emissions on O_3 concentrations usually occur several hours after they are emitted and many miles from the source. Meteorology and terrain play major roles in O_3 formation, and ideal conditions occur during summer and early autumn on days with low wind speeds or stagnant air, warm temperatures, and cloudless skies. O_3 exists in the upper atmosphere ozone layer as well as at the Earth's surface in the troposphere. The O_3 that the Environmental Protection Agency (EPA) and California Air Resources Board (CARB) regulate as a criteria air pollutant is produced close to the ground level, where people live, exercise, and breathe. Ground-level ozone is a harmful air pollutant that causes numerous adverse health effects and is thus, considered "bad" ozone. Stratospheric ozone, or "good" ozone, occurs naturally in the upper atmosphere, where it reduces the amount of ultraviolet light (i.e., solar radiation) entering the earth's atmosphere. Without the protection of the beneficial stratospheric ozone layer, plant and animal life would be seriously harmed.

O_3 in the troposphere causes numerous adverse health effects; short-term exposures (lasting for a few hours) to O_3 at levels typically observed in Southern California can result in breathing pattern changes, reduction of breathing capacity, increased susceptibility to infections, inflammation of the lung tissue, and some immunological changes. These health problems are particularly acute in sensitive receptors such as the sick, the elderly, and young children.

Nitrogen Dioxide. NO_2 is a brownish, highly reactive gas that is present in all urban atmospheres. The major mechanism for the formation of NO_2 in the atmosphere is the oxidation of the primary air pollutant nitric oxide, which is a colorless, odorless gas. NO_2 plays a major role, together with VOCs, in the atmospheric reactions that produce O_3. NO_2 is formed from fuel combustion under high temperature or pressure. In addition, NO_2 is an important precursor to acid rain and may affect both terrestrial and aquatic ecosystems. The two major emissions sources are transportation and stationary fuel combustion sources such as electric utility and industrial boilers. NO_2 can irritate the lungs, cause bronchitis and pneumonia, and lower resistance to respiratory infections.

Carbon Monoxide. CO is a colorless, odorless gas formed by the incomplete combustion of hydrocarbon, or fossil fuels. CO is emitted almost exclusively from motor vehicles, power plants, refineries, industrial boilers, ships, aircraft, and trains. In urban areas, such as the project location, automobile exhaust accounts for the majority of CO emissions. CO is a nonreactive air pollutant that dissipates relatively quickly; therefore, ambient CO concentrations generally follow the spatial and temporal distributions of vehicular traffic. CO concentrations are influenced by local meteorological conditions—primarily wind speed, topography, and atmospheric stability. CO from motor vehicle exhaust can become locally concentrated when surface-based temperature inversions are combined with calm atmospheric conditions, which is a typical situation at dusk in

urban areas from November to February. The highest levels of CO typically occur during the colder months of the year, when inversion conditions are more frequent.

In terms of adverse health effects, CO competes with oxygen, often replacing it in the blood, reducing the blood's ability to transport oxygen to vital organs. The results of excess CO exposure can include dizziness, fatigue, and impairment of central nervous system functions.

Sulfur Dioxide. SO_2 is a colorless, pungent gas formed primarily from incomplete combustion of sulfur-containing fossil fuels. The main sources of SO_2 are coal and oil used in power plants and industries; as such, the highest levels of SO_2 are generally found near large industrial complexes. In recent years, SO_2 concentrations$_2$ have been reduced by the increasingly stringent controls placed on stationary source emissions of SO_2 and limits on the sulfur content of fuels.

SO_2 is an irritant gas that attacks the throat and lungs and can cause acute respiratory symptoms and diminished ventilator function in children. When combined with particulate matter, SO_2 can injure lung tissue and reduce visibility and the level of sunlight. SO_2 also yellow plant leaves and erode iron and steel.

Particulate Matter. Particulate matter pollution consists of very small liquid and solid particles floating in the air, which can include smoke, soot, dust, salts, acids, and metals. Particulate matter can form when gases emitted from industries and motor vehicles undergo chemical reactions in the atmosphere. $PM_{2.5}$ and PM_{10} represent fractions of particulate matter. Coarse particulate matter (PM10) is about 1/7 the thickness of a human hair. Major sources of PM_{10} include crushing or grinding operations; dust stirred up by vehicles traveling on roads; woodburning stoves and fireplaces; dust from construction, landfills, and agriculture; wildfires and brush/waste burning; industrial sources; windblown dust from open lands; and atmospheric chemical and photochemical reactions. Fine particulate matter ($PM_{2.5}$) is roughly 1/28 the diameter of a human hair. $PM_{2.5}$ results from fuel combustion (e.g., from motor vehicles and power generation and industrial facilities), residential fireplaces, and woodstoves. In addition, $PM_{2.5}$ can be formed in the atmosphere from gases such as sulfur oxides (SO_x), Nitrogen Oxides ($NO_{x)}$, and Volatile Organic Compounds (VOCs).

$PM_{2.5}$ and PM_{10} pose a greater health risk than larger-size particles. When inhaled, these tiny particles can penetrate the human respiratory system's natural defenses and damage the respiratory tract. $PM_{2.5}$ and PM_{10} can increase the number and severity of asthma attacks, cause or aggravate bronchitis and other lung diseases, and reduce the body's ability to fight infections. Very small particles of substances such as lead, sulfates, and nitrates can cause lung damage directly or be absorbed into the blood stream, causing damage elsewhere in the body. Additionally, these substances can transport adsorbed gases such as chlorides or ammonium into the lungs, also causing injury. Whereas PM_{10} tends to collect in the upper portion of the respiratory system, $PM_{2.5}$ is so tiny that it can penetrate deeper into the lungs and damage lung tissue. Suspended particulates also damage and discolor surfaces on which they settle and produce haze and reduce regional visibility.

People with influenza, people with chronic respiratory and cardiovascular diseases, and the elderly may suffer worsening illness and premature death as a result of breathing particulate matter. People with bronchitis can expect aggravated symptoms from breathing in particulate matter. Children may experience a decline in lung function due to breathing in PM_{10} and $PM_{2.5}$. Other groups considered sensitive are smokers, people who cannot breathe well through their noses, and exercising athletes (because many breathe through their mouths).

Lead. Lead in the atmosphere occurs as particulate matter. Sources of lead include leaded gasoline; the manufacturing of batteries, paints, ink, ceramics, and ammunition; and secondary lead smelters. Prior to 1978, mobile emissions were the primary source of atmospheric lead. Between 1978 and 1987, the phaseout of leaded gasoline reduced the overall inventory of airborne lead by nearly 95 percent. With the phaseout of leaded gasoline, secondary lead smelters, battery recycling, and manufacturing facilities are becoming lead-emissions sources of greater concern.

Prolonged exposure to atmospheric lead poses a serious threat to human health. Health effects associated with exposure to lead include gastrointestinal disturbances, anemia, kidney disease, and in severe cases, neuromuscular and neurological dysfunction. Of particular concern are low-level lead exposures during infancy and childhood. Such exposures are associated with decrements in neurobehavioral performance, including intelligence quotient performance, psychomotor performance, reaction time, and growth. Children are highly susceptible to the effects of lead.

Volatile Organic Compounds(VOCs). Hydrocarbons are organic gases that are formed from hydrogen and carbon and sometimes other elements. Hydrocarbons that contribute to formation of O_3 are referred to and regulated as VOCs (also referred to as reactive organic gases). Combustion engine exhaust, oil refineries, and fossil-fueled power plants are the sources of hydrocarbons. Other sources of hydrocarbons include evaporation from petroleum fuels, solvents, dry cleaning solutions, and paint.

The primary health effects of VOCs result from the formation of O_3 and its related health effects. High levels of VOCs in the atmosphere can interfere with oxygen intake by reducing the amount of available oxygen through displacement. Carcinogenic forms of hydrocarbons, such as benzene, are considered TACs. There are no separate health standards for VOCs as a group.

Non-Criteria Air Pollutants

Toxic Air Contaminants (TAC). A substance is considered toxic if it has the potential to cause adverse health effects in humans, including increasing the risk of cancer upon exposure, or acute and/or chronic non-cancer health effects. A toxic substance released into the air is considered a TAC. TACs are identified by federal and state agencies based on a review of available scientific evidence. In the state of California, TACs are identified through a two-step process that was established in 1983 under the Toxic Air Contaminant Identification and Control Act. This two-step process of risk identification and risk management and reduction was designed to protect residents from the health effects of toxic substances in the air. In addition, the California Air Toxics "Hot Spots" Information and Assessment Act, Assembly Bill (AB) 2588, was enacted in 1987 to address public concern over the release of TACs into the atmosphere. The law requires facilities emitting toxic substances to provide local air pollution control districts with information that will allow an assessment of the air toxics problem, identification of air toxics emissions sources, location of resulting hotspots, notification of the public exposed to significant risk, and development of effective strategies to reduce potential risks to the public over a period of five years.

Examples include certain aromatic and chlorinated hydrocarbons, certain metals, and asbestos. TACs are generated by a number of sources, including stationary sources, such as dry cleaners, gas stations, combustion sources, and laboratories; mobile sources, such as automobiles; and area sources, such as landfills. Adverse health effects associated with exposure to TACs may

include carcinogenic (i.e., cancer-causing) and non-carcinogenic effects. Noncarcinogenic effects typically affect one or more target organ systems and may be experienced on either short-term (acute) or long-term (chronic) exposure to a given TAC.

Diesel Particulate Matter. Diesel particulate matter (DPM) is part of a complex mixture that makes up diesel exhaust. Diesel exhaust is composed of two phases, gas and particle, both of which contribute to health risks. CARB classified "particulate emissions from diesel-fueled engines" (i.e., DPM; 17 CCR § 93000) as a TAC in August 1998. DPM is emitted from a broad range of diesel engines: on-road diesel engines of trucks, buses, and cars and off-road diesel engines including locomotives, marine vessels, and heavy-duty construction equipment, among others. Approximately 70% of all airborne cancer risk in California is associated with DPM (CARB 2000). To reduce the cancer risk associated with DPM, CARB adopted a diesel risk reduction plan in 2000 (CARB 2000).

Sensitive Receptors

Some land uses are considered more sensitive to changes in air quality than others, depending on the population groups and the activities involved. People most likely to be affected by air pollution include children, the elderly, athletes, and people with cardiovascular and chronic respiratory diseases. Facilities and structures where people sensitive to air pollution live or spend considerable amounts of time are known as sensitive receptors and include schools and schoolyards, parks and playgrounds, daycare centers, nursing homes, hospitals, and residential communities (CARB 2005). The SCAQMD identifies sensitive receptors as residences, schools, playgrounds, childcare centers, long-term healthcare facilities, rehabilitation centers, convalescent centers, and retirement homes (SCAQMD 1993).

Regional and Local Air Quality Conditions

South Coast Air Basin Attainment Classification

Pursuant to the 1990 federal Clean Air Act amendments, the EPA classifies air basins (or portions thereof) as "attainment" or "nonattainment" for each criteria air pollutant, based on whether the National Ambient Air Quality Standards (NAAQS) have been achieved. The Project is located within the SCAB, where efforts to attain state and federal air quality standards are governed by the SCAQMD. Both the State of California (State) and the Federal government have established health-based ambient air quality standards (AAQS) for seven air pollutants (known as *criteria pollutants*). These pollutants include ozone (O_3), carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), inhalable particulate matter with a diameter of 10 microns or less (PM_{10}), fine particulate matter with a diameter of 2.5 microns or less ($PM_{2.5}$), and lead (Pb). The state has also established AAQS (CAAQS) for additional pollutants. The AAQS are designed to protect the health and welfare of the populace within a reasonable margin of safety. Where the state and federal standards differ, CAAQS are more stringent than the NAAQS.

The U.S. EPA, CARB, and the SCAQMD assess the air quality of an area by measuring and monitoring the amount of pollutants in the ambient air and comparing pollutant levels against NAAQS and CAAQS. Based on these comparisons, regions are classified into one of the following categories:

- **Attainment.** A region is "in attainment" if monitoring shows ambient concentrations of a specific pollutant are less than or equal to NAAQS or CAAQS. In addition, an area that

has been re-designated from nonattainment to attainment is classified as a "maintenance area" for 10 years to ensure that the air quality improvements are sustained.

- **Nonattainment.** If the NAAQS or CAAQS are exceeded for a pollutant, the region is designated as nonattainment for that pollutant. It is important to note that some NAAQS and CAAQS require multiple exceedances of the standard in order for a region to be classified as nonattainment. Federal and state laws require nonattainment areas to develop strategies, plans, and control measures to reduce pollutant concentrations to levels that meet, or attain, standards.
- **Unclassified.** An area is unclassified if the ambient air monitoring data are incomplete and do not support a designation of attainment or nonattainment.

Air pollution levels are measured at monitoring stations located throughout the air basin. Table 4.3-1 depicts the current attainment status of the project site with respect to the NAAQS and CAAQS. The attainment classifications for the criteria pollutants are outlined in Table 4.3-1.

Table 4.3-1
South Coast Air Basin Attainment Classification

Pollutant	Federal	State
Ozone (8-Hour)	Nonattainment	Nonattainment
Ozone (1-Hour)	Nonattainment	Nonattainment
Carbon Monoxide	Attainment (Maintenance)	Attainment
PM_{10}	Attainment	Nonattainment
$PM_{2.5}$	Nonattainment	Nonattainment
Nitrogen Dioxide	Attainment	Attainment
Sulfur Dioxide	Attainment	Attainment
Lead	Partial Nonattainment	Nonattainment
Sulfates	--	Attainment
Hydrogen Sulfide	--	Unclassified
Visibility	--	Unclassified
Source: CARB, 2019		

In summary, the SCAB is designated as a nonattainment area for federal and state O_3 standards and federal and state $PM_{2.5}$ standards. The SCAB is designated as a nonattainment area for state PM_{10} standards; however, it is designated as an attainment area for federal PM_{10} standards. The SCAB is designated as an attainment area for federal and state CO standards, federal and state NO_2 standards, and federal and state SO_2 standards. While the SCAB has been designated as nonattainment for the federal rolling 3-month average lead standard, it is designated attainment for the state lead standard (EPA 2016; CARB 2016).

Local Ambient Air Quality

CARB, air districts, and other agencies monitor ambient air quality at approximately 250 air quality monitoring stations across the state. The project site's local ambient air quality is monitored by the SCAQMD. Air quality monitoring stations usually measure pollutant concentrations 10 feet above ground level; therefore, air quality is often referred to in terms of ground-level concentrations. The San Bernardino Monitoring Station, located at 24302 East 4th Street, San Bernardino, California, is located approximately 3.8-miles northwest of the Project site. Representative air quality data from the San Bernardino monitoring station from 2015 through 2017 are provided in Table 4.3-2, Ambient Air Quality Data. Particulate Matter data is not available for the San Bernardino monitoring station for the year 2017.

Table 4.3-2
Ambient Air Quality Data

Pollutant	Standard	Year		
		2015	2016	2017
Ozone (O_3)				
Maximum 1-hour Concentration (ppm)		0.133	0.139	0.137
Maximum 8-hr Concentration (ppm)		0.111	0.105	0.118
Number of Days Exceeding State 1-hr Standard	>0.09 ppm	36	34	32
Number of Days Exceeding State 8-hr Standard	>0.07 ppm	59	52	48
Days Exceeding Federal 1-hr Standard	>0.12 ppm	3	3	2
Days Exceeding Federal 8-hr Standard	>0.075 ppm	57	49	48
Days Exceeding Health Advisory	≥0.15ppm	--	--	--
Carbon Monoxide (CO)				
Maximum 1-hr Concentration (ppm)		2.8	1.7	1.6
Maximum 8-hr Concentration (ppm)		1.2	1.0	1.2
Days Exceeding State 1-hr Standard	>20 ppm	--	--	--
Days Exceeding Federal/State 8-hr Standard	>9.0 ppm	--	--	--
Days Exceeding Federal 1-hr Standard	>35 ppm	--	--	--
Nitrogen Dioxide (NO_2)				
Maximum 1-hr Concentration (ppb)		89.1	71.7	69.2
Annual Arithmetic Mean Concentration (ppb)		18.7	18.2	18.3
Days Exceeding State 1-hr Standard	>0.18 ppm	--	--	--
Sulfur Dioxide (SO_2)				
Maximum 1-hr Concentration (ppb)	>0.075 ppm	4.0	6.3	3.9
Particulate Matter (PM_{10})				
Maximum 24-hr Concentration (µg/m^3)		96	94	--
Number of Samples		55	61	--
Samples Exceeding State Standard	>50 µg/m^3	13	15	--
Samples Exceeding Federal Standard	>150 µg/m^3	0	0	--
Particulate Matter ($PM_{2.5}$)				
Maximum 24-hr Concentration (µg/m^3)		47.3	30.45	--
Annual Arithmetic Mean (µg/m^3)		10.70	12.04	--
Samples Exceeding Federal 24-hr Standard	>35 µg/m^3	2	0	-

Source: CARB 2016, SCAQMD 2016, modified by MIG.
-- pollutant not monitored
ppm, parts per million
µg/m^3, micrograms per cubic meter

4.3.2 – REGULATORY FRAMEWORK

Regulatory oversight for air quality in the SCAB is maintained by the EPA at the federal level, CARB at the state level, and by the SCAQMD at the regional level. Applicable laws, regulations and standards of these three agencies are described in the following subsections.

Federal

The Federal Clean Air Act passed in 1970 and last amended in 1990 forms the basis for the national air pollution control effort. The EPA is responsible for implementing most aspects of the Clean Air Act, including the setting of the federal NAAQS for major air pollutants hazardous air

pollution standards, approval of state attainment plans, motor vehicle emission standards, stationary source emissions standards and permits, acid rain control measures, stratospheric O_3 protection, and enforcement provisions. Federal standards are established for criteria pollutants under the Clean Air Act, which are O_3, CO, NO_2, SO_2, PM_{10}, $PM_{2.5}$, and lead.

The federal standards describe acceptable air quality conditions designed to protect the health and welfare of the citizens of the nation. The federal standards (other than for O_3, NO_2, SO_2, PM_{10}, $PM_{2.5}$, and those based on annual averages or arithmetic mean) are not to be exceeded more than once per year. Federal standards for O_3, NO_2, SO_2, PM_{10}, and $PM_{2.5}$ are based on statistical calculations over 1- to 3-year periods, depending on the pollutant. The Clean Air Act requires the EPA to reassess the federal standards at least every 5 years to determine whether adopted standards are adequate to protect public health based on current scientific evidence. States with areas that exceed the federal standards must prepare a state implementation plan that demonstrates how those areas will attain the standards within mandated time frames.

The federal Clean Air Act delegates the regulation of air pollution control and the enforcement of the federal standards to the states. In California, the task of air quality management and regulation has been legislatively granted to CARB, with subsidiary responsibilities assigned to air quality management districts and air pollution control districts at the regional and county levels.

State

CARB has established state CAAQS, which are generally more restrictive than the federal standards. The state standards describe adverse conditions; that is, pollution levels must be below these standards before a basin can attain the standard. The state standards for O_3, CO, SO_2 (1 hour and 24 hours), NO_2, PM_{10}, and $PM_{2.5}$ and visibility-reducing particles are values that are not to be exceeded. All others are not to be equaled or exceeded. The federal and state standards are presented in Table 4.3-3 (Ambient Air Quality Standards).

Table 4.3-3
Ambient Air Quality Standards

Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards [1]		National Standards [2]		
		Concentration [3]	Method [4]	Primary [3,5]	Secondary [3,6]	Method [7]
Ozone (O_3)[8]	1 Hour	0.09 ppm (180 µg/m^3)	Ultraviolet Photometry	—	Same as Primary Standard	Ultraviolet Photometry
	8 Hour	0.070 ppm (137 µg/m^3)		0.070 ppm (137 µg/m^3)		
Respirable Particulate Matter (PM10)[9]	24 Hour	50 µg/m^3	Gravimetric or Beta Attenuation	150 µg/m^3	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 µg/m^3		—		
Fine Particulate Matter (PM2.5)[9]	24 Hour	—	—	35 µg/m^3	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	12 µg/m^3	Gravimetric or Beta Attenuation	12.0 µg/m^3	15 µg/m^3	
Carbon Monoxide (CO)	1 Hour	20 ppm (23 mg/m^3)	Non-Dispersive Infrared Photometry (NDIR)	35 ppm (40 mg/m^3)	—	Non-Dispersive Infrared Photometry (NDIR)
	8 Hour	9.0 ppm (10 mg/m^3)		9 ppm (10 mg/m^3)	—	
	8 Hour (Lake Tahoe)	6 ppm (7 mg/m^3)		—	—	
Nitrogen Dioxide (NO_2)[10]	1 Hour	0.18 ppm (339 µg/m^3)	Gas Phase Chemiluminescence	100 ppb (188 µg/m^3)	—	Gas Phase Chemiluminescence
	Annual Arithmetic Mean	0.030 ppm (57 µg/m^3)		0.053 ppm (100 µg/m^3)	Same as Primary Standard	
Sulfur Dioxide (SO_2)[11]	1 Hour	0.25 ppm (655 µg/m^3)	Ultraviolet Fluorescence	75 ppb (196 µg/m^3)	—	Ultraviolet Flourescence; Spectrophotometry (Pararosaniline Method)
	3 Hour	—		—	0.5 ppm (1300 µg/m^3)	
	24 Hour	0.04 ppm (105 µg/m^3)		0.14 ppm (for certain areas)[11]	—	
	Annual Arithmetic Mean	—		0.030 ppm (for certain areas)[11]	—	
Lead[12,13]	30 Day Average	1.5 µg/m^3	Atomic Absorption	—	—	High Volume Sampler and Atomic Absorption
	Calendar Quarter	—		1.5 µg/m^3 (for certain areas)[12]	Same as Primary Standard	
	Rolling 3-Month Average	—		0.15 µg/m^3		
Visibility Reducing Particles[14]	8 Hour	See footnote 14	Beta Attenuation and Transmittance through Filter Tape	No National Standards		
Sulfates	24 Hour	25 µg/m^3	Ion Chromatography			
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m^3)	Ultraviolet Fluorescence			
Vinyl Chloride[12]	24 Hour	0.01 ppm (26 µg/m^3)	Gas Chromatography			

See footnotes at https://www.arb.ca.gov/research/aaqs/aaqs2.pdf

For more information please call ARB-PIO at (916) 322-2990

California Air Resources Board (5/4/16)

Local

South Coast Air Quality Management District

The SCAQMD is the regional agency responsible for the regulation and enforcement of federal, state, and local air pollution control regulations in the SCAB, where the project is located. The SCAQMD operates monitoring stations in the SCAB, develops rules and regulations for stationary sources and equipment, prepares emissions inventory and air quality management planning documents, and conducts source testing and inspections. The SCAQMD's Air Quality Management Plans (AQMPs) include control measures and strategies to be implemented to attain state and federal ambient air quality standards in the SCAB. The SCAQMD then implements these control measures as regulations to control or reduce criteria pollutant emissions from stationary sources or equipment.

On March 3, 2017, the SCAQMD approved the 2016 AQMP, which demonstrates attainment of the 1-hour and 8-hour ozone NAAQS as well as the latest 24-hour and annual $PM_{2.5}$ standards. The 2016 AQMP is a regional blueprint for achieving air quality standards and healthful air. The 2016 AQMP represents a new approach, focusing on available, proven, and cost effective alternatives to traditional strategies, while seeking to achieve multiple goals in partnership with other entities promoting reductions in GHGs and toxic risk, as well as efficiencies in energy use, transportation, and goods movement (SCAQMD 2018). Since mobile sources are the principal contributor to the SCAB's air quality challenges, the SCAQMD has been and will continue to be closely engaged with CARB and the EPA, who have primary responsibility for these sources. The 2016 AQMP recognizes the critical importance of working with other agencies to develop funding and other incentives that encourage the accelerated transition of vehicles, buildings, and industrial facilities to cleaner technologies in a manner that benefits not only air quality but also local businesses and the regional economy. These "win-win" scenarios are key to implementation of this draft 2016 AQMP with broad support from a wide range of stakeholders.

SCAQMD Rules

Emissions that would result from stationary and area sources during operation under the project may be subject to SCAQMD rules and regulations, including:

- **Rule 401 – Visible Emissions:** This rule establishes the limit for visible emissions from stationary sources.
- **Rule 402 – Nuisance:** This rule prohibits the discharge of air pollutants from a facility that cause injury, detriment, nuisance, or annoyance to the public or damage to business or property.
- **Rule 403 – Fugitive Dust:** This rule requires fugitive dust sources to implement best available control measures for all sources to ensure all forms of visible particulate matter are prohibited from crossing any property line. SCAQMD Rule 403 is intended to reduce PM10 emissions from any transportation, handling, construction, or storage activity that has the potential to generate fugitive dust.
- **Rule 431.2 – Sulfur Content of Liquid Fuels:** The purpose of this rule is to limit the sulfur content in diesel and other liquid fuels for the purpose of reducing the formation of SOx and particulates during combustion and of enabling the use of add-on control devices for diesel-fueled internal combustion engines. The rule applies to all refiners, importers, and other fuel suppliers such as distributors, marketers, and retailers, as well as to users of

diesel, low-sulfur diesel, and other liquid fuels for stationary-source applications in the SCAQMD. The rule also affects diesel fuel supplied for mobile sources.

- **Rule 1110.2 – Emissions from Gaseous- and Liquid-Fueled Engines**: This rule applies to stationary and portable engines rated at greater than 50 horsepower. The purpose of Rule 1110.2 is to reduce NO_x, VOCs, and CO emissions from engines. Emergency engines, including those powering standby generators, are generally exempt from the emissions and monitoring requirements of this rule because they have permit conditions that limit operation to 200 hours or less per year as determined by an elapsed operating time meter.
- **Rule 1113 – Architectural Coatings*:*** This rule requires manufacturers, distributors, and end users of architectural and industrial maintenance coatings to reduce VOC emissions from the use of these coatings, primarily by placing limits on the VOC content of various coating categories.
- **Rule 1143 (Consumer Paint Thinners and Multi-Purpose Solvents)** prohibits the supply, sale, manufacture, blend, package or repackage of any consumer paint thinner or multi-purpose solvent for use in the District unless consumer paint thinners or other multi-purpose solvents comply with applicable VOC content limits.

San Bernardino County General Plan

The following goals, policies, and programs from the General Plan Conservation Element are applicable to the Project:

Goal CO 4.1 The County will ensure good air quality for its residents, businesses, and visitors to reduce impacts on human health and the economy

4.3.3 – SIGNIFICANCE THRESHOLDS

Per the CEQA Guidelines, implementation of the Project would have a significant impact related to air quality if it would:

a) Conflict with or obstruct implementation of the applicable air quality plan;
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard;
c) Expose sensitive receptors to substantial pollutant concentrations; or
d) Result in other emissions (such as those leading to odors adversely affecting a substantial number of people.

4.3.4 – IMPACTS AND MITIGATION MEASURES

This section describes potential impacts related to conflicts with an applicable air quality plan, violations of air quality standards, cumulatively considerable net increases of criteria pollutants, exposure of sensitive receptors to substantial pollutant concentrations, and objectionable odors; which could result from the implementation of the project and recommends mitigation measures as needed to reduce significant impacts.

Conflicts with Local Air Quality Plans

Impact AQ-1 – Would the Project conflict with or obstruct implementation of the applicable air quality plan?

Analysis of Impacts

As part of its enforcement responsibilities, the EPA requires each state with nonattainment areas to prepare and submit a State Implementation Plan that demonstrates the means to attain the federal standards. The plan must integrate federal, state, and local plan components and regulations to identify specific measures to reduce pollution in nonattainment areas, using a combination of performance standards and market-based programs. Similarly, under state law, the California Clean Air Act requires an air quality attainment plan to be prepared for areas designated as nonattainment under the federal and state ambient air quality standards. Air quality attainment plans outline emissions limits and control measures to achieve and maintain these standards by the earliest practical date.

As previously mentioned, the project site is in the SCAB, which is under the jurisdiction of the SCAQMD. The SCAQMD is required, pursuant to the federal Clean Air Act, to reduce emissions of criteria pollutants for which the Basin is in nonattainment. To reduce such emissions, the SCAQMD adopted the 2016 AQMP, which establishes a program of rules and regulations directed at reducing air pollutant emissions and achieving state and national air quality standards. The 2016 AQMP pollutant control strategies are based on the latest scientific and technical information and planning assumptions, including the Southern California Association of Governments' (SCAG) latest Regional Transportation Plan/Sustainable Communities Strategy, updated emission inventory methodologies for various source categories, and SCAG's latest growth forecasts. (SCAG's latest growth forecasts were defined in consultation with local governments and with reference to local general plans.)

Criteria for determining consistency with the AQMP are defined by the following indicators:

- Consistency Criterion No. 1: The proposed project will not result in an increase in the frequency or severity of existing air quality violations, or cause or contribute to new violations, or delay the timely attainment of air quality standards or the interim emissions reductions specified in the AQMP.
- Consistency Criterion No. 2: The proposed project will not exceed the assumptions in the AQMP or increments based on the years of the project buildout phase.

The violations that Consistency Criterion No. 1 refers to are the NAAQS and CAAQS. The SCAQMD has established thresholds of significance for construction and operational activities of land use development to determine whether a project would violate the CAAQS and NAAQS. Provided below is a full analysis of the construction and operational emissions generated by the Project. Project operation would exceed SCAQMD operational thresholds for NO_X, even with mitigation, and would, therefore, violate air quality standards.

Concerning Consistency Criterion No. 2, the AQMP contains air pollutant reduction strategies based on SCAG's latest growth forecasts, and SCAG's growth forecasts were defined in consultation with local governments and with reference to local general plans. The CEQA Air Quality Handbook indicates that consistency with AQMP growth assumptions must be analyzed for new or amended General Plan elements, Specific Plans, and significant projects. Significant

projects include airports, electrical generating facilities, petroleum and gas refineries, designation of oil drilling districts, water ports, solid waste disposal sites, and off-shore drilling facilities; therefore, the Project is not defined as significant.

Construction–Related Regional Air Quality Impacts

Construction associated with the Project would generate short-term emissions of criteria air pollutants. The criteria pollutants of primary concern in the project area include ozone-precursor pollutants (i.e., VOC and NO_x) and PM_{10}. Construction-generated emissions are short term and of temporary duration, lasting only as long as construction activities occur, but have the potential to represent a significant air quality impact.

Construction results in the temporary generation of emissions ensuing from site grading and excavation, road paving, motor vehicle exhaust associated with construction equipment and worker trips, and the movement of construction equipment, especially on unpaved surfaces. Emissions of airborne PM are largely dependent on the amount of ground disturbance associated with site preparation activities as well as weather conditions and the appropriate application of water. Construction-related emissions are expected from site preparation, grading, building construction, paving, architectural coatings, and construction workers commuting. Grading of the project site would be balanced, and no soil import or export would be required. Architectural coatings (i.e., painting) would occur sporadically throughout the building phase, as needed.

Short-term emissions from Project construction were evaluated using the California Emissions Estimator Model (CalEEMod), Version 2016.3.2. The estimated construction period for the Project is approximately 14 months. The default parameters within CalEEMod were used and these default values reflect a worst-case scenario, which means that Project emissions are expected to be equal to or less than the estimated emissions. In addition to the default values used, assumptions relevant to model inputs for short-term construction emission estimates used are discussed herein. Construction is anticipated to begin no sooner than August 2019 with grading and end no sooner than September 2020 with architectural coatings (painting). The equipment to be used for each construction phase is based on CalEEMod defaults, with the exception of paving and grading. Default paving equipment was reduced to one piece of each type of equipment due to the limited amount of asphalt proposed. Three additional scrapers were analyzed in the grading phase, based on applicant input. Each piece of equipment is assumed to operate 8 hours per day. To evaluate Project compliance with SCAQMD Rule 403 for fugitive dust control, the Project utilized the mitigation option of watering the site three times daily, which achieves a control efficiency of 61 percent for PM_{10} and $PM_{2.5}$ emissions. Two one-way vendor trips were added to the grading and paving activities to account for water truck trips. Off-site infrastructure improvements will also be required. Off-site improvements will include half-width buildout of Alabama Street and Palmetto Avenue (additional 12 feet) along the Project frontage. Sewer, water, and storm water drainage lines will connect to existing lines within adjacent streets.

The estimated maximum daily construction emissions are summarized in Table 4.3-4, below. As previously stated, all construction projects in the SCAB are subject to SCAQMD rules and regulations in effect at the time of construction, including Rule 403 described above. The construction emissions summarized in Table 4.3-4 account for the quantifiable PM reducing requirements of SCAQMD Rule 403.

Table 4.3-4
Unmitigated Estimated Maximum Daily Construction Emissions

Activity	Peak Daily Emissions (lbs/day)					
	VOC	**NO_X**	**CO**	**SO_2**	**PM_{10}**	**$PM_{2.5}$**
Grading-2019	8.11	**93.61**	59.00	0.11	9.42	5.28
Building Construction-2019	10.11	72.93	78.95	0.26	15.81	5.43
Building Consrtuction-2020	**9.15**	66.57	**72.45**	**0.25**	**15.53**	**5.17**
Paving-2020	**1.80**	7.27	**7.73**	**0.01**	**0.48**	**0.38**
Architectural Coatings-2020	**381.61**	3.00	**11.71**	**0.03**	**2.47**	**0.77**
Maximum[1]	**392.57**	**93.61**	**91.89**	**0.29**	**18.48**	**6.32**
SCAQMD Daily Threshold	**75**	**100**	**550**	**150**	**150**	**55**
Exceeds Threshold?	**Yes**	**No**	**No**	**No**	**No**	**No**

Note: [1] Maximum emissions are the greater of grading alone in 2019, or the greater of the sum of building construction, paving and architectural coating in 2020 since these activities overlap. Maximum emissions are shown in bold.

As shown in Table 4.3-4, the emissions from construction of the Project are below the SCAQMD daily construction thresholds for all the criteria pollutants, except VOC resulting from architectural coatings (painting). As discussed below, mitigation measures will be adopted that will reduce VOC emissions during architectural coating activities to less than significant levels.

Construction–Related Localized Impacts Analysis

As part of the SCAQMD's Environmental Justice program, attention has been focused on localized effects of air quality. Staff at SCAQMD has developed localized significance threshold (LST) methodology that can be used by public agencies to determine whether or not a project may generate significant adverse localized air quality impacts (both short- and long-term). LSTs represent the maximum emissions from a project that will not cause or contribute to an exceedance of the state ambient air quality standard, and are developed based on the ambient concentrations of that pollutant for each source receptor area (SRA). The Project is located close to the borderline of SRA-34 and SRA- 35. SRA-34 was used because it provides the most conservative thresholds.

According to the LST methodology, only on-site emissions need to be analyzed. Emissions associated with vendor and worker trips are mobile source emissions that occur off site. The emissions analyzed under the LST methodology are NO_2, CO, PM_{10}, and $PM_{2.5}$. SCAQMD has provided LST lookup tables to allow users to readily determine if the daily emissions for proposed construction or operational activities could result in significant localized air quality impacts for projects five acres or smaller. Although the Project site disturbs almost 54.76 acres, it is anticipated that an area of approximately seven acres would be disturbed per day during construction. Although the Project exceeds five acres per day disturbance, per SCAQMD, the LST threshold and tables can be used as a screening tool to determine if dispersion modeling would be necessary. Therefore, the Project's on-site emissions from CalEEMod and LST Look-Up Tables for the five-acre site were utilized as a screening-level analysis. If the Project emissions do not exceed the screening thresholds for five acres, a more detailed analysis is not required.

The LST thresholds are estimated using the maximum daily disturbed area (in acres) and the distance of the Project to the nearest sensitive receptors (in meters). The closest sensitive receptors to the Project site is the existing Packinghouse Christian Academy on the southwest corner of San Bernardino Avenue and Alabama Street, approximately 810 meters (2,657 feet) to the south. The applicable receptor distance on the LST look-up tables is 500 meters, which

provides a conservative analysis. The results are summarized in Table 4.3-5, *Unmitigated LST Results for Daily Construction Emissions*, below. As shown in Table, 4.3-5, emissions from construction of the Project will be below the LST threshold established by SCAQMD for the Project.

Table 4.3-5
Unmitigated LST Results for Daily Construction Emissions

Activity	Peak Daily Emissions (lbs/day)			
	NO_X	CO	PM_{10}	$PM_{2.5}$
Grading-2019	**93.26**	**57.56**	**9.09**	**5.19**
Building Construction-2019	22.71	18.31	1.38	1.30
Building Consrtuction-2020	20.65	17.97	1.19	1.12
Paving-2020	7.03	7.33	0.38	0.35
Architectural Coatings-2020	2.25	2.44	0.15	0.15
Maximum[1]	**93.26**	**57.56**	**9.09**	**5.19**
LST Threshold[2]	**778**	**27,680**	**229**	**120**
Exceeds Threshold?	**No**	**No**	**No**	**No**

Note: [1] Maximum emissions are the greater of either grading alone or building construction 2019, or building construction 2020, paving architectural coatings since these activities overlap. Maximum emissions are shown in bold.
[2] LST Threshold for a 5-acre site at 500 meter receptor distance.

Operation–Related Regional Air Quality Impacts

Long-term emissions are evaluated at build-out of a project. The Project is assumed to be operational in 2020. Mobile source emissions refer to on-road motor vehicle emissions generated from the Project's traffic and are based on the Project-specific TIA. An average truck trip length of approximately 77 miles was assumed, which is the distance to the Ports of Los Angeles/Long Beach. On-site service equipment (i.e., forklifts) are assumed to be electric and therefore do not have any direct emissions of criteria pollutants. Area source emissions from the Project include stationary combustion emissions of natural gas used for space and water heating (shown in a separate row as energy), yard and landscape maintenance, and an average building square footage to be repainted each year. CalEEMod computes area source emissions based upon default factors and land use assumptions. CalEEMod defaults were used and reflect the 2016 Title 24 standards. Separate emissions were computed for both the summer and winter. The estimated maximum daily operation emissions are summarized in Table 4.3-6, *Unmitigated Estimated Maximum Daily Project Operation Emissions (Summer),* and Table 4.3-7, *Unmitigated Estimated Maximum Daily Project Operation Emissions (Winter)*.

Table 4.3-6
Unmitigated Estimated Maximum Daily Project Emissions (Summer)

Activity	Peak Daily Emissions (lbs/day)					
	VOC	NO_X	CO	SO_2	PM_{10}	$PM_{2.5}$
Area	27.21	0.00	0.25	0.00	0.00	0.00
Energy	0.07	0.65	0.55	0.00	0.05	0.05
Mobile	7.42	88.74	117.28	0.58	38.91	10.95
Total	**34.70**	**89.40**	**118.08**	**0.58**	**38.96**	**11.00**
SCAQMD Daily Threshold	**55**	**55**	**550**	**150**	**150**	**55**
Exceeds Threshold?	**No**	**Yes**	**No**	**No**	**No**	**No**

Note: Emissions reported as zero are rounded and not necessarily equal to zero.

Table 4.3-7
Unmitigated Estimated Maximum Daily Project Emissions (Winter)

Activity	Peak Daily Emissions (lbs/day)					
	VOC	NO_X	CO	SO_2	PM_{10}	$PM_{2.5}$
Area	27.21	0.00	0.25	0.00	0.00	0.00
Energy	0.07	0.65	0.55	0.00	0.05	0.05
Mobile	6.88	90.74	100.51	0.54	38.91	10.95
Total	**34.16**	**91.40**	**101.31**	**0.55**	**38.96**	**11.00**
SCAQMD Daily Threshold	**55**	**55**	**550**	**150**	**150**	**55**
Exceeds Threshold?	**No**	**Yes**	**No**	**No**	**No**	**No**
Note: Emissions reported as zero are rounded and not necessarily equal to zero.						

As shown in Tables 4.3-6 and 4.3-7, criteria pollutant emissions from operation of the Project will exceed the SCAQMD regional daily thresholds for NO_x during summer and winter. Please see the subheading "Recommended Mitigation Measures" for mitigation that reduces the Project's NO_x emissions.

Operation–Related Localized Impacts Analysis

According to the LST methodology, LSTs only apply to the operational phase if a project includes stationary sources or attracts mobile sources that may spend long periods of time idling at the site, such as warehouse/transfer facilities. The Project will operate as a logistics center and has the potential to attract mobile sources that can reasonably be assumed will idle at the site; therefore, a long-term LST analysis was prepared for this Project. CalEEMod version 2016.3.2 was utilized to estimate the Project's emissions from cars and trucks traveling on the Project site. An on-site distance of 0.68 miles was conservatively assumed to be traveled for each one of the Project's trips identified in the Project TIA. Idling emissions from trucks at loading docks is not available in CalEEMod; therefore, PM_{10} and $PM_{2.5}$ idling emissions were calculated separately to account for 15-minutes of on-site idling per truck per day. The results were added to the total PM_{10} and $PM_{2.5}$ emissions from CalEEMod and presented in Table 4.3-8, *Unmitigated LST Results for Daily Operational Emissions*, below. The closest sensitive receptor to the Project site is the existing Packinghouse Christian Academy on the southwest corner of San Bernardino Avenue and Alabama Street, approximately 810 meters (2,657 feet) to the south. Therefore, a receptor distance of 500 meters (1,640 feet) was used and provides a conservative analysis.

Table 4.3-8
Unmitigated LST Results for Daily Operational Emissions

Activity	Peak Daily Emissions (lbs/day)			
	NO_X	CO	PM_{10}	$PM_{2.5}$[1]
On-Site Mobile	27.34	12.18	0.93	0.28
LST Threshold	**778**	**27,680**	**55**	**29**
Exceeds Threshold?	**No**	**No**	**No**	**No**
Note: The greater of summer or winter emissions from CalEEMod is shown. Output attached herewith. [1] CalEEMod output emissions added to idling emissions				

As shown in Table 4.3-8, Project-related long-term operational emissions will not exceed an SCAQMD operational LST threshold. Impacts will be less than significant.

Level of Significance Before Mitigation

As shown in Table 4.3-4, the emissions from construction of the Project are below the SCAQMD daily construction thresholds for all the criteria pollutants, except VOC resulting from architectural

coatings (painting). As shown in Tables 4.3-6 and 4.3-7, criteria pollutant emissions from operation of this Project will exceed the SCAQMD regional daily thresholds for NO_X during summer and winter.

Mitigation Measures

The following mitigation measure is recommended to reduce VOC emissions from Project construction:

MM AQ-1: To reduce VOC emissions associated with architectural coating, the Project designer and contractor shall reduce the use of paints and solvents by utilizing pre-coated materials (e.g. bathroom stall dividers, metal awnings), materials that do not require painting, and require coatings and solvents with a VOC content lower than required under Rule 1113 to be utilized. The construction contractor shall be required to utilize "Super-Compliant" VOC paints (less than 10% VOC content), which are defined in SCAQMD Rule 1113. Construction specifications shall be included in building specifications that assure these requirements are implemented. The specifications shall be reviewed by the County Building and Safety Division for compliance with this mitigation measure prior to issuance of the Project's building permit.

The following mitigation measures will be implemented by the Lead Agency to reduce NO_x emissions from Project operation:

MM AQ-2: In order to promote alternative fuels, and help support "clean" truck fleets, the developer/successor-in-interest shall provide building occupants and businesses with information related to SCAQMD's Carl Moyer Program, or other state programs that restrict operations to "clean" trucks, such as 2007 or newer model year or 2010 compliant vehicles and information including, but not limited to, the health effect of diesel particulates, benefits of reduced idling time, CARB regulations, and importance of not parking in residential areas. If trucks older than 2007 model year will be used, the developer/successor-in-interest shall require, within one year of signing a lease, future tenants to apply in good-faith for funding for diesel truck replacement/retrofit through grant programs such as the Carl Moyer, Prop 1B, VIP, HVIP, and SOON funding programs, as identified on SCAQMD's website (http://www.aqmd.gov). Tenants will be required to use those funds, if awarded.

MM AQ-3: Service equipment (i.e., yard hostlers and forklifts) used within the site shall be electric or compressed natural gas-powered. Compliance with this mitigation measure shall be required prior to certificate of occupancy.

MM AQ-4: Although the Project does not include refrigerated warehouse space, trucks accessing the Project site may have auxiliary power units (APU) and/or transport refrigeration units (TRUs). Therefore, electrical hookups shall be installed at all loading docks to allow trucks with APU and/or TRUs with electric standby capabilities to plug in when APU/TRUs are in use. The County shall verify electrical hookups have been installed prior to occupancy.

Level of Significance After Mitigation

Implementation of mitigation measure MM AQ-1 will reduce the Project's short-term construction-related emissions. MM AQ-1 has quantitative reductions associated with it available in CalEEMod.

The mitigated emissions are shown in Table 4.3-9, *Mitigated Estimated Maximum Daily Construction Emissions*, below, and indicate that VOC emissions from architectural coatings (painting) activities will be reduced below the SCAQMD thresholds with implementation. As shown in Table 4.3-9, with implementation of MM AQ 1, VOC emissions associated with painting activities will be reduced below applicable thresholds. Construction-related VOC impacts will be less than significant with Implementation of MM AQ-1.

Table 4.3-9
Mitigated Estimated Maximum Daily Construction Emissions

Activity	Peak Daily Emissions (lbs/day)					
	VOC	NO_X	CO	SO_2	PM_{10}	$PM_{2.5}$
Building Consrtuction-2020[1]	9.15	66.57	72.45	0.25	15.53	5.17
Paving-2020[1]	1.80	7.27	7.73	0.01	0.48	0.38
Architectural Coatings-2020	49.93	3.00	11.71	0.03	2.47	0.77
Maximum[2]	**60.88**	**76.84**	**91.89**	**0.29**	**18.48**	**6.32**
SCAQMD Daily Threshold	**75**	**100**	**550**	**150**	**150**	**55**
Exceeds Threshold?	**No**	**No**	**No**	**No**	**No**	**No**

Notes: [1] Emissions shown are the Unmitigated Estimated Maximum Daily Construction Emissions from Table 2.
[2] Maximum emissions the sum of building construction, paving and architectural coating in 2020 since these activities overlap.

Implementation of MM AQ-2 through AQ-4 will reduce operational emissions of NO_X from transportation emissions; however, they do not have quantitative reductions associated with them available in CalEEMod. Therefore, even after implementation of MM AQ-2 through AQ-4, operation of the Project will still exceed criteria pollutant thresholds for NO_X established by SCAQMD on a regional level after implementation of mitigation measures. As a result, operational impacts related to NO_X will be significant and unavoidable because they will conflict with the AQMP by contributing to new violations of air quality standards for NO_X.

Cumulatively Considerable Net Increase of Criteria Pollutants

Impact A2-3 – Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?

Analysis of Impacts

Implementation of the Project would generate short-term construction and long-term operational emissions of regulated air pollutants (i.e., criteria air pollutants and TACs). These emissions would be released to the ambient air and disperse according to the topographic and meteorological influences that prevail near the Project area and in the greater SCAB. As discussed in Impact AQ-1, the Project would have short-term construction impacts related to VOC emissions and long-term operational impacts related to NO_x. The SCAQMD has adopted project-level significance thresholds for criteria pollutant emissions. The SCAQMD and/or CARB monitor levels of criteria air pollutant concentrations in ambient air to evaluate attainment of CAAQS and NAAQS. As explained under Impact AQ-1, the SCAQMD, in developing its CEQA significance thresholds, considered the emission levels at which a project's individual emissions would be cumulatively considerable (SCAQMD 2003b; page D-3). The SCAQMD considers projects that result in emissions that exceed its CEQA significance thresholds to result in individual impacts that are

cumulatively considerable and significant. As shown in Impact AQ-1, emissions of VOC during construction would be reduced to less than significant levels through mitigation. However, emissions of NO_x during operation will remain significant and unavoidable because they do not have quantitative reductions associated with them available in CalEEMod. Therefore, the Project would result in a cumulatively considerable net increase of NO_x for which the SCAB is in non-attainment.

Level of Significance Before Mitigation

Potentially significant.

Mitigation Measures

See Mitigation Measure AQ-2 through AQ-4. There are no additional feasible mitigation measures that would reduce operational NO_x impacts to less than significant.

Level of Significance After Mitigation

Operational impacts related to NO_x will be significant and unavoidable.

Exposure of Sensitive Receptors to Pollutants

Impact AQ-4 – Would the project expose sensitive receptors to substantial pollutant concentrations?

Analysis of Impacts

Sensitive receptors are defined as facilities or land uses that include members of the population that are particularly sensitive to the effects of air pollutants, such as children, the elderly, and people with illnesses. Examples of these sensitive receptors are residences, schools, hospitals, and day care centers. CARB has identified the following groups of individuals as the most likely to be affected by air pollution: the elderly over 65, children under 14, athletes, and persons with cardiovascular and chronic respiratory diseases such as asthma, emphysema, and bronchitis.

The project site is in an area characterized by large industrial warehouses. The closest sensitive receptors to the Project site is the existing Packinghouse Christian Academy on the southwest corner of San Bernardino Avenue and Alabama Street, approximately 810 meters (2,657 feet) to the south.

Construction-Generation Air Toxics

Construction-generated DPM emissions contribute to negative health impacts when construction is extended over lengthy periods of time. The use of diesel-powered equipment during construction would be temporary and episodic and would occur over several locations isolated from one another. Furthermore, the Project would be subject to and would comply with California regulations limiting idling to no more than 5 minutes, which would further reduce nearby sensitive receptors' exposure to temporary and variable DPM emissions. Project construction would not be a substantial source of other CARB-identified TACs.

Construction projects contained in a site of less than five acres are generally considered to represent less than significant health risk impacts due to (1) limitations on the off-road diesel

equipment able to operate and thus a reduced amount of generated DPM, (2) the reduced amount of dust-generating ground disturbance possible compared to larger construction sites, and (3) the reduced duration of construction activities compared to the development of larger sites. For these reasons and because diesel fumes disperse rapidly over relatively short distances, DPM generated by most construction activities, in and of itself, would not be expected to create conditions where the probability of contracting cancer is greater than 10 in one million for nearby receptors. As previously discussed, project construction is estimated to disturb up to seven acres daily. Although the Project exceeds five acres per day disturbance, per SCAQMD, the LST threshold and tables can be used as a screening tool to determine if dispersion modeling would be necessary. Therefore, the Project's on-site emissions from CalEEMod and LST Look-Up Tables for the five acre site were utilized as a screening-level analysis. If the Project emissions do not exceed the screening thresholds for five acres, a more detailed analysis is not required.

The LST thresholds are estimated using the maximum daily disturbed area (in acres) and the distance of the Project to the nearest sensitive receptors (in meters). The closest sensitive receptors to the Project site is the existing Packinghouse Christian Academy on the southwest corner of San Bernardino Avenue and Alabama Street, approximately 810 meters (2,657 feet) to the south. The applicable receptor distance on the LST look-up tables is 500 meters (1,640 feet), which provides a conservative analysis. The results are summarized in Table 4.3-5, *Unmitigated LST Results for Daily Construction Emissions*, below. As shown in Table, 4.3-5, emissions from construction of the Project will be below the LST threshold established by SCAQMD for the Project.

In addition, SCAQMD Rule 403 requires that basic construction mitigation measures be employed during all construction projects, including measures that would substantially reduce nuisance fugitive dust.

Furthermore, as discussed in the LST analysis previously presented, results indicate that the would not exceed the SCAQMD localized significance thresholds, and a less than significant impact is expected during construction activity. LSTs were developed in response to environmental justice and health concerns raised by the public regarding exposure of individuals to criteria pollutants in local communities. Therefore, sensitive receptors would not be subject to a significant air quality impact during project construction. This impact is less than significant.

CO Hot Spots During Project Operations

CO emissions are a function of vehicle idling time, meteorological conditions, and traffic flow. Under certain extreme meteorological conditions, CO concentrations near a congested roadway or intersection may reach unhealthful levels (adversely affecting residents, schoolchildren, hospital patients, the elderly, etc.).

The SCAQMD requires a quantified assessment of CO hot spots when a project increases the volume-to-capacity ratio (also called the intersection capacity utilization) by 0.02 (2 percent) for any intersection with an existing level of service (LOS) D or worse. Since traffic congestion is highest at intersections where vehicles queue and are subject to reduced speeds, these hot spots are typically produced at intersections.

The SCAB is designated as an unclassified/attainment area for the federal CO standards and as an attainment area for state standards. There has been a decline in overall CO emissions in the United States even though vehicle miles traveled on US urban and rural roads have increased. On-road mobile source CO emissions declined 24 percent between 1989 and 1998, despite a 23

percent rise in motor vehicle miles traveled over the same 10 years. California trends have been consistent with national trends; CO emissions declined 20 percent in California from 1985 through 1997 while vehicle miles traveled increased 18 percent in the 1990s. Three major control programs have contributed to the reduced per vehicle CO emissions: exhaust standards, cleaner burning fuels, and motor vehicle inspection/maintenance programs.

A detailed CO analysis was conducted in the Federal Attainment Plan for Carbon Monoxide (CO Plan) for the SCAQMD's 2003 Air Quality Management Plan. The locations selected for micro-scale modeling in the CO Plan are worst-case intersections in the Basin and would likely experience the highest CO concentrations. Thus, CO analysis in the CO Plan is utilized in a comparison to the Project, since it represents a worst-case scenario with heavy traffic volumes in the Basin.

The analysis prepared for CO attainment in the South Coast Air Basin by the SCAQMD can be used to assist in evaluating the potential for CO exceedances in the South Coast Air Basin. CO attainment was thoroughly analyzed as part of the SCAQMD's 2003 Air Quality Management Plan (2003 AQMP) and the Revised 1992 Federal Attainment Plan for Carbon Monoxide (1992 CO Plan). As discussed in the 1992 CO Plan, peak carbon monoxide concentrations in the South Coast Air Basin are due to unusual meteorological and topographical conditions, and not due to the impact of particular intersections (2003 AQMP Appendix V, p. V-4-32). Considering the region's unique meteorological conditions and the increasingly stringent CO emissions standards, CO modeling was performed as part of the 1992 CO Plan and subsequent plan updates and air quality management plans.

In the 1992 CO Plan, a CO hot spot analysis was conducted for four busy intersections in Los Angeles at the peak morning and afternoon time periods. The intersections evaluated included: Long Beach Blvd. and Imperial Highway (Lynwood); Wilshire Blvd. and Veteran Ave. (Westwood); Sunset Blvd. and Highland Ave. (Hollywood); and La Cienega Blvd. and Century Blvd. (Inglewood). These analyses did not predict a violation of CO standards. The busiest intersection evaluated in the 1992 CO Plan and subsequent 2003 AQMP was that at Wilshire Blvd. and Veteran Ave., which has a daily traffic volume of approximately 100,000 vehicles per day (2003 AQMP Appendix V, Table 4-7). The Los Angeles County Metropolitan Transportation Authority (MTA) evaluated the LOS in the vicinity of the Wilshire Blvd./Veteran Ave. intersection and found it to be level E at peak morning traffic and Level F at peak afternoon traffic (MTA, Exhibit 2-5 and 2-6). This hot spot analysis was conducted at intersections subject to extremes in vehicle volumes and vehicle congestion, and did not predict any violation of CO standards. Considering Project-related traffic as well as existing conditions, ambient growth, and cumulative project traffic, the highest average daily trips would be approximately 39,000 passenger car equivalents (PCE) on Alabama Street between Lugonia Avenue and Interstate 10 (I-10) westbound ramps, which is lower than the values studied by SCAQMD. Therefore, it can reasonably be concluded that Project-related traffic would not have daily traffic volumes exceeding those at the intersections modeled in the 2003 AQMP, nor would there be any reason unique to the meteorology to conclude that intersections affected by the Project would yield higher CO concentrations if modeled in detail. Thus, the Project would not result in CO hot spots.

Operational Diesel Particulate Matter

To analyze potential health risks resulting from project-generated DPM, a health risk assessment was prepared (Albert A. Webb Associates, April 2018). The assessment evaluated the increased potential for cancer risk and non-carcinogenic hazards as a result of the Project.

Cancer Risk: Six separate discrete receptors located at sensitive receptors and off-site worker receptors within the Project vicinity were modeled, as shown in Exhibit 4.3-1 below. Receptor 1 is located at the edge of the Packinghouse Christian Academy located one mile south of the Project, off of Alabama Street. Receptors 2 and 3 are located near the intersection of California Street and Lugonia Avenue, southwest of the Project site. Receptor 2 is representative of the Kaiser Permanente hospital and Receptor 3 is representative of a water park. Receptor 4 is located at a residence located off of 5th Street over one mile north of the Project site within an industrial area. Receptors 5 and 6 are off-site worker receptors located at the existing warehouse uses east and west, immediately adjacent to the Project site. Existing cancer risks were modeled based on the existing DPM concentrations in the Project vicinity to represent cancer risks from the modeled traffic only and, as such, do not include background DPM concentrations. The Project's anticipated increases in DPM and cancer risk were also modeled to determine if the Project would result in excess cancer risk above the SCAQMD threshold of 10 in one million. The existing cancer risk at modeled receptors is summarized in Table 4.3-10, *Existing (2018) Cancer Risk at Discrete Receptors*, below. As shown in Table 4.3-10, three of the six modeled receptor locations are exposed to excess cancer risks from DPM on the modeled roadways that exceed the SCAQMD threshold of 10 in one million. The highest modeled cancer risk at discrete receptors is 52.7 per million at Receptor 2, a sensitive receptor. The highest cancer risk to modeled off-site worker receptors is 1.4 per million. The reported maximum modeled concentration of DPM for off-site workers is located a mile northeast of the Project site on 5th Street between Alabama Street and the SR-210 (an area without sensitive uses) and equates to an excess cancer risk of 2.2 in one million.

Table 4.3-10
Existing (2018) Cancer Risk at Discrete Receptors

Receptor	Cancer Risk (per million)
Sensitive Receptors	
1	30.0
2	52.7
3	42.7
4	3.2
Off-Site Worker Receptors	
5	1.4
6	0.5

The Project-generated cancer risks to the discrete receptor locations modeled are summarized in Table 4.3-11, *Project-Generated Cancer Risk at Discrete Receptors*, below. As shown in Table 4.3-11, the greatest excess cancer risk faced by discrete sensitive and off-site worker receptors is 1.2 in one million or less. The reported maximum modeled DPM concentration to non-sensitive receptors is located near the on-site loading area in the east side of the Project site and would result in an excess cancer risk of 1.1 in one million. Based on the analysis, without mitigation, the long-term DPM emissions directly from the Project will not result in cancer risks exceeding the SCAQMD 10-in-one-million threshold at sensitive receptors.

Source: Albert A. Webb Associates

Not to Scale

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Exhibit 4.3-1 Discreet Receptor Locations

Duke Realty Alabama Palmetto Warehouse
County of San Bernardino, California

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Table 4.3-11
Project-Generated Cancer Risk at Discrete Receptors

Receptor	Cancer Risk (per million)
Sensitive Receptors	
1	1.2
2	0.7
3	0.6
4	0.2
Off-Site Worker Receptors	
5	0.3
6	0.2

Non-Cancer Risks: The non-cancer risks can be described as acute (short-term, generally 1-hour peak exposures) or chronic (long-term exposure, defined as 12 percent of a lifetime or about eight years for humans) health impacts. The California Office of Environmental Health Hazard Assessment (OEHHA) has developed acute and chronic reference exposure levels (REL) for determining the non-cancer health impacts of toxic substances. Exceeding the acute or chronic REL does not necessarily indicate that an adverse health impact will occur; however, levels of exposure above the REL have an increasing but undefined probability of resulting in an adverse health impact, particularly in sensitive individuals (OEHHA 2003). For DPM, there is no value for the acute REL and the chronic REL is 5 µg/m^3.

The relationship for the non-cancer health effects of DPM is given by the following equation:

$$\mathbf{HI_{DPM} = C_{DPM} / REL_{DPM}}$$

where,

HI_{DPM} Hazard Index; an expression of the potential for non-cancer health effects.

C_{DPM} Annual average DPM concentration in µg/m^3.

REL_{DPM} Reference exposure level (REL) for DPM; the DPM concentration at which no adverse health effects are anticipated.

The maximum DPM concentration of 0.04094 µg/m^3 occurs at sensitive Receptor 2, the Kaiser Permanente hospital off California Street under existing conditions. Using the equation above, the hazard index is 0.008, which is less than one percent of the allowed threshold of 1.

Level of Significance Before Mitigation

Less than significant.

Mitigation Measures

No mitigation is required.

Objectionable Odors

Impact AQ-5 – Would the project create objectionable odors affecting a substantial number of people?

Analysis of Impacts

Typically, odors are regarded as an annoyance rather than a health hazard. However, manifestations of a person's reaction to foul odors can range from psychological (e.g., irritation, anger, or anxiety) to physiological (e.g., circulatory and respiratory effects, nausea, vomiting, and headache).

According to the SCAQMD (1993) CEQA Air Quality Handbook, land uses associated with odor complaints typically include agricultural uses, wastewater treatment plants, food processing plants, chemical plants, composting, refineries, landfills, dairies, and fiberglass molding. The Project does not include any uses identified by the SCAQMD as being associated with odors.

Construction activities associated with the project may generate detectable odors from heavy duty equipment exhaust. Construction-related odors would be short-term in nature and cease upon project completion. Additionally, construction-related odors dissipate rapidly as the nature of construction necessitates the need to move equipment around the construction site throughout a workday. Any impacts to existing adjacent land uses would be short term and are less than significant.

Level of Significance Before Mitigation

Less than significant.

Mitigation Measures

No mitigation is required.

4.3.5 REFERENCES

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4.4 – Biological Resources

This EIR chapter addresses potential biological resources impacts associated with the Project. Issues of interest are biological resources impacts identified by the CEQA Guidelines: whether the Project will have a substantial adverse effect on any special status plant or wildlife species, riparian habitat, or state or federally protected wetlands, will interfere with the movement of native wildlife, will conflict with any local plan, or conflict with the provisions of an adopted Habitat Conservation Plan, or other approved plan. The information found in this Chapter is based in part on the *Biological Report for the Palmetto Project Site* by Harmsworth Associates (January 2019) which can be found in Appendix C of this Draft EIR.

4.4.1 – ENVIRONMENTAL SETTING

The entire Project site consists of approximately 55 acres of land previously used for agriculture but which is now fallow and abandoned. The Project site has historically been used as an orchard. The site is flat with little topographical variation. Site topography varies from an elevation of approximately 1,196 to 1,225 feet above mean sea level (msl). The Project site is located approximately 600-800 feet south of the Santa Ana River. Historically, the Santa Ana River flowed through a broad alluvial plain. There were many braided channels, with the main flows alternating between channels depending on flood conditions and flow regimes. In the project vicinity the southern boundary of the Santa Ana River was approximately along the 1,200 foot contour.

With development in the region the Santa Ana River was partially controlled with berms, banks and rock barriers, to reduce flooding. Currently, there is a rock rip-rap barrier with associated bank and access road running along the southern boundary of the Santa Ana River. This barrier is approximately 600 to 800 feet north of the Project site. The land between the southern boundary of the Santa Ana River and the Project site consists of the Redlands Wastewater Treatment Facility and an undeveloped parcel with ruderal, non-native grassland, eucalyptus trees and sparse scrub habitats

Soils

The soils on the study area are sandy loams from the Hanford-Tujunga-Greenfield association, which are excessively to poorly drained, loam soils on alluvial fans (NRCS Soil Survey 2018). Hanford sandy loam is the dominant soil onsite, covering more than 96 percent of the site. A small area along the northern boundary supports Tujunga loamy soil and a very small area (less than 0.2% of the site) on the property boundary supports Psamments, Fluvents and frequently flooded soils. Site soils are as follows;

Hanford Sandy Loam, 0 to 2 Percent Slopes (HbA)
This soil consists of well-drained and somewhat excessively drained soils on alluvial fans, and is derived from granitic materials. The upper 18 inches consists of grayish-brown (10YR 5/2) and very dark grayish brown (10YR 3/2) coarse sandy loam.

Tujunga Loamy Sand, Channeled, 0 to 5 Percent Slopes (TvC)
This soil consists of excessively drained soils on alluvial fans and floodplains, derived from alluvium primarily from granitic materials. These soils contain many small braided to large meandering channels. Surface soils are light gray (10YR 6/1) loamy sand, underlain by light gray

(10YR 7/1) fine sand. Tujunga soils are used for dryland grain, and if irrigated, truck crops, grapes and grain.

Psamments, Fluvents, and Frequently Flooded Soils (ps)
These soils consist of sandy and gravelly material in intermittent streambeds and rivers. Some areas consist of cobbles, stones and boulders. Surface soils are sand, gravel and cobbles. These soils support scant annual grasses and forbes with a few willows and cottonwoods. The main use is for sand and gravel for construction.

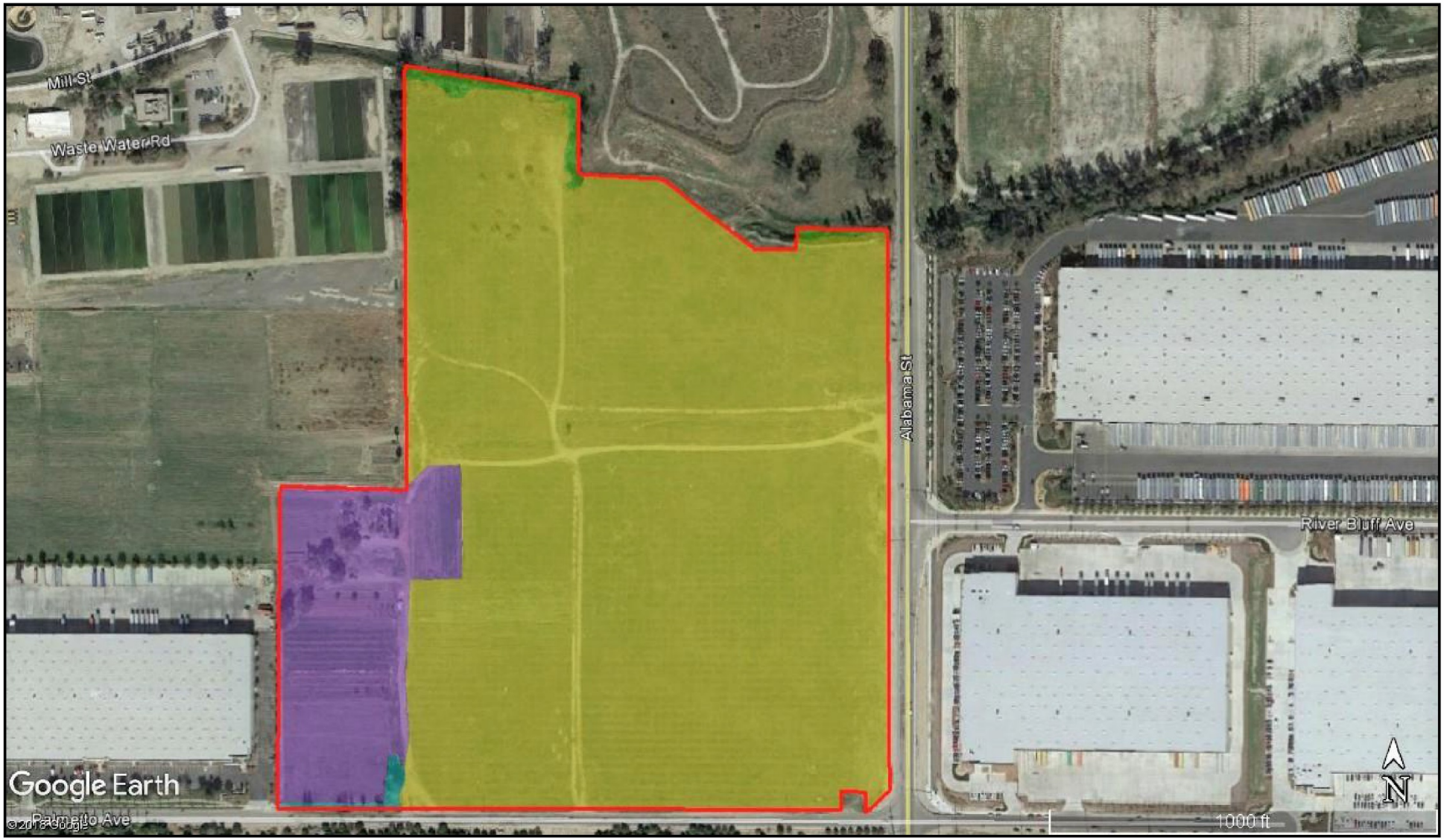
Plant Communities/ Habitat

The Project site has been significantly impacted due to years of agricultural activity, disking and disturbance. The entire area consisted of an active orchard in as recently as the late 1990s. Currently the site contains four vegetation communities/land types; California annual grassland, Eucalyptus semi-natural woodland stands, Mixed species windrows and agriculture (see Exhibit 4.4-1 Vegetation Map). Vegetation types within the Project site were mapped according to the state-wide Manual of California Vegetation (Sawyer *et al.* 2009) to the extent possible. Since this system focuses on native vegetation communities many disturbed and man-made land covers do not fit cleanly into the system. The best fit possible was made to map and classify the onsite vegetation. The equivalent vegetation community under the old Holland classification system (Holland 1986) is also noted. Dirt roads were mapped as the vegetation community which they go through.

California Annual Grasslands
This vegetation type describes areas dominated by non-native European annual grasses, with a large component of ruderal forbs. The best fit under the Sawyer *et al.* 2009 system would be Avena semi-natural herbaceous stands or Bromus-Brachypodium distachyon semi-natural herbaceous stands. However, neither of these stands contains significant amounts of barley, which is one of the dominants at the Project site. Therefore, the best fit for this vegetation type is California annual grassland (used in the older version of Sawyer *et al*). The majority of the project site consists of non-native grassland that is regularly disked. Non-native grasslands are associated with areas of historic grazing, disking and off-road recreational vehicle use. Soils are generally deep, well-drained sand to fine sandy loam. Holland (1986) classified this habitat type as non-native grasslands and wildflower fields.

The dominant species in the California annual grassland included barley (*Hordeum murinum*), oats (*Avena fatua*), brome grasses (*Bromus* spp.) and summer mustard (*Hirschfeldia incana*). Other species present included Russian thistle (*Salsola tragus*), common sunflower (*Helianthus annuus*), common phacelia (*Phacelia distans*) and common fiddlenck (*Amsinckia intermedia*). Approximately 10-15 blue elderberry (*Sambucus nigra*) trees occur in the northwestern end of the site within the California annual grassland. A total of 47.0 acres of California annual grassland occurs onsite (Table 4.4-1).

Agriculture
All agricultural operations on the Project site have ceased. The former now-abandoned agricultural area includes irrigated row crops, exotic trees, abandoned and recently disked fields. This area also supported weedy vegetation, non-native grasses, landscaping and exotic trees. A number of structures were located in this area including glass-houses, sheds and one temporary dwelling. The glass-houses are uncovered or partially covered in tarps rather than glass. Most of the sheds are in disrepair with no roof (Table 4.4-1).



Yellow = California annual grassland
Purple =agriculture
Green = Eucalyptus semi-natural woodland stands
Blue = Mixed species windrow

Source: Harmsworth Associates; Google Maps

Not to Scale

Exhibit 4.4-1 Vegetation Map

Duke Realty Alabama and Palmetto Warehouse
County of San Bernardino, California

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Table 4.4-1
Vegetation Communities at the Project Site

Vegetation Communities/ Land Cover Type	Project Site (acres)
California Annual Grassland	47.0
Now abandoned) Agricultural	7.2
Eucalyptus Semi-Natural Woodland Stands	0.6
Mixed-Species Windrow	0.2
Site Total	55.0
Source: Harmsworth Associates, 2019	

Eucalyptus Semi-Natural Woodland Stands
Two Eucalyptus windrows occur along the northern site boundary, where red gum (*Eucalyptus camaldulentis*) and silver-dollar gum (*Eucalyptus polyanthemos*) were planted in the past. The understory is minimal and consists of non-native annual grasses. A total of 0.6 acres of Eucalyptus semi-natural woodland stands occurs onsite (Table 4.4-1).

Windrows
A windrow along the southwestern site boundary, adjacent Palmetto Avenue, consists of a variety of exotic landscaping trees including pines, cypress and palms. A total of 0.2 acres of windrow occurs onsite (Table 4.4-1).

Plant Inventory

Plant species at the Project site consist of species associated with open and disturbed habitats. A total of 41 vascular plant species, representing 23 families were detected at the project site during the current surveys. About 32 percent (13) were native and the remaining 28 species were exotic. The best represented families were Poaceae (7 species) and Asteraceae (4 species).

Special Status Plant Species

No special-status plants were observed on the Project site during the July 2018 site surveys, and there are no historic site records for any special status plant species onsite (CNDDB 2018).

Based on a review of California Natural Diversity Database (CNDDB), the California Native Plant Society (CNPS) Inventory of Rare and Endangered Vascular Plants of California (Tibor 2001, CNPS 2018), and field surveys, several special status species were identified for additional analysis, although none are expected to occur onsite.

The entire site was an active orchard as recently as the late 1990s and any special status plant species present would likely have been eliminated during that time. Due to the past and current activities onsite, the disturbed nature of the site, the absence of native vegetation communities, the absence of any current or historic site records, no special-status plant species are expected to occur onsite.

In order to confirm the presence or absence of special status plant species at the Project site, surveys were conducted on April 5th and May 11th, 2019, by Glen Morrison of Harmsworth Associates. The focused survey for special status plant species followed the methods of CNPS (2001) and Nelson (1984). The focused surveys concentrated on habitats with the highest potential for yielding the target species and were performed during the peak of the blooming

period. Fieldwork was focused within specific areas and habitats, specifically open barrens, rock outcrops and heavy clays where non-native species were limited. However, all portions of the site were surveyed. Each of the habitats within the study area was traversed on foot, examining the areas for particular features such as seeps, unique geologic types, exposures, etc., that would indicate the presence of a preferred habitat for each rare plant species.

Prior to conducting fieldwork, previous results of botanical surveys and habitat assessments in the project area were reviewed. Survey visit dates were chosen to maximize visibility of potentially present special status plant species. During the surveys field notes included the date, location, habitat characteristics, and other information pertinent to the CNDDB field survey data form. This information was completed whether or not rare species are located. When a species was located, the following information was collected: plant phenology, relative abundance, estimated number of individuals, micro-site conditions, associated species and general habitat type. Special-status plants were mapped with a sub-meter-accurate, hand-held GPS unit, and subsequent to the survey, and photographs were taken.

The Special Status Plant Species Survey Report, which is included in Appendix C of this document, notes that the Project site has been significantly impacted due to years of agricultural activity, disking and disturbance. The entire area consisted of an active orchard in 1990s. Currently the site contains four vegetation communities/land types; California annual grassland, Eucalyptus semi-natural woodland stands, Mixed species windrows and agriculture. Vegetation types within the project site were mapped according the state-wide A Manual of California Vegetation (Sawyer *et al.* 2009) to the extent possible. Since this system focuses on native vegetation communities many disturbed and man-made land covers do not fit cleanly into the system. The best fit possible was made to map and classify the onsite vegetation. See the Biological Report for details (Harmsworth Associates 2019).

During the April 2019 survey, soils were relatively dry, but vegetation was still largely green and living. Vegetation across the site was very dense at this point in the season. By the May 2019 survey, the soils were very dry and the vegetation had died substantially due to drying and mechanical clearing/disking. Vegetation across the site was much sparser than at the time of the first survey.

Plant species at the Palmetto project site consisted of species associated with open and disturbed habitats. A total of 53 vascular plant species, representing 27 families were detected at the project site during the current surveys (Appendix B). About 30% (16) were native and the remaining 37 species were exotic naturalized species (28) or species that were previously planted on the site (9). The best represented families were Poaceae (8 species), Asteraceae (6 species), and Brassicaceae (5 species).

No special-status plants were observed on the Palmetto project site during the July 2018 or spring 2019 site surveys, and there are no historic site records for any special status plant species onsite (CNDDB 2018).

The entire site was an active orchard during the 1990s and any special status plant species present would likely have been eliminated during that time.

The current surveys confirm that no special status plant species occur at the project site.

Wildlife Overview

Wildlife found at the Project site consists of common species and species associated with open, disturbed habitats. The most abundant species detected during the site visit were birds such as American crow (*Corvus brachyrhynchos*), mourning dove (*Zenaida macroura*) and house finch (*Carpodacus mexicanus*). A total of 25 wildlife species were detected during the site visits, including two reptile, 18 bird and three mammalian species.

Special Status Wildlife Species

No special-status wildlife species were observed on the Project site during the July 2018 site surveys, and there are no historic site records for any special status wildlife species onsite (CNDDB 2018).

Based on a review of CNDDB, published literature and field surveys and assessments, a number of special status wildlife species were identified as potentially occurring onsite, including some species with historic records from the project vicinity. These are species which typically occur in native habitats that historically occurred in the project vicinity, prior to agriculture and urban development.

Due to the past and current activities onsite, the disturbed nature of the site, the absence of native vegetation communities, and the absence of any current or historic site records, special status wildlife species are unlikely to occur onsite.

All special status wildlife species with some potential to occur onsite are addressed in Table 3 of the Biological Report prepared by Harmsworth Associates. All species listed in Table 3 are unlikely to occur on the Project site, with the exception of burrowing owl, San Bernardino kangaroo rat (SBKR), and roosting bats, which are discussed in detail below.

Burrowing Owl. Burrowing owls (*Athene cunicularia*) occur in shortgrass prairies, grasslands, lowland scrub, agricultural lands (particularly rangelands), prairies, coastal dunes, desert floors, and some artificial, open areas as a yearlong resident. They require large open expanses of sparsely vegetated areas on gently rolling or level terrain with an abundance of active small mammal burrows. As a critical habitat feature, they require the use of rodent or other burrows for roosting and nesting cover. They can also use pipes, culverts, and nest boxes (USFWS 2003, Haug *et al.* 1993, Zeiner *et al.* 1990).

No burrowing owls were detected during the site visit and there was no evidence that burrowing owls were present. Burrowing owls do occur nearby at the San Bernardino International Airport to the northwest (CNDDB 2018). Burrowing owl is assumed absent from the Project site. In order to confirm the presence or absence of burrowing owl at the Project site, focused burrowing owl surveys were conducted on March 29th, April 16th, May 30th, and June 7th, 2019, by Paul Galvin of Harmsworth Associates. The Burrowing Owl Survey Report, which is included in Appendix C of this document, concludes that no burrowing owls or their signs were detected during the surveys and there was no evidence that any burrowing owls occur on site. In addition, it was noted that this species has not been recorded in the Project area in the past. Finally, while it was noted that the entire Project site could be considered burrowing owl habitat, it was concluded that no burrowing owls are on site.

SBKR. SBKR (*Dipodomys merriami parvus*) is confined to primary and secondary alluvial fan scrub habitats, with sandy soils deposited by fluvial (water) rather than aeolian (wind) processes. Burrows are dug in loose soil, usually near or beneath shrubs.

The Project site is located outside and just south of the SBKR critical habitat area, Unit 1: Santa Ana River and Wash (USFWS 2002). SBKR is likely absent from the Project site due to past and current site disturbances and the fact that the Project site is not located within designated critical habitat for the SBKR. However, in order to confirm the presence or absence of SBKR at the Project site, a focused a kangaroo rat trapping survey was conducted according to protocols established for small mammal species and used for SBKR surveys. The protocol calls for five consecutive nights of trapping, conducted when the animal is active above ground at night. One five-day trapping session was deemed necessary to cover the project site. The focused trapping survey was conducted from March 4 to 9, 2019. The Presence/Absence Trapping Studies, which are included in Appendix C of this document, found that no SBKR were caught during the trapping surveys. The surveys also show that no other sensitive small mammal species were captured on site during the surveys. A total of three small mammal species and 99 individual small mammals were captured for a capture rate of about seven percent. No endangered species or species of concern were trapped during the protocol survey.

Bat Species. A number of bat species have the potential to occur at the project site, particularly while foraging (see Table 3 of the Biological Report). Some of these species roost in buildings. There are a number of structures on the Project site in the agricultural area. These structures include glass-houses, sheds, and one temporary dwelling. The glass-houses are uncovered or partially covered in tarps rather than glass. The sheds are in disrepair with no roof or had tarp roofs. The buildings lack the appropriate crevices, cracks and shelter that bats like for roosting and most of the structures are un-roofed. Consequently, the structures do not provide roosting habitat for bat species.

Wildlife Movement Corridors and Linkages

The terms “wildlife corridors” and “linkages” are based upon fundamental ecological concepts, but can be easily misinterpreted because: 1) universally accepted definitions of these terms have not been established; 2) each term can be interpreted using different time scales (i.e. daily, seasonal, annual and evolutionary) and spatial scales (i.e. microclimate, local, community, and landscape) which changes their meaning; 3) the areas and values change from species to species; and, 4) the understanding of how these processes work is on-going and conclusions are subject to revision. The following definitions are intended to provide a working understanding of corridors and linkages and are summarized from several sources (SCWP 2003, USCA9D 1990, Barrett and Livermore 1983, Beier 1993).

Wildlife corridor - Wildlife corridors are areas which animals can use to move from one patch of suitable habitat to another. These areas would be expected to have the least habitat fragmentation relative to surroundings areas. A wildlife corridor establishes connectivity for animals to move, live, reproduce and respond to functional ecological processes during the course of a year to several years. The quality and functionality of a particular wildlife corridor varies from species to species.

Wildlife crossings are generally small, narrow wildlife corridors that allow wildlife to pass through an obstacle or barrier such as a roadway to reach another patch of habitat. Wildlife crossings are manmade and include culverts, drainage pipes, underpasses, tunnels, and, more recently, crossings created specifically for wildlife movement over or under highways.

Both wildlife crossings and wildlife corridors function to prevent habitat fragmentation that would result in the loss of species that require large contiguous expanses of unbroken habitat and/or that occur in low densities.

Linkages – Linkages are areas that provide for long term movement or interaction of wildlife to maintain natural evolutionary and ecological patterns. Linkages are fundamental for gene flow and large scale ecological processes. These areas are usually defined by the zones of "least resistance" for the genes of a given species to move or "flow" between core reserve populations.

The Project site is located adjacent the Santa Ana River and its associated habitats, which is a known wildlife corridor. The Project site is connected to the Santa Ana River via an undeveloped parcel located to the northeast of the Project site. This parcel consists of ruderal, non-native grassland, eucalyptus trees and sparse scrub habitats. Any wildlife at the Project site or the Santa Ana River and its associated habitats could connect via this parcel. However, from the project site there is no suitable habitat further south, east or west for wildlife to utilize.

No wildlife corridors or linkages are known at the Project site. It is unlikely that the site is of any significance to wildlife movement.

Wetlands and Streambeds

A formal jurisdictional delineation was not conducted onsite; however, a general assessment of onsite drainage features was conducted as part of the biological assessment. No rivers, creeks, ephemeral drainages, channels, washes, wetlands, riparian areas, vernal pools or temporary rain pools occur within the project site. Furthermore, no features exist on-site that would qualify as either Army Corps of Engineers (Corps) or California Department of Fish and Wildlife (CDFW) jurisdictional areas.

4.4.2 – REGULATORY FRAMEWORK

Federal

Endangered Species Act

The Federal Endangered Species Act (FESA) of 1973, as amended, protects and conserves any species of plant or animal that is endangered or threatened with extinction, as well as the habitats where these species are found. "Take" of endangered species is prohibited under Section 9 of the FESA. "Take" means to "harass, harm, pursue, hunt, wound, kill, trap, capture, collect, or attempt to engage in any such conduct." Section 7 of the FESA requires federal agencies to consult with the US Fish and Wildlife Service (USFWS) on proposed federal actions that may affect any endangered, threatened, or proposed (for listing) species or critical habitat that may support those species. Section 4(a) of the FESA requires that critical habitat be designated by the USFWS "to the maximum extent prudent and determinable, at the time a species is determined to be endangered or threatened." This provides guidance for planners/managers and biologists by indicating locations of suitable habitat and where preservation of a particular species has high priority. Section 10 of the FESA provides the regulatory mechanism for incidental take of a listed species by private interests and nonfederal government agencies during lawful activities. Habitat conservation plans for the impacted species must be developed in support of incidental take permits to minimize impacts to the species and formulate viable mitigation measures.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act of 1918 (MBTA) affirms and implements the United States' commitment to four international conventions—with Canada, Japan, Mexico, and Russia—to protect shared migratory bird resources. The MBTA governs the take, kill, possession, transportation, and importation of migratory birds and their eggs, parts, and nests. It prohibits the take, possession, import, export, transport, sale, purchase, barter, or offering of these items, except under a valid permit or as permitted in the implementing regulations. USFWS administers permits to take migratory birds in accordance with the MBTA.

Clean Water Act, Section 404

The Corps regulates discharge of dredged or fill material into "waters of the United States." Any filling or dredging within waters of the United States requires a permit, which entails assessment of potential adverse impacts to Corps wetlands and jurisdictional waters and any mitigation measures that the Corps requires. Section 7 consultation with USFWS may be required for impacts to a federally listed species. If cultural resources may be present, Section 106 review may also be required. When a Section 404 permit is required, a Section 401 Water Quality Certification is also required from the Regional Water Quality Control Board (RWQCB).

Clean Water Act, Section 401 and 402

Section 401(a)(1) of the CWA specifies that any applicant for a federal license or permit to conduct any activity that may result in any discharge into navigable waters shall provide the federal permitting agency with a certification, issued by the state in which the discharge originates, that any such discharge will comply with the applicable provisions of the CWA. In California, the applicable RWQCB must certify that the project will comply with water quality standards. Permits requiring Section 401 certification include Corps Section 404 permits and National Pollutant Discharge Elimination System permits issued by the US Environmental Protection Agency (EPA) under Section 402 of the CWA. These permits are issued by the applicable RWQCB. The project area is in the jurisdiction of the Santa Ana RWQCB (Region 8).

State

California Fish and Game Code, Section 1600

Section 1600 of the California Fish and Game Code requires a project proponent to notify the CDFW of any proposed alteration of streambeds, rivers, and lakes. The intent is to protect habitats that are important to fish and wildlife. CDFW may review and place conditions on the project as part of a Streambed Alteration Agreement that addresses potentially significant adverse impacts within CDFW's jurisdictional limits.

California Endangered Species Act

The California Endangered Species Act (CESA) generally parallels the main provisions of the FESA and is administered by the CDFW. Its intent is to prohibit take and protect state-listed endangered and threatened species of fish, wildlife, and plants. Unlike its federal counterpart, CESA also applies the take prohibitions to species petitioned for listing (state candidates). Candidate species may be afforded temporary protection as though they were already listed as threatened or endangered at the discretion of the Fish and Game Commission. Unlike the FESA, CESA does not include listing provisions for invertebrate species. Under certain conditions, CESA has provisions for take through a 2081 permit or memorandum of understanding. In addition, some sensitive mammals and birds are protected by the state as "fully protected species." California "species of special concern" are species designated as vulnerable to extinction due to declining population levels, limited ranges, and/or continuing threats. This list is primarily a working document for the CDFW's CNDDB, which maintains a record of known and recorded

occurrences of sensitive species. Informally listed takes are not protected per se, but warrant consideration in the preparation of biological resources assessments.

Local

San Bernardino County Development Code
San Bernardino County Development Code (SBCDC) Section 88.01.070, Tree Removal Permits, stipulates that the removal of native trees and row-planted palm trees requires a tree or plant removal permit if they meet the thresholds for that section (6-inch diameter at 4.5 feet above grade for native trees, and at least three trees in a row for planted palm trees).

Existing Conservation Plans and Area
The Project site is not located in the plan area of a habitat conservation plan (HCP) or natural communities conservation plan (NCCP). The nearest HCPs or NCCPs to the Project site are the Western Riverside County Multiple-Species NCCP/HCP and the Coachella Valley Multiple-Species NCCP/HCP. The Project site is approximately 4.85 miles north of the nearest Western Riverside County Multiple-Species NCCP/HCP boundary line and approximately 21.15 miles west of the nearest Coachella Valley Multiple-Species NCCP/HCP boundary line.

It should be noted that the Project site is located within the proposed Plan Area for the pending Upper Santa Ana River Habitat Conservation Plan (Upper SAR HCP). The Upper SAR HCP is a collaborative effort among the water resource agencies of the Santa Ana River Watershed, in partnership with the US Fish and Wildlife Service, California Department of Fish and Wildlife, and several other government agencies and stakeholder organizations. The purpose of the Upper SAR HCP is to enable the water resource agencies to continue to provide and maintain a secure source of water for the residents and businesses in the watershed, and to conserve and maintain natural rivers and streams that provide habitat for a diversity of unique and rare species in the watershed. The protection of these habitats and the river systems they depend on also provides recreational opportunities for activities such as hiking, fishing, and wildlife viewing. The Upper SAR HCP will specify how species and their habitats will be protected and managed in the future and will provide the incidental take permits needed by the water resource agencies under the federal and State endangered species acts to maintain, operate, and improve their water resource infrastructure. The Upper Santa Ana River HCP has yet to be adopted by the responsible agencies. Therefore, the Upper SAR HCP does not currently apply to the Project area.

4.4.3 – SIGNIFICANCE THRESHOLDS

Per the CEQA Guidelines, implementation of Project would have a significant impact related to biological resources if it would:

a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the CDFW or U.S. Fish and Wildlife Service;
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the CDFW or US Fish and Wildlife Service;
c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means;

d) Expose Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites;
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; or
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan; or

4.4.4 – IMPACTS AND MITIGATION MEASURES

This section describes potential impacts related to special status plant and animal species, sensitive natural communities, wetland conservation, animal migration, conflicts with local plans and policies, and conflicts with conservation plans, which could result from the implementation of the project and recommends mitigation measures as needed to reduce significant impacts.

Special Status Species Protections

Impact BIO-1 – Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the CDFW or U.S. Fish and Wildlife Service?

Analysis of Impacts

The Project area is developed with industrial uses, agriculture to the south and roadway infrastructure. The Project site has been significantly impacted due to years of agricultural activity, disking and disturbance.

Sensitive Plant Species
In order to confirm the presence or absence of special status plant species at the Project site, surveys were conducted on April 5th and May 11th, 2019, by Glen Morrison of Harmsworth Associates. The Special Status Plant Species Survey Report, which is included in Appendix C of this Draft EIR, notes that the Project site has been significantly impacted due to years of agricultural activity, disking, and disturbance. The entire area consisted of active orchards into the 1990s. It was noted in the survey that the site currently contains four vegetation communities/land types: California annual grassland, Eucalyptus semi-natural woodland stands, Mixed species windrows, and agriculture.

During the April 2019 survey, soils were relatively dry, but vegetation was still largely green and living. Vegetation across the site was very dense at this point in the season. By the May 2019 survey, the soils were very dry and the vegetation had died substantially due to drying and mechanical clearing/disking. Vegetation across the site was much sparser than at the time of the first survey. The surveys conclude that no special status plants occur at the Project-site. Therefore, impacts wo special status plant species will not occur as a result of the Project.

Sensitive Animal Species
No special-status wildlife species were observed on the Project site during the July 2018 site surveys, and there are no historic site records for any special status wildlife species onsite. Due

to the past and current activities onsite, the disturbed nature of the site, the absence of native vegetation communities, and the absence of any current or historic site records, special status wildlife species are unlikely to occur onsite.

Special status wildlife species with some potential to occur onsite are discussed below:

Burrowing Owl. No burrowing owls were detected during the site visit and there was no evidence that burrowing owls were present. Burrowing owls do occur nearby, at the San Bernardino International Airport (CNDDB 2018). Burrowing owl is assumed absent from the Project site although there is some habitat on site that could be occupied by them. In order to confirm the presence or absence of burrowing owl at the Project site, focused burrowing owl surveys were conducted on March 29th, April 16th, May 30th, and June 7th, 2019. The Burrowing Owl Survey Report concludes that no burrowing owls or their signs were detected during the surveys and there was no evidence that any burrowing owls occur on site. In addition, it was noted that this species has not been recorded in the Project area in the past. Therefore, impacts to burrowing owls will not occur as a result of the Project and no mitigation is required.

SBKR. The Project site is located outside and just south of the formal SBKR critical habitat area, Unit 1: Santa Ana River and Wash (USFWS 2002). SBKR is likely absent from the Project site due to past and current site disturbances. However, in order to confirm the presence or absence of San Bernardino kangaroo rat at the Project site, focused trapping survey was conducted from March 4 to 9, 2019. The Presence/Absence Trapping Studies, which are included in Appendix C of this DEIR, found that no San Bernardino kangaroo rats were caught during the trapping surveys. The surveys also show that no sensitive small mammal species were captured on site during the surveys. A total of three small mammal species and 99 individual small mammals were captured for a capture rate of about seven percent. No endangered or species of concern were trapped during the protocol survey. Therefore, impacts to SBKR will not occur as a result of the Project and no mitigation is required.

Bat Species. There are a number of structures on the Project site in the agricultural area. These structures include glass-houses, sheds, and one temporary dwelling. The glass-houses are uncovered or partially covered in tarps rather than glass. The sheds are in disrepair with no roof or had tarp roofs. The buildings lack the appropriate crevices, cracks and shelter that bats like for roosting and most of the structures are un-roofed. Consequently, the structures do not provide roosting habitat for bat species and no mitigation is necessary.

Nesting Birds

There is a potential for nesting birds to occur on-site given the existence of vegetation and ornamental trees. As, such **Mitigation Measure BIO-1** has been included to ensure that nesting birds and their offspring will not be impacted by vegetation removal and grading activities.

Level of Significance Before Mitigation

Impacts to sensitive plant and animal species, including bats, burrowing owl, and SBKR will be less than significant before mitigation. Impacts to migratory birds will be potentially significant before mitigation.

Mitigation Measures

BIO-1 *Avoidance of Nesting Migratory Birds:* If possible, all vegetation removal activities shall be scheduled from September 1 to February 1, which is outside the general avian nesting season. This would ensure that no active nests would be disturbed and that removal could proceed rapidly. If vegetation is to be cleared during the nesting season, all suitable habitat will be thoroughly surveyed within 72 hours prior to clearing for the presence of nesting birds by a qualified biologist (Project Biologist). The Project Biologist shall be approved by the County and retained by the Applicant. The survey results shall be submitted by the Project Applicant to the Count Land Use Services Department. If any active nests are detected, the area shall be flagged and mapped on the construction plans along with a minimum 300-foot buffer, with the final buffer distance to be determined by the Project Biologist. The buffer area shall be avoided until, as determined by the Project Biologist, the nesting cycle is complete or it is concluded that the nest has failed. In addition, the Project Biologist shall be present on the site to monitor the vegetation removal to ensure that any nests, which were not detected during the initial survey, are not disturbed.

Level of Significance After Mitigation

Less than significant.

Sensitive Natural Communities

Impact BIO-2 – Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the CDFW or US Fish and Wildlife Service?

Analysis of Impacts

A general assessment of onsite drainage features was conducted as part of the biological assessment. The Project area was checked in the field for the presence of streambeds, definable channels, wetland and riparian vegetation and hydric soils. All areas of topographic relief suspected of representing historic or current drainage patterns were inspected on-foot. No rivers, creeks, ephemeral drainages, channels, washes, wetlands, riparian areas, vernal pools or temporary rain pools occur within the project site. Furthermore, no features exist on-site that would qualify as either Corps or CDFW jurisdictional areas..

Level of Significance Before Mitigation

Less than significant.

Mitigation Measures

No mitigation required.

Wetlands

Impact BIO-3 – Would the project have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

Analysis of Impacts

A general assessment of onsite drainage features was conducted as part of the biological assessment. No rivers, creeks, ephemeral drainages, channels, washes, wetlands, riparian areas, vernal pools or temporary rain pools occur within the project site.

Level of Significance Before Mitigation

Less than significant.

Mitigation Measures

No mitigation is required.

Animal Migration

Impact BIO-4 – Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

Analysis of Impacts

The Project site is located adjacent the Santa Ana River and its associated habitats, which is a known wildlife corridor. The Project site is connected to the Santa Ana River via an undeveloped parcel located to the northeast of the Project site. This parcel consists of ruderal, non-native grassland, eucalyptus trees and sparse scrub habitats. Any wildlife at the Project site/the Santa Ana River and its associated habitats could connect via this parcel. However, from the project site there is no suitable habitat further south, east or west for wildlife to utilize. No wildlife corridors or linkages are known at the Project site, and it is unlikely that the site is of any significance to wildlife movement. In addition, implementation of the Project will not obstruct or impede the use of the Santa Rivers as a wildlife corridor.

Level of Significance Before Mitigation

Less than significant.

Mitigation Measures

No mitigation is required.

Conflict with Local Biological Resources Plans

Impact BIO-5 – Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

Analysis of Impacts

The Conservation Element of the County of San Bernardino General Plan notes that the Valley Region is almost entirely urbanized with few natural open space areas still existing (San Bernardino County 2007). The predominant vegetation types within the undeveloped areas of the valley are chaparral, coastal sage scrub, deciduous woodlands, grasslands, and wetlands. Vegetation in urbanized areas consists primarily of introduced landscape species. The most sensitive vegetation types found within the study area are wetlands, including riparian woodland, riparian scrub, and freshwater marsh. Wetlands are considered a valuable but woodlands and mature riparian woodland communities, such as at Prado Basin, include the southwestern willow flycatcher, least Bell's vireo, and western yellow-billed cuckoo, declining resource both locally and statewide. Therefore, the few wetland areas remaining in the County should be preserved in conservation areas. The largest and most well-known example of riparian woodland in the Valley Region of the County is within Federal and state protected areas. Species associated with willow woodlands and mature riparian woodland riparian communities, such as at Prado Basin, include the southwestern willow flycatcher, least Bell's vireo, and western yellow-billed cuckoo.

The dominant aquatic feature within the Valley Region is the Santa Ana River watershed. The upstream reaches are located within San Bernardino County. Key riverine resources within the area are Day Creek, Etiwanda Creek, Sevaine Creek, Lytle Creek, Cajon Wash, San Timoteo Wash, and Mill Creek. The Santa Ana Watershed Planning Authority (2002) identifies several of these riverine resources as "Essential Resource Conservation Areas" within the County. Invasive species such as Giant Reed (*Arundo donax*) and tamarisk (*Tamarix* sp.) are a problem for native flora and fauna in the drainages. Other areas are important biologically because they support flora or fauna that are limited in their distribution or require or tolerate unusual conditions that occur there. For example, the alluvial sage scrub habitat in the Santa Ana River, Lytle Creek, and Cajon washes has adapted to frequent flooding and therefore supports a unique diversity of plant species. Another sensitive plant community is the Riversidian alluvial fan sage scrub found on the alluvial fans at the base foothills of the San Bernardino Mountains which has adapted to episodic flood. This habitat supports several sensitive species including SBKR, San Diego horned lizard, Los Angeles pocket mouse, and California bedstraw.
The Conservation Element of the General Plan includes goals and policies for the maintenance and enhancement of biological diversity and healthy ecosystems. The Project would not conflict with General Plan conservation and open space policies with respect to biological resources.

The San Bernardino County Development Code Section 88.01.050 stipulates that the removal of native trees and row-planted palm trees requires a tree or plant removal permit if they meet the thresholds for that section (6-inch diameter at 4.5 feet above grade for native trees, and at least three trees in a row for planted palm trees). The Project site includes two eucalyptus windrows along the northern site boundary, totaling 0.6 acres of semi-natural woodland stands. The site also includes a windrow along the southwestern site boundary, adjacent to Palmetto Avenue, consisting of a variety of landscaping trees including pines, cypress, and palms. The Project contractor will be required by existing regulations to obtain a tree removal permit prior to tree removal activities. Compliance with these requirements will ensure that the Project will not conflict with such requirements.

Level of Significance Before Mitigation

Less than significant.

Mitigation Measures

No mitigation required.

Habitat Conservation Plans

Impact BIO-6 – Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

Analysis of Impacts

The Project site is not located in the plan area of a habitat conservation plan (HCP) or natural communities conservation plan (NCCP). The nearest HCPs or NCCPs to the Project site are the Western Riverside County Multiple-Species NCCP/HCP and the Coachella Valley Multiple-Species NCCP/HCP. The Project site is approximately 4.85 miles north of the nearest Western Riverside County Multiple-Species NCCP/HCP boundary line and approximately 21.15 miles west of the nearest Coachella Valley Multiple-Species NCCP/HCP boundary line.

It should be noted that the Project site is located within the proposed Plan Area for the pending Upper Santa Ana River Habitat Conservation Plan (Upper SAR HCP). The Upper SAR HCP is a collaborative effort among the water resource agencies of the Santa Ana River Watershed, in partnership with the US Fish and Wildlife Service, California Department of Fish and Wildlife, and several other government agencies and stakeholder organizations. The purpose of the Upper SAR HCP is to enable the water resource agencies to continue to provide and maintain a secure source of water for the residents and businesses in the watershed, and to conserve and maintain natural rivers and streams that provide habitat for a diversity of unique and rare species in the watershed. The protection of these habitats and the river systems they depend on also provides recreational opportunities for activities such as hiking, fishing, and wildlife viewing. The Upper SAR HCP will specify how species and their habitats will be protected and managed in the future and will provide the incidental take permits needed by the water resource agencies under the federal and State endangered species acts to maintain, operate, and improve their water resource infrastructure. The Upper Santa Ana River HCP is currently in the Draft EIR and Public Comment Period phase and has yet to be adopted by the responsible agencies. Therefore, the Upper SAR HCP does not currently apply to the Project area and no impacts will occur with regard to conflicts with the provisions of an adopted HCP, NCCP, or other approved plans.

Level of Significance Before Mitigation

No impact.

Mitigation Measures

No mitigation is required.

Cumulative Impacts

Would the project cause substantial adverse cumulative impacts with respect to Biological Resources?

Analysis of Impacts

The area considered for cumulative impacts is the Upper Santa Ana River Valley and the San Jacinto Basin. The Upper Santa Ana River Valley is in parts of eastern Los Angeles County, southwestern San Bernardino County, and western Riverside County. The San Jacinto Basin comprises most of the remainder of western Riverside County. The region is slightly drier and subject to somewhat more temperature variation than the Los Angeles Basin to the west. Vegetation historically included coastal sage scrub, chaparral, valley grasslands, and some riparian woodlands (Griffith 2016). Much of the region is now urbanized.

Other projects in the region may impact habitats used by sensitive species. Proponents of other projects would be required to conduct biological resources assessments for their respective project areas using qualified biologists. Such assessments would include biological resources surveys and habitat assessments for sensitive species. Where sensitive species are observed on project areas or determined to be potentially present due to the presence of suitable habitat, the biological resources assessments would evaluate impacts and recommend mitigation measures to reduce those impacts.

Such biological resources assessments would also include impact evaluations and mitigation measures, where necessary, for sensitive natural communities, jurisdictional waters and wetlands, wildlife movement corridors, and habitat conservation plans. Therefore, cumulative impacts to biological resources would be less than significant, and project impacts would not be cumulatively considerable.

Level of Significance Before Mitigation

Cumulative impacts will be less than significant.

Mitigation Measures

None required.

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4.5 – Cultural Resources

This EIR chapter addresses cultural, historic, and tribal cultural resource impacts associated with the Project. Issues of interest are cultural, archaeological and historic impacts identified by the CEQA Guidelines: whether the Project will cause a substantial adverse change in an archaeological or historic resource or disturb human remains. A Phase I Cultural Resource Assessment was completed for the Project by Applied Earth Works, Inc. (Æ), dated January 2019. The information in this chapter is taken from the Phase I Cultural Resource Assessment which can be found in Appendix E of this EIR.

4.5.1 – ENVIRONMENTAL SETTING

The Project area is situated on the flood plain of the upper Santa Ana River within the San Bernardino Basin at the intersection of the Peninsular and Transverse mountain ranges. The basin lies between the San Jacinto and San Andreas Faults and is filled with coarse Quaternary sediments derived from the San Bernardino Mountains. The San Andreas Fault separates the San Bernardino Mountains from the San Gabriel Mountains, which were uplifted during the middle Pleistocene. The San Bernardino Valley is associated with erosion in the nearby mountains that occurred prior to their uplift. During the early Pliocene, sedimentary deposits formed in large freshwater lakes in the mountains. Late Pliocene rejuvenation of the mountains caused these lakes to fill in. As a result, streams coming down out of the mountains created a floodplain. During the late Pliocene and early Pleistocene, the sedimentary rocks folded, establishing the San Bernardino Valley by the late middle Pleistocene.

Within the general Project area (i.e., San Bernardino Valley), grassland vegetation communities exist. Native species present prior to historical use and disturbance may have included rye grass (*Leymus condensatus*), blue grass (*Poa secunda*), bent grass (*Agrostis* spp.), needlegrass (*Stipa* spp.), three-awn (*Aristida divaricata*), and members of the sunflower family (*Asteraceae*). At present, the grassland communities are dominated by exotic species such as filaree (*Erodium cicutarium),* tansy mustard *(Descurainia pinnata),* tumble mustard *(Sisymbrium altissimus),* foxtail fescue *(Vulpia myuros),* barleys *(Hordeum spp.),* wild oats *(Avena spp.),* rye grass *(Lolium spp.),* cheat or brome grass *(Bromus spp.),* vinegar weed *(Trichostema lanceolatum),* and dove weed *(Eremocarpus setigerus).* Belts of vegetation occur within the San Bernardino Mountain areas to the north. Chamise chaparral occurs on the south and west aspects below about 6,000 feet in elevation, desert scrub from about 3,000 to 9,000 feet, and coniferous forests above 6,000 feet.

Ethnographic Setting

The Project is within an area where the traditional use territories of the Serrano, Cahuilla, and Gabrielino meet, just southeast of the present-day City of San Bernardino. All of these cultural groups spoke languages belonging to the Takic branch of the Shoshonean family, a part of the larger Uto-Aztecan language stock. The Phase I Cultural Resource Assessment notes that more detailed ethnographic information is supplied by Bean and Saubel (1972), Bean and Smith (1978), Bean and Vane (2001), Harrington (1942), McCawley (1996), and Strong (1929). The reader is referred to these documents for specific information on Native American cultures of southern San Bernardino County.

Early Irrigation Systems in San Bernardino Valley

Irrigation of the San Bernardino Valley began in 1819 with the construction of the Mill Creek Z*anja*. The first sawmills were constructed in Mill Creek Canyon in the early 1850s by the Mormon settlers and were powered by man-made water conveyance systems. They also built a canal bringing water to their settlement from Warm Creek to power a gristmill. The Tenney, Lord and Hale, and Perdue ditches were early irrigation systems that laid the foundation for the San Bernardino Valley-wide irrigation system. Additional canals were built in the 1850s to divert water from the Santa Ana River for irrigation purposes. Later, flood control channels were constructed to minimize flooding in the basin and reduce damage to agricultural lands and residential and commercial properties, and avoid loss of life.

The San Bernardino Valley is fairly arid and substantial rainfall is seasonal. Natural water sources including the Santa Ana River were not able to produce a sustainable source of water for large-scale farming.

Redlands

Redlands was initially established through real estate speculation, much like several other ventures in San Bernardino County during the mid- to late-1800s. The townsite was established by Frank E. Brown and Edward G. Judson in 1881 and was named after the rich red colored soil found in the region. Brown and Judson organized the Redlands Water Company to provide water to the community. With water guaranteed and the construction of a Santa Fe Railway branch line, Redlands and Lugonia, a neighboring community, merged to form one town. The largest early industry was citrus packing and shipping (Federal Writers' Project 1939). The real estate boom associated with the development of the citrus industry in southern California also contributed to the early growth of Redlands.

The real estate boom drew Albert and Alfred Smiley, prominent early residents, to Redlands in the late 1880s. The Smileys purchased 200 acres in Redlands in 1889 with a view of the valley and the mountains where they constructed their homes and developed the area into Canyon Crest Park, later known as Smiley Heights. They also planted over a thousand varieties of trees and shrubs in Smiley Heights, which quickly became a popular tourist destination. The Kite Route, an early rail line geared toward tourism, brought tourists and their dollars to Redlands to enjoy these gardens, and other services and entertainments provided by the City.

Through the establishment of tourist destinations and agricultural industries, Redlands experienced a population boom in the late 1800s. In 1888, the population was 900, and by 1900, the population had grown to 5,600. Redlands developed a thriving economy based on the citrus and timber industries and tourism. Other prominent local businesses were the Union Ice Company factory, the Brookside Winery, the Academy of Music, the Redlands Electric Light and Power Company, University of Redlands, and hotels such as the Hotel Casa Loma and the Windsor Hotel. Citrus was the primary agricultural product in Redlands, but Redlands was better known for its fine homes, parks, and the University of Redlands. The city had 14 packinghouses in 1919 and was located on the Santa Fe Railway and Southern Pacific Railway lines. Redlands continues to thrive as a tourist draw for many of the same reasons listed above.

Cultural Resources Literature and Records Search

On June 28, 2018, prior to the field survey of the Project area, an archaeological literature and records search was conducted at the South Central Coastal Information Center (SCCIC) of the

California Historical Resource Information System (CHRIS), housed at the California State University, Fullerton. The objective of this records search was to determine whether any prehistoric or historical cultural resources had been recorded previously within a Study Area encompassing a 1-mile radius of the Project area. The records search indicated that no less than 43 cultural resource studies have been conducted between 1977 and 2015 within the Study Area (see Table 3‑1 of the Phase I Cultural Resource Assessment). Five of these studies specifically involved a portion of the Project area (see Table 3-1 of the Phase I Cultural Resource Assessment). Approximately 15 percent of the Project area had been surveyed previously as a result of these studies.

These studies resulted in the identification and documentation of 24 cultural resources within the Study Area: 16 historical archaeological sites (primarily farm and agricultural system remnants and a refuse scatter), 1 isolated artifact (historical curb fragments), and 7 built environment resources (4 residences, 1 landscape, 1 road alignment [California Street], and the San Bernardino County Museum) (see Table 3‑2 of the Phase I Cultural Resource Assessment). The San Bernardino County Museum has been designated California Point of Historical Interest (No. 1). None of the 24 previously documented cultural resources are located within the current Project area.

Other sources consulted during the archaeological literature and records search include the *Office of Historic Preservation Archaeological Determinations of Eligibility (ADOE)* and the *Office of Historic Preservation Directory of Properties in the Historic Property Data File*. These sources identified one property (P-36-013514) within the Study Area that is listed on the *Office of Historic Preservation Directory of Properties in the Historic Property Data File*. The resource, a Craftsman-style residence built in 1901, was identified during a reconnaissance survey and was recommended ineligible for inclusion on the National Register of Historic Places.

Æ consulted a series of archival maps to assess historical land use and development in the Study Area. These USGS maps include the Redlands (1899, 1901, and 1954) 15' USGS Quadrangle maps and Redlands (1954, 1967, 1973, and 1975) 7.5' USGS Quadrangle maps. In addition, aerial photographs from 1930, 1938, 1959, 1966, and 1968 were examined for extant structures or features within the Project area that may be 45 years of age or older. No current extant structures or features appear within the Project area on any of the historical maps or photographs; however, historical aerial images show that the Project area contained an orchard and two residential properties between 1930 and 2009.

Native American Communication

Æ contacted the Native American Heritage Commission (NAHC) on June 14, 2017, for a review of the Sacred Land Files (SLF), to determine if any known properties of importance to Native Americans (e.g., traditional use or gathering areas, places of religious or sacred activity) are present within or adjacent to the Project area. The NAHC responded on June 15, 2018, stating that the SLF search was completed with negative results. The NAHC requested that local Native American individuals and organizations be contacted to elicit information and/or concerns regarding cultural resource issues related to the Project. A letter describing the Project and asking these individuals and organizations for their input was sent via United States Postal Service (USPS) and electronic mail on July 10, 2018. An example of the letter sent, the list of contacts, and responses received are included in Appendix A. A second attempt at correspondence was made on July 30, 2018. Individuals/organizations contacted at the request of the NAHC include:

- Patricia Garcia-Plotkin, Director for the Agua Caliente Band of Cahuilla Indians (ACBCI) Tribal Historic Preservation Office
- Amanda Vance, Chairperson of the Augustine Band of Cahuilla Indians
- Judy Stapp, Director of Cultural Affairs for the Cabazon Band of Mission Indians
- Daniel Salgado, Chairperson of the Cahuilla Band of Indians
- John Perada, Environmental Director for the Los Coyotes Band of Mission Indians
- Denisa Torres, Cultural Resources Manager for the Morongo Band of Mission Indians
- Temet Aguilar, Chairperson of the Pauma Band of Luiseño Indians – Pauma & Yuima Reservation
- John Gomez, Environmental Coordinator for the Ramona Band of Cahuilla Mission
- Indians
- Jessica Mauck, Cultural Resources Analyst for the San Manuel Band of Mission Indians (SMBMI)
- Steven Estrada, Chairperson of the Santa Rosa Band of Mission Indians
- Goldie Walker, Chairperson of the Serrano Nation of Mission Indians
- Donna Yocum, Chairperson of the San Fernando Band of Mission Indians
- Joseph Ontiveros, Cultural Resource Department of the Soboba Band of Luiseño Indians
- Michael Mirelez, Cultural Resource Coordinator for the Torres-Martinez Desert Cahuilla
- Indians

As of July 30, 2018, five responses have been received. The San Manuel Band of Mission Indians (SMBMI) noted that the Project is located in close proximity to the Santa Ana River, which is a Tribal Cultural Resource (TRC). SMBMI recommended Phase I presence/absence testing within the Project area, assuming there are in situ Holocene layers beneath the existing disturbance that resulted from agriculture. Additionally, SMBMI will request a copy of the completed cultural resource report from the County and provide Project recommendations directly to the County. The Cabazon Band of Mission Indians stated that the Project is located outside of the Tribe's current reservation boundaries. The Tribe has no specific archival information indicating that the Project may be a sacred/religious site or other site of Native American traditional cultural value.

The ACBCI noted that the Project area is within the Tribe's Traditional Use Area; however, the Tribe defers all further consultation efforts to the SMBMI. Cahuilla Band of Indians noted that the Project area is located within the Tribe's Traditional Use Area; therefore the Tribe requested to be notified of all updates and or changes with the Project moving forward. The Morongo Band of Mission Indians noted the Project area is located within the Tribe's Traditional Use Area and requested a thorough records search be conducted by contacting one of the CHRIS Archaeological Information Centers and a copy of the search results be provided to the tribe. Morongo also requested that a copy of the Phase I Cultural Resources Assessment be provided to the tribe as soon as it can be made available. A table of responses summarizing consultation with Native American groups and/or individuals is in Appendix A of the Phase I Cultural Resource Assessment.

Phase I Cultural Resource Survey

Survey Methods

Æ Staff Archaeologist Evan Mills performed an intensive pedestrian archaeological survey of the Project area on July 5 and 6, 2018. The area was inspected by walking a set of survey transects across the Project area spaced 10 to 15 meters (33‑50 feet) apart. The Project area is relatively level and covered in sparse vegetation (see Figure 5-1 of the Phase I Cultural Resource Assessment). Sediments consist of a silty-sand alluvium with a low (10 percent) gravel content and few cobbles. The central western portion of the Project area was, at the time of the survey, an active farm field and was not surveyed (see Figure 5-2 of the Phase I Cultural Resource Assessment). These agricultural uses have since been discontinued.

Survey Results

The Project is within a former citrus grove that was cleared of trees around 2007. Soils within the Project area are completely disturbed from plowing associated with previous and current agricultural activity and operation of heavy equipment during tree removal. Other disturbances noted during the survey include scattered modern refuse and debris from homeless encampments present at the northern Project boundary. Vegetation consisted of seasonal grasses and eucalyptus trees. Ground surface visibility was generally excellent (90 percent). A few modern irrigation features are extant on the subject properties including PVC pipes, concrete standpipes, and a concrete pad with protruding steel pipe. These features were not documented as they were not over 50 years of age. Two cultural resources, both remnants of a historic-period water conveyance system, were identified during the survey. These two resources are depicted on Figure 5-2 of the Phase I Cultural Resource Assessment, summarized below, and discussed in detail in the site records included in Appendix B of the Phase I Cultural Resource Assessment.

<u>Irrigation Flume (CA-SBR-32488H)</u>
CA-SBR-32488H is an irrigation flume located between two Project parcels, Assessor's Parcel Numbers (APNs) 0292-041-43 and 029-2041-48, on a north south line, west of Alabama Street. The flume is approximately 2,106 feet long and is composed of split local cobbles set in concrete mortar. The flume is overgrown with natural grasses and has been inactive for a long period of time. Portions of the flume have been damaged in several locations but overall its alignment is intact (see Figure 5-2; Figure 5-3 of the Phase I Cultural Resource Assessment).

<u>Concrete Weir (CA-SBR-32489H)</u>
CA-SBR-32489H is a weir located on Project Parcel APN 0292-04-147 in the southwestern portion of the Project area near Palmetto Avenue. The weir is built of concrete and mortared concrete blocks and brick, and features a hand crank metal release gate (see Figure 5-2; Figure 5-4 of the Phase I Cultural Resource Assessment). Portions of the weir have been damaged, but overall it is intact. On the north end of the weir, portions of the cast-iron pipe feeding into the weir have been patched with rubber and steel clamps, revealing that a portion of the system may still be active.

4.5.2 – REGULATORY FRAMEWORK

Federal

Archaeological Resources Protection Act

The Archaeological Resources Protection Act of 1979 regulates the protection of archaeological sites and resources that are on Native American lands or federal lands. Federal regulations for cultural resources are governed primarily by Section 106 of the National Historic Preservation Act (NHPA) of 1966. Section 106 requires federal agencies to take into account the effects of their undertakings on historic properties and affords the Advisory Council on Historic Preservation a reasonable opportunity to comment on such undertakings. The Council's implementing regulations, Protection of Historic Properties, are found in 36 Code of Federal Regulations (CFR) Section 800. The goal of the Section 106 review process is to offer a measure of protection to sites that are determined eligible for listing on the National Register of Historic Places (NRHP). The criteria for determining NRHP eligibility are found in 36 CFR Section 60. Amendments to the act (1986 and 1992) and subsequent revisions to the implementing regulations have, among other things, strengthened the provisions for Native American consultation and participation in the Section 106 review process. While federal agencies must follow federal regulations, most projects by private developers and landowners do not require this level of compliance. Federal regulations only come into play in the private sector if a project requires a federal permit or if it uses federal funding.

National Register of Historic Places

The NRHP is "an authoritative guide to be used by federal, state, and local governments, private groups, and citizens to identify the nation's cultural resources and to indicate what properties should be considered for protection from destruction or impairment." However, the federal regulations explicitly provide that a listing of private property on the NRHP "does not prohibit under federal law or regulation any actions which may otherwise be taken by the property owner with respect to the property."

Historic properties, as defined by the Advisory Council on Historic Preservation, include any "prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the NRHP maintained by the Secretary of the Interior" (36 CFR § 800.16[l]). Eligibility for inclusion in the NRHP is determined by applying the following criteria, developed by the National Park Service in accordance with the NHPA:

> The quality of significance in American history, architecture, archeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association and
>
> 1) that are associated with events that have made a significant contribution to the broad patterns of our history; or
> 2) that are associated with the lives of persons significant in our past; or
> 3) that embody distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or

4) that have yielded, or may be likely to yield, information important in prehistory or history (36 CFR § 60.4).

State

State historic preservation regulations affecting the project include the statutes and guidelines contained in CEQA, Public Resources Code (PRC) Sections 20183.2 and 21084.1, and CEQA Guidelines Section 15064.5. CEQA requires lead agencies to carefully consider the potential effects of a project on historical resources. A historical resource includes, but is not limited to, any object, building, structure, site, area, place, record or manuscript which is historically or archaeologically significant (PRC Section 5020.1). Section 15064.5 of the CEQA Guidelines specifies criteria for evaluating the significance or importance of cultural resources, including:

- The resource is associated with events that have made a contribution to the broad patterns of California history;
- The resource is associated with the lives of important persons from our past;
- The resource embodies the distinctive characteristics of a type, period, region or method of construction, or represents the work of an important individual or possesses high artistic values; or
- The resource has yielded, or may be likely to yield, important information in prehistory or history.

Advice on procedures to identify such resources, evaluate their importance, and estimate potential effects is given in several agency publications such as the series produced by the Governor's Office of Planning and Research (OPR). The technical advice series produced by OPR strongly recommends that Native American concerns and the concerns of other interested persons and corporate entities, including but not limited to museums, historical commissions, associations, and societies, be solicited as part of the process of cultural resources inventory. In addition, California law protects Native American burials, skeletal remains, and associated grave goods regardless of the antiquity and provides for the sensitive treatment and disposition of those remains.

Senate Bill 18

California Senate Bill (SB) 18, effective September 2004, requires local government to notify and consult with California Native American tribes when the local government is considering adoption or amendment of a general plan or specific plan. SB 18 provides California Native American tribes an opportunity to participate in local land use decisions at an early stage of planning, for the purpose of protecting or mitigating impacts to cultural places. Prior to adoption or amendment of a general plan or specific plan, a local government must refer the proposed action to those tribes that are on the Native American Heritage Commission contact list and have traditional lands located within the city's or county's jurisdiction. The referral must allow a 45-day comment period pursuant to Government Code Section 65453. The County has coordinated with tribes to pursuant to SB 18 requirements, and consulted with those tribes interested in the project.

Assembly Bill 52

On September 25, 2014, Governor Brown signed Assembly Bill (AB) 52, which creates a new category of environmental resources that must be considered under CEQA: tribal cultural resources. The legislation imposes new requirements for consultation regarding projects that may

affect a tribal cultural resource, includes a broad definition of what may be considered to be a tribal cultural resource, and includes a list of recommended mitigation measures. AB 52 adds tribal cultural resources to the categories of cultural resources in CEQA, which had formerly been limited to historic, archaeological, and paleontological resources. Tribal cultural resources are defined as either:

1) Sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are included in the state register of historical resources or a local register of historical resources, or that are determined to be eligible for inclusion in the state register; or
2) Resources determined by the lead agency, in its discretion, to treat the resource as a tribal cultural resource.

California Register of Historical Resources

AB 2881 was signed into law in 1992, establishing the California Register of Historical Resources (CRHR). The CRHR is an authoritative guide in California used by state and local agencies, private groups, and citizens to identify the state's historical resources and to indicate what properties are to be protected, to the extent prudent and feasible, from substantial adverse change. The criteria for eligibility for the CRHR are based on National Register of Historic Places criteria. Certain resources are determined by the statute to be included on the CRHR, including California properties formally determined eligible for, or listed in, the NRHP, State Landmarks, and State Points of Interest.

The State Office of Historic Preservation (OHP) has broad authority under federal and state law for the implementation of historic preservation programs in California. The State Historic Preservation Officer makes determinations of eligibility for listing on the NRHP and the CRHR. The appropriate standard for evaluating "substantial adverse effect" is defined in PRC Sections 5020.1(q) and 21084.1. Substantial adverse change means demolition, destruction, relocation, or alteration such that the significance of an historical resource would be impaired. Such impairment of significance would be an adverse impact on the environment.

Cultural resources consist of buildings, structures, objects, or archaeological sites. Each of these entities may have historic, architectural, archaeological, cultural, or scientific importance. Under the CEQA Guidelines, a significant impact would result if the significance of a cultural resource would be changed by project area activities. Activities that could potentially result in a significant impact consist of demolition, replacement, substantial alteration, and relocation of the resource. The significance of a resource is required to be determined prior to analysis of the level of significance of project activities. The steps required to be implemented to determine significance in order to comply with CEQA Guidelines are:

- Identify cultural resources.
- Evaluate the significance of the cultural resources based on established thresholds of significance.
- Evaluate the effects of a project on all cultural resources.
- Develop and implement measures to mitigate the effects of the project on significant cultural resources.

Sections 6253, 6254, and 6254.10 of the California Government Code authorize state agencies to exclude archaeological site information from public disclosure under the Public Records Act. In

addition, the California Public Records Act (CPRA; Government Code [§§ 6250 *et seq*.) and California's open meeting laws (The Brown Act, Government Code §§ 54950 *et seq*.) protect the confidentiality of Native American cultural place information. The CPRA (as amended, 2005) contains two exemptions that aid in the protection of records relating to Native American cultural places by permitting any state or local agency to deny a CPRA request and withhold from public disclosure:

- Records of Native American graves, cemeteries, and sacred places and records of Native American places, features, and objects described in Section 5097.9 and Section 5097.993 of the Public Resources Code maintained by, or in the possession of, the Native American Heritage Commission, another state agency, or a local agency (Government Code § 6254(r)); and
- Records that relate to archaeological site information and reports maintained by, or in the possession of, the Department of Parks and Recreation, the State Historical Resources Commission, the State Lands Commission, another state agency, or a local agency, including the records that the agency obtains through a consultation process between a California Native American tribe and a state or local agency (Government Code § 6254.10).

Likewise, the Information Centers of the CHRIS maintained by the OHP prohibit public dissemination of records and site location information. In compliance with these requirements, and those of the Code of Ethics of the Society for California Archaeology and the Register of Professional Archaeologists, the locations of cultural resources are considered restricted information with highly restricted distribution and are not publicly accessible.

Any project site located on non-federal land in California is also required to comply with state laws pertaining to the inadvertent discovery of Native American human remains.

California Health and Safety Code Sections 7050.5, 7051, and 7054

California Health and Safety Code Sections 7050.5, 7051, and 7054 collectively address the illegality of interference with human burial remains as well as the disposition of Native American burials in archaeological sites. The law protects such remains from disturbance, vandalism, or inadvertent destruction and establishes procedures to be implemented if Native American skeletal remains are discovered during construction of a project, including the treatment of remains prior to, during, and after evaluation, and reburial procedures.

Local

County of San Bernardino General Plan

The General Plan Conservation Element includes concepts and guidelines to manage, preserve, and use cultural resources. The following goals, policies, and programs are applicable to the Project:

Goal CO 3 The County will preserve and promote its historic and prehistoric cultural heritage.

Policy CO 3.1 Identify and protect important archaeological and historic cultural resources in areas of the County that have been determined to have known cultural resource sensitivity.

Programs

1. Require a cultural resources field survey and evaluation prepared by a qualified professional for projects located within the mapped Cultural Resource Overlay area.

2. Mitigation of impacts to important cultural resources will follow the standards established in Article 9 of the California Environmental Quality Act Guidelines, as amended to date.

Policy CO 3.2 Identify and protect important archaeological and historic cultural resources in all lands that involves disturbance of previously undisturbed ground.

Programs

1. Require the Archaeological Information Center at the San Bernardino County Museum to conduct a preliminary cultural resource review prior to the County's application acceptance for all land use applications in planning regions lacking Cultural Resource Overlays and in lands located outside of planning regions.

2. Should the County's preliminary review indicate the presence of known cultural resources or moderate to high sensitivity for the potential presence of cultural resources, a field survey and evaluation prepared by a qualified professional will be required with project submittal. The format of the report and standards for evaluation will follow the "Guidelines for Cultural Resource Management Reports" on file with the San Bernardino County Land Use Services Department.

Policy CO 3.3 Establish programs to preserve the information and heritage value of cultural and historical resources.

Policy CO 3.4 The County will comply with Government Code Section 65352.2 (SB 18) by consulting with tribes as identified by the California Native American Heritage Commission on all General Plan and specific plan actions.

Programs

1. Site record forms and reports of surveys, test excavations, and data recovery programs will be filed with the Archaeological Information Center at the San Bernardino County Museum, and will be reviewed and approved in consultation with that office.

    a. Preliminary reports verifying that all necessary archaeological or historical fieldwork has been completed will be required prior to project grading and/or building permits.

b. Final reports will be submitted and approved prior to project occupancy permits.

2. Any artifacts collected or recovered as a result of cultural resource investigations will be catalogued per County Museum guidelines and adequately curated in an institution with appropriate staff and facilities for their scientific information potential to be preserved. This shall not preclude the local tribes from seeking the return of certain artifacts as agreed to in a consultation process with the developer/project archaeologist.

3. When avoidance or preservation of an archaeological site or historic structure is proposed as a form of mitigation, a program detailing how such long-term avoidance or preservation is assured will be developed and approved prior to conditional approval.

4. In areas of potential but unknown sensitivity, field surveys prior to grading will be required to establish the need for paleontologic monitoring.

5. Projects requiring grading plans that are located in areas of known fossil occurrences, or demonstrated in a field survey to have fossils present, will have all rough grading (cuts greater than 3 feet) monitored by trained paleontologic crews working under the direction of a qualified professional, so that fossils exposed during grading can be recovered and preserved. Fossils include large and small vertebrate fossils, the latter recovered by screen washing of bulk samples.

6. A report of findings with an itemized accession inventory will be prepared as evidence that monitoring has been successfully completed. A preliminary report will be submitted and approved prior to granting of building permits, and a final report will be submitted and approved prior to granting of occupancy permits. The adequacy of paleontologic reports will be determined in consultation with the Curator of Earth Science, San Bernardino County Museum.

Policy CO 3.5 Ensure that important cultural resources are avoided or minimized to protect Native American beliefs and traditions.

Programs

1. Consistent with SB 18, as well as possible mitigation measures identified through the CEQA process, the County will work and consult with local tribes to identify, protect and preserve “traditional cultural properties” (TCPs). TCPs include both manmade sites and resources as well as natural landscapes that contribute to the cultural significance of areas.

2. The County will protect confidential information concerning Native American cultural resources with internal procedures, per the requirements of SB 922, an addendum to SB 18. The purpose of SB 922 is to exempt cultural site information from public review as provided for in the Public Records

Act. Information provided by tribes to the County shall be considered confidential or sacred.

3. The County will work in good faith with the local tribes, developers/applicants and other parties if the local affected tribes request the return of certain Native American artifacts from private development proposed projects. The developer is expected to act in good faith when considering the local tribe's request for artifacts. Artifacts not desired by the local tribe will be placed in a qualified repository as established by the California State Historical Resources Commission. If no facility is available, then all artifacts will be donated to the local tribe.

4. The County will work with the developer of any "gated community" to ensure that the Native Americans are allowed future access, under reasonable conditions, to view and/or visit known sites within the "gated community." If a site is identified within a gated community proposed project, and preferably preserved as open space, the development will be conditioned by the County allow future access to Native Americans to view and/or visit that site.

5. Because contemporary Native Americans have expressed concern over the handling of the remains of their ancestors, particularly with respect to archaeological sites containing human burials or cremations, artifacts of ceremonial or spiritual significance, and rock art, the following actions will be taken when decisions are made regarding the disposition of archaeological sites that are the result of prehistoric or historic Native American cultural activity:

    a. The Native American Heritage Commission and local reservation, museum, and other concerned Native American leaders will be notified in writing of any proposed evaluation or mitigation activities that involve excavation of Native American archaeological sites, and their comments and concerns solicited.

    b. The concerns of the Native American community will be fully considered in the planning process.

    c. If human remains are encountered during grading and other construction excavation, work in the immediate vicinity will cease and the County Coroner will be contacted pursuant to the state Health and Safety Code.

    d. In the event that Native American cultural resources are discovered during project development and/or construction, all work in the immediate vicinity of the find will cease and a qualified archaeologist meeting U.S. Secretary of Interior standards will be hired to assess the find. Work on the overall project may continue during this assessment period.

e. If Native American cultural resources are discovered, the County will contact the local tribe. If requested by the tribe, the County will, in good faith, consult on the discovery and its disposition with the tribe.

County of San Bernardino Development Code

Development Code Chapter 82.12, Cultural Resources Preservation (CP) Overlay, includes regulations pertaining to the identification and preservation of important archaeological and historical resources. The chapter outlines application requirements for a project proposed within a CP Overlay, as well as development standards and explanation of the need for a Native American monitor.

The Development Code states that the CP Overlay may be applied to areas where archaeological and historic sites that warrant preservation are known or are likely to be present. Specific identification of known cultural resources is indicated by listing in one or more of the following inventories: California Archaeological Inventory, California Historic Resources Inventory, California Historical Landmarks, California Points of Historic Interest, and/or National Register of Historic Places. The Project site is not located in a designated CP Overlay area.

4.5.3 – SIGNIFICANCE THRESHOLDS

Per the CEQA Guidelines, implementation of the Project would have a significant impact related to historic and cultural resources if it would:

a) Cause a substantial adverse change in the significance of a historic resource pursuant to CEQA Guidelines Section 15064.5;
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines section 15064.5;
c) Disturb any human remains, including those interred outside of dedicated cemeteries?

4.5.4 – IMPACTS AND MITIGATION MEASURES

This section describes potential impacts related to historic resources, archaeological resources, and human remains, which could result from the implementation of the project and recommends mitigation measures as needed to reduce significant impacts.

Historic Resources

Impact CUL-1 – Would the project cause a substantial adverse change in the significance of a historic resource pursuant to Section 15064.5?

Analysis of Impacts

CEQA Guidelines Section 15064.5 defines historic resources as resources listed or determined to be eligible for listing by the State Historical Resources Commission, a local register of historical resources, or the lead agency. Generally, a resource is considered to be historically significant if it meets one of the following criteria:

i) Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;

ii) Is associated with the lives of persons important in our past;

iii) Embodies the distinctive characteristics of a type, period, region or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or

iv) Has yielded, or may be likely to yield, information important in prehistory or history. Although the project site has had business activity, there has been relatively minor ground disturbance.

Potentially Historic Irrigation Equipment

As discussed in Section 4.5.1, the Project is within a former citrus grove that was cleared of trees around 2007. Soils within the Project area are completely disturbed from plowing associated with previous and current agricultural activity and operation of heavy equipment during tree removal. A few modern irrigation features are extant on the subject properties including PVC pipes, concrete standpipes, and a concrete pad with protruding steel pipe. These features were not documented as cultural resources as they were not over 50 years of age. Two cultural resources (CA-SBR-32488H and CA-SBR32489H), both remnants of a historic-period water conveyance system, were identified during the survey. These features consist of a local stone and concrete mortar flume (CA-SBR-32488H) and a concrete block, concrete, and brick weir with a hand crank metal release gate (CA-SBR-32489H). These features were evaluated to determine their significance and eligibility for inclusion in the California Register of Historic Resources (CRHR). Æ conducted archival research on the associated parcels (APNs 029204143, 029204148, 029204147) and local irrigation systems to define ownership and development history and determine if the water conveyance system could be associated with a particular event, person of importance, or building style. The standpipes, PVC pipe fragments, and concrete pad with steel pipe within the Project area are from a more recent drip system introduced in the 1970s. These elements were not evaluated in this study because they are less than 50 years old.

The flume and weir are directly associated with the Redlands citrus industry. This site is similar to several other sites recorded nearby, as many irrigation flumes, standpipes, and weirs have been reported in the vicinity. These resources were components of a larger gravity-fed irrigation system for the citrus groves that were previously extant within the subject parcels and within the general vicinity.

Citrus production began in the Redlands area in the late nineteenth century and remained prominent until the late 1950s. While ownership of the subject property changed throughout the twentieth century, the land use did not change. This property was developed as an agricultural lot in the late 1880s as a part of Williams Tract No.1. In 1893, Frank Brown subdivided the Williams Tract No. 1, and these properties became Lots within Block 1 and 2 of the Brown Subdivision.

Frank Brown was the founder and head engineer of the Bear Valley Land and Water Company. He installed gravity-fed irrigation systems on his lots to service the growing citrus industry. The water for this system came from the Bear Valley Land and Water Company's new state of the art reservoir in Bear Valley, now known as Big Bear Lake. This sustainable water source brought growth and prosperity to the Redlands region, resulting in a prosperous citrus industry, and gravity-fed irrigation became the standard practice in southern California orchard production until the drip system was introduced in the 1970s.

Several land tracts in the area were developed in the 1890s due to this sustainable water source. These land tracts, including the Williams Tract, became extensive citrus groves owned by local

families and entrepreneurs. Historical aerial images confirmed that the Project area contained an orchard by 1930. The 1954 edition of the USGS Redlands topographic quadrangle map shows a citrus grove on the property as well as on the surrounding properties. Thus, it appears this property was a citrus grove from the 1890s until circa 2007, when the trees were removed, explaining why the historic gravity-fed irrigation system is still extant on the property.

CA-SBR-32488H (flume) and CA-SBR-32489H (weir) were constructed circa 1893, within the Frank Brown subdivision of Williams Tract No. 1. These components of a gravity-fed irrigation system have a direct association with irrigation practices in San Bernardino Valley and development of the citrus industry in Redlands, events that were important in local and regional history. The flume and weir are significant under CRHR Criterion 1, with the period of significance from 1893, when the Brown Subdivision was created, until 1950, the end of the citrus industry boom.

Ownership of the properties changed throughout the late nineteenth and twentieth centuries (see timeline in Section 2.4.5). Past owners include local families, entrepreneurs, and banks who wanted to make a profit in the lucrative citrus industry. The most historically significant property owner was Frank Brown; however, other historic resources in the region, including the old Bear Valley Dam, listed as a California Historical Landmark, better convey Brown's historical contribution to the region. With no direct association with any other important historical persons, the site is not considered significant under CRHR Criterion 2.

The flume and weir embody the distinctive design and construction characteristics of a gravity-fed irrigation flume and weir from the turn of the twentieth century, and are significant under CRHR Criterion 3.

This gravity-flow irrigation flume and weir does not appear to meet CRHR Criterion 4 individually for their potential to provide information important in history or prehistory. However, the larger Bear Valley Land and Water Company system, the Williams Tract irrigation system, and adjoining orchards, with which this flume is associated, could potentially be eligible under Criterion 4. The extent of these systems is not fully known and little documentation on the layout of the systems was found during current historic research. Therefore, further investigation and study of the remaining physical elements of these systems have the potential to yield new information about the systems and their contribution to the historic Redlands Citrus industry.

The flume and weir may be a contributing element of a larger historic citrus district in Redlands. Several gravity-fed irrigation systems, oil tanks, citrus packing houses, and electrical railways have been documented within a 1-mile radius of the Project (see Appendix C of the Phase 1 Cultural Resources Assessment). Additional research and studies are needed to investigate the extent, significance, and integrity of this potential historic district.

An evaluation of the two historical resources suggests that they are eligible for listing on the CRHR under Criteria 1 and 3. These resources may also be a contributing element to a larger citrus historic district. Whenever feasible, avoidance of resources is preferred and recommended. It appears that CA-SBR-32489H (weir) can be avoided during Project construction and preserved in place. However, CA-SBR-32488H (flume) will be directly impacted by the Project. Therefore, Mitigation Measure CUL-1 is incorporated to reduce Project impacts to the flume to a less-than-significant level under CEQA.

Level of Significance Before Mitigation

Potentially significant.

Mitigation Measures

CUL-1 *HABS Survey*. Prior to ground-disturbing activities, the project proponent shall prepare Historic American Building Survey (HABS)/Historic American Engineering Record (HAER)-like documentation of the segment of the flume (CA-SBR-32488H) within the Project boundaries. The project proponent shall also conduct additional research on the citrus industry and prepare documentation in the form of a district record to be filed at the South Central Coastal Information Center SCCIC.

Level of Significance After Mitigation

Less than significant.

Archaeological Resources

Impact CUL-2 – Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?

Analysis of Impacts

Geologic data indicate that the surface of the Project area has been stable for the last several thousand years and that any extant archaeological deposits post-dating the middle Holocene would likely be found near the modern ground surface. Late Holocene flood events, which have inundated much of the Redlands and San Bernardino areas (Springer 2007), may have deposited thin layers of mud across the Project area. However, these deposits have likely been altered by development of the citrus grove in the twentieth century. As such, any significant archaeological remains within the Project area dating to the latter half of the Holocene would likely be within the plow zone and would be observed during the Phase I survey.

The sensitivity for older archaeological deposits within deeper subsurface contexts is low. While the sediments underlying the Project area were deposited during the first half of the Holocene, they consist of stream deposits related to the Santa Ana River. These types of deposits are part of a high-energy system subject to intermittent periods of erosion and deposition. Archaeological remains in these settings, if present, are often entrained into the flow and reworked into secondary contexts. As such, the likelihood of finding intact buried resources within the Project area is very low.

In addition to the above buried site sensitivity analysis, the terrain throughout the entire Project area has been extensively disturbed by mechanical tree removal. It is unlikely that buried archaeological remains are present; therefore, no further archaeological management of the Project area is recommended.

It should be noted, however, that the San Manuel Band of Mission Indians recommended Phase I presence/absence testing within the Project area, assuming there are in situ Holocene layers beneath the existing disturbance that resulted from agriculture. The Cahuilla Band of Indians noted that the Project area is located within the Tribe's Traditional Use Area; therefore, the Tribe requested to be notified of all updates and or changes with the Project moving forward.

There are no known designated cultural (i.e., archaeological) resources present on the Project site, as discussed above. A pedestrian-level survey revealed no archaeological resources associated with the Project site. The Project site is surrounded by industrial developed that has been permanently altered due to the construction and grading of below- and aboveground improvements (buildings, parking lots, roads, hardscapes, and utilities). The site has already been subject to extensive disruption during past agricultural activities. Given the highly disturbed condition of the site, the potential for ground disturbing activities to impact an as-yet-unidentified archaeological resource is considered remote. Additionally, based on a literature and records search conducted for the project site, there are no previously recorded prehistoric features that are known to occur on the site. However, although no archaeological resources were observed during the cultural resources assessment, the project may reveal unknown cultural resources in the course of construction. In order to protect potentially significant unknown resources, Mitigation Measures CUL-2 and CUL-3 have been incorporated to reduce potentially significant impacts to previously undiscovered archaeological resources to a less than significant level. Mitigation Measure CUL-2 requires that a qualified archaeologist conduct an archaeological sensitivity training for construction personnel. If archaeological resources are encountered, Mitigation Measure CUL-3 requires that all ground-disturbing activities must be halted or diverted away from the find and that a buffer of at least 50 feet be established around the find until an appropriate treatment plan is coordinated.

Level of Significance Before Mitigation

Potentially significant.

Mitigation Measures

CUL-2 *Conduct Archaeological Sensitivity Training for Construction Personnel*. The project proponent shall retain a qualified professional archaeologist who meets U.S. Secretary of the Interior's Professional Qualifications and Standards, to conduct Archaeological Sensitivity Training for construction personnel prior to commencement of excavation activities. The training session shall be carried out by a cultural resources professional with expertise in archaeology, who meets the U.S. Secretary of the Interior's Professional Qualifications and Standards. The training session will include a handout and will focus on how to identify archaeological resources that may be encountered during earthmoving activities and the procedures to be followed in such an event, the duties of archaeological monitors, and the general steps a qualified professional archaeologist would follow in conducting a salvage investigation if one is necessary.

CUL-3 *Cease Ground-Disturbing Activities and Implement Treatment Plan if Archaeological Resources Are Encountered.* In the event that archaeological resources are unearthed during ground-disturbing activities, ground-disturbing activities shall be halted or diverted away from the vicinity of the find so that the find can be evaluated. A buffer area of at least 50 feet shall be established around the find where construction activities shall not be allowed to continue until a qualified archaeologist has examined the newly discovered artifact(s) and has evaluated the area of the find. Work shall be allowed to continue outside of the buffer area. All archaeological resources unearthed by project construction activities shall be evaluated by a qualified professional archaeologist, who meets the U.S. Secretary of the Interior's Professional Qualifications and Standards. Should the newly discovered artifacts be determined to be prehistoric, Native

American Tribes/Individuals should be contacted and consulted and Native American construction monitoring should be initiated. The Applicant and City shall coordinate with the archaeologist to develop an appropriate treatment plan for the resources. The plan may include implementation of archaeological data recovery excavations to address treatment of the resource along with subsequent laboratory processing and analysis.

Level of Significance After Mitigation

Less than Significant.

Human Remains

Impact CUL-3 – Would the project disturb any human remains, including those interred outside of formal cemeteries?

Analysis of Impacts

There are no existing or known cemeteries on or adjacent to the Project site. As a result, Project implementation is not anticipated to impact human remains associated with a cemetery. In the event that any human remains or related resources are discovered, such resources would be treated in accordance with all applicable federal, state, and local regulations and guidelines for disclosure, recovery, relocation, and preservation, including California Health and Safety Code Section 7050.5, which states that no further disturbance shall occur until the county coroner has made a determination of origin and disposition pursuant to Public Resources Code Section 5097.98. Under these provisions, the coroner must be notified of the find immediately. If the remains are determined to be prehistoric, the coroner will notify the Native American Heritage Commission (NAHC), which will determine and notify a Most Likely Descendant (MLD). With the permission of the landowner or his/her authorized representative, the MLD may inspect the site of the discovery. The MLD shall complete the inspection within 48 hours of notification by the Native American Heritage Commission. Therefore, with compliance with California Health and Safety Code Section 7050.5 and Public Resources Code 5097.98, impacts associated with human remains would be less than significant.

Level of Significance Before Mitigation

Less than Significant.

Mitigation Measures

No mitigation required.

4.5.5 – REFERENCES

Applied Earth Works, Inc. Phase I Cultural Resource Assessment for the Alabama and Palmetto Project, near the City of Redlands, San Bernardino County, California. January 2019.

County of San Bernardino. County of San Bernardino 2007 General Plan: Conservation Element. April 24, 2014

4.6 – Energy

This EIR section describes the energy environmental and regulatory setting as it applies to the Project and addresses potential energy impacts associated with the development and operation of the Project. Energy resources are intimately tied to impacts discussed in the Air Quality and Greenhouse Gas sections of the EIR, Sections 4.3 and 4.8, respectively. As such, many of the values presented in this Section reflect values derived from the modeling conducted in those sections.

4.6.1 – ENVIRONMENTAL SETTING

Energy is primarily categorized in three areas: electricity, natural gas, and fuels used for transportation. According to the U.S. Energy Information Administration (USEIA), California is the most populous state in the U.S., representing 12 percent of the total national population, has the largest economy, and is second only to Texas in total energy consumption. However, California has one of the lowest per capita energy consumption levels in the U.S. This is a result of California's mild climate, extensive efforts to increase energy efficiency, and implementation of alternative technologies. California leads the nation in electricity generation from solar, geothermal, and biomass resources (U.S. EIA, 2018).

Electricity

In 2017 almost half of California's net electricity generation was from renewable resources, including hydropower (U.S. EIA, 2019). In 2017 the California electric system used 292,039 Gigawatt hours (GWh) of electricity, of which 206,336 GWh was produced in-state (CEC, 2018a). Los Angeles County consumed 67,598 GWh of electricity, about 23 percent of the state's electricity consumption (CEC, 2019a). Southern California Edison (SCE) is the utility provider in the portion of San Bernardino County where the project is located. In the 2017 fiscal year, SCE sold approximately 85,879 million kilowatt-hours (kWh) of electricity (SCE, 2018a); approximately 46% of the electricity that SCE delivered to customers came from carbon-free resources, including solar energy (approximately 13%), wind energy (approximately 10%), and geothermal energy (approximately 8%)(SCE, 2018b).

Natural Gas

California accounts for less than one percent of total U.S. natural gas reserves and production; however, almost two-thirds of California households use natural gas for home heating (EIA 2019). In 2017, California consumed about 25,142 million therms of natural gas. Approximately 18 percent of natural gas was consumed by the residential sector. San Bernardino County consumed approximately 493 million therms of natural gas in the same year, accounting for approximately 2 percent of statewide consumption. The non-residential sector made up approximately 52 percent of County wide consumption (CEC, 2019b).

The Southern California Gas Company (SoCalGas) provides natural gas service to the project site. SoCalGas is the principal distributor of natural gas in Southern California and provides natural gas for residential, commercial, and industrial markets. The annual natural gas sale to all markets in 2017 was approximately 5,142 million Btu (CEC, 2019c).

Transportation

California's transportation sector consumed 79.3 million Btu of energy per capita in 2017, which ranked 32nd in the nation (U.S. EIA, 2017). Most gasoline and diesel fuel sold in California for motor vehicles is refined in California to meet state-specific formulations required by the California Air Resources Board (CARB).

According to the state Board of Equalization (BOE), statewide taxable sales figures indicate a total of 15,584 million gallons of gasoline and 3,124 million gallons of diesel fuel were sold in 2017 (CEC, 2019d; CDFTA, 2018). Although exact estimates are not available by County, retail fuel outlet survey data indicates San Bernardino County accounted for approximately 6.0 percent and 13.7 percent of total statewide gasoline and diesel sales, respectively, in 2017 (CEC, 2018b).

According to CalTrans, the annual vehicle miles traveled within all jurisdictions of San Bernardino County (state highway and local roadway) is 21,546,638 (Caltrans 2017).

4.6.2 – REGULATORY FRAMEWORK

Federal

Federal Energy Policy and Conservation Act

In 1975, Congress enacted the Federal Energy and Policy Conservation Act. Which established the first fuel economy standards for on-road motor vehicles in the United States. Pursuant to the act, the National Highway Traffic Safety Administration (NHTSA) is responsible for establishing additional vehicle standards.

Energy Independence and Security Act of 2007

On December 19, 2007, the Energy Independence and Security Act of 2007 was signed into law. In addition to setting increased Corporate Average Fuel Economy (CAFE) standards for motor vehicles, the act also includes the following provisions related to energy efficiency:

- Renewable fuel standards (RFS)
- Appliance and lighting efficiency standards
- Building energy efficiency

This federal legislation requires ever-increasing levels of renewable fuels to replace petroleum. The United States Environmental Protection Agency (U.S. EPA) is responsible for developing and implementing regulations to ensure transportation fuel sold in the United State contains a minimum volume of renewable fuel. The RFS program regulations were developed in collaboration with refiners, renewable fuel produces, and other stakeholders.

The RFS program was created under the Energy Policy Act of 2005 and established the first renewable fuel volume mandate in the United States. As required under the act, the original RFS program (RFS1) required 7.5 billion gallons of renewable fuel to be blended into gasoline by 2012. Under the Energy Independence and Security Act of 2007 (EISA), the RFS program was expanded in several key ways that laid the foundation for achieving significant reductions of greenhouse gas (GHG) emissions through the use of renewable fuels, for reducing imported

petroleum, and for encouraging the development and expansion of our nation's renewable fuels sector. The updated program is referred to as RFS2 and includes the following:

- EISA expanded the RFS program to include diesel, in addition to gasoline;
- EISA increased the volume of renewable fuel required to be blended into transportation fuel from 9 billion gallons in 2008 to 36 billion gallons by 2022;
- EISA established new categories of renewable fuel and set separate volume requirements for each one.
- EISA required the U.S. EPA to apply lifecycle GHG performance threshold standards to ensure that each category of renewable fuel emits fewer GHGs than the petroleum fuel it replaces (U.S. EPA, 2015).

Additional provisions of the EISA address energy savings in government and public institutions, promoting research for alternative energy, additional research in carbon capture, international energy programs, and the creation of "green jobs."

Federal Vehicle Standards

In 2009, the NHTSA issued a final rule regulating fuel efficiency and GHG emissions from cars and light-duty trucks for model year 2011; and, in 2010, the EPA and NHTSA issued a final rule regulating cars and light-duty trucks for model years 2012–2016.

In 2010, President Obama issued a memorandum directing the Department of Transportation, Department of Energy, EPA, and NHTSA to establish additional standards regarding fuel efficiency and GHG reduction, clean fuels, and advanced vehicle infrastructure. In response to this directive, EPA and NHTSA proposed stringent, coordinated federal GHG and fuel economy standards for model years 2017–2025 light-duty vehicles. The proposed standards projected to achieve 163 grams per mile of carbon dioxide (CO_2) in model year 2025, on an average industry fleetwide basis, which is equivalent to 54.5 miles per gallon if this level were achieved solely through fuel efficiency. The final rule was adopted in 2012 for model years 2017–2021, and NHTSA intends to set standards for model years 2022–2025 in a future rulemaking.

In addition to the regulations applicable to cars and light-duty trucks described above, in 2011, the EPA and NHTSA announced fuel economy and GHG standards for medium- and heavy-duty trucks for model years 2014–2018. The standards for CO_2 emissions and fuel consumption are tailored to three main vehicle categories: combination tractors, heavy-duty pickup trucks and vans, and vocational vehicles. According to the EPA, this regulatory program will reduce GHG emissions and fuel consumption for the affected vehicles by 6 percent to 23 percent over the 2010 baselines.

In August 2016, the EPA and NHTSA announced the adoption of the phase two program related to the fuel economy and GHG standards for medium- and heavy-duty trucks. The phase two program will apply to vehicles with model year 2018 through 2027 for certain trailers, and model years 2021 through 2027 for semi-trucks, large pickup trucks, vans, and all types and sizes of buses and work trucks. The final standards are expected to lower CO_2 emissions by approximately 1.1 billion metric tons (MT) and reduce oil consumption by up to 2 billion barrels over the lifetime of the vehicles sold under the program (U.S. EPA and NHTSA, 2016).

In August 2018, The USEPA and NHTSA released a notice of proposed rulemaking called Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule for Model Years 2021-2026 Passenger Cars and

Light Trucks (SAFE Vehicles Rule). This rule would modify the existing CAFE standards and tailpipe carbon dioxide emissions standards for passenger cars and light trucks and establish new standards covering model years 2021 through 2026. SAFE standards are expected to uphold model year 2020 standards through 2026 (NHTSA, 2018).

State

Title 24 Energy Standards

The California Energy Commission (CEC) first adopted Energy Efficiency Standards for Residential and Nonresidential Buildings in 1978 in response to a legislative mandate to reduce energy consumption in the State. Although not originally intended to reduce GHG emissions, increased energy efficiency, and reduced consumption of electricity, natural gas, and other fuels would result in fewer GHG emissions from residential and nonresidential buildings subject to the standard. The standards are updated periodically to allow for the consideration and inclusion of new energy efficiency technologies and methods.

Part 11 of the Title 24 Building Standards Code is referred to as the California Green Building Standards Code (CALGreen Code). The purpose of the CALGreen Code is to "improve public health, safety and general welfare by enhancing the design and construction of buildings through the use of building concepts having a positive environmental impact and encouraging sustainable construction practices in the following categories: (1) planning and design; (2) energy efficiency; (3) water efficiency and conservation; (4) material conservation and resource efficiency; and (5) environmental air quality." The CALGreen Code is not intended to substitute or be identified as meeting the certification requirements of any green building program that is not established and adopted by the California Building Standards Commission (CBSC).

CALGreen contains both mandatory and voluntary measures. For non-residential land uses there are 39 mandatory measures including, but not limited to exterior light pollution reduction, wastewater reduction by 20 percent, and commissioning of projects over 10,000 square feet. Two tiers of voluntary measures apply to non-residential land uses, for a total of 36 additional elective measures.

California's Building Energy Efficiency Standards are updated on an approximately three-year cycle. The 2019 standards, adopted May 9, 2018, will go into effect on January 1, 2020 and improve upon existing standards, focusing on three key areas: proposing new requirements for installation of solar photovoltaics for newly constructed low-rise residential buildings; updating current ventilation and Indoor Air Quality (IAQ) requirements, and extending Title 24 Part 6 to apply to healthcare facilities. The 2019 standards also propose several smaller improvements in energy efficiency.

Executive Order B-30-15

Executive Order B-30-15, 2030 Carbon Target and Adaptation, issued by Governor Brown in April 2015, set a target of reducing GHG emissions by 40 percent below 1990 levels in 2030. To achieve this ambitious target, Governor Brown identified five key goals for reducing GHG emissions in California through 2030:

- Increase the amount of renewable electricity provided state-wide to 50 percent.

- Double energy efficiency savings achieved in existing buildings and make heating fuels cleaner.
- Reduce petroleum use in cars and trucks by up to 50 percent.
- Reduce emissions of short-lived climate pollutants.
- Manage farms, rangelands, forests, and wetlands to increasingly store carbon.

Senate Bill 375 (Sustainable Communities and Climate Protection Act)

In January 2009, California SB 375 went into effect known as the Sustainable Communities and Climate Protection Act. The objective of SB 375 is to better integrate regional planning of transportation, land use, and housing to reduce sprawl and ultimately reduce greenhouse gas emissions and other air pollutants. SB 375 tasks CARB to set GHG reduction targets for each of California's 18 regional Metropolitan Planning Organizations (MPOs). Each MPO is required to prepare a Sustainable Communities Strategy (SCS) as part of their Regional Transportation Plan (RTP). The SCS is a growth strategy in combination with transportation policies that will show how the MPO will meet its GHG reduction target. If the SCS cannot meet the reduction goal, an Alternative Planning Strategy may be adopted that meets the goal through alternative development, infrastructure, and transportation measures or policies.

In August 2010, CARB released the proposed GHG reduction targets for the MPOs to be adopted in September 2010. The proposed reduction targets for the Southern California Association of Governments (SCAG) region were eight percent by year 2020 and 13 percent by year 2035. In September 2010 and February 2011, the eight percent and the 13 percent targets were adopted, respectively.

SCAG's Regional Council adopted an update to the *2012-2035 Regional Transportation Plan/Sustainable Communities Strategy: Towards a Sustainable Future* (2012 RTP/SCS) on April 7, 2016, the *2016-2040 Regional Transportation Plan/Sustainable Communities Strategy* (2016 RTP/SCS). The 2016 RTP/SCS expands upon the 2012 RTP/SCS's goal of balancing future mobility and housing needs with economic, environmental, and public health goals. Included in the 2016 RTP/SCS are 13 major initiatives primarily focused around preserving and maintaining the existing transportation system, expanding and improving mass transit (with a specific emphasis on passenger rail), decreasing reliance on vehicular modes of transportation through the expansion of pedestrian and bicycle infrastructure, and focusing new growth around transit. In March 2018, CARB established new regional GHG reduction targets for SCAG and other MPOs in the state (CARB, 2018). The new SCAG targets are an 8 percent reduction in per capita passenger vehicle GHG reductions by 2020 and a 19 percent reduction by 2035. The 2016 RTP/SCS, however, remains the approved SCS for the SCAG MPO until such time as SCAG prepares an updated SCS.

Renewables Portfolio Standard Program

In 2002, California established its Renewables Portfolio Standard (RPS) Program, with the goal of increasing the percentage of renewable energy in the state's electricity mix to 20 percent of retail sales by 2017. The *2003 Integrated Energy Policy Report* recommended accelerating that goal to 20 percent by 2010, and the *2004 Energy Report Update* further recommended increasing the target to 33 percent by 2020. The state's *Energy Action Plan* also supported this goal. In 2006 under Senate Bill 107, California's 20 percent by 2010 RPS goal was codified. The legislation required retail sellers of electricity to increase renewable energy purchases by at least one percent each year with a target of 20 percent renewables by 2010. Publicly owned utilities set

their own RPS goals, recognizing the intent of the legislature to attain the 20 percent by 2010 target.

On November 17, 2008, Governor Schwarzenegger signed Executive Order S-14-08 requiring "[a]ll retail sellers of electricity shall serve 33 percent of their load with renewable energy by 2020." The following year, Executive Order S-21-09 directed the California Air Resources Board, under its AB 32 authority, to enact regulations to achieve the goal of 33 percent renewables by 2020.In October 2015, Governor Brown signed Senate Bill 350 to codify ambitious climate and clean energy goals. One key provision of SB 350 is for retail sellers and publicly owned utilities to procure "half of the state's electricity from renewable sources by 2030."

The State's RPS program was further strengthened by the passage of SB 100 in 2018. SB 100 revised the State's RPS Program to require retail sellers of electricity to serve 50% and 60% of the total kilowatt-hours sold to retail end-use customers be served by renewable energy sources by 2026 and 2030, respectively, and requires 100% of all electricity supplied come from renewable sources by 2045.

Executive Order B-55-18

On September 10, 2018, Governor Brown signed EO B-55-18, to achieve carbon neutrality by moving the State of California to 100 percent clean energy by 2045. This Executive Order also includes specific measures to reduce GHG emissions via clean transportation, energy efficient buildings, directing cap-and-trade funds to disadvantaged communities, and better management of state's forest land.

Low Carbon Fuel Standard Regulation

CARB initially approved the Low Carbon Fuel Standard (LCFS) regulation in 2009, identifying it as one of the nine discrete early action measures in the *2008 Scoping Plan* to reduce California's GHG emissions. The LCFS regulation defines a Carbon Intensity, or "CI," reduction target (or standard) for each year, which the rule refers to as the "compliance schedule." The LCFS regulation requires a reduction of at least 10 percent in the CI of California's transportation fuels by 2020 and maintains that target for all subsequent years.

CARB has begun the rulemaking process for strengthening the compliance target of the LCFS through the year 2030. For a new LCFS target, the preferred scenario in the *2017 Scoping Plan Update* identifies an 18 percent reduction in average transportation fuel carbon intensity, compared to a 2010 baseline, by 2030 as one of the primary measures for achieving the state's GHG 2030 target. Achieving the SB 32 reduction goals will require the use of a low carbon transportation fuels portfolio beyond the amount expended to result from the current compliance schedule (CARB, 2017).

Advanced Clean Cars Program

In January 2012, CARB approved the Advanced Clean Cars (ACC) Program (formerly known as Pavley II) for model years 2017 through 2025. The components of the ACC program are the Low-Emission Vehicle (LEV) regulations and the Zero-Emission Vehicle (ZEV) regulation. The Program combines the control of smog, soot, and global warming gases and requirements for greater numbers of zero-emission vehicles into a single package of standards. By 2025, new automobiles under California's Advanced Clean Car program will emit 34 percent less global warming gases and 75 percent less smog-forming emissions.

EO B-48-18, issued by Governor Brown in January 2018, establishes a target to have five million ZEVs on the road in California by 2030. This Executive Order is supported by the State's 2018 ZEV Action Plan Priorities Update, which expands upon the State's 2016 ZEV Action Plan. While the 2016 plan remains in effect, the 2018 update function as an addendum, highlighting the most important actions State agencies are taking in 2018 to implement the directives of EO B-48-18.

Local

San Bernardino County GHG Emissions Reduction Plan

The County of San Bernardino adopted the Greenhouse Gas Reduction Plan (GHG Plan) in 2011, which provides guidance on how to analyze GHG emissions and determine significance during the CEQA review of proposed development projects within the County of San Bernardino (San Bernardino County, 2011). The reduction strategies in the GHG Plan correspond to reduction measures. Measurable reductions in GHG emissions are achieved through adherence to the County's development review process (DRP) procedures.

The County's GHG DRP procedures, updated in 2015, are streamlined by 1) applying a uniform set of performance standards to all development projects and 2) utilizing Screening Tables to mitigate project GHG emissions. Projects have the option of preparing a project-specific technical analysis to quantify and mitigate GHG emissions in lieu of the utilizing the Screening Tables. A review standard of 3,000 MT (metric tons) CO_2e (carbon dioxide equivalents) per year is used to identify projects that require the use of Screening Tables or a project-specific technical analysis to quantify and mitigate project emissions.

Projects that exceed the 3,000 $MTCO_2e$ per year are required to either achieve a minimum 100 points per the Screening Tables or a 31 percent reduction over 2007 emissions levels. Many of the point options identified in the screening tables are related to energy efficiency. Such point options include, but are not limited to: enhanced building design (e.g., exceeding Title 24 Building Code standards, reduction in water consumption, etc.), vehicle trip reduction measures, construction and demolition debris diversion, and solid waste diversion.

San Bernardino County General Plan Conservation Element

The County of San Bernardino General Plan Conservation Element contains the following policies and programs that may be applicable to the Project:

- CO 8.5 – There are unique climatic and geographic opportunities for energy conservation and small scale alternative energy systems within each of the County's three geographic regions and, therefore, the County shall:
    a) Implement land use and building controls and incentives to ensure energy-efficient standards in new developments that comply with California energy regulations as minimum requirements.
    b) Quantify local climate variations and in each climatic region require energy conservation systems in new construction.
    c) Fully enforce all current residential and commercial California Energy Commission energy conservation standards.

- CO 8.6 – Fossil fuels combustion contributes to poor air quality. Therefore, alternative energy production and conservation will be required, as follows:
    a) New developments will be encouraged to incorporate the most energy-efficient technologies that reduce energy waste by weatherization, insulation, efficient appliances, solar energy systems, reduced energy demand, efficient space cooling and heating, water heating, and electricity generation.
- CO 8.8 – Promote energy-efficient design features, including appropriate site orientation, use of lighter color roofing and building materials, and use of deciduous shade trees and windbreak trees to reduce fuel consumption for heating and cooling (San Bernardino County, 2007).

4.6.3 – SIGNIFICANCE THRESHOLDS

Per the CEQA Guidelines, implementation of the Project would have a significant impact related to energy if it would:

a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation; or
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

4.6.4 – IMPACTS AND MITIGATION MEASURES

This section describes potential impacts related energy impacts.

Impact ENG-1 – Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption or energy resources, during project construction or operation?

Analysis of Impacts

Implementation of the Project would increase the demand for electricity and natural gas at the project site and gasoline consumption in the region during construction and operation.

Electricity

Construction. Temporary electric power would be required for lighting and electronic equipment (e.g., computers) located in trailers used by the construction crew. However, the electricity used for such activities would be temporary and would have a negligible contribution to the project's overall energy consumption.

Operational. During operation of the Project, the warehouse would require electricity for multiple purposes, such as: building heating and cooling, lighting, appliances, and electronics.

As described in Section 4.3, the California Emissions Estimator Model (CalEEMod) was used to estimate project emissions from energy uses. Default electricity generations in CalEEMod were used for the proposed land use and climate zone based on compliance with the 2016 Title 24

Building Code.[1] Modifications were made to the model, based on the County's GHG DRP checklist contained in Appendix J. Such measures that would reduce electricity consumption include, but are not limited to: an improved efficiency heating, ventilation, and air conditioning (HVAC) system, high efficiency lights, water efficient faucets, and water efficient irrigation systems. Based on the project design and mitigations applied, the project is estimated to consume approximately 2,894,382 kWh/yr, with approximately 2,814,700 kWh/yr attributable to building electricity consumption and approximately 79,682 kWh/yr attributable to water consumption.

Although electricity consumption would increase at the site under implementation of the Project, the building envelope, HVAC, lighting, and other systems, would be designed to maximize energy performance. The project would be subject to statewide mandatory energy requirements as outlined in the CALGreen Code. In addition, the project would implement additional measures, as detailed in the checklist presented in Appendix J, that would further reduce electricity consumption. Electricity that would be consumed by the Project would also subject to the cap-and-trade regulation. For these reasons, the electricity that would be consumed by the Project is not considered to be inefficient or wasteful, and impacts would be less than significant.

Natural Gas

Construction. Natural gas consumption is not anticipated during construction of the Project. Fuels used for construction would generally consists of diesel and gasoline, which are discussed in the next subsection. Any amounts of natural gas that may be consumed during project construction would be nominal and would have a negligible contribution to the project's overall energy consumption.

Operational. Natural gas consumption during operation would be required during operation of the Project for various purposes, such as building heating and cooling.

Similar to the estimates derived for electricity consumption, CalEEMod was also used to estimate natural gas consumption associated with the Project. The demand calculations assumed the structure would be built to the 2016 Title 24 CALGreen efficiency requirements. In addition, mitigation was applied based on the information contained in the County's GHG DRP checklist. These measures include, but are not limited to: enhanced wall, attic, and window insulation; high efficiency water heater, and optimized building orientation. Based on the project design and mitigations applied, the project is estimated to consume approximately 2,421,120 kBTU/yr.

Although natural gas consumption would increase at the site under implementation of the Project, the building envelope, HVAC, lighting, and other systems, would be designed to maximize energy performance. The project would be subject to statewide mandatory energy requirements as outlined in the CALGreen Code. In addition, the project would implement additional measures, as detailed in the checklist presented in Appendix J, that would further reduce natural gas consumption. Natural gas that would be consumed by the Project would also be subject to the cap-and-trade regulation. For these reasons, the natural gas that would be consumed by the project is not considered to be inefficient or wasteful, and impacts would be less than significant.

[1] Based on the timing of construction, the Project would be constructed to the 2019 Title 24 CALGreen Building Code requirements, which are more efficient than the 2016 standards. Thus, the values presented reflect conservative assumptions, and likely overestimate energy that would be consumed by the Project

Diesel and Gasoline Fuel

Construction. Diesel and gasoline fuels, also referred to as petroleum in this subsection, would be consumed throughout construction of the Project. Fuel consumed by construction equipment would be the primary energy resource consumed over the course of construction, and vehicle miles traveled (VMT) associated with the transportation of construction materials (e.g., deliveries to the site) and worker trips to and from the site would also result in petroleum consumption. Whereas on-site, heavy-duty construction equipment and delivery trucks would predominantly use diesel fuel, construction workers would generally rely on gasoline-powered vehicles. Table 4.6-1 summarizes the annual on- and off-road fuel consumption, as estimated by Albert A. Webb Associates based on calculations carried out in CalEEMod.

Table 4.6-1
Estimated Construction Fuel Consumption

Activity	Trips	Trip Length (Miles)	Vehicle Miles Traveled	Fuel Efficiency (MPG)	Annual Fuel Usage[1]	
					(Fuel Type)	(Gallons)
ON-ROAD[3]						
Worker[2]	254,420	14.7	3,739,974	24.4	Gasoline	149,534
Vendor	96,420	6.9	665,298	7.6	Diesel	91,017
Hauling	0	20	0	6.2	Diesel	0
OFF-ROAD[4]						
Heavy-Duty Equipment	--	--	--	--	Diesel	52,918

Source: WEBB 2019
1) On-road mobile source fuel use based on VMT from CalEEMod output for all years of construction and fleet-average fuel consumption in gallons per mile from EMFAC2014 web-based data for 2019 in San Bernardino County.
2) Worker trips were assumed to be 100% gasoline-powered vehicles.
3) On-road consumption values presented reflect annual consumption over the course of project construction.
4) Off-road consumption values presented reflect total consumption across all years of project construction.

As shown in Table 4.6-1, the Project is estimated to consume approximately 149,534 and 91,017 gallons of gasoline and diesel fuel, respectively, during each year of project construction. The project is also estimated to consume approximately 52,918 gallons of diesel fuel through the use of heavy-duty, off-road construction equipment over the course of all project construction activities. The project would be required to comply with CARB's Airborne Toxic Control Measures, which restricts heavy-duty diesel vehicle idling to five minutes. Since petroleum use during construction would be temporary and required to conduct development activities, it would not be wasteful or inefficient, and impacts would be less than significant.

Operational. Fuel consumption associated with the Project's operational phase would primarily be attributable to workers commuting to and from the Project and the operation of large, diesel-powered trucks (e.g., semi-trucks) needed to transport goods. The Project is estimated to consume approximately 517,472 and 470,558 gallons of gasoline and diesel fuel, respectively, during each year of project operation (WEBB 2019). These estimates are based on average fuel economy in San Bernardino County during the 2020 calendar year. Over the lifetime of the Project, the fuel efficiency of the vehicles being used by the employees is expected to increase.

As such, the amount of petroleum consumed as a result of vehicular trips to and from the project site during operation is anticipated to decrease over time. There are numerous regulations in place that require and encourage fuel efficiency. For example, CARB has adopted an approach to passenger vehicles by combining the control of smog-causing pollutants and GHG emissions into a single, coordinated package of standards. The approach also includes efforts to support an accelerate the number of plug-in hybrids and ZEVs in California. In addition, per the requirements identified in SB 375, CARB adopted a regional goal for the SCAG region of reducing per-capita GHG emissions from 2005 levels by 8% by 2020 and 19% by 2035 for light-duty passenger vehicles. Accordingly, operation of the Project is expected to decrease the amount of petroleum it consumes in the future due to advances in fuel economy.

Although the Project would increase petroleum use in the region during construction and operation, the use would be a small fraction of the statewide use and, due to efficiency increase, would diminish over time. As such, petroleum consumption associated with the Project would not be considered inefficient or wasteful and would result in a less-than-significant impact.

Level of Significance Before Mitigation

Less than Significant.

Mitigation Measures

No mitigation required.

Impact ENG-2 – Would the project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

Analysis of Impacts

The Project would not conflict with or obstruct a state or local plan adopted for the purposes of increasing the amount of renewable energy or energy efficiency. The California Title 24 Building Code contains energy efficiency standards for non-residential buildings. These standards address electricity and natural gas efficiency in lighting, water, heating, and air conditioning, as well as the effects of the building envelope (e.g., windows, doors, walls and rooves, etc.) on energy consumption. As described under Impact ENG-1, the Project would be required to comply with the 2019 Title 24 CALGreen standards, and would implement additional measures as identified in the County's GHG DRP checklist (see Appendix J). Since the Project would comply with applicable State standards and adhere to the County's energy reductions measures identified in the GHG Emissions Reduction Plan, the Project would not conflict with nor obstruct a sate or local plan for renewable energy or energy efficiency. This impact would be less than significant.

Level of Significance Before Mitigation

Less than Significant

Mitigation Measures

No mitigation required.

4.6.5 REFERENCES

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4.7 Geology and Soils

This EIR chapter evaluates potential geology and soils impacts associated with construction and operation of the Project, including earthquake hazards, soil instability, subsidence and liquefaction and slope stability.

The site-specific information included in this section was taken from *Geotechnical Investigation Proposed Commercial/Industrial Building*, prepared by Southern California Geotechnical on December 15, 2017 (Southern California Geotechnical, 2017). The report is incorporated by reference and included as Appendix G to the DEIR.

4.7.1 ENVIRONMENTAL SETTING

Soils

A subsurface exploration was conducted consisting of ten borings at depths of approximately five to 30 feet below currently existing site grades. Artificial fill soils were encountered at the ground surface at one boring and extended to a depth of approximately 4.5 feet below the existing site grades. The fill soils generally consist of very loose to loose fine to medium sands with trace fine gravel content. Additional soils classified as possible fill were encountered beneath the fill soils extending to depths of 4.5 to 6.5 feet below the existing site grades. The possible fill soils consist of loose fine to medium sands with varying amounts of coarse sand, silt, and fine gravel content.

Native alluvial soils were encountered at the ground surface at all of the boring locations, with the exception of the boring that included artificial fill soils. The near-surface alluvium possesses a disturbed appearance, and is identified as disturbed alluvium. These soils generally consist of very loose to loose silty fine sands to fine sandy silts with trace amounts of fine root fibers. These soils resemble the composition and color of the native alluvium encountered at similar depths, but also possess a disturbed appearance. Undisturbed native alluvial soils were encountered at all of the boring locations, beneath the disturbed alluvium or beneath the fill soils, extending to the maximum depth explored of 30 feet below existing site grades. The native alluvium generally consists of very loose to medium dense silty fine sands, fine sandy silts and fine to medium sands.

Free water was not encountered during the drilling of any of the borings. Based on the lack of any water within the borings, and the moisture contents of the recovered soil samples, the static groundwater is considered to have existed at a depth in excess of 30 feet at the time of the subsurface exploration.

Seismic Activity

The Project site is located in an area which is subject to strong ground motions due to earthquakes. Numerous faults capable of producing significant ground motions are located near the Project site. These include: the San Andreas Fault (South Branch), approximately three miles north and east of the Project site; the Loma Linda Fault, approximately three miles west and south of the Project site; and the Redlands Fault, approximately four miles south and west of the Project site (California Department of Conservation, 2010). As the Project site is located within the vicinity

of several active faults, the project site will very likely experience earthquake-related ground shaking in the future.

No evidence of onsite faulting was identified during the geotechnical investigation. Additionally, research of available maps indicates that the Project site is not located within an Alquist-Priolo Earthquake Fault Zone (Southern California Geotechnical, 2017).

Liquefaction

Liquefaction is a phenomenon that occurs when water-laden, loose, and cohesionless soils are subject to intense seismic shaking and form a quicksand- or fluid-like soil condition below the ground surface. The California Geological Survey (CGS) has not yet conducted detailed seismic hazards mapping in the area of the Project site. The general liquefaction susceptibility of the site was determined by research of the San Bernardino County General Plan, Geologic Hazard Overlay. Map FH31 C for the Redlands Quadrangle, in addition to soil conditions encountered during borings, indicates that the Project site is not located within an area of liquefaction susceptibility (Southern California Geotechnical, 2017).

Settlement

Settlement of the ground may occur in poorly consolidated or particular soils or improperly compacted fills during earthquake shaking, though the problem could also arise during heavy rains. Laboratory testing at the Project site indicates that the near surface soils possess a high potential for collapse when inundated by water. These soils also possess a moderate potential for consolidation when exposed to load increases in the range of those that will be exerted by the foundations of the new structure (Southern California Geotechnical, 2017).

Subsidence

Subsidence may result in settling, tilting, or uneven land surfaces. Subsidence generally occurs in areas of loose materials when ground water is withdrawn to the extent that surface deformation takes place. At the Project site, minor ground subsidence is expected to occur in the soils below the zone of removal due to settlement and machinery working. The subsidence is estimated to be 0.1 to 0.2 feet. These estimates are based on previous experience and the subsurface conditions encountered at the boring locations. The actual amount of subsidence is expected to be variable and will be dependent on the type of machinery used, repetitions of use, and dynamic effects, all of which are difficult to assess precisely (Southern California Geotechnical, 2017).

4.7.2 REGULATORY FRAMEWORK

Federal

National Earthquake Hazards Reduction Program

Established by Congress in 1977, the National Earthquake Hazards Reduction Program (NEHRP) leads the federal government's efforts to reduce the fatalities, injuries and property losses caused by earthquakes. The four basic NEHRP goals are:

- Develop effective practices and policies for earthquake loss reduction and accelerate their implementation.

- Improve techniques for reducing earthquake vulnerabilities of facilities and systems.
- Improve earthquake hazards identification and risk assessment methods, and their use.
- Improve the understanding of earthquakes and their effects.

In its initial NEHRP authorization in 1977, and in subsequent reauthorizations, Congress has recognized that several key Federal agencies can contribute to earthquake mitigation efforts.

State

Alquist-Priolo Earthquake Fault Zoning Act

The Alquist-Priolo Earthquake Fault Zoning (AP) Act provides a mechanism for reducing losses from surface fault rupture on a statewide basis. The intent of the AP Act is to ensure public safety by prohibiting the siting of most structures for human occupancy across traces of active faults that constitute a potential hazard to structures from surface faulting or fault creep. The AP Act only addresses the hazard of surface fault rupture and is not directed toward other earthquake hazards. The law requires the State Geologist to establish regulatory zones (known as Earthquake Fault Zones) around the surface traces of active faults and to issue appropriate maps. Local agencies must regulate most development projects within the zones.

Seismic Hazard Mapping Act

The Seismic Hazards Mapping Act (SHMA) of 1990 directs the Department of Conservation, California Geological Survey to identify and map areas prone to earthquake hazards of liquefaction, earthquake-induced landslides and amplified ground shaking. The purpose of the SHMA is to reduce the threat to public safety and to minimize the loss of life and property by identifying and mitigating these seismic hazards. Staff geologists in the Seismic Hazard Mapping Program gather existing geological, geophysical and geotechnical data from numerous sources to compile the Seismic Hazard Zone Maps. They integrate and interpret this data regionally in order to evaluate the severity of the seismic hazards and designate Zones of Required Investigation for areas prone to liquefaction and earthquake-induced landslides. Cities and counties are then required to use the Seismic Hazard Zone Maps in their land use planning and building permit process.

California Building Code

The state regulations protecting structures from seismic hazards are contained in the California Code of Regulations, Title 24 (the California Building Code (CBC)), which is updated on a triennial basis. These regulations apply to public and private buildings in the State. Provisions of the CBC address (among other topics) fire safety, access for disabled persons, seismic-resistant construction design.

Local

Safety Element of the County of San Bernardino General Plan

The purpose of the Safety Element (URS Corporation, 2007) is to reduce the potential risk of death, injuries, property damage, and economic and social dislocation resulting from fires, floods, earthquakes, landslides, and other hazards. General Plan policies related to potential seismic and geologic hazards are listed below.

GOAL S 7. The County will minimize exposure to hazards and structural damage from geologic and seismic conditions.

- Policy S 7.1 Strive to mitigate the risks from geologic hazards through a combination of engineering, construction, land use, and development standards.
    - Program 2. Require sites to be developed and all structures designed in accordance with recommendations contained in any required geotechnical or geologic reports, through conditioning, construction plans, and field inspections.
    - Program 3. Require that all recommended mitigation measures be clearly indicated on all grading and construction plans.
    - Program 4. Require all facilities to meet appropriate geologic hazard specifications as determined by the County Geologist for discretionary and ministerial authorizations.
    - Program 5. Because of the potential for displacement along faults not classified as active, the County will reserve the right to require site-specific geotechnical analysis and mitigation for development located contiguous to potentially active faults, if deemed necessary by the County Geologist.
- Policy S 7.5 Minimize damage cause by liquefaction, which can cause devastating structural damage and a high potential for saturation exists when the groundwater level is within the upper 50 feet of alluvial material.
    - Program 1. Require that each site located within the Liquefaction Hazard Overlay be evaluated by a licensed geologist prior to design, land disturbance or construction, for soil type, history of the water table's fluctuation, and adequacy of the structural engineering to withstand the effects of liquefaction.
    - Program 3. Evaluate potential areas of liquefaction susceptibility that are not currently identified on the Geologic Hazard Overlay. Add areas to the Geologic Hazard Overlay based on the evaluation of susceptibility.

4.7.3 SIGNIFICANCE THRESHOLDS

Per the CEQA Guidelines, construction and operation of the Project would have a significant impact related to geology and soils if it would:

a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:
    I. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.
    II. Strong seismic ground shaking?
    III. Seismic-related ground failure, including liquefaction?
    IV. Landslides?;
b) Result in substantial soil erosion or the loss of topsoil;
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse;

d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property; or

e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water.

4.7.4 IMPACTS AND MITIGATION MEASURES

This section describes potential impacts related geology and soils which could result from the construction and operation of the Project and recommends mitigation measures as needed to reduce significant impacts.

Rupture of Faults, Seismic Ground Shaking, Liquefaction and Landslides

Impact GEO-1 - ***Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42. ii) Strong seismic ground shaking? iii) Seismic-related ground failure, including liquefaction? iv) Landslides??***

Analysis of Impacts

Rupture of Known Earthquake Faults. As noted in *Geotechnical Investigation Proposed Commercial/Industrial Building,* the Project site showed no evidence of faulting during the geotechnical investigation. Additionally, research of available maps indicates that the Project site is not located within an Alquist-Priolo Earthquake Fault Zone (Southern California Geotechnical, 2017). The potential for rupture of a fault at the Project site is considered low.

Strong-Seismic Ground Shaking. While no known active faults are located on the Project site, the County of San Bernardino is located within a seismically active region and a seismic event, resulting in ground shaking at the Project site, should be anticipated. Generally, adequate engineering and construction techniques have been developed to reduce the risk of damage to structures from ground shaking. The Project would be required to be designed in accordance with the criteria contained in the California Building Code, which includes measures to address seismic conditions.

Liquefaction. As described in *Geotechnical Investigation Proposed Commercial/Industrial Building*, the California Geological Survey (CGS) has not yet conducted detailed seismic hazards mapping in the area of the Project site. The general liquefaction susceptibility of the site was determined by research of the San Bernardino County General Plan, Geologic Hazard Overlay. Map FH31 C for the Redlands Quadrangle, in addition to soil conditions encountered during borings, indicates that the Project site is not located within an area of liquefaction susceptibility.

Landslides. The site topography ranges from 1,199 feet mean sea level (msl) in the northern area of the site to 1,224 feet msl in the southeastern area of the site. However, the bottom of the existing drainage course, located at the northeast corner of the site, is at an elevation of 1,181 feet msl. With the exception of the drainage course, the site topography slopes gently downward to the northwest at a gradient of one percent. In the northeast corner of the site, the site grades

slope downward into the drainage coarse at an approximate inclination of ½h:1v (horizontal to vertical). Given the existing topography of the Project site, landslide activity is unlikely.

The near surface soils generally consist of very loose to loose silty fine sands to fine sandy silts. These materials could be subject to caving within shallow excavations. Adherence to the recommendations contained in the geotechnical report for the Project will address any potential caving issues that may be encountered during grading.

Level of Significance Before Mitigation

Less than significant.

Mitigation Measures

Less than significant.

Soil Erosion

Impact GEO-2 - ***Would the project result in substantial soil erosion or the loss of topsoil?***

Analysis of Impacts

Site preparation activities will include removal of topsoil or vegetation, which could result in erosion. Soil erosion can have a detrimental effect on stormwater quality. Stormwater discharges from construction activities at the Project site would be regulated under the National Pollutant Discharge Elimination System (NPDES) stormwater permitting program. Prior to the start of construction, the construction operator must obtain coverage under a NPDES permit, which is administered by the State. The Project applicant will be required to develop a Storm Water Pollution Prevention Plan (SWPPP) detailing erosion and sediment controls, as well as pollution prevention measures that will be implemented. Additionally, the Project applicant would be required to adhere to the construction activity requirements described in San Bernardino County Code Section 35.0120. With the implementation of required erosion control measures and adherence to existing regulations, impacts related to soil erosion would be considered less than significant.

Level of Significance Before Mitigation

Less than Significant

Mitigation Measures

No mitigation is required.

Landslide, Lateral Spreading, Subsidence, Liquefaction or Collapse

Impact GEO-3 - ***Would the project be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?***

Analysis of Impacts

Landslides. The site topography ranges from 1,199 msl in the northern area of the site to 1,224 feet msl in the southeastern area of the site. Given the existing topography of the Project site, landslide activity is unlikely.

Lateral Spreading. Lateral spreading is a form of horizontal displacement of soil toward an open channel or other "free" face, such as an excavation boundary. Lateral spreading may also occur where open banks and unsupported cut slopes provide a free face. Site specific recommendations identified in the geotechnical report would address this issue. In addition, *Geotechnical Investigation Proposed Commercial/Industrial Building* found the soil expansion, settlement, and associated potential for lateral spreading would not be significant.

Subsidence. Minor ground subsidence is expected to occur in the soils below the zone of removal, due to settlement and machinery working. (Southern California Geotechnical, 2017). The subsidence is estimated to be approximately 0.1 to 0.2 feet and with the recommended remedial grading to remove artificial fill post construction settlements would be less than significant.

Liquefaction. The California Geological Survey (CGS) has not yet conducted detailed seismic hazards mapping in the area of the Project site. The general liquefaction susceptibility of the site was determined by research of the San Bernardino County Official Land Use Plan, General Plan, Geologic Hazard Overlay. Map FH31 C for the Redlands Quadrangle, in addition to soil conditions encountered during borings, indicates that the Project site is not located within an area of liquefaction susceptibility. (Southern California Geotechnical, 2017).

Settlement. Laboratory testing indicates that the near surface soils possess a high potential for collapse when inundated by water. These soils also possess a moderate potential for consolidation when exposed to load increases in the range of those that will be exerted by the foundations of the new structure. Based on conditions encountered at the boring locations, the geotechnical report recommends the existing soils within the proposed building area be overexcavated to a depth of at least 5 feet below existing grade and to a depth of at least 5 feet below proposed building pad subgrade elevation, whichever is greater. Following completion of the overexcavation, the subgrade soils within the building area should be evaluated by the geotechnical engineer to verify their suitability to serve as the structural fill subgrade, as well as to support the foundation loads of the new structure. (Southern California Geotechnical, 2017). Implementation of recommendations in *Geotechnical Investigation Proposed Commercial/Industrial Building* would ensure that potential impacts related to settlement would be less than significant.

Level of Significance Before Mitigation

Less than significant.

Mitigation Measures

No mitigation is required.

Expansive Soils

Impact GEO-4 - ***Would the project be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?***

Analysis of Impacts

The near-surface soils generally consist of silty sands and sandy silts with no appreciable clay content. These materials have been visually classified as non-expansive. (Southern California Geotechnical, 2017) Therefore, no design considerations related to expansive soils are considered warranted for this site and this impact would be considered less than significant.

Level of Significance Before Mitigation

Less than Significant

Mitigation Measures

No mitigation is required.

Septic Tanks

Impact GEO-5 - ***Would the project have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?***

Analysis of Impacts

The Project would connect to the existing sewer system; no septic tanks or alternative wastewater disposal system are proposed as part of the Project.

Level of Significance Before Mitigation

No Impact.

Mitigation Measures

No mitigation is required.

Impact GEO-6 - ***Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?***

Analysis of Impacts

A Paleontological Resource Assessment for the Project site was conducted by Applied Earthworks (Æ), dated August 2, 2018. Æ used the Society of Vertebrate Paleontology (SVP) (2010) sensitivity scale to determine the paleontological potential of the Project area. The Very Young and Young alluvial deposits in the Project area have a Low paleontological resource potential, because they are generally too young to preserve fossilized remains. McLeod (2018) reports that significant vertebrate fossils probably will not be encountered in shallow excavations

in the younger Quaternary alluvial deposits. Fossils in these younger Quaternary deposits, if any, may be the result of redeposition from elsewhere. However, these younger deposits may overlie intact older Quaternary fossiliferous alluvial deposits at depths as shallow as nine to 11 feet. For instance, Very Old Axial-Channel deposits (Qvoa3) dating to the Late to Middle Pleistocene would have a High potential for significant paleontological resources and they may underlie the younger Quaternary deposits in the Project area since they crop out of the north slope of the foothills of the Box Springs Mountains to the south.

The thickness of the younger Quaternary deposits with Low sensitivity for paleontological resources is unknown at this time within the Project Area. Therefore, a field survey prior to grading to establish the need for paleontological monitoring is not recommended. Project-related ground disturbance to a maximum depth of 13 feet may impact buried older Quaternary deposits with potentially significant paleontological resources. Therefore, Æ recommends paleontological monitoring under the direction of a Qualified Professional Paleontologist, as defined in SVP (2010), during any grading or other excavation activities at depths of three feet and below in accordance with County of San Bernardino General Plan Policy CO 3.4.5.

The mitigation measures (GEO-1 through GEO-4) described below are intended to mitigate potential adverse impacts to significant paleontological resources, if present. These measures have been used by professional paleontologists for many years and have proven to be effective in reducing or eliminating adverse impacts to paleontological resources as a result of private and public development projects throughout California. As a result, mitigation measures are provided to reduce potentially significant impacts to a less than significant level regarding previously undiscovered paleontological resources or unique geological features that may be accidentally encountered during Project implementation.

Level of Significance Before Mitigation

Potentially significant.

Mitigation Measures

Mitigation Measure GEO-1: Conduct Paleontological Sensitivity Training for Construction Personnel. The applicant shall retain a professional paleontologist, who meets the qualifications set forth by the Society of Vertebrate Paleontology and shall conduct a paleontological sensitivity training for construction personnel prior to commencement of excavation activities. The training will include a handout and will focus on how to identify paleontological resources that may be encountered during earthmoving activities and the procedures to be followed in such an event, the duties of paleontological monitors, notification and other procedures to follow upon discovery of resources, and the general steps a qualified professional paleontologist would follow in conducting a salvage investigation if one is necessary.

Mitigation Measure GEO-2: Conduct Periodic Paleontological Spot Checks during Grading and Earth-moving Activities. The applicant shall retain a professional paleontologist who meets the qualifications set forth by the Society of Vertebrate Paleontology and shall conduct periodic Paleontological Spot Checks beginning at depths below six feet to determine if construction excavations have extended into older Quaternary deposits. After the initial paleontological spot check, further periodic checks will be conducted at the discretion of the qualified paleontologist. If the qualified paleontologist determines that construction excavations have extended into the older Quaternary deposits, construction monitoring for paleontological resources will be required. The applicant shall retain a qualified paleontological monitor, who will work under the guidance

and direction of a professional paleontologist, who meets the qualifications set forth by the Society of Vertebrate Paleontology. The paleontological monitor shall be present during all construction excavations (e.g., grading, trenching, or clearing/grubbing) into the older Pleistocene alluvial deposits. Multiple earth-moving construction activities may require multiple paleontological monitors. The frequency of monitoring shall be based on the rate of excavation and grading activities, proximity to known paleontological resources and/or unique geological features, the materials being excavated (native versus artificial fill soils), and the depth of excavation, and if found, the abundance and type of paleontological resources and/or unique geological features encountered. Full-time monitoring can be reduced to part-time inspections if determined adequate by the qualified professional paleontologist.

Mitigation Measure GEO-3: Cease Ground-Disturbing Activities and Implement Treatment Plan if Paleontological Resources Are Encountered. If paleontological resources and or unique geological features are unearthed during ground-disturbing activities, ground-disturbing activities shall be halted or diverted away from the vicinity of the find so that the find can be evaluated. A buffer area of at least 50 feet shall be established around the find where construction activities shall not be allowed to continue until appropriate paleontological treatment plan has been approved by the applicant and the County. Work shall be allowed to continue outside of the buffer area. The applicant and County shall coordinate with a professional paleontologist, who meets the qualifications set forth by the Society of Vertebrate Paleontology, to develop an appropriate treatment plan for the resources. Treatment may include implementation of paleontological salvage excavations to remove the resource along with subsequent laboratory processing and analysis or preservation in place. At the paleontologist's discretion and to reduce construction delay, the grading and excavation contractor shall assist in removing rock samples for initial processing.

Mitigation Measure GEO-4: All significant fossils collected, if any, will be prepared in a properly equipped paleontology laboratory to a point ready for curation. Preparation will include the careful removal of excess matrix from fossil materials and stabilizing and repairing specimens, as necessary. Following laboratory work, all fossils specimens will be identified to the lowest taxonomic level, cataloged, analyzed, and delivered to a regionally-accredited museum repository, such as the SBCM in Redlands or the NHMLAC in Los Angeles, for permanent curation and storage. The cost of curation is assessed by the repository and is the responsibility of the landowner. A final report should be prepared to describe the results of the paleontological mitigation monitoring efforts. The report will include a summary of the field methods, laboratory methods (if any), an overview of the geology and paleontology of the construction site, a list of taxa recovered (if any), an analysis of fossils recovered (if any) and their scientific significance, and recommendations. If the monitoring efforts produce fossils, then a copy of the report also will be submitted to the curation facility.

Level of Significance after Mitigation

Less than significant impact.

Geology and Soils Cumulative Impacts

GEO Cumulative Impacts - *Would the project cause substantial adverse cumulative impacts with respect to geology and soils?*

Impacts related to geology and soils are generally site specific and not cumulative in nature because each project area has unique geologic considerations that would be subject to uniform

site development and construction standards. As such, the potential for cumulative impacts is limited. The mitigation measure described above would reduce impacts from geologic hazards to a less-than significant and would not result in a cumulatively considerable impact.

4.7.5 REFERENCES

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4.8 Greenhouse Gas Emissions

This EIR section describes the existing setting of the project site related to greenhouse gas (GHG) emissions and climate change, identifies associated regulatory requirements, evaluates potential impacts, and identifies mitigation measures related to implementation of the Project. GHG modeling data and associated information in this Chapter comes from the *Greenhouse Gas Analysis Technical Memorandum* prepared for the Project by Albert A. Webb Associates, dated November 15, 2018. The *Greenhouse Gas Analysis Technical Memorandum* is incorporated by reference and included in the EIR as part of Appendix J.

4.8.1 ENVIRONMENTAL SETTING

Climate Change

Climate change is the distinct change in measures of climate for a long period of time. Climate change can result from natural processes and from human activities. Natural changes in the climate can be caused by indirect processes such as changes in the Earth's orbit around the Sun or direct changes within the climate system itself (i.e. changes in ocean circulation). Human activities can affect the atmosphere through emissions of gases and changes to the planet's surface. Emissions affect the atmosphere directly by changing its chemical composition, while changes to the land surface indirectly affect the atmosphere by changing the way the Earth absorbs gases from the atmosphere. The term "climate change" is preferred over the term "global warming" because "climate change" conveys the fact that other changes can occur beyond just average increase in temperatures near the Earth's surface. Elements that indicate that climate change is occurring on Earth include:

- Rising of global surface temperatures by 1.3° Fahrenheit (F) over the last 100 years
- Changes in precipitation patterns
- Melting ice in the Arctic
- Melting glaciers throughout the world
- Rising ocean temperatures
- Acidification of oceans
- Range shifts in plant and animal species

Climate change is intimately tied to the Earth's greenhouse effect. The greenhouse effect is a natural occurrence that helps regulate the temperature of the planet, and without it, life as we know it on Earth would not exist. Human activities since the beginning of the industrial revolution (approximately 150 years) have been adding to the natural greenhouse effect by increasing the gases in the atmosphere that trap energy, thereby contributing to an average increase in the Earth's temperature. Human activities that enhance the greenhouse effect are detailed below.

Greenhouse Gases

Gases that "trap" heat in the atmosphere and affect regulation of the earth's temperature are known as "greenhouse gases" (GHG). Many chemical compounds in the Earth's atmosphere exhibit the GHG property. GHG allow sunlight to enter the atmosphere freely. When the sunlight

strikes the earth's surface, it is either absorbed or reflected back toward space. Earth, or materials near the Earth's surface, that have absorbed energy from sunlight warm up during the daytime and emit infrared radiation back toward space during both the daytime and nighttime hours. GHG absorb this long-wave, infrared radiation and trap the energy in the Earth's atmosphere. The term "climate change" is preferred over the term "global warming" because climate change conveys the fact that other changes can occur beyond just average increase in temperatures near the earth's surface.

GHG that contribute to climate regulation are a different type of pollutant than criteria or hazardous air pollutants because climate regulation is global in scale, both in terms of causes and effects. Some GHG are emitted to the atmosphere naturally by biological and geological processes such as evaporation (water vapor), aerobic respiration (carbon dioxide, or CO_2), and off-gassing from low-oxygen environments such as swamps or exposed permafrost (methane or CH_4). However, GHG emissions from human activities such as fuel combustion (e.g., CO_2) and refrigerants use (e.g., hydrofluorocarbons, or HFCs) significantly contribute to overall GHG concentrations in the atmosphere, climate regulation, and global climate change. Human production of GHG has increased steadily since pre-industrial times (approximately pre-1880), and atmospheric CO_2 concentrations have increased from a pre-industrial value of 280 parts per million (ppm) in the early 1800s to 404 ppm in November 2017 (NOAA, 2017). The effects of increased GHG concentrations in the atmosphere include increasing shifts in temperature and precipitation patterns and amounts, reduced ice and snow cover, sea level rise, and acidification of oceans. These effects in turn will impact food and water supplies, infrastructure, ecosystems, and overall public health and welfare.

The 1997 United Nations' Kyoto Protocol international treaty set targets for reductions in emissions of four specific greenhouse gases—CO_2, CH_4, nitrous oxide (N_2O), and sulfur hexafluoride (SF_6) – and two groups of gases—HFCs and perfluorocarbons (PFCs). These GHG are the primary GHG emitted into the atmosphere by human activities. Water vapor is also a common GHG that regulates the Earth's temperature; however, the amount of water vapor in the atmosphere can change substantially from day to day, whereas other GHG emissions remain in the atmosphere for longer periods of time. Black carbon consists of particles emitted during combustion; although a particle and not a gas, black carbon also acts to trap heat in the Earth's atmosphere. Detailed descriptions of the most common GHG are described below.

- **Carbon Dioxide (CO_2)** is emitted and removed from the atmosphere naturally. Animal and plant respiration involves the release of CO_2 from animals and its absorption by plants in a continuous cycle. The ocean-atmosphere exchange results in the absorption and release of CO_2 at the sea surface. CO_2 is also released from plants during wildfires. Volcanic eruptions release a small amount of CO_2 from the Earth's crust.
- Human activities that affect CO_2 in the atmosphere include burning of fossil fuels, industrial processes, and product uses. Combustion of fossil fuels used for electricity generation and transportation are the largest source of CO_2 emissions in the United States. When fossil fuels are burned, the carbon stored in them is released into the atmosphere entirely as CO_2. Emissions from industrial activities also emit CO_2 such as cement, metal, and chemical production and use of petroleum produced in plastics, solvents, and lubricants.
- **Methane (CH_4)** is emitted from human activities and natural sources. Natural sources of CH_4 include wetlands, gas hydrates, permafrost, termites, oceans, freshwater bodies, soils, and wildfires. Human activities that cause CH_4 releases include fossil fuel production, animal digestive processes from farms, manure management, and waste management. It is estimated that 50 % of global CH_4 emissions are human generated.

Releases from animal digestive processes at agricultural operations are the primary source of human-related CH_4 emissions. CH_4 is produced from landfills as solid waste decomposes. CH_4 is a primary component of natural gas and is emitted during its production, processing, storage, transmission, distribution, and use. Decomposition of organic material in manure stocks or in liquid manure management systems also releases CH_4. Wetlands are the primary natural producers of CH_4 because the habitat is conducive to bacteria that produce CH_4 during decomposition of organic material.

- **Nitrous Oxide (N_2O)** is emitted from human sources such as agricultural soil management, animal manure management, sewage treatment, combustion of fossil fuels, and production of certain acids. N_2O is produced naturally in soil and water, especially in wet, tropical forests. The primary human-related source of N_2O is agricultural soil management due to use of synthetic nitrogen fertilizers and other techniques to boost nitrogen in soils. Combustion of fossil fuels (mobile and stationary) is the second leading source of N_2O, although parts of the world where catalytic converters are used (such as California) have significantly lower levels than those areas that do not.
- **Hydrofluorocarbons (HFCs) and Perfluorocarbons (PFCs)** are entirely human made and are mainly generated through various industrial processes. These types of gases are used in aluminum production, semiconductor manufacturing, and magnesium production and processing. HFCs and PFCs are also used as substitutes for ozone-depleting gases like chlorofluorocarbons (CFCs) and halons.
- **Sulfur Hexafluoride (SF_6)** is commonly used as an electrical insulator in high-voltage electrical transmission and distribution equipment such as circuit breakers, substations, and transmission switchgear. Releases of SF_6 occur during maintenance and servicing as well as from leaks of electrical equipment.

GHG can remain in the atmosphere long after they are emitted. The potential for a particular greenhouse gas to absorb and trap heat in the atmosphere is considered its global warming potential. The reference gas for measuring global warming potential is CO_2, which has a global warming potential of one. By comparison, CH_4 has a global warming potential of 25, which means that one molecule of CH_4 has 25 times the effect on global warming as one molecule of CO_2. Multiplying the estimated emissions for non-CO_2 GHG by their global warming potential determines their CO_2 equivalent (CO_2e), which enables a project's combined global warming potential to be expressed in terms of mass CO_2 emissions. The global warming potentials and estimated atmospheric lifetimes of the common GHG are shown in Table 4.8-1 (Global Warming Potential (GWP) of Common GHG (100-Year Horizon)).

Table 4.8-1
Global Warming Potential (GWP) of Common GHG (100-YEAR HORIZON)

GHG	GWP[(A)]	GHG	GWP[(A)]
Carbon Dioxide (CO_2)	1	Perfluorocarbons (PFCs)	
Methane (CH_4)	25	CF_4	6,500
Nitrous Oxide (N_2O)	298	C_2F_6	9,200
Hydrofluorocarbons (HFCs)		C_4F_{10}	7,000
HFC-23	14,800	C_6F_{14}	7,400
HFC-134a	1,430	Sulfur Hexafluoride (SF_6)	22,800
HFC-152a	140		
HCFC-22	1,700		

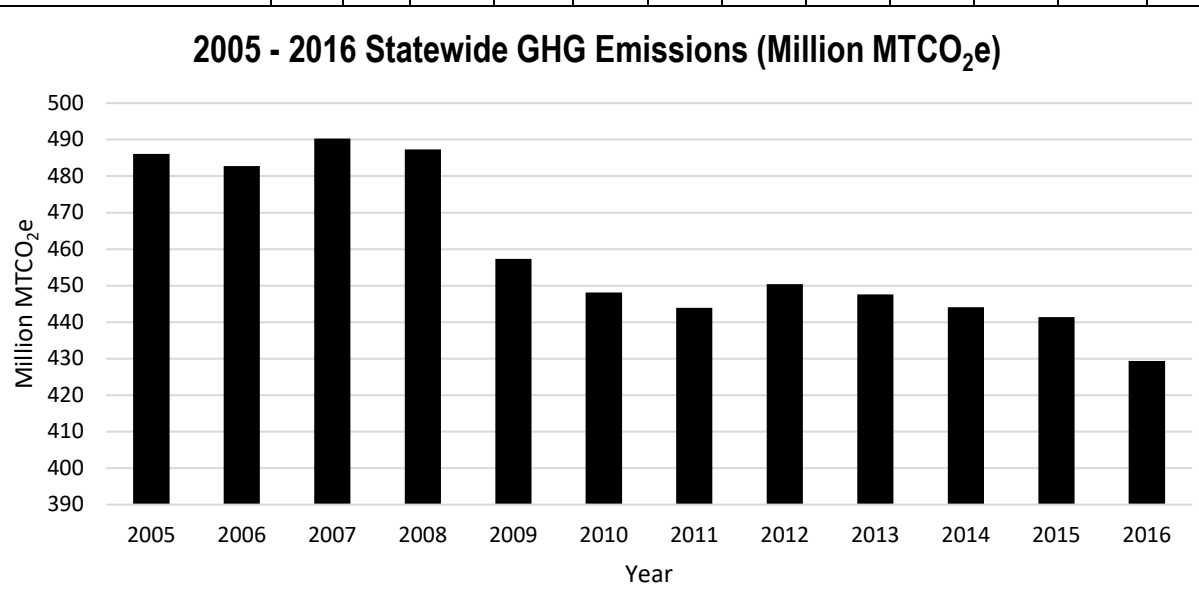
Source: CARB 2014
GWPs are based on the United Nations Intergovernmental Panel on Climate Change 4th Assessment Report.

Statewide GHG Emissions

California Air Resources Board (CARB)and federal data sources, including facility-specific emissions reports prepared pursuant to the State's Mandatory GHG Reporting Program. The statewide GHG emissions inventory helps CARB track progress towards meeting California's Assembly Bill (AB) 32 GHG emissions target of 431 million metric tons of CO_2 equivalents ($MTCO_2e$), as well as establish and understand trends in GHG emissions.[1] Statewide GHG emissions for the 2005 to 2016 time period are shown in Table 4.8-2.

Table 4.8-2:
2005-2016 Statewide GHG Emissions (in the Million $MTCO_2e$)

Scoping Plan Sector	Year											
	'05	'06	'07	'08	'09	'10	'11	'12	'13	'14	'15	'16
Agriculture	34	35	36	36	33	34	35	36	35	36	34	34
Commercial/Residential	42	43	43	44	44	45	46	43	44	37	38	39
Electric Power	108	105	114	120	101	90	88	95	90	88	84	69
High GWP	9	10	11	12	12	14	15	16	17	18	19	20
Industrial	96	93	90	91	88	91	91	91	94	94	92	90
Recycling and Waste	8	8	8	8	8	8	8	8	9	9	9	9
Transportation	189	189	189	178	170	165	162	161	161	162	166	169
Total Million $MTCO_2e$(A)	***486***	***483***	***490***	***487***	***457***	***448***	***444***	***450***	***448***	***444***	***441***	***429***



Source: CARB, 2018a
(A) Totals may not equal due to rounding. CARB inventory uses GWPs based on the United Nations' IPCC's 4th Assessment Report.

[1] CARB approved use of 431 $MMCO_2e$ as the state's 2020 GHG emission target in May 2014. Previously, the target had been set at 427 $MMCO_2e$

As shown in Table 4.8-2, statewide GHG emissions have generally decreased over the last decade, with 2016 levels (429 million $MTCO_2e$) approximately 11% less than 2005 levels (486 million $MTCO_2e$) and below the State's 2020 reduction target of 431 million $MTCO_2e$. The transportation sector (165 million $MTCO_2e$) accounted for more than one-third (approximately 39.4%) of the State's total GHG emissions inventory (429 million $MTCO_2e$) in 2016.

Climate Change and California

The 2009 California Climate Adaptation Strategy prepared by the California Natural Resources Agency (CNRA) identified anticipated impacts to California due to climate change through extensive modeling efforts. General climate changes in California indicate that:

- California is likely to get hotter and drier as climate change occurs with a reduction in winter snow, particularly in the Sierra Nevada Mountain Range.
- Some reduction in precipitation is likely by the middle of the century.
- Sea levels will rise up to an estimated 55 inches.
- Extreme events such as heat waves, wildfires, droughts, and floods will increase.
- Ecological shifts of habitat and animals are already occurring and will continue to occur (CNRA 2009).

It should be noted that changes are based on the results of several models prepared under different climatic scenarios; therefore, discrepancies occur between the projections and the interpretation.

In January 2018, the CNRA adopted the Safeguarding California Plan: 2018 Update, which builds on nearly a decade of adaptation strategies to communicate current and needed actions state government should take to build climate change resiliency. It identifies hundreds of ongoing actions and next steps state agencies are taking to safeguard Californians from climate impacts within a framework of 81 policy principles and recommendations. The 2018 update also has two new chapters and incorporates a feature showcasing the many linkages among policy areas. A new "Climate Justice" chapter highlights how equity is woven throughout the entire plan (CNRA 2018).The potential impacts of global climate change in California are detailed below.

Public Health and Welfare

Concerns related to public health and climate change include higher rates of mortality and morbidity, change in prevalence and spread of disease vectors, decreases in food quality and security, reduced water availability, and increased exposure to pesticides. These concerns are all generally related to increases in ambient outdoor air temperature, particularly in summer.

Higher rates of mortality and morbidity could arise from more frequent heat waves at greater intensities. Health impacts associated with extreme heat events include heat stroke, heat exhaustion, and exacerbation of medical conditions such as cardiovascular and respiratory diseases, diabetes, nervous system disorders, emphysema, and epilepsy. Climate change would result in degradation of air quality promoting the formation of ground-level pollutants, particularly ozone. Degradation of air quality would increase the severity of health impacts from criteria and other air pollutants discussed in Section 6.1 (Air Quality). Temperature increases and increases in CO_2 are also expected to increase plant production of pollens, spores, and fungus. Pollens

and spores could induce or aggravate allergic rhinitis, asthma, and obstructive pulmonary diseases.

Precipitation projections suggest that California will become drier over the next century due to reduced precipitation and increased evaporation from higher temperatures. These conditions could result in increased occurrences of drought. Surface water reductions will increase the need to pump groundwater, reducing supplies and increasing the potential for land subsidence. Precipitation changes are also suspected to impact the Sierra snowpack (see Section 10.1.4.3). Earlier snow melts could coincide with the rainy season and could result in failure of the flood control devices in that region. Flooding can cause property damage and loss of life for those affected. Increased wildfires are also of concern as the State dries over time. Wildfires can also cause property damage, loss of life, and injuries to citizens and emergency response services.

Sea-level rises would also threaten human health and welfare. Flood risks will be increased in coastal areas due to strengthened storm surges and greater tidal damage that could result in injury and loss of property and life. Gradual rising of the sea will permanently inundate many coastal areas in the State.

Other concerns related to public health are changes in the range, incidence, and spread of infectious, water-borne, and food-borne diseases. Changes in humidity levels, distribution of surface water, and precipitation changes are all likely to shift or increase the preferred range of disease vectors (e.g., mosquitoes). This could expose more people and animals to potential for vector-borne disease.

Biodiversity and Habitat

Changes in temperature will change the livable ranges of plants and animals throughout the state and cause considerable stress on these species. Species will shift their range if appropriate habitat is available and accessible if they cannot adapt to their new climate. If they do not adapt or shift, they face local extirpation or extinction. As the climate changes, community compositions and interactions will be interrupted and changed. These have substantial implications on the ecosystems in California. Extreme events will lead to tremendous stress and displacement on affected species. This could make it easier for invasive species to enter new areas, due to their ability to more easily adapt. Precipitation changes would alter stream flow patterns and affect fish populations during their life cycle. Sea level rises could impact fragile wetland and other coastal habitat.

Water Management

Although disagreement among scientists on the causes and effects of long-term precipitation patterns in the state has occurred, it is generally accepted by scientists that rising temperatures will impact California's water supply due to changes in the Sierra Nevada snowpack. Currently, the State's water infrastructure is designed to both gather and convey water from melting snow and to serve as a flood control device. Snowpack melts gradually through spring warming into early summer, releasing an average of approximately 15 million acre-feet of water. The State's concern related to climate change is that due to rising temperatures, snowpack melt will begin earlier in the spring and will coincide with the rainy season. The combination of precipitation and snowmelt would overwhelm the current system, requiring tradeoffs between water storage and flood protection to be made. Reduction in reserves from the Sierra Nevada snowpack is troublesome for California and particularly for Southern California. Approximately 75% of California's available water supply originates in the northern third of the State, while 80% of

demand occurs in the southern two-thirds. There is also concern that rising temperatures will result in decreasing volumes from the Colorado River basin. Colorado River water is important to Southern California because it supplies water directly to Metropolitan Water District of Southern California.

Agriculture

California is the most agriculturally productive state in the US resulting in more than 37 billion dollars in revenue in 2008. California is the nation's leading producer of nearly 80 crops and livestock commodities, supplying more than half of the nation's fruit and vegetables and over 90% of the nation's production of almonds, apricots, raisin grapes, olives, pistachios, and walnuts. Production of crops is not limited to the Central Valley but also occurs in Southern California. Strawberries and grapes are grown in San Bernardino and Riverside Counties. Orange County and San Diego County also contribute to strawberry production. Cherries are also grown in Los Angeles and Riverside County. Anticipated impacts to agricultural resources are mixed when compared to the potentially increased temperatures, reduced chill hours, and changes in precipitation associated with climate change. For example, wheat, cotton, maize, sunflower, and rice are anticipated to show declining yields as temperatures rise. Conversely, grapes and almonds would benefit from warming temperatures. Anticipated increases in the number and severity in heat waves would have a negative impact on livestock where heat stress would make livestock more vulnerable to disease, infection and mortality. The projected drying trend and changes in precipitation are a threat to agricultural production in California. Reduced water reliability and changes in weather patterns would impact irrigated farmlands and reduce food security. Furthermore, a drying trend would increase wildfire risk. Overall, agriculture in California is anticipated to suffer due to climate change impacts.

Forestry

Increases in wildfires will substantially impact California's forest resources that are prime targets for wildfires. This can increase public safety risks, property damage, emergency response costs, watershed quality, and habitat fragmentation. Climate change is also predicted to affect the behavior of plant species including seed production, seedling establishment, growth, and vigor due to rising temperatures. Precipitation changes will affect forests due to longer dry periods and moisture deficits and drought conditions that limit seedling and sapling growth. Prolonged drought also weakens trees, making them more susceptible to disease and pest invasion.

Transportation and Energy Infrastructure

Higher temperatures will require increased cooling, raising energy production demand. Higher temperatures also decrease the efficiency of distributing electricity and could lead to more power outages during peak demand. Climate changes would impact the effectiveness of California's transportation infrastructure as extreme weather events damage, destroy, and impair roadways and railways throughout the state, causing governmental costs to increase as well as impacts to human life as accidents increase. Other infrastructure costs and potential impacts to life would increase due to the need to upgrade levees and other flood control devices throughout the State. Infrastructure improvement costs related to climate change adaptation are estimated in the tens of billions of dollars.

Energy Setting: State and Regional Energy

According to the California Energy Commission's (CEC) *2015 Integrated Energy Policy Report*, Californians consumed about 280,500 gigawatt hours (GWh) of electricity in 2014 and 13,240 million BTU of natural gas in 2013. The CEC estimates that by 2025, California's electricity consumption will reach between 297,618 GWh and 322,266 GWh, an annual average growth rate of 0.54 to 1.27% (CEC, 2015a), and natural gas consumption is expected to reach between 12,673 million and 13,731 million BTU by 2024, an average annual growth rate of -0.4 to 0.33% (CEC, 2015a).

Approximately 70% of California's electricity is generated from power plants located within the State and from plants in other states but owned by California utilities. About 10% is imported from the Pacific Northwest and 20% from the American Southwest (CEC, 2011). In-state power is attained from 61.1% natural gas, 17.1 renewable energy, and 11.7% large hydropower.

Due in part to the State's emphasis on renewable energy, California is second in leading the nation when it comes to net electricity generation from renewable resources. A top producer of electricity from conventional hydroelectric power, California is also a leader in net electricity generation from several other renewable energy sources. In 2016, California generated approximately 73,900 GWh of renewable electricity, accounting for 28.9% of the State's overall electricity sales (CEC, 2017a).

4.8.2 REGULATORY FRAMEWORK

This section summarizes key federal, State, and city statutes, regulations, and policies that would apply to the Project. Global climate change resulting from GHG emissions is an ongoing environmental concern being discussed at the international, national, and statewide levels. At each level, agencies are considering strategies to control emissions of gases that contribute to global climate change.

International Regulation and the Kyoto Protocol

In 1988, the United Nations established the Intergovernmental Panel on Climate Change to evaluate the impacts of global warming and to develop strategies that nations could implement to curtail global climate change. In 1992, the United States joined other countries around the world in signing the United Nations' Framework Convention on Climate Change agreement with the goal of controlling greenhouse gas emissions. As a result, the Climate Change Action Plan was developed to address the reduction of GHGs in the United States. The plan currently consists of more than 50 voluntary programs for member nations to adopt.

Federal

***Massachusetts v. EPA* (2007) 549 U.S. 497.** On April 2, 2007, in *Massachusetts v. EPA*, the Supreme Court directed the EPA Administrator to determine whether GHG emissions from new motor vehicles cause or contribute to air pollution that may reasonably be anticipated to endanger public health or welfare, or whether the science is too uncertain to make a reasoned decision. In making these decisions, the EPA Administrator is required to follow the language of Section 202(a) of the Clean Air Act. On December 7, 2009, the EPA Administrator signed a final rule with the following two distinct findings regarding GHGs under Section 202(a) of the CAA:

- The Administrator found that elevated concentrations of GHGs—CO2, CH4, N2O, HFCs, PFCs, and SF6—in the atmosphere threaten the public health and welfare of current and future generations. This is referred to as the "endangerment finding."
- The Administrator further found the combined emissions of GHGs—CO2, CH4, N2O, and HFCs—from new motor vehicles and new motor vehicle engines contribute to the GHG air pollution that endangers public health and welfare. This is referred to as the "cause or contribute finding."

These two findings were necessary to establish the foundation for regulation of GHGs from new motor vehicles as air pollutants under the CAA.

Energy Independence and Security Act of 2007. On December 19, 2007, President George W. Bush signed the Energy Independence and Security Act of 2007. Among other key measures, the Act would do the following, which would aid in the reduction of national GHG emissions:

1. Increase the supply of alternative fuel sources by setting a mandatory Renewable Fuel Standard (RFS) requiring fuel producers to use at least 36 billion gallons of bio-fuel in 2022.
2. Set a target of 35 miles per gallon for the combined fleet of cars and light trucks by model year 2020 and directs National Highway Traffic Safety Administration (NHTSA) to establish a fuel economy program for medium- and heavy-duty trucks and create a separate fuel economy standard for work trucks.
3. Prescribe or revise standards affecting regional efficiency for heating and cooling products and procedures for new or amended standards, energy conservation, energy efficiency labeling for consumer electronic products, residential boiler efficiency, electric motor efficiency, and home appliances.

EPA and NHTSA Joint Final Rules for Vehicle Standards. On April 1, 2010, the EPA and NHTSA announced a joint final rule to establish a national program consisting of new standards for light-duty vehicles model years 2012 through 2016 that is intended to reduce GHG emissions and improve fuel economy. The EPA approved the first-ever national GHG emissions standards under the Clean Air Act, and NHTSA approved Corporate Average Fuel Economy standards under the Energy Policy and Conservation Act (75 FR 25324–25728), which became effective on July 6, 2010. The EPA's GHG standards require new passenger cars, light-duty trucks, and medium-duty passenger vehicles to meet an estimated combined average emissions level of 250 grams of CO_2 per mile in model year 2016. The Corporate Average Fuel Economy standards for passenger cars and light trucks will be phased in between 2012 and 2016. The rules will simultaneously reduce GHG emissions, improve energy security, increase fuel savings, and provide clarity and predictability for manufacturers (EPA 2010). In August 2012, the EPA and NHTSA approved a second round of GHG and Corporate Average Fuel Economy standards for model years 2017 and beyond (77 FR 62624–63200). These standards will reduce motor vehicle GHG emissions for cars and light-duty trucks by model year 2025.

Clean Power Plan and New Source Performance Standards for Electric Generating Units. On October 23, 2015, EPA published a final rule (effective December 22, 2015) establishing the Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units (80 FR 64510–64660), also known as the Clean Power Plan. These guidelines prescribe how states must develop plans to reduce GHG emissions from existing fossil-fuel-fired electric generating units. The guidelines establish CO_2 emission performance rates representing the best system of emission reduction for two subcategories of existing fossil-fuel-fired electric generating

units: (1) fossil-fuel-fired electric utility steam-generating units, and (2) stationary combustion turbines. Concurrently, EPA published a final rule (effective October 23, 2015) establishing Standards of Performance for Greenhouse Gas Emissions from New, Modified, and Reconstructed Stationary Sources: Electric Utility Generating Units (80 FR 64661–65120). The rule prescribes CO_2 emission standards for newly constructed, modified, and reconstructed affected fossil-fuel-fired electric utility generating units. Implementation of the Clean Power Plan has been stayed by the U.S. Supreme Court pending resolution of several lawsuits.

State

Title 24 Energy Standards

The California Energy Commission (CEC) first adopted Energy Efficiency Standards for Residential and Nonresidential Buildings in 1978 in response to a legislative mandate to reduce energy consumption in the State. Although not originally intended to reduce GHG emissions, increased energy efficiency, and reduced consumption of electricity, natural gas, and other fuels would result in fewer GHG emissions from residential and nonresidential buildings subject to the standard. The standards are updated periodically to allow for the consideration and inclusion of new energy efficiency technologies and methods.

Part 11 of the Title 24 Building Standards Code is referred to as the California Green Building Standards Code (CALGreen Code). The purpose of the CALGreen Code is to "improve public health, safety and general welfare by enhancing the design and construction of buildings through the use of building concepts having a positive environmental impact and encouraging sustainable construction practices in the following categories: (1) planning and design; (2) energy efficiency; (3) water efficiency and conservation; (4) material conservation and resource efficiency; and (5) environmental air quality." The CALGreen Code is not intended to substitute or be identified as meeting the certification requirements of any green building program that is not established and adopted by the California Building Standards Commission (CBSC).

CALGreen contains both mandatory and voluntary measures. For non-residential land uses there are 39 mandatory measures including, but not limited to exterior light pollution reduction, wastewater reduction by 20%, and commissioning of projects over 10,000 square feet. Two tiers of voluntary measures apply to non-residential land uses, for a total of 36 additional elective measures.

California's Building Energy Efficiency Standards are updated on an approximately three-year cycle. The 2019 standards, adopted May 9, 2018, will go into effect on January 1, 2020 and improve upon existing standards, focusing on three key areas: proposing new requirements for installation of solar photovoltaics for newly constructed low-rise residential buildings; updating current ventilation and Indoor Air Quality (IAQ) requirements, and extending Title 24 Part 6 to apply to healthcare facilities. The 2019 standards also propose several smaller improvements in energy efficiency.

AB 939 and AB 341. In 1989, AB 939, known as the Integrated Waste Management Act (California Public Resources Code §§ 40000 *et seq.*), was passed because of the increase in waste stream and the decrease in landfill capacity. The statute established the California Integrated Waste Management Board, which oversees a disposal reporting system. AB 939 mandated a reduction of waste being disposed where jurisdictions were required to meet diversion goals of all solid waste through source reduction, recycling, and composting activities of 25% by 1995 and 50% by the year 2000. AB 341 (Chapter 476, Statutes of 2011 (Chesbro))

amended the California Integrated Waste Management Act of 1989 to include a provision declaring that it is the policy goal of the state that not less than 75% of solid waste generated be source-reduced, recycled, or composted by the year 2020 and annually thereafter. In addition, AB 341 required the California Department of Resources Recycling and Recovery (CalRecycle) to develop strategies to achieve the state's policy goal. CalRecycle conducted several stakeholder workshops, and in May 2012, published a discussion document titled *California's New Goal: 75 Percent Recycling*, which identifies concepts that CalRecycle believes would assist the state in reaching the 75% goal by 2020 (CalRecycle 2012).

AB 1493. In a response to the transportation sector accounting for more than half of California's CO_2 emissions, AB 1493 (Pavley) was enacted in July 2002. AB 1493 required CARB to set GHG emission standards for passenger vehicles, light-duty trucks, and other vehicles determined by CARB to be vehicles that are primarily used for noncommercial personal transportation in the state. The bill required that CARB set GHG emission standards for motor vehicles manufactured in 2009 and all subsequent model years. CARB adopted the standards in September 2004. When fully phased in, the near-term (2009–2012) standards will result in a reduction of about 22% in GHG emissions compared to the emissions from the 2002 fleet, while the mid-term (2013–2016) standards will result in a reduction of about 30%.

Senate Bill (SB) 1078. SB 1078 (Sher) (September 2002) established the Renewable Portfolio Standard (RPS) program, which requires an annual increase in renewable generation by the utilities equivalent to at least one percent of sales, with an aggregate goal of 20% by 2017. This goal was subsequently accelerated, requiring utilities to obtain 20% of their power from renewable sources by 2010 (see SB 107, EOs S-14-08, and S-21-09.)

Executive Order (EO) S-3-05. EO S-3-05 (June 2005) established the following goals: GHG emissions should be reduced to 2000 levels by 2010, GHG emissions should be reduced to 1990 levels by 2020, and GHG emissions should be reduced to 80% below 1990 levels by 2050. Under EO S-3-05, the California Environmental Protection Agency is directed to report biannually on progress made toward meeting the GHG targets and the impacts to California due to global warming, including impacts to water supply, public health, agriculture, the coastline, and forestry.

AB 32. In furtherance of the goals established in EO S-3-05, the legislature enacted AB 32 (Núñez and Pavley), the California Global Warming Solutions Act of 2006 (September 27, 2006). AB 32 requires California to reduce its GHG emissions to 1990 levels by 2020, representing a reduction of approximately 15% below emissions expected under a "business as usual" scenario. AB 32 directs CARB to develop programs and requirements necessary to achieve the AB 32 goals; to adopt regulations requiring the reporting and verification of statewide GHG emissions; and to monitor compliance and enforcing any rule, regulation, order, emission limitation, emission reduction measure, or market-based compliance mechanism adopted. AB 32 also directs Climate Action Team to coordinate the efforts set forth under EO S-3-05 to continue its role in coordinating overall climate policy. Pursuant to AB 32, CARB must adopt regulations to achieve the maximum technologically feasible and cost-effective GHG emission reductions. Reductions in GHG emissions will come from virtually all sectors of the economy and will be accomplished from a combination of policies, planning, direct regulations, market approaches, incentives, and voluntary efforts. These efforts target GHG emission reductions from cars and trucks, electricity production, fuels, and other sources. The full implementation of AB 32 will help mitigate risks associated with climate change while improving energy efficiency, expanding the use of renewable energy resources and cleaner transportation, and reducing waste.

As required under AB 32, on December 6, 2007, CARB approved the 1990 GHG emissions inventory, establishing the emissions limit for 2020. The 2020 emissions limit was set at 427 million MT of CO2e. In addition to the 1990 emissions inventory, CARB also adopted regulations requiring mandatory reporting of GHGs for the large facilities that account for 94% of GHG emissions from industrial and commercial stationary sources in California. AB 32 requires CARB to develop a scoping plan, which lays out California's strategy for meeting the goals and which must be updated every 5 years. On December 11, 2008, CARB approved the initial *Climate Change Scoping Plan: A Framework for Change* (Scoping Plan) (CARB 2008) to achieve the goals of AB 32. The Scoping Plan establishes an overall framework for a suite of measures that will be adopted to sharply reduce California's GHG emissions. The Scoping Plan evaluates opportunities for sector-specific reductions, integrates all CARB and Climate Action Team early actions and additional GHG reduction measures by both entities, identifies additional measures to be pursued as regulations, and outlines the role of a cap-and-trade program. The key elements of the Scoping Plan include the following (CARB 2008):

1. Expanding and strengthening existing energy efficiency programs as well as building and appliance standards;
2. Achieving a statewide renewable energy mix of 33%;
3. Developing a California cap-and-trade program that links with other Western Climate Initiative partner programs to create a regional market system and caps sources contributing 85% of California's GHG emissions;
4. Establishing targets for transportation-related GHG emissions for regions throughout California, and pursuing policies and incentives to achieve those targets;
5. Adopting and implementing measures pursuant to existing state laws and policies, including California's clean car standards, goods movement measures, and the Low Carbon Fuel Standard; and
6. Creating targeted fees, including a public goods charge on water use, fees on high GWP gases, and a fee to fund the administrative costs of the State of California's long-term commitment to AB 32 implementation.

In May 2014, CARB approved the *First Update to the Climate Change Scoping Plan Building on the Framework Pursuant to AB 32 – The California Global Warming Solutions Act of 2006* (Scoping Plan Update; CARB 2014), which builds on the initial Scoping Plan with new strategies and recommendations and identifies opportunities to leverage existing and new funds to further drive GHG emission reductions through strategic planning and targeted low carbon investments. Based on updated information, the Scoping Plan Update revises the 2020 emissions target to 431 MMT CO2e (based on updated GWPs for GHGs) (CARB 2014).

The second update of the scoping plan, the *2017 Climate Change Scoping Plan Update*, is currently in draft form and available for public review. The primary objective for the 2017 Scoping Plan Update is to identify the measures required to achieve the mid-term GHG reduction target for 2030 (i.e., reduce emissions by 40% below 1990 levels by 2030) established under Executive Order B-30-15 and Senate Bill (SB) 32. The draft 2017 Scoping Plan Update identifies an increased need for coordination among state, regional, and local governments to realize the potential for GHG emissions reductions that can be gained from local land use decisions. It notes that emissions reductions targets set by more than one hundred local jurisdictions in the state could result in emissions reductions of up to 45 $MMTCO_2e$ and 83 $MMTCO_2e$ by 2020 and 2050, respectively. To achieve these goals, the draft 2017 Scoping Plan Update includes a recommended plan-level efficiency threshold of six metric tons or less per capita by 2030 and no

more than two metric tons by 2050. The major elements of the draft 2017 Scoping Plan Update framework include:

- Implementing and/or increasing the standards of the Mobile Source Strategy, which include increasing zero emission vehicle (ZEV) buses and trucks
- Low Carbon Fuel Standard, with an increased stringency (18% by 2030)
- Implementation of SB 350, which expands the Renewable Portfolio Standard (RPS) to 50% and doubles energy efficiency savings by 2030
- California Sustainable Freight Action Plan, which improves freight system efficiency, utilizes near-zero emissions technology, and deployment of ZEV trucks
- Implementing the proposed Short-Lived Climate Pollutant Strategy, which focuses on reducing CH_4 and hydrocarbon emissions by 40% and anthropogenic black carbon emissions by 50% by year 2030
- Continued implementation of SB 375
- Post-2020 Cap-and-Trade Program that includes declining caps
- 20% reduction in GHG emissions from refineries by 2030

Development of a Natural and Working Lands Action Plan to secure California's land base as a net carbon sink

The Scoping Plan Update highlights California's progress toward meeting the near-term 2020 GHG emission reduction goals defined in the initial Scoping Plan, summarizes the latest climate change science, defines CARB's climate change priorities for the next 5 years, and provides direction on how to achieve the long-term emission reduction goal described in EO S- 3-05 and B-16-12 (see EO B-16-12). The Scoping Plan Update identified nine key focus areas, including energy, transportation, agriculture, water, waste management, and natural and working lands, along with short-lived climate pollutants, green buildings, and the cap-and trade program. The update also recommends that a statewide mid-term target and mid-term and long-term sector targets be established toward meeting the 2050 goal established by EO S-3-05 (i.e., reduce California's GHG emissions to 80% below 1990 levels), although no specific recommendations are made.

SB 107. SB 107 (Simitian) (September 2006) requires investor-owned utilities, such as Pacific Gas and Electric, Southern California Edison, and San Diego Gas & Electric, to generate 20% of their electricity from renewable sources by 2010. Previously, state law required that this target be achieved by 2017 (see SB 1078).

SB 1368. SB 1368 (September 2006) requires the CEC to develop and adopt regulations for GHG emissions performance standards for the long-term procurement of electricity by local, publicly owned utilities. These standards must be consistent with the standards adopted by the California Public Utilities Commission (CPUC). This effort will help protect energy customers from financial risks associated with investments in carbon-intensive generation by allowing new capital investments in power plants that have GHG emissions that are as low or lower than new combined-cycle natural gas plants. This will be done by requiring imported electricity to meet GHG performance standards in California and by requiring that the standards be developed and adopted in a public process.

Low Carbon Fuel Standards. The Low Carbon Fuel Standard (LCFS) is administered by the California Air Resources Board. Established In 2007 through a Governor's Executive Order, it

uses a market-based cap and trade approach to lowering the greenhouse gas emissions from petroleum-based transportation fuels like reformulated gasoline and diesel. The LCFS requires producers of petroleum-based fuels to reduce the carbon intensity of their products, beginning with a quarter of a percent in 2011 culminating in a 10% total reduction in 2020. Petroleum importers, refiners and wholesalers can either develop their own low carbon fuel products, or buy LCFS Credits from other companies that develop and sell low carbon alternative fuels, such as bio-fuels, electricity, natural gas or hydrogen. The LCFS has several principal elements. First, it establishes a life cycle-scale assessment of the carbon content for each fuel used in the LCFS. This method captures the energy used to create each fuel from the initial point of extraction or cultivation, to transport, to refining, to distribution to the final point of sale. The GREET model, (Greenhouse Gases, Regulated Emissions, and Energy Use in Transportation) is used to calculate the carbon intensity value of each fuel. GREET was developed by the Argonne National Laboratory. This "carbon intensity value" is expressed in terms of grams of CO_2e per mega joule of energy. The carbon intensity value has a direct emissions and indirect emissions component. All carbon intensity values are reported in the "LCFS Lookup Table," which is available in their current regulation (California Code of Regulations, title 17, section 95480 and following) or on the LCFS website. Second, the LCFS establishes an implementation schedule. 2010 was a reporting year, while 2011 was the first year of formal implementation where petroleum fuel producers and importers had to reduce the carbon content of their fuel by a quarter of a percent. The reduction requirements will increase steadily to the full 10% reduction in 2020. The LCFS program also has a registry of alternative fuel producers who have submitted all appropriate documentation and are eligible to participate in the LCFS Credit Market and sell or trade credits for their low carbon alternative fuel products. The ARB has initiated a Quarterly Report, which describes the carbon reduction obligation for the petroleum industry and describes the relative carbon debits and credits for the industry. The University of California Berkeley and Davis campuses have played a major role in supporting the establishment and implementation of the LCFS.

SB 375. In January 2009, California SB 375 went into effect known as the Sustainable Communities and Climate Protection Act. The objective of SB 375 is to better integrate regional planning of transportation, land use, and housing to reduce sprawl and ultimately reduce greenhouse gas emissions and other air pollutants. SB 375 tasks CARB to set GHG reduction targets for each of California's 18 regional Metropolitan Planning Organizations (MPOs). Each MPO is required to prepare a Sustainable Communities Strategy (SCS) as part of their Regional Transportation Plan (RTP). The SCS is a growth strategy in combination with transportation policies that will show how the MPO will meet its GHG reduction target. If the SCS cannot meet the reduction goal, an Alternative Planning Strategy may be adopted that meets the goal through alternative development, infrastructure, and transportation measures or policies.

In August 2010, CARB released the proposed GHG reduction targets for the MPOs to be adopted in September 2010. The proposed reduction targets for the SCAG region were eight percent by year 2020 and 13% by year 2035. In September 2010 and February 2011, the eight percent and the 13% targets were adopted, respectively.

On April 4, 2012, SCAG's Regional Council adopted the *2012-2035 Regional Transportation Plan/Sustainable Communities Strategy: Towards a Sustainable Future.* The 2012 RTP/SCS included a strong commitment to reduce emissions from transportation sources to comply with SB 375. The document contained a host of improvements to the region's multimodal transportation system. These improvements included closures of critical gaps in the network that hinder access to certain parts of the region, as well as the strategic expansion of the transportation system where there is room to grow in order to provide the region with greater mobility. The RTP/SCS demonstrated the region's ability to attain and exceed the GHG emission-reduction

targets set forth by the CARB, and outlined a plan for integrating the transportation network and related strategies with an overall land use pattern that responds to projected growth, housing needs, changing demographics, and transportation demands.

SCAG's Regional Council adopted an update to the 2012 RTP/SCS on April 7, 2016, the *2016-2040 Regional Transportation Plan/Sustainable Communities Strategy* (2016 RTP/SCS). The 2016 RTP/SCS expands upon the 2012 RTP/SCS's goal of balancing future mobility and housing needs with economic, environmental, and public health goals. Included in the 2016 RTP/SCS are 13 major initiatives primarily focused around preserving and maintaining the existing transportation system, expanding and improving mass transit (with a specific emphasis on passenger rail), decreasing reliance on vehicular modes of transportation through the expansion of pedestrian and bicycle infrastructure, and focusing new growth around transit. Through proactive land use planning and improvements to the transportation network, implementation of the 2016 RTP/SCS will result in an eight percent reduction in greenhouse gas emissions per capita by 2020, an 18% reduction by 2035, and a 21% reduction by 2040 when compared with 2005 levels. These reductions meet or exceed the State's mandate, which require an eight percent reduction by 2020 and 13% by 2035.

In March 2018, CARB established new regional GHG reduction targets for SCAG and other MPOs in the state (CARB, 2018b). The new SCAG targets are an 8% reduction in per capita passenger vehicle GHG reductions by 2020 and a 19% reduction by 2035. The 2016 RTP/SCS, however, remains the approved SCS for the SCAG MPO until such time as SCAG prepares an updated SCS.

EO S-13-08. EO Order S-13-08 (November 2008) is intended to hasten California's response to the impacts of global climate change, particularly sea-level rise. It directs state agencies to take specified actions to assess and plan for such impacts. It directs the CNRA, in cooperation with the California Department of Water Resources, CEC, California's coastal management agencies, and the Ocean Protection Council, to request that the National Academy of Sciences prepare a Sea Level Rise Assessment Report by December 1, 2010. The Ocean Protection Council, California Department of Water Resources, and CEC, in cooperation with other state agencies, are required to conduct a public workshop to gather information relevant to the Sea Level Rise Assessment Report. The Business, Transportation, and Housing Agency was ordered to assess within 90 days of issuance of the EO the vulnerability of the state's transportation systems to sea-level rise. The Governor's Office of Planning and Research and the CNRA are required to provide land use planning guidance related to sea-level rise and other climate change impacts. The EO also required the other state agencies to develop adaptation strategies by June 9, 2009, to respond to the impacts of global climate change that are predicted to occur over the next 50 to 100 years. A discussion draft adaptation strategies report was released in August 2009, and the final *2009 California Climate Adaptation Strategy* report was issued in December 2009 (CNRA 2009a). To assess the state's vulnerability, the report summarizes key climate change impacts to the state for the following areas: public health, ocean and coastal resources, water supply and flood protection, agriculture, forestry, biodiversity and habitat, and transportation and energy infrastructure. The report then recommends strategies and specific responsibilities related to water supply, planning and land use, public health, fire protection, and energy conservation.

SB 605. SB 605 (September 2014) requires CARB to complete a comprehensive strategy to reduce emissions of short-lived climate pollutants in the state no later than January 1, 2016. As defined in the statute, short-lived climate pollutant means "an agent that has a relatively short lifetime in the atmosphere, from a few days to a few decades, and a warming influence on the climate that is more potent than that of carbon dioxide" (SB 605). SB 605, however, does not

prescribe specific compounds as short-lived climate pollutants or add to the list of GHGs regulated under AB 32. In developing the strategy, the CARB must complete an inventory of sources and emissions of short-lived climate pollutants in the state based on available data, identify research needs to address any data gaps, identify existing and potential new control measures to reduce emissions, and prioritize the development of new measures for short-lived climate pollutants that offer co-benefits by improving water quality or reducing other air pollutants that impact community health and benefit disadvantaged communities. The draft strategy released by CARB in September 2015 focuses on methane, black carbon, and fluorinated gases, particularly HFCs, as important short-lived climate pollutants. The draft strategy recognizes emission reduction efforts implemented under AB 32 (e.g., refrigerant management programs) and other regulatory programs (e.g., in-use diesel engines, solid waste diversion) along with additional measures to be developed.

EO B-29-15. In response to the ongoing drought in California, EO B-29-15 (April 2015) set a goal of achieving a statewide reduction in potable urban water usage of 25% relative to water use in 2013. The term of the EO extended through February 28, 2016, although many of the directives have become permanent water-efficiency standards and requirements. The EO includes specific directives that set strict limits on water usage in the state. In response to EO B- 29-15, the California Department of Water Resources has modified and adopted a revised version of the Model Water Efficient Landscape Ordinance that, among other changes, significantly increases the requirements for landscape water use efficiency and broadens its applicability to include new development projects with smaller landscape areas.

SB 350. SB 350 (October 2015) expands the RPS by establishing a goal of 50% of the total electricity sold to retail customers in California per year by December 31, 2030. In addition, SB 350 includes the goal to double the energy efficiency savings in electricity and natural gas final end uses (such as heating, cooling, lighting, or class of energy uses on which an energy-efficiency program is focused) of retail customers through energy conservation and efficiency. The bill also requires the CPUC, in consultation with the CEC, to establish efficiency targets for electrical and gas corporations consistent with this goal. SB 350 also provides for the transformation of the California Independent System Operator into a regional organization to promote the development of regional electricity transmission markets in the western states and to improve the access of consumers served by the California Independent System Operator to those markets, pursuant to a specified process.

Local

San Bernardino County GHG Emissions Reduction Plan. The County of San Bernardino adopted its Greenhouse Gas Reduction Plan (GHG Plan) in 2011, which provides guidance on how to analyze GHG emissions and determine significance during the CEQA review of proposed development projects within the County of San Bernardino. The reduction strategies in the GHG Plan correspond to reduction measures. Measureable reductions in GHG emissions are achieved through adherence to the County's DRP procedures.

The County's GHG DRP procedures, updated in 2015, are streamlined by 1) applying a uniform set of performance standards to all development project, and 2) utilizing Screening Tables to mitigate project GHG emissions. Projects have the option of preparing a project-specific technical analysis to quantify and mitigate GHG emissions in lieu of the utilizing the Screening Tables. A review standard of 3,000 MT CO_2e per year is used to identify projects that require the use of Screening Tables or a project-specific technical analysis to quantify and mitigate project emissions.

Projects that exceed the 3,000 $MTCO_2e$ per year are required to either achieve a minimum 100 points per the Screening Tables or a 31% reduction over 2007 emissions levels. Consistent with CEQA guidelines, such projects would be determined to have a less than significant individual and cumulative impact for GHG emissions.

4.8.3 SIGNIFICANCE THRESHOLDS

Based on Appendices F and G of the CEQA Guidelines, a significant GHG impact would occur if implementation of a project would:

A. Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment; or
B. Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs.

To provide guidance to local lead agencies on determining the significance of GHG emissions in their CEQA documents, the SCAQMD convened the first GHG Significance Threshold Working Group (Working Group) meeting on April 30, 2008. To date, the Working Group has convened a total of 15 times, with the last meeting taking place on September 28, 2010. Based on the last Working Group meeting, the SCAQMD identified an interim, tiered approach for evaluating GHG emissions intent on capturing 90% of development projects where the SCAQMD is not the lead agency. The following describes the basic structure of the SCAQMD's tiered, interim GHG significance thresholds:

A. **Tier 1** consists of evaluating whether or not the project qualifies for applicable CEQA exemptions.
B. **Tier 2** consists of determining whether or not a project is consistent with a greenhouse gas reduction plan. If a project is consistent with a greenhouse gas reduction plan, it would not have a significant impact.
C. **Tier 3** consists of using screening values at the discretion of the Lead Agency; however, the Lead Agency should be consistent for all projects within its jurisdiction. The following thresholds were proposed for consideration:
    a. 3,000 $MTCO_2e$/yr for all land use types; or
    b. 3,500 $MTCO_2e$/yr for residential; 1,400 $MTCO_2e$/yr for commercial; 3,000 $MTCO_2e$/yr for mixed use projects.
D. **Tier 4** has three options for projects that exceed the screening values identified in Tier 3:
    a. Option 1: Reduce emissions from business as usual by a certain percentage (currently undefined)
    b. Option 2: Early implementation of applicable AB 32 Scoping Measures

a) Option 3: For plan-level analyses, analyze a project's emissions against an efficiency value of 6.6 $MTCO_2e$/yr/SP in 2020 and 4.1 $MTCO_2e$/yr/SP by 2035. For project-level analyses, analyze a project's emissions against an efficiency value of 4.8 and 3.0 $MTCO_2e$/yr/SP for the 2020 and 2035 calendar years, respectively

4.8.4 IMPACTS AND MITIGATION MEASURES

This section describes potential impacts related to the generation of greenhouse gas emissions that may have a significant impact on the environment and conflicts with applicable plans adopted for the purpose of reducing emissions of greenhouse gases; which could result from the implementation of the project and recommends mitigation measures as needed to reduce significant impacts.

Greenhouse Gas Emissions

Impact GHG-1 - ***Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?***

Analysis of Impacts

Project-related GHG emissions would include emissions from direct and indirect sources. The proposed project would result in direct and indirect emissions of CO_2, N_2O, and CH_4. Direct project-related GHG emissions include emissions from construction activities and mobile sources, while indirect sources include emissions from area sources, electricity consumption, water demand, and solid waste generation during operation

As mentioned above, projects that exceed the 3,000 $MTCO_2e$ per year are required to either achieve a minimum 100 points per the Screening Tables or a 31% reduction over 2007 emissions levels. Consistent with CEQA guidelines, such projects would be determined to have a less than significant individual and cumulative impact for GHG emissions. Due to the Project's size, its GHG emissions are presumed to exceed the 3,000 $MTCO_2e$ per year threshold. As such, the Screening Table approach has been utilized to demonstrate consistency with the County GHG Plan. Mitigation Measure GHG-1, provided below, requires that the Project implement measures totaling a minimum of 100 points from the Screening Tables. The Screening Table for the Project is included as Table 2 in Attachment A of the *Project Greenhouse Gas Analysis Technical Memorandum* prepared by Albert A. Webb Associates, and shows the Project implementing measures totaling 101 points.

Level of Significance Before Mitigation

As stated above, the Project's GHG emissions are expected to exceed the 3,000 $MTCO_2e$ per year significance threshold without mitigation.

Mitigation Measures

GHG-1 Prior to issuance of building permits, the Project applicant shall provide documentation to the County of San Bernardino Building and Safety Division demonstrating that the following measures or any other combination thereof are incorporated from the County's 2015 Development Review Processes Greenhouse Gas Emissions Screening Tables, as needed to achieve the required 100 points. Documentation may include measures incorporated into construction plans and specifications, development agreements, and/or other mechanisms.

Level of Significance After Mitigation

Since the Project will implement at least 100 points from the Screening Tables with incorporation of mitigation, it would be consistent with the County's GHG Reduction Plan and would result in a less than significant GHG emissions impact.

Conflicts with Adopted Plans

Impact GHG-2 - *Would the project conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?*

Analysis of Impacts

As shown above, the Project would be consistent with the County of San Bernardino GHG Plan. Additionally, the Project's consistency with AB 32 and Senate Bill (SB) 32 are discussed below.

AB 32 Consistency. AB 32 was adopted in 2006 and requires California to reduce its GHG emissions to 1990 levels by 2020. CARB identified reduction measures to achieve this goal as set forth in the CARB Scoping Plan. Thus, projects that are consistent with the CARB Scoping Plan are also consistent with AB 32 goal.

The Project would generate GHG emissions, directly and indirectly, from a variety of sources. The CARB Scoping Plan includes strategies for implementation at the statewide level to meet the goals of AB 32. These strategies serve as statewide measures to reduce GHG emissions levels. The Project would be subject to the applicable measures established in the Scoping Plan because these measures are implemented at the state level. Therefore, the Project would not conflict or otherwise interfere with implementation of AB 32.

SB 32 Consistency. SB 32 was adopted in 2016 and requires the state to reduce statewide GHG emissions 40% below 1990 levels by 2030. SB 32 codifies the reduction target issued in Executive Order B-30-15. SB 32 builds upon the AB 32 goal of 1990 levels by 2020 and provides an interim goal to achieving Executive Order S-3-05's 2050 reduction goal of 80% below 1990 levels.

The CARB 2017 Scoping Plan identified reduction measures to achieve the SB 32 GHG reduction goal. Like the previously adopted Scoping Plans, the 2017 Scoping Plan includes statewide reduction measures that are implemented at the state level. The Project would be subject to the applicable measures established in the 2017 Scoping Plan because these measures are implemented at the state level.

Additionally, the 2014 Scoping Plan Update indicates "California is on track to meet the near-term 2020 greenhouse gas limit and is well positioned to maintain and continue reductions beyond 2020 as required by AB 32"; and it recognizes the potential for California to "reduce emissions by 2030 to levels squarely in line with those needed in the developed world and to stay on track to reduce emissions to 80% below 1990 levels by 2050."

Moreover, the Project does not propose facilities or operations that would substantively interfere with any future County-mandated, state-mandated, or federally-mandated regulations enacted or promulgated to legally require development to assist in meeting state-adopted GHG emissions reduction targets, including those established under Executive Order S-3-05, Executive Order B-30-15, SB 32, or the 2017 Scoping Plan.

Therefore, the Project would not conflict with implementation of SB 32 or otherwise interfere with implementation of this or future goals.

Level of Significance Before Mitigation

Less than significant.

Mitigation Measures

No mitigation is required.

Cumulative Impacts

Would the project cause substantial adverse cumulative impacts with respect to greenhouse gas emissions?

Analysis of Impacts

Global climate change is the result of GHG emissions worldwide; individual projects do not generate enough GHG emissions to influence global climate change. Thus, the analysis of GHG Emissions is, by nature, a cumulative analysis focused on whether an individual project's contribution to global climate change is cumulatively considerable. As described under Impact GHG-1, since the Project will implement at least 100 points from the Screening Tables with incorporation of mitigation, it would be consistent with the County's GHG Reduction Plan and would not result in a significant GHG emissions impact. As such, the Project would have a less than significant impact on GHG emissions.

Level of Significance Before Mitigation

Potentially significant.

Mitigation Measures

See Mitigation Measure GHG-1.

Level of Significance After Mitigation

Less than significant.

4.8.5 REFERENCES

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4.9 – Hazards and Hazardous Materials

This EIR chapter addresses hazards and hazardous materials impacts associated with the Project. Issues of interest are hazards and hazardous materials impacts identified by the CEQA Guidelines: whether the Project will create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials, create the release of hazardous materials emissions result in the exposure of nearby to a school to hazardous materials In addition potential exposure to wildfire or aviation hazards are examined. A Phase I Environmental Site Assessment (ESA) was prepared for the Project by Partner Engineering and Science, Inc. (Partner), dated January 8, 2018. Much of the information in this section was taken from the Phase I ESA report, which is incorporated by reference and attached to the EIR as Appendix K.

4.9.1 – ENVIRONMENTAL SETTING

Existing Land Use

The Project site is primarily vacant land formerly used as a citrus orchard. However, a small western portion of the Project site maintains an active agricultural field, and a temporary residence (trailer), and beehive fixtures are present in the northern portion of the Project site. Onsite operations consist of a small area of active agricultural land, apiaristry (beekeeping), and vacant/fallow agricultural land. Onsite improvements, materials and chemicals include former concrete building foundations, fencing, limited amounts of small consumer sized (one-quart) empty containers motor oil, used automobile tires, and other miscellaneous debris such as former irrigation features and fixtures including aboveground and belowground suspect asbestos-containing transite irrigation piping. The Project site also has unpaved roads and sewer/drainage access manholes.

The Project site is located within a mixed commercial, industrial and agricultural area of San Bernardino County. To the north of the site is a fallow agricultural field, the Redlands Wastewater Treatment Facility, and undeveloped undulating woodland and grassland. To the south of the site is Palmetto Avenue, with citrus orchards and other agricultural lands beyond. To the east of the site is Alabama Street, with vacant field/fallow agricultural land, industrial warehouse buildings, and a Home Depot warehouse beyond. To the west of the site is a fallow agricultural field and an industrial warehouse building.

Schools

No schools are onsite. There are no schools within 0.25 mile of the project area. The nearest school to the site is the Packinghouse Christian Academy, located approximately 0.5 miles to the south. Citrus Valley High School is located approximately 0.65 miles to the southeast of the Project site.

Physical Setting

The United States Geological Survey (USGS) *Redlands, California* Quadrangle 7.5-minute series topographic map was reviewed. According to the contour lines on the topographic map, the Project site is located at approximately 1,217 feet above mean sea level (MSL). The contour lines

in the area of the Project site indicate the area is sloping gently toward the west-northwest. The Project site is depicted on the 1988 map as developed with two small building structures (two residences), and an agriculture field on the western half of the property and developed with two rectangular building structures (storage and greenhouse), three small building structures (residence and storage), and an agriculture field on the eastern half of the property.

Hydrology

According to topographic map interpretation, the direction of groundwater in the vicinity of the Project site is inferred to flow toward the west-southwest. The nearest surface water in the vicinity of the Project site is the Santa Ana River located approximately 1,000 feet to the north-northwest of the Project site. No settling ponds, lagoons, surface impoundments, wetlands or natural catch basins were observed at the Project site during this assessment.

According to available information, a public water system operated by Division V the San Bernardino Valley Municipal Water District (SBVMWD) serves the Project site vicinity. According to a representative of the SBVMWD, shallow groundwater beneath the Project site is not utilized for domestic purposes. SBVMWD's primary source of water is from the California State Water Project (SWP) through the East Branch of the State Aqueduct via Lake Silverwood. The SBVMWD and Western Municipal Water District have filed water right applications with the State Water Resources Control Board to obtain authorization to divert water from the Santa Ana River.

According to the California Department of Water Resources (DWR) Bulletin 118 (2003), the Project site belongs to the Upper Santa Ana Valley Groundwater Basin, and the Bunker Hill Subbasin (Groundwater Basin Number: 8-2.06). The water-bearing material in the sub-basin consists of Holocene and Pleistocene age alluvial deposits of sand, gravel, and boulders interspersed with deposits of silt and clay. Recharge to the Bunker Hill Subbasin historically has resulted from infiltration of runoff from the San Gabriel and San Bernardino Mountains. The San Jacinto fault forms a strong barrier to groundwater that raises the water table nearly to the surface below the course of the Santa Ana River.

According to Cal/EPA Regional Water Quality Control Board (RWQCB) *Geotracker* online database, a previous subsurface investigation conducted on a nearby property (2151 Nevada Street/RWQCB Case #8360303001) indicates that the depth to groundwater in the vicinity of the Project site is approximately 149 feet below ground surface (bgs) with the direction of groundwater flow identified to be towards the west-southwest.

Flood Zone Information

Partner performed a review of the Flood Insurance Rate Map, published by the Federal Emergency Management Agency. According to Community Panel Number 06071C8704H, dated August 28, 2008, the Project site appears to be located in Zone X (unshaded), an area located outside of the 100-year and 500-year flood plains.

Historical Land Uses

Historical Use Information

Partner obtained historical use information about the Project site from a variety of sources. A chronological listing of the historical data found is summarized in Table 4.9-1, below.

Table 4.9-1
Historical Use Information

Period/Date	Source	Description/Use
1899-1920	Aerial Photographs, Interviews, Topographic, Maps	Agricultural Farmstead
1930-2003	Aerial Photographs, Building Records, City Directories, Interviews, Previous Report, Topographic Maps	Residential/Citrus Orchard
2004-2016	Aerial Photographs, Building Records, City Directories, Interviews, Topographic Maps	Residential/Agricultural
2016-Present	Aerial Photographs, Building Records, City Directories, Interviews, Topographic Maps	Unoccupied Land
Source: Partner Engineering, 2018.		

According to available historical sources, the Project site was formerly developed with residential and agricultural uses as early as 1899; occupied for use as residential property and an agricultural citrus orchard from the late 1920s through 2003, and residential and agricultural fields from 2003 to 2016. All permanent structures including past residential homes are no longer present at the property.

Aerial Photograph Review

Partner obtained available aerial photographs of the Project site and surrounding area from Environmental Data Resources, Inc. (EDR). The following observations were noted to be visible on the Project site and adjacent properties during the aerial photograph review:

Date: 1930/1938 – Project site is developed with two single-family residences, an unpaved access road, and agricultural fields on the western half of the Project site, and depicted as developed with one single-family residence, an unpaved access road, and agricultural fields on the eastern half of the Project site. To the north is undeveloped, undulating land (grassland, woodland, dirt), followed by the Santa Ana Riverbed and watershed. To the south is Palmetto Avenue, followed by agricultural fields (citrus orchards). To the east is Alabama Street, followed by a single-family residence and agricultural fields (citrus orchards). West of the Project site are agricultural fields (citrus orchards) and unpaved access roads.

Date: 1949/1953 – Project site is developed with two single-family residences, a storage building, an unpaved access road, and agricultural fields on the western half of the Project site, and depicted as developed with one single-family residence, two farm storage buildings, an unpaved access road, and agricultural fields on the eastern half of the Project site. To the north is undeveloped, undulating land (grassland, woodland, dirt), followed by the Santa Ana Riverbed and watershed. To the south is Palmetto Avenue, followed by agricultural fields (citrus orchards). To the east is Alabama Street, followed by a single-family residence and agricultural fields (citrus orchards). To the west are agricultural fields (citrus orchards) and unpaved access roads.

Date: 1959 – Project site is developed with two single-family residences, a storage building, an unpaved access road, and agricultural fields on the western half of the Project site, and depicted as developed with one single-family residence, two farm storage buildings, rectangular buildings, an unpaved access road, and agricultural fields on the eastern half of the Project site. To the north is undeveloped, undulating land (grassland, woodland, dirt) a small building, followed by the Santa Ana Riverbed and watershed. To the south is Palmetto Avenue, followed by agricultural fields (citrus orchards). To the east is Alabama Street, followed by a single-family residence and agricultural fields (citrus orchards). To the west are agricultural fields (citrus orchards) and unpaved access roads.

Date: 1966/1968 –Developed with two single-family residences, a storage building, an unpaved access road, and agricultural fields on the western half of the Project site, and depicted as developed with one single-family residence, two farm storage buildings, four rectangular buildings, an unpaved access road, and agricultural fields on the eastern half of the Project site. To the north is undeveloped, undulating land (grassland, woodland, dirt) to the north, and developed with a wastewater treatment facility to the northwest, followed by the Santa Ana Riverbed and watershed. To the south is Palmetto Avenue, followed by agricultural fields (citrus orchards). To the east is Alabama Street, followed by a single-family residence and agricultural fields (citrus orchards). To the west are agricultural fields (citrus orchards) and unpaved access roads.

Date: 1975/1985 – Developed with two single-family residences, a storage building, an unpaved access road, and agricultural fields on the western half of the Project site, and depicted as developed with one single-family residence, two farm storage buildings, four rectangular buildings, an unpaved access road, and agricultural fields on the eastern half of the Project site. To the north is undeveloped, undulating land (grassland, woodland, dirt), and developed with a wastewater treatment facility to the north and northwest, followed by the Santa Ana Riverbed and watershed. To the south is Palmetto Avenue, followed by agricultural fields (citrus orchards). To the east is Alabama Street, followed by a single-family residence and agricultural fields (citrus orchards). To the west are agricultural fields (citrus orchards) and unpaved access roads.

Date: 1989/1994 – Developed with two single-family residences, a storage building, an unpaved access road, and agricultural fields on the western half of the Project site, and depicted as developed with one single-family residence, two farm storage buildings, four rectangular buildings, an unpaved access road, and agricultural fields on the eastern half of the Project site. To the north is undeveloped, undulating land (grassland, woodland, dirt), and developed with a wastewater treatment facility to the north and northwest, followed by the Santa Ana Riverbed and watershed. To the south is Palmetto Avenue, followed by agricultural fields (citrus orchards). To the east is Alabama Street, followed by a single-family residence and agricultural fields (citrus orchards). To the west are agricultural fields (citrus orchards), a wastewater treatment facility, and unpaved access roads.

Date: 2005 – Developed with two single-family residences, a storage building, an unpaved access road, fallow agricultural fields, and agricultural fields on the western half of the Project site, and depicted as developed with one single-family residence, two farm storage buildings, two rectangular buildings, an unpaved access road, fallow agricultural fields, and agricultural fields on the eastern half of the Project site. To the north is undeveloped, undulating land (grassland, woodland, dirt), and developed with a wastewater treatment facility to the north and northwest, followed by the Santa Ana Riverbed and watershed. To the south is Palmetto Avenue, followed by agricultural fields (citrus orchards). To the east is Alabama Street, followed by a single-family residence and agricultural fields (citrus orchards). To the west are agricultural fields (citrus orchards), a wastewater treatment facility, and unpaved access roads.

Date: 2006 – Developed with two single-family residences, a storage building, an unpaved access road, fallow agricultural fields, and agricultural fields on the western half of the Project site, and depicted as developed with one single-family residence, two farm storage buildings, two rectangular buildings, an unpaved access road, fallow agricultural fields, and agricultural fields on the eastern half of the Project site. To the north is undeveloped, undulating land (grassland, woodland, dirt), and developed with a wastewater treatment facility to the north and northwest, followed by the Santa Ana Riverbed and watershed. To the south is Palmetto Avenue, followed by agricultural fields (citrus orchards). To the east is Alabama Street, followed by a single-family

residence and agricultural fields (citrus orchards). To the west is an industrial building, agricultural fields (citrus orchards), a wastewater treatment facility, and unpaved access roads.

Date: 2009/2010/2012 – Developed with a single-family residence, an unpaved access road, vacant fields, and agricultural fields on the western half of the Project site, and depicted as developed with unpaved access roads, and vacant/fallow agricultural fields on the eastern half of the Project site. To the north is undeveloped, undulating land (grassland, woodland, dirt), and developed with a wastewater treatment facility to the north and northwest, followed by the Santa Ana Riverbed and watershed. To the south is Palmetto Avenue, followed by agricultural fields (citrus orchards). To the east is Alabama Street, followed by an industrial warehouse building, and vacant fields. To the west is an industrial building, agricultural fields (citrus orchards), a wastewater treatment facility, and unpaved access roads.

City Directories

Partner reviewed historical city directories obtained from EDR for past names and businesses that were listed for the Project site and adjacent properties. The findings for the Project site are presented in Table 4.9-2, and the findings for adjacent properties are presented in Table 4.9-3, below.

Table 4.9-2
City Directory Search (Project Site)

Year(s)	Occupant Listed
1975	Address Not Listed (9092 Alabama Street); Address Not Listed (9180 Alabama Street); Elzinga T General Contractor (27050 Palmetto Avenue)
1980	Address Not Listed (9092 Alabama Street); Address Not Listed (9180 Alabama Street); Address Not Listed (27050 Palmetto Avenue)
1985	Lynn Teunissen (9092 Alabama Street); Address Not Listed (9180 Alabama Street); Marshburn SL (27050 Palmetto Avenue)
1992	Don Teunissen, Mario Aguilar (9086-9092 Alabama Street); Address Not Listed (9180 Alabama Street); Kwons Landscaping (27050 Palmetto Avenue)
1995	Don Teunissen, Mario Aguilar (9086-9092 Alabama Street); Address Not Listed (9180 Alabama Street); Kim, L (27050 Palmetto Avenue)
2000	Don Teunissen, Capital Pool & Spa Maintenance (9086-9092 Alabama Street); Address Not Listed (9180 Alabama Street); Address Not Listed (27050 Palmetto Avenue)
2005	Unknown Occupant, Capital Pool & Spa Maintenance (9086-9092 Alabama Street); Address Not Listed (9180 Alabama Street); Kwon Farm, Unknown Occupant (27050 Palmetto Avenue)
2010	Unknown Occupant, Capital Pool & Spa Maintenance (9086-9092 Alabama Street); Address Not Listed (9180 Alabama Street); Address Not Listed (27050 Palmetto Avenue)
2014	Address Not Listed (9086-9092 Alabama Street); Address Not Listed (9180 Alabama Street); Address Not Listed (27050 Palmetto Avenue)
Source: Partner Engineering, 2018.	

According to the city directory review, the Project site has been occupied by Don and Lynn Teunissen, between at least 1985 and 2000. The Don Teunissen tenancy is related to an underground storage tank record discussed in detail below.

Table 4.9-3
City Directory Search (Adjacent Properties)

Year(s)	Occupant Listed
1975	Address Not Listed (1950 Nevada Street); Address Not Listed (27352 Red Bluff Avenue); Address Not Listed (26940 Palmetto Avenue); Address Not Listed (9377 Alabama Avenue)
1980	Address Not Listed (1950 Nevada Street); Address Not Listed (27352 Red Bluff Avenue); Address Not Listed (26940 Palmetto Avenue); Address Not Listed (9377 Alabama Avenue)
1985	Address Not Listed (1950 Nevada Street); Address Not Listed (27352 Red Bluff Avenue); Address Not Listed (26940 Palmetto Avenue); Address Not Listed (9377 Alabama Avenue)
1992	Address Not Listed (1950 Nevada Street); Address Not Listed (27352 Red Bluff Avenue); Address Not Listed (26940 Palmetto Avenue); Address Not Listed (9377 Alabama Avenue)
1995	Address Not Listed (1950 Nevada Street); Address Not Listed (27352 Red Bluff Avenue); Address Not Listed (26940 Palmetto Avenue); Address Not Listed (9377 Alabama Avenue)
2000	Address Not Listed (1950 Nevada Street); Address Not Listed (27352 Red Bluff Avenue); Address Not Listed (26940 Palmetto Avenue); Address Not Listed (9377 Alabama Avenue)
2005	Address Not Listed (1950 Nevada Street); Address Not Listed (27352 Red Bluff Avenue); Address Not Listed (26940 Palmetto Avenue); Address Not Listed (9377 Alabama Avenue)
2010	Address Not Listed (1950 Nevada Street); Address Not Listed (27352 Red Bluff Avenue); Information Process Systems (26940 Palmetto Avenue); Address Not Listed (9377 Alabama Avenue)
2014	Address Not Listed (1950 Nevada Street); Address Not Listed (27352 Red Bluff Avenue); Kenneth Cole Productions/Pacific Connections, Inc. (26940 Palmetto Avenue); Address Not Listed (9377 Alabama Avenue)
Source: Partner Engineering, 2018.	

According to the city directory review, the adjacent properties (26940 Palmetto Avenue) has been occupied by small quantity wastes generators, which are discussed in Section 4.9.4.

Historic Topographic Maps

Partner reviewed historical topographic maps obtained from EDR. The following observations were noted to be depicted on the Project site and adjacent properties during the topographic map review:

Date: 1899/1901 – Developed with a rural single-family residence and access road on the western side of the Project site, and otherwise undeveloped land (grassland, agriculture, dirt). To the north is undeveloped, undulating land (grassland, woodland, dirt) followed by the Santa Ana River channel and watershed. To the south is an early, unpaved version of Palmetto Avenue, followed by otherwise undeveloped land (grassland, agriculture, dirt). To the east is an early, unpaved version of Alabama Street, followed by otherwise undeveloped land (grassland, agriculture, dirt) and an unpaved access road. To the west is developed land (grassland, agriculture, dirt).

Date: 1954 – Developed with a rural single-family residence, access road, and agricultural fields on the western side of the Project site, developed with a rural single-family residence and agricultural fields on the eastern side of the Project site. To the north is undeveloped, undulating land (grassland, woodland, dirt) followed by the Santa Ana River channel and watershed. To the south is Palmetto Avenue, followed by agricultural fields. To the east is Alabama Street, followed

by agricultural fields, a rural residence, and an unpaved access road. To the west is an agricultural field.

Date: 1967/1973 – Developed with one small rural single-family residence, access road, and agricultural fields on the western side of the Project site, developed with three small rural buildings (residence, barn, storage) and agricultural fields on the eastern side of the Project site. To the north is undeveloped, undulating land (grassland, woodland, dirt), and a Sewage Disposal treatment facility, followed by the Santa Ana River channel and watershed. To the south is Palmetto Avenue, followed by agricultural fields. To the east is Alabama Street, followed by agricultural fields, a rural residence, and an unpaved access road. To the west is an agricultural field.

Date: 1980/1988/1996 – Developed with two small rural buildings (residence, storage), an access road, and agricultural fields on the western side of the Project site, developed with three small rural buildings (residence, barn, storage), two rectangular buildings, and agricultural fields on the eastern side of the Project site. To the north is undeveloped, undulating land (grassland, woodland, dirt), and a Sewage Disposal treatment facility, followed by the Santa Ana River channel and watershed. To the south is Palmetto Avenue, followed by agricultural fields. To the east is Alabama Street, followed by agricultural fields, a rural residence, and an unpaved access road. To the west is an agricultural field.

Date: 2012 – The Project site has no structures and agricultural fields on the western side of the Project site and developed with agricultural fields on the eastern side of the Project site. To the north is undulating land without structures, followed by the Santa Ana River channel and watershed. To the south is Palmetto Avenue, followed by land without structures and agricultural fields. To the east is Alabama Street, followed by land without structures and agricultural fields. To the west is an agricultural field.

Fire Insurance Maps

Partner reviewed a Certified Sanborn Map Report that was prepared by EDR. According to the report, the Project site and the nearby area are "unmapped" with no fire insurance maps available.

Project Site Reconnaissance

A site reconnaissance was performed by Burke Walker of Partner on December 6, 2017. The weather at the time of the site visit was sunny and clear. Environmental concerns were identified during the onsite reconnaissance related to former storage, use, and generation of hazardous substances, current signs of a release, and indications of illegal dumping as further discussed below.

Solid Waste Disposal

Solid waste generated at the Project site appears to be disposed by on-site dispersal and/or off-site transfer. Commercial trash containers, dumpsters or receptacles are not present on the Project site. Partner observed the following waste-like materials on the Project site: construction materials (concrete, brick, stucco, plaster, wood, etc.), furniture, used automobile tires, paper, plastics, cardboard, green wastes (tree and shrub trimmings), an abandoned RV trailer, concrete irrigation piping, and other miscellaneous solid wastes. No indications of a hazardous substance or petroleum product type release was observed in the vicinity of the waste-like materials.

Sewage Discharge and Disposal

Regional sanitary discharges on the Project site are directed into the municipal sanitary sewer system. The County of San Bernardino/Redlands services the surrounding vicinity. No wastewater treatment facilities or septic systems are observed or reported on the Project site. However, due to the historic development of single-family residences and farming storage buildings on-site between 1900 and 2005, abandoned septic systems and cesspools may be present in the subsurface of the Project site. The former residences were developed prior to the development of a municipal sewer system in the region and residences would have likely been equipped with septic systems. On-site sewer/drainage man-hole covers were observed in the north, central-northeastern portion of the Project site, and are assumed to be associated with a municipal sewer system.

Surface Water Drainage

Storm water is removed from the Project site primarily by sheet flow action across the base soils and impervious surfaces towards storm water drains located onsite and within the public right of way. The Project site does not appear to be a designated wetland area, based on information obtained from the United States Fish & Wildlife Service. No surface impoundments, natural catch basins, settling ponds, or lagoons are located on the Project site. No drywells were identified on the Project site.

Source Heating and Cooling

No heating and cooling systems or domestic hot water equipment were located onsite. Regional power sources/utility providers include electricity and natural gas provided by Southern California Edison (SCE) and Southern California Gas Company (SCGC).

Wells and Cisterns

Aboveground evidence of groundwater wells was observed during the site reconnaissance. An agricultural water supply piping system, on a concrete pad was observed in the southwestern portion of the property. These water supply pipes appeared to be connected to a water main-line system. This wellhead appeared to be used to irrigate the small farming operation located on the southwestern portion of the Project site (now discontinued). An additional groundwater monitoring well may be located on-site, in the northeastern most portion of the Project site. A steel well-head like structure was noted in this undulating area and was surrounded by steel bollards. All steel was painted safety yellow for visibility in this vegetated area. The City of Redlands was unaware of a groundwater monitoring well in this area, however, a California Environmental Protection Agency (CalEPA) Regional Water Quality Control Board (RWQCB) record of a monitoring well is depicted in the region. The RWQCB well may be associated with a subsurface investigation of the California Street Landfill, which is to the west of the Project site. The California Street Landfill is not considered to represent a significant environmental concern.

Wastewater

Domestic wastewater is not generated at the Project site. No industrial process is currently performed at the Project site.

Septic Systems

No septic systems were observed or reported on the Project site. The Project site was formerly developed with older residential structures which were demolished during 2005 to 2006. No reasonably ascertainable records relative to the disposition of the likely septic systems – beyond that the former structures were razed – was available during the course of this assessment.

Potential Environmental Hazards

Hazardous Substances and Petroleum Products Used or Stored at the Site

No evidence of the use of reportable quantities of hazardous substances or the use of petroleum products was observed on the Project site.

Aboveground and Underground Hazardous Substance or Petroleum Product Storage Tanks (ASTs/USTs)

No evidence of current or former ASTs or USTs was observed during the site reconnaissance.

Evidence of Releases

No spills, stains or other indications that a surficial release has occurred at the Project site were observed.

Polychlorinated Biphenyls (PCBs)

Older transformers and other electrical equipment could contain PCBs at a level that subjects them to regulation by the U.S. Environmental Protection Agency (EPA). PCBs in electrical equipment are controlled by federal regulations 40 CFR, Part 761. Under the regulations, there are three categories into which electrical equipment can be classified: 1) Less than 50 parts per million (ppm) of PCBs – "*Non-PCB;"* 2) 50 ppm to 500 ppm – "*PCB-Contaminated;"* and, 3) Greater than 500 ppm – "*PCB-Containing."* The manufacture, process, or distribution in commerce or use of any PCB in any manner other than in a totally enclosed manner was prohibited after January 1, 1977.

The on-site reconnaissance addressed indoor and outdoor transformers that may contain PCBs. Three pole-mounted utility-owned electrical transformers were observed on the Project site. The transformers are not labeled indicating PCB content. No staining or leakage was observed in the vicinity of the transformers. Partner contacted a customer service representative of Southern California Edison (SCE), who confirmed that Southern California Edison (SCE) maintains ownership and operational responsibility for the transformers and that the units do not contain PCBs. Based on the good condition of the equipment, the transformers are not expected to represent a significant environmental concern. Additionally, no other potential PCB-containing equipment (interior transformers, oil-filled switches, hoists, lifts, dock levelers, hydraulic elevators, balers, etc.) was observed on the Project site during Partner's reconnaissance.

Strong, Pungent, or Noxious Odors

No strong, pungent or noxious odors were evident during the site reconnaissance.

Pools of Liquid

No pools of liquid were observed on the Project site during the site reconnaissance.

Drains, Sumps, and Clarifiers

No drains, sumps, or clarifiers, other than those associated with storm water removal, were observed on the Project site during the site reconnaissance.

Pits, Ponds, and Lagoons

No pits, ponds or lagoons were observed on the Project site.

Stressed Vegetation

No stressed vegetation was observed on the Project site.

Non-ASTM Services

Asbestos-Containing Materials (ACMs)

Asbestos is the name given to a number of naturally occurring, fibrous silicate minerals mined for their useful properties such as thermal insulation, chemical and thermal stability, and high tensile strength. The Occupational Safety and Health Administration (OSHA) regulation 29 CFR Section 1926.1101 requires certain construction materials to be *presumed* to contain asbestos, for purposes of this regulation. All thermal system insulation (TSI), surfacing material, and asphalt/vinyl flooring that are present in a building constructed prior to 1981 and have not been appropriately tested are “presumed asbestos-containing material” (PACM).

The former Project site buildings were demolished prior to 2006. However, Partner conducted a limited, visual evaluation of accessible areas for the presence of suspect ACMs at the Project site. The objective of this visual survey was to note the presence and condition of suspect ACM observed. Partner observed several areas of the property that include aboveground and below ground irrigation piping that was used during the former citrus orchard operations. Orchard operations ceased in 2003 and the irrigation system is no longer in use and inactive. Where observed, the piping appears to be constructed of a hardened cementitious material that is similar to the known asbestos-containing material Transite, which contains variable amounts of the asbestos mineral Chrysotile typically between 10 to 50 percent. Between the 1930s and 1970s, Transite was commonly used for water distribution piping, duct flues, corrugated roof/siding panels, cement board, house siding shingles, etc. Partner observed piping that was both damaged and undamaged. In undamaged condition Transite is considered to be a nonfriable ACM; however, when damaged, there is a significant potential for an airborne fiber release when handled. Removal of these materials would subject to the applicable federal, state and local asbestos abatement regulations and procedures. No other suspect ACM was observed.

The limited visual survey consisted of noting observable materials (materials which were readily accessible and visible during the course of the site reconnaissance) that are commonly known to potentially contain asbestos. This activity was not designed to discover all sources of suspect ACM, PACM, or asbestos at the site; or to comply with any regulations and/or laws relative to planned disturbance of building materials such as renovation or demolition, or any other regulatory purpose. Rather, it is intended to give the User an indication if significant (significant

due to quantity, accessibility, or condition) potential sources of ACM or PACM are present at the Project site. Additional sampling, assessment, and evaluation will be warranted for any other use. Partner was not provided building plans or specifications for review, which may have been useful in determining areas likely to have used ACM.

Lead-Based Paint (LBP)

Lead is a highly toxic metal that affects virtually every system of the body. LBP is defined as any paint, varnish, stain, or other applied coating that has one microgram per cubic centimeter ($\mu g/cm^3 \mu^3$), 5,000 micrograms per gram (µg/g), or 0.5% by weight or more of lead. Congress passed the Residential Lead- Based Paint Hazard Reduction Act of 1992, also known as "Title X," to protect families from exposure to lead from paint, dust, and soil. Under Section 1017 of Title X, intact LBP on most walls and ceilings is not considered a "hazard," although the condition of the paint should be monitored and maintained to ensure that it does not become deteriorated. Further, Section 1018 of this law directed the Housing and Urban Development (HUD) and the U.S. EPA to require the disclosure of known information on LBP and LBP hazards before the sale or lease of most housing built before 1978. There are no permanent residential structures on the Project site. As such, a lead-based paint evaluation was beyond the scope and purpose of the Phase I ESA.

Radon

Radon is a colorless, odorless, naturally occurring, radioactive, inert, gaseous element formed by radioactive decay of radium (Ra) atoms. The U.S. EPA has prepared a map to assist National, State, and local organizations to target their resources and to implement radon-resistant building codes. The map divides the country into three Radon Zones, as shown in Table 4.9-4, below.

Table 4.9-4
EPA Radon Zones

EPA Zone	Average Predicted Radon Levels	Potential
Zone 1	Exceed 4.0 pCi/L	Highest
Zone 2	Between 2.0 and 4.0 pCi/L	Moderate
Zone 3	Less than 2.0 pCi/L	Low
Source: Partner Engineering, 2018.		

It is important to note that the U.S. EPA has found homes with elevated levels of radon in all three zones, and the U.S. EPA recommends site-specific testing in order to determine radon levels at a specific location. However, the map does give a valuable indication of the propensity of radon gas accumulation in structures. Radon sampling was not conducted as part of this assessment. Review of the "EPA Map of Radon Zones" places the Project site in Zone 2. Based upon the non-residential use and radon zone classification, radon is not considered to be a significant environmental concern.

Lead in Drinking Water

According to available information, a public water system operated by Division V of the SBVMWD serves the Project site vicinity. According to a representative of the SBVMWD, shallow groundwater beneath the Project site is not utilized for domestic purposes. The SBVMWD primary source of water is from the SWP through the East Branch of the State Aqueduct via Lake Silverwood. The SBVMWD and Western Municipal Water District have filed water right applications with the State Water Resources Control Board to obtain authorization to divert water

from the Santa Ana River. According to the SBVMWD and the 2016 Annual Water Quality Report, water supplied to the Project site is in compliance with all State and Federal regulations pertaining to drinking water standards, including lead and copper. Water sampling was not conducted to verify water quality.

Mold

Molds are microscopic organisms found virtually everywhere, indoors and outdoors. Mold will grow and multiply under the right conditions, needing only sufficient moisture (e.g. in the form of very high humidity, condensation, or water from a leaking pipe, etc.) and organic material (e.g., ceiling tile, drywall, paper, or natural fiber carpet padding). There are no permanent structures on the Project site. As such, a water intrusion and mold evaluation was beyond the scope and purpose of the Phase I ESA.

4.9.2 – REGULATORY FRAMEWORK

Hazardous materials and wastes can pose a significant actual or potential hazard to human health and the environment when improperly treated, stored, transported, disposed of, or otherwise managed. Many federal, state, regional, and local programs that regulate the use, storage, and transportation of hazardous materials and hazardous waste are in place to prevent these unwanted consequences. These regulatory programs are designed to reduce the danger that hazardous substances may pose to people and businesses under normal daily circumstances and as a result of emergencies and disasters.

Federal

Resource Conservation and Recovery Act (RCRA) of 1976, as Amended by the Hazardous and Solid Waste Amendments of 1984

Federal hazardous waste laws are generally promulgated under RCRA. These laws provide for the “cradle to grave” regulation of hazardous wastes. Any business, institution, or other entity that generates hazardous waste is required to identify and track its hazardous waste from the point of generation until it is recycled, reused, or disposed. The California Department of Toxic Substances Control (DTSC) is responsible for implementing the RCRA program as well as California’s own hazardous waste laws, which are collectively known as the Hazardous Waste Control Law. Under the Certified Unified Program Agency (CUPA) program, the California Environmental Protection Agency has delegated enforcement authority to San Bernardino County for state law regulating hazardous waste producers or generators.

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and the Superfund Amendments and Reauthorization Act (SARA) of 1986

Congress enacted CERCLA, commonly known as Superfund, on December 11, 1980. CERCLA established prohibitions and requirements concerning closed and abandoned hazardous waste sites; provided for liability of persons responsible for releases of hazardous waste at these sites; and established a trust fund to provide for cleanup when no responsible party could be identified. SARA amended the CERCLA on October 17, 1986. SARA stressed the importance of permanent remedies and innovative treatment technologies in cleaning up hazardous waste sites; required Superfund actions to consider the standards and requirements found in other state and federal environmental laws and regulations; provided new enforcement authorities and settlement tools; increased state involvement in every phase of the Superfund program; increased the focus on

human health problems posed by hazardous waste sites; encouraged greater citizen participation in making decisions on how sites should be cleaned up; and increased the size of the trust fund to $8.5 billion.

Emergency Planning Community Right-to-Know Act (EPCRA)

The EPCRA, also known as SARA Title III, was enacted in October 1986. This law requires any infrastructure at the state and local levels to plan for chemical emergencies. Reported information is then made publicly available so that interested parties may become informed about potentially dangerous chemicals in their community. EPCRA Sections 301 through 312 are administered by the U.S. EPA's Office of Emergency Management. The EPA's Office of Information Analysis and Access implements the EPCRA Section 313 program. In California, SARA Title III is implemented through the California Accidental Release Prevention Program.

Hazardous Materials Transportation Act

The United States Department of Transportation regulates hazardous materials transportation under Title 49 (Transportation) of the Code of Federal Regulations, which reflects laws passed by Congress as of January 2, 2006. State agencies that have primary responsibility for enforcing federal and state regulations and responding to hazardous materials transportation emergencies are the California Highway Patrol and the California Department of Transportation. These agencies also govern permitting for hazardous materials transportation.

Federal Response Plan

The Federal Response Plan of 1999 is a signed agreement among 27 federal departments and agencies, including the American Red Cross, that: 1) provides the mechanism for coordinating delivery of federal assistance and resources to augment efforts of state and local governments overwhelmed by a major disaster or emergency; 2) supports implementation of the Robert T. Stafford Disaster Relief and Emergency Act as well as individual agency statutory authorities; and 3) supplements other federal emergency operations plans developed to address specific hazards. The Federal Response Plan is implemented in anticipation of a significant event likely to result in a need for federal assistance or in response to an actual event requiring federal assistance under a Presidential declaration of a major disaster or emergency.

State

California Health and Safety Code and Code of Regulations

California Health and Safety Code Chapter 6.95 (Hazardous Materials Release Response Plans and Inventory) and California Code of Regulations, Title 19, Section 2729, set out the minimum requirements for business emergency plans and chemical inventory reporting. These regulations require businesses to provide emergency response plans and procedures; training program information; and a hazardous material chemical inventory disclosing hazardous materials stored, used, or handled onsite. A business that uses hazardous materials or a mixture containing hazardous materials in certain quantities must establish and implement a business plan.

California Building Code

The State of California provides a minimum standard for building design through the California Building Code (CBC), which is in Title 24, Part 2, of the California Code of Regulations. The most

recent (20166 CBC is based on the 2015 International Building Code, but has been modified for California conditions. It is generally adopted on a jurisdiction-by-jurisdiction basis, subject to further modification based on local conditions. Commercial and residential building plans are checked by local city and county building officials for compliance with the CBC. Typical fire safety requirements of the CBC include: the installation of sprinklers in all high-rise buildings; the establishment of fire resistance standards for fire doors, building materials, and particular types of construction; and the clearance of debris and vegetation within a prescribed distance from occupied structures in wildlife hazard areas.

California Fire Code

The California Code of Regulations, Title 24, also known as the California Building Standards Code, contains the California Fire Code, included as Part 9 of that title. Updated every three years, the fire code includes provisions and standards for emergency planning and preparedness, fire service features, fire protection systems, hazardous materials, fire flow requirements, and fire hydrant locations and distribution.

Asbestos-Containing Material (ACM) Regulations

State-level agencies, in conjunction with the EPA and California Occupational Safety and Health Administration, regulate removal, abatement, and transport procedures for ACMs. Releases of asbestos from industrial, demolition, or construction activities are prohibited by these regulations, and medical evaluation and monitoring are required for employees performing activities that could expose them to asbestos. Additionally, the regulations include warnings that must be heeded and practices that must be followed to reduce the risk for asbestos emissions and exposure. For example, Title 8 of the California Code of Regulations, Section 1529 (Asbestos), provides for exposure limits, exposure monitoring, respiratory protection, and good working practices by workers exposed to asbestos. Finally, federal, state, and local agencies must be notified prior to the onset of demolition or construction activities with the potential to release asbestos.

Polychlorinated Biphenyls (PCBs)

The EPA prohibited the use of PCBs in the majority of new electrical equipment starting in 1979, and initiated a phase-out for much of the existing PCB-containing equipment. The inclusion and handling of PCBs in electrical equipment are regulated by the provisions of the Toxic Substances Control Act (15 U.S.C. §§ 2601 *et seq.*). Relevant regulations include labeling and periodic inspection requirements for certain types of PCB-containing equipment and outline highly specific safety procedures for their disposal. The state likewise regulates PCB-laden electrical equipment and materials contaminated above a certain threshold as hazardous waste; these regulations require that such materials be treated, transported, and disposed accordingly. At lower concentrations for nonliquids, regional water quality control boards may exercise discretion over the classification of such wastes.

Lead-Based Paint

The California Occupational Safety and Health Administration's Lead in Construction Standard is in Title 8, Section 1532.1 (Lead) of the California Code of Regulations. The regulations address all of the following areas: permissible exposure limits; exposure assessment; compliance methods; respiratory protection; protective clothing and equipment; housekeeping; medical surveillance; medical removal protection; employee information, training, and certification; signage; record keeping; monitoring; and agency notification.

Local

South Coast Air Quality Management District Rule 1403

South Coast Air Quality Management District Rule 1403 governs the demolition of buildings containing asbestos materials. Rule 1403 specifies work practices with the goal of minimizing asbestos emissions during building demolition and renovation activities, including the removal and associated disturbance of ACM. The requirements for demolition and renovation activities include asbestos surveying, notification, ACM removal procedures and time schedules, ACM handling and cleanup procedures, storage, and disposal requirements for asbestos-containing waste materials. If ACMs are identified, Rule 1403 requires that they be safely removed and disposed of, if possible. If it is not possible to safely remove ACMs, Rule 1403 requires that safe procedures be used to demolish the building with asbestos in place without resulting in a significant release of asbestos.

San Bernardino County Fire Department (SBCFD): Certified Unified Program Agency (CUPA)

The SBCFD's Hazardous Materials Division is the CUPA for the County of San Bernardino, which focuses the management of specific environmental programs at the local government level. The CUPA is charged with the responsibility of conducting compliance inspections for over 7,000 regulated facilities in San Bernardino County that handle hazardous material, generate or treat hazardous waste, and/or operate an underground storage tank. The CUPA provides a comprehensive environmental management approach to resolve environmental issues. This balanced approach utilizes education and effective enforcement procedures to minimize the potential risk to human health and the environment and establish an atmosphere to promote fair business practices.

As CUPA, SBCFD manages six hazardous material and hazardous waste programs, described below. The CUPA program is designed to consolidate, coordinate, and uniformly and consistently administer permits, inspection activities, and enforcement activities throughout San Bernardino County (with the exception of the city of Victorville). This approach strives to reduce overlapping and sometimes conflicting requirements of different governmental agencies independently managing these programs.

Hazardous Materials Release Response Plans and Inventory (Business Plan). This CUPA program provides information to emergency responders and the general public regarding hazardous materials at certain facilities, and coordinates reporting of releases and spill response among businesses and local, state, and federal government authorities. Businesses are required to disclose all hazardous materials and wastes above certain quantities that are used, stored, or handled at their facility. They are also required to train their employees to safely handle chemicals and to take appropriate emergency response actions. Inspections are conducted periodically to verify the inventory and other information on the business emergency/contingency plan.

California Accidental Release Prevention Program. This program aims to reduce risks involving regulated substances through the evaluation of hazards and consequences and the development of risk management plans and prevention programs. The program requires certain facilities (referred to as "stationary sources") that handle specified chemicals (termed "regulated substances") to take specified actions to prevent and prepare for chemical accidents.

Underground Storage Tank Program. The Hazardous Materials Division oversees the Underground Storage Tank (UST) Program throughout San Bernardino County, with the exception of the city of Victorville. The purpose of this program is to ensure that hazardous substances are not released into the groundwater and/or the environment from UST systems. Specialists annually inspect tank system components, associated monitoring equipment, and inventory records to ensure that the UST systems comply with applicable laws and regulations.

Aboveground Petroleum Storage Act /Spill Prevention, Control, and Countermeasure Plan. Facilities that have cumulative aboveground storage capacities of petroleum products at or exceeding 1,320 gallons are subject to the Aboveground Petroleum Storage Act. Facilities that are subject to this act must prepare a Spill Prevention, Control, and Countermeasure Plan. Facilities handling petroleum or any other hazardous material require a business emergency/contingency plan. Both petroleum and nonpetroleum aboveground storage tanks are subject to the fire code requirements of the authority having fire code jurisdiction.

Hazardous Waste Generation and Onsite Treatment. The Hazardous Waste Inspection Program works to ensure that all hazardous wastes generated by San Bernardino County facilities are properly managed. Specialists in this program inspect facilities that generate hazardous waste, investigate complaints of unlawful hazardous waste disposal, and participate in public education. These programs are designed to provide information about laws and regulations relating to safe management of hazardous waste.

Hazardous Materials Management Plans (HMMPs) and Hazardous Materials Inventory Statements (HMISs). The Uniform Fire Code has a provision for the local fire agency to collect information regarding hazardous materials at facilities for purposes of fire code implementation. A fire chief may require additional information to a Business Plan to meet the California Fire Code HMMP/HMIS requirements.

4.9.3 – SIGNIFICANCE THRESHOLDS

Per the CEQA Guidelines, implementation of the Project would have a significant impact related to hazards and hazardous materials if it would:

a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials;
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment;
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school;
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment;
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area;
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan; or

g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires.

4.9.4 – IMPACTS AND MITIGATION MEASURES

This section describes potential impacts related to the routine transport, use, or disposal of hazardous materials, reasonably foreseeable upset or accident conditions involving the release of hazardous materials, emissions or handling of hazardous materials in close proximity to schools, hazardous materials sites, safety hazards or excessive noise from airport operations, and exposure of people or structures to wildfires, which could result from the implementation of the project and recommends mitigation measures as needed to reduce significant impacts.

Transport, Use, and Disposal Hazards

Impact HAZMAT-1 – Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

Analysis of Impacts

A Project could result in a significant hazard to the public if the Project includes the routine transport, use, or disposal of hazardous materials or places housing near a facility which routinely transports, uses, or disposes of hazardous materials. The Project is located within an area of the County that is primarily characterized by industrial development with some commercial uses and vacant land interspersed between industrial developments. The Project does not include a housing component and would therefore not place housing near any hazardous materials facilities. The routine use, transport, or disposal of hazardous materials is primarily associated with industrial uses that require such materials for manufacturing operations or produce hazardous wastes as by-products of production applications. The Project includes the operation of a warehouse and logistics center intended for regional distribution operations. The Project does not propose or facilitate any activity involving significant use, routine transport, or disposal of hazardous substances as part of operation.

During construction, there would be a minor level of transport, use, and disposal of hazardous materials and wastes that are typical of construction projects. This would include fuels and lubricants for construction machinery, coating materials, etc. Routine construction control measures and best management practices in compliance with state and federal regulations for hazardous materials storage, application, waste disposal, accident prevention and clean-up, etc. would be sufficient to reduce potential impacts to a less than significant level.

With regard to project operation, widely used hazardous materials common at warehousing uses such as the Project include paints and other solvents, cleaners, and pesticides utilized during normal upkeep of the Project. The remnants of these and other products are disposed of as household hazardous waste that are prohibited or discouraged from being disposed of at local landfills. Regular operation and cleaning of the warehouse and logistics center use would not result in significant impacts involving the use, storage, transport or disposal of hazardous wastes and substances. Use of common household hazardous materials and their disposal does not present a substantial health risk to the community. Impacts associated with the routine transport and use of hazardous materials or wastes would be less than significant.

Level of Significance Before Mitigation

Less than significant.

Mitigation Measures

No mitigation required.

Hazardous Materials

Impact HAZMAT-2 – Would the project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

Analysis of Impacts

Construction of the Project will require the use and transport of hazardous materials such as asphalt, paints, and other solvents. Construction activities could also produce hazardous wastes associated with the use of such products. Construction of the Project requires ordinary construction activities and will not require a substantial or uncommon amount of hazardous materials to complete.

As discussed above, a site reconnaissance was performed and a Phase I ESA was produced for the Project site. An assessment of the existing site conditions was made, and a statement of conclusions was made along with recommendations.

Findings

A *recognized environmental condition* (*REC*) refers to the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property: due to release to the environment; under conditions indicative of a release to the environment; or under conditions that pose a material threat of a future release to the environment. The following was identified during the course of the site assessment:

- Partner did not identify any recognized environmental conditions during the course of the site assessment.

A *controlled recognized environmental condition* (*CREC*) refers to a REC resulting from a past release of hazardous substances or petroleum products that has been addressed to the satisfaction of the applicable regulatory authority, with hazardous substances or petroleum products allowed to remain in place subject to the implementation of required controls. The following was identified during the course of the site assessment:

- Partner did not identify any controlled recognized environmental conditions during the course of the site assessment.

A *historical recognized environmental condition* (*HREC*) refers to a past release of any hazardous substances or petroleum products that has occurred in connection with the property and has been addressed to the satisfaction of the applicable regulatory authority or meeting unrestricted use criteria established by a regulatory authority, without subjecting the property to any required controls. The following was identified during the course of the site assessment:

- Partner did not identify any historical recognized environmental conditions during the course of the site assessment.

An *environmental issue* refers to environmental concerns identified by Partner, which do not qualify as RECs; however, warrant further discussion. The following was identified during the course of the site assessment:

According to Partner's review of regulatory database records and online environmental regulatory agency records, the Project site, known as AG-Tuenissen Farming at 9092 Alabama Street, is identified as a state-registered and county permitted underground storage tank (UST) facility (Facility Number 88015440). No information regarding the number, size, construction, contents, location, and operational history of any USTs at the Project site is in the database records. However, according to information included in a previous 2010 environmental site assessment that referenced an older 2006 assessment report, the northeastern side of the property included a residence/agricultural building that operated one diesel fuel UST that was reportedly closed and removed in 2001. As a result, the SBCFD Hazardous Materials Division issued a letter of No Further Action (NFA) on March 16, 2001. The issuance of a NFA letter indicates that no further subsurface investigations, remedial cleanup or other actions are required. No spills or releases from the UST are identified. Copies of the UST closure documentation and the NFA letter were not included in the appendices of the 2010 report. In addition, Partner has submitted requests using the California Public Records Act to the County for fire and building permit records; however, to date, no response has been provided with any records received for review. Nonetheless, all available evidence indicates that the tank was closed and removed with regulatory oversight with no releases reported. As such, the former UST is not considered to represent a significant environmental concern and no further actions appear to be warranted. Impacts related to this environmental issue will be less than significant.

The former Project site buildings were demolished prior to 2006. However, Partner conducted a limited, visual evaluation of accessible areas for the presence of suspect ACMs at the Project site. The objective of this visual survey was to note the presence and condition of suspect ACM observed. Partner observed several areas of the property that include aboveground and below ground irrigation piping that was used during the former citrus orchard operations. Orchard operations ceased in 2003 and the irrigation system is no longer in use and inactive. Where observed, the piping appears to be constructed of a hard, cementitious material that is similar to the known asbestos-containing material "transite", which can contain variable amounts of the asbestos mineral and be a "regulated" ACM. Between the 1930s and 1970s, transite was commonly used for water distribution piping, duct flues, corrugated roof/siding panels, cement board, house siding shingles, etc. Partner observed piping that was both damaged and in good condition. Transite material in good condition is considered to be a nonfriable ACM; however, when damaged, there is a potential for an airborne fiber release when handled. Removal of these materials would subject to the applicable federal, state and local asbestos abatement regulations and procedures. No other suspect ACM was observed. Because removal of ACM is guided by federal, state and local regulations, impacts will be less than significant.

During the site reconnaissance, Partner observed various trash and debris including construction materials (concrete, brick, stucco, plaster, wood, etc.), discarded furniture, automobile tires, household trash and an abandoned recreational trailer in several areas of the Project site. No evidence of landfilling was observed. Where observable, no evidence of chemical or oil staining or impacts were identified. The waste materials observed are not considered to represent a significant environmental concern at this time; however, these materials should be removed and

properly disposed prior and/or during the proposed redevelopment activities. Removal of solid waste is guided by federal, state and local regulations; therefore, impacts will be less than significant.

Partner conducted a Phase II Subsurface Investigation at the Project site to investigate the potential impact of volatile organic compounds (VOCs), Organochlorine Pesticides (OCPs), and/or arsenic to soil as a consequence of a release or releases from the former on-site agricultural and service/repair activities. The scope of the Phase II Subsurface Investigation included 11 soil borings and 26 shallow soil samples. Eleven (11) soil samples were analyzed for VOCs, 18 composite soil samples were analyzed for OCPs, and 18 discrete soil samples were analyzed for arsenic. Subsurface lithology encountered in the upper five feet bgs consisted of silty sand. Groundwater was not encountered during this investigation. Soil samples did not contain detectable concentrations of OCPs in excess of applicable Regional Screening Levels (RSLs). Arsenic and VOCs were not detected in the analyzed soil samples at concentrations exceeding laboratory Practical Quantitation Limit (PQL)s and the PQLs were below applicable regulatory guidelines. Based on the Subsurface Investigation, there is evidence of a *de minimis* release of hazardous materials from the Project site which does not represent a concern to human health or the environment at this time. Partner recommended no further investigation with respect to the former on-site agricultural and service/repair activities. Impacts will be less than significant.

Level of Significance Before Mitigation

Less than significant.

Mitigation Measures

No mitigation required.

Emit Hazardous Emissions

Impact HAZMAT-3 – Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

Analysis of Impacts

The nearest school to the site is the Packinghouse Christian Academy, located approximately 0.5 miles to the south of the project site. Operation of the Project will not generate any hazardous emissions. Storage, handling, production or disposal of acutely hazardous materials associated with future operation of the warehouse and logistics center would be subject to existing regulations. Impacts would be less than significant with implementation of existing regulations.

Level of Significance Before Mitigation

Less than significant.

Mitigation Measures

No mitigation required.

Hazardous Material Sites

Impact HAZMAT-4 – Would the project be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

Analysis of Impacts

The presence of site contamination was evaluated for the Project site and surrounding properties through evaluation of Government Code Section 65962.5, and the results are discussed herein.

CalEPA maintains a record, known as the State *Cortese List*, which is a compilation of various sites throughout the state that have been compromised due to soil or groundwater contamination from past uses. Based upon review of the Cortese List, the Project site is not listed as a hazardous waste and substance site by the DTSC, listed as a hazardous solid waste disposal site by the State Water Resources Control Board (SWRCB), currently subject to a Cease and Desist Order (CDO) or a Cleanup and Abatement Order (CAO) as issued by the SWRCB, or developed with a hazardous waste facility subject to corrective action by the DTSC. Moreover, as discussed in Impact HAZMAT-2, there are no leaking underground storage tank (LUST) sites on or within close proximity to the Project, as listed by the SWRCB. The Phase I ESA identified a state-registered and county permitted underground storage tank (UST) facility (Facility Number 88015440). The tank was closed and removed with regulatory oversight with no releases reported. As such, the former UST is not considered to represent a significant environmental concern and no further actions appear to be warranted. Impacts related to this environmental issue will be less than significant.

No other site contamination that would be considered a hazardous material has been identified at the Project site. Therefore, impacts would be less than significant.

Level of Significance Before Mitigation

Less than significant.

Mitigation Measures

No mitigation required.

Airports

Impact HAZMAT-5 – For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?

Analysis of Impacts

The Project is located approximately 0.6 miles from San Bernardino International Airport (the former Norton Air Force Base). The airport is used minimally for cargo planes, the fire department, and small private planes; however, passenger flights are expected to increase in coming years. The Project is located within the Airport Safety Overlay for the airport, as defined in Section 82.09.030 (Airport Safety Review Areas), in the San Bernardino County Development Code

(SBDC). The Project site is located in Airport Safety Review Area (AR3). AR3 includes one of the following areas, as applicable:

1) **Public Use Airport with Adopted Noise Contours.** For a public use airport with adopted noise contours, AR3 includes the area within one mile outside the 65 Ldn noise contour, encompassing the boundaries prescribed in Federal Aviation Regulations (FAR) Part 77 that depict imaginary surfaces for "objects affecting navigable airspace," as applicable to the specific FAA-approved Airport Layout and Approach Plan. The imaginary surfaces are as follows:

    A. **Approach Surface.** Extending outward and upward from the end of the primary runway surface along a slope of 20 to 1 and extending for a horizontal distance of 5,000 feet. (Slope and distances increase depending on precise approach existing or planned for the particular runway.)
    B. **Horizontal Surface.** A horizontal plane 150 feet above the established airport elevation. The perimeter is constructed by swinging arcs of 5,000 feet (10,000 feet for runways other than utility or visual) radii from the center of each of the primary runway surfaces (i.e., beginning points of Safety Review Area I) and connecting the adjacent arcs by lines tangent to the arcs.
    C. **Conical Surface.** A surface extending outward and upward from the periphery of the horizontal surface at a slope of 20 to 1 (20:1) for a horizontal distance of 4,000 feet. (Distances increase for military airports.)

2) **Public Use Airport Without Adopted Noise Contours.** For a public use airport without adopted noise contours (e.g. 65 Ldn), AR3 includes the area within one mile of the other boundaries of the airport ownership.
3) **Heliports.** The area outside the 65 Ldn noise contour for a heliport but within one-half mile of the line.

The SBIA is a public use airport with adopted noise contours. The Project site is located outside the 65Ldn noise contour for SBIA. The Project will not encroach on any imaginary surfaces of the airport. The Project will be developed in compliance with Section 82.09.060 (Development Standards) of the SBDC; therefore, the Project will not expose persons residing or working in the Project area to excessive airport safety hazards. Per Section 82.09.060(a), the Project represents an allowable land use consistent with the General Plan. Consistent with, Section 82.09.060(b), the Project will not exceed the allowable height limits established in FAR Part 77, and all mitigation measures recommended by FAA shall be incorporated into the Project Conditions of Approval. Pursuant to Section 82.09.060(c), the Project will not interfere with aircraft operations because the proposed warehouse structure will not reflect glare, emit electronic interference, produce smoke, or store or dispense hazardous materials in such a manner that would endanger aircraft operations or public safety in the event of an aircraft accident. The Project site will experience maximum interior noise levels that are less than the allowable 55 dBA for commercial and industrial uses, as required under Section 82.09.060(e). As required in Section 82.09.060(f) of the SBDC, an Avigation Easement shall be granted to SBIA before the issuance of a building permit. A copy of the easement shall be forwarded to the County and the affected airport. Finally, pursuant to Section 82.09.060(g), the property owner shall notify all renters, lessees or buyers information that the site is subject to aircraft overflight from the airport, is subject to potential noise problems associated with aircraft operations, and is subject to an Avigation Easement. The information shall be provided before completion of final rental, lease or sale, and shall be incorporated into the Covenants, Conditions, and Restrictions (CC&Rs) recorded with the

property and in all lease and rental agreements. Therefore, with adherence to established regulations and standards less than significant impacts will occur.

Level of Significance Before Mitigation

Less than significant.

Mitigation Measures

No mitigation required.

Adopted Response and/or Evacuation Plans

Impact HAZMAT-6 – Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

Analysis of Impacts

The Project is not expected to significantly increase employment in the area. The development of a warehouse and logistics center will not present a significant impact to the evacuation plans for the County of San Bernardino or the City of Redlands. The Project site is located on the northwest corner of Alabama Street and Palmetto Avenue. Alabama Street is a major arterial that may function as an evacuation route from the Project site. Access to the site will be provided via three driveways on Alabama Street and three driveways on Palmetto Avenue. The Project will not create, interrupt, or otherwise reduce the ability of Palmetto Avenue and Alabama Street to be used for emergency access. Therefore, the Project will have a less than significant impact on emergency response and evacuation plans.

Level of Significance Before Mitigation

Less than significant.

Mitigation Measures

No mitigation required.

Wildland Fires

Impact HAZMAT-7 – Would the project expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?

Analysis of Impacts

The Project site is located in an almost completely urbanized portion of the County, with the exception of vacant lots scattered between existing industrial developments. The Project is not located within a wildfire hazard area or a State Responsibility Area.

Level of Significance Before Mitigation

Less than significant.

Mitigation Measures

No mitigation is required

Cumulative Impacts

Would the project cause substantial adverse cumulative impacts with respect to hazards and hazardous materials, exposure to aviation hazard, impede emergency access or result in exposure to fire hazard?

Analysis of Impacts

The incremental effects of the Project related to hazards and hazardous materials, if any, are anticipated to be minimal, and any effects would be site-specific. Therefore, the Project would not result in incremental effects to hazards or hazardous materials that could be compounded or increased when considered together with similar effects from other past, present, and reasonably foreseeable future project. The Project would not result in cumulatively considerable impacts to or from hazards or hazardous materials.

Level of Significance Before Mitigation

Less than significant.

Mitigation Measures

No mitigation required.

4.9.5 REFERENCES

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4.10 – Hydrology and Water Quality

This EIR chapter addresses hydrology and water quality impacts associated with the Project. Issues of interest are hydrology and water quality impacts identified by the CEQA Guidelines: whether the Project will cause a substantial adverse change to the environment.

4.10.1 – Environmental Setting

Watershed

The project site is located within the in the larger Santa Ana River Watershed. The Santa Ana River Watershed is the largest stream system in Southern California. The headwaters originate in the San Bernardino Mountains and are discharged to the Pacific Ocean approximately 100 miles to the southwest in the Newport Beach area. The Santa Ana River watershed covers an approximate 2,650 square miles of terrain with a wide variety of vegetation communities occurring throughout. The Upper Santa Ana River Watershed is an area with unique hydrological characteristics and water management issues.

The Upper Santa Ana River Watershed has a widely variable hydrology and challenging water management issues. The Project lies within the Santa Ana River Watershed and the main channel is less than 0.28 miles from the project site as shown in Exhibit 4.10-1. The existing drainage for the site is primarily sheet flow and surface water runoff. An existing inlet collects surface water runoff and conveys that flow toward the Santa Ana River.

Topography and Drainage

The project site is located on approximately 55 acres of land in unincorporated San Bernardino County. The project site vegetation communities consist of fallow agricultural lands with an onsite elevation range from 1,202 Mean Above Sea Level at the northwest corner to 1,224 Mean Above Sea Level at the southeast corner. The site currently has a 1.4 % grade slope to the southeast.

Groundwater

According to the 2015 Urban Water Management Plan for San Bernardino County, the geology of San Bernardino County does include large alluvial aquifers that could support efficient groundwater extraction and recharge. Ground water is a major source of water supply for the San Bernardino Valley. Table 4.10-1 (Water Supply and Demand Projects) and Table 4.10-2 summarizes the approximate amount of water supplied in acre-feet per year (AFY). The estimated supply from each source is estimated through the year 2040. Exhibit 4.10-2 identifies the extent of the groundwater basin in the San Bernardino Valley.

Table 4.10-1
Water Supply and Demand Projections – Normal Water Year & Single Dry Year (Acre-Feet/Year)

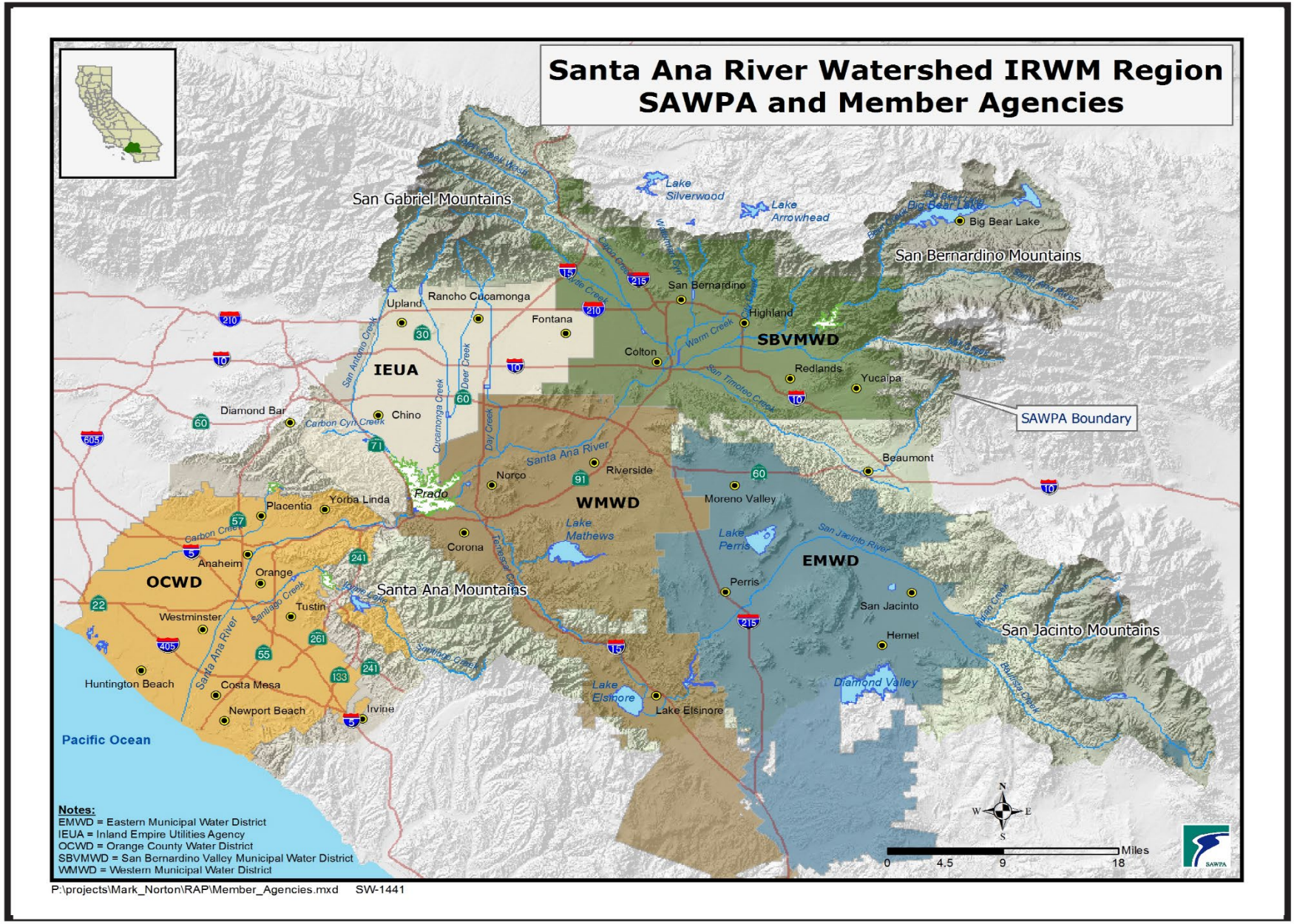
	2020	2025	2030	2035	2040
Normal Water Year					
Total Supply	337,258	344,848	352,041	359,269	366,097
Total Demand	250,027	260,542	270,747	281,697	289,821
Supply/Demand Difference	87,230	84,306	81,294	77,571	76,276
Single Dry Year					
Total Supply	315,601	322,910	329,970	336,930	343,990
Total Demand	254,785	265,677	276,613	288,321	296,915
Supply/Demand Difference	60,815	57,233	53,357	48,609	47,075

Source: 2015 San Bernardino Valley Regional Urban Water Management Plan. Agencies Participating in RUWMP. June 2016.

Table 4.10-2
Regional Water Supply– Normal Water Year & Single Dry Year (Acre-Feet/Year)

	2020	2025	2030	2035	2040
Water Source					
Total Surface Water	12,869	12,865	13,035	13,030	13,030
Total Groundwater	221,328	221,332	221,337	221,342	221,342
SWP Water	64,847	64,847	64,847	64,847	64,847
Recycled Water	19,839	27,148	34,208	41,168	48,228
Total Supply	319,058	326,367	333,427	340,387	347,447

Source: 2015 San Bernardino Valley Regional Urban Water Management Plan. Agencies Participating in RUWMP. June 2016.



Not to Scale

Exhibit 4.10-1 Santa Ana River Watershed Map

Duke Realty Warehouse Project

County of San Bernardino, California

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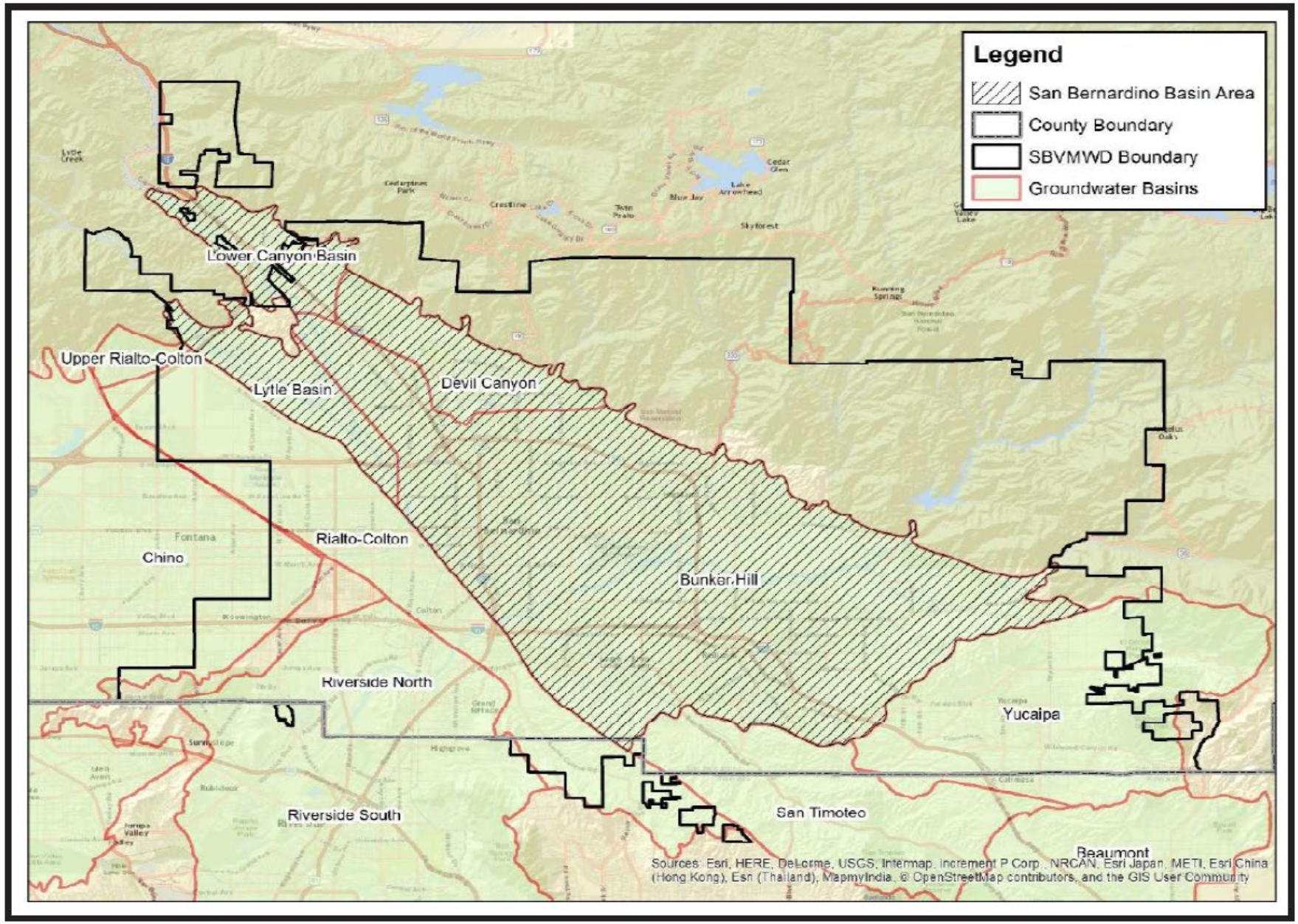

Not to Scale

Exhibit 4.10-2 Groundwater Basins Map

Duke Realty Warehouse Project

County of San Bernardino, California

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Flood Hazards

The Project is determined to be located outside the 0.21% annual chance flood plain and outside the 100 year flood zone.

Water Quality

Beneficial Uses

Beneficial uses of a water body are designated in the Santa Ana Region Basin Plan under the Clean Water Act Section 303(d) in accordance with regulations contained in 40 CFR 131. The Santa Ana River is in close proximity to the project site. Existing and potential beneficial uses for the Santa Ana River include the following:

- Agricultural Supply – Includes uses of water for farming, horticulture, or ranching including, but not limited to, irrigation, stock watering, or support of vegetation for range grazing.
- Industrial Service Supply– Includes uses of water for industrial activities that do not depend primarily on water quality including, but not limited to, mining, cooling water supply, hydraulic conveyance, gravel washing, fire protection, or oil well re-pressurization.
- Contact Water Recreation – Include uses of water for recreational activities involving body contact with water, where ingestion of water is reasonably possible. These uses include, but are not limited to, swimming, wading, water-skiing, skin and SCUBA diving, surfing, white water activities, fishing, or use of natural hot springs.
- Non-contact Water Recreation – Includes the uses of water for recreational activities involving proximity to water, but not normally involving body contact with water, where ingestion of water is reasonably possible. These uses include, but are not limited to, picnicking, sunbathing, hiking, beachcombing, camping, boating, tidepool and marine life study, hunting, sightseeing, or aesthetic enjoyment in conjunction with the above activities.
- Warm Freshwater Habitat – Includes uses of water that support warm water ecosystems including, but not limited to, preservation or enhancement of aquatic habitats, vegetation, fish or wildlife, including invertebrates.
- Cold Freshwater Habitat – Includes uses of water that support cold water ecosystems including, but not limited to, preservation or enhancement of aquatic habitats, vegetation, fish or wildlife, including invertebrates.
- Wildlife Habitat – Includes uses of water that support terrestrial ecosystems including, but not limited to, preservation and enhancement of terrestrial habitats, vegetation, wildlife (e.g., mammals, birds, reptiles, amphibians, invertebrates), or wildlife water and food sources.

4.10.2 – REGULATORY FRAMEWORK

The following section provides information regarding regulatory programs currently in effect and applicable to the Project. This section does not propose to list all regulations relevant to hydrology, and water quality issues; however; it does outline major programs that are applicable to the Project.

Federal

Federal Clean Water Act

The Federal Clean Water Act (CWA) is the cornerstone of surface water quality protection in the United States. The CWA does not deal directly with groundwater or with water quantity issues. The statute employs a variety of regulatory and non-regulatory tools to sharply reduce direct pollutant discharges (known as "point sources") into waterways, finance municipal wastewater treatment facilities, and manage polluted runoff, the principal nonpoint source. These tools are employed to achieve the broader goal of restoring and maintaining the chemical, physical, and biological integrity of the nation's waters so that they can support "the protection and propagation of fish, shellfish, and wildlife and recreation in and on the water." Evolution of CWA programs over the last decade has included a shift from a program-by-program, source-by-source, and pollutant-by-pollutant approach to more holistic watershed-based strategies. Under the watershed approach, equal emphasis is placed on protecting healthy waters and restoring impaired ones.

Major CWA programs include water quality standards, anti-degradation policy, waterbody monitoring and assessment, total maximum daily loads (TMDLs), the National Pollutant Discharge Elimination System (NPDES) permit program for point sources, Section 319 program for nonpoint sources, Section 401 State water quality certification, and the State revolving loan fund (SRF).

Water pollutants under the CWA are categorized as conventional, toxic, and nonconventional. The five conventional pollutants, as defined by the CWA, are as follows:

Biochemical Oxygen Demand (BOD): BOD is the amount of oxygen utilized by decomposition of organic material over a specific time period (for the purposes of water quality a measure is taken over five days and is known as BOD5). Although natural organic sources occur in waterbodies, the amount of oxidizing aerobic bacteria can increase significantly due to discharges of wastewater and urban runoff such as lawn fertilizer. Increased oxygen use in waterbodies can result in the death of native aquatic species because the aerobic bacteria decreases natural oxygen levels in the waterbody. This can lead to infiltration and less oxygen dependent organisms and species.

Total Suspended Solids (TSS): TSS represents the amount of solids within a waterbody that are suspended or not settled. TSS can represent the amount of turbidity in a water body and is measured by filtering solids from a water sample and measuring its weight. High TSS levels in a waterbody can lead to numerous problems. High TSS can block sunlight from reaching the bottom of a waterbody and therefore result in the inability for bottom dwelling plants to photosynthesize. This can not only lead to floral death but faunal death as well due to the decreased levels of oxygen resulting from reduced plant life. Increased TSS levels can lead to increased water temperature because suspended particles absorb heat from sunlight and therefore can also lead to decreased oxygen levels because warmer water holds less dissolved oxygen.

pH: pH is the measurement of the hydrogen ion concentration in a waterbody. A pH measurement of seven is neutral while less than seven becomes increasingly acidic and greater than seven becomes increasingly base on a scale of zero to 14. The balance of pH in a waterbody is important to maintain natural biological functions and prevent pollution. Generally, waterbodies maintain pH levels by neutralizing increases and decreases through naturally occurring dissolved chemicals in the water. This is known as the waterbody's buffering capacity, or ability to withstand changes in pH. Increasing and decreasing pH levels affects the ability for solids to dissolve in the waterbody known as its solubility. Changes in pH change the way a waterbody absorbs nutrients and minerals and therefore affects the ability for aquatic life to synthesize them. Changes in pH can also increase pollutant loads. For example, heavy metals increase in toxicity to lower pH levels because they become more soluble in the waterbody. pH readings approaching approximately two or 12 are considered hazardous.

Fecal coliform: Fecal coliform is a harmless bacterium that lives inside the digestive systems of humans and other warm-blooded animals that aids in the digestion process. The presence of this bacterium in a waterbody is an indicator that the waterbody has been contaminated by humans or other animal waste (fecal matter). These wastes have the potential to carry harmful bacteria and viruses that can lead to disease and potentially death.

Oil and grease: Oil and grease has high surface tension and are not soluble in water, so it forms a film on the surface of a waterbody, also known as "sheen."

The CWA also establishes a list of toxic pollutants known as primary pollutants. Currently, this list includes 126 hazardous chemicals and toxics. Finally, various nonconventional pollutants are established such as chlorine and ammonia. Important toxic and nonconventional pollutants and other water quality indicators are discussed here.

1,2-Dibromo-3-Chloropropane (DBCP): DBCP is a colorless chemical that was commonly used as a pesticide until the late 1970s and early 1980s. Use as a pesticide was the most common source of this contaminant until use as a pesticide was banned by the US in 1979. Small amounts of the chemical are still produced for industrial processes. The chemical can also be used as a fire retardant. Men exposed to DBCP may experience decreased sperm counts and after prolonged exposure may become unable to father children. The chemical can also cause headaches, nausea, lightheadedness, and fatigue and is also considered to be carcinogenic.

Nitrate-Nitrogen (Nitrates): Nitrogen-oxygen chemical units that combine with various organic and inorganic compounds that when ingested convert to nitrates. Excessive ingestion of nitrates can lead to serious illness, including death, especially in infants. This is a result of the bonding capabilities of nitrates to impair oxygen-carrying capabilities in the blood. Long term exposure can also result in diuresis (increased urine production by the kidney) and hemorrhaging of the spleen. Primary contamination occurs from potassium nitrate and ammonium nitrate in fertilizer but may also be caused by organic nitrates in human sewage and livestock manure.

Pathogens: Pathogen is a general term for disease-causing bacteria, viruses, and protozoan that are transmitted to people when they consume untreated or inadequately treated water. Health effects vary depending on the pathogen but can vary from simple stomachache to severe, life threatening diseases. Pathogens may be ubiquitous to a waterbody or may be introduced through exposure of a waterbody to human or animal wastes.

Total Dissolved Solids (TDS): TDS is a measurement that indicates the total dissolved organic and inorganic materials in a water source. This is not a primary water quality standard because it

does not result in primary health effects. High TDS result in unpleasant odor, taste, and brackish water and therefore is considered a secondary water quality standard because it is based on aesthetic circumstances.

Trichloroethylene/Perchloroethylene (TCE/PCE): TCE or PCE is a chlorinated solvent (volatile organic carbon or VOC) used for metal degreasing and as an ingredient in adhesives, paint removers, correction fluid, and spot removers. Primary sources for TCE/PCE contamination are direct discharges from industrial operations utilizing the compound and from leaching from Superfund and disposal sites. The chemical is commonly used in dry cleaning operations. The chemical is considered to be carcinogenic and acts as a central nervous system depressant that may cause nausea, confusion, dizziness, and unconsciousness after prolonged exposure. Chronic exposure to TCE/PCE may result in toxic effects to the liver and kidneys.

Nonpoint sources (NPS) of pollution emanate from diffuse sources, such as snowmelt running over an undeveloped countryside, or street runoff coming from numerous paved areas, rooftops, yards and other urbanized surfaces. Section 319 of the 1987 amendments to the Clean Water Act (33 U.S.C. §§ 466 *et seq*.) established the framework for reducing water pollution from nonpoint source activities. Section 319 requires each state to prepare a Nonpoint Source Management Plan and to conduct an assessment of the impact nonpoint sources have on the state's waterbodies. In response to these requirements, State Water Resources Control Board (SWRCB) adopted the Nonpoint Source Management Plan (NPSMP) in 1988 and the Water Quality Assessment in 1990. The NPSMP establishes a statewide policy for managing nonpoint source inputs to California's waters. The NPSMP received was upgraded in January 2000 when the 15-year Nonpoint Source Program Strategy and Implementation Plan was adopted.

Implementation of the NPSMP has been delegated to the nine Regional Water Quality Control Boards (RWQCB), with the SWRCB acting as the monitoring and enforcement agency. This ultimately leads to local requirements to control NPS sources. The primary means by which the County of San Bernardino implements the NPSMP is through the requirements of its municipal separate stormwater system (MS4) permit and by requiring preparation of Water Quality Management Plans by project proponents for new development and significant redevelopment projects. The County is also required to comply with waste discharge requirements for its wastewater treatment plant as issued by the RWQCB. Compliance with these requirements are the primary means by which the County complies with the NPSMP program and are consistent with the SWRCB's *Policy for Implementation and Enforcement of the Nonpoint Source Pollution Control Program.*

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act, enacted in 1969, authorizes the SWRCB to adopt, review, and revise policies for all waters of the state (including both surface and ground waters) and directs the RWQCBs to develop region-specific Basin Plans. Section 1310 of the California Water Code also authorizes the SWRCB to adopt water quality control plans on its own initiative. The purpose of these plans is to designate beneficial uses of the region's surface and ground waters, designate water quality objectives for the reasonable protection of those uses and establish an implementation plan to achieve the objectives.

National Pollution Discharge Elimination System (NPDES)

In California, the SWRCB and its RWQCBs administer the NPDES permit program. The NPDES permit system was established in the CWA to regulate both point source discharges and nonpoint

source discharges to surface waters of the U.S. The NPDES program consists of characterizing receiving water quality, identifying harmful constituents, targeting potential sources of pollutants, and implementing a comprehensive stormwater management program. Construction and industrial activities are typically regulated under statewide general permits that are issued by the SWRCB. The RWQCB also issues Waste Discharge Requirements that serve as NPDES permits under the authority delegated to the RWQCBs, under the CWA. In November 1990, under Phase I of the urban runoff management strategy, the EPA published NPDES permit application requirements for municipal, industrial, and construction stormwater discharges. With regard to municipalities, the permit application requirements were directed at jurisdictions owning or operating MS4s serving populations of 100,000 or more, or contributing significant pollutants to waters of the U.S. Such municipalities were required to obtain coverage under a NPDES municipal stormwater permit as well as to develop and implement an urban runoff management program to reduce pollutants in urban runoff and stormwater discharges.

Low Impact Development

The State of California adopted sustainability as a core value for all SWRCB activities and programs on January 20, 2005. Low Impact Development (LID) practices benefit water supply and contribute to water quality protection by taking a different approach to development and using site design and stormwater management to maintain the site's pre-development runoff rates and volumes. The amount of impervious surface, infiltration, water quality, and infrastructure costs can all be addressed by LID techniques, tools, and materials. LID practices include bioretention facilities or rain gardens, grass swales and channels, vegetated rooftops, rain barrels, cisterns, vegetated filter strips, and permeable pavements.

National Flood Insurance Act

The National Flood Insurance Act of 1968 requires the identification of floodplain areas and establishment of flood-risk zones within those areas. The Federal Emergency Management Agency (FEMA) administers the programs and coordinates with communities to establish effective floodplain management standards. FEMA identifies areas of known flood hazards via preparation of Federal Insurance Rate Maps.

State

State Department of Water Resources.

The Department of Water Resources (DWR) is responsible for the management and regulation of water usage, including the delivery of water to two-thirds of California's population, through the nation's largest state-built water development and conveyance system, the State Water Project. Working with other agencies and the public, DWR develops strategic goals, and near-term and long-term actions, to conserve, manage, develop, and sustain California's watersheds, water resources, and management systems. DWR also works to prevent and respond to floods, droughts, and catastrophic events that would threaten public safety, water resources and management systems, the environment, and property.

State Water Resources Control Board (SWRCB).

The SWRCB and the nine RWQCBs protect water quality and allocate surface water rights in the State of California. The SWRCB is the regulating authority for industrial and construction activities, and issues NPDES Storm Water permits in the form of Waste Discharge Requirements.

California Model Floodplain Management Ordinance: Title 16 Floodplain Regulations.

Title 16 Floodplain Regulations includes provisions for flood hazard reduction such as standards of construction for areas with special flood hazard areas.

Local

San Bernardino County Code

The San Bernardino County Code, Chapter 82.14 established the Floodplain Safety (FP) Overlay to provide greater public safety, promote public health, and minimize public and private economic losses due to flood conditions by promulgating regulations for development and construction within flood prone areas. FEMA designated floodways are extremely hazardous areas due to the velocity of flood waters that carry debris, potential projectiles, and erosion potential. Projects are discouraged from modifying the drainage flow pattern when located within a FEMA floodplain. Structures are required to comply with FEMA design standards such as incorporating the first floor of the proposed structure to be one foot above base flood elevation within a 100-year floodplain. Or structures should be one foot above the highest adjacent grade in any areas designated as a 100 to 500-year floodplain.

Upper Santa Ana River Watershed Integrated Watershed Plan 2015.

The Integrated Regional Water Management Plan is an integrated plan for evaluating goals, objectives, and strategies for future implementation of regional water management.

City of Redlands General Plan

The City of Redlands General Plan 2035 is a policy document approved by the City Council to guide the future development of the City. The City of Redlands provides high-quality drinking water to the City of Redlands and unincorporated areas of San Bernardino County. The General Plan provides for measures to conserve and reduce drinking water consumption in the operating areas of the City while maintaining water quality.

4.10.3 – SIGNIFICANCE THRESHOLDS

Per the CEQA Guidelines, implementation of the Project would have a significant impact related to hydrology and water quality if it would:

a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality;
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin;
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would; (i) result in substantial erosion or siltation on-or off-site; (ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on-or offsite; (iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or (iv) impede or redirect flood flows?

d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

4.10.4 – IMPACTS AND MITIGATION MEASURES

This section describes potential impacts related to hydrology, and water quality resources, which could result from the implementation of the Project and recommends mitigation measures as needed to reduce significant impacts.

Water Quality Standards

Impact HYDRO-1 – Would the Project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?

Analysis of Impacts

The Project is an approximately 1,116,930 square foot warehouse facility on an approximate 55 acres of vacant land within the County of San Bernardino. The project site is located within larger Santa Ana River Watershed and the Project will require a Storm Water Pollution Prevention Plan (SWPPP) for review and approval by the County of San Bernardino Public Works Department. A SWPPP and State General Construction Permit is required for projects that disturb more than one acre. A Water Quality Management Plan (WQMP) was completed for the project by Webb Associates on April 19, 2018 and revised on July 1, 2018 (Appendix M). The WQMP complies with the requirements for the County of San Bernardino and the NPDES Area wide Stormwater Program requirement. All construction activity including clearing, grading, stockpiling, and rock excavation would be subject to the State of California Construction General Permit Order 2009-0009-DWQ. Non-structural and structural source control Best Management Practices (BMPs) are required for the Project BMPs are would significantly reduce impacts from potential pollutant sources or activities. Furthermore, there are no site constraints that would limit the type of BMP installed on the site.

The Project would include a site plan, and drainage plan that contains: the project location, site boundary, land uses, suitability, structural source control BMP locations, site design hydrological source control BMPs, LID BMP details, drainage delineations and flow information, and drainage connections. According to the General Plan, the project site is located within a groundwater recharge basin, and a High Basin Priority California Statewide Groundwater Elevation Monitoring Groundwater Basin Prioritization site. According to the Santa Ana River Water Management Plan, total groundwater storage capacity is 5,976,000-acre feet in the Basin. Active groundwater monitoring in the Sub-basin is performed by the City of Redlands. No active groundwater monitoring wells occurs on the project site and no groundwater spreading grounds are located on the project site. Therefore, with adherence to federal, state, and local regulations the Project would have a less than significant impact and no mitigation is required.

Level of Significance Before Mitigation

The project would not violate any water quality standards or waste discharge requirements. The project would not degrade surface or groundwater quality as the Project would adhere to all

federal, state and local regulations. Therefore, the Project would have a less than significant impact.

Mitigation Measures

No mitigation is required.

Decrease Groundwater

Impact HYDRO-2 – Would the Project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such the project may impede sustainable groundwater management of the basin?

Analysis of Impacts

The IRWM and United States Geological Survey have determined that most of the natural groundwater recharge occurs in unlined streams and creeks in the Santa Ana Watershed. Storing groundwater in wet years is a fundamental strategy to improve water supply reliability in the San Bernardino Valley and larger Santa Ana River Watershed. According to the IRWM groundwater quality within the Valley are relatively good, and recharge supplies are abundant. The Project would not utilize any groundwater. The Project would connect to existing City of Redlands water lines and utilize both potable and recycled water. The project is within a groundwater recharge basin; however, any surface water would not be redirected from groundwater recharge as a result of the Project. Therefore, the Project would not have result in a substantial decrease in groundwater supplies or interfere with groundwater recharge or impede sustainable groundwater management of the basin. Therefore, with adherence to federal, state, and local regulations the Project would result in a less than significant impact and no mitigation is required.

Level of Significance Before Mitigation

The proposed project has a less than significant impact.

Mitigation Measures

No mitigation is required.

Drainage

Impact HYDRO-3 – Would the Project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:

(i) Result in substantial erosion or siltation on- or off-site:

Analysis of Impacts

The Project site is located in a generally urbanized environment with both industrial and agricultural uses surrounding the project site. The project is situated 0.28 miles south of the present channel of the Santa Ana River. The Project site has historically been used as an orchard. Currently, the subject property contains vacant/fallow agricultural land, and no agricultural production currently occurs on the site. A small western portion of the subject property maintains

an active agricultural field, and a temporary residence (trailer), while beehive fixtures are present in the northern portion of the subject property. Onsite improvements include former concrete building foundations, fencing, limited amounts of small consumer sized (one-quart) empty containers motor oil, used automobile tires, and other miscellaneous debris such as former irrigation features, and fixtures including above ground and below ground suspect asbestos-containing irrigation piping. The subject property also includes unpaved roads and sewer/drainage access manholes. The Project proposes minimal subsurface storm drains for onsite conveyance. All onsite flows would rely on surface flow to convey flows to the proposed infiltration basin. The basin outflow would be discharged into the proposed Lateral A-1 storm drain. The outlet structure would mitigate the 100-year flow rate to 64.8 cfs before discharging in Line-A. Furthermore, the Project proposes to improve Alabama Street and Palmetto Avenue by widening the current edge of pavement and constructing curb and gutter along the project frontage. The project proposes to discharge its onsite flows into Line-A which is an existing storm drain facility with an upstream terminus at the corner of Alabama Street and Almond Avenue. The facility extends along Alabama Street and then discharges into the Santa Ana River a jurisdictional water resource feature. Discharges into the Santa Ana River would be reviewed by the San Bernardino County Flood Management district and the Army Corps of Engineers. No substantial changes to the existing drainage pattern of the site or area are proposed. With adherence to existing federal, state, and local regulations a less than significant impact would occur and no mitigation is required.

Level of Significance Before Mitigation

Less than significant.

Mitigation Measures

No mitigation is required.

(ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on-or-offsite;

Analysis of Impacts

The Project is an approximate 1,192,671 square-foot high-cube, non-refrigerated, warehouse building on approximately 55.8 acres (54.8 net acres) of vacant land on the northwestern corner of Alabama Street and Palmetto Avenue, in unincorporated San Bernardino County, California. Construction and conversion of land would result in surface runoff. Based on the analysis provided in the *Hydrological Study* performed by Webb Associates (Appendix L), the proposed drainage improvements would adequately convey flows to the basin and provide flood protection for the 100-year storm event. The proposed basin would provide adequate water quality treatment and drawdown within a 48-hour period. As such the Project would not impact flooding conditions to upstream or downstream properties. Furthermore, the San Bernardino County Flood District (SBCFD) provides improvements for flood water management in the Santa Ana River channel. The SBCFD in conjunction with the Army Corps of Engineers has actively managed the Santa Ana River Channel located 0.28 miles north of the project site. Onsite surface water generation would not substantially increase flows resulting in on or offsite flooding. Therefore, the proposed project would have a less than significant impact.

Level of Significance Before Mitigation

Less than significant.

Mitigation Measures

No mitigation required.

(iii) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or;

Analysis of Impacts

Violations of water quality standards due to urban runoff can be prevented through the continued implementation of existing regional water quality regulations. NPDES regulations applicable to the planning area are designed to reduce non-point-source pollutant loading through implementation of BMPs and other control measures that minimize or eliminate pollutants from urban runoff, thereby protecting downstream water resources. These regulations specifically prohibit construction of structures that could cause or divert floodwaters without appropriate site planning and structural design. In most cases, no one goal, policy, or implementation measure ("policy" for short) is expected to completely avoid or reduce an identified potential environmental impact. The SBCFD Master Plan for drainage have identified the future development in the unincorporated San Bernardino County land in the Valley Division require system upgrades. Existing and planned upgrades are projected to improve storm sewer capacity. According to the SBCFD Master Plan, the purpose development in the project vicinity has already been incorporated into the Capital Improvement projects and storm drainage system capacity improvement plan. Furthermore, the SBCFD Master Plan did not identify any system deficiencies resulting in system failures within the vicinity of the project site. Therefore, the proposed project would have a less than significant impact and no mitigation is required.

Level of Significance Before Mitigation

Less than significant.

Mitigation Measures

No mitigation required.

(iv) Impede or redirect flood flows;

Analysis of Impacts

Urbanization in the valley areas of the surrounding project site have resulted in increased responsiveness of basin to rainfall. The increase in impervious surfaces such as roofs, roads, and parking lots has resulted in a decrease in groundwater infiltration and larger storm surges. The Project site currently slopes southeast with a 1.4% grade, and the existing drainage pattern is characterized by sheet flows that follow the slope to the northwest. The project site is not impacted by offsite flows. The project site is not located in a FEMA Firm Panel designated Flood Zone Risk, and according to the *Biological Report* conducted by Harmsworth Associates on July 2018 (Appendix D), United States Fish and Wildlife Service National Wetlands Inventory (NWI) no wetlands exist on the property. The Project would convert permeable surface to impermeable surfaces such as parking areas and building foundation areas. As previously mentioned, the project proposes to discharge onsite flows into Line-A which is an existing storm drain facility with an upstream terminus at the corner of Alabama Street and Almond Avenue, discharging into the

Santa Ana River. No changes to the flows of the Santa Ana River would be proposed. No rerouting of any channelized portion of the Santa Ana River is proposed. As such, the proposed project would not impede or redirect flood flows. With adherence to existing federal, state, and local regulation no changes to the existing flood flows would occur.

Level of Significance Before Mitigation

Less than significant.

Mitigation Measures

No mitigation required.

Flood Risk

Impact HYDRO-4 – Would the Project be subject to flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?

Analysis of Impacts

Impacts associated with flooding are primarily related to the construction or placement of structures in areas prone to flooding including within an unprotected 100-year flood zone, and in areas susceptible to high tides, tsunamis, seiches, mudflows or sea level rise. Specifically, structures placed in flood prone areas, if flooded, would be damaged, and could subject people to injury or death. The Valley region of San Bernardino County includes channelized portions of the Santa Ana River and channelized tributaries. The National Flood Insurance Act of 1968 requires the identification of floodplain areas and establishment of flood-risk zones within those areas. FEMA administers the programs and coordinates with communities to establish effective floodplain management standards. According to the FEMA FIRM Panel Maps 06071C8704Hthe Project is not located in a known floodplain. Furthermore, although the Project site is adjacent to the Santa Ana River, this area is not known to flood and is not typically subjected to flooding. The Project is in FEMA FIRM Panel Zone X with a less than two percent chance of a 100-year flood event. Therefore, the Project site has a less than significant chance of flood risk. The proposed project would not be required to adhere to any specific flood design regulations.

The project site lies in the Valley region of San Bernardino County. The predominate vegetation types in the Valley region consist of chaparral, coastal sage scrub, deciduous woodlands, grasslands, and wetlands. The project site is dominated by Agricultural fallow fields and does not contain any vegetation associated with riparian features. The project site lies 0.28 miles south of the Santa Ana River. No wetlands have been mapped on the project site according to the NWI. According to the FEMA FIRM Panel Map 06071C8704H, the project is not located in an area that is subject to flood hazard, tsunami, or seiche zones. The project site is located over 60 miles east of the Pacific Ocean and is not located in a mapped tsunami zone. Therefore, the project would not have a significant risk of flood hazard, tsunami, seiche zones, release of pollutants due to project inundation.

Level of Significance Before Mitigation

Less than significant

Mitigation Measures

No mitigation is required

Water Quality

Impact HYDRO-5 – Would the Project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

The Regional Board's Basin Plan is designed to preserve and enhance water quality and protect the beneficial uses of all regional waters. Specifically, the Basin Plan (i) designates beneficial uses for surface and ground waters, (ii) sets narrative and numerical objectives that must be attained or maintained to protect the designated beneficial uses and conform to the state's anti-degradation policy, and (iii) describes implementation programs to protect all waters in the region. Development allowed by the Project would be required to adhere to requirements of the water quality control plan, including all existing regulation and permitting requirements. This would include the incorporation of best management practices (BMPs) to protect water quality during construction and operational periods.

Development of the Project would be subject to all existing water quality regulations and programs, as described in the regulatory section above, including all applicable construction permits. Existing General Plan policies related to water quality would also be applicable to the Project. These policies include the following:

- Policy CI 11.2: Support the safe management of hazardous materials to avoid the pollution of both surface and groundwaters. Prohibit hazardous waste disposal facilities within any area known to be or suspected of supplying principal recharge to a regional aquifer.
- Policy CI 12.1: Require wastewater collection and treatment facilities services in urbanized areas of the County.
- Policy CI 14.2.5: Continue to map the precise location of all waste sites (existing, inactive and closed) on the County's automated mapping system and create a database with information on air, soil, and water contamination and the type of wastes disposed of at each site.
- Policy CI 13.1: Utilize site-design, source-control, and treatment control best management practices (BMPs) on applicable projects, to achieve compliance with the County Municipal Stormwater (NPDES) Permit.

Implementation of these policies, in conjunction with compliance with existing regulatory programs, would ensure that water quality impacts related to the Project would be less than significant.

Level of Significance Before Mitigation

Less than significant.

Mitigation Measures

No mitigation is required.

Cumulative Impacts

Would the project cause substantial adverse cumulative impacts with respect to hydrology and water quality?

Analysis of Impacts

As identified in the *Preliminary Drainage Study* (Appendix L), and the *Preliminary Water Quality Management Plan* (Appendix M), the Project would alter the surface hydrology of the project site, however based on water modeling analysis provided in the above mentioned studies, the Project would not result in a cumulative impact with respect to water quality or hydrology. The Project would not obstruct implementation of a water quality control plan or sustainable ground water management plan. As such, the Project would have a less than significant impact and no mitigation is required.

Level of Significance Before Mitigation

Less than significant.

Mitigation Measures

No mitigation required.

4.10.5 REFERENCES

Upper Santa Ana River Watershed Integrated Regional Water Management Plan 2015 County of San Bernardino 2007 General Plan. https://www.sbvwcd.org/docman-projects/upper-santa-ana-integrated-regional-water-management-plan/3802-usarw-irwmp-2015-ch1-9-final/file.html

San Bernardino Association of Governments (SANBAG). http://www.sanbag.ca.gov/ Southern California Association of Governments (SCAG). http://www.scag.ca.gov Duke Realty Preliminary Drainage Study July 2018.

Preliminary Water Quality Management Plan for Duke-Alabama & Palmetto Project July 2018 Geotechnical Investigation Proposed Commercial/Industrial Building NWC Alabama Street and Palmetto Avenue for Duke Realty December 15, 2017

4.11 – Land Use and Planning

This EIR chapter addresses land use and planning impacts associated with the Project. Issues of interest are land use and planning impacts identified by the CEQA Guidelines: whether the Project will cause a substantial adverse change to the environment.

4.11.1 – ENVIRONMENTAL SETTING

The Project is a 1,192,671 square-foot high-cube, non-refrigerated warehouse and logistics center on an approximate 55.8-acre site located in the San Bernardino Valley in an urbanized portion of the County of San Bernardino (County). The County is a 20,106 square mile area located in Southeastern portion of the State of California which includes large areas of undeveloped lands and populated unincorporated areas. The County maintains jurisdiction over unincorporated lands for planning, building, and entitlement processing, however several areas also lie within the service area of adjacent cities which provide services and a measure of land use entitlement oversight. The project site is west of the State Route 210 Freeway (SR 210), between Interstate 10 (I-10), and the Santa Ana River and includes four parcels of land (Assessor Parcel Numbers 0292-041-42-0000, 0292-041-47-0000, 0292-041-48-0000, and 0292-041-43-0000). The City of Redlands is adjacent to the Project site and provides sewer services. The Project site is accessed via Alabama Street and Palmetto Avenue. The Project site is also located with the airport influence area of the San Bernardino International Airport and the San Bernardino County East Valley Area Plan.

4.11.2 – REGULATORY FRAMEWORK

State

Senate Bill 379

The planning and zoning law require the legislative body of a city or county to adopt a comprehensive, long-term general plan that includes various elements, including, among other, a safety element of the protection of the community from unreasonable risks associated with the effects of various geologic hazards, flooding, and wildland and urban fires.

Southern California Association of Governments (SCAG) Plans and Policies

SCAG is the regional planning agency and council of governments for the Greater Los Angeles Area (in addition to Imperial county), addressing in a regional context such intraregional issues as land use, housing, environmental quality, and economic development. The following SCAG regional planning program warrants consideration: 2012-2035 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS). The Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS or Plan) is a long-range vision and investment plan that provides a comprehensive look at future transportation needs. The Plan considers future population growth and housing needs, as well as economic, environmental, and public health goals. The Plan maps out how the Southern California region will integrate transportation and land use, with the goal of providing transportation options to help the region grow in a financially and environmentally responsible way. It also contributes to California state goals of reductions in greenhouse gas emissions and miles driven on the road.

Subdivision Map Act

Regulation and control of the design and improvement of subdivisions are vested in the legislative bodies of local agencies. Each local agency shall, by ordinance, regulate and control the initial design and improvement of common interest developments as defined in Section 1351 of the Civil Code and subdivisions for which this division requires a tentative and final or parcel map. In the development, adoption, revision, and application of such ordinance, the local agency shall control, including the prevention of sedimentation or damage to offsite property. Each local agency may by ordinance regulate and control other subdivisions, provided that the regulations are not more restrictive than the regulations for those subdivisions for which a tentative and final or parcel map are required by this division. As well as provided further that the regulations shall not be applied to short-term leases (terminable by either party on not more than 30 days' notice in writing) of a portion of the operating right-of-way of a railroad corporation as defined by Section 230 of the Public Utilities Code unless a showing is made in individual cases, under substantial evidence, that public policy necessitates the application of the regulations to those short-term leases in individual cases.

Local

San Bernardino County General Plan

Every city and county in California is required by law to have a general plan for its future development (California Government Code § 65300). The County General Plan includes the following elements: Land Use, Circulation and Infrastructure, Housing, Conservation, Open Space, Noise, Safety, and Economic Development. In addition to establishing land use designations, the General Plan also includes Hazard Overlay Maps, Geological Hazard Overlay Maps, Resource Overlay Maps, Biotic Resources Overlay Maps, Open Space Overlay Maps, Cultural Resources Sensitivity Overlay Maps, Paleontological Resources Sensitivity Overlay Maps, and an Alternate Housing Overlay Map. The County is in the process of updating the General Plan with an EIR target date of mid-2019 and consideration and adoption by the County Board of Supervisors by the end of 2019.

San Bernardino County East Valley Area Plan

The plan reflects findings and determinations of the County Board of Supervisors concerning "the future size, shape and character of this specific area." The Valley region includes 51,766 acres of unincorporated County land that contains single, and multi-family residential uses occupying 24,236 acres. The Valley Region includes nearly 5,155 acres of industrial uses. Commercial uses occupy almost 2,155 acres, while agriculture uses occupy 938 acres. Existing land uses include 2,875 acres of institutional uses, and 7,216 acres of planned development and almost 1,600 acres of the specific plan. In addition, there are 5,820 acres of improved flood and waterways in the Valley region.

4.11.3 – SIGNIFICANCE THRESHOLDS

Per the CEQA Guidelines, implementation of the Project may have a significant impact related to land use and planning if it would:

a) Physically divide an established community;
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

4.11.4 – IMPACTS AND MITIGATION MEASURES

This section describes potential impacts related to land use policies, plans, or regulations, which could result from the implementation of the project and recommends mitigation measures as needed to reduce significant impacts.

Divide an Established Community

Impact LAND-1 – Would the project physically divide an established community?

Analysis of Impacts

The Project site is located within the East Valley Area Plan area of San Bernardino County which includes a wide-variety of land uses and properties (Exhibit 4.11-1). The immediate area surrounding the Project site includes industrial, agricultural, and open space uses. The areas to the north of the Project site include the Santa Ana River, and the low valley interface area adjacent to the Santa Ana River Channel. The Project site is accessed by Alabama Street and Palmetto Avenue, both paved County-maintained public roads. Alabama Street, which parallels SR-210 to the east, is designated as a major arterial and connects the City of Redlands to the City of Highland as the main arterial access. The General Plan Land use designation, as well as the zoning along Alabama Street is Regional Industrial (EV/IR), and Special Development (EV/SD). The Project site will access Alabama Street, however no permanent road closures or rerouting of the alignment of Alabama Street is proposed. Also, the Project site has no existing residential structures onsite and no structures would be demolished as a result of the Project. Furthermore, the Project site is a fallow/abandoned agricultural field with no existing agricultural uses onsite. There are existing utilities onsite, and any new utilities connections proposed would not physically divide the project site from the surrounding community as electrical and natural gas lines would be subterranean. Alabama Street and Palmetto Avenue both public County roads with two lanes of access in each direction would be improved as required by State and local regulations. The Project site is regionally accessed by both the SR 210 and I-10 Freeways, which connects this part of the San Bernardino Valley to all of Southern California in each direction. Neither freeway would be impacted by the Project.

The Project site is located in a predominately industrial area where no residential housing occurs. No residential housing is located within the immediate vicinity of the Project site; therefore, the Project would not obstruct any residential roads or facilities servicing a residential area. No new roads as proposed part of the Project. As such, no physical divisions to the established community are proposed. Therefore, no impacts are anticipated.

Additionally, the proposed use and manner of development are consistent with the goals, maps, policies, and standards of the County General Plan and the East Valley Area Plan. The proposed Project site plan, together with the provisions for its design and improvement are consistent with the County General Plan. The Project specifically implements the following goals and policies:

General Plan GOAL LU 4: The unincorporated communities within the County will be sufficiently served by industrial land uses.

Goal Implementation: The proposed Project provides additional industrial development opportunities in the East Valley Area Plan.

General Plan POLICY LU 6.2: Expand opportunities for future employment centers in the unincorporated County, recruit industrial and commercial development to urban infill areas.

General Plan GOAL LU 9: Development will be in a contiguous manner as much as possible to minimize environmental impacts, minimize public infrastructure and service costs, and further countywide economic development goals.

General Plan POLICY LU 9.1: Encourage infill development in unincorporated areas and sphere of influence (SOI) areas.

General Plan GOAL ED 1: The County will have a vibrant and thriving local economy that spans a variety of industries, services, and other sectors.

General Plan GOAL ED 4: The County will assist development of small businesses and encourage new businesses of all sizes.

General Plan POLICY ED 19.1: Retain and expand trucking, warehousing, and distribution opportunities.

General Plan GOAL V/ED 1: Promote economic development that is compatible with the land use patterns and environment of the Valley Region.

General Plan POLICY V/ED 1.1: Support commercial and industrial development that is compatible with surrounding development and does not disrupt the land use patterns and environment of the Valley Region.

Level of Significance Before Mitigation

No impact.

Less than significant.

Mitigation Measures

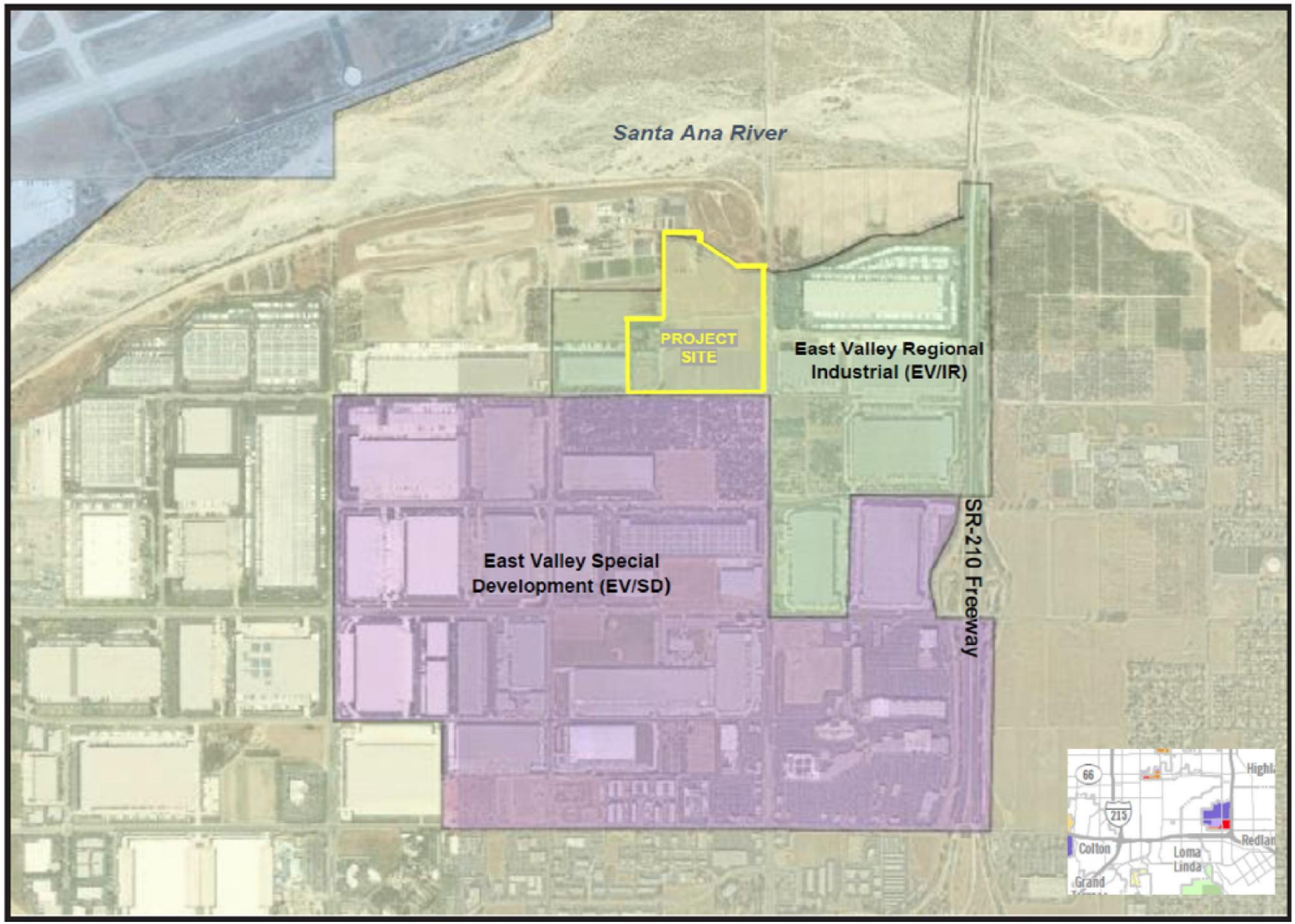
No mitigation required.

Existing Plans, Policies or Regulations

Impact LAND-2 – Would the project cause a significant environmental impact due to a conflict with any land use plan, policy, or regulations adopted for the purpose of avoiding or mitigation an environmental effect?

Analysis of Impacts

The Project is located in an urbanized portion of unincorporated San Bernardino County adjacent to the City of Redlands. The Project site is zoned Regional Industrial and has a General Plan land use designation of General Industrial (GI). Table 4.11-1 Land Use Designation by Parcel summarizes this information:



Source: Google Maps

Not to Scale

Exhibit 4.11-1 Zoning

Duke Realty Alabama and Palmetto Warehouse
County of San Bernardino, California

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Table 4.11-1:
Land Use Designation by Parcel (Acres)

Assessor Parcel Number	General Plan Land Use Designation	Zoning Classification	Existing Land Use	Acreage	Proposed Use Compatibility
0292-041-42-0000	Regional Industrial	Regional Industrial (EV/IR)	Vacant agricultural land / active agricultural	18.04	Yes
0292-041-47-0000	Regional Industrial	Regional Industrial (EV/IR)	Vacant agricultural land / active agricultural	15.61	Yes
0292-041-48-0000	Regional Industrial	Regional Industrial (EV/IR)	Vacant agricultural land / active agricultural	10.51	Yes
0292-041-43-0000	Regional Industrial	Regional Industrial (EV/IR)	Vacant agricultural land / active agricultural	11.02	Yes
Total Acreage				**55.18**	

Source: San Bernardino County General Plan 2007.

The Project site is not located in any General Plan Overlay zones. Surrounding uses include industrial and agricultural uses as shown in Table 4.11-2.

Table 4.11-2
Surrounding Land Use Designation

Direction	Land Uses	Zoning
Project site		
North	A fallow agricultural field and The Redlands Wastewater Treatment Facility (1950 Nevada Street), composting facility, and undeveloped woodland and grassland.	City of Redlands: Public / Institutional
South	Palmetto Avenue to the south with citrus orchards, and agricultural land.	East Valley/Special Development
East	Alabama Street to the east and a vacant field with fallow agricultural land. An industrial warehouse building occupied by Prologis, Home Depot, and (27352 River Bluff Avenue).	East Valley/Regional Industrial
West	A fallow agricultural field and an industrial warehouse building occupied by Performance Team Freight (26940 Palmetto Avenue).	East Valley/Regional Industrial and City of Redlands: Public / Institutional (on the northwest boundary)

Source: San Bernardino County General Plan 2007.

The Project, a warehouse and logistics center is compatible with the existing General Industrial land use designation and the existing East Valley/Regional Industrial zoning. Furthermore, the Project is compatible with the surrounding area and existing land uses, General Plan land use designation and zoning. Although the Project requires a Conditional Use Permit for construction of a warehouse facility, it will not require a Variance, Zone Change, General Plan Amendment or creation of a new Specific Plan. According to the National Wetlands Inventory and the General Plan, no known water resource features occur on the project. The project would include consolidation of five parcels into one parcel. The Project site is considered Grazing Land by the California Farmland Mapping and Monitoring Program. Adjacent land uses include Prime Farmland as defined by the California Farmland Mapping and Monitoring Program. No active grazing occurs onsite. The project site is not located in any Natural Community Conservation Plan or Habitat Conservation Plans. In addition, impacts to wetlands and or water features are not anticipated. Therefore, the Project would have a less than significant impact with adherence to existing State and Local regulations. As such, no mitigation is required.

Level of Significance Before Mitigation

Less than significant.

Mitigation Measures

No mitigation required.

Cumulative Impacts

Would the project cause substantial adverse cumulative impacts with respect to land use and planning?

Analysis of Impacts

The Project is an industrial warehouse and logistics center in the unincorporated San Bernardino County. The Project would include consolidation of five parcels into one parcel. The Project is considered Grazing Land by the California Farmland Mapping and Monitoring Program. Adjacent land uses include Prime Farmland as defined by the California Farmland Mapping and Monitoring Program. No active grazing occurs onsite. All of the affected parcels are have a General Plan land use designation of General Industrial and are zoned East Valley/Regional Industrial. Likewise, all of the surrounding property has a General Plan land use designation of General Industrial and is zoned either East Valley/Regional Industrial or East Valley/Special Development, both of which allow for similar warehouse and logistics center uses. As a result, the Project and any surrounding development would be consistent with both the General Plan and zoning and, therefore, would have a less than significant cumulative impact on land use and planning.

Level of Significance Before Mitigation

Less than significant.

Mitigation Measures

No mitigation required.

4.11.5 REFERENCES

California Department of Conservation. http://www.consrv.ca.gov/index [Accessed April 1, 2019].

California Department of Finance. www.dof.ca.gov [Accessed March 29, 2019].

California Land Use Planning Information Network (LUPIN)

County of San Bernardino General Plan 2007.

County of San Bernardino General Plan Environmental Impact Report 2007.

County of San Bernardino Countywide Plan Background Reports 2017.

San Bernardino LAFCO. http://www.sbclafco.org

Smart Communities Network. http://www.sustainable.doe.gov [Accessed March 28, 2019]

4.12 – Mineral Resources

This EIR chapter addresses mineral resources impacts associated with the Project. Issues of interest are mineral resources impacts identified by the CEQA Guidelines: whether the Project will cause a result in a los in availability of a known or locally important mineral resource or mineral resource recovery site.

4.12.1 – ENVIRONMENTAL SETTING

Minerals are defined as any naturally occurring chemical elements or compounds, formed from inorganic processes and organic substances. Minable minerals or an "ore deposit" is defined as a deposit of ore or minerals having a value materially in excess of the cost of developing, mining and processing the mineral and reclaiming the project area. Mineral resources are an integral part of development and the economic well-being of the County of San Bernardino (County). The conservation, extraction and processing of those mineral resources is essential to meeting the needs of society. In the County, minerals are a foremost natural resource, with the Desert Planning Area accounting for over 90 percent of all County mining activities.

There are 92 mines within the County (Figures 6-11-A thru 6-11-C of the Conservation Background Report, prepared as part of the update of the County's General Plan). Table 4.12- 1 includes a list of some of the mines and processing plants that are located within the including several large calcium carbonate mines. In addition, the County is home to the largest cement producer in the state and has the largest rare earth mine in North America. Extensive aggregate mining is also a major component of the mining industry within the County. More details on mining resources in San Bernardino County are provided in the Conservation Background Report.

Table 4.12-1
Prominent Mine and Processing Plant Locations in San Bernardino County

No.	Company Name	Site Name	Commodity	Mine/Plant (M/P)
1	BMCS Insulation Products	Ontario Plant	Perlite	P
2	California Portland Cement Co.	Colton Plant	Cement	P
3	Cargill Inc./Leslie Salt	Amboy Plant	Salt	M/P
4	CV Organic Fertilizer Co.	Amboy Mine	Gypsum	M
5	Mitsubishi Cement	Cushenbury Plant	Cement	M/P
6	Molycorp Incorporation	Molycorp Mill	Rare Earths	M/P
7	North American Chemical Corporation	Westend Plant	Boron, Sodium Sulfate	M/P
8	North America Chemical Corporation	Argus Plant	Trona/Soda Ash	M/P
9	Pacific Salt and Chemical Company	Searles Dry Lake	Salt	M/P
10	Rheox Inc.	Hector Mine	Bentonite	M/P
11	Riverside Cement Co.	Oro Grande Plant	Cement	P
12	Salt Products Co.	N/A	Salt	M/P
13	Southwestern Mineral Incorporated	Victorville Plant	Cement	P
14	Specialty Mineral Incorporated	Mud Hills	Zeolite	M
15	Superior Salt Inc.	Dale Lake	Salt	M/P
16	Superior Salt Inc.	Dale Lake	Salt	M/P
17	Viceroy Gold Corporation	Castle Mountain Mine	Gold/Silver	M
18	Pfizer Chemical	Castle Mountain Mine	Silver	M

Source: USGS Mine and Processing Plant Locations, Arranged by State and County, 2001; CGS, California Non-Fuel Minerals, 2004.

4.12.2 – REGULATORY FRAMEWORK

State

The California Geological Survey (CGS) has an ongoing classification project for San Bernardino County which is mandated by the Surface Mining and Reclamation Act (SMARA). SMARA addresses the need for a continuing supply of mineral resources and to prevent or minimize the negative impacts of surface mining to public health, property and the environment. SMARA applies to anyone, including government agencies, engaged in surface mining operations in California, including federally managed lands that disturb more than one acre or remove more than 1,000 cubic yards of material cumulatively from one site. This includes, but is not limited to, prospecting and exploratory activities, dredging and quarrying, streambed skimming, borrow pitting, and the stockpiling of mined materials.

The California Department of Conservation's Division of Mines and Geology Mineral Land Classification Project continues to provide the County with mineral resource maps which have proved to be of value in land use planning and mineral conservation. The State Department of Conservation, Division of Mines and Geology, is also in the process of identifying lands within the County with the potential for mineral resource recovery and will be used by the County in identifying new mineral resource areas to help ensure there preservation. The programs produce maps of Mineral Resource Zones (MRZ) that designate known or suspected economic mineral deposits.

Local

The County requires mining operations to have approved Mining/Reclamation Plans in compliance with the applicable sections of the Public Resources Code; SMARA; the State Administrative Code, Natural Resources, Mining and Geology; State Mining and Geology Board; and the San Bernardino County General Plan and Development Code prior to the start of mining operations. Before a mining project is approved, a reclamation plan must be prepared and approved by the County. The plan must include the following information:

- Maximum anticipated depth of extraction;
- A description of the reclamation land use;
- A description of the manner in which affected streambed channels and stream banks will be rehabilitated to a condition minimizing erosion;
- Final slope stability;
- Removal of improvements and actions to reduce compaction of areas sited for roads, buildings, or other improvements; and
- Revegetation methods to reestablish wildlife habitat and provide long-term soil stabilization.

The plan also includes performance standards for:

- Revegetation;
- Drainages and erosion control;
- Reclamation of prime agricultural land and other agricultural land;
- Stream protection, including protection of surface water and groundwater;
- Topsoil salvage; and
- Slope stability.

The State requires that a Mining Report be submitted annually by each mine operator. The Report must include information as to the amount of land disturbed during the previous year, acreage reclaimed during the previous year, and any amendments to the mine's reclamation plan. This process helps the County and the State to track mining operations. The County performs at least one inspection of all active mines and mines that are temporarily inactive in compliance with SMARA.

4.12.3 – SIGNIFICANCE THRESHOLDS

Per the CEQA Guidelines, implementation of the Project would have a significant impact related to mineral resources if it would:

a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state; or
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan.

4.12.4 – IMPACTS AND MITIGATION MEASURES

This section describes potential impacts related to loss of statewide or regional mineral resources and loss of locally important mineral resources, which could result from the implementation of the Project and recommends mitigation measures as needed to reduce significant impacts.

Loss of Statewide or Regional Mineral Resources

Impact MINERAL-1 – Would the project result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?

Analysis of Impacts

According to the California Department of Conservation *CGS Information Warehouse: Mineral Land Classification* tool, the Project site is located within Sector F-20 of the San Bernardino Production-Consumption Region (Special Report 143, Plate 7-34). As shown in the SMARA map for the Project area, the Project site is not located within a portion of the Sector boundary that is owned or controlled by aggregate producers. Therefore, the Project would not result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state.

Level of Significance Before Mitigation

No impact.

Mitigation Measures

No mitigation required.

Loss of Locally Important Mineral Resources

Impact MINERAL-2 – Would the project result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?

Analysis of Impacts

As discussed in Impact MINERAL-1 above, the Project site is not located within a portion of the Sector boundary that is owned or controlled by aggregate producers. The Project site was previously used for agriculture. No known resource recovery sites have been delineated on the Project site. Therefore, the Project would not result in the loss of availability of a locally important mineral resource recovery site.

Level of Significance Before Mitigation

No impact.

Mitigation Measures

No mitigation required.

Cumulative Impacts

Would the project cause substantial adverse cumulative impacts with respect to mineral resources?

Analysis of Impacts

As shown in Impacts MINERAL-1 and MINERAL-2 above, the Project will not result in the loss of availability of a known mineral resource that would be of value to the region or residents of the state, and will not result in the loss of availability of a locally important mineral resource recovery site. Therefore, the Project will not cause a substantial adverse cumulative impact with respect to mineral resources.

Level of Significance Before Mitigation

No impact.

Mitigation Measures

No mitigation required.

4.12.5 REFERENCES

California Resources Agency Department of Conservation, Divisions of Mines and Geology. Generalized Mineral Land Classification Map of Los Angeles County. 1979.

County of San Bernardino. County of San Bernardino 2007 General Plan. April 24, 2014. http://www.sbcounty.gov/Uploads/lus/GeneralPlan/FINALGP.pdf.

4.13 – Noise

This EIR chapter addresses noise impacts associated with the Project. Issues of interest are noise impacts identified by the CEQA Guidelines: whether the Project will cause a substantial adverse change to the environment with respect to Noise and Vibration.

4.13.1 ENVIRONMENTAL SETTING

Existing Noise Environment

The project area is a semi-developed area of the County and is subject to noise from a variety of transportation and stationary sources. The area currently consists primarily of industrial, office, commercial and transitioning agricultural uses.

Nearby Noise Sources

On-Road Vehicles

On-road vehicles represent the most prominent source of noise in the project area, and the majority of traffic and resultant noise are associated with the I-10 Freeway, the I-210 Freeway, Alabama Street, and San Bernardino Avenue.

Airports

The closest airport from the project site is San Bernardino International Airport (SBIA), approximately 1.15 miles to the northwest. There are no other airports within the vicinity of the project. As of the writing of this report, the Airport Master Plan and the Comprehensive Land Use Plan (CLUP) for SBIA were in the process of being prepared and the Airport was operating under an Interim Airport Operating Plan. As a consequence, the precise noise contours and safety zones were not available to include in the General Plan. However, relevant policies have been included in the General Plan. In addition, the Airport Land Use Compatibility Plan for the SBIA was not available for use in the General Plan. Upon adoption of the Airport Master Plan and CLUP, the new noise and safety zones will be incorporated into the General Plan and the Airport Land Use Compatibility Plan analyzed for relative information. Aircrafts overflights, takeoffs, and landings are sporadically heard, but do not cause a substantial noise impact in the vicinity of the project area. It is not anticipated that noise from SBIA will impact the proposed Project or its occupants.

Rail

The Union Pacific rail system, including 11 sidings that run east-west along the south side of I-10, is approximately 1.55 miles south of the site just south of the I-10. The lines are a major thoroughfare for freight and lead into a major rail yard (Santa Fe Station) west of the Project site in San Bernardino. As rail operations are intermittent, their influence on hourly or 24-hour noise metrics would generally be lower than noise produced by traffic on I-10 or I-210. However, rail operations noise would have some affect at receptors that are near the rail lines.

Stationary-Source Noise

Stationary-source noise from industrial and commercial operations in the Project area results primarily from mechanical sources and systems, including heaters, ventilation systems, pumps, compressors, air conditioners (HVAC), and refrigeration systems.

Project and Nearby Sensitive Receptors

Certain land uses are particularly sensitive to noise and vibration. These uses include residences, schools, hospital facilities, houses of worship, and open space/recreation areas where quiet environments are necessary for the enjoyment, public health, and safety of the community. Commercial and industrial uses are not considered noise- or vibration-sensitive uses. The proposed Project includes development of a distribution warehouse. Surrounding land consists of similar industrial uses with some undeveloped land and commercial developments

Fundamentals of Acoustics, Noise and Vibration

The following are brief definitions of terminology used in this chapter:

- **Sound.** A disturbance created by a vibrating object, which, when transmitted by pressure waves through a medium such as air, is capable of being detected by a receiving mechanism, such as the human ear or a microphone.
- **Noise.** Sound that is loud, unpleasant, unexpected, or otherwise undesirable.
- **Decibel (dB).** A unitless measure of sound on a logarithmic scale.
- **Vibration Decibel (VdB).** A unitless measure of vibration, expressed on a logarithmic scale and with respect to a defined reference vibration velocity. In the U.S., the standard reference velocity is 1 micro-inch per second (1x10-6 in/sec).
- **A-Weighted Decibel (dBA).** An overall frequency-weighted sound level in decibels that approximates the frequency response of the human ear.
- **Equivalent Continuous Noise Level (Leq); also called the Energy-Equivalent Noise Level.** The value of an equivalent, steady sound level which, in a stated time period (often over an hour) and at a stated location, has the same A-weighted sound energy as the time-varying sound. Thus, the Leq metric is a single numerical value that represents the equivalent amount of variable sound energy received by a receptor over the specified duration.
- **Statistical Sound Level (Ln).** The sound level that is exceeded “n” percent of time during a given sample period. For example, the L50 level is the statistical indicator of the time-varying noise signal that is exceeded 50 percent of the time (during each sampling period); that is, half of the sampling time, the changing noise levels are above this value and half of the time they are below it. This is called the “median sound level.” The L10 level, likewise, is the value that is exceeded 10 percent of the time (i.e., near the maximum) and this is often known as the “intrusive sound level.” The L90 is the sound level exceeded 90 percent of the time and is often considered the “effective background level” or “residual noise level.”

- **Day-Night Level (Ldn or DNL).** The energy average of the A-weighted sound levels occurring during a 24-hour period, with 10 dB added to the A-weighted sound levels occurring during the period from 10 PM to 7 AM.
- **Community Noise Equivalent Level (CNEL).** The energy average of the A-weighted sound levels occurring during a 24-hour period, with 5 dB added to the A-weighted sound levels occurring during the period from 7 PM to 10 PM and 10 dB added to the A-weighted sound levels occurring during the period from 10 PM to 7 AM. For general community/environmental noise, CNEL and Ldn values rarely differ by more than 1 dB. As a matter of practice, Ldn and CNEL values are interchangeable and are treated as being equivalent in this assessment.
- **Sensitive Receptor.** Noise- and vibration-sensitive receptors include land uses where quiet environments are necessary for enjoyment and public health and safety. Residences, schools, motels and hotels, libraries, religious institutions, hospitals, and nursing homes are examples.

CNEL and Ldn are utilized for describing ambient noise levels because they account for all noise sources over an extended period of time and account for the heightened sensitivity of people to noise during the night. Leq is better utilized for describing specific and consistent sources because of the shorter reference period.

Federal and State agencies have established noise and land use compatibility guidelines that use averaging approaches to noise measurement. The State Department of Aeronautics and the California Commission on Housing and Community Development have adopted the CNEL.

The Production of Sound

Sound has three properties: amplitude and amplitude variation of the acoustical wave (loudness), frequency (pitch), and duration of the noise. Despite the ability to measure sound, human perceptibility is subjective, and the physical response to sound complicates the analysis of its impact on people. People judge the relative magnitude of sound sensation in subjective terms such as “noisiness” or “loudness.”

Measuring Sound

Loudness (sound pressure level) is described in logarithmic units of ratios of sound pressures to a reference pressure, squared. These units are called bels. To provide a finer description of sound, a bel is subdivided into 10 decibels, abbreviated dB. Since decibels are logarithmic units, sound pressure levels cannot be added or subtracted by ordinary arithmetic means. For example, if one automobile produces a sound pressure level of 70 dB when it passes an observer, two cars passing simultaneously will not produce 140 dB. Rather, they would combine to produce 73 dB. This same principle can be applied to other traffic quantities as well. In other words, doubling the traffic volume on a street or the speed of the traffic will increase the traffic noise level by three dB. Conversely, halving the traffic volume or speed will reduce the traffic noise level by three dB. A three dB change in sound is the beginning at which humans generally notice a *barely perceptible* change in sound, and a five-dB change is generally *readily perceptible* (Caltrans 2013a). In addition to sound pressure levels, the frequency or pitch of a sound also has a substantial effect on how humans will respond.

The A-weighted sound pressure level (dB[A]) is the sound pressure level, in decibels, as measured on a sound level meter using the A-weighted filter network. The A-weighting filter de-

emphasizes the very low and very high frequency components of the sound, placing greater emphasis on those frequencies within the sensitivity range of the human ear. Table 4.13-1 (Typical A-Weighted Noise Levels) displays a range of noise levels associated with common indoor and outdoor activities.

Table 4.13-1
Typical A-Weighted Noise Levels

Outdoor Activities	dB(A) Noise Level	Indoor Activities
	110	Rock Bank
Jet flyover at 1,000 feet		
	100	
Gas lawnmower at 3 feet		
	90	
Diesel truck at 50 feet at 50 mph		Food blender at 3 feet
	80	Garbage disposal at 3 feet
Noise urban area, daytime		
Gas lawnmower, 100 feet	70	Vacuum cleaner at 10 feet
Commercial area		Normal speech at 3 feet
Heavy traffic at 3 feet	60	
		Large business office
Quiet urban daytime	50	Dishwasher in next rom
Quiet urban area nighttime	40	Theater, large conference room (background)
Quiet suburban nighttime		
	30	Library
Quiet rural nighttime		Bedroom at night, concert hall (background)
	20	
		Broadcast/recording studio
	10	
	0	

Source: Caltrans 2013

Distance from a Noise Source

For each doubling of distance from a point noise source, the sound level will decrease by 6 dBA. In other words, if a person is 100 feet from a machine, and moves to 200 feet from that source, sound levels will drop approximately 6 dBA. For each doubling of distance from a line source, like a roadway, noise levels are reduced by 3 to 5 decibels, depending on the ground cover between the source and the receiver.

Noise barriers can provide approximately a 5 dBA CNEL noise reduction. (Additional reduction may be provided with a barrier of appropriate height, material, location, and length). A row of buildings provides up to 5 dBA CNEL noise reduction, with a 1.5 dBA CNEL reduction for each additional row up to a maximum reduction of approximately 10 dBA. The exact degree of noise attenuation depends on the nature and orientation of the structure and intervening barriers.

Vibration and Groundborne Noise

Vibration is the movement of mass over time. It is described in terms of frequency and amplitude and unlike sound; there is no standard way of measuring and reporting amplitude. Vibration can be described in units of velocity (inches per second) or discussed in decibel (dB) units to compress the range of numbers required to describe vibration. Vibration impacts to buildings are generally discussed in terms of peak particle velocity (PPV) that describes particle movement over time (in terms of physical displacement of mass). For purposes of this analysis, PPV will be used to describe all vibration for ease of reading and comparison. Vibration can impact people, structures, and sensitive equipment (Caltrans 2013b). The primary concern related to vibration and people is the potential to annoy those working and residing in the area. Vibration with high enough amplitudes can damage structures (such as crack plaster or destroy windows). Groundborne vibration can also disrupt the use of sensitive medical and scientific instruments such as electron microscopes. Common sources of vibration within communities include construction activities and railroads.

Groundborne vibration generated by construction projects is usually highest during pile driving, rock blasting, soil compacting, jack hammering, and demolition-related activities. Next to pile driving, grading activity has the greatest potential for vibration impacts if large bulldozers, large trucks, or other heavy equipment are used.

4.13.2 – REGULATORY FRAMEWORK

Noise is defined as unwanted sound and is known to have several adverse effects on people, including hearing loss, speech and sleep interference, physiological responses, and annoyance. Based on these known adverse effects, the federal government, State of California, and many local governments have established criteria to protect public health and safety and to prevent disruption of certain human activities.

The environmental impact of noise is a function of the sensitivity of the land use where noise is heard. In general, land use sensitivity to noise is a function of human annoyance and community reaction rather than health and safety considerations. Human annoyance takes place at sound levels that are much lower than the sound levels that could produce hearing loss.

Residents typically become annoyed when the noise level in their environment interferes with sleeping, talking, and listening to radio or television. People are particularly sensitive to nighttime noises that interfere with sleep. Interior noise levels of 45 Ldn or CNEL or less are considered necessary for restful sleep (USEPA 1974).

To limit population exposure to physically and/or psychologically damaging as well as intrusive noise levels, the State of California and the County of San Bernardino have established standards and ordinances to control noise.

State

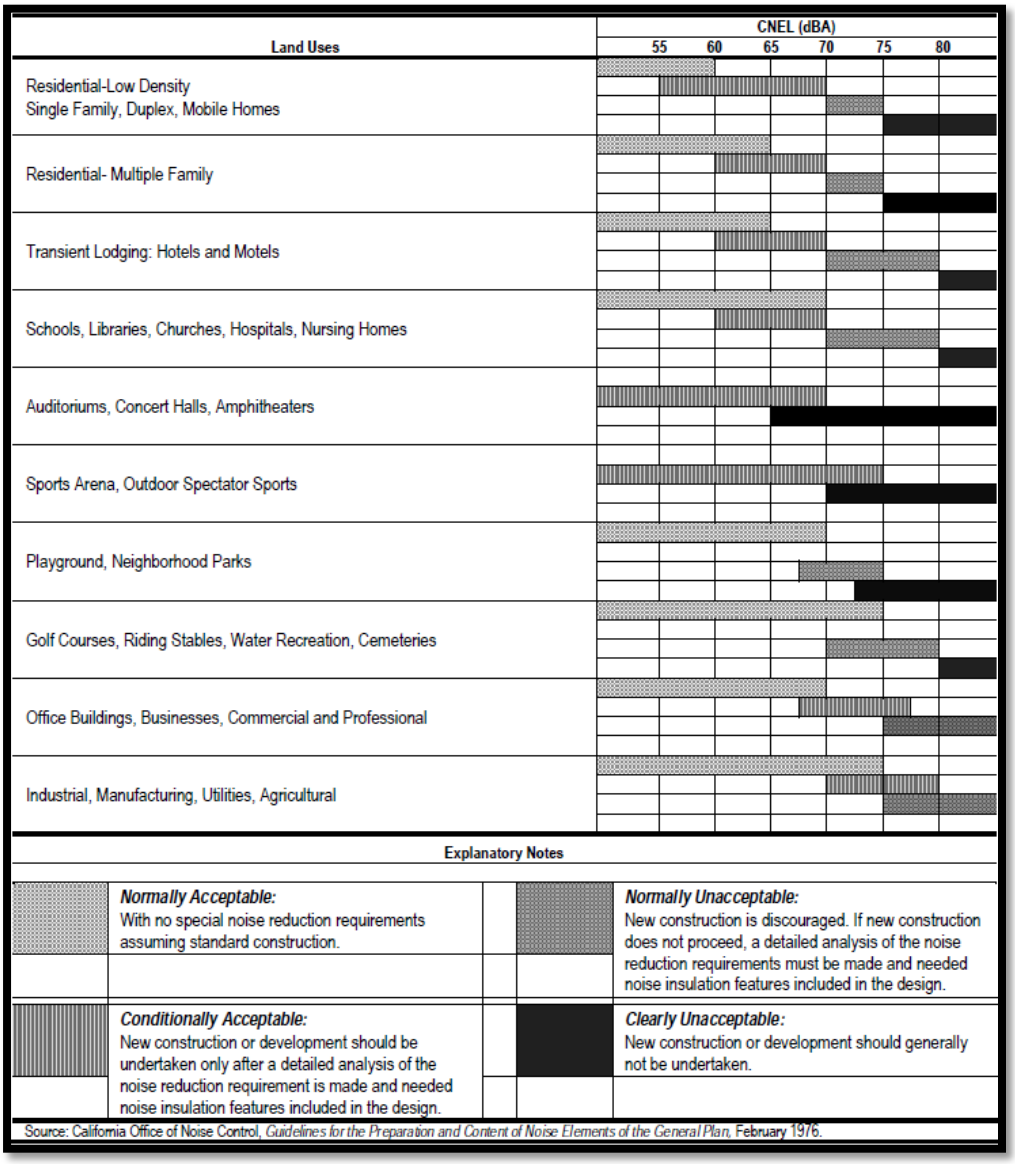
State of California Noise Requirements

The state regulates freeway noise, sets standards for sound transmission, provides occupational noise control criteria, identifies noise insulation standards, and provides guidance for local land use compatibility. State law requires that each county and city adopt a general

plan that includes a noise element, which is to be prepared according to guidelines adopted by the Governor's Office of Planning and Research. The purpose of the noise element is to "limit the exposure of the community to excessive noise levels" (OPR 2003).

The state noise compatibility guidelines, presented in Figure 4.13-1, are designed to ensure that proposed land uses are compatible with the predicted future noise environment. At different exterior noise levels, individual land uses are identified as "clearly acceptable," "normally acceptable," "normally unacceptable," or "clearly unacceptable." A "conditionally acceptable" designation implies new construction or development should be undertaken only after a detailed analysis of the noise reduction requirements for each land use is made and needed noise insulation features are incorporated in the design. By comparison, a "normally acceptable" designation indicates that standard construction can occur with no special noise reduction requirements.

Figure 4.13-1
Community Noise and Land Use Compatibility



In addition, the California Environmental Quality Act (CEQA) requires that all known environmental effects of a project be analyzed, including environmental noise impacts. Under CEQA, a project has a significant impact if the project exposes people to noise levels in excess of thresholds, which can include standards established in the local general plan or noise ordinance.

State of California Building Code

The state's noise insulation standards are codified in the California Code of Regulations, Title 24, Building Standards Administrative Code, Part 2, California Building Code. These noise standards are applied to new construction in the state for the purpose of controlling interior noise levels resulting from exterior noise sources. The regulations specify that acoustical studies must be prepared when noise-sensitive structures, such as residential buildings, schools, or hospitals, are near major transportation noise sources, and where such noise sources create an exterior noise level of 60 dBA CNEL or higher. Acoustical studies that accompany building plans must demonstrate that the structure has been designed to limit interior noise in habitable rooms to acceptable noise levels. For residential buildings, schools, and hospitals, the acceptable interior noise limit for new construction is 45 dBA CNEL.

Local

County of San Bernardino General Plan Noise Element

The purpose of the Noise Element is to limit the exposure of the community to excessive noise levels. Local governments must "analyze and quantify" noise levels and the extent of noise exposure through actual measurement of the use of noise modeling. Technical data relating to mobile and point sources must be collected and synthesized into a set of noise control policies and programs that minimize the exposure of community residents to excessive noise. Noise levels are contained in the San Bernardino County General Plan.

The San Bernardino County General Plan Noise Element identifies the limit to the exposure of the community to excessive noise levels. Local governments must analyze and quantify noise levels and the extent of noise exposure through actual measurement or the use of noise modeling. Technical data relating to mobile and point sources must be collected and synthesized into a set of noise control policies and programs that minimizes the exposure of community residents to excessive noise. The Noise Element is closely related to the Circulation and Land Use Elements.

The goals and policies in the County of San Bernardino General Plan Noise Element that are relevant to the project are:

Goal N 1 The County will abate and avoid excessive noise exposures through noise mitigation measures incorporated into the design of new noise-generating and new noise-sensitive land uses, while protecting areas within the County where the present noise environment is within acceptable limits.

- **Policy N 1.1** Designate areas within San Bernardino County as "noise impacted" if exposed to existing or projected future exterior noise levels from mobile or stationary sources exceeding the standards listed in Chapter 83.01 of the Development Code.

- **Policy N 1.2** Ensure that new development of residential or other noise-sensitive land uses is not permitted in noise-impacted areas unless effective mitigation measures are incorporated into the project design to reduce noise levels to the standards of Noise-sensitive land uses include residential uses, schools, hospitals, nursing homes, places of worship and libraries.
- **Policy N 1.3** When industrial, commercial, or other land uses, including locally regulated noise sources, are proposed for areas containing noise-sensitive land uses, noise levels generated by the proposed use will not exceed the performance standards of Table N-2 within outdoor activity areas. If outdoor activity areas have not yet been determined, noise levels shall not exceed the performance standards listed in Chapter 83.01 of the Development Code at the boundary of areas planned or zoned for residential or other noise-sensitive land uses.
- **Policy N 1.4** Enforce the state noise insulation standards (California Administrative Code, Title 24) and Chapter 35 of the California Building Code (CBC).1
- **Policy N 1.5** Limit truck traffic in residential and commercial areas to designated truck routes; limit construction, delivery, and through-truck traffic to designated routes; and distribute maps of approved truck routes to County traffic officers.
- **Policy N 1.6** Enforce the hourly noise-level performance standards for stationary and other locally regulated sources, such as industrial, recreational, and construction activities as well as mechanical and electrical equipment.
- **Policy N 1.7** Prevent incompatible land uses, by reason of excessive noise levels, from occurring in the future.

Goal N 2 The County will strive to preserve and maintain the quiet environment of mountain, desert and other rural areas.

- **Policy N 2.1** The County will require appropriate and feasible on-site noise attenuating measures that may include noise walls, enclosure of noise-generating equipment, site planning to locate noise sources away from sensitive receptors, and other comparable features.
- **Policy N 2.2** The County will continue to work aggressively with federal agencies, including the branches of the military, the US Forest Service, BLM, and other agencies to identify and work cooperatively to reduce potential conflicts arising from noise generated on federal lands and facilities affecting nearby land uses in unincorporated County areas.

County Code of Ordinances

Stationary Noise Sources

SBCDC Section 83.01.080 (Noise) of the County of San Bernardino Code of Ordinances establishes standards concerning acceptable noise levels for both noise-sensitive land uses and noise-generating land uses. Noise limits based on receiving land use are shown below in Table 4.13-2, *Noise Standards for Stationary Noise Sources*.

Table 4.13-2
Noise Standards for Stationary Noise Sources

Affected Land Uses (Receiving Noise)	7:00 AM – 10:00 PM L_{eq}	10:00 PM – 7:00 AM L_{eq}
Residential	55 dBA	45 dBA
Professional Services	55 dBA	55 dBA
Other Commercial	60 dBA	60 dBA
Industrial	70 dBA	70 dBA

Source: SBCDC, Section 83.01.080 (Noise)
Leq = Equivalent-Energy Sound Level
dBA = A-weighted Sound Pressure Level

Noise levels at receiving properties may not exceed the standards:

1. for a cumulative period of more than 30 minutes in any hour (equivalent to the L50 statistical sound level).
2. plus 5 dBA for a cumulative period of more than 15 minutes in any hour (equivalent to the L25 statistical sound level).
3. plus 10 dBA for a cumulative period of more than 5 minutes in any hour (equivalent to the L8.3 statistical sound level).
4. plus 15 dBA for a cumulative period of more than 1 minute in any hour (equivalent to the L1.6 statistical sound level).
5. plus 20 dBA for any period of time (equivalent to the L0 or Lmax statistical sound level).

If the measured ambient level exceeds any of the first four noise limit categories above, the allowable noise exposure standard shall be increased to reflect the ambient noise level. If the ambient noise level exceeds the fifth noise limit category, the maximum allowable noise level under this category shall be increased to reflect the maximum ambient noise level.

Mobile Source Noise

Table 4.13-3 shows the noise standards by receiving land use type for exposures to mobile noise sources.

Table 4.13-3
Interior 12-Hour Equivalent Sound Level

Land Use		L_{dn} (or CNEL) dBA	
Categories	**Uses**	**Interior[1]**	**Exterior[2]**
Residential	Single and multi-family, duplex, mobile homes	45	60[3]
Commercial	Hotel, motel, transient housing	45	60[3]
	Commercial Retail, bank, restaurant	50	N/A
	Office Building, research and development, professional offices	45	65
	Amphitheater, concert hall, auditorium, movie theater	45	N/A
Institutional/ Public	Hospital, nursing home, school classroom, religious institution, library	45	65
Open Space	Park	N/A	65

Source: SBCDC, Section 8.01.080 (Noise).
Notes: CNEL = Community Noise Equivalent Level
1 The indoor environment shall exclude bathrooms, kitchens, toilets, closets and corridors.
2 The outdoor environment shall be limited to: Hospital/office building patios Hotel and motel recreation areas Mobile home parks Multi-family private patios or balconies Park picnic areas Private yard of single-family dwellings School playgrounds
3 An exterior noise level of up to 65 dBA Ldn (or CNEL) shall be allowed provided exterior noise levels have been substantially mitigated through a reasonable application of the best available noise reduction technology, and interior noise exposure does not exceed 45 dB(A) Ldn (or CNEL) with windows and doors closed. Requiring that windows and doors remain closed to achieve an acceptable interior noise level shall necessitate the use of air conditioning or mechanical ventilation.

SBCDC also has noise level standards for other structures, as summarized in Table 4.13-4. In addition, the average of the maximum levels of the loudest of intrusive sounds occurring during a 24-hour period shall not exceed an interior sound level of 65 dBA.

Table 4.13-4
Interior 12-Hour Equivalent Sound Level

Typical Uses	dBA L_{dn}[1]
Educational, Institutions, Libraries, Churches, etc.	45 dBA
General Office, Reception, etc.	50 dBA
Retail Stores, Restaurants, etc.	55 dBA
Other Areas of Manufacturing, Assembly, Test, Warehousing, etc.	65 dBA

Source: SBCDC, Section 83.01.080 (Noise).
1 Note that there is an inherent mismatch between the specified 12-hour sound level and the Ldn level, which is, by definition, a 24-hour noise metric.

Construction Noise

Under SBCDC Section 83.01.080, the County allows construction activities from 7AM to 7PM, except on Sundays and federal holidays.

Vibration

SBCDC Section 83.01.090 prohibits vibration that can be felt without the aid of instruments or produces a particle velocity greater than or equal to two-tenths inches per second (i.e., 0.20 in/sec) at or beyond the lot line of the source. Exceptions are made for temporary construction, maintenance, repair, or demolition activities between 7:00 AM and 7:00 PM, except Sundays and federal holidays.

4.13.3 – SIGNIFICANCE THRESHOLDS

Per the CEQA Guidelines, implementation of the Duke Realty warehouse project would have a significant impact related to noise if it would:

a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies;
b) Generation of excessive groundborne vibration or groundborne noise levels;
c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels; or

4.13.4 – IMPACTS AND MITIGATION MEASURES

This section analyzes the existing and future noise environment for the Duke Realty Warehouse Project and assesses whether implementation of the proposed project would result in substantial noise impacts.

Existing Noise Regulations

Impact NOISE-1 – Would the project result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Analysis of Impacts

The proposed Project consists of a 1.192 million square foot industrial distribution warehouse in an area of unincorporated San Bernardino County known as the Redlands "Donut Hole". The Project site and surrounding sites are zoned for similar industrial uses, and similar industrial warehouses are currently operating on the Project vicinity. The nearest sensitive receptors to the site are located approximately 0.5-miles to the south of the site. The proposed Project is compatible with surrounding/adjacent land uses and is not itself a sensitive land use that would be exposed to incompatible noise levels. Below is a brief discussion of sensitive receptors in the Project area as well as potential temporary and permanent increases in ambient noise levels from on-site construction and operation activities and roadway traffic noise levels.

Noise Sensitive Receptors

Noise sensitive receptors are buildings or areas where unwanted sound or increases in sound may have an adverse effect on people or land uses. Residential areas, motels and hotels, hospitals and health care facilities, school facilities, and parks are examples of noise receptors that could be sensitive to changes in existing environmental noise levels. The noise sensitive receptors near the Project site are shown in Exhibit 4.13-1 below, and include the following:

1. The Packinghouse Christian Academy located 0.5 miles south of the Project site.
2. Citrus Valley High School located 0.65 miles east of the Project site.
3. Single-family residences located 1.0 mile to the east of the Project site.

Construction Noise

The Project would require the use of heavy-duty, off-road construction equipment during construction activities. Since project specific information is not available at this time, potential construction-related noise impacts can only be evaluated based on the typical construction activities associated with industrial development. Project construction activities would include: staging, site preparation (e.g., land clearing), grading, utility trenching, foundation work (e.g., excavation, pouring concrete pads), material deliveries, building construction (e.g., framing, concrete pouring, welding), paving, coating application, and site finishing work. In general, these activities would involve the use of worker vehicles, delivery trucks, dump trucks, and heavy-duty construction equipment such as (but not limited to) backhoes, tractors, loaders, graders, excavators, rollers, cranes, material lifts, generators, and air compressors. Table 4.13-5 presents the noise levels associated with typical types of construction equipment that could be used to develop the Project.

Table 4.13-5
Typical Construction Equipment Noise Levels (dBA)

Equipment	Reference Noise Level at 50 Feet (Lmax)(A)	Percent Usage Factor(B)	Predicted Noise Levels (Leq) at Distance(C)					
			25 Feet	50 Feet	100 Feet	150 Feet	250 Feet	350 Feet
Bulldozer	85	40	82	81	75	71	67	64
Backhoe	80	40	87	76	70	66	62	59
Compact Roller	80	20	79	73	67	63	59	56
Concrete Mixer	85	40	87	81	75	71	67	64
Crane	85	16	83	77	71	67	63	60
Excavator	85	40	87	81	75	71	67	64
Generator	82	50	85	79	73	69	65	62
Pneumatic tools	85	50	88	82	76	72	68	65
Scraper	85	40	87	82	76	72	68	64
Delivery Truck	85	40	87	81	75	71	67	64
Vibratory Roller	80	20	79	73	67	63	59	56

Sources: Caltrans, 2013 and FHWA, 2010.

(A) L_{max} noise levels based on manufacturer's specifications.

(B) Usage factor refers to the amount of time the equipment produces noise over the time period.

(C) Estimate does not account for any atmospheric or ground attenuation factors. Calculated noise levels based on Caltrans, 2013: L_{eq} (hourly) = L_{max} at 50 feet – 20log (D/50) + 10log (UF), where: L_{max} = reference L_{max} from manufacturer or other source; D = distance of interest; UF = usage fraction or fraction of time period of interest equipment is in use.

With regard to construction noise, site preparation and grading phases typically result in the highest temporary noise levels due to the use of heavy-duty equipment such as dozers, excavators, graders, loaders, scrapers, and trucks. As shown in Table 4.13-5, the worst-case Leq and Lmax noise levels associated with the operation of pneumatic tools and scrapers are predicted to be approximately 85 dBA, at a distance of 50 feet from the equipment operating area. At an active construction site, it is not uncommon for two or more pieces of construction equipment to operate at the same time and in close proximity. The concurrent operation of two or more pieces of construction equipment would result in noise levels of approximately 85 to 88 dBA at a distance of 50 feet from equipment operating areas[1]. These maximum noise levels would occur for a short period time; as site preparation (10 days) and grading (20 days) is completed and building construction begins, work activities would occur further from property lines and generate lower construction noise levels.

Construction noise would be noticeable since construction noise would be higher than the ambient noise environment at and near the site; however, the City's municipal code sets specific noise level standards for construction noise. The San Bernardino County Development Code Section 83.01(g) allows construction related noise between 7:00 a.m. and 6:00 p.m. Monday through Saturday, excluding holidays. Construction of the proposed Project will be conditioned by the County to occur only during the exempted hours allowed in the County Development Code. Therefore, temporary construction noise levels will be less than significant.

[1] As shown in Table 4.13.5, a single bulldozer provides a sound level of 81 dBA Leq at a distance of 50 feet; when two identical sound levels are combined, the noise level increases to 84 dBA Leq and when three identical sound levels are combined, the noise level increases to 86 dBA Leq. These estimates assume no shielding or other noise control measures are in place at or near the work areas.

Source: Google Maps

Not to Scale

Exhibit 4.13-1 Noise Sensitive Receptor Locations

Duke Realty Alabama Palmetto Warehouse
County of San Bernardino, California

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On-Site Operational Noise Sources Including Stationary Noise Sources

The Project would include a warehouse building and associated parking and landscaping improvements. The warehouse building will include on-site equipment noise such as forklifts, HVAC systems, etc. This type of anticipated activity is consistent with other land uses in the area, and would not result in a substantial increase in noise levels in the immediate area. Although the exact noise levels at sensitive receptors are not known at this time, it is likely that noise levels generated by the Project would not contribute to noise levels that exceed the County's allowable daytime (55 dBA) and/or nighttime noise standards (45 dBA) established in the County Code of Ordinances for single-family residential land uses. Therefore, this impact is considered less than significant.

Roadway Traffic Noise Levels

The Project would generate traffic that would be distributed onto the local roadway system, potentially increasing noise levels along travel routes. According to the Caltrans *Basics of Highway Noise: Technical Noise Supplement*, doubling the traffic volume on a street or the speed of the traffic will increase the traffic noise level by 3 dBA. Conversely, halving the traffic volume or speed will reduce the traffic noise level by 3 dBA. A 3 dBA change in sound is the beginning at which humans generally notice a *barely perceptible* change in sound and a 5 dBA change is generally *readily perceptible* (Caltrans 2009). A noise level of less than 3 dBA is typically not perceptible to the human ear in an outdoor environment. If the proposed project would not result in a doubling of traffic volumes on the local roadway system, it would not result in a substantial permanent increase in traffic-related noise levels. Therefore, a substantial increase in ambient noise is considered an increase that is *barely perceptible* (3 dBA), and can be determined by analyzing Project-related traffic volume increases.

The Traffic Impact Study (TIS) prepared for the proposed Project identifies that the Project would result in a net increase in trip generation equal to 2,202 daily PCE trip-ends, including 127 PCE trip-ends during the AM peak hour and 158 PCE trip-ends during the PM peak hour (Albert A. Webb Associates, January 2019). More than 7% of the Project's total net increase in vehicle trips (158 of 2,202) would occur during the PM peak hour and, therefore, provides an overall indication of the relative increase in traffic on local roadways resulting from the Project. Based on the trip generation and trip distribution assumptions contained in the TIS, the Project would not increase total intersection turning volumes (i.e., the number of trips moving through the intersection) by more than approximately 54 trips at any one intersection. This worst case trip increase would occur at the intersection of Alabama Street and Palmetto Avenue during AM peak hour conditions and would constitute an approximately 2.5% increase in intersection volumes under existing conditions and an approximately 2.1% increase in total intersection volumes under cumulative 2040 conditions. All other Project-related increases in traffic volumes moving through studied intersections would be less than these increases. Since the Project would not result in a doubling of traffic volumes on roadways in the Project vicinity, ambient noise would not increase by 3 dBA as a result of the Project, and a substantial increase in ambient noise would not occur. Therefore, impacts related to temporary and permanent ambient noise increases will be less than significant

Level of Significance Before Mitigation

Less than significant.

Mitigation Measures

No mitigation required.

Groundborne Vibration and Noise Levels

Impact NOISE-2 – Would the project result in generation of excessive groundborne vibration or noise levels?

Analysis of Impacts

Vibration is the movement of particles within a medium or object such as the ground or a building. Vibration may be caused by natural phenomena (e.g., earthquakes, volcanic eruptions, sea waves, landslides) or humans (e.g., explosions, machinery, traffic, trains, construction equipment). Vibration sources are usually characterized as continuous, such as factory machinery, or transient, such as explosions. As is the case with airborne sound, groundborne vibrations may be described by amplitude and frequency; however, unlike airborne sound, there is no standard way of measuring and reporting amplitude. Vibration amplitudes can be expressed in terms of velocity (inches per second) or discussed in dB units in order to compress the range of numbers required to describe vibration.[2] Vibration impacts to buildings are usually discussed in terms of peak particle velocity (PPV) in inches per second (in/sec). PPV represents the maximum instantaneous positive or negative peak of a vibration signal and is most appropriate for evaluating the potential for building damage. Vibration can impact people, structures, and sensitive equipment. The primary concern related to vibration and people is the potential to annoy those working and residing in the area. Vibration with high enough amplitudes can damage structures (such as crack plaster or destroy windows).

The potential for groundborne vibration is typically greatest when vibratory or large equipment such as rollers, impact drivers, or bulldozers are in operation. For the Project, the largest earthmoving equipment would primarily operate during site preparation, grading, building construction, and paving work. The closest sensitive receptors to the Project site are located approximately 2,640 feet to the south (Packinghouse Christian Academy). Table 4.13-6 lists the groundborne vibration levels associated with the potential type of construction equipment that would most likely be required while undertaking construction in the Project area.

Table 4.13-6
Estimated Project Construction Groundborne Vibration Levels

Equipment	Peak Particle Velocity (in/sec) (A)			Velocity Decibels (VdB) (B)		
	25 feet	60 feet	100 feet	25 feet	60 feet	100 feet
Large bulldozer	0.089	0.034	0.019	87.0	75.6	68.9
Small bulldozer	0.03	0.011	0.007	58.0	46.6	39.9
Loaded truck	0.076	0.029	0.017	86.0	74.6	67.9
Jackhammer	0.035	0.013	0.008	79.0	67.6	60.9
Sources: Caltrans 2013b and FTA 2006. (A) Estimated PPV calculated as: PPV(D)=PPV(ref)*(25/D)^1.1 where PPV(D)= Estimated PPV at distance; PPVref= Reference PPV at 25 ft; D= Distance from equipment to receiver; and n= ground						

[2] As with airborne sound, the groundborne velocity can also be expressed in decibel notation as velocity decibels, or dBV (FTA, 2006). The vibration of floors and walls may cause perceptible vibration, rattling of items such as windows or dishes on shelves, or a low-frequency rumble noise, referred to as groundborne noise. This analysis uses PPV to describe vibration effects.

Equipment	Peak Particle Velocity (in/sec) (A)			Velocity Decibels (VdB) (B)		
	25 feet	60 feet	100 feet	25 feet	60 feet	100 feet
attenuation rate (1.1 for dense compacted hard soils). (B) Estimated Lv calculated as: Lv(D)=Lv(25 feet)-30Log(D/25) where Lv(D)= estimated velocity level in decibels at distance, Lv(25 feet)= RMS velocity amplitude at 25 f; and D= distance from equipment to receiver.						

As shown in Table 4.13-6, receptors 25 feet away from construction activities could be exposed to groundborne vibration levels of up to 0.089 in/sec PPV and 87.0 VdB during operation of large bulldozers. Based on Caltrans' transient criteria (see Table 16-6), these vibration levels would be "barely perceptible," but under no circumstances are groundborne vibration levels predicted to exceed Caltrans' vibration damage threshold criteria for older residential structures (0.5 in/sec PPV), a threshold considered protective of all nearby buildings, which are presumed to be of more recent construction and thus are not as susceptible to damage from vibration as older, unreinforced structures. Although groundborne vibration from construction activities may be barely perceptible at nearby sensitive receptor locations, this impact would be infrequent and short in duration (lasting a few hours or days as equipment would not operate in the same location for a prolonged amount of time), would not damage buildings or structures, would not result in long-term incompatibility with existing land uses, and would, therefore, not be excessive.

Level of Significance Before Mitigation

Less than significant.

Mitigation Measures

No mitigation required.

Excessive Noise Levels within Airport Vicinity

Impact NOISE-3 – For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

Analysis of Impacts

The Project is located approximately 0.6 miles from San Bernardino International Airport (the former Norton Air Force Base). The airport is used minimally for cargo planes, the fire department, and small private planes; however, passenger flights are expected to increase in coming years. The Project is located within the Airport Safety Overlay for the Airport, as defined in Section 82.09.030 (Airport Safety Review Areas), in the San Bernardino County Development Code. The Project site is located in Airport Safety Review Area (AR3). The AR3 Area includes the area within one mile outside the 65Ldn noise contour. As such, the Project will not expose persons residing or working in the Project area to excessive noise levels, because exterior noise at the Project site will not exceed 65 dBA during airport operations. Therefore, less than significant impacts will occur.

Level of Significance Before Mitigation

Less than significant.

Mitigation Measures

No mitigation required.

Cumulative Impacts

Would the project cause substantial adverse cumulative impacts with respect to Noise?

Analysis of Impacts

Cumulative noise impacts would occur primarily as a result of increased traffic on local roadways due to buildout of the Project and other projects in the vicinity. A project's contribution to a cumulative traffic noise increase would be considered significant when the combined effect exceeds perception level threshold. The combined effect compares the "cumulative with Project" condition to existing conditions. Although there may be a significant noise increase due to the Project in combination with other related projects (combined effects), it must also be demonstrated that the Project has an incremental effect. In other words, a significant portion of the noise increase must be due to the Project. The following criteria were utilized to evaluate the combined effect of the cumulative noise increase.

- Combined Effect. The cumulative with Project noise level "Future With Project" would cause a significant cumulative impact if a 3.0 dB increase over existing conditions occurs and the resulting noise level exceeds the applicable exterior standard at a sensitive use.
- Incremental Effect. The "Future With Project" causes a 1.0 dBA increase in noise over the "Future Without Project" noise level.
- A significant impact would result only if both the combined and incremental effects criteria have been exceeded.

As indicated in the analysis of noise impacts above, the Project will not result in a 3.0 dB increase over existing conditions; therefore, none of the roadway segments would exceed both the Combined Effect and Incremental Effect criteria. Therefore, the Project in combination with cumulative background traffic noise levels would result in a less than significant cumulative impact.

Level of Significance Before Mitigation

Less than significant.

Mitigation Measures

No mitigation required.

4.13.5 REFERENCES

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4.14 – Population and Housing

This EIR chapter addresses population and housing impacts associated with the Project. Issues of interest are population and housing impacts identified by the CEQA Guidelines: whether the Project will induce substantial unplanned population growth or displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere.

4.14.1 – ENVIRONMENTAL SETTING

Regional Population Trends

Table 4.14-1 shows population and housing data collected by the Census Bureau for unincorporated and incorporated San Bernardino County during the last two decennial censuses.

Table 4.14-1
Census Data for San Bernardino County, 2000 and 2010

	2000	2010	Change, 2000-2010	
			Total	Percent
Unincorporated San Bernardino County (Includes Project Site)				
Population	292,857	291,776	-1,081	-0.4
Dwelling Units	126,869	132,921	6,052	4.8
San Bernardino County				
Population	1,709,434	2,035,210	325,776	19.1
Dwelling Units	601,369	699,637	98,268	16.3
Source: US Census, 2015a				

Department of Finance (DOF) information estimates the 2018 population of all of San Bernardino County at 2, 174,938 and 311,169 for the unincorporated portion.

SCAG Population Forecasts

Population forecasts for the unincorporated County and the County as a whole are listed in Table 4.14-2. The 2040 population forecasts are from the SCAG 2016-2040 RTP/SCS regional forecast. SCAG's household and employment projections, also shown in Table 4.14-3, are discussed later in this subsection.

Table 4.14-2
Adopted SCAG Growth Forecasts

	Unincorporated San Bernardino County		San Bernardino County		Projected Increase (2012 – 2040)		Projected % Increase, (2012 – 2040)	
Forecast	2012	2040	2012	2040	Uninc. SB County	SB County	Uninc. SB County	SB County
Population	295,600	344,100	2,068,000	2,731,300	48,500	663,300	16.4	32.1
Households	94,200	111,300	615,300	854,300	17,100	239,000	18.2	38.8
Employment	57,400	91,100	659,500	1,028,100	33,700	368,600	58.7	55.9
Source: SCAG, 2016								

As shown in the Table 4.14-2, the population of the County is forecast to increase to 2,731,300 by 2040, an increase of 663,300 or approximately 30.7 percent beyond its 2012 population. Approximately 48,500 of these future residents are expected to reside in the unincorporated portions of the County, which includes the Project site. SCAG forecasts also predict strong household and employment growth in the County.

Housing Trends

Housing units and households as counted in the 2010 Census and compared to 2018 DOF estimates are shown in Table 4.14-3.

Table 4.14-3
Housing Units and Households in San Bernardino County

	2010 Census	2018 DOF Estimate
Unincorporated San Bernardino County		
Housing Units	132,921	134,458
Households	94,085	99,118
Vacant Housing Units	38,836	35,340
Vacancy Rate	29.2%	26.3%
San Bernardino County		
Housing Units	699,637	719,911
Households	611,618	644,247
Vacant Housing Units	88,109	75,664
Vacancy Rate	12.6%	10.5%
Source: US Census 2015a; DOF 2018b.		

As shown in Table 4.14-3, the housing vacancy rate in San Bernardino County was 12.6 percent in 2010, as reported in the 2010 Census, and is currently estimated at 10.5%, as reported by the California Department of Finance. The vacancy rate of the unincorporated portions of the County was even higher, at 29.2 percent in 2010 and 26.3 percent currently. As shown in Table 4.14-2, the number of households in the County is forecast to increase by over a third—38.8 percent—between 2012 and 2040.

Regional Housing Needs Allocation

The RHNA is mandated by state housing law as part of the periodic process of updating housing elements of local general plans. State law requires that housing elements identify RHNA targets set by HCD to encourage each jurisdiction in the state to provide its fair share of very low, low, moderate, and upper income housing.

SCAG determines total housing need for each community in southern California based on three general factors: 1) the number of housing units needed to accommodate future population and employment growth; 2) the number of additional units needed to allow for housing vacancies; and 3) the number of very low, low, moderate, and above moderate income households needed in the community. Additional factors used to determine the RHNA include tenure, the average rate of units needed to replace housing units demolished, and other factors.

The County of San Bernardino's RHNA allocation for the 2014–2021 period was approved in 2012 and is shown in Table 4.14-4. The County is required to ensure that sufficient sites planned and zoned for housing are available to accommodate its need and to implement

proactive programs that facilitate and encourage the production of housing commensurate with its housing needs.

Table 4.14-4
San Bernardino County Regional Housing Needs Allocation for 2014-2021

Income Category	Definition	RHNA	
		Number of Units	Percentage
Very Low[1]	50% or Less of MFI[2]	9	23.1
Low	51-80% of MFI	6	15.4
Moderate	81-120% of MFI	7	17.9
Above Moderate	Above 120% of MFI	17	43.6
Total		**39**	**100%**

Source: San Bernardino County, 2014
[1] Includes Extremely Low
[2] MFI = median family income

Consistent with state housing law, the housing element demonstrates that the County can accommodate its RHNA allocation through its inventory of appropriate housing sites.

4.14.2 – REGULATORY FRAMEWORK

State

California Housing Element Law

California planning and zoning law requires each city and county to adopt a general plan for future growth (California Government Code § 65300). This plan must include a housing element that identifies housing needs for all economic segments and provides opportunities for housing development to meet that need. At the state level, the Housing and Community Development Department (HCD) estimates the relative share of California's projected population growth in each county based on DOF population projections and historical growth trends. These figures are compiled by HCD in a Regional Housing Needs Assessment (RHNA) for each region of California. Where there is a regional council of governments, HCD provides the RHNA to the council. Such is the case for the County of San Bernardino, which is a member of the Southern California Association of Governments (SCAG). SCAG assigns a share of the regional housing need to each of its cities and counties. The process gives cities and counties the opportunity to comment on the proposed allocations. HCD oversees the process to ensure that the council of governments distributes its share of the state's projected housing need.

California housing element laws (California Government Code §§ 65580–65589) require that each city and county identify and analyze existing and projected housing needs within its jurisdiction and prepare goals, policies, and programs to further the development, improvement, and preservation of housing for all economic segments of the community commensurate with local housing needs.

2014-2021 County of San Bernardino Housing Element

The County's most recent housing element was adopted by the San Bernardino County Board of Supervisors on January 28, 2014. For the 2014–2021 planning period, SCAG determined that the County's RHNA allocation for its unincorporated areas—which include the Project site—was 39 units (SCAG 2012).

Regional

Southern California Association of Governments

SCAG is a council of governments representing Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura counties. SCAG is the federally recognized metropolitan planning organization for this region, which encompasses over 38,000 square miles. SCAG actions in the San Bernardino County subregion that includes the Project site are partially the result of input from the San Bernardino Associated Governments, which offers recommendations regarding SCAG's initiatives.

Regional Transportation Plan/ Sustainable Communities Strategy

SCAG is responsible for the development of the regional transportation plan every four years and the regional transportation improvement plan every two years. SCAG uses regional transportation plans to focus on the relationship between jobs and housing and how it impacts mobility, minimizes congestion, and protects quality of life. Unique to the SCAG region is the option for subregions to create their own SCS. However, the San Bernardino Associated Governments has not chosen to do this and relies on SCAG's 2016-2040 RTP/SCS.

On April 7, 2016, SCAG's Regional Council adopted the 2016-2040 RTP/SCS. This long-range visioning plan balances future mobility and housing needs with economic, environmental, and public health goals. The 2016 RTP/SCS includes a strong commitment to reduce emissions from transportation sources to comply with Senate Bill 375, improve public health, and meet the National Ambient Air Quality Standards. It balances the region's future mobility and housing needs with economic, environmental, and public health goals. The RTP/SCS is required by the state of California and the federal government and is updated by SCAG every four years as demographic, economic, and policy circumstances change. The 2016 RTP/SCS is a living, evolving blueprint for the region's future (SCAG 2016).

4.14.3 – SIGNIFICANCE THRESHOLDS

Per the CEQA Guidelines, implementation of the Duke Realty warehouse project would have a significant impact related to population and housing if it would:

a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure);
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere; or

4.14.4 – IMPACTS AND MITIGATION MEASURES

This section describes potential impacts related to population growth, housing displacement, and physical displacement of the site, which could result from the implementation of the project and recommends mitigation measures as needed to reduce significant impacts.

Population Growth

Impact POP-1 – Would the Project induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

Analysis of Impacts

The Project will not induce substantial population growth either directly or indirectly. The Project will generate several new jobs and employment opportunities. This may generate a need for housing for new employees. However, the existing and currently developing housing stock should accommodate the housing needs for those employed by the type of jobs generated by the Project.

The Project site is designated as East Valley / Regional Industrial within the San Bernardino County East Valley Area Plan. The Project proposes a new warehouse facility; however no tenant has been proposed so the number of employees cannot be determined. Typically, new uses such as the proposed use generate 50-100 jobs including warehouse employees and drivers that will be on site in shifts. Employees could be full time or part time depending on the ultimate tenant. The Inland Empire has been considered to be housing rich with employees having to travel out of the area to work. Warehouse and other industrial uses have been developed, such that local residents are now able to commute shorter distances to work. The proposed project will likely draw from the local employment base for most of its employees.

Level of Significance Before Mitigation

Less than significant.

Mitigation Measures

No mitigation is required.

Housing Displacement

Impact POP-2 – Would the Project displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

Analysis of Impacts

The Project site is designated as East Valley / Regional Industrial within the San Bernardino County East Valley Area Plan. The Project proposes a new warehouse facility on undeveloped land and would not displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere.

Level of Significance Before Mitigation

No impact.

Mitigation Measures

No mitigation required.

Cumulative Impacts

Would the project cause substantial adverse cumulative impacts with respect to population and housing?

Analysis of Impacts

Capacity for additional l development on the Project site and in the surrounding area would be expected to occur during buildout of the San Bernardino County East Valley Area Plan. This planned growth is also accounted for in SCAG's growth projections for the region. In addition will not result in the displacement of any persons or housing, nor would it create a need for replacement housing. Cumulative impacts of the proposed Project related to displacement of people and housing would be less than significant

Level of Significance Before Mitigation

Less than significant.

Mitigation Measures

No mitigation required.

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4.15 – Public Services

This EIR chapter addresses public services impacts associated with the Project. Issues of interest are public services impacts identified by the CEQA Guidelines: whether the Project will result in substantial adverse physical impacts associated with the provision of public services and public service facilities which could cause significant environmental impacts.

4.15.1 – ENVIRONMENTAL SETTING

The Project site is approximately 55.8-acres of land located on four parcels within the "Donut Hole," an island area of unincorporated San Bernardino County, completely surrounded by the City of Redlands, west of the State Route 210 Freeway (SR 210) between Interstate 10(I-10) and the Santa Ana River. In 2003, due to the unique Public Services issues involving the Donut Hole and the City of Redlands, the County and the City of Redlands entered into Agreement No. 03-0856 wherein the City of Redlands agreed to provide police, fire, water and sewer services to the Donut Hole in exchange for 90 percent of the sales and use taxes generated within that area.

Police Protection

Per Agreement No. 03-0856, the City of Redlands provides police protection to the Project site. The Redlands Police Department is located at 1270 West Park Avenue, approximately two miles south of the Project site.

Fire Protection

Per Agreement No. 03-0856, the Redlands Fire Department provides fire services to the Project site. There are four fire station facilities within the City of Redlands service area; 261, 262, 263, and 264. Redlands Fire Station 264 is the nearest facility to the project site, approximately 2.3 miles to the southwest. The current response time in the City of Redlands, and at Fire Station 264 is four minutes within 90 percent of the time.[1]

Schools

The unincorporated portions of San Bernardino County are serviced by several school districts. The Project site is located in the Redlands Unified School District.[2]

Libraries

The San Bernardino County Library System services county residents in the Valley Region. The San Bernardino County Library System services approximately 1,100,000 people in 18 cities within San Bernardino County.[3] There are 28 branch facilities with a combined 177,925 square feet of library space providing one library for every 714 square miles or 0.21 square feet per person. There are also public libraries in the Cities of Redlands (K Smiley Library), Loma Linda (Loma Linda Library, San Bernardino (Feldheym Library), and Highlands (Racadio Library) that are in close proximity to the Project site.

[1] Redlands Fire Department Information Request, March 21, 2019.
[2] Redlands Unified School District https://www.redlandsusd.net/ [Accessed 3/21/2019]
[3] County of San Bernardino 2007 General Plan Final Program Environmental Impact Report.

4.15.2 – REGULATORY FRAMEWORK

Federal

Fire Prevention and Control Act of 1974

The Federal Fire Prevention and Control Act of 1974 was created to reduce the nation's losses caused by fire through better fire prevention and control, supplement existing programs of research, training, and education, and to encourage new and improved programs, and activities by State and local governments. In addition, the act established the United States Fire Administration and the Fire Research Center within the Department of Commerce. The Fire Prevention and Control Act established an intensified program of research into the treatment of burn and smoke injuries and the rehabilitation of victims of fires within the National Institutes of Health.

State

California Governor's Office of Emergency Services (Cal OES)

CAL OES serves as the lead State agency for emergency management in California. CAL OES coordinates the State response to major emergencies in support of local government. Cal OES is also responsible for collecting, verifying, and evaluating information about the emergency, facilitating communication with local government, and providing affected jurisdictions with additional resources when necessary. CAL OES may task State agencies to perform work outside their day to-day statuary responsibilities. Local jurisdictions first use their own resources and, as they are exhausted, obtain more from neighboring cities, and special districts in the county in which they are located, and other counties throughout the state through the Statewide Mutual Aid System.

Local

California Fire Code (Title 24, Part 9, California Code of Regulations)

The California Fire Code is based on the International Fire Code, with necessary California amendments. This code prescribes regulations consistent with nationally recognized good practices and safeguarding, to a reasonable degree, of life and property from the hazards of fire and explosion. It also addresses: 1) dangerous conditions arising from the storage, handling, and use of hazardous materials, and devices; 2) conditions hazardous to life or property in the use or occupancy of buildings or premises; and 3) provisions to assist emergency response personnel.

California Building Standards Code

The 2016 California Building Code (CBC) became effective January 1, 2017 including Part 9 of Title 24, the California Fire Code.

California Code of Regulations, Title 19

Title 19 is the California Code of Regulations pertaining to public safety. The office of the State Fire Marshall reviews and updates the Code and submits revisions to the Code as needed.

California Health and Safety Code (§§13000 et seq.)

This code establishes State fire regulations, including regulations for building standards (also set forth in the California Building Code), fire protection and notification systems, fire protection devices such as extinguishers and smoke alarms, high-rise buildings, child-care facility standards, and fire suppression training.

Regional and Local Conditions

County of San Bernardino General Plan Lan Use and Safety Elements

The County of San Bernardino General Plan was adopted in 2007. The County of San Bernardino General Plan underwent the CEQA review process, resulting in certification of an environmental impact report for the General Plan. Policies, goals, and regulations pertaining to public services are identified in the General Plan Land Use and Safety Elements.

4.15.3 – SIGNIFICANCE THRESHOLDS

Per the CEQA Guidelines, implementation of the Project would have a significant impact related to public services if it would:

a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:

   I. Fire protection;
   II. Police protection;
   III. Schools;
   IV. Parks;
   V. Other public facilities.

4.15.4 – IMPACTS AND MITIGATION MEASURES

This section describes potential impacts related to the provision of public services; which could result from the implementation of the project and recommends mitigation measures as needed to reduce significant impacts.

Governmental Facilities

Impact PS-1 – Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:

I. Fire Protection

Analysis of Impacts

Per Agreement No. 03-0856, Redlands Fire Department provides fire protection to the Project site. The closest fire station to the project site is the Redlands Fire Station 264 located approximately 2.3 miles southwest of the Project site which is operated by the City of Redlands. The next nearest facility is the San Bernardino County Fire Station Number 233 which is part of the Valley Region and is located approximately 4.6 miles northwest of the Project site. Operations within the Valley Division are coordinated by the County San Bernardino Fire Department and the County of San Bernardino local fire-protection agencies.

According to CALFIRE, the proposed project is not located in a State Responsibility Zone and therefore is not designated as a Fire Hazard Severity Zone (CALFIRE, 2019). In addition, no residential uses are proposed. The Project site is not located in a State Responsibility Zone and would not require additional fire department staffing. Response times would remain at four minutes with implementation of the Project as no residential uses are proposed that would alter or impact the demand for fire services. The City of Redlands identifies fire response requirements by categorizing land uses with a point system. The Project is an industrial warehouse and logistics center and would receive a 10-point value which would be deemed a non-significant fire threat. The Redlands Fire Department maintains up to 60 uniformed positions, 47 emergency medical technicians and 18 paramedics and has specified that new or expanded services would not be required as a result of implementation of the Project. Therefore, the Project would not require new or expanded fire department services or alterations to the existing facilities and would have a less than significant impact

Level of Significance Before Mitigation

Less than significant.

Mitigation Measures

No mitigation required.

II. Police Protection

Analysis of Impacts

The Redlands Police the City of Redlands as well as some of , including the Project site Redlands Police Department is approximately two miles south of the Project., which typically require a higher degree of protection services.

Level of Significance Before Mitigation

Less than significant.

Mitigation Measures

No mitigation required.

III. Schools;

Analysis of Impacts

The Project site lies within the Redlands Unified School District boundary. The Project is a warehouse and logistics center and the underlying East Valley/Regional Industrial zoning does not allow residential uses. With no proposed residential uses and residential uses not permitted, the Project likewise would not generate students. Nonetheless, the Project will still be required to pay the Redlands Unified School District School Facility Fee, which is $0.56 per square foot for industrial construction as of July 2017. Accordingly, based on the foregoing, no impacts to schools are anticipated.

Level of Significance Before Mitigation

No impact.

Mitigation Measures

No mitigation is required.

IV. Parks;

Analysis of Impacts

The San Bernardino County Regional Parks Department provides maintenance for open space, parklands and regional trails for recreational use in the County. Open Space areas are identified in the General Plan by Open Space Overlay maps and zoning maps. Open space lands within the County of San Bernardino fill an important need for recreational opportunities for residents. The Project site is not zoned for park or open space uses and would not convert previously designated open space land. In addition, the Project would not remove access to existing parks and open space areas. Therefore, the project would have a less than significant impact on parks and open space facilities.

Level of Significance Before Mitigation

Less than significant.

Mitigation Measures

No mitigation required.

V. Other Public Facilities;

Analysis of Impacts

The Project site is served by the San Bernardino County Library System, which includes 28 branches in San Bernardino County. The Project site is also served by public libraries in the Cities of Redlands, Loma Linda, San Bernardino, and Highland. The Project is a warehouse and logistics center with no residential uses. Pursuant to the San Bernardino County Code section 16.0216 library fees and fines are established for costs of usage of all libraries in the San Bernardino County Library System. Residential land uses typically generate usage and circulation demands on library systems, therefore, the Project will have no impact to the San Bernardino County Library System.

Level of Significance Before Mitigation

Less than significant.

Mitigation Measures

No mitigation required.

Cumulative Impacts

Would the project cause substantial adverse cumulative impacts with respect to public services?

Analysis of Impacts

The Project would not cause a substantial adverse cumulative impact with respect to public services as the Project does not include nor will it significantly induce residential use that impact school facilities, police protection services or fire protection services. Existing police, fire, library and school facilities would be able to accommodate the nominal increase in use that could result from the Project new employees. Therefore, the Project would have a less than significant impact on public services.

Level of Significance Before Mitigation

Less than significant.

Mitigation Measures

No mitigation required.

4.15.5 REFERENCES

http://www.fire.ca.gov/fire_prevention/fhsz_maps_sanbernardinosw

http://cms.sbcounty.gov/Portals/59/Content/2018-2019/2018-19-Recommended-Budget.pdf

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http://www.amlegal.com/codes/client/san-bernardino-county_ca/

4.16 – Recreation

This EIR chapter addresses recreation impacts associated with the Project. Issues of interest are recreation impacts identified by the CEQA Guidelines: whether the Project will increase the use of existing neighborhood and regional parks or other recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment.

4.16.1 – ENVIRONMENTAL SETTING

Open Space and Parks

The Project site is located in the Valley Region of San Bernardino County. The Valley Region contains only 20% of the land area of the County, but almost three-quarters of the County's population lives there. State parks in the region include Chino Hills State Park and Wildwood Canyon State Park Property. Table IV-N-2 of the San Bernardino County General Plan lists the regional and community parks in the Valley Region.

4.16.2 – REGULATORY FRAMEWORK

State

Mitigation Fee Act

The California Mitigation Fee Act (Government Code §§ 66000 *et seq*.), allows counties to establish fees that will be imposed on development projects to mitigate the impact of the development projects on the county's ability to provide specified public facilities. In order to comply with the Mitigation Fee Act, a county must follow four primary requirements: 1) Make certain determinations regarding the purpose and use of a fee and establish a nexus or connection between a development project or class of project and the public improvement being financed with the fee; 2) Segregate fee revenue from the general fund in order to avoid commingling of capital facilities fees and general funds; 3) For fees that have been in the possession of the county for five years or more and for which the dollars have not been spent or committed to a project, the county must make findings each fiscal year describing the continuing need for the money; and 4) Refund any fees with interest for which the findings noted above cannot be made.

Quimby Act

The State Quimby Act (California Government Code § 66477) was first established by the California legislature in 1965. It provided provisions in the State Subdivision Map Act for the dedication of parkland and/or payment of in-lieu fees as a condition of approval of certain types of residential development projects. Previously, a city or county could only use these fees to provide parks that served the developer's proposed subdivision. However, Assembly Bill 1359 (AB 1359), signed in September 2013 by Governor Brown, allows cities and counties to use developer-paid Quimby Act fees to provide parks in neighborhoods other than the one in which the developer's subdivision is located. Overall, AB 1359 provides cities and counties with opportunities to improve parks and create new parks in areas that would not have benefited before provided that certain requirements are met. It also allows a city or county to enter into a joint or

shared use agreement with one or more public districts in order to provide additional park and recreational access.

California Public Park Preservation Act

The primary instrument for protecting and preserving parkland is California's Public Park Preservation Act of 1971. Under this act, cities and counties may not acquire any real property that is in use as a public park for any non-park use unless compensation, land, or both are provided to replace it. This provides no net loss of parkland and facilities.

Local

San Bernardino County General Plan

The San Bernardino County General Plan Open Space Element includes a program that requires new residential development to provide park and recreation facilities at a rate of not less than 3 acres per 1,000 population.

Countywide Park Standards

When examining the County as a whole it is important to note that the County is currently within the County standard of 3.0 acres of park area for each 1,000 population. The County population total (incorporated and unincorporated) is approximately 2,174,938. Using the County standard of 2.5 acres per 1,000 population, the County would need approximately 6,525 acres of parkland. The total parkland in all three planning regions of the County is 9,647 acres. As such, the County currently meets the standard of 3.0 acres of parkland per 1,000 populations.

To estimate existing parkland and future parkland need based on growth and population projections, the County uses the standard of 3.0 acres per 1,000 residents as stated in the 2007 General Plan Open Space Element. The Open Space Element provides guidance for the acquisition, maintenance, expansion, and development of parks, trails, scenic areas, and recreational facilities throughout for the County as a whole and within each region, including the Valley Region.

County Public Park Funding

The General Plan requires all multifamily residential projects and single-family residential projects over 250 units to include onsite recreational amenities. Funding for future public parks and recreational facilities in the County is expected to be provided primarily through local development impact fees. There is also the potential for financial support from the County general fund. The San Bernardino County Code describes how parkland, fees for recreational facilities, or a combination of both can be collected as a condition of the approval for a parcel map or final map (Chapter 89.02, Recreational Facilities Financing).

San Bernardino County Code

The San Bernardino County Code describes the process for determining the dedication of park land, payment of in-lieu fees, or a combination of both in Chapter 89.02, Recreational Facilities Financing.

4.16.3 – SIGNIFICANCE THRESHOLDS

Per the CEQA Guidelines, implementation of the Project would have a significant impact related to recreation if it would:

a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated; or
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

4.16.4 – IMPACTS AND MITIGATION MEASURES

This section describes potential impacts related to recreation, which could result from the implementation of the project and recommends mitigation measures as needed to reduce significant impacts.

Local and Regional Recreational Facilities

Impact REC-1 – Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

Analysis of Impacts

The Project, a warehouse and logistics center, will not directly result in population growth that would impact recreation facilities. The addition of employees to the project vicinity would result in increased use of local park facilities; however, increases in park and recreational facility demand will be incremental in nature and are anticipated by build out of the County's General Plan. Development of the project will be accompanied by payment of fees designed to offset increases in population and demand on public facilities.

Level of Significance Before Mitigation

Less than significant.

Mitigation Measures

No mitigation required.

Expansion of Recreational Facilities

Impact REC-2 – Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

Analysis of Impacts

Development of the Project will include the construction of an 8-foot wide, asphalt, continuous multi-use trail along the entire Palmetto Avenue and Alabama Street Project frontages, in

accordance with the East Valley Area Plan. This improvement represents a planned enhancement to local recreational facilities and will be contained with the Project site. There will be no adverse physical effect on the environment resulting from these improvements.

Level of Significance Before Mitigation

Less than significant.

Mitigation Measures

No mitigation required.

Cumulative Impacts

Would the project cause substantial adverse cumulative impacts with respect to Recreation?

Analysis of Impacts

Ongoing land development projects that provide new residences to accommodate population growth throughout the region will affect recreational facilities. As populations increase, the demand for parks, sports fields, and other recreational areas and programs will also increase.

Local city and county governments are responsible for planning and developing parks and recreational facilities to serve their populations. At the same time, regional recreational facilities are developed by higher levels of governments, including the Federal Government (U.S. Forest Service), State of California (Parks and Recreation Department and Department of Fish and Wildlife), and county governments. These provide special and unique recreational opportunities for people over a very large area.

As discussed in Impact REC-1, the Project will not directly result in population growth that would impact recreation facilities. The addition of employees to the project vicinity would result in a nominal increase in the use of local park facilities; however, increases in park and recreational facility demand will be incremental in nature and are anticipated by build out of the County's General Plan. Thus, the Project's contribution towards cumulative demand for, or use of, recreational facilities would be less than significant.

Level of Significance Before Mitigation

Less than significant.

Mitigation Measures

No mitigation required.

4.16.5 REFERENCES

San Bernardino, County of. 2007a, March. Muscoy Community Plan. http://www.sbcounty.gov/Uploads/lus/CommunityPlans/MuscoyCP.pdf.

———. 2007b, March. County of San Bernardino General Plan Open Space Element. http://www.sbcounty.gov/Uploads/lus/GeneralPlan/FINALGP.pdf.

———. 2007c, March. County of San Bernardino Development Code. http://www.sbcounty.gov/Uploads/lus/DevelopmentCode/DCWebsite.pdf.

4.17 – Transportation

This EIR chapter addresses transportation and traffic impacts associated with the Project. Issues of interest are transportation and traffic impacts identified by the l conflict with regulations or policies addressing transportation and create traffic hazards or result in inadequate emergency access. The analysis in this section is based on *Traffic Impact Analysis (TIA) for Duke Realty-High Cube Warehouse*, performed by Albert A. Webb Associates, and dated January 2019 which can be found in Appendix N of this EIR.

4.17.1 – ENVIRONMENTAL SETTING

Roadways

The existing roadway system is shown in Exhibit 4.17-1, below. It identifies the existing intersection traffic controls (i.e. signals and signage), intersection geometries, and the number of vehicle lanes for each intersection within the study area.

Primary Arterial

5th Street is a divided four-lane east-west arterial in the project area with a painted median. It is classified as a Primary Arterial east of Palm Avenue/Alabama Street and is classified as a Major Highway west of Palm Avenue/Alabama Street in the City of Highland General Plan Circulation Element and provides connectivity to the State Route 210 (SR-210) Freeway. Its ultimate cross section includes six through lanes and a raised median. East of the SR-210 interchange, it continues as Greenspot Road. Street parking is not allowed. There are existing sidewalks on both sides of the street, and designated bike lanes in most areas within the study area.

Major Arterials

Alabama Street is a divided two-lane north-south arterial with a painted median in the frontage area of the Project. Alabama Street is a divided six-lane north-south arterial with a raised median south of the Project. It is classified as a Major Arterial in the County of San Bernardino East Valley Area Plan and provides connectivity to Interstate 10 (I-10) and SR-210 freeways. North of the City of Highland border, it continues as Palm Avenue and is classified as a Major Highway. Its ultimate cross section includes six through lanes and a raised median. Street parking is not allowed. There are existing sidewalks on both sides of the street and designated bike lanes where improvements have been constructed within the study area.

San Bernardino Avenue is a divided six-lane east-west arterial with a raised median in the Project area. It is classified as a Major Arterial in the San Bernardino County East Valley Area Plan (EVAP) and provides connectivity to the SR-210 freeway. Its ultimate cross section includes six through lanes and a raised median. Street parking is not allowed. There are existing sidewalks on both sides of the street where improvements have been constructed, but designated bike lanes do not exist within the study area.

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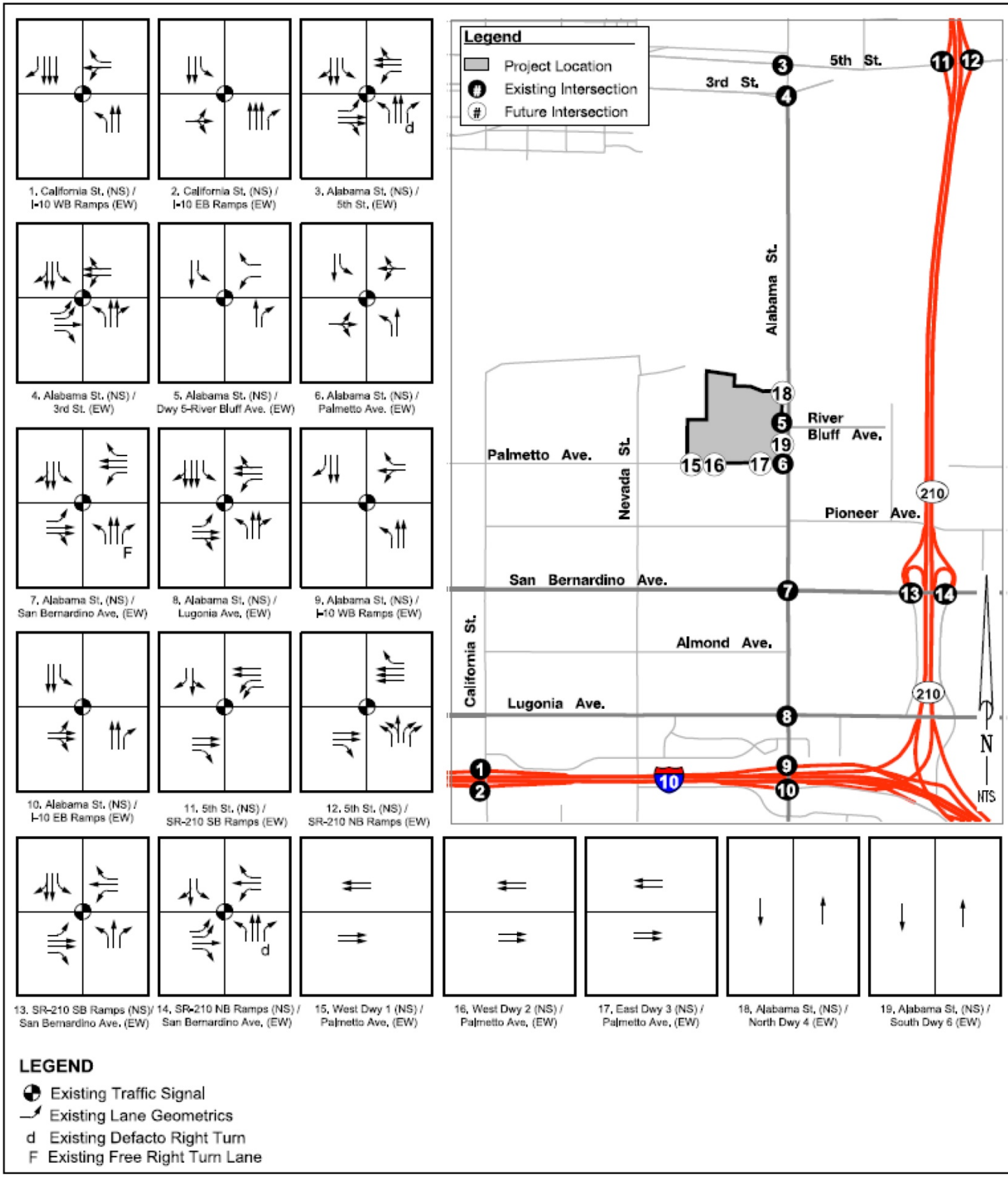

Exhibit 4.17-1 Existing Roadway System

Duke Realty Alabama and Palmetto Warehouse

County of San Bernardino, California

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California Street is a divided six-lane north-south arterial with a raised median in the Project area. It is classified as a Major Arterial in the Redlands General Plan Circulation Element and provides connectivity to I-10. Its ultimate cross section includes six through lanes and a raised median. Street parking is not allowed. There are existing sidewalks on both sides of the street where improvements have been constructed, but designated bike lanes do not exist within the study area.

Major Highways

3rd Street is a divided 4-lane east-west roadway in the Project area with a painted median. It is classified as a Major Highway in the Highland General Plan Circulation Element. Its ultimate cross section includes four through lanes and a raised median. Street parking is allowed. There are existing sidewalks on both sides of the street where improvements have been construction, but designated bike lanes do not exist within the study area.

Collector Streets

Palmetto Avenue is an undivided 2-lane east-west roadway in the project area. It is classified as a collector in the EVAP. Its ultimate cross section includes four through lanes and no median. Street parking is not allowed. There are existing sidewalks where improvements have been constructed, but designated bike lanes do not exist within the study area.

Local Roadways

River Bluff Avenue is a divided 2-lane east-west roadway in the project area. It is not classified in the San Bernardino County General Plan Circulation Element, but acts as a local roadway. It provides connectivity to one warehouse property. Street parking is not allowed. There are existing sidewalks on the north side of the street, but designated bike lanes do not exist within the study area.

Intersections

Study Area Intersections and Roadways

Key study intersections and roadway segments are typically selected based on their location in relation to the vicinity of the Project and whether potential significant project-related traffic will pass through them. The key intersections and roadway segments were identified in coordination with the County of San Bernardino staff and are shown on Figure 3 below. The study area includes the following intersections and their jurisdictional location:

1. California Street (NS) / I-10 WB Ramps (EW) - Caltrans
2. California Street (NS) / I-10 EB Ramps (EW) - Caltrans
3. Alabama Street (NS)/ 5th Street (EW) - City of Highland
4. Alabama Street (NS)/ 3rd Street (EW) - City of Highland
5. Alabama Street (NS)/ Project Driveway 5-River Bluff Avenue (EW) - Unincorporated/ Donut Hole
6. Alabama Street (NS)/ Palmetto Avenue (EW) - Unincorporated/ Donut Hole
7. Alabama Street (NS)/ San Bernardino Avenue (EW) - Unincorporated/ Donut Hole
8. Alabama Street (NS)/ Lugonia Avenue (EW) - City of Redlands

9. Alabama Street (NS)/ I-10 WB Ramps (EW) - Caltrans
10. Alabama Street (NS)/ I-10 EB Ramps (EW) - Caltrans
11. SR-210 SB Ramps (NS)/ 5th Street (EW) - Caltrans
12. SR-210 NB Ramps (NS)/ 5th Street (EW) - Caltrans
13. SR-210 SB Ramps (NS) / San Bernardino Avenue (EW) - Caltrans
14. SR-210 NB Ramps (NS)/ San Bernardino Avenue (EW) - Caltrans
15. Project Driveway 1 (NS)/ Palmetto Avenue (EW) - Unincorporated/ Donut Hole
16. Project Driveway 2 (NS)/ Palmetto Avenue (EW) - Unincorporated/ Donut Hole
17. Project Driveway 3 (NS)/ Palmetto Avenue (EW) - Unincorporated/ Donut Hole
18. Alabama Street (NS)/ Project Driveway 4 (EW) - Unincorporated/ Donut Hole
19. Alabama Street (NS)/ Project Driveway 6 (EW) - Unincorporated/ Donut Hole

Existing Traffic Volumes

Nineteen key study intersections have been chosen to evaluate existing and future traffic operating conditions. Some portion of potential Project related traffic will pass through each of these locations, and their analysis will reveal the expected relative impacts of the project. The existing AM peak period and PM peak period intersection turning movement counts at the 19 study intersections were conducted by Counts Unlimited, Inc. on February 21, 2018. Because of the high number of heavy vehicles in the area and the truck-intensive land use of the Project, raw turning movement counts were converted into passenger car equivalent (PCE). PCE is defined as the number of passenger cars that will result in the same operational conditions as a single heavy vehicle of a particular type. The AM and PM peak hour intersection turning movement volumes are presented on Figure 4 and Figure 5 of the TIA, respectively.

Levels of Service – Existing (2018) Conditions

The intersection levels of service for existing (2018) conditions shown in Table 4.17-1 were calculated based on the traffic counts that were collected. The level of service calculation worksheets are provided in Appendix E. The following study intersections currently operate at an unacceptable level of service:

1. California Street (NS) / I-10 WB Ramps
2. California Street (NS) / I-10 EB Ramps

Table 4.17-1
Intersection Levels of Service Existing (2018) Conditions

Intersection	Peak Hour	Traffic Controls	Delay (sec)	LOS
1. California Street (NS) / I-10 WB Ramps (EW)	AM PM	Signal	**69.7** 33.7	**E** C
2. California Street (NS) / I-10 EB Ramps (EW)	AM PM	Signal	**60.5** **56.8**	**E** **E**
3. Alabama Street (NS) / 5th Street (EW)	AM PM	Signal	34.6 48.4	C D
4. Alabama Street (NS) / 3rd Street (EW)	AM PM	Signal	20.4 31.8	C C
5. Alabama Street (NS) / Dwy 5-River Bluff Avenue (EW)	AM PM	Signal	7.1 6.9	A A
6. Alabama Street (NS) / Palmetto Avenue (EW)	AM PM	Signal	9.7 10.5	A A
7. Alabama Street (NS) / San Bernardino Avenue (EW)	AM PM	Signal	28.7 30.2	C C
8. Alabama Street (NS) / Lugonia Avenue (EW)	AM PM	Signal	23.9 33.5	C C
9. Alabama Street (NS) / I-10 WB Ramps (EW)	AM PM	Signal	34.0 29.1	D C
10. Alabama Street (NS) / I-10 EB Ramps (EW)	AM PM	Signal	27.5 33.3	C C
11. SR-210 SB Ramps (NS) / 5th Street (EW)	AM PM	Signal	22.0 23.6	C C
12. SR-210 NB Ramps (NS) / 5th Street (EW)	AM PM	Signal	16.7 20.2	B C
13. SR-210 SB Ramps (NS) / San Bernardino Avenue (EW)	AM PM	Signal	35.1 27.3	D C
14. SR-210 NB Ramps (NS) / San Bernardino Avenue (EW)	AM PM	Signal	33.7 35.3	C C
15. West Dwy 1 (NS) / Palmetto Avenue (EW)	AM PM	Does Not Exist		
16. West Dwy 2 (NS) / Palmetto Avenue (EW)	AM PM	Does Not Exist		
17. East Dwy 3 (NS) / Palmetto Avenue (EW)	AM PM	Does Not Exist		
18. Alabama Street (NS) / North Dwy 4 (EW)	AM PM	Does Not Exist		
19. Alabama Street (EW) / South Dwy 6 (EW)	AM PM	Does Not Exist		

General Plan Circulation

The current San Bernardino County General Plan Circulation Element for EVAP is shown on Exhibit 4.17-2, the Redlands General Plan Circulation Element is shown in Exhibit 4.17-3, and the Highland General Plan Circulation Element is shown in Exhibit 4.17-4, below.

Pedestrian and Bicycle Circulation

Pedestrian facilities only exist within the study area where developments have made frontage improvements. There are many sidewalk gaps in close proximity to the Project site. Pedestrian facilities are nearly complete in other areas of the EVAP that are closer to build-out conditions.

EVAP includes a planned trail system that includes Class I, Class II, and Class IV bikeways. Class III bikeways are not currently within the EVAP. While planned, no bicycle lanes exist in the Project area within San Bernardino County. The EVAP Trail System is shown Exhibit 4.17-5, below.

Transit Service

The Project area is served by OmniTrans Route 15. A map of OmniTrans Route 15 is shown Exhibit 4.17-6, below. The nearest bus stop is located at the intersection of Alabama Street and San Bernardino Avenue to the south.

Exhibit 4.17-2 San Bernardino County General Plan Circulation

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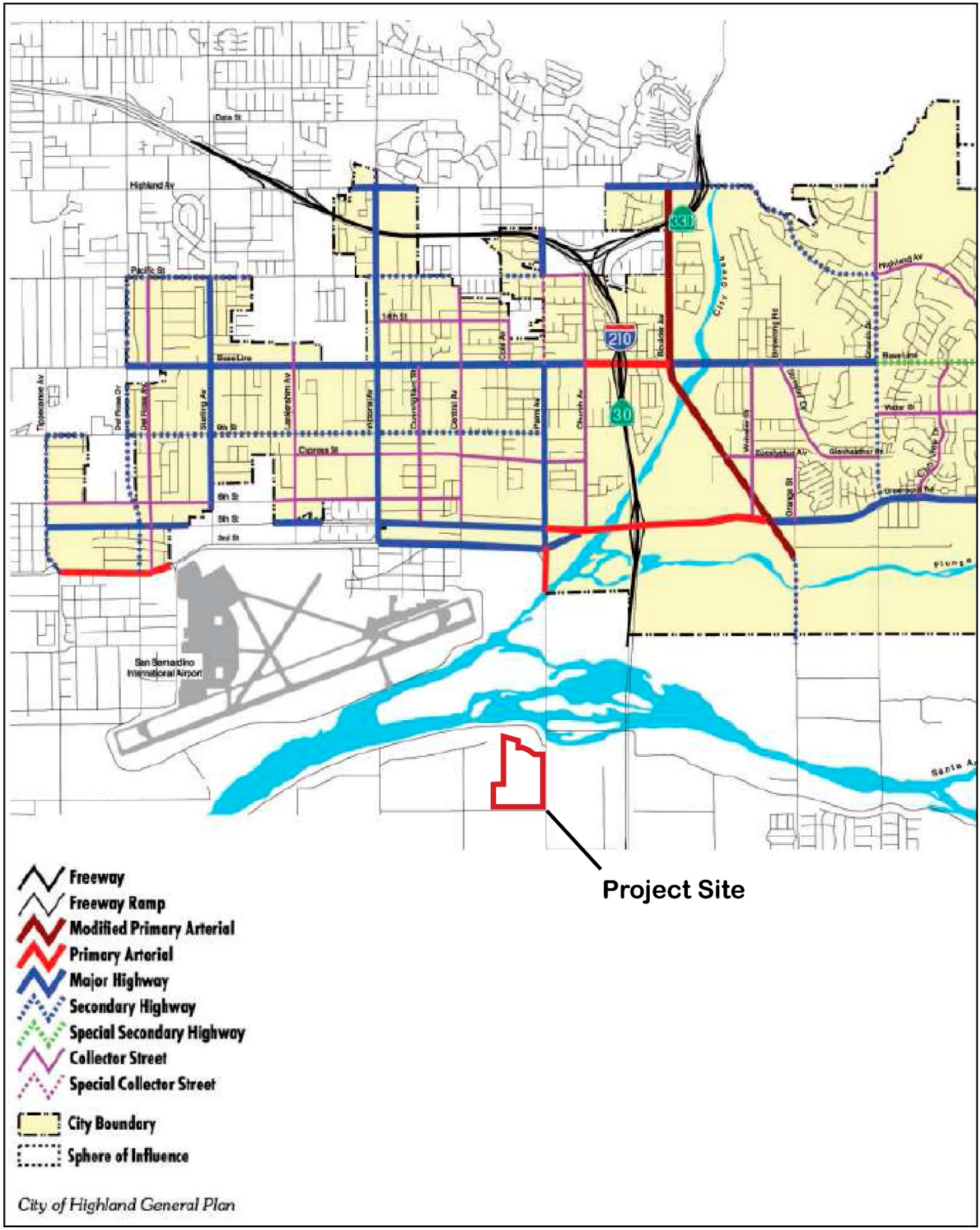

Exhibit 4.17-3 City of Highland General Plan Circulation

Duke Realty Alabama and Palmetto Warehouse
County of San Bernardino, California

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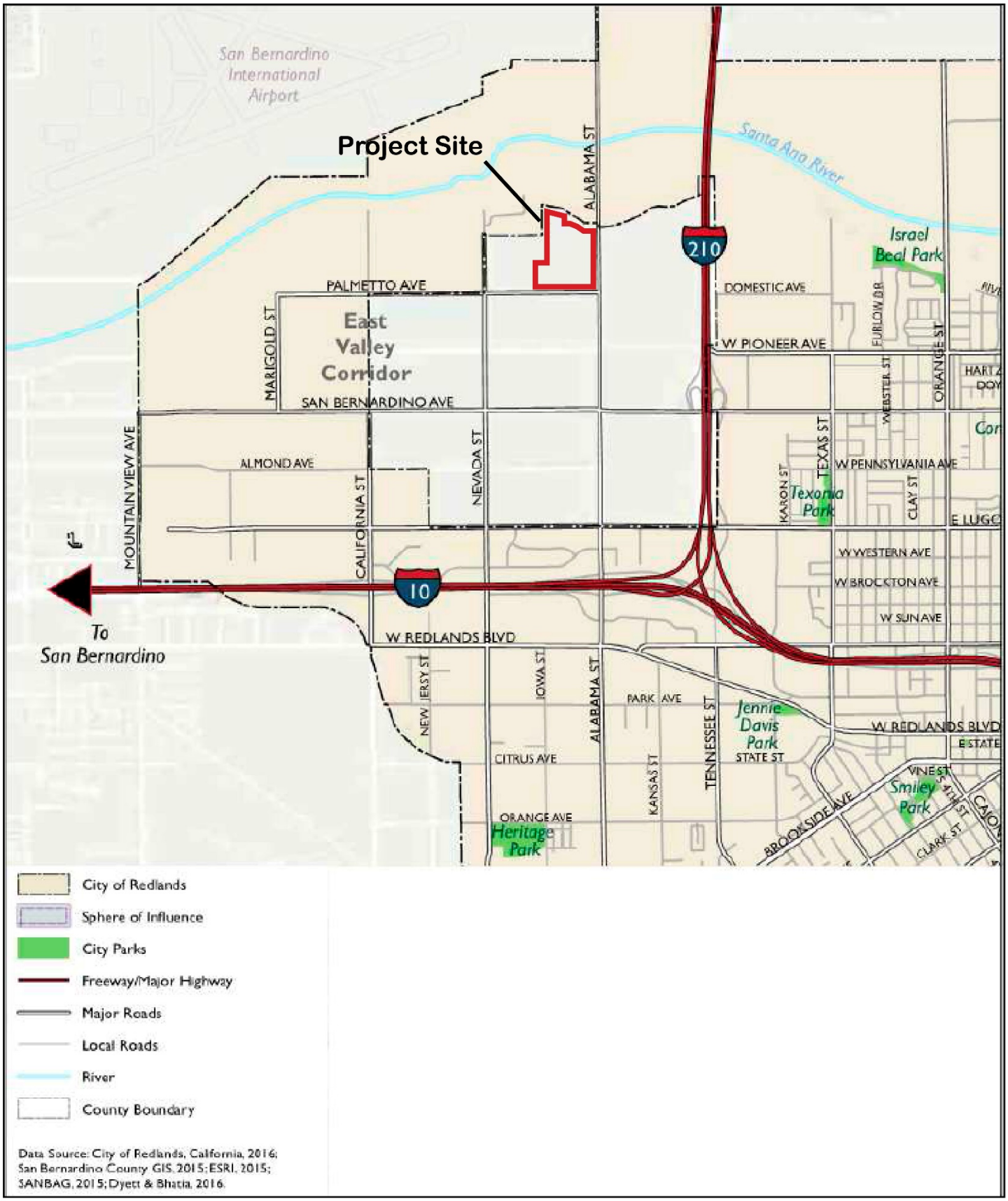

Exhibit 4.17-4 City of Redlands General Plan Circulation

Duke Realty Alabama and Palmetto Warehouse
County of San Bernardino, California

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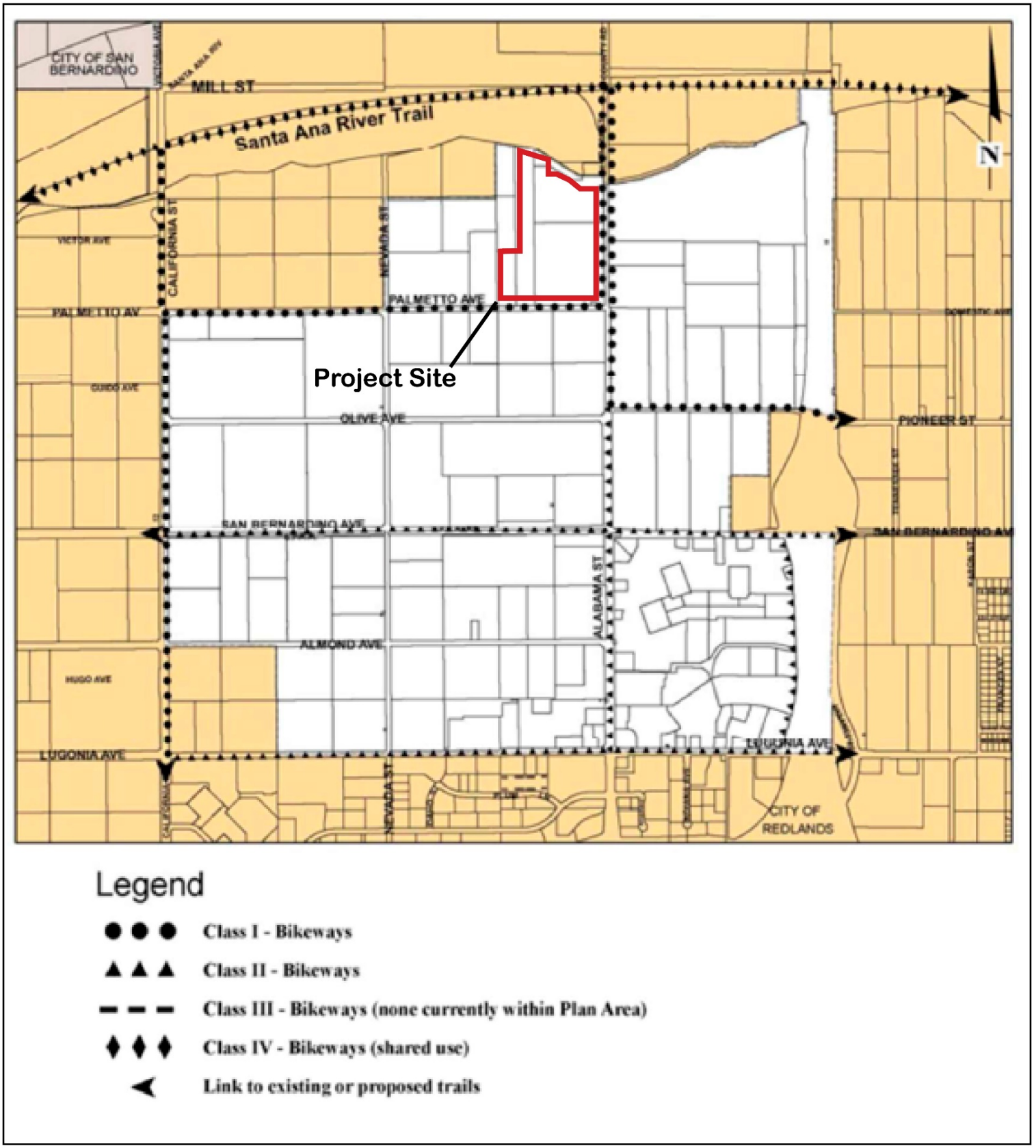

Exhibit 4.17-5 East Valley Plan Trail System

Duke Realty Alabama and Palmetto Warehouse

County of San Bernardino, California

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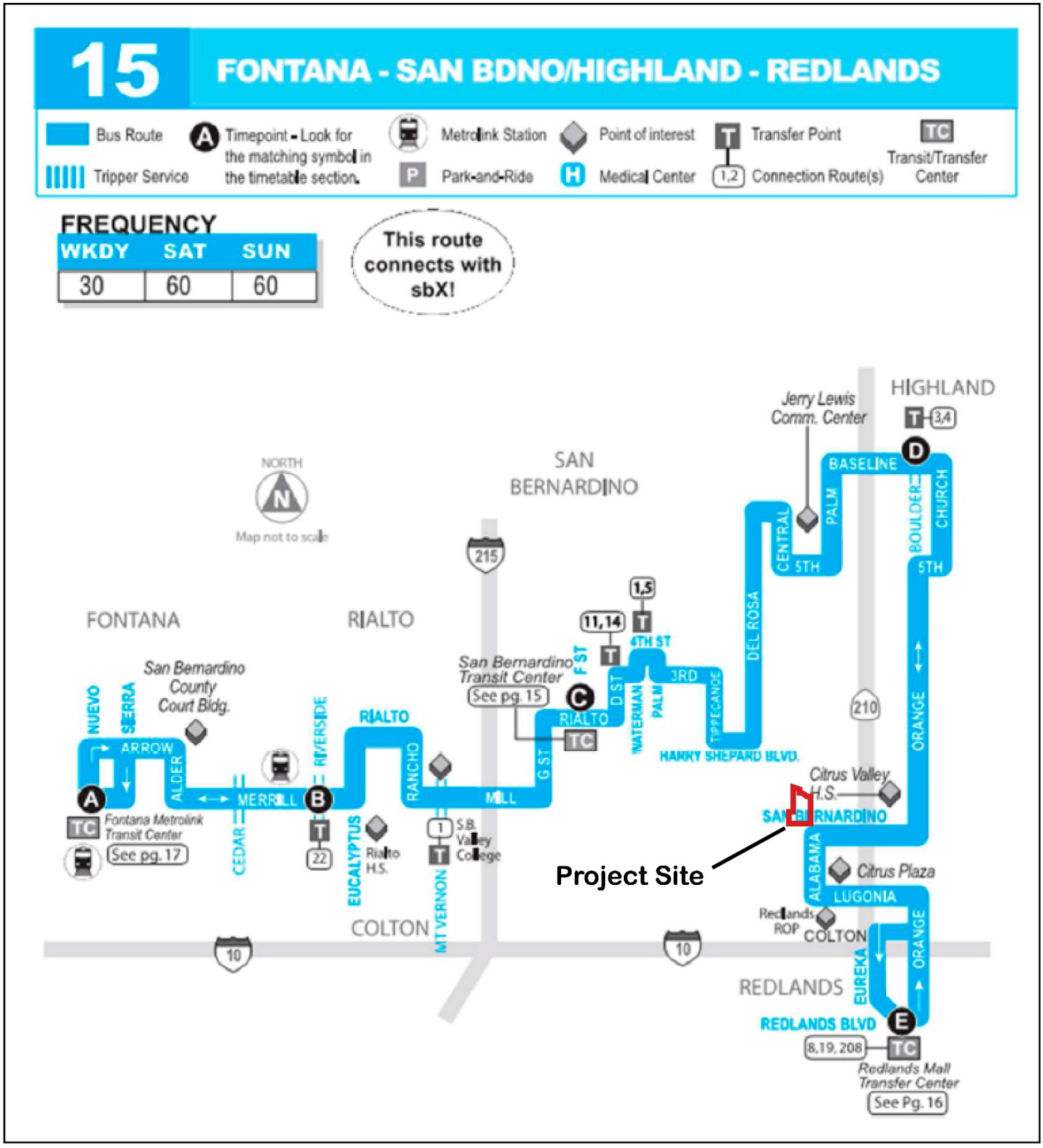

Exhibit 4.17-6 OmniTrans Route 15 Map

Duke Realty Alabama and Palmetto Warehouse

County of San Bernardino, California

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4.17.2 – REGULATORY FRAMEWORK

San Bernardino Associated Governments/San Bernardino County Transportation Authority

San Bernardino Associated Governments (SANBAG) is the council of governments and transportation planning agency for San Bernardino County. SANBAG is responsible for cooperative regional planning and furthering an efficient multi-modal transportation system countywide. SANBAG supports freeway construction projects, regional and local road improvements, train and bus transportation, railroad crossings, call boxes, ridesharing, congestion management efforts and long-term planning studies. SANBAG administers Measure I, the half-cent transportation sales tax approved by county voters in 1989. In January 2017, SANBAG was renamed the San Bernardino County Transportation Authority (SBCTA)

Regional Transportation Development Mitigation Plan ('The PLAN")

In November 2004, San Bernardino County voters approved "Measure I 2010-2040", a half-cent transaction and use tax dedicated to countywide transportation improvements. The Measure I Ordinance requires that the cities and the unincorporated sphere of influence areas in the San Bernardino Valley and Victor Valley must adopt a mechanism to "require all future development to pay its fair share for needed transportation facilities as a result of new development pursuant to California Government Code 66000 et seq. and as determined by the Congestion Management Agency," and to "comply with the Land Use/Transportation Analysis and Deficiency Plan provisions of the San Bernardino County Congestion Management Program pursuant to California Government Code Section 65089." Included in these transportation facilities are freeway interchanges, major arterial roads, and railroad grade separations. Measure I also required the Congestion Management Agency to update the Congestion Management Program (CMP) to include fair share mitigation for regional transportation facilities.
SANBAG serves as the San Bernardino County Congestion Management Agency and is responsible for implementing and maintaining the CMP for San Bernardino County. As part of the CMP Update process required by Measure I 2010-2040, SANBAG developed and adopted the SANBAG Development Mitigation Nexus Study (hereafter "SANBAG Nexus Study") on November 2, 2005 (updated on November 7, 2007, November 4, 2009, November 2, 2011, and November 6, 2013). The SANBAG Nexus Study provides a framework for fair-share development contributions to regional transportation improvements.

The SANBAG Nexus Study determines the fair-share contributions from new development for each jurisdiction in the urbanized areas of the County. The County's fair-share contributions are based upon growth projections reviewed and approved by the County Land Use Planning Department and specific transportation projects submitted to SANBAG by the Department of Public Works – Transportation. Projects identified in the PLAN must be included in the SANBAG Nexus Study to be eligible to receive SANBAG public share contributions of regional Measure I funding or allocations of state or federal transportation funds administered by SANBAG. The PLAN is intended to generate only the development fair-share contribution of project costs as required by the CMP and is not intended to provide 100 percent funding for or construction of all projects listed in the PLAN. Additional regional Measure I and federal/state funds administered by SANBAG are required for full funding of projects listed in the PLAN.

Payment of fees required by the PLAN replaces TIA requirements of the CMP. The PLAN is intended to satisfy all requirements set for in California Government Code Section 66000 *et seq*. (AB 1600 "Mitigation Fee Act")

Level of Service Methodology

The San Bernardino County Transportation Division requires that the most recent release of the Transportation Research Board Highway Capacity Manual (HCM) be used to analyze Level of Service (LOS). The Highway Capacity Manual 6th Edition (HCM6) was used for the analysis.

Quality of service describes how well a transportation facility or service operates from the traveler's perspective. Level of service (LOS) is a quantitative stratification of a performance measure or measures that represent quality of service. LOS is measured on a familiar A to F scale where LOS A represents the best conditions from a traveler's perspective and LOS F the worst. A simple LOS letter system is used to hide much of the complexity of transportation facility performance in order to simplify decision making on whether facility performance is generally acceptable and whether a future change in performance is likely to be perceived as significant by the general public. One reason for the widespread adoption of the LOS concept by agencies is the concept's ability to communicate roadway performance to nontechnical decision makers.

The HCM6 evaluates the LOS of intersections based upon the control delay per vehicle. Control delay is defined as the delay associated with vehicles slowing in advance of an intersection, the time spent stopped on an intersection approach, the time spent as vehicles move up in the queue, and the time needed for vehicles to accelerate to their desired speed. The methodology used to evaluate the intersection level of service differs on whether the intersection is signalized or unsignalized. Levels of service at signalized and unsignalized intersections have been evaluated using Synchro Version 10, which is based upon HCM6 methodologies.

Delays and queue lengths were analyzed using Synchro Version 10.0. Synchro is a computerized micro- simulation modeling software program that analyzes traffic models by simulating the behavior of individual vehicles within the traffic circulation network.

Signalized Intersections

Signalized intersections have been evaluated using the Operational Method as described in Chapter 16, Section II of the HCM6. According to this methodology, the level of service for signalized intersections is based upon the weighted average control delay, in seconds per vehicle, of all vehicles passing through the intersection. Table 4.17-2 shows the criteria used to determine the level of service for signalized intersections.

Table 4.17-2
Levels of Service, Signalized Intersections

LOS	Control Delay, seconds per vehicle	Description
A	≤ 10	Minimal delay and primarily free-flow operation. Most vehicles do not stop because they arrive during the green light or only stop for a brief time as the signal changes.
B	> 10-20	Short delay and reasonably unimpeded operation. Many vehicles do not stop because they arrive during the green light or only stop for a short time as the signal changes. More vehicles stop than with LOS A.
C	> 20-35	Moderate delay and stable operation. Individual cycle failures (i.e., when queued vehicles do not clear the signal during the next green light) may begin to appear. The number of vehicles stopping is significant, although many vehicles still pass through the intersection without stopping.
D	> 35-55	Less stable operation. Small increases in vehicles may cause substantial increases in delay. Many vehicles stop and individual cycle failures are noticeable.
E	> 55-80	Significant delay and unstable operation. Most vehicles stop and individual cycle failures are frequent.
F	> 80	Considerable delay and extensive queuing. Almost all vehicles stop and most cycles fail to clear the queue.
Source: Transportation Research Board Highway Capacity Manual 6		

Unsignalized Intersections

Unsignalized intersections were evaluated using Chapter 19-20 of the HCM6. According to this methodology, the level of service for all-way stop intersections is based upon the weighted average control delay, in seconds per vehicle, of all vehicles passing through the intersection. For two-way stop controlled intersections, the level of service is based on the highest control delay of all controlled movements for the intersection. Table 4.17-3 shows the criteria used to determine the level of service for unsignalized intersections.

Table 4.17-3
Levels of Service, Unsignalized Intersections

LOS	Control Delay, seconds per vehicle	Description
A	≤ 10	Minimal delay. Usually no conflicting traffic.
B	> 10-15	Short delay. Occasionally some conflicting traffic.
C	> 15-25	Noticeable delay, but not inconveniencing. Usually some conflicting traffic.
D	> 25-35	Noticeable delay and irritating. A significant amount of conflicting traffic. Increased likelihood of risk taking.
E	> 35-50	Significant delay approaching tolerance level. Lots of conflicting traffic, but with some gaps of suitable size. Risk taking behavior likely.
F	> 50	Considerable delay exceeding tolerance level. Lots of conflicting traffic, with not enough gaps of suitable size. High likelihood of risk taking.
Source: Transportation Research Board Highway Capacity Manual 6		

Acceptable Levels of Service

County of San Bernardino. The acceptable Level of Service (LOS) for the unincorporated County of San Bernardino is LOS D and it should be maintained during the peak commute hours.

City of Highland. The acceptable LOS for the City of Highland is based on the Highland General Plan, Chapter 3:

> *The Circulation Element establishes that the LOS should be LOS D or better for major intersections in the City. For peak operating periods LOS D is considered acceptable. Therefore, any City of Highland intersection operating at LOS "E" or "F" is considered deficient.*

City of Redlands. The acceptable LOS for the City of Redlands is based on the Redlands General Plan, Policy 5.20c:

> *Where the current level of service at a location within the City of Redlands is below the Level of Service (LOS) C standard, no development project shall be approved that cannot be mitigated so that it does not reduce the existing level of service at that location except as provided in Section 5.20b.*

Caltrans. The acceptable LOS for Caltrans facilities is based on the Caltrans' *Guide for the Preparation of Traffic Impact Studies* Section II:

> *Caltrans endeavors to maintain a target LOS at the transition between LOS "C" and LOS "D" on State highway facilities, however, Caltrans acknowledges that this may not always be feasible and recommends that the lead agency consult with Caltrans to determine the appropriate target LOS. If an existing State highway facility is operating at less than the appropriate target LOS, the existing measures of effectiveness (MOE) should be maintained.*

Per discussion with Mark Roberts, Caltrans District 8 Office Chief, Intergovernmental Review, Community and Regional Planning, the region-wide goal for acceptable LOS on all freeways, roadway segments, and intersections is LOS D.

Determination of Significant Impact

The determination of significant impacts used in this study is based on the County of San Bernardino Traffic Impact Analysis Guidelines, Sections 10.8.1 and 10.8.2, with modifications to accommodate the varying acceptable LOS standards in different jurisdictions:

Signalized Intersections

> *Any study intersection that is operating at a LOS 'A, 'B', 'C', or 'D' for any study scenario without project traffic in which the addition of project traffic causes the intersection to degrade to a LOS 'E' of 'F' shall mitigate the impact to bring the intersection back to at least LOS 'D'.*

Any study intersection that is operating at a LOS 'E' or 'F' for any study scenario without project traffic shall mitigate any impacts so as to bring the intersection back to the overall level of delay established prior to project traffic being added

For scenarios which include the addition of Cumulative Project Traffic (i.e. shared impacts), study intersections shall be mitigated to LOS 'D' or better in the Valley and Mountain regions and LOS 'C' or better in the Desert regions of the County.

Unsignalized Intersections

An impact is considered significant if the study determines that either section a) or both sections b) and c) occur.

a) The addition of project related traffic causes the intersection to move from a LOS 'D' or better to a LOS 'E' or worse

OR

b) The project contributes additional traffic to an intersection that is already projected to operate at an LOS 'E' or with background traffic (per Section 10.5.2b)

AND

c) One or both of the following conditions are met:

1) The project adds ten (10) or more trips to any approach
2) The intersection meets the peak hour traffic signal warrant after the addition of project traffic (per Section 10.5.2c)).

Once a significant impact has been identified, mitigation shall be provided as follows:

1. *For scenarios involving project traffic but not Cumulative Project Traffic, the LOS shall be mitigated to either LOS 'D' or better for case a) above or to pre-project LOS and delay for case b) above.*
2. *For scenarios that include Cumulative Project Traffic study intersections shall be mitigated to LOS 'D' or better in the Valley and Mountain regions and LOS 'C' or better in the Desert regions of the County.*

4.17.3 – SIGNIFICANCE THRESHOLDS

Per the CEQA Guidelines, implementation of the Project would have a significant impact related to transportation and traffic if it would:

a) Conflict with program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?
b) Would the project conflict or be inconsistent with CEQA guidelines section 15064.3, subdivision (b)
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment);
d) Result in inadequate emergency access; or

This report uses a project opening year of 2020 for analysis purposes.

4.17.4 – IMPACTS AND MITIGATION MEASURES

This section describes potential impacts related to transportation and traffic, which could result from the implementation of the Project and recommends mitigation measures as needed to reduce significant impacts.

Existing Circulation System Plans, Ordinances, or Policies

Impact TRANS-1 – Would the project conflict with program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?

Analysis of Impacts

In order to estimate the traffic impact characteristics of the Project, a multi-step process has been utilized. The first step is traffic generation which estimates the total arriving and departing traffic during a peak hour and on a daily basis. The traffic generation potential is forecast by applying the appropriate vehicle trip generation rates to the project development tabulation. The second step of the forecasting process is traffic distribution, which identifies the origins and destinations of inbound and outbound Project traffic based on existing/expected future travel patterns in the study area. The third step is traffic assignment, which involves the allocation of Project traffic to study area street segments and intersections. Traffic distribution patterns are indicated by general percentage orientation, while traffic assignment allocates specific volume forecasts to individual roadway segments and intersection turning movements throughout the study area. The impact of the Project is isolated by comparing operation level of service conditions at selected key study intersections using expected future traffic volumes with and without forecasted project traffic.

The method of traffic projection is based on the following criteria:

- Existing traffic conditions (2018);
- Ambient growth projections;
- Project generated traffic; and
- Cumulative project generated traffic.
- Build-out (2040) year traffic

Project Generated Traffic

Trip Generation Rates

Trip generation represents the amount of traffic traveling to and from the Project which are defined as inbound and outbound trips. Inbound and outbound trips by the same vehicle are considered two separate trips or trip ends. Table 4.17-4 shows the peak hour and daily trip generation rates for the Project by the associated land use. The trip generation volumes used in this study are based upon the development of a 1,192,671 square foot warehouse and logistics center.

The trip generation rates for the Project land use are based on the fitted curve equation for trip generation provided in the *Trip Generation Manual (10th Edition)* by the Institute of Transportation Engineers (ITE), 2017. The inbound and outbound peak hour trip generation rates are calculated by multiplying the total peak hour generation rate by the directional distribution provided in the *Trip Generation Manual.*

The County of San Bernardino utilizes Passenger Car Equivalent (PCE) factors that are recommended by the San Bernardino County Congestion Management Program (CMP), 2016 Update. PCE factors have been used to convert heavy truck trips (large 2-axles, 3-axles and 4+-axles) to passenger equivalent trips. A factor of 1.5 was applied to large 2-axle trucks, a factor of 2.0 was applied to 3-axle trucks and a factor of 3.0 was applied to 4+-axle trucks.

Table 4.17-4
Trip Generation Rates

TRIP GENERATION RATES								
Land Use	Units[1]	AM Peak Hour			PM Peak Hour			Daily
		Total	In	Out	Total	In	Out	
High-Cube Transload and Short-Term Storage Warehouse	TSF	—	--	—	--	--	--	--
Trip Generation Rates[2]		0.080	0.062	0.018	0.100	0.028	0.072	1.40
PCE Inbound/Outbound Splits[3]		100%	77%	23%	100%	28%	72%	--
PASSENGER CAR EQUIVALENT RATES CALCULATIONS								
Land Use	Unit	AM Peak Hour			PM Peak Hour			Daily
		Total	In	Out	Total	In	Out	
Passenger Cars								
Recommended Mix (%)[4]		*79.57%*	*79.57%*	*79.57%*	*79.57%*	*79.57%*	*79.57%*	*79.57%*
PCE Factor[5]		*1.0*	*1.0*	*1.0*	*1.0*	*1.0*	*1.0*	*1.0*
PCE Rates		*0.064*	*0.049*	*0.015*	*0.080*	*0.022*	*0.057*	*1.114*
2-Axle Trucks								
Recommended Mix (%)[4]		*3.46%*	*3.46%*	*3.46%*	*3.46%*	*3.46%*	*3.46%*	*3.46%*
PCE Factor[5]		*1.5*	*1.5*	*1.5*	*1.5*	*1.5*	*1.5*	*1.5*
PCE Rates		*0.004*	*0.003*	*0.001*	*0.005*	*0.001*	*0.004*	*0.073*
3-Axle Trucks								
Recommended Mix (%)[4]		*4.64%*	*4.64%*	*4.64%*	*4.64%*	*4.64%*	*4.64%*	*4.64%*
PCE Factor[5]		*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*
PCE Rates		*0.008*	*0.006*	*0.002*	*0.009*	*0.003*	*0.007*	*0.130*
4-Axle Trucks								
Recommended Mix (%)[4]		*12.33%*	*12.33%*	*12.33%*	*12.33%*	*12.33%*	*12.33%*	*12.33%*
PCE Factor[5]		*3.0*	*3.0*	*3.0*	*3.0*	*3.0*	*3.0*	*3.0*
PCE Rates		*0.030*	*0.023*	*0.007*	*0.037*	*0.010*	*0.027*	*0.518*
Final Rates (PCE)								
Passenger Cars		*0.064*	*0.049*	*0.015*	*0.080*	*0.022*	*0.057*	*1.114*
Trucks (2 Axle)		*0.004*	*0.003*	*0.001*	*0.005*	*0.001*	*0.004*	*0.073*
Trucks (3 Axle)		*0.008*	*0.006*	*0.002*	*0.009*	*0.003*	*0.007*	*0.130*
Trucks (4+ Axle)		*0.030*	*0.023*	*0.007*	*0.037*	*0.010*	*0.027*	*0.518*

[1] TSF = 1,000 Square Feet Gross Floor Area.
[2] Average trip generation rates from Trip Generation Manual, ITE, 10th Edition (2017).
[3] Inbound/Outbound Splits per ITE Trip Generation, 10th Ed., 2017.
[4] Passenger car / 2 axle / 3 axle / 4+ axle truck split from Truck Trip Generation Study by the City of Fontana, 2003.
[5] PCE Factor per San Bernardino County CMP, 2016 Update are used.

Project Trip Generation

The trip generation potential for the Project was forecast using ITE Land Use Code 154: High-Cube Transload and Short-Term Storage Warehouse equations. The trip generation volumes are developed by multiplying the trip generation rates from the previous section by the square footage of the Project. Table 4.17-5 presents the daily and peak hour trip generation for the Project. As shown, the Project is anticipated to generate approximately 2,202 daily PCE trip-ends, including 127 PCE trip-ends during the AM peak hour and 158 PCE trip-ends during the PM peak hour.

Table 4.17-5
Project Trip Generation (PCE)

Land Use	Qty	Unit	AM Peak Hour			PM Peak Hour			Daily
			Total	In	Out	Total	In	Out	
High-Cube Transload and Short-Term Storage Warehouse	1200	TSF							
Passenger Cars (PCE = 1.0)			*77*	*59*	*18*	*96*	*28*	*68*	*1,337*
Trucks (2 Axle, PCE = 1.5)			*5*	*4*	*1*	*6*	*2*	*4*	*87*
Trucks (3 Axle, PCE = 2.0)			*9*	*7*	*2*	*11*	*3*	*8*	*156*
Trucks (4+ Axle, PCE = 3.0)			*36*	*27*	*8*	*45*	*13*	*32*	*621*
PROJECT TOTAL (IN PCE)			127	97	29	158	46	112	2,202

TSF = 1,000 Square Feet Gross Floor Area.

Project Trip Distribution

Trip distribution represents the directional orientation of traffic to and from the Project site. Trip distribution is influenced by the geographical location of the site, type of land use in the study area, such as shopping centers and recreational sites, and proximity to the regional freeway system. The trip directional orientation of traffic for the Project was determined based upon the existing roadway system, existing traffic patterns, and existing and future land uses. The directional distribution for the Project traffic for passenger vehicles and trucks assumed in this study are shown on Figure 11 and Figure 12 of the TIA, respectively. This shows the direction that vehicles will travel from the Project site to their next destination.

Cumulative Project Generated Traffic

Cumulative projects are closely related past, present and reasonably foreseeable probably future projects that contribute vehicle trips to the roadway network by the project's opening year (2020). The County of San Bernardino, City of Highland, and City of Redlands provided Webb a list of cumulative projects within the Project study area. Traffic from these cumulative projects is expected to have an Impact on levels of service. The cumulative projects within the study area are listed In Table 4-3 of the TIA and the locations are shown in Exhibit 4.17-7, below.

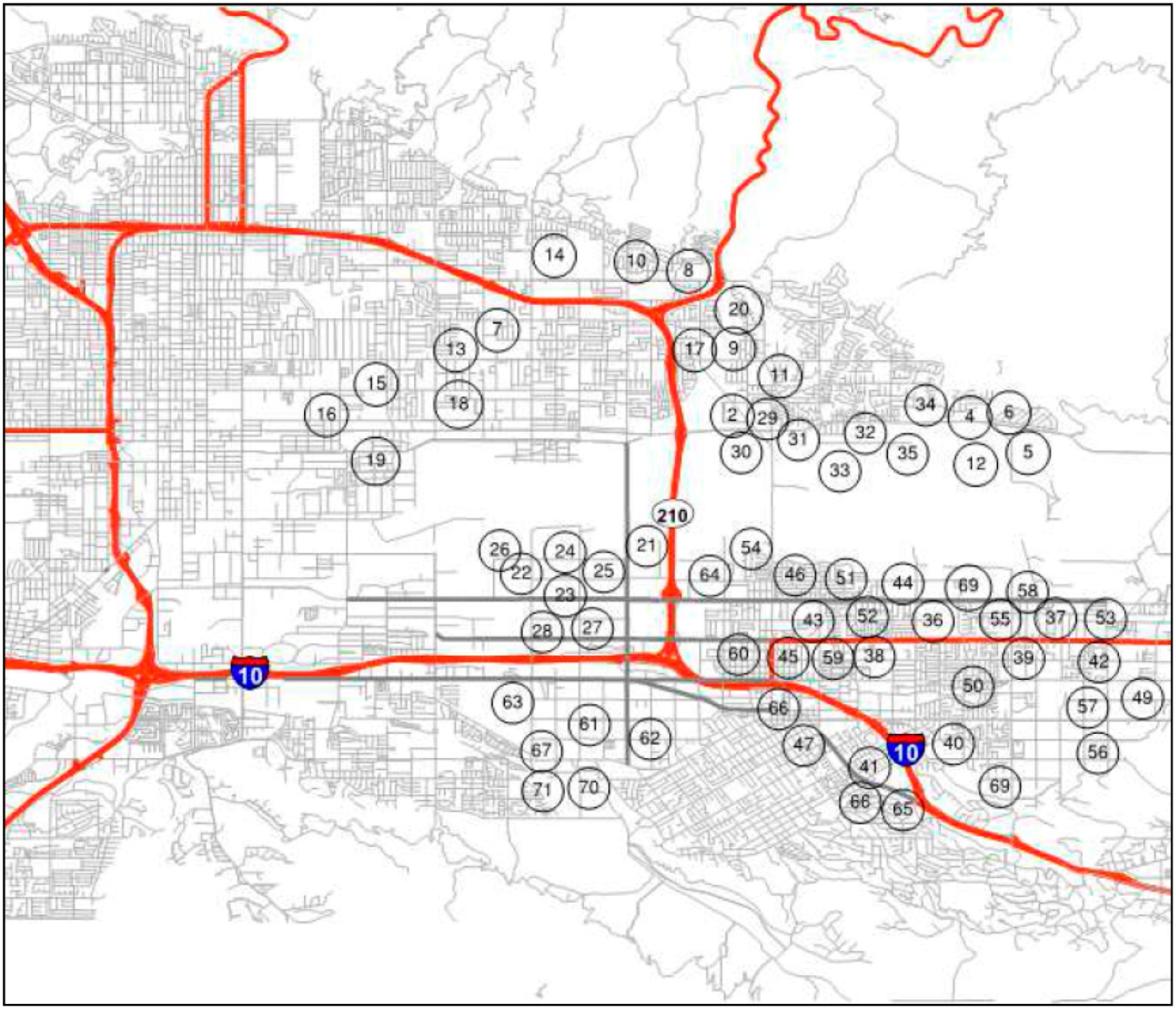

Exhibit 4.17-7 Cumulative Projects Location Map

Duke Realty Alabama and Palmetto Warehouse

County of San Bernardino, California

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Ambient Growth

In order to evaluate traffic conditions for the opening year, area wide growth on existing roadways must be projected. The majority of the anticipated growth within the study area is accounted for through cumulative project traffic. The ambient traffic growth factor is intended to include unknown and future cumulative projects in the study area, as well as account for regular growth in traffic volumes due to the development of projects outside the study area. Per discussion with San Bernardino County Traffic Division staff, the TIA utilized a two percent per year growth rate.

Total Traffic (2020)

Traffic conditions for the opening year include existing traffic, ambient growth, cumulative project trips, and the proposed Project trips. All of the types of trips are included in the analysis to result in forecasted intersection LOS for the opening year (2020).

Build Out Year (2040) Trip Generation

The San Bernardino County Guidelines require examination of traffic impacts under build-out year 2040 conditions. The San Bernardino County TIA procedures require that an analysis be conducted utilizing year 2040 traffic data from an approved local or regional traffic model provided by San Bernardino County Transportation Authority (SBCTA). SBCTA developed year 2040 traffic volumes using future traffic projections from the East Valley Traffic Model (EVTM), maintained by the City of San Bernardino.

Project Design Features – Roadway and Safety Improvements

The following roadway and safety improvements are intended to mitigate the direct traffic impacts generated by the project in order to meet the required level of service:

- Conduct full width improvements on all internal roadways.
- Construct partial width improvements on the northerly side of Palmetto Avenue at its ultimate cross- section as a collector street adjacent to project boundary line.
- Construct partial width improvements on the westerly side of Alabama Street at its ultimate cross- section as a major arterial adjacent to project boundary line.
- Modify the existing traffic signal at intersection of Alabama Street and River Bluff Avenue to provide full access for all movements at the intersection.
- Signing/striping should be implemented in conjunction with detailed construction plans for the Project site.
- Sight distance at the Project entrance roadway will be reviewed with respect to standard County of San Bernardino sight distance standards at the time of preparation of final grading, landscape, site development, and street improvement plans.

Project Design Features – Intersection Improvements

The following intersection improvements are intended to mitigate the direct traffic impacts generated by the project in order to meet the required level of service:

- Construct the intersection of West Driveway 1 and Palmetto Avenue (Intersection 15) to include the following geometries:

Northbound: No proposed improvements.
Southbound: Shared left-right turn lane.
Eastbound: Convert through lane to shared through-left turn lane.
Westbound: Convert through lane to shared through-right turn lane.

- Construct the intersection of West Driveway 2 and Palmetto Avenue (Intersection 16) to include the following geometries:

  Northbound: No proposed improvements.
  Southbound: Shared left-right turn lane.
  Eastbound: Convert through lane to shared through-left turn lane.
  Westbound: Convert through lane to shared through-right turn lane.

- Construct the intersection of East Driveway 3 and Palmetto Avenue (Intersection 17) to include the following geometries:

  Northbound: No proposed improvements.
  Southbound: Shared left-right turn lane.
  Eastbound: Convert through lane to shared through-left turn lane.
  Westbound: Convert through lane to shared through-right turn lane.

- Construct the intersection of Alabama Street and North Driveway 4 (Intersection 18) to restrict the movements for right in right out only:

  Northbound: One through lane.
  Southbound: Convert through lane to shared through-right turn lane. Add two through lanes.
  Eastbound: Add a right turn lane.
  Westbound: Does not exist.

- Modify traffic signal and construct the intersection of River-Bluff Avenue/ Driveway 5 and Alabama Street to include the following geometries:

  Northbound: One left turn lane. One through lane. One right turn lane.
  Southbound: One left turn lane. Two through lanes. One through-right turn lane.
  Eastbound: One left turn lane. One lane shared by through-right turn movements.
  Westbound: One left turn lane. One lane shared by through-right turn movements.

- Construct the intersection of Alabama Street and South Driveway 6 (Intersection 19) to restrict the movements for right in right out only:

  Northbound: Two through lanes.
  Southbound: Convert through lane to shared through-right turn lane.
  Eastbound: Add a right turn lane.
  Westbound: Does not exist.

Committed Roadway Improvements

The Project is within the sphere of influence or within one mile of the border of the City of San Bernardino, the City of Redlands, and the City of Highland. Several intersection and roadway improvement Projects are planned to be constructed by the county and city in the future within the study area.

Intersection Improvements:

1. Alabama Street (NS) and Lugonia Avenue (EW)
   a. Add northbound right-turn lane and second westbound left-turn lane.
2. Alabama Street (NS) and San Bernardino Avenue (EW)

a. Reconfigure eastbound approach for three through lanes and one right-turn lane. Reconfigure westbound approach to include two left-turn lanes.

The County also plans to improve following interchanges under the SANBAG Congestion Management Program:

1. I-10 (EW) and California Street (NS)
2. I-10 (EW) and Alabama Street (NS)

Roadway Improvements:

1. Alabama Street from Pioneer Avenue to Santa Ana River
    a. Widen the roadway from one lane in each direction to three lanes in each direction.
2. Alabama Street from I-10 WB Ramps to I-10 EB Ramps
    a. Widen overcrossing to two to three lanes in each direction. Re-configure ramps.
3. San Bernardino Avenue
    a. Widen the roadway from one lane in each direction to three lanes in each direction.

Capacity and Level of Service and Improvement Analysis

Levels of Service – Existing Plus Project (2018) Conditions

The Existing Plus Project (2018) scenario includes existing traffic and Project traffic. Table 4.17-6 provides the projected delay and levels of service at the study intersections under Existing Plus Project conditions without off-site improvements. These levels of service vary from LOS A to E. The Existing Plus Project AM and PM peak hour intersection turning movement volumes are shown on Figure 24 and Figure 25 of the TIA, respectively. The levels of service are based upon the existing geometries for the study area intersections. The level of service calculation worksheets are provided in Appendix E of the TIA. The following study intersections are expected to operate at an unacceptable level of service:

1) California Street (NS)/ I-10 WB Ramps
2) California Street (NS)/ I-10 EB Ramps

These are the same intersections that experience unacceptable LOS under the 2018 Exiting condition.

Table 4.17-6
Intersection Levels of Service – Existing Plus Project (2018) Conditions

Intersection	Peak Hour	Traffic Controls	Delay (sec)	LOS
1. California Street (NS)/ I-10 WB Ramps (EW)	AM PM	Signal	**72.2** 32.9	**E** C
2. California Street (NS)/ I-10 EB Ramps (EW)	AM PM	Signal	**61.0** **57.3**	**E** **E**
3. Alabama Street (NS)/ 5th Street (EW)	AM PM	Signal	35.4 51.2	D D
4. Alabama Street (NS)/ 3rd Street (EW)	AM PM	Signal	26.2 28.9	C C
5. Alabama Street (NS)/ Dwy 5-River Bluff Avenue (EW)	AM PM	Signal	9.2 8.5	A A
6. Alabama Street (NS)/ Palmetto Avenue (EW)	AM PM	Signal	7.7 13.4	A B
7. Alabama Street (NS)/ San Bernardino Avenue (EW)	AM PM	Signal	26.8 32.1	C C
8. Alabama Street (NS)/ Lugonia Avenue (EW)	AM PM	Signal	25.6 34.6	C C
9. Alabama Street (NS)/ I-10 WB Ramps (EW)	AM PM	Signal	33.7 29.2	C C
10. Alabama Street (NS)/ I-10 EB Ramps (EW)	AM PM	Signal	21.3 27.9	D C
11. SR-210 SB Ramps (NS)/ 5th Street (EW)	AM PM	Signal	32.8 14.5	C B
12. SR-210 NB Ramps (NS)/ 5th Street (EW)	AM PM	Signal	7.9 12.5	B B
13. SR-210 SB Ramps (NS)/ San Bernardino Avenue (EW)	AM PM	Signal	28.5 28.0	C C
14. SR-210 NB Ramps (NS)/ San Bernardino Avenue (EW)	AM PM	Signal	30.1 34.3	C C
15. West Dwy 1 (NS)/ Palmetto Avenue (EW)	AM PM	OWSS	0.4 7.0	A A
16. West Dwy 2 (NS)/ Palmetto Avenue (EW)	AM PM	OWSS	0.3 1.0	A A
17. East Dwy 3 (NS)/ Palmetto Avenue (EW)	AM PM	OWSS	0.2 0.5	A A
18. Alabama Street (NS)/ North Dwy 4 (EW)	AM PM	OWSS	0.0 0.0	A A
19. Alabama Street (EW)/ South Dwy 6 (EW)	AM PM	OWSS	0.1 0.3	A A

Levels of Service – Existing Plus Ambient Growth Plus Project (2020) Conditions

The Existing Plus Ambient Growth Plus Project (2020) scenario includes existing traffic, an ambient growth of two percent per year for two years to 2020 (four percent total ambient growth) and project traffic. Table 4.17-7 provides the projected delay and levels of service at the study intersections under Existing Plus Ambient Growth Plus Project conditions without off-site improvements. These levels of service vary from LOS A to E. The Existing Plus Ambient Growth Plus Project AM and PM peak hour intersection turning movement volumes are shown on Figure 26 and Figure 27 of the TIA, respectively. The levels of service are based upon the existing geometries for the study intersections. The level of service calculation worksheets are provided in Appendix E of the TIA. The following study intersections are expected to operate at an unacceptable level of service:

1. California Street (NS)/ I-10 WB Ramps
2. California Street (NS)/ I-10 EB Ramps
3. Alabama Street (NS)/ 5th Street (EW)
8. Alabama Street (NS)/ Lugonia Avenue (EW)

Under this 2020 condition two more intersections (Intersections 3 and 8) have unacceptable LOS in addition to the two intersections (Intersections 1 and 2) that have unacceptable LOS under the Existing Plus Project (2018) Conditions.

Table 4.17-7
Intersection Levels of Service – Existing Plus Ambient Growth Plus Project (2020) Conditions

Intersection	Peak Hour	Traffic Controls	Delay (sec)	LOS
1. California Street (NS)/ I-10 WB Ramps (EW)	AM PM	Signal	**69.3** 36.9	**E** D
2. California Street (NS)/ I-10 EB Ramps (EW)	AM PM	Signal	**62.1** **77.9**	**E** **E**
3. Alabama Street (NS)/ 5th Street (EW)	AM PM	Signal	35.1 **61.6**	D **E**
4. Alabama Street (NS)/ 3rd Street (EW)	AM PM	Signal	17.7 29.6	B C
5. Alabama Street (NS)/ Dwy 5-River Bluff Avenue (EW)	AM PM	Signal	7.2 8.3	A A
6. Alabama Street (NS)/ Palmetto Avenue (EW)	AM PM	Signal	7.5 14.4	A B
7. Alabama Street (NS)/ San Bernardino Avenue (EW)	AM PM	Signal	24.4 36.2	C D
8. Alabama Street (NS)/ Lugonia Avenue (EW)	AM PM	Signal	22.3 **41.4**	C **D**
9. Alabama Street (NS)/ I-10 WB Ramps (EW)	AM PM	Signal	32.7 27.2	C C
10. Alabama Street (NS)/ I-10 EB Ramps (EW)	AM PM	Signal	24.6 36.7	C D
11. SR-210 SB Ramps (NS)/ 5th Street (EW)	AM PM	Signal	21.5 25.6	C C
12. SR-210 NB Ramps (NS)/ 5th Street (EW)	AM PM	Signal	7.9 21.3	B C
13. SR-210 SB Ramps (NS)/ San Bernardino Avenue (EW)	AM PM	Signal	38.1 40.2	D D
14. SR-210 NB Ramps (NS)/ San Bernardino Avenue (EW)	AM PM	Signal	30.9 46.7	C D
15. West Dwy 1 (NS)/ Palmetto Avenue (EW)	AM PM	OWSS	0.4 0.6	A A
16. West Dwy 2 (NS)/ Palmetto Avenue (EW)	AM PM	OWSS	0.3 1.0	A A
17. East Dwy 3 (NS)/ Palmetto Avenue (EW)	AM PM	OWSS	0.2 0.5	A A
18. Alabama Street (NS)/ North Dwy 4 (EW)	AM PM	OWSS	0.1 0.1	A A
19. Alabama Street (EW)/ South Dwy 6 (EW)	AM PM	OWSS	0.1 0.3	A A

Levels of Service – Existing Plus Ambient Growth Plus Cumulative Plus Project (2020) Conditions

The Existing Plus Ambient Growth Plus Cumulative Plus Project (2020) scenario includes existing traffic, an ambient growth of two percent per year for two years to 2020 (four percent total ambient growth), cumulative projects provided by the County of San Bernardino, City of Highland, and City of Redlands, and Project traffic. Table 4.17-8 provides the projected delay and levels of service at the study intersections under Existing Plus Ambient Growth Plus Cumulative Plus Project conditions without off-site improvements. These levels of service vary from LOS A to F. The levels of service are based upon the existing geometries for the study intersections. The level of service calculation worksheets are provided in Appendix E of the TIA. The following study intersections are expected to operate at an unacceptable level of service:

1. California Street (NS)/ I-10 WB Ramps
2. California Street (NS)/ I-10 EB Ramps
3. Alabama Street (NS)/ 5th Street (EW)
8. Alabama Street (NS)/ Lugonia Avenue (EW)

Table 4.17-8
Intersection Levels of Service-Existing Plus Ambient Growth Plus Cumulative Plus Project (2020) Conditions

Intersection	Peak Hour	Traffic Controls	Delay (sec)	LOS
1. California Street (NS)/ I-10 WB Ramps (EW)	AM PM	Signal	**91.1** 54.0	**F** D
2. California Street (NS)/ I-10 EB Ramps (EW)	AM PM	Signal	**75.5** **95.4**	**E** **F**
3. Alabama Street (NS)/ 5th Street (EW)	AM PM	Signal	**39.5** **58.1**	D **E**
4. Alabama Street (NS)/ 3rd Street (EW)	AM PM	Signal	22.5 28.9	C C
5. Alabama Street (NS)/ Dwy 5-River Bluff Avenue (EW)	AM PM	Signal	6.1 9.4	A A
6. Alabama Street (NS)/ Palmetto Avenue (EW)	AM PM	Signal	8.4 18.0	A B
7. Alabama Street (NS)/ San Bernardino Avenue (EW)	AM PM	Signal	32.5 44.8	C D
8. Alabama Street (NS)/ Lugonia Avenue (EW)	AM PM	Signal	28.5 **56.8**	C **E**
9. Alabama Street (NS)/ I-10 WB Ramps (EW)	AM PM	Signal	36.0 39.9	D D
10. Alabama Street (NS)/ I-10 EB Ramps (EW)	AM PM	Signal	41.9 54.9	D D
11. SR-210 SB Ramps (NS)/ 5th Street (EW)	AM PM	Signal	22.0 34.7	B C
12. SR-210 NB Ramps (NS)/ 5th Street (EW)	AM PM	Signal	16.9 19.2	B C
13. SR-210 SB Ramps (NS)/ San Bernardino Avenue (EW)	AM PM	Signal	34.6 42.4	C D
14. SR-210 NB Ramps (NS)/ San Bernardino Avenue (EW)	AM PM	Signal	29.3 43.7	C D
15. West Dwy 1 (NS)/ Palmetto Avenue (EW)	AM PM	OWSS	0.3 0.4	A A
16. West Dwy 2 (NS)/ Palmetto Avenue (EW)	AM PM	OWSS	0.2 0.8	A A
17. East Dwy 3 (NS)/ Palmetto Avenue (EW)	AM PM	OWSS	0.1 0.4	A A
18. Alabama Street (NS)/ North Dwy 4 (EW)	AM PM	OWSS	0.1 0.1	A A
19. Alabama Street (EW)/ South Dwy 6 (EW)	AM PM	OWSS	0.1 0.3	A A

Levels of Service – Existing Plus Ambient Growth Plus Cumulative Plus Project (2020) With Improvements

Table 4.17-9 provides the projected delay and levels of service at the study intersections under Existing Plus Ambient Growth Plus Cumulative Plus Project (2020) conditions with off-site improvements. With the recommended off-site improvements, the study area intersections would operate at an acceptable LOS C/D or better. The level of service calculation worksheets are provided in Appendix E of the TIA.

Table 4.17-9
Intersection Levels of Service – Existing Plus Ambient Growth Plus Cumulative Plus Project (2020) With Improvements

Intersection	Peak Hour	Traffic Controls	W/O Improvements		W/ Improvements	
			Delay (sec)	LOS	Delay (sec)	LOS
1. California Street (NS)/ I-10 WB Ramps (EW)	AM PM	Signal	**91.1** 54.8	**F** D	50.4 49.5	D D
2. California Street (NS)/ I-10 EB Ramps (EW)	AM PM	Signal	**75.5** **95.4**	**E** **F**	23.7 22.5	C C
3. Alabama Street (NS)/ 5th Street (EW)	AM PM	Signal	39.4 **58.1**	D **E**	37.0 53.9	D D
8. Alabama Street (NS)/ Lugonia Avenue (EW)	AM PM	Signal	28.5 **57.9**	C **E**	19.4 34.5	C C

Table 6-2 and Figure 35 of the Project TIA present the proposed improvement and mitigation measures in order to achieve a satisfactory level of service at the study intersections in Existing Plus Ambient Growth Plus Project (2020) conditions. The following improvements and mitigations are proposed for existing plus ambient growth plus Project conditions:

Improvements:

5. **Alabama Street (NS)/ Dwy-5-River-Bluff Avenue (EW)**: Add two through lanes for southbound approach.
6. **Alabama Street (NS)/ Palmetto Avenue (EW)**: Add one right turn lane for northbound approach.
18. **Alabama Street (NS)/ North Dwy 4 (EW)**: Add two through lanes for southbound approach.
19. **Alabama Street (NS)/ South Dwy 6 (EW)**: Add two through lanes for southbound approach.

Mitigations:

3. **Alabama Street (NS)/ 5th Street (EW):** Add one overlapping northbound right turn lane.
8. **Alabama Street (NS)/ Lugonia Avenue (EW)**: Add one northbound right turn lane.

The Project will construct half-width improvements along its frontage on Alabama Street and Palmetto Avenue prior to opening. However, due to restrictive existing roadway geometrics on Alabama Street to the north and south of the Project, striping of additional through travel lanes along the Project frontage is not possible until the adjacent non-Project segments are completed. It is assumed that the adjacent non-Project roadway segments will not be constructed by Project

completion, so the roadway geometries analyzed in this scenario are assumed to be less than ultimate conditions.

Table 6-3 and Figure 36 of the Project TIA present the proposed improvement and mitigation measures in order to achieve a satisfactory level of service at the study intersections in Existing Plus Ambient Growth Plus Cumulative Plus Project (2020) conditions. In addition to existing plus Project improvements, no improvement and mitigation measures are proposed. The Project will construct half-width improvements along its frontage on Alabama Street and Palmetto Avenue prior to opening. However, due to restrictive existing roadway geometrics on Alabama Street to the north and south of the Project, striping of additional through travel lanes along the Project frontage is not possible until the adjacent non-Project segments are completed. It is assumed that the adjacent non-Project roadway segments will not be constructed by Project completion, so the roadway geometries analyzed in this scenario are assumed to be less than ultimate conditions.

Levels of Service – Build Out Year Plus Cumulative Projects (2040) Conditions

The Build-Out Year Plus Cumulative Projects (2040) scenario includes forecasted traffic volumes at expected area build-out and cumulative projects provided by the County of San Bernardino, City of Highland, and City of Redlands. Table 4.17-10 provides the projected delay and levels of service at the study intersections under Build-Out Year Plus Cumulative Projects conditions without off-site improvements. These levels of service vary from LOS A to F. The Build-Out Year Plus Cumulative Projects AM and PM peak hour intersection turning movement volumes are shown on Figure 30 and Figure 31 of the TIA, respectively. The levels of service are based upon the existing geometries for the study intersections. The level of service calculation worksheets are provided in Appendix E of the TIA. The intersections listed below are expected to operate at an unacceptable level of service.

1. California Street (NS)/ I-10 WB Ramps (EW)
2. California Street (NS)/ I-10 EB Ramps (EW)
3. Alabama Street (NS)/ 5th Street (EW)
4. Alabama Street (NS)/ 3rd Street (EW)
8. Alabama Street (NS)/ Lugonia Avenue (EW)
9. Alabama Street (NS)/ I-10 WB Ramps (EW)
10. Alabama Street (NS)/ I-10 EB Ramps (EW)
14. SR-210 NB Ramps (NS)/ San Bernardino Avenue (EW)

Table 4.17-10
Intersection Levels of Service – Build-Out Year Plus Cumulative Projects (2040) Conditions

Intersection	Peak Hour	Traffic Controls	Delay (sec)	LOS
1. California Street (NS)/ I-10 WB Ramps (EW)	AM PM	Signal	53.0 **101.6**	D **F**
2. California Street (NS)/ I-10 EB Ramps (EW)	AM PM	Signal	**78.9** **125.5**	**E** **F**
3. Alabama Street (NS)/ 5th Street (EW)	AM PM	Signal	53.2 **86.2**	D **F**
4. Alabama Street (NS)/ 3rd Street (EW)	AM PM	Signal	**62.0** 32.7	**E** C
5. Alabama Street (NS)/ Dwy 5-River Bluff Avenue (EW)	AM PM	Signal	5.2 8.4	A A
6. Alabama Street (NS)/ Palmetto Avenue (EW)	AM PM	Signal	5.4 10.3	A B
7. Alabama Street (NS)/ San Bernardino Avenue (EW)	AM PM	Signal	30.5 33.3	C C
8. Alabama Street (NS)/ Lugonia Avenue (EW)	AM PM	Signal	28.9 **61.4**	C **E**
9. Alabama Street (NS)/ I-10 WB Ramps (EW)	AM PM	Signal	**94.8** **112.3**	**F** **F**
10. Alabama Street (NS)/ I-10 EB Ramps (EW)	AM PM	Signal	43.8 **69.8**	D **E**
11. SR-210 SB Ramps (NS)/ 5th Street (EW)	AM PM	Signal	29.2 37.9	C D
12. SR-210 NB Ramps (NS)/ 5th Street (EW)	AM PM	Signal	23.0 25.8	C C
13. SR-210 SB Ramps (NS)/ San Bernardino Avenue (EW)	AM PM	Signal	36.1 49.8	D D
14. SR-210 NB Ramps (NS)/ San Bernardino Avenue (EW)	AM PM	Signal	34.9 **129.3**	C **F**
15. West Dwy 1 (NS)/ Palmetto Avenue (EW)	AM PM	Does Not Exist		
16. West Dwy 2 (NS)/ Palmetto Avenue (EW)	AM PM	Does Not Exist		
17. East Dwy 3 (NS)/ Palmetto Avenue (EW)	AM PM	Does Not Exist		
18. Alabama Street (NS)/ North Dwy 4 (EW)	AM PM	Does Not Exist		
19. Alabama Street (EW)/ South Dwy 6 (EW)	AM PM	Does Not Exist		

As shown in Table 4.17-10, Intersections 1, 2, 3, 8 and 9 were already projected to operate at an unacceptable LOS under the Existing Plus Ambient Growth Plus Cumulative Plus Project (2020) Conditions as well as 2040 conditions. In addition, intersections 4, 10 and 14 would also operate under an unacceptable LOS under 2040 conditions.

Table 6-4 and Figure 37 of the Project TIA present the proposed improvement and mitigation measures in order to achieve a satisfactory level of service at the study intersections in Build-Out Year Plus Cumulative Projects (2040) conditions. The proposed improvement and mitigation measures are as follows:

Improvements:

1. **California Street (NS)/ I-10 WB Ramps (EW**): Add one left turn lane for northbound approach.
2. **California Street (NS)/ I-10 EB Ramps (EW)**: Add one left lane for southbound approach.
3. **Alabama Street (NS)/ River-Bluff Avenue (EW)**: Add two through lanes for northbound approach.
6. **Alabama Street (NS)/ Palmetto Avenue (EW)**: Add one through lane for eastbound approach and one through lane for westbound approach. Add one through lane for northbound approach and southbound approach.
7. **Alabama Street (NS)/ San Bernardino Avenue (EW)**: Add one through lane and one right turn lane for eastbound approach and one left turn lane for westbound approach.
8. **Alabama Street (NS)/ Lugonia Avenue (EW)**: Add one northbound right turn lane and one westbound left turn lane.

Mitigations:

4. **Alabama Street (NS)/ 5th Street (EW)**: Add one overlapping northbound right turn lane.
5. **Alabama Street (NS)/ 3rd Street (EW)**: Add one westbound left turn lane and one westbound right-turn lane.
6. **Alabama Street (NS)/ Lugonia Avenue (EW)**: Add one eastbound right turn lane and westbound right turn lane.
9. **Alabama Street (NS)/ I-10 WB Ramps (EW**): Add one left turn lane for northbound approach and one right turn lane for southbound approach.
10. **Alabama Street (NS)/ I-10 EB Ramps (EW):** Add one through lane for northbound approach.
14. **SR-210 NB Ramps (NS)/ San Bernardino Avenue (EW**): Convert geometry of eastbound right turn lane to eastbound through-right lane. Add one through lane for the westbound approach.

Note*: Intersection mitigations from existing conditions included in the General Plan are shown as improvements in for Build-Out Year 2040 conditions. Additional improvements beyond General Plan improvements are shown as Mitigations.

Levels of Service – Build-Out Year Plus Cumulative Projects (2040) With Improvements

Table 4.17-11 provides the projected delay and levels of service at the study intersections under Build-Out Year Plus Cumulative Projects (2040) conditions with off-site improvements. With the recommended off-site improvements, the study area intersections would operate at an acceptable LOS C/D or better. The level of service calculation worksheets are provided in the TIA.

Table 4.17-11
Intersection Levels of Service – Build-Out Year Plus Cumulative Plus Project (2040) With Improvements

Intersection	Peak Hour	Traffic Controls	W/O Improvements		W/ Improvements	
			Delay (sec)	LOS	Delay (sec)	LOS
1. California Street (NS)/ I-10 WB Ramps (EW)	AM PM	Signal	53.0 **101.6**	D **F**	47.8 36.6	D D
2. California Street (NS)/ I-10 EB Ramps (EW)	AM PM	Signal	**78.9** **125.5**	**E** **F**	22.2 52.6	C D
3. Alabama Street (NS)/ 5th Street (EW)	AM PM	Signal	53.2 **86.2**	D **F**	43.3 54.5	D D
4. Alabama Street (NS)/ 3rd Street (EW)	AM PM	Signal	**62.0** 32.7	**E** C	51.0 32.7	D C
8. Alabama Street (NS)/ Lugonia Avenue (EW)	AM PM	Signal	28.9 **61.4**	C **E**	32.9 34.7	C C
9. Alabama Street (NS)/ I-10 WB Ramps (EW)	AM PM	Signal	**94.8** **112.3**	**F** **F**	41.1 39.5	D D
10. Alabama Street (NS)/ I-10 EB Ramps (EW)	AM PM	Signal	43.8 **69.8**	D **E**	41.6 48.3	D D
14. SR-210 NB Ramps (NS)/ San Bernardino Avenue (EW)	AM PM	Signal	34.9 **129.3**	C **F**	42.0 48.6	D D

Levels of Service – Build-Out Year Plus Cumulative Projects Plus Project (2040) Conditions

The Build-Out Year Plus Cumulative Projects Plus Project (2040) scenario includes forecasted traffic volumes at expected area build-out and cumulative projects provided by the County of San Bernardino, City of Highland, and City of Redlands, and the project. Table 4.17-12 provides the projected delay and levels of service at the study intersections under Build-Out Year Plus Cumulative Projects Plus Project conditions.

Table 4.17-12
Intersection Levels of Service – Build-Out Year Plus Cumulative Projects Plus Project (2040) Conditions

Intersection	Peak Hour	Traffic Controls	Delay (sec)	LOS
1. California Street (NS)/ I-10 WB Ramps (EW)	AM PM	Signal	50.2 **112.9**	D **F**
2. California Street (NS)/ I-10 EB Ramps (EW)	AM PM	Signal	**77.0** **113.1**	**E** **F**
3. Alabama Street (NS)/ 5th Street (EW)	AM PM	Signal	**98.5** **90.2**	**F** **F**
4. Alabama Street (NS)/ 3rd Street (EW)	AM PM	Signal	**69.2** 33.4	**E** C
5. Alabama Street (NS)/ Dwy 5-River Bluff Avenue (EW)	AM PM	Signal	5.8 12.9	A B
6. Alabama Street (NS)/ Palmetto Avenue (EW)	AM PM	Signal	7.4 10.6	A B
7. Alabama Street (NS)/ San Bernardino Avenue (EW)	AM PM	Signal	26.9 35.7	C D
8. Alabama Street (NS)/ Lugonia Avenue (EW)	AM PM	Signal	27.2 **60.4**	C **E**
9. Alabama Street (NS)/ I-10 WB Ramps (EW)	AM PM	Signal	**98.7** **111.9**	**F** **F**
10. Alabama Street (NS)/ I-10 EB Ramps (EW)	AM PM	Signal	38.9 **71.7**	D **E**
11. SR-210 SB Ramps (NS)/ 5th Street (EW)	AM PM	Signal	23.6 38.1	C D
12. SR-210 NB Ramps (NS)/ 5th Street (EW)	AM PM	Signal	13.7 30.8	C D
13. SR-210 SB Ramps (NS)/ San Bernardino Avenue (EW)	AM PM	Signal	33.9 40.5	C D
14. SR-210 NB Ramps (NS)/ San Bernardino Avenue (EW)	AM PM	Signal	34.1 **116.6**	C **F**
15. West Dwy 1 (NS)/ Palmetto Avenue (EW)	AM PM	OWSS	0.1 0.4	A A
16. West Dwy 2 (NS)/ Palmetto Avenue (EW)	AM PM	OWSS	0.1 0.7	A A
17. East Dwy 3 (NS)/ Palmetto Avenue (EW)	AM PM	OWSS	0.1 0.4	A A
18. Alabama Street (NS)/ North Dwy 4 (EW)	AM PM	OWSS	0.1 0.3	A A
19. Alabama Street (EW)/ South Dwy 6 (EW)	AM PM	OWSS	0.1 0.1	A A

As shown in Table 4.17-12, levels of service vary from LOS A to F. The levels of service are based upon the build out year geometries for the study area intersections. The following study intersections are expected to operate at an unacceptable level of service:

1. California Street (NS)/ I-10 WB Ramps (EW)
2. California Street (NS)/ I-10 EB Ramps (EW)
3. Alabama Street (NS)/ 5th Street (EW)
4. Alabama Street (NS)/ 3rd Street (EW)
8. Alabama Street (NS)/ Lugonia Avenue (EW)
9. Alabama Street (NS)/ I-10 WB Ramps (EW)
10. Alabama Street (NS)/ I-10 EB Ramps (EW)
14. SR-210 NB Ramps (NS)/ San Bernardino Avenue (EW)

These intersections are the same as those that operate under an unacceptable LOS for Build-Out Year Plus Cumulative Projects (2040) Conditions, the long range condition that does not include Project-generated traffic.

Table 6-5 and Figure of the Project TIA 38 present the proposed improvement and mitigation measures in order to achieve a satisfactory level of service at the study intersections in Build-Out Year Plus Cumulative Plus Project (2040) conditions. In addition to 2040 cumulative project improvements and mitigations, following improvement and mitigation measures are proposed:

Improvements:

5. **Alabama Street (NS)/ Dwy-5-River-Bluff Avenue (EW):** Add one left turn lane for northbound approach, one shared through-right turn lane for southbound approach and eastbound left and through-right turn lane.
15. **West Dwy 1 (NS)/ Palmetto Avenue (EW):** Add one shared left-right turn lane for southbound approach, one shared left turn lane for eastbound approach and add a shared right turn lane to the westbound approach.
16. **West Dwy 2 (NS)/ Palmetto Avenue (EW):** Add one shared left-right turn lane for southbound approach, one shared left turn lane for eastbound approach and add one shared right turn lane for westbound approach.
17. **West Dwy 3 (NS)/ Palmetto Avenue (EW):** Add one shared left-right turn lane for southbound approach, one shared left turn lane for eastbound approach and add one shared right turn lane for westbound approach.
18. **Alabama Street (NS)/ North Dwy 4 (EW):** Add one shared right turn lane for southbound approach and add one right turn lane for westbound approach.
19. **Alabama Street (EW)/ South Dwy 6 (EW):** Add one shared right turn lane for southbound approach and a right turn lane for westbound approach.

Levels of Service – Build-Out Year Plus Cumulative Projects Plus Project (2040) With Improvements

Table 4.17-13 provides the projected delay and levels of service at the study intersections under Build-Out Year Plus Cumulative Projects Plus Project (2040) conditions with off-site improvements. With the recommended off-site improvements, the study area intersections would operate at an acceptable LOS C/D or better. The level of service calculation worksheets are provided in Appendix E of the TIA.

Table 4.17-13
Intersection Levels of Service – Build-Out Year Plus Cumulative Plus Project (2040) Conditions With Improvements

Intersection	Peak Hour	Traffic Controls	W/O Improvements		W/ Improvements	
			Delay (sec)	LOS	Delay (sec)	LOS
1. California Street (NS)/ I-10 WB Ramps (EW)	AM PM	Signal	50.2 **112.9**	D **F**	53.8 37.3	D D
2. California Street (NS)/ I-10 EB Ramps (EW)	AM PM	Signal	**77.0** **113.1**	**E** **F**	22.8 49.5	C D
3. Alabama Street (NS)/ 5th Street (EW)	AM PM	Signal	**98.5** **90.2**	**F** **F**	53.6 54.1	D D
4. Alabama Street (NS)/ 3rd Street (EW)	AM PM	Signal	**67.5** 36.6	**E** D	49.2 28.3	D C
8. Alabama Street (NS)/ Lugonia Avenue (EW)	AM PM	Signal	27.1 **60.6**	C **E**	25.9 33.3	C C
9. Alabama Street (NS)/ I-10 WB Ramps (EW)	AM PM	Signal	**106.5** **125.2**	**F** **F**	42.1 33.8	D C
10. Alabama Street (NS)/ I-10 EB Ramps (EW)	AM PM	Signal	38.9 **71.7**	D **E**	32.6 45.0	C D
14. SR-210 NB Ramps (NS)/ San Bernardino Avenue (EW)	AM PM	Signal	34.1 **116.6**	C **F**	28.2 49.9	C D

Traffic Signal Warrants Analysis

Conducting traffic signal warrants is a method of determining whether or not an unsignalized intersection needs to install a traffic signal. Traffic conditions that satisfy a traffic signal warrant are more likely to require the installation of a traffic signal. However, the California Manual on Uniform Traffic Control Devices (MUTCD) states that the satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal. Peak hour traffic signal warrant analysis should only be considered as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal. Intersections that exceed the peak hour warrant are more likely to meet one or more of the other volume based signal warrants. The MUTCD also advises that a traffic control signal should not be installed unless:

- One or more of the traffic signal warrants is satisfied;
- An engineering study indicates that installing a traffic control signal will improve the overall safety and/or operation of the intersection; and
- It will not seriously disrupt progressive traffic flow.

For Existing (2018) traffic conditions, the peak hour traffic control signal warrant is not satisfied for any of the study area unsignalized intersections (see Appendix D of the TIA for technical calculations).

For Existing Plus Project (2018) traffic conditions, the peak hour traffic control signal warrant is not satisfied for any of the study area unsignalized intersections (see Appendix D of the TIA for technical calculations).

For Existing Plus Ambient Growth Plus Project (2020) traffic conditions, the peak hour traffic control signal warrant is not satisfied for any of the study area unsignalized intersections (see Appendix D of the TIA for technical calculations).

For Existing Plus Ambient Growth Plus Cumulative Plus Project (2020) traffic conditions, the peak hour traffic control signal warrant is not satisfied for any of the study area unsignalized intersections (see Appendix D of the TIA for technical calculations).

For Buildout Year Plus Cumulative Projects (2040) traffic conditions, the peak hour traffic control signal warrant is not satisfied for any of the study area unsignalized intersections (see Appendix D of the TIA for technical calculations).

For Buildout Year Plus Cumulative Projects Plus Project (2040) traffic conditions, the peak hour traffic control signal warrant is not satisfied for any of the study area unsignalized intersections (see Appendix D of the TIA for technical calculations).

Regional Funding Mechanisms

The project will participate in the cost of off-site improvements through the payment of "fair share" mitigation fees, including the following:

- San Bernardino Associated Governments (SANBAG) Congestion Management Program

Program improvements: SANBAG congestion management program provides funding for the 2040 improvements mentioned in the Table 1-1 of the TIA. The fee of $0.73 per square foot is charged for every high-cube warehouse project developed in the unincorporated San Bernardino County area known as the " Donut Hole" under the SANBAG congestion management program. These fees will be collected and utilized as needed by the County of San Bernardino to construct the improvements necessary to assist in maintaining the required level of service.

Non Program Improvements: The non-program improvements are the improvements which are not funded by any program in County of San Bernardino or Caltrans. The Project has one non-program improvement. As the impact is generated in 2040 Cumulative Plus Project Condition the fair share towards the improvement is calculated based on the number of project trips and total number of cumulative trips. Table 6-5 of the TIA summarizes the proposed mitigation measures and improvements that would result in acceptable LOS and associated funding mechanisms for the Project.

Level of Significance Before Mitigation

The following intersections that would operate at an unacceptable LOS as a result of Project implementation are subject to the jurisdiction of Caltrans, the City of Highland or the City of Redlands:

1. California Street (NS)/ I-10 WB Ramps (EW)
2. California Street (NS)/ I-10 Eastbound Ramps (EW)
3. Alabama Street (NS)/ 5th Street (EW)
4. Alabama Street (NS)/ 3rd Street (EW)
8. Alabama Street (NS)/ Lugonia Avenue (EW)
9. Alabama Street (NS)/ I-10 WB Ramps (EW)

10. Alabama Street (NS)/ I-10 EB Ramps (EW)
14. SR-210 NB Ramps (NS)/ San Bernardino Avenue (EW)

This is a potentially significant impact.

Level of Significance After Mitigation

Caltrans, the City of Highland and the City of Redlands either do not have any plans to improve the impacted intersections or if they do have plans, those plans are either not funded or on a construction schedule that would allow for those improvements to be operational by the Project's opening year. Furthermore, the County has no independent control or jurisdiction over the implementation of those mitigation measures. Accordingly, the recommended mitigation measures needed to mitigate the identified impacts are not economically and legally feasible. As a result, impacts would be significant and unavoidable.

Conflicts with CEQA

Impact TRANS-2 – Would the project conflict or be inconsistent with CEQA guidelines section 15064.3, subdivision (b)?

Analysis of Impacts

CEQA Guidelines Section 15064.3 subdivision (b) has been included in the 2018 CEQA Guidelines as part of the implementation of SB 743 which requires local jurisdictions to use Vehicle Miles Travelled (VMT) instead of Level of Service (LOS) methodologies for the purpose of determining the significance of traffic impacts under CEQA. Also, as part of the implementation of SB 743 local jurisdiction are given until July 1, 2020 to develop and implement thresholds of significance criteria and methodologies for evaluating VMT under the new SB 743 requirements. Therefore, impacts with respect to CEQA Guidelines Section 15064.3(b) are less than significant.

Level of Significance Before Mitigation

Less than significant.

Mitigation Measures

No mitigation required.

Design Feature Hazards

Impact TRANS-3– Would the project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

Analysis of Impacts

The Project would not involve any unusual conditions or hazardous design features, such as sharp curves, dangerous intersections, or incompatible uses. Site access would be obtained via three driveways along Palmetto Avenue and three driveways Alabama Street. Alabama Street is classified as a Major Arterial and Palmetto Avenue is a Collector Roadway. Two of the three driveways on Palmetto Avenue will provide access for passenger vehicle parking while the third

will provide access for trucks and employees. Two of the three driveways on Alabama Street will provide access for trucks and employees while the third will provide access to passenger vehicle parking. Since Alabama Street is a Major Arterial, it should be adequate to accommodate all types of transportation vehicles, including trucks.

Level of Significance Before Mitigation

Less than significant.

Mitigation Measures

No mitigation required.

Emergency Access

Impact TRANS-4 – Would the project result in inadequate emergency access?

Analysis of Impacts

Operation

Operation of the Project would not result in inadequate emergency access since the project is near I-10 and three regional hospitals: Redlands Community Hospital, Arrowhead Regional Medical Center in Colton, and Loma Linda Medical Center in Loma Linda. Additionally, all Project design features would comply with design standards and regulations set forth by the County. During the County's required review of the Project, the Project's design was reviewed to ensure that adequate site access is available for emergency vehicles. Operational impacts to emergency vehicles would be less than significant.

Construction

Traffic circulation may be temporarily adversely impacted during the Project's construction phase. Impacts would occur because of the construction equipment and additional vehicles on the roadways adjacent to the construction area. Impacts that are likely to occur would be a disruption of the normal flow of traffic because of the movement of construction vehicles, heavy equipment within the public right-of-way, and potential temporary lane closures. Thus, fire and police protection emergency vehicles may be temporarily impacted. However, construction would include coordination and appropriate temporary signage and identification of any detour routes to ensure safe and efficient movement of vehicles, including emergency vehicles, during the project's construction phase.

Level of Significance Before Mitigation

Less than significant.

Mitigation Measures

No mitigation required.

Cumulative Impacts

Would the project cause substantial adverse cumulative impacts with respect to transportation and traffic?

Analysis of Impacts

San Bernardino County, City of Highland, and the City of Redlands provided a list of cumulative projects that were utilized to determine the cumulative traffic impacts. San Bernardino County staff identified the list of projects that would generate traffic in the study area by the project's opening year (2018). Cumulative project traffic data through the study area is based on information from traffic impact studies prepared for the cumulative projects where available. A total of 71 cumulative projects were considered in the County, City of Highland, and City of Redlands. The list of cumulative projects and the trips generated by each project are presented in Table 4-3, *Cumulative Projects within the Study Area*, of the TIA. A cumulative impact analysis was included with Impact TRANS-1 for the opening year (2020) and Build-Out Year (2040).

Level of Significance Before Mitigation

This is a potentially significant impact.

Mitigation Measures

Please refer to Section 4.17-3, above, for the discussion of Project improvements and mitigation.

Level of Significance After Mitigation
The following intersections that operate at an unacceptable LOS are subject to the jurisdiction of Caltrans, the City of Highland and the City of Redlands:

1. California Street (NS)/ I-10 WB Ramps (EW):
2. California Street (NS)/ I-10 Eastbound Ramps (EW
3. Alabama Street (NS)/ 5th Street (EW
4. Alabama Street (NS)/ 3rd Street (EW)
8. Alabama Street (NS)/ Lugonia Avenue (EW)
9. Alabama Street (NS)/ I-10 WB Ramps (EW)
10. Alabama Street (NS)/ I-10 EB Ramps (EW)
14. SR-210 NB Ramps (NS)/ San Bernardino Avenue (EW)

Caltrans, the City of Highland and the City of Redlands either do not have any plans to improve the impacted intersections or if they do have plans, those plans are either not funded or on a construction schedule that would allow for those improvements to be operational by the Project's opening year. Furthermore, the County has no independent control or jurisdiction over the implementation of those mitigation measures. Accordingly, the recommended mitigation measures needed to mitigate the identified impacts are not economically and legally feasible. Therefore, impacts will be significant and unavoidable.

4.17.5 REFERENCES

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4.18 –Tribal Cultural Resources

This section describes the existing tribal cultural resources of the Project area; identifies associated regulatory requirements; and evaluates the Project's potential impacts to tribal cultural resources. Issues of interest are cultural and historic impacts indentified by the CEQA Guidelines: whether the project will cause a substantial adverse change in the significant of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe. A *Phase I Cultural Resource Assessment* was prepared for the Project by Applied Earth Works, Inc. (*Æ*), dated January 2019 and is attached as Appendix E to the EIR.

4.18.1 – ENVIRONMENTAL SETTING

The Project is within an area where the traditional use territories of the Serrano, Cahuilla, and Gabrielino meet, just southeast of the present-day City of San Bernardino. All of these cultural groups spoke languages belonging to the Takic branch of the Shoshonean family, a part of the larger Uto-Aztecan language stock. The Phase I Cultural Resource Assessment notes that more detailed ethnographic information is supplied by Bean and Saubel (1972), Bean and Smith (1978), Bean and Vane (2001), Harrington (1942), McCawley (1996), and Strong 1929. The reader is referred to these documents for specific information on Native American cultures of the southern San Bernardino County.

Native American Communication

Æ contacted the Native American Heritage Commission (NAHC) on June 14, 2018, for a review of the Sacred Land Files (SLF), to determine if any known properties of importance to Native Americans (e.g., traditional use or gathering areas, places of religious or sacred activity) are present within or adjacent to the Project area. The NAHC responded on June 15, 2018, stating that the SLF search was completed with negative results. The NAHC requested that local Native American individuals and organizations be contacted to elicit information and/or concerns regarding cultural resource issues related to the Project. A letter describing the Project and asking these individuals and organizations for their input was sent via United States Postal Service (USPS) and electronic mail on July 10, 2018. An example of the letter sent, the list of contacts, and responses received are included in Appendix A. A second attempt at correspondence was made on July 30, 2018. Individuals/organizations contacted at the request of the NAHC include:

- Patricia Garcia-Plotkin, Director for the Agua Caliente Band of Cahuilla Indians (ACBCI) Tribal Historic Preservation Office
- Amanda Vance, Chairperson of the Augustine Band of Cahuilla Indians
- Judy Stapp, Director of Cultural Affairs for the Cabazon Band of Mission Indians
- Daniel Salgado, Chairperson of the Cahuilla Band of Indians
- John Perada, Environmental Director for the Los Coyotes Band of Mission Indians
- Denisa Torres, Cultural Resources Manager for the Morongo Band of Mission Indians
- Temet Aguilar, Chairperson of the Pauma Band of Luiseño Indians – Pauma & Yuima Reservation

- John Gomez, Environmental Coordinator for the Ramona Band of Cahuilla Mission Indians
- Jessica Mauck, Cultural Resources Analyst for the San Manuel Band of Mission Indians (SMBMI)
- Steven Estrada, Chairperson of the Santa Rosa Band of Mission Indians
- Goldie Walker, Chairperson of the Serrano Nation of Mission Indians
- Donna Yocum, Chairperson of the San Fernando Band of Mission Indians
- Joseph Ontiveros, Cultural Resource Department of the Soboba Band of Luiseño Indians
- Michael Mirelez, Cultural Resource Coordinator for the Torres-Martinez Desert Cahuilla Indians

As of July 30, 2018, five responses have been received. The San Manuel Band of Mission Indians (SMBMI) noted that the Project is located in close proximity to the Santa Ana River, which is a Tribal Cultural Resource (TRC). SMBMI recommended Phase I presence/absence testing within the Project area, assuming there are in situ Holocene layers beneath the existing disturbance that resulted from agriculture. Additionally, SMBMI will request a copy of the completed cultural resource report from the County and provide Project recommendations directly to the County. The Cabazon Band of Mission Indians stated that the Project is located outside of the Tribe's current reservation boundaries. The Tribe has no specific archival information indicating that the Project may be a sacred/religious site or other site of Native American traditional cultural value.

The ACBCI noted that the Project area is within the Tribe's Traditional Use Area; however, the Tribe defers all further consultation efforts to the SMBMI. Cahuilla Band of Indians noted that the Project area is located within the Tribe's Traditional Use Area; therefore the Tribe requested to be notified of all updates and or changes with the Project moving forward. The Morongo Band of Mission Indians noted the Project area is located within the Tribe's Traditional Use Area and requested a thorough records search be conducted by contacting one of the CHRIS Archaeological Information Centers and a copy of the search results be provided to the tribe. Morongo also requested that a copy of the Phase I Cultural Resources Assessment be provided to the tribe as soon as it can be made available. A table of responses summarizing consultation with Native American groups and/or individuals is in Appendix A of the *Phase I Cultural Resource Assessment*.

For a more general and expanded discussion of the Environmental Setting please refer to Chapter 4.5 (Cultural Resources).

4.18.2 – REGULATORY FRAMEWORK

Federal

Section 106 of the National Historic Preservation Act

Archaeological resources are protected through the National Historic Preservation Act (NHPA) of 1966, as amended (16 U.S.C. § 470(f)), and its implementing regulation, Protection of Historic Properties (Code of Federal Regulations [CFR] 36 Part 800), the Archaeological and Historic Preservation Act of 1974, and the Archaeological Resources Protection Act of 1979. Prior to implementing an "undertaking" (e.g., issuing a federal permit), Section 106 of the NHPA requires federal agencies to consider the effects of the undertaking on historic properties and to afford the

Advisory Council on Historic Preservation and the State Historic Preservation Officer a reasonable opportunity to comment on any undertaking that would adversely affect properties eligible for listing in the National Register of Historic Places (National Register). As indicated in Section 101(d)(6)(A) of the NHPA, properties of traditional religious and cultural importance to a tribe are eligible for inclusion in the National Register. Under the NHPA, a resource is considered significant if it meets the National Register listing criteria at 36 CFR Section 60.4.

National Register of Historic Places

The National Register was established by the NHPA of 1966, as "an authoritative guide to be used by federal, State, and local governments, private groups and citizens to identify the Nation's historic resources and to indicate what properties should be considered for protection from destruction or impairment" (36 CFR § 60.2). The National Register recognizes both historical-period and prehistoric archaeological properties that are significant at the national, state, and local levels. To be eligible for listing in the National Register, a resource must be significant in American history, architecture, archaeology, engineering, or culture. Districts, sites, buildings, structures, and objects of potential significance must meet one or more of the following four established criteria (U.S. Department of the Interior, 1995):

1. Are associated with events that have made a significant contribution to the broad patterns of our history;
2. Are associated with the lives of persons significant in our past;
3. Embody the distinctive characteristics of a type, period, or method of construction or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
4. Have yielded, or may be likely to yield, information important in prehistory or history. Unless the property possesses exceptional significance, it must be at least 50 years old to be eligible for listing in the National Register (U.S. Department of the Interior, 1995).

In addition to meeting the criteria of significance, a property must have integrity. Integrity is defined as "the ability of a property to convey its significance" (U.S. Department of the Interior, 1995). The National Register recognizes seven qualities that, in various combinations, define integrity: location, design, setting, materials, workmanship, feeling, and association. To retain historic integrity a property must possess several, and usually most, of these seven aspects. Thus, the retention of the specific aspects of integrity is paramount for a property to convey its significance.

Native American Graves Protection and Repatriation Act of 1990

The Native American Graves Protection and Repatriation Act (NAGPRA) of 1990 sets provisions for the intentional removal and inadvertent discovery of human remains and other cultural items from federal and tribal lands. It clarifies the ownership of human remains and sets forth a process for repatriation of human remains and associated funerary objects and sacred religious objects to the Native American groups claiming to be lineal descendants or culturally affiliated with the remains or objects. It requires any federally funded institution housing Native American remains or artifacts to compile an inventory of all cultural items within the museum or with its agency and to provide a summary to any Native American tribe claiming affiliation.

State

California Register of Historic Places

Created in 1992 and implemented in 1998, the California Register is "an authoritative guide in California to be used by state and local agencies, private groups, and citizens to identify the state's historical resources and to indicate what properties are to be protected, to the extent prudent and feasible, from substantial adverse change." Certain properties, including those listed in, or formally determined eligible for listing in, the National Register and California Historical Landmarks numbered 770 and higher, are automatically included in the California Register. Other properties recognized under the California Points of Historical Interest program, identified as significant in historic resources surveys or designated by local landmarks programs, may be nominated for inclusion in the California Register. A resource, either an individual property or a contributor to a historic district, may be listed in the California Register if the State Historical Resources Commission determines that it meets one or more of the following criteria, which are modeled on National Register criteria:

1. It is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage.
2. It is associated with the lives of persons important in our past.
3. It embodies the distinctive characteristics of a type, period, region, or method of construction; represents the work of an important creative individual; or possesses high artistic values.
4. It has yielded, or may be likely to yield, information important in history or prehistory.

Furthermore, under the California Public Resources Code Section 5024.1 and Title 14 California Code of Regulations (CCR) Section 4852(c), a cultural resource must retain integrity to be considered eligible for the California Register. Specifically, it must retain sufficient character or appearance to be recognizable as a historical resource and convey reasons of significance. Integrity is evaluated with regard to retention of such factors as location, design, setting, materials, workmanship, feeling, and association. Cultural sites that have been affected by ground-disturbing activities, such as farming, often lack integrity because they have been directly damaged or moved from their original location, among other changes.

Typically, an archaeological site in California is recommended eligible for listing in the California Register based on its potential to yield information important in prehistory or history (Criterion 4). Important information includes chronological markers such as projectile point styles or obsidian artifacts that can be subjected to dating methods or undisturbed deposits that retain their stratigraphic integrity. Sites such as these have the ability to address research questions.

California Historic Landmarks

California Historical Landmarks (CHLs) are buildings, structures, sites, or places that have anthropological, cultural, military, political, architectural, economic, scientific or technical, religious, experimental, or other value and that have been determined to have statewide historical significance by meeting at least one of the criteria listed below. The resource also must be approved for designation by the County Board of Supervisors (or the city or town council in whose jurisdiction it is located); be recommended by the State Historical Resources Commission; and be officially designated by the Director of California State Parks. The specific standards now in

use were first applied in the designation of CHL #770. CHLs #770 and above are automatically listed in the California Register.

To be eligible for designation as a landmark, a resource must meet at least one of the following criteria:

1. It is the first, last, only, or most significant of its type in the state or within a large geographic region (Northern, Central, or Southern California);
2. It is associated with an individual or group having a profound influence on the history of California; or
3. It is a prototype of, or an outstanding example of, a period, style, architectural movement or construction or is one of the more notable works or the best surviving work in a region of a pioneer architect, designer, or master builder.

California Points of Historic Interest

California Points of Historical Interest (PHI) are sites, buildings, features, or events that are of local (city or county) significance and have anthropological, cultural, military, political, architectural, economic, scientific or technical, religious, experimental, or other value. PHI designated after December 1997 and recommended by the State Historical Resources Commission are also listed in the California Register. No historic resource may be designated as both a landmark and a point. If a point is later granted status as a landmark, the point designation will be retired. In practice, the point designation program is most often used in localities that do not have a locally enacted cultural heritage or preservation ordinance. To be eligible for designation as a PHI, a resource must meet at least one of the following criteria: 1. It is the first, last, only, or most significant of its type within the local geographic region (city or county); 2. It is associated with an individual or group having a profound influence on the history of the local area; or 3. It is a prototype of, or an outstanding example of, a period, style, architectural movement or construction or is one of the more notable works or the best surviving work in the local region of a pioneer architect, designer, or master builder.

California Environmental Quality Act (CEQA)

CEQA is the principal statute governing environmental review of projects occurring in the state and is codified at Public Resources Code Section 21000 *et seq*. CEQA requires lead agencies to determine if a Project would have a significant effect on the environment, including significant effects on historical or archaeological resources.

Under CEQA (§§ 21084.1), a project that may cause a substantial adverse change in the significance of an historical resource is a project that may have a significant effect on the environment. CEQA Guidelines Section 15064.5 recognizes that an historical resource includes: (1) a resource listed in, or determined to be eligible by the State Historical Resources Commission, for listing in the California Register; (2) a resource included in a local register of historical resources, as defined in Public Resources Code Section 5020.1(k) or identified as significant in a historical resource survey meeting the requirements of Section 5024.1(g); and (3) any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California by the lead agency, provided the lead agency's determination is supported by substantial evidence in light of the whole record. The fact that a resource does not meet the three criteria outlined above

does not preclude the lead agency from determining that the resource may be an historical resource as defined in Public Resources Code Sections 5020.1(j) or 5024.1.

If a lead agency determines that an archaeological site is a historical resource, the provisions of Section 21084.1 of CEQA and Section 15064.5 of the CEQA Guidelines apply. If a project may cause a substantial adverse change (defined as physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired) in the significance of an historical resource, the lead agency must identify potentially feasible measures to mitigate these effects (CEQA Guidelines §§ 15064.5(b)(1), 15064.5(b)(4)).

If an archaeological site does not meet the historical resource criteria contained in the CEQA Guidelines, then the site may be treated in accordance with the provisions of Section 21083, which is a unique archaeological resource. As defined in Section 21083.2 of CEQA a "unique" archaeological resource is an archaeological artifact, object, or site, for which it can be clearly demonstrated that without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

- Contains information needed to answer important scientific research questions and there is a demonstrable public interest in that information;
- Has a special and particular quality such as being the oldest of its type or the best available example of its type; or,
- Is directly associated with a scientifically recognized important prehistoric or historic event or person.

If an archaeological site meets the criteria for a unique archaeological resource as defined in Section 21083.2, then the site is to be treated in accordance with the provisions of Section 21083.2, which state that if the lead agency determines that a project would have a significant effect on unique archaeological resources, the lead agency may require reasonable efforts be made to permit any or all of these resources to be preserved in place (§§ 21083.2(b)). If preservation in place is not feasible, mitigation measures shall be required. The CEQA Guidelines note that if an archaeological resource is neither a unique archaeological nor a historical resource, the effects of the project on those resources shall not be considered a significant effect on the environment (CEQA Guidelines § 15064.5(c)(4)).

Native American Heritage Commission (NAHC)

Public Resources Code Section 5097.91 established the NAHC, the duties of which include inventorying places of religious or social significance to Native Americans and identifying known graves and cemeteries of Native Americans on private lands. Public Resources Code Section 5097.98 discusses the procedures that need to be followed upon the discovery of Native American human remains. The NAHC, upon notification of the discovery of human remains is required to contact the County Coroner pursuant to subdivision (c) of Section 7050.5 of the Health and Safety Code and shall immediately notify those persons it believes to be most likely descended from the deceased Native American.

California Public Records Act

Sections 6254(r) and 6254.10 of the California Public Records Act were enacted to protect archaeological sites from unauthorized excavation, looting, or vandalism. Section 6254(r) explicitly authorizes public agencies to withhold information from the public related to "Native American graves, cemeteries, and sacred places maintained by the Native American Heritage Commission." Section 6254.10 specifically exempts from disclosure requests for "Records that relate to archaeological site information and reports maintained by, or in the possession of, the Department of Parks and Recreation, the State Historical Resources Commission, the State Lands Commission, the NAHC, another state agency, or a local agency, including the records that the agency obtains through a consultation process between a California Native American tribe and a state or local agency".

California Health and Safety Code Sections 7050 and 7052

Health and Safety Code Section 7050.5, declares that, in the event of the discovery of human remains outside of a dedicated cemetery, all ground disturbance must cease and the county coroner must be notified. Section 7052 establishes a felony penalty for mutilating, disinterring, or otherwise disturbing human remains, except by relatives.

California Penal Code Section 622.5

Penal Code Section 622.5 provides misdemeanor penalties for injuring or destroying objects of historic or archaeological interest located on public or private lands but specifically excludes the landowner.

California Public Resources Code Section 5097.5

Public Resources Code Section 5097.5 defines as a misdemeanor the unauthorized disturbance or removal of archaeological, historic, or paleontological resources located on public lands.

Senate Bill 18 (SB 18)

SB 18 went into effect January 1, 2005 and requires local governments (city and county) to consult with Native American tribes before making certain planning decisions and to provide notice to tribes at certain key points in the planning process. The intent is to "provide California Native American tribes an opportunity to participate in local land use decisions at an early planning stage, for the purpose of protecting, or mitigating impacts to, cultural places" (Governor's Office of Planning and Research, 2005).

The purpose of involving tribes at these early planning stages is to allow consideration of cultural places in the context of broad local land use policy, before individual site-specific, project-level, land use designations are made by a local government. The consultation requirements of SB 18 apply to general plan or specific plan processes proposed on or after March 1, 2005.

According to the Tribal Consultation Guidelines: Supplement to General Plan Guidelines (2005), the following are the contact and notification responsibilities of local governments:

- Prior to the adoption or any amendment of a general plan or specific plan, a local government must notify the appropriate tribes (on the contact list maintained by the NAHC) of the opportunity to conduct consultations for the purpose of preserving, or mitigating

impacts to, cultural places located on land within the local government's jurisdiction that is affected by the proposed plan adoption or amendment. Tribes have 90 days from the date on which they receive notification to request consultation, unless a shorter timeframe has been agreed to by the tribe (Government Code § 65352.3).

- Prior to the adoption or substantial amendment of a general plan or specific plan, a local government must refer the proposed action to those tribes that are on the NAHC contact list and have traditional lands located within the city or county's jurisdiction. The referral must allow a 45-day comment period (Government Code § 65352). Notice must be sent regardless of whether prior consultation has taken place. Such notice does not initiate a new consultation process.
- Local government must send a notice of a public hearing, at least 10 days prior to the hearing, to tribes who have filed a written request for such notice (Government Code § 65092).

Assembly Bill 52 (AB 52)

AB 52, enacted in September 2014, requires lead agencies to consider the effects of projects on tribal cultural resources and to conduct consultation with federally and non-federally recognized Native American Tribes early in the CEQA process. AB 52 applies specifically to projects for which a Notice of Preparation (NOP) or a notice of Negative Declaration or Mitigated Negative Declaration (MND) has been filed after July 1, 2015.

The goal of AB 52 is to include California Tribes in determining whether a project may result in a significant impact to tribal cultural resources that may be undocumented or known only to the Tribe and its members. This bill specifies that a project that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment. AB 52 defines tribal cultural resources as "sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American Tribe" that are either included or determined to be eligible for inclusion in the CRHR or included in a local register of historical resources (Public Resources Code § 21074 (a)(1)).

AB 52 requires that prior to determining whether a Negative Declaration, MND, or Environmental Impact Report (EIR) is prepared for a project, the lead agency must consult with California Native American Tribes, defined as those identified on the contact list maintained by the NAHC, who are traditionally and culturally affiliated with the geographic area of the Project, and who have requested such consultation in writing. Consultation must be initiated by a lead agency within 14 days of determining that an application for a project is complete or that a decision by a public agency to undertake a project. The lead agency shall provide formal notification to the designated contact of, or a tribal representative of, traditionally and culturally affiliated California Native American Tribes that have requested notice. At the very least the notice should consist of at least one written notification that includes a brief description of the Project and its location, the lead agency contact information, and a notification that the California Native American Tribe has 30 days to request consultation pursuant to this section. The lead agency shall begin the consultation process within 30 days of receiving a California Native American Tribe's request for consultation. According to Public Resources Code Section 21080.3.2(b), consultation is considered concluded when either the parties agree to measure to mitigate or avoid a significant effect, if a significant effect exists, on a tribal cultural resource, or a party, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached.

Local
San Bernardino County General Plan Conservation Element

The General Plan Conservation Element includes concepts and guidelines to manage, preserve, and use cultural resources. The following goals, policies, and programs are applicable to the Project:

Goal CO 3 The County will preserve and promote its historic and prehistoric cultural heritage.

Policy CO 3.1 Identify and protect important archaeological and historic cultural resources in areas of the County that have been determined to have known cultural resource sensitivity.

Programs

1. Require a cultural resources field survey and evaluation prepared by a qualified professional for projects located within the mapped Cultural Resource Overlay area.

2. Mitigation of impacts to important cultural resources will follow the standards established in Article 9 of the California Environmental Quality Act Guidelines, as amended to date.

Policy CO 3.2 Identify and protect important archaeological and historic cultural resources in all lands that involves disturbance of previously undisturbed ground.

Programs

1. Require the Archaeological Information Center at the San Bernardino County Museum to conduct a preliminary cultural resource review prior to the County's application acceptance for all land use applications in planning regions lacking Cultural Resource Overlays and in lands located outside of planning regions.

2. Should the County's preliminary review indicate the presence of known cultural resources or moderate to high sensitivity for the potential presence of cultural resources, a field survey and evaluation prepared by a qualified professional will be required with project submittal. The format of the report and standards for evaluation will follow the "Guidelines for Cultural Resource Management Reports" on file with the San Bernardino County Land Use Services Department.

Policy CO 3.3 Establish programs to preserve the information and heritage value of cultural and historical resources.

Policy CO *3.*4 The County will comply with Government Code Section 65352.2 (SB 18) by consulting with tribes as identified by the California Native American Heritage Commission on all General Plan and specific plan actions.

Programs

1. Site record forms and reports of surveys, test excavations, and data recovery programs will be filed with the Archaeological Information Center at the San Bernardino County Museum, and will be reviewed and approved in consultation with that office.

    a. Preliminary reports verifying that all necessary archaeological or historical fieldwork has been completed will be required prior to project grading and/or building permits.

    b. Final reports will be submitted and approved prior to project occupancy permits.

2. Any artifacts collected or recovered as a result of cultural resource investigations will be catalogued per County Museum guidelines and adequately curated in an institution with appropriate staff and facilities for their scientific information potential to be preserved. This shall not preclude the local tribes from seeking the return of certain artifacts as agreed to in a consultation process with the developer/project archaeologist.

3. When avoidance or preservation of an archaeological site or historic structure is proposed as a form of mitigation, a program detailing how such long-term avoidance or preservation is assured will be developed and approved prior to conditional approval.

4. In areas of potential but unknown sensitivity, field surveys prior to grading will be required to establish the need for paleontologic monitoring.

5. Projects requiring grading plans that are located in areas of known fossil occurrences, or demonstrated in a field survey to have fossils present, will have all rough grading (cuts greater than 3 feet) monitored by trained paleontologic crews working under the direction of a qualified professional, so that fossils exposed during grading can be recovered and preserved. Fossils include large and small vertebrate fossils, the latter recovered by screen washing of bulk samples.

6. A report of findings with an itemized accession inventory will be prepared as evidence that monitoring has been successfully completed. A preliminary report will be submitted and approved prior to granting of building permits, and a final report will be submitted and approved prior to granting of occupancy permits. The adequacy of paleontologic reports will be determined in consultation with the Curator of Earth Science, San Bernardino County Museum.

Policy CO 3.5 Ensure that important cultural resources are avoided or minimized to protect Native American beliefs and traditions.

Programs

1. Consistent with SB 18, as well as possible mitigation measures identified through the CEQA process, the County will work and consult with local tribes to identify, protect and preserve “traditional cultural properties” (TCPs). TCPs include both manmade sites and resources as well as natural landscapes that contribute to the cultural significance of areas.

2. The County will protect confidential information concerning Native American cultural resources with internal procedures, per the requirements of SB 922, an addendum to SB 18. The purpose of SB 922 is to exempt cultural site information from public review as provided for in the Public Records Act. Information provided by tribes to the County shall be considered confidential or sacred.

3. The County will work in good faith with the local tribes, developers/applicants and other parties if the local affected tribes request the return of certain Native American artifacts from private development proposed projects. The developer is expected to act in good faith when considering the local tribe’s request for artifacts. Artifacts not desired by the local tribe will be placed in a qualified repository as established by the California State Historical Resources Commission. If no facility is available, then all artifacts will be donated to the local tribe.

4. The County will work with the developer of any “gated community” to ensure that the Native Americans are allowed future access, under reasonable conditions, to view and/or visit known sites within the “gated community.” If a site is identified within a gated community proposed project, and preferably preserved as open space, the development will be conditioned by the County allow future access to Native Americans to view and/or visit that site.

5. Because contemporary Native Americans have expressed concern over the handling of the remains of their ancestors, particularly with respect to archaeological sites containing human burials or cremations, artifacts of ceremonial or spiritual significance, and rock art, the following actions will be taken when decisions are made regarding the disposition of archaeological sites that are the result of prehistoric or historic Native American cultural activity:

    a. The Native American Heritage Commission and local reservation, museum, and other concerned Native American leaders will be notified in writing of any proposed evaluation or mitigation activities that involve excavation of Native American archaeological sites, and their comments and concerns solicited.

    b. The concerns of the Native American community will be fully considered in the planning process.

    c. If human remains are encountered during grading and other construction excavation, work in the immediate vicinity will cease and

the County Coroner will be contacted pursuant to the state Health and Safety Code.

d. In the event that Native American cultural resources are discovered during project development and/or construction, all work in the immediate vicinity of the find will cease and a qualified archaeologist meeting U.S. Secretary of Interior standards will be hired to assess the find. Work on the overall project may continue during this assessment period.

e. If Native American cultural resources are discovered, the County will contact the local tribe. If requested by the tribe, the County will, in good faith, consult on the discovery and its disposition with the tribe.

San Bernardino County Code

County Code Chapter 82.12, Cultural Resources Preservation (CP) Overlay, includes regulations pertaining to the identification and preservation of important archaeological and historical resources. The chapter outlines application requirements for a project proposed within a CP Overlay, as well as development standards and explanation of the need for a Native American monitor.

The County Code states that the CP Overlay may be applied to areas where archaeological and historic sites that warrant preservation are known or are likely to be present. Specific identification of known cultural resources is indicated by listing in one or more of the following inventories: California Archaeological Inventory, California Historic Resources Inventory, California Historical Landmarks, California Points of Historic Interest, and/or National Register of Historic Places.

4.18.3 – SIGNIFICANCE THRESHOLDS

Per the CEQA Guidelines, implementation of the Project would have a significant impact related to tribal cultural resources if it would:

a) cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is;
    i. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k), or
    ii. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

4.18.4 – IMPACTS AND MITIGATION MEASURES

This section describes potential impacts related to cultural tribal resources; which could result from the implementation of the project and recommends mitigation measures as needed to reduce significant impacts.

Listing for Eligible Resources

Impact TRC-1 – Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is: i) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k); or ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

Analysis of Impacts

The County has notified California Native American tribes who have formally requested notification on CEQA projects under ABAB 52 that the County proposes to undertake the Project. This notification affords California Native American tribes the opportunity for consultation pursuant to Public Resources Code Section 21080.3.1. In September 2018, County staff conducted the AB52 consultation process, pursuant to the Assembly Bill (AB) 52 – Tribal Consultation. The AB52 consultation letters were mailed and submitted to the tribes having cultural affiliation within the geographic area of the proposed site. Based on the tribes' review, the Morongo Band of Mission Indians formally requested these items:

1. A thorough records search be conducted by contacting one of the California Historical Resources Information System (CHRIS) Archaeological Information Centers and a copy of the search results be provided to the tribe.

2. Tribal monitor participation during the initial pedestrian field survey of the Phase I Study of the project and a copy of the results of that study. In the event the pedestrian survey has already been conducted, MBMI requests a copy of the Phase I study be provided to the tribe as soon as it can be made available.

3. MBMI Tribal Cultural Resource Monitor(s) be present during all required ground disturbing activities pertaining to the project.

The Project will comply with each of these requests. Further, the Project will incorporate Mitigation Measures TCR-1 through TCR-4 to ensure impacts to Tribal Cultural Resources are avoided. Therefore, with Mitigation the Project would have a less than significant impact to the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1.

Level of Significance Before Mitigation

Potentially significant.

Mitigation Measures

TCR-1 Prior to the issuance of a grading permit and/or action that would permit project site disturbance (whichever occurs first), the Applicant shall provide written evidence to the County of San Bernardino that the Applicant has retained a qualified archaeologist and Native American monitor to observe grading activities and to salvage and catalogue historic and archaeological resources, as necessary. A Tribal monitor representing the Morongo Band of Mission Indians shall be present for all ground-disturbing activities that occurs within the proposed project area (which includes, but is not limited to, tree/shrub removal and planting, clearing/grubbing, grading, excavation, trenching, compaction, fence/gate removal and installation, drainage and irrigation removal and installation, hardscape installation [benches, signage, boulders, walls, seat walls, fountains, etc.], and archaeological work). The Project developer/applicant shall provide compensation (hourly wages, per diem, mileage, lodging, etc.) for the Tribal monitor as part of the monitoring effort for the Project.

TCR-2 A pre-construction meeting shall be held with the contractors, archaeologist, and American tribal monitor/representative prior to the start of construction. This meeting shall outline all processes for monitoring on the project and information regarding how the Project Archaeologist and the Tribe will provide a weekly construction schedule identifying all ground disturbing activities within the monitoring area, and the specific cultural concerns associated with the Project area.

TCR-3 If human remains or funerary objects are encountered during any activities associated with the project, work in the immediate vicinity (within a 100-foot buffer of the find) shall cease and the County Coroner shall be contacted pursuant to State Health and Safety Code §7050.5 and that code enforced for the duration of the project.

TCR-4 In the event that Native American cultural resources are discovered during project activities, all work in the immediate vicinity of the find (within a 60-foot buffer) shall cease and a qualified archaeologist meeting Secretary of Interior standards shall be hired to assess the find. Work on the other portions of the project outside of the buffered area may continue during this assessment period. Additionally, San Manuel Band of Mission Indians will be contacted if any such find occurs and be provided information and permitted/invited to perform a site visit when the archaeologist makes his/her assessment, so as to provide Tribal input.

Level of Significance after Mitigation

Less than significant.

Cumulative Impacts

Would the project cause substantial adverse cumulative impacts with respect to tribal cultural resources?

Analysis of Impacts

The absence or presence of a tribal cultural resource would not affect such resources on other sites that may develop. Each such potential cumulative project would undergo its own

environmental review. Therefore, any direct project-related impacts for such projects would be addressed and mitigated and there would be no cumulative impacts

Level of Significance Before Mitigation

Less than significant.

Level of Significance After Mitigation

No mitigation is required.

4.18.5 REFERENCES

Applied Earth Works, Inc. 2019. *Phase I Cultural Resource Assessment for the Alabama and Palmetto Project, near the City of Redlands, San Bernardino County, California*. January, 2019.

County of San Bernardino. County of San Bernardino 2007 General Plan: Conservation Element. April 24, 2014

Governor's Office of Planning and Research. 2005. Tribal Consultation Guidelines, Supplement to General Plan Guidelines. Available: https://www.parks.ca.gov/pages/22491/files/tribal_consultation_guidelines_vol-4.pdf.

United States Department of the Interior, National Park Service. 1995. National Register of Historic Places. Available: https://www.nps.gov/nr/publications/bulletins/nrb15/nrb15_pre.htm.

4.19 – Utilities and Service Systems

This EIR chapter addresses utilities and service systems impacts associated with the Project. Issues of interest are utilities and service systems impacts identified by the CEQA Guidelines: whether the Project would exceed applicable wastewater treatment requirements, require or result in the construction of new water or wastewater treatment facilities, require or result in the construction of new or expansion of stormwater drainage facilities, have insufficient water supplies, have sufficient wastewater treatment capacity, have sufficient landfill capacity, or comply with Federal, State and local requirements related to solid waste.

4.19.1 – ENVIRONMENTAL SETTING

The Project site is approximately 55.8-acres of land located on four parcels within the "Donut Hole," an island area of unincorporated San Bernardino County, completely surrounded by the City of Redlands, west of the State Route 210 Freeway (SR 210) between Interstate 10 (I-10) and the Santa Ana River. In 2003, due to the unique Public Services issues involving the Donut Hole and the City of Redlands, the County and the City of Redlands entered into Agreement No. 03-0856 wherein the City of Redlands agreed to provide police, fire, water and sewer services to the Donut Hole in exchange for 90 percent of the sales and use taxes generated within that area.

Water Supply

Per Agreement No. 03-0856, the Project site is currently served by the City of Redlands Municipal Utilities & Engineering Department (RMUED). The RMUED operates and maintains a water distribution system with nearly 400 miles of pipeline and 7 different pressure zones. The system has a 54.5-million-gallon maximum storage capacity. More than 75,000 residents in Redlands, a small part of the City of San Bernardino, and the unincorporated communities of Mentone, parts of Crafton Hills, San Timoteo Canyon and the Donut Hole rely on RMUED to provide water service to their homes and businesses. RMUED supplies a blend of local groundwater, local surface water, and imported water from the State Water Project (SWP) to meet the daily demands of customers. Existing water transmission and distribution pipelines in the system range in size from one to 36 inches in diameter. There are approximately 400 miles of pipeline and 21,500 metered connections that serve potable water. The City of Redlands is a participating agency in the San Bernardino Valley Regional Urban Water Management Plan (RUWMP) which covers most of the eastern half of the Valley Region of San Bernardino County. Water supplies for the project site are projected based upon individual agency supply and combined RUWMP supply as identified in Table 4.19-1 through 4.19-3.

Water Demands

The RMUED service area has an average daily water consumption rate of 27 million gallons per day (mgd) with a maximum daily consumption of 50 mgd in the summer. The average consumption per capita is approximately 320 gallons per day. The City has implemented options for obtaining new potable water sources to manage demand. The City has increased production of water from the groundwater basin, increased conservation practices, and expanded use of reclamation water systems. In addition, the City plans to purchase additional water supply from the SWP. Water demands are projected based upon individual agency demands and combined RUWMP area demands as identified in Table 4.19-1 through 4.19-3.

Table 4.19-1
Projected Potable Water Use by Sector (Acre-Feet/Year)

Sector	2020	2025	2030	2035	2040
Single Family Residential	13,533	14,223	14,801	15,403	16,029
Multi-Family Residential	3,713	3,903	4,061	4,227	4,398
Commercial	3,129	3,289	3,423	3,562	3,706
Landscape Irrigation	2,204	2,317	2,411	2,509	2,611
Other	64	68	70	73	76
Subtotal	**22,643**	**23,800**	**24,766**	**25,774**	**26,820**
Unaccounted for Water	2,264	2,380	2,477	2,577	2,682
Total Water Use	**24,907**	**26,180**	**27,243**	**28,351**	**29,502**

Source: 2015 San Bernardino Valley Regional Urban Water Management Plan. Agencies Participating in RUWMP. June 2016.

Table 4.19-2
Water Supply and Demand Projections – Normal Water Year & Single Dry Year (Acre-Feet/Year)

	2020	2025	2030	2035	2040
Normal Water Year					
Total Supply	337,258	344,848	352,041	359,269	366,097
Total Demand	250,027	260,542	270,747	281,697	289,821
Supply/Demand Difference	87,230	84,306	81,294	77,571	76,276
Single Dry Year					
Total Supply	315,601	322,910	329,970	336,930	343,990
Total Demand	254,785	265,677	276,613	288,321	296,915
Supply/Demand Difference	60,815	57,233	53,357	48,609	47,075

Source: 2015 San Bernardino Valley Regional Urban Water Management Plan. Agencies Participating in RUWMP. June 2016.

Table 4.19-3
Water Supply and Demand Projections – Multiple Dry Years (Acre-Feet/Year)

	2020	2025	2030	2035	2040
	Normal Years		Multiple Dry Years		
Total Supply	315,601	322,910	340,313	347,273	354,333
Total Demand	254,785	265,677	261,662	272,191	280,072
Supply/Demand Difference	60,815	57,233	78,650	75,082	74,261

Source: 2015 San Bernardino Valley Regional Urban Water Management Plan. June 2016.

Wastewater

Per Agreement No. 03-0856, the Project site is serviced by the Redlands sewer collection system and the Redlands Wastewater Treatment Facility (RWTF). The RWTF can treat 7.2 mgd of wastewater for industrial and irrigation purposes including supplying water to the Southern California Edison Mountainview Power Plant. The collection system consists of 250 miles of six to 48-inch sewer lines. Wastewater generated flows by gravity to the RWTF.

Stormwater Drainage Facilities

The project site is serviced jointly by the RMUED and the San Bernardino County Public Works Department. RMUED is one of the agencies responsible for planning, design, construction and maintenance of flood control facilities for project area. The San Bernardino County Department of Public Works through the San Bernardino County Flood Control District operates an extensive system of flood control projects, conservation basins, channels and storm drains.

Solid Waste

Currently, solid waste collection for the project site is operated by the City of Redlands and is disposed at several landfills. The California Department of Resources Recycling and Recovery (CalRecycle) maintains records of maximum capacity and usage of landfills. In 2019, there are two landfills serving the project area as shown in Table 4.19-4.

Table 4.19-4
Landfills Serving the Project Site (2019)

Landfill Facility Name	Maximum Permitted (Cubic Yards)	Remaining Capacity (Cubic Yards)	Max Daily Throughput (Tons/Day)	Scheduled Close Date
California Street Landfill	10,000,000	6,800,000	829	2041
San Timoteo Sanitary Landfill	20,400,000	11,400,000	320	-/-

Source: 2015 San Bernardino Valley Regional Urban Water Management Plan. June 2016.

4.19.2 – REGULATORY FRAMEWORK

Existing regulations identify the applicable significance criteria and policies that contribute to avoiding or reducing the identified potential impact; in many cases, implementation of a policy can be applied to avoid or reduce a wide range of potential impacts.

Federal

Federal Safe Drinking Water Act (SDWA)

The Safe Drinking Water Act (SDWA), originally passed by Congress in 1974, protects public health by regulating the nation's public drinking water supply. The law was amended in 1986 and 1996 and requires many actions to protect drinking water and its sources, including rivers, lakes, reservoirs, springs, and ground water wells. SDWA authorizes the United States Environmental Protection Agency (USEPA) to set national health-based standards for drinking water to protect against both naturally occurring and man-made contaminants that may be found in drinking water. USEPA, states, and water systems then work together to make sure that these standards are met. There are a number of threats to drinking water. Improperly disposed of chemicals, animal wastes, pesticides, human wastes, wastes injected deep underground, and naturally occurring substances can all contaminate drinking water. Likewise, drinking water that is not properly treated or disinfected, or which travels through an improperly maintained distribution system, may also pose a health risk. Originally, SDWA focused primarily on treatment as the means of providing safe drinking water at the tap. The 1996 amendments recognize source water protection, operator training, funding for water system improvements, and public information as important components of safe drinking water.

Clean Water Act (CWA)

USEPA established primary drinking water standards under the authority of the Clean Water Act Section 304. States are required to ensure that potable water retailed to the public meets these standards. Standards for a total of 81 individual constituents have been established under the SDWA as amended in 1986. The USEPA may identify additional constituents in the future. State primary and secondary drinking water standards are promulgated in the California Code of Regulations (CCR) Sections 64431-64501. Secondary drinking water standards incorporate non-health risk factors including taste, odor, and appearance.

State

California Safe Drinking Water Act

Enacted in 1976, the California Safe Drinking Water Act is codified in Title 22 of the CCR. Potable water supply is managed through local agencies and water districts, the State Department of Water Resources (DWR), the Department of Health Services (DHS), the State Water Resources Control Board (SWRCB), USEPA, and the U.S. Bureau of Reclamation. Water right applications are processed through the SWRCB for properties claiming riparian rights or requesting irrigation water from State or Federal distribution facilities. The DWR manages the SWP and compiles planning information on supply and demand within the state.

SB 610 and CEQA Guidelines Section 15155

SB 610 enacted Sections 10910 to 10915 of the State Water Code to require a local land use authority to consult with the local water purveyor to prepare or obtain a water supply assessment (WSA), prior to completing an environmental impact assessment for a specified “water demand” project, defined below. CEQA Guidelines Section 15155 was added to directly incorporate these water code provisions into the CEQA process.

- A proposed residential development of more than 500 dwelling units.
- A proposed shopping center or business establishment employing more than 1,000 persons or having more than 500,000 square feet of floor space.
- A proposed commercial office building employing more than 1,000 persons or having more than 250,000 square feet of floor space.
- A proposed hotel or motel, or both, having more than 500 rooms.
- A proposed industrial, manufacturing, or processing plant, or industrial park planned to house more than 1,000 persons, occupying more than 40 acres of land, or having more than 650,000 square feet of floor area.
- A mixed-use project that includes one or more of the projects specified in this subdivision.
- A project that would demand an amount of water equivalent to, or greater than, the amount of water required by a 500-dwelling unit project.

If a public water system has fewer than 5,000 service connections, then ‘‘project’’ means any proposed residential, business, commercial, hotel or motel, or industrial development that would account for an increase of 10 percent or more in the number of the public water system’s existing service connections, or a mixed-use project that would demand an amount of water equivalent to, or greater than, the amount of water required by residential development that would represent an increase of 10 percent or more in the number of the public water system’s existing service connections.

Key provisions required to be addressed in a WSA include a description of past and existing water supplies and rights and groundwater extraction information including identification of basins,

adjudication rights, and over drafting status. Should the WSA determine that insufficient supplies would be available to serve the project the water purveyor must indicate how it would meet the demand of the new project. If additional supplies are unavailable to meet project demand then the approving agency must include that determination in its project findings.

Urban Water Management Plans (UWMP)

Pursuant to the Urban Water Management Planning Act (Water Code §§ 10610 *et seq.)*), any water district servicing 3,000 or more customers or provides over 3,000 acre-feet of water per year is required to prepare an UWMP. As shown in Chapter 4.8.4, The analysis contained in a UWMP is designed to ensure the appropriate level of reliability in its service to meet the needs of its customers in normal, dry, and multiple-dry years. Normal and dry years refer to categories of projected water supply in times of regular rainfall and in times of drought. UWMPs must be updated every five years on years ending with zero and five. The Act describes the contents of a UWMP as follows:

- Description of service area including current climate and population and project populations estimates in five-year increments over 20 years
- Description of existing and planned water supply over the same 5-year increments including groundwater and surface water resources
- Water supply reliability and methods to compensate for shortages during dry years
- Opportunities for long-term and short-term water exchange or transfer
- Description of water use and demand estimates based on land use for past, current, and projected quantities
- Description of current and planned projects and programs designed to meet the service needs of the customer base
- Description of opportunities for use of desalinated water
- Preparation of a staged water shortage contingency plan for up to a 50 percent shortage over three years
- Information on use and opportunities for use of recycled water

The 2015 San Bernardino Valley Regional Urban Water Management Plan (UWMP) covers the eastern portion of the Valley Region of San Bernardino Valley County including the City of Colton, parts of the East Valley Water District, City of Loma Linda, City of Redlands, City of Rialto, and significant parts of unincorporated San Bernardino County.

Assembly Bill 939 (AB 939)

The California Integrated Waste Management Act of 1989 regulates solid waste management and implements priorities in source reduction, recycling and composting, and environmentally safe transformation and land disposal. The primary provisions of AB 939 required all cities and counties to divert a minimum of 50 percent of their solid waste from landfills and to adopt Integrated Waste Management Plans (IWMP). The Act also established permitting and enforcement provisions for the California Integrated Waste Management Board (CIWMB).

Senate Bill 606 (SB 606)

SB 606 requires the State of California to achieve a 20 percent reduction in per capita water use in California by December 31, 2020. SB 606 requires urban retail water suppliers to calculate an urban water use objective no later than November 1, 2023 and by November 1 every year thereafter and its actual urban water use by those same dates. SB 610 and 221, amended State law to improve the link between the information on water supply availability and certain land use

decisions made by cities and counties. Both statutes require detailed information regarding water availability (WSAs) to be provided to city and county decision-makers prior to approval of specified large (greater than 500 dwelling units) development projects. Both statutes require this detailed information to be included in the administrative record. Under SB 610 WSAs must be furnished to local governments for inclusion in any environmental document for certain projects as defined in Water Code 10912 subject to CEQA. Under SB 221 approval by a city or county of certain residential subdivisions requires an affirmative written verification of enough water supply. General plans do not require their own WSAs, but individual future projects under the General Plan and subject to SB 610 and SB 221 would require WSAs.

Statewide Water Conservation Act of 2009 (Senate Bill (SB) X7-7).

In November 2009, the California State legislature passed, and the Governor approved, a comprehensive package of water legislation, including SB X7-7, addressing water conservation. In general, SB X7-7 requires a 20 percent reduction in per capita urban water use by 2020, with an interim 10 percent target in 2015. The legislation requires urban water users to develop consistent water use targets and to use those targets in their UWMPs. SB X7-7 also requires certain agricultural water supplies to implement a variety of water conservation and management practices and to submit Agricultural Water Management Plans.

State Water Resources Control Board (SWRCB)

The SWRCB, in coordination with nine Regional Boards (RWQCBs), performs functions related to water quality, including issuance and oversight of wastewater discharge permits (e.g., National Pollution Discharge Elimination System), other programs regulating stormwater runoff, and underground and above-ground storage tanks. The SWRCB has also issued statewide waste discharge requirements for sanitary sewer systems, which include requirements for development of a sewer system management plan (SSMP).

Title 22 of California Code of Regulations

Title 22 regulates the use of reclaimed wastewater. In most cases, only disinfected tertiary water may be used on food crops where the recycled water would meet the edible portion of the crop. Standards are also prescribed for the use of treated wastewater for irrigation of parks, playgrounds, landscaping, and other non-agricultural irrigation. Regulation of reclaimed water is governed by the nine RWQCBs and the California Department of Public Health (CDPH).

Assembly Bill 939 (AB 939) (Public Resources Code 41780)

Requires cities and counties to prepare integrated waste management plans (IWMPs) and to divert 50 percent of solid waste from landfills beginning in calendar year 2000 and each year thereafter. AB 939 also requires cities and counties to prepare Source Reduction and Recycling Elements (SRRE) as part of the IWMP.

Senate Bill 1016 (SB 1016)

Requires that the 50 percent solid waste diversion requirement established by AB 939 be expressed in pounds per person per day.

Local

Santa Ana River Watershed Stormwater Permit

The San Bernardino County Flood District, the County, and the 16 incorporated San Bernardino County cities within the Santa Ana River watershed are co-permittees under a stormwater discharge permit issued by the State of California through the Santa Ana Regional Water Quality Control Board. The San Bernardino County Flood District has been designated “Principal Permittee” under the MS4 Permit and administers and coordinates many of the permit requirements on behalf of all the Permittees.

National Pollution Discharge Elimination System (NPDES)

This is a program created for consistency with the Clean Water Act. The Act prohibits discharging "pollutants" through a "point source" into a "water of the United States" unless they have an NPDES permit. The permit contains limits on what can be discharged, creates monitoring and reporting requirements, and other provisions to ensure the discharge does not diminish water quality and/or people's health.

San Bernardino County General Plan

The General Plan contains the goals and policies that would guide future development within the County. It also identifies a full set of implementation measures that would ensure the policies of the plan are carried out. It describes the planning area, provides an overview of existing conditions, summarizes the issues raised during the preparation of the General Plan, and identifies the environmental resources and constraints associated with the General Plan.

Santa Ana Watershed Project Authority (SAWPA)

SAWPA was formed in 1968 as a planning agency to build facilities would protect water quality of the Santa Ana River watershed. SAWPA is a joint-powers authority, classified as a Special District in which it carries out functions useful to its member agencies including regional planning initiatives.

4.19.3 – SIGNIFICANCE THRESHOLDS

Per the CEQA Guidelines, implementation of the Project would have a significant impact related to utilities and service systems if it would:

a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects;

b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years;

c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project’s projected demand in addition to the provider’s existing commitments;

d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals;

e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste.

4.19.4 – IMPACTS AND MITIGATION MEASURES

This section describes potential impacts related to wastewater treatment requirements, water and wastewater treatment facilities, stormwater drainage facilities, water supplies, wastewater treatment capacity, landfill capacity, and solid waste; which could result from the implementation of the project and recommends mitigation measures as needed to reduce significant impacts.

Utility Services

Impact UTS-1 – Would the project require or result in the relocation or construction of new or expanded water, wastewater treatment, or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?

Analysis of Impacts

The Project would require water, wastewater collection and treatment, storm water drainage, electrical power, natural gas, and telecommunication facilities. An analysis of impacts is provided below.

Water

The Project site would be serviced by existing water service lines along Alabama Street. The Project is in an unincorporated portion of San Bernardino County serviced by the RMUED Existing water lines operated by RMUED traverse the perimeter of the Project site. Thus, later connections to existing water lines would be required but the Project would not result in a need for expanded or new water facilities. Therefore, the Project would have a less than significant impact.

Wastewater

For wastewater, the Project site is also serviced by RMUED operates the sewer collection system and the RWTF. The Project site would connect to an existing eight-inch sewer line located under Alabama Street. Wastewater would flow to the RMUED sewer system and existing facilities. Wastewater flows associated with the Project would consist of the same kinds of substances typically generated by industrial uses and would not require upgrades or new technology to be installed at the existing wastewater treatment facilities. Therefore, the Project would result in a less than significant impact.

Stormwater

The Project would develop the existing 55.76 acres of vacant land with an approximate 1,192,671 square-foot warehouse and logistics center with an approximate 831,784 square feet of asphalt paving in the parting areas and 360,887 square feet of landscaping. The project site currently slopes at a 1.4% grade to the southeast which stormwater drainage would flow to storm drains located on Alabama Street. The proposed project would construct onsite and offsite improvements consisting of landscaping, and curb and gutter and street widening which would increase impermeable surfaces. An existing 96-inch diameter storm drain facility located along the frontage of Alabama street would be modified to allow for a lateral connection to the proposed project. As-built drawings have identified the need for bio-filtration ponds and water detention facilities onsite to avoid impacts to the adjacent Santa Ana River channel. The Project proposes to discharge its onsite flows into Line-A, an existing storm drain facility with any upstream terminus at the corner of Alabama Street and Almond Avenue. There is existing capacity in Line-A and it would not be negatively impacted by implementation of the Project. Therefore, through adherence

to Federal, State, and local regulations the proposed project would have a less than significant impact.

Electric Power

The project site would be serviced by Southern California Edison. Above ground power lines, stub poles and associated hardware run north and south along Alabama Street servicing the Project site. The Edison Mountain View Eastern Operations facility provides electrical reliability and generation services for the surrounding Project area. The Project site would connect to the existing power grid via above ground electrical lines along the Alabama Street frontage. New electrical lines to the Project site would be installed via undergrounded lines and the existing above ground poles would be removed. Although the Project would require new electrical line tie ins for service, it would not result in the need for new electrical substations or electrical generating facilities. Therefore, the Project would have a less than significant impact.

Natural Gas

The Southern California Gas Company (Gas Company) would provide natural gas services to the Project site. The majority of the gas supply is transported via transmission pipelines owned by private companies. The Project site would utilize the existing Gas Company distribution grid to service the project site. All new connections and service installations would be reviewed and approved by the Gas Company and the San Bernardino County Public Works Department. Although the project would require new natural gas services connections, it would not result in the need for new natural gas supplies or infrastructure. Therefore, the Project would have a less than significant impact.

Telecommunication Facilities

The Project site is supported by telecommunication services for a variety of providers. Spectrum Communication provides residential and business services to the Project area. Fiber optic cables and high-speed connection services from wireless providers such as Spectrum Communications are available to service the Project site. The Project site would be required to comply with all Federal, State and local regulations for installation and wiring of telecommunications to the Project. With adherence to existing San Bernardino County Electrical, Building and Safety code requirements, the Project would have a less than significant impact.

Level of Significance Before Mitigation

Less than significant.

Mitigation Measures

No mitigation required.

Water Supply

Impact UTS-2 – Would the project have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?

Analysis of Impacts

As discussed above, RMUED serves the Project site. The project would be operational in 2020. RMUED sources are a mix of groundwater, surface water and sources are supplied from local and imported water from the Metropolitan Water District of Southern California (MWD) and the SWP. The SWP does not anticipate independently using groundwater to meet the operational total water demands. Furthermore, the Project site lies in the San Timoteo Sub basin, and reliable estimates of total groundwater extractions are not available. The water table elevations within the San Timoteo Subbasin have not declined over the years which is likely due to the constant flow of treated wastewater from Yucaipa Valley Water District (YVWD) that flows through San Timoteo Creek. Groundwater is replenished by subsurface inflow and percolation of precipitation, runoff, wastewater discharge, and imported water. The Project site is not within a groundwater recharge site and no Project specific groundwater usage is anticipated, therefore no impacts to groundwater would occur as a result of the proposed project.

As discussed above, the City of Redlands is part of the San Bernardino Valley RUWMP, as such, projected water supply and demands are noted in Table 4.19-2 for the entire Plan Area. Projected demands and supply are calculated as such. Commercial potable water uses in the RMUED service area accounted for 3,129-acre feet in 2020 a 0.01 percent of the total demand projected for the year 2020. As noted in Table 4.19-2, total supply is projected at 337,258-acre feet per year. Therefore, all projected commercial use in the RMUED service area in 2020 would account for a 0.009 percent use of the total supply. The Project, a warehouse and logistics center, would have a calculated projected water demand of 23,853.42 gallons per day (0.0851 acre-feet per year) of water resulting an increased demand of 0.2 percent of the RMUED total commercial use.

For the purposes of evaluating demand industrial uses are combined with commercial uses in the RUWMP. Water calculations were derived utilizing the standard water generation rate of 0.02 Gal/Day/sq. ft. specified in the 2015 San Bernardino Valley Urban Water Management Plan. The proposed use, a warehouse and logistics center would use a portion of recycled water to meet operational demands, thus the demands for potable water would be less than significant as recycled water would be allocated for use as well as the project would only increase demand by 0.2 percent. RMUED projects an estimated 5,152 acre-feet per year demand for recycled water. This water source is considered a reliable water source as indicated in the RUWMP and projected use of recycled water is projected to increase by 2040 to 5,402 acre-feet per year. Therefore, the Project would have a less than significant impact as sufficient water supplies are available to serve the project during normal, dry, and multiple dry years.

Level of Significance Before Mitigation

Less than significant .

Mitigation Measures

No mitigation required.

Wastewater Treatment Capacity

Impact UTS-3 – Would the project result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

Analysis of Impacts

The Project site is serviced by the RMUED. The RMUED operates approximately 5.6 million gallons per day of wastewater treatment and has a capacity of 9.5 million gallons per day. In addition, permitting and connection to wastewater facilities would be subject to approval by the RMUED. The Project would be required to adhere to all conditions of approval and requirements by the RMUED and County of San Bernardino Public Works Department. Implementation of the project would be required to remain consistent with the Santa Ana Region 5 Water Quality Control Plan and would not be allowed to exceed wastewater treatment requirements of the Board. The County of San Bernardino has provided an integrated water resources planning framework to address the expected population increases in the County of San Bernardino. Wastewater facilities are required to meet the expected population increases and land use projections in the County of San Bernardino. As such, the Project and related land use growth has been accounted for in projected demand calculations for existing facilities.

Short-term construction and operation of the project would marginally increase demands on wastewater treatment services within the City. Operation wastewater conveyed from the site, which is calculated at a 0.08 Gal/Day/Sq. Ft. generation rate, totaling 95,413 gallons per day (see Impact UTS-2 for additional information in this regard) would ultimately reach RMUED's wastewater treatment facility (1950 North Nevada Street) located south of the Santa Ana River and north of Nevada Street, where it would undergo treatment in accordance with applicable regulations, including the requirements of the Santa Ana Region 5 Water Quality Control Plan. The treatment facility operates at a 5.6 million gallons per day rate. The proposed project is projected to convey 0.095 million gallons per day which is less than 0.01% of the total daily conveyance. Therefore, the Project would not exceed the capacity of wastewater treatment facilities.

Furthermore, sewer mainlines would be improved and installed in these areas as needed as part of a larger sewer improvement plan for the Donut Hole section of San Bernardino County. Development of the Project would involve an onsite system for the collection of wastewater for conveyance to offsite public wastewater facilities. All sewer connections for the Project would be subject to plan review by the RMUED. In addition, permitting for the proposed project would be subject to a joint-review with the County of San Bernardino Public Works Department and all Federal, State and local regulations for utility upgrades would be adhered to.

As the Project will be adequately served by the existing wastewater facilities and no new facilities would be required to service the project site, with adherence to existing Federal, State, and local regulations impacts would be less than significant.

Level of Significance Before Mitigation

Less than significant.

Mitigation Measures

No mitigation required.

Landfill Capacity

Impact UTS-4 – Would the project generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?

Analysis of Impacts

The Project would generate solid waste during both construction and operations which would require transfer to disposal sites. The City of Redlands provides solid waste services to the Project site and waste would be transferred to the City of Redlands' California Street Landfill. The proposed project would result in 5,963 Lbs. per day (2.704 Tons per day) of solid waste generated as shown below in Table 4.19-5.

Table 4.19-5
Solid Waste Impacts

Waste Generation Rate	Calculation	Significant Impact (Yes/No)
0.005 lbs./Day/Sq. ft.	5,963 Lbs. per day	Industry thresholds not exceeded.

Source: City of Los Angeles CEQA Thresholds Guide 2006. For the purposes of analysis, a waste generation rate of pounds, per 1,000 square feet per day was not used.

The Project would result in 2.704 Tons per day or (986.96 Tons per year) of solid waste. As such the proposed project would result in 0.003 percent of total Max Daily Throughput of the California Street Landfill. The proposed project would not exceed the waste reduction goals of the City of Redlands of 20 percent waste reduction per year, as the project site would be required to adhere to local regulations for recycling of waste and adhere to the goal of 50 percent onsite recycling of construction materials as a condition of approval. In addition, the California Street Landfill has an operating capacity of 3,200,000 cubic yards and has at least 20 years of remaining capacity. The Project solid waste generation can be handled and would not result in a need for a new disposal facility or require expansion of an existing solid waste facility. Therefore, with adherence to Federal, State and local regulations, the proposed project would have a less than significant impact on waste capacity.

Level of Significance Before Mitigation
Less than significant.

Mitigation Measures

No mitigation required.

Solid Waste

Impact UTS-5 – Would the project comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

Analysis of Impacts

The Project would comply with the California Integrated Waste Management Board and San Bernardino County Recycling regulations. The Project would be required to recycle and or salvage at least 50 percent of non-hazardous construction and demolition debris. Furthermore, a construction waste management plan shall be developed and kept onsite in conformance with the San Bernardino County Code, 2018 Countywide Integrated Waste Management Plan, and AB 939. Excavated soils and land-clearing debris would not be subject to recycled/salvage debris and would therefore not be included in the construction waste management plan. Adherence to the waste management plan would be periodically monitored by the County of San Bernardino Public Works Department. Finally, the Project would haul and remove all construction debris

offsite in adherence with all Federal, State and local regulations. Therefore, the Project would have a less than significant impact.

Level of Significance Before Mitigation

Less than significant.

Mitigation Measures

No mitigation required.

Cumulative Impacts

Would the project cause substantial adverse cumulative impacts with respect to Utilities services?

Analysis of Impacts

As discussed above in Impacts UTS-1 to UTS-5, the Project is located an area that has existing utility infrastructure and utility capacity that is more than adequate to serve not only the Project but all of the potential cumulative projects. Therefore, the Project have a less than significant impact on with respect to utility services.

Level of Significance Before Mitigation

Less than significant.

Mitigation Measures

No mitigation required.

4.19.5 REFERENCES

County of San Bernardino General Plan Program Environmental Impact Report. 2007

San Bernardino Valley Regional Urban Water Management Plan (RUWMP)

City of Los Angeles CEQA Thresholds Guide 2006

4.20 – Wildfire

This section describes the existing wildland fire conditions for the Project site; with an emphasis on wildland fire hazards, project-related fire measures, firefighting capabilities, associated regulatory requirements; and evaluation of the project's potential to conflict with applicable wildfire plans. Wildland fires are defined as any non-structure fire, other than prescribed burns, that occur in an undeveloped or natural environment. Fire behavior is highly influenced by climate, topography and fuel.

4.20.1 – ENVIRONMENTAL SETTING

Setting, Climate, Slope and Topography and Meteorology

The Project site is located in an urbanized part of unincorporated San Bernardino County (County) with both industrial, commercial and agricultural uses. The Project site has historically been used as an orchard, although that use has been discontinued for over 10 years. The present channel of the Santa Ana River is less than 0.13 miles north of the project site.

Climate

The County has a climate that is predominantly arid but contains areas with a mixed-terrain climate along with alpine conditions in areas above 5,000 feet in elevation. The project site receives less than 17 inches of rain a year. Temperatures can range from 46 degrees Fahrenheit to 96 degrees Fahrenheit in the summer months.

Slope and Topography

A wildland-urban interface is an area where urban development is located in proximity to open space or wildland areas. The potential for wildland fires represents a hazard where development is adjacent to open space or within close proximity to wildland fuels or designated fire severity zones. The closest wildland-urban interface is over four miles to the north. The Project site itself lies within the San Bernardino Valley low valley floor with little variation and rise in land mass.

Meteorology

The County is an arid climate in the northern high desert reaches extending to the Nevada and Arizona borders with a semi-arid to Mediterranean climate in the southwestern portions of the County. The County includes urbanized and rural areas such as the urbanized San Bernardino Valley, and rural foothills and mountains of the San Bernardino Mountains, and high deserts. Temperature and climate variations within the County itself can vary widely as a result of the expansive boundaries. The County is known to experience the high wind phenomenon known as the Santa Ana winds which produce high east to west blowing winds of high gusts, and dry air masses reaching to the Los Angeles County border. Santa Ana winds are particularly intense in the Cajon Pass down to the San Bernardino Valley floor. Climate variations are particularly more intensified in the County as hot summers and cold winters with light snow occur in the San Bernardino foothills to heavy snow in the San Bernardino Mountains. Wide temperature variations in the County are known to produce wet winters with very dry summers.

4.20.2 – REGULATORY FRAMEWORK

The regulatory framework for the fire protection services and wildfire management policies and plans are described below.

Federal

Federal Fire Prevention and Control Act of 1974

The Federal Fire Prevention and Control Act of 1974 was created in response to the 1973 National Commission on Fire Prevention and Control report. Fire was determined to be an undue burden and the Act was proposed to reduce the loss of life and property through better fire prevention methods and control. The Fire Prevention and Control Act requires the Federal Government to review claims by local firefighting districts for services performed on federal properties.

State

Title 24, Part 9

California Fire Code (CFC), Title 24 California Code of Regulations, Part 9, requires fire department access roads to conform to certain standards to ensure that personnel and equipment can reach structures.

California Board of Forestry and Fire Protection

The California Board of Forestry and Fire Protection has authority to develop and implement standards for defensible space around structures within State Responsibility Areas (SRAs) and establishes building standards for development in the wildland-urban interface. Land covered with flammable material be maintained within 100 feet of defensible space from each site of a structure. Fuels are required to be maintained so that wildfire burning under average weather conditions would be unlikely to ignite an adjacent structure. The Project Site is not located within or near any SRAs. The nearest such area is approximately 2.5 miles south of the Project site.

California Government Code Section 51175 et seq.

Government Code Section 51175 requires the Director of Forestry and Fire Protection to identify areas in the State of California that are considered Very High Fire Hazard Severity Zones (SW San Bernardino County Fire Hazard Severity in SRA Map, 2007). These fire zones are delineated on Fire Hazard Severity Zone Maps created for areas throughout the state, including the county.

California Building Code

The California Building Code (CBC) specifies structural requirements for buildings exposed to wildland vegetation. These requirements are intended to protect buildings from wildland fires. The CBC requires the use of ignition resistant building methods and materials as a measure to reduce structure ignitibility for new buildings located in any Fire Hazard Severity Zone.

Local

Per Agreement No. 03-0856, wherein the City of Redlands agreed to provide police, fire, water and sewer services to the Donut Hole in exchange for 90 percent of the sales and use taxes

generated within that area, the Redlands Fire Department provides fire services to the Project site. There are four fire station facilities within the City of Redlands service area; 261, 262, 263, and 264. Redlands Fire Station 264 is the nearest facility to the project site, approximately 2.3 miles to the southwest. The current response time in the City of Redlands, and at Fire Station 264 is four minutes within 90 percent of the time.[1]).

Regional and Local Conditions

The California Department of Forestry maintains a database with mapped areas of fire threat significance in the County of San Bernardino. Wildland areas within the San Bernardino National Forest would be under the jurisdiction of the United States Department of Agriculture Forest Service (San Bernardino County Land Use Plan Hazard Overlays Map, 2019).

San Bernardino County Code

The Fire Safety Overlay established by San Bernardino County Code Section 82.01.020 (Land Use Plan and Land Use Zoning Districts) and 82.01.030 (Overlays) was created to provide greater public safety in areas prone to wildland brush fires, by establishing additional development standards for these areas. The Fire Safety Overlay is mapped on the General Plan Hazards Maps with the boundaries derived from the California Department of Fire and Rescue (CALFIRE), U.S. Forest Service, and the County Fire Protection District (County Fire). The fire safety hazard overlay extends into the mountains, valley foothills, and desert regions of the County. Present and future development within the Fire Safety Overlay is exposed to the impacts of wildland fires and other natural hazards primarily due to native fuel types.

Fuel Modification Plan

If applicable, each project application shall include a fuel modification plan describing the fuel modification area required in Subsection 82.13.050(1). Plans are submitted with development applications.

Fire Hazard Abatement - San Bernardino County Code Sections 23.0301 to 23.0319

The Fire Hazard Abatement program conducts surveys to identify fire hazards throughout the year. Fire hazards are identified, and notices are mailed to property owners.

4.20.3 – SIGNIFICANCE THRESHOLDS

Per the CEQA Guidelines, implementation of the Project would have a significant impact related to wildfire if the project would be located in or near state responsibility areas or lands classified as very high hazard severity zones, would the project:

a) Substantially impair an adopted emergency response plan or emergency evacuated plan?
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?

[1] Redlands Fire Department Information Request, March 21, 2019.

c) Require the installation or maintenance of associated infrastructure such as roads fuel breaks, emergency water sources, power lines or other utilities that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result or runoff, post-fire slope instability, or drainage changes? sensitive receptors to substantial pollutant concentrations; or

4.20.4 – IMPACTS AND MITIGATION MEASURES

This section describes potential impacts related to wildfires which could result from the implementation of the project and recommends mitigation measures as needed to reduce significant impacts.

Emergency Response Plans

Impact Wil-1 – Would the Project substantially impair an adopted emergency response plan or emergency evacuation plan?

Analysis of Impacts

The Project Site is not located within or near any State Responsibility Areas. The nearest such area is approximately 2.5 miles south of the Project site.

Level of Significance Before Mitigation

No impact.

Mitigation Measures

No mitigation required.

Prevailing winds

Impact Wil-2 – Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?

Analysis of Impacts

The Project Site is not located within or near any State Responsibility Areas. The nearest such area is approximately 2.5 miles south of the Project site.

Level of Significance Before Mitigation

No impact.

Mitigation Measures

No mitigation required.

Maintenance of Infrastructure

Impact Wil-3 – Would the project require the installation or maintenance of associated infrastructure such as roads, fuel breaks, emergency water resources, powerlines, or other utilities that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?

Analysis of Impacts

The Project Site is not located within or near any State Responsibility Areas. The nearest such area is approximately 2.5 miles south of the Project site. As a result, none of the Project improvements would exacerbate fire risk or will result in a temporary or ongoing impact from wildfires.

Level of Significance Before Mitigation

No impact.

Mitigation Measures

No mitigation required.

Expose People or Structures to Risk

Impact Wil-4 – Would the project expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

Analysis of Impacts

The Project Site is not located within or near any State Responsibility Areas. The nearest such area is approximately 2.5 miles south of the Project site. As a result, the Project would not expose people or structures to significant risk due to runoff, post-fire slope instability or drainage changes.

Level of Significance Before Mitigation

No impact.

Mitigation Measures

No mitigation required.

Cumulative Impacts

Would the project cause substantial adverse cumulative impacts with respect to Wildfire?

Analysis of Impacts

The Project Site is not located within or near any State Responsibility Areas. The nearest such area is approximately 2.5 miles south of the Project site. As a result, there would be no associated cumulative impacts.

Level of Significance Before Mitigation

No impact.

Mitigation Measures

No mitigation required.

4.20.5 REFERENCES

http://www.fire.ca.gov/fire_prevention/downloads/GovernmentCode51175.pdf

http://cms.sbcounty.gov/Portals/59/Content/2018-2019/2018-19-Recommended-Budget.pdf

http://www.amlegal.com/codes/client/san-bernardino-county_ca/

http://cms.sbcounty.gov/lus/FireHazardAbatement/FireHazardAbatementHome.aspx

http://countywideplan.com/wp-content/uploads/2015/09/2007_GP_EIR.pdf

5.0 ALTERNATIVES TO THE PROPOSED PROJECT

The following discussion considers alternatives to the Project by examining the potential environmental impacts resulting from each alternative scenario. Through comparisons of these alternatives to the Project, the relative advantage(s) of each are weighed and analyzed.

State CEQA Guidelines Section 15126.6 identifies the parameters within which consideration and discussion of alternatives to the proposed Project should occur. As stated in Section 15126.6, the alternatives considered must focus on those that would feasibly attain most of the basic objectives of the Project but would avoid or substantially lessen one or more of the significant effects of the Project.

5.1 PROJECT OBJECTIVES

As stated previously in the DEIR, Section 3 – Project Description, the objectives of the Project are to:

1. Develop a warehouse and logistics center similar in scale to such uses in the surrounding area and in accordance with the East Valley Area Plan.
2. Develop a center that takes advantage of the existing infrastructure and support systems including the local workforce.
3. Positively contribute to the economy of the region through new capital investment and the creation of new employment opportunities.
4. Expand the local and regional tax base.
5. Develop and operate a large format logistics center that will attract quality tenants and will be competitive with other similar regional facilities.
6. Operate a large format logistics center consistent with industry standards for operational design.
7. Implement the East Valley Area Plan through the development of a land use consistent with the development standards and criteria relevant to the site.
8. Facilitate the development of underutilized land currently planned for industrial uses that, maximizes the use of the site and responds to regional market demand.

5.2 SUMMARY OF PROJECT'S SIGNIFICANT AND UNAVOIDABLE IMPACTS

The analysis in the DEIR, Section A.0 determined that even with implementation of mitigation measures, significant environmental impacts will result from the construction and operation of the Project. To satisfactorily provide the CEQA-mandated alternatives analysis, the alternatives considered must substantially lessen any of the following Project-related significant unavoidable impacts:

- Air Quality: Long-term NO_x emissions in excess of South Coast Air Quality Management District (SCAQMD) regional significance threshold which conflicts with the implementation of the 2016 South Coast Air Quality Management Plan.
- Traffic: Conflict with program plan, ordinance or policy addressing the local circulation system (i.e. exceed Level of Service Standards).

5.3 RATIONALE FOR ALTERNATIVES SELECTION

CEQA Guidelines Section 15126.6(a) requires that an EIR "…describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives." Furthermore, "…an EIR need not consider every conceivable alternative to a project. Rather it must consider a reasonable range of potentially feasible alternatives that will foster informed decision-making and public participation." An EIR is not required to consider alternatives which are infeasible. The County, as lead agency, is responsible for selecting a range of Project alternatives for examination, and there is no ironclad rule governing the nature or scope of the alternatives to be discussed other than the "rule of reason." (CEQA Guidelines § 15126.6 (a)) Among the factors that may be taken into account when addressing the feasibility of alternatives are site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries, and whether the proponent can reasonably acquire, control, or otherwise have access to an alternative. (CEQA Guidelines §15126.6 (f)(1).)

With respect to the selection of alternatives to be considered in an EIR, State CEQA Guidelines Section 15126.6(b) states "…the discussion of alternatives shall focus on alternatives to the project or its location which are capable of avoiding or substantially lessening any significant effects of the project, even if these alternatives would impede to some degree the attainment of the project objectives, or would be more costly." That is, each alternative must be capable of avoiding or substantially lessening any significant effects of the Project. For this Project, those significant effects are related to air quality and traffic.

The rationale for selecting the alternatives to be evaluated and a discussion of the "No Project" alternative are also required (CEQA Guidelines § 15126.6(e)). Because the Project is consistent with the approved East Valley Area Plan the "No Project" alternative in this case would take one form: no change from the existing uses. The other alternative evaluated in this DEIR was selected based on its ability to reduce or avoid air quality and traffic impacts.

5.4 ALTERNATIVES REJECTED FROM FURTHER CONSIDERATION

Section 15126.6(c) of the State CEQA Guidelines specify that an EIR should identify alternatives that were considered by the lead agency but were rejected during the scoping process and identify the reasons for eliminating the alternatives from further consideration. Section 15126.6(c) further indicates that a lead agency may eliminate an alternative from detailed consideration in an EIR if it fails to meet the basic Project objectives, is infeasible, or does not avoid significant environmental impacts. Two such alternatives were considered and rejected by the County.

5.4.1 Alternative Land Use – Business Park

Development of the Project site with a different land use, such as a business park, was considered because the number of truck trips would be less than the amount generated by the Project. However, the number of automobile trips, including passenger equivalent (PCE) trips, under this alternative would be much, greater, because the trip generation rates for business park uses generate more passenger vehicle trips compared to warehouse/distribution center uses. Therefore, a business park use would have the same or greater air quality and traffic impacts as the Project while not meeting most of the Project Objectives. Additionally, the proposed Project site is consistent with the planned land use of the site and the surrounding area within the EVAP planning area, whereas a business park use would not be consistent with the EVAP. Therefore,

this alternative has been rejected from further consideration.

5.4.2 Alternative Location

This alternative was rejected from further consideration because there are no site-specific significant and unavoidable impacts that would be lessened if a different site was selected. Moving theProject site anywhere within the Project area would still generate the same level of NO_x emissions could possibly result in more air quality and traffic impacts depending on the location of the alternative site in relationship to the existing freeway system, the existing infrastructure at and in the proximity of the alternative site and the possibility the possibility of existing or planned residential development near an alternative site. Rather, because the Project site is located within an area that is already industrial zoned, is surrounded by similar industrial and related uses and is not near any residential or other sensitive receptors, the analysis of an alternative site was rejected from further consideration.

5.5 DESCRIPTION OF ALTERNATIVES EVALUATED IN THE DEIR

This section of the DEIR presents the analysis of two alternatives in comparison to the potential environmental effects associated with the Project. In accordance with CEQA Guidelines Section 15126.6(d), the discussion of the environmental effects of the alternatives may be less detailed than the discussion of the impacts of the proposed Project. Alternative 1 is the "No Project" alternative and Alternative 2 is the "Reduced Project Size" alternative. Following a description of each alternative is a discussion of potential impacts to each of the environmental topics evaluated in this DEIR. A Comparison of Alternatives matrix is presented in Section 5.6. For analytic purposes it has been assumed that that the Project mitigation measures would also apply to each of the alternatives.

5.5.1 Alternative 1: No Project/No Build

Pursuant to CEQA Guidelines Section 15126.6(e)(3)(B), the No Project Alternative for a development project on identifiable property is the circumstance under which the Project does not proceed. The discussion of the No Project Alternative must compare the environmental effects from the Project site remaining in its existing state versus the environmental effects resulting from the development of the Project. Accordingly, under the No Build Alternative, the site would remain in its existing condition and no development would occur.

Evaluation of Alternative 1: No Project/No Build

Aesthetics and Visual Resources

Since the Project site is currently undeveloped, the No Project Alternative would result in no change with respect to impacts on aesthetic and visual resources. However, the visual character of the site will remain the same, and proposed landscaping and streetscape improvement that would enhance the visual character of the area would not be implemented. Impacts would be less than significant for both the project and this alternative.

Agriculture and Forest Resources

The Project would not convert farmland to non-agricultural use. The Project will not conflict with existing zoning for agricultural use, forest land, or timberland. The Project would not result in the loss of forest land. The Project would not involve other changes to the environment that could

result in the conversion of farmland to non-agricultural uses or forest land to non-forest use. All the property in the vicinity of the Project has long been planned for industrial and other urban uses Therefore, impacts associated with Alternative 1 would be slightly less than that of the proposed Project, since the Project would eliminate any possibility of future agricultural uses on the site. Impacts would be less than significant under both scenarios.

Air Quality

Since no construction activity would occur, Alternative 1 would generate no short-term construction emissions. Further, no new long-term operational emissions would result from increased traffic and increased use of energy resources. Due to the avoidance of short-term and long-term criteria pollutant emissions, Alternative 1's air quality impact would be avoided compared to the Project. Therefore, impacts associated with the Alternative 1 would be substantially less than that of the Project.

Biological Resources

Since no site preparation or construction activity would occur, Alternative 1 would not result in a change to the existing biology of the Project site. Existing and potential biological species would be able to continue to utilize the Project site (including breeding and/or seasonal foraging habitat). Thus, impacts would be avoided compared to the proposed Project. Therefore, impacts associated with Alternative 1 would be less than that of the proposed Project.

Cultural Resources

Alternative 1 would retain the Project site's existing conditions. Because there would be no site preparation, grading, or construction, there would be no potential to disturb cultural resources. Thus, impacts would be less than that of the Project.

Energy

Since no site preparation, grading, or construction activities would occur under Alternative 1, and operation of the Project would not occur, impacts related to potentially wasteful, inefficient, or unnecessary consumption of energy resources will be less than that of the Project.

Geology and Soils

Alternative 1 would retain the Project site's existing conditions. Therefore, people would not be exposed to potential ground shaking, liquefaction, lateral spreading, expansive soils, subsidence, and differential settlement hazards associated with geologic and soils conditions on the Project site. Therefore, impacts associated with Alternative 1 would be less than that of the Project.

Greenhouse Gas (GHG) Emissions

Due to the avoidance of short-term and long-term GHG emissions, Alternative 1's impacts with regard to GHG emissions would be less than that of the Project.

Hazards and Hazardous Materials

Impacts under the No Project Alternative would be less than the Project because the No Project alternative would not expose any people and properties to potential hazards and hazardous

materials compared to the Project. Therefore, impacts associated with the Alternative 1 would be less than that of the Project.

Hydrology and Water Quality

Alternative 1 would retain the Project site's existing conditions. Under Alternative 1 the existing hydrologic conditions would continue and the storm flow patterns and capacity would remain. However, due to the area's relatively flat terrain and the lack of regional drainage infrastructure, flooding occurs in both major and minor storm events. With no development at the Project site, the Project would not contribute to construction of regional drainage infrastructure to alleviate flooding conditions in the Project vicinity. Thus, impacts to hydrology and water quality associated with Alternative 1 would be somewhat greater than those of the Project. However, impacts under this alternative would still be less than significant.

Land Use and Planning

Alternative 1 would retain the Project site's existing conditions. The Project site would not be developed and would remain vacant and underutilized; certain goals and policies of the San Bernardino County General Plan and the EVAP would not be realized. Therefore, impacts with regard to land use and planning would be slightly greater than that of the proposed Project. However, impacts under this alternative would still be less than significant.

Mineral Resources

The Project site does not contain any known mineral resources. Implementation of the Project or this alternative would not result in significant impacts with respect to the loss of the availability of mineral resources because the Project site does not contain any such materials and is not a known mineral resource production area. Impacts under both the Project and Alternative 1 would be similar and would be less than significant.

Noise

Since no construction activity would occur, Alternative 1 would not have any short-term noise impacts. Ambient noise increases created by Project-related operations and traffic would also not occur. Therefore, under Alternative 1, impacts to noise would be less than that of the Project.

Population and Housing

As with the Project, Alternative 1 would not include additional development and would not involve construction of new infrastructure with the capacity to support extensive growth. Population and housing impacts would be similar to the Project and impacts would be less than significant for both the Project and Alternative 1.

Public Services and Recreation

Compared to the Project, Alternative 1 would result in fewer impacts on fire protection/emergency medical service, police service, public schools, parks and recreational facilities, and other public facilities (e.g., library, community center) because there would be no employees requiring public services. However, impacts would be less than significant for both the proposed Project and this alternative.

Transportation/Traffic

Under Alternative 1, no additional traffic would be generated from the Project site and there would be no impact on the local or regional circulation system. As a result, Alternative 1 would avoid all significant and unavoidable traffic impacts. Specifically, Alternative 1 would have no impact compared to the significant and unavoidable Project impacts.

Tribal Cultural Resources

Alternative 1 would retain the Project site's existing conditions. Because there would be no site preparation, grading, or construction, there would be no potential to disturb cultural resources. Thus, impacts would be less than the Project.

Utilities and Service Systems

Alternative 1 would retain the Project site's existing condition and no utility and service system improvements would occur. Furthermore, there would be no additional demands on water, wastewater, solid waste disposal, storm water or dry utilities (electricity, natural gas, cable/phone service). Therefore, Alternative 1 impacts to utilities and service systems would be considered less than that of the Project.

Wildfire

The Project site is not located in a mapped Fire Hazard Area. Therefore, impacts under both Alternative 1 and the proposed Project would be less than significant.

Relationship of Alternative 1 to Project Objectives

Alternative 1 assumes that no development would occur. The warehouse/distribution center and associated site, street and drainage improvements would not be realized. An analysis of whether Alternative 1 meets each Project objectives is provided in Table 5-1 below.

Table 5-1
Alternative 1 (No Project) Project Objectives Comparison

Project Objective	Alternative Meets Objective?
Develop a warehouse and logistics center similar in scale to such uses in the surrounding area and in accordance with the East Valley Area Plan.	No. Alternative 1 will not develop a warehouse and logistics center similar in scale to such uses in the surrounding area and in accordance with the East Valley Area Plan.
Develop a center that takes advantage of the existing infrastructure and support systems including the local workforce.	No. Alternative 1 will not develop a center that takes advantage of the existing infrastructure and support systems including the local workforce.
Positively contribute to the economy of the region through new capital investment and the creation of new employment opportunities.	No. Alternative 1 will not positively contribute to the economy of the region through new capital investment and the creation of new employment opportunities.
Expand the local and regional tax base.	No. Alternative 1 will not expand the local and regional tax base.

Project Objective	Alternative Meets Objective?
Develop and operate a large format logistics center that will attract quality tenants and will be competitive with other similar regional facilities.	No. Alternative 1 will not develop and operate a large format logistics center that will attract quality tenants and will be competitive with other similar regional facilities.
Operate a large format logistics center consistent with industry standards for operational design.	No. Alternative 1 will not operate a large format logistics center consistent with industry standards for operational design.
Implement the East Valley Area Plan through the development of a land use consistent with the development standards and criteria relevant to the site.	No. Alternative 1 will not implement the East Valley Area Plan through the development of a land use consistent with the development standards and criteria relevant to the site.
Facilitate the development of underutilized land currently planned for industrial uses that, maximizes the use of the site and responds to regional market demand.	No. Alternative 1 will not facilitate the development of underutilized land currently planned for industrial uses that, maximizes the use of the site and responds to regional market demand.

Alternative 1 Conclusion

While all of the environmental impacts would be less than significant with Alternative 1, Alternative 1 would greatly underutilize the Project site and would not meet any of the Project Objectives. CEQA Guidelines Section 15126.6(f)(1) states that among the factors that may be taken into account when addressing the feasibility of alternatives are site suitability and economic viability; Alternative 1 is neither suitable for the site nor economically viable.

5.5.2 Alternative 2: Reduced Project Size

With the intent of further reducing potential environmental impacts from the proposed Project, the County has considered a reduced size option in Alternative 2. In this case, development of the Project site would be reduced by 25 percent overall (or roughly by 13.95 acres), resulting in approximately 731,002 square feet of concrete paving and 220,304 square feet of landscaping. The high-cube warehouse building would decrease in size by 25 percent to 894,503 square feet. This alternate assumes there would be a proportional decrease in the number of dock doors, trailer parking stalls, automobile parking stalls, and ADA–compliant parking stalls. On-site features such as the water quality basin would also be reduced in size.

Evaluation of Alternative 2 – Reduced Project Size

Aesthetics

Impacts would be similar under this alternative compared to the Project since this alternative would have a similar design quality and type as the Project and would include similar streetscape enhancements. These enhancements would help to improve the aesthetic and visual quality of the Project site and surrounding area. Impacts would be less than significant for both the Project and this alternative.

Agriculture and Forest Resources

This alternative would have similar impacts to the Project. This alternative would not convert farmland to non-agricultural use, would not conflict with existing zoning for agricultural use, forest

land or timberland, and would not result in the loss of forest land. This alternative would not involve other changes to the environment that could result in the conversion of farmland to non-agricultural uses or forest land to non-forest use. Since the entire existing site would not be developed impacts would be slightly less for Alternative 2 compared ot the Project. Therefore, impacts would be less than significant for both the Project and this alternative.

Air Quality

Alternative 2 would develop approximately 25 percent less building square footage and reduce truck traffic by approximately 25 percent, which in turn reduces air quality emissions by a similar amount. The long-term air quality impacts resulting from mobile sources would be reduced due to the reduction of building size and localized emissions of criteria pollutants would decrease due to the decrease in total truck trips accessing the site. Additionally, health risks (which are already less than significant) associated with diesel exhaust would be reduced compared to the proposed Project because daily truck trips will decrease as a result of building size, thus decreasing impacts of toxic air contaminants. This impact would be less than that of the proposed Project.

Operational NOX emissions would also be reduced by approximately 25 percent under Alternative 2, which means that maximum operational NOX emissions reported in Table 5.1-G would decrease from approximately 91.40 lbs/day to approximately 68.55 lbs/day, which still exceeds the SCAQMD threshold for NOX of 55 lbs/day. Because emissions would be reduced by approximately 25 percent, impacts to air quality would be lesser than the proposed Project even though impacts remain significant and unavoidable for long-term NOX emissions for both the Project and this alternative.

Biological Resources

Although Alternative 2 would have a smaller building footprint, create less land disturbance, and therefore have less impacts on biological resources. Because Alternative 2 would be required to comply with the same mitigation measures as the Project, impacts would be less than significant for both the Project and this alternative.

Cultural Resources

Alternative 2 would encompass a small footprint compared to the Project, impacts to cultural resources and tribal cultural resources would be slightly less compared to the Project. Because Alternative 2 would be required to comply with the same mitigation measures as the Project, impacts would be less than significant for both the Project and this alternative.

Energy

Under Alternative 2, energy use during construction and long-term operation would be reduced by approximately 25 percent compared to the Project. Therefore, impacts related to energy would be less than the Project and less than significant under both this alternative and the Project.

Geology and Soils

Alternative 2 would result in less impacts when compared to the Project since development would not occur on the entire site. Consequently, potential impacts with respect to ground shaking, liquefaction, lateral spreading, expansive soils, subsidence, and differential

settlement hazards associated with geologic and soils conditions would be less under this alternative and less than significant under both Alternative 2 and the Project.

Greenhouse Gas Emissions

Alternative 2 would result in disturbance of a smaller area (site footprint) compared to the Project. Thus, the one-time construction-related GHG emissions from Alternative 2 would be less than the Project. Alternative 2 would also comply with all present and future regulatory measures developed in accordance with AB 32 and CARB's Scoping Plan, and incorporate a number of Project design features that would further minimize GHG emissions. Alternative 2 would result in approximately 25 percent fewer trip ends than the proposed Project, and with the square footage reduced by 25 percent, would likely generate approximately 25 percent less GHG emissions. Since the Project under the SCAQMD threshold, Alternative 2, with an approximate 25 percent reduction in GHG emissions would also be below the SCAQMD screening threshold. Therefore, GHG impacts associated with Alternative 2 would be less than the proposed Project.

Hazards and Hazardous Materials

Alternative 2 would result in impacts less than the Project since it would have less floor area, the area would be smaller, and it would generate less vehicle trips. Potential exposure of people and property to potential hazards and hazardous materials would be less compared to the Project. However, impacts would be less than significant for both the Project and Alternative 2.

Hydrology and Water Quality

Alternative 2 would include on-site water quality and detention basins although, due to the smaller site area, these facilities would likely be somewhat smaller compared to the Project. Under Alternative 2, runoff would also be collected and conveyed to the on-site basin before being discharged to the local municipal stormwater system. Under Alternative 2, there would be urban runoff from the paved areas of the site. This potential impact is the same as the proposed Project and would also be reduced to less than significant levels through compliance with mandatory regulatory requirements. Therefore, hydrology and water quality impacts associated with Alternative 2 would be similar to the Project.

Land Use and Planning

Development of Alternative 2 would be consistent with the San Bernardino County General Plan and t East Valley Area Plan, as is the Project. Impacts would therefore be similar and less than significant for both the Project and Alternative 2.

Mineral Resources

There are no known mineral resources on the Project site. Accordingly, both Alternative 2 and the Project would have no impact on Mineral Resources.

Noise

Alternative 2 would develop approximately 25 percent less building square footage and reduce trips by approximately 25 percent. Development of Alternative 2 would result in a smaller disturbance area (site footprint) compared to the Project. Therefore, construction noise would be

slightly less compared to the Project, at least with respect to duration.

Alternative 2 would generate long-term noise from on-site operations and vehicular traffic on area streets. Operational noise will be generated from parking lots, rooftop-mounted equipment, diesel truck engines, exhaust systems and loading and unloading of materials. As shown in Table 5-2, Alternative 2 will generate approximately 25 percent fewer trips than the proposed Project. With 25 percent fewer vehicles using the Project site, the resulting noise level will be approximately 1 dBA less than the proposed Project. However, this is not enough of a reduction in operational noise to be perceptible and the impacts would therefore be similar to the Project, which is less than significant.

Population and Housing

Due to the reduced scope, Alternative 2 would result in reduced impacts to the Project, although Project are already less than significant. As a result, population and housing impacts would be less than significant for both the Project and Alternative 2.

Public Services and Recreation

Due to the reduced scope, Alternative 2 would result in reduced impacts compared to the Project, although Project impacts are already less than significant. As a result, public services and recreation impacts would be less than significant for both the Project and Alternative 2.

Transportation/Traffic

Development of Alternative 2 would result in approximately 25 percent fewer passenger car equivalent (PCE) trip ends than the Project, as shown in Table 5-2. Trip distribution under Alternative 2 will be similar to that of the Project.

Table 5-2
Alternative 2 (Reduced Project Size) Comparison to Project

Component	Proposed Project	Alternative 2	Difference (25% Decrease)
Type of Development	Logistics Center	Logistics Center	NA
Total Building Size	1,192,671 SF	894,503 SF	298,168 SF
Projected Employment[a]	746	560	186
Trip Generation (PCEs[b])			
Total Trip Ends/Day	2,202	1,652	550
Passenger Cars	1,337	1,003	334
Trucks (total 2, 3, and 4+ Axle)	864	648	216
2 Axle	87	65	22
3 Axle	156	117	39
4+ Axle	621	466	155

Notes
a For logistics center employment: based on an average of 1,598 sf of logistics space per employee per Logistics Trends and Specific Industries that Will Drive Warehouse and Distribution Growth and Demand for Space, March 2010 prepared by the NAIOP Research Foundation. (2010 NAIOP, Figure 3, p. 12).
b Units are in PCE or Passenger Car Equivalent.

Table 4.17-13 in Chapter 4.17 (Transportation and Traffic) of this EIR provides the projected delay and levels of service at the study intersections under Build-Out Year Plus Cumulative Projects Plus Project (2040) conditions with off-site improvements. With the recommended off-site improvements, the study area intersections would operate at an acceptable LOS C/D or better. However, because many intersections that are significantly impacted by the Project are located within the City of Redlands, City of Highlands or Caltrans jurisdiction, the County cannot guarantee that needed improvements will be made timely to avoid Project impacts on these intersections. Therefore, it was determined that Project impacts will be significant and unavoidable.

Since Alternative 2 would have similar PCEs as the Project, the LOS at the study intersections would be the same. In the Existing (2018) Conditions scenario, the intersections of California Street/I-10 Westbound Ramps and California Street/I-10 Eastbound Ramps operate at LOS E, which exceeds Caltrans standard of LOS D. Because these intersections operate at LOS E without the Project, Alternative 2 would be expected to have similar impacts as the proposed Project.

Although overall impacts for this alternative would be less than the Project they would still be significant adverse and unavoidable.

Tribal Cultural Resources

Alternative 2 would encompass a smaller footprint compared to the Project, and therefore impacts to tribal cultural resources would remain same. Mitigation would be applied to both the Project and Alternative 2 and impacts would be less than significant under both scenarios.

Utilities and Service Systems

Since Alternative 2 has less building area and would be constructed on a smaller site compared to the project demand for utilities and service would be also be smaller. Nonetheless, utilities and service system impacts would be less than significant for both the Project and Alternative 2.

Wildfire

The Project site is not located in a mapped Fire Hazard Area. Therefore, impacts under both Alternative 2 and the Project would be less than significant.

Relationship of Alternative 2 to Project Objectives

The Reduced Project Size Alternative would develop the site as a smaller logistics center by reducing building floor area by approximately 25 percent resulting in 894,503-SF high cube/logistics center building. The proposed warehouse and offices would be smaller, but the street improvements and water quality treatment would be realized. An analysis of whether Alternative 2 meets each Project objective is provided in Table 5-3, below.

Table 5-3
Alternative 2 (Reduced Project Size) Project Objectives Comparison

Project Objective	Alternative Meets Objective?
Develop a warehouse and logistics center similar in scale to such uses in the surrounding area and in accordance with the East Valley Area Plan.	Partially. Alternative 2 would develop a warehouse and logistics center similar in scale to such uses in the surrounding area and in accordance with the East Valley Area Plan. However, since the building would be approximately 894,503 SF, this would not satisfy the market demand for logistics centers to the extent that the Project would. The availability of development sites similar to the project, with good freeway access, located away from sensitive and of a size to accommodate a million+ square foot logistics facility are very limited. Thus, although Alternative 2 satisfies this objective it does so to a much lesser degree than the Project.
Develop a center that takes advantage of the existing infrastructure and support systems including the local workforce.	Yes. Alternative 2 would develop a center that takes advantage of the existing infrastructure and support systems including the local workforce.
Positively contribute to the economy of the region through new capital investment and the creation of new employment opportunities.	Partially. Alternative 2 would positively contribute to the economy through the construction of new buildings, creation of new employment opportunities, and the expansion of the tax base. Thus, although Alternative 2 satisfies this objective it does so to a lesser degree than the Project because it is smaller.
Expand the local and regional tax base.	Partially. Alternative 2 would positively contribute to the economy through the construction of new buildings, creation of new employment opportunities, and the expansion of the tax base. Thus, although Alternative 2 satisfies this objective it does so to a lesser degree than the Project because it is smaller.
Develop and operate a large format logistics center that will attract quality tenants and will be competitive with other similar regional facilities.	No. Alternative 2 would not develop and operate a logistics center will be competitive with other similar regional facilities for potential tenants that are seeking a million+ square foot facility.

Project Objective	Alternative Meets Objective?
Operate a large format logistics center consistent with industry standards for operational design.	Partially. Alternative 2 would develop and operate a logistics center that meets industry standards for operational design criteria. Thus, although Alternative 2 satisfies this objective it does so to a lesser degree than the Project because it is a smaller building.
Implement the East Valley Area Plan through the development of a land use consistent with the development standards and criteria relevant to the site.	Yes. Alternative 2 would be consistent with the East Valley Area Plan's development standards.
Facilitate the development of underutilized land currently planned for industrial uses that, maximizes the use of the site and responds to regional market demand.	Partially, since it would leave nearly 14 acres on the project site as undeveloped. Alternative 2 would also result in construction of a warehouse; however, it would not maximize the use of the site or respond as well to regional market because development would be reduced by approximately 25 percent.

Alternative 2 Conclusion

Alternative 2 (Reduced Project Size) would reduce development of the Project site by 25 percent in comparison to the Project. This alternative would have reduced impacts to air quality because it would generate fewer emissions of NOx. However, it is expected that emissions of NOx from Alternative 2 would still exceed SCAQMD regional thresholds. Also, although it will generate less traffic Alternative 2 would have significant and unavoidable traffic impacts similar to the Project because it cannot be guaranteed that mitigation measures for intersections under the control of other jurisdictions (City of Redlands, City of Highland and Caltrans) will be implemented in a manner timely to avoid Project impacts.

Alternative 2 only full achieved two of the eight Project objectives. Furthermore, a survey of industrial buildings in the Inland Empire submarket shows very low availability of buildings in the 1,000,000-square-foot size range and greater and a high availability of buildings in the 700,000-square-foot size range, and the 300,000- square-foot size range, respectively

5.6 Comparison of Alternatives

The matrix approach to comparing the aforementioned alternatives is used for ease of directly comparing the Project's significant effects with those of the alternatives, per State CEQA Guidelines Section 15126.6(d). The potential environmental impacts of each alternative are ranked as greater, similar, or less than the Project with respect to each topic discussed in the DEIR, as shown in Table 5-4, below.

Table 5-4
Comparison of Impacts from Project Alternatives

Environmental Issue	Alternative 1 No Project/ No Build	Alternative 2 Reduced Project Size (25%)
Aesthetics	Less	Similar
Agricultural and Forest Resources	Similar	Similar
Air Quality	Less	Similar .
Biological Resources	Less	Similar
Cultural Resources	Less	Similar
Energy	Less	Less
Greenhouse Gas Emissions	Less	Less
Hazards and Hazardous Materials	Less	Similar
Hydrology and Water Quality	Greater	Similar
Land Use and Planning	Less	Similar
Mineral Resources	Similar	Similar
Noise	Less	Similar
Population and Housing	Less.	Less
Public Services and Recreation	Less	Less
Transportation and Traffic	Less	Similar
Tribal Cultural Resources	Less	Similar
Utilities and Service Systems	Less	Less
Wildfire	Similar	Similar
Environmentally Superior to Project?	Yes	Yes
Meets Most of the Project Objectives?	No	No

5.6.1 Environmentally Superior Alternative

CEQA Guidelines, Section 15126.6(e)(2), requires the identification of the environmentally superior alternative. Of the alternatives evaluated above, the No Project alternative is the environmentally superior alternative with respect to reducing impacts created by the Project. CEQA Guidelines also require the identification of another environmentally superior alternative if the No Project alternative is selected as the environmentally superior alternative.

Of the remaining alternatives, the Reduced Project Size Alternative (Alternative 2) is the most environmentally superior alternative to the Project. This alternative would reduce the size of the warehouse building by approximately 25 percent.

6 CEQA-MANDATED SECTIONS

6.1 GROWTH-INDUCING IMPACTS

CEQA Guidelines Section 15126.2(e) requires that the EIR discuss "...the ways in which the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment."

Implementation of the Project would result in the construction of an approximately 1,192,671 square-foot high-cube, non- refrigerated warehouse and logistics center on approximately 54.8 net acres. The project is consistent with the East Valley Area Plan which zoned the Project site Regional Industrial (EV/IR). No substantial, detrimental, growth-inducing effect is expected from implementation of the Project. The Project will not involve the extension of roads or sewer or water lines, or the construction of other major infrastructure facilities that would induce growth. A key feature of the East Valley Area Plan is to facilitate appropriate development efficiently and effectively in an area where roads and infrastructure already exist.

6.1 SIGNIFICANT UNAVOIDABLE IMPACTS

CEQA Guidelines Section 15126.2(c) requires that the EIR discuss "significant environmental effects which cannot be avoided if the proposed project is implemented." The impacts listed below are identified as significant and unavoidable for one of four reasons: 1) no potentially feasible mitigation has been identified; 2) potential mitigation has been identified but may be found by the Lead Agency to be infeasible; 3) with implementation of feasible mitigation, the impact still would not, or might not, be reduced to a less-than-significant level; or 4) implementation of the mitigation measure would require approval of another jurisdictional agency, whose approval will be pursued by the Lead Agency but cannot be guaranteed as of the publication of this EIR. Because these significant unavoidable impacts “cannot be alleviated without imposing an alternative design” (CEQA Guidelines Section 15126.2[b]), Chapter 5 (Alternatives to the Proposed Project) of this EIR evaluates feasible alternatives that could lessen the identified significant unavoidable impacts, and evaluates the alternatives’ ability to meet the Project Objectives.

The following impacts have been identified in this EIR as significant and unavoidable:

- Impact AIR-1: Conflict with or obstruct implementation of applicable air quality plan (Chapter 4.3) - The Project would exceed SCAQMD regional thresholds for Nitrous Oxides (NO_x) which would conflict with implementation of the 2016 South Coast Air Quality Management Plan. Due to the nature of warehouse uses which involve goods-movement vehicle trips (the main generator of NO_x emissions) there are no feasible mitigation measures to reducing impacts to a level that is Less than Significant.

Impact TRANS-1: conflict with program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities. (Chapter 4.17) – Although it is physically possible to reduce the potential impacts to roadway intersections to less than significant levels, those intersections are under the jurisdiction of Caltrans, the City of Highland or the City of Redlands. Caltrans, the City of Highland and the City of Redlands either do not have any plans to improve the impacted intersections or if they do have plans, those plans are

either not funded or on a construction schedule that would allow for those improvements to be operational by the Project's opening year. Furthermore, the County has no independent control or jurisdiction over the implementation of those mitigation measures. Accordingly, the recommended mitigation measures needed to mitigate the identified impacts are not economically and legally feasible.

As a result, impacts will be ***significant and unavoidable***.

The implications of each significant unavoidable impact identified above are described in detail the particular EIR chapter referenced with the impact. The Project is being proposed, notwithstanding these effects, to fully achieve the Project Objectives described in Chapter 3 of this EIR. If the County approves the Project (or an alternative to the proposed Project) that would result in significant unavoidable impacts, the County must adopt a Statement of Overriding Considerations per CEQA Guidelines Section 15093, describing why the economic, legal, social, technological, or other benefits, including region-wide or statewide environmental benefits, of the approved Plan outweigh its significant unavoidable impacts.

6.2 IRREVERSIBLE ENVIRONMENTAL CHANGES

CEQA Guidelines Section 15126.2(c) requires that the EIR discuss "significant irreversible environmental changes which would be caused by the proposed project should it be implemented."

Project implementation would result in an irreversible commitment of energy resources, primarily in the form of fossil fuels, including fuel oil, natural gas, and gasoline or diesel fuel for construction equipment and vehicles, as well as the use of these same resources during long-term operation of individual projects facilitated by the Plan. Because development facilitated by the Project would be required by law to comply with California Code of Regulations Title 24 (including updates over time) and adopted County energy conservation ordinances and regulations, Plan implementation would not be expected to use energy in a wasteful, inefficient, or unnecessary manner.

The consumption or destruction of other non-renewable or slowly renewable resources would also result during construction, occupancy, and use of individual development sites under the Plan. These resources would include, but would not be limited to, lumber, concrete, sand, gravel, asphalt, masonry, metals, and water. Project implementation would also irreversibly use water and solid waste landfill resources. However, development under the Plan would not involve a large commitment of those resources relative to supply, nor would it consume any of those resources wastefully, inefficiently, or unnecessarily, especially considering ongoing County conservation and recycling programs. In addition, the development of the Project site as an industrial use has long been planned by the East Valley Corridor Specific Plan adopted by City of Redlands and its successor the East Valley Area Plan adopted by the County.

7.0 PREPARATION TEAM

Lead Agency

County of San Bernardino
Land Use Development Department
385 North Arrowhead Avenue
San Bernardino, California 92415
909-387-0235

Contact: Aron Liang, Senior Planner

Consultants to the Lead Agency

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Eliza Laws, Senior Environmental Analyst

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San Bernardino County
Land Use Services Department
Planning Division
385 North Arrowhead Avenue, 1st Floor • San Bernardino, CA 92415
Phone Number (909)387-8311 • Fax Number (909) 387-3223

NOTICE OF PREPARATION AND NOTICE OF PUBLIC SCOPING MEETING

FROM: San Bernardino County Land Use Services Department
385 North Arrowhead Avenue, First Floor
San Bernardino, CA 92415-0187

TO: Responsible Agencies, Trustee Agencies, and Interested Parties

DATE: February 7, 2019

SUBJECT: Notice of Preparation of a Draft Environmental Impact Report for the Duke Warehouse at Alabama and Palmetto Project[1]

The County of San Bernardino (County) will be the Lead Agency and will prepare a Draft Environmental Impact Report (DEIR) for the proposed Duke Warehouse at Alabama and Palmetto Project ("Project") described below. We are interested in your agency's views as to the appropriate scope and content of the DEIR's environmental information pertaining to your agency's statutory responsibilities related to the project. We will need the name of a contact person for your agency. For interested individuals, we would like to be informed of environmental topics of interest to you regarding the project.

Because the County has already determined that an EIR is required for the proposed Project, and as permitted by CEQA Guidelines Section 15060(d) (Preliminary Review), the County will not prepare an Initial Study for the Project.

The proposed Project, its location, and its potential environmental effects are described below. The County welcomes public input during the Notice of Preparation (NOP) review period. Due to the time limits mandated by the CEQA Guidelines, your response must be sent ***not later than 30 days after your receipt of this notice***. In the event that no response or request for additional time is received by the end of the review period, the County may presume that you have no response.

Reference: Title 14, California Code of Regulations, California Environmental Quality Act (CEQA) Guidelines, Sections 15082(a), 15103, and 15375

Project Title: Duke Realty Alabama and Palmetto Warehouse Project

Project Applicant: Michael Weber, Duke Realty Limited Partnership

Assessor's Parcel Number(s): APN: 0292-041-42, 0292-041-43, 0292-041-47 and 0292-041-48

Project Location: The 54.8-acre Project site is west of State Route 210 (SR 210), between Interstate 10 (I-10) and the Santa Ana River. Specifically, the subject property is on the northwest corner of the Palmetto Avenue and Alabama Street intersection, with Palmetto Avenue the south boundary and Alabama Street the east boundary. The project is in an unincorporated area of San Bernardino County surrounded by the City of Redlands, known as the "Donut Hole" and is also within the boundaries of the East Valley Area Plan. The Project site is also located within the San Bernardino International Airport Influence Area.

The site is relatively flat with minimal topographical variation; site topography varies from an elevation of approximately 1,199 to 1,226 feet above mean sea level (msl) and generally slopes gently in a northerly direction toward the Santa Ana River. Figure 1 shows the location of the project site. Figure 2 shows the site plan for the warehouse.

Public Review Period: February 7, 2019 through March 11, 2019

Responses and Comments: Please send your responses and comments by Monday, March 11, 2019 to Aron Liang, Senior Planner at Aron.Liang@lus.sbcounty.gov or at the following address:

Aron Liang, Senior Planner
County of San Bernardino
Land Use Services Department – Planning Division
385 North Arrowhead Avenue, First Floor
San Bernardino, CA 92415-0187

Notice of Scoping Meeting:

Pursuant to CEQA Guidelines Section 15082(c) (Notice of Preparation and Determination of Scope of EIR), the County will conduct a scoping meeting for the purpose of soliciting comments of adjacent cities, responsible agencies, trustee agencies, and interested parties requesting notice as to the appropriate scope and content of the DEIR.

Date: February 21, 2019
Time: 2:00 p.m.
Place: Government Center Building - County Board of Supervisors Chambers
385 North Arrowhead Avenue,
San Bernardino, CA 92415

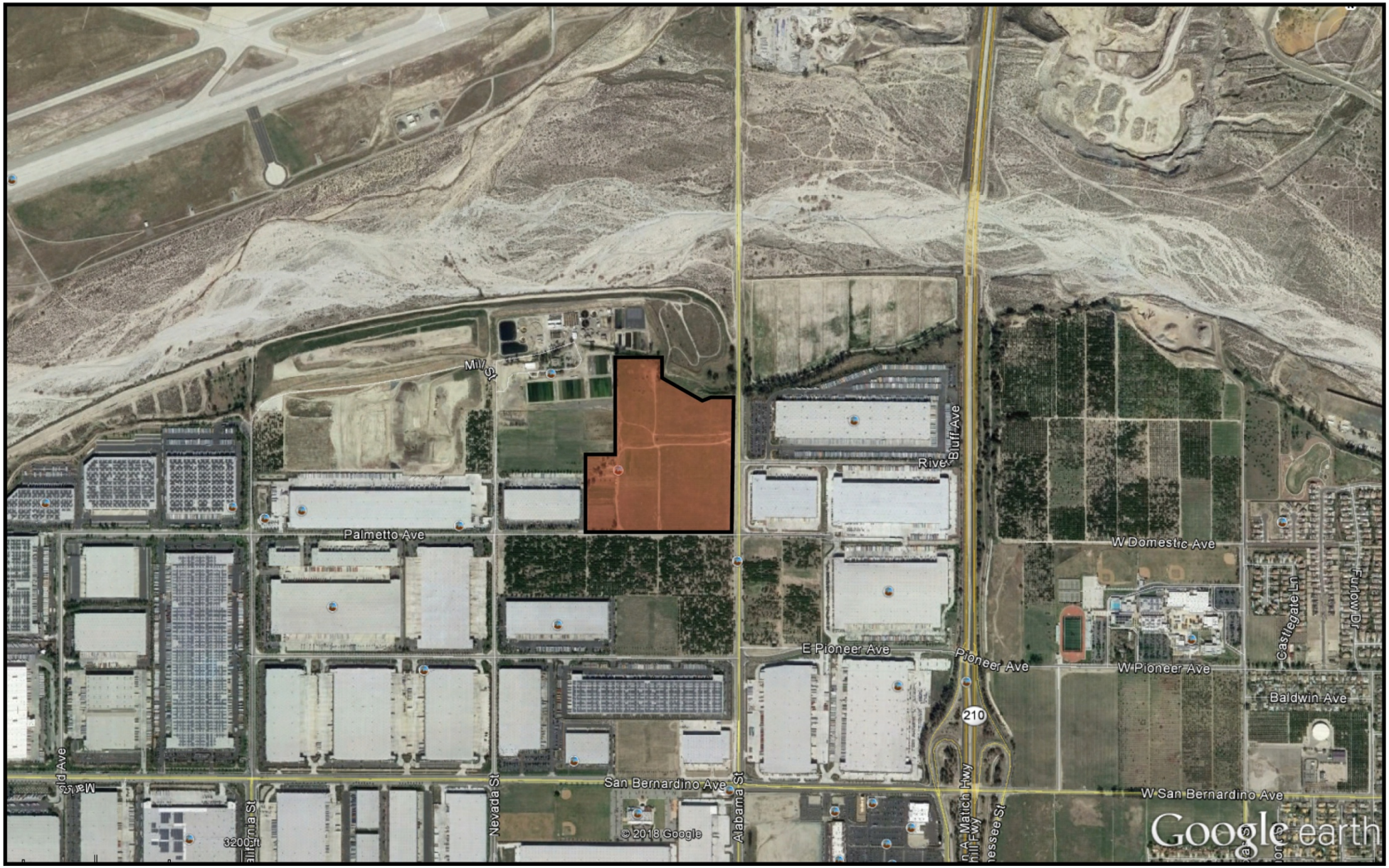
Document Availability:

Notice of Preparation

This Notice of Preparation can be viewed on the County of San Bernardino website at: http://cms.sbcounty.gov/lus/Planning/Environmental/Valley.aspx. The documents are also available during regular business hours at:

- County of San Bernardino Land Use Services Department, Planning Division, 385 North Arrowhead Avenue, San Bernardino, CA 92415; between the hours of 8:00 a.m. and 4:30 p.m., Monday through Friday.

If you require additional information please contact Aron Liang, Senior Planner, at (909) 387-8311.

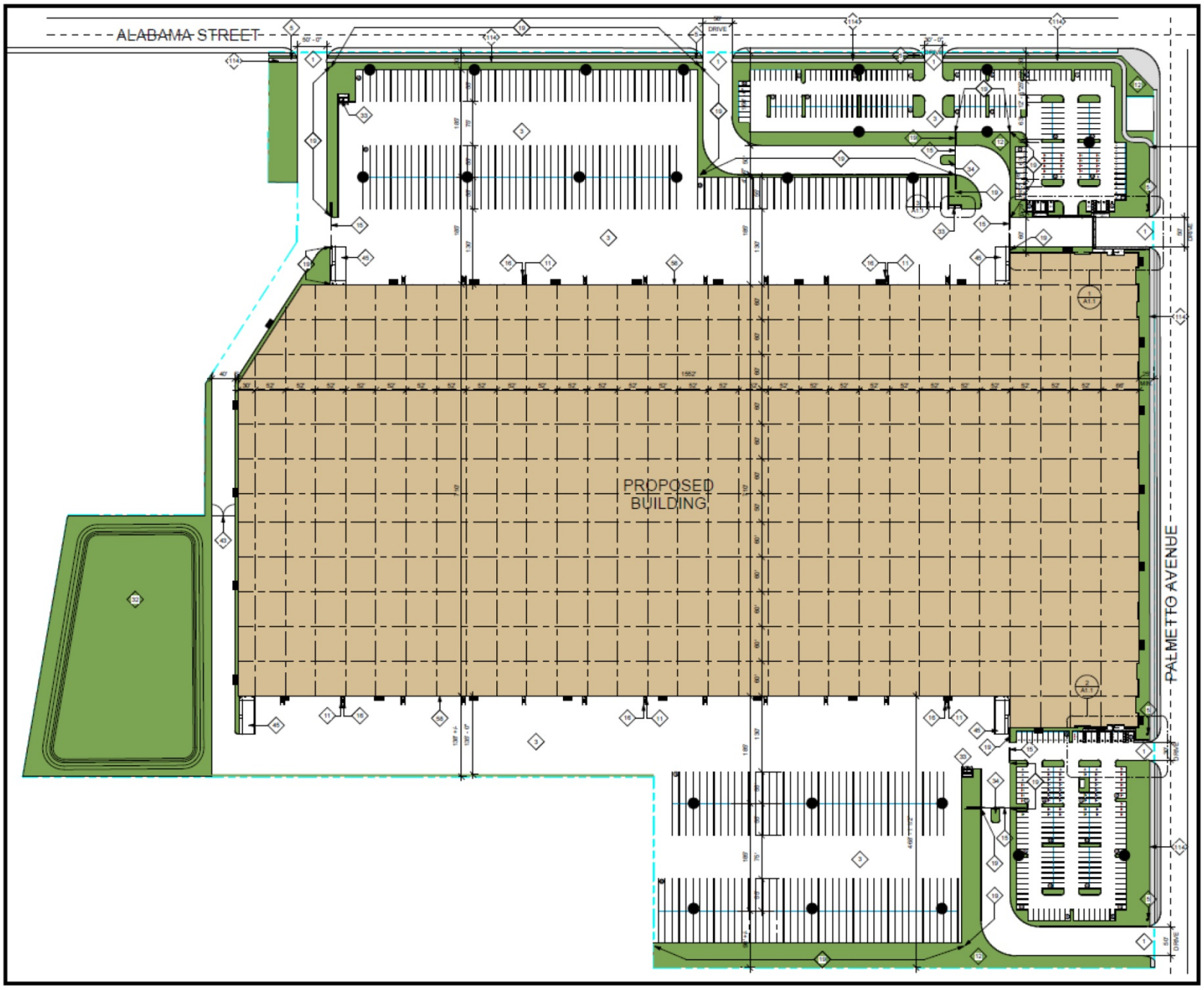


Not to Scale

Figure 1 Project Location Map

Duke Realty Alabama and Palmetto Warehouse

County of San Bernardino, California



SITE LEGEND

- LANDSCAPE AREA
- PROPOSED BUILDING
- CONCRETE PAVING
- STANDARD PARKING STALL (20' x 9')
- TYP. HANDICAP PARKING STALL W/ 8' LOADING ZONE (20' x 9', 8')
- TYP. HANDICAP PARKING STALL W/ 5' LOADING ZONE (20' x 9', 5')
- PROPERTY LINE
- DOCK HIGH DOOR
- DRIVE THRU. DOOR
- PROPOSED WALL PACK LOCATION
- PROPOSED LIGHT POLE LOCATION
- ADA PATH OF TRAVEL

*NO PROPOSED SIGNAGE *NO PROTECTED PLANTS

PROJECT INFORMATION			12/17/2018
GROSS SITE AREA	54.76 AC	2,385,342 SF	
TOTAL BUILDING AREA		1,192,671 SF	
FOOTPRINT		1,116,934 SF	
	WAREHOUSE	1,091,934	
	OFFICE	25,000	
MEZZANINE		75,737	
	OFFICE	25,000	
	STORAGE	50,737	
NET COVERAGE		50.00%	
LANDSCAPE PROVIDED		23.2%	293,739
LANDSCAPE REQUIRED	15% EXCL. OF BUILDING		190,261
PARKING REQUIRED			
	WAREHOUSE @ 1/1,000 <40K	40	
	WAREHOUSE @ 1/4,000 >40K	276	
	OFFICE @ 1/250	200	
TOTAL REQUIRED		516	
PARKING PROVIDED		737	
	STANDARD	280	
	ADA	14	
	CLEAN AIR	59	
	EVC	42	
	ADA EVC	1	
	VAN EVC	1	
	AMBULATORY EVC	1	
	TRAILER	339	

Not to Scale

Figure 2 Site Plan

Duke Realty Alabama and Palmetto Warehouse
County of San Bernardino, California

Project Description:

The Project involves the development of an approximate 1,192,671 square-foot high-cube, non-refrigerated warehouse building on approximately 54.8 net acres. The building will have a maximum height of 50 feet and occupy a footprint area of 1,116,934 square feet. Onsite improvements will include approximately 293,739 square feet of landscaped area and approximately 974,669 square feet of Portland cement concrete paving for parking areas, loading areas, truck courts, and circulation drives. In order to accommodate the ultimate roadway typical cross-section, right-of-way will be dedicated along the Project frontage to provide 60 feet of width on the westerly half of Alabama Street and 33 feet of width on the northerly half of Palmetto Avenue. Proposed offsite road improvements consist of 30 feet of street widening along the westerly side of Alabama Street, 12 feet of street widening along the northerly side of Palmetto Avenue, new curbing, new sidewalks, and a new multipurpose trail extending along the entire Project frontage.

Construction is expected to begin in Late 2019 and be completed by the end of 2020. The existing limited amounts of old foundations, irrigation piping, and miscellaneous debris would be demolished and removed from the site. Grading and earthwork operations are expected to disturb approximately 255,000 cubic yards of onsite soil. However, no import or export of soil material is anticipated as the cut and fill volumes on site are expected to balance assuming a soil material shrinkage rate of 20 percent.

The building will be divided into three functional spaces as follows: 1,091,934 square feet for the warehouse; 50,737 square feet of mezzanine storage; and 50,000 square feet of office space. Approximately 161 loading dock doors and 339 trailer stall spaces will be provided. The Project's sewer, water, and storm water drainage lines will connect to the existing publicly-maintained lines located within Alabama Street and Palmetto Avenue.

Development of the Project will include the construction of an 8-foot wide, asphalt, continuous multi-use trail along the entire Palmetto Avenue and Alabama Street Project frontages, in accordance with the East Valley Area Plan.

Approximately 85 percent of the Project site will be composed of impervious surfaces with approximately 15 percent composed of landscaping. The proposed development will include one onsite stormwater quality basin located in the northwest corner of the site and a stormwater quality infiltration trench along the southwest portion of the Project site.

Required Approvals:

Implementation of the Project would require, but is not limited to, the following discretionary approvals by the County of San Bernardino (lead agency):

- Certification of the Final EIR
- Adoption of a Mitigation Monitoring and Reporting Program
- Airport Land Use Commission approval
- Site Plan Approval
- Approval of a Conditional Use Permit (CUP) to allow the construction of the 1,192,671-square foot high cube warehouse building.

- Approval of a Tentative Parcel Map (TPM) to consolidate four parcels into one large parcel.

Other Potential Government Agency Approvals (Responsible Agencies)

- South Coast Air Quality Management District (SCAQMD)
- California Department of Transportation (Caltrans)
- Santa Ana Regional Water Quality Control Board (RWQCB)

EIR Scope:

The County of San Bernardino has determined that the proposed warehouse will require preparation of an Environmental Impact Report (EIR) pursuant to the California Environmental Quality Act (CEQA).

The following environmental topics will be evaluated in the EIR:

Aesthetics: The EIR will describe the aesthetic and urban design implications of the proposed Project, including its visual relationships to the surrounding vicinity and the potential impacts of warehouse development (the proposed array of building masses, heights, view sheds etc.) on important surrounding vantage points.

Agriculture and Forestry: The EIR will evaluate potential impacts (if any) related to land used or zoned for agriculture or forestry resources

Air Quality: The EIR will describe the potential short- and long-term impacts of the warehouse development on local and regional air quality based on methodologies defined by the South Coast Air Quality Management District (SCAQMD).

Biological Resources: The EIR will evaluate potential impacts on biological resources resulting from development of the proposed warehouse. Mitigation measures will be defined as necessary to avoid or reduce the potential impacts.

Cultural and Historic Resources and Tribal Cultural Resources: The EIR will describe any potential impacts and mitigation needs associated with historic and cultural (archaeological and paleontological) resources, including potential impacts on Tribal Cultural Resources, that could result from the proposed warehouse development.

Energy: The EIR will evaluate inefficient, or unnecessary consumption of energy resources or conflicts obstruct a state or local plan for renewable energy or energy efficiency.

Geology and Soils: The EIR will describe the potential geotechnical implications of development of the proposed warehouse.

Greenhouse Gas Emissions and Global Climate Change: The EIR will describe the potential impacts on local greenhouse gas emissions and global climate change, following the latest approach and methodologies recommended by State and regional agencies, that could result from the proposed warehouse development.

Hazards and Hazardous Materials: The EIR will describe the potential for hazardous material use or hazardous waste investigation and cleanup activities anticipated from the warehouse development and will describe any associated potential impacts and mitigation needs. Potential construction period hazards and hazardous material impacts and mitigation needs will also be described.

Hydrology and Water Quality: The EIR will evaluate potential impacts on hydrology and water quality resulting from development of the proposed warehouse, including possible effects related to drainage and flooding.

Land Use and Planning: The EIR will describe the potential effects of development of the proposed warehouse on existing and planned land use characteristics in the Project vicinity, including the warehouse's relationship to other adopted regional and local plans.

Mineral Resources: The EIR will evaluate whether the project will result in the loss of availability of a known mineral resource or a local mineral resource recovery area.

Noise: The EIR will describe potential construction and long-term operation noise (traffic, mechanical systems etc.) impacts and related mitigation needs.

Population and Housing: The EIR will describe the anticipated effects of the warehouse development on existing and projected population and housing characteristics. This information will be used to forecast public service and utility needs in the Project area.

Public Services: The EIR will describe potential impacts on public services (police and fire protection parks and recreation, and schools) and any mitigation needs.

Transportation: The EIR will describe the transportation and circulation implications of the proposed warehouse project, including its incremental contribution to daily and peak hour traffic on local and regional roadways. The evaluation will include roadway system impacts, transit implications, and effects on pedestrian and bicycle circulation.

Utilities and Service Systems: The EIR will describe potential warehouse impacts on local utility and service systems, including water supply, water and wastewater treatment, and solid waste and recycling.

Wildfires: The EIR will describe potential increase in exposure/risk to wildfires to the project site and surrounding areas.

Alternatives: Pursuant to CEQA Guidelines Section 15126.6, the EIR will identify and compare a reasonable range of alternatives to the Project.

REDLANDS MUNICIPAL UTILITIES & ENGINEERING DEPT.

SAN BERNARDINO COUNTY
LAND USE SERVICES
PLANNING PROJECT NOTICE
385 North Arrowhead Avenue, First Floor, San Bernardino, CA 92415-0187

Referral Date:
September 28, 2018

ATTENTION REVIEWING AGENCIES

The development proposal listed below has been filed with County Planning. Please comment in the space below. You may attach additional pages as necessary.

Your comments must be received by Planning **no later than October 15, 2018 to be sure that they are included in the final project action.** Please refer to this project by the Applicant's name and the Assessor Parcel Number indicated below. If you have no comment, a reply is not necessary. If you have any questions regarding this proposal, please contact **Planner, ARON LIANG** at **(909) 387-0235**, by email at **Aron.Liang@lus.sbcounty.gov**, or mail your comments to the address above. If you wish, you may also FAX your comments to (909) 387-3223.

ASSESSOR PARCEL NUMBER:	**0292-041-42**	**(See map below for more information)**
PROJECT NUMBER:	**P201800232/CF**	*** Multiple Parcel Associations ***
APPLICANT:	**MICHAEL WEBER - DUKE REALTY LIMITED PARTNERSHIP**	
LAND USE DISTRICT (ZONING):	**EV/IR**	
IN THE COMMUNITY OF:	**REDLANDS/3RD/ SUPERVISORIAL DISTRICT**	
LOCATED AT:	**9180 ALABAMA ST REDLANDS 92374**	
PROPOSAL:	**TENTATIVE PARCEL MAP AND CONDITIONAL USE PERMIT TO CONSOLIDATE FIVE PARCELS AND CONSTRUCT A 1.2-MILLION SQUARE FOOT HIGH CUBE WAREHOUSE BUILDNG ON 55.8 ACRES; APN: 0292-041-42, 43, 47 and 48; PROJECT # P201800232**	

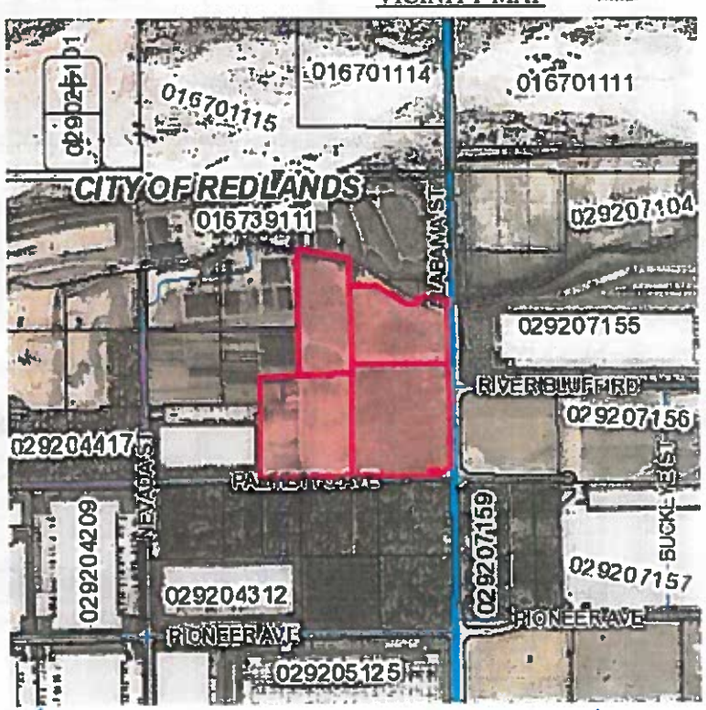
If you want to be notified of the project decision, please print your name clearly and legibly on this form and mail it to the address above along with a self-addressed, stamped envelope. All decisions are subject to an appeal period of ten (10) calendar days after an action is taken.

Comments (If you need additional space, please attach additional pages):

Please see attached comments.

RECEIVED
OCT 2 2018
MUNICIPAL UTILITIES & ENGINEERING DEPT.

VICINITY MAP



SIGNATURE

10/12/18
DATE

City of Redlands Municipal Utilities & Engineering Dept.
AGENCY

IF THIS DECISION IS CHALLENGED IN COURT, SUCH CHALLENGE MAY BE LIMITED TO ONLY THOSE ISSUES RAISED IN WRITING AND DELIVERED TO LAND USE SERVICES BEFORE THE PROJECT DECISION IS MADE.

IF A PUBLIC HEARING IS HELD ON THE PROPOSAL, YOU OR SOMEONE ELSE MUST HAVE RAISED THOSE ISSUES AT THE PUBLIC HEARING OR IN WRITTEN CORRESPONDENCE DELIVERED TO THE HEARING BODY AT, OR PRIOR TO, THE HEARING. DUE TO TIME CONSTRAINTS AND THE NUMBER OF PERSONS WISHING TO GIVE ORAL TESTIMONY, TIME RESTRICTIONS MAY BE PLACED ON ORAL TESTIMONY AT ANY PUBLIC HEARING ABOUT THIS PROPOSAL. YOU MAY WISH TO MAKE YOUR COMMENTS IN WRITING TO ASSURE THAT YOU ARE ABLE TO EXPRESS YOURSELF ADEQUATELY.

City of
REDLANDS
Incorporated 1888
Municipal Utilities & Engineering Department
35 Cajon Street, Suite 15A
Redlands, CA 92373
909-798-7698

PAUL TOOR
Director

SAVAT KHAMPHOU
Deputy Director

San Bernardino County
Land Use Services
385 North Arrowhead Avenue, First Floor
San Bernardino, CA 92415-0187

In response to San Bernardino County Land Use Services Planning Project Notice for Michael Weber – Duke Reality Limited Partnership (APN 0292-041-41, 42, 43, and 48), the City of Redlands Municipal Utilities and Engineering Department (MUED) has the following comments:

- Tentative Parcel Map 19951 shows Water & Sewer Easement No. 2008-0369-698 to be relocated. No water and/or sewer main relocation plans and calculations have been submitted to the City of Redlands for relocation off the existing 15" gravity sewer main or 12" water main. The engineer (Webb) for the project has been asked to submit additional information to the City of Redlands for conceptual review of the sewer relocation and justification for removal of the existing water main. At this time, MUED staff cannot recommend to the City Council for relinquishment of the utility easement; and,
- The City of Redlands Quality of Life Department (QOL) owns and operates a gravity irrigation main. This main meanders from east to west in the proximity of Palmetto Av. The main has required recent relocation(s) due to development between Alabama Street and the I-210. This main may be associated with the easement conveyed to the Tennessee Water Company recorded February 13, 1934 in Book 942 Page 57, Official Records; and,
- MUED will prepare Potable Water, Non-Potable and Sewer Development/Connection Requirements as more information is available from the developer and San Bernardino County Land Use Services

Please direct questions from the developer and County personal to Alan Collett, Senior Civil Engineer @ 909-798-7585, x4 or acollet@cityofredlands.org .

Sincerely,

Donald P. Young

Donald Young
Engineering Manager

DEVELOPMENT SERVICES
DEPARTMENT

CITY OF
REDLANDS
Incorporated 1888
35 Cajon Street, Suite 20
Mailing: P.O. Box 3005
Redlands, CA 92373
(909) 798-7555 option 2

BRIAN DESATNIK
Development Services Director

February 19, 2019

VIA E-MAIL & U.S. MAIL

County of San Bernardino
Land Use Services Department – Planning Division
Attn: Aron Liang, Senior Planner
385 N. Arrowhead Avenue, First Floor
San Bernardino, CA. 92415-0187

RE: Agency Notification for EIR Scoping – Duke Warehouse at Alabama & Palmetto Project

Dear Mr. Liang:

Thank you for notifying the City of Redlands regarding the above-referenced project, and agree an Environmental Impact Report (EIR) is the appropriate level of environmental review. Our understanding is the project proposes to construct a 1,192,671 square-foot high cube warehouse building and related improvements on 54.8 acres of land located at the northwest corner of Alabama St./Palmetto Ave. within the County of San Bernardino's jurisdiction. The Project Site abuts the boundary line of the City of Redlands (approximately 2,200 linear feet along the City boundary, of which 1,100 linear feet abut the City of Redlands Wastewater Treatment Plant and associated ponds). The following comments are consolidated from the Municipal Utilities & Engineering Department and the Development Services Department to assist you with preparing the environmental analysis.

EIR Scoping Comments

Traffic & Circulation

- The analysis and discussion should thoroughly address how the traffic impacts from the proposed project would affect intersections and freeway access points in the City of Redlands (depending upon trip distribution in the Traffic Impact Analysis). Assistance with study scoping and review of the TIA can be provided by Mr. Don Young, Engineering Manager, at (909) 798-7585 extension 6, or by e-mail at 'dyoung@cityofredlands.org'.
- **The Traffic Impact Analysis should be routed to the City of Redlands**, Municipal Utilities & Engineering Department (Mr. Don Young) and the Development Services Department (Mr. Brian Foote), **for review and comment while the document is still in Draft form.**
- Traffic mitigation language should be sufficiently precise to clearly identify the locations and consequences of necessary traffic improvements (such as widening any public rights-of-way, re-striping traffic lanes, adding or lengthening traffic lanes or turn lanes, installing new signs/signals or adjusting signal timing, constructing corner turn radius, sidewalk or parkway changes, etc.), in particular any roadways in the City of Redlands. Exhibits and graphics should be prepared, if necessary, to illustrate conceptual street and lane sections.

Air Quality & Greenhouse Gases

The EIR analysis and discussion must adequately address how the air quality impacts may affect the City of Redlands (e.g., heavy truck vehicle emissions). The analysis and discussion may reference applicable portions of the City of Redlands 2035 General Plan Update EIR and Climate Action Plan.

Hydrology

- The EIR analysis and discussion must thoroughly address the hydrology and drainage of the Project Site as well as potential effects on adjacent land uses. There is a potential negative impact from increased runoff adjacent to the City of Redlands Wastewater Treatment Plant (adjacent to the north and northwest sides of the proposed project site) and nearby landfill site. There appears to be a proposed large drainage basin (estimated to be 2.25 acres in area) at the northwest corner of the project site, suggesting all future runoff from the entire project site would be directed toward the direction of the Wastewater Treatment Plant ponds. The proposed 85% impervious surface area of the project site will be problematic unless adequately mitigated and/or the drainage concept is designed appropriately to avoid potential negative impacts.
- **The Hydrology/Drainage Report should be routed to the City of Redlands, Municipal Utilities & Engineering Department (Mr. Don Young), for review and comment while the document is still in Draft form.** Assistance can be provided by Mr. Don Young, Engineering Manager, at (909) 798-7585 extension 6, or by e-mail at 'dyoung@cityofredlands.org'.

Noise

The EIR analysis and discussion must adequately address how the potential long-term operational noise impacts (e.g., heavy truck trips that may be routed through the City of Redlands) may affect transportation corridors and land uses in the City of Redlands.

Public Services

The EIR analysis and discussion must adequately address any potential impacts on the current and future provision of Police and Fire services by the City of Redlands.

Utilities & Service Systems

The EIR analysis and discussion must adequately address the issue of relocation of existing public sewer and water facilities on the project site as well as adjacent to the project site.

Early Consultation

The City requests coordination for early review of draft environmental documents prior to public circulation, as recommended by statute regarding Early Public Consultation for EIRs (CEQA Guidelines §15083). City staff can assist the County's consultant with certain topics of analysis, such as traffic impacts and City services.

Responsible Agency

Based on the information available at this time, it appears that the City of Redlands will not be a Responsible Agency (CEQA Guidelines §15381). If it is later determined that the Redlands City

Council must make a discretionary decision related to the project, then the City of Redlands would be acting as a Responsible Agency. In such cases where the City of Redlands is a Responsible Agency, the City should be able to rely on the Lead Agency's environmental document prior to making a decision, which means the document must be adequate for the City of Redlands purpose of making a decision on a discretionary action (CEQA Guidelines §15096).

If you have any questions during the scoping process or during preparation of the Draft EIR, please do not hesitate to contact me at (909) 798-7562 or by e-mail at 'bfoote@cityofredlands.org'. In addition, Mr. Don Young, Engineering Manager, of the Municipal Utilities & Engineering Department can be reached at (909) 798-7585 extension 6, or by e-mail at 'dyoung@cityofredlands.org'.

Respectfully submitted,

BRIAN FOOTE, AICP
City Planner/ Planning Manager

South Coast
Air Quality Management District
21865 Copley Drive, Diamond Bar, CA 91765-4178
(909) 396-2000 • www.aqmd.gov

SENT VIA USPS AND E-MAIL: March 5, 2019

Aron.Liang@lus.sbcounty.gov
Aron Liang, Senior Planner
County of San Bernardino, Land Use Department
Planning Division
385 North Arrowhead Avenue, First Floor
San Bernardino CA 92415-0187

Notice of Preparation of a Draft Environmental Impact Report for the Proposed Duke Realty Alabama and Palmetto Warehouse Project[1]

South Coast Air Quality Management District (SCAQMD) staff appreciates the opportunity to comment on the above-mentioned document. SCAQMD staff's comments are recommendations regarding the analysis of potential air quality impacts from the Proposed Project that should be included in the Draft Environmental Impact Report (EIR). Please send SCAQMD a copy of the Draft EIR upon its completion. Note that copies of the Draft EIR that are submitted to the State Clearinghouse are not forwarded to SCAQMD. Please forward a copy of the Draft EIR directly to SCAQMD at the address shown in the letterhead. **In addition, please send with the Draft EIR all appendices or technical documents related to the air quality, health risk, and greenhouse gas analyses and electronic versions of all air quality modeling and health risk assessment files[2]. These include emission calculation spreadsheets and modeling input and output files (not PDF files). Without all files and supporting documentation, SCAQMD staff will be unable to complete our review of the air quality analyses in a timely manner. Any delays in providing all supporting documentation will require additional time for review beyond the end of the comment period.**

Air Quality Analysis

SCAQMD adopted its California Environmental Quality Act (CEQA) Air Quality Handbook in 1993 to assist other public agencies with the preparation of air quality analyses. SCAQMD recommends that the Lead Agency use this Handbook as guidance when preparing its air quality analysis. Copies of the Handbook are available from SCAQMD's Subscription Services Department by calling (909) 396-3720. More guidance developed since this Handbook is also available on SCAQMD's website at: http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook/ceqa-air-quality-handbook-(1993). SCAQMD staff also recommends that the Lead Agency use the CalEEMod land use emissions software. This software has recently been updated to incorporate up-to-date state and locally approved emission factors and methodologies for estimating pollutant emissions from typical land use development. CalEEMod is the only software model maintained by the California Air Pollution Control Officers Association (CAPCOA) and replaces the now outdated URBEMIS. This model is available free of charge at: www.caleemod.com.

[1] The Proposed Project would include, among others, construction of a 1,192,671-square-foot warehouse on 54.8 acres.

[2] Pursuant to the CEQA Guidelines Section 15174, the information contained in an EIR shall include summarized technical data, maps, plot plans, diagrams, and similar relevant information sufficient to permit full assessment of significant environmental impacts by reviewing agencies and members of the public. Placement of highly technical and specialized analysis and data in the body of an EIR should be avoided through inclusion of supporting information and analyses as appendices to the main body of the EIR. Appendices to the EIR may be prepared in volumes separate from the basic EIR document, but shall be readily available for public examination and shall be submitted to all clearinghouses which assist in public review.

SCAQMD has also developed both regional and localized significance thresholds. SCAQMD staff requests that the Lead Agency quantify criteria pollutant emissions and compare the results to SCAQMD's CEQA regional pollutant emissions significance thresholds to determine air quality impacts. SCAQMD's CEQA regional pollutant emissions significance thresholds can be found here: http://www.aqmd.gov/docs/default-source/ceqa/handbook/scaqmd-air-quality-significance-thresholds.pdf. In addition to analyzing regional air quality impacts, SCAQMD staff recommends calculating localized air quality impacts and comparing the results to localized significance thresholds (LSTs). LSTs can be used in addition to the recommended regional significance thresholds as a second indication of air quality impacts when preparing a CEQA document. Therefore, when preparing the air quality analysis for the Proposed Project, it is recommended that the Lead Agency perform a localized analysis by either using the LSTs developed by SCAQMD staff or performing dispersion modeling as necessary. Guidance for performing a localized air quality analysis can be found at: http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook/localized-significance-thresholds.

The Lead Agency should identify any potential adverse air quality impacts that could occur from all phases of the Proposed Project and all air pollutant sources related to the Proposed Project. Air quality impacts from both construction (including demolition, if any) and operations should be calculated. Construction-related air quality impacts typically include, but are not limited to, emissions from the use of heavy-duty equipment from grading, earth-loading/unloading, paving, architectural coatings, off-road mobile sources (e.g., heavy-duty construction equipment) and on-road mobile sources (e.g., construction worker vehicle trips, material transport trips). Operation-related air quality impacts may include, but are not limited to, emissions from stationary sources (e.g., boilers), area sources (e.g., solvents and coatings), and vehicular trips (e.g., on- and off-road tailpipe emissions and entrained dust). Air quality impacts from indirect sources, such as sources that generate or attract vehicular trips, should be included in the analysis.

In the event that the Proposed Project generates or attracts vehicular trips, especially heavy-duty diesel-fueled vehicles, it is recommended that the Lead Agency perform a mobile source health risk assessment. Guidance for performing a mobile source health risk assessment ("*Health Risk Assessment Guidance for Analyzing Cancer Risk from Mobile Source Diesel Idling Emissions for CEQA Air Quality Analysis*") can be found at: http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook/mobile-source-toxics-analysis. An analysis of all toxic air contaminant impacts due to the use of equipment potentially generating such air pollutants should also be included.

In addition, guidance on siting incompatible land uses (such as placing homes near freeways) can be found in the California Air Resources Board's *Air Quality and Land Use Handbook: A Community Health Perspective*, which can be found at: http://www.arb.ca.gov/ch/handbook.pdf. CARB's Land Use Handbook is a general reference guide for evaluating and reducing air pollution impacts associated with new projects that go through the land use decision-making process. Guidance[3] on strategies to reduce air pollution exposure near high-volume roadways can be found at: https://www.arb.ca.gov/ch/rd_technical_advisory_final.PDF.

SCAQMD Staff's Recommendation for Truck Trip Rates for High Cube Warehouse Projects

The Proposed Project will include, among others, construction of a 55,000-square-foot warehouse. SCAQMD staff recommends the use of truck trip rates from the Institute of Transportation Engineers

[3] In April 2017, CARB published a technical advisory, *Strategies to Reduce Air Pollution Exposure Near High-Volume Roadways: Technical Advisory*, to supplement CARB's Air Quality and Land Use Handbook: A Community Health Perspective. This technical advisory is intended to provide information on strategies to reduce exposures to traffic emissions near high-volume roadways to assist land use planning and decision-making in order to protect public health and promote equity and environmental justice. The technical advisory is available at: https://www.arb.ca.gov/ch/landuse.htm.

(ITE) for high cube warehouse projects located in SCAQMD (i.e. 1.68 average daily vehicle trips per 1,000 square feet and 0.64 average daily truck trips per 1,000 square feet). Consistent with CEQA Guidelines, the Draft EIR for the Proposed Project may use a non-default trip rate if there is substantial evidence supporting another rate is more appropriate for the air quality analysis.

Mitigation Measures

In the event that the Proposed Project generates significant adverse air quality impacts, CEQA requires that all feasible mitigation measures that go beyond what is required by law be utilized during project construction and operation to minimize these impacts. Pursuant to CEQA Guidelines Section 15126.4 (a)(1)(D), any impacts resulting from mitigation measures must also be discussed. Several resources are available to assist the Lead Agency with identifying potential mitigation measures for the Proposed Project, including:

- Chapter 11 "Mitigating the Impact of a Project" of SCAQMD'S *CEQA Air Quality Handbook.* SCAQMD's CEQA web pages available here: http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook/mitigation-measures-and-control-efficiencies
- SCAQMD's Rule 403 – Fugitive Dust, and the Implementation Handbook for controlling construction-related emissions and Rule 1403 – Asbestos Emissions from Demolition/Renovation Activities
- SCAQMD's Mitigation Monitoring and Reporting Plan (MMRP) for the 2016 Air Quality Management Plan (2016 AQMP) available here (starting on page 86): http://www.aqmd.gov/docs/default-source/Agendas/Governing-Board/2017/2017-mar3-035.pdf
- CAPCOA's *Quantifying Greenhouse Gas Mitigation Measures* available here: http://www.capcoa.org/wp-content/uploads/2010/11/CAPCOA-Quantification-Report-9-14-Final.pdf

Additional mitigation measures for operational air quality impacts from mobile sources that the Lead Agency should consider in the Draft EIR may include the following:

- Require zero-emissions or near-zero emission on-road haul trucks such as heavy-duty trucks with natural gas engines that meet the CARB's adopted optional NOx emissions standard at 0.02 grams per brake horsepower-hour (g/bhp-hr), if and when feasible. At a minimum, require that vendors, contractors, and/or haul truck operators commit to using 2010 model year trucks (e.g., material delivery trucks and soil import/export) that meet CARB's 2010 engine emissions standards at 0.01 g/bhp-hr of particulate matter (PM) and 0.20 g/bhp-hr of NOx emissions or newer, cleaner trucks[4]. The Lead Agency should include this requirement in applicable bid documents, purchase orders, and contracts. Operators shall maintain records of all trucks associated with project construction to document that each truck used meets these emission standards, and make the records available for inspection. The Lead Agency should conduct regular inspections to the maximum extent feasible to ensure compliance.
- Have truck routes clearly marked with trailblazer signs, so that trucks will not enter residential areas.
- Limit the daily number of trucks allowed at the Proposed Project to levels analyzed in the Final CEQA document. If higher daily truck volumes are anticipated to visit the site, the Lead Agency should commit to re-evaluating the Proposed Project through CEQA prior to allowing this land use or higher activity level.

[4] Based on a review of the California Air Resources Board's diesel truck regulations, 2010 model year diesel haul trucks should have already been available and can be obtained in a successful manner for the project construction California Air Resources Board. March 2016. Available at: http://www.truckload.org/tca/files/ccLibraryFiles/Filename/000000003422/California-Clean-Truck-and-Trailer-Update.pdf (See slide #23).

- Provide electric vehicle (EV) Charging Stations (see the discussion below regarding EV charging stations).
- Should the Proposed Project generate significant regional emissions, the Lead Agency should require mitigation that requires accelerated phase-in for non-diesel powered trucks. For example, natural gas trucks, including Class 8 HHD trucks, are commercially available today. Natural gas trucks can provide a substantial reduction in health risks, and may be more financially feasible today due to reduced fuel costs compared to diesel. In the Final CEQA document, the Lead Agency should require a phase-in schedule for these cleaner operating trucks to reduce any significant adverse air quality impacts. SCAQMD staff is available to discuss the availability of current and upcoming truck technologies and incentive programs with the Lead Agency.
- Trucks that can operate at least partially on electricity have the ability to substantially reduce the significant NOx impacts from this project. Further, trucks that run at least partially on electricity are projected to become available during the life of the project as discussed in the 2016-2040 Regional Transportation Plan/Sustainable Communities Strategy (2016-2040 RTP/SCS)[5]. It is important to make this electrical infrastructure available when the project is built so that it is ready when this technology becomes commercially available. The cost of installing electrical charging equipment onsite is significantly cheaper if completed when the project is built compared to retrofitting an existing building. Therefore, SCAQMD staff recommends the Lead Agency require the Proposed Project and other plan areas that allow truck parking to be constructed with the appropriate infrastructure to facilitate sufficient electric charging for trucks to plug-in. Similar to the City of Los Angeles requirements for all new projects, SCAQMD staff recommends that the Lead Agency require at least 5% of all vehicle parking spaces (including for trucks) include EV charging stations[6]. Further, electrical hookups should be provided at the onsite truck stop for truckers to plug in any onboard auxiliary equipment. At a minimum, electrical panels should be appropriately sized to allow for future expanded use.
- Design the Proposed Project such that entrances and exits are such that trucks are not traversing past neighbors or other sensitive receptors.
- Design the Proposed Project such that any check-in point for trucks is well inside the Proposed Project site to ensure that there are no trucks queuing outside of the facility.
- Design the Proposed Project to ensure that truck traffic within the Proposed Project site is located away from the property line(s) closest to its residential or sensitive receptor neighbors.
- Restrict overnight parking in residential areas.
- Establish overnight parking within the Proposed Project where trucks can rest overnight.
- Establish area(s) within the Proposed Project site for repair needs.
- Develop, adopt and enforce truck routes both in and out of city, and in and out of facilities.
- Create a buffer zone of at least 300 meters (roughly 1,000 feet), which can be office space, employee parking, greenbelt, etc. between the Proposed Project and sensitive receptors.

Additional mitigation measures for operational air quality impacts from other area sources that the Lead Agency should consider in the Draft EIR may include the following:

- Maximize use of solar energy including solar panels; installing the maximum possible number of solar energy arrays on the building roofs and/or on the project site to generate solar energy for the facility.
- Maximize the planting of trees in landscaping and parking lots.

[5] Southern California Association of Governments. Accessed at: http://scagrtpscs.net/Pages/FINAL2016RTPSCS.aspx.
[6] City of Los Angeles. Accessed at: http://ladbs.org/LADBSWeb/LADBS_Forms/Publications/LAGreenBuildingCodeOrdinance.pdf.

- Use light colored paving and roofing materials.
- Utilize only Energy Star heating, cooling, and lighting devices, and appliances.
- Require use of electric or alternatively fueled sweepers with HEPA filters.
- Use of water-based or low VOC cleaning products that go beyond the requirements of SCAQMD Rule 1113.

Alternatives

In the event that the Proposed Project generates significant adverse air quality impacts, CEQA requires the consideration and discussion of alternatives to the project or its location which are capable of avoiding or substantially lessening any of the significant effects of the project. The discussion of a reasonable range of potentially feasible alternatives, including a "no project" alternative, is intended to foster informed decision-making and public participation. Pursuant to CEQA Guidelines Section 15126.6(d), the Draft EIR shall include sufficient information about each alternative to allow meaningful evaluation, analysis, and comparison with the Proposed Project.

Permits and SCAQMD Rules

In the event that the Proposed Project requires a permit from SCAQMD, SCAQMD should be identified as a Responsible Agency for the Proposed Project in the Draft EIR. The assumptions in the air quality analysis in the Draft EIR will be the basis for permit conditions and limits. For more information on permits, please visit SCAQMD's webpage at: http://www.aqmd.gov/home/permits. Questions on permits can be directed to SCAQMD's Engineering and Permitting staff at (909) 396-3385.

Data Sources

SCAQMD rules and relevant air quality reports and data are available by calling SCAQMD's Public Information Center at (909) 396-2039. Much of the information available through the Public Information Center is also available at SCAQMD's webpage at: http://www.aqmd.gov.

SCAQMD staff is available to work with the Lead Agency to ensure that project air quality and health risk impacts are accurately evaluated and mitigated where feasible. If you have any questions regarding this letter, please contact me at lsun@aqmd.gov or (909) 396-3308.

Sincerely,

Lijin Sun

Lijin Sun, J.D.
Program Supervisor, CEQA IGR
Planning, Rule Development & Area Sources

LS
SBC190212-05
Control Number

CALIFORNIA
AIR RESOURCES BOARD

Mary D. Nichols, Chair
Jared Blumenfeld, CalEPA Secretary
Gavin Newsom, Governor

March 11, 2019

Mr. Aron Liang
Senior Planner
Land Use Services Department - Planning
385 North Arrowhead Avenue, First Floor
San Bernardino, California 92415

Dear Mr. Liang:

Thank you for providing the California Air Resources Board (CARB) with the opportunity to comment on the Notice of Preparation (NOP) for the Duke Realty Alabama and Palmetto Warehouse Project (Project) Draft Environmental Impact Report (DEIR), State Clearinghouse No. 2019029078. The Project will consist of the construction of a 1,192,671 square-foot, high-cube, non-refrigerated warehouse building on approximately 54.8 net acres located within an unincorporated area of San Bernardino County. The Project will be divided into 1,091,934 square feet for the warehouse; 50,737 square feet of mezzanine storage; and 50,000 square feet of office space. The warehouse will contain 161 loading dock doors and 339 trailer stall spaces.

CARB is currently engaged in statewide efforts to identify actions that minimize emissions and community health impacts from freight facilities, including warehouse/distribution facilities such as the proposed Project. The Project site is located within close proximity of existing warehouses and is approximately 4,000 feet southeast from the San Bernardino International Airport, which serves as both a passenger and cargo airport. Packinghouse Christian Academy, is located approximately 2,700 feet south of the Project site. The nearest residences to the Project site are approximately one mile east of the Project boundary. The operation of other warehouse/distribution centers within the vicinity of these sensitive receptors will increase air pollution impacts in the community. Freight facilities, such as warehouse/distribution facilities, can result in high daily volumes of heavy-duty diesel truck traffic and operation of onsite equipment (e.g., forklifts, generators, etc.) that emit toxic diesel emissions and contribute to regional pollution, as well as global climate change.

The State of California has recently placed additional emphasis on protecting local communities from the harmful effects of air pollution through the passage of Assembly Bill 617 (AB 617) (Garcia, Chapter 136, Statutes of 2017). AB 617 is a significant piece of air quality legislation that highlights the need for further emission reductions in communities with high exposure burdens, like those near the proposed Project.

The California Environmental Protection Agency (CalEPA) defines a disadvantaged community as a community that scores within the top 25 percent of the census tracts, as analyzed by the California Communities Environmental Health Screening Tool Version 3.0 (CalEnviroScreen). CalEnviroScreen uses a screening methodology to help identify California communities that are disproportionately burdened by multiple sources of pollution. The census tract containing the proposed Project is in the 99th percentile for Pollution Burden and is directly adjacent to a designated disadvantaged community, as defined by the CalEPA.

A preliminary air quality technical memorandum and health risk assessment (HRA) was prepared for the Project and is currently available for public review on the County of San Bernardino's website. Based on the modeling conducted, unmitigated emissions of volatile organic compounds (VOC) during Project construction and nitrogen oxides (NO_x) emissions generated during Project operation have the potential to exceed the South Coast Air Quality Management District's (SCAQMD) significance thresholds. Mitigation Measures AQ-1 through AQ-4 were recommended to reduce construction and operation criteria pollutant emissions to below SCAQMD's significance thresholds. These measures would require the applicant to utilize compliant VOC paint, cleaner trucks, electric onsite equipment, and electric plugs at all proposed loading docks to provide power to trucks equipped with either auxiliary power units (APU) or transport refrigeration units (TRU).

The lead agency should require additional mitigation to reduce the Project's construction and operational criteria pollutant emissions. The Project should utilize all existing and emerging zero-emission technologies that minimize diesel particulate matter (PM) and NO_x exposure to the neighboring community. To that end, the lead agency should apply the recommended mitigation measures for warehouses/distribution centers found in Attachment A of this comment letter.

Review of the Air Quality Technical Memorandum and Health Risk Assessment

CARB staff has reviewed the air quality technical memorandum and HRA (dated April 2018) and have the following comments:

1. Mitigation Measure AQ-2 would promote alternative fuels and help support clean truck fleets by requiring future tenants, within two years of signing a lease, to fund diesel truck replacement/retrofits for all trucks older than 2007 operating at the proposed warehouse through grant programs such as the Carl Moyer Program. This mitigation measure should be revised to require equipment operators or subcontractors to show proof of application for grant funding for diesel truck replacements/retrofits and designate a specific County department to

monitor the upgrade of the tenant's truck fleet to cleaner trucks. The applicant should also include contractual language in tenant lease agreements that requires all Class 8 trucks entering the project site be model year 2014 or later and also requires that all trucks meet CARB's lowest optional NO_x standard by 2022.

2. Mitigation Measure AQ-3 would require all onsite service equipment (i.e., yard hostlers and forklifts) be electric or powered by compressed natural gas. This mitigation measure should be revised to designate a specific county department to enforce the measure. The applicant should also include contractual language in tenant lease agreements that requires future tenants use all electric onsite equipment, as specified in Attachment A.

3. Mitigation Measure AQ-4 would require electrical hookups be installed at all onsite loading docks. The mitigation measure states that the County would verify the electrical hookups have been installed prior occupancy. The mitigation measure should be revised to specifically state which County department will monitor the implementation of this measure. Furthermore, Mitigation Measure AQ-4 should be revised to include the installation of electric plugs at the proposed trailer parking and staging spaces for both trucks and TRUs.

4. The air quality technical memorandum and HRA did not evaluate impacts associated with the operation of trucks or trailers with TRUs. Since the Project could include the operation of TRUs, the lead agency should have the air quality technical memorandum and HRA revised assuming a conservative percentage of the truck fleet serving the Project is equipped with TRUs.

5. The HRA should evaluate and present both the existing conditions baseline (current conditions) and a future conditions baseline (full build-out year, without the Project). In this situation, the Project site is located in a non-attainment area for several State and federal criteria pollutants and is near residential areas and existing sensitive receptors. Additionally, full build-out of the Project will not occur until 2020, when environmental conditions could be different from current conditions due to full implementation of existing regulations and policies. For these reasons, it is important to ensure that the public has a complete understanding of the environmental impacts of the Project, as compared to both existing conditions and future conditions.

6. The HRA did not evaluate health risks at sensitive receptors located downwind of the project site. For example, there are residences and a high school located downwind from the Project site that were not considered in the HRA. The HRA

should be revised to include health risk impacts at residences located near the intersection of Boulder Avenue/Greenspot Road and Texas Street/Domestic Avenue, as well as at Citrus Valley High School. The results of the HRA should be presented graphically with risk isopleths for both cancer and noncancer overlaid on a map.

7. According to the CalEEMod outputs, referenced in the air quality technical memorandum, the Project would result in 1,670 average daily trips, of which 3 percent would consist of light-duty trucks, 5 percent would consist of medium-heavy duty trucks and 12 percent would consist of heavy-duty trucks. Based on these estimates, the Project could result in approximately 341 average daily truck trips. CARB staff feel that this may be an underestimate. Based on evaluations of general industry practices, we would expect multiple visits to each loading dock in the course of a normal operating day. Since the Project would have 161 loading docks and 339 trailer parking spaces, CARB is concerned that the mobile emissions presented in the air quality technical memorandum are substantially underestimated and recommends the Project's averaged daily truck trip estimate be reevaluated.

CARB appreciates the opportunity to comment on the NOP for the proposed Project and is able to provide assistance on zero-emission technologies and emission reduction strategies, as needed. Please include CARB on your State Clearinghouse list of selected State agencies that will receive the DEIR as part of the comment period. If you have questions, please contact Stanley Armstrong, Air Pollution Specialist, at (916) 440-8242 or via email at stanley.armstrong@arb.ca.gov.

Sincerely,

Richard Boyd

Richard Boyd, Chief
Risk Reduction Branch
Transportation and Toxics Division

Attachment

cc: See next page.

cc: State Clearinghouse
P.O. Box 3044
Sacramento, California 95812

Lijin Sun
Program Supervisor-CEQA
South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, California 91765

Andrea Vidaurre
Center for Community Action and Environmental Justice
3840 Sunnyhill Drive
Jurupa Valley, California 92509

Carlo De La Cruz
Sierra Club
2101 Webster Street Suite 1300
Oakland, California 94612

ATTACHMENT A

Recommended Mitigation Measures for Warehouses/Distribution Centers

Construction

1. Ensure the cleanest possible construction practices and equipment is utilized. For off-road construction equipment, utilize those that meet Tier 4 emission standards where possible and Tier 3, at a minimum. Other practices include eliminating idling of diesel-powered equipment, requiring the use of zero and near-zero emission equipment and tools, and providing the necessary infrastructure (e.g. electric hookups), to support that equipment. In addition, require that all construction fleets be in compliance with all current air quality regulations. CARB staff is available to provide assistance in implementing this recommendation.
2. Implement, and plan accordingly for, the necessary infrastructure to support the zero and near-zero emission technology vehicles and equipment that will be operating onsite. This includes physical (e.g. needed footprint), energy, and fueling infrastructure for construction equipment, on-site vehicles and equipment, and medium-heavy and heavy-heavy duty trucks.

Operation

1. Include contractual language in tenant lease agreements that requires future tenants use the cleanest technologies available, including, but not limited to, zero-emission yard tractors, yard equipment, forklifts, and pallet jacks.
2. Provide necessary infrastructure to support zero-emission vehicles and equipment that will be operating onsite.
3. Include contractual language in tenant lease agreements that requires that all Class 8 trucks entering the project site be model year 2014 or later. Beginning in 2022, all trucks must also meet CARB's low lowest optional NOx standard.
4. Include contractual language in tenant lease agreements that includes tenants be in, and monitor compliance with, all current air quality regulations for on-road trucks including CARB's Heavy-Duty Greenhouse Gas Regulation, Periodic Smoke Inspection Program, and the Statewide Truck and Bus Regulation.
5. Include contractual language in tenant lease agreements that require tenants to provide sufficient plug-in capacity for TRUs at loading dock doors and staging areas.
6. Include contractual language in tenant lease agreements that limits onsite TRU diesel engine runtime to no longer than 15 minutes.

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SAN BERNARDINO COUNTY

Department of Public Works

- Flood Control
- Operations
- Solid Waste Management
- Surveyor
- Transportation

Kevin Blakeslee, P.E.
Director

Transmitted Via Email

March 11, 2019

County of San Bernardino
Land Use Services Department
Attn: Aron Liang, Senior Planner
385 N. Arrowhead Ave., First Floor
San Bernardino, CA. 92415-0187

File: 10(ENV)-4.01

RE: CEQA – NOTICE OF PREPARATION OF A DRAFT ENVIRONMENTAL IMPACT REPORT FOR LUSD FOR THE DUKE REALTY ALABAMA AND PALMETTO WAREHOUSE PROJECT

Dear Mr. Liang:

Thank you for allowing the San Bernardino County Department of Public Works the opportunity to comment on the above-referenced project. **We received this request on February 5, 2019** and pursuant to our review, the following comments are provided:

Permits/Operations Support Division (Melissa Walker, Chief, 909-387-7995):

1. Any road improvements will require a permit from County Transportation. Its necessity and any impacts associated with the construction should be addressed in the DEIR prior to certification.

Environmental Management Division (Jonathan Dillon, PWE III, Stormwater Program, 909-387-8119):

1. The project will disturb more than one acre of land and is within the Santa Ana River Watershed, the applicant will be required to obtain a WDID number in accordance with the General Construction Permit from the state as well as insure that a Water Quality Management Plan is prepared and implemented per NPDES permit R8-2010-0036.

We respectfully request to be included on the circulation list for all project notices, public reviews, or public hearings. In closing, I would like to thank you again for allowing the San Bernardino County Department of Public Works the opportunity to comment on the above-referenced project. Should you have any questions or need additional clarification, please contact the individuals who provided the specific comment, as listed above.

Sincerely,

Michael R. Perry
Supervising Planner
Environmental Management
MRP:PE:sr Email: Aron.liang@lus.sbcounty.gov

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March 11, 2019

Mr. Aron Liang, Senior Planner
County of San Bernardino, Land Use Services Department
385 North Arrowhead Avenue, First Floor
San Bernardino, California 92415
E-mail: aron.liang@lus.sbcounty.gov

RE: SCAG Comments on the Notice of Preparation of a Draft Environmental Impact Report for the Duke Realty Alabama and Palmetto Warehouse Project [SCAG NO. IGR9839]

Dear Mr. Liang,

Thank you for submitting the Notice of Preparation of a Draft Environmental Impact Report for the Duke Realty Alabama and Palmetto Warehouse Project ("proposed project") to the Southern California Association of Governments (SCAG) for review and comment. SCAG is the authorized regional agency for Inter-Governmental Review (IGR) of programs proposed for Federal financial assistance and direct Federal development activities, pursuant to Presidential Executive Order 12372. Additionally, SCAG reviews the Environmental Impact Reports of projects of regional significance for consistency with regional plans pursuant to the California Environmental Quality Act (CEQA) and CEQA Guidelines.

SCAG is also the designated Regional Transportation Planning Agency under state law, and is responsible for preparation of the Regional Transportation Plan (RTP) including the Sustainable Communities Strategy (SCS) pursuant to Senate Bill (SB) 375. As the clearinghouse for regionally significant projects per Executive Order 12372, SCAG reviews the consistency of local plans, projects, and programs with regional plans.[1] SCAG's feedback is intended to assist local jurisdictions and project proponents to implement projects that have the potential to contribute to attainment of Regional Transportation Plan/Sustainable Community Strategies (RTP/SCS) goals and align with RTP/SCS policies.

SCAG staff has reviewed the Notice of Preparation of a Draft Environmental Impact Report for the Duke Realty Alabama and Palmetto Warehouse Project in San Bernardino County. The proposed project includes the development of a 1,192,671 square foot high-cube, non-refrigerated warehouse on a 54.8 net acre site.

When available, please send environmental documentation to *SCAG's Los Angeles office in Los Angeles (900 Wilshire Boulevard, Ste. 1700, Los Angeles, California 90017) or by email to au@scag.ca.gov* providing, at a minimum, the full public comment period for review.

If you have any questions regarding the attached comments, please contact the Inter-Governmental Review (IGR) Program, attn.: Anita Au, Associate Regional Planner, at (213) 236-1874 or au@scag.ca.gov. Thank you.

Sincerely,

Ping Chang
Manager, Compliance and Performance Monitoring

[1] Lead agencies such as local jurisdictions have the sole discretion in determining a local project's consistency with the 2016 RTP/SCS for the purpose of determining consistency for CEQA. Any "consistency" finding by SCAG pursuant to the IGR process should not be construed as a determination of consistency with the 2016 RTP/SCS for CEQA.

COMMENTS ON THE NOTICE OF PREPARATION OF A DRAFT ENVIRONMENTAL IMPACT REPORT FOR THE DUKE REALTY ALABAMA AND PALMETTO WAREHOUSE PROJECT [SCAG NO. IGR9839]

CONSISTENCY WITH RTP/SCS

SCAG reviews environmental documents for regionally significant projects for their consistency with the adopted RTP/SCS. For the purpose of determining consistency with CEQA, lead agencies such as local jurisdictions have the sole discretion in determining a local project's consistency with the RTP/SCS.

2016 RTP/SCS GOALS

The SCAG Regional Council adopted the 2016 RTP/SCS in April 2016. The 2016 RTP/SCS seeks to improve mobility, promote sustainability, facilitate economic development and preserve the quality of life for the residents in the region. The long-range visioning plan balances future mobility and housing needs with goals for the environment, the regional economy, social equity and environmental justice, and public health (see http://scagrtpscs.net/Pages/FINAL2016RTPSCS.aspx). The goals included in the 2016 RTP/SCS may be pertinent to the proposed project. These goals are meant to provide guidance for considering the proposed project within the context of regional goals and policies. Among the relevant goals of the 2016 RTP/SCS are the following:

SCAG 2016 RTP/SCS GOALS	
RTP/SCS G1:	*Align the plan investments and policies with improving regional economic development and competitiveness*
RTP/SCS G2:	*Maximize mobility and accessibility for all people and goods in the region*
RTP/SCS G3:	*Ensure travel safety and reliability for all people and goods in the region*
RTP/SCS G4:	*Preserve and ensure a sustainable regional transportation system*
RTP/SCS G5:	*Maximize the productivity of our transportation system*
RTP/SCS G6:	*Protect the environment and health for our residents by improving air quality and encouraging active transportation (e.g., bicycling and walking)*
RTP/SCS G7:	*Actively encourage and create incentives for energy efficiency, where possible*
RTP/SCS G8:	*Encourage land use and growth patterns that facilitate transit and active transportation*
RTP/SCS G9:	*Maximize the security of the regional transportation system through improved system monitoring, rapid recovery planning, and coordination with other security agencies**
	**SCAG does not yet have an agreed-upon security performance measure.*

For ease of review, we encourage the use of a side-by-side comparison of SCAG goals with discussions of the consistency, non-consistency or non-applicability of the goals and supportive analysis in a table format. Suggested format is as follows:

SCAG 2016 RTP/SCS GOALS		
	Goal	Analysis
RTP/SCS G1:	*Align the plan investments and policies with improving regional economic development and competitiveness*	*Consistent: Statement as to why;* *Not-Consistent: Statement as to why;* *Or* *Not Applicable: Statement as to why;* *DEIR page number reference*
RTP/SCS G2:	*Maximize mobility and accessibility for all people and goods in the region*	*Consistent: Statement as to why;* *Not-Consistent: Statement as to why;* *Or* *Not Applicable: Statement as to why;* *DEIR page number reference*
etc.		etc.

2016 RTP/SCS STRATEGIES

To achieve the goals of the 2016 RTP/SCS, a wide range of land use and transportation strategies are included in the 2016 RTP/SCS. Technical appendances of the 2016 RTP/SCS provide additional supporting information in detail. To view the 2016 RTP/SCS, please visit: http://scagrtpscs.net/Pages/FINAL2016RTPSCS.aspx. The 2016 RTP/SCS builds upon the progress from the 2012 RTP/SCS and continues to focus on integrated, coordinated, and balanced planning for land use and transportation that the SCAG region strives toward a more sustainable region, while the region meets and exceeds in meeting all of applicable statutory requirements pertinent to the 2016 RTP/SCS. These strategies within the regional context are provided as guidance for lead agencies such as local jurisdictions when the proposed project is under consideration.

The 2016 RTP/SCS also identifies a goods movement system in the SCAG region and develops strategies to address expected growth trends and demands in goods movement. For further information on the goods movement strategies, please see the Goods Movement Appendix of the 2016 RTP/SCS (http://scagrtpscs.net/Documents/2016/final/f2016RTPSCS_GoodsMovement.pdf).

For further information on SCAG's long-range comprehensive plan for the goods movement system in Southern California, please see "On the Move, Southern California Delivers the Goods" (http://www.freightworks.org/DocumentLibrary/CRGMPIS_Summary_Report_Final.pdf). For further information industrial development and warehousing in Southern California, please see "Industrial Warehousing in the SCAG Region" (http://www.freightworks.org/DocumentLibrary/Industrial%20Warehousing%20Report%20-%20Revised%202018.pdf).

DEMOGRAPHICS AND GROWTH FORECASTS

Local input plays an important role in developing a reasonable growth forecast for the 2016 RTP/SCS. SCAG used a bottom-up local review and input process and engaged local jurisdictions in establishing the base geographic and socioeconomic projections including population, household and employment. At the time of this letter, the most recently adopted SCAG jurisdictional-level growth forecasts that were developed in accordance with the bottom-up local review and input process consist of the 2020, 2035, and 2040 population, households and employment forecasts. To view them, please visit http://www.scag.ca.gov/Documents/2016GrowthForecastByJurisdiction.pdf. The growth forecasts for the region and applicable jurisdictions are below.

	Adopted SCAG Region Wide Forecasts			Adopted San Bernardino County Forecasts		
	Year 2020	Year 2035	Year 2040	Year 2020	Year 2035	Year 2040
Population	19,663,000	22,091,000	22,138,800	2,197,400	2,637,400	2,731,300
Households	6,458,000	7,325,000	7,412,300	687,100	824,600	854,300
Employment	8,414,000	9,441,000	9,871,500	789,500	998,000	1,028,100

MITIGATION MEASURES

SCAG staff recommends that you review the Final Program Environmental Impact Report (Final PEIR) for the 2016 RTP/SCS for guidance, as appropriate. SCAG's Regional Council certified the Final PEIR and adopted the associated Findings of Fact and a Statement of Overriding Considerations (FOF/SOC) and Mitigation Monitoring and Reporting Program (MMRP) on April 7, 2016 (please see: http://scagrtpscs.net/Pages/FINAL2016PEIR.aspx). The Final PEIR includes a list of project-level performance standards-based mitigation measures that may be considered for adoption and implementation by lead, responsible, or trustee agencies in the region, as applicable and feasible. Project-level mitigation measures are within responsibility, authority, and/or jurisdiction of project-implementing agency or other public agency serving as lead agency under CEQA in subsequent project- and site- specific design, CEQA review, and decision-making processes, to meet the performance standards for each of the CEQA resource categories.

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ALBERT A. WEBB ASSOCIATES

Technical Memorandum

To: Adam Schmid, Duke Realty

From: Eliza Laws, Senior Environmental Analyst
Noemi Avila, Assistant Environmental Analyst

Date: April 11, 2018

Re: Air Quality Analysis for the Duke Warehouse at Palmetto Avenue and Alabama Street Project, County of San Bernardino

The following air quality assessment was prepared to evaluate whether the expected criteria air pollutant emissions generated as a result of construction and operation of the proposed Project would cause exceedances of the South Coast Air Quality Management District's (SCAQMD) thresholds for air quality in the Project area. This assessment was conducted within the context of the California Environmental Quality Act (CEQA, California Public Resources Code Sections 21000 et seq.). The methodology follows the *CEQA Air Quality Handbook* prepared by the SCAQMD for quantification of emissions and evaluation of potential impacts to air resources. As recommended by SCAQMD staff, the **Cal**ifornia **E**missions **E**stimator **Mod**el® version 2016.3.2 (CalEEMod) was used to quantify Project-related emissions.

The Project proposes development of an approximate 1,192,671 square-foot high-cube, non-refrigerated warehouse building on approximately 54.76 net acres on the northwestern corner of Alabama Street and Palmetto Avenue, in unincorporated San Bernardino County, California. The Project will include approximately 831,784 square feet of asphalt paving in the parking area and 360,887 square feet of landscaping. The Project's sewer, water, and storm water drainage lines will connect to existing lines along the frontage of the Project within Alabama Street and Palmetto Avenue. The Project will also construct off-site road improvements consisting of partial width improvements to the ultimate cross-section (an additional 12 feet) of Alabama Street and Palmetto Avenue along the Project frontage.

▪ Regional Significance Thresholds

The thresholds contained in the *SCAQMD CEQA Air Quality Handbook*[1] (SCAQMD 1993) are considered regional thresholds and are shown in **Table 1 – SCAQMD CEQA Daily Regional Significance Thresholds**, below. These regional thresholds were developed based on the SCAQMD's treatment of a major stationary source.

[1] South Coast Air Quality Management District, *CEQA Air Quality Handbook*, November 1993. (Available at SCAQMD.)

Table 1 – SCAQMD CEQA Daily Regional Significance Thresholds

Emission Threshold	Units	VOC	NO_X	CO	SO_X	PM-10	PM-2.5
Construction	lbs/day	75	100	550	150	150	55
Operation[1]	lbs/day	55	55	550	150	150	55

Air quality impacts can be described in a short- and long-term perspective. Short-term impacts occur during site grading and Project construction and consist of fugitive dust and other particulate matter, as well as exhaust emissions generated by construction-related vehicles. Long-term air quality impacts occur once the Project is in operation.

The Project will be required to comply with existing SCAQMD rules for the reduction of fugitive dust emissions. SCAQMD Rule 403 establishes these procedures. Compliance with this rule is achieved through application of standard best management practices in construction and operation activities, such as application of water or chemical stabilizers to disturbed soils, managing haul road dust by application of water, covering haul vehicles, restricting vehicle speeds on unpaved roads to 15 mph, sweeping loose dirt from paved site access roadways, cessation of construction activity when winds exceed 25 mph and establishing a permanent, stabilizing ground cover on finished sites. In addition, projects that disturb 50 or more acres or more of soil or move 5,000 cubic yards of materials per day are required to submit a Fugitive Dust Control Plan or a Large Operation Notification Form to SCAQMD. Based on the size of this Project's site (54.76 acres), a Fugitive Dust Control Plan or a Large Operation Notification Form would be required.

Short-Term Analysis

Short-term emissions from Project construction were evaluated using the CalEEMod version 2016.3.2 program. The estimated construction period for the proposed Project is approximately 14 months, beginning no sooner than August 2019. The default parameters within CalEEMod were used and these default values reflect a worst-case scenario, which means that Project emissions are expected to be equal to or less than the estimated emissions. In addition to the default values used, assumptions relevant to model inputs for short-term construction emission estimates used are:

- Construction is anticipated to begin in August 2019 with grading and end with architectural coatings (painting):

Construction Activity	Start Date	End Date	Total Working Days
Grading	August 1, 2019	September 25, 2019	40 days
Building Construction	September 26, 2019	August 26, 2020	240 days
Paving	June 18, 2020	August 26, 2020	50 days
Architectural Coatings	August 1, 2020	September 11, 2020	30 days

- The equipment to be used for each activity is shown below and is based on CalEEMod defaults with the exception of paving and grading. Default paving equipment was reduced to one piece of each type of equipment due to the limited amount of asphalt proposed. Three additional scrapers were analyzed in the grading phase, based on applicant input. Each piece of equipment is assumed to operate 8 hours per day:

Construction Activity	Off-Road Equipment	Unit Amount
Grading	Excavators	2
	Graders	1
	Rubber Tired Dozers	1
	Scrapers	5
	Tractors/Loaders/Backhoes	2

Building Construction	Cranes	1
	Forklifts	3
	Generator Sets	1
	Tractors/Loaders/Backhoes	3
	Welders	1
Paving	Pavers	1
	Paving Equipment	1
	Rollers	1
Architectural Coatings	Air Compressors	1

- To evaluate Project compliance with SCAQMD Rule 403 for fugitive dust control, the Project utilized the mitigation option of watering the Project site three times daily which achieves a control efficiency of 61 percent for PM-10 and PM-2.5 emissions. Two (2) one-way vendor trips were added to the grading and paving activities to account for water truck trips.

- Off-site infrastructure improvements will also be required. Off-site improvements will include half-width buildout of Alabama Street and Palmetto Avenue (additional 12 feet) along the Project frontage. Sewer, water, and storm water drainage lines will connect to existing lines within adjacent streets.

The results of this analysis are summarized below.

Table 2 – Unmitigated Estimated Maximum Daily Construction Emissions

Activity	Peak Daily Emissions (lb/day)					
	VOC	NO_X	CO	SO_2	PM-10	PM-2.5
SCAQMD Daily Construction Thresholds	**75**	**100**	**550**	**150**	**150**	**55**
Grading-2019	8.11	**93.61**	59.00	0.11	9.42	5.28
Building Construction-2019	10.11	72.93	78.95	0.26	15.81	5.43
Building Construction-2020	**9.15**	66.57	**72.45**	**0.25**	**15.53**	**5.17**
Paving-2020	**1.80**	7.27	**7.73**	**0.01**	**0.48**	**0.38**
Architectural Coatings-2020	**381.61**	3.00	**11.71**	**0.03**	**2.47**	**0.77**
Maximum[1]	**392.57**	**93.61**	**91.89**	**0.29**	**18.48**	**6.32**
Exceeds Threshold?	**Yes**	**No**	**No**	**No**	**No**	**No**

Note: [1] Maximum emissions are the greater of grading alone in 2019, or the greater of the sum of building construction, paving and architectural coating in 2020 since these activities overlap. Maximum emissions are shown in bold.

As shown in the table above, the emissions from construction of the Project are below the SCAQMD daily construction thresholds for all the criteria pollutants, except VOC resulting from architectural coatings (painting). Please see the subheading "Recommended Mitigation Measures" for mitigation that reduces the Project's construction emissions.

Long-Term Analysis

Long-term emissions are evaluated at build-out of a project. The Project is assumed to be operational in 2020. Mobile source emissions refer to on-road motor vehicle emissions generated from the Project's traffic and are based on the Project-specific Traffic Impact Analysis (TIA).[2] An average truck trip length of approximately 77 miles was assumed, which is the distance to the Ports of Los Angeles/Long Beach.

[2] Albert A. Webb Associates, *Traffic Impact Analysis (TIA) Duke Realty- Alabama Street and Palmetto Avenue High Cube Warehouse,* April 2018.

On-site service equipment (i.e., forklifts) are assumed to be electric and therefore do not have any direct emissions of criteria pollutants.

Area source emissions from the Project include stationary combustion emissions of natural gas used for space and water heating (shown in a separate row as energy), yard and landscape maintenance, and an average building square footage to be repainted each year. CalEEMod computes area source emissions based upon default factors and land use assumptions. CalEEMod defaults were used and reflect the 2016 Title 24 standards. Separate emissions were computed for both the summer and winter.

Table 3 – Unmitigated Estimated Daily Project Operation Emissions (Summer)

Source	Peak Daily Emissions (lb/day)					
	VOC	NO_X	CO	SO_2	PM-10	PM-2.5
SCAQMD Daily Thresholds	**55**	**55**	**550**	**150**	**150**	**55**
Area	27.21	0.00	0.25	0.00	0.00	0.00
Energy	0.07	0.65	0.55	0.00	0.05	0.05
Mobile	7.42	88.74	117.28	0.58	38.91	10.95
Total	**34.70**	**89.40**	**118.08**	**0.58**	**38.96**	**11.00**
Exceeds Threshold?	**No**	**Yes**	**No**	**No**	**No**	**No**

Note: Emissions reported as zero are rounded and not necessarily equal to zero.

Table 4 – Unmitigated Estimated Daily Project Operation Emissions (Winter)

Source	Peak Daily Emissions (lb/day)					
	VOC	NO_X	CO	SO_2	PM-10	PM-2.5
SCAQMD Daily Thresholds	**55**	**55**	**550**	**150**	**150**	**55**
Area	27.21	0.00	0.25	0.00	0.00	0.00
Energy	0.07	0.65	0.55	0.00	0.05	0.05
Mobile	6.88	90.74	100.51	0.54	38.91	10.95
Total	**34.16**	**91.40**	**101.31**	**0.55**	**38.96**	**11.00**
Exceeds Threshold?	**No**	**Yes**	**No**	**No**	**No**	**No**

Note: Emissions reported as zero are rounded and not necessarily equal to zero.

Evaluation of the data presented on the above tables indicates that criteria pollutant emissions from operation of this Project will exceed the SCAQMD regional daily thresholds for NO_X during summer and winter. Please see the subheading "Recommended Mitigation Measures" for mitigation that reduces the Project's NO_X emissions.

▪ Localized Significance Threshold Analysis

Background

As part of the SCAQMD's environmental justice program, attention has been focused on localized effects of air quality. Staff at SCAQMD has developed localized significance threshold (LST) methodology[3] that can be used by public agencies to determine whether or not a project may generate significant adverse localized air quality impacts (both short- and long-term). LSTs represent the maximum emissions from a project that will not cause or contribute to an exceedance of the state ambient air quality standard, and are developed based on the ambient concentrations of that pollutant for each source receptor area (SRA). The Project is located close to the borderline of SRA-34 and SRA-35. SRA-34 was used because it provides the most conservative thresholds.

[3] South Coast Air Quality Management District, *Final Localized Significance Threshold Methodology*, Revised July 2008. (Available at http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook/localized-significance-thresholds, accessed April 2018.)

Short-Term Analysis

According to the LST methodology, only on-site emissions need to be analyzed. Emissions associated with vendor and worker trips are mobile source emissions that occur off site. The emissions analyzed under the LST methodology are NO_2, CO, PM-10, and PM-2.5. SCAQMD has provided LST lookup tables[4] to allow users to readily determine if the daily emissions for proposed construction or operational activities could result in significant localized air quality impacts for projects five acres or smaller. Although the Project site disturbs almost 54.76 acres, it is anticipated that an area of approximately seven acres would be disturbed per day during construction.[5] Although the Project exceeds five acres per day disturbance, per SCAQMD, the LST threshold and tables can be used as a screening tool to determine if dispersion modeling would be necessary. Therefore, the Project's on-site emissions from CalEEMod and LST Look-Up Tables for the 5-acre site were utilized as a screening-level analysis. If the Project emissions do not exceed the screening thresholds for five acres, a more detailed analysis is not required.

The LST thresholds are estimated using the maximum daily disturbed area (in acres) and the distance of the Project to the nearest sensitive receptors (in meters). The closest sensitive receptors to the Project site is the existing Packinghouse Christian Academy on the southwest corner of San Bernardino Avenue and Alabama Street, approximately 810 meters (2,657 feet) south of the Project site. The applicable receptor distance on the LST look-up tables is 500 meters, which provides a conservative analysis. The results are summarized below.

Table 5 – Unmitigated LST Results for Daily Construction Emissions

Source	Peak Daily Emissions (lb/day)			
	NO_X	CO	PM-10	PM-2.5
LST Threshold for 5-acre at 500 meters	**778**	**27,680**	**229**	**120**
Grading	**93.26**	**57.56**	**9.09**	**5.19**
Building Construction 2019	22.71	18.31	1.38	1.30
Building Construction 2020	20.65	17.97	1.19	1.12
Paving 2020	7.03	7.33	0.38	0.35
Architectural Coatings 2020	2.25	2.44	0.15	0.15
Maximum[1]	**93.26**	**57.56**	**9.09**	**5.19**
Exceeds Threshold?	**No**	**No**	**No**	**No**

Note: [1] Maximum emissions are the greater of either grading alone or building construction 2019, or building construction 2020, paving architectural coatings since these activities overlap. Maximum emissions are shown in bold.

Emissions from construction of the Project will be below the LST established by SCAQMD for the Project.

Long-Term Analysis

According to the LST methodology, LSTs only apply to the operational phase if a project includes stationary sources or attracts mobile sources that may spend long periods of time idling at the site, such as warehouse/transfer facilities. The proposed Project will operate as a logistics center and has the potential to attract mobile sources that can reasonably be assumed will idle at the site; therefore, a long-term LST analysis was prepared for this Project.

CalEEMod version 2016.3.2 was utilized to estimate the Project's emissions from cars and trucks traveling on the Project site. An on-site distance of 0.68 miles was conservatively assumed to be

[4] http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook/localized-significance-thresholds

[5] http://www.aqmd.gov/docs/default-source/ceqa/handbook/localized-significance-thresholds/caleemod-guidance.pdf?sfvrsn=2

traveled for each one of the Project's trips identified in the Traffic Impact Analysis. The output is attached to this memo and summarized below. Idling emissions from trucks at loading docks is not available in CalEEMod; therefore, PM-10 and PM-2.5 idling emissions were calculated separately to account for 15-minutes of on-site idling per truck per day.[6] The results were added to the total PM-10 and PM-2.5 emissions from CalEEMod and presented in the table below. The closest sensitive receptors to the Project site is the existing Packinghouse Christian Academy on the southwest corner of San Bernardino Avenue and Alabama Street, approximately 810 meters (2,657 feet) south of the Project site. Therefore, a receptor distance of 500 meters (1,640 feet) was used and provides a conservative analysis. The results are summarized below.

Table 6 – Unmitigated LST Results for Daily Operational Emissions

Source	Peak Daily Emissions (lb/day)			
	NO_x	CO	PM-10[1]	PM-2.5[1]
LST Threshold for 5-acre at 500 meters	**778**	**27,680**	**55**	**29**
On-Site Mobile	27.34	12.18	0.93	0.28
Exceeds Threshold?	**No**	**No**	**No**	**No**

Note: The greater of summer or winter emissions from CalEEMod is shown. Output attached herewith.

[1] CalEEMod output emissions added to idling emissions

Therefore, as indicated in the table above, Project-related long-term operational emissions will not exceed any SCAQMD operational LST.

CO Hot Spots Analysis

A carbon monoxide (CO) "hot spot" is a localized concentration of CO that is above the state or federal 1-hour or 8-hour ambient air quality standards (AAQS). Localized high levels of CO are associated with traffic congestion and idling or slow-moving vehicles.

Based on the information presented below, a CO "hot spot" analysis is not needed to determine whether the addition of Project related traffic will contribute to an exceedance of either the state or federal AAQS for CO emissions in the Project area.

The analysis prepared for CO attainment in the South Coast Air Basin by the SCAQMD can be used to assist in evaluating the potential for CO exceedances in the South Coast Air Basin. CO attainment was thoroughly analyzed as part of the SCAQMD's 2003 Air Quality Management Plan (2003 AQMP)[7] and the Revised 1992 Federal Attainment Plan for Carbon Monoxide (1992 CO Plan). [8] As discussed in the 1992 CO Plan, peak carbon monoxide concentrations in the South Coast Air Basin are due to unusual meteorological and topographical conditions, and not due to the impact of particular intersections (2003 AQMP Appendix V, p. V-4-32). Considering the region's unique meteorological conditions and the increasingly stringent CO emissions standards, CO modeling was performed as part of the 1992 CO Plan and subsequent plan updates and air quality management plans.

In the 1992 CO Plan, a CO hot spot analysis was conducted for four busy intersections in Los Angeles at the peak morning and afternoon time periods. The intersections evaluated included: Long Beach Blvd. and Imperial Highway (Lynwood); Wilshire Blvd. and Veteran Ave. (Westwood); Sunset Blvd. and Highland Ave. (Hollywood); and La Cienega Blvd. and Century Blvd. (Inglewood). These analyses did not predict a violation of CO standards. The busiest intersection evaluated in the 1992 CO Plan and

[6] Idling emission factors obtained from CalEEMod; idling calculations attached herewith.

[7] SCAQMD, *2003 Air Quality Management Plan, August 1, 2003.* (Available at http://www.aqmd.gov/home/air-quality/clean-air-plans/air-quality-mgt-plan/2003-aqmp, accessed April 2018.)

[8] SCAQMD, *Revision to the 1992 Carbon Monoxide Attainment Plan*, September 1994. (Available at SCAQMD.)

subsequent 2003 AQMP was that at Wilshire Blvd. and Veteran Ave., which has a daily traffic volume of approximately 100,000 vehicles per day (2003 AQMP Appendix V, Table 4-7). The Los Angeles County Metropolitan Transportation Authority (MTA)[9] evaluated the LOS in the vicinity of the Wilshire Blvd./Veteran Ave. intersection and found it to be level E at peak morning traffic and Level F at peak afternoon traffic (MTA, Exhibit 2-5 and 2-6). This hot spot analysis was conducted at intersections subject to extremes in vehicle volumes and vehicle congestion, and did not predict any violation of CO standards. Considering Project-related traffic as well as existing conditions, ambient growth, and cumulative project traffic, the highest average daily trips would be approximately 39,000 passenger car equivalents (PCE)[10] on Alabama Street between Lugonia Avenue and Interstate 10 (I-10) westbound ramps, which is lower than the values studied by SCAQMD.[11] Therefore, it can reasonably be concluded that Project-related traffic would not have daily traffic volumes exceeding those at the intersections modeled in the 2003 AQMP, nor would there be any reason unique to the meteorology to conclude that intersections affected by the Project would yield higher CO concentrations if modeled in detail. Thus, the Project would not result in CO hot spots.

▪ Recommended Mitigation Measures

The following mitigation measure is recommended to reduce VOC emissions from Project construction:

MM AQ 1: To reduce VOC emissions associated with architectural coating, the Project designer and contractor shall reduce the use of paints and solvents by utilizing pre-coated materials (e.g. bathroom stall dividers, metal awnings), materials that do not require painting, and require coatings and solvents with a VOC content lower than required under Rule 1113 to be utilized. The construction contractor shall be required to utilize "Super-Compliant" VOC paints, which are defined in SCAQMD's Rule 1113. Construction specifications shall be included in building specifications that assure these requirements are implemented. The specifications shall be reviewed by the County of San Bernardino's Building and Safety Division for compliance with this mitigation measure prior to issuance of the Project's building permit.

The following mitigation measures are recommended to reduce NO_X emissions from Project operation:

MM AQ 2: In order to promote alternative fuels, and help support "clean" truck fleets, the developer/successor-in-interest shall provide building occupants and businesses with information related to SCAQMD's Carl Moyer Program, or other state programs that restrict operations to "clean" trucks, such as 2007 or newer model year or 2010 compliant vehicles and information including, but not limited to, the health effect of diesel particulates, benefits of reduced idling time, CARB regulations, and importance of not parking in residential areas. If trucks older than 2007 model year will be used, the developer/successor-in-interest shall require, within one year of signing a lease, future tenants to apply in good-faith for funding for diesel truck replacement/retrofit through grant programs such as the Carl Moyer, Prop 1B, VIP, HVIP, and SOON funding programs, as identified on SCAQMD's website (http://www.aqmd.gov). Tenants will be required to use those funds, if awarded.

MM AQ 3: Service equipment (i.e., yard hostlers and forklifts) used within the site shall be electric or compressed natural gas-powered. Compliance with this mitigation measure shall be required prior to certificate of occupancy.

MM AQ 4: Although the Project does not include refrigerated warehouse space, trucks accessing the Project site may have auxiliary power units (APU) and/or transport refrigeration units (TRUs). Therefore, electrical hookups shall be installed at all loading docks to allow trucks with APU and/or TRUs with

[9] Metropolitan Transportation Authority, *2004 Congestion Management Plan for Los Angeles County*, Adopted July 22, 2004. (Available at http://www.metro.net/images/cmp_2004.pdf, accessed April 2018.)

[10] PCE is defined as the number of passenger cars that will result in the same operational conditions as a single heavy vehicle of a particular type.

[11] Albert A. Webb Associates Traffic Engineers.

electric standby capabilities to plug in when APU/TRUs are in use. The County shall verify electrical hookups have been installed prior to occupancy.

▪ Impacts after Mitigation

Implementation of mitigation measure **MM AQ 1** will reduce the Project's short-term construction-related emissions. **MM AQ 1** has quantitative reductions associated with it available in CalEEMod. The mitigated emissions are shown in **Table 7**, below, and indicate that VOC emissions from architectural coatings (painting) activities will be reduced below the SCAQMD thresholds.

Table 7 – Mitigated Estimated Daily Construction Emissions

Activity	Peak Daily Emissions (lb/day)					
	VOC	NO_X	CO	SO_2	PM-10	PM-2.5
SCAQMD Daily Construction Thresholds	**75**	**100**	**550**	**150**	**150**	**55**
Building Construction-2020[1]	9.15	66.57	72.45	0.25	15.53	5.17
Paving-2020[1]	1.80	7.27	7.73	0.01	0.48	0.38
Architectural Coatings-2020	49.93	3.00	11.71	0.03	2.47	0.77
Maximum[2]	**60.88**	**76.84**	**91.89**	**0.29**	**18.48**	**6.32**
Exceeds Threshold?	**No**	**No**	**No**	**No**	**No**	**No**

Notes: [1]Emissions shown are the Unmitigated Estimated Maximum Daily Construction Emissions from Table 2.
[2] Maximum emissions the sum of building construction, paving and architectural coating in 2020 since these activities overlap.

With implementation of **MM AQ 1**, VOC emissions associated with painting activities will be reduced below applicable thresholds.

Implementation of **MM AQ 2** through **4** will reduce operational emissions of NO_X from transportation emissions; however, they do not have quantitative reductions associated with them available in CalEEMod. Therefore, after implementation of mitigation measures, the operational emissions of NO_X exceed the SCAQMD threshold.

▪ Conclusion

The conclusion of this analysis indicates that construction of the proposed Project will not exceed criteria pollutant thresholds established by SCAQMD on a regional level after implementation of mitigation measures. The analysis also concludes that operation of the proposed Project will exceed criteria pollutant thresholds for NO_X established by SCAQMD on a regional level after implementation of mitigation measures. The Project's construction and operation will not exceed criteria pollutant thresholds established by SCAQMD on a localized level. In addition, the Project will not create a CO hot spot.

Should you have any questions, please contact me at (951) 686-1070.

CALEEMOD OUTPUT FILES

Duke Warehouse at Alabama and Palmetto

San Bernardino-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unrefrigerated Warehouse-No Rail	1,192.67	1000sqft	27.38	1,192,671.00	0
Other Asphalt Surfaces	893.68	1000sqft	20.52	893,684.00	0
Other Non-Asphalt Surfaces	360.89	1000sqft	8.28	360,887.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	32
Climate Zone	10			**Operational Year**	2020
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Duke Warehouse at Alabama and Palmetto - San Bernardino-South Coast County, Summer

Project Characteristics -

Land Use - Per Site Plan

Construction Phase - Per Applicant

Off-road Equipment - Per Applicant

Off-road Equipment - Per Applicant

Off-road Equipment - Per Applicant

Off-road Equipment - Per Applicant

Trips and VMT - Added Water Truck Trips

Architectural Coating -

Vehicle Trips - Per TIA

Energy Use -

Construction Off-road Equipment Mitigation - Per Rule 403

Water Mitigation -

Waste Mitigation -

Fleet Mix - Per TIA

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	75.00	30.00
tblConstructionPhase	NumDays	1,110.00	240.00
tblConstructionPhase	NumDays	110.00	40.00
tblConstructionPhase	NumDays	75.00	50.00
tblFleetMix	HHD	0.06	0.12
tblFleetMix	LDA	0.55	0.56
tblFleetMix	LDT1	0.04	0.04
tblFleetMix	LDT2	0.18	0.18
tblFleetMix	LHD1	0.02	0.00
tblFleetMix	LHD2	5.4600e-003	0.03

tblFleetMix	MCY	6.1170e-003	6.2900e-003
tblFleetMix	MDV	0.12	0.00
tblFleetMix	MH	1.0820e-003	1.1100e-003
tblFleetMix	MHD	0.02	0.05
tblFleetMix	OBUS	1.3370e-003	1.3700e-003
tblFleetMix	SBUS	8.1700e-004	8.4000e-004
tblFleetMix	UBUS	1.6570e-003	1.7000e-003
tblGrading	AcresOfGrading	220.00	275.00
tblLandUse	LandUseSquareFeet	1,192,670.00	1,192,671.00
tblLandUse	LandUseSquareFeet	893,680.00	893,684.00
tblLandUse	LandUseSquareFeet	360,890.00	360,887.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	5.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblVehicleTrips	CNW_TL	6.90	77.00
tblVehicleTrips	CNW_TTP	41.00	20.43
tblVehicleTrips	CW_TTP	59.00	79.57
tblVehicleTrips	DV_TP	5.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PR_TP	92.00	100.00
tblVehicleTrips	ST_TR	1.68	1.40

tblVehicleTrips	SU_TR	1.68	1.40
tblVehicleTrips	WD_TR	1.68	1.40

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2019	10.0447	93.6024	78.9470	0.2589	14.0590	3.9042	17.5430	4.1842	3.5919	7.7761						
2020	392.4988	76.8059	91.8800	0.2945	16.4638	2.0057	18.4695	4.4250	1.8870	6.3119						
Maximum	**392.4988**	**93.6024**	**91.8800**	**0.2945**	**16.4638**	**3.9042**	**18.4695**	**4.4250**	**3.5919**	**7.7761**						

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2019	10.0447	93.6024	78.9470	0.2589	14.0590	3.9042	15.8053	3.7869	3.5919	5.4302						
2020	392.4988	76.8059	91.8800	0.2945	16.4638	2.0057	18.4695	4.4250	1.8870	6.3119						
Maximum	**392.4988**	**93.6024**	**91.8800**	**0.2945**	**16.4638**	**3.9042**	**18.4695**	**4.4250**	**3.5919**	**6.3119**						

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**4.83**	**4.61**	**0.00**	**16.65**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	27.2076	2.3200e-003	0.2515	2.0000e-005		9.0000e-004	9.0000e-004		9.0000e-004	9.0000e-004						
Energy	0.0715	0.6503	0.5463	3.9000e-003		0.0494	0.0494		0.0494	0.0494						
Mobile	7.4175	88.7447	117.2841	0.5765	38.2367	0.6711	38.9077	10.3158	0.6363	10.9521						
Total	**34.6966**	**89.3973**	**118.0819**	**0.5805**	**38.2367**	**0.7214**	**38.9581**	**10.3158**	**0.6866**	**11.0024**						

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	27.2076	2.3200e-003	0.2515	2.0000e-005		9.0000e-004	9.0000e-004		9.0000e-004	9.0000e-004						
Energy	0.0715	0.6503	0.5463	3.9000e-003		0.0494	0.0494		0.0494	0.0494						
Mobile	7.4175	88.7447	117.2841	0.5765	38.2367	0.6711	38.9077	10.3158	0.6363	10.9521						
Total	**34.6966**	**89.3973**	**118.0819**	**0.5805**	**38.2367**	**0.7214**	**38.9581**	**10.3158**	**0.6866**	**11.0024**						

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading	Grading	8/1/2019	9/25/2019	5	40	
2	Building Construction	Building Construction	9/26/2019	8/26/2020	5	240	
3	Paving	Paving	6/18/2020	8/26/2020	5	50	
4	Architectural Coating	Architectural Coating	8/1/2020	9/11/2020	5	30	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 275

Acres of Paving: 28.8

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 1,789,007; Non-Residential Outdoor: 596,336; Striped Parking Area: 75,274 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	5	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	8.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	1	8.00	80	0.38
Architectural Coating	Air Compressors	1	8.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Grading	11	28.00	2.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	1,028.00	401.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	3	8.00	2.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	206.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Grading - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					13.3130	0.0000	13.3130	4.0975	0.0000	4.0975						
Off-Road	7.9347	93.2617	57.5611	0.1074		3.9006	3.9006		3.5886	3.5886						
Total	**7.9347**	**93.2617**	**57.5611**	**0.1074**	**13.3130**	**3.9006**	**17.2137**	**4.0975**	**3.5886**	**7.6861**						

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Vendor	7.1700e-003	0.2303	0.0468	5.5000e-004	0.0128	1.4400e-003	0.0143	3.6900e-003	1.3800e-003	5.0700e-003						
Worker	0.1660	0.1104	1.3957	3.2800e-003	0.3130	2.1000e-003	0.3151	0.0830	1.9400e-003	0.0849						
Total	**0.1732**	**0.3407**	**1.4426**	**3.8300e-003**	**0.3258**	**3.5400e-003**	**0.3293**	**0.0867**	**3.3200e-003**	**0.0900**						

3.2 Grading - 2019

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					5.1921	0.0000	5.1921	1.5980	0.0000	1.5980						
Off-Road	7.9347	93.2617	57.5611	0.1074		3.9006	3.9006		3.5886	3.5886						
Total	**7.9347**	**93.2617**	**57.5611**	**0.1074**	**5.1921**	**3.9006**	**9.0927**	**1.5980**	**3.5886**	**5.1866**						

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Vendor	7.1700e-003	0.2303	0.0468	5.5000e-004	0.0128	1.4400e-003	0.0143	3.6900e-003	1.3800e-003	5.0700e-003						
Worker	0.1660	0.1104	1.3957	3.2800e-003	0.3130	2.1000e-003	0.3151	0.0830	1.9400e-003	0.0849						
Total	**0.1732**	**0.3407**	**1.4426**	**3.8300e-003**	**0.3258**	**3.5400e-003**	**0.3293**	**0.0867**	**3.3200e-003**	**0.0900**						

3.3 Building Construction - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.5115	22.7062	18.3139	0.0288		1.3802	1.3802		1.2958	1.2958						
Total	**2.5115**	**22.7062**	**18.3139**	**0.0288**		**1.3802**	**1.3802**		**1.2958**	**1.2958**						

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Vendor	1.4383	46.1741	9.3894	0.1096	2.5684	0.2888	2.8572	0.7395	0.2763	1.0158						
Worker	6.0949	4.0540	51.2438	0.1205	11.4906	0.0773	11.5679	3.0474	0.0712	3.1185						
Total	**7.5332**	**50.2280**	**60.6331**	**0.2301**	**14.0590**	**0.3661**	**14.4251**	**3.7869**	**0.3474**	**4.1343**						

3.3 Building Construction - 2019

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.5115	22.7062	18.3139	0.0288		1.3802	1.3802		1.2958	1.2958						
Total	**2.5115**	**22.7062**	**18.3139**	**0.0288**		**1.3802**	**1.3802**		**1.2958**	**1.2958**						

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Vendor	1.4383	46.1741	9.3894	0.1096	2.5684	0.2888	2.8572	0.7395	0.2763	1.0158						
Worker	6.0949	4.0540	51.2438	0.1205	11.4906	0.0773	11.5679	3.0474	0.0712	3.1185						
Total	**7.5332**	**50.2280**	**60.6331**	**0.2301**	**14.0590**	**0.3661**	**14.4251**	**3.7869**	**0.3474**	**4.1343**						

3.3 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.2551	20.6494	17.9678	0.0288		1.1948	1.1948		1.1218	1.1218						
Total	**2.2551**	**20.6494**	**17.9678**	**0.0288**		**1.1948**	**1.1948**		**1.1218**	**1.1218**						

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Vendor	1.2173	42.3170	8.2471	0.1088	2.5683	0.1947	2.7631	0.7395	0.1863	0.9258						
Worker	5.6107	3.6009	46.2319	0.1167	11.4906	0.0753	11.5659	3.0474	0.0693	3.1167						
Total	**6.8280**	**45.9179**	**54.4790**	**0.2255**	**14.0590**	**0.2700**	**14.3290**	**3.7869**	**0.2556**	**4.0425**						

3.3 Building Construction - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.2551	20.6494	17.9678	0.0288		1.1948	1.1948		1.1218	1.1218						
Total	**2.2551**	**20.6494**	**17.9678**	**0.0288**		**1.1948**	**1.1948**		**1.1218**	**1.1218**						

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Vendor	1.2173	42.3170	8.2471	0.1088	2.5683	0.1947	2.7631	0.7395	0.1863	0.9258						
Worker	5.6107	3.6009	46.2319	0.1167	11.4906	0.0753	11.5659	3.0474	0.0693	3.1167						
Total	**6.8280**	**45.9179**	**54.4790**	**0.2255**	**14.0590**	**0.2700**	**14.3290**	**3.7869**	**0.2556**	**4.0425**						

3.4 Paving - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6783	7.0328	7.3260	0.0114		0.3764	0.3764		0.3463	0.3463						
Paving	1.0753					0.0000	0.0000		0.0000	0.0000						
Total	**1.7535**	**7.0328**	**7.3260**	**0.0114**		**0.3764**	**0.3764**		**0.3463**	**0.3463**						

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Vendor	6.0700e-003	0.2111	0.0411	5.4000e-004	0.0128	9.7000e-004	0.0138	3.6900e-003	9.3000e-004	4.6200e-003						
Worker	0.0437	0.0280	0.3598	9.1000e-004	0.0894	5.9000e-004	0.0900	0.0237	5.4000e-004	0.0243						
Total	**0.0497**	**0.2391**	**0.4009**	**1.4500e-003**	**0.1022**	**1.5600e-003**	**0.1038**	**0.0274**	**1.4700e-003**	**0.0289**						

3.4 Paving - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6783	7.0328	7.3260	0.0114		0.3764	0.3764		0.3463	0.3463						
Paving	1.0753					0.0000	0.0000		0.0000	0.0000						
Total	**1.7535**	**7.0328**	**7.3260**	**0.0114**		**0.3764**	**0.3764**		**0.3463**	**0.3463**						

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Vendor	6.0700e-003	0.2111	0.0411	5.4000e-004	0.0128	9.7000e-004	0.0138	3.6900e-003	9.3000e-004	4.6200e-003						
Worker	0.0437	0.0280	0.3598	9.1000e-004	0.0894	5.9000e-004	0.0900	0.0237	5.4000e-004	0.0243						
Total	**0.0497**	**0.2391**	**0.4009**	**1.4500e-003**	**0.1022**	**1.5600e-003**	**0.1038**	**0.0274**	**1.4700e-003**	**0.0289**						

3.5 Architectural Coating - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	380.1653					0.0000	0.0000		0.0000	0.0000						
Off-Road	0.3229	2.2451	2.4419	3.9600e-003		0.1479	0.1479		0.1479	0.1479						
Total	**380.4882**	**2.2451**	**2.4419**	**3.9600e-003**		**0.1479**	**0.1479**		**0.1479**	**0.1479**						

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	1.1243	0.7216	9.2644	0.0234	2.3026	0.0151	2.3177	0.6107	0.0139	0.6246						
Total	**1.1243**	**0.7216**	**9.2644**	**0.0234**	**2.3026**	**0.0151**	**2.3177**	**0.6107**	**0.0139**	**0.6246**						

3.5 Architectural Coating - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	380.1653					0.0000	0.0000		0.0000	0.0000						
Off-Road	0.3229	2.2451	2.4419	3.9600e-003		0.1479	0.1479		0.1479	0.1479						
Total	**380.4882**	**2.2451**	**2.4419**	**3.9600e-003**		**0.1479**	**0.1479**		**0.1479**	**0.1479**						

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	1.1243	0.7216	9.2644	0.0234	2.3026	0.0151	2.3177	0.6107	0.0139	0.6246						
Total	**1.1243**	**0.7216**	**9.2644**	**0.0234**	**2.3026**	**0.0151**	**2.3177**	**0.6107**	**0.0139**	**0.6246**						

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	7.4175	88.7447	117.2841	0.5765	38.2367	0.6711	38.9077	10.3158	0.6363	10.9521						
Unmitigated	7.4175	88.7447	117.2841	0.5765	38.2367	0.6711	38.9077	10.3158	0.6363	10.9521						

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	1,669.74	1,669.74	1669.74	17,589,117	17,589,117
Total	1,669.74	1,669.74	1,669.74	17,589,117	17,589,117

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Unrefrigerated Warehouse-No	16.60	8.40	77.00	79.57	0.00	20.43	100	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Asphalt Surfaces	0.546179	0.037976	0.179086	0.122965	0.018430	0.005460	0.017497	0.061396	0.001337	0.001657	0.006117	0.000817	0.001082
Other Non-Asphalt Surfaces	0.546179	0.037976	0.179086	0.122965	0.018430	0.005460	0.017497	0.061396	0.001337	0.001657	0.006117	0.000817	0.001082
Unrefrigerated Warehouse-No Rail	0.561300	0.039030	0.184050	0.000000	0.000000	0.034600	0.046400	0.123300	0.001370	0.001700	0.006290	0.000840	0.001110

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0715	0.6503	0.5463	3.9000e-003		0.0494	0.0494		0.0494	0.0494						
NaturalGas Unmitigated	0.0715	0.6503	0.5463	3.9000e-003		0.0494	0.0494		0.0494	0.0494						

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						
Unrefrigerated Warehouse-No Rail	6633.21	0.0715	0.6503	0.5463	3.9000e-003		0.0494	0.0494		0.0494	0.0494						
Total		**0.0715**	**0.6503**	**0.5463**	**3.9000e-003**		**0.0494**	**0.0494**		**0.0494**	**0.0494**						

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						
Unrefrigerated Warehouse-No Rail	6.63321	0.0715	0.6503	0.5463	3.9000e-003		0.0494	0.0494		0.0494	0.0494						
Total		**0.0715**	**0.6503**	**0.5463**	**3.9000e-003**		**0.0494**	**0.0494**		**0.0494**	**0.0494**						

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	27.2076	2.3200e-003	0.2515	2.0000e-005		9.0000e-004	9.0000e-004		9.0000e-004	9.0000e-004						
Unmitigated	27.2076	2.3200e-003	0.2515	2.0000e-005		9.0000e-004	9.0000e-004		9.0000e-004	9.0000e-004						

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	3.1246					0.0000	0.0000		0.0000	0.0000						
Consumer Products	24.0593					0.0000	0.0000		0.0000	0.0000						
Landscaping	0.0237	2.3200e-003	0.2515	2.0000e-005		9.0000e-004	9.0000e-004		9.0000e-004	9.0000e-004						
Total	**27.2076**	**2.3200e-003**	**0.2515**	**2.0000e-005**		**9.0000e-004**	**9.0000e-004**		**9.0000e-004**	**9.0000e-004**						

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	3.1246					0.0000	0.0000		0.0000	0.0000						
Consumer Products	24.0593					0.0000	0.0000		0.0000	0.0000						
Landscaping	0.0237	2.3200e-003	0.2515	2.0000e-005		9.0000e-004	9.0000e-004		9.0000e-004	9.0000e-004						
Total	**27.2076**	**2.3200e-003**	**0.2515**	**2.0000e-005**		**9.0000e-004**	**9.0000e-004**		**9.0000e-004**	**9.0000e-004**						

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Duke Warehouse at Alabama and Palmetto

San Bernardino-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unrefrigerated Warehouse-No Rail	1,192.67	1000sqft	27.38	1,192,671.00	0
Other Asphalt Surfaces	893.68	1000sqft	20.52	893,684.00	0
Other Non-Asphalt Surfaces	360.89	1000sqft	8.28	360,887.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	32
Climate Zone	10			**Operational Year**	2020
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Duke Warehouse at Alabama and Palmetto - San Bernardino-South Coast County, Winter

Project Characteristics -

Land Use - Per Site Plan

Construction Phase - Per Applicant

Off-road Equipment - Per Applicant

Off-road Equipment - Per Applicant

Off-road Equipment - Per Applicant

Off-road Equipment - Per Applicant

Trips and VMT - Added Water Truck Trips

Architectural Coating -

Vehicle Trips - Per TIA

Energy Use -

Construction Off-road Equipment Mitigation - Per Rule 403

Water Mitigation -

Waste Mitigation -

Fleet Mix - Per TIA

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	75.00	30.00
tblConstructionPhase	NumDays	1,110.00	240.00
tblConstructionPhase	NumDays	110.00	40.00
tblConstructionPhase	NumDays	75.00	50.00
tblFleetMix	HHD	0.06	0.12
tblFleetMix	LDA	0.55	0.56
tblFleetMix	LDT1	0.04	0.04
tblFleetMix	LDT2	0.18	0.18
tblFleetMix	LHD1	0.02	0.00
tblFleetMix	LHD2	5.4600e-003	0.03

tblFleetMix	MCY	6.1170e-003	6.2900e-003
tblFleetMix	MDV	0.12	0.00
tblFleetMix	MH	1.0820e-003	1.1100e-003
tblFleetMix	MHD	0.02	0.05
tblFleetMix	OBUS	1.3370e-003	1.3700e-003
tblFleetMix	SBUS	8.1700e-004	8.4000e-004
tblFleetMix	UBUS	1.6570e-003	1.7000e-003
tblGrading	AcresOfGrading	220.00	275.00
tblLandUse	LandUseSquareFeet	1,192,670.00	1,192,671.00
tblLandUse	LandUseSquareFeet	893,680.00	893,684.00
tblLandUse	LandUseSquareFeet	360,890.00	360,887.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	5.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblVehicleTrips	CNW_TL	6.90	77.00
tblVehicleTrips	CNW_TTP	41.00	20.43
tblVehicleTrips	CW_TTP	59.00	79.57
tblVehicleTrips	DV_TP	5.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PR_TP	92.00	100.00
tblVehicleTrips	ST_TR	1.68	1.40

tblVehicleTrips	SU_TR	1.68	1.40
tblVehicleTrips	WD_TR	1.68	1.40

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2019	10.1070	93.6069	71.3058	0.2422	14.0590	3.9042	17.5430	4.1842	3.5919	7.7761						
2020	392.5694	76.6882	83.2491	0.2757	16.4638	2.0082	18.4720	4.4250	1.8894	6.3143						
Maximum	**392.5694**	**93.6069**	**83.2491**	**0.2757**	**16.4638**	**3.9042**	**18.4720**	**4.4250**	**3.5919**	**7.7761**						

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2019	10.1070	93.6069	71.3058	0.2422	14.0590	3.9042	15.8091	3.7869	3.5919	5.4338						
2020	392.5694	76.6882	83.2491	0.2757	16.4638	2.0082	18.4720	4.4250	1.8894	6.3143						
Maximum	**392.5694**	**93.6069**	**83.2491**	**0.2757**	**16.4638**	**3.9042**	**18.4720**	**4.4250**	**3.5919**	**6.3143**						

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**4.81**	**4.61**	**0.00**	**16.62**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	27.2076	2.3200e-003	0.2515	2.0000e-005		9.0000e-004	9.0000e-004		9.0000e-004	9.0000e-004						
Energy	0.0715	0.6503	0.5463	3.9000e-003		0.0494	0.0494		0.0494	0.0494						
Mobile	6.8816	90.7440	100.5114	0.5432	38.2367	0.6733	38.9100	10.3158	0.6385	10.9543						
Total	**34.1607**	**91.3967**	**101.3091**	**0.5471**	**38.2367**	**0.7236**	**38.9603**	**10.3158**	**0.6888**	**11.0046**						

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	27.2076	2.3200e-003	0.2515	2.0000e-005		9.0000e-004	9.0000e-004		9.0000e-004	9.0000e-004						
Energy	0.0715	0.6503	0.5463	3.9000e-003		0.0494	0.0494		0.0494	0.0494						
Mobile	6.8816	90.7440	100.5114	0.5432	38.2367	0.6733	38.9100	10.3158	0.6385	10.9543						
Total	**34.1607**	**91.3967**	**101.3091**	**0.5471**	**38.2367**	**0.7236**	**38.9603**	**10.3158**	**0.6888**	**11.0046**						

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading	Grading	8/1/2019	9/25/2019	5	40	
2	Building Construction	Building Construction	9/26/2019	8/26/2020	5	240	
3	Paving	Paving	6/18/2020	8/26/2020	5	50	
4	Architectural Coating	Architectural Coating	8/1/2020	9/11/2020	5	30	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 275

Acres of Paving: 28.8

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 1,789,007; Non-Residential Outdoor: 596,336; Striped Parking Area: 75,274 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	5	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	8.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	1	8.00	80	0.38
Architectural Coating	Air Compressors	1	8.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Grading	11	28.00	2.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	1,028.00	401.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	3	8.00	2.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	206.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Grading - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					13.3130	0.0000	13.3130	4.0975	0.0000	4.0975						
Off-Road	7.9347	93.2617	57.5611	0.1074		3.9006	3.9006		3.5886	3.5886						
Total	**7.9347**	**93.2617**	**57.5611**	**0.1074**	**13.3130**	**3.9006**	**17.2137**	**4.0975**	**3.5886**	**7.6861**						

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Vendor	7.5300e-003	0.2290	0.0539	5.3000e-004	0.0128	1.4600e-003	0.0143	3.6900e-003	1.4000e-003	5.0800e-003						
Worker	0.1658	0.1163	1.1493	2.9400e-003	0.3130	2.1000e-003	0.3151	0.0830	1.9400e-003	0.0849						
Total	**0.1733**	**0.3452**	**1.2031**	**3.4700e-003**	**0.3258**	**3.5600e-003**	**0.3294**	**0.0867**	**3.3400e-003**	**0.0900**						

3.2 Grading - 2019

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					5.1921	0.0000	5.1921	1.5980	0.0000	1.5980						
Off-Road	7.9347	93.2617	57.5611	0.1074		3.9006	3.9006		3.5886	3.5886						
Total	**7.9347**	**93.2617**	**57.5611**	**0.1074**	**5.1921**	**3.9006**	**9.0927**	**1.5980**	**3.5886**	**5.1866**						

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Vendor	7.5300e-003	0.2290	0.0539	5.3000e-004	0.0128	1.4600e-003	0.0143	3.6900e-003	1.4000e-003	5.0800e-003						
Worker	0.1658	0.1163	1.1493	2.9400e-003	0.3130	2.1000e-003	0.3151	0.0830	1.9400e-003	0.0849						
Total	**0.1733**	**0.3452**	**1.2031**	**3.4700e-003**	**0.3258**	**3.5600e-003**	**0.3294**	**0.0867**	**3.3400e-003**	**0.0900**						

3.3 Building Construction - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.5115	22.7062	18.3139	0.0288		1.3802	1.3802		1.2958	1.2958						
Total	**2.5115**	**22.7062**	**18.3139**	**0.0288**		**1.3802**	**1.3802**		**1.2958**	**1.2958**						

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Vendor	1.5102	45.9088	10.7965	0.1054	2.5684	0.2926	2.8610	0.7395	0.2799	1.0195						
Worker	6.0853	4.2685	42.1954	0.1081	11.4906	0.0773	11.5679	3.0474	0.0712	3.1185						
Total	**7.5955**	**50.1773**	**52.9919**	**0.2134**	**14.0590**	**0.3699**	**14.4289**	**3.7869**	**0.3511**	**4.1380**						

3.3 Building Construction - 2019

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.5115	22.7062	18.3139	0.0288		1.3802	1.3802		1.2958	1.2958						
Total	**2.5115**	**22.7062**	**18.3139**	**0.0288**		**1.3802**	**1.3802**		**1.2958**	**1.2958**						

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Vendor	1.5102	45.9088	10.7965	0.1054	2.5684	0.2926	2.8610	0.7395	0.2799	1.0195						
Worker	6.0853	4.2685	42.1954	0.1081	11.4906	0.0773	11.5679	3.0474	0.0712	3.1185						
Total	**7.5955**	**50.1773**	**52.9919**	**0.2134**	**14.0590**	**0.3699**	**14.4289**	**3.7869**	**0.3511**	**4.1380**						

3.3 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.2551	20.6494	17.9678	0.0288		1.1948	1.1948		1.1218	1.1218						
Total	**2.2551**	**20.6494**	**17.9678**	**0.0288**		**1.1948**	**1.1948**		**1.1218**	**1.1218**						

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Vendor	1.2839	41.9738	9.5585	0.1046	2.5683	0.1972	2.7655	0.7395	0.1886	0.9282						
Worker	5.6137	3.7890	37.9973	0.1046	11.4906	0.0753	11.5659	3.0474	0.0693	3.1167						
Total	**6.8975**	**45.7628**	**47.5557**	**0.2092**	**14.0590**	**0.2725**	**14.3314**	**3.7869**	**0.2580**	**4.0449**						

3.3 Building Construction - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.2551	20.6494	17.9678	0.0288		1.1948	1.1948		1.1218	1.1218						
Total	**2.2551**	**20.6494**	**17.9678**	**0.0288**		**1.1948**	**1.1948**		**1.1218**	**1.1218**						

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Vendor	1.2839	41.9738	9.5585	0.1046	2.5683	0.1972	2.7655	0.7395	0.1886	0.9282						
Worker	5.6137	3.7890	37.9973	0.1046	11.4906	0.0753	11.5659	3.0474	0.0693	3.1167						
Total	**6.8975**	**45.7628**	**47.5557**	**0.2092**	**14.0590**	**0.2725**	**14.3314**	**3.7869**	**0.2580**	**4.0449**						

3.4 Paving - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6783	7.0328	7.3260	0.0114		0.3764	0.3764		0.3463	0.3463						
Paving	1.0753					0.0000	0.0000		0.0000	0.0000						
Total	**1.7535**	**7.0328**	**7.3260**	**0.0114**		**0.3764**	**0.3764**		**0.3463**	**0.3463**						

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Vendor	6.4000e-003	0.2094	0.0477	5.2000e-004	0.0128	9.8000e-004	0.0138	3.6900e-003	9.4000e-004	4.6300e-003						
Worker	0.0437	0.0295	0.2957	8.1000e-004	0.0894	5.9000e-004	0.0900	0.0237	5.4000e-004	0.0243						
Total	**0.0501**	**0.2388**	**0.3434**	**1.3300e-003**	**0.1022**	**1.5700e-003**	**0.1038**	**0.0274**	**1.4800e-003**	**0.0289**						

3.4 Paving - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6783	7.0328	7.3260	0.0114		0.3764	0.3764		0.3463	0.3463						
Paving	1.0753					0.0000	0.0000		0.0000	0.0000						
Total	**1.7535**	**7.0328**	**7.3260**	**0.0114**		**0.3764**	**0.3764**		**0.3463**	**0.3463**						

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Vendor	6.4000e-003	0.2094	0.0477	5.2000e-004	0.0128	9.8000e-004	0.0138	3.6900e-003	9.4000e-004	4.6300e-003						
Worker	0.0437	0.0295	0.2957	8.1000e-004	0.0894	5.9000e-004	0.0900	0.0237	5.4000e-004	0.0243						
Total	**0.0501**	**0.2388**	**0.3434**	**1.3300e-003**	**0.1022**	**1.5700e-003**	**0.1038**	**0.0274**	**1.4800e-003**	**0.0289**						

3.5 Architectural Coating - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	380.1653					0.0000	0.0000		0.0000	0.0000						
Off-Road	0.3229	2.2451	2.4419	3.9600e-003		0.1479	0.1479		0.1479	0.1479						
Total	**380.4882**	**2.2451**	**2.4419**	**3.9600e-003**		**0.1479**	**0.1479**		**0.1479**	**0.1479**						

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	1.1249	0.7593	7.6142	0.0210	2.3026	0.0151	2.3177	0.6107	0.0139	0.6246						
Total	**1.1249**	**0.7593**	**7.6142**	**0.0210**	**2.3026**	**0.0151**	**2.3177**	**0.6107**	**0.0139**	**0.6246**						

3.5 Architectural Coating - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	380.1653					0.0000	0.0000		0.0000	0.0000						
Off-Road	0.3229	2.2451	2.4419	3.9600e-003		0.1479	0.1479		0.1479	0.1479						
Total	**380.4882**	**2.2451**	**2.4419**	**3.9600e-003**		**0.1479**	**0.1479**		**0.1479**	**0.1479**						

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	1.1249	0.7593	7.6142	0.0210	2.3026	0.0151	2.3177	0.6107	0.0139	0.6246						
Total	**1.1249**	**0.7593**	**7.6142**	**0.0210**	**2.3026**	**0.0151**	**2.3177**	**0.6107**	**0.0139**	**0.6246**						

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	6.8816	90.7440	100.5114	0.5432	38.2367	0.6733	38.9100	10.3158	0.6385	10.9543						
Unmitigated	6.8816	90.7440	100.5114	0.5432	38.2367	0.6733	38.9100	10.3158	0.6385	10.9543						

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	1,669.74	1,669.74	1669.74	17,589,117	17,589,117
Total	1,669.74	1,669.74	1,669.74	17,589,117	17,589,117

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Unrefrigerated Warehouse-No	16.60	8.40	77.00	79.57	0.00	20.43	100	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Asphalt Surfaces	0.546179	0.037976	0.179086	0.122965	0.018430	0.005460	0.017497	0.061396	0.001337	0.001657	0.006117	0.000817	0.001082
Other Non-Asphalt Surfaces	0.546179	0.037976	0.179086	0.122965	0.018430	0.005460	0.017497	0.061396	0.001337	0.001657	0.006117	0.000817	0.001082
Unrefrigerated Warehouse-No Rail	0.561300	0.039030	0.184050	0.000000	0.000000	0.034600	0.046400	0.123300	0.001370	0.001700	0.006290	0.000840	0.001110

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0715	0.6503	0.5463	3.9000e-003		0.0494	0.0494		0.0494	0.0494						
NaturalGas Unmitigated	0.0715	0.6503	0.5463	3.9000e-003		0.0494	0.0494		0.0494	0.0494						

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						
Unrefrigerated Warehouse-No Rail	6633.21	0.0715	0.6503	0.5463	3.9000e-003		0.0494	0.0494		0.0494	0.0494						
Total		**0.0715**	**0.6503**	**0.5463**	**3.9000e-003**		**0.0494**	**0.0494**		**0.0494**	**0.0494**						

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						
Unrefrigerated Warehouse-No Rail	6.63321	0.0715	0.6503	0.5463	3.9000e-003		0.0494	0.0494		0.0494	0.0494						
Total		**0.0715**	**0.6503**	**0.5463**	**3.9000e-003**		**0.0494**	**0.0494**		**0.0494**	**0.0494**						

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	27.2076	2.3200e-003	0.2515	2.0000e-005		9.0000e-004	9.0000e-004		9.0000e-004	9.0000e-004						
Unmitigated	27.2076	2.3200e-003	0.2515	2.0000e-005		9.0000e-004	9.0000e-004		9.0000e-004	9.0000e-004						

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	3.1246					0.0000	0.0000		0.0000	0.0000						
Consumer Products	24.0593					0.0000	0.0000		0.0000	0.0000						
Landscaping	0.0237	2.3200e-003	0.2515	2.0000e-005		9.0000e-004	9.0000e-004		9.0000e-004	9.0000e-004						
Total	**27.2076**	**2.3200e-003**	**0.2515**	**2.0000e-005**		**9.0000e-004**	**9.0000e-004**		**9.0000e-004**	**9.0000e-004**						

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	3.1246					0.0000	0.0000		0.0000	0.0000						
Consumer Products	24.0593					0.0000	0.0000		0.0000	0.0000						
Landscaping	0.0237	2.3200e-003	0.2515	2.0000e-005		9.0000e-004	9.0000e-004		9.0000e-004	9.0000e-004						
Total	**27.2076**	**2.3200e-003**	**0.2515**	**2.0000e-005**		**9.0000e-004**	**9.0000e-004**		**9.0000e-004**	**9.0000e-004**						

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Duke Warehouse at Alabama and Palmetto - VOC Mitigation

San Bernardino-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unrefrigerated Warehouse-No Rail	1,192.67	1000sqft	27.38	1,192,671.00	0
Other Asphalt Surfaces	893.68	1000sqft	20.52	893,684.00	0
Other Non-Asphalt Surfaces	360.89	1000sqft	8.28	360,887.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	32
Climate Zone	10			**Operational Year**	2020
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Per Site Plan

Construction Phase - Per Applicant

Off-road Equipment - Per Applicant

Off-road Equipment - Per Applicant

Trips and VMT - Added Water Truck Trips

Architectural Coating - VOC Mitigation 10 g/L

Vehicle Trips - Per TIA

Energy Use -

Construction Off-road Equipment Mitigation - Per Rule 403

Water Mitigation -

Waste Mitigation -

Fleet Mix - Per TIA

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	100.00	10.00
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	10.00
tblConstructionPhase	NumDays	75.00	30.00
tblFleetMix	HHD	0.06	0.12
tblFleetMix	LDA	0.55	0.56
tblFleetMix	LDT1	0.04	0.04
tblFleetMix	LDT2	0.18	0.18
tblFleetMix	LHD1	0.02	0.00
tblFleetMix	LHD2	5.4600e-003	0.03
tblFleetMix	MCY	6.1170e-003	6.2900e-003
tblFleetMix	MDV	0.12	0.00
tblFleetMix	MH	1.0820e-003	1.1100e-003
tblFleetMix	MHD	0.02	0.05
tblFleetMix	OBUS	1.3370e-003	1.3700e-003
tblFleetMix	SBUS	8.1700e-004	8.4000e-004

tblFleetMix	UBUS	1.6570e-003	1.7000e-003
tblLandUse	LandUseSquareFeet	1,192,670.00	1,192,671.00
tblLandUse	LandUseSquareFeet	893,680.00	893,684.00
tblLandUse	LandUseSquareFeet	360,890.00	360,887.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblVehicleTrips	CNW_TL	6.90	77.00
tblVehicleTrips	CNW_TTP	41.00	20.43
tblVehicleTrips	CW_TTP	59.00	79.57
tblVehicleTrips	DV_TP	5.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PR_TP	92.00	100.00
tblVehicleTrips	ST_TR	1.68	1.40
tblVehicleTrips	SU_TR	1.68	1.40
tblVehicleTrips	WD_TR	1.68	1.40

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2020	49.9306	2.9667	11.7063	0.0274	2.3026	0.1630	2.4656	0.6107	0.1618	0.7725						
Maximum	**49.9306**	**2.9667**	**11.7063**	**0.0274**	**2.3026**	**0.1630**	**2.4656**	**0.6107**	**0.1618**	**0.7725**						

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2020	49.9306	2.9667	11.7063	0.0274	2.3026	0.1630	2.4656	0.6107	0.1618	0.7725						
Maximum	**49.9306**	**2.9667**	**11.7063**	**0.0274**	**2.3026**	**0.1630**	**2.4656**	**0.6107**	**0.1618**	**0.7725**						

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Architectural Coating	Architectural Coating	8/1/2020	9/11/2020	5	30	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 28.8

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 1,789,007; Non-Residential Outdoor: 596,336; Striped Parking

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	8.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Architectural Coating	1	206.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Architectural Coating - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	48.4834					0.0000	0.0000		0.0000	0.0000						
Off-Road	0.3229	2.2451	2.4419	3.9600e-003		0.1479	0.1479		0.1479	0.1479						
Total	**48.8063**	**2.2451**	**2.4419**	**3.9600e-003**		**0.1479**	**0.1479**		**0.1479**	**0.1479**						

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	1.1243	0.7216	9.2644	0.0234	2.3026	0.0151	2.3177	0.6107	0.0139	0.6246						
Total	**1.1243**	**0.7216**	**9.2644**	**0.0234**	**2.3026**	**0.0151**	**2.3177**	**0.6107**	**0.0139**	**0.6246**						

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	48.4834					0.0000	0.0000		0.0000	0.0000						
Off-Road	0.3229	2.2451	2.4419	3.9600e-003		0.1479	0.1479		0.1479	0.1479						
Total	**48.8063**	**2.2451**	**2.4419**	**3.9600e-003**		**0.1479**	**0.1479**		**0.1479**	**0.1479**						

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	1.1243	0.7216	9.2644	0.0234	2.3026	0.0151	2.3177	0.6107	0.0139	0.6246						
Total	**1.1243**	**0.7216**	**9.2644**	**0.0234**	**2.3026**	**0.0151**	**2.3177**	**0.6107**	**0.0139**	**0.6246**						

CalEEMod Version: CalEEMod.2016.3.2

Date: 4/5/2018 10:29 AM

Duke Warehouse at Alabama and Palmetto - VOC Mitigation - San Bernardino-South Coast County, Winter

Duke Warehouse at Alabama and Palmetto - VOC Mitigation

San Bernardino-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unrefrigerated Warehouse-No Rail	1,192.67	1000sqft	27.38	1,192,671.00	0
Other Asphalt Surfaces	893.68	1000sqft	20.52	893,684.00	0
Other Non-Asphalt Surfaces	360.89	1000sqft	8.28	360,887.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	32
Climate Zone	10			**Operational Year**	2020
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Per Site Plan

Construction Phase - Per Applicant

Off-road Equipment - Per Applicant

Off-road Equipment - Per Applicant

Trips and VMT - Added Water Truck Trips

Architectural Coating - VOC Mitigation 10 g/L

Vehicle Trips - Per TIA

Energy Use -

Construction Off-road Equipment Mitigation - Per Rule 403

Water Mitigation -

Waste Mitigation -

Fleet Mix - Per TIA

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	100.00	10.00
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	10.00
tblConstructionPhase	NumDays	75.00	30.00
tblFleetMix	HHD	0.06	0.12
tblFleetMix	LDA	0.55	0.56
tblFleetMix	LDT1	0.04	0.04
tblFleetMix	LDT2	0.18	0.18
tblFleetMix	LHD1	0.02	0.00
tblFleetMix	LHD2	5.4600e-003	0.03
tblFleetMix	MCY	6.1170e-003	6.2900e-003
tblFleetMix	MDV	0.12	0.00
tblFleetMix	MH	1.0820e-003	1.1100e-003
tblFleetMix	MHD	0.02	0.05
tblFleetMix	OBUS	1.3370e-003	1.3700e-003

tblFleetMix	SBUS	8.1700e-004	8.4000e-004
tblFleetMix	UBUS	1.6570e-003	1.7000e-003
tblLandUse	LandUseSquareFeet	1,192,670.00	1,192,671.00
tblLandUse	LandUseSquareFeet	893,680.00	893,684.00
tblLandUse	LandUseSquareFeet	360,890.00	360,887.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblVehicleTrips	CNW_TL	6.90	77.00
tblVehicleTrips	CNW_TTP	41.00	20.43
tblVehicleTrips	CW_TTP	59.00	79.57
tblVehicleTrips	DV_TP	5.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PR_TP	92.00	100.00
tblVehicleTrips	ST_TR	1.68	1.40
tblVehicleTrips	SU_TR	1.68	1.40
tblVehicleTrips	WD_TR	1.68	1.40

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2020	49.9312	3.0044	10.0561	0.0249	2.3026	0.1630	2.4656	0.6107	0.1618	0.7725						
Maximum	**49.9312**	**3.0044**	**10.0561**	**0.0249**	**2.3026**	**0.1630**	**2.4656**	**0.6107**	**0.1618**	**0.7725**						

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2020	49.9312	3.0044	10.0561	0.0249	2.3026	0.1630	2.4656	0.6107	0.1618	0.7725						
Maximum	**49.9312**	**3.0044**	**10.0561**	**0.0249**	**2.3026**	**0.1630**	**2.4656**	**0.6107**	**0.1618**	**0.7725**						

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Architectural Coating	Architectural Coating	8/1/2020	9/11/2020	5	30	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 28.8

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 1,789,007; Non-Residential Outdoor: 596,336; Striped Parking

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	8.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Architectural Coating	1	206.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Architectural Coating - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	48.4834					0.0000	0.0000		0.0000	0.0000						
Off-Road	0.3229	2.2451	2.4419	3.9600e-003		0.1479	0.1479		0.1479	0.1479						
Total	**48.8063**	**2.2451**	**2.4419**	**3.9600e-003**		**0.1479**	**0.1479**		**0.1479**	**0.1479**						

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	1.1249	0.7593	7.6142	0.0210	2.3026	0.0151	2.3177	0.6107	0.0139	0.6246						
Total	**1.1249**	**0.7593**	**7.6142**	**0.0210**	**2.3026**	**0.0151**	**2.3177**	**0.6107**	**0.0139**	**0.6246**						

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	48.4834					0.0000	0.0000		0.0000	0.0000						
Off-Road	0.3229	2.2451	2.4419	3.9600e-003		0.1479	0.1479		0.1479	0.1479						
Total	**48.8063**	**2.2451**	**2.4419**	**3.9600e-003**		**0.1479**	**0.1479**		**0.1479**	**0.1479**						

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	1.1249	0.7593	7.6142	0.0210	2.3026	0.0151	2.3177	0.6107	0.0139	0.6246						
Total	**1.1249**	**0.7593**	**7.6142**	**0.0210**	**2.3026**	**0.0151**	**2.3177**	**0.6107**	**0.0139**	**0.6246**						

CalEEMod Version: CalEEMod.2016.3.2

Date: 4/6/2018 9:06 AM

Duke Warehouse at Alabama and Palmetto - Operation LST

San Bernardino-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unrefrigerated Warehouse-No Rail	1,192.67	1000sqft	27.38	1,192,671.00	0
Other Asphalt Surfaces	893.68	1000sqft	20.52	893,684.00	0
Other Non-Asphalt Surfaces	360.89	1000sqft	8.28	360,887.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	32
Climate Zone	10			**Operational Year**	2020
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Per Site Plan

Construction Phase - Not Modeled

Off-road Equipment - Per Applicant

Off-road Equipment - Not Modeled

Trips and VMT -

Architectural Coating -

Vehicle Trips - Model onsite Travel

Energy Use -

Construction Off-road Equipment Mitigation - Per Rule 403

Water Mitigation -

Waste Mitigation -

Fleet Mix - Per TIA

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	110.00	0.00
tblFleetMix	HHD	0.06	0.12
tblFleetMix	LDA	0.55	0.56
tblFleetMix	LDT1	0.04	0.04
tblFleetMix	LDT2	0.18	0.18
tblFleetMix	LHD1	0.02	0.00
tblFleetMix	LHD2	5.4600e-003	0.03
tblFleetMix	MCY	6.1170e-003	6.2900e-003
tblFleetMix	MDV	0.12	0.00
tblFleetMix	MH	1.0820e-003	1.1100e-003
tblFleetMix	MHD	0.02	0.05
tblFleetMix	OBUS	1.3370e-003	1.3700e-003
tblFleetMix	SBUS	8.1700e-004	8.4000e-004
tblFleetMix	UBUS	1.6570e-003	1.7000e-003

tblGrading	AcresOfGrading	0.00	275.00
tblLandUse	LandUseSquareFeet	1,192,670.00	1,192,671.00
tblLandUse	LandUseSquareFeet	893,680.00	893,684.00
tblLandUse	LandUseSquareFeet	360,890.00	360,887.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblTripsAndVMT	WorkerTripNumber	0.00	28.00
tblVehicleTrips	CC_TL	8.40	0.68
tblVehicleTrips	CNW_TL	6.90	0.68
tblVehicleTrips	CNW_TTP	41.00	20.43
tblVehicleTrips	CW_TL	16.60	0.68
tblVehicleTrips	CW_TTP	59.00	79.57
tblVehicleTrips	DV_TP	5.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PR_TP	92.00	100.00
tblVehicleTrips	ST_TR	1.68	1.40
tblVehicleTrips	SU_TR	1.68	1.40
tblVehicleTrips	WD_TR	1.68	1.40

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	27.2076	2.3200e-003	0.2515	2.0000e-005		9.0000e-004	9.0000e-004		9.0000e-004	9.0000e-004						
Energy	0.0715	0.6503	0.5463	3.9000e-003		0.0494	0.0494		0.0494	0.0494						
Mobile	2.5497	27.3382	10.5648	0.0473	0.8985	0.0302	0.9287	0.2424	0.0285	0.2709						
Total	**29.8288**	**27.9909**	**11.3625**	**0.0512**	**0.8985**	**0.0805**	**0.9790**	**0.2424**	**0.0788**	**0.3212**						

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	27.2076	2.3200e-003	0.2515	2.0000e-005		9.0000e-004	9.0000e-004		9.0000e-004	9.0000e-004						
Energy	0.0715	0.6503	0.5463	3.9000e-003		0.0494	0.0494		0.0494	0.0494						
Mobile	2.5497	27.3382	10.5648	0.0473	0.8985	0.0302	0.9287	0.2424	0.0285	0.2709						
Total	**29.8288**	**27.9909**	**11.3625**	**0.0512**	**0.8985**	**0.0805**	**0.9790**	**0.2424**	**0.0788**	**0.3212**						

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	2.5497	27.3382	10.5648	0.0473	0.8985	0.0302	0.9287	0.2424	0.0285	0.2709						
Unmitigated	2.5497	27.3382	10.5648	0.0473	0.8985	0.0302	0.9287	0.2424	0.0285	0.2709						

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	1,669.74	1,669.74	1669.74	413,294	413,294
Total	1,669.74	1,669.74	1,669.74	413,294	413,294

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Unrefrigerated Warehouse-No	0.68	0.68	0.68	79.57	0.00	20.43	100	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Asphalt Surfaces	0.546179	0.037976	0.179086	0.122965	0.018430	0.005460	0.017497	0.061396	0.001337	0.001657	0.006117	0.000817	0.001082
Other Non-Asphalt Surfaces	0.546179	0.037976	0.179086	0.122965	0.018430	0.005460	0.017497	0.061396	0.001337	0.001657	0.006117	0.000817	0.001082
Unrefrigerated Warehouse-No Rail	0.561300	0.039030	0.184050	0.000000	0.000000	0.034600	0.046400	0.123300	0.001370	0.001700	0.006290	0.000840	0.001110

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Duke Warehouse at Alabama and Palmetto - Operation LST - San Bernardino-South Coast County, Winter

Duke Warehouse at Alabama and Palmetto - Operation LST

San Bernardino-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unrefrigerated Warehouse-No Rail	1,192.67	1000sqft	27.38	1,192,671.00	0
Other Asphalt Surfaces	893.68	1000sqft	20.52	893,684.00	0
Other Non-Asphalt Surfaces	360.89	1000sqft	8.28	360,887.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	32
Climate Zone	10			**Operational Year**	2020
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Per Site Plan

Construction Phase - Not Modeled

Off-road Equipment - Per Applicant

Off-road Equipment - Not Modeled

Trips and VMT -

Architectural Coating -

Vehicle Trips - Model onsite Travel

Energy Use -

Construction Off-road Equipment Mitigation - Per Rule 403

Water Mitigation -

Waste Mitigation -

Fleet Mix - Per TIA

Table Name	Column Name	Default Value	New Value
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tblFleetMix	LHD2	5.4600e-003	0.03
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tblFleetMix	MDV	0.12	0.00
tblFleetMix	MH	1.0820e-003	1.1100e-003
tblFleetMix	MHD	0.02	0.05
tblFleetMix	OBUS	1.3370e-003	1.3700e-003
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tblGrading	AcresOfGrading	0.00	275.00
tblLandUse	LandUseSquareFeet	1,192,670.00	1,192,671.00
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tblLandUse	LandUseSquareFeet	360,890.00	360,887.00
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tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblTripsAndVMT	WorkerTripNumber	0.00	28.00
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tblVehicleTrips	CNW_TL	6.90	0.68
tblVehicleTrips	CNW_TTP	41.00	20.43
tblVehicleTrips	CW_TL	16.60	0.68
tblVehicleTrips	CW_TTP	59.00	79.57
tblVehicleTrips	DV_TP	5.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PR_TP	92.00	100.00
tblVehicleTrips	ST_TR	1.68	1.40
tblVehicleTrips	SU_TR	1.68	1.40
tblVehicleTrips	WD_TR	1.68	1.40

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	27.2076	2.3200e-003	0.2515	2.0000e-005		9.0000e-004	9.0000e-004		9.0000e-004	9.0000e-004						
Energy	0.0715	0.6503	0.5463	3.9000e-003		0.0494	0.0494		0.0494	0.0494						
Mobile	2.2160	26.4089	12.1792	0.0424	0.8985	0.0325	0.9309	0.2424	0.0307	0.2731						
Total	**29.4951**	**27.0616**	**12.9769**	**0.0463**	**0.8985**	**0.0828**	**0.9812**	**0.2424**	**0.0810**	**0.3234**						

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	27.2076	2.3200e-003	0.2515	2.0000e-005		9.0000e-004	9.0000e-004		9.0000e-004	9.0000e-004						
Energy	0.0715	0.6503	0.5463	3.9000e-003		0.0494	0.0494		0.0494	0.0494						
Mobile	2.2160	26.4089	12.1792	0.0424	0.8985	0.0325	0.9309	0.2424	0.0307	0.2731						
Total	**29.4951**	**27.0616**	**12.9769**	**0.0463**	**0.8985**	**0.0828**	**0.9812**	**0.2424**	**0.0810**	**0.3234**						

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	2.2160	26.4089	12.1792	0.0424	0.8985	0.0325	0.9309	0.2424	0.0307	0.2731						
Unmitigated	2.2160	26.4089	12.1792	0.0424	0.8985	0.0325	0.9309	0.2424	0.0307	0.2731						

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	1,669.74	1,669.74	1669.74	413,294	413,294
Total	1,669.74	1,669.74	1,669.74	413,294	413,294

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Unrefrigerated Warehouse-No	0.68	0.68	0.68	79.57	0.00	20.43	100	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Asphalt Surfaces	0.546179	0.037976	0.179086	0.122965	0.018430	0.005460	0.017497	0.061396	0.001337	0.001657	0.006117	0.000817	0.001082
Other Non-Asphalt Surfaces	0.546179	0.037976	0.179086	0.122965	0.018430	0.005460	0.017497	0.061396	0.001337	0.001657	0.006117	0.000817	0.001082
Unrefrigerated Warehouse-No Rail	0.561300	0.039030	0.184050	0.000000	0.000000	0.034600	0.046400	0.123300	0.001370	0.001700	0.006290	0.000840	0.001110

Particulate Matter Idling Emissions Calculations for Operation LST

Pollutant	Emission Factor*	Idling Time	Daily Truck Trips**	Idling Emissions	Idling Emissions
	(g/hr-veh)	(min)		(g/day)	(lb/day)
LHDT1					
PM-10	0.000961	15	58	0.013935	3.07205E-05
PM-2.5	0.000919	15	58	0.013326	2.93779E-05
MHDT					
PM-10	0.002801	15	78	0.05462	0.000120416
PM-2.5	0.00268	15	78	0.05226	0.000115214
HHDT					
PM-10	0.016843	15	207	0.871625	0.001921615
PM-2.5	0.016115	15	207	0.833951	0.001838557
PM-10 Sub-Total					0.002072751
PM-2.5 Sub-Total					0.001983149
CalEEMod Total					
PM-10 Total					0.9309
PM-2.5 Total					0.2731
Operation LST Total					
PM-10 Total					0.932972751
PM-2.5 Total					0.275083149

* Emission factors from CalEEMod

** Project-specific Traffic Impact Analysis, April 2018

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ALBERT A. WEBB ASSOCIATES

HEALTH RISK ASSESSMENT

Duke Warehouse
at Alabama Street and Palmetto Avenue

Prepared for:

Duke Realty Corporation

April 2018

www.webbassociates.com

DIESEL PARTICULATE MATTER

HEALTH RISK ASSESSMENT

Duke Warehouse at Alabama Street and Palmetto Avenue Project
County of San Bernardino

Prepared for:

Duke Realty Corporation

Prepared by:

Albert A. Webb Associates
3788 McCray Street
Riverside, CA 92506

April 11, 2018

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APPENDIX

A – Dispersion Modeling Parameters

Section 1 – Introduction

Purpose and Methods of Analysis

Health risk assessments are commonly used to estimate the health risks to the surrounding community from projects that significantly increase the number of diesel vehicles and hence increase the amount of diesel particulate matter (DPM) in the area. The proposed Project is a single warehouse building, which will result in an increase in the number of diesel trucks in the Project vicinity.

The intent of this report is to support the California Environmental Quality Act (CEQA) document being prepared by the County of San Bernardino for the Project. The analysis examines the diesel exhaust emissions from Project-generated traffic in the Project vicinity from diesel trucks traveling along local roads.

The dispersion and concentration of DPM was modeled using AERMOD. The roadways were modeled as line sources represented by adjacent volume sources. Emission factors were obtained using EMFAC2014. The estimation of health risks (both cancer and non-cancer) from DPM was performed following the guidelines established by the South Coast Air Quality Management District (SCAQMD) for health risk assessments from known DPM. The methods and assumptions used in this analysis are explained in greater detail in Section 3.

Project Description

The Project site is located on approximately 55 acres on the northwestern corner of Alabama Street and Palmetto Avenue in an unincorporated area of the County of San Bernardino, California. (**Figure 1 – Project Location**) The Project proposes development of a 1,192,671 square foot warehouse building. The warehouse building will feature approximately 87 dock doors on the western side and approximately 75 dock doors on the eastern side of the proposed building. (**Figure 2 – Site Plan**)

G:\2018\18-0011\GIS\HRA_Proj_Loc.mxd; Map created 09 Apr 2018

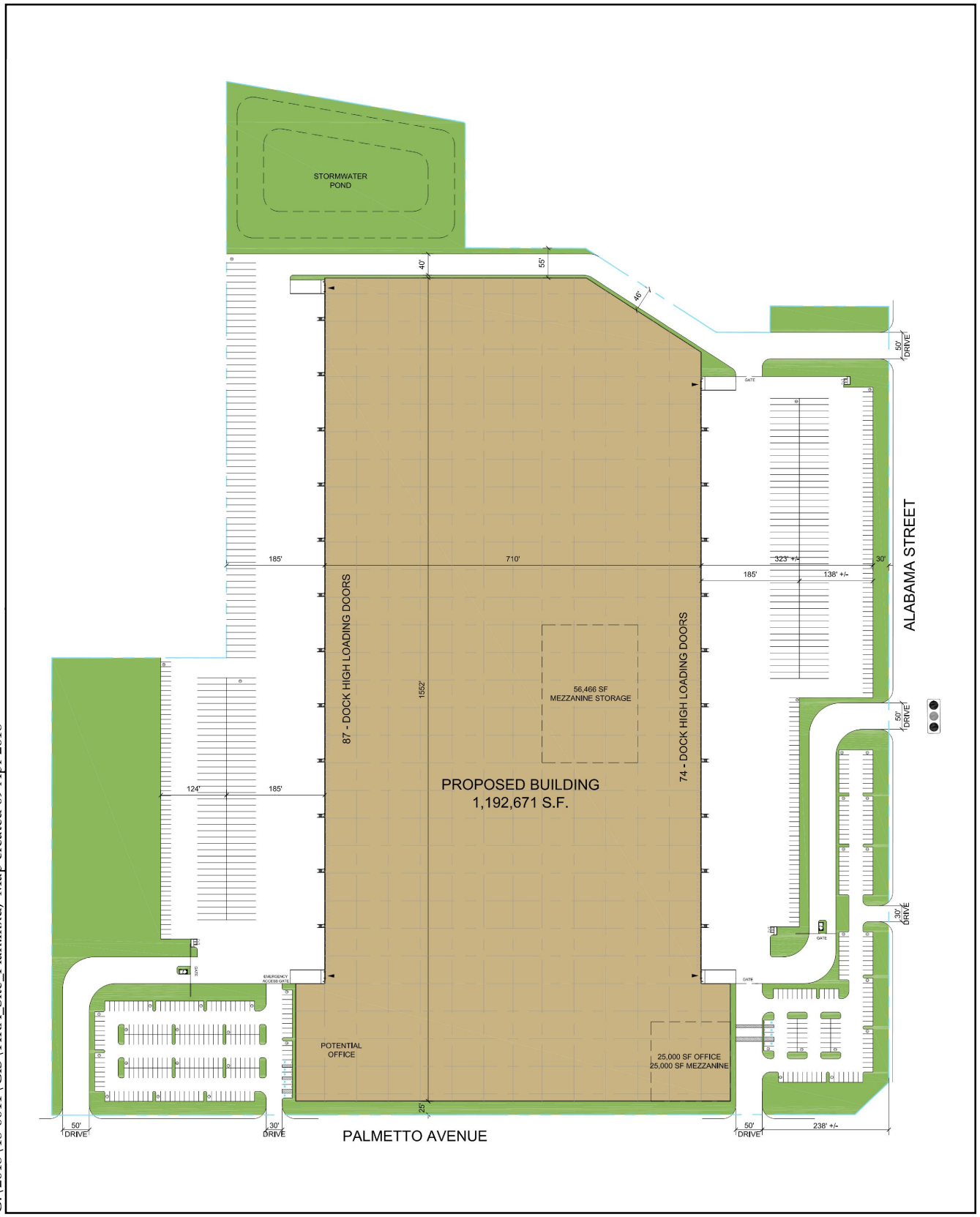
Sources: San Bernardino Co. GIS, 2018, (parcels and streets) and 2016 (imagery).

0 1,000 2,000 3,000 4,000 Feet

Figure 1 - Project Location

Duke Warehouse at Alabama and Palmetto

ALBERT A. WEBB ASSOCIATES



G:\2018\18-0011\GIS\HRA_Site_Plan.mxd; Map created 09 Apr 2018

Source: Herdman Architecture + Design, Jan. 12, 2018.

Not to Scale

Figure 2 - Site Plan

Duke Warehouse at Alabama and Palmetto

ALBERT A. WEBB ASSOCIATES

Section 2 – Setting

Existing and Surrounding Land Uses

The proposed Project site is currently unimproved vacant land. The surrounding area includes a mix of developed and undeveloped land. Developed uses mostly include industrial uses. There are scattered individual homes associated within non-residential areas located off 5th Street approximately a mile to the north of the Project site. There is also a Christian Academy located about half of a mile south of the Project site at the intersection of San Bernardino Avenue and Alabama Street.

Sensitive Receptors

“Sensitive receptors” refer to those people most susceptible to respiratory distress such as asthmatics, the elderly, very young children, people already weakened by other diseases or illness and persons engaged in strenuous work or exercise. SCAQMD defines a "sensitive receptor" as a land use or facility such as residences, schools, childcare centers, athletic facilities, playgrounds, retirement homes, and convalescent homes. (SCAQMD 1993, p. 1-2)

Analysis Setting

The human health effects examined in this analysis are the inhalation cancer risks and chronic non-cancer health effects due to exposure to airborne diesel exhaust. The potential health risks were estimated using modeling and health risk assessment methodology established by the:

- Office of Environmental Health Hazard Assessment (OEHHA) of the California Environmental Protection Agency (CalEPA)
- South Coast Air Quality Management District (SCAQMD)
- U.S. Environmental Protection Agency (USEPA)
- California Air Resources Board (CARB)

Diesel Particulate Matter Background

Particulate matter in the less than or equal to 10 micron diameter size range (PM-10) is usually formed from mechanical action, such as dust and tire debris. These particles are large enough that they settle out of the air rapidly due to gravitational settling. While in the air, they contribute to visibility degradation and enter into the respiratory tracts of humans. However, they do not travel as far into the respiratory system as the smaller PM-2.5 (particles with a diameter of 2.5 microns or smaller) particles. PM-2.5 is formed through the accumulation of smaller particles or the condensation onto the surface of the smaller particles, which are directly emitted from cars and trucks. The particles in this 2.5 micron size range have the longest atmospheric lifetimes of any particles in the atmosphere of about 10 days and can be transported for up to 1,800-miles from the emission source.

Diesel exhaust is a complex mixture of inorganic and organic compounds that exist in the gaseous, liquid, and solid phases. The primary gaseous components are nitrogen, oxygen, carbon dioxide, and water vapor. As a result of incomplete combustion, diesel exhaust also includes over 40 substances that are listed as hazardous air pollutants by the USEPA and by CARB as toxic air contaminants (TACs). Exhaust from diesel engines contains approximately 20 times more particles than exhaust from comparable gasoline engines. Over 90 percent of the mass of the particles are less than 2.5 microns in diameter and are easily inhaled into the bronchial and alveolar regions of the lung. The particles are

mainly aggregates of spherical carbon particles coated with inorganic and organic substances. The inorganic fraction primarily consists of elemental carbon, while the organic fraction consists of soluble organic compounds such as aldehydes, alkanes, alkenes, high-molecular weight polycyclic aromatic hydrocarbons (PAH), and PAH-derivatives, such as nitro-PAHs. Many of these PAHs and PAH-derivatives, especially nitro-PAHs, have been found to be mutagens and carcinogens. Nitro-PAH compounds can also be formed during transport through the atmosphere by reactions of adsorbed PAH with nitric acid and by gas-phase radical-initiated reactions in the presence of oxides of nitrogen (NO_X) (CARB 1998).

There are three groups of sources of diesel exhaust in California:

- Mobile sources (on-road vehicles and other mobile sources),
- Stationary area sources (e.g., oil and gas production facilities, stationary engines, shipyards, repair yards), and
- Stationary point sources (e.g., chemical manufacturing, electric utilities).

Of these sources, on-road mobile sources (heavy-duty trucks, buses, light-duty cars and trucks) contribute the majority of total diesel exhaust PM-10 emissions in California.

Health Effects

The most significant health effect of diesel exhaust is its potential for increasing the risk of cancer in exposed persons. Studies of workers exposed to diesel exhaust have been shown to have an increased risk of developing lung cancer. Studies have also shown that exposure to diesel exhaust causes lung cancer in laboratory animals (OEHHA 2000).

In addition to the carcinogenic effects, there are both short-term (acute) and long-term (chronic) effects on human health. Acute health effects are due to sudden exposure to high concentrations of air toxics which can irritate the eyes, nose, and throat, cause respiratory symptoms such as increased cough, labored breathing, chest tightness, and wheezing, and cause inflammatory responses in the airways and lungs. Exposure to diesel exhaust may also cause increased allergic responses to allergens such as ragweed pollen. Chronic health effects are a result of low-dose, long-term exposure from routine releases of air toxics. Health effects include chronic respiratory symptoms and reduced lung function, and may cause or worsen allergic respiratory diseases such as asthma. Reproductive or developmental effects from diesel exposure in laboratory animals have been seen; however, there is insufficient information to determine if those same effects are seen in humans (OEHHA 2000).

Exposure to “whole” diesel exhaust (gases and particles) can cause the above-mentioned health effects, while exposure to DPM alone has been linked in animal studies with lung cancer and allergic reactions. Recent epidemiological studies of the health effects of diesel exhaust have supported findings in earlier studies, which show higher rates of lung cancer in exposed workers and the potential to cause allergies (OEHHA 2000).

Extensive research into the correlation between health effects and increased levels of pollutants in the air has been done in the Eastern U.S. The major difference in the air quality issues between East Coast and West Coast cities is the prevalence of oxides of sulfur (SO_X) from the coal burning power plants on the East Coast, and the presence of NO_X in the West Coast from vehicular emissions. Within Southern California, the focus of many of these air quality studies is aimed towards the health effects of air pollution on children. One such study looked at the association between air pollution and lung function

growth in Southern California children (Gauderman, et al., 2000). The results of this study suggest that exposure to air pollution may lead to a reduction in maximal attained lung function; however, due to the high correlation in concentrations across communities, researchers were unable to identify the independent effects of each pollutant, and their models suggest that no single pollutant measured is responsible for the observed deficits in lung function growth. Similarly, another study (McConnell, et al., 1999) also concluded that there is no association between bronchitis and pollution, except for people who already have asthma. And even then, the high correlation between particulates, nitrogen dioxide (NO_2), and acid make it impossible to distinguish which of these pollutants is more likely responsible for the observed effects. A study by Gilliland, et al., in 2001 found that, while a short-term change in ozone (O_3), but not NO_2 or PM-10, was associated with a substantial increase in school absences from both upper and lower respiratory illness, ozone-related increases in all absences and illness-related absences were larger in communities with lower levels of NO_2 and PM-10 than in communities with higher levels of NO_2 or PM-10.

The results of a 10-year children's health study commissioned by CARB in which researchers looked at the chronic health effects of air pollutants on children have been released and a portion of the results of this study relating the effect of air pollution on lung development was published in the New England Journal of Medicine (Gauderman et al., 2004). The communities studied included Alpine, Atascadero, Lake Elsinore, Lake Arrowhead, Lancaster, Lompoc, Long Beach, Mira Loma, Riverside, San Dimas, Santa Maria, and Upland. Deficits in lung function were associated with a correlated set of pollutants that included nitrogen dioxide, acid vapor, fine particulate matter, and elemental carbon. However, little evidence was shown that links ozone exposure with chronic deficits in lung function growth. Although Mira Loma had the highest average concentration of PM-10, PM-2.5, and elemental carbon, it did not have the largest proportion of children with less than 80 percent of the predicted forced expiratory volume in the first second (<80 percent FEV_1). Upland had the largest proportion of children with <80 percent FEV_1 even though pollutant concentrations were much less than at Mira Loma.

Health Risks

OEHHA has estimated that 130 to 2,400 excess cancer cases would be expected to occur in a population of one million people breathing in an average concentration of DPM of 1 µg/m^3 over a 70-year lifetime. These excess cancer cases are beyond what would be expected to occur if there were no DPM in the air. The estimate of excess cancer cases is based upon analysis by OEHHA of more than 30 studies of workers exposed to diesel exhaust. An independent review by the CARB Scientific Review Panel derived a "best estimate" of the cancer unit risk factor of 300 excess cancer cases per million people breathing 1 µg/m^3 of DPM over a lifetime.

The CARB estimates that the average Californian is exposed to (both indoors and outdoors) an average of 1.3 µg/m^3 of DPM on a long-term basis. Using this exposure value and multiplying by the best estimate unit risk factor of 300 excess cancer cases per million population per µg/m^3, the annual excess cancer risk in California from DPM is estimated to be 390 cases per million (OEHHA 2000).

According to OEHHA, scientific evidence suggests that non-cancer lung damage (such as reduced lung function and increased sensitivity to asthma) can occur when long-term ambient DPM levels are greater than 5 µg/m^3. Although this is higher than the average concentration of DPM in California's air, people can be exposed to DPM concentrations greater than 5 µg/m^3 near truck stops, busy freeways, and other places where multiple diesel engines are in operation.

Regulations

The local air districts (such as SCAQMD) have the primary responsibility for control of air pollution for all sources, except for mobile source emissions, which are under the control of CARB. On August 27, 1998, following a 10-year review process, CARB listed DPM as a toxic air contaminant (TAC).

The USEPA, CARB, and SCAQMD have adopted many regulations that have resulted in or will reduce particulate matter (PM), nitrogen oxides (NO_X), and sulfur oxides (SO_X) emissions from diesel-fueled engines. Some of the existing control measures are:

- a requirement for low sulfur/low aromatic diesel fuel that reduces PM, NO_X, and SO_X emissions (October 1993).
- emission standards for NO_X emissions from diesel cars, trucks, and urban buses (phased in from 1984 through 2004).
- roadside testing of heavy-duty on-road vehicles for excessive PM emissions (1991) and a requirement for fleet inspection and maintenance of heavy-duty vehicles (Summer 1998).
- emission standards that restrict the amount of PM and NO_X that can be emitted from many 1995 and newer diesel utility engines.
- a requirement limiting the idling of diesel-fueled commercial vehicles to five minutes at any location pursuant to Section 2485 of Chapter 10 within Title 13 of California Code of Regulations (February 1, 2005).

In October 2000, the USEPA published the final rule for new diesel engine standards beginning in 2004 for all diesel vehicles over 8,500 pounds. Additional diesel standards and test procedures in this rule began in 2007. Heavy-duty gasoline engines are required to meet new, more stringent standards starting no later than the 2005 model year. The new standards require gasoline trucks to be 78 percent cleaner and diesel trucks to be more than 40 percent cleaner than the models of 2000 (USEPA 2000a). In December 2000, the USEPA established a comprehensive national control program that regulates the heavy-duty vehicle and its fuel as a single system. New emission standards took effect in model year 2007 and apply to heavy-duty highway engines and vehicles. The new standards for PM took full effect for diesel engines in the 2007 model year. Gasoline engines will also be subject to these standards, requiring full compliance in the 2009 model year. In addition, the level of sulfur in highway diesel fuel was reduced by 97 percent to no more than 15 parts per million (ppm) in mid-2006. As a result of this program, each new truck and bus is more than 90 percent cleaner (USEPA 2000b).

In October 2000, CARB completed a risk reduction plan (CARB 2000) to reduce DPM emissions throughout the state. The plan proposes measures which will require all new diesel-fueled vehicles and engines to use state-of-the-art catalyzed DPM filters and very low sulfur diesel fuel. In addition, all existing vehicles and engines should be evaluated, and wherever technically feasible and cost-effective, retrofitted with DPM filters. One of the incentive programs is the Carl Moyer Program, which is a clean engine incentive program. This program provides money in the form of grants to cover the incremental portion of the cost to purchase cleaner burning engines or retrofitting existing ones. As with new engines, very low sulfur diesel fuel should be used by retrofitted vehicles and engines. It is estimated that full implementation of the plan, including proposed federal measures, will result in reductions in DPM emissions and associated cancer risks of 75 percent by 2010 and 85 percent by 2020. On February 27, 2004, CARB announced the approval of five diesel air toxic control measures (ATCM) control measures (CARB 2004), which will limit DPM as part of the plan.

In December 2008, CARB approved the Statewide Truck and Bus Rule. The regulation applies to nearly all privately- and federally-owned diesel-fueled trucks and buses and to privately- and publicly-owned school buses with a gross vehicle weight rating greater than 14,000 pounds. This regulation was last amended in December 2014 to provide more time for fleets to comply (CARB 2014a). The amended regulation requires installation of PM retrofits beginning January 1, 2012 and replacement of older trucks starting January 1, 2015. By January 1, 2023, nearly all vehicles would need to have 2010 model year engines or equivalent.

In June 2000, SCAQMD announced new fleet vehicle rules (SCAQMD 2000), which will seek to gradually shift public agencies to low emissions and alternative fuel vehicles. Whenever a public fleet operator with 15 or more vehicles replaces or purchases new vehicles, they must be either low-emission or alternative-fueled. This would also apply to vehicles used to transport passengers to and from airports in the region. Following adoption of the first six fleet rules, the Engine Manufacturers Association sued AQMD in district court in August 2000. Plaintiffs appealed to the 9th Circuit Court of Appeals in San Francisco, which affirmed the lower court's decision. Plaintiffs sought review in the Supreme Court of the United States and heard the case on January 14, 2004 (SCAQMD 2004a). On April 28, 2004, the Supreme Court issued an opinion that, under the Clean Air Act, SCAQMD (and other local jurisdictions) are prohibited from adopting regulations that require private fleet owners to purchase clean-fueled vehicles. However, the court allowed the possibility that fleet rules can be applied to public fleets and may be valid for leased and used vehicles (SCAQMD 2004b).

Both federal and state Clean Air Acts require that each non-attainment area prepare a plan to reduce air pollution to healthful levels. The 1988 California Clean Air Act and the 1990 amendments to the federal Clean Air Act (CAA) established new planning requirements and deadlines for attainment of the air quality standards within specified time frames, which are contained in the State Implementation Plan (SIP). Amendments to the SIP have been proposed, revised, and approved since 1990. The currently adopted clean air plan for the South Coast Air Basin (Basin) is the 2012 SIP Amendment for ozone, approved by the USEPA in 2014. The Air Quality Management Plan (AQMP) for the Basin establishes a program of rules and regulations directed at attainment of the state and national air quality standards. The AQMP control measures and related emission reduction estimates are based upon emissions projections for a future development scenario derived from land use, population, and employment characteristics defined in consultation with local governments. The SCAQMD adopted an updated AQMP in March 2017, which outlines the air pollution measures needed to meet federal health-based standards. Specifically, the Plan includes control strategies to demonstrate attainment with various ozone and PM 2.5 National Ambient Air Quality Standards (NAAQS) by specified deadlines; it incorporates the latest scientific and technological information and planning assumptions, including Southern California Association of Governments' (SCAG's) 2016 Regional Transportation Plan/Sustainable Communities Strategy and updated emission inventories and modeling methods.

The AQMP points out that the regulation of emissions from ships, aircraft, trains, and off-road farm and construction equipment less than 175 horsepower are under federal jurisdiction, yet emissions from these sources continues to represent a significant and increasing portion of the emissions inventory in the Basin. In order to attain federal standards, the emissions reduction burden will have to be shifted to other stationary and mobile sources that have been regulated. The AQMP includes measures at the state and federal level that will have to be complied with. In addition, several measures aimed at reducing PM emissions will also be implemented. They include a measure to install electric systems at truck stops in order to eliminate truck idling and operation of auxiliary engines to power refrigerated trailers and units, a

mitigation fee program for federal sources, and the authority to implement regulations in the event that USEPA or CARB does not develop aggressive programs to reduce emissions from vehicles.

The SCAQMD *CEQA Air Quality Handbook* (1993) states that emissions of TACs are considered significant if a health risk assessment shows a Maximum Individual Cancer Risk (MICR) of greater than ten (10) in one million. Based on guidance from SCAQMD (SCAQMD 2003), 10 in one million is used as the threshold for this Project. For non-cancer risks, the threshold is a hazard index value greater than one (1).

Section 3 – Emissions Estimates

Modeling Methodology

This health risk assessment was performed using AERMOD and in accordance with the SCAQMD's Health Risk Assessment Guidance for Analyzing Cancer Risk from Mobile Source Diesel Idling Emissions for CEQA Air Quality Analysis (SCAQMD 2003) and the 2017 Risk Assessment Procedures for Rules 1401, 1401.1 and 212 Version 8.1 based on OEHHA's *The Air Toxics Hot Spots Program Guidance Manual for the Preparation of Health Risk Assessments* ("Guidance Manual") (SCAQMD 2017).

SCAQMD recommends using the USEPA's AERMOD model for mobile source emissions impact assessments by modeling the individual roadways as line sources represented by adjacent volume sources, consistent with the USEPA Haul Road Workgroup Recommendations (USEPA 2012). For dispersion analysis, AERMOD has four source types that the user can choose from. Point sources refer to stacks, where the pollutants are released from a single point. The area source model is used to simulate the effects of fugitive emissions from sources such as storage piles and slag lumps. The open pit source model is used to stimulate fugitive emissions from below-grade open pits, such as surface coal mines or stone quarries. The volume source model is used to simulate the effects of emissions from sources such as building roof monitors and line sources, which include roads (USEPA 1995). This study uses the volume source model.

Due to the large number of volume sources modeled for this analysis, the corresponding coordinates of each volume source have not been included in this report. However, tables showing the roadways and volume sources modeled are included in Appendix A. In order to model the mobile source emissions from area diesel truck traffic, the roadways were treated as line sources represented by multiple adjacent volume sources. The initial horizontal and vertical plume standard deviations must be computed for each volume source modeled. According to the AERMOD user's guide, the initial horizontal standard deviation (σ_y) of individual volume sources should be estimated as the distance between separate volume sources divided by 2.15. In a similar manner, the AERMOD user guide specifies that the source initial vertical standard deviation (σ_z) for a surface-based source (simulating truck travel on roadways or idling at truck bays) should be estimated as the height of the building divided by the same factor of 2.15. For roadway parameters, the USEPA Haul Road Workgroup Recommendations was utilized for calculating the volume source characteristics based on the height and width of heavy duty diesel trucks.

The area studied as part of this health risk assessment is much larger than the Project site itself and is bounded by 5th Street to the north, California Street to the west, Interstate10 (I-10) to the south, and State Route 210 (SR-210) to the east. The local roadway segments modeled are listed in **Table 1**, below, and are based on the truck distribution patterns identified in the Project-specific Traffic Study (WEBB 2018).

Table 1 – Local Road Segments Modeled

Roadway	Link Segment Description	Average Vehicle Speed (mph)
5th Street	B/n Alabama St. and SR-210	30
Palmetto Avenue	B/n California St. and Alabama St.	25
San Bernardino Avenue	B/n Alabama Street and SR-210	35
California Street	B/n Palmetto Ave. and I-10	25
Alabama Street	B/n 5th Street and River Bluff Ave.	35
	B/n River Bluff Ave. and Palmetto Ave.	35
	B/n Palmetto Ave. and San Bernardino Ave.	35
	B/n San Bernardino Ave. and I-10	35

In order to do the dispersion analysis, the initial concentration of DPM emitted per roadway segment modeled has to be estimated. The EMFAC2014 (CARB 2014b) developed by CARB was utilized to obtain an average emission factor for 2018 (existing) and 2020 (Project opening year) using the meteorological data for the South Coast Air Basin to estimate the particulate matter (PM) emissions generated by the truck traffic on the local roads near the Project site.

EMFAC2014 results are available by vehicle category. The Project-specific Traffic Study (WEBB 2018) provides truck data by axle number categorizing trucks as either 2-axle, 3-axle, or 4+-axle. To convert the axle-based truck categories to those within EMFAC2014, one of SCAQMD's recommended methods was used which equates 2-axle trucks to Light-Heavy Duty Diesel trucks (LHDT), 3-axle trucks to Medium-Heavy Duty Diesel Trucks (MHDT), and 4+-axle trucks to Heavy-Heavy Duty Diesel Truck (HHDT) (SCAQMD 2011).

Since PM emissions are also a function of vehicle speed, the modeled vehicle speeds along local roads and the freeway ranging between 5 miles per hour (mph) and 35 mph, depending on the road segment, were used. An average vehicle speed of 5 mph was modeled for the trucks traveling within the Project site. These vehicle speeds were chosen after consultation with staff at SCAQMD,[1] who suggested that the average vehicle speed be reduced for each roadway below the posted speed limit in order to model emissions from diesel trucks while they are idling at traffic lights or in congested traffic conditions. **Table 2** summarizes the emission factors and corresponding vehicle speeds used.

The below emission factors were adjusted to reflect actual percentages for each truck category identified in the Traffic Study (WEBB 2018) for the modeled scenarios on each road modeled to produce an average emission factor for each road segment modeled. These emission factors were averaged for each of the four age bins in the 2017 SCAQMD Guidance for each modeled scenario (Appendix A). For assessment of sensitive receptor cancer risk, the risk is calculated in individual age bins (e.g., third trimester, 0 to 2 years, etc.) rather than a single lifetime calculation, whereas, for offsite workers the default assumption is that working age begins at 16 years (SCAQMD 2017). These age bins are based on scientific data, which has shown that young animals are more sensitive than adult animals to exposure to many carcinogens, and are designed to take into account the increased sensitivity to carcinogens during early-in-life exposure. Each age bin is adjusted by an Age Sensitivity Factor (ASF) when calculating cancer risks to account for this increased sensitivity.

[1] Staff communication with James Koizumi on March 5, 2004.

Table 2 – EMFAC2014 Emission Factors Used

Speed	2018 Existing Emission Factors (grams/mile)			2020 Project Emission Factors (grams/mile)		
	LDT	MDT	HDT	LDT	MDT	HDT
0 mph (Idling)						
-0.25 to 0 years	0.797	0.278	0.036	0.780	0.131	0.019
0 to 2 years	0.793	0.253	0.034	0.773	0.073	0.018
2 to 16 years	0.682	0.047	0.012	0.644	0.013	0.008
16 to 30 years	0.682	0.047	0.012	0.644	0.013	0.008
5 mph						
-0.25 to 0 years	0.112	0.222	0.060	0.101	0.057	0.042
0 to 2 years	0.109	0.193	0.057	0.098	0.035	0.039
2 to 16 years	0.073	0.035	0.023	0.063	0.010	0.017
16 to 30 years	0.073	0.035	0.023	0.063	0.010	0.017
25 mph						
-0.25 to 0 years	0.037	0.089	0.031	0.034	0.040	0.024
0 to 2 years	0.036	0.080	0.029	0.034	0.024	0.023
2 to 16 years	0.026	0.017	0.013	0.023	0.007	0.010
16 to 30 years	0.026	0.017	0.013	0.023	0.007	0.010
30 mph						
-0.25 to 0 years	0.031	0.081	0.028	0.029	0.039	0.022
0 to 2 years	0.031	0.073	0.027	0.028	0.023	0.021
2 to 16 years	0.022	0.016	0.012	0.020	0.006	0.009
16 to 30 years	0.022	0.016	0.012	0.020	0.006	0.009
35 mph						
-0.25 to 0 years	0.027	0.077	0.026	0.025	0.039	0.020
0 to 2 years	0.027	0.070	0.025	0.025	0.023	0.019
2 to 16 years	0.020	0.015	0.011	0.018	0.006	0.009
16 to 30 years	0.020	0.015	0.011	0.018	0.006	0.009

Truck Counts

The number of trucks using local roads in 2018 was counted as part of the Project-specific Traffic Study (WEBB 2018). For 2020, the number of trucks generated and truck trip distribution was also modeled in the Traffic Study and included herein. The assumptions for truck distributions (LHDT, MHDT, and HHDT) in each scenario are contained in detail in Appendix A. The local road segments and truck average daily traffic (ADT) used for this analysis are listed in **Table 3**.

Table 3 – Average Daily Truck Traffic

Roadway	Link Segment Description	Truck ADT	
		Existing	Project
5th Street	B/n Alabama St. and SR-210	2,261	137
Palmetto Avenue	B/n California St. and Alabama St.	256	51
San Bernardino Avenue	B/n Alabama St. and SR-210	927	103
California Street	B/n Palmetto Ave. and I-10	2,369	51
Alabama Street	B/n 5th St. and River Bluff Ave.	1,543	137
	B/n River Bluff Ave. and Palmetto Ave.	1,636	103
	B/n Palmetto Ave. and San Bernardino Ave.	1,977	154
	B/n San Bernardino Ave. and I-10	1,941	51

Truck Idling

In addition to the emissions of DPM from trucks traveling along the roadways, it is also important to model the emissions of DPM from trucks while they are idling at the loading areas of the Project site. There are two loading areas at the Project site, with approximately equal numbers of dock doors on the east and west side of the building (**Figure 2 – Site Plan**). The emissions from the loading areas were calculated as line volume sources utilizing the idling emission factor shown in **Table 2**, calculated by EMFAC2014. All trucks were assumed to idle in the loading areas for 15 minutes.

Diesel Particulate Matter Dispersion Modeling

The AERMOD dispersion model uses available meteorological data (provided by SCAQMD) for the Project area in order to estimate the DPM concentrations at receptor locations. The meteorological data provided by SCAQMD used was for Redlands, CA. A uniform Cartesian receptor grid, with receptors placed at 100 meter intervals, extending in each direction of the Project boundary was used.

Estimation of Health Risks

Cancer Risks

Cancer risks are a calculated probability of the number of people who will develop cancer after exposure to DPM at the same concentration, 24 hours a day, 350 days a year for a lifetime of 70 years. As a conservative measure, the SCAQMD does not recognize indoor adjustments for residents. However, a study by published in the Journal of Air and Waste Management Association in 2001 (Cackette/Lloyd, pp. 809–847) shows that the typical person spends approximately 87 percent of their time indoors, 5 percent of their time outdoors, and 7 percent of their time in vehicles.

The cancer risks from DPM occur exclusively through the inhalation pathway; therefore, the maximum individual cancer risk (MICR) can be estimated from the following equation:

$$*MICR_{DPM} = CP_{DPM} \bullet DI_{DPM}$$

where,

$MICR_{DPM}$ Cancer risk from diesel particulate matter (DPM); the probability of an individual developing cancer as a result of exposure to DPM.

CP_{DPM} [1] Cancer Potency factor for DPM $(mg/kg\text{-}day)^{-1}$; estimated probability that a person will contract cancer as a result of inhalation of a DPM concentration of 1mg per kilogram of bodyweight continuously over a period of 70 years CP_{DPM} value of 1.1 $(mg/kg\text{-}day)^{-1}$

DI_{DPM} [2] Dose through inhalation (mg/kg-day)

- obtained by multiplying C_{air} x ASF x ED x FAH x DBR x (EF/70) x 10^{-6}
    - C_{air} is the Annual Average 24 hour per day concentration of DPM in air ($\mu g/m^3$) (calculated by AERMOD).
    - ASF is the age specific factor.
    - ED is the exposure duration in years.
    - FAH is the fraction of time at home.
    - DBR is the daily breathing rate
        - To be most protective, the DBR was adjusted for each age group,
    - EF is the exposure factor
        - Most sensitive value of 0.96 used.
        - Off-site receptor value of 0.68 was used.

* Table of data used in calculations can be found in Appendix A.

1. From Table 2.0 of the 2017 SCAQMD Permit Application Package "N" (For Use in Conjunction with the Risk Assessment Procedures for Rules 1401, 1401.1 and 212 Version 8.1 [SCAQMD 2017]).
2. From Table 4.0 of the 2017 SCAQMD Permit Application Package "N".

This probability is usually expressed in terms of the number of people who will develop cancer per one million people who are also exposed. The exposure assumptions provided in the above calculations are based on the SCAQMD 2017 Permit Applications Package "N" which is based on The Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments updated by OEHHA in 2015 (OEHHA 2015). In 2015, OEHHA adopted updated Guidelines (OEHHA 2015) for risk assessments conducted under The Air Toxics "Hot Spots" Information and Assessment Act of 1987 (AB2588), which superseded the previous 2003 Guidelines. The Air Toxics "Hot Spots" Information and Assessment Act requires stationary sources (facilities) to report the type and quantity of substances they routinely release into the air. For risk assessments conducted under AB 2588, OEHHA applies specific adjustment factors to all carcinogens regardless of purported mechanism of action. However, U.S. EPA guidance relating to the use of early life exposure adjustment factors[2] explains that use of adjustment factors is only necessary when carcinogens act "through the mutagenic mode of action." A mutagen is a physical or chemical agent that changes genetic material, such as DNA, which increases the frequency of mutations and produces carcinogenic effects. The use of adjustment factors is recommended to account for the susceptibility of producing adverse health effects during early life stages from exposure to these mutagenic compounds. Because DPM does not elicit a mutagenic mode of action, the use of age specific adjustment factors is not warranted. Nonetheless, age adjustment factors were used herein to ensure a conservative analysis.

Additionally, with regard to applicability of the risk assessment procedures, OEHHA has indicated that roadways are not part of the Hot Spots program because the program only addresses stationary sources. Nonetheless, this HRA conservatively used the 2017 updated Risk Assessment Procedures for Rules 1401 and 212.

Modeled Cancer Risks

Six (6) separate discrete receptors located at sensitive receptors and off-site worker receptors within the Project vicinity were modeled (**Figure 3**). Receptor 1 is located at the edge of the Packinghouse Christian Academy located one mile south of the Project, off of Alabama Street. Receptors 2 and 3 are located near the intersection of California Street and Lugonia Avenue, southwest of the Project site. Receptor 2 is representative of the Kaiser Permanente hospital and Receptor 3 is representative of a water park. Receptor 4 is located at a residence located off of 5th Street over one mile north of the Project site within an industrial area. Receptors 5 and 6 are off-site worker receptors located at the existing warehouse uses east and west, immediately adjacent to the Project site.[3]

Existing cancer risks were modeled based on the existing DPM concentrations in the Project vicinity to represent cancer risks from the modeled traffic only and, as such, do not include background DPM concentrations. The Project's anticipated increases in DPM and cancer risk were also modeled to determine if the Project would result in excess cancer risk above the SCAQMD threshold of 10 in one million.

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[2] U.S. EPA, Supplemental Guidance for Assessing Susceptibility from Early-Life Exposure to Carcinogens, EPA/630/R-003F, March 2005. Available at: https://archive.epa.gov/raf/web/pdf/childrens_supplement_final.pdf.

[3] Off-site workers utilized a different exposure factor (EVF = 0.68) and daily breathing rate (DBR = 230), per SCAQMD Permit Application Package "N"

G:\2018\18-0011\GIS\HRA_Receptors.mxd; Map created 09 Apr 2018

Sources: San Bernardino Co. GIS, 2018, (parcels and streets) and 2016 (imagery).

0 1,000 2,000 3,000 4,000 Feet

Figure 3 - Discrete Receptor Locations

Duke Warehouse at Alabama and Palmetto

ALBERT A. WEBB ASSOCIATES

The existing cancer risk at modeled receptors is summarized in **Table 4**, below.

Table 4 – Existing (2018) Cancer Risk at Discrete Receptors

Receptor	Cancer Risk (per million)
Sensitive Receptors	
1	30.0
2	52.7
3	42.7
4	3.2
Off-site Worker Receptors	
5	1.4
6	0.5

Three of the six modeled receptor locations are exposed to excess cancer risks from DPM on the modeled roadways that exceed the SCAQMD threshold of 10 in one million. The highest modeled cancer risk at discrete receptors is 52.7 per million at Receptor 2, a sensitive receptor. The highest cancer risk to modeled off-site worker receptors is 1.4 per million. The reported maximum modeled concentration of DPM for off-site workers is located a mile northeast of the Project site on 5th Street between Alabama Street and the SR-210 (an area without sensitive uses) and equates to an excess cancer risk of 2.2 in one million.

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The Project-generated cancer risks to the discrete receptor locations modeled are summarized in **Table 5**.

Table 5 – Project-Generated Cancer Risk at Discrete Receptors

Receptor	Cancer risk (per million)
Sensitive Receptors	
1	1.2
2	0.7
3	0.6
4	0.2
Off-site Worker Receptors	
5	0.3
6	0.2

The greatest excess cancer risk faced by discrete sensitive and off-site worker receptors was 1.2 in one million or less. The reported maximum modeled DPM concentration to non-sensitive receptors is located near the on-site loading area in the east side of the Project site and would result in an excess cancer risk of 1.1 in one million.

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Non-Cancer Risks

The non-cancer risks can be described as acute (short-term, generally 1-hour peak exposures) or chronic (long-term exposure, defined as 12 percent of a lifetime or about 8 years for humans) health impacts. OEHHA has developed acute and chronic reference exposure levels (REL) for determining the non-cancer health impacts of toxic substances. Exceeding the acute or chronic REL does not necessarily indicate that an adverse health impact will occur; however, levels of exposure above the REL have an increasing but undefined probability of resulting in an adverse health impact, particularly in sensitive individuals (OEHHA 2003). For DPM, there is no value for the acute REL and the chronic REL is 5 µg/m^3.

The relationship for the non-cancer health effects of DPM is given by the following equation:

$$\mathbf{HI_{DPM} = C_{DPM} / REL_{DPM}}$$

where,

HI_{DPM} Hazard Index; an expression of the potential for non-cancer health effects.

C_{DPM} Annual average DPM concentration in µg/m^3.

REL_{DPM} Reference exposure level (REL) for DPM; the DPM concentration at which no adverse health effects are anticipated.

The maximum DPM concentration of 0.04094 µg/m^3 occurs at sensitive Receptor 2, the Kaiser Permanente hospital off California Street under existing conditions. Using the equation above, the hazard index is 0.008 which is less than one percent of the allowed threshold of 1.

Recommended Mitigation Measures

Because the Project's DPM emissions do not exceed the 10 in one million threshold, no mitigation is required.

Conclusion

Based on the analysis herein, without mitigation, the long-term DPM emissions directly from the Project will not result in cancer risks exceeding the SCAQMD 10-in-one-million threshold at sensitive receptors.

Non-cancer risks are less than one percent of the SCAQMD recommended threshold.

Section 4 – References

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The following documents were referred to as general information sources during preparation of this document. They are available for public review at the locations indicated after each listing and identified out at the end of this section. Some of these documents are also available at public libraries and at other public agency offices.

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Location	**Address**
County of San Bernardino	County of San Bernardino, Planning Division 201 North E Street, 3rd Floor, San Bernardino, CA 92401
SCAQMD	South Coast Air Quality Management District 21865 East Copley Drive Diamond Bar, CA 91765-4182
UCR	University of California, Riverside Science Library Riverside, CA 92521

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APPENDIX A

Dispersion Modeling Parameters and Output

2018 Average Truck Emission Rates (grams/mile; grams/idle-hour)

	0 mph			5 mph			25 mph			30 mph			35 mph		
	LHDT	MHDT	HHDT	LHDT	MHDT	HHDT	LHDT	MHDT	HHDT	LHDT	MHDT	HHDT	LHDT	MHDT	HHDT
2018	0.797	0.278	0.036	0.112	0.222	0.060	0.037	0.089	0.031	0.031	0.081	0.028	0.027	0.077	0.026
2019	0.790	0.228	0.031	0.106	0.165	0.055	0.036	0.071	0.028	0.030	0.066	0.026	0.026	0.063	0.024
2020	0.780	0.131	0.019	0.101	0.057	0.042	0.034	0.040	0.024	0.029	0.039	0.022	0.025	0.039	0.020
2021	0.766	0.016	0.017	0.095	0.013	0.036	0.033	0.007	0.021	0.028	0.007	0.020	0.024	0.006	0.018
2022	0.748	0.013	0.014	0.089	0.012	0.032	0.031	0.007	0.019	0.026	0.006	0.017	0.023	0.006	0.016
2023	0.730	0.005	0.010	0.083	0.006	0.013	0.030	0.004	0.008	0.025	0.003	0.007	0.022	0.003	0.006
2024	0.710	0.005	0.009	0.077	0.006	0.013	0.028	0.004	0.008	0.024	0.004	0.007	0.021	0.003	0.006
2025	0.690	0.004	0.008	0.072	0.006	0.013	0.026	0.004	0.008	0.022	0.004	0.007	0.020	0.003	0.006
2026	0.670	0.003	0.007	0.066	0.006	0.012	0.025	0.004	0.007	0.021	0.004	0.007	0.019	0.003	0.006
2027	0.647	0.003	0.006	0.061	0.006	0.012	0.023	0.004	0.007	0.020	0.003	0.007	0.017	0.003	0.006
2028	0.625	0.003	0.006	0.056	0.006	0.012	0.021	0.004	0.007	0.018	0.003	0.007	0.016	0.003	0.006
2029	0.601	0.003	0.005	0.051	0.006	0.012	0.020	0.004	0.007	0.017	0.003	0.007	0.015	0.003	0.006
2030	0.578	0.002	0.004	0.046	0.006	0.012	0.019	0.004	0.007	0.016	0.003	0.007	0.014	0.003	0.006
2031	0.556	0.002	0.004	0.042	0.006	0.012	0.017	0.004	0.007	0.015	0.003	0.007	0.013	0.003	0.006
2032	0.537	0.002	0.004	0.038	0.006	0.011	0.016	0.004	0.007	0.014	0.003	0.006	0.012	0.003	0.006
2033	0.518	0.002	0.003	0.035	0.006	0.011	0.015	0.004	0.007	0.013	0.003	0.006	0.012	0.003	0.006
2034	0.500	0.002	0.003	0.032	0.006	0.011	0.014	0.004	0.007	0.012	0.003	0.006	0.011	0.003	0.006
2035	0.483	0.002	0.003	0.030	0.006	0.011	0.013	0.004	0.007	0.011	0.003	0.006	0.010	0.003	0.006
2036	0.468	0.002	0.003	0.028	0.006	0.011	0.012	0.004	0.007	0.011	0.003	0.006	0.010	0.003	0.006
2037	0.453	0.002	0.002	0.025	0.006	0.011	0.012	0.004	0.007	0.010	0.003	0.006	0.009	0.003	0.006
2038	0.439	0.002	0.002	0.024	0.006	0.011	0.011	0.004	0.007	0.010	0.003	0.006	0.009	0.003	0.006
2039	0.427	0.002	0.002	0.022	0.006	0.011	0.011	0.004	0.007	0.009	0.003	0.006	0.008	0.003	0.006
2040	0.415	0.002	0.002	0.020	0.006	0.011	0.010	0.004	0.007	0.009	0.003	0.006	0.008	0.003	0.006
2041	0.405	0.001	0.002	0.019	0.006	0.011	0.010	0.004	0.007	0.008	0.003	0.006	0.008	0.003	0.006
2042	0.396	0.001	0.002	0.018	0.006	0.011	0.009	0.004	0.007	0.008	0.003	0.006	0.007	0.003	0.006
2043	0.388	0.001	0.002	0.017	0.006	0.011	0.009	0.004	0.007	0.008	0.003	0.006	0.007	0.003	0.006
2044	0.380	0.001	0.002	0.017	0.006	0.011	0.009	0.004	0.007	0.008	0.003	0.006	0.007	0.003	0.006
2045	0.373	0.001	0.002	0.016	0.006	0.011	0.008	0.004	0.007	0.007	0.003	0.006	0.007	0.003	0.006
2046	0.367	0.001	0.002	0.015	0.006	0.011	0.008	0.004	0.007	0.007	0.003	0.006	0.006	0.003	0.006
2047	0.361	0.001	0.002	0.014	0.006	0.011	0.008	0.004	0.007	0.007	0.003	0.006	0.006	0.003	0.006
-.25 to 0	0.797	0.278	0.036	0.112	0.222	0.060	0.037	0.089	0.031	0.031	0.081	0.028	0.027	0.077	0.026
0 to 2	0.793	0.253	0.034	0.109	0.193	0.057	0.036	0.080	0.029	0.031	0.073	0.027	0.027	0.070	0.025
2 to 16	0.682	0.047	0.012	0.073	0.035	0.023	0.026	0.017	0.013	0.022	0.016	0.012	0.020	0.015	0.011
16 to 30	0.682	0.047	0.012	0.073	0.035	0.023	0.026	0.017	0.013	0.022	0.016	0.012	0.020	0.015	0.011

Existing Road Segment Emission Rates with Existing Truck Mix[1]

Speed ►	0 mph	5 mph	25 mph	30 mph	35 mph
Road # ▼					
1)					
-.25 to 0				0.039 grams/mile	
0 to 2				0.037 grams/mile	
2 to 16				0.017 grams/mile	
16 to 30				0.017 grams/mile	
2)					
-.25 to 0			0.049 grams/mile		
0 to 2			0.046 grams/mile		
2 to 16			0.021 grams/mile		
16 to 30			0.021 grams/mile		
3)					
-.25 to 0					0.034 grams/mile
0 to 2					0.033 grams/mile
2 to 16					0.017 grams/mile
16 to 30					0.017 grams/mile
4)					
-.25 to 0			0.051 grams/mile		
0 to 2			0.048 grams/mile		
2 to 16			0.019 grams/mile		
16 to 30			0.019 grams/mile		
5)					
-.25 to 0					0.042 grams/mile
0 to 2					0.039 grams/mile
2 to 16					0.014 grams/mile
16 to 30					0.014 grams/mile
6)					
-.25 to 0					0.041 grams/mile
0 to 2					0.039 grams/mile
2 to 16					0.014 grams/mile
16 to 30					0.014 grams/mile
7)					
-.25 to 0					0.041 grams/mile
0 to 2					0.039 grams/mile
2 to 16					0.015 grams/mile
16 to 30					0.015 grams/mile
8)					
-.25 to 0					0.038 grams/mile
0 to 2					0.036 grams/mile
2 to 16					0.016 grams/mile
16 to 30					0.016 grams/mile

Note: [1] Existing truck mix based on truck counts in Traffic Study, calculated on following tab.

Existing Truck Mix

Roadway Segment	Link Segment Description	2 Axle	% of total	3 Axle	% of total	4+ Axle	% of total	total # of trucks
5th Street	B/n Alabama St. and SR-210	1,000	44.2	413	18.3	848	37.5	2,261
Palmetto Avenue	B/n California St and Alabama St.	142	55.5	65	25.4	49	19.1	256
San Bernardino Avenue	B/n Alabama Street and SR-210	548	59.1	137	14.8	242	26.1	927
California St	B/n Palmetto Ave and I-10	762	32.2	757	32.0	850	35.9	2,369
Alabama Street	B/n 5th Street and River Bluff Ave.	322	20.9	467	30.3	754	48.9	1,543
	B/n River Bluff Ave and Palmetto Ave	378	23.1	483	29.5	775	47.4	1,636
	B/n Palmetto Ave and San Bernardino Ave	522	26.4	573	29.0	882	44.6	1,977
	B/n San Bernardino Ave and I-10	832	42.9	423	21.8	686	35.3	1,941

Roadway Links Modeled (2018) - Existing Trucks

Roadway Segment	Link Segment Description	Vol Source Spacing (ft)	Vol Source Spacing (m)	Average Speed (mph)	Age	Emission Factor (g/mi)	Existing Truck ADT	Length (m)	Total Line Emission Rate (g/s)	SLINE #
5th Street	B/n Alabama St. and SR-210	28.18	8.59	30	-.25 to 0	0.039	2,261	833.70	**5.298E-04**	1
					0 to 2	0.037			**5.022E-04**	
					2 to 16	0.017			**2.339E-04**	
					16 to 30	0.017			**2.339E-04**	
Palmetto Ave	B/n California St. and Alabama St.	28.18	8.59	25	-.25 to 0	0.049	256	1,607.30	**1.448E-04**	2
					0 to 2	0.046			**1.364E-04**	
					2 to 16	0.021			**6.329E-05**	
					16 to 30	0.021			**6.329E-05**	
San Bernardino Ave.	B/n Alabama St. and SR-210	28.18	8.59	35	-.25 to 0	0.034	927	649.70	**1.489E-04**	3
					0 to 2	0.033			**1.421E-04**	
					2 to 16	0.017			**7.283E-05**	
					16 to 30	0.017			**7.283E-05**	
California Street	B/n Palmetto Ave and I-10	28.18	8.59	25	-.25 to 0	0.051	2,369	1,958.60	**1.711E-03**	4
					0 to 2	0.048			**1.596E-03**	
					2 to 16	0.019			**6.192E-04**	
					16 to 30	0.019			**6.192E-04**	
Alabama	B/n 5th Street and River Bluff Ave	28.18	8.59	35	-.25 to 0	0.042	1,543	2,313.50	**1.072E-03**	5
					0 to 2	0.039			**1.003E-03**	
					2 to 16	0.014			**3.625E-04**	
					16 to 30	0.014			**3.625E-04**	
	B/n River Bluff Ave and Palmetto Ave	28.18	8.59	35	-.25 to 0	0.041	1,636	224.30	**1.092E-04**	6
					0 to 2	0.039			**1.022E-04**	
					2 to 16	0.014			**3.765E-05**	
					16 to 30	0.014			**3.765E-05**	
	B/n Palmetto Ave and San Bernardino Ave	28.18	8.59	35	-.25 to 0	0.041	1,977	790.80	**4.627E-04**	7
					0 to 2	0.039			**4.337E-04**	
					2 to 16	0.015			**1.634E-04**	
					16 to 30	0.015			**1.634E-04**	
	B/n San Bernardino Ave and I-10	28.18	8.59	35	-.25 to 0	0.038	1,941	1,121.90	**5.907E-04**	8
					0 to 2	0.036			**5.583E-04**	
					2 to 16	0.016			**2.456E-04**	
					16 to 30	0.016			**2.456E-04**	

2020 Average Truck Emission Rates (grams/mile; grams/idle-hour)

	0 mph			5 mph			25 mph			30 mph			35 mph		
	LHDT	MHDT	HHDT	LHDT	MHDT	HHDT	LHDT	MHDT	HHDT	LHDT	MHDT	HHDT	LHDT	MHDT	HHDT
2020	0.780	0.131	0.019	0.101	0.057	0.042	0.034	0.040	0.024	0.029	0.039	0.022	0.025	0.039	0.020
2021	0.766	0.016	0.017	0.095	0.013	0.036	0.033	0.007	0.021	0.028	0.007	0.020	0.024	0.006	0.018
2022	0.748	0.013	0.014	0.089	0.012	0.032	0.031	0.007	0.019	0.026	0.006	0.017	0.023	0.006	0.016
2023	0.730	0.005	0.010	0.083	0.006	0.013	0.030	0.004	0.008	0.025	0.003	0.007	0.022	0.003	0.006
2024	0.710	0.005	0.009	0.077	0.006	0.013	0.028	0.004	0.008	0.024	0.004	0.007	0.021	0.003	0.006
2025	0.690	0.004	0.008	0.072	0.006	0.013	0.026	0.004	0.008	0.022	0.004	0.007	0.020	0.003	0.006
2026	0.670	0.003	0.007	0.066	0.006	0.012	0.025	0.004	0.007	0.021	0.004	0.007	0.019	0.003	0.006
2027	0.647	0.003	0.006	0.061	0.006	0.012	0.023	0.004	0.007	0.020	0.003	0.007	0.017	0.003	0.006
2028	0.625	0.003	0.006	0.056	0.006	0.012	0.021	0.004	0.007	0.018	0.003	0.007	0.016	0.003	0.006
2029	0.601	0.003	0.005	0.051	0.006	0.012	0.020	0.004	0.007	0.017	0.003	0.007	0.015	0.003	0.006
2030	0.578	0.002	0.004	0.046	0.006	0.012	0.019	0.004	0.007	0.016	0.003	0.007	0.014	0.003	0.006
2031	0.556	0.002	0.004	0.042	0.006	0.012	0.017	0.004	0.007	0.015	0.003	0.007	0.013	0.003	0.006
2032	0.537	0.002	0.004	0.038	0.006	0.011	0.016	0.004	0.007	0.014	0.003	0.006	0.012	0.003	0.006
2033	0.518	0.002	0.003	0.035	0.006	0.011	0.015	0.004	0.007	0.013	0.003	0.006	0.012	0.003	0.006
2034	0.500	0.002	0.003	0.032	0.006	0.011	0.014	0.004	0.007	0.012	0.003	0.006	0.011	0.003	0.006
2035	0.483	0.002	0.003	0.030	0.006	0.011	0.013	0.004	0.007	0.011	0.003	0.006	0.010	0.003	0.006
2036	0.468	0.002	0.003	0.028	0.006	0.011	0.012	0.004	0.007	0.011	0.003	0.006	0.010	0.003	0.006
2037	0.453	0.002	0.002	0.025	0.006	0.011	0.012	0.004	0.007	0.010	0.003	0.006	0.009	0.003	0.006
2038	0.439	0.002	0.002	0.024	0.006	0.011	0.011	0.004	0.007	0.010	0.003	0.006	0.009	0.003	0.006
2039	0.427	0.002	0.002	0.022	0.006	0.011	0.011	0.004	0.007	0.009	0.003	0.006	0.008	0.003	0.006
2040	0.415	0.002	0.002	0.020	0.006	0.011	0.010	0.004	0.007	0.009	0.003	0.006	0.008	0.003	0.006
2041	0.405	0.001	0.002	0.019	0.006	0.011	0.010	0.004	0.007	0.008	0.003	0.006	0.008	0.003	0.006
2042	0.396	0.001	0.002	0.018	0.006	0.011	0.009	0.004	0.007	0.008	0.003	0.006	0.007	0.003	0.006
2043	0.388	0.001	0.002	0.017	0.006	0.011	0.009	0.004	0.007	0.008	0.003	0.006	0.007	0.003	0.006
2044	0.380	0.001	0.002	0.017	0.006	0.011	0.009	0.004	0.007	0.008	0.003	0.006	0.007	0.003	0.006
2045	0.373	0.001	0.002	0.016	0.006	0.011	0.008	0.004	0.007	0.007	0.003	0.006	0.007	0.003	0.006
2046	0.367	0.001	0.002	0.015	0.006	0.011	0.008	0.004	0.007	0.007	0.003	0.006	0.006	0.003	0.006
2047	0.361	0.001	0.002	0.014	0.006	0.011	0.008	0.004	0.007	0.007	0.003	0.006	0.006	0.003	0.006
2048	0.355	0.001	0.002	0.014	0.006	0.011	0.008	0.004	0.007	0.007	0.003	0.006	0.006	0.003	0.006
2049	0.349	0.001	0.002	0.013	0.006	0.011	0.010	0.004	0.008	0.007	0.003	0.006	0.006	0.003	0.006
-.25 to 0	0.780	0.131	0.019	0.101	0.057	0.042	0.034	0.040	0.024	0.029	0.039	0.022	0.025	0.039	0.020
0 to 2	0.773	0.073	0.018	0.098	0.035	0.039	0.034	0.024	0.023	0.028	0.023	0.021	0.025	0.023	0.019
2 to 16	0.644	0.013	0.008	0.063	0.010	0.017	0.023	0.007	0.010	0.020	0.006	0.009	0.018	0.006	0.009
16 to 30	0.644	0.013	0.008	0.063	0.010	0.017	0.023	0.007	0.010	0.020	0.006	0.009	0.018	0.006	0.009

Project Road Segment Emission Rates with Project Truck Mix[1]																				
Speed ►	**0 mph**			**5 mph**			**25 mph**			**30 mph**			**35 mph**							
Road # ▼																				
1)																				
-.25 to 0										0.027	grams/mile									
0 to 2										0.022	grams/mile									
2 to 16										0.010	grams/mile									
16 to 30										0.010	grams/mile									
2)																				
-.25 to 0							0.029	grams/mile												
0 to 2							0.025	grams/mile												
2 to 16							0.012	grams/mile												
16 to 30							0.012	grams/mile												
3)																				
-.25 to 0																0.025	grams/mile			
0 to 2																0.021	grams/mile			
2 to 16																0.010	grams/mile			
16 to 30																0.010	grams/mile			
4)																				
-.25 to 0							0.029	grams/mile												
0 to 2							0.025	grams/mile												
2 to 16							0.012	grams/mile												
16 to 30							0.012	grams/mile												
5)																				
-.25 to 0																0.025	grams/mile			
0 to 2																0.021	grams/mile			
2 to 16																0.010	grams/mile			
16 to 30																0.010	grams/mile			
6)																				
-.25 to 0																0.025	grams/mile			
0 to 2																0.021	grams/mile			
2 to 16																0.010	grams/mile			
16 to 30																0.010	grams/mile			
7)																				
-.25 to 0																0.025	grams/mile			
0 to 2																0.021	grams/mile			
2 to 16																0.010	grams/mile			
16 to 30																0.010	grams/mile			
8)																				
-.25 to 0																0.025	grams/mile			
0 to 2																0.021	grams/mile			
2 to 16																0.010	grams/mile			
16 to 30																0.010	grams/mile			
9) through 11) - On-site Travel																				
-.25 to 0				0.055	grams/mile															
0 to 2				0.048	grams/mile															
2 to 16				0.023	grams/mile															
16 to 30				0.023	grams/mile															
12) and 13) Idling																				
-.25 to 0	0.173	grams/mile																		
0 to 2	0.158	grams/mile																		
2 to 16	0.117	grams/mile																		
16 to 30	0.117	grams/mile																		

Note: [1] Project truck mix based on Traffic Study, calculated on following tab.

Project Truck Mix

Roadway Segment	Link Segment Description	2 Axle	% of total	3 Axle	% of total	4+ Axle	% of total	total # of trucks
5th Street	B/n Alabama St and SR-210	23	16.9	31	22.7	83	60.3	137
Palmetto Avenue	B/n California St and Alabama St	9	16.9	12	22.7	31	60.3	51
San Bernardino Ave	B/n Alabama St and SR-210	17	16.9	23	22.7	62	60.3	103
California Street	B/n Palmetto Ave and I-10	9	16.9	12	22.7	31	60.3	51
Alabama Street	B/n 5th Street and River Bluff Ave.	23	16.9	31	22.7	83	60.3	137
	B/n River Bluff Ave. and Palmetto Ave.	17	16.9	23	22.7	62	60.3	103
	B/n Palmetto Ave and San Bernardino Ave.	26	16.9	35	22.7	93	60.3	154
	B/n San Bernardino Ave. and I-10	9	16.9	12	22.7	31	60.3	51

Roadway Links Modeled (2020) - Project Only Trucks

Roadway Segment	Link Segment Description	Vol Source Spacing (ft)	Vol Source Spacing (m)	Average Speed (mph)	Age	Emission Factor (g/mi)	Project Truck ADT	Length (m)	Total Line Emission Rate (g/s)	SLINE #
5th Street	B/n Alabama St. and SR-210	28.18	8.59	30	-.25 to 0	0.027	137	833.70	**2.206E-05**	1
					0 to 2	0.022			**1.849E-05**	
					2 to 16	0.010			**8.556E-06**	
					16 to 30	0.010			**8.556E-06**	
Palmetto Ave	B/n California St. and Alabama St.	28.18	8.59	25	-.25 to 0	0.029	51	1,607.30	**1.731E-05**	2
					0 to 2	0.025			**1.464E-05**	
					2 to 16	0.012			**6.876E-06**	
					16 to 30	0.012			**6.876E-06**	
San Bernardino Ave.	B/n Alabama St. and SR-210	28.18	8.59	35	-.25 to 0	0.025	103	649.70	**1.222E-05**	3
					0 to 2	0.021			**1.011E-05**	
					2 to 16	0.010			**4.596E-06**	
					16 to 30	0.010			**4.596E-06**	
California Street	B/n Palmetto Ave and I-10	28.18	8.59	25	-.25 to 0	0.029	51	1,958.60	**2.109E-05**	4
					0 to 2	0.025			**1.784E-05**	
					2 to 16	0.012			**8.379E-06**	
					16 to 30	0.012			**8.379E-06**	
Alabama	B/n 5th Street and River Bluff Ave	28.18	8.59	35	-.25 to 0	0.025	137	2,313.50	**5.793E-05**	5
					0 to 2	0.021			**4.795E-05**	
					2 to 16	0.010			**2.179E-05**	
					16 to 30	0.010			**2.179E-05**	
	B/n River Bluff Ave and Palmetto Ave	28.18	8.59	35	-.25 to 0	0.025	103	224.30	**4.222E-06**	6
					0 to 2	0.021			**3.495E-06**	
					2 to 16	0.010			**1.588E-06**	
					16 to 30	0.010			**1.588E-06**	
	B/n Palmetto Ave and San Bernardino Ave	28.18	8.59	35	-.25 to 0	0.025	154	790.80	**2.226E-05**	7
					0 to 2	0.021			**1.843E-05**	
					2 to 16	0.010			**8.373E-06**	
					16 to 30	0.010			**8.373E-06**	
	B/n San Bernardino Ave and I-10	28.18	8.59	35	-.25 to 0	0.025	51	1,121.90	**1.046E-05**	8
					0 to 2	0.021			**8.657E-06**	
					2 to 16	0.010			**3.934E-06**	
					16 to 30	0.010			**3.934E-06**	

On-Site Travel

Roadway	Vol Source Spacing (ft)	Vol Source Spacing (m)	Average Speed (mph)	Age	Emission Factor (g/mi)	Project Truck ADT	Length (m)	Total Line Emission Rate (g/s)	SLINE #
Eastern Drive Aisle	28.18	8.59	5	-.25 to 0	0.055	240	745	**7.091E-05**	9
				0 to 2	0.048			**6.171E-05**	
				2 to 16	0.023			**2.986E-05**	
				16 to 30	0.023			**2.986E-05**	
Western Driveway	28.18	8.59	5	-.25 to 0	0.055	103	186	**7.583E-06**	10
				0 to 2	0.048			**6.599E-06**	
				2 to 16	0.023			**3.193E-06**	
				16 to 30	0.023			**3.193E-06**	
Western Drive Aisle	28.18	8.59	5	-.25 to 0	0.055	137	651	**3.534E-05**	11
				0 to 2	0.048			**3.076E-05**	
				2 to 16	0.023			**1.488E-05**	
				16 to 30	0.023			**1.488E-05**	

Truck Idling (15 min)

Location	Vol Source Spacing (ft)	Vol Source Spacing (m)	Project Trucks	Age	Idling Time (min)	Emission Factor (g/hr)	Loading Areas	Total Line Emission Rate (g/s)	SLINE #
West Loading Area	28.18	8.59	172	-.25 to 0	15	0.173	1	**8.602E-05**	12
				0 to 2		0.158		**7.860E-05**	
				2 to 16		0.117		**5.798E-05**	
				16 to 30		0.117		**5.798E-05**	
East Loading Area	28.18	8.59	171	-.25 to 0	15	0.173	1	**8.552E-05**	13
				0 to 2		0.158		**7.814E-05**	
				2 to 16		0.117		**5.765E-05**	
				16 to 30		0.117		**5.765E-05**	

Project Only trucks are estimated percentages of the total truck trips generated in the Traffic Study.

MICR Calculations

Data for Table 4, Existing Cancer Risk at Sensitive Receptors

Receptor	Age Bin	DPM* Conc (µg/m3)	DBR** (Daily Breathing rate)	Age Specific Factor**	Exposure Duration**	Fraction of Time at Home**	EF** (Exposure Frequency)		CP*** (Cancer Potency Factor)	MICR (Maximum Individual Cancer Risk)	Cancer risk per million
1	-0.25 to 0	0.06152	361	10	0.25	1	0.96	1.00E-06	1.1	8.38E-07	0.8
	0 to 2	0.05808	1090	10	2	1	0.96	1.00E-06	1.1	1.91E-05	**19.1**
	2 to 16	0.02504	572	3	14	1	0.96	1.00E-06	1.1	9.07E-06	9.1
	16 to 30	0.02504	261	1	14	0.73	0.96	1.00E-06	1.1	1.01E-06	1.0
									Total	***3.00E-05***	**30.0**
2	-0.25 to 0	0.11302	361	10	0.25	1	0.96	1.00E-06	1.1	1.54E-06	1.5
	0 to 2	0.10544	1090	10	2	1	0.96	1.00E-06	1.1	3.47E-05	**34.7**
	2 to 16	0.04094	572	3	14	1	0.96	1.00E-06	1.1	1.48E-05	**14.8**
	16 to 30	0.04094	261	1	14	0.73	0.96	1.00E-06	1.1	1.65E-06	1.6
									Total	***5.27E-05***	**52.7**
3	-0.25 to 0	0.09159	361	10	0.25	1	0.96	1.00E-06	1.1	1.25E-06	1.2
	0 to 2	0.08545	1090	10	2	1	0.96	1.00E-06	1.1	2.81E-05	**28.1**
	2 to 16	0.03318	572	3	14	1	0.96	1.00E-06	1.1	1.20E-05	**12.0**
	16 to 30	0.03318	261	1	14	0.73	0.96	1.00E-06	1.1	1.34E-06	1.3
									Total	***4.27E-05***	**42.7**
4	-0.25 to 0	0.00667	361	10	0.25	1	0.96	1.00E-06	1.1	9.08E-08	0.1
	0 to 2	0.00628	1090	10	2	1	0.96	1.00E-06	1.1	2.07E-06	2.1
	2 to 16	0.00259	572	3	14	1	0.96	1.00E-06	1.1	9.39E-07	0.9
	16 to 30	0.00259	261	1	14	0.73	0.96	1.00E-06	1.1	1.04E-07	0.1
									Total	***3.20E-06***	***3.2***

Data for Table 4, Existing Cancer Risk at Off-Site Workers in Project Vicinity

Receptor	DPM* Conc (µg/m3)	DBR** (Daily Breathing rate)	Exposure Duration**	EF** (Exposure Frequency)		CP*** (Cancer Potency Factor)	MICR (Maximum Individual Cancer Risk)	Cancer risk per million
5	0.02207	230	25	0.68	1.00E-06	1.1	1.36E-06	1.4
6	0.00789	230	25	0.68	1.00E-06	1.1	4.85E-07	0.5
Max	0.03516	230	25	0.68	1.00E-06	1.1	2.16E-06	2.2

Data for Table 5, 2019 Project Cancer Risk at Sensitive Receptors

Receptor	Age Bin	DPM* Conc (µg/m3)	DBR** (Daily Breathing rate)	Age Specific Factor**	Exposure Duration**	Fraction of Time at Home**	EF** (Exposure Frequency)		CP*** (Cancer Potency Factor)	MICR (Maximum Individual Cancer Risk)	Cancer risk per million
1	-0.25 to 0	0.00260	361	10	0.25	1	0.96	1.00E-06	1.1	3.54E-08	0.0
	0 to 2	0.00217	1090	10	2	1	0.96	1.00E-06	1.1	7.14E-07	0.7
	2 to 16	0.00105	572	3	14	1	0.96	1.00E-06	1.1	3.81E-07	0.4
	16 to 30	0.00105	261	1	14	0.73	0.96	1.00E-06	1.1	4.23E-08	0.0
									Total	***1.17E-06***	***1.2***
2	-0.25 to 0	0.00155	361	10	0.25	1	0.96	1.00E-06	1.1	2.11E-08	0.0
	0 to 2	0.00131	1090	10	2	1	0.96	1.00E-06	1.1	4.31E-07	0.4
	2 to 16	0.00063	572	3	14	1	0.96	1.00E-06	1.1	2.28E-07	0.2
	16 to 30	0.00063	261	1	14	0.73	0.96	1.00E-06	1.1	2.54E-08	0.0
									Total	***7.06E-07***	***0.7***
3	-0.25 to 0	0.00128	361	10	0.25	1	0.96	1.00E-06	1.1	1.74E-08	0.0
	0 to 2	0.00109	1090	10	2	1	0.96	1.00E-06	1.1	3.58E-07	0.4
	2 to 16	0.00053	572	3	14	1	0.96	1.00E-06	1.1	1.92E-07	0.2
	16 to 30	0.00053	261	1	14	0.73	0.96	1.00E-06	1.1	2.13E-08	0.0
									Total	***5.89E-07***	***0.6***
4	-0.25 to 0	0.00042	361	10	0.25	1	0.96	1.00E-06	1.1	5.72E-09	0.0
	0 to 2	0.00036	1090	10	2	1	0.96	1.00E-06	1.1	1.18E-07	0.1
	2 to 16	0.00018	572	3	14	1	0.96	1.00E-06	1.1	6.52E-08	0.1
	16 to 30	0.00018	261	1	14	0.73	0.96	1.00E-06	1.1	7.24E-09	0.0
									Total	***1.97E-07***	***0.2***

Data for Table 5, Cancer Risk at Off-Site Workers in Project Vicinity from Project OnlyTraffic

Receptor	DPM* Conc (µg/m3)	DBR** (Daily Breathing rate)	Exposure Duration**	EF** (Exposure Frequency)		CP*** (Cancer Potency Factor)	MICR (Maximum Individual Cancer Risk)	Cancer risk per million
5	0.00546	230	25	0.68	1.00E-06	1.1	3.35E-07	0.3
6	0.00259	230	25	0.68	1.00E-06	1.1	1.59E-07	0.2
Max	0.01790	230	25	0.68	1.00E-06	1.1	1.10E-06	1.1

* DPM concentration calculated by AERMOD

** Values from Table 4.0 of 2017 Permit Application Package "N" For Use in Conjunction with SCAQMD Risk Assessment Procedures for Rules 1401, 1401.1, and 212 version 8.1

*** CP for DPM value from Table 2.0 of 2017 Permit Application Package "N"

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**
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**
** AERMOD Input Produced by:
** AERMOD View Ver. 9.5.0
** Lakes Environmental Software Inc.
** Date: 4/3/2018
** File: C:\Users\eliza\Desktop\ExistingAB!\ExistingAB!.ADI
**
**************************************
**
**
**************************************
** AERMOD Control Pathway
**************************************
**
**
CO STARTING
   TITLEONE Duke Warehouse at Alabama and Palmetto
   TITLETWO Existing DPM Concentrations (2018) - AB1
   MODELOPT DFAULT CONC
   AVERTIME PERIOD
   URBANOPT 2035210 San_Bernardino_County
   POLLUTID DPM
   RUNORNOT RUN
   ERRORFIL ExistingAB!.err
CO FINISHED
**
**************************************
** AERMOD Source Pathway
**************************************
**
**
SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **
** ------------------------------------------------------------------------
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE1
** DESCRSRC 5th St b/n Alabama St and SR-210
** PREFIX
** Length of Side = 8.59
** Configuration = Adjacent
** Emission Rate = 0.0005298
** Vertical Dimension = 6.99
** SZINIT = 3.25
** Nodes = 4
** 480745.401, 3774134.486, 363.46, 3.49, 4.00
** 481061.555, 3774108.608, 366.99, 3.49, 4.00
** 481153.813, 3774104.108, 367.98, 3.49, 4.00
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** 481576.850, 3774134.486, 372.13, 3.49, 4.00
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   LOCATION L0000002     VOLUME   480758.243 3774133.434 363.94
   LOCATION L0000003     VOLUME   480766.805 3774132.734 364.00
   LOCATION L0000004     VOLUME   480775.366 3774132.033 364.00
   LOCATION L0000005     VOLUME   480783.927 3774131.332 364.00
   LOCATION L0000006     VOLUME   480792.489 3774130.631 364.00
   LOCATION L0000007     VOLUME   480801.050 3774129.931 364.00
   LOCATION L0000008     VOLUME   480809.612 3774129.230 364.00
   LOCATION L0000009     VOLUME   480818.173 3774128.529 364.00
   LOCATION L0000010     VOLUME   480826.734 3774127.828 364.06
   LOCATION L0000011     VOLUME   480835.296 3774127.128 364.16
   LOCATION L0000012     VOLUME   480843.857 3774126.427 364.26
   LOCATION L0000013     VOLUME   480852.418 3774125.726 364.41
   LOCATION L0000014     VOLUME   480860.980 3774125.025 364.61
   LOCATION L0000015     VOLUME   480869.541 3774124.325 364.79
   LOCATION L0000016     VOLUME   480878.103 3774123.624 364.97
   LOCATION L0000017     VOLUME   480886.664 3774122.923 365.00
   LOCATION L0000018     VOLUME   480895.225 3774122.222 365.00
   LOCATION L0000019     VOLUME   480903.787 3774121.522 365.00
   LOCATION L0000020     VOLUME   480912.348 3774120.821 365.00
   LOCATION L0000021     VOLUME   480920.909 3774120.120 365.00
   LOCATION L0000022     VOLUME   480929.471 3774119.419 365.00
   LOCATION L0000023     VOLUME   480938.032 3774118.719 365.00
   LOCATION L0000024     VOLUME   480946.593 3774118.018 365.22
   LOCATION L0000025     VOLUME   480955.155 3774117.317 365.51
   LOCATION L0000026     VOLUME   480963.716 3774116.616 365.79
   LOCATION L0000027     VOLUME   480972.278 3774115.916 366.00
   LOCATION L0000028     VOLUME   480980.839 3774115.215 366.00
   LOCATION L0000029     VOLUME   480989.400 3774114.514 366.00
   LOCATION L0000030     VOLUME   480997.962 3774113.813 366.00
   LOCATION L0000031     VOLUME   481006.523 3774113.113 366.00
   LOCATION L0000032     VOLUME   481015.084 3774112.412 366.00
   LOCATION L0000033     VOLUME   481023.646 3774111.711 366.00
   LOCATION L0000034     VOLUME   481032.207 3774111.010 366.08
   LOCATION L0000035     VOLUME   481040.769 3774110.310 366.36
   LOCATION L0000036     VOLUME   481049.330 3774109.609 366.65
   LOCATION L0000037     VOLUME   481057.891 3774108.908 366.93
   LOCATION L0000038     VOLUME   481066.463 3774108.369 367.00
   LOCATION L0000039     VOLUME   481075.043 3774107.950 367.00
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   LOCATION L0000045     VOLUME   481126.522 3774105.439 367.24
   LOCATION L0000046     VOLUME   481135.102 3774105.021 367.53
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   LOCATION L0000048     VOLUME   481152.261 3774104.184 368.00
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   LOCATION L0000066     VOLUME   481306.486 3774115.071 369.22
   LOCATION L0000067     VOLUME   481315.054 3774115.686 369.50
   LOCATION L0000068     VOLUME   481323.622 3774116.302 369.79
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   LOCATION L0000094     VOLUME   481546.388 3774132.298 372.03
   LOCATION L0000095     VOLUME   481554.956 3774132.913 372.06
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** End of LINE VOLUME Source ID = SLINE1
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** PREFIX
** Length of Side = 8.59
** Configuration = Adjacent
** Emission Rate = 0.0001448
** Vertical Dimension = 6.99
** SZINIT = 3.25
** Nodes = 4
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   LOCATION L0000207     VOLUME   479247.028 3771579.540 353.13
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   LOCATION L0000220     VOLUME   479358.697 3771578.913 354.29
   LOCATION L0000221     VOLUME   479367.286 3771578.865 354.58
   LOCATION L0000222     VOLUME   479375.876 3771578.817 354.87
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   LOCATION L0000228     VOLUME   479427.415 3771578.527 355.15
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LOCATION L0000241     VOLUME   479539.084 3771577.900 356.31
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LOCATION L0000243     VOLUME   479556.263 3771577.804 356.88
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LOCATION L0000287     VOLUME   479934.217 3771575.682 361.48
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** End of LINE VOLUME Source ID = SLINE2
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** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE3
** DESCRSRC San Bernardino Ave b/n Alabama St and SR-210
** PREFIX
** Length of Side = 8.59
** Configuration = Adjacent
** Emission Rate = 0.0001489
** Vertical Dimension = 6.99
** SZINIT = 3.25
** Nodes = 3
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** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE4
** DESCRSRC California St b/n Palmetto Ave and I-10
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** Configuration = Adjacent
** Emission Rate = 0.001711
** Vertical Dimension = 6.99
** SZINIT = 3.25
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** End of LINE VOLUME Source ID = SLINE4
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** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE5
** DESCRSRC Alabama St b/n 5th St and River Bluff Ave
** PREFIX
** Length of Side = 8.59
** Configuration = Adjacent
** Emission Rate = 0.001072
** Vertical Dimension = 6.99
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LOCATION L0002345     VOLUME   480747.352 3773623.264 365.48
LOCATION L0002346     VOLUME   480747.435 3773614.674 365.20
LOCATION L0002347     VOLUME   480747.517 3773606.085 364.91
LOCATION L0002348     VOLUME   480747.599 3773597.495 364.63
LOCATION L0002349     VOLUME   480747.681 3773588.905 364.45
LOCATION L0002350     VOLUME   480747.764 3773580.316 364.28
LOCATION L0002351     VOLUME   480747.846 3773571.726 364.11
LOCATION L0002352     VOLUME   480747.928 3773563.136 363.96
LOCATION L0002353     VOLUME   480748.010 3773554.547 363.85
LOCATION L0002354     VOLUME   480748.093 3773545.957 363.73
LOCATION L0002355     VOLUME   480748.175 3773537.368 363.62
LOCATION L0002356     VOLUME   480748.257 3773528.778 363.46
LOCATION L0002357     VOLUME   480748.339 3773520.188 363.29
LOCATION L0002358     VOLUME   480748.422 3773511.599 363.11
LOCATION L0002359     VOLUME   480748.497 3773503.009 362.96
LOCATION L0002360     VOLUME   480748.519 3773494.419 362.85
LOCATION L0002361     VOLUME   480748.541 3773485.829 362.74
LOCATION L0002362     VOLUME   480748.563 3773477.239 362.63
LOCATION L0002363     VOLUME   480748.585 3773468.649 362.62
LOCATION L0002364     VOLUME   480748.606 3773460.059 362.62
LOCATION L0002365     VOLUME   480748.628 3773451.469 362.62
LOCATION L0002366     VOLUME   480748.650 3773442.879 362.55
LOCATION L0002367     VOLUME   480748.672 3773434.289 362.38
LOCATION L0002368     VOLUME   480748.693 3773425.699 362.20
LOCATION L0002369     VOLUME   480748.715 3773417.109 362.02
LOCATION L0002370     VOLUME   480748.737 3773408.520 362.00
LOCATION L0002371     VOLUME   480748.759 3773399.930 362.00
LOCATION L0002372     VOLUME   480748.781 3773391.340 362.00
LOCATION L0002373     VOLUME   480748.802 3773382.750 362.00
LOCATION L0002374     VOLUME   480748.824 3773374.160 362.00
LOCATION L0002375     VOLUME   480748.846 3773365.570 362.00
LOCATION L0002376     VOLUME   480748.868 3773356.980 362.00
LOCATION L0002377     VOLUME   480748.890 3773348.390 362.00
LOCATION L0002378     VOLUME   480748.911 3773339.800 362.00
LOCATION L0002379     VOLUME   480748.933 3773331.210 362.00
LOCATION L0002380     VOLUME   480748.955 3773322.620 362.00
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LOCATION L0002382     VOLUME   480748.999 3773305.440 362.00
LOCATION L0002383     VOLUME   480749.020 3773296.850 362.00
LOCATION L0002384     VOLUME   480749.042 3773288.260 362.00
LOCATION L0002385     VOLUME   480749.064 3773279.670 362.00
LOCATION L0002386     VOLUME   480749.086 3773271.080 362.00
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LOCATION L0002388     VOLUME   480749.129 3773253.900 362.00
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LOCATION L0002390     VOLUME   480749.173 3773236.720 362.00
LOCATION L0002391     VOLUME   480749.195 3773228.130 362.00
LOCATION L0002392     VOLUME   480749.217 3773219.540 362.00
LOCATION L0002393     VOLUME   480749.238 3773210.950 362.00
LOCATION L0002394     VOLUME   480749.260 3773202.360 362.00
LOCATION L0002395     VOLUME   480749.282 3773193.770 362.00
LOCATION L0002396     VOLUME   480749.304 3773185.180 362.00
LOCATION L0002397     VOLUME   480749.326 3773176.590 362.00
LOCATION L0002398     VOLUME   480749.347 3773168.000 361.90
LOCATION L0002399     VOLUME   480749.369 3773159.410 361.80
LOCATION L0002400     VOLUME   480749.391 3773150.820 361.70
LOCATION L0002401     VOLUME   480749.413 3773142.230 361.65
LOCATION L0002402     VOLUME   480749.435 3773133.640 361.65
LOCATION L0002403     VOLUME   480749.456 3773125.050 361.65
LOCATION L0002404     VOLUME   480749.478 3773116.460 361.65
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LOCATION L0002408     VOLUME   480749.565 3773082.101 361.66
LOCATION L0002409     VOLUME   480749.587 3773073.511 361.66
LOCATION L0002410     VOLUME   480749.609 3773064.921 361.66
LOCATION L0002411     VOLUME   480749.631 3773056.331 361.66
LOCATION L0002412     VOLUME   480749.652 3773047.741 361.66
LOCATION L0002413     VOLUME   480749.674 3773039.151 361.66
LOCATION L0002414     VOLUME   480749.696 3773030.561 361.66
LOCATION L0002415     VOLUME   480749.718 3773021.971 361.66
LOCATION L0002416     VOLUME   480749.740 3773013.381 361.66
LOCATION L0002417     VOLUME   480749.761 3773004.791 361.66
LOCATION L0002418     VOLUME   480749.783 3772996.201 361.66
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LOCATION L0002420     VOLUME   480749.827 3772979.021 361.66
LOCATION L0002421     VOLUME   480749.849 3772970.431 361.67
LOCATION L0002422     VOLUME   480749.870 3772961.841 361.67
LOCATION L0002423     VOLUME   480749.892 3772953.251 361.67
LOCATION L0002424     VOLUME   480749.914 3772944.661 361.67
LOCATION L0002425     VOLUME   480749.936 3772936.071 361.67
LOCATION L0002426     VOLUME   480749.958 3772927.481 361.67
LOCATION L0002427     VOLUME   480749.979 3772918.891 361.67
LOCATION L0002428     VOLUME   480750.001 3772910.301 361.67
LOCATION L0002429     VOLUME   480750.023 3772901.711 361.67
LOCATION L0002430     VOLUME   480750.045 3772893.121 361.67
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LOCATION L0002431     VOLUME   480750.067 3772884.531 361.67
LOCATION L0002432     VOLUME   480750.088 3772875.941 361.67
LOCATION L0002433     VOLUME   480750.110 3772867.351 361.67
LOCATION L0002434     VOLUME   480750.132 3772858.761 361.67
LOCATION L0002435     VOLUME   480750.154 3772850.171 361.68
LOCATION L0002436     VOLUME   480750.176 3772841.581 361.68
LOCATION L0002437     VOLUME   480750.197 3772832.991 361.68
LOCATION L0002438     VOLUME   480750.219 3772824.401 361.68
LOCATION L0002439     VOLUME   480750.241 3772815.811 361.68
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LOCATION L0002448     VOLUME   480750.437 3772738.502 361.68
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LOCATION L0002452     VOLUME   480750.524 3772704.142 361.69
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LOCATION L0002454     VOLUME   480750.568 3772686.962 361.69
LOCATION L0002455     VOLUME   480750.590 3772678.372 361.69
LOCATION L0002456     VOLUME   480750.611 3772669.782 361.69
LOCATION L0002457     VOLUME   480750.633 3772661.192 361.57
LOCATION L0002458     VOLUME   480750.655 3772652.602 361.38
LOCATION L0002459     VOLUME   480750.677 3772644.012 361.18
LOCATION L0002460     VOLUME   480750.699 3772635.422 361.00
LOCATION L0002461     VOLUME   480750.720 3772626.832 361.00
LOCATION L0002462     VOLUME   480750.742 3772618.242 361.00
LOCATION L0002463     VOLUME   480750.764 3772609.652 361.00
LOCATION L0002464     VOLUME   480750.786 3772601.062 361.00
LOCATION L0002465     VOLUME   480750.808 3772592.472 361.00
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LOCATION L0002467     VOLUME   480750.851 3772575.292 360.99
LOCATION L0002468     VOLUME   480750.873 3772566.702 360.90
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LOCATION L0002471     VOLUME   480750.938 3772540.932 360.70
LOCATION L0002472     VOLUME   480750.960 3772532.342 360.70
LOCATION L0002473     VOLUME   480750.982 3772523.752 360.70
LOCATION L0002474     VOLUME   480751.004 3772515.162 360.68
LOCATION L0002475     VOLUME   480751.026 3772506.572 360.48
LOCATION L0002476     VOLUME   480751.047 3772497.982 360.28
LOCATION L0002477     VOLUME   480751.069 3772489.392 360.07
LOCATION L0002478     VOLUME   480751.091 3772480.803 360.13
LOCATION L0002479     VOLUME   480751.113 3772472.213 360.33
LOCATION L0002480     VOLUME   480751.135 3772463.623 360.53
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LOCATION L0002481     VOLUME   480751.156 3772455.033 360.71
LOCATION L0002482     VOLUME   480751.178 3772446.443 360.71
LOCATION L0002483     VOLUME   480751.200 3772437.853 360.71
LOCATION L0002484     VOLUME   480751.222 3772429.263 360.71
LOCATION L0002485     VOLUME   480751.244 3772420.673 360.90
LOCATION L0002486     VOLUME   480751.265 3772412.083 361.19
LOCATION L0002487     VOLUME   480751.287 3772403.493 361.47
LOCATION L0002488     VOLUME   480751.309 3772394.903 361.71
LOCATION L0002489     VOLUME   480751.331 3772386.313 361.71
LOCATION L0002490     VOLUME   480751.352 3772377.723 361.72
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LOCATION L0002492     VOLUME   480751.396 3772360.543 361.77
LOCATION L0002493     VOLUME   480751.418 3772351.953 361.85
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LOCATION L0002495     VOLUME   480751.461 3772334.773 362.04
LOCATION L0002496     VOLUME   480751.483 3772326.183 362.24
LOCATION L0002497     VOLUME   480751.505 3772317.593 362.45
LOCATION L0002498     VOLUME   480751.527 3772309.003 362.66
LOCATION L0002499     VOLUME   480751.549 3772300.413 362.78
LOCATION L0002500     VOLUME   480751.570 3772291.823 362.86
LOCATION L0002501     VOLUME   480751.592 3772283.233 362.94
LOCATION L0002502     VOLUME   480751.614 3772274.643 363.00
LOCATION L0002503     VOLUME   480751.636 3772266.053 363.00
LOCATION L0002504     VOLUME   480751.658 3772257.463 363.00
LOCATION L0002505     VOLUME   480751.679 3772248.873 363.00
LOCATION L0002506     VOLUME   480751.701 3772240.283 363.15
LOCATION L0002507     VOLUME   480751.723 3772231.693 363.35
LOCATION L0002508     VOLUME   480751.745 3772223.103 363.56
LOCATION L0002509     VOLUME   480751.767 3772214.513 363.74
LOCATION L0002510     VOLUME   480751.788 3772205.923 363.82
LOCATION L0002511     VOLUME   480751.810 3772197.333 363.90
LOCATION L0002512     VOLUME   480751.832 3772188.743 363.98
LOCATION L0002513     VOLUME   480751.854 3772180.153 364.00
LOCATION L0002514     VOLUME   480751.876 3772171.563 364.00
LOCATION L0002515     VOLUME   480751.897 3772162.974 364.00
LOCATION L0002516     VOLUME   480751.919 3772154.384 364.05
LOCATION L0002517     VOLUME   480751.941 3772145.794 364.26
LOCATION L0002518     VOLUME   480751.963 3772137.204 364.47
LOCATION L0002519     VOLUME   480751.985 3772128.614 364.68
LOCATION L0002520     VOLUME   480752.006 3772120.024 364.79
LOCATION L0002521     VOLUME   480752.028 3772111.434 364.87
LOCATION L0002522     VOLUME   480752.050 3772102.844 364.94
LOCATION L0002523     VOLUME   480752.072 3772094.254 365.05
LOCATION L0002524     VOLUME   480752.094 3772085.664 365.26
LOCATION L0002525     VOLUME   480752.115 3772077.074 365.47
LOCATION L0002526     VOLUME   480752.137 3772068.484 365.69
LOCATION L0002527     VOLUME   480752.159 3772059.894 365.95
LOCATION L0002528     VOLUME   480752.181 3772051.304 366.24
LOCATION L0002529     VOLUME   480752.203 3772042.714 366.53
LOCATION L0002530     VOLUME   480752.224 3772034.124 366.94
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   LOCATION L0002531     VOLUME   480752.246 3772025.534 367.73
   LOCATION L0002532     VOLUME   480752.268 3772016.944 368.52
   LOCATION L0002533     VOLUME   480752.290 3772008.354 369.30
   LOCATION L0002534     VOLUME   480752.311 3771999.764 369.77
   LOCATION L0002535     VOLUME   480752.333 3771991.174 370.13
   LOCATION L0002536     VOLUME   480752.355 3771982.584 370.49
   LOCATION L0002537     VOLUME   480752.377 3771973.994 370.75
   LOCATION L0002538     VOLUME   480752.399 3771965.404 370.75
   LOCATION L0002539     VOLUME   480752.420 3771956.814 370.75
   LOCATION L0002540     VOLUME   480752.442 3771948.224 370.75
   LOCATION L0002541     VOLUME   480752.464 3771939.634 370.97
   LOCATION L0002542     VOLUME   480752.486 3771931.044 371.26
   LOCATION L0002543     VOLUME   480752.508 3771922.454 371.55
   LOCATION L0002544     VOLUME   480752.529 3771913.864 371.75
   LOCATION L0002545     VOLUME   480752.551 3771905.274 371.76
   LOCATION L0002546     VOLUME   480752.573 3771896.684 371.76
   LOCATION L0002547     VOLUME   480752.595 3771888.094 371.76
   LOCATION L0002548     VOLUME   480752.617 3771879.504 371.76
   LOCATION L0002549     VOLUME   480752.638 3771870.914 371.76
   LOCATION L0002550     VOLUME   480752.660 3771862.324 371.76
   LOCATION L0002551     VOLUME   480752.682 3771853.735 371.76
   LOCATION L0002552     VOLUME   480752.704 3771845.145 371.76
   LOCATION L0002553     VOLUME   480752.726 3771836.555 371.76
   LOCATION L0002554     VOLUME   480752.747 3771827.965 371.76
   LOCATION L0002555     VOLUME   480752.769 3771819.375 371.76
** End of LINE VOLUME Source ID = SLINE5
** ----------------------------------------------------------------------
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE6
** DESCRSRC Alabama St b/n River Bluff Ave and Palmetto Ave
** PREFIX
** Length of Side = 8.59
** Configuration = Adjacent
** Emission Rate = 0.0001092
** Vertical Dimension = 6.99
** SZINIT = 3.25
** Nodes = 2
** 480750.988, 3771810.041, 371.84, 3.49, 4.00
** 480747.435, 3771585.792, 372.96, 3.49, 4.00
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   LOCATION L0002557     VOLUME   480750.784 3771797.158 371.70
   LOCATION L0002558     VOLUME   480750.647 3771788.569 371.69
   LOCATION L0002559     VOLUME   480750.511 3771779.980 371.69
   LOCATION L0002560     VOLUME   480750.375 3771771.391 371.68
   LOCATION L0002561     VOLUME   480750.239 3771762.802 371.72
   LOCATION L0002562     VOLUME   480750.103 3771754.213 371.80
   LOCATION L0002563     VOLUME   480749.967 3771745.624 371.90
   LOCATION L0002564     VOLUME   480749.831 3771737.035 371.99
   LOCATION L0002565     VOLUME   480749.695 3771728.446 372.00
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   LOCATION L0002566     VOLUME   480749.559 3771719.857 372.00
   LOCATION L0002567     VOLUME   480749.423 3771711.268 372.00
   LOCATION L0002568     VOLUME   480749.287 3771702.679 372.08
   LOCATION L0002569     VOLUME   480749.151 3771694.090 372.26
   LOCATION L0002570     VOLUME   480749.015 3771685.502 372.44
   LOCATION L0002571     VOLUME   480748.879 3771676.913 372.62
   LOCATION L0002572     VOLUME   480748.743 3771668.324 372.63
   LOCATION L0002573     VOLUME   480748.607 3771659.735 372.62
   LOCATION L0002574     VOLUME   480748.470 3771651.146 372.62
   LOCATION L0002575     VOLUME   480748.334 3771642.557 372.66
   LOCATION L0002576     VOLUME   480748.198 3771633.968 372.77
   LOCATION L0002577     VOLUME   480748.062 3771625.379 372.88
   LOCATION L0002578     VOLUME   480747.926 3771616.790 372.99
   LOCATION L0002579     VOLUME   480747.790 3771608.201 373.00
   LOCATION L0002580     VOLUME   480747.654 3771599.612 373.00
   LOCATION L0002581     VOLUME   480747.518 3771591.023 373.00
** End of LINE VOLUME Source ID = SLINE6
** ----------------------------------------------------------------------
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE7
** DESCRSRC Alabama St b/n Palmetto Ave and San Bernardino Ave
** PREFIX
** Length of Side = 8.59
** Configuration = Adjacent
** Emission Rate = 0.0004627
** Vertical Dimension = 6.99
** SZINIT = 3.25
** Nodes = 2
** 480747.029, 3771568.778, 372.93, 3.49, 4.00
** 480745.027, 3770777.988, 373.95, 3.49, 4.00
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   LOCATION L0002583     VOLUME   480746.996 3771555.893 373.00
   LOCATION L0002584     VOLUME   480746.974 3771547.303 373.00
   LOCATION L0002585     VOLUME   480746.953 3771538.713 373.00
   LOCATION L0002586     VOLUME   480746.931 3771530.123 373.00
   LOCATION L0002587     VOLUME   480746.909 3771521.533 373.09
   LOCATION L0002588     VOLUME   480746.887 3771512.943 373.25
   LOCATION L0002589     VOLUME   480746.866 3771504.353 373.41
   LOCATION L0002590     VOLUME   480746.844 3771495.763 373.56
   LOCATION L0002591     VOLUME   480746.822 3771487.173 373.56
   LOCATION L0002592     VOLUME   480746.801 3771478.583 373.56
   LOCATION L0002593     VOLUME   480746.779 3771469.993 373.56
   LOCATION L0002594     VOLUME   480746.757 3771461.403 373.56
   LOCATION L0002595     VOLUME   480746.735 3771452.813 373.56
   LOCATION L0002596     VOLUME   480746.714 3771444.223 373.56
   LOCATION L0002597     VOLUME   480746.692 3771435.633 373.56
   LOCATION L0002598     VOLUME   480746.670 3771427.043 373.56
   LOCATION L0002599     VOLUME   480746.648 3771418.453 373.56
   LOCATION L0002600     VOLUME   480746.627 3771409.863 373.56
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LOCATION L0002601     VOLUME   480746.605 3771401.273 373.56
LOCATION L0002602     VOLUME   480746.583 3771392.683 373.56
LOCATION L0002603     VOLUME   480746.561 3771384.093 373.56
LOCATION L0002604     VOLUME   480746.540 3771375.504 373.57
LOCATION L0002605     VOLUME   480746.518 3771366.914 373.69
LOCATION L0002606     VOLUME   480746.496 3771358.324 373.82
LOCATION L0002607     VOLUME   480746.474 3771349.734 373.95
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LOCATION L0002617     VOLUME   480746.257 3771263.834 374.00
LOCATION L0002618     VOLUME   480746.235 3771255.244 374.00
LOCATION L0002619     VOLUME   480746.213 3771246.654 374.00
LOCATION L0002620     VOLUME   480746.192 3771238.064 374.00
LOCATION L0002621     VOLUME   480746.170 3771229.474 374.00
LOCATION L0002622     VOLUME   480746.148 3771220.884 374.00
LOCATION L0002623     VOLUME   480746.126 3771212.294 374.00
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LOCATION L0002636     VOLUME   480745.844 3771100.624 374.00
LOCATION L0002637     VOLUME   480745.822 3771092.034 374.00
LOCATION L0002638     VOLUME   480745.800 3771083.444 374.00
LOCATION L0002639     VOLUME   480745.779 3771074.854 374.00
LOCATION L0002640     VOLUME   480745.757 3771066.264 374.00
LOCATION L0002641     VOLUME   480745.735 3771057.675 374.00
LOCATION L0002642     VOLUME   480745.713 3771049.085 374.00
LOCATION L0002643     VOLUME   480745.692 3771040.495 374.00
LOCATION L0002644     VOLUME   480745.670 3771031.905 374.00
LOCATION L0002645     VOLUME   480745.648 3771023.315 374.00
LOCATION L0002646     VOLUME   480745.626 3771014.725 374.00
LOCATION L0002647     VOLUME   480745.605 3771006.135 374.00
LOCATION L0002648     VOLUME   480745.583 3770997.545 374.00
LOCATION L0002649     VOLUME   480745.561 3770988.955 374.00
LOCATION L0002650     VOLUME   480745.539 3770980.365 374.00
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   LOCATION L0002651     VOLUME   480745.518 3770971.775 374.00
   LOCATION L0002652     VOLUME   480745.496 3770963.185 374.00
   LOCATION L0002653     VOLUME   480745.474 3770954.595 374.00
   LOCATION L0002654     VOLUME   480745.452 3770946.005 374.00
   LOCATION L0002655     VOLUME   480745.431 3770937.415 374.00
   LOCATION L0002656     VOLUME   480745.409 3770928.825 374.00
   LOCATION L0002657     VOLUME   480745.387 3770920.235 374.00
   LOCATION L0002658     VOLUME   480745.365 3770911.645 374.00
   LOCATION L0002659     VOLUME   480745.344 3770903.055 374.00
   LOCATION L0002660     VOLUME   480745.322 3770894.465 374.00
   LOCATION L0002661     VOLUME   480745.300 3770885.875 374.00
   LOCATION L0002662     VOLUME   480745.278 3770877.285 374.00
   LOCATION L0002663     VOLUME   480745.257 3770868.695 374.00
   LOCATION L0002664     VOLUME   480745.235 3770860.105 374.00
   LOCATION L0002665     VOLUME   480745.213 3770851.515 374.00
   LOCATION L0002666     VOLUME   480745.191 3770842.925 374.00
   LOCATION L0002667     VOLUME   480745.170 3770834.335 374.00
   LOCATION L0002668     VOLUME   480745.148 3770825.745 374.00
   LOCATION L0002669     VOLUME   480745.126 3770817.155 374.00
   LOCATION L0002670     VOLUME   480745.105 3770808.565 374.00
   LOCATION L0002671     VOLUME   480745.083 3770799.975 374.00
   LOCATION L0002672     VOLUME   480745.061 3770791.385 374.00
   LOCATION L0002673     VOLUME   480745.039 3770782.795 374.00
** End of LINE VOLUME Source ID = SLINE7
** ----------------------------------------------------------------------
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE8
** DESCRSRC Alabama St b/n San Bernardino Ave and I-10
** PREFIX
** Length of Side = 8.59
** Configuration = Adjacent
** Emission Rate = 0.0005907
** Vertical Dimension = 6.99
** SZINIT = 3.25
** Nodes = 2
** 480741.352, 3770758.508, 373.92, 3.49, 4.00
** 480741.352, 3769636.638, 378.00, 3.49, 4.00
** ----------------------------------------------------------------------
   LOCATION L0002857     VOLUME   480741.352 3770754.213 374.00
   LOCATION L0002858     VOLUME   480741.352 3770745.623 374.00
   LOCATION L0002859     VOLUME   480741.352 3770737.033 374.00
   LOCATION L0002860     VOLUME   480741.352 3770728.443 374.00
   LOCATION L0002861     VOLUME   480741.352 3770719.853 374.00
   LOCATION L0002862     VOLUME   480741.352 3770711.263 374.00
   LOCATION L0002863     VOLUME   480741.352 3770702.673 374.00
   LOCATION L0002864     VOLUME   480741.352 3770694.083 374.00
   LOCATION L0002865     VOLUME   480741.352 3770685.493 374.00
   LOCATION L0002866     VOLUME   480741.352 3770676.903 374.00
   LOCATION L0002867     VOLUME   480741.352 3770668.313 374.00
   LOCATION L0002868     VOLUME   480741.352 3770659.723 374.00
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LOCATION L0002869     VOLUME   480741.352 3770651.133 374.07
LOCATION L0002870     VOLUME   480741.352 3770642.543 374.17
LOCATION L0002871     VOLUME   480741.352 3770633.953 374.28
LOCATION L0002872     VOLUME   480741.352 3770625.363 374.38
LOCATION L0002873     VOLUME   480741.352 3770616.773 374.38
LOCATION L0002874     VOLUME   480741.352 3770608.183 374.38
LOCATION L0002875     VOLUME   480741.352 3770599.593 374.38
LOCATION L0002876     VOLUME   480741.352 3770591.003 374.38
LOCATION L0002877     VOLUME   480741.352 3770582.413 374.38
LOCATION L0002878     VOLUME   480741.352 3770573.823 374.38
LOCATION L0002879     VOLUME   480741.352 3770565.233 374.38
LOCATION L0002880     VOLUME   480741.352 3770556.643 374.38
LOCATION L0002881     VOLUME   480741.352 3770548.053 374.38
LOCATION L0002882     VOLUME   480741.352 3770539.463 374.38
LOCATION L0002883     VOLUME   480741.352 3770530.873 374.38
LOCATION L0002884     VOLUME   480741.352 3770522.283 374.38
LOCATION L0002885     VOLUME   480741.352 3770513.693 374.38
LOCATION L0002886     VOLUME   480741.352 3770505.103 374.38
LOCATION L0002887     VOLUME   480741.352 3770496.513 374.38
LOCATION L0002888     VOLUME   480741.352 3770487.923 374.38
LOCATION L0002889     VOLUME   480741.352 3770479.333 374.38
LOCATION L0002890     VOLUME   480741.352 3770470.743 374.50
LOCATION L0002891     VOLUME   480741.352 3770462.153 374.67
LOCATION L0002892     VOLUME   480741.352 3770453.563 374.85
LOCATION L0002893     VOLUME   480741.352 3770444.973 375.00
LOCATION L0002894     VOLUME   480741.352 3770436.383 375.00
LOCATION L0002895     VOLUME   480741.352 3770427.793 375.00
LOCATION L0002896     VOLUME   480741.352 3770419.203 375.00
LOCATION L0002897     VOLUME   480741.352 3770410.613 375.00
LOCATION L0002898     VOLUME   480741.352 3770402.023 375.00
LOCATION L0002899     VOLUME   480741.352 3770393.433 375.00
LOCATION L0002900     VOLUME   480741.352 3770384.843 375.02
LOCATION L0002901     VOLUME   480741.352 3770376.253 375.13
LOCATION L0002902     VOLUME   480741.352 3770367.663 375.24
LOCATION L0002903     VOLUME   480741.352 3770359.073 375.35
LOCATION L0002904     VOLUME   480741.352 3770350.483 375.38
LOCATION L0002905     VOLUME   480741.352 3770341.893 375.38
LOCATION L0002906     VOLUME   480741.352 3770333.303 375.38
LOCATION L0002907     VOLUME   480741.352 3770324.713 375.38
LOCATION L0002908     VOLUME   480741.352 3770316.123 375.38
LOCATION L0002909     VOLUME   480741.352 3770307.533 375.38
LOCATION L0002910     VOLUME   480741.352 3770298.943 375.38
LOCATION L0002911     VOLUME   480741.352 3770290.353 375.38
LOCATION L0002912     VOLUME   480741.352 3770281.763 375.38
LOCATION L0002913     VOLUME   480741.352 3770273.173 375.38
LOCATION L0002914     VOLUME   480741.352 3770264.583 375.38
LOCATION L0002915     VOLUME   480741.352 3770255.993 375.38
LOCATION L0002916     VOLUME   480741.352 3770247.403 375.38
LOCATION L0002917     VOLUME   480741.352 3770238.813 375.38
LOCATION L0002918     VOLUME   480741.352 3770230.223 375.38
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LOCATION L0002919     VOLUME   480741.352 3770221.633 375.38
LOCATION L0002920     VOLUME   480741.352 3770213.043 375.38
LOCATION L0002921     VOLUME   480741.352 3770204.453 375.38
LOCATION L0002922     VOLUME   480741.352 3770195.863 375.38
LOCATION L0002923     VOLUME   480741.352 3770187.273 375.38
LOCATION L0002924     VOLUME   480741.352 3770178.683 375.38
LOCATION L0002925     VOLUME   480741.352 3770170.093 375.38
LOCATION L0002926     VOLUME   480741.352 3770161.503 375.38
LOCATION L0002927     VOLUME   480741.352 3770152.913 375.38
LOCATION L0002928     VOLUME   480741.352 3770144.323 375.38
LOCATION L0002929     VOLUME   480741.352 3770135.733 375.38
LOCATION L0002930     VOLUME   480741.352 3770127.143 375.38
LOCATION L0002931     VOLUME   480741.352 3770118.553 375.38
LOCATION L0002932     VOLUME   480741.352 3770109.963 375.38
LOCATION L0002933     VOLUME   480741.352 3770101.373 375.38
LOCATION L0002934     VOLUME   480741.352 3770092.783 375.38
LOCATION L0002935     VOLUME   480741.352 3770084.193 375.38
LOCATION L0002936     VOLUME   480741.352 3770075.603 375.38
LOCATION L0002937     VOLUME   480741.352 3770067.013 375.38
LOCATION L0002938     VOLUME   480741.352 3770058.423 375.38
LOCATION L0002939     VOLUME   480741.352 3770049.833 375.38
LOCATION L0002940     VOLUME   480741.352 3770041.243 375.38
LOCATION L0002941     VOLUME   480741.352 3770032.653 375.38
LOCATION L0002942     VOLUME   480741.352 3770024.063 375.38
LOCATION L0002943     VOLUME   480741.352 3770015.473 375.38
LOCATION L0002944     VOLUME   480741.352 3770006.883 375.38
LOCATION L0002945     VOLUME   480741.352 3769998.293 375.38
LOCATION L0002946     VOLUME   480741.352 3769989.703 375.38
LOCATION L0002947     VOLUME   480741.352 3769981.113 375.38
LOCATION L0002948     VOLUME   480741.352 3769972.523 375.38
LOCATION L0002949     VOLUME   480741.352 3769963.933 375.38
LOCATION L0002950     VOLUME   480741.352 3769955.343 375.38
LOCATION L0002951     VOLUME   480741.352 3769946.753 375.38
LOCATION L0002952     VOLUME   480741.352 3769938.163 375.38
LOCATION L0002953     VOLUME   480741.352 3769929.573 375.38
LOCATION L0002954     VOLUME   480741.352 3769920.983 375.38
LOCATION L0002955     VOLUME   480741.352 3769912.393 375.38
LOCATION L0002956     VOLUME   480741.352 3769903.803 375.43
LOCATION L0002957     VOLUME   480741.352 3769895.213 375.61
LOCATION L0002958     VOLUME   480741.352 3769886.623 375.79
LOCATION L0002959     VOLUME   480741.352 3769878.033 375.96
LOCATION L0002960     VOLUME   480741.352 3769869.443 376.09
LOCATION L0002961     VOLUME   480741.352 3769860.853 376.20
LOCATION L0002962     VOLUME   480741.352 3769852.263 376.31
LOCATION L0002963     VOLUME   480741.352 3769843.673 376.52
LOCATION L0002964     VOLUME   480741.352 3769835.083 376.99
LOCATION L0002965     VOLUME   480741.352 3769826.493 377.45
LOCATION L0002966     VOLUME   480741.352 3769817.903 377.91
LOCATION L0002967     VOLUME   480741.352 3769809.313 378.00
LOCATION L0002968     VOLUME   480741.352 3769800.723 378.00
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   LOCATION L0002969     VOLUME   480741.352 3769792.133 378.00
   LOCATION L0002970     VOLUME   480741.352 3769783.543 378.00
   LOCATION L0002971     VOLUME   480741.352 3769774.953 378.00
   LOCATION L0002972     VOLUME   480741.352 3769766.363 378.00
   LOCATION L0002973     VOLUME   480741.352 3769757.773 378.00
   LOCATION L0002974     VOLUME   480741.352 3769749.183 378.00
   LOCATION L0002975     VOLUME   480741.352 3769740.593 378.00
   LOCATION L0002976     VOLUME   480741.352 3769732.003 378.00
   LOCATION L0002977     VOLUME   480741.352 3769723.413 378.00
   LOCATION L0002978     VOLUME   480741.352 3769714.823 378.00
   LOCATION L0002979     VOLUME   480741.352 3769706.233 378.00
   LOCATION L0002980     VOLUME   480741.352 3769697.643 378.00
   LOCATION L0002981     VOLUME   480741.352 3769689.053 378.00
   LOCATION L0002982     VOLUME   480741.352 3769680.463 378.00
   LOCATION L0002983     VOLUME   480741.352 3769671.873 378.00
   LOCATION L0002984     VOLUME   480741.352 3769663.283 378.00
   LOCATION L0002985     VOLUME   480741.352 3769654.693 378.00
   LOCATION L0002986     VOLUME   480741.352 3769646.103 378.00
   LOCATION L0002987     VOLUME   480741.352 3769637.513 378.00
** End of LINE VOLUME Source ID = SLINE8
** Source Parameters **
** LINE VOLUME Source ID = SLINE1
   SRCPARAM L0000001     0.000005462      3.49      4.00      3.25
   SRCPARAM L0000002     0.000005462      3.49      4.00      3.25
   SRCPARAM L0000003     0.000005462      3.49      4.00      3.25
   SRCPARAM L0000004     0.000005462      3.49      4.00      3.25
   SRCPARAM L0000005     0.000005462      3.49      4.00      3.25
   SRCPARAM L0000006     0.000005462      3.49      4.00      3.25
   SRCPARAM L0000007     0.000005462      3.49      4.00      3.25
   SRCPARAM L0000008     0.000005462      3.49      4.00      3.25
   SRCPARAM L0000009     0.000005462      3.49      4.00      3.25
   SRCPARAM L0000010     0.000005462      3.49      4.00      3.25
   SRCPARAM L0000011     0.000005462      3.49      4.00      3.25
   SRCPARAM L0000012     0.000005462      3.49      4.00      3.25
   SRCPARAM L0000013     0.000005462      3.49      4.00      3.25
   SRCPARAM L0000014     0.000005462      3.49      4.00      3.25
   SRCPARAM L0000015     0.000005462      3.49      4.00      3.25
   SRCPARAM L0000016     0.000005462      3.49      4.00      3.25
   SRCPARAM L0000017     0.000005462      3.49      4.00      3.25
   SRCPARAM L0000018     0.000005462      3.49      4.00      3.25
   SRCPARAM L0000019     0.000005462      3.49      4.00      3.25
   SRCPARAM L0000020     0.000005462      3.49      4.00      3.25
   SRCPARAM L0000021     0.000005462      3.49      4.00      3.25
   SRCPARAM L0000022     0.000005462      3.49      4.00      3.25
   SRCPARAM L0000023     0.000005462      3.49      4.00      3.25
   SRCPARAM L0000024     0.000005462      3.49      4.00      3.25
   SRCPARAM L0000025     0.000005462      3.49      4.00      3.25
   SRCPARAM L0000026     0.000005462      3.49      4.00      3.25
   SRCPARAM L0000027     0.000005462      3.49      4.00      3.25
   SRCPARAM L0000028     0.000005462      3.49      4.00      3.25
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SRCPARAM L0000029     0.000005462      3.49      4.00      3.25
SRCPARAM L0000030     0.000005462      3.49      4.00      3.25
SRCPARAM L0000031     0.000005462      3.49      4.00      3.25
SRCPARAM L0000032     0.000005462      3.49      4.00      3.25
SRCPARAM L0000033     0.000005462      3.49      4.00      3.25
SRCPARAM L0000034     0.000005462      3.49      4.00      3.25
SRCPARAM L0000035     0.000005462      3.49      4.00      3.25
SRCPARAM L0000036     0.000005462      3.49      4.00      3.25
SRCPARAM L0000037     0.000005462      3.49      4.00      3.25
SRCPARAM L0000038     0.000005462      3.49      4.00      3.25
SRCPARAM L0000039     0.000005462      3.49      4.00      3.25
SRCPARAM L0000040     0.000005462      3.49      4.00      3.25
SRCPARAM L0000041     0.000005462      3.49      4.00      3.25
SRCPARAM L0000042     0.000005462      3.49      4.00      3.25
SRCPARAM L0000043     0.000005462      3.49      4.00      3.25
SRCPARAM L0000044     0.000005462      3.49      4.00      3.25
SRCPARAM L0000045     0.000005462      3.49      4.00      3.25
SRCPARAM L0000046     0.000005462      3.49      4.00      3.25
SRCPARAM L0000047     0.000005462      3.49      4.00      3.25
SRCPARAM L0000048     0.000005462      3.49      4.00      3.25
SRCPARAM L0000049     0.000005462      3.49      4.00      3.25
SRCPARAM L0000050     0.000005462      3.49      4.00      3.25
SRCPARAM L0000051     0.000005462      3.49      4.00      3.25
SRCPARAM L0000052     0.000005462      3.49      4.00      3.25
SRCPARAM L0000053     0.000005462      3.49      4.00      3.25
SRCPARAM L0000054     0.000005462      3.49      4.00      3.25
SRCPARAM L0000055     0.000005462      3.49      4.00      3.25
SRCPARAM L0000056     0.000005462      3.49      4.00      3.25
SRCPARAM L0000057     0.000005462      3.49      4.00      3.25
SRCPARAM L0000058     0.000005462      3.49      4.00      3.25
SRCPARAM L0000059     0.000005462      3.49      4.00      3.25
SRCPARAM L0000060     0.000005462      3.49      4.00      3.25
SRCPARAM L0000061     0.000005462      3.49      4.00      3.25
SRCPARAM L0000062     0.000005462      3.49      4.00      3.25
SRCPARAM L0000063     0.000005462      3.49      4.00      3.25
SRCPARAM L0000064     0.000005462      3.49      4.00      3.25
SRCPARAM L0000065     0.000005462      3.49      4.00      3.25
SRCPARAM L0000066     0.000005462      3.49      4.00      3.25
SRCPARAM L0000067     0.000005462      3.49      4.00      3.25
SRCPARAM L0000068     0.000005462      3.49      4.00      3.25
SRCPARAM L0000069     0.000005462      3.49      4.00      3.25
SRCPARAM L0000070     0.000005462      3.49      4.00      3.25
SRCPARAM L0000071     0.000005462      3.49      4.00      3.25
SRCPARAM L0000072     0.000005462      3.49      4.00      3.25
SRCPARAM L0000073     0.000005462      3.49      4.00      3.25
SRCPARAM L0000074     0.000005462      3.49      4.00      3.25
SRCPARAM L0000075     0.000005462      3.49      4.00      3.25
SRCPARAM L0000076     0.000005462      3.49      4.00      3.25
SRCPARAM L0000077     0.000005462      3.49      4.00      3.25
SRCPARAM L0000078     0.000005462      3.49      4.00      3.25
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   SRCPARAM L0000079     0.000005462      3.49      4.00      3.25
   SRCPARAM L0000080     0.000005462      3.49      4.00      3.25
   SRCPARAM L0000081     0.000005462      3.49      4.00      3.25
   SRCPARAM L0000082     0.000005462      3.49      4.00      3.25
   SRCPARAM L0000083     0.000005462      3.49      4.00      3.25
   SRCPARAM L0000084     0.000005462      3.49      4.00      3.25
   SRCPARAM L0000085     0.000005462      3.49      4.00      3.25
   SRCPARAM L0000086     0.000005462      3.49      4.00      3.25
   SRCPARAM L0000087     0.000005462      3.49      4.00      3.25
   SRCPARAM L0000088     0.000005462      3.49      4.00      3.25
   SRCPARAM L0000089     0.000005462      3.49      4.00      3.25
   SRCPARAM L0000090     0.000005462      3.49      4.00      3.25
   SRCPARAM L0000091     0.000005462      3.49      4.00      3.25
   SRCPARAM L0000092     0.000005462      3.49      4.00      3.25
   SRCPARAM L0000093     0.000005462      3.49      4.00      3.25
   SRCPARAM L0000094     0.000005462      3.49      4.00      3.25
   SRCPARAM L0000095     0.000005462      3.49      4.00      3.25
   SRCPARAM L0000096     0.000005462      3.49      4.00      3.25
   SRCPARAM L0000097     0.000005462      3.49      4.00      3.25
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** LINE VOLUME Source ID = SLINE2
   SRCPARAM L0000195     0.0000007743      3.49      4.00      3.25
   SRCPARAM L0000196     0.0000007743      3.49      4.00      3.25
   SRCPARAM L0000197     0.0000007743      3.49      4.00      3.25
   SRCPARAM L0000198     0.0000007743      3.49      4.00      3.25
   SRCPARAM L0000199     0.0000007743      3.49      4.00      3.25
   SRCPARAM L0000200     0.0000007743      3.49      4.00      3.25
   SRCPARAM L0000201     0.0000007743      3.49      4.00      3.25
   SRCPARAM L0000202     0.0000007743      3.49      4.00      3.25
   SRCPARAM L0000203     0.0000007743      3.49      4.00      3.25
   SRCPARAM L0000204     0.0000007743      3.49      4.00      3.25
   SRCPARAM L0000205     0.0000007743      3.49      4.00      3.25
   SRCPARAM L0000206     0.0000007743      3.49      4.00      3.25
   SRCPARAM L0000207     0.0000007743      3.49      4.00      3.25
   SRCPARAM L0000208     0.0000007743      3.49      4.00      3.25
   SRCPARAM L0000209     0.0000007743      3.49      4.00      3.25
   SRCPARAM L0000210     0.0000007743      3.49      4.00      3.25
   SRCPARAM L0000211     0.0000007743      3.49      4.00      3.25
   SRCPARAM L0000212     0.0000007743      3.49      4.00      3.25
   SRCPARAM L0000213     0.0000007743      3.49      4.00      3.25
   SRCPARAM L0000214     0.0000007743      3.49      4.00      3.25
   SRCPARAM L0000215     0.0000007743      3.49      4.00      3.25
   SRCPARAM L0000216     0.0000007743      3.49      4.00      3.25
   SRCPARAM L0000217     0.0000007743      3.49      4.00      3.25
   SRCPARAM L0000218     0.0000007743      3.49      4.00      3.25
   SRCPARAM L0000219     0.0000007743      3.49      4.00      3.25
   SRCPARAM L0000220     0.0000007743      3.49      4.00      3.25
   SRCPARAM L0000221     0.0000007743      3.49      4.00      3.25
   SRCPARAM L0000222     0.0000007743      3.49      4.00      3.25
   SRCPARAM L0000223     0.0000007743      3.49      4.00      3.25
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SRCPARAM L0000224     0.0000007743      3.49      4.00      3.25
SRCPARAM L0000225     0.0000007743      3.49      4.00      3.25
SRCPARAM L0000226     0.0000007743      3.49      4.00      3.25
SRCPARAM L0000227     0.0000007743      3.49      4.00      3.25
SRCPARAM L0000228     0.0000007743      3.49      4.00      3.25
SRCPARAM L0000229     0.0000007743      3.49      4.00      3.25
SRCPARAM L0000230     0.0000007743      3.49      4.00      3.25
SRCPARAM L0000231     0.0000007743      3.49      4.00      3.25
SRCPARAM L0000232     0.0000007743      3.49      4.00      3.25
SRCPARAM L0000233     0.0000007743      3.49      4.00      3.25
SRCPARAM L0000234     0.0000007743      3.49      4.00      3.25
SRCPARAM L0000235     0.0000007743      3.49      4.00      3.25
SRCPARAM L0000236     0.0000007743      3.49      4.00      3.25
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SRCPARAM L0000238     0.0000007743      3.49      4.00      3.25
SRCPARAM L0000239     0.0000007743      3.49      4.00      3.25
SRCPARAM L0000240     0.0000007743      3.49      4.00      3.25
SRCPARAM L0000241     0.0000007743      3.49      4.00      3.25
SRCPARAM L0000242     0.0000007743      3.49      4.00      3.25
SRCPARAM L0000243     0.0000007743      3.49      4.00      3.25
SRCPARAM L0000244     0.0000007743      3.49      4.00      3.25
SRCPARAM L0000245     0.0000007743      3.49      4.00      3.25
SRCPARAM L0000246     0.0000007743      3.49      4.00      3.25
SRCPARAM L0000247     0.0000007743      3.49      4.00      3.25
SRCPARAM L0000248     0.0000007743      3.49      4.00      3.25
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SRCPARAM L0000253     0.0000007743      3.49      4.00      3.25
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SRCPARAM L0000259     0.0000007743      3.49      4.00      3.25
SRCPARAM L0000260     0.0000007743      3.49      4.00      3.25
SRCPARAM L0000261     0.0000007743      3.49      4.00      3.25
SRCPARAM L0000262     0.0000007743      3.49      4.00      3.25
SRCPARAM L0000263     0.0000007743      3.49      4.00      3.25
SRCPARAM L0000264     0.0000007743      3.49      4.00      3.25
SRCPARAM L0000265     0.0000007743      3.49      4.00      3.25
SRCPARAM L0000266     0.0000007743      3.49      4.00      3.25
SRCPARAM L0000267     0.0000007743      3.49      4.00      3.25
SRCPARAM L0000268     0.0000007743      3.49      4.00      3.25
SRCPARAM L0000269     0.0000007743      3.49      4.00      3.25
SRCPARAM L0000270     0.0000007743      3.49      4.00      3.25
SRCPARAM L0000271     0.0000007743      3.49      4.00      3.25
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SRCPARAM L0000273     0.0000007743      3.49      4.00      3.25
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SRCPARAM L0000274     0.0000007743      3.49      4.00      3.25
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SRCPARAM L0000279     0.0000007743      3.49      4.00      3.25
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SRCPARAM L0000297     0.0000007743      3.49      4.00      3.25
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SRCPARAM L0000302     0.0000007743      3.49      4.00      3.25
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SRCPARAM L0000307     0.0000007743      3.49      4.00      3.25
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SRCPARAM L0000311     0.0000007743      3.49      4.00      3.25
SRCPARAM L0000312     0.0000007743      3.49      4.00      3.25
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SRCPARAM L0000320     0.0000007743      3.49      4.00      3.25
SRCPARAM L0000321     0.0000007743      3.49      4.00      3.25
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SRCPARAM L0000323     0.0000007743      3.49      4.00      3.25
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SRCPARAM L0000324     0.0000007743      3.49      4.00      3.25
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SRCPARAM L0000339     0.0000007743      3.49      4.00      3.25
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SRCPARAM L0000342     0.0000007743      3.49      4.00      3.25
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SRCPARAM L0000344     0.0000007743      3.49      4.00      3.25
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SRCPARAM L0000346     0.0000007743      3.49      4.00      3.25
SRCPARAM L0000347     0.0000007743      3.49      4.00      3.25
SRCPARAM L0000348     0.0000007743      3.49      4.00      3.25
SRCPARAM L0000349     0.0000007743      3.49      4.00      3.25
SRCPARAM L0000350     0.0000007743      3.49      4.00      3.25
SRCPARAM L0000351     0.0000007743      3.49      4.00      3.25
SRCPARAM L0000352     0.0000007743      3.49      4.00      3.25
SRCPARAM L0000353     0.0000007743      3.49      4.00      3.25
SRCPARAM L0000354     0.0000007743      3.49      4.00      3.25
SRCPARAM L0000355     0.0000007743      3.49      4.00      3.25
SRCPARAM L0000356     0.0000007743      3.49      4.00      3.25
SRCPARAM L0000357     0.0000007743      3.49      4.00      3.25
SRCPARAM L0000358     0.0000007743      3.49      4.00      3.25
SRCPARAM L0000359     0.0000007743      3.49      4.00      3.25
SRCPARAM L0000360     0.0000007743      3.49      4.00      3.25
SRCPARAM L0000361     0.0000007743      3.49      4.00      3.25
SRCPARAM L0000362     0.0000007743      3.49      4.00      3.25
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SRCPARAM L0000369     0.0000007743      3.49      4.00      3.25
SRCPARAM L0000370     0.0000007743      3.49      4.00      3.25
SRCPARAM L0000371     0.0000007743      3.49      4.00      3.25
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SRCPARAM L0000373     0.0000007743      3.49      4.00      3.25
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   SRCPARAM L0000374     0.0000007743      3.49      4.00      3.25
   SRCPARAM L0000375     0.0000007743      3.49      4.00      3.25
   SRCPARAM L0000376     0.0000007743      3.49      4.00      3.25
   SRCPARAM L0000377     0.0000007743      3.49      4.00      3.25
   SRCPARAM L0000378     0.0000007743      3.49      4.00      3.25
   SRCPARAM L0000379     0.0000007743      3.49      4.00      3.25
   SRCPARAM L0000380     0.0000007743      3.49      4.00      3.25
   SRCPARAM L0000381     0.0000007743      3.49      4.00      3.25
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** LINE VOLUME Source ID = SLINE3
   SRCPARAM L0000382     0.000001959       3.49      4.00      3.25
   SRCPARAM L0000383     0.000001959       3.49      4.00      3.25
   SRCPARAM L0000384     0.000001959       3.49      4.00      3.25
   SRCPARAM L0000385     0.000001959       3.49      4.00      3.25
   SRCPARAM L0000386     0.000001959       3.49      4.00      3.25
   SRCPARAM L0000387     0.000001959       3.49      4.00      3.25
   SRCPARAM L0000388     0.000001959       3.49      4.00      3.25
   SRCPARAM L0000389     0.000001959       3.49      4.00      3.25
   SRCPARAM L0000390     0.000001959       3.49      4.00      3.25
   SRCPARAM L0000391     0.000001959       3.49      4.00      3.25
   SRCPARAM L0000392     0.000001959       3.49      4.00      3.25
   SRCPARAM L0000393     0.000001959       3.49      4.00      3.25
   SRCPARAM L0000394     0.000001959       3.49      4.00      3.25
   SRCPARAM L0000395     0.000001959       3.49      4.00      3.25
   SRCPARAM L0000396     0.000001959       3.49      4.00      3.25
   SRCPARAM L0000397     0.000001959       3.49      4.00      3.25
   SRCPARAM L0000398     0.000001959       3.49      4.00      3.25
   SRCPARAM L0000399     0.000001959       3.49      4.00      3.25
   SRCPARAM L0000400     0.000001959       3.49      4.00      3.25
   SRCPARAM L0000401     0.000001959       3.49      4.00      3.25
   SRCPARAM L0000402     0.000001959       3.49      4.00      3.25
   SRCPARAM L0000403     0.000001959       3.49      4.00      3.25
   SRCPARAM L0000404     0.000001959       3.49      4.00      3.25
   SRCPARAM L0000405     0.000001959       3.49      4.00      3.25
   SRCPARAM L0000406     0.000001959       3.49      4.00      3.25
   SRCPARAM L0000407     0.000001959       3.49      4.00      3.25
   SRCPARAM L0000408     0.000001959       3.49      4.00      3.25
   SRCPARAM L0000409     0.000001959       3.49      4.00      3.25
   SRCPARAM L0000410     0.000001959       3.49      4.00      3.25
   SRCPARAM L0000411     0.000001959       3.49      4.00      3.25
   SRCPARAM L0000412     0.000001959       3.49      4.00      3.25
   SRCPARAM L0000413     0.000001959       3.49      4.00      3.25
   SRCPARAM L0000414     0.000001959       3.49      4.00      3.25
   SRCPARAM L0000415     0.000001959       3.49      4.00      3.25
   SRCPARAM L0000416     0.000001959       3.49      4.00      3.25
   SRCPARAM L0000417     0.000001959       3.49      4.00      3.25
   SRCPARAM L0000418     0.000001959       3.49      4.00      3.25
   SRCPARAM L0000419     0.000001959       3.49      4.00      3.25
   SRCPARAM L0000420     0.000001959       3.49      4.00      3.25
   SRCPARAM L0000421     0.000001959       3.49      4.00      3.25
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   SRCPARAM L0000422     0.000001959      3.49      4.00      3.25
   SRCPARAM L0000423     0.000001959      3.49      4.00      3.25
   SRCPARAM L0000424     0.000001959      3.49      4.00      3.25
   SRCPARAM L0000425     0.000001959      3.49      4.00      3.25
   SRCPARAM L0000426     0.000001959      3.49      4.00      3.25
   SRCPARAM L0000427     0.000001959      3.49      4.00      3.25
   SRCPARAM L0000428     0.000001959      3.49      4.00      3.25
   SRCPARAM L0000429     0.000001959      3.49      4.00      3.25
   SRCPARAM L0000430     0.000001959      3.49      4.00      3.25
   SRCPARAM L0000431     0.000001959      3.49      4.00      3.25
   SRCPARAM L0000432     0.000001959      3.49      4.00      3.25
   SRCPARAM L0000433     0.000001959      3.49      4.00      3.25
   SRCPARAM L0000434     0.000001959      3.49      4.00      3.25
   SRCPARAM L0000435     0.000001959      3.49      4.00      3.25
   SRCPARAM L0000436     0.000001959      3.49      4.00      3.25
   SRCPARAM L0000437     0.000001959      3.49      4.00      3.25
   SRCPARAM L0000438     0.000001959      3.49      4.00      3.25
   SRCPARAM L0000439     0.000001959      3.49      4.00      3.25
   SRCPARAM L0000440     0.000001959      3.49      4.00      3.25
   SRCPARAM L0000441     0.000001959      3.49      4.00      3.25
   SRCPARAM L0000442     0.000001959      3.49      4.00      3.25
   SRCPARAM L0000443     0.000001959      3.49      4.00      3.25
   SRCPARAM L0000444     0.000001959      3.49      4.00      3.25
   SRCPARAM L0000445     0.000001959      3.49      4.00      3.25
   SRCPARAM L0000446     0.000001959      3.49      4.00      3.25
   SRCPARAM L0000447     0.000001959      3.49      4.00      3.25
   SRCPARAM L0000448     0.000001959      3.49      4.00      3.25
   SRCPARAM L0000449     0.000001959      3.49      4.00      3.25
   SRCPARAM L0000450     0.000001959      3.49      4.00      3.25
   SRCPARAM L0000451     0.000001959      3.49      4.00      3.25
   SRCPARAM L0000452     0.000001959      3.49      4.00      3.25
   SRCPARAM L0000453     0.000001959      3.49      4.00      3.25
   SRCPARAM L0000454     0.000001959      3.49      4.00      3.25
   SRCPARAM L0000455     0.000001959      3.49      4.00      3.25
   SRCPARAM L0000456     0.000001959      3.49      4.00      3.25
   SRCPARAM L0000457     0.000001959      3.49      4.00      3.25
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** LINE VOLUME Source ID = SLINE4
   SRCPARAM L0000919     0.000007504      3.49      4.00      3.25
   SRCPARAM L0000920     0.000007504      3.49      4.00      3.25
   SRCPARAM L0000921     0.000007504      3.49      4.00      3.25
   SRCPARAM L0000922     0.000007504      3.49      4.00      3.25
   SRCPARAM L0000923     0.000007504      3.49      4.00      3.25
   SRCPARAM L0000924     0.000007504      3.49      4.00      3.25
   SRCPARAM L0000925     0.000007504      3.49      4.00      3.25
   SRCPARAM L0000926     0.000007504      3.49      4.00      3.25
   SRCPARAM L0000927     0.000007504      3.49      4.00      3.25
   SRCPARAM L0000928     0.000007504      3.49      4.00      3.25
   SRCPARAM L0000929     0.000007504      3.49      4.00      3.25
   SRCPARAM L0000930     0.000007504      3.49      4.00      3.25
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SRCPARAM L0000931     0.000007504      3.49      4.00      3.25
SRCPARAM L0000932     0.000007504      3.49      4.00      3.25
SRCPARAM L0000933     0.000007504      3.49      4.00      3.25
SRCPARAM L0000934     0.000007504      3.49      4.00      3.25
SRCPARAM L0000935     0.000007504      3.49      4.00      3.25
SRCPARAM L0000936     0.000007504      3.49      4.00      3.25
SRCPARAM L0000937     0.000007504      3.49      4.00      3.25
SRCPARAM L0000938     0.000007504      3.49      4.00      3.25
SRCPARAM L0000939     0.000007504      3.49      4.00      3.25
SRCPARAM L0000940     0.000007504      3.49      4.00      3.25
SRCPARAM L0000941     0.000007504      3.49      4.00      3.25
SRCPARAM L0000942     0.000007504      3.49      4.00      3.25
SRCPARAM L0000943     0.000007504      3.49      4.00      3.25
SRCPARAM L0000944     0.000007504      3.49      4.00      3.25
SRCPARAM L0000945     0.000007504      3.49      4.00      3.25
SRCPARAM L0000946     0.000007504      3.49      4.00      3.25
SRCPARAM L0000947     0.000007504      3.49      4.00      3.25
SRCPARAM L0000948     0.000007504      3.49      4.00      3.25
SRCPARAM L0000949     0.000007504      3.49      4.00      3.25
SRCPARAM L0000950     0.000007504      3.49      4.00      3.25
SRCPARAM L0000951     0.000007504      3.49      4.00      3.25
SRCPARAM L0000952     0.000007504      3.49      4.00      3.25
SRCPARAM L0000953     0.000007504      3.49      4.00      3.25
SRCPARAM L0000954     0.000007504      3.49      4.00      3.25
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SRCPARAM L0000961     0.000007504      3.49      4.00      3.25
SRCPARAM L0000962     0.000007504      3.49      4.00      3.25
SRCPARAM L0000963     0.000007504      3.49      4.00      3.25
SRCPARAM L0000964     0.000007504      3.49      4.00      3.25
SRCPARAM L0000965     0.000007504      3.49      4.00      3.25
SRCPARAM L0000966     0.000007504      3.49      4.00      3.25
SRCPARAM L0000967     0.000007504      3.49      4.00      3.25
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SRCPARAM L0000969     0.000007504      3.49      4.00      3.25
SRCPARAM L0000970     0.000007504      3.49      4.00      3.25
SRCPARAM L0000971     0.000007504      3.49      4.00      3.25
SRCPARAM L0000972     0.000007504      3.49      4.00      3.25
SRCPARAM L0000973     0.000007504      3.49      4.00      3.25
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SRCPARAM L0000976     0.000007504      3.49      4.00      3.25
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SRCPARAM L0000978     0.000007504      3.49      4.00      3.25
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SRCPARAM L0000980     0.000007504      3.49      4.00      3.25
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SRCPARAM L0000984     0.000007504      3.49      4.00      3.25
SRCPARAM L0000985     0.000007504      3.49      4.00      3.25
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SRCPARAM L0002421     0.000003985      3.49      4.00      3.25
SRCPARAM L0002422     0.000003985      3.49      4.00      3.25
SRCPARAM L0002423     0.000003985      3.49      4.00      3.25
SRCPARAM L0002424     0.000003985      3.49      4.00      3.25
SRCPARAM L0002425     0.000003985      3.49      4.00      3.25
SRCPARAM L0002426     0.000003985      3.49      4.00      3.25
SRCPARAM L0002427     0.000003985      3.49      4.00      3.25
SRCPARAM L0002428     0.000003985      3.49      4.00      3.25
SRCPARAM L0002429     0.000003985      3.49      4.00      3.25
SRCPARAM L0002430     0.000003985      3.49      4.00      3.25
SRCPARAM L0002431     0.000003985      3.49      4.00      3.25
SRCPARAM L0002432     0.000003985      3.49      4.00      3.25
SRCPARAM L0002433     0.000003985      3.49      4.00      3.25
SRCPARAM L0002434     0.000003985      3.49      4.00      3.25
SRCPARAM L0002435     0.000003985      3.49      4.00      3.25
SRCPARAM L0002436     0.000003985      3.49      4.00      3.25
SRCPARAM L0002437     0.000003985      3.49      4.00      3.25
SRCPARAM L0002438     0.000003985      3.49      4.00      3.25
SRCPARAM L0002439     0.000003985      3.49      4.00      3.25
SRCPARAM L0002440     0.000003985      3.49      4.00      3.25
SRCPARAM L0002441     0.000003985      3.49      4.00      3.25
SRCPARAM L0002442     0.000003985      3.49      4.00      3.25
SRCPARAM L0002443     0.000003985      3.49      4.00      3.25
SRCPARAM L0002444     0.000003985      3.49      4.00      3.25
SRCPARAM L0002445     0.000003985      3.49      4.00      3.25
SRCPARAM L0002446     0.000003985      3.49      4.00      3.25
SRCPARAM L0002447     0.000003985      3.49      4.00      3.25
SRCPARAM L0002448     0.000003985      3.49      4.00      3.25
SRCPARAM L0002449     0.000003985      3.49      4.00      3.25
SRCPARAM L0002450     0.000003985      3.49      4.00      3.25
SRCPARAM L0002451     0.000003985      3.49      4.00      3.25
SRCPARAM L0002452     0.000003985      3.49      4.00      3.25
SRCPARAM L0002453     0.000003985      3.49      4.00      3.25
SRCPARAM L0002454     0.000003985      3.49      4.00      3.25
SRCPARAM L0002455     0.000003985      3.49      4.00      3.25
SRCPARAM L0002456     0.000003985      3.49      4.00      3.25
SRCPARAM L0002457     0.000003985      3.49      4.00      3.25
SRCPARAM L0002458     0.000003985      3.49      4.00      3.25
SRCPARAM L0002459     0.000003985      3.49      4.00      3.25
SRCPARAM L0002460     0.000003985      3.49      4.00      3.25
SRCPARAM L0002461     0.000003985      3.49      4.00      3.25
SRCPARAM L0002462     0.000003985      3.49      4.00      3.25
SRCPARAM L0002463     0.000003985      3.49      4.00      3.25
SRCPARAM L0002464     0.000003985      3.49      4.00      3.25
SRCPARAM L0002465     0.000003985      3.49      4.00      3.25
SRCPARAM L0002466     0.000003985      3.49      4.00      3.25
SRCPARAM L0002467     0.000003985      3.49      4.00      3.25
SRCPARAM L0002468     0.000003985      3.49      4.00      3.25
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SRCPARAM L0002469     0.000003985      3.49      4.00      3.25
SRCPARAM L0002470     0.000003985      3.49      4.00      3.25
SRCPARAM L0002471     0.000003985      3.49      4.00      3.25
SRCPARAM L0002472     0.000003985      3.49      4.00      3.25
SRCPARAM L0002473     0.000003985      3.49      4.00      3.25
SRCPARAM L0002474     0.000003985      3.49      4.00      3.25
SRCPARAM L0002475     0.000003985      3.49      4.00      3.25
SRCPARAM L0002476     0.000003985      3.49      4.00      3.25
SRCPARAM L0002477     0.000003985      3.49      4.00      3.25
SRCPARAM L0002478     0.000003985      3.49      4.00      3.25
SRCPARAM L0002479     0.000003985      3.49      4.00      3.25
SRCPARAM L0002480     0.000003985      3.49      4.00      3.25
SRCPARAM L0002481     0.000003985      3.49      4.00      3.25
SRCPARAM L0002482     0.000003985      3.49      4.00      3.25
SRCPARAM L0002483     0.000003985      3.49      4.00      3.25
SRCPARAM L0002484     0.000003985      3.49      4.00      3.25
SRCPARAM L0002485     0.000003985      3.49      4.00      3.25
SRCPARAM L0002486     0.000003985      3.49      4.00      3.25
SRCPARAM L0002487     0.000003985      3.49      4.00      3.25
SRCPARAM L0002488     0.000003985      3.49      4.00      3.25
SRCPARAM L0002489     0.000003985      3.49      4.00      3.25
SRCPARAM L0002490     0.000003985      3.49      4.00      3.25
SRCPARAM L0002491     0.000003985      3.49      4.00      3.25
SRCPARAM L0002492     0.000003985      3.49      4.00      3.25
SRCPARAM L0002493     0.000003985      3.49      4.00      3.25
SRCPARAM L0002494     0.000003985      3.49      4.00      3.25
SRCPARAM L0002495     0.000003985      3.49      4.00      3.25
SRCPARAM L0002496     0.000003985      3.49      4.00      3.25
SRCPARAM L0002497     0.000003985      3.49      4.00      3.25
SRCPARAM L0002498     0.000003985      3.49      4.00      3.25
SRCPARAM L0002499     0.000003985      3.49      4.00      3.25
SRCPARAM L0002500     0.000003985      3.49      4.00      3.25
SRCPARAM L0002501     0.000003985      3.49      4.00      3.25
SRCPARAM L0002502     0.000003985      3.49      4.00      3.25
SRCPARAM L0002503     0.000003985      3.49      4.00      3.25
SRCPARAM L0002504     0.000003985      3.49      4.00      3.25
SRCPARAM L0002505     0.000003985      3.49      4.00      3.25
SRCPARAM L0002506     0.000003985      3.49      4.00      3.25
SRCPARAM L0002507     0.000003985      3.49      4.00      3.25
SRCPARAM L0002508     0.000003985      3.49      4.00      3.25
SRCPARAM L0002509     0.000003985      3.49      4.00      3.25
SRCPARAM L0002510     0.000003985      3.49      4.00      3.25
SRCPARAM L0002511     0.000003985      3.49      4.00      3.25
SRCPARAM L0002512     0.000003985      3.49      4.00      3.25
SRCPARAM L0002513     0.000003985      3.49      4.00      3.25
SRCPARAM L0002514     0.000003985      3.49      4.00      3.25
SRCPARAM L0002515     0.000003985      3.49      4.00      3.25
SRCPARAM L0002516     0.000003985      3.49      4.00      3.25
SRCPARAM L0002517     0.000003985      3.49      4.00      3.25
SRCPARAM L0002518     0.000003985      3.49      4.00      3.25
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   SRCPARAM L0002519     0.000003985      3.49      4.00      3.25
   SRCPARAM L0002520     0.000003985      3.49      4.00      3.25
   SRCPARAM L0002521     0.000003985      3.49      4.00      3.25
   SRCPARAM L0002522     0.000003985      3.49      4.00      3.25
   SRCPARAM L0002523     0.000003985      3.49      4.00      3.25
   SRCPARAM L0002524     0.000003985      3.49      4.00      3.25
   SRCPARAM L0002525     0.000003985      3.49      4.00      3.25
   SRCPARAM L0002526     0.000003985      3.49      4.00      3.25
   SRCPARAM L0002527     0.000003985      3.49      4.00      3.25
   SRCPARAM L0002528     0.000003985      3.49      4.00      3.25
   SRCPARAM L0002529     0.000003985      3.49      4.00      3.25
   SRCPARAM L0002530     0.000003985      3.49      4.00      3.25
   SRCPARAM L0002531     0.000003985      3.49      4.00      3.25
   SRCPARAM L0002532     0.000003985      3.49      4.00      3.25
   SRCPARAM L0002533     0.000003985      3.49      4.00      3.25
   SRCPARAM L0002534     0.000003985      3.49      4.00      3.25
   SRCPARAM L0002535     0.000003985      3.49      4.00      3.25
   SRCPARAM L0002536     0.000003985      3.49      4.00      3.25
   SRCPARAM L0002537     0.000003985      3.49      4.00      3.25
   SRCPARAM L0002538     0.000003985      3.49      4.00      3.25
   SRCPARAM L0002539     0.000003985      3.49      4.00      3.25
   SRCPARAM L0002540     0.000003985      3.49      4.00      3.25
   SRCPARAM L0002541     0.000003985      3.49      4.00      3.25
   SRCPARAM L0002542     0.000003985      3.49      4.00      3.25
   SRCPARAM L0002543     0.000003985      3.49      4.00      3.25
   SRCPARAM L0002544     0.000003985      3.49      4.00      3.25
   SRCPARAM L0002545     0.000003985      3.49      4.00      3.25
   SRCPARAM L0002546     0.000003985      3.49      4.00      3.25
   SRCPARAM L0002547     0.000003985      3.49      4.00      3.25
   SRCPARAM L0002548     0.000003985      3.49      4.00      3.25
   SRCPARAM L0002549     0.000003985      3.49      4.00      3.25
   SRCPARAM L0002550     0.000003985      3.49      4.00      3.25
   SRCPARAM L0002551     0.000003985      3.49      4.00      3.25
   SRCPARAM L0002552     0.000003985      3.49      4.00      3.25
   SRCPARAM L0002553     0.000003985      3.49      4.00      3.25
   SRCPARAM L0002554     0.000003985      3.49      4.00      3.25
   SRCPARAM L0002555     0.000003985      3.49      4.00      3.25
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** LINE VOLUME Source ID = SLINE6
   SRCPARAM L0002556     0.0000042      3.49      4.00      3.25
   SRCPARAM L0002557     0.0000042      3.49      4.00      3.25
   SRCPARAM L0002558     0.0000042      3.49      4.00      3.25
   SRCPARAM L0002559     0.0000042      3.49      4.00      3.25
   SRCPARAM L0002560     0.0000042      3.49      4.00      3.25
   SRCPARAM L0002561     0.0000042      3.49      4.00      3.25
   SRCPARAM L0002562     0.0000042      3.49      4.00      3.25
   SRCPARAM L0002563     0.0000042      3.49      4.00      3.25
   SRCPARAM L0002564     0.0000042      3.49      4.00      3.25
   SRCPARAM L0002565     0.0000042      3.49      4.00      3.25
   SRCPARAM L0002566     0.0000042      3.49      4.00      3.25
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   SRCPARAM L0002567     0.0000042      3.49      4.00      3.25
   SRCPARAM L0002568     0.0000042      3.49      4.00      3.25
   SRCPARAM L0002569     0.0000042      3.49      4.00      3.25
   SRCPARAM L0002570     0.0000042      3.49      4.00      3.25
   SRCPARAM L0002571     0.0000042      3.49      4.00      3.25
   SRCPARAM L0002572     0.0000042      3.49      4.00      3.25
   SRCPARAM L0002573     0.0000042      3.49      4.00      3.25
   SRCPARAM L0002574     0.0000042      3.49      4.00      3.25
   SRCPARAM L0002575     0.0000042      3.49      4.00      3.25
   SRCPARAM L0002576     0.0000042      3.49      4.00      3.25
   SRCPARAM L0002577     0.0000042      3.49      4.00      3.25
   SRCPARAM L0002578     0.0000042      3.49      4.00      3.25
   SRCPARAM L0002579     0.0000042      3.49      4.00      3.25
   SRCPARAM L0002580     0.0000042      3.49      4.00      3.25
   SRCPARAM L0002581     0.0000042      3.49      4.00      3.25
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** LINE VOLUME Source ID = SLINE7
   SRCPARAM L0002582     0.000005029      3.49      4.00      3.25
   SRCPARAM L0002583     0.000005029      3.49      4.00      3.25
   SRCPARAM L0002584     0.000005029      3.49      4.00      3.25
   SRCPARAM L0002585     0.000005029      3.49      4.00      3.25
   SRCPARAM L0002586     0.000005029      3.49      4.00      3.25
   SRCPARAM L0002587     0.000005029      3.49      4.00      3.25
   SRCPARAM L0002588     0.000005029      3.49      4.00      3.25
   SRCPARAM L0002589     0.000005029      3.49      4.00      3.25
   SRCPARAM L0002590     0.000005029      3.49      4.00      3.25
   SRCPARAM L0002591     0.000005029      3.49      4.00      3.25
   SRCPARAM L0002592     0.000005029      3.49      4.00      3.25
   SRCPARAM L0002593     0.000005029      3.49      4.00      3.25
   SRCPARAM L0002594     0.000005029      3.49      4.00      3.25
   SRCPARAM L0002595     0.000005029      3.49      4.00      3.25
   SRCPARAM L0002596     0.000005029      3.49      4.00      3.25
   SRCPARAM L0002597     0.000005029      3.49      4.00      3.25
   SRCPARAM L0002598     0.000005029      3.49      4.00      3.25
   SRCPARAM L0002599     0.000005029      3.49      4.00      3.25
   SRCPARAM L0002600     0.000005029      3.49      4.00      3.25
   SRCPARAM L0002601     0.000005029      3.49      4.00      3.25
   SRCPARAM L0002602     0.000005029      3.49      4.00      3.25
   SRCPARAM L0002603     0.000005029      3.49      4.00      3.25
   SRCPARAM L0002604     0.000005029      3.49      4.00      3.25
   SRCPARAM L0002605     0.000005029      3.49      4.00      3.25
   SRCPARAM L0002606     0.000005029      3.49      4.00      3.25
   SRCPARAM L0002607     0.000005029      3.49      4.00      3.25
   SRCPARAM L0002608     0.000005029      3.49      4.00      3.25
   SRCPARAM L0002609     0.000005029      3.49      4.00      3.25
   SRCPARAM L0002610     0.000005029      3.49      4.00      3.25
   SRCPARAM L0002611     0.000005029      3.49      4.00      3.25
   SRCPARAM L0002612     0.000005029      3.49      4.00      3.25
   SRCPARAM L0002613     0.000005029      3.49      4.00      3.25
   SRCPARAM L0002614     0.000005029      3.49      4.00      3.25
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SRCPARAM L0002615     0.000005029      3.49      4.00      3.25
SRCPARAM L0002616     0.000005029      3.49      4.00      3.25
SRCPARAM L0002617     0.000005029      3.49      4.00      3.25
SRCPARAM L0002618     0.000005029      3.49      4.00      3.25
SRCPARAM L0002619     0.000005029      3.49      4.00      3.25
SRCPARAM L0002620     0.000005029      3.49      4.00      3.25
SRCPARAM L0002621     0.000005029      3.49      4.00      3.25
SRCPARAM L0002622     0.000005029      3.49      4.00      3.25
SRCPARAM L0002623     0.000005029      3.49      4.00      3.25
SRCPARAM L0002624     0.000005029      3.49      4.00      3.25
SRCPARAM L0002625     0.000005029      3.49      4.00      3.25
SRCPARAM L0002626     0.000005029      3.49      4.00      3.25
SRCPARAM L0002627     0.000005029      3.49      4.00      3.25
SRCPARAM L0002628     0.000005029      3.49      4.00      3.25
SRCPARAM L0002629     0.000005029      3.49      4.00      3.25
SRCPARAM L0002630     0.000005029      3.49      4.00      3.25
SRCPARAM L0002631     0.000005029      3.49      4.00      3.25
SRCPARAM L0002632     0.000005029      3.49      4.00      3.25
SRCPARAM L0002633     0.000005029      3.49      4.00      3.25
SRCPARAM L0002634     0.000005029      3.49      4.00      3.25
SRCPARAM L0002635     0.000005029      3.49      4.00      3.25
SRCPARAM L0002636     0.000005029      3.49      4.00      3.25
SRCPARAM L0002637     0.000005029      3.49      4.00      3.25
SRCPARAM L0002638     0.000005029      3.49      4.00      3.25
SRCPARAM L0002639     0.000005029      3.49      4.00      3.25
SRCPARAM L0002640     0.000005029      3.49      4.00      3.25
SRCPARAM L0002641     0.000005029      3.49      4.00      3.25
SRCPARAM L0002642     0.000005029      3.49      4.00      3.25
SRCPARAM L0002643     0.000005029      3.49      4.00      3.25
SRCPARAM L0002644     0.000005029      3.49      4.00      3.25
SRCPARAM L0002645     0.000005029      3.49      4.00      3.25
SRCPARAM L0002646     0.000005029      3.49      4.00      3.25
SRCPARAM L0002647     0.000005029      3.49      4.00      3.25
SRCPARAM L0002648     0.000005029      3.49      4.00      3.25
SRCPARAM L0002649     0.000005029      3.49      4.00      3.25
SRCPARAM L0002650     0.000005029      3.49      4.00      3.25
SRCPARAM L0002651     0.000005029      3.49      4.00      3.25
SRCPARAM L0002652     0.000005029      3.49      4.00      3.25
SRCPARAM L0002653     0.000005029      3.49      4.00      3.25
SRCPARAM L0002654     0.000005029      3.49      4.00      3.25
SRCPARAM L0002655     0.000005029      3.49      4.00      3.25
SRCPARAM L0002656     0.000005029      3.49      4.00      3.25
SRCPARAM L0002657     0.000005029      3.49      4.00      3.25
SRCPARAM L0002658     0.000005029      3.49      4.00      3.25
SRCPARAM L0002659     0.000005029      3.49      4.00      3.25
SRCPARAM L0002660     0.000005029      3.49      4.00      3.25
SRCPARAM L0002661     0.000005029      3.49      4.00      3.25
SRCPARAM L0002662     0.000005029      3.49      4.00      3.25
SRCPARAM L0002663     0.000005029      3.49      4.00      3.25
SRCPARAM L0002664     0.000005029      3.49      4.00      3.25
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   SRCPARAM L0002665     0.000005029      3.49      4.00      3.25
   SRCPARAM L0002666     0.000005029      3.49      4.00      3.25
   SRCPARAM L0002667     0.000005029      3.49      4.00      3.25
   SRCPARAM L0002668     0.000005029      3.49      4.00      3.25
   SRCPARAM L0002669     0.000005029      3.49      4.00      3.25
   SRCPARAM L0002670     0.000005029      3.49      4.00      3.25
   SRCPARAM L0002671     0.000005029      3.49      4.00      3.25
   SRCPARAM L0002672     0.000005029      3.49      4.00      3.25
   SRCPARAM L0002673     0.000005029      3.49      4.00      3.25
** ----------------------------------------------------------------
** LINE VOLUME Source ID = SLINE8
   SRCPARAM L0002857     0.000004509      3.49      4.00      3.25
   SRCPARAM L0002858     0.000004509      3.49      4.00      3.25
   SRCPARAM L0002859     0.000004509      3.49      4.00      3.25
   SRCPARAM L0002860     0.000004509      3.49      4.00      3.25
   SRCPARAM L0002861     0.000004509      3.49      4.00      3.25
   SRCPARAM L0002862     0.000004509      3.49      4.00      3.25
   SRCPARAM L0002863     0.000004509      3.49      4.00      3.25
   SRCPARAM L0002864     0.000004509      3.49      4.00      3.25
   SRCPARAM L0002865     0.000004509      3.49      4.00      3.25
   SRCPARAM L0002866     0.000004509      3.49      4.00      3.25
   SRCPARAM L0002867     0.000004509      3.49      4.00      3.25
   SRCPARAM L0002868     0.000004509      3.49      4.00      3.25
   SRCPARAM L0002869     0.000004509      3.49      4.00      3.25
   SRCPARAM L0002870     0.000004509      3.49      4.00      3.25
   SRCPARAM L0002871     0.000004509      3.49      4.00      3.25
   SRCPARAM L0002872     0.000004509      3.49      4.00      3.25
   SRCPARAM L0002873     0.000004509      3.49      4.00      3.25
   SRCPARAM L0002874     0.000004509      3.49      4.00      3.25
   SRCPARAM L0002875     0.000004509      3.49      4.00      3.25
   SRCPARAM L0002876     0.000004509      3.49      4.00      3.25
   SRCPARAM L0002877     0.000004509      3.49      4.00      3.25
   SRCPARAM L0002878     0.000004509      3.49      4.00      3.25
   SRCPARAM L0002879     0.000004509      3.49      4.00      3.25
   SRCPARAM L0002880     0.000004509      3.49      4.00      3.25
   SRCPARAM L0002881     0.000004509      3.49      4.00      3.25
   SRCPARAM L0002882     0.000004509      3.49      4.00      3.25
   SRCPARAM L0002883     0.000004509      3.49      4.00      3.25
   SRCPARAM L0002884     0.000004509      3.49      4.00      3.25
   SRCPARAM L0002885     0.000004509      3.49      4.00      3.25
   SRCPARAM L0002886     0.000004509      3.49      4.00      3.25
   SRCPARAM L0002887     0.000004509      3.49      4.00      3.25
   SRCPARAM L0002888     0.000004509      3.49      4.00      3.25
   SRCPARAM L0002889     0.000004509      3.49      4.00      3.25
   SRCPARAM L0002890     0.000004509      3.49      4.00      3.25
   SRCPARAM L0002891     0.000004509      3.49      4.00      3.25
   SRCPARAM L0002892     0.000004509      3.49      4.00      3.25
   SRCPARAM L0002893     0.000004509      3.49      4.00      3.25
   SRCPARAM L0002894     0.000004509      3.49      4.00      3.25
   SRCPARAM L0002895     0.000004509      3.49      4.00      3.25
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SRCPARAM L0002896     0.000004509      3.49      4.00      3.25
SRCPARAM L0002897     0.000004509      3.49      4.00      3.25
SRCPARAM L0002898     0.000004509      3.49      4.00      3.25
SRCPARAM L0002899     0.000004509      3.49      4.00      3.25
SRCPARAM L0002900     0.000004509      3.49      4.00      3.25
SRCPARAM L0002901     0.000004509      3.49      4.00      3.25
SRCPARAM L0002902     0.000004509      3.49      4.00      3.25
SRCPARAM L0002903     0.000004509      3.49      4.00      3.25
SRCPARAM L0002904     0.000004509      3.49      4.00      3.25
SRCPARAM L0002905     0.000004509      3.49      4.00      3.25
SRCPARAM L0002906     0.000004509      3.49      4.00      3.25
SRCPARAM L0002907     0.000004509      3.49      4.00      3.25
SRCPARAM L0002908     0.000004509      3.49      4.00      3.25
SRCPARAM L0002909     0.000004509      3.49      4.00      3.25
SRCPARAM L0002910     0.000004509      3.49      4.00      3.25
SRCPARAM L0002911     0.000004509      3.49      4.00      3.25
SRCPARAM L0002912     0.000004509      3.49      4.00      3.25
SRCPARAM L0002913     0.000004509      3.49      4.00      3.25
SRCPARAM L0002914     0.000004509      3.49      4.00      3.25
SRCPARAM L0002915     0.000004509      3.49      4.00      3.25
SRCPARAM L0002916     0.000004509      3.49      4.00      3.25
SRCPARAM L0002917     0.000004509      3.49      4.00      3.25
SRCPARAM L0002918     0.000004509      3.49      4.00      3.25
SRCPARAM L0002919     0.000004509      3.49      4.00      3.25
SRCPARAM L0002920     0.000004509      3.49      4.00      3.25
SRCPARAM L0002921     0.000004509      3.49      4.00      3.25
SRCPARAM L0002922     0.000004509      3.49      4.00      3.25
SRCPARAM L0002923     0.000004509      3.49      4.00      3.25
SRCPARAM L0002924     0.000004509      3.49      4.00      3.25
SRCPARAM L0002925     0.000004509      3.49      4.00      3.25
SRCPARAM L0002926     0.000004509      3.49      4.00      3.25
SRCPARAM L0002927     0.000004509      3.49      4.00      3.25
SRCPARAM L0002928     0.000004509      3.49      4.00      3.25
SRCPARAM L0002929     0.000004509      3.49      4.00      3.25
SRCPARAM L0002930     0.000004509      3.49      4.00      3.25
SRCPARAM L0002931     0.000004509      3.49      4.00      3.25
SRCPARAM L0002932     0.000004509      3.49      4.00      3.25
SRCPARAM L0002933     0.000004509      3.49      4.00      3.25
SRCPARAM L0002934     0.000004509      3.49      4.00      3.25
SRCPARAM L0002935     0.000004509      3.49      4.00      3.25
SRCPARAM L0002936     0.000004509      3.49      4.00      3.25
SRCPARAM L0002937     0.000004509      3.49      4.00      3.25
SRCPARAM L0002938     0.000004509      3.49      4.00      3.25
SRCPARAM L0002939     0.000004509      3.49      4.00      3.25
SRCPARAM L0002940     0.000004509      3.49      4.00      3.25
SRCPARAM L0002941     0.000004509      3.49      4.00      3.25
SRCPARAM L0002942     0.000004509      3.49      4.00      3.25
SRCPARAM L0002943     0.000004509      3.49      4.00      3.25
SRCPARAM L0002944     0.000004509      3.49      4.00      3.25
SRCPARAM L0002945     0.000004509      3.49      4.00      3.25
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   SRCPARAM L0002946     0.000004509      3.49      4.00      3.25
   SRCPARAM L0002947     0.000004509      3.49      4.00      3.25
   SRCPARAM L0002948     0.000004509      3.49      4.00      3.25
   SRCPARAM L0002949     0.000004509      3.49      4.00      3.25
   SRCPARAM L0002950     0.000004509      3.49      4.00      3.25
   SRCPARAM L0002951     0.000004509      3.49      4.00      3.25
   SRCPARAM L0002952     0.000004509      3.49      4.00      3.25
   SRCPARAM L0002953     0.000004509      3.49      4.00      3.25
   SRCPARAM L0002954     0.000004509      3.49      4.00      3.25
   SRCPARAM L0002955     0.000004509      3.49      4.00      3.25
   SRCPARAM L0002956     0.000004509      3.49      4.00      3.25
   SRCPARAM L0002957     0.000004509      3.49      4.00      3.25
   SRCPARAM L0002958     0.000004509      3.49      4.00      3.25
   SRCPARAM L0002959     0.000004509      3.49      4.00      3.25
   SRCPARAM L0002960     0.000004509      3.49      4.00      3.25
   SRCPARAM L0002961     0.000004509      3.49      4.00      3.25
   SRCPARAM L0002962     0.000004509      3.49      4.00      3.25
   SRCPARAM L0002963     0.000004509      3.49      4.00      3.25
   SRCPARAM L0002964     0.000004509      3.49      4.00      3.25
   SRCPARAM L0002965     0.000004509      3.49      4.00      3.25
   SRCPARAM L0002966     0.000004509      3.49      4.00      3.25
   SRCPARAM L0002967     0.000004509      3.49      4.00      3.25
   SRCPARAM L0002968     0.000004509      3.49      4.00      3.25
   SRCPARAM L0002969     0.000004509      3.49      4.00      3.25
   SRCPARAM L0002970     0.000004509      3.49      4.00      3.25
   SRCPARAM L0002971     0.000004509      3.49      4.00      3.25
   SRCPARAM L0002972     0.000004509      3.49      4.00      3.25
   SRCPARAM L0002973     0.000004509      3.49      4.00      3.25
   SRCPARAM L0002974     0.000004509      3.49      4.00      3.25
   SRCPARAM L0002975     0.000004509      3.49      4.00      3.25
   SRCPARAM L0002976     0.000004509      3.49      4.00      3.25
   SRCPARAM L0002977     0.000004509      3.49      4.00      3.25
   SRCPARAM L0002978     0.000004509      3.49      4.00      3.25
   SRCPARAM L0002979     0.000004509      3.49      4.00      3.25
   SRCPARAM L0002980     0.000004509      3.49      4.00      3.25
   SRCPARAM L0002981     0.000004509      3.49      4.00      3.25
   SRCPARAM L0002982     0.000004509      3.49      4.00      3.25
   SRCPARAM L0002983     0.000004509      3.49      4.00      3.25
   SRCPARAM L0002984     0.000004509      3.49      4.00      3.25
   SRCPARAM L0002985     0.000004509      3.49      4.00      3.25
   SRCPARAM L0002986     0.000004509      3.49      4.00      3.25
   SRCPARAM L0002987     0.000004509      3.49      4.00      3.25
** ------------------------------------------------------------------
   URBANSRC ALL
   SRCGROUP ALL
SO FINISHED
**
************************************
** AERMOD Receptor Pathway
************************************
```

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**
**
RE STARTING
   INCLUDED ExistingAB!.rou
RE FINISHED
**
**************************************
** AERMOD Meteorology Pathway
**************************************
**
**
ME STARTING
   SURFFILE ..\RedlandsADJU\RDLD_V9_ADJU\RDLD_v9.SFC
   PROFFILE ..\RedlandsADJU\RDLD_V9_ADJU\RDLD_v9.PFL
   SURFDATA 3171 2012
   UAIRDATA 3190 2012
   SITEDATA 99999 2012
   PROFBASE 481.0 METERS
ME FINISHED
**
**************************************
** AERMOD Output Pathway
**************************************
**
**
OU STARTING
** Auto-Generated Plotfiles
   PLOTFILE PERIOD ALL ExistingAB!.AD\PE00GALL.PLT 31
   SUMMFILE ExistingAB!.sum
OU FINISHED

  *** Message Summary For AERMOD Model Setup ***
  --------- Summary of Total Messages --------

 A Total of            0 Fatal Error Message(s)
 A Total of            2 Warning Message(s)
 A Total of            0 Informational Message(s)


    ******** FATAL ERROR MESSAGES ********
               ***  NONE  ***


    ********   WARNING MESSAGES   ********
 ME W186    2419       MEOPEN: THRESH_1MIN 1-min ASOS wind speed threshold used          0.50
 ME W187    2419       MEOPEN: ADJ_U* Option for Low Winds used in AERMET

 *********************************
 *** SETUP Finishes Successfully ***
 *********************************
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*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

                                        ***   MODEL SETUP OPTIONS SUMMARY   ***
- -

**Model Is Setup For Calculation of Average CONCentration Values.

  -- DEPOSITION LOGIC --
**NO GAS DEPOSITION Data Provided.
**NO PARTICLE DEPOSITION Data Provided.
**Model Uses NO DRY DEPLETION. DRYDPLT = F
**Model Uses NO WET DEPLETION. WETDPLT = F

**Model Uses URBAN Dispersion Algorithm for the SBL for 1106 Source(s),
  for Total of   1 Urban Area(s):
  Urban Population =   2035210.0 ; Urban Roughness Length = 1.000 m

**Model Uses Regulatory DEFAULT Options:
       1. Stack-tip Downwash.
       2. Model Accounts for ELEVated Terrain Effects.
       3. Use Calms Processing Routine.
       4. Use Missing Data Processing Routine.
       5. No Exponential Decay.
       6. Urban Roughness Length of 1.0 Meter Assumed.

**Other Options Specified:
       ADJ_U*   - Use ADJ_U* BETA option for SBL in AERMET
       TEMP_Sub - Meteorological data includes TEMP substitutions

**Model Assumes No FLAGPOLE Receptor Heights.

**The User Specified a Pollutant Type of: DPM

**Model Calculates PERIOD Averages Only

**This Run Includes: 1106 Source(s);   1 Source Group(s); and   1506 Receptor(s)

              with: 0 POINT(s), including
                         0 POINTCAP(s) and   0 POINTHOR(s)
               and: 1106 VOLUME source(s)
               and: 0 AREA type source(s)
               and: 0 LINE source(s)
               and: 0 OPENPIT source(s)
               and: 0 BUOYANT LINE source(s) with   0 line(s)

**Model Set To Continue RUNning After the Setup Testing.

```
**The AERMET Input Meteorological Data Version Date:  16216

**Output Options Selected:
         Model Outputs Tables of PERIOD Averages by Receptor
         Model Outputs External File(s) of High Values for Plotting (PLOTFILE Keyword)
         Model Outputs Separate Summary File of High Ranked Values (SUMMFILE Keyword)

**NOTE:  The Following Flags May Appear Following CONC Values:  c for Calm Hours
                                                                m for Missing Hours
                                                                b for Both Calm and Missing Hours

**Misc. Inputs:  Base Elev. for Pot. Temp. Profile (m MSL) =   481.00 ;  Decay Coef. =    0.000     ;  Rot. Angle =     0.0
                 Emission Units = GRAMS/SEC                              ;  Emission Rate Unit Factor =   0.10000E+07
                 Output Units   = MICROGRAMS/M**3

**Approximate Storage Requirements of Model =      4.1 MB of RAM.

**Detailed Error/Message File:   ExistingAB!.err
**File for Summary of Results:   ExistingAB!.sum
```

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0000001	0	0.54620E-05	480749.7	3774134.1	363.7	3.49	4.00	3.25	YES	
L0000002	0	0.54620E-05	480758.2	3774133.4	363.9	3.49	4.00	3.25	YES	
L0000003	0	0.54620E-05	480766.8	3774132.7	364.0	3.49	4.00	3.25	YES	
L0000004	0	0.54620E-05	480775.4	3774132.0	364.0	3.49	4.00	3.25	YES	
L0000005	0	0.54620E-05	480783.9	3774131.3	364.0	3.49	4.00	3.25	YES	
L0000006	0	0.54620E-05	480792.5	3774130.6	364.0	3.49	4.00	3.25	YES	
L0000007	0	0.54620E-05	480801.0	3774129.9	364.0	3.49	4.00	3.25	YES	
L0000008	0	0.54620E-05	480809.6	3774129.2	364.0	3.49	4.00	3.25	YES	
L0000009	0	0.54620E-05	480818.2	3774128.5	364.0	3.49	4.00	3.25	YES	
L0000010	0	0.54620E-05	480826.7	3774127.8	364.1	3.49	4.00	3.25	YES	
L0000011	0	0.54620E-05	480835.3	3774127.1	364.2	3.49	4.00	3.25	YES	
L0000012	0	0.54620E-05	480843.9	3774126.4	364.3	3.49	4.00	3.25	YES	
L0000013	0	0.54620E-05	480852.4	3774125.7	364.4	3.49	4.00	3.25	YES	
L0000014	0	0.54620E-05	480861.0	3774125.0	364.6	3.49	4.00	3.25	YES	
L0000015	0	0.54620E-05	480869.5	3774124.3	364.8	3.49	4.00	3.25	YES	
L0000016	0	0.54620E-05	480878.1	3774123.6	365.0	3.49	4.00	3.25	YES	
L0000017	0	0.54620E-05	480886.7	3774122.9	365.0	3.49	4.00	3.25	YES	
L0000018	0	0.54620E-05	480895.2	3774122.2	365.0	3.49	4.00	3.25	YES	
L0000019	0	0.54620E-05	480903.8	3774121.5	365.0	3.49	4.00	3.25	YES	
L0000020	0	0.54620E-05	480912.3	3774120.8	365.0	3.49	4.00	3.25	YES	
L0000021	0	0.54620E-05	480920.9	3774120.1	365.0	3.49	4.00	3.25	YES	
L0000022	0	0.54620E-05	480929.5	3774119.4	365.0	3.49	4.00	3.25	YES	
L0000023	0	0.54620E-05	480938.0	3774118.7	365.0	3.49	4.00	3.25	YES	
L0000024	0	0.54620E-05	480946.6	3774118.0	365.2	3.49	4.00	3.25	YES	
L0000025	0	0.54620E-05	480955.2	3774117.3	365.5	3.49	4.00	3.25	YES	
L0000026	0	0.54620E-05	480963.7	3774116.6	365.8	3.49	4.00	3.25	YES	
L0000027	0	0.54620E-05	480972.3	3774115.9	366.0	3.49	4.00	3.25	YES	
L0000028	0	0.54620E-05	480980.8	3774115.2	366.0	3.49	4.00	3.25	YES	
L0000029	0	0.54620E-05	480989.4	3774114.5	366.0	3.49	4.00	3.25	YES	
L0000030	0	0.54620E-05	480998.0	3774113.8	366.0	3.49	4.00	3.25	YES	
L0000031	0	0.54620E-05	481006.5	3774113.1	366.0	3.49	4.00	3.25	YES	
L0000032	0	0.54620E-05	481015.1	3774112.4	366.0	3.49	4.00	3.25	YES	
L0000033	0	0.54620E-05	481023.6	3774111.7	366.0	3.49	4.00	3.25	YES	
L0000034	0	0.54620E-05	481032.2	3774111.0	366.1	3.49	4.00	3.25	YES	
L0000035	0	0.54620E-05	481040.8	3774110.3	366.4	3.49	4.00	3.25	YES	
L0000036	0	0.54620E-05	481049.3	3774109.6	366.7	3.49	4.00	3.25	YES	
L0000037	0	0.54620E-05	481057.9	3774108.9	366.9	3.49	4.00	3.25	YES	
L0000038	0	0.54620E-05	481066.5	3774108.4	367.0	3.49	4.00	3.25	YES	
L0000039	0	0.54620E-05	481075.0	3774107.9	367.0	3.49	4.00	3.25	YES	
L0000040	0	0.54620E-05	481083.6	3774107.5	367.0	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0000041	0	0.54620E-05	481092.2	3774107.1	367.0	3.49	4.00	3.25	YES	
L0000042	0	0.54620E-05	481100.8	3774106.7	367.0	3.49	4.00	3.25	YES	
L0000043	0	0.54620E-05	481109.4	3774106.3	367.0	3.49	4.00	3.25	YES	
L0000044	0	0.54620E-05	481117.9	3774105.9	367.0	3.49	4.00	3.25	YES	
L0000045	0	0.54620E-05	481126.5	3774105.4	367.2	3.49	4.00	3.25	YES	
L0000046	0	0.54620E-05	481135.1	3774105.0	367.5	3.49	4.00	3.25	YES	
L0000047	0	0.54620E-05	481143.7	3774104.6	367.8	3.49	4.00	3.25	YES	
L0000048	0	0.54620E-05	481152.3	3774104.2	368.0	3.49	4.00	3.25	YES	
L0000049	0	0.54620E-05	481160.8	3774104.6	368.0	3.49	4.00	3.25	YES	
L0000050	0	0.54620E-05	481169.4	3774105.2	368.0	3.49	4.00	3.25	YES	
L0000051	0	0.54620E-05	481178.0	3774105.8	368.0	3.49	4.00	3.25	YES	
L0000052	0	0.54620E-05	481186.5	3774106.5	368.0	3.49	4.00	3.25	YES	
L0000053	0	0.54620E-05	481195.1	3774107.1	368.0	3.49	4.00	3.25	YES	
L0000054	0	0.54620E-05	481203.7	3774107.7	368.0	3.49	4.00	3.25	YES	
L0000055	0	0.54620E-05	481212.2	3774108.3	368.1	3.49	4.00	3.25	YES	
L0000056	0	0.54620E-05	481220.8	3774108.9	368.4	3.49	4.00	3.25	YES	
L0000057	0	0.54620E-05	481229.4	3774109.5	368.7	3.49	4.00	3.25	YES	
L0000058	0	0.54620E-05	481237.9	3774110.1	368.9	3.49	4.00	3.25	YES	
L0000059	0	0.54620E-05	481246.5	3774110.8	369.0	3.49	4.00	3.25	YES	
L0000060	0	0.54620E-05	481255.1	3774111.4	369.0	3.49	4.00	3.25	YES	
L0000061	0	0.54620E-05	481263.6	3774112.0	369.0	3.49	4.00	3.25	YES	
L0000062	0	0.54620E-05	481272.2	3774112.6	369.0	3.49	4.00	3.25	YES	
L0000063	0	0.54620E-05	481280.8	3774113.2	369.0	3.49	4.00	3.25	YES	
L0000064	0	0.54620E-05	481289.3	3774113.8	369.0	3.49	4.00	3.25	YES	
L0000065	0	0.54620E-05	481297.9	3774114.5	369.0	3.49	4.00	3.25	YES	
L0000066	0	0.54620E-05	481306.5	3774115.1	369.2	3.49	4.00	3.25	YES	
L0000067	0	0.54620E-05	481315.1	3774115.7	369.5	3.49	4.00	3.25	YES	
L0000068	0	0.54620E-05	481323.6	3774116.3	369.8	3.49	4.00	3.25	YES	
L0000069	0	0.54620E-05	481332.2	3774116.9	370.0	3.49	4.00	3.25	YES	
L0000070	0	0.54620E-05	481340.8	3774117.5	370.0	3.49	4.00	3.25	YES	
L0000071	0	0.54620E-05	481349.3	3774118.1	370.0	3.49	4.00	3.25	YES	
L0000072	0	0.54620E-05	481357.9	3774118.8	370.0	3.49	4.00	3.25	YES	
L0000073	0	0.54620E-05	481366.5	3774119.4	370.0	3.49	4.00	3.25	YES	
L0000074	0	0.54620E-05	481375.0	3774120.0	370.0	3.49	4.00	3.25	YES	
L0000075	0	0.54620E-05	481383.6	3774120.6	370.0	3.49	4.00	3.25	YES	
L0000076	0	0.54620E-05	481392.2	3774121.2	370.1	3.49	4.00	3.25	YES	
L0000077	0	0.54620E-05	481400.7	3774121.8	370.4	3.49	4.00	3.25	YES	
L0000078	0	0.54620E-05	481409.3	3774122.5	370.7	3.49	4.00	3.25	YES	
L0000079	0	0.54620E-05	481417.9	3774123.1	370.9	3.49	4.00	3.25	YES	
L0000080	0	0.54620E-05	481426.4	3774123.7	371.0	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0000081	0	0.54620E-05	481435.0	3774124.3	371.0	3.49	4.00	3.25	YES	
L0000082	0	0.54620E-05	481443.6	3774124.9	371.0	3.49	4.00	3.25	YES	
L0000083	0	0.54620E-05	481452.1	3774125.5	371.0	3.49	4.00	3.25	YES	
L0000084	0	0.54620E-05	481460.7	3774126.1	371.1	3.49	4.00	3.25	YES	
L0000085	0	0.54620E-05	481469.3	3774126.8	371.2	3.49	4.00	3.25	YES	
L0000086	0	0.54620E-05	481477.8	3774127.4	371.3	3.49	4.00	3.25	YES	
L0000087	0	0.54620E-05	481486.4	3774128.0	371.4	3.49	4.00	3.25	YES	
L0000088	0	0.54620E-05	481495.0	3774128.6	371.6	3.49	4.00	3.25	YES	
L0000089	0	0.54620E-05	481503.5	3774129.2	371.8	3.49	4.00	3.25	YES	
L0000090	0	0.54620E-05	481512.1	3774129.8	372.0	3.49	4.00	3.25	YES	
L0000091	0	0.54620E-05	481520.7	3774130.5	372.0	3.49	4.00	3.25	YES	
L0000092	0	0.54620E-05	481529.3	3774131.1	372.0	3.49	4.00	3.25	YES	
L0000093	0	0.54620E-05	481537.8	3774131.7	372.0	3.49	4.00	3.25	YES	
L0000094	0	0.54620E-05	481546.4	3774132.3	372.0	3.49	4.00	3.25	YES	
L0000095	0	0.54620E-05	481555.0	3774132.9	372.1	3.49	4.00	3.25	YES	
L0000096	0	0.54620E-05	481563.5	3774133.5	372.1	3.49	4.00	3.25	YES	
L0000097	0	0.54620E-05	481572.1	3774134.1	372.1	3.49	4.00	3.25	YES	
L0000195	0	0.77430E-06	479144.0	3771580.1	352.0	3.49	4.00	3.25	YES	
L0000196	0	0.77430E-06	479152.5	3771580.1	352.0	3.49	4.00	3.25	YES	
L0000197	0	0.77430E-06	479161.1	3771580.0	352.0	3.49	4.00	3.25	YES	
L0000198	0	0.77430E-06	479169.7	3771580.0	352.0	3.49	4.00	3.25	YES	
L0000199	0	0.77430E-06	479178.3	3771579.9	352.3	3.49	4.00	3.25	YES	
L0000200	0	0.77430E-06	479186.9	3771579.9	352.6	3.49	4.00	3.25	YES	
L0000201	0	0.77430E-06	479195.5	3771579.8	352.9	3.49	4.00	3.25	YES	
L0000202	0	0.77430E-06	479204.1	3771579.8	353.0	3.49	4.00	3.25	YES	
L0000203	0	0.77430E-06	479212.7	3771579.7	353.0	3.49	4.00	3.25	YES	
L0000204	0	0.77430E-06	479221.3	3771579.7	353.0	3.49	4.00	3.25	YES	
L0000205	0	0.77430E-06	479229.8	3771579.6	353.0	3.49	4.00	3.25	YES	
L0000206	0	0.77430E-06	479238.4	3771579.6	353.1	3.49	4.00	3.25	YES	
L0000207	0	0.77430E-06	479247.0	3771579.5	353.1	3.49	4.00	3.25	YES	
L0000208	0	0.77430E-06	479255.6	3771579.5	353.2	3.49	4.00	3.25	YES	
L0000209	0	0.77430E-06	479264.2	3771579.4	353.3	3.49	4.00	3.25	YES	
L0000210	0	0.77430E-06	479272.8	3771579.4	353.6	3.49	4.00	3.25	YES	
L0000211	0	0.77430E-06	479281.4	3771579.3	353.8	3.49	4.00	3.25	YES	
L0000212	0	0.77430E-06	479290.0	3771579.3	354.0	3.49	4.00	3.25	YES	
L0000213	0	0.77430E-06	479298.6	3771579.2	354.0	3.49	4.00	3.25	YES	
L0000214	0	0.77430E-06	479307.2	3771579.2	354.0	3.49	4.00	3.25	YES	
L0000215	0	0.77430E-06	479315.7	3771579.2	354.0	3.49	4.00	3.25	YES	
L0000216	0	0.77430E-06	479324.3	3771579.1	354.0	3.49	4.00	3.25	YES	
L0000217	0	0.77430E-06	479332.9	3771579.1	354.0	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0000218	0	0.77430E-06	479341.5	3771579.0	354.0	3.49	4.00	3.25	YES	
L0000219	0	0.77430E-06	479350.1	3771579.0	354.0	3.49	4.00	3.25	YES	
L0000220	0	0.77430E-06	479358.7	3771578.9	354.3	3.49	4.00	3.25	YES	
L0000221	0	0.77430E-06	479367.3	3771578.9	354.6	3.49	4.00	3.25	YES	
L0000222	0	0.77430E-06	479375.9	3771578.8	354.9	3.49	4.00	3.25	YES	
L0000223	0	0.77430E-06	479384.5	3771578.8	355.0	3.49	4.00	3.25	YES	
L0000224	0	0.77430E-06	479393.1	3771578.7	355.0	3.49	4.00	3.25	YES	
L0000225	0	0.77430E-06	479401.6	3771578.7	355.0	3.49	4.00	3.25	YES	
L0000226	0	0.77430E-06	479410.2	3771578.6	355.0	3.49	4.00	3.25	YES	
L0000227	0	0.77430E-06	479418.8	3771578.6	355.1	3.49	4.00	3.25	YES	
L0000228	0	0.77430E-06	479427.4	3771578.5	355.2	3.49	4.00	3.25	YES	
L0000229	0	0.77430E-06	479436.0	3771578.5	355.2	3.49	4.00	3.25	YES	
L0000230	0	0.77430E-06	479444.6	3771578.4	355.4	3.49	4.00	3.25	YES	
L0000231	0	0.77430E-06	479453.2	3771578.4	355.6	3.49	4.00	3.25	YES	
L0000232	0	0.77430E-06	479461.8	3771578.3	355.8	3.49	4.00	3.25	YES	
L0000233	0	0.77430E-06	479470.4	3771578.3	356.0	3.49	4.00	3.25	YES	
L0000234	0	0.77430E-06	479479.0	3771578.2	356.0	3.49	4.00	3.25	YES	
L0000235	0	0.77430E-06	479487.5	3771578.2	356.0	3.49	4.00	3.25	YES	
L0000236	0	0.77430E-06	479496.1	3771578.1	356.0	3.49	4.00	3.25	YES	
L0000237	0	0.77430E-06	479504.7	3771578.1	356.0	3.49	4.00	3.25	YES	
L0000238	0	0.77430E-06	479513.3	3771578.0	356.0	3.49	4.00	3.25	YES	
L0000239	0	0.77430E-06	479521.9	3771578.0	356.0	3.49	4.00	3.25	YES	
L0000240	0	0.77430E-06	479530.5	3771577.9	356.0	3.49	4.00	3.25	YES	
L0000241	0	0.77430E-06	479539.1	3771577.9	356.3	3.49	4.00	3.25	YES	
L0000242	0	0.77430E-06	479547.7	3771577.9	356.6	3.49	4.00	3.25	YES	
L0000243	0	0.77430E-06	479556.3	3771577.8	356.9	3.49	4.00	3.25	YES	
L0000244	0	0.77430E-06	479564.9	3771577.8	357.0	3.49	4.00	3.25	YES	
L0000245	0	0.77430E-06	479573.4	3771577.7	357.0	3.49	4.00	3.25	YES	
L0000246	0	0.77430E-06	479582.0	3771577.7	357.0	3.49	4.00	3.25	YES	
L0000247	0	0.77430E-06	479590.6	3771577.6	357.0	3.49	4.00	3.25	YES	
L0000248	0	0.77430E-06	479599.2	3771577.6	357.0	3.49	4.00	3.25	YES	
L0000249	0	0.77430E-06	479607.8	3771577.5	357.0	3.49	4.00	3.25	YES	
L0000250	0	0.77430E-06	479616.4	3771577.5	357.0	3.49	4.00	3.25	YES	
L0000251	0	0.77430E-06	479625.0	3771577.4	357.2	3.49	4.00	3.25	YES	
L0000252	0	0.77430E-06	479633.6	3771577.4	357.5	3.49	4.00	3.25	YES	
L0000253	0	0.77430E-06	479642.2	3771577.3	357.7	3.49	4.00	3.25	YES	
L0000254	0	0.77430E-06	479650.8	3771577.3	358.0	3.49	4.00	3.25	YES	
L0000255	0	0.77430E-06	479659.3	3771577.2	358.0	3.49	4.00	3.25	YES	
L0000256	0	0.77430E-06	479667.9	3771577.2	358.0	3.49	4.00	3.25	YES	
L0000257	0	0.77430E-06	479676.5	3771577.1	358.0	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0000258	0	0.77430E-06	479685.1	3771577.1	358.0	3.49	4.00	3.25	YES	
L0000259	0	0.77430E-06	479693.7	3771577.0	358.0	3.49	4.00	3.25	YES	
L0000260	0	0.77430E-06	479702.3	3771577.0	358.0	3.49	4.00	3.25	YES	
L0000261	0	0.77430E-06	479710.9	3771576.9	358.0	3.49	4.00	3.25	YES	
L0000262	0	0.77430E-06	479719.5	3771576.9	358.3	3.49	4.00	3.25	YES	
L0000263	0	0.77430E-06	479728.1	3771576.8	358.6	3.49	4.00	3.25	YES	
L0000264	0	0.77430E-06	479736.7	3771576.8	358.9	3.49	4.00	3.25	YES	
L0000265	0	0.77430E-06	479745.2	3771576.7	359.0	3.49	4.00	3.25	YES	
L0000266	0	0.77430E-06	479753.8	3771576.7	359.0	3.49	4.00	3.25	YES	
L0000267	0	0.77430E-06	479762.4	3771576.6	359.0	3.49	4.00	3.25	YES	
L0000268	0	0.77430E-06	479771.0	3771576.6	359.0	3.49	4.00	3.25	YES	
L0000269	0	0.77430E-06	479779.6	3771576.5	359.3	3.49	4.00	3.25	YES	
L0000270	0	0.77430E-06	479788.2	3771576.5	359.6	3.49	4.00	3.25	YES	
L0000271	0	0.77430E-06	479796.8	3771576.5	359.9	3.49	4.00	3.25	YES	
L0000272	0	0.77430E-06	479805.4	3771576.4	360.0	3.49	4.00	3.25	YES	
L0000273	0	0.77430E-06	479814.0	3771576.4	360.0	3.49	4.00	3.25	YES	
L0000274	0	0.77430E-06	479822.5	3771576.3	360.0	3.49	4.00	3.25	YES	
L0000275	0	0.77430E-06	479831.1	3771576.3	360.0	3.49	4.00	3.25	YES	
L0000276	0	0.77430E-06	479839.7	3771576.2	360.0	3.49	4.00	3.25	YES	
L0000277	0	0.77430E-06	479848.3	3771576.2	360.0	3.49	4.00	3.25	YES	
L0000278	0	0.77430E-06	479856.9	3771576.1	360.0	3.49	4.00	3.25	YES	
L0000279	0	0.77430E-06	479865.5	3771576.1	360.2	3.49	4.00	3.25	YES	
L0000280	0	0.77430E-06	479874.1	3771576.0	360.5	3.49	4.00	3.25	YES	
L0000281	0	0.77430E-06	479882.7	3771576.0	360.8	3.49	4.00	3.25	YES	
L0000282	0	0.77430E-06	479891.3	3771575.9	361.0	3.49	4.00	3.25	YES	
L0000283	0	0.77430E-06	479899.9	3771575.9	361.0	3.49	4.00	3.25	YES	
L0000284	0	0.77430E-06	479908.4	3771575.8	361.0	3.49	4.00	3.25	YES	
L0000285	0	0.77430E-06	479917.0	3771575.8	361.0	3.49	4.00	3.25	YES	
L0000286	0	0.77430E-06	479925.6	3771575.7	361.2	3.49	4.00	3.25	YES	
L0000287	0	0.77430E-06	479934.2	3771575.7	361.5	3.49	4.00	3.25	YES	
L0000288	0	0.77430E-06	479942.8	3771575.6	361.8	3.49	4.00	3.25	YES	
L0000289	0	0.77430E-06	479951.3	3771576.4	362.0	3.49	4.00	3.25	YES	
L0000290	0	0.77430E-06	479959.8	3771577.9	362.0	3.49	4.00	3.25	YES	
L0000291	0	0.77430E-06	479968.3	3771579.1	362.0	3.49	4.00	3.25	YES	
L0000292	0	0.77430E-06	479976.8	3771579.1	362.0	3.49	4.00	3.25	YES	
L0000293	0	0.77430E-06	479985.4	3771579.1	362.0	3.49	4.00	3.25	YES	
L0000294	0	0.77430E-06	479994.0	3771579.1	362.0	3.49	4.00	3.25	YES	
L0000295	0	0.77430E-06	480002.6	3771579.1	362.0	3.49	4.00	3.25	YES	
L0000296	0	0.77430E-06	480011.2	3771579.1	362.0	3.49	4.00	3.25	YES	
L0000297	0	0.77430E-06	480019.8	3771579.1	362.3	3.49	4.00	3.25	YES	

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*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0000298	0	0.77430E-06	480028.4	3771579.1	362.6	3.49	4.00	3.25	YES	
L0000299	0	0.77430E-06	480037.0	3771579.1	362.9	3.49	4.00	3.25	YES	
L0000300	0	0.77430E-06	480045.6	3771579.1	363.0	3.49	4.00	3.25	YES	
L0000301	0	0.77430E-06	480054.2	3771579.0	363.0	3.49	4.00	3.25	YES	
L0000302	0	0.77430E-06	480062.7	3771579.0	363.0	3.49	4.00	3.25	YES	
L0000303	0	0.77430E-06	480071.3	3771579.0	363.0	3.49	4.00	3.25	YES	
L0000304	0	0.77430E-06	480079.9	3771579.0	363.1	3.49	4.00	3.25	YES	
L0000305	0	0.77430E-06	480088.5	3771579.0	363.2	3.49	4.00	3.25	YES	
L0000306	0	0.77430E-06	480097.1	3771579.0	363.2	3.49	4.00	3.25	YES	
L0000307	0	0.77430E-06	480105.7	3771579.0	363.4	3.49	4.00	3.25	YES	
L0000308	0	0.77430E-06	480114.3	3771579.0	363.6	3.49	4.00	3.25	YES	
L0000309	0	0.77430E-06	480122.9	3771579.0	363.8	3.49	4.00	3.25	YES	
L0000310	0	0.77430E-06	480131.5	3771579.0	364.0	3.49	4.00	3.25	YES	
L0000311	0	0.77430E-06	480140.1	3771579.0	364.0	3.49	4.00	3.25	YES	
L0000312	0	0.77430E-06	480148.6	3771579.0	364.0	3.49	4.00	3.25	YES	
L0000313	0	0.77430E-06	480157.2	3771579.0	364.0	3.49	4.00	3.25	YES	
L0000314	0	0.77430E-06	480165.8	3771579.0	364.2	3.49	4.00	3.25	YES	
L0000315	0	0.77430E-06	480174.4	3771579.0	364.5	3.49	4.00	3.25	YES	
L0000316	0	0.77430E-06	480183.0	3771579.0	364.8	3.49	4.00	3.25	YES	
L0000317	0	0.77430E-06	480191.6	3771579.0	365.0	3.49	4.00	3.25	YES	
L0000318	0	0.77430E-06	480200.2	3771579.0	365.0	3.49	4.00	3.25	YES	
L0000319	0	0.77430E-06	480208.8	3771578.9	365.0	3.49	4.00	3.25	YES	
L0000320	0	0.77430E-06	480217.4	3771578.9	365.0	3.49	4.00	3.25	YES	
L0000321	0	0.77430E-06	480226.0	3771578.9	365.2	3.49	4.00	3.25	YES	
L0000322	0	0.77430E-06	480234.5	3771578.9	365.5	3.49	4.00	3.25	YES	
L0000323	0	0.77430E-06	480243.1	3771578.9	365.8	3.49	4.00	3.25	YES	
L0000324	0	0.77430E-06	480251.7	3771578.9	366.0	3.49	4.00	3.25	YES	
L0000325	0	0.77430E-06	480260.3	3771578.9	366.0	3.49	4.00	3.25	YES	
L0000326	0	0.77430E-06	480268.9	3771578.9	366.0	3.49	4.00	3.25	YES	
L0000327	0	0.77430E-06	480277.5	3771578.9	366.0	3.49	4.00	3.25	YES	
L0000328	0	0.77430E-06	480286.1	3771578.9	366.0	3.49	4.00	3.25	YES	
L0000329	0	0.77430E-06	480294.7	3771578.9	366.0	3.49	4.00	3.25	YES	
L0000330	0	0.77430E-06	480303.3	3771578.9	366.0	3.49	4.00	3.25	YES	
L0000331	0	0.77430E-06	480311.9	3771578.9	366.1	3.49	4.00	3.25	YES	
L0000332	0	0.77430E-06	480320.4	3771578.9	366.4	3.49	4.00	3.25	YES	
L0000333	0	0.77430E-06	480329.0	3771578.9	366.6	3.49	4.00	3.25	YES	
L0000334	0	0.77430E-06	480337.6	3771578.9	366.9	3.49	4.00	3.25	YES	
L0000335	0	0.77430E-06	480346.2	3771578.9	367.0	3.49	4.00	3.25	YES	
L0000336	0	0.77430E-06	480354.8	3771578.9	367.0	3.49	4.00	3.25	YES	
L0000337	0	0.77430E-06	480363.4	3771578.8	367.0	3.49	4.00	3.25	YES	

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*** VOLUME SOURCE DATA ***

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L0000338	0	0.77430E-06	480372.0	3771578.8	367.1	3.49	4.00	3.25	YES	
L0000339	0	0.77430E-06	480380.6	3771578.8	367.4	3.49	4.00	3.25	YES	
L0000340	0	0.77430E-06	480389.2	3771578.8	367.6	3.49	4.00	3.25	YES	
L0000341	0	0.77430E-06	480397.8	3771578.8	367.9	3.49	4.00	3.25	YES	
L0000342	0	0.77430E-06	480406.3	3771578.8	368.0	3.49	4.00	3.25	YES	
L0000343	0	0.77430E-06	480414.9	3771578.8	368.0	3.49	4.00	3.25	YES	
L0000344	0	0.77430E-06	480423.5	3771578.8	368.0	3.49	4.00	3.25	YES	
L0000345	0	0.77430E-06	480432.1	3771578.8	368.1	3.49	4.00	3.25	YES	
L0000346	0	0.77430E-06	480440.7	3771578.8	368.4	3.49	4.00	3.25	YES	
L0000347	0	0.77430E-06	480449.3	3771578.8	368.7	3.49	4.00	3.25	YES	
L0000348	0	0.77430E-06	480457.9	3771578.8	368.9	3.49	4.00	3.25	YES	
L0000349	0	0.77430E-06	480466.5	3771578.8	369.0	3.49	4.00	3.25	YES	
L0000350	0	0.77430E-06	480475.1	3771578.8	369.0	3.49	4.00	3.25	YES	
L0000351	0	0.77430E-06	480483.7	3771578.8	369.0	3.49	4.00	3.25	YES	
L0000352	0	0.77430E-06	480492.2	3771578.8	369.1	3.49	4.00	3.25	YES	
L0000353	0	0.77430E-06	480500.8	3771578.8	369.4	3.49	4.00	3.25	YES	
L0000354	0	0.77430E-06	480509.4	3771578.8	369.7	3.49	4.00	3.25	YES	
L0000355	0	0.77430E-06	480518.0	3771578.8	369.9	3.49	4.00	3.25	YES	
L0000356	0	0.77430E-06	480526.6	3771578.7	370.0	3.49	4.00	3.25	YES	
L0000357	0	0.77430E-06	480535.2	3771578.7	370.0	3.49	4.00	3.25	YES	
L0000358	0	0.77430E-06	480543.8	3771578.7	370.0	3.49	4.00	3.25	YES	
L0000359	0	0.77430E-06	480552.4	3771578.7	370.0	3.49	4.00	3.25	YES	
L0000360	0	0.77430E-06	480561.0	3771578.7	370.0	3.49	4.00	3.25	YES	
L0000361	0	0.77430E-06	480569.6	3771578.7	370.0	3.49	4.00	3.25	YES	
L0000362	0	0.77430E-06	480578.1	3771578.7	370.0	3.49	4.00	3.25	YES	
L0000363	0	0.77430E-06	480586.7	3771578.7	370.2	3.49	4.00	3.25	YES	
L0000364	0	0.77430E-06	480595.3	3771578.7	370.5	3.49	4.00	3.25	YES	
L0000365	0	0.77430E-06	480603.9	3771578.7	370.8	3.49	4.00	3.25	YES	
L0000366	0	0.77430E-06	480612.5	3771578.7	371.0	3.49	4.00	3.25	YES	
L0000367	0	0.77430E-06	480621.1	3771578.7	371.0	3.49	4.00	3.25	YES	
L0000368	0	0.77430E-06	480629.7	3771578.7	371.0	3.49	4.00	3.25	YES	
L0000369	0	0.77430E-06	480638.3	3771578.7	371.0	3.49	4.00	3.25	YES	
L0000370	0	0.77430E-06	480646.9	3771578.7	371.2	3.49	4.00	3.25	YES	
L0000371	0	0.77430E-06	480655.5	3771578.7	371.5	3.49	4.00	3.25	YES	
L0000372	0	0.77430E-06	480664.0	3771578.7	371.8	3.49	4.00	3.25	YES	
L0000373	0	0.77430E-06	480672.6	3771578.7	372.0	3.49	4.00	3.25	YES	
L0000374	0	0.77430E-06	480681.2	3771578.6	372.0	3.49	4.00	3.25	YES	
L0000375	0	0.77430E-06	480689.8	3771578.6	372.0	3.49	4.00	3.25	YES	
L0000376	0	0.77430E-06	480698.4	3771578.6	372.0	3.49	4.00	3.25	YES	
L0000377	0	0.77430E-06	480707.0	3771578.6	372.2	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0000378	0	0.77430E-06	480715.6	3771578.6	372.5	3.49	4.00	3.25	YES	
L0000379	0	0.77430E-06	480724.2	3771578.6	372.8	3.49	4.00	3.25	YES	
L0000380	0	0.77430E-06	480732.8	3771578.6	373.0	3.49	4.00	3.25	YES	
L0000381	0	0.77430E-06	480741.4	3771578.6	373.0	3.49	4.00	3.25	YES	
L0000382	0	0.19590E-05	480745.7	3770768.6	374.0	3.49	4.00	3.25	YES	
L0000383	0	0.19590E-05	480754.0	3770766.6	374.0	3.49	4.00	3.25	YES	
L0000384	0	0.19590E-05	480762.4	3770764.6	374.1	3.49	4.00	3.25	YES	
L0000385	0	0.19590E-05	480770.7	3770762.6	374.4	3.49	4.00	3.25	YES	
L0000386	0	0.19590E-05	480779.1	3770760.6	374.6	3.49	4.00	3.25	YES	
L0000387	0	0.19590E-05	480787.5	3770758.6	374.9	3.49	4.00	3.25	YES	
L0000388	0	0.19590E-05	480795.8	3770756.6	375.0	3.49	4.00	3.25	YES	
L0000389	0	0.19590E-05	480804.2	3770755.1	375.0	3.49	4.00	3.25	YES	
L0000390	0	0.19590E-05	480812.8	3770755.1	375.0	3.49	4.00	3.25	YES	
L0000391	0	0.19590E-05	480821.4	3770755.0	375.1	3.49	4.00	3.25	YES	
L0000392	0	0.19590E-05	480830.0	3770755.0	375.3	3.49	4.00	3.25	YES	
L0000393	0	0.19590E-05	480838.6	3770754.9	375.6	3.49	4.00	3.25	YES	
L0000394	0	0.19590E-05	480847.2	3770754.9	375.9	3.49	4.00	3.25	YES	
L0000395	0	0.19590E-05	480855.8	3770754.9	376.0	3.49	4.00	3.25	YES	
L0000396	0	0.19590E-05	480864.4	3770754.8	376.0	3.49	4.00	3.25	YES	
L0000397	0	0.19590E-05	480872.9	3770754.8	376.0	3.49	4.00	3.25	YES	
L0000398	0	0.19590E-05	480881.5	3770754.8	376.1	3.49	4.00	3.25	YES	
L0000399	0	0.19590E-05	480890.1	3770754.7	376.3	3.49	4.00	3.25	YES	
L0000400	0	0.19590E-05	480898.7	3770754.7	376.6	3.49	4.00	3.25	YES	
L0000401	0	0.19590E-05	480907.3	3770754.7	376.9	3.49	4.00	3.25	YES	
L0000402	0	0.19590E-05	480915.9	3770754.6	377.0	3.49	4.00	3.25	YES	
L0000403	0	0.19590E-05	480924.5	3770754.6	377.0	3.49	4.00	3.25	YES	
L0000404	0	0.19590E-05	480933.1	3770754.6	377.0	3.49	4.00	3.25	YES	
L0000405	0	0.19590E-05	480941.7	3770754.5	377.1	3.49	4.00	3.25	YES	
L0000406	0	0.19590E-05	480950.3	3770754.5	377.3	3.49	4.00	3.25	YES	
L0000407	0	0.19590E-05	480958.8	3770754.5	377.6	3.49	4.00	3.25	YES	
L0000408	0	0.19590E-05	480967.4	3770754.4	377.9	3.49	4.00	3.25	YES	
L0000409	0	0.19590E-05	480976.0	3770754.4	378.0	3.49	4.00	3.25	YES	
L0000410	0	0.19590E-05	480984.6	3770754.3	378.0	3.49	4.00	3.25	YES	
L0000411	0	0.19590E-05	480993.2	3770754.3	378.0	3.49	4.00	3.25	YES	
L0000412	0	0.19590E-05	481001.8	3770754.3	378.1	3.49	4.00	3.25	YES	
L0000413	0	0.19590E-05	481010.4	3770754.2	378.4	3.49	4.00	3.25	YES	
L0000414	0	0.19590E-05	481019.0	3770754.2	378.6	3.49	4.00	3.25	YES	
L0000415	0	0.19590E-05	481027.6	3770754.2	378.9	3.49	4.00	3.25	YES	
L0000416	0	0.19590E-05	481036.2	3770754.1	379.0	3.49	4.00	3.25	YES	
L0000417	0	0.19590E-05	481044.7	3770754.1	379.0	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0000418	0	0.19590E-05	481053.3	3770754.1	379.0	3.49	4.00	3.25	YES	
L0000419	0	0.19590E-05	481061.9	3770754.0	379.1	3.49	4.00	3.25	YES	
L0000420	0	0.19590E-05	481070.5	3770754.0	379.4	3.49	4.00	3.25	YES	
L0000421	0	0.19590E-05	481079.1	3770754.0	379.6	3.49	4.00	3.25	YES	
L0000422	0	0.19590E-05	481087.7	3770753.9	379.9	3.49	4.00	3.25	YES	
L0000423	0	0.19590E-05	481096.3	3770753.9	380.0	3.49	4.00	3.25	YES	
L0000424	0	0.19590E-05	481104.9	3770753.8	380.0	3.49	4.00	3.25	YES	
L0000425	0	0.19590E-05	481113.5	3770753.8	380.0	3.49	4.00	3.25	YES	
L0000426	0	0.19590E-05	481122.0	3770753.8	380.0	3.49	4.00	3.25	YES	
L0000427	0	0.19590E-05	481130.6	3770753.7	380.0	3.49	4.00	3.25	YES	
L0000428	0	0.19590E-05	481139.2	3770753.7	380.0	3.49	4.00	3.25	YES	
L0000429	0	0.19590E-05	481147.8	3770753.7	380.0	3.49	4.00	3.25	YES	
L0000430	0	0.19590E-05	481156.4	3770753.6	380.2	3.49	4.00	3.25	YES	
L0000431	0	0.19590E-05	481165.0	3770753.6	380.5	3.49	4.00	3.25	YES	
L0000432	0	0.19590E-05	481173.6	3770753.6	380.8	3.49	4.00	3.25	YES	
L0000433	0	0.19590E-05	481182.2	3770753.5	381.1	3.49	4.00	3.25	YES	
L0000434	0	0.19590E-05	481190.8	3770753.5	381.4	3.49	4.00	3.25	YES	
L0000435	0	0.19590E-05	481199.4	3770753.5	381.7	3.49	4.00	3.25	YES	
L0000436	0	0.19590E-05	481207.9	3770753.4	381.9	3.49	4.00	3.25	YES	
L0000437	0	0.19590E-05	481216.5	3770753.4	382.0	3.49	4.00	3.25	YES	
L0000438	0	0.19590E-05	481225.1	3770753.3	382.0	3.49	4.00	3.25	YES	
L0000439	0	0.19590E-05	481233.7	3770753.3	382.0	3.49	4.00	3.25	YES	
L0000440	0	0.19590E-05	481242.3	3770753.3	382.0	3.49	4.00	3.25	YES	
L0000441	0	0.19590E-05	481250.9	3770753.2	382.0	3.49	4.00	3.25	YES	
L0000442	0	0.19590E-05	481259.5	3770753.2	382.0	3.49	4.00	3.25	YES	
L0000443	0	0.19590E-05	481268.1	3770753.2	382.0	3.49	4.00	3.25	YES	
L0000444	0	0.19590E-05	481276.7	3770753.1	382.2	3.49	4.00	3.25	YES	
L0000445	0	0.19590E-05	481285.3	3770753.1	382.5	3.49	4.00	3.25	YES	
L0000446	0	0.19590E-05	481293.8	3770753.1	382.8	3.49	4.00	3.25	YES	
L0000447	0	0.19590E-05	481302.4	3770753.0	383.0	3.49	4.00	3.25	YES	
L0000448	0	0.19590E-05	481311.0	3770753.0	383.0	3.49	4.00	3.25	YES	
L0000449	0	0.19590E-05	481319.6	3770753.0	383.0	3.49	4.00	3.25	YES	
L0000450	0	0.19590E-05	481328.2	3770752.9	383.0	3.49	4.00	3.25	YES	
L0000451	0	0.19590E-05	481336.8	3770752.9	383.2	3.49	4.00	3.25	YES	
L0000452	0	0.19590E-05	481345.4	3770752.8	383.5	3.49	4.00	3.25	YES	
L0000453	0	0.19590E-05	481354.0	3770752.8	383.8	3.49	4.00	3.25	YES	
L0000454	0	0.19590E-05	481362.6	3770752.8	384.0	3.49	4.00	3.25	YES	
L0000455	0	0.19590E-05	481371.2	3770752.7	384.0	3.49	4.00	3.25	YES	
L0000456	0	0.19590E-05	481379.7	3770752.7	384.0	3.49	4.00	3.25	YES	
L0000457	0	0.19590E-05	481388.3	3770752.7	384.0	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0000919	0	0.75040E-05	479139.8	3771569.7	352.0	3.49	4.00	3.25	YES	
L0000920	0	0.75040E-05	479139.7	3771561.1	352.0	3.49	4.00	3.25	YES	
L0000921	0	0.75040E-05	479139.6	3771552.5	352.0	3.49	4.00	3.25	YES	
L0000922	0	0.75040E-05	479139.5	3771543.9	352.0	3.49	4.00	3.25	YES	
L0000923	0	0.75040E-05	479139.4	3771535.3	352.0	3.49	4.00	3.25	YES	
L0000924	0	0.75040E-05	479139.3	3771526.7	352.0	3.49	4.00	3.25	YES	
L0000925	0	0.75040E-05	479139.2	3771518.1	352.0	3.49	4.00	3.25	YES	
L0000926	0	0.75040E-05	479139.1	3771509.6	352.0	3.49	4.00	3.25	YES	
L0000927	0	0.75040E-05	479139.0	3771501.0	352.0	3.49	4.00	3.25	YES	
L0000928	0	0.75040E-05	479138.9	3771492.4	352.0	3.49	4.00	3.25	YES	
L0000929	0	0.75040E-05	479138.8	3771483.8	352.0	3.49	4.00	3.25	YES	
L0000930	0	0.75040E-05	479138.7	3771475.2	352.0	3.49	4.00	3.25	YES	
L0000931	0	0.75040E-05	479138.6	3771466.6	352.0	3.49	4.00	3.25	YES	
L0000932	0	0.75040E-05	479138.5	3771458.0	352.0	3.49	4.00	3.25	YES	
L0000933	0	0.75040E-05	479138.4	3771449.4	352.0	3.49	4.00	3.25	YES	
L0000934	0	0.75040E-05	479138.3	3771440.8	352.0	3.49	4.00	3.25	YES	
L0000935	0	0.75040E-05	479138.2	3771432.2	352.0	3.49	4.00	3.25	YES	
L0000936	0	0.75040E-05	479138.1	3771423.7	352.0	3.49	4.00	3.25	YES	
L0000937	0	0.75040E-05	479138.0	3771415.1	352.0	3.49	4.00	3.25	YES	
L0000938	0	0.75040E-05	479137.9	3771406.5	352.0	3.49	4.00	3.25	YES	
L0000939	0	0.75040E-05	479137.8	3771397.9	352.0	3.49	4.00	3.25	YES	
L0000940	0	0.75040E-05	479137.7	3771389.3	352.0	3.49	4.00	3.25	YES	
L0000941	0	0.75040E-05	479137.6	3771380.7	352.0	3.49	4.00	3.25	YES	
L0000942	0	0.75040E-05	479137.5	3771372.1	352.0	3.49	4.00	3.25	YES	
L0000943	0	0.75040E-05	479137.4	3771363.5	352.0	3.49	4.00	3.25	YES	
L0000944	0	0.75040E-05	479137.3	3771354.9	352.0	3.49	4.00	3.25	YES	
L0000945	0	0.75040E-05	479137.2	3771346.4	352.0	3.49	4.00	3.25	YES	
L0000946	0	0.75040E-05	479137.1	3771337.8	352.0	3.49	4.00	3.25	YES	
L0000947	0	0.75040E-05	479137.0	3771329.2	352.0	3.49	4.00	3.25	YES	
L0000948	0	0.75040E-05	479136.9	3771320.6	352.0	3.49	4.00	3.25	YES	
L0000949	0	0.75040E-05	479136.8	3771312.0	352.0	3.49	4.00	3.25	YES	
L0000950	0	0.75040E-05	479136.7	3771303.4	352.0	3.49	4.00	3.25	YES	
L0000951	0	0.75040E-05	479136.6	3771294.8	352.0	3.49	4.00	3.25	YES	
L0000952	0	0.75040E-05	479136.5	3771286.2	352.0	3.49	4.00	3.25	YES	
L0000953	0	0.75040E-05	479136.4	3771277.6	352.0	3.49	4.00	3.25	YES	
L0000954	0	0.75040E-05	479136.3	3771269.1	352.0	3.49	4.00	3.25	YES	
L0000955	0	0.75040E-05	479136.2	3771260.5	352.0	3.49	4.00	3.25	YES	
L0000956	0	0.75040E-05	479136.1	3771251.9	352.0	3.49	4.00	3.25	YES	
L0000957	0	0.75040E-05	479136.0	3771243.3	352.0	3.49	4.00	3.25	YES	
L0000958	0	0.75040E-05	479135.9	3771234.7	352.0	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0000959	0	0.75040E-05	479135.8	3771226.1	352.0	3.49	4.00	3.25	YES	
L0000960	0	0.75040E-05	479135.7	3771217.5	352.0	3.49	4.00	3.25	YES	
L0000961	0	0.75040E-05	479135.6	3771208.9	352.0	3.49	4.00	3.25	YES	
L0000962	0	0.75040E-05	479135.5	3771200.3	352.0	3.49	4.00	3.25	YES	
L0000963	0	0.75040E-05	479135.4	3771191.7	352.0	3.49	4.00	3.25	YES	
L0000964	0	0.75040E-05	479135.3	3771183.2	352.0	3.49	4.00	3.25	YES	
L0000965	0	0.75040E-05	479135.2	3771174.6	352.0	3.49	4.00	3.25	YES	
L0000966	0	0.75040E-05	479135.1	3771166.0	352.0	3.49	4.00	3.25	YES	
L0000967	0	0.75040E-05	479135.0	3771157.4	352.0	3.49	4.00	3.25	YES	
L0000968	0	0.75040E-05	479135.0	3771148.8	352.0	3.49	4.00	3.25	YES	
L0000969	0	0.75040E-05	479134.9	3771140.2	352.0	3.49	4.00	3.25	YES	
L0000970	0	0.75040E-05	479134.8	3771131.6	352.0	3.49	4.00	3.25	YES	
L0000971	0	0.75040E-05	479134.7	3771123.0	352.0	3.49	4.00	3.25	YES	
L0000972	0	0.75040E-05	479134.6	3771114.4	352.0	3.49	4.00	3.25	YES	
L0000973	0	0.75040E-05	479134.5	3771105.9	352.0	3.49	4.00	3.25	YES	
L0000974	0	0.75040E-05	479134.4	3771097.3	352.0	3.49	4.00	3.25	YES	
L0000975	0	0.75040E-05	479134.3	3771088.7	352.0	3.49	4.00	3.25	YES	
L0000976	0	0.75040E-05	479134.2	3771080.1	352.0	3.49	4.00	3.25	YES	
L0000977	0	0.75040E-05	479134.1	3771071.5	352.0	3.49	4.00	3.25	YES	
L0000978	0	0.75040E-05	479134.0	3771062.9	352.0	3.49	4.00	3.25	YES	
L0000979	0	0.75040E-05	479133.9	3771054.3	352.0	3.49	4.00	3.25	YES	
L0000980	0	0.75040E-05	479133.8	3771045.7	352.0	3.49	4.00	3.25	YES	
L0000981	0	0.75040E-05	479133.7	3771037.1	352.0	3.49	4.00	3.25	YES	
L0000982	0	0.75040E-05	479133.6	3771028.5	352.0	3.49	4.00	3.25	YES	
L0000983	0	0.75040E-05	479133.5	3771020.0	352.0	3.49	4.00	3.25	YES	
L0000984	0	0.75040E-05	479133.4	3771011.4	352.0	3.49	4.00	3.25	YES	
L0000985	0	0.75040E-05	479133.3	3771002.8	352.0	3.49	4.00	3.25	YES	
L0000986	0	0.75040E-05	479133.2	3770994.2	352.0	3.49	4.00	3.25	YES	
L0000987	0	0.75040E-05	479133.1	3770985.6	352.0	3.49	4.00	3.25	YES	
L0000988	0	0.75040E-05	479133.0	3770977.0	352.2	3.49	4.00	3.25	YES	
L0000989	0	0.75040E-05	479132.9	3770968.4	352.5	3.49	4.00	3.25	YES	
L0000990	0	0.75040E-05	479132.8	3770959.8	352.7	3.49	4.00	3.25	YES	
L0000991	0	0.75040E-05	479132.7	3770951.2	352.8	3.49	4.00	3.25	YES	
L0000992	0	0.75040E-05	479132.6	3770942.7	352.8	3.49	4.00	3.25	YES	
L0000993	0	0.75040E-05	479132.5	3770934.1	352.8	3.49	4.00	3.25	YES	
L0000994	0	0.75040E-05	479132.4	3770925.5	352.8	3.49	4.00	3.25	YES	
L0000995	0	0.75040E-05	479132.3	3770916.9	352.8	3.49	4.00	3.25	YES	
L0000996	0	0.75040E-05	479132.2	3770908.3	352.7	3.49	4.00	3.25	YES	
L0000997	0	0.75040E-05	479132.1	3770899.7	352.7	3.49	4.00	3.25	YES	
L0000998	0	0.75040E-05	479132.0	3770891.1	352.7	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0000999	0	0.75040E-05	479131.9	3770882.5	352.7	3.49	4.00	3.25	YES	
L0001000	0	0.75040E-05	479131.8	3770873.9	352.7	3.49	4.00	3.25	YES	
L0001001	0	0.75040E-05	479131.7	3770865.3	352.7	3.49	4.00	3.25	YES	
L0001002	0	0.75040E-05	479131.6	3770856.8	352.7	3.49	4.00	3.25	YES	
L0001003	0	0.75040E-05	479131.5	3770848.2	352.7	3.49	4.00	3.25	YES	
L0001004	0	0.75040E-05	479131.4	3770839.6	352.7	3.49	4.00	3.25	YES	
L0001005	0	0.75040E-05	479131.3	3770831.0	352.8	3.49	4.00	3.25	YES	
L0001006	0	0.75040E-05	479131.2	3770822.4	352.9	3.49	4.00	3.25	YES	
L0001007	0	0.75040E-05	479131.1	3770813.8	352.9	3.49	4.00	3.25	YES	
L0001008	0	0.75040E-05	479131.0	3770805.2	353.0	3.49	4.00	3.25	YES	
L0001009	0	0.75040E-05	479130.9	3770796.6	353.0	3.49	4.00	3.25	YES	
L0001010	0	0.75040E-05	479130.8	3770788.0	353.0	3.49	4.00	3.25	YES	
L0001011	0	0.75040E-05	479130.7	3770779.5	353.0	3.49	4.00	3.25	YES	
L0001012	0	0.75040E-05	479130.6	3770770.9	353.0	3.49	4.00	3.25	YES	
L0001013	0	0.75040E-05	479130.5	3770762.3	353.0	3.49	4.00	3.25	YES	
L0001014	0	0.75040E-05	479130.4	3770753.7	353.0	3.49	4.00	3.25	YES	
L0001015	0	0.75040E-05	479130.3	3770745.1	353.0	3.49	4.00	3.25	YES	
L0001016	0	0.75040E-05	479130.2	3770736.5	353.0	3.49	4.00	3.25	YES	
L0001017	0	0.75040E-05	479130.1	3770727.9	353.0	3.49	4.00	3.25	YES	
L0001018	0	0.75040E-05	479130.0	3770719.3	353.0	3.49	4.00	3.25	YES	
L0001019	0	0.75040E-05	479130.0	3770710.7	353.0	3.49	4.00	3.25	YES	
L0001020	0	0.75040E-05	479129.9	3770702.1	353.0	3.49	4.00	3.25	YES	
L0001021	0	0.75040E-05	479129.8	3770693.6	353.0	3.49	4.00	3.25	YES	
L0001022	0	0.75040E-05	479129.7	3770685.0	353.0	3.49	4.00	3.25	YES	
L0001023	0	0.75040E-05	479129.6	3770676.4	353.0	3.49	4.00	3.25	YES	
L0001024	0	0.75040E-05	479129.5	3770667.8	353.0	3.49	4.00	3.25	YES	
L0001025	0	0.75040E-05	479129.4	3770659.2	353.0	3.49	4.00	3.25	YES	
L0001026	0	0.75040E-05	479129.3	3770650.6	353.0	3.49	4.00	3.25	YES	
L0001027	0	0.75040E-05	479129.2	3770642.0	353.0	3.49	4.00	3.25	YES	
L0001028	0	0.75040E-05	479129.1	3770633.4	353.0	3.49	4.00	3.25	YES	
L0001029	0	0.75040E-05	479129.0	3770624.8	353.0	3.49	4.00	3.25	YES	
L0001030	0	0.75040E-05	479128.9	3770616.3	353.0	3.49	4.00	3.25	YES	
L0001031	0	0.75040E-05	479128.8	3770607.7	353.0	3.49	4.00	3.25	YES	
L0001032	0	0.75040E-05	479128.7	3770599.1	353.0	3.49	4.00	3.25	YES	
L0001033	0	0.75040E-05	479128.6	3770590.5	353.1	3.49	4.00	3.25	YES	
L0001034	0	0.75040E-05	479128.5	3770581.9	353.3	3.49	4.00	3.25	YES	
L0001035	0	0.75040E-05	479128.4	3770573.3	353.5	3.49	4.00	3.25	YES	
L0001036	0	0.75040E-05	479128.3	3770564.7	353.6	3.49	4.00	3.25	YES	
L0001037	0	0.75040E-05	479128.2	3770556.1	353.7	3.49	4.00	3.25	YES	
L0001038	0	0.75040E-05	479128.1	3770547.5	353.9	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0001039	0	0.75040E-05	479128.0	3770538.9	354.0	3.49	4.00	3.25	YES	
L0001040	0	0.75040E-05	479127.9	3770530.4	354.0	3.49	4.00	3.25	YES	
L0001041	0	0.75040E-05	479127.8	3770521.8	354.0	3.49	4.00	3.25	YES	
L0001042	0	0.75040E-05	479127.7	3770513.2	354.0	3.49	4.00	3.25	YES	
L0001043	0	0.75040E-05	479127.6	3770504.6	354.0	3.49	4.00	3.25	YES	
L0001044	0	0.75040E-05	479127.5	3770496.0	354.0	3.49	4.00	3.25	YES	
L0001045	0	0.75040E-05	479127.4	3770487.4	354.0	3.49	4.00	3.25	YES	
L0001046	0	0.75040E-05	479127.3	3770478.8	354.0	3.49	4.00	3.25	YES	
L0001047	0	0.75040E-05	479127.2	3770470.2	354.0	3.49	4.00	3.25	YES	
L0001048	0	0.75040E-05	479127.1	3770461.6	354.0	3.49	4.00	3.25	YES	
L0001049	0	0.75040E-05	479127.0	3770453.1	354.0	3.49	4.00	3.25	YES	
L0001050	0	0.75040E-05	479126.9	3770444.5	354.0	3.49	4.00	3.25	YES	
L0001051	0	0.75040E-05	479126.8	3770435.9	354.0	3.49	4.00	3.25	YES	
L0001052	0	0.75040E-05	479126.7	3770427.3	354.0	3.49	4.00	3.25	YES	
L0001053	0	0.75040E-05	479126.6	3770418.7	354.0	3.49	4.00	3.25	YES	
L0001054	0	0.75040E-05	479126.5	3770410.1	354.0	3.49	4.00	3.25	YES	
L0001055	0	0.75040E-05	479126.4	3770401.5	354.0	3.49	4.00	3.25	YES	
L0001056	0	0.75040E-05	479126.3	3770392.9	354.0	3.49	4.00	3.25	YES	
L0001057	0	0.75040E-05	479126.2	3770384.3	354.0	3.49	4.00	3.25	YES	
L0001058	0	0.75040E-05	479126.1	3770375.7	354.0	3.49	4.00	3.25	YES	
L0001059	0	0.75040E-05	479126.2	3770367.2	354.0	3.49	4.00	3.25	YES	
L0001060	0	0.75040E-05	479126.2	3770358.6	354.0	3.49	4.00	3.25	YES	
L0001061	0	0.75040E-05	479126.3	3770350.0	354.0	3.49	4.00	3.25	YES	
L0001062	0	0.75040E-05	479126.4	3770341.4	354.0	3.49	4.00	3.25	YES	
L0001063	0	0.75040E-05	479126.4	3770332.8	354.0	3.49	4.00	3.25	YES	
L0001064	0	0.75040E-05	479126.5	3770324.2	354.0	3.49	4.00	3.25	YES	
L0001065	0	0.75040E-05	479126.5	3770315.6	353.8	3.49	4.00	3.25	YES	
L0001066	0	0.75040E-05	479126.6	3770307.0	353.7	3.49	4.00	3.25	YES	
L0001067	0	0.75040E-05	479126.7	3770298.4	353.6	3.49	4.00	3.25	YES	
L0001068	0	0.75040E-05	479126.7	3770289.9	353.4	3.49	4.00	3.25	YES	
L0001069	0	0.75040E-05	479126.8	3770281.3	353.3	3.49	4.00	3.25	YES	
L0001070	0	0.75040E-05	479126.8	3770272.7	353.1	3.49	4.00	3.25	YES	
L0001071	0	0.75040E-05	479126.9	3770264.1	353.0	3.49	4.00	3.25	YES	
L0001072	0	0.75040E-05	479127.0	3770255.5	353.0	3.49	4.00	3.25	YES	
L0001073	0	0.75040E-05	479127.0	3770246.9	353.0	3.49	4.00	3.25	YES	
L0001074	0	0.75040E-05	479127.1	3770238.3	353.0	3.49	4.00	3.25	YES	
L0001075	0	0.75040E-05	479127.1	3770229.7	353.0	3.49	4.00	3.25	YES	
L0001076	0	0.75040E-05	479127.2	3770221.1	353.0	3.49	4.00	3.25	YES	
L0001077	0	0.75040E-05	479127.2	3770212.5	353.0	3.49	4.00	3.25	YES	
L0001078	0	0.75040E-05	479127.3	3770204.0	353.0	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0001079	0	0.75040E-05	479127.4	3770195.4	353.0	3.49	4.00	3.25	YES	
L0001080	0	0.75040E-05	479127.4	3770186.8	353.0	3.49	4.00	3.25	YES	
L0001081	0	0.75040E-05	479127.5	3770178.2	353.0	3.49	4.00	3.25	YES	
L0001082	0	0.75040E-05	479127.5	3770169.6	353.0	3.49	4.00	3.25	YES	
L0001083	0	0.75040E-05	479127.6	3770161.0	353.0	3.49	4.00	3.25	YES	
L0001084	0	0.75040E-05	479127.7	3770152.4	353.0	3.49	4.00	3.25	YES	
L0001085	0	0.75040E-05	479127.7	3770143.8	353.0	3.49	4.00	3.25	YES	
L0001086	0	0.75040E-05	479127.8	3770135.2	353.0	3.49	4.00	3.25	YES	
L0001087	0	0.75040E-05	479127.8	3770126.6	353.0	3.49	4.00	3.25	YES	
L0001088	0	0.75040E-05	479127.9	3770118.1	353.0	3.49	4.00	3.25	YES	
L0001089	0	0.75040E-05	479128.0	3770109.5	353.0	3.49	4.00	3.25	YES	
L0001090	0	0.75040E-05	479128.0	3770100.9	353.0	3.49	4.00	3.25	YES	
L0001091	0	0.75040E-05	479128.1	3770092.3	353.0	3.49	4.00	3.25	YES	
L0001092	0	0.75040E-05	479128.1	3770083.7	353.0	3.49	4.00	3.25	YES	
L0001093	0	0.75040E-05	479128.2	3770075.1	353.0	3.49	4.00	3.25	YES	
L0001094	0	0.75040E-05	479128.3	3770066.5	353.0	3.49	4.00	3.25	YES	
L0001095	0	0.75040E-05	479128.3	3770057.9	353.0	3.49	4.00	3.25	YES	
L0001096	0	0.75040E-05	479128.4	3770049.3	353.0	3.49	4.00	3.25	YES	
L0001097	0	0.75040E-05	479128.4	3770040.7	353.0	3.49	4.00	3.25	YES	
L0001098	0	0.75040E-05	479128.5	3770032.2	353.0	3.49	4.00	3.25	YES	
L0001099	0	0.75040E-05	479128.6	3770023.6	353.0	3.49	4.00	3.25	YES	
L0001100	0	0.75040E-05	479128.6	3770015.0	353.0	3.49	4.00	3.25	YES	
L0001101	0	0.75040E-05	479128.7	3770006.4	353.0	3.49	4.00	3.25	YES	
L0001102	0	0.75040E-05	479128.7	3769997.8	353.0	3.49	4.00	3.25	YES	
L0001103	0	0.75040E-05	479128.8	3769989.2	353.0	3.49	4.00	3.25	YES	
L0001104	0	0.75040E-05	479128.9	3769980.6	353.0	3.49	4.00	3.25	YES	
L0001105	0	0.75040E-05	479128.9	3769972.0	353.0	3.49	4.00	3.25	YES	
L0001106	0	0.75040E-05	479129.0	3769963.4	353.0	3.49	4.00	3.25	YES	
L0001107	0	0.75040E-05	479129.0	3769954.8	353.0	3.49	4.00	3.25	YES	
L0001108	0	0.75040E-05	479129.1	3769946.3	353.0	3.49	4.00	3.25	YES	
L0001109	0	0.75040E-05	479129.1	3769937.7	353.0	3.49	4.00	3.25	YES	
L0001110	0	0.75040E-05	479129.2	3769929.1	353.2	3.49	4.00	3.25	YES	
L0001111	0	0.75040E-05	479129.3	3769920.5	353.3	3.49	4.00	3.25	YES	
L0001112	0	0.75040E-05	479129.3	3769911.9	353.5	3.49	4.00	3.25	YES	
L0001113	0	0.75040E-05	479129.4	3769903.3	353.7	3.49	4.00	3.25	YES	
L0001114	0	0.75040E-05	479129.4	3769894.7	353.8	3.49	4.00	3.25	YES	
L0001115	0	0.75040E-05	479129.5	3769886.1	353.9	3.49	4.00	3.25	YES	
L0001116	0	0.75040E-05	479129.6	3769877.5	354.0	3.49	4.00	3.25	YES	
L0001117	0	0.75040E-05	479129.6	3769869.0	354.0	3.49	4.00	3.25	YES	
L0001118	0	0.75040E-05	479129.7	3769860.4	354.0	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0001119	0	0.75040E-05	479129.7	3769851.8	354.0	3.49	4.00	3.25	YES	
L0001120	0	0.75040E-05	479129.8	3769843.2	354.0	3.49	4.00	3.25	YES	
L0001121	0	0.75040E-05	479129.9	3769834.6	354.0	3.49	4.00	3.25	YES	
L0001122	0	0.75040E-05	479129.9	3769826.0	354.0	3.49	4.00	3.25	YES	
L0001123	0	0.75040E-05	479130.0	3769817.4	354.0	3.49	4.00	3.25	YES	
L0001124	0	0.75040E-05	479130.0	3769808.8	354.0	3.49	4.00	3.25	YES	
L0001125	0	0.75040E-05	479130.1	3769800.2	354.0	3.49	4.00	3.25	YES	
L0001126	0	0.75040E-05	479130.2	3769791.6	354.0	3.49	4.00	3.25	YES	
L0001127	0	0.75040E-05	479130.2	3769783.1	354.0	3.49	4.00	3.25	YES	
L0001128	0	0.75040E-05	479130.3	3769774.5	354.0	3.49	4.00	3.25	YES	
L0001129	0	0.75040E-05	479130.3	3769765.9	354.0	3.49	4.00	3.25	YES	
L0001130	0	0.75040E-05	479130.4	3769757.3	354.0	3.49	4.00	3.25	YES	
L0001131	0	0.75040E-05	479130.5	3769748.7	354.0	3.49	4.00	3.25	YES	
L0001132	0	0.75040E-05	479130.5	3769740.1	354.0	3.49	4.00	3.25	YES	
L0001133	0	0.75040E-05	479130.6	3769731.5	354.0	3.49	4.00	3.25	YES	
L0001134	0	0.75040E-05	479130.6	3769722.9	354.0	3.49	4.00	3.25	YES	
L0001135	0	0.75040E-05	479130.7	3769714.3	354.0	3.49	4.00	3.25	YES	
L0001136	0	0.75040E-05	479130.8	3769705.7	354.0	3.49	4.00	3.25	YES	
L0001137	0	0.75040E-05	479130.8	3769697.2	354.0	3.49	4.00	3.25	YES	
L0001138	0	0.75040E-05	479130.9	3769688.6	354.2	3.49	4.00	3.25	YES	
L0001139	0	0.75040E-05	479130.9	3769680.0	354.4	3.49	4.00	3.25	YES	
L0001140	0	0.75040E-05	479131.0	3769671.4	354.6	3.49	4.00	3.25	YES	
L0001141	0	0.75040E-05	479131.1	3769662.8	354.7	3.49	4.00	3.25	YES	
L0001142	0	0.75040E-05	479131.1	3769654.2	354.8	3.49	4.00	3.25	YES	
L0001143	0	0.75040E-05	479131.2	3769645.6	354.9	3.49	4.00	3.25	YES	
L0001144	0	0.75040E-05	479131.2	3769637.0	355.0	3.49	4.00	3.25	YES	
L0001145	0	0.75040E-05	479131.3	3769628.4	355.6	3.49	4.00	3.25	YES	
L0001146	0	0.75040E-05	479131.3	3769619.8	356.3	3.49	4.00	3.25	YES	
L0002287	0	0.39850E-05	480742.6	3774121.5	363.4	3.49	4.00	3.25	YES	
L0002288	0	0.39850E-05	480742.7	3774112.9	363.4	3.49	4.00	3.25	YES	
L0002289	0	0.39850E-05	480742.7	3774104.3	363.4	3.49	4.00	3.25	YES	
L0002290	0	0.39850E-05	480742.8	3774095.7	363.4	3.49	4.00	3.25	YES	
L0002291	0	0.39850E-05	480742.9	3774087.1	363.4	3.49	4.00	3.25	YES	
L0002292	0	0.39850E-05	480743.0	3774078.5	363.4	3.49	4.00	3.25	YES	
L0002293	0	0.39850E-05	480743.1	3774069.9	363.6	3.49	4.00	3.25	YES	
L0002294	0	0.39850E-05	480743.2	3774061.3	363.7	3.49	4.00	3.25	YES	
L0002295	0	0.39850E-05	480743.2	3774052.7	363.9	3.49	4.00	3.25	YES	
L0002296	0	0.39850E-05	480743.3	3774044.2	364.0	3.49	4.00	3.25	YES	
L0002297	0	0.39850E-05	480743.4	3774035.6	364.0	3.49	4.00	3.25	YES	
L0002298	0	0.39850E-05	480743.5	3774027.0	364.0	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0002299	0	0.39850E-05	480743.6	3774018.4	364.0	3.49	4.00	3.25	YES	
L0002300	0	0.39850E-05	480743.7	3774009.8	364.1	3.49	4.00	3.25	YES	
L0002301	0	0.39850E-05	480743.7	3774001.2	364.2	3.49	4.00	3.25	YES	
L0002302	0	0.39850E-05	480743.8	3773992.6	364.4	3.49	4.00	3.25	YES	
L0002303	0	0.39850E-05	480743.9	3773984.0	364.5	3.49	4.00	3.25	YES	
L0002304	0	0.39850E-05	480744.0	3773975.4	364.7	3.49	4.00	3.25	YES	
L0002305	0	0.39850E-05	480744.1	3773966.8	364.8	3.49	4.00	3.25	YES	
L0002306	0	0.39850E-05	480744.1	3773958.3	365.0	3.49	4.00	3.25	YES	
L0002307	0	0.39850E-05	480744.2	3773949.7	365.1	3.49	4.00	3.25	YES	
L0002308	0	0.39850E-05	480744.3	3773941.1	365.2	3.49	4.00	3.25	YES	
L0002309	0	0.39850E-05	480744.4	3773932.5	365.4	3.49	4.00	3.25	YES	
L0002310	0	0.39850E-05	480744.5	3773923.9	365.5	3.49	4.00	3.25	YES	
L0002311	0	0.39850E-05	480744.6	3773915.3	365.5	3.49	4.00	3.25	YES	
L0002312	0	0.39850E-05	480744.6	3773906.7	365.5	3.49	4.00	3.25	YES	
L0002313	0	0.39850E-05	480744.7	3773898.1	365.5	3.49	4.00	3.25	YES	
L0002314	0	0.39850E-05	480744.8	3773889.5	365.5	3.49	4.00	3.25	YES	
L0002315	0	0.39850E-05	480744.9	3773881.0	365.5	3.49	4.00	3.25	YES	
L0002316	0	0.39850E-05	480745.0	3773872.4	365.5	3.49	4.00	3.25	YES	
L0002317	0	0.39850E-05	480745.0	3773863.8	365.5	3.49	4.00	3.25	YES	
L0002318	0	0.39850E-05	480745.1	3773855.2	365.5	3.49	4.00	3.25	YES	
L0002319	0	0.39850E-05	480745.2	3773846.6	365.5	3.49	4.00	3.25	YES	
L0002320	0	0.39850E-05	480745.3	3773838.0	365.5	3.49	4.00	3.25	YES	
L0002321	0	0.39850E-05	480745.4	3773829.4	365.5	3.49	4.00	3.25	YES	
L0002322	0	0.39850E-05	480745.5	3773820.8	365.5	3.49	4.00	3.25	YES	
L0002323	0	0.39850E-05	480745.5	3773812.2	365.5	3.49	4.00	3.25	YES	
L0002324	0	0.39850E-05	480745.6	3773803.6	365.5	3.49	4.00	3.25	YES	
L0002325	0	0.39850E-05	480745.7	3773795.1	365.5	3.49	4.00	3.25	YES	
L0002326	0	0.39850E-05	480745.8	3773786.5	365.5	3.49	4.00	3.25	YES	
L0002327	0	0.39850E-05	480745.9	3773777.9	365.5	3.49	4.00	3.25	YES	
L0002328	0	0.39850E-05	480746.0	3773769.3	365.5	3.49	4.00	3.25	YES	
L0002329	0	0.39850E-05	480746.0	3773760.7	365.5	3.49	4.00	3.25	YES	
L0002330	0	0.39850E-05	480746.1	3773752.1	365.5	3.49	4.00	3.25	YES	
L0002331	0	0.39850E-05	480746.2	3773743.5	365.5	3.49	4.00	3.25	YES	
L0002332	0	0.39850E-05	480746.3	3773734.9	365.6	3.49	4.00	3.25	YES	
L0002333	0	0.39850E-05	480746.4	3773726.3	365.6	3.49	4.00	3.25	YES	
L0002334	0	0.39850E-05	480746.4	3773717.7	365.6	3.49	4.00	3.25	YES	
L0002335	0	0.39850E-05	480746.5	3773709.2	365.6	3.49	4.00	3.25	YES	
L0002336	0	0.39850E-05	480746.6	3773700.6	365.6	3.49	4.00	3.25	YES	
L0002337	0	0.39850E-05	480746.7	3773692.0	365.6	3.49	4.00	3.25	YES	
L0002338	0	0.39850E-05	480746.8	3773683.4	365.6	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0002339	0	0.39850E-05	480746.9	3773674.8	365.6	3.49	4.00	3.25	YES	
L0002340	0	0.39850E-05	480746.9	3773666.2	365.6	3.49	4.00	3.25	YES	
L0002341	0	0.39850E-05	480747.0	3773657.6	365.6	3.49	4.00	3.25	YES	
L0002342	0	0.39850E-05	480747.1	3773649.0	365.6	3.49	4.00	3.25	YES	
L0002343	0	0.39850E-05	480747.2	3773640.4	365.6	3.49	4.00	3.25	YES	
L0002344	0	0.39850E-05	480747.3	3773631.9	365.6	3.49	4.00	3.25	YES	
L0002345	0	0.39850E-05	480747.4	3773623.3	365.5	3.49	4.00	3.25	YES	
L0002346	0	0.39850E-05	480747.4	3773614.7	365.2	3.49	4.00	3.25	YES	
L0002347	0	0.39850E-05	480747.5	3773606.1	364.9	3.49	4.00	3.25	YES	
L0002348	0	0.39850E-05	480747.6	3773597.5	364.6	3.49	4.00	3.25	YES	
L0002349	0	0.39850E-05	480747.7	3773588.9	364.4	3.49	4.00	3.25	YES	
L0002350	0	0.39850E-05	480747.8	3773580.3	364.3	3.49	4.00	3.25	YES	
L0002351	0	0.39850E-05	480747.8	3773571.7	364.1	3.49	4.00	3.25	YES	
L0002352	0	0.39850E-05	480747.9	3773563.1	364.0	3.49	4.00	3.25	YES	
L0002353	0	0.39850E-05	480748.0	3773554.5	363.9	3.49	4.00	3.25	YES	
L0002354	0	0.39850E-05	480748.1	3773546.0	363.7	3.49	4.00	3.25	YES	
L0002355	0	0.39850E-05	480748.2	3773537.4	363.6	3.49	4.00	3.25	YES	
L0002356	0	0.39850E-05	480748.3	3773528.8	363.5	3.49	4.00	3.25	YES	
L0002357	0	0.39850E-05	480748.3	3773520.2	363.3	3.49	4.00	3.25	YES	
L0002358	0	0.39850E-05	480748.4	3773511.6	363.1	3.49	4.00	3.25	YES	
L0002359	0	0.39850E-05	480748.5	3773503.0	363.0	3.49	4.00	3.25	YES	
L0002360	0	0.39850E-05	480748.5	3773494.4	362.9	3.49	4.00	3.25	YES	
L0002361	0	0.39850E-05	480748.5	3773485.8	362.7	3.49	4.00	3.25	YES	
L0002362	0	0.39850E-05	480748.6	3773477.2	362.6	3.49	4.00	3.25	YES	
L0002363	0	0.39850E-05	480748.6	3773468.6	362.6	3.49	4.00	3.25	YES	
L0002364	0	0.39850E-05	480748.6	3773460.1	362.6	3.49	4.00	3.25	YES	
L0002365	0	0.39850E-05	480748.6	3773451.5	362.6	3.49	4.00	3.25	YES	
L0002366	0	0.39850E-05	480748.6	3773442.9	362.6	3.49	4.00	3.25	YES	
L0002367	0	0.39850E-05	480748.7	3773434.3	362.4	3.49	4.00	3.25	YES	
L0002368	0	0.39850E-05	480748.7	3773425.7	362.2	3.49	4.00	3.25	YES	
L0002369	0	0.39850E-05	480748.7	3773417.1	362.0	3.49	4.00	3.25	YES	
L0002370	0	0.39850E-05	480748.7	3773408.5	362.0	3.49	4.00	3.25	YES	
L0002371	0	0.39850E-05	480748.8	3773399.9	362.0	3.49	4.00	3.25	YES	
L0002372	0	0.39850E-05	480748.8	3773391.3	362.0	3.49	4.00	3.25	YES	
L0002373	0	0.39850E-05	480748.8	3773382.8	362.0	3.49	4.00	3.25	YES	
L0002374	0	0.39850E-05	480748.8	3773374.2	362.0	3.49	4.00	3.25	YES	
L0002375	0	0.39850E-05	480748.8	3773365.6	362.0	3.49	4.00	3.25	YES	
L0002376	0	0.39850E-05	480748.9	3773357.0	362.0	3.49	4.00	3.25	YES	
L0002377	0	0.39850E-05	480748.9	3773348.4	362.0	3.49	4.00	3.25	YES	
L0002378	0	0.39850E-05	480748.9	3773339.8	362.0	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0002379	0	0.39850E-05	480748.9	3773331.2	362.0	3.49	4.00	3.25	YES	
L0002380	0	0.39850E-05	480749.0	3773322.6	362.0	3.49	4.00	3.25	YES	
L0002381	0	0.39850E-05	480749.0	3773314.0	362.0	3.49	4.00	3.25	YES	
L0002382	0	0.39850E-05	480749.0	3773305.4	362.0	3.49	4.00	3.25	YES	
L0002383	0	0.39850E-05	480749.0	3773296.8	362.0	3.49	4.00	3.25	YES	
L0002384	0	0.39850E-05	480749.0	3773288.3	362.0	3.49	4.00	3.25	YES	
L0002385	0	0.39850E-05	480749.1	3773279.7	362.0	3.49	4.00	3.25	YES	
L0002386	0	0.39850E-05	480749.1	3773271.1	362.0	3.49	4.00	3.25	YES	
L0002387	0	0.39850E-05	480749.1	3773262.5	362.0	3.49	4.00	3.25	YES	
L0002388	0	0.39850E-05	480749.1	3773253.9	362.0	3.49	4.00	3.25	YES	
L0002389	0	0.39850E-05	480749.2	3773245.3	362.0	3.49	4.00	3.25	YES	
L0002390	0	0.39850E-05	480749.2	3773236.7	362.0	3.49	4.00	3.25	YES	
L0002391	0	0.39850E-05	480749.2	3773228.1	362.0	3.49	4.00	3.25	YES	
L0002392	0	0.39850E-05	480749.2	3773219.5	362.0	3.49	4.00	3.25	YES	
L0002393	0	0.39850E-05	480749.2	3773210.9	362.0	3.49	4.00	3.25	YES	
L0002394	0	0.39850E-05	480749.3	3773202.4	362.0	3.49	4.00	3.25	YES	
L0002395	0	0.39850E-05	480749.3	3773193.8	362.0	3.49	4.00	3.25	YES	
L0002396	0	0.39850E-05	480749.3	3773185.2	362.0	3.49	4.00	3.25	YES	
L0002397	0	0.39850E-05	480749.3	3773176.6	362.0	3.49	4.00	3.25	YES	
L0002398	0	0.39850E-05	480749.3	3773168.0	361.9	3.49	4.00	3.25	YES	
L0002399	0	0.39850E-05	480749.4	3773159.4	361.8	3.49	4.00	3.25	YES	
L0002400	0	0.39850E-05	480749.4	3773150.8	361.7	3.49	4.00	3.25	YES	
L0002401	0	0.39850E-05	480749.4	3773142.2	361.7	3.49	4.00	3.25	YES	
L0002402	0	0.39850E-05	480749.4	3773133.6	361.7	3.49	4.00	3.25	YES	
L0002403	0	0.39850E-05	480749.5	3773125.0	361.7	3.49	4.00	3.25	YES	
L0002404	0	0.39850E-05	480749.5	3773116.5	361.7	3.49	4.00	3.25	YES	
L0002405	0	0.39850E-05	480749.5	3773107.9	361.7	3.49	4.00	3.25	YES	
L0002406	0	0.39850E-05	480749.5	3773099.3	361.7	3.49	4.00	3.25	YES	
L0002407	0	0.39850E-05	480749.5	3773090.7	361.7	3.49	4.00	3.25	YES	
L0002408	0	0.39850E-05	480749.6	3773082.1	361.7	3.49	4.00	3.25	YES	
L0002409	0	0.39850E-05	480749.6	3773073.5	361.7	3.49	4.00	3.25	YES	
L0002410	0	0.39850E-05	480749.6	3773064.9	361.7	3.49	4.00	3.25	YES	
L0002411	0	0.39850E-05	480749.6	3773056.3	361.7	3.49	4.00	3.25	YES	
L0002412	0	0.39850E-05	480749.7	3773047.7	361.7	3.49	4.00	3.25	YES	
L0002413	0	0.39850E-05	480749.7	3773039.2	361.7	3.49	4.00	3.25	YES	
L0002414	0	0.39850E-05	480749.7	3773030.6	361.7	3.49	4.00	3.25	YES	
L0002415	0	0.39850E-05	480749.7	3773022.0	361.7	3.49	4.00	3.25	YES	
L0002416	0	0.39850E-05	480749.7	3773013.4	361.7	3.49	4.00	3.25	YES	
L0002417	0	0.39850E-05	480749.8	3773004.8	361.7	3.49	4.00	3.25	YES	
L0002418	0	0.39850E-05	480749.8	3772996.2	361.7	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0002419	0	0.39850E-05	480749.8	3772987.6	361.7	3.49	4.00	3.25	YES	
L0002420	0	0.39850E-05	480749.8	3772979.0	361.7	3.49	4.00	3.25	YES	
L0002421	0	0.39850E-05	480749.8	3772970.4	361.7	3.49	4.00	3.25	YES	
L0002422	0	0.39850E-05	480749.9	3772961.8	361.7	3.49	4.00	3.25	YES	
L0002423	0	0.39850E-05	480749.9	3772953.3	361.7	3.49	4.00	3.25	YES	
L0002424	0	0.39850E-05	480749.9	3772944.7	361.7	3.49	4.00	3.25	YES	
L0002425	0	0.39850E-05	480749.9	3772936.1	361.7	3.49	4.00	3.25	YES	
L0002426	0	0.39850E-05	480750.0	3772927.5	361.7	3.49	4.00	3.25	YES	
L0002427	0	0.39850E-05	480750.0	3772918.9	361.7	3.49	4.00	3.25	YES	
L0002428	0	0.39850E-05	480750.0	3772910.3	361.7	3.49	4.00	3.25	YES	
L0002429	0	0.39850E-05	480750.0	3772901.7	361.7	3.49	4.00	3.25	YES	
L0002430	0	0.39850E-05	480750.0	3772893.1	361.7	3.49	4.00	3.25	YES	
L0002431	0	0.39850E-05	480750.1	3772884.5	361.7	3.49	4.00	3.25	YES	
L0002432	0	0.39850E-05	480750.1	3772875.9	361.7	3.49	4.00	3.25	YES	
L0002433	0	0.39850E-05	480750.1	3772867.4	361.7	3.49	4.00	3.25	YES	
L0002434	0	0.39850E-05	480750.1	3772858.8	361.7	3.49	4.00	3.25	YES	
L0002435	0	0.39850E-05	480750.2	3772850.2	361.7	3.49	4.00	3.25	YES	
L0002436	0	0.39850E-05	480750.2	3772841.6	361.7	3.49	4.00	3.25	YES	
L0002437	0	0.39850E-05	480750.2	3772833.0	361.7	3.49	4.00	3.25	YES	
L0002438	0	0.39850E-05	480750.2	3772824.4	361.7	3.49	4.00	3.25	YES	
L0002439	0	0.39850E-05	480750.2	3772815.8	361.7	3.49	4.00	3.25	YES	
L0002440	0	0.39850E-05	480750.3	3772807.2	361.7	3.49	4.00	3.25	YES	
L0002441	0	0.39850E-05	480750.3	3772798.6	361.7	3.49	4.00	3.25	YES	
L0002442	0	0.39850E-05	480750.3	3772790.0	361.7	3.49	4.00	3.25	YES	
L0002443	0	0.39850E-05	480750.3	3772781.5	361.7	3.49	4.00	3.25	YES	
L0002444	0	0.39850E-05	480750.3	3772772.9	361.7	3.49	4.00	3.25	YES	
L0002445	0	0.39850E-05	480750.4	3772764.3	361.7	3.49	4.00	3.25	YES	
L0002446	0	0.39850E-05	480750.4	3772755.7	361.7	3.49	4.00	3.25	YES	
L0002447	0	0.39850E-05	480750.4	3772747.1	361.7	3.49	4.00	3.25	YES	
L0002448	0	0.39850E-05	480750.4	3772738.5	361.7	3.49	4.00	3.25	YES	
L0002449	0	0.39850E-05	480750.5	3772729.9	361.7	3.49	4.00	3.25	YES	
L0002450	0	0.39850E-05	480750.5	3772721.3	361.7	3.49	4.00	3.25	YES	
L0002451	0	0.39850E-05	480750.5	3772712.7	361.7	3.49	4.00	3.25	YES	
L0002452	0	0.39850E-05	480750.5	3772704.1	361.7	3.49	4.00	3.25	YES	
L0002453	0	0.39850E-05	480750.5	3772695.6	361.7	3.49	4.00	3.25	YES	
L0002454	0	0.39850E-05	480750.6	3772687.0	361.7	3.49	4.00	3.25	YES	
L0002455	0	0.39850E-05	480750.6	3772678.4	361.7	3.49	4.00	3.25	YES	
L0002456	0	0.39850E-05	480750.6	3772669.8	361.7	3.49	4.00	3.25	YES	
L0002457	0	0.39850E-05	480750.6	3772661.2	361.6	3.49	4.00	3.25	YES	
L0002458	0	0.39850E-05	480750.7	3772652.6	361.4	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0002459	0	0.39850E-05	480750.7	3772644.0	361.2	3.49	4.00	3.25	YES	
L0002460	0	0.39850E-05	480750.7	3772635.4	361.0	3.49	4.00	3.25	YES	
L0002461	0	0.39850E-05	480750.7	3772626.8	361.0	3.49	4.00	3.25	YES	
L0002462	0	0.39850E-05	480750.7	3772618.2	361.0	3.49	4.00	3.25	YES	
L0002463	0	0.39850E-05	480750.8	3772609.7	361.0	3.49	4.00	3.25	YES	
L0002464	0	0.39850E-05	480750.8	3772601.1	361.0	3.49	4.00	3.25	YES	
L0002465	0	0.39850E-05	480750.8	3772592.5	361.0	3.49	4.00	3.25	YES	
L0002466	0	0.39850E-05	480750.8	3772583.9	361.0	3.49	4.00	3.25	YES	
L0002467	0	0.39850E-05	480750.9	3772575.3	361.0	3.49	4.00	3.25	YES	
L0002468	0	0.39850E-05	480750.9	3772566.7	360.9	3.49	4.00	3.25	YES	
L0002469	0	0.39850E-05	480750.9	3772558.1	360.8	3.49	4.00	3.25	YES	
L0002470	0	0.39850E-05	480750.9	3772549.5	360.7	3.49	4.00	3.25	YES	
L0002471	0	0.39850E-05	480750.9	3772540.9	360.7	3.49	4.00	3.25	YES	
L0002472	0	0.39850E-05	480751.0	3772532.3	360.7	3.49	4.00	3.25	YES	
L0002473	0	0.39850E-05	480751.0	3772523.8	360.7	3.49	4.00	3.25	YES	
L0002474	0	0.39850E-05	480751.0	3772515.2	360.7	3.49	4.00	3.25	YES	
L0002475	0	0.39850E-05	480751.0	3772506.6	360.5	3.49	4.00	3.25	YES	
L0002476	0	0.39850E-05	480751.0	3772498.0	360.3	3.49	4.00	3.25	YES	
L0002477	0	0.39850E-05	480751.1	3772489.4	360.1	3.49	4.00	3.25	YES	
L0002478	0	0.39850E-05	480751.1	3772480.8	360.1	3.49	4.00	3.25	YES	
L0002479	0	0.39850E-05	480751.1	3772472.2	360.3	3.49	4.00	3.25	YES	
L0002480	0	0.39850E-05	480751.1	3772463.6	360.5	3.49	4.00	3.25	YES	
L0002481	0	0.39850E-05	480751.2	3772455.0	360.7	3.49	4.00	3.25	YES	
L0002482	0	0.39850E-05	480751.2	3772446.4	360.7	3.49	4.00	3.25	YES	
L0002483	0	0.39850E-05	480751.2	3772437.9	360.7	3.49	4.00	3.25	YES	
L0002484	0	0.39850E-05	480751.2	3772429.3	360.7	3.49	4.00	3.25	YES	
L0002485	0	0.39850E-05	480751.2	3772420.7	360.9	3.49	4.00	3.25	YES	
L0002486	0	0.39850E-05	480751.3	3772412.1	361.2	3.49	4.00	3.25	YES	
L0002487	0	0.39850E-05	480751.3	3772403.5	361.5	3.49	4.00	3.25	YES	
L0002488	0	0.39850E-05	480751.3	3772394.9	361.7	3.49	4.00	3.25	YES	
L0002489	0	0.39850E-05	480751.3	3772386.3	361.7	3.49	4.00	3.25	YES	
L0002490	0	0.39850E-05	480751.4	3772377.7	361.7	3.49	4.00	3.25	YES	
L0002491	0	0.39850E-05	480751.4	3772369.1	361.7	3.49	4.00	3.25	YES	
L0002492	0	0.39850E-05	480751.4	3772360.5	361.8	3.49	4.00	3.25	YES	
L0002493	0	0.39850E-05	480751.4	3772352.0	361.9	3.49	4.00	3.25	YES	
L0002494	0	0.39850E-05	480751.4	3772343.4	361.9	3.49	4.00	3.25	YES	
L0002495	0	0.39850E-05	480751.5	3772334.8	362.0	3.49	4.00	3.25	YES	
L0002496	0	0.39850E-05	480751.5	3772326.2	362.2	3.49	4.00	3.25	YES	
L0002497	0	0.39850E-05	480751.5	3772317.6	362.4	3.49	4.00	3.25	YES	
L0002498	0	0.39850E-05	480751.5	3772309.0	362.7	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0002499	0	0.39850E-05	480751.5	3772300.4	362.8	3.49	4.00	3.25	YES	
L0002500	0	0.39850E-05	480751.6	3772291.8	362.9	3.49	4.00	3.25	YES	
L0002501	0	0.39850E-05	480751.6	3772283.2	362.9	3.49	4.00	3.25	YES	
L0002502	0	0.39850E-05	480751.6	3772274.6	363.0	3.49	4.00	3.25	YES	
L0002503	0	0.39850E-05	480751.6	3772266.1	363.0	3.49	4.00	3.25	YES	
L0002504	0	0.39850E-05	480751.7	3772257.5	363.0	3.49	4.00	3.25	YES	
L0002505	0	0.39850E-05	480751.7	3772248.9	363.0	3.49	4.00	3.25	YES	
L0002506	0	0.39850E-05	480751.7	3772240.3	363.2	3.49	4.00	3.25	YES	
L0002507	0	0.39850E-05	480751.7	3772231.7	363.4	3.49	4.00	3.25	YES	
L0002508	0	0.39850E-05	480751.7	3772223.1	363.6	3.49	4.00	3.25	YES	
L0002509	0	0.39850E-05	480751.8	3772214.5	363.7	3.49	4.00	3.25	YES	
L0002510	0	0.39850E-05	480751.8	3772205.9	363.8	3.49	4.00	3.25	YES	
L0002511	0	0.39850E-05	480751.8	3772197.3	363.9	3.49	4.00	3.25	YES	
L0002512	0	0.39850E-05	480751.8	3772188.7	364.0	3.49	4.00	3.25	YES	
L0002513	0	0.39850E-05	480751.9	3772180.2	364.0	3.49	4.00	3.25	YES	
L0002514	0	0.39850E-05	480751.9	3772171.6	364.0	3.49	4.00	3.25	YES	
L0002515	0	0.39850E-05	480751.9	3772163.0	364.0	3.49	4.00	3.25	YES	
L0002516	0	0.39850E-05	480751.9	3772154.4	364.1	3.49	4.00	3.25	YES	
L0002517	0	0.39850E-05	480751.9	3772145.8	364.3	3.49	4.00	3.25	YES	
L0002518	0	0.39850E-05	480752.0	3772137.2	364.5	3.49	4.00	3.25	YES	
L0002519	0	0.39850E-05	480752.0	3772128.6	364.7	3.49	4.00	3.25	YES	
L0002520	0	0.39850E-05	480752.0	3772120.0	364.8	3.49	4.00	3.25	YES	
L0002521	0	0.39850E-05	480752.0	3772111.4	364.9	3.49	4.00	3.25	YES	
L0002522	0	0.39850E-05	480752.0	3772102.8	364.9	3.49	4.00	3.25	YES	
L0002523	0	0.39850E-05	480752.1	3772094.3	365.1	3.49	4.00	3.25	YES	
L0002524	0	0.39850E-05	480752.1	3772085.7	365.3	3.49	4.00	3.25	YES	
L0002525	0	0.39850E-05	480752.1	3772077.1	365.5	3.49	4.00	3.25	YES	
L0002526	0	0.39850E-05	480752.1	3772068.5	365.7	3.49	4.00	3.25	YES	
L0002527	0	0.39850E-05	480752.2	3772059.9	365.9	3.49	4.00	3.25	YES	
L0002528	0	0.39850E-05	480752.2	3772051.3	366.2	3.49	4.00	3.25	YES	
L0002529	0	0.39850E-05	480752.2	3772042.7	366.5	3.49	4.00	3.25	YES	
L0002530	0	0.39850E-05	480752.2	3772034.1	366.9	3.49	4.00	3.25	YES	
L0002531	0	0.39850E-05	480752.2	3772025.5	367.7	3.49	4.00	3.25	YES	
L0002532	0	0.39850E-05	480752.3	3772016.9	368.5	3.49	4.00	3.25	YES	
L0002533	0	0.39850E-05	480752.3	3772008.4	369.3	3.49	4.00	3.25	YES	
L0002534	0	0.39850E-05	480752.3	3771999.8	369.8	3.49	4.00	3.25	YES	
L0002535	0	0.39850E-05	480752.3	3771991.2	370.1	3.49	4.00	3.25	YES	
L0002536	0	0.39850E-05	480752.4	3771982.6	370.5	3.49	4.00	3.25	YES	
L0002537	0	0.39850E-05	480752.4	3771974.0	370.8	3.49	4.00	3.25	YES	
L0002538	0	0.39850E-05	480752.4	3771965.4	370.8	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0002539	0	0.39850E-05	480752.4	3771956.8	370.8	3.49	4.00	3.25	YES	
L0002540	0	0.39850E-05	480752.4	3771948.2	370.8	3.49	4.00	3.25	YES	
L0002541	0	0.39850E-05	480752.5	3771939.6	371.0	3.49	4.00	3.25	YES	
L0002542	0	0.39850E-05	480752.5	3771931.0	371.3	3.49	4.00	3.25	YES	
L0002543	0	0.39850E-05	480752.5	3771922.5	371.6	3.49	4.00	3.25	YES	
L0002544	0	0.39850E-05	480752.5	3771913.9	371.8	3.49	4.00	3.25	YES	
L0002545	0	0.39850E-05	480752.6	3771905.3	371.8	3.49	4.00	3.25	YES	
L0002546	0	0.39850E-05	480752.6	3771896.7	371.8	3.49	4.00	3.25	YES	
L0002547	0	0.39850E-05	480752.6	3771888.1	371.8	3.49	4.00	3.25	YES	
L0002548	0	0.39850E-05	480752.6	3771879.5	371.8	3.49	4.00	3.25	YES	
L0002549	0	0.39850E-05	480752.6	3771870.9	371.8	3.49	4.00	3.25	YES	
L0002550	0	0.39850E-05	480752.7	3771862.3	371.8	3.49	4.00	3.25	YES	
L0002551	0	0.39850E-05	480752.7	3771853.7	371.8	3.49	4.00	3.25	YES	
L0002552	0	0.39850E-05	480752.7	3771845.1	371.8	3.49	4.00	3.25	YES	
L0002553	0	0.39850E-05	480752.7	3771836.6	371.8	3.49	4.00	3.25	YES	
L0002554	0	0.39850E-05	480752.7	3771828.0	371.8	3.49	4.00	3.25	YES	
L0002555	0	0.39850E-05	480752.8	3771819.4	371.8	3.49	4.00	3.25	YES	
L0002556	0	0.42000E-05	480750.9	3771805.7	371.7	3.49	4.00	3.25	YES	
L0002557	0	0.42000E-05	480750.8	3771797.2	371.7	3.49	4.00	3.25	YES	
L0002558	0	0.42000E-05	480750.6	3771788.6	371.7	3.49	4.00	3.25	YES	
L0002559	0	0.42000E-05	480750.5	3771780.0	371.7	3.49	4.00	3.25	YES	
L0002560	0	0.42000E-05	480750.4	3771771.4	371.7	3.49	4.00	3.25	YES	
L0002561	0	0.42000E-05	480750.2	3771762.8	371.7	3.49	4.00	3.25	YES	
L0002562	0	0.42000E-05	480750.1	3771754.2	371.8	3.49	4.00	3.25	YES	
L0002563	0	0.42000E-05	480750.0	3771745.6	371.9	3.49	4.00	3.25	YES	
L0002564	0	0.42000E-05	480749.8	3771737.0	372.0	3.49	4.00	3.25	YES	
L0002565	0	0.42000E-05	480749.7	3771728.4	372.0	3.49	4.00	3.25	YES	
L0002566	0	0.42000E-05	480749.6	3771719.9	372.0	3.49	4.00	3.25	YES	
L0002567	0	0.42000E-05	480749.4	3771711.3	372.0	3.49	4.00	3.25	YES	
L0002568	0	0.42000E-05	480749.3	3771702.7	372.1	3.49	4.00	3.25	YES	
L0002569	0	0.42000E-05	480749.2	3771694.1	372.3	3.49	4.00	3.25	YES	
L0002570	0	0.42000E-05	480749.0	3771685.5	372.4	3.49	4.00	3.25	YES	
L0002571	0	0.42000E-05	480748.9	3771676.9	372.6	3.49	4.00	3.25	YES	
L0002572	0	0.42000E-05	480748.7	3771668.3	372.6	3.49	4.00	3.25	YES	
L0002573	0	0.42000E-05	480748.6	3771659.7	372.6	3.49	4.00	3.25	YES	
L0002574	0	0.42000E-05	480748.5	3771651.1	372.6	3.49	4.00	3.25	YES	
L0002575	0	0.42000E-05	480748.3	3771642.6	372.7	3.49	4.00	3.25	YES	
L0002576	0	0.42000E-05	480748.2	3771634.0	372.8	3.49	4.00	3.25	YES	
L0002577	0	0.42000E-05	480748.1	3771625.4	372.9	3.49	4.00	3.25	YES	
L0002578	0	0.42000E-05	480747.9	3771616.8	373.0	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0002579	0	0.42000E-05	480747.8	3771608.2	373.0	3.49	4.00	3.25	YES	
L0002580	0	0.42000E-05	480747.7	3771599.6	373.0	3.49	4.00	3.25	YES	
L0002581	0	0.42000E-05	480747.5	3771591.0	373.0	3.49	4.00	3.25	YES	
L0002582	0	0.50290E-05	480747.0	3771564.5	373.0	3.49	4.00	3.25	YES	
L0002583	0	0.50290E-05	480747.0	3771555.9	373.0	3.49	4.00	3.25	YES	
L0002584	0	0.50290E-05	480747.0	3771547.3	373.0	3.49	4.00	3.25	YES	
L0002585	0	0.50290E-05	480747.0	3771538.7	373.0	3.49	4.00	3.25	YES	
L0002586	0	0.50290E-05	480746.9	3771530.1	373.0	3.49	4.00	3.25	YES	
L0002587	0	0.50290E-05	480746.9	3771521.5	373.1	3.49	4.00	3.25	YES	
L0002588	0	0.50290E-05	480746.9	3771512.9	373.2	3.49	4.00	3.25	YES	
L0002589	0	0.50290E-05	480746.9	3771504.4	373.4	3.49	4.00	3.25	YES	
L0002590	0	0.50290E-05	480746.8	3771495.8	373.6	3.49	4.00	3.25	YES	
L0002591	0	0.50290E-05	480746.8	3771487.2	373.6	3.49	4.00	3.25	YES	
L0002592	0	0.50290E-05	480746.8	3771478.6	373.6	3.49	4.00	3.25	YES	
L0002593	0	0.50290E-05	480746.8	3771470.0	373.6	3.49	4.00	3.25	YES	
L0002594	0	0.50290E-05	480746.8	3771461.4	373.6	3.49	4.00	3.25	YES	
L0002595	0	0.50290E-05	480746.7	3771452.8	373.6	3.49	4.00	3.25	YES	
L0002596	0	0.50290E-05	480746.7	3771444.2	373.6	3.49	4.00	3.25	YES	
L0002597	0	0.50290E-05	480746.7	3771435.6	373.6	3.49	4.00	3.25	YES	
L0002598	0	0.50290E-05	480746.7	3771427.0	373.6	3.49	4.00	3.25	YES	
L0002599	0	0.50290E-05	480746.6	3771418.5	373.6	3.49	4.00	3.25	YES	
L0002600	0	0.50290E-05	480746.6	3771409.9	373.6	3.49	4.00	3.25	YES	
L0002601	0	0.50290E-05	480746.6	3771401.3	373.6	3.49	4.00	3.25	YES	
L0002602	0	0.50290E-05	480746.6	3771392.7	373.6	3.49	4.00	3.25	YES	
L0002603	0	0.50290E-05	480746.6	3771384.1	373.6	3.49	4.00	3.25	YES	
L0002604	0	0.50290E-05	480746.5	3771375.5	373.6	3.49	4.00	3.25	YES	
L0002605	0	0.50290E-05	480746.5	3771366.9	373.7	3.49	4.00	3.25	YES	
L0002606	0	0.50290E-05	480746.5	3771358.3	373.8	3.49	4.00	3.25	YES	
L0002607	0	0.50290E-05	480746.5	3771349.7	373.9	3.49	4.00	3.25	YES	
L0002608	0	0.50290E-05	480746.5	3771341.1	374.0	3.49	4.00	3.25	YES	
L0002609	0	0.50290E-05	480746.4	3771332.6	374.0	3.49	4.00	3.25	YES	
L0002610	0	0.50290E-05	480746.4	3771324.0	374.0	3.49	4.00	3.25	YES	
L0002611	0	0.50290E-05	480746.4	3771315.4	374.0	3.49	4.00	3.25	YES	
L0002612	0	0.50290E-05	480746.4	3771306.8	374.0	3.49	4.00	3.25	YES	
L0002613	0	0.50290E-05	480746.3	3771298.2	374.0	3.49	4.00	3.25	YES	
L0002614	0	0.50290E-05	480746.3	3771289.6	374.0	3.49	4.00	3.25	YES	
L0002615	0	0.50290E-05	480746.3	3771281.0	374.0	3.49	4.00	3.25	YES	
L0002616	0	0.50290E-05	480746.3	3771272.4	374.0	3.49	4.00	3.25	YES	
L0002617	0	0.50290E-05	480746.3	3771263.8	374.0	3.49	4.00	3.25	YES	
L0002618	0	0.50290E-05	480746.2	3771255.2	374.0	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0002619	0	0.50290E-05	480746.2	3771246.7	374.0	3.49	4.00	3.25	YES	
L0002620	0	0.50290E-05	480746.2	3771238.1	374.0	3.49	4.00	3.25	YES	
L0002621	0	0.50290E-05	480746.2	3771229.5	374.0	3.49	4.00	3.25	YES	
L0002622	0	0.50290E-05	480746.1	3771220.9	374.0	3.49	4.00	3.25	YES	
L0002623	0	0.50290E-05	480746.1	3771212.3	374.0	3.49	4.00	3.25	YES	
L0002624	0	0.50290E-05	480746.1	3771203.7	374.0	3.49	4.00	3.25	YES	
L0002625	0	0.50290E-05	480746.1	3771195.1	374.0	3.49	4.00	3.25	YES	
L0002626	0	0.50290E-05	480746.1	3771186.5	374.0	3.49	4.00	3.25	YES	
L0002627	0	0.50290E-05	480746.0	3771177.9	374.0	3.49	4.00	3.25	YES	
L0002628	0	0.50290E-05	480746.0	3771169.3	374.0	3.49	4.00	3.25	YES	
L0002629	0	0.50290E-05	480746.0	3771160.8	374.0	3.49	4.00	3.25	YES	
L0002630	0	0.50290E-05	480746.0	3771152.2	374.0	3.49	4.00	3.25	YES	
L0002631	0	0.50290E-05	480746.0	3771143.6	374.0	3.49	4.00	3.25	YES	
L0002632	0	0.50290E-05	480745.9	3771135.0	374.0	3.49	4.00	3.25	YES	
L0002633	0	0.50290E-05	480745.9	3771126.4	374.0	3.49	4.00	3.25	YES	
L0002634	0	0.50290E-05	480745.9	3771117.8	374.0	3.49	4.00	3.25	YES	
L0002635	0	0.50290E-05	480745.9	3771109.2	374.0	3.49	4.00	3.25	YES	
L0002636	0	0.50290E-05	480745.8	3771100.6	374.0	3.49	4.00	3.25	YES	
L0002637	0	0.50290E-05	480745.8	3771092.0	374.0	3.49	4.00	3.25	YES	
L0002638	0	0.50290E-05	480745.8	3771083.4	374.0	3.49	4.00	3.25	YES	
L0002639	0	0.50290E-05	480745.8	3771074.9	374.0	3.49	4.00	3.25	YES	
L0002640	0	0.50290E-05	480745.8	3771066.3	374.0	3.49	4.00	3.25	YES	
L0002641	0	0.50290E-05	480745.7	3771057.7	374.0	3.49	4.00	3.25	YES	
L0002642	0	0.50290E-05	480745.7	3771049.1	374.0	3.49	4.00	3.25	YES	
L0002643	0	0.50290E-05	480745.7	3771040.5	374.0	3.49	4.00	3.25	YES	
L0002644	0	0.50290E-05	480745.7	3771031.9	374.0	3.49	4.00	3.25	YES	
L0002645	0	0.50290E-05	480745.6	3771023.3	374.0	3.49	4.00	3.25	YES	
L0002646	0	0.50290E-05	480745.6	3771014.7	374.0	3.49	4.00	3.25	YES	
L0002647	0	0.50290E-05	480745.6	3771006.1	374.0	3.49	4.00	3.25	YES	
L0002648	0	0.50290E-05	480745.6	3770997.5	374.0	3.49	4.00	3.25	YES	
L0002649	0	0.50290E-05	480745.6	3770989.0	374.0	3.49	4.00	3.25	YES	
L0002650	0	0.50290E-05	480745.5	3770980.4	374.0	3.49	4.00	3.25	YES	
L0002651	0	0.50290E-05	480745.5	3770971.8	374.0	3.49	4.00	3.25	YES	
L0002652	0	0.50290E-05	480745.5	3770963.2	374.0	3.49	4.00	3.25	YES	
L0002653	0	0.50290E-05	480745.5	3770954.6	374.0	3.49	4.00	3.25	YES	
L0002654	0	0.50290E-05	480745.5	3770946.0	374.0	3.49	4.00	3.25	YES	
L0002655	0	0.50290E-05	480745.4	3770937.4	374.0	3.49	4.00	3.25	YES	
L0002656	0	0.50290E-05	480745.4	3770928.8	374.0	3.49	4.00	3.25	YES	
L0002657	0	0.50290E-05	480745.4	3770920.2	374.0	3.49	4.00	3.25	YES	
L0002658	0	0.50290E-05	480745.4	3770911.6	374.0	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0002659	0	0.50290E-05	480745.3	3770903.1	374.0	3.49	4.00	3.25	YES	
L0002660	0	0.50290E-05	480745.3	3770894.5	374.0	3.49	4.00	3.25	YES	
L0002661	0	0.50290E-05	480745.3	3770885.9	374.0	3.49	4.00	3.25	YES	
L0002662	0	0.50290E-05	480745.3	3770877.3	374.0	3.49	4.00	3.25	YES	
L0002663	0	0.50290E-05	480745.3	3770868.7	374.0	3.49	4.00	3.25	YES	
L0002664	0	0.50290E-05	480745.2	3770860.1	374.0	3.49	4.00	3.25	YES	
L0002665	0	0.50290E-05	480745.2	3770851.5	374.0	3.49	4.00	3.25	YES	
L0002666	0	0.50290E-05	480745.2	3770842.9	374.0	3.49	4.00	3.25	YES	
L0002667	0	0.50290E-05	480745.2	3770834.3	374.0	3.49	4.00	3.25	YES	
L0002668	0	0.50290E-05	480745.1	3770825.7	374.0	3.49	4.00	3.25	YES	
L0002669	0	0.50290E-05	480745.1	3770817.2	374.0	3.49	4.00	3.25	YES	
L0002670	0	0.50290E-05	480745.1	3770808.6	374.0	3.49	4.00	3.25	YES	
L0002671	0	0.50290E-05	480745.1	3770800.0	374.0	3.49	4.00	3.25	YES	
L0002672	0	0.50290E-05	480745.1	3770791.4	374.0	3.49	4.00	3.25	YES	
L0002673	0	0.50290E-05	480745.0	3770782.8	374.0	3.49	4.00	3.25	YES	
L0002857	0	0.45090E-05	480741.4	3770754.2	374.0	3.49	4.00	3.25	YES	
L0002858	0	0.45090E-05	480741.4	3770745.6	374.0	3.49	4.00	3.25	YES	
L0002859	0	0.45090E-05	480741.4	3770737.0	374.0	3.49	4.00	3.25	YES	
L0002860	0	0.45090E-05	480741.4	3770728.4	374.0	3.49	4.00	3.25	YES	
L0002861	0	0.45090E-05	480741.4	3770719.9	374.0	3.49	4.00	3.25	YES	
L0002862	0	0.45090E-05	480741.4	3770711.3	374.0	3.49	4.00	3.25	YES	
L0002863	0	0.45090E-05	480741.4	3770702.7	374.0	3.49	4.00	3.25	YES	
L0002864	0	0.45090E-05	480741.4	3770694.1	374.0	3.49	4.00	3.25	YES	
L0002865	0	0.45090E-05	480741.4	3770685.5	374.0	3.49	4.00	3.25	YES	
L0002866	0	0.45090E-05	480741.4	3770676.9	374.0	3.49	4.00	3.25	YES	
L0002867	0	0.45090E-05	480741.4	3770668.3	374.0	3.49	4.00	3.25	YES	
L0002868	0	0.45090E-05	480741.4	3770659.7	374.0	3.49	4.00	3.25	YES	
L0002869	0	0.45090E-05	480741.4	3770651.1	374.1	3.49	4.00	3.25	YES	
L0002870	0	0.45090E-05	480741.4	3770642.5	374.2	3.49	4.00	3.25	YES	
L0002871	0	0.45090E-05	480741.4	3770634.0	374.3	3.49	4.00	3.25	YES	
L0002872	0	0.45090E-05	480741.4	3770625.4	374.4	3.49	4.00	3.25	YES	
L0002873	0	0.45090E-05	480741.4	3770616.8	374.4	3.49	4.00	3.25	YES	
L0002874	0	0.45090E-05	480741.4	3770608.2	374.4	3.49	4.00	3.25	YES	
L0002875	0	0.45090E-05	480741.4	3770599.6	374.4	3.49	4.00	3.25	YES	
L0002876	0	0.45090E-05	480741.4	3770591.0	374.4	3.49	4.00	3.25	YES	
L0002877	0	0.45090E-05	480741.4	3770582.4	374.4	3.49	4.00	3.25	YES	
L0002878	0	0.45090E-05	480741.4	3770573.8	374.4	3.49	4.00	3.25	YES	
L0002879	0	0.45090E-05	480741.4	3770565.2	374.4	3.49	4.00	3.25	YES	
L0002880	0	0.45090E-05	480741.4	3770556.6	374.4	3.49	4.00	3.25	YES	
L0002881	0	0.45090E-05	480741.4	3770548.1	374.4	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0002882	0	0.45090E-05	480741.4	3770539.5	374.4	3.49	4.00	3.25	YES	
L0002883	0	0.45090E-05	480741.4	3770530.9	374.4	3.49	4.00	3.25	YES	
L0002884	0	0.45090E-05	480741.4	3770522.3	374.4	3.49	4.00	3.25	YES	
L0002885	0	0.45090E-05	480741.4	3770513.7	374.4	3.49	4.00	3.25	YES	
L0002886	0	0.45090E-05	480741.4	3770505.1	374.4	3.49	4.00	3.25	YES	
L0002887	0	0.45090E-05	480741.4	3770496.5	374.4	3.49	4.00	3.25	YES	
L0002888	0	0.45090E-05	480741.4	3770487.9	374.4	3.49	4.00	3.25	YES	
L0002889	0	0.45090E-05	480741.4	3770479.3	374.4	3.49	4.00	3.25	YES	
L0002890	0	0.45090E-05	480741.4	3770470.7	374.5	3.49	4.00	3.25	YES	
L0002891	0	0.45090E-05	480741.4	3770462.2	374.7	3.49	4.00	3.25	YES	
L0002892	0	0.45090E-05	480741.4	3770453.6	374.9	3.49	4.00	3.25	YES	
L0002893	0	0.45090E-05	480741.4	3770445.0	375.0	3.49	4.00	3.25	YES	
L0002894	0	0.45090E-05	480741.4	3770436.4	375.0	3.49	4.00	3.25	YES	
L0002895	0	0.45090E-05	480741.4	3770427.8	375.0	3.49	4.00	3.25	YES	
L0002896	0	0.45090E-05	480741.4	3770419.2	375.0	3.49	4.00	3.25	YES	
L0002897	0	0.45090E-05	480741.4	3770410.6	375.0	3.49	4.00	3.25	YES	
L0002898	0	0.45090E-05	480741.4	3770402.0	375.0	3.49	4.00	3.25	YES	
L0002899	0	0.45090E-05	480741.4	3770393.4	375.0	3.49	4.00	3.25	YES	
L0002900	0	0.45090E-05	480741.4	3770384.8	375.0	3.49	4.00	3.25	YES	
L0002901	0	0.45090E-05	480741.4	3770376.3	375.1	3.49	4.00	3.25	YES	
L0002902	0	0.45090E-05	480741.4	3770367.7	375.2	3.49	4.00	3.25	YES	
L0002903	0	0.45090E-05	480741.4	3770359.1	375.4	3.49	4.00	3.25	YES	
L0002904	0	0.45090E-05	480741.4	3770350.5	375.4	3.49	4.00	3.25	YES	
L0002905	0	0.45090E-05	480741.4	3770341.9	375.4	3.49	4.00	3.25	YES	
L0002906	0	0.45090E-05	480741.4	3770333.3	375.4	3.49	4.00	3.25	YES	
L0002907	0	0.45090E-05	480741.4	3770324.7	375.4	3.49	4.00	3.25	YES	
L0002908	0	0.45090E-05	480741.4	3770316.1	375.4	3.49	4.00	3.25	YES	
L0002909	0	0.45090E-05	480741.4	3770307.5	375.4	3.49	4.00	3.25	YES	
L0002910	0	0.45090E-05	480741.4	3770298.9	375.4	3.49	4.00	3.25	YES	
L0002911	0	0.45090E-05	480741.4	3770290.4	375.4	3.49	4.00	3.25	YES	
L0002912	0	0.45090E-05	480741.4	3770281.8	375.4	3.49	4.00	3.25	YES	
L0002913	0	0.45090E-05	480741.4	3770273.2	375.4	3.49	4.00	3.25	YES	
L0002914	0	0.45090E-05	480741.4	3770264.6	375.4	3.49	4.00	3.25	YES	
L0002915	0	0.45090E-05	480741.4	3770256.0	375.4	3.49	4.00	3.25	YES	
L0002916	0	0.45090E-05	480741.4	3770247.4	375.4	3.49	4.00	3.25	YES	
L0002917	0	0.45090E-05	480741.4	3770238.8	375.4	3.49	4.00	3.25	YES	
L0002918	0	0.45090E-05	480741.4	3770230.2	375.4	3.49	4.00	3.25	YES	
L0002919	0	0.45090E-05	480741.4	3770221.6	375.4	3.49	4.00	3.25	YES	
L0002920	0	0.45090E-05	480741.4	3770213.0	375.4	3.49	4.00	3.25	YES	
L0002921	0	0.45090E-05	480741.4	3770204.5	375.4	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0002922	0	0.45090E-05	480741.4	3770195.9	375.4	3.49	4.00	3.25	YES	
L0002923	0	0.45090E-05	480741.4	3770187.3	375.4	3.49	4.00	3.25	YES	
L0002924	0	0.45090E-05	480741.4	3770178.7	375.4	3.49	4.00	3.25	YES	
L0002925	0	0.45090E-05	480741.4	3770170.1	375.4	3.49	4.00	3.25	YES	
L0002926	0	0.45090E-05	480741.4	3770161.5	375.4	3.49	4.00	3.25	YES	
L0002927	0	0.45090E-05	480741.4	3770152.9	375.4	3.49	4.00	3.25	YES	
L0002928	0	0.45090E-05	480741.4	3770144.3	375.4	3.49	4.00	3.25	YES	
L0002929	0	0.45090E-05	480741.4	3770135.7	375.4	3.49	4.00	3.25	YES	
L0002930	0	0.45090E-05	480741.4	3770127.1	375.4	3.49	4.00	3.25	YES	
L0002931	0	0.45090E-05	480741.4	3770118.6	375.4	3.49	4.00	3.25	YES	
L0002932	0	0.45090E-05	480741.4	3770110.0	375.4	3.49	4.00	3.25	YES	
L0002933	0	0.45090E-05	480741.4	3770101.4	375.4	3.49	4.00	3.25	YES	
L0002934	0	0.45090E-05	480741.4	3770092.8	375.4	3.49	4.00	3.25	YES	
L0002935	0	0.45090E-05	480741.4	3770084.2	375.4	3.49	4.00	3.25	YES	
L0002936	0	0.45090E-05	480741.4	3770075.6	375.4	3.49	4.00	3.25	YES	
L0002937	0	0.45090E-05	480741.4	3770067.0	375.4	3.49	4.00	3.25	YES	
L0002938	0	0.45090E-05	480741.4	3770058.4	375.4	3.49	4.00	3.25	YES	
L0002939	0	0.45090E-05	480741.4	3770049.8	375.4	3.49	4.00	3.25	YES	
L0002940	0	0.45090E-05	480741.4	3770041.2	375.4	3.49	4.00	3.25	YES	
L0002941	0	0.45090E-05	480741.4	3770032.7	375.4	3.49	4.00	3.25	YES	
L0002942	0	0.45090E-05	480741.4	3770024.1	375.4	3.49	4.00	3.25	YES	
L0002943	0	0.45090E-05	480741.4	3770015.5	375.4	3.49	4.00	3.25	YES	
L0002944	0	0.45090E-05	480741.4	3770006.9	375.4	3.49	4.00	3.25	YES	
L0002945	0	0.45090E-05	480741.4	3769998.3	375.4	3.49	4.00	3.25	YES	
L0002946	0	0.45090E-05	480741.4	3769989.7	375.4	3.49	4.00	3.25	YES	
L0002947	0	0.45090E-05	480741.4	3769981.1	375.4	3.49	4.00	3.25	YES	
L0002948	0	0.45090E-05	480741.4	3769972.5	375.4	3.49	4.00	3.25	YES	
L0002949	0	0.45090E-05	480741.4	3769963.9	375.4	3.49	4.00	3.25	YES	
L0002950	0	0.45090E-05	480741.4	3769955.3	375.4	3.49	4.00	3.25	YES	
L0002951	0	0.45090E-05	480741.4	3769946.8	375.4	3.49	4.00	3.25	YES	
L0002952	0	0.45090E-05	480741.4	3769938.2	375.4	3.49	4.00	3.25	YES	
L0002953	0	0.45090E-05	480741.4	3769929.6	375.4	3.49	4.00	3.25	YES	
L0002954	0	0.45090E-05	480741.4	3769921.0	375.4	3.49	4.00	3.25	YES	
L0002955	0	0.45090E-05	480741.4	3769912.4	375.4	3.49	4.00	3.25	YES	
L0002956	0	0.45090E-05	480741.4	3769903.8	375.4	3.49	4.00	3.25	YES	
L0002957	0	0.45090E-05	480741.4	3769895.2	375.6	3.49	4.00	3.25	YES	
L0002958	0	0.45090E-05	480741.4	3769886.6	375.8	3.49	4.00	3.25	YES	
L0002959	0	0.45090E-05	480741.4	3769878.0	376.0	3.49	4.00	3.25	YES	
L0002960	0	0.45090E-05	480741.4	3769869.4	376.1	3.49	4.00	3.25	YES	
L0002961	0	0.45090E-05	480741.4	3769860.9	376.2	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0002962	0	0.45090E-05	480741.4	3769852.3	376.3	3.49	4.00	3.25	YES	
L0002963	0	0.45090E-05	480741.4	3769843.7	376.5	3.49	4.00	3.25	YES	
L0002964	0	0.45090E-05	480741.4	3769835.1	377.0	3.49	4.00	3.25	YES	
L0002965	0	0.45090E-05	480741.4	3769826.5	377.4	3.49	4.00	3.25	YES	
L0002966	0	0.45090E-05	480741.4	3769817.9	377.9	3.49	4.00	3.25	YES	
L0002967	0	0.45090E-05	480741.4	3769809.3	378.0	3.49	4.00	3.25	YES	
L0002968	0	0.45090E-05	480741.4	3769800.7	378.0	3.49	4.00	3.25	YES	
L0002969	0	0.45090E-05	480741.4	3769792.1	378.0	3.49	4.00	3.25	YES	
L0002970	0	0.45090E-05	480741.4	3769783.5	378.0	3.49	4.00	3.25	YES	
L0002971	0	0.45090E-05	480741.4	3769775.0	378.0	3.49	4.00	3.25	YES	
L0002972	0	0.45090E-05	480741.4	3769766.4	378.0	3.49	4.00	3.25	YES	
L0002973	0	0.45090E-05	480741.4	3769757.8	378.0	3.49	4.00	3.25	YES	
L0002974	0	0.45090E-05	480741.4	3769749.2	378.0	3.49	4.00	3.25	YES	
L0002975	0	0.45090E-05	480741.4	3769740.6	378.0	3.49	4.00	3.25	YES	
L0002976	0	0.45090E-05	480741.4	3769732.0	378.0	3.49	4.00	3.25	YES	
L0002977	0	0.45090E-05	480741.4	3769723.4	378.0	3.49	4.00	3.25	YES	
L0002978	0	0.45090E-05	480741.4	3769714.8	378.0	3.49	4.00	3.25	YES	
L0002979	0	0.45090E-05	480741.4	3769706.2	378.0	3.49	4.00	3.25	YES	
L0002980	0	0.45090E-05	480741.4	3769697.6	378.0	3.49	4.00	3.25	YES	
L0002981	0	0.45090E-05	480741.4	3769689.1	378.0	3.49	4.00	3.25	YES	
L0002982	0	0.45090E-05	480741.4	3769680.5	378.0	3.49	4.00	3.25	YES	
L0002983	0	0.45090E-05	480741.4	3769671.9	378.0	3.49	4.00	3.25	YES	
L0002984	0	0.45090E-05	480741.4	3769663.3	378.0	3.49	4.00	3.25	YES	
L0002985	0	0.45090E-05	480741.4	3769654.7	378.0	3.49	4.00	3.25	YES	
L0002986	0	0.45090E-05	480741.4	3769646.1	378.0	3.49	4.00	3.25	YES	
L0002987	0	0.45090E-05	480741.4	3769637.5	378.0	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs
ALL	L0000001 , L0000002 , L0000003 , L0000004 , L0000005 , L0000006 , L0000007 , L0000008 ,
	L0000009 , L0000010 , L0000011 , L0000012 , L0000013 , L0000014 , L0000015 , L0000016 ,
	L0000017 , L0000018 , L0000019 , L0000020 , L0000021 , L0000022 , L0000023 , L0000024 ,
	L0000025 , L0000026 , L0000027 , L0000028 , L0000029 , L0000030 , L0000031 , L0000032 ,
	L0000033 , L0000034 , L0000035 , L0000036 , L0000037 , L0000038 , L0000039 , L0000040 ,
	L0000041 , L0000042 , L0000043 , L0000044 , L0000045 , L0000046 , L0000047 , L0000048 ,
	L0000049 , L0000050 , L0000051 , L0000052 , L0000053 , L0000054 , L0000055 , L0000056 ,
	L0000057 , L0000058 , L0000059 , L0000060 , L0000061 , L0000062 , L0000063 , L0000064 ,
	L0000065 , L0000066 , L0000067 , L0000068 , L0000069 , L0000070 , L0000071 , L0000072 ,
	L0000073 , L0000074 , L0000075 , L0000076 , L0000077 , L0000078 , L0000079 , L0000080 ,
	L0000081 , L0000082 , L0000083 , L0000084 , L0000085 , L0000086 , L0000087 , L0000088 ,
	L0000089 , L0000090 , L0000091 , L0000092 , L0000093 , L0000094 , L0000095 , L0000096 ,
	L0000097 , L0000195 , L0000196 , L0000197 , L0000198 , L0000199 , L0000200 , L0000201 ,
	L0000202 , L0000203 , L0000204 , L0000205 , L0000206 , L0000207 , L0000208 , L0000209 ,
	L0000210 , L0000211 , L0000212 , L0000213 , L0000214 , L0000215 , L0000216 , L0000217 ,
	L0000218 , L0000219 , L0000220 , L0000221 , L0000222 , L0000223 , L0000224 , L0000225 ,
	L0000226 , L0000227 , L0000228 , L0000229 , L0000230 , L0000231 , L0000232 , L0000233 ,
	L0000234 , L0000235 , L0000236 , L0000237 , L0000238 , L0000239 , L0000240 , L0000241 ,
	L0000242 , L0000243 , L0000244 , L0000245 , L0000246 , L0000247 , L0000248 , L0000249 ,
	L0000250 , L0000251 , L0000252 , L0000253 , L0000254 , L0000255 , L0000256 , L0000257 ,

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs
	L0000258 , L0000259 , L0000260 , L0000261 , L0000262 , L0000263 , L0000264 , L0000265 ,
	L0000266 , L0000267 , L0000268 , L0000269 , L0000270 , L0000271 , L0000272 , L0000273 ,
	L0000274 , L0000275 , L0000276 , L0000277 , L0000278 , L0000279 , L0000280 , L0000281 ,
	L0000282 , L0000283 , L0000284 , L0000285 , L0000286 , L0000287 , L0000288 , L0000289 ,
	L0000290 , L0000291 , L0000292 , L0000293 , L0000294 , L0000295 , L0000296 , L0000297 ,
	L0000298 , L0000299 , L0000300 , L0000301 , L0000302 , L0000303 , L0000304 , L0000305 ,
	L0000306 , L0000307 , L0000308 , L0000309 , L0000310 , L0000311 , L0000312 , L0000313 ,
	L0000314 , L0000315 , L0000316 , L0000317 , L0000318 , L0000319 , L0000320 , L0000321 ,
	L0000322 , L0000323 , L0000324 , L0000325 , L0000326 , L0000327 , L0000328 , L0000329 ,
	L0000330 , L0000331 , L0000332 , L0000333 , L0000334 , L0000335 , L0000336 , L0000337 ,
	L0000338 , L0000339 , L0000340 , L0000341 , L0000342 , L0000343 , L0000344 , L0000345 ,
	L0000346 , L0000347 , L0000348 , L0000349 , L0000350 , L0000351 , L0000352 , L0000353 ,
	L0000354 , L0000355 , L0000356 , L0000357 , L0000358 , L0000359 , L0000360 , L0000361 ,
	L0000362 , L0000363 , L0000364 , L0000365 , L0000366 , L0000367 , L0000368 , L0000369 ,
	L0000370 , L0000371 , L0000372 , L0000373 , L0000374 , L0000375 , L0000376 , L0000377 ,
	L0000378 , L0000379 , L0000380 , L0000381 , L0000382 , L0000383 , L0000384 , L0000385 ,
	L0000386 , L0000387 , L0000388 , L0000389 , L0000390 , L0000391 , L0000392 , L0000393 ,
	L0000394 , L0000395 , L0000396 , L0000397 , L0000398 , L0000399 , L0000400 , L0000401 ,
	L0000402 , L0000403 , L0000404 , L0000405 , L0000406 , L0000407 , L0000408 , L0000409 ,
	L0000410 , L0000411 , L0000412 , L0000413 , L0000414 , L0000415 , L0000416 , L0000417 ,

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs
	L0000418 , L0000419 , L0000420 , L0000421 , L0000422 , L0000423 , L0000424 , L0000425 ,
	L0000426 , L0000427 , L0000428 , L0000429 , L0000430 , L0000431 , L0000432 , L0000433 ,
	L0000434 , L0000435 , L0000436 , L0000437 , L0000438 , L0000439 , L0000440 , L0000441 ,
	L0000442 , L0000443 , L0000444 , L0000445 , L0000446 , L0000447 , L0000448 , L0000449 ,
	L0000450 , L0000451 , L0000452 , L0000453 , L0000454 , L0000455 , L0000456 , L0000457 ,
	L0000919 , L0000920 , L0000921 , L0000922 , L0000923 , L0000924 , L0000925 , L0000926 ,
	L0000927 , L0000928 , L0000929 , L0000930 , L0000931 , L0000932 , L0000933 , L0000934 ,
	L0000935 , L0000936 , L0000937 , L0000938 , L0000939 , L0000940 , L0000941 , L0000942 ,
	L0000943 , L0000944 , L0000945 , L0000946 , L0000947 , L0000948 , L0000949 , L0000950 ,
	L0000951 , L0000952 , L0000953 , L0000954 , L0000955 , L0000956 , L0000957 , L0000958 ,
	L0000959 , L0000960 , L0000961 , L0000962 , L0000963 , L0000964 , L0000965 , L0000966 ,
	L0000967 , L0000968 , L0000969 , L0000970 , L0000971 , L0000972 , L0000973 , L0000974 ,
	L0000975 , L0000976 , L0000977 , L0000978 , L0000979 , L0000980 , L0000981 , L0000982 ,
	L0000983 , L0000984 , L0000985 , L0000986 , L0000987 , L0000988 , L0000989 , L0000990 ,
	L0000991 , L0000992 , L0000993 , L0000994 , L0000995 , L0000996 , L0000997 , L0000998 ,
	L0000999 , L0001000 , L0001001 , L0001002 , L0001003 , L0001004 , L0001005 , L0001006 ,
	L0001007 , L0001008 , L0001009 , L0001010 , L0001011 , L0001012 , L0001013 , L0001014 ,
	L0001015 , L0001016 , L0001017 , L0001018 , L0001019 , L0001020 , L0001021 , L0001022 ,
	L0001023 , L0001024 , L0001025 , L0001026 , L0001027 , L0001028 , L0001029 , L0001030 ,
	L0001031 , L0001032 , L0001033 , L0001034 , L0001035 , L0001036 , L0001037 , L0001038 ,

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs
	L0001039 , L0001040 , L0001041 , L0001042 , L0001043 , L0001044 , L0001045 , L0001046 ,
	L0001047 , L0001048 , L0001049 , L0001050 , L0001051 , L0001052 , L0001053 , L0001054 ,
	L0001055 , L0001056 , L0001057 , L0001058 , L0001059 , L0001060 , L0001061 , L0001062 ,
	L0001063 , L0001064 , L0001065 , L0001066 , L0001067 , L0001068 , L0001069 , L0001070 ,
	L0001071 , L0001072 , L0001073 , L0001074 , L0001075 , L0001076 , L0001077 , L0001078 ,
	L0001079 , L0001080 , L0001081 , L0001082 , L0001083 , L0001084 , L0001085 , L0001086 ,
	L0001087 , L0001088 , L0001089 , L0001090 , L0001091 , L0001092 , L0001093 , L0001094 ,
	L0001095 , L0001096 , L0001097 , L0001098 , L0001099 , L0001100 , L0001101 , L0001102 ,
	L0001103 , L0001104 , L0001105 , L0001106 , L0001107 , L0001108 , L0001109 , L0001110 ,
	L0001111 , L0001112 , L0001113 , L0001114 , L0001115 , L0001116 , L0001117 , L0001118 ,
	L0001119 , L0001120 , L0001121 , L0001122 , L0001123 , L0001124 , L0001125 , L0001126 ,
	L0001127 , L0001128 , L0001129 , L0001130 , L0001131 , L0001132 , L0001133 , L0001134 ,
	L0001135 , L0001136 , L0001137 , L0001138 , L0001139 , L0001140 , L0001141 , L0001142 ,
	L0001143 , L0001144 , L0001145 , L0001146 , L0002287 , L0002288 , L0002289 , L0002290 ,
	L0002291 , L0002292 , L0002293 , L0002294 , L0002295 , L0002296 , L0002297 , L0002298 ,
	L0002299 , L0002300 , L0002301 , L0002302 , L0002303 , L0002304 , L0002305 , L0002306 ,
	L0002307 , L0002308 , L0002309 , L0002310 , L0002311 , L0002312 , L0002313 , L0002314 ,
	L0002315 , L0002316 , L0002317 , L0002318 , L0002319 , L0002320 , L0002321 , L0002322 ,
	L0002323 , L0002324 , L0002325 , L0002326 , L0002327 , L0002328 , L0002329 , L0002330 ,
	L0002331 , L0002332 , L0002333 , L0002334 , L0002335 , L0002336 , L0002337 , L0002338 ,

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs
	L0002339 , L0002340 , L0002341 , L0002342 , L0002343 , L0002344 , L0002345 , L0002346 ,
	L0002347 , L0002348 , L0002349 , L0002350 , L0002351 , L0002352 , L0002353 , L0002354 ,
	L0002355 , L0002356 , L0002357 , L0002358 , L0002359 , L0002360 , L0002361 , L0002362 ,
	L0002363 , L0002364 , L0002365 , L0002366 , L0002367 , L0002368 , L0002369 , L0002370 ,
	L0002371 , L0002372 , L0002373 , L0002374 , L0002375 , L0002376 , L0002377 , L0002378 ,
	L0002379 , L0002380 , L0002381 , L0002382 , L0002383 , L0002384 , L0002385 , L0002386 ,
	L0002387 , L0002388 , L0002389 , L0002390 , L0002391 , L0002392 , L0002393 , L0002394 ,
	L0002395 , L0002396 , L0002397 , L0002398 , L0002399 , L0002400 , L0002401 , L0002402 ,
	L0002403 , L0002404 , L0002405 , L0002406 , L0002407 , L0002408 , L0002409 , L0002410 ,
	L0002411 , L0002412 , L0002413 , L0002414 , L0002415 , L0002416 , L0002417 , L0002418 ,
	L0002419 , L0002420 , L0002421 , L0002422 , L0002423 , L0002424 , L0002425 , L0002426 ,
	L0002427 , L0002428 , L0002429 , L0002430 , L0002431 , L0002432 , L0002433 , L0002434 ,
	L0002435 , L0002436 , L0002437 , L0002438 , L0002439 , L0002440 , L0002441 , L0002442 ,
	L0002443 , L0002444 , L0002445 , L0002446 , L0002447 , L0002448 , L0002449 , L0002450 ,
	L0002451 , L0002452 , L0002453 , L0002454 , L0002455 , L0002456 , L0002457 , L0002458 ,
	L0002459 , L0002460 , L0002461 , L0002462 , L0002463 , L0002464 , L0002465 , L0002466 ,
	L0002467 , L0002468 , L0002469 , L0002470 , L0002471 , L0002472 , L0002473 , L0002474 ,
	L0002475 , L0002476 , L0002477 , L0002478 , L0002479 , L0002480 , L0002481 , L0002482 ,
	L0002483 , L0002484 , L0002485 , L0002486 , L0002487 , L0002488 , L0002489 , L0002490 ,
	L0002491 , L0002492 , L0002493 , L0002494 , L0002495 , L0002496 , L0002497 , L0002498 ,

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs
	L0002499 , L0002500 , L0002501 , L0002502 , L0002503 , L0002504 , L0002505 , L0002506 ,
	L0002507 , L0002508 , L0002509 , L0002510 , L0002511 , L0002512 , L0002513 , L0002514 ,
	L0002515 , L0002516 , L0002517 , L0002518 , L0002519 , L0002520 , L0002521 , L0002522 ,
	L0002523 , L0002524 , L0002525 , L0002526 , L0002527 , L0002528 , L0002529 , L0002530 ,
	L0002531 , L0002532 , L0002533 , L0002534 , L0002535 , L0002536 , L0002537 , L0002538 ,
	L0002539 , L0002540 , L0002541 , L0002542 , L0002543 , L0002544 , L0002545 , L0002546 ,
	L0002547 , L0002548 , L0002549 , L0002550 , L0002551 , L0002552 , L0002553 , L0002554 ,
	L0002555 , L0002556 , L0002557 , L0002558 , L0002559 , L0002560 , L0002561 , L0002562 ,
	L0002563 , L0002564 , L0002565 , L0002566 , L0002567 , L0002568 , L0002569 , L0002570 ,
	L0002571 , L0002572 , L0002573 , L0002574 , L0002575 , L0002576 , L0002577 , L0002578 ,
	L0002579 , L0002580 , L0002581 , L0002582 , L0002583 , L0002584 , L0002585 , L0002586 ,
	L0002587 , L0002588 , L0002589 , L0002590 , L0002591 , L0002592 , L0002593 , L0002594 ,
	L0002595 , L0002596 , L0002597 , L0002598 , L0002599 , L0002600 , L0002601 , L0002602 ,
	L0002603 , L0002604 , L0002605 , L0002606 , L0002607 , L0002608 , L0002609 , L0002610 ,
	L0002611 , L0002612 , L0002613 , L0002614 , L0002615 , L0002616 , L0002617 , L0002618 ,
	L0002619 , L0002620 , L0002621 , L0002622 , L0002623 , L0002624 , L0002625 , L0002626 ,
	L0002627 , L0002628 , L0002629 , L0002630 , L0002631 , L0002632 , L0002633 , L0002634 ,
	L0002635 , L0002636 , L0002637 , L0002638 , L0002639 , L0002640 , L0002641 , L0002642 ,
	L0002643 , L0002644 , L0002645 , L0002646 , L0002647 , L0002648 , L0002649 , L0002650 ,
	L0002651 , L0002652 , L0002653 , L0002654 , L0002655 , L0002656 , L0002657 , L0002658 ,

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs
	L0002659 , L0002660 , L0002661 , L0002662 , L0002663 , L0002664 , L0002665 , L0002666 ,
	L0002667 , L0002668 , L0002669 , L0002670 , L0002671 , L0002672 , L0002673 , L0002857 ,
	L0002858 , L0002859 , L0002860 , L0002861 , L0002862 , L0002863 , L0002864 , L0002865 ,
	L0002866 , L0002867 , L0002868 , L0002869 , L0002870 , L0002871 , L0002872 , L0002873 ,
	L0002874 , L0002875 , L0002876 , L0002877 , L0002878 , L0002879 , L0002880 , L0002881 ,
	L0002882 , L0002883 , L0002884 , L0002885 , L0002886 , L0002887 , L0002888 , L0002889 ,
	L0002890 , L0002891 , L0002892 , L0002893 , L0002894 , L0002895 , L0002896 , L0002897 ,
	L0002898 , L0002899 , L0002900 , L0002901 , L0002902 , L0002903 , L0002904 , L0002905 ,
	L0002906 , L0002907 , L0002908 , L0002909 , L0002910 , L0002911 , L0002912 , L0002913 ,
	L0002914 , L0002915 , L0002916 , L0002917 , L0002918 , L0002919 , L0002920 , L0002921 ,
	L0002922 , L0002923 , L0002924 , L0002925 , L0002926 , L0002927 , L0002928 , L0002929 ,
	L0002930 , L0002931 , L0002932 , L0002933 , L0002934 , L0002935 , L0002936 , L0002937 ,
	L0002938 , L0002939 , L0002940 , L0002941 , L0002942 , L0002943 , L0002944 , L0002945 ,
	L0002946 , L0002947 , L0002948 , L0002949 , L0002950 , L0002951 , L0002952 , L0002953 ,
	L0002954 , L0002955 , L0002956 , L0002957 , L0002958 , L0002959 , L0002960 , L0002961 ,
	L0002962 , L0002963 , L0002964 , L0002965 , L0002966 , L0002967 , L0002968 , L0002969 ,
	L0002970 , L0002971 , L0002972 , L0002973 , L0002974 , L0002975 , L0002976 , L0002977 ,
	L0002978 , L0002979 , L0002980 , L0002981 , L0002982 , L0002983 , L0002984 , L0002985 ,
	L0002986 , L0002987 ,

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** SOURCE IDs DEFINED AS URBAN SOURCES ***

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 URBAN ID   URBAN POP                                  SOURCE IDs
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             2035210.   L0000001    , L0000002    , L0000003    , L0000004    , L0000005    , L0000006    , L0000007    ,
L0000008    ,

            L0000009    , L0000010    , L0000011    , L0000012    , L0000013    , L0000014    , L0000015    , L0000016    ,

            L0000017    , L0000018    , L0000019    , L0000020    , L0000021    , L0000022    , L0000023    , L0000024    ,

            L0000025    , L0000026    , L0000027    , L0000028    , L0000029    , L0000030    , L0000031    , L0000032    ,

            L0000033    , L0000034    , L0000035    , L0000036    , L0000037    , L0000038    , L0000039    , L0000040    ,

            L0000041    , L0000042    , L0000043    , L0000044    , L0000045    , L0000046    , L0000047    , L0000048    ,

            L0000049    , L0000050    , L0000051    , L0000052    , L0000053    , L0000054    , L0000055    , L0000056    ,

            L0000057    , L0000058    , L0000059    , L0000060    , L0000061    , L0000062    , L0000063    , L0000064    ,

            L0000065    , L0000066    , L0000067    , L0000068    , L0000069    , L0000070    , L0000071    , L0000072    ,

            L0000073    , L0000074    , L0000075    , L0000076    , L0000077    , L0000078    , L0000079    , L0000080    ,

            L0000081    , L0000082    , L0000083    , L0000084    , L0000085    , L0000086    , L0000087    , L0000088    ,

            L0000089    , L0000090    , L0000091    , L0000092    , L0000093    , L0000094    , L0000095    , L0000096    ,

            L0000097    , L0000195    , L0000196    , L0000197    , L0000198    , L0000199    , L0000200    , L0000201    ,

            L0000202    , L0000203    , L0000204    , L0000205    , L0000206    , L0000207    , L0000208    , L0000209    ,

            L0000210    , L0000211    , L0000212    , L0000213    , L0000214    , L0000215    , L0000216    , L0000217    ,

            L0000218    , L0000219    , L0000220    , L0000221    , L0000222    , L0000223    , L0000224    , L0000225    ,

            L0000226    , L0000227    , L0000228    , L0000229    , L0000230    , L0000231    , L0000232    , L0000233    ,

            L0000234    , L0000235    , L0000236    , L0000237    , L0000238    , L0000239    , L0000240    , L0000241    ,

            L0000242    , L0000243    , L0000244    , L0000245    , L0000246    , L0000247    , L0000248    , L0000249    ,

            L0000250    , L0000251    , L0000252    , L0000253    , L0000254    , L0000255    , L0000256    , L0000257    ,
```

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** SOURCE IDs DEFINED AS URBAN SOURCES ***

URBAN ID	URBAN POP	SOURCE IDs
		L0000258 , L0000259 , L0000260 , L0000261 , L0000262 , L0000263 , L0000264 , L0000265 ,
		L0000266 , L0000267 , L0000268 , L0000269 , L0000270 , L0000271 , L0000272 , L0000273 ,
		L0000274 , L0000275 , L0000276 , L0000277 , L0000278 , L0000279 , L0000280 , L0000281 ,
		L0000282 , L0000283 , L0000284 , L0000285 , L0000286 , L0000287 , L0000288 , L0000289 ,
		L0000290 , L0000291 , L0000292 , L0000293 , L0000294 , L0000295 , L0000296 , L0000297 ,
		L0000298 , L0000299 , L0000300 , L0000301 , L0000302 , L0000303 , L0000304 , L0000305 ,
		L0000306 , L0000307 , L0000308 , L0000309 , L0000310 , L0000311 , L0000312 , L0000313 ,
		L0000314 , L0000315 , L0000316 , L0000317 , L0000318 , L0000319 , L0000320 , L0000321 ,
		L0000322 , L0000323 , L0000324 , L0000325 , L0000326 , L0000327 , L0000328 , L0000329 ,
		L0000330 , L0000331 , L0000332 , L0000333 , L0000334 , L0000335 , L0000336 , L0000337 ,
		L0000338 , L0000339 , L0000340 , L0000341 , L0000342 , L0000343 , L0000344 , L0000345 ,
		L0000346 , L0000347 , L0000348 , L0000349 , L0000350 , L0000351 , L0000352 , L0000353 ,
		L0000354 , L0000355 , L0000356 , L0000357 , L0000358 , L0000359 , L0000360 , L0000361 ,
		L0000362 , L0000363 , L0000364 , L0000365 , L0000366 , L0000367 , L0000368 , L0000369 ,
		L0000370 , L0000371 , L0000372 , L0000373 , L0000374 , L0000375 , L0000376 , L0000377 ,
		L0000378 , L0000379 , L0000380 , L0000381 , L0000382 , L0000383 , L0000384 , L0000385 ,
		L0000386 , L0000387 , L0000388 , L0000389 , L0000390 , L0000391 , L0000392 , L0000393 ,
		L0000394 , L0000395 , L0000396 , L0000397 , L0000398 , L0000399 , L0000400 , L0000401 ,
		L0000402 , L0000403 , L0000404 , L0000405 , L0000406 , L0000407 , L0000408 , L0000409 ,
		L0000410 , L0000411 , L0000412 , L0000413 , L0000414 , L0000415 , L0000416 , L0000417 ,

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** SOURCE IDs DEFINED AS URBAN SOURCES ***

URBAN ID	URBAN POP	SOURCE IDs
		L0000418 , L0000419 , L0000420 , L0000421 , L0000422 , L0000423 , L0000424 , L0000425 ,
		L0000426 , L0000427 , L0000428 , L0000429 , L0000430 , L0000431 , L0000432 , L0000433 ,
		L0000434 , L0000435 , L0000436 , L0000437 , L0000438 , L0000439 , L0000440 , L0000441 ,
		L0000442 , L0000443 , L0000444 , L0000445 , L0000446 , L0000447 , L0000448 , L0000449 ,
		L0000450 , L0000451 , L0000452 , L0000453 , L0000454 , L0000455 , L0000456 , L0000457 ,
		L0000919 , L0000920 , L0000921 , L0000922 , L0000923 , L0000924 , L0000925 , L0000926 ,
		L0000927 , L0000928 , L0000929 , L0000930 , L0000931 , L0000932 , L0000933 , L0000934 ,
		L0000935 , L0000936 , L0000937 , L0000938 , L0000939 , L0000940 , L0000941 , L0000942 ,
		L0000943 , L0000944 , L0000945 , L0000946 , L0000947 , L0000948 , L0000949 , L0000950 ,
		L0000951 , L0000952 , L0000953 , L0000954 , L0000955 , L0000956 , L0000957 , L0000958 ,
		L0000959 , L0000960 , L0000961 , L0000962 , L0000963 , L0000964 , L0000965 , L0000966 ,
		L0000967 , L0000968 , L0000969 , L0000970 , L0000971 , L0000972 , L0000973 , L0000974 ,
		L0000975 , L0000976 , L0000977 , L0000978 , L0000979 , L0000980 , L0000981 , L0000982 ,
		L0000983 , L0000984 , L0000985 , L0000986 , L0000987 , L0000988 , L0000989 , L0000990 ,
		L0000991 , L0000992 , L0000993 , L0000994 , L0000995 , L0000996 , L0000997 , L0000998 ,
		L0000999 , L0001000 , L0001001 , L0001002 , L0001003 , L0001004 , L0001005 , L0001006 ,
		L0001007 , L0001008 , L0001009 , L0001010 , L0001011 , L0001012 , L0001013 , L0001014 ,
		L0001015 , L0001016 , L0001017 , L0001018 , L0001019 , L0001020 , L0001021 , L0001022 ,
		L0001023 , L0001024 , L0001025 , L0001026 , L0001027 , L0001028 , L0001029 , L0001030 ,
		L0001031 , L0001032 , L0001033 , L0001034 , L0001035 , L0001036 , L0001037 , L0001038 ,

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** SOURCE IDs DEFINED AS URBAN SOURCES ***

URBAN ID	URBAN POP	SOURCE IDs
		L0001039 , L0001040 , L0001041 , L0001042 , L0001043 , L0001044 , L0001045 , L0001046 ,
		L0001047 , L0001048 , L0001049 , L0001050 , L0001051 , L0001052 , L0001053 , L0001054 ,
		L0001055 , L0001056 , L0001057 , L0001058 , L0001059 , L0001060 , L0001061 , L0001062 ,
		L0001063 , L0001064 , L0001065 , L0001066 , L0001067 , L0001068 , L0001069 , L0001070 ,
		L0001071 , L0001072 , L0001073 , L0001074 , L0001075 , L0001076 , L0001077 , L0001078 ,
		L0001079 , L0001080 , L0001081 , L0001082 , L0001083 , L0001084 , L0001085 , L0001086 ,
		L0001087 , L0001088 , L0001089 , L0001090 , L0001091 , L0001092 , L0001093 , L0001094 ,
		L0001095 , L0001096 , L0001097 , L0001098 , L0001099 , L0001100 , L0001101 , L0001102 ,
		L0001103 , L0001104 , L0001105 , L0001106 , L0001107 , L0001108 , L0001109 , L0001110 ,
		L0001111 , L0001112 , L0001113 , L0001114 , L0001115 , L0001116 , L0001117 , L0001118 ,
		L0001119 , L0001120 , L0001121 , L0001122 , L0001123 , L0001124 , L0001125 , L0001126 ,
		L0001127 , L0001128 , L0001129 , L0001130 , L0001131 , L0001132 , L0001133 , L0001134 ,
		L0001135 , L0001136 , L0001137 , L0001138 , L0001139 , L0001140 , L0001141 , L0001142 ,
		L0001143 , L0001144 , L0001145 , L0001146 , L0002287 , L0002288 , L0002289 , L0002290 ,
		L0002291 , L0002292 , L0002293 , L0002294 , L0002295 , L0002296 , L0002297 , L0002298 ,
		L0002299 , L0002300 , L0002301 , L0002302 , L0002303 , L0002304 , L0002305 , L0002306 ,
		L0002307 , L0002308 , L0002309 , L0002310 , L0002311 , L0002312 , L0002313 , L0002314 ,
		L0002315 , L0002316 , L0002317 , L0002318 , L0002319 , L0002320 , L0002321 , L0002322 ,
		L0002323 , L0002324 , L0002325 , L0002326 , L0002327 , L0002328 , L0002329 , L0002330 ,
		L0002331 , L0002332 , L0002333 , L0002334 , L0002335 , L0002336 , L0002337 , L0002338 ,

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** SOURCE IDs DEFINED AS URBAN SOURCES ***

URBAN ID	URBAN POP	SOURCE IDs
		L0002339 , L0002340 , L0002341 , L0002342 , L0002343 , L0002344 , L0002345 , L0002346 ,
		L0002347 , L0002348 , L0002349 , L0002350 , L0002351 , L0002352 , L0002353 , L0002354 ,
		L0002355 , L0002356 , L0002357 , L0002358 , L0002359 , L0002360 , L0002361 , L0002362 ,
		L0002363 , L0002364 , L0002365 , L0002366 , L0002367 , L0002368 , L0002369 , L0002370 ,
		L0002371 , L0002372 , L0002373 , L0002374 , L0002375 , L0002376 , L0002377 , L0002378 ,
		L0002379 , L0002380 , L0002381 , L0002382 , L0002383 , L0002384 , L0002385 , L0002386 ,
		L0002387 , L0002388 , L0002389 , L0002390 , L0002391 , L0002392 , L0002393 , L0002394 ,
		L0002395 , L0002396 , L0002397 , L0002398 , L0002399 , L0002400 , L0002401 , L0002402 ,
		L0002403 , L0002404 , L0002405 , L0002406 , L0002407 , L0002408 , L0002409 , L0002410 ,
		L0002411 , L0002412 , L0002413 , L0002414 , L0002415 , L0002416 , L0002417 , L0002418 ,
		L0002419 , L0002420 , L0002421 , L0002422 , L0002423 , L0002424 , L0002425 , L0002426 ,
		L0002427 , L0002428 , L0002429 , L0002430 , L0002431 , L0002432 , L0002433 , L0002434 ,
		L0002435 , L0002436 , L0002437 , L0002438 , L0002439 , L0002440 , L0002441 , L0002442 ,
		L0002443 , L0002444 , L0002445 , L0002446 , L0002447 , L0002448 , L0002449 , L0002450 ,
		L0002451 , L0002452 , L0002453 , L0002454 , L0002455 , L0002456 , L0002457 , L0002458 ,
		L0002459 , L0002460 , L0002461 , L0002462 , L0002463 , L0002464 , L0002465 , L0002466 ,
		L0002467 , L0002468 , L0002469 , L0002470 , L0002471 , L0002472 , L0002473 , L0002474 ,
		L0002475 , L0002476 , L0002477 , L0002478 , L0002479 , L0002480 , L0002481 , L0002482 ,
		L0002483 , L0002484 , L0002485 , L0002486 , L0002487 , L0002488 , L0002489 , L0002490 ,
		L0002491 , L0002492 , L0002493 , L0002494 , L0002495 , L0002496 , L0002497 , L0002498 ,

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** SOURCE IDs DEFINED AS URBAN SOURCES ***

URBAN ID	URBAN POP	SOURCE IDs
		L0002499 , L0002500 , L0002501 , L0002502 , L0002503 , L0002504 , L0002505 , L0002506 ,
		L0002507 , L0002508 , L0002509 , L0002510 , L0002511 , L0002512 , L0002513 , L0002514 ,
		L0002515 , L0002516 , L0002517 , L0002518 , L0002519 , L0002520 , L0002521 , L0002522 ,
		L0002523 , L0002524 , L0002525 , L0002526 , L0002527 , L0002528 , L0002529 , L0002530 ,
		L0002531 , L0002532 , L0002533 , L0002534 , L0002535 , L0002536 , L0002537 , L0002538 ,
		L0002539 , L0002540 , L0002541 , L0002542 , L0002543 , L0002544 , L0002545 , L0002546 ,
		L0002547 , L0002548 , L0002549 , L0002550 , L0002551 , L0002552 , L0002553 , L0002554 ,
		L0002555 , L0002556 , L0002557 , L0002558 , L0002559 , L0002560 , L0002561 , L0002562 ,
		L0002563 , L0002564 , L0002565 , L0002566 , L0002567 , L0002568 , L0002569 , L0002570 ,
		L0002571 , L0002572 , L0002573 , L0002574 , L0002575 , L0002576 , L0002577 , L0002578 ,
		L0002579 , L0002580 , L0002581 , L0002582 , L0002583 , L0002584 , L0002585 , L0002586 ,
		L0002587 , L0002588 , L0002589 , L0002590 , L0002591 , L0002592 , L0002593 , L0002594 ,
		L0002595 , L0002596 , L0002597 , L0002598 , L0002599 , L0002600 , L0002601 , L0002602 ,
		L0002603 , L0002604 , L0002605 , L0002606 , L0002607 , L0002608 , L0002609 , L0002610 ,
		L0002611 , L0002612 , L0002613 , L0002614 , L0002615 , L0002616 , L0002617 , L0002618 ,
		L0002619 , L0002620 , L0002621 , L0002622 , L0002623 , L0002624 , L0002625 , L0002626 ,
		L0002627 , L0002628 , L0002629 , L0002630 , L0002631 , L0002632 , L0002633 , L0002634 ,
		L0002635 , L0002636 , L0002637 , L0002638 , L0002639 , L0002640 , L0002641 , L0002642 ,
		L0002643 , L0002644 , L0002645 , L0002646 , L0002647 , L0002648 , L0002649 , L0002650 ,
		L0002651 , L0002652 , L0002653 , L0002654 , L0002655 , L0002656 , L0002657 , L0002658 ,

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** SOURCE IDs DEFINED AS URBAN SOURCES ***

URBAN ID	URBAN POP	SOURCE IDs
		L0002659 , L0002660 , L0002661 , L0002662 , L0002663 , L0002664 , L0002665 , L0002666 ,
		L0002667 , L0002668 , L0002669 , L0002670 , L0002671 , L0002672 , L0002673 , L0002857 ,
		L0002858 , L0002859 , L0002860 , L0002861 , L0002862 , L0002863 , L0002864 , L0002865 ,
		L0002866 , L0002867 , L0002868 , L0002869 , L0002870 , L0002871 , L0002872 , L0002873 ,
		L0002874 , L0002875 , L0002876 , L0002877 , L0002878 , L0002879 , L0002880 , L0002881 ,
		L0002882 , L0002883 , L0002884 , L0002885 , L0002886 , L0002887 , L0002888 , L0002889 ,
		L0002890 , L0002891 , L0002892 , L0002893 , L0002894 , L0002895 , L0002896 , L0002897 ,
		L0002898 , L0002899 , L0002900 , L0002901 , L0002902 , L0002903 , L0002904 , L0002905 ,
		L0002906 , L0002907 , L0002908 , L0002909 , L0002910 , L0002911 , L0002912 , L0002913 ,
		L0002914 , L0002915 , L0002916 , L0002917 , L0002918 , L0002919 , L0002920 , L0002921 ,
		L0002922 , L0002923 , L0002924 , L0002925 , L0002926 , L0002927 , L0002928 , L0002929 ,
		L0002930 , L0002931 , L0002932 , L0002933 , L0002934 , L0002935 , L0002936 , L0002937 ,
		L0002938 , L0002939 , L0002940 , L0002941 , L0002942 , L0002943 , L0002944 , L0002945 ,
		L0002946 , L0002947 , L0002948 , L0002949 , L0002950 , L0002951 , L0002952 , L0002953 ,
		L0002954 , L0002955 , L0002956 , L0002957 , L0002958 , L0002959 , L0002960 , L0002961 ,
		L0002962 , L0002963 , L0002964 , L0002965 , L0002966 , L0002967 , L0002968 , L0002969 ,
		L0002970 , L0002971 , L0002972 , L0002973 , L0002974 , L0002975 , L0002976 , L0002977 ,
		L0002978 , L0002979 , L0002980 , L0002981 , L0002982 , L0002983 , L0002984 , L0002985 ,
		L0002986 , L0002987 ,

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** GRIDDED RECEPTOR NETWORK SUMMARY ***

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

*** X-COORDINATES OF GRID ***
(METERS)

478868.2, 478968.2, 479068.2, 479168.2, 479268.2, 479368.2, 479468.2, 479568.2, 479668.2, 479768.2,
479868.2, 479968.2, 480068.2, 480168.2, 480268.2, 480368.2, 480468.2, 480568.2, 480668.2, 480768.2,
480868.2, 480968.2, 481068.2, 481168.2, 481268.2, 481368.2, 481468.2, 481568.2, 481668.2, 481768.2,

*** Y-COORDINATES OF GRID ***
(METERS)

3769389.7, 3769489.7, 3769589.7, 3769689.7, 3769789.7, 3769889.7, 3769989.7, 3770089.7, 3770189.7, 3770289.7,
3770389.7, 3770489.7, 3770589.7, 3770689.7, 3770789.7, 3770889.7, 3770989.7, 3771089.7, 3771189.7, 3771289.7,
3771389.7, 3771489.7, 3771589.7, 3771689.7, 3771789.7, 3771889.7, 3771989.7, 3772089.7, 3772189.7, 3772289.7,
3772389.7, 3772489.7, 3772589.7, 3772689.7, 3772789.7, 3772889.7, 3772989.7, 3773089.7, 3773189.7, 3773289.7,
3773389.7, 3773489.7, 3773589.7, 3773689.7, 3773789.7, 3773889.7, 3773989.7, 3774089.7, 3774189.7, 3774289.7,

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

* ELEVATION HEIGHTS IN METERS *

Y-COORD (METERS)	X-COORD (METERS)								
	478868.21	478968.21	479068.21	479168.21	479268.21	479368.21	479468.21	479568.21	479668.21
3774289.70	346.00	347.30	348.00	349.00	350.00	350.60	351.00	352.00	353.00
3774189.70	346.00	347.00	348.00	348.70	349.30	350.00	351.00	352.00	352.90
3774089.70	346.00	347.00	347.60	348.00	349.00	350.00	351.00	352.00	352.30
3773989.70	345.90	346.30	347.00	347.10	348.30	350.00	350.90	351.40	352.00
3773889.70	345.90	346.30	347.00	348.00	349.00	350.00	350.90	352.00	352.00
3773789.70	345.00	346.30	347.00	348.00	349.00	350.00	350.90	352.00	352.60
3773689.70	345.00	346.30	347.60	348.00	349.00	350.00	350.00	351.40	352.60
3773589.70	345.00	346.00	347.00	348.00	349.00	349.60	350.00	351.30	352.60
3773489.70	345.00	346.00	347.00	347.90	348.30	349.30	350.00	351.00	352.00
3773389.70	344.90	346.00	347.00	347.90	348.30	349.00	350.00	351.00	352.00
3773289.70	344.90	346.00	347.00	347.90	348.00	349.00	350.00	351.00	351.60
3773189.70	344.00	346.00	346.60	347.90	348.00	349.00	349.90	350.10	351.00
3773089.70	344.00	345.30	346.10	347.00	348.00	348.10	349.00	350.00	351.00
3772989.70	344.00	345.00	346.00	346.70	347.00	347.90	348.00	349.30	350.00
3772889.70	343.90	344.60	345.60	346.00	346.60	347.00	347.90	349.00	350.00
3772789.70	343.00	344.00	345.00	346.00	346.00	347.00	347.00	348.00	349.70
3772689.70	342.80	343.80	344.50	345.00	346.00	347.00	347.20	348.00	349.60
3772589.70	342.00	342.10	343.80	345.00	346.00	346.80	347.90	348.30	349.60
3772489.70	341.00	342.00	343.00	344.00	345.30	346.60	347.90	348.00	349.60
3772389.70	340.90	341.30	342.60	344.00	345.00	346.00	347.00	347.80	349.60
3772289.70	340.90	341.30	342.60	344.00	345.30	346.00	346.90	347.30	349.60
3772189.70	340.90	341.30	343.50	345.00	346.00	347.00	347.00	347.90	350.50
3772089.70	340.90	341.50	344.80	347.00	347.20	348.80	351.60	354.00	354.00
3771989.70	342.60	346.50	347.80	348.00	349.80	353.40	354.00	355.00	355.30
3771889.70	348.00	348.00	349.00	350.00	351.30	353.00	354.80	355.90	356.50
3771789.70	348.00	349.10	350.00	351.00	353.00	354.00	354.90	356.00	357.10
3771689.70	348.90	350.00	350.60	352.00	353.20	354.00	355.00	356.20	357.60
3771589.70	348.90	350.00	351.00	352.00	353.30	354.60	355.90	356.90	358.00
3771489.70	348.90	350.00	351.00	352.20	354.00	355.00	356.00	357.00	358.00
3771389.70	349.00	350.00	351.60	352.90	354.00	355.00	356.00	357.30	358.60
3771289.70	349.00	350.00	351.60	352.90	354.00	355.00	356.00	357.30	359.00
3771189.70	349.00	350.30	351.60	352.90	354.00	355.00	356.00	358.00	359.00
3771089.70	349.00	350.30	351.60	352.90	354.00	355.00	356.90	358.00	359.00
3770989.70	349.90	350.30	352.00	352.90	354.00	355.60	356.90	358.00	359.00
3770889.70	350.00	351.00	352.00	353.00	354.10	355.60	357.00	358.00	359.60
3770789.70	350.00	351.00	352.00	353.00	354.30	356.00	357.00	358.20	359.60
3770689.70	350.00	351.00	352.00	353.90	355.00	356.00	357.00	358.30	359.60
3770589.70	350.00	351.30	352.70	354.00	355.00	356.00	357.00	358.30	360.00
3770489.70	350.00	352.00	353.00	354.00	355.20	356.00	357.00	358.30	359.80
3770389.70	350.00	352.00	353.50	354.00	355.30	356.00	357.00	358.30	359.60

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

* ELEVATION HEIGHTS IN METERS *

Y-COORD (METERS)	X-COORD (METERS)								
	478868.21	478968.21	479068.21	479168.21	479268.21	479368.21	479468.21	479568.21	479668.21
3770289.70	350.00	352.00	353.00	354.00	355.00	356.00	357.00	358.30	359.60
3770189.70	350.90	352.00	352.60	353.90	355.00	356.00	357.00	358.30	359.60
3770089.70	350.90	351.90	352.60	353.90	355.00	356.00	357.90	358.90	360.00
3769989.70	350.90	352.00	352.60	353.90	355.00	356.60	357.90	359.00	360.00
3769889.70	351.00	352.00	353.00	354.00	355.30	356.80	358.00	359.00	360.60
3769789.70	351.00	352.00	353.00	354.90	356.00	357.00	358.00	359.00	360.60
3769689.70	352.20	353.00	353.00	355.90	358.10	358.70	359.00	359.30	361.60
3769589.70	353.60	354.20	357.90	359.50	360.00	360.00	360.00	360.20	365.00
3769489.70	350.20	353.00	354.10	358.00	358.10	359.00	359.00	359.90	363.40
3769389.70	349.90	352.00	353.00	354.90	356.20	357.50	358.00	359.00	360.00

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

* ELEVATION HEIGHTS IN METERS *

Y-COORD (METERS)	X-COORD (METERS)								
	479768.21	479868.21	479968.21	480068.21	480168.21	480268.21	480368.21	480468.21	480568.21
3774289.70	353.80	354.00	355.10	356.10	357.30	358.00	359.80	360.00	361.60
3774189.70	353.00	354.00	354.60	356.00	357.00	358.00	359.00	360.00	361.60
3774089.70	353.00	354.00	355.00	356.00	357.00	358.00	359.00	360.20	361.60
3773989.70	353.00	354.00	355.00	356.00	357.00	358.00	359.00	360.30	362.00
3773889.70	353.00	354.00	355.00	356.00	357.00	358.00	359.00	360.30	362.00
3773789.70	353.00	354.00	355.00	356.00	357.00	358.00	359.00	360.00	362.00
3773689.70	353.90	354.00	355.00	356.00	357.00	358.00	359.00	360.00	362.00
3773589.70	353.70	354.00	355.00	356.00	357.00	358.00	359.00	360.00	360.90
3773489.70	353.00	354.00	355.00	355.90	356.30	357.60	358.40	359.00	360.00
3773389.70	352.90	354.00	354.60	355.10	356.00	357.00	358.00	359.00	359.10
3773289.70	352.00	353.30	354.00	355.00	356.00	356.90	357.90	358.30	359.00
3773189.70	352.00	353.00	354.00	355.00	355.60	356.60	357.40	358.70	359.80
3773089.70	352.00	352.40	353.10	354.00	355.00	356.00	357.00	358.40	359.50
3772989.70	351.00	352.00	353.00	353.00	354.30	355.90	356.90	358.00	359.00
3772889.70	351.00	352.00	352.30	353.00	354.30	356.00	356.90	358.00	359.00
3772789.70	350.90	352.00	352.60	353.80	354.30	356.00	356.90	358.00	359.60
3772689.70	350.90	351.40	352.60	353.90	354.30	356.00	356.90	358.00	359.60
3772589.70	350.40	351.30	352.30	353.40	354.00	355.60	356.90	358.00	359.00
3772489.70	350.00	351.30	352.00	353.00	354.00	355.60	356.90	358.00	358.60
3772389.70	351.00	352.00	352.00	353.00	354.00	355.60	357.00	358.40	359.10
3772289.70	351.90	354.00	353.00	353.00	354.20	356.80	358.00	359.20	360.80
3772189.70	352.00	354.20	353.00	354.80	359.80	359.90	359.90	359.00	361.60
3772089.70	354.20	356.90	359.20	360.20	361.20	362.80	365.20	365.80	366.00
3771989.70	356.50	359.30	359.60	361.00	362.70	364.30	366.00	367.00	367.60
3771889.70	358.00	360.00	360.50	362.00	363.30	365.00	366.80	367.90	368.50
3771789.70	358.90	360.00	361.00	362.20	364.00	365.60	367.00	368.00	369.10
3771689.70	359.00	360.20	361.60	362.90	364.00	365.60	367.00	368.30	369.80
3771589.70	359.00	360.30	362.00	363.00	364.30	366.00	367.00	368.90	370.00
3771489.70	359.90	361.00	362.00	363.00	364.30	366.00	367.00	369.00	370.60
3771389.70	360.00	361.00	362.00	363.50	364.70	366.00	367.90	369.30	370.60
3771289.70	360.00	361.30	362.60	363.90	365.00	366.50	367.90	369.30	371.00
3771189.70	360.00	361.40	362.60	364.00	365.30	366.60	368.00	369.40	371.00
3771089.70	360.00	362.00	363.00	364.00	365.30	367.00	368.00	370.00	371.00
3770989.70	360.90	362.00	363.00	364.00	366.00	367.00	368.00	370.00	371.00
3770889.70	360.90	362.00	363.60	364.90	366.00	367.60	368.90	370.00	371.00
3770789.70	360.90	362.00	363.60	365.00	366.30	367.60	368.90	370.00	371.60
3770689.70	361.00	362.00	363.60	365.00	366.30	367.60	368.90	370.30	372.00
3770589.70	361.00	362.00	363.60	364.90	366.00	367.60	368.90	370.00	371.60
3770489.70	361.00	362.00	363.60	364.90	366.00	367.60	369.00	370.30	372.00
3770389.70	360.90	362.00	363.60	364.90	366.00	367.60	369.00	370.30	372.00

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

* ELEVATION HEIGHTS IN METERS *

Y-COORD (METERS)	X-COORD (METERS)								
	479768.21	479868.21	479968.21	480068.21	480168.21	480268.21	480368.21	480468.21	480568.21
3770289.70	360.90	362.30	364.00	365.00	366.30	368.00	369.00	371.00	372.00
3770189.70	360.90	362.30	364.00	365.90	367.00	368.00	369.50	371.00	372.60
3770089.70	361.00	363.00	364.60	366.00	367.00	368.00	369.90	371.00	372.60
3769989.70	361.90	363.00	364.60	366.00	367.30	368.10	369.90	371.00	372.00
3769889.70	362.00	363.30	364.60	366.00	367.30	368.60	369.90	371.00	372.00
3769789.70	362.00	363.90	364.60	366.00	367.30	368.60	370.00	371.00	372.50
3769689.70	364.00	364.20	365.00	366.00	367.40	369.00	370.20	371.10	373.50
3769589.70	366.00	365.80	366.00	366.00	368.00	369.60	372.00	372.00	374.30
3769489.70	365.10	365.00	365.00	366.00	368.00	369.60	371.10	373.00	374.60
3769389.70	362.00	363.30	364.60	366.00	367.30	369.00	370.90	372.00	374.50

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

* ELEVATION HEIGHTS IN METERS *

Y-COORD (METERS)	X-COORD (METERS)								
	480668.21	480768.21	480868.21	480968.21	481068.21	481168.21	481268.21	481368.21	481468.21
3774289.70	362.80	363.30	364.00	365.00	366.00	367.60	368.90	370.00	371.00
3774189.70	362.00	363.30	364.60	365.90	366.30	368.00	368.90	370.00	371.00
3774089.70	362.90	364.00	365.00	366.00	367.00	368.00	369.00	370.20	371.60
3773989.70	363.00	364.90	365.60	366.00	367.20	368.00	369.00	371.00	372.00
3773889.70	363.90	366.00	366.00	366.00	366.80	367.60	368.90	370.20	371.00
3773789.70	363.90	366.00	366.00	365.50	366.00	366.60	368.00	370.00	370.60
3773689.70	363.90	366.00	365.50	365.00	366.00	366.60	368.00	370.00	371.00
3773589.70	362.90	364.80	365.00	366.00	366.40	367.60	368.20	370.00	371.70
3773489.70	361.40	363.10	364.80	366.00	366.60	367.60	368.00	369.70	368.00
3773389.70	360.00	362.30	364.60	366.00	366.30	367.00	368.00	369.00	368.00
3773289.70	360.00	362.30	364.60	366.00	366.00	366.90	368.00	368.00	369.10
3773189.70	360.50	362.30	364.60	366.00	366.00	366.00	367.00	366.40	367.70
3773089.70	360.00	362.00	363.70	366.00	365.00	366.00	367.00	366.00	366.00
3772989.70	360.00	362.00	363.00	364.00	365.40	366.10	367.00	367.20	368.10
3772889.70	360.00	362.00	363.00	364.00	365.30	366.60	367.90	368.20	369.30
3772789.70	360.90	362.00	363.00	364.00	366.00	366.60	367.90	368.30	369.60
3772689.70	360.00	362.00	363.00	364.00	365.30	366.60	367.90	369.00	370.00
3772589.70	360.00	361.30	363.00	364.50	366.00	366.60	368.00	369.00	370.00
3772489.70	359.10	360.60	363.00	364.90	366.00	367.00	368.00	369.30	370.00
3772389.70	360.00	362.00	363.60	364.90	366.00	367.00	368.20	370.00	371.00
3772289.70	361.60	363.20	364.00	365.00	365.60	367.20	369.50	371.00	372.20
3772189.70	363.00	364.00	365.50	365.90	366.00	371.70	371.90	376.80	378.00
3772089.70	365.20	365.20	368.00	370.20	373.10	374.80	377.20	378.20	378.10
3771989.70	367.60	371.00	372.60	373.50	374.70	376.80	378.00	379.20	379.20
3771889.70	369.90	372.00	373.00	374.00	376.00	378.00	379.00	380.00	381.00
3771789.70	370.90	372.00	373.60	375.00	376.30	378.00	379.90	381.00	382.10
3771689.70	371.00	372.70	374.00	375.50	377.00	378.60	380.00	381.30	383.00
3771589.70	371.90	373.20	374.50	376.00	377.00	378.60	380.00	382.00	383.60
3771489.70	372.00	374.00	375.00	376.90	378.00	379.60	381.00	382.30	384.00
3771389.70	372.00	374.00	375.60	377.50	379.00	380.00	381.90	383.20	384.60
3771289.70	372.90	374.30	376.00	378.00	379.30	380.60	382.00	384.00	385.50
3771189.70	372.90	374.30	376.50	378.00	379.30	381.00	382.90	384.30	386.00
3771089.70	372.90	374.30	376.00	377.90	379.30	381.00	382.90	384.30	386.00
3770989.70	372.90	374.30	376.00	377.90	379.30	381.00	382.90	384.30	386.00
3770889.70	372.90	374.30	376.00	377.90	379.30	380.60	382.70	384.00	385.90
3770789.70	372.90	374.30	376.00	377.90	379.30	380.60	382.00	384.00	385.60
3770689.70	372.90	374.30	376.00	377.90	379.30	381.00	382.00	384.00	385.60
3770589.70	373.00	375.00	376.60	378.00	379.40	381.00	382.20	384.00	385.60
3770489.70	373.50	375.20	376.60	378.00	380.00	381.60	382.90	384.20	386.00
3770389.70	373.90	375.30	377.00	378.90	380.00	382.00	383.00	385.00	386.60

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

* ELEVATION HEIGHTS IN METERS *

Y-COORD (METERS)	X-COORD (METERS)								
	480668.21	480768.21	480868.21	480968.21	481068.21	481168.21	481268.21	481368.21	481468.21
3770289.70	374.00	376.00	377.70	379.00	380.30	382.00	384.00	385.30	387.00
3770189.70	374.00	376.00	378.00	379.00	381.00	382.60	384.00	386.00	387.60
3770089.70	374.00	376.00	377.60	379.00	381.00	382.60	384.00	386.00	387.60
3769989.70	374.00	376.00	377.60	379.00	380.80	382.50	384.00	386.00	387.60
3769889.70	374.00	376.00	377.00	378.90	380.30	382.00	383.90	385.30	387.60
3769789.70	376.80	377.70	377.60	379.00	381.00	382.60	384.00	386.00	387.60
3769689.70	378.00	378.00	378.00	379.90	381.10	382.70	384.00	386.10	388.00
3769589.70	377.00	377.60	378.30	379.90	381.30	383.80	384.90	386.70	388.60
3769489.70	376.90	378.00	378.00	379.90	381.40	383.10	384.90	387.30	389.60
3769389.70	376.90	377.90	378.60	380.00	381.30	383.00	384.90	387.30	389.10

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

* ELEVATION HEIGHTS IN METERS *

Y-COORD (METERS)	X-COORD (METERS) 481568.21	481668.21	481768.21
3774289.70	372.00	373.30	374.60
3774189.70	372.00	374.00	375.00
3774089.70	372.90	374.70	375.80
3773989.70	373.90	376.90	377.00
3773889.70	374.90	377.10	377.80
3773789.70	372.00	372.10	375.30
3773689.70	371.90	373.00	374.00
3773589.70	372.00	373.00	372.80
3773489.70	371.40	368.70	367.40
3773389.70	366.20	366.00	366.00
3773289.70	365.80	366.00	366.00
3773189.70	371.40	372.00	372.00
3773089.70	369.90	371.90	372.00
3772989.70	370.00	372.00	372.10
3772889.70	370.50	372.00	372.80
3772789.70	371.00	372.00	372.60
3772689.70	371.20	372.10	373.10
3772589.70	372.00	372.70	374.00
3772489.70	371.10	372.00	374.50
3772389.70	371.00	372.10	376.70
3772289.70	375.10	378.80	382.30
3772189.70	378.00	381.20	384.00
3772089.70	378.00	382.50	385.00
3771989.70	378.00	384.30	385.60
3771889.70	380.80	384.90	386.00
3771789.70	384.00	385.30	386.70
3771689.70	384.00	386.00	387.60
3771589.70	384.10	386.20	388.00
3771489.70	385.90	387.30	388.70
3771389.70	386.00	388.00	389.80
3771289.70	386.90	388.30	390.00
3771189.70	387.00	389.00	390.60
3771089.70	387.90	389.30	391.00
3770989.70	387.90	389.30	391.00
3770889.70	387.90	389.30	390.90
3770789.70	387.00	389.00	390.60
3770689.70	387.00	389.00	390.60
3770589.70	387.90	389.10	390.60
3770489.70	388.00	389.70	391.30
3770389.70	388.00	390.20	392.00

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

* ELEVATION HEIGHTS IN METERS *

Y-COORD (METERS)	X-COORD (METERS) 481568.21	481668.21	481768.21
3770289.70	388.90	390.40	392.10
3770189.70	389.00	391.00	392.60
3770089.70	389.10	391.00	392.60
3769989.70	389.00	391.00	392.60
3769889.70	389.00	390.30	392.60
3769789.70	389.00	391.00	392.60
3769689.70	389.20	391.10	392.70
3769589.70	394.20	393.80	393.00
3769489.70	390.30	391.00	394.00
3769389.70	390.70	391.40	396.00

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

* HILL HEIGHT SCALES IN METERS *

Y-COORD (METERS)	X-COORD (METERS)								
	478868.21	478968.21	479068.21	479168.21	479268.21	479368.21	479468.21	479568.21	479668.21
3774289.70	346.00	347.30	348.00	349.00	350.00	350.60	351.00	352.00	353.00
3774189.70	346.00	347.00	348.00	348.70	349.30	350.00	351.00	352.00	352.90
3774089.70	346.00	347.00	347.60	348.00	349.00	350.00	351.00	352.00	352.30
3773989.70	345.90	346.30	347.00	347.10	348.30	350.00	350.90	351.40	352.00
3773889.70	345.90	346.30	347.00	348.00	349.00	350.00	350.90	352.00	352.00
3773789.70	345.00	346.30	347.00	348.00	349.00	350.00	350.90	352.00	352.60
3773689.70	345.00	346.30	347.60	348.00	349.00	350.00	350.00	351.40	352.60
3773589.70	345.00	346.00	347.00	348.00	349.00	349.60	350.00	351.30	352.60
3773489.70	345.00	346.00	347.00	347.90	348.30	349.30	350.00	351.00	352.00
3773389.70	344.90	346.00	347.00	347.90	348.30	349.00	350.00	351.00	352.00
3773289.70	344.90	346.00	347.00	347.90	348.00	349.00	350.00	351.00	351.60
3773189.70	344.00	346.00	346.60	347.90	348.00	349.00	349.90	350.10	351.00
3773089.70	344.00	345.30	346.10	347.00	348.00	348.10	349.00	350.00	351.00
3772989.70	344.00	345.00	346.00	346.70	347.00	347.90	348.00	349.30	350.00
3772889.70	343.90	344.60	345.60	346.00	346.60	347.00	347.90	349.00	350.00
3772789.70	343.00	344.00	345.00	346.00	346.00	347.00	347.00	348.00	349.70
3772689.70	342.80	343.80	344.50	345.00	346.00	347.00	347.20	348.00	349.60
3772589.70	342.00	342.10	343.80	345.00	346.00	346.80	347.90	348.30	349.60
3772489.70	341.00	342.00	343.00	344.00	345.30	346.60	347.90	348.00	349.60
3772389.70	340.90	341.30	342.60	344.00	345.00	346.00	347.00	347.80	349.60
3772289.70	340.90	341.30	342.60	344.00	345.30	346.00	346.90	347.30	349.60
3772189.70	340.90	341.30	343.50	345.00	346.00	347.00	347.00	347.90	350.50
3772089.70	340.90	341.50	344.80	347.00	347.20	354.00	354.00	354.00	354.00
3771989.70	348.00	346.50	347.80	348.00	349.80	353.40	354.00	355.00	355.30
3771889.70	348.00	348.00	349.00	350.00	351.30	353.00	354.80	355.90	356.50
3771789.70	348.00	349.10	350.00	351.00	353.00	354.00	354.90	356.00	357.10
3771689.70	348.90	350.00	350.60	352.00	353.20	354.00	355.00	356.20	357.60
3771589.70	348.90	350.00	351.00	352.00	353.30	354.60	355.90	356.90	358.00
3771489.70	348.90	350.00	351.00	352.20	354.00	355.00	356.00	357.00	358.00
3771389.70	349.00	350.00	351.60	352.90	354.00	355.00	356.00	357.30	358.60
3771289.70	349.00	350.00	351.60	352.90	354.00	355.00	356.00	357.30	359.00
3771189.70	349.00	350.30	351.60	352.90	354.00	355.00	356.00	358.00	359.00
3771089.70	349.00	350.30	351.60	352.90	354.00	355.00	356.90	358.00	359.00
3770989.70	349.90	350.30	352.00	352.90	354.00	355.60	356.90	358.00	359.00
3770889.70	350.00	351.00	352.00	353.00	354.10	355.60	357.00	358.00	359.60
3770789.70	350.00	351.00	352.00	353.00	354.30	356.00	357.00	358.20	359.60
3770689.70	350.00	351.00	352.00	353.90	355.00	356.00	357.00	358.30	359.60
3770589.70	350.00	351.30	352.70	354.00	355.00	356.00	357.00	358.30	360.00
3770489.70	350.00	352.00	353.00	354.00	355.20	356.00	357.00	358.30	359.80
3770389.70	350.00	352.00	353.50	354.00	355.30	356.00	357.00	358.30	359.60

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

* HILL HEIGHT SCALES IN METERS *

Y-COORD (METERS)	X-COORD (METERS)								
	478868.21	478968.21	479068.21	479168.21	479268.21	479368.21	479468.21	479568.21	479668.21
3770289.70	350.00	352.00	353.00	354.00	355.00	356.00	357.00	358.30	359.60
3770189.70	350.90	352.00	352.60	353.90	355.00	356.00	357.00	358.30	359.60
3770089.70	350.90	351.90	352.60	353.90	355.00	356.00	357.90	358.90	360.00
3769989.70	350.90	352.00	352.60	353.90	355.00	356.60	357.90	359.00	360.00
3769889.70	351.00	352.00	353.00	354.00	355.30	356.80	358.00	359.00	360.60
3769789.70	351.00	352.00	353.00	354.90	356.00	357.00	358.00	359.00	360.60
3769689.70	352.20	353.00	353.00	355.90	358.10	358.70	359.00	359.30	361.60
3769589.70	353.60	354.20	360.00	359.50	360.00	360.00	360.00	360.20	365.00
3769489.70	350.20	353.00	360.00	358.00	358.10	359.00	359.00	359.90	363.40
3769389.70	349.90	352.00	353.00	354.90	356.20	357.50	358.00	359.00	360.00

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

* HILL HEIGHT SCALES IN METERS *

Y-COORD (METERS)	X-COORD (METERS)								
	479768.21	479868.21	479968.21	480068.21	480168.21	480268.21	480368.21	480468.21	480568.21
3774289.70	353.80	354.00	355.10	356.10	357.30	358.00	359.80	360.00	361.60
3774189.70	353.00	354.00	354.60	356.00	357.00	358.00	359.00	360.00	361.60
3774089.70	353.00	354.00	355.00	356.00	357.00	358.00	359.00	360.20	361.60
3773989.70	353.00	354.00	355.00	356.00	357.00	358.00	359.00	360.30	362.00
3773889.70	353.00	354.00	355.00	356.00	357.00	358.00	359.00	360.30	362.00
3773789.70	353.00	354.00	355.00	356.00	357.00	358.00	359.00	360.00	362.00
3773689.70	353.90	354.00	355.00	356.00	357.00	358.00	359.00	360.00	362.00
3773589.70	353.70	354.00	355.00	356.00	357.00	358.00	359.00	360.00	360.90
3773489.70	353.00	354.00	355.00	355.90	356.30	357.60	358.40	359.00	360.00
3773389.70	352.90	354.00	354.60	355.10	356.00	357.00	358.00	359.00	359.10
3773289.70	352.00	353.30	354.00	355.00	356.00	356.90	357.90	358.30	359.00
3773189.70	352.00	353.00	354.00	355.00	355.60	356.60	357.40	358.70	359.80
3773089.70	352.00	352.40	353.10	354.00	355.00	356.00	357.00	358.40	359.50
3772989.70	351.00	352.00	353.00	353.00	354.30	355.90	356.90	358.00	359.00
3772889.70	351.00	352.00	352.30	353.00	354.30	356.00	356.90	358.00	359.00
3772789.70	350.90	352.00	352.60	353.80	354.30	356.00	356.90	358.00	359.60
3772689.70	350.90	351.40	352.60	353.90	354.30	356.00	356.90	358.00	359.60
3772589.70	350.40	351.30	352.30	353.40	354.00	355.60	356.90	358.00	359.00
3772489.70	350.00	351.30	352.00	353.00	354.00	355.60	356.90	358.00	358.60
3772389.70	351.00	352.00	352.00	353.00	354.00	355.60	357.00	358.40	359.10
3772289.70	351.90	354.00	353.00	353.00	354.20	356.80	358.00	359.20	360.80
3772189.70	352.00	354.20	359.00	360.00	359.80	359.90	359.90	359.00	361.60
3772089.70	354.20	356.90	359.20	360.20	361.20	362.80	365.20	365.80	366.00
3771989.70	356.50	359.30	359.60	361.00	362.70	364.30	366.00	367.00	367.60
3771889.70	358.00	360.00	360.50	362.00	363.30	365.00	366.80	367.90	368.50
3771789.70	358.90	360.00	361.00	362.20	364.00	365.60	367.00	368.00	369.10
3771689.70	359.00	360.20	361.60	362.90	364.00	365.60	367.00	368.30	369.80
3771589.70	359.00	360.30	362.00	363.00	364.30	366.00	367.00	368.90	370.00
3771489.70	359.90	361.00	362.00	363.00	364.30	366.00	367.00	369.00	370.60
3771389.70	360.00	361.00	362.00	363.50	364.70	366.00	367.90	369.30	370.60
3771289.70	360.00	361.30	362.60	363.90	365.00	366.50	367.90	369.30	371.00
3771189.70	360.00	361.40	362.60	364.00	365.30	366.60	368.00	369.40	371.00
3771089.70	360.00	362.00	363.00	364.00	365.30	367.00	368.00	370.00	371.00
3770989.70	360.90	362.00	363.00	364.00	366.00	367.00	368.00	370.00	371.00
3770889.70	360.90	362.00	363.60	364.90	366.00	367.60	368.90	370.00	371.00
3770789.70	360.90	362.00	363.60	365.00	366.30	367.60	368.90	370.00	371.60
3770689.70	361.00	362.00	363.60	365.00	366.30	367.60	368.90	370.30	372.00
3770589.70	361.00	362.00	363.60	364.90	366.00	367.60	368.90	370.00	371.60
3770489.70	361.00	362.00	363.60	364.90	366.00	367.60	369.00	370.30	372.00
3770389.70	360.90	362.00	363.60	364.90	366.00	367.60	369.00	370.30	372.00

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

* HILL HEIGHT SCALES IN METERS *

Y-COORD (METERS)	X-COORD (METERS)								
	479768.21	479868.21	479968.21	480068.21	480168.21	480268.21	480368.21	480468.21	480568.21
3770289.70	360.90	362.30	364.00	365.00	366.30	368.00	369.00	371.00	372.00
3770189.70	360.90	362.30	364.00	365.90	367.00	368.00	369.50	371.00	372.60
3770089.70	361.00	363.00	364.60	366.00	367.00	368.00	369.90	371.00	372.60
3769989.70	361.90	363.00	364.60	366.00	367.30	368.10	369.90	371.00	372.00
3769889.70	362.00	363.30	364.60	366.00	367.30	368.60	369.90	371.00	372.00
3769789.70	362.00	363.90	364.60	366.00	367.30	368.60	370.00	371.00	372.50
3769689.70	364.00	364.20	365.00	366.00	367.40	369.00	370.20	371.10	373.50
3769589.70	366.00	365.80	366.00	366.00	368.00	369.60	372.00	372.00	374.30
3769489.70	365.10	365.00	365.00	366.00	368.00	369.60	371.10	373.00	374.60
3769389.70	362.00	363.30	364.60	366.00	367.30	369.00	370.90	372.00	374.50

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

* HILL HEIGHT SCALES IN METERS *

Y-COORD (METERS)	X-COORD (METERS)								
	480668.21	480768.21	480868.21	480968.21	481068.21	481168.21	481268.21	481368.21	481468.21
3774289.70	362.80	363.30	364.00	365.00	366.00	367.60	368.90	370.00	371.00
3774189.70	362.00	363.30	364.60	365.90	366.30	368.00	368.90	370.00	371.00
3774089.70	362.90	364.00	365.00	366.00	367.00	368.00	369.00	370.20	371.60
3773989.70	363.00	364.90	365.60	366.00	367.20	368.00	369.00	371.00	372.00
3773889.70	363.90	366.00	366.00	366.00	366.80	367.60	368.90	370.20	371.00
3773789.70	363.90	366.00	366.00	365.50	366.00	366.60	368.00	370.00	370.60
3773689.70	363.90	366.00	365.50	365.00	366.00	366.60	368.00	370.00	371.00
3773589.70	362.90	364.80	365.00	366.00	366.40	367.60	368.20	370.00	371.70
3773489.70	361.40	363.10	364.80	366.00	366.60	367.60	368.00	369.70	368.00
3773389.70	360.00	362.30	364.60	366.00	366.30	367.00	368.00	369.00	368.00
3773289.70	360.00	362.30	364.60	366.00	366.00	366.90	368.00	368.00	369.10
3773189.70	360.50	362.30	364.60	366.00	366.00	366.00	367.00	366.40	367.70
3773089.70	360.00	362.00	363.70	366.00	365.00	366.00	367.00	366.00	366.00
3772989.70	360.00	362.00	363.00	364.00	365.40	366.10	367.00	367.20	368.10
3772889.70	360.00	362.00	363.00	364.00	365.30	366.60	367.90	368.20	369.30
3772789.70	360.90	362.00	363.00	364.00	366.00	366.60	367.90	368.30	369.60
3772689.70	360.00	362.00	363.00	364.00	365.30	366.60	367.90	369.00	370.00
3772589.70	360.00	361.30	363.00	364.50	366.00	366.60	368.00	369.00	370.00
3772489.70	359.10	360.60	363.00	364.90	366.00	367.00	368.00	369.30	370.00
3772389.70	360.00	362.00	363.60	364.90	366.00	367.00	368.20	370.00	371.00
3772289.70	361.60	363.20	364.00	365.00	365.60	367.20	369.50	371.00	378.00
3772189.70	363.00	364.00	365.50	365.90	372.00	371.70	371.90	376.80	378.00
3772089.70	365.20	365.20	371.00	370.20	373.10	374.80	377.20	378.20	378.10
3771989.70	367.60	371.00	372.60	373.50	374.70	376.80	378.00	379.20	379.20
3771889.70	369.90	372.00	373.00	374.00	376.00	378.00	379.00	380.00	381.00
3771789.70	370.90	372.00	373.60	375.00	376.30	378.00	379.90	381.00	382.10
3771689.70	371.00	372.70	374.00	375.50	377.00	378.60	380.00	381.30	383.00
3771589.70	371.90	373.20	374.50	376.00	377.00	378.60	380.00	382.00	383.60
3771489.70	372.00	374.00	375.00	376.90	378.00	379.60	381.00	382.30	384.00
3771389.70	372.00	374.00	375.60	377.50	379.00	380.00	381.90	383.20	384.60
3771289.70	372.90	374.30	376.00	378.00	379.30	380.60	382.00	384.00	385.50
3771189.70	372.90	374.30	376.50	378.00	379.30	381.00	382.90	384.30	386.00
3771089.70	372.90	374.30	376.00	377.90	379.30	381.00	382.90	384.30	386.00
3770989.70	372.90	374.30	376.00	377.90	379.30	381.00	382.90	384.30	386.00
3770889.70	372.90	374.30	376.00	377.90	379.30	380.60	382.70	384.00	385.90
3770789.70	372.90	374.30	376.00	377.90	379.30	380.60	382.00	384.00	385.60
3770689.70	372.90	374.30	376.00	377.90	379.30	381.00	382.00	384.00	385.60
3770589.70	373.00	375.00	376.60	378.00	379.40	381.00	382.20	384.00	385.60
3770489.70	373.50	375.20	376.60	378.00	380.00	381.60	382.90	384.20	386.00
3770389.70	373.90	375.30	377.00	378.90	380.00	382.00	383.00	385.00	386.60

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

* HILL HEIGHT SCALES IN METERS *

Y-COORD (METERS)	X-COORD (METERS)								
	480668.21	480768.21	480868.21	480968.21	481068.21	481168.21	481268.21	481368.21	481468.21
3770289.70	374.00	376.00	377.70	379.00	380.30	382.00	384.00	385.30	387.00
3770189.70	374.00	376.00	378.00	379.00	381.00	382.60	384.00	386.00	387.60
3770089.70	374.00	376.00	377.60	379.00	381.00	382.60	384.00	386.00	387.60
3769989.70	374.00	376.00	377.60	379.00	380.80	382.50	384.00	386.00	387.60
3769889.70	374.00	376.00	377.00	378.90	380.30	382.00	383.90	385.30	387.60
3769789.70	376.80	377.70	377.60	379.00	381.00	382.60	384.00	386.00	387.60
3769689.70	378.00	378.00	378.00	379.90	381.10	382.70	384.00	386.10	388.00
3769589.70	377.00	377.60	378.30	379.90	381.30	383.80	384.90	386.70	399.00
3769489.70	376.90	378.00	378.00	379.90	381.40	383.10	384.90	387.30	399.00
3769389.70	376.90	377.90	378.60	380.00	381.30	383.00	384.90	387.30	389.10

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

* HILL HEIGHT SCALES IN METERS *

Y-COORD (METERS)	X-COORD (METERS) 481568.21	481668.21	481768.21
3774289.70	372.00	373.30	374.60
3774189.70	372.00	374.00	375.00
3774089.70	372.90	374.70	375.80
3773989.70	373.90	376.90	377.00
3773889.70	376.00	377.10	377.80
3773789.70	372.00	372.10	375.30
3773689.70	371.90	373.00	374.00
3773589.70	372.00	373.00	372.80
3773489.70	371.40	372.00	371.00
3773389.70	366.20	366.00	366.00
3773289.70	373.00	366.00	366.00
3773189.70	371.40	372.00	372.00
3773089.70	369.90	371.90	372.00
3772989.70	370.00	372.00	372.10
3772889.70	370.50	372.00	372.80
3772789.70	371.00	372.00	372.60
3772689.70	371.20	372.10	373.10
3772589.70	372.00	372.70	374.00
3772489.70	371.10	372.00	374.50
3772389.70	371.00	378.00	376.70
3772289.70	375.10	378.80	382.30
3772189.70	378.00	381.20	384.00
3772089.70	378.00	382.50	385.00
3771989.70	378.00	384.30	385.60
3771889.70	380.80	384.90	386.00
3771789.70	384.00	385.30	386.70
3771689.70	384.00	386.00	387.60
3771589.70	384.10	386.20	388.00
3771489.70	385.90	387.30	388.70
3771389.70	386.00	388.00	389.80
3771289.70	386.90	388.30	390.00
3771189.70	387.00	389.00	390.60
3771089.70	387.90	389.30	391.00
3770989.70	387.90	389.30	391.00
3770889.70	387.90	389.30	390.90
3770789.70	387.00	389.00	390.60
3770689.70	387.00	389.00	390.60
3770589.70	387.90	389.10	390.60
3770489.70	388.00	389.70	391.30
3770389.70	388.00	390.20	392.00

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

* HILL HEIGHT SCALES IN METERS *

Y-COORD (METERS)	X-COORD (METERS) 481568.21	481668.21	481768.21
3770289.70	388.90	390.40	392.10
3770189.70	389.00	391.00	392.60
3770089.70	389.10	391.00	392.60
3769989.70	389.00	391.00	392.60
3769889.70	389.00	390.30	392.60
3769789.70	389.00	391.00	392.60
3769689.70	389.20	391.10	392.70
3769589.70	397.00	393.80	393.00
3769489.70	399.00	391.00	394.00
3769389.70	390.70	391.40	396.00

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** DISCRETE CARTESIAN RECEPTORS ***
(X-COORD, Y-COORD, ZELEV, ZHILL, ZFLAG)
(METERS)

(	480726.1,	3770758.2,	373.9,	373.9,	0.0);	(	479114.5,	3769998.8,	353.0,	353.0,	0.0);
(	479109.7,	3769953.9,	353.0,	353.0,	0.0);	(	480558.0,	3774226.4,	361.3,	361.3,	0.0);
(	480766.0,	3771834.4,	372.0,	372.0,	0.0);	(	480235.5,	3771590.9,	365.5,	365.5,	0.0);

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** METEOROLOGICAL DAYS SELECTED FOR PROCESSING ***
(1=YES; 0=NO)

1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
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NOTE: METEOROLOGICAL DATA ACTUALLY PROCESSED WILL ALSO DEPEND ON WHAT IS INCLUDED IN THE DATA FILE.

*** UPPER BOUND OF FIRST THROUGH FIFTH WIND SPEED CATEGORIES ***
(METERS/SEC)

1.54, 3.09, 5.14, 8.23, 10.80,

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: ..\RedlandsADJU\RDLD_V9_ADJU\RDLD_v9.SFC Met Version: 16216
Profile file: ..\RedlandsADJU\RDLD_V9_ADJU\RDLD_v9.PFL
Surface format: FREE
Profile format: FREE
Surface station no.: 3171 Upper air station no.: 3190
Name: UNKNOWN Name: UNKNOWN
Year: 2012 Year: 2012

First 24 hours of scalar data

YR	MO	DY	JDY	HR	H0	U*	W*	DT/DZ	ZICNV	ZIMCH	M-O LEN	Z0	BOWEN	ALBEDO	REF WS	WD	HT	REF TA	HT
12	01	01	1	01	-10.6	0.149	-9.000	-9.000	-999.	138.	26.7	0.32	3.22	1.00	1.30	110.	9.1	285.4	5.5
12	01	01	1	02	-5.0	0.102	-9.000	-9.000	-999.	78.	17.9	0.32	3.22	1.00	0.90	130.	9.1	284.5	5.5
12	01	01	1	03	-5.0	0.102	-9.000	-9.000	-999.	78.	17.9	0.32	3.22	1.00	0.90	100.	9.1	285.0	5.5
12	01	01	1	04	-5.0	0.102	-9.000	-9.000	-999.	78.	17.9	0.32	3.22	1.00	0.90	107.	9.1	284.6	5.5
12	01	01	1	05	-10.7	0.149	-9.000	-9.000	-999.	138.	26.7	0.32	3.22	1.00	1.30	98.	9.1	284.9	5.5
12	01	01	1	06	-5.0	0.102	-9.000	-9.000	-999.	78.	17.9	0.32	3.22	1.00	0.90	86.	9.1	284.5	5.5
12	01	01	1	07	-5.0	0.102	-9.000	-9.000	-999.	78.	17.9	0.32	3.22	1.00	0.90	91.	9.1	284.0	5.5
12	01	01	1	08	-4.0	0.102	-9.000	-9.000	-999.	78.	22.9	0.32	3.22	0.54	0.90	107.	9.1	285.0	5.5
12	01	01	1	09	44.6	0.237	0.382	0.006	43.	276.	-25.6	0.15	3.22	0.33	2.10	81.	10.1	289.1	5.5
12	01	01	1	10	134.3	0.111	0.882	0.008	176.	99.	-1.0	0.32	3.22	0.26	0.40	72.	9.1	295.1	5.5
12	01	01	1	11	199.8	0.409	1.429	0.005	503.	627.	-29.4	0.15	3.22	0.23	3.68	78.	10.1	297.9	5.5
12	01	01	1	12	232.3	0.300	1.889	0.005	999.	402.	-10.0	0.32	3.22	0.22	1.80	333.	9.1	299.4	5.5
12	01	01	1	13	230.0	0.300	2.134	0.005	1453.	394.	-10.1	0.32	3.22	0.22	1.80	72.	9.1	300.4	5.5
12	01	01	1	14	194.0	0.294	2.109	0.005	1663.	382.	-11.2	0.32	3.22	0.24	1.80	277.	9.1	301.0	5.5
12	01	01	1	15	126.3	0.378	1.872	0.005	1784.	557.	-36.5	0.32	3.22	0.27	2.70	243.	9.1	301.0	5.5
12	01	01	1	16	39.5	0.199	1.278	0.005	1817.	240.	-17.2	0.32	3.22	0.36	1.30	274.	9.1	300.1	5.5
12	01	01	1	17	-4.7	0.101	-9.000	-9.000	-999.	85.	19.0	0.32	3.22	0.65	0.90	252.	9.1	298.2	5.5
12	01	01	1	18	-4.9	0.102	-9.000	-9.000	-999.	78.	18.2	0.32	3.22	1.00	0.90	116.	9.1	296.4	5.5
12	01	01	1	19	-18.8	0.204	-9.000	-9.000	-999.	220.	45.6	0.15	3.22	1.00	2.27	79.	10.1	292.2	5.5
12	01	01	1	20	-5.0	0.102	-9.000	-9.000	-999.	83.	18.1	0.32	3.22	1.00	0.90	95.	9.1	290.2	5.5
12	01	01	1	21	-5.0	0.102	-9.000	-9.000	-999.	78.	18.0	0.32	3.22	1.00	0.90	99.	9.1	287.8	5.5
12	01	01	1	22	-5.0	0.102	-9.000	-9.000	-999.	78.	18.0	0.32	3.22	1.00	0.90	110.	9.1	287.6	5.5
12	01	01	1	23	-10.6	0.149	-9.000	-9.000	-999.	138.	26.8	0.32	3.22	1.00	1.30	89.	9.1	287.2	5.5
12	01	01	1	24	-5.0	0.102	-9.000	-9.000	-999.	78.	17.9	0.32	3.22	1.00	0.90	105.	9.1	285.9	5.5

First hour of profile data

YR	MO	DY	HR	HEIGHT	F	WDIR	WSPD	AMB_TMP	sigmaA	sigmaW	sigmaV
12	01	01	01	5.5	0	-999.	-99.00	285.5	99.0	-99.00	-99.00
12	01	01	01	9.1	1	110.	1.30	-999.0	99.0	-99.00	-99.00

F indicates top of profile (=1) or below (=0)

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): L0000001 , L0000002 , L0000003 , L0000004 , L0000005 ,
L0000006 , L0000007 , L0000008 , L0000009 , L0000010 , L0000011 , L0000012 , L0000013 ,
L0000014 , L0000015 , L0000016 , L0000017 , L0000018 , L0000019 , L0000020 , L0000021 ,
L0000022 , L0000023 , L0000024 , L0000025 , L0000026 , L0000027 , L0000028 , . . . ,

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

** CONC OF DPM IN MICROGRAMS/M**3 **

Y-COORD (METERS)	X-COORD (METERS)								
	478868.21	478968.21	479068.21	479168.21	479268.21	479368.21	479468.21	479568.21	479668.21
3774289.70	0.00125	0.00131	0.00136	0.00143	0.00150	0.00157	0.00166	0.00176	0.00188
3774189.70	0.00129	0.00135	0.00141	0.00148	0.00155	0.00163	0.00173	0.00184	0.00196
3774089.70	0.00134	0.00139	0.00146	0.00153	0.00161	0.00169	0.00180	0.00191	0.00205
3773989.70	0.00138	0.00144	0.00151	0.00158	0.00166	0.00176	0.00186	0.00198	0.00213
3773889.70	0.00142	0.00149	0.00156	0.00163	0.00172	0.00182	0.00193	0.00205	0.00220
3773789.70	0.00147	0.00153	0.00161	0.00169	0.00178	0.00188	0.00199	0.00212	0.00228
3773689.70	0.00152	0.00158	0.00166	0.00174	0.00183	0.00194	0.00205	0.00219	0.00235
3773589.70	0.00156	0.00163	0.00171	0.00180	0.00189	0.00200	0.00212	0.00226	0.00242
3773489.70	0.00161	0.00169	0.00177	0.00185	0.00195	0.00206	0.00218	0.00232	0.00249
3773389.70	0.00167	0.00174	0.00182	0.00191	0.00201	0.00212	0.00224	0.00239	0.00255
3773289.70	0.00172	0.00180	0.00188	0.00197	0.00207	0.00218	0.00231	0.00245	0.00262
3773189.70	0.00178	0.00186	0.00195	0.00204	0.00214	0.00225	0.00238	0.00252	0.00269
3773089.70	0.00185	0.00193	0.00202	0.00211	0.00221	0.00232	0.00245	0.00259	0.00276
3772989.70	0.00192	0.00200	0.00209	0.00219	0.00229	0.00240	0.00253	0.00267	0.00283
3772889.70	0.00200	0.00208	0.00218	0.00227	0.00237	0.00249	0.00261	0.00275	0.00291
3772789.70	0.00208	0.00218	0.00227	0.00237	0.00247	0.00258	0.00270	0.00284	0.00300
3772689.70	0.00218	0.00228	0.00238	0.00248	0.00258	0.00269	0.00281	0.00295	0.00310
3772589.70	0.00230	0.00240	0.00250	0.00260	0.00271	0.00282	0.00294	0.00307	0.00322
3772489.70	0.00243	0.00254	0.00264	0.00275	0.00286	0.00297	0.00308	0.00321	0.00335
3772389.70	0.00259	0.00270	0.00282	0.00293	0.00304	0.00315	0.00326	0.00337	0.00351
3772289.70	0.00278	0.00291	0.00304	0.00316	0.00327	0.00337	0.00347	0.00357	0.00369
3772189.70	0.00301	0.00317	0.00332	0.00345	0.00356	0.00365	0.00373	0.00382	0.00393
3772089.70	0.00331	0.00351	0.00370	0.00385	0.00395	0.00403	0.00409	0.00415	0.00422
3771989.70	0.00371	0.00400	0.00424	0.00441	0.00451	0.00455	0.00455	0.00456	0.00458
3771889.70	0.00426	0.00468	0.00505	0.00528	0.00534	0.00528	0.00518	0.00511	0.00507
3771789.70	0.00498	0.00571	0.00643	0.00682	0.00674	0.00644	0.00614	0.00593	0.00576
3771689.70	0.00595	0.00736	0.00935	0.01056	0.00964	0.00861	0.00791	0.00746	0.00719
3771589.70	0.00713	0.00986	0.01765	0.03971	0.02554	0.02194	0.02014	0.01898	0.01828
3771489.70	0.00834	0.01251	0.02815	0.06392	0.01891	0.01273	0.01043	0.00929	0.00886
3771389.70	0.00934	0.01435	0.03206	0.06567	0.02012	0.01274	0.00986	0.00873	0.00788
3771289.70	0.01008	0.01545	0.03387	0.06518	0.02088	0.01315	0.00999	0.00873	0.00777

3771189.70	0.01060	0.01617	0.03506	0.06415	0.02128	0.01347	0.01018	0.00885	0.00779
3771089.70	0.01097	0.01664	0.03596	0.06293	0.02148	0.01368	0.01033	0.00895	0.00784
3770989.70	0.01124	0.01698	0.03675	0.06167	0.02155	0.01380	0.01043	0.00899	0.00787
3770889.70	0.01142	0.01725	0.03737	0.06033	0.02154	0.01386	0.01048	0.00895	0.00786
3770789.70	0.01154	0.01742	0.03795	0.05903	0.02147	0.01386	0.01049	0.00896	0.00783
3770689.70	0.01161	0.01755	0.03852	0.05773	0.02135	0.01382	0.01047	0.00887	0.00778
3770589.70	0.01163	0.01763	0.03916	0.05648	0.02119	0.01374	0.01041	0.00870	0.00771
3770489.70	0.01160	0.01768	0.03962	0.05519	0.02098	0.01363	0.01031	0.00849	0.00760
3770389.70	0.01152	0.01762	0.04011	0.05406	0.02078	0.01348	0.01018	0.00832	0.00747

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): L0000001 , L0000002 , L0000003 , L0000004 , L0000005 ,
L0000006 , L0000007 , L0000008 , L0000009 , L0000010 , L0000011 , L0000012 , L0000013 ,
L0000014 , L0000015 , L0000016 , L0000017 , L0000018 , L0000019 , L0000020 , L0000021 ,
L0000022 , L0000023 , L0000024 , L0000025 , L0000026 , L0000027 , L0000028 , . . . ,

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

** CONC OF DPM IN MICROGRAMS/M**3 **

Y-COORD (METERS)	X-COORD (METERS) 478868.21	478968.21	479068.21	479168.21	479268.21	479368.21	479468.21	479568.21	479668.21
3770289.70	0.01137	0.01746	0.03979	0.05415	0.02061	0.01330	0.01001	0.00823	0.00733
3770189.70	0.01117	0.01719	0.03919	0.05461	0.02042	0.01307	0.00979	0.00815	0.00716
3770089.70	0.01085	0.01679	0.03846	0.05494	0.02013	0.01277	0.00946	0.00802	0.00696
3769989.70	0.01042	0.01624	0.03753	0.05512	0.01969	0.01233	0.00909	0.00771	0.00669
3769889.70	0.00981	0.01541	0.03625	0.05492	0.01895	0.01171	0.00860	0.00722	0.00637
3769789.70	0.00897	0.01413	0.03415	0.05393	0.01766	0.01079	0.00794	0.00658	0.00595
3769689.70	0.00787	0.01204	0.02939	0.04954	0.01497	0.00928	0.00704	0.00606	0.00545
3769589.70	0.00656	0.00908	0.01586	0.01968	0.01044	0.00758	0.00616	0.00532	0.00476
3769489.70	0.00528	0.00646	0.00786	0.00812	0.00691	0.00576	0.00499	0.00451	0.00416
3769389.70	0.00430	0.00484	0.00529	0.00540	0.00511	0.00467	0.00427	0.00388	0.00366

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): L0000001 , L0000002 , L0000003 , L0000004 , L0000005 ,
L0000006 , L0000007 , L0000008 , L0000009 , L0000010 , L0000011 , L0000012 , L0000013 ,
L0000014 , L0000015 , L0000016 , L0000017 , L0000018 , L0000019 , L0000020 , L0000021 ,
L0000022 , L0000023 , L0000024 , L0000025 , L0000026 , L0000027 , L0000028 , . . . ,

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

** CONC OF DPM IN MICROGRAMS/M**3 **

Y-COORD (METERS)	X-COORD (METERS)								
	479768.21	479868.21	479968.21	480068.21	480168.21	480268.21	480368.21	480468.21	480568.21
3774289.70	0.00202	0.00218	0.00238	0.00262	0.00293	0.00334	0.00389	0.00470	0.00592
3774189.70	0.00211	0.00229	0.00251	0.00279	0.00316	0.00364	0.00435	0.00547	0.00751
3774089.70	0.00221	0.00240	0.00265	0.00295	0.00336	0.00392	0.00476	0.00616	0.00901
3773989.70	0.00230	0.00251	0.00277	0.00310	0.00354	0.00416	0.00508	0.00663	0.00977
3773889.70	0.00238	0.00260	0.00288	0.00323	0.00369	0.00434	0.00530	0.00689	0.00997
3773789.70	0.00246	0.00269	0.00297	0.00334	0.00382	0.00447	0.00544	0.00700	0.00998
3773689.70	0.00254	0.00277	0.00306	0.00343	0.00391	0.00457	0.00552	0.00704	0.00993
3773589.70	0.00261	0.00285	0.00314	0.00351	0.00399	0.00464	0.00558	0.00707	0.00986
3773489.70	0.00268	0.00292	0.00321	0.00358	0.00406	0.00470	0.00562	0.00707	0.00982
3773389.70	0.00275	0.00299	0.00328	0.00364	0.00411	0.00475	0.00565	0.00709	0.00979
3773289.70	0.00281	0.00305	0.00334	0.00370	0.00417	0.00480	0.00569	0.00710	0.00979
3773189.70	0.00288	0.00311	0.00340	0.00376	0.00422	0.00484	0.00572	0.00712	0.00980
3773089.70	0.00295	0.00318	0.00346	0.00381	0.00427	0.00488	0.00577	0.00715	0.00980
3772989.70	0.00302	0.00325	0.00353	0.00387	0.00432	0.00493	0.00581	0.00718	0.00982
3772889.70	0.00310	0.00332	0.00360	0.00394	0.00438	0.00499	0.00585	0.00722	0.00984
3772789.70	0.00319	0.00341	0.00368	0.00401	0.00445	0.00505	0.00591	0.00726	0.00988
3772689.70	0.00328	0.00350	0.00376	0.00409	0.00452	0.00511	0.00597	0.00731	0.00991
3772589.70	0.00339	0.00360	0.00386	0.00418	0.00460	0.00519	0.00603	0.00737	0.00996
3772489.70	0.00352	0.00372	0.00397	0.00428	0.00470	0.00527	0.00611	0.00744	0.01001
3772389.70	0.00367	0.00386	0.00409	0.00440	0.00481	0.00537	0.00620	0.00751	0.01007
3772289.70	0.00384	0.00403	0.00425	0.00454	0.00494	0.00550	0.00630	0.00760	0.01015
3772189.70	0.00405	0.00422	0.00442	0.00471	0.00505	0.00560	0.00641	0.00771	0.01024
3772089.70	0.00432	0.00446	0.00459	0.00486	0.00523	0.00574	0.00650	0.00779	0.01031
3771989.70	0.00465	0.00468	0.00486	0.00511	0.00545	0.00595	0.00671	0.00796	0.01043
3771889.70	0.00504	0.00507	0.00523	0.00546	0.00579	0.00628	0.00701	0.00827	0.01074
3771789.70	0.00568	0.00571	0.00583	0.00604	0.00634	0.00683	0.00758	0.00885	0.01133
3771689.70	0.00702	0.00700	0.00710	0.00728	0.00759	0.00808	0.00883	0.01012	0.01264
3771589.70	0.01762	0.01721	0.01893	0.01936	0.01954	0.02005	0.02070	0.02202	0.02461
3771489.70	0.00848	0.00832	0.00826	0.00833	0.00859	0.00907	0.00987	0.01127	0.01412
3771389.70	0.00740	0.00715	0.00706	0.00712	0.00737	0.00784	0.00866	0.01013	0.01318
3771289.70	0.00720	0.00689	0.00676	0.00679	0.00703	0.00751	0.00835	0.00987	0.01304

3771189.70	0.00717	0.00683	0.00667	0.00668	0.00691	0.00739	0.00825	0.00981	0.01306
3771089.70	0.00717	0.00681	0.00662	0.00664	0.00686	0.00733	0.00822	0.00981	0.01311
3770989.70	0.00719	0.00680	0.00660	0.00661	0.00681	0.00730	0.00820	0.00982	0.01317
3770889.70	0.00718	0.00678	0.00656	0.00655	0.00678	0.00726	0.00816	0.00980	0.01319
3770789.70	0.00715	0.00674	0.00652	0.00651	0.00672	0.00721	0.00810	0.00974	0.01313
3770689.70	0.00710	0.00669	0.00646	0.00644	0.00665	0.00713	0.00802	0.00963	0.01298
3770589.70	0.00702	0.00661	0.00638	0.00636	0.00657	0.00703	0.00790	0.00947	0.01273
3770489.70	0.00692	0.00650	0.00628	0.00626	0.00645	0.00690	0.00775	0.00928	0.01246
3770389.70	0.00679	0.00638	0.00616	0.00613	0.00632	0.00675	0.00757	0.00907	0.01218

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): L0000001 , L0000002 , L0000003 , L0000004 , L0000005 ,
L0000006 , L0000007 , L0000008 , L0000009 , L0000010 , L0000011 , L0000012 , L0000013 ,
L0000014 , L0000015 , L0000016 , L0000017 , L0000018 , L0000019 , L0000020 , L0000021 ,
L0000022 , L0000023 , L0000024 , L0000025 , L0000026 , L0000027 , L0000028 , . . . ,

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

** CONC OF DPM IN MICROGRAMS/M**3 **

Y-COORD (METERS)	X-COORD (METERS) 479768.21	479868.21	479968.21	480068.21	480168.21	480268.21	480368.21	480468.21	480568.21
3770289.70	0.00665	0.00624	0.00601	0.00598	0.00616	0.00658	0.00738	0.00884	0.01190
3770189.70	0.00649	0.00608	0.00585	0.00580	0.00597	0.00638	0.00715	0.00859	0.01162
3770089.70	0.00630	0.00589	0.00565	0.00561	0.00576	0.00615	0.00689	0.00829	0.01128
3769989.70	0.00607	0.00566	0.00543	0.00538	0.00551	0.00587	0.00657	0.00792	0.01084
3769889.70	0.00578	0.00539	0.00517	0.00512	0.00523	0.00555	0.00619	0.00744	0.01024
3769789.70	0.00542	0.00506	0.00487	0.00481	0.00490	0.00517	0.00573	0.00682	0.00936
3769689.70	0.00496	0.00467	0.00450	0.00446	0.00452	0.00474	0.00518	0.00604	0.00801
3769589.70	0.00441	0.00421	0.00410	0.00407	0.00412	0.00428	0.00459	0.00517	0.00628
3769489.70	0.00390	0.00377	0.00370	0.00368	0.00371	0.00382	0.00402	0.00434	0.00482
3769389.70	0.00350	0.00339	0.00332	0.00330	0.00332	0.00339	0.00351	0.00367	0.00385

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): L0000001 , L0000002 , L0000003 , L0000004 , L0000005 ,
L0000006 , L0000007 , L0000008 , L0000009 , L0000010 , L0000011 , L0000012 , L0000013 ,
L0000014 , L0000015 , L0000016 , L0000017 , L0000018 , L0000019 , L0000020 , L0000021 ,
L0000022 , L0000023 , L0000024 , L0000025 , L0000026 , L0000027 , L0000028 , . . . ,

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

** CONC OF DPM IN MICROGRAMS/M**3 **

Y-COORD (METERS)	X-COORD (METERS)								
	480668.21	480768.21	480868.21	480968.21	481068.21	481168.21	481268.21	481368.21	481468.21
3774289.70	0.00777	0.00989	0.01106	0.01128	0.01112	0.01089	0.01067	0.01030	0.00940
3774189.70	0.01230	0.02388	0.02605	0.02438	0.02266	0.02192	0.02257	0.02353	0.02359
3774089.70	0.01848	0.05673	0.04682	0.05615	0.07144	0.08028	0.06182	0.04950	0.03947
3773989.70	0.01940	0.04745	0.02003	0.01775	0.01731	0.01684	0.01578	0.01446	0.01242
3773889.70	0.01907	0.04700	0.01639	0.01265	0.01128	0.01042	0.00962	0.00880	0.00778
3773789.70	0.01868	0.04763	0.01515	0.01086	0.00915	0.00815	0.00732	0.00664	0.00600
3773689.70	0.01836	0.04865	0.01459	0.01002	0.00813	0.00705	0.00623	0.00560	0.00512
3773589.70	0.01808	0.04981	0.01431	0.00956	0.00758	0.00640	0.00565	0.00506	0.00462
3773489.70	0.01788	0.05118	0.01418	0.00930	0.00726	0.00609	0.00534	0.00477	0.00426
3773389.70	0.01773	0.05163	0.01409	0.00914	0.00707	0.00584	0.00518	0.00460	0.00411
3773289.70	0.01769	0.05204	0.01403	0.00904	0.00695	0.00573	0.00509	0.00449	0.00403
3773189.70	0.01769	0.05247	0.01400	0.00898	0.00688	0.00567	0.00490	0.00428	0.00396
3773089.70	0.01763	0.05294	0.01402	0.00895	0.00686	0.00562	0.00490	0.00424	0.00379
3772989.70	0.01761	0.05342	0.01405	0.00899	0.00683	0.00559	0.00492	0.00435	0.00391
3772889.70	0.01760	0.05393	0.01407	0.00900	0.00683	0.00557	0.00495	0.00436	0.00391
3772789.70	0.01765	0.05445	0.01411	0.00901	0.00681	0.00559	0.00496	0.00436	0.00391
3772689.70	0.01760	0.05496	0.01416	0.00904	0.00686	0.00566	0.00497	0.00438	0.00392
3772589.70	0.01764	0.05554	0.01422	0.00907	0.00695	0.00576	0.00500	0.00440	0.00393
3772489.70	0.01761	0.05609	0.01429	0.00911	0.00707	0.00587	0.00503	0.00442	0.00395
3772389.70	0.01764	0.05664	0.01436	0.00917	0.00708	0.00587	0.00505	0.00445	0.00397
3772289.70	0.01770	0.05725	0.01443	0.00924	0.00704	0.00583	0.00508	0.00446	0.00397
3772189.70	0.01775	0.05791	0.01450	0.00929	0.00709	0.00594	0.00509	0.00436	0.00387
3772089.70	0.01779	0.05827	0.01445	0.00939	0.00719	0.00588	0.00499	0.00437	0.00392
3771989.70	0.01775	0.05817	0.01434	0.00929	0.00711	0.00589	0.00503	0.00437	0.00392
3771889.70	0.01797	0.05960	0.01451	0.00931	0.00712	0.00595	0.00508	0.00442	0.00393
3771789.70	0.01880	0.05639	0.01483	0.00948	0.00721	0.00609	0.00515	0.00449	0.00399
3771689.70	0.02041	0.05574	0.01530	0.00980	0.00751	0.00626	0.00530	0.00461	0.00407
3771589.70	0.03227	0.04886	0.01581	0.01017	0.00771	0.00647	0.00547	0.00474	0.00417
3771489.70	0.02337	0.06004	0.01661	0.01051	0.00796	0.00663	0.00562	0.00488	0.00428
3771389.70	0.02311	0.06035	0.01704	0.01077	0.00835	0.00682	0.00577	0.00500	0.00438
3771289.70	0.02325	0.06009	0.01725	0.01097	0.00855	0.00699	0.00594	0.00512	0.00447

3771189.70	0.02339	0.05980	0.01743	0.01123	0.00880	0.00723	0.00614	0.00529	0.00460
3771089.70	0.02356	0.05955	0.01773	0.01160	0.00919	0.00760	0.00648	0.00557	0.00480
3770989.70	0.02376	0.05941	0.01822	0.01225	0.00991	0.00831	0.00711	0.00606	0.00512
3770889.70	0.02392	0.05956	0.01953	0.01392	0.01170	0.01010	0.00876	0.00726	0.00573
3770789.70	0.02368	0.06157	0.02906	0.02412	0.02194	0.02023	0.01859	0.01465	0.00688
3770689.70	0.02366	0.05130	0.02252	0.01800	0.01603	0.01463	0.01323	0.01056	0.00662
3770589.70	0.02314	0.04872	0.01766	0.01270	0.01065	0.00920	0.00801	0.00676	0.00555
3770489.70	0.02269	0.04787	0.01641	0.01126	0.00910	0.00770	0.00665	0.00574	0.00493
3770389.70	0.02231	0.04738	0.01577	0.01053	0.00825	0.00699	0.00601	0.00519	0.00454

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): L0000001 , L0000002 , L0000003 , L0000004 , L0000005 ,
L0000006 , L0000007 , L0000008 , L0000009 , L0000010 , L0000011 , L0000012 , L0000013 ,
L0000014 , L0000015 , L0000016 , L0000017 , L0000018 , L0000019 , L0000020 , L0000021 ,
L0000022 , L0000023 , L0000024 , L0000025 , L0000026 , L0000027 , L0000028 , . . . ,

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

** CONC OF DPM IN MICROGRAMS/M**3 **

Y-COORD (METERS)	X-COORD (METERS) 480668.21	480768.21	480868.21	480968.21	481068.21	481168.21	481268.21	481368.21	481468.21
3770289.70	0.02197	0.04697	0.01532	0.01007	0.00776	0.00655	0.00558	0.00485	0.00426
3770189.70	0.02164	0.04662	0.01494	0.00970	0.00756	0.00622	0.00529	0.00458	0.00403
3770089.70	0.02127	0.04624	0.01458	0.00934	0.00724	0.00593	0.00504	0.00436	0.00385
3769989.70	0.02079	0.04575	0.01413	0.00894	0.00687	0.00563	0.00479	0.00415	0.00368
3769889.70	0.02002	0.04497	0.01349	0.00842	0.00623	0.00524	0.00451	0.00394	0.00349
3769789.70	0.01887	0.04348	0.01243	0.00770	0.00576	0.00477	0.00418	0.00366	0.00327
3769689.70	0.01584	0.03918	0.01043	0.00662	0.00505	0.00423	0.00379	0.00335	0.00301
3769589.70	0.00896	0.01133	0.00719	0.00534	0.00431	0.00377	0.00334	0.00300	0.00271
3769489.70	0.00538	0.00551	0.00494	0.00422	0.00363	0.00324	0.00292	0.00264	0.00241
3769389.70	0.00399	0.00398	0.00378	0.00344	0.00309	0.00280	0.00257	0.00234	0.00217

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION   VALUES FOR SOURCE GROUP: ALL   ***
INCLUDING SOURCE(S):   L0000001   , L0000002   , L0000003   , L0000004   , L0000005   ,
L0000006   , L0000007   , L0000008   , L0000009   , L0000010   , L0000011   , L0000012   , L0000013   ,
L0000014   , L0000015   , L0000016   , L0000017   , L0000018   , L0000019   , L0000020   , L0000021   ,
L0000022   , L0000023   , L0000024   , L0000025   , L0000026   , L0000027   , L0000028   , . . .   ,

*** NETWORK ID: UCART1   ; NETWORK TYPE: GRIDCART ***

** CONC OF DPM   IN MICROGRAMS/M**3   **

Y-COORD (METERS)	X-COORD (METERS)		
	481568.21	481668.21	481768.21
3774289.70	0.00762	0.00558	0.00420
3774189.70	0.01763	0.00802	0.00515
3774089.70	0.02366	0.00900	0.00568
3773989.70	0.00964	0.00705	0.00528
3773889.70	0.00662	0.00539	0.00449
3773789.70	0.00526	0.00454	0.00395
3773689.70	0.00456	0.00405	0.00360
3773589.70	0.00416	0.00374	0.00337
3773489.70	0.00391	0.00348	0.00314
3773389.70	0.00365	0.00332	0.00302
3773289.70	0.00355	0.00322	0.00295
3773189.70	0.00360	0.00328	0.00301
3773089.70	0.00357	0.00325	0.00299
3772989.70	0.00355	0.00323	0.00297
3772889.70	0.00354	0.00322	0.00295
3772789.70	0.00353	0.00322	0.00296
3772689.70	0.00353	0.00322	0.00296
3772589.70	0.00354	0.00323	0.00296
3772489.70	0.00357	0.00325	0.00296
3772389.70	0.00359	0.00327	0.00294
3772289.70	0.00355	0.00316	0.00281
3772189.70	0.00352	0.00311	0.00278
3772089.70	0.00356	0.00311	0.00279
3771989.70	0.00360	0.00309	0.00281
3771889.70	0.00357	0.00313	0.00285
3771789.70	0.00354	0.00319	0.00289
3771689.70	0.00364	0.00325	0.00294
3771589.70	0.00374	0.00333	0.00300
3771489.70	0.00377	0.00339	0.00306
3771389.70	0.00388	0.00345	0.00311
3771289.70	0.00395	0.00353	0.00318

3771189.70	0.00407	0.00360	0.00323
3771089.70	0.00417	0.00369	0.00330
3770989.70	0.00437	0.00383	0.00340
3770889.70	0.00468	0.00402	0.00353
3770789.70	0.00503	0.00422	0.00367
3770689.70	0.00500	0.00423	0.00369
3770589.70	0.00464	0.00403	0.00357
3770489.70	0.00428	0.00378	0.00339
3770389.70	0.00401	0.00357	0.00322

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION   VALUES FOR SOURCE GROUP: ALL   ***
INCLUDING SOURCE(S):   L0000001   , L0000002   , L0000003   , L0000004   , L0000005   ,
L0000006   , L0000007   , L0000008   , L0000009   , L0000010   , L0000011   , L0000012   , L0000013   ,
L0000014   , L0000015   , L0000016   , L0000017   , L0000018   , L0000019   , L0000020   , L0000021   ,
L0000022   , L0000023   , L0000024   , L0000025   , L0000026   , L0000027   , L0000028   , . . .   ,

*** NETWORK ID: UCART1   ; NETWORK TYPE: GRIDCART ***

** CONC OF DPM   IN MICROGRAMS/M**3   **

Y-COORD (METERS)	X-COORD (METERS)		
	481568.21	481668.21	481768.21
3770289.70	0.00378	0.00340	0.00309
3770189.70	0.00361	0.00325	0.00296
3770089.70	0.00345	0.00312	0.00285
3769989.70	0.00330	0.00299	0.00274
3769889.70	0.00314	0.00286	0.00262
3769789.70	0.00296	0.00269	0.00248
3769689.70	0.00274	0.00251	0.00232
3769589.70	0.00241	0.00227	0.00215
3769489.70	0.00225	0.00211	0.00196
3769389.70	0.00202	0.00192	0.00176

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): L0000001 , L0000002 , L0000003 , L0000004 , L0000005 ,
L0000006 , L0000007 , L0000008 , L0000009 , L0000010 , L0000011 , L0000012 , L0000013 ,
L0000014 , L0000015 , L0000016 , L0000017 , L0000018 , L0000019 , L0000020 , L0000021 ,
L0000022 , L0000023 , L0000024 , L0000025 , L0000026 , L0000027 , L0000028 , . . . ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF DPM IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
480726.12	3770758.20	0.06152	479114.46	3769998.76	0.11302
479109.70	3769953.87	0.09159	480558.05	3774226.36	0.00667
480766.03	3771834.40	0.06444	480235.52	3771590.86	0.01901

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** THE SUMMARY OF MAXIMUM PERIOD (43848 HRS) RESULTS ***

** CONC OF DPM IN MICROGRAMS/M**3 **

GROUP ID		AVERAGE CONC		RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)					OF TYPE	NETWORK GRID-ID
ALL	1ST HIGHEST VALUE IS	0.11302 AT	(479114.46,	3769998.76,	353.00,	353.00,	0.00)	DC		
	2ND HIGHEST VALUE IS	0.09159 AT	(479109.70,	3769953.87,	353.00,	353.00,	0.00)	DC		
	3RD HIGHEST VALUE IS	0.08028 AT	(481168.21,	3774089.70,	368.00,	368.00,	0.00)	GC	UCART1	
	4TH HIGHEST VALUE IS	0.07144 AT	(481068.21,	3774089.70,	367.00,	367.00,	0.00)	GC	UCART1	
	5TH HIGHEST VALUE IS	0.06567 AT	(479168.21,	3771389.70,	352.90,	352.90,	0.00)	GC	UCART1	
	6TH HIGHEST VALUE IS	0.06518 AT	(479168.21,	3771289.70,	352.90,	352.90,	0.00)	GC	UCART1	
	7TH HIGHEST VALUE IS	0.06444 AT	(480766.03,	3771834.40,	372.00,	372.00,	0.00)	DC		
	8TH HIGHEST VALUE IS	0.06415 AT	(479168.21,	3771189.70,	352.90,	352.90,	0.00)	GC	UCART1	
	9TH HIGHEST VALUE IS	0.06392 AT	(479168.21,	3771489.70,	352.20,	352.20,	0.00)	GC	UCART1	
	10TH HIGHEST VALUE IS	0.06293 AT	(479168.21,	3771089.70,	352.90,	352.90,	0.00)	GC	UCART1	

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** Message Summary : AERMOD Model Execution ***

 --------- Summary of Total Messages --------

A Total of   0 Fatal Error Message(s)
A Total of   2 Warning Message(s)
A Total of   388 Informational Message(s)

A Total of   43848 Hours Were Processed

A Total of   191 Calm Hours Identified

A Total of   197 Missing Hours Identified (0.45 Percent)

   ******** FATAL ERROR MESSAGES ********
              *** NONE ***

   ********   WARNING MESSAGES   ********
ME W186   2419   MEOPEN: THRESH_1MIN 1-min ASOS wind speed threshold used   0.50
ME W187   2419   MEOPEN: ADJ_U* Option for Low Winds used in AERMET

   ****
   *** AERMOD Finishes Successfully ***
   ****

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**
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**
** AERMOD Input Produced by:
** AERMOD View Ver. 9.5.0
** Lakes Environmental Software Inc.
** Date: 4/5/2018
** File: C:\Users\eliza\Desktop\Duke  Alabama\ExistingAB2\ExistingAB2.ADI
**
**************************************
**
**
**************************************
** AERMOD Control Pathway
**************************************
**
**
CO STARTING
   TITLEONE Duke Warehouse at Alabama and Palmetto
   TITLETWO Existing DPM Concentrations (2018) - AB2
   MODELOPT DFAULT CONC
   AVERTIME PERIOD
   URBANOPT 2035210 San_Bernardino_County
   POLLUTID DPM
   RUNORNOT RUN
   ERRORFIL ExistingAB2.err
CO FINISHED
**
**************************************
** AERMOD Source Pathway
**************************************
**
**
SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **
** ----------------------------------------------------------------------
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE1
** DESCRSRC 5th St b/n Alabama St and SR-210
** PREFIX
** Length of Side = 8.59
** Configuration = Adjacent
** Emission Rate = 0.0005022
** Vertical Dimension = 6.99
** SZINIT = 3.25
** Nodes = 4
** 480745.401, 3774134.486, 363.46, 3.49, 4.00
** 481061.555, 3774108.608, 366.99, 3.49, 4.00
** 481153.813, 3774104.108, 367.98, 3.49, 4.00
** 481576.850, 3774134.486, 372.13, 3.49, 4.00
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** ----------------------------------------------------------------------
   LOCATION L0002988     VOLUME   480749.682 3774134.135 363.66
   LOCATION L0002989     VOLUME   480758.243 3774133.434 363.94
   LOCATION L0002990     VOLUME   480766.805 3774132.734 364.00
   LOCATION L0002991     VOLUME   480775.366 3774132.033 364.00
   LOCATION L0002992     VOLUME   480783.927 3774131.332 364.00
   LOCATION L0002993     VOLUME   480792.489 3774130.631 364.00
   LOCATION L0002994     VOLUME   480801.050 3774129.931 364.00
   LOCATION L0002995     VOLUME   480809.612 3774129.230 364.00
   LOCATION L0002996     VOLUME   480818.173 3774128.529 364.00
   LOCATION L0002997     VOLUME   480826.734 3774127.828 364.06
   LOCATION L0002998     VOLUME   480835.296 3774127.128 364.16
   LOCATION L0002999     VOLUME   480843.857 3774126.427 364.26
   LOCATION L0003000     VOLUME   480852.418 3774125.726 364.41
   LOCATION L0003001     VOLUME   480860.980 3774125.025 364.61
   LOCATION L0003002     VOLUME   480869.541 3774124.325 364.79
   LOCATION L0003003     VOLUME   480878.103 3774123.624 364.97
   LOCATION L0003004     VOLUME   480886.664 3774122.923 365.00
   LOCATION L0003005     VOLUME   480895.225 3774122.222 365.00
   LOCATION L0003006     VOLUME   480903.787 3774121.522 365.00
   LOCATION L0003007     VOLUME   480912.348 3774120.821 365.00
   LOCATION L0003008     VOLUME   480920.909 3774120.120 365.00
   LOCATION L0003009     VOLUME   480929.471 3774119.419 365.00
   LOCATION L0003010     VOLUME   480938.032 3774118.719 365.00
   LOCATION L0003011     VOLUME   480946.593 3774118.018 365.22
   LOCATION L0003012     VOLUME   480955.155 3774117.317 365.51
   LOCATION L0003013     VOLUME   480963.716 3774116.616 365.79
   LOCATION L0003014     VOLUME   480972.278 3774115.916 366.00
   LOCATION L0003015     VOLUME   480980.839 3774115.215 366.00
   LOCATION L0003016     VOLUME   480989.400 3774114.514 366.00
   LOCATION L0003017     VOLUME   480997.962 3774113.813 366.00
   LOCATION L0003018     VOLUME   481006.523 3774113.113 366.00
   LOCATION L0003019     VOLUME   481015.084 3774112.412 366.00
   LOCATION L0003020     VOLUME   481023.646 3774111.711 366.00
   LOCATION L0003021     VOLUME   481032.207 3774111.010 366.08
   LOCATION L0003022     VOLUME   481040.769 3774110.310 366.36
   LOCATION L0003023     VOLUME   481049.330 3774109.609 366.65
   LOCATION L0003024     VOLUME   481057.891 3774108.908 366.93
   LOCATION L0003025     VOLUME   481066.463 3774108.369 367.00
   LOCATION L0003026     VOLUME   481075.043 3774107.950 367.00
   LOCATION L0003027     VOLUME   481083.623 3774107.532 367.00
   LOCATION L0003028     VOLUME   481092.203 3774107.113 367.00
   LOCATION L0003029     VOLUME   481100.782 3774106.695 367.00
   LOCATION L0003030     VOLUME   481109.362 3774106.276 367.00
   LOCATION L0003031     VOLUME   481117.942 3774105.858 367.01
   LOCATION L0003032     VOLUME   481126.522 3774105.439 367.24
   LOCATION L0003033     VOLUME   481135.102 3774105.021 367.53
   LOCATION L0003034     VOLUME   481143.681 3774104.602 367.80
   LOCATION L0003035     VOLUME   481152.261 3774104.184 368.00
   LOCATION L0003036     VOLUME   481160.831 3774104.612 368.00
   LOCATION L0003037     VOLUME   481169.399 3774105.227 368.00
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   LOCATION L0003038     VOLUME   481177.967 3774105.842 368.00
   LOCATION L0003039     VOLUME   481186.535 3774106.458 368.00
   LOCATION L0003040     VOLUME   481195.103 3774107.073 368.00
   LOCATION L0003041     VOLUME   481203.671 3774107.688 368.00
   LOCATION L0003042     VOLUME   481212.239 3774108.303 368.08
   LOCATION L0003043     VOLUME   481220.807 3774108.919 368.36
   LOCATION L0003044     VOLUME   481229.375 3774109.534 368.65
   LOCATION L0003045     VOLUME   481237.943 3774110.149 368.93
   LOCATION L0003046     VOLUME   481246.511 3774110.764 369.00
   LOCATION L0003047     VOLUME   481255.079 3774111.380 369.00
   LOCATION L0003048     VOLUME   481263.647 3774111.995 369.00
   LOCATION L0003049     VOLUME   481272.214 3774112.610 369.00
   LOCATION L0003050     VOLUME   481280.782 3774113.225 369.00
   LOCATION L0003051     VOLUME   481289.350 3774113.841 369.00
   LOCATION L0003052     VOLUME   481297.918 3774114.456 369.00
   LOCATION L0003053     VOLUME   481306.486 3774115.071 369.22
   LOCATION L0003054     VOLUME   481315.054 3774115.686 369.50
   LOCATION L0003055     VOLUME   481323.622 3774116.302 369.79
   LOCATION L0003056     VOLUME   481332.190 3774116.917 370.00
   LOCATION L0003057     VOLUME   481340.758 3774117.532 370.00
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** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE2
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** Configuration = Adjacent
** Emission Rate = 0.0001364
** Vertical Dimension = 6.99
** SZINIT = 3.25
** Nodes = 4
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LOCATION L0003205     VOLUME   480174.418 3771578.971 364.48
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** End of LINE VOLUME Source ID = SLINE2
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** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE3
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** Configuration = Adjacent
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** SZINIT = 3.25
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   LOCATION L0003323     VOLUME   481182.180 3770753.522 381.08
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   LOCATION L0003327     VOLUME   481216.539 3770753.380 382.00
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** End of LINE VOLUME Source ID = SLINE3
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** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE4
** DESCRSRC California St b/n Palmetto Ave and I-10
** PREFIX
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** Configuration = Adjacent
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** Vertical Dimension = 6.99
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LOCATION L0003653     VOLUME   480748.606 3773460.059 362.62
LOCATION L0003654     VOLUME   480748.628 3773451.469 362.62
LOCATION L0003655     VOLUME   480748.650 3773442.879 362.55
LOCATION L0003656     VOLUME   480748.672 3773434.289 362.38
LOCATION L0003657     VOLUME   480748.693 3773425.699 362.20
LOCATION L0003658     VOLUME   480748.715 3773417.109 362.02
LOCATION L0003659     VOLUME   480748.737 3773408.520 362.00
LOCATION L0003660     VOLUME   480748.759 3773399.930 362.00
LOCATION L0003661     VOLUME   480748.781 3773391.340 362.00
LOCATION L0003662     VOLUME   480748.802 3773382.750 362.00
LOCATION L0003663     VOLUME   480748.824 3773374.160 362.00
LOCATION L0003664     VOLUME   480748.846 3773365.570 362.00
LOCATION L0003665     VOLUME   480748.868 3773356.980 362.00
LOCATION L0003666     VOLUME   480748.890 3773348.390 362.00
LOCATION L0003667     VOLUME   480748.911 3773339.800 362.00
LOCATION L0003668     VOLUME   480748.933 3773331.210 362.00
LOCATION L0003669     VOLUME   480748.955 3773322.620 362.00
LOCATION L0003670     VOLUME   480748.977 3773314.030 362.00
LOCATION L0003671     VOLUME   480748.999 3773305.440 362.00
LOCATION L0003672     VOLUME   480749.020 3773296.850 362.00
LOCATION L0003673     VOLUME   480749.042 3773288.260 362.00
LOCATION L0003674     VOLUME   480749.064 3773279.670 362.00
LOCATION L0003675     VOLUME   480749.086 3773271.080 362.00
LOCATION L0003676     VOLUME   480749.108 3773262.490 362.00
LOCATION L0003677     VOLUME   480749.129 3773253.900 362.00
LOCATION L0003678     VOLUME   480749.151 3773245.310 362.00
LOCATION L0003679     VOLUME   480749.173 3773236.720 362.00
LOCATION L0003680     VOLUME   480749.195 3773228.130 362.00
LOCATION L0003681     VOLUME   480749.217 3773219.540 362.00
LOCATION L0003682     VOLUME   480749.238 3773210.950 362.00
LOCATION L0003683     VOLUME   480749.260 3773202.360 362.00
LOCATION L0003684     VOLUME   480749.282 3773193.770 362.00
LOCATION L0003685     VOLUME   480749.304 3773185.180 362.00
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LOCATION L0003687     VOLUME   480749.347 3773168.000 361.90
LOCATION L0003688     VOLUME   480749.369 3773159.410 361.80
LOCATION L0003689     VOLUME   480749.391 3773150.820 361.70
LOCATION L0003690     VOLUME   480749.413 3773142.230 361.65
LOCATION L0003691     VOLUME   480749.435 3773133.640 361.65
LOCATION L0003692     VOLUME   480749.456 3773125.050 361.65
LOCATION L0003693     VOLUME   480749.478 3773116.460 361.65
LOCATION L0003694     VOLUME   480749.500 3773107.870 361.65
LOCATION L0003695     VOLUME   480749.522 3773099.281 361.65
LOCATION L0003696     VOLUME   480749.544 3773090.691 361.65
LOCATION L0003697     VOLUME   480749.565 3773082.101 361.66
LOCATION L0003698     VOLUME   480749.587 3773073.511 361.66
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LOCATION L0003700     VOLUME   480749.631 3773056.331 361.66
LOCATION L0003701     VOLUME   480749.652 3773047.741 361.66
LOCATION L0003702     VOLUME   480749.674 3773039.151 361.66
LOCATION L0003703     VOLUME   480749.696 3773030.561 361.66
LOCATION L0003704     VOLUME   480749.718 3773021.971 361.66
LOCATION L0003705     VOLUME   480749.740 3773013.381 361.66
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LOCATION L0003714     VOLUME   480749.936 3772936.071 361.67
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LOCATION L0003716     VOLUME   480749.979 3772918.891 361.67
LOCATION L0003717     VOLUME   480750.001 3772910.301 361.67
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LOCATION L0003721     VOLUME   480750.088 3772875.941 361.67
LOCATION L0003722     VOLUME   480750.110 3772867.351 361.67
LOCATION L0003723     VOLUME   480750.132 3772858.761 361.67
LOCATION L0003724     VOLUME   480750.154 3772850.171 361.68
LOCATION L0003725     VOLUME   480750.176 3772841.581 361.68
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LOCATION L0003727     VOLUME   480750.219 3772824.401 361.68
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LOCATION L0003729     VOLUME   480750.263 3772807.221 361.68
LOCATION L0003730     VOLUME   480750.285 3772798.631 361.68
LOCATION L0003731     VOLUME   480750.306 3772790.042 361.68
LOCATION L0003732     VOLUME   480750.328 3772781.452 361.68
LOCATION L0003733     VOLUME   480750.350 3772772.862 361.68
LOCATION L0003734     VOLUME   480750.372 3772764.272 361.68
LOCATION L0003735     VOLUME   480750.394 3772755.682 361.68
LOCATION L0003736     VOLUME   480750.415 3772747.092 361.68
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LOCATION L0003738     VOLUME   480750.459 3772729.912 361.69
LOCATION L0003739     VOLUME   480750.481 3772721.322 361.69
LOCATION L0003740     VOLUME   480750.502 3772712.732 361.69
LOCATION L0003741     VOLUME   480750.524 3772704.142 361.69
LOCATION L0003742     VOLUME   480750.546 3772695.552 361.69
LOCATION L0003743     VOLUME   480750.568 3772686.962 361.69
LOCATION L0003744     VOLUME   480750.590 3772678.372 361.69
LOCATION L0003745     VOLUME   480750.611 3772669.782 361.69
LOCATION L0003746     VOLUME   480750.633 3772661.192 361.57
LOCATION L0003747     VOLUME   480750.655 3772652.602 361.38
LOCATION L0003748     VOLUME   480750.677 3772644.012 361.18
LOCATION L0003749     VOLUME   480750.699 3772635.422 361.00
LOCATION L0003750     VOLUME   480750.720 3772626.832 361.00
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LOCATION L0003756     VOLUME   480750.851 3772575.292 360.99
LOCATION L0003757     VOLUME   480750.873 3772566.702 360.90
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LOCATION L0003759     VOLUME   480750.917 3772549.522 360.73
LOCATION L0003760     VOLUME   480750.938 3772540.932 360.70
LOCATION L0003761     VOLUME   480750.960 3772532.342 360.70
LOCATION L0003762     VOLUME   480750.982 3772523.752 360.70
LOCATION L0003763     VOLUME   480751.004 3772515.162 360.68
LOCATION L0003764     VOLUME   480751.026 3772506.572 360.48
LOCATION L0003765     VOLUME   480751.047 3772497.982 360.28
LOCATION L0003766     VOLUME   480751.069 3772489.392 360.07
LOCATION L0003767     VOLUME   480751.091 3772480.803 360.13
LOCATION L0003768     VOLUME   480751.113 3772472.213 360.33
LOCATION L0003769     VOLUME   480751.135 3772463.623 360.53
LOCATION L0003770     VOLUME   480751.156 3772455.033 360.71
LOCATION L0003771     VOLUME   480751.178 3772446.443 360.71
LOCATION L0003772     VOLUME   480751.200 3772437.853 360.71
LOCATION L0003773     VOLUME   480751.222 3772429.263 360.71
LOCATION L0003774     VOLUME   480751.244 3772420.673 360.90
LOCATION L0003775     VOLUME   480751.265 3772412.083 361.19
LOCATION L0003776     VOLUME   480751.287 3772403.493 361.47
LOCATION L0003777     VOLUME   480751.309 3772394.903 361.71
LOCATION L0003778     VOLUME   480751.331 3772386.313 361.71
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LOCATION L0003780     VOLUME   480751.374 3772369.133 361.72
LOCATION L0003781     VOLUME   480751.396 3772360.543 361.77
LOCATION L0003782     VOLUME   480751.418 3772351.953 361.85
LOCATION L0003783     VOLUME   480751.440 3772343.363 361.93
LOCATION L0003784     VOLUME   480751.461 3772334.773 362.04
LOCATION L0003785     VOLUME   480751.483 3772326.183 362.24
LOCATION L0003786     VOLUME   480751.505 3772317.593 362.45
LOCATION L0003787     VOLUME   480751.527 3772309.003 362.66
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LOCATION L0003789     VOLUME   480751.570 3772291.823 362.86
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LOCATION L0003791     VOLUME   480751.614 3772274.643 363.00
LOCATION L0003792     VOLUME   480751.636 3772266.053 363.00
LOCATION L0003793     VOLUME   480751.658 3772257.463 363.00
LOCATION L0003794     VOLUME   480751.679 3772248.873 363.00
LOCATION L0003795     VOLUME   480751.701 3772240.283 363.15
LOCATION L0003796     VOLUME   480751.723 3772231.693 363.35
LOCATION L0003797     VOLUME   480751.745 3772223.103 363.56
LOCATION L0003798     VOLUME   480751.767 3772214.513 363.74
LOCATION L0003799     VOLUME   480751.788 3772205.923 363.82
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LOCATION L0003801     VOLUME   480751.832 3772188.743 363.98
LOCATION L0003802     VOLUME   480751.854 3772180.153 364.00
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LOCATION L0003805     VOLUME   480751.919 3772154.384 364.05
LOCATION L0003806     VOLUME   480751.941 3772145.794 364.26
LOCATION L0003807     VOLUME   480751.963 3772137.204 364.47
LOCATION L0003808     VOLUME   480751.985 3772128.614 364.68
LOCATION L0003809     VOLUME   480752.006 3772120.024 364.79
LOCATION L0003810     VOLUME   480752.028 3772111.434 364.87
LOCATION L0003811     VOLUME   480752.050 3772102.844 364.94
LOCATION L0003812     VOLUME   480752.072 3772094.254 365.05
LOCATION L0003813     VOLUME   480752.094 3772085.664 365.26
LOCATION L0003814     VOLUME   480752.115 3772077.074 365.47
LOCATION L0003815     VOLUME   480752.137 3772068.484 365.69
LOCATION L0003816     VOLUME   480752.159 3772059.894 365.95
LOCATION L0003817     VOLUME   480752.181 3772051.304 366.24
LOCATION L0003818     VOLUME   480752.203 3772042.714 366.53
LOCATION L0003819     VOLUME   480752.224 3772034.124 366.94
LOCATION L0003820     VOLUME   480752.246 3772025.534 367.73
LOCATION L0003821     VOLUME   480752.268 3772016.944 368.52
LOCATION L0003822     VOLUME   480752.290 3772008.354 369.30
LOCATION L0003823     VOLUME   480752.311 3771999.764 369.77
LOCATION L0003824     VOLUME   480752.333 3771991.174 370.13
LOCATION L0003825     VOLUME   480752.355 3771982.584 370.49
LOCATION L0003826     VOLUME   480752.377 3771973.994 370.75
LOCATION L0003827     VOLUME   480752.399 3771965.404 370.75
LOCATION L0003828     VOLUME   480752.420 3771956.814 370.75
LOCATION L0003829     VOLUME   480752.442 3771948.224 370.75
LOCATION L0003830     VOLUME   480752.464 3771939.634 370.97
LOCATION L0003831     VOLUME   480752.486 3771931.044 371.26
LOCATION L0003832     VOLUME   480752.508 3771922.454 371.55
LOCATION L0003833     VOLUME   480752.529 3771913.864 371.75
LOCATION L0003834     VOLUME   480752.551 3771905.274 371.76
LOCATION L0003835     VOLUME   480752.573 3771896.684 371.76
LOCATION L0003836     VOLUME   480752.595 3771888.094 371.76
LOCATION L0003837     VOLUME   480752.617 3771879.504 371.76
LOCATION L0003838     VOLUME   480752.638 3771870.914 371.76
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   LOCATION L0003839     VOLUME   480752.660 3771862.324 371.76
   LOCATION L0003840     VOLUME   480752.682 3771853.735 371.76
   LOCATION L0003841     VOLUME   480752.704 3771845.145 371.76
   LOCATION L0003842     VOLUME   480752.726 3771836.555 371.76
   LOCATION L0003843     VOLUME   480752.747 3771827.965 371.76
   LOCATION L0003844     VOLUME   480752.769 3771819.375 371.76
** End of LINE VOLUME Source ID = SLINE5
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** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE6
** DESCRSRC Alabama St b/n River Bluff Ave and Palmetto Ave
** PREFIX
** Length of Side = 8.59
** Configuration = Adjacent
** Emission Rate = 0.0001022
** Vertical Dimension = 6.99
** SZINIT = 3.25
** Nodes = 2
** 480750.988, 3771810.041, 371.84, 3.49, 4.00
** 480747.435, 3771585.792, 372.96, 3.49, 4.00
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   LOCATION L0003846     VOLUME   480750.784 3771797.158 371.70
   LOCATION L0003847     VOLUME   480750.647 3771788.569 371.69
   LOCATION L0003848     VOLUME   480750.511 3771779.980 371.69
   LOCATION L0003849     VOLUME   480750.375 3771771.391 371.68
   LOCATION L0003850     VOLUME   480750.239 3771762.802 371.72
   LOCATION L0003851     VOLUME   480750.103 3771754.213 371.80
   LOCATION L0003852     VOLUME   480749.967 3771745.624 371.90
   LOCATION L0003853     VOLUME   480749.831 3771737.035 371.99
   LOCATION L0003854     VOLUME   480749.695 3771728.446 372.00
   LOCATION L0003855     VOLUME   480749.559 3771719.857 372.00
   LOCATION L0003856     VOLUME   480749.423 3771711.268 372.00
   LOCATION L0003857     VOLUME   480749.287 3771702.679 372.08
   LOCATION L0003858     VOLUME   480749.151 3771694.090 372.26
   LOCATION L0003859     VOLUME   480749.015 3771685.502 372.44
   LOCATION L0003860     VOLUME   480748.879 3771676.913 372.62
   LOCATION L0003861     VOLUME   480748.743 3771668.324 372.63
   LOCATION L0003862     VOLUME   480748.607 3771659.735 372.62
   LOCATION L0003863     VOLUME   480748.470 3771651.146 372.62
   LOCATION L0003864     VOLUME   480748.334 3771642.557 372.66
   LOCATION L0003865     VOLUME   480748.198 3771633.968 372.77
   LOCATION L0003866     VOLUME   480748.062 3771625.379 372.88
   LOCATION L0003867     VOLUME   480747.926 3771616.790 372.99
   LOCATION L0003868     VOLUME   480747.790 3771608.201 373.00
   LOCATION L0003869     VOLUME   480747.654 3771599.612 373.00
   LOCATION L0003870     VOLUME   480747.518 3771591.023 373.00
** End of LINE VOLUME Source ID = SLINE6
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** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE7
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** DESCRSRC Alabama St b/n Palmetto Ave and San Bernardino Ave
** PREFIX
** Length of Side = 8.59
** Configuration = Adjacent
** Emission Rate = 0.0004337
** Vertical Dimension = 6.99
** SZINIT = 3.25
** Nodes = 2
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** 480745.027, 3770777.988, 373.95, 3.49, 4.00
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   LOCATION L0003873     VOLUME   480746.974 3771547.303 373.00
   LOCATION L0003874     VOLUME   480746.953 3771538.713 373.00
   LOCATION L0003875     VOLUME   480746.931 3771530.123 373.00
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   LOCATION L0003878     VOLUME   480746.866 3771504.353 373.41
   LOCATION L0003879     VOLUME   480746.844 3771495.763 373.56
   LOCATION L0003880     VOLUME   480746.822 3771487.173 373.56
   LOCATION L0003881     VOLUME   480746.801 3771478.583 373.56
   LOCATION L0003882     VOLUME   480746.779 3771469.993 373.56
   LOCATION L0003883     VOLUME   480746.757 3771461.403 373.56
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   LOCATION L0003892     VOLUME   480746.561 3771384.093 373.56
   LOCATION L0003893     VOLUME   480746.540 3771375.504 373.57
   LOCATION L0003894     VOLUME   480746.518 3771366.914 373.69
   LOCATION L0003895     VOLUME   480746.496 3771358.324 373.82
   LOCATION L0003896     VOLUME   480746.474 3771349.734 373.95
   LOCATION L0003897     VOLUME   480746.453 3771341.144 374.00
   LOCATION L0003898     VOLUME   480746.431 3771332.554 374.00
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   LOCATION L0003900     VOLUME   480746.387 3771315.374 374.00
   LOCATION L0003901     VOLUME   480746.366 3771306.784 374.00
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   LOCATION L0003903     VOLUME   480746.322 3771289.604 374.00
   LOCATION L0003904     VOLUME   480746.300 3771281.014 374.00
   LOCATION L0003905     VOLUME   480746.279 3771272.424 374.00
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   LOCATION L0003907     VOLUME   480746.235 3771255.244 374.00
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   LOCATION L0003910     VOLUME   480746.170 3771229.474 374.00
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LOCATION L0003912     VOLUME   480746.126 3771212.294 374.00
LOCATION L0003913     VOLUME   480746.105 3771203.704 374.00
LOCATION L0003914     VOLUME   480746.083 3771195.114 374.00
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LOCATION L0003936     VOLUME   480745.605 3771006.135 374.00
LOCATION L0003937     VOLUME   480745.583 3770997.545 374.00
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LOCATION L0003939     VOLUME   480745.539 3770980.365 374.00
LOCATION L0003940     VOLUME   480745.518 3770971.775 374.00
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LOCATION L0003946     VOLUME   480745.387 3770920.235 374.00
LOCATION L0003947     VOLUME   480745.365 3770911.645 374.00
LOCATION L0003948     VOLUME   480745.344 3770903.055 374.00
LOCATION L0003949     VOLUME   480745.322 3770894.465 374.00
LOCATION L0003950     VOLUME   480745.300 3770885.875 374.00
LOCATION L0003951     VOLUME   480745.278 3770877.285 374.00
LOCATION L0003952     VOLUME   480745.257 3770868.695 374.00
LOCATION L0003953     VOLUME   480745.235 3770860.105 374.00
LOCATION L0003954     VOLUME   480745.213 3770851.515 374.00
LOCATION L0003955     VOLUME   480745.191 3770842.925 374.00
LOCATION L0003956     VOLUME   480745.170 3770834.335 374.00
LOCATION L0003957     VOLUME   480745.148 3770825.745 374.00
LOCATION L0003958     VOLUME   480745.126 3770817.155 374.00
LOCATION L0003959     VOLUME   480745.105 3770808.565 374.00
LOCATION L0003960     VOLUME   480745.083 3770799.975 374.00
LOCATION L0003961     VOLUME   480745.061 3770791.385 374.00
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   LOCATION L0003962     VOLUME   480745.039 3770782.795 374.00
** End of LINE VOLUME Source ID = SLINE7
** ----------------------------------------------------------------
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE8
** DESCRSRC Alabama St b/n San Bernardino Ave and I-10
** PREFIX
** Length of Side = 8.59
** Configuration = Adjacent
** Emission Rate = 0.0005583
** Vertical Dimension = 6.99
** SZINIT = 3.25
** Nodes = 2
** 480741.352, 3770758.508, 373.92, 3.49, 4.00
** 480741.352, 3769636.638, 378.00, 3.49, 4.00
** ----------------------------------------------------------------
   LOCATION L0003963     VOLUME   480741.352 3770754.213 374.00
   LOCATION L0003964     VOLUME   480741.352 3770745.623 374.00
   LOCATION L0003965     VOLUME   480741.352 3770737.033 374.00
   LOCATION L0003966     VOLUME   480741.352 3770728.443 374.00
   LOCATION L0003967     VOLUME   480741.352 3770719.853 374.00
   LOCATION L0003968     VOLUME   480741.352 3770711.263 374.00
   LOCATION L0003969     VOLUME   480741.352 3770702.673 374.00
   LOCATION L0003970     VOLUME   480741.352 3770694.083 374.00
   LOCATION L0003971     VOLUME   480741.352 3770685.493 374.00
   LOCATION L0003972     VOLUME   480741.352 3770676.903 374.00
   LOCATION L0003973     VOLUME   480741.352 3770668.313 374.00
   LOCATION L0003974     VOLUME   480741.352 3770659.723 374.00
   LOCATION L0003975     VOLUME   480741.352 3770651.133 374.07
   LOCATION L0003976     VOLUME   480741.352 3770642.543 374.17
   LOCATION L0003977     VOLUME   480741.352 3770633.953 374.28
   LOCATION L0003978     VOLUME   480741.352 3770625.363 374.38
   LOCATION L0003979     VOLUME   480741.352 3770616.773 374.38
   LOCATION L0003980     VOLUME   480741.352 3770608.183 374.38
   LOCATION L0003981     VOLUME   480741.352 3770599.593 374.38
   LOCATION L0003982     VOLUME   480741.352 3770591.003 374.38
   LOCATION L0003983     VOLUME   480741.352 3770582.413 374.38
   LOCATION L0003984     VOLUME   480741.352 3770573.823 374.38
   LOCATION L0003985     VOLUME   480741.352 3770565.233 374.38
   LOCATION L0003986     VOLUME   480741.352 3770556.643 374.38
   LOCATION L0003987     VOLUME   480741.352 3770548.053 374.38
   LOCATION L0003988     VOLUME   480741.352 3770539.463 374.38
   LOCATION L0003989     VOLUME   480741.352 3770530.873 374.38
   LOCATION L0003990     VOLUME   480741.352 3770522.283 374.38
   LOCATION L0003991     VOLUME   480741.352 3770513.693 374.38
   LOCATION L0003992     VOLUME   480741.352 3770505.103 374.38
   LOCATION L0003993     VOLUME   480741.352 3770496.513 374.38
   LOCATION L0003994     VOLUME   480741.352 3770487.923 374.38
   LOCATION L0003995     VOLUME   480741.352 3770479.333 374.38
   LOCATION L0003996     VOLUME   480741.352 3770470.743 374.50
   LOCATION L0003997     VOLUME   480741.352 3770462.153 374.67
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LOCATION L0003998     VOLUME   480741.352 3770453.563 374.85
LOCATION L0003999     VOLUME   480741.352 3770444.973 375.00
LOCATION L0004000     VOLUME   480741.352 3770436.383 375.00
LOCATION L0004001     VOLUME   480741.352 3770427.793 375.00
LOCATION L0004002     VOLUME   480741.352 3770419.203 375.00
LOCATION L0004003     VOLUME   480741.352 3770410.613 375.00
LOCATION L0004004     VOLUME   480741.352 3770402.023 375.00
LOCATION L0004005     VOLUME   480741.352 3770393.433 375.00
LOCATION L0004006     VOLUME   480741.352 3770384.843 375.02
LOCATION L0004007     VOLUME   480741.352 3770376.253 375.13
LOCATION L0004008     VOLUME   480741.352 3770367.663 375.24
LOCATION L0004009     VOLUME   480741.352 3770359.073 375.35
LOCATION L0004010     VOLUME   480741.352 3770350.483 375.38
LOCATION L0004011     VOLUME   480741.352 3770341.893 375.38
LOCATION L0004012     VOLUME   480741.352 3770333.303 375.38
LOCATION L0004013     VOLUME   480741.352 3770324.713 375.38
LOCATION L0004014     VOLUME   480741.352 3770316.123 375.38
LOCATION L0004015     VOLUME   480741.352 3770307.533 375.38
LOCATION L0004016     VOLUME   480741.352 3770298.943 375.38
LOCATION L0004017     VOLUME   480741.352 3770290.353 375.38
LOCATION L0004018     VOLUME   480741.352 3770281.763 375.38
LOCATION L0004019     VOLUME   480741.352 3770273.173 375.38
LOCATION L0004020     VOLUME   480741.352 3770264.583 375.38
LOCATION L0004021     VOLUME   480741.352 3770255.993 375.38
LOCATION L0004022     VOLUME   480741.352 3770247.403 375.38
LOCATION L0004023     VOLUME   480741.352 3770238.813 375.38
LOCATION L0004024     VOLUME   480741.352 3770230.223 375.38
LOCATION L0004025     VOLUME   480741.352 3770221.633 375.38
LOCATION L0004026     VOLUME   480741.352 3770213.043 375.38
LOCATION L0004027     VOLUME   480741.352 3770204.453 375.38
LOCATION L0004028     VOLUME   480741.352 3770195.863 375.38
LOCATION L0004029     VOLUME   480741.352 3770187.273 375.38
LOCATION L0004030     VOLUME   480741.352 3770178.683 375.38
LOCATION L0004031     VOLUME   480741.352 3770170.093 375.38
LOCATION L0004032     VOLUME   480741.352 3770161.503 375.38
LOCATION L0004033     VOLUME   480741.352 3770152.913 375.38
LOCATION L0004034     VOLUME   480741.352 3770144.323 375.38
LOCATION L0004035     VOLUME   480741.352 3770135.733 375.38
LOCATION L0004036     VOLUME   480741.352 3770127.143 375.38
LOCATION L0004037     VOLUME   480741.352 3770118.553 375.38
LOCATION L0004038     VOLUME   480741.352 3770109.963 375.38
LOCATION L0004039     VOLUME   480741.352 3770101.373 375.38
LOCATION L0004040     VOLUME   480741.352 3770092.783 375.38
LOCATION L0004041     VOLUME   480741.352 3770084.193 375.38
LOCATION L0004042     VOLUME   480741.352 3770075.603 375.38
LOCATION L0004043     VOLUME   480741.352 3770067.013 375.38
LOCATION L0004044     VOLUME   480741.352 3770058.423 375.38
LOCATION L0004045     VOLUME   480741.352 3770049.833 375.38
LOCATION L0004046     VOLUME   480741.352 3770041.243 375.38
LOCATION L0004047     VOLUME   480741.352 3770032.653 375.38
LOCATION L0004048     VOLUME   480741.352 3770024.063 375.38
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   LOCATION L0004049     VOLUME   480741.352 3770015.473 375.38
   LOCATION L0004050     VOLUME   480741.352 3770006.883 375.38
   LOCATION L0004051     VOLUME   480741.352 3769998.293 375.38
   LOCATION L0004052     VOLUME   480741.352 3769989.703 375.38
   LOCATION L0004053     VOLUME   480741.352 3769981.113 375.38
   LOCATION L0004054     VOLUME   480741.352 3769972.523 375.38
   LOCATION L0004055     VOLUME   480741.352 3769963.933 375.38
   LOCATION L0004056     VOLUME   480741.352 3769955.343 375.38
   LOCATION L0004057     VOLUME   480741.352 3769946.753 375.38
   LOCATION L0004058     VOLUME   480741.352 3769938.163 375.38
   LOCATION L0004059     VOLUME   480741.352 3769929.573 375.38
   LOCATION L0004060     VOLUME   480741.352 3769920.983 375.38
   LOCATION L0004061     VOLUME   480741.352 3769912.393 375.38
   LOCATION L0004062     VOLUME   480741.352 3769903.803 375.43
   LOCATION L0004063     VOLUME   480741.352 3769895.213 375.61
   LOCATION L0004064     VOLUME   480741.352 3769886.623 375.79
   LOCATION L0004065     VOLUME   480741.352 3769878.033 375.96
   LOCATION L0004066     VOLUME   480741.352 3769869.443 376.09
   LOCATION L0004067     VOLUME   480741.352 3769860.853 376.20
   LOCATION L0004068     VOLUME   480741.352 3769852.263 376.31
   LOCATION L0004069     VOLUME   480741.352 3769843.673 376.52
   LOCATION L0004070     VOLUME   480741.352 3769835.083 376.99
   LOCATION L0004071     VOLUME   480741.352 3769826.493 377.45
   LOCATION L0004072     VOLUME   480741.352 3769817.903 377.91
   LOCATION L0004073     VOLUME   480741.352 3769809.313 378.00
   LOCATION L0004074     VOLUME   480741.352 3769800.723 378.00
   LOCATION L0004075     VOLUME   480741.352 3769792.133 378.00
   LOCATION L0004076     VOLUME   480741.352 3769783.543 378.00
   LOCATION L0004077     VOLUME   480741.352 3769774.953 378.00
   LOCATION L0004078     VOLUME   480741.352 3769766.363 378.00
   LOCATION L0004079     VOLUME   480741.352 3769757.773 378.00
   LOCATION L0004080     VOLUME   480741.352 3769749.183 378.00
   LOCATION L0004081     VOLUME   480741.352 3769740.593 378.00
   LOCATION L0004082     VOLUME   480741.352 3769732.003 378.00
   LOCATION L0004083     VOLUME   480741.352 3769723.413 378.00
   LOCATION L0004084     VOLUME   480741.352 3769714.823 378.00
   LOCATION L0004085     VOLUME   480741.352 3769706.233 378.00
   LOCATION L0004086     VOLUME   480741.352 3769697.643 378.00
   LOCATION L0004087     VOLUME   480741.352 3769689.053 378.00
   LOCATION L0004088     VOLUME   480741.352 3769680.463 378.00
   LOCATION L0004089     VOLUME   480741.352 3769671.873 378.00
   LOCATION L0004090     VOLUME   480741.352 3769663.283 378.00
   LOCATION L0004091     VOLUME   480741.352 3769654.693 378.00
   LOCATION L0004092     VOLUME   480741.352 3769646.103 378.00
   LOCATION L0004093     VOLUME   480741.352 3769637.513 378.00
** End of LINE VOLUME Source ID = SLINE8
** Source Parameters **
** LINE VOLUME Source ID = SLINE1
   SRCPARAM L0002988     0.000005177      3.49      4.00      3.25
   SRCPARAM L0002989     0.000005177      3.49      4.00      3.25
   SRCPARAM L0002990     0.000005177      3.49      4.00      3.25
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SRCPARAM L0002991     0.000005177      3.49      4.00      3.25
SRCPARAM L0002992     0.000005177      3.49      4.00      3.25
SRCPARAM L0002993     0.000005177      3.49      4.00      3.25
SRCPARAM L0002994     0.000005177      3.49      4.00      3.25
SRCPARAM L0002995     0.000005177      3.49      4.00      3.25
SRCPARAM L0002996     0.000005177      3.49      4.00      3.25
SRCPARAM L0002997     0.000005177      3.49      4.00      3.25
SRCPARAM L0002998     0.000005177      3.49      4.00      3.25
SRCPARAM L0002999     0.000005177      3.49      4.00      3.25
SRCPARAM L0003000     0.000005177      3.49      4.00      3.25
SRCPARAM L0003001     0.000005177      3.49      4.00      3.25
SRCPARAM L0003002     0.000005177      3.49      4.00      3.25
SRCPARAM L0003003     0.000005177      3.49      4.00      3.25
SRCPARAM L0003004     0.000005177      3.49      4.00      3.25
SRCPARAM L0003005     0.000005177      3.49      4.00      3.25
SRCPARAM L0003006     0.000005177      3.49      4.00      3.25
SRCPARAM L0003007     0.000005177      3.49      4.00      3.25
SRCPARAM L0003008     0.000005177      3.49      4.00      3.25
SRCPARAM L0003009     0.000005177      3.49      4.00      3.25
SRCPARAM L0003010     0.000005177      3.49      4.00      3.25
SRCPARAM L0003011     0.000005177      3.49      4.00      3.25
SRCPARAM L0003012     0.000005177      3.49      4.00      3.25
SRCPARAM L0003013     0.000005177      3.49      4.00      3.25
SRCPARAM L0003014     0.000005177      3.49      4.00      3.25
SRCPARAM L0003015     0.000005177      3.49      4.00      3.25
SRCPARAM L0003016     0.000005177      3.49      4.00      3.25
SRCPARAM L0003017     0.000005177      3.49      4.00      3.25
SRCPARAM L0003018     0.000005177      3.49      4.00      3.25
SRCPARAM L0003019     0.000005177      3.49      4.00      3.25
SRCPARAM L0003020     0.000005177      3.49      4.00      3.25
SRCPARAM L0003021     0.000005177      3.49      4.00      3.25
SRCPARAM L0003022     0.000005177      3.49      4.00      3.25
SRCPARAM L0003023     0.000005177      3.49      4.00      3.25
SRCPARAM L0003024     0.000005177      3.49      4.00      3.25
SRCPARAM L0003025     0.000005177      3.49      4.00      3.25
SRCPARAM L0003026     0.000005177      3.49      4.00      3.25
SRCPARAM L0003027     0.000005177      3.49      4.00      3.25
SRCPARAM L0003028     0.000005177      3.49      4.00      3.25
SRCPARAM L0003029     0.000005177      3.49      4.00      3.25
SRCPARAM L0003030     0.000005177      3.49      4.00      3.25
SRCPARAM L0003031     0.000005177      3.49      4.00      3.25
SRCPARAM L0003032     0.000005177      3.49      4.00      3.25
SRCPARAM L0003033     0.000005177      3.49      4.00      3.25
SRCPARAM L0003034     0.000005177      3.49      4.00      3.25
SRCPARAM L0003035     0.000005177      3.49      4.00      3.25
SRCPARAM L0003036     0.000005177      3.49      4.00      3.25
SRCPARAM L0003037     0.000005177      3.49      4.00      3.25
SRCPARAM L0003038     0.000005177      3.49      4.00      3.25
SRCPARAM L0003039     0.000005177      3.49      4.00      3.25
SRCPARAM L0003040     0.000005177      3.49      4.00      3.25
SRCPARAM L0003041     0.000005177      3.49      4.00      3.25
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   SRCPARAM L0003042     0.000005177      3.49      4.00      3.25
   SRCPARAM L0003043     0.000005177      3.49      4.00      3.25
   SRCPARAM L0003044     0.000005177      3.49      4.00      3.25
   SRCPARAM L0003045     0.000005177      3.49      4.00      3.25
   SRCPARAM L0003046     0.000005177      3.49      4.00      3.25
   SRCPARAM L0003047     0.000005177      3.49      4.00      3.25
   SRCPARAM L0003048     0.000005177      3.49      4.00      3.25
   SRCPARAM L0003049     0.000005177      3.49      4.00      3.25
   SRCPARAM L0003050     0.000005177      3.49      4.00      3.25
   SRCPARAM L0003051     0.000005177      3.49      4.00      3.25
   SRCPARAM L0003052     0.000005177      3.49      4.00      3.25
   SRCPARAM L0003053     0.000005177      3.49      4.00      3.25
   SRCPARAM L0003054     0.000005177      3.49      4.00      3.25
   SRCPARAM L0003055     0.000005177      3.49      4.00      3.25
   SRCPARAM L0003056     0.000005177      3.49      4.00      3.25
   SRCPARAM L0003057     0.000005177      3.49      4.00      3.25
   SRCPARAM L0003058     0.000005177      3.49      4.00      3.25
   SRCPARAM L0003059     0.000005177      3.49      4.00      3.25
   SRCPARAM L0003060     0.000005177      3.49      4.00      3.25
   SRCPARAM L0003061     0.000005177      3.49      4.00      3.25
   SRCPARAM L0003062     0.000005177      3.49      4.00      3.25
   SRCPARAM L0003063     0.000005177      3.49      4.00      3.25
   SRCPARAM L0003064     0.000005177      3.49      4.00      3.25
   SRCPARAM L0003065     0.000005177      3.49      4.00      3.25
   SRCPARAM L0003066     0.000005177      3.49      4.00      3.25
   SRCPARAM L0003067     0.000005177      3.49      4.00      3.25
   SRCPARAM L0003068     0.000005177      3.49      4.00      3.25
   SRCPARAM L0003069     0.000005177      3.49      4.00      3.25
   SRCPARAM L0003070     0.000005177      3.49      4.00      3.25
   SRCPARAM L0003071     0.000005177      3.49      4.00      3.25
   SRCPARAM L0003072     0.000005177      3.49      4.00      3.25
   SRCPARAM L0003073     0.000005177      3.49      4.00      3.25
   SRCPARAM L0003074     0.000005177      3.49      4.00      3.25
   SRCPARAM L0003075     0.000005177      3.49      4.00      3.25
   SRCPARAM L0003076     0.000005177      3.49      4.00      3.25
   SRCPARAM L0003077     0.000005177      3.49      4.00      3.25
   SRCPARAM L0003078     0.000005177      3.49      4.00      3.25
   SRCPARAM L0003079     0.000005177      3.49      4.00      3.25
   SRCPARAM L0003080     0.000005177      3.49      4.00      3.25
   SRCPARAM L0003081     0.000005177      3.49      4.00      3.25
   SRCPARAM L0003082     0.000005177      3.49      4.00      3.25
   SRCPARAM L0003083     0.000005177      3.49      4.00      3.25
   SRCPARAM L0003084     0.000005177      3.49      4.00      3.25
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** LINE VOLUME Source ID = SLINE2
   SRCPARAM L0003085     0.0000007294      3.49      4.00      3.25
   SRCPARAM L0003086     0.0000007294      3.49      4.00      3.25
   SRCPARAM L0003087     0.0000007294      3.49      4.00      3.25
   SRCPARAM L0003088     0.0000007294      3.49      4.00      3.25
   SRCPARAM L0003089     0.0000007294      3.49      4.00      3.25
   SRCPARAM L0003090     0.0000007294      3.49      4.00      3.25
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SRCPARAM L0003091     0.0000007294      3.49      4.00      3.25
SRCPARAM L0003092     0.0000007294      3.49      4.00      3.25
SRCPARAM L0003093     0.0000007294      3.49      4.00      3.25
SRCPARAM L0003094     0.0000007294      3.49      4.00      3.25
SRCPARAM L0003095     0.0000007294      3.49      4.00      3.25
SRCPARAM L0003096     0.0000007294      3.49      4.00      3.25
SRCPARAM L0003097     0.0000007294      3.49      4.00      3.25
SRCPARAM L0003098     0.0000007294      3.49      4.00      3.25
SRCPARAM L0003099     0.0000007294      3.49      4.00      3.25
SRCPARAM L0003100     0.0000007294      3.49      4.00      3.25
SRCPARAM L0003101     0.0000007294      3.49      4.00      3.25
SRCPARAM L0003102     0.0000007294      3.49      4.00      3.25
SRCPARAM L0003103     0.0000007294      3.49      4.00      3.25
SRCPARAM L0003104     0.0000007294      3.49      4.00      3.25
SRCPARAM L0003105     0.0000007294      3.49      4.00      3.25
SRCPARAM L0003106     0.0000007294      3.49      4.00      3.25
SRCPARAM L0003107     0.0000007294      3.49      4.00      3.25
SRCPARAM L0003108     0.0000007294      3.49      4.00      3.25
SRCPARAM L0003109     0.0000007294      3.49      4.00      3.25
SRCPARAM L0003110     0.0000007294      3.49      4.00      3.25
SRCPARAM L0003111     0.0000007294      3.49      4.00      3.25
SRCPARAM L0003112     0.0000007294      3.49      4.00      3.25
SRCPARAM L0003113     0.0000007294      3.49      4.00      3.25
SRCPARAM L0003114     0.0000007294      3.49      4.00      3.25
SRCPARAM L0003115     0.0000007294      3.49      4.00      3.25
SRCPARAM L0003116     0.0000007294      3.49      4.00      3.25
SRCPARAM L0003117     0.0000007294      3.49      4.00      3.25
SRCPARAM L0003118     0.0000007294      3.49      4.00      3.25
SRCPARAM L0003119     0.0000007294      3.49      4.00      3.25
SRCPARAM L0003120     0.0000007294      3.49      4.00      3.25
SRCPARAM L0003121     0.0000007294      3.49      4.00      3.25
SRCPARAM L0003122     0.0000007294      3.49      4.00      3.25
SRCPARAM L0003123     0.0000007294      3.49      4.00      3.25
SRCPARAM L0003124     0.0000007294      3.49      4.00      3.25
SRCPARAM L0003125     0.0000007294      3.49      4.00      3.25
SRCPARAM L0003126     0.0000007294      3.49      4.00      3.25
SRCPARAM L0003127     0.0000007294      3.49      4.00      3.25
SRCPARAM L0003128     0.0000007294      3.49      4.00      3.25
SRCPARAM L0003129     0.0000007294      3.49      4.00      3.25
SRCPARAM L0003130     0.0000007294      3.49      4.00      3.25
SRCPARAM L0003131     0.0000007294      3.49      4.00      3.25
SRCPARAM L0003132     0.0000007294      3.49      4.00      3.25
SRCPARAM L0003133     0.0000007294      3.49      4.00      3.25
SRCPARAM L0003134     0.0000007294      3.49      4.00      3.25
SRCPARAM L0003135     0.0000007294      3.49      4.00      3.25
SRCPARAM L0003136     0.0000007294      3.49      4.00      3.25
SRCPARAM L0003137     0.0000007294      3.49      4.00      3.25
SRCPARAM L0003138     0.0000007294      3.49      4.00      3.25
SRCPARAM L0003139     0.0000007294      3.49      4.00      3.25
SRCPARAM L0003140     0.0000007294      3.49      4.00      3.25
SRCPARAM L0003141     0.0000007294      3.49      4.00      3.25
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SRCPARAM L0003142     0.0000007294      3.49      4.00      3.25
SRCPARAM L0003143     0.0000007294      3.49      4.00      3.25
SRCPARAM L0003144     0.0000007294      3.49      4.00      3.25
SRCPARAM L0003145     0.0000007294      3.49      4.00      3.25
SRCPARAM L0003146     0.0000007294      3.49      4.00      3.25
SRCPARAM L0003147     0.0000007294      3.49      4.00      3.25
SRCPARAM L0003148     0.0000007294      3.49      4.00      3.25
SRCPARAM L0003149     0.0000007294      3.49      4.00      3.25
SRCPARAM L0003150     0.0000007294      3.49      4.00      3.25
SRCPARAM L0003151     0.0000007294      3.49      4.00      3.25
SRCPARAM L0003152     0.0000007294      3.49      4.00      3.25
SRCPARAM L0003153     0.0000007294      3.49      4.00      3.25
SRCPARAM L0003154     0.0000007294      3.49      4.00      3.25
SRCPARAM L0003155     0.0000007294      3.49      4.00      3.25
SRCPARAM L0003156     0.0000007294      3.49      4.00      3.25
SRCPARAM L0003157     0.0000007294      3.49      4.00      3.25
SRCPARAM L0003158     0.0000007294      3.49      4.00      3.25
SRCPARAM L0003159     0.0000007294      3.49      4.00      3.25
SRCPARAM L0003160     0.0000007294      3.49      4.00      3.25
SRCPARAM L0003161     0.0000007294      3.49      4.00      3.25
SRCPARAM L0003162     0.0000007294      3.49      4.00      3.25
SRCPARAM L0003163     0.0000007294      3.49      4.00      3.25
SRCPARAM L0003164     0.0000007294      3.49      4.00      3.25
SRCPARAM L0003165     0.0000007294      3.49      4.00      3.25
SRCPARAM L0003166     0.0000007294      3.49      4.00      3.25
SRCPARAM L0003167     0.0000007294      3.49      4.00      3.25
SRCPARAM L0003168     0.0000007294      3.49      4.00      3.25
SRCPARAM L0003169     0.0000007294      3.49      4.00      3.25
SRCPARAM L0003170     0.0000007294      3.49      4.00      3.25
SRCPARAM L0003171     0.0000007294      3.49      4.00      3.25
SRCPARAM L0003172     0.0000007294      3.49      4.00      3.25
SRCPARAM L0003173     0.0000007294      3.49      4.00      3.25
SRCPARAM L0003174     0.0000007294      3.49      4.00      3.25
SRCPARAM L0003175     0.0000007294      3.49      4.00      3.25
SRCPARAM L0003176     0.0000007294      3.49      4.00      3.25
SRCPARAM L0003177     0.0000007294      3.49      4.00      3.25
SRCPARAM L0003178     0.0000007294      3.49      4.00      3.25
SRCPARAM L0003179     0.0000007294      3.49      4.00      3.25
SRCPARAM L0003180     0.0000007294      3.49      4.00      3.25
SRCPARAM L0003181     0.0000007294      3.49      4.00      3.25
SRCPARAM L0003182     0.0000007294      3.49      4.00      3.25
SRCPARAM L0003183     0.0000007294      3.49      4.00      3.25
SRCPARAM L0003184     0.0000007294      3.49      4.00      3.25
SRCPARAM L0003185     0.0000007294      3.49      4.00      3.25
SRCPARAM L0003186     0.0000007294      3.49      4.00      3.25
SRCPARAM L0003187     0.0000007294      3.49      4.00      3.25
SRCPARAM L0003188     0.0000007294      3.49      4.00      3.25
SRCPARAM L0003189     0.0000007294      3.49      4.00      3.25
SRCPARAM L0003190     0.0000007294      3.49      4.00      3.25
SRCPARAM L0003191     0.0000007294      3.49      4.00      3.25
SRCPARAM L0003192     0.0000007294      3.49      4.00      3.25
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SRCPARAM L0003193     0.0000007294      3.49      4.00      3.25
SRCPARAM L0003194     0.0000007294      3.49      4.00      3.25
SRCPARAM L0003195     0.0000007294      3.49      4.00      3.25
SRCPARAM L0003196     0.0000007294      3.49      4.00      3.25
SRCPARAM L0003197     0.0000007294      3.49      4.00      3.25
SRCPARAM L0003198     0.0000007294      3.49      4.00      3.25
SRCPARAM L0003199     0.0000007294      3.49      4.00      3.25
SRCPARAM L0003200     0.0000007294      3.49      4.00      3.25
SRCPARAM L0003201     0.0000007294      3.49      4.00      3.25
SRCPARAM L0003202     0.0000007294      3.49      4.00      3.25
SRCPARAM L0003203     0.0000007294      3.49      4.00      3.25
SRCPARAM L0003204     0.0000007294      3.49      4.00      3.25
SRCPARAM L0003205     0.0000007294      3.49      4.00      3.25
SRCPARAM L0003206     0.0000007294      3.49      4.00      3.25
SRCPARAM L0003207     0.0000007294      3.49      4.00      3.25
SRCPARAM L0003208     0.0000007294      3.49      4.00      3.25
SRCPARAM L0003209     0.0000007294      3.49      4.00      3.25
SRCPARAM L0003210     0.0000007294      3.49      4.00      3.25
SRCPARAM L0003211     0.0000007294      3.49      4.00      3.25
SRCPARAM L0003212     0.0000007294      3.49      4.00      3.25
SRCPARAM L0003213     0.0000007294      3.49      4.00      3.25
SRCPARAM L0003214     0.0000007294      3.49      4.00      3.25
SRCPARAM L0003215     0.0000007294      3.49      4.00      3.25
SRCPARAM L0003216     0.0000007294      3.49      4.00      3.25
SRCPARAM L0003217     0.0000007294      3.49      4.00      3.25
SRCPARAM L0003218     0.0000007294      3.49      4.00      3.25
SRCPARAM L0003219     0.0000007294      3.49      4.00      3.25
SRCPARAM L0003220     0.0000007294      3.49      4.00      3.25
SRCPARAM L0003221     0.0000007294      3.49      4.00      3.25
SRCPARAM L0003222     0.0000007294      3.49      4.00      3.25
SRCPARAM L0003223     0.0000007294      3.49      4.00      3.25
SRCPARAM L0003224     0.0000007294      3.49      4.00      3.25
SRCPARAM L0003225     0.0000007294      3.49      4.00      3.25
SRCPARAM L0003226     0.0000007294      3.49      4.00      3.25
SRCPARAM L0003227     0.0000007294      3.49      4.00      3.25
SRCPARAM L0003228     0.0000007294      3.49      4.00      3.25
SRCPARAM L0003229     0.0000007294      3.49      4.00      3.25
SRCPARAM L0003230     0.0000007294      3.49      4.00      3.25
SRCPARAM L0003231     0.0000007294      3.49      4.00      3.25
SRCPARAM L0003232     0.0000007294      3.49      4.00      3.25
SRCPARAM L0003233     0.0000007294      3.49      4.00      3.25
SRCPARAM L0003234     0.0000007294      3.49      4.00      3.25
SRCPARAM L0003235     0.0000007294      3.49      4.00      3.25
SRCPARAM L0003236     0.0000007294      3.49      4.00      3.25
SRCPARAM L0003237     0.0000007294      3.49      4.00      3.25
SRCPARAM L0003238     0.0000007294      3.49      4.00      3.25
SRCPARAM L0003239     0.0000007294      3.49      4.00      3.25
SRCPARAM L0003240     0.0000007294      3.49      4.00      3.25
SRCPARAM L0003241     0.0000007294      3.49      4.00      3.25
SRCPARAM L0003242     0.0000007294      3.49      4.00      3.25
SRCPARAM L0003243     0.0000007294      3.49      4.00      3.25
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   SRCPARAM L0003244     0.0000007294      3.49      4.00      3.25
   SRCPARAM L0003245     0.0000007294      3.49      4.00      3.25
   SRCPARAM L0003246     0.0000007294      3.49      4.00      3.25
   SRCPARAM L0003247     0.0000007294      3.49      4.00      3.25
   SRCPARAM L0003248     0.0000007294      3.49      4.00      3.25
   SRCPARAM L0003249     0.0000007294      3.49      4.00      3.25
   SRCPARAM L0003250     0.0000007294      3.49      4.00      3.25
   SRCPARAM L0003251     0.0000007294      3.49      4.00      3.25
   SRCPARAM L0003252     0.0000007294      3.49      4.00      3.25
   SRCPARAM L0003253     0.0000007294      3.49      4.00      3.25
   SRCPARAM L0003254     0.0000007294      3.49      4.00      3.25
   SRCPARAM L0003255     0.0000007294      3.49      4.00      3.25
   SRCPARAM L0003256     0.0000007294      3.49      4.00      3.25
   SRCPARAM L0003257     0.0000007294      3.49      4.00      3.25
   SRCPARAM L0003258     0.0000007294      3.49      4.00      3.25
   SRCPARAM L0003259     0.0000007294      3.49      4.00      3.25
   SRCPARAM L0003260     0.0000007294      3.49      4.00      3.25
   SRCPARAM L0003261     0.0000007294      3.49      4.00      3.25
   SRCPARAM L0003262     0.0000007294      3.49      4.00      3.25
   SRCPARAM L0003263     0.0000007294      3.49      4.00      3.25
   SRCPARAM L0003264     0.0000007294      3.49      4.00      3.25
   SRCPARAM L0003265     0.0000007294      3.49      4.00      3.25
   SRCPARAM L0003266     0.0000007294      3.49      4.00      3.25
   SRCPARAM L0003267     0.0000007294      3.49      4.00      3.25
   SRCPARAM L0003268     0.0000007294      3.49      4.00      3.25
   SRCPARAM L0003269     0.0000007294      3.49      4.00      3.25
   SRCPARAM L0003270     0.0000007294      3.49      4.00      3.25
   SRCPARAM L0003271     0.0000007294      3.49      4.00      3.25
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** LINE VOLUME Source ID = SLINE3
   SRCPARAM L0003272     0.00000187      3.49      4.00      3.25
   SRCPARAM L0003273     0.00000187      3.49      4.00      3.25
   SRCPARAM L0003274     0.00000187      3.49      4.00      3.25
   SRCPARAM L0003275     0.00000187      3.49      4.00      3.25
   SRCPARAM L0003276     0.00000187      3.49      4.00      3.25
   SRCPARAM L0003277     0.00000187      3.49      4.00      3.25
   SRCPARAM L0003278     0.00000187      3.49      4.00      3.25
   SRCPARAM L0003279     0.00000187      3.49      4.00      3.25
   SRCPARAM L0003280     0.00000187      3.49      4.00      3.25
   SRCPARAM L0003281     0.00000187      3.49      4.00      3.25
   SRCPARAM L0003282     0.00000187      3.49      4.00      3.25
   SRCPARAM L0003283     0.00000187      3.49      4.00      3.25
   SRCPARAM L0003284     0.00000187      3.49      4.00      3.25
   SRCPARAM L0003285     0.00000187      3.49      4.00      3.25
   SRCPARAM L0003286     0.00000187      3.49      4.00      3.25
   SRCPARAM L0003287     0.00000187      3.49      4.00      3.25
   SRCPARAM L0003288     0.00000187      3.49      4.00      3.25
   SRCPARAM L0003289     0.00000187      3.49      4.00      3.25
   SRCPARAM L0003290     0.00000187      3.49      4.00      3.25
   SRCPARAM L0003291     0.00000187      3.49      4.00      3.25
   SRCPARAM L0003292     0.00000187      3.49      4.00      3.25
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SRCPARAM L0003293     0.00000187      3.49      4.00      3.25
SRCPARAM L0003294     0.00000187      3.49      4.00      3.25
SRCPARAM L0003295     0.00000187      3.49      4.00      3.25
SRCPARAM L0003296     0.00000187      3.49      4.00      3.25
SRCPARAM L0003297     0.00000187      3.49      4.00      3.25
SRCPARAM L0003298     0.00000187      3.49      4.00      3.25
SRCPARAM L0003299     0.00000187      3.49      4.00      3.25
SRCPARAM L0003300     0.00000187      3.49      4.00      3.25
SRCPARAM L0003301     0.00000187      3.49      4.00      3.25
SRCPARAM L0003302     0.00000187      3.49      4.00      3.25
SRCPARAM L0003303     0.00000187      3.49      4.00      3.25
SRCPARAM L0003304     0.00000187      3.49      4.00      3.25
SRCPARAM L0003305     0.00000187      3.49      4.00      3.25
SRCPARAM L0003306     0.00000187      3.49      4.00      3.25
SRCPARAM L0003307     0.00000187      3.49      4.00      3.25
SRCPARAM L0003308     0.00000187      3.49      4.00      3.25
SRCPARAM L0003309     0.00000187      3.49      4.00      3.25
SRCPARAM L0003310     0.00000187      3.49      4.00      3.25
SRCPARAM L0003311     0.00000187      3.49      4.00      3.25
SRCPARAM L0003312     0.00000187      3.49      4.00      3.25
SRCPARAM L0003313     0.00000187      3.49      4.00      3.25
SRCPARAM L0003314     0.00000187      3.49      4.00      3.25
SRCPARAM L0003315     0.00000187      3.49      4.00      3.25
SRCPARAM L0003316     0.00000187      3.49      4.00      3.25
SRCPARAM L0003317     0.00000187      3.49      4.00      3.25
SRCPARAM L0003318     0.00000187      3.49      4.00      3.25
SRCPARAM L0003319     0.00000187      3.49      4.00      3.25
SRCPARAM L0003320     0.00000187      3.49      4.00      3.25
SRCPARAM L0003321     0.00000187      3.49      4.00      3.25
SRCPARAM L0003322     0.00000187      3.49      4.00      3.25
SRCPARAM L0003323     0.00000187      3.49      4.00      3.25
SRCPARAM L0003324     0.00000187      3.49      4.00      3.25
SRCPARAM L0003325     0.00000187      3.49      4.00      3.25
SRCPARAM L0003326     0.00000187      3.49      4.00      3.25
SRCPARAM L0003327     0.00000187      3.49      4.00      3.25
SRCPARAM L0003328     0.00000187      3.49      4.00      3.25
SRCPARAM L0003329     0.00000187      3.49      4.00      3.25
SRCPARAM L0003330     0.00000187      3.49      4.00      3.25
SRCPARAM L0003331     0.00000187      3.49      4.00      3.25
SRCPARAM L0003332     0.00000187      3.49      4.00      3.25
SRCPARAM L0003333     0.00000187      3.49      4.00      3.25
SRCPARAM L0003334     0.00000187      3.49      4.00      3.25
SRCPARAM L0003335     0.00000187      3.49      4.00      3.25
SRCPARAM L0003336     0.00000187      3.49      4.00      3.25
SRCPARAM L0003337     0.00000187      3.49      4.00      3.25
SRCPARAM L0003338     0.00000187      3.49      4.00      3.25
SRCPARAM L0003339     0.00000187      3.49      4.00      3.25
SRCPARAM L0003340     0.00000187      3.49      4.00      3.25
SRCPARAM L0003341     0.00000187      3.49      4.00      3.25
SRCPARAM L0003342     0.00000187      3.49      4.00      3.25
SRCPARAM L0003343     0.00000187      3.49      4.00      3.25
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   SRCPARAM L0003344     0.00000187      3.49      4.00      3.25
   SRCPARAM L0003345     0.00000187      3.49      4.00      3.25
   SRCPARAM L0003346     0.00000187      3.49      4.00      3.25
   SRCPARAM L0003347     0.00000187      3.49      4.00      3.25
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** LINE VOLUME Source ID = SLINE4
   SRCPARAM L0003348      0.000007      3.49      4.00      3.25
   SRCPARAM L0003349      0.000007      3.49      4.00      3.25
   SRCPARAM L0003350      0.000007      3.49      4.00      3.25
   SRCPARAM L0003351      0.000007      3.49      4.00      3.25
   SRCPARAM L0003352      0.000007      3.49      4.00      3.25
   SRCPARAM L0003353      0.000007      3.49      4.00      3.25
   SRCPARAM L0003354      0.000007      3.49      4.00      3.25
   SRCPARAM L0003355      0.000007      3.49      4.00      3.25
   SRCPARAM L0003356      0.000007      3.49      4.00      3.25
   SRCPARAM L0003357      0.000007      3.49      4.00      3.25
   SRCPARAM L0003358      0.000007      3.49      4.00      3.25
   SRCPARAM L0003359      0.000007      3.49      4.00      3.25
   SRCPARAM L0003360      0.000007      3.49      4.00      3.25
   SRCPARAM L0003361      0.000007      3.49      4.00      3.25
   SRCPARAM L0003362      0.000007      3.49      4.00      3.25
   SRCPARAM L0003363      0.000007      3.49      4.00      3.25
   SRCPARAM L0003364      0.000007      3.49      4.00      3.25
   SRCPARAM L0003365      0.000007      3.49      4.00      3.25
   SRCPARAM L0003366      0.000007      3.49      4.00      3.25
   SRCPARAM L0003367      0.000007      3.49      4.00      3.25
   SRCPARAM L0003368      0.000007      3.49      4.00      3.25
   SRCPARAM L0003369      0.000007      3.49      4.00      3.25
   SRCPARAM L0003370      0.000007      3.49      4.00      3.25
   SRCPARAM L0003371      0.000007      3.49      4.00      3.25
   SRCPARAM L0003372      0.000007      3.49      4.00      3.25
   SRCPARAM L0003373      0.000007      3.49      4.00      3.25
   SRCPARAM L0003374      0.000007      3.49      4.00      3.25
   SRCPARAM L0003375      0.000007      3.49      4.00      3.25
   SRCPARAM L0003376      0.000007      3.49      4.00      3.25
   SRCPARAM L0003377      0.000007      3.49      4.00      3.25
   SRCPARAM L0003378      0.000007      3.49      4.00      3.25
   SRCPARAM L0003379      0.000007      3.49      4.00      3.25
   SRCPARAM L0003380      0.000007      3.49      4.00      3.25
   SRCPARAM L0003381      0.000007      3.49      4.00      3.25
   SRCPARAM L0003382      0.000007      3.49      4.00      3.25
   SRCPARAM L0003383      0.000007      3.49      4.00      3.25
   SRCPARAM L0003384      0.000007      3.49      4.00      3.25
   SRCPARAM L0003385      0.000007      3.49      4.00      3.25
   SRCPARAM L0003386      0.000007      3.49      4.00      3.25
   SRCPARAM L0003387      0.000007      3.49      4.00      3.25
   SRCPARAM L0003388      0.000007      3.49      4.00      3.25
   SRCPARAM L0003389      0.000007      3.49      4.00      3.25
   SRCPARAM L0003390      0.000007      3.49      4.00      3.25
   SRCPARAM L0003391      0.000007      3.49      4.00      3.25
   SRCPARAM L0003392      0.000007      3.49      4.00      3.25
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SRCPARAM L0003393      0.000007      3.49      4.00      3.25
SRCPARAM L0003394      0.000007      3.49      4.00      3.25
SRCPARAM L0003395      0.000007      3.49      4.00      3.25
SRCPARAM L0003396      0.000007      3.49      4.00      3.25
SRCPARAM L0003397      0.000007      3.49      4.00      3.25
SRCPARAM L0003398      0.000007      3.49      4.00      3.25
SRCPARAM L0003399      0.000007      3.49      4.00      3.25
SRCPARAM L0003400      0.000007      3.49      4.00      3.25
SRCPARAM L0003401      0.000007      3.49      4.00      3.25
SRCPARAM L0003402      0.000007      3.49      4.00      3.25
SRCPARAM L0003403      0.000007      3.49      4.00      3.25
SRCPARAM L0003404      0.000007      3.49      4.00      3.25
SRCPARAM L0003405      0.000007      3.49      4.00      3.25
SRCPARAM L0003406      0.000007      3.49      4.00      3.25
SRCPARAM L0003407      0.000007      3.49      4.00      3.25
SRCPARAM L0003408      0.000007      3.49      4.00      3.25
SRCPARAM L0003409      0.000007      3.49      4.00      3.25
SRCPARAM L0003410      0.000007      3.49      4.00      3.25
SRCPARAM L0003411      0.000007      3.49      4.00      3.25
SRCPARAM L0003412      0.000007      3.49      4.00      3.25
SRCPARAM L0003413      0.000007      3.49      4.00      3.25
SRCPARAM L0003414      0.000007      3.49      4.00      3.25
SRCPARAM L0003415      0.000007      3.49      4.00      3.25
SRCPARAM L0003416      0.000007      3.49      4.00      3.25
SRCPARAM L0003417      0.000007      3.49      4.00      3.25
SRCPARAM L0003418      0.000007      3.49      4.00      3.25
SRCPARAM L0003419      0.000007      3.49      4.00      3.25
SRCPARAM L0003420      0.000007      3.49      4.00      3.25
SRCPARAM L0003421      0.000007      3.49      4.00      3.25
SRCPARAM L0003422      0.000007      3.49      4.00      3.25
SRCPARAM L0003423      0.000007      3.49      4.00      3.25
SRCPARAM L0003424      0.000007      3.49      4.00      3.25
SRCPARAM L0003425      0.000007      3.49      4.00      3.25
SRCPARAM L0003426      0.000007      3.49      4.00      3.25
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SRCPARAM L0003433      0.000007      3.49      4.00      3.25
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SRCPARAM L0003438      0.000007      3.49      4.00      3.25
SRCPARAM L0003439      0.000007      3.49      4.00      3.25
SRCPARAM L0003440      0.000007      3.49      4.00      3.25
SRCPARAM L0003441      0.000007      3.49      4.00      3.25
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SRCPARAM L0003443      0.000007      3.49      4.00      3.25
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SRCPARAM L0003494      0.000007      3.49      4.00      3.25
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   SRCPARAM L0003594     0.000003729      3.49      4.00      3.25
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SRCPARAM L0003720     0.000003729      3.49      4.00      3.25
SRCPARAM L0003721     0.000003729      3.49      4.00      3.25
SRCPARAM L0003722     0.000003729      3.49      4.00      3.25
SRCPARAM L0003723     0.000003729      3.49      4.00      3.25
SRCPARAM L0003724     0.000003729      3.49      4.00      3.25
SRCPARAM L0003725     0.000003729      3.49      4.00      3.25
SRCPARAM L0003726     0.000003729      3.49      4.00      3.25
SRCPARAM L0003727     0.000003729      3.49      4.00      3.25
SRCPARAM L0003728     0.000003729      3.49      4.00      3.25
SRCPARAM L0003729     0.000003729      3.49      4.00      3.25
SRCPARAM L0003730     0.000003729      3.49      4.00      3.25
SRCPARAM L0003731     0.000003729      3.49      4.00      3.25
SRCPARAM L0003732     0.000003729      3.49      4.00      3.25
SRCPARAM L0003733     0.000003729      3.49      4.00      3.25
SRCPARAM L0003734     0.000003729      3.49      4.00      3.25
SRCPARAM L0003735     0.000003729      3.49      4.00      3.25
SRCPARAM L0003736     0.000003729      3.49      4.00      3.25
SRCPARAM L0003737     0.000003729      3.49      4.00      3.25
SRCPARAM L0003738     0.000003729      3.49      4.00      3.25
SRCPARAM L0003739     0.000003729      3.49      4.00      3.25
SRCPARAM L0003740     0.000003729      3.49      4.00      3.25
SRCPARAM L0003741     0.000003729      3.49      4.00      3.25
SRCPARAM L0003742     0.000003729      3.49      4.00      3.25
SRCPARAM L0003743     0.000003729      3.49      4.00      3.25
SRCPARAM L0003744     0.000003729      3.49      4.00      3.25
SRCPARAM L0003745     0.000003729      3.49      4.00      3.25
SRCPARAM L0003746     0.000003729      3.49      4.00      3.25
SRCPARAM L0003747     0.000003729      3.49      4.00      3.25
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SRCPARAM L0003748     0.000003729      3.49      4.00      3.25
SRCPARAM L0003749     0.000003729      3.49      4.00      3.25
SRCPARAM L0003750     0.000003729      3.49      4.00      3.25
SRCPARAM L0003751     0.000003729      3.49      4.00      3.25
SRCPARAM L0003752     0.000003729      3.49      4.00      3.25
SRCPARAM L0003753     0.000003729      3.49      4.00      3.25
SRCPARAM L0003754     0.000003729      3.49      4.00      3.25
SRCPARAM L0003755     0.000003729      3.49      4.00      3.25
SRCPARAM L0003756     0.000003729      3.49      4.00      3.25
SRCPARAM L0003757     0.000003729      3.49      4.00      3.25
SRCPARAM L0003758     0.000003729      3.49      4.00      3.25
SRCPARAM L0003759     0.000003729      3.49      4.00      3.25
SRCPARAM L0003760     0.000003729      3.49      4.00      3.25
SRCPARAM L0003761     0.000003729      3.49      4.00      3.25
SRCPARAM L0003762     0.000003729      3.49      4.00      3.25
SRCPARAM L0003763     0.000003729      3.49      4.00      3.25
SRCPARAM L0003764     0.000003729      3.49      4.00      3.25
SRCPARAM L0003765     0.000003729      3.49      4.00      3.25
SRCPARAM L0003766     0.000003729      3.49      4.00      3.25
SRCPARAM L0003767     0.000003729      3.49      4.00      3.25
SRCPARAM L0003768     0.000003729      3.49      4.00      3.25
SRCPARAM L0003769     0.000003729      3.49      4.00      3.25
SRCPARAM L0003770     0.000003729      3.49      4.00      3.25
SRCPARAM L0003771     0.000003729      3.49      4.00      3.25
SRCPARAM L0003772     0.000003729      3.49      4.00      3.25
SRCPARAM L0003773     0.000003729      3.49      4.00      3.25
SRCPARAM L0003774     0.000003729      3.49      4.00      3.25
SRCPARAM L0003775     0.000003729      3.49      4.00      3.25
SRCPARAM L0003776     0.000003729      3.49      4.00      3.25
SRCPARAM L0003777     0.000003729      3.49      4.00      3.25
SRCPARAM L0003778     0.000003729      3.49      4.00      3.25
SRCPARAM L0003779     0.000003729      3.49      4.00      3.25
SRCPARAM L0003780     0.000003729      3.49      4.00      3.25
SRCPARAM L0003781     0.000003729      3.49      4.00      3.25
SRCPARAM L0003782     0.000003729      3.49      4.00      3.25
SRCPARAM L0003783     0.000003729      3.49      4.00      3.25
SRCPARAM L0003784     0.000003729      3.49      4.00      3.25
SRCPARAM L0003785     0.000003729      3.49      4.00      3.25
SRCPARAM L0003786     0.000003729      3.49      4.00      3.25
SRCPARAM L0003787     0.000003729      3.49      4.00      3.25
SRCPARAM L0003788     0.000003729      3.49      4.00      3.25
SRCPARAM L0003789     0.000003729      3.49      4.00      3.25
SRCPARAM L0003790     0.000003729      3.49      4.00      3.25
SRCPARAM L0003791     0.000003729      3.49      4.00      3.25
SRCPARAM L0003792     0.000003729      3.49      4.00      3.25
SRCPARAM L0003793     0.000003729      3.49      4.00      3.25
SRCPARAM L0003794     0.000003729      3.49      4.00      3.25
SRCPARAM L0003795     0.000003729      3.49      4.00      3.25
SRCPARAM L0003796     0.000003729      3.49      4.00      3.25
SRCPARAM L0003797     0.000003729      3.49      4.00      3.25
SRCPARAM L0003798     0.000003729      3.49      4.00      3.25
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   SRCPARAM L0003799     0.000003729      3.49      4.00      3.25
   SRCPARAM L0003800     0.000003729      3.49      4.00      3.25
   SRCPARAM L0003801     0.000003729      3.49      4.00      3.25
   SRCPARAM L0003802     0.000003729      3.49      4.00      3.25
   SRCPARAM L0003803     0.000003729      3.49      4.00      3.25
   SRCPARAM L0003804     0.000003729      3.49      4.00      3.25
   SRCPARAM L0003805     0.000003729      3.49      4.00      3.25
   SRCPARAM L0003806     0.000003729      3.49      4.00      3.25
   SRCPARAM L0003807     0.000003729      3.49      4.00      3.25
   SRCPARAM L0003808     0.000003729      3.49      4.00      3.25
   SRCPARAM L0003809     0.000003729      3.49      4.00      3.25
   SRCPARAM L0003810     0.000003729      3.49      4.00      3.25
   SRCPARAM L0003811     0.000003729      3.49      4.00      3.25
   SRCPARAM L0003812     0.000003729      3.49      4.00      3.25
   SRCPARAM L0003813     0.000003729      3.49      4.00      3.25
   SRCPARAM L0003814     0.000003729      3.49      4.00      3.25
   SRCPARAM L0003815     0.000003729      3.49      4.00      3.25
   SRCPARAM L0003816     0.000003729      3.49      4.00      3.25
   SRCPARAM L0003817     0.000003729      3.49      4.00      3.25
   SRCPARAM L0003818     0.000003729      3.49      4.00      3.25
   SRCPARAM L0003819     0.000003729      3.49      4.00      3.25
   SRCPARAM L0003820     0.000003729      3.49      4.00      3.25
   SRCPARAM L0003821     0.000003729      3.49      4.00      3.25
   SRCPARAM L0003822     0.000003729      3.49      4.00      3.25
   SRCPARAM L0003823     0.000003729      3.49      4.00      3.25
   SRCPARAM L0003824     0.000003729      3.49      4.00      3.25
   SRCPARAM L0003825     0.000003729      3.49      4.00      3.25
   SRCPARAM L0003826     0.000003729      3.49      4.00      3.25
   SRCPARAM L0003827     0.000003729      3.49      4.00      3.25
   SRCPARAM L0003828     0.000003729      3.49      4.00      3.25
   SRCPARAM L0003829     0.000003729      3.49      4.00      3.25
   SRCPARAM L0003830     0.000003729      3.49      4.00      3.25
   SRCPARAM L0003831     0.000003729      3.49      4.00      3.25
   SRCPARAM L0003832     0.000003729      3.49      4.00      3.25
   SRCPARAM L0003833     0.000003729      3.49      4.00      3.25
   SRCPARAM L0003834     0.000003729      3.49      4.00      3.25
   SRCPARAM L0003835     0.000003729      3.49      4.00      3.25
   SRCPARAM L0003836     0.000003729      3.49      4.00      3.25
   SRCPARAM L0003837     0.000003729      3.49      4.00      3.25
   SRCPARAM L0003838     0.000003729      3.49      4.00      3.25
   SRCPARAM L0003839     0.000003729      3.49      4.00      3.25
   SRCPARAM L0003840     0.000003729      3.49      4.00      3.25
   SRCPARAM L0003841     0.000003729      3.49      4.00      3.25
   SRCPARAM L0003842     0.000003729      3.49      4.00      3.25
   SRCPARAM L0003843     0.000003729      3.49      4.00      3.25
   SRCPARAM L0003844     0.000003729      3.49      4.00      3.25
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** LINE VOLUME Source ID = SLINE6
   SRCPARAM L0003845     0.000003931      3.49      4.00      3.25
   SRCPARAM L0003846     0.000003931      3.49      4.00      3.25
   SRCPARAM L0003847     0.000003931      3.49      4.00      3.25
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   SRCPARAM L0003848     0.000003931      3.49      4.00      3.25
   SRCPARAM L0003849     0.000003931      3.49      4.00      3.25
   SRCPARAM L0003850     0.000003931      3.49      4.00      3.25
   SRCPARAM L0003851     0.000003931      3.49      4.00      3.25
   SRCPARAM L0003852     0.000003931      3.49      4.00      3.25
   SRCPARAM L0003853     0.000003931      3.49      4.00      3.25
   SRCPARAM L0003854     0.000003931      3.49      4.00      3.25
   SRCPARAM L0003855     0.000003931      3.49      4.00      3.25
   SRCPARAM L0003856     0.000003931      3.49      4.00      3.25
   SRCPARAM L0003857     0.000003931      3.49      4.00      3.25
   SRCPARAM L0003858     0.000003931      3.49      4.00      3.25
   SRCPARAM L0003859     0.000003931      3.49      4.00      3.25
   SRCPARAM L0003860     0.000003931      3.49      4.00      3.25
   SRCPARAM L0003861     0.000003931      3.49      4.00      3.25
   SRCPARAM L0003862     0.000003931      3.49      4.00      3.25
   SRCPARAM L0003863     0.000003931      3.49      4.00      3.25
   SRCPARAM L0003864     0.000003931      3.49      4.00      3.25
   SRCPARAM L0003865     0.000003931      3.49      4.00      3.25
   SRCPARAM L0003866     0.000003931      3.49      4.00      3.25
   SRCPARAM L0003867     0.000003931      3.49      4.00      3.25
   SRCPARAM L0003868     0.000003931      3.49      4.00      3.25
   SRCPARAM L0003869     0.000003931      3.49      4.00      3.25
   SRCPARAM L0003870     0.000003931      3.49      4.00      3.25
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** LINE VOLUME Source ID = SLINE7
   SRCPARAM L0003871     0.000004714      3.49      4.00      3.25
   SRCPARAM L0003872     0.000004714      3.49      4.00      3.25
   SRCPARAM L0003873     0.000004714      3.49      4.00      3.25
   SRCPARAM L0003874     0.000004714      3.49      4.00      3.25
   SRCPARAM L0003875     0.000004714      3.49      4.00      3.25
   SRCPARAM L0003876     0.000004714      3.49      4.00      3.25
   SRCPARAM L0003877     0.000004714      3.49      4.00      3.25
   SRCPARAM L0003878     0.000004714      3.49      4.00      3.25
   SRCPARAM L0003879     0.000004714      3.49      4.00      3.25
   SRCPARAM L0003880     0.000004714      3.49      4.00      3.25
   SRCPARAM L0003881     0.000004714      3.49      4.00      3.25
   SRCPARAM L0003882     0.000004714      3.49      4.00      3.25
   SRCPARAM L0003883     0.000004714      3.49      4.00      3.25
   SRCPARAM L0003884     0.000004714      3.49      4.00      3.25
   SRCPARAM L0003885     0.000004714      3.49      4.00      3.25
   SRCPARAM L0003886     0.000004714      3.49      4.00      3.25
   SRCPARAM L0003887     0.000004714      3.49      4.00      3.25
   SRCPARAM L0003888     0.000004714      3.49      4.00      3.25
   SRCPARAM L0003889     0.000004714      3.49      4.00      3.25
   SRCPARAM L0003890     0.000004714      3.49      4.00      3.25
   SRCPARAM L0003891     0.000004714      3.49      4.00      3.25
   SRCPARAM L0003892     0.000004714      3.49      4.00      3.25
   SRCPARAM L0003893     0.000004714      3.49      4.00      3.25
   SRCPARAM L0003894     0.000004714      3.49      4.00      3.25
   SRCPARAM L0003895     0.000004714      3.49      4.00      3.25
   SRCPARAM L0003896     0.000004714      3.49      4.00      3.25
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SRCPARAM L0003897     0.000004714      3.49      4.00      3.25
SRCPARAM L0003898     0.000004714      3.49      4.00      3.25
SRCPARAM L0003899     0.000004714      3.49      4.00      3.25
SRCPARAM L0003900     0.000004714      3.49      4.00      3.25
SRCPARAM L0003901     0.000004714      3.49      4.00      3.25
SRCPARAM L0003902     0.000004714      3.49      4.00      3.25
SRCPARAM L0003903     0.000004714      3.49      4.00      3.25
SRCPARAM L0003904     0.000004714      3.49      4.00      3.25
SRCPARAM L0003905     0.000004714      3.49      4.00      3.25
SRCPARAM L0003906     0.000004714      3.49      4.00      3.25
SRCPARAM L0003907     0.000004714      3.49      4.00      3.25
SRCPARAM L0003908     0.000004714      3.49      4.00      3.25
SRCPARAM L0003909     0.000004714      3.49      4.00      3.25
SRCPARAM L0003910     0.000004714      3.49      4.00      3.25
SRCPARAM L0003911     0.000004714      3.49      4.00      3.25
SRCPARAM L0003912     0.000004714      3.49      4.00      3.25
SRCPARAM L0003913     0.000004714      3.49      4.00      3.25
SRCPARAM L0003914     0.000004714      3.49      4.00      3.25
SRCPARAM L0003915     0.000004714      3.49      4.00      3.25
SRCPARAM L0003916     0.000004714      3.49      4.00      3.25
SRCPARAM L0003917     0.000004714      3.49      4.00      3.25
SRCPARAM L0003918     0.000004714      3.49      4.00      3.25
SRCPARAM L0003919     0.000004714      3.49      4.00      3.25
SRCPARAM L0003920     0.000004714      3.49      4.00      3.25
SRCPARAM L0003921     0.000004714      3.49      4.00      3.25
SRCPARAM L0003922     0.000004714      3.49      4.00      3.25
SRCPARAM L0003923     0.000004714      3.49      4.00      3.25
SRCPARAM L0003924     0.000004714      3.49      4.00      3.25
SRCPARAM L0003925     0.000004714      3.49      4.00      3.25
SRCPARAM L0003926     0.000004714      3.49      4.00      3.25
SRCPARAM L0003927     0.000004714      3.49      4.00      3.25
SRCPARAM L0003928     0.000004714      3.49      4.00      3.25
SRCPARAM L0003929     0.000004714      3.49      4.00      3.25
SRCPARAM L0003930     0.000004714      3.49      4.00      3.25
SRCPARAM L0003931     0.000004714      3.49      4.00      3.25
SRCPARAM L0003932     0.000004714      3.49      4.00      3.25
SRCPARAM L0003933     0.000004714      3.49      4.00      3.25
SRCPARAM L0003934     0.000004714      3.49      4.00      3.25
SRCPARAM L0003935     0.000004714      3.49      4.00      3.25
SRCPARAM L0003936     0.000004714      3.49      4.00      3.25
SRCPARAM L0003937     0.000004714      3.49      4.00      3.25
SRCPARAM L0003938     0.000004714      3.49      4.00      3.25
SRCPARAM L0003939     0.000004714      3.49      4.00      3.25
SRCPARAM L0003940     0.000004714      3.49      4.00      3.25
SRCPARAM L0003941     0.000004714      3.49      4.00      3.25
SRCPARAM L0003942     0.000004714      3.49      4.00      3.25
SRCPARAM L0003943     0.000004714      3.49      4.00      3.25
SRCPARAM L0003944     0.000004714      3.49      4.00      3.25
SRCPARAM L0003945     0.000004714      3.49      4.00      3.25
SRCPARAM L0003946     0.000004714      3.49      4.00      3.25
SRCPARAM L0003947     0.000004714      3.49      4.00      3.25
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   SRCPARAM L0003948     0.000004714      3.49      4.00      3.25
   SRCPARAM L0003949     0.000004714      3.49      4.00      3.25
   SRCPARAM L0003950     0.000004714      3.49      4.00      3.25
   SRCPARAM L0003951     0.000004714      3.49      4.00      3.25
   SRCPARAM L0003952     0.000004714      3.49      4.00      3.25
   SRCPARAM L0003953     0.000004714      3.49      4.00      3.25
   SRCPARAM L0003954     0.000004714      3.49      4.00      3.25
   SRCPARAM L0003955     0.000004714      3.49      4.00      3.25
   SRCPARAM L0003956     0.000004714      3.49      4.00      3.25
   SRCPARAM L0003957     0.000004714      3.49      4.00      3.25
   SRCPARAM L0003958     0.000004714      3.49      4.00      3.25
   SRCPARAM L0003959     0.000004714      3.49      4.00      3.25
   SRCPARAM L0003960     0.000004714      3.49      4.00      3.25
   SRCPARAM L0003961     0.000004714      3.49      4.00      3.25
   SRCPARAM L0003962     0.000004714      3.49      4.00      3.25
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** LINE VOLUME Source ID = SLINE8
   SRCPARAM L0003963     0.000004262      3.49      4.00      3.25
   SRCPARAM L0003964     0.000004262      3.49      4.00      3.25
   SRCPARAM L0003965     0.000004262      3.49      4.00      3.25
   SRCPARAM L0003966     0.000004262      3.49      4.00      3.25
   SRCPARAM L0003967     0.000004262      3.49      4.00      3.25
   SRCPARAM L0003968     0.000004262      3.49      4.00      3.25
   SRCPARAM L0003969     0.000004262      3.49      4.00      3.25
   SRCPARAM L0003970     0.000004262      3.49      4.00      3.25
   SRCPARAM L0003971     0.000004262      3.49      4.00      3.25
   SRCPARAM L0003972     0.000004262      3.49      4.00      3.25
   SRCPARAM L0003973     0.000004262      3.49      4.00      3.25
   SRCPARAM L0003974     0.000004262      3.49      4.00      3.25
   SRCPARAM L0003975     0.000004262      3.49      4.00      3.25
   SRCPARAM L0003976     0.000004262      3.49      4.00      3.25
   SRCPARAM L0003977     0.000004262      3.49      4.00      3.25
   SRCPARAM L0003978     0.000004262      3.49      4.00      3.25
   SRCPARAM L0003979     0.000004262      3.49      4.00      3.25
   SRCPARAM L0003980     0.000004262      3.49      4.00      3.25
   SRCPARAM L0003981     0.000004262      3.49      4.00      3.25
   SRCPARAM L0003982     0.000004262      3.49      4.00      3.25
   SRCPARAM L0003983     0.000004262      3.49      4.00      3.25
   SRCPARAM L0003984     0.000004262      3.49      4.00      3.25
   SRCPARAM L0003985     0.000004262      3.49      4.00      3.25
   SRCPARAM L0003986     0.000004262      3.49      4.00      3.25
   SRCPARAM L0003987     0.000004262      3.49      4.00      3.25
   SRCPARAM L0003988     0.000004262      3.49      4.00      3.25
   SRCPARAM L0003989     0.000004262      3.49      4.00      3.25
   SRCPARAM L0003990     0.000004262      3.49      4.00      3.25
   SRCPARAM L0003991     0.000004262      3.49      4.00      3.25
   SRCPARAM L0003992     0.000004262      3.49      4.00      3.25
   SRCPARAM L0003993     0.000004262      3.49      4.00      3.25
   SRCPARAM L0003994     0.000004262      3.49      4.00      3.25
   SRCPARAM L0003995     0.000004262      3.49      4.00      3.25
   SRCPARAM L0003996     0.000004262      3.49      4.00      3.25
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SRCPARAM L0003997     0.000004262      3.49      4.00      3.25
SRCPARAM L0003998     0.000004262      3.49      4.00      3.25
SRCPARAM L0003999     0.000004262      3.49      4.00      3.25
SRCPARAM L0004000     0.000004262      3.49      4.00      3.25
SRCPARAM L0004001     0.000004262      3.49      4.00      3.25
SRCPARAM L0004002     0.000004262      3.49      4.00      3.25
SRCPARAM L0004003     0.000004262      3.49      4.00      3.25
SRCPARAM L0004004     0.000004262      3.49      4.00      3.25
SRCPARAM L0004005     0.000004262      3.49      4.00      3.25
SRCPARAM L0004006     0.000004262      3.49      4.00      3.25
SRCPARAM L0004007     0.000004262      3.49      4.00      3.25
SRCPARAM L0004008     0.000004262      3.49      4.00      3.25
SRCPARAM L0004009     0.000004262      3.49      4.00      3.25
SRCPARAM L0004010     0.000004262      3.49      4.00      3.25
SRCPARAM L0004011     0.000004262      3.49      4.00      3.25
SRCPARAM L0004012     0.000004262      3.49      4.00      3.25
SRCPARAM L0004013     0.000004262      3.49      4.00      3.25
SRCPARAM L0004014     0.000004262      3.49      4.00      3.25
SRCPARAM L0004015     0.000004262      3.49      4.00      3.25
SRCPARAM L0004016     0.000004262      3.49      4.00      3.25
SRCPARAM L0004017     0.000004262      3.49      4.00      3.25
SRCPARAM L0004018     0.000004262      3.49      4.00      3.25
SRCPARAM L0004019     0.000004262      3.49      4.00      3.25
SRCPARAM L0004020     0.000004262      3.49      4.00      3.25
SRCPARAM L0004021     0.000004262      3.49      4.00      3.25
SRCPARAM L0004022     0.000004262      3.49      4.00      3.25
SRCPARAM L0004023     0.000004262      3.49      4.00      3.25
SRCPARAM L0004024     0.000004262      3.49      4.00      3.25
SRCPARAM L0004025     0.000004262      3.49      4.00      3.25
SRCPARAM L0004026     0.000004262      3.49      4.00      3.25
SRCPARAM L0004027     0.000004262      3.49      4.00      3.25
SRCPARAM L0004028     0.000004262      3.49      4.00      3.25
SRCPARAM L0004029     0.000004262      3.49      4.00      3.25
SRCPARAM L0004030     0.000004262      3.49      4.00      3.25
SRCPARAM L0004031     0.000004262      3.49      4.00      3.25
SRCPARAM L0004032     0.000004262      3.49      4.00      3.25
SRCPARAM L0004033     0.000004262      3.49      4.00      3.25
SRCPARAM L0004034     0.000004262      3.49      4.00      3.25
SRCPARAM L0004035     0.000004262      3.49      4.00      3.25
SRCPARAM L0004036     0.000004262      3.49      4.00      3.25
SRCPARAM L0004037     0.000004262      3.49      4.00      3.25
SRCPARAM L0004038     0.000004262      3.49      4.00      3.25
SRCPARAM L0004039     0.000004262      3.49      4.00      3.25
SRCPARAM L0004040     0.000004262      3.49      4.00      3.25
SRCPARAM L0004041     0.000004262      3.49      4.00      3.25
SRCPARAM L0004042     0.000004262      3.49      4.00      3.25
SRCPARAM L0004043     0.000004262      3.49      4.00      3.25
SRCPARAM L0004044     0.000004262      3.49      4.00      3.25
SRCPARAM L0004045     0.000004262      3.49      4.00      3.25
SRCPARAM L0004046     0.000004262      3.49      4.00      3.25
SRCPARAM L0004047     0.000004262      3.49      4.00      3.25
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   SRCPARAM L0004048     0.000004262      3.49      4.00      3.25
   SRCPARAM L0004049     0.000004262      3.49      4.00      3.25
   SRCPARAM L0004050     0.000004262      3.49      4.00      3.25
   SRCPARAM L0004051     0.000004262      3.49      4.00      3.25
   SRCPARAM L0004052     0.000004262      3.49      4.00      3.25
   SRCPARAM L0004053     0.000004262      3.49      4.00      3.25
   SRCPARAM L0004054     0.000004262      3.49      4.00      3.25
   SRCPARAM L0004055     0.000004262      3.49      4.00      3.25
   SRCPARAM L0004056     0.000004262      3.49      4.00      3.25
   SRCPARAM L0004057     0.000004262      3.49      4.00      3.25
   SRCPARAM L0004058     0.000004262      3.49      4.00      3.25
   SRCPARAM L0004059     0.000004262      3.49      4.00      3.25
   SRCPARAM L0004060     0.000004262      3.49      4.00      3.25
   SRCPARAM L0004061     0.000004262      3.49      4.00      3.25
   SRCPARAM L0004062     0.000004262      3.49      4.00      3.25
   SRCPARAM L0004063     0.000004262      3.49      4.00      3.25
   SRCPARAM L0004064     0.000004262      3.49      4.00      3.25
   SRCPARAM L0004065     0.000004262      3.49      4.00      3.25
   SRCPARAM L0004066     0.000004262      3.49      4.00      3.25
   SRCPARAM L0004067     0.000004262      3.49      4.00      3.25
   SRCPARAM L0004068     0.000004262      3.49      4.00      3.25
   SRCPARAM L0004069     0.000004262      3.49      4.00      3.25
   SRCPARAM L0004070     0.000004262      3.49      4.00      3.25
   SRCPARAM L0004071     0.000004262      3.49      4.00      3.25
   SRCPARAM L0004072     0.000004262      3.49      4.00      3.25
   SRCPARAM L0004073     0.000004262      3.49      4.00      3.25
   SRCPARAM L0004074     0.000004262      3.49      4.00      3.25
   SRCPARAM L0004075     0.000004262      3.49      4.00      3.25
   SRCPARAM L0004076     0.000004262      3.49      4.00      3.25
   SRCPARAM L0004077     0.000004262      3.49      4.00      3.25
   SRCPARAM L0004078     0.000004262      3.49      4.00      3.25
   SRCPARAM L0004079     0.000004262      3.49      4.00      3.25
   SRCPARAM L0004080     0.000004262      3.49      4.00      3.25
   SRCPARAM L0004081     0.000004262      3.49      4.00      3.25
   SRCPARAM L0004082     0.000004262      3.49      4.00      3.25
   SRCPARAM L0004083     0.000004262      3.49      4.00      3.25
   SRCPARAM L0004084     0.000004262      3.49      4.00      3.25
   SRCPARAM L0004085     0.000004262      3.49      4.00      3.25
   SRCPARAM L0004086     0.000004262      3.49      4.00      3.25
   SRCPARAM L0004087     0.000004262      3.49      4.00      3.25
   SRCPARAM L0004088     0.000004262      3.49      4.00      3.25
   SRCPARAM L0004089     0.000004262      3.49      4.00      3.25
   SRCPARAM L0004090     0.000004262      3.49      4.00      3.25
   SRCPARAM L0004091     0.000004262      3.49      4.00      3.25
   SRCPARAM L0004092     0.000004262      3.49      4.00      3.25
   SRCPARAM L0004093     0.000004262      3.49      4.00      3.25
** ------------------------------------------------------------------
   URBANSRC ALL
   SRCGROUP ALL
SO FINISHED
**
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**************************************
** AERMOD Receptor Pathway
**************************************
**
**
RE STARTING
   INCLUDED ExistingAB2.rou
RE FINISHED
**
**************************************
** AERMOD Meteorology Pathway
**************************************
**
**
ME STARTING
   SURFFILE ..\RedlandsADJU\RDLD_V9_ADJU\RDLD_v9.SFC
   PROFFILE ..\RedlandsADJU\RDLD_V9_ADJU\RDLD_v9.PFL
   SURFDATA 3171 2012
   UAIRDATA 3190 2012
   SITEDATA 99999 2012
   PROFBASE 481.0 METERS
ME FINISHED
**
**************************************
** AERMOD Output Pathway
**************************************
**
**
OU STARTING
** Auto-Generated Plotfiles
   PLOTFILE PERIOD ALL EXISTINGAB2.AD\PE00GALL.PLT 31
   SUMMFILE ExistingAB2.sum
OU FINISHED


  *** Message Summary For AERMOD Model Setup ***

  --------- Summary of Total Messages --------

 A Total of            0 Fatal Error Message(s)
 A Total of            2 Warning Message(s)
 A Total of            0 Informational Message(s)


    ******** FATAL ERROR MESSAGES ********
               ***  NONE  ***


    ********   WARNING MESSAGES   ********
 ME W186    2419       MEOPEN: THRESH_1MIN 1-min ASOS wind speed threshold used          0.50
 ME W187    2419       MEOPEN: ADJ_U* Option for Low Winds used in AERMET
```

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**********************************
*** SETUP Finishes Successfully ***
**********************************
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*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

                                        ***   MODEL SETUP OPTIONS SUMMARY   ***
- -

**Model Is Setup For Calculation of Average CONCentration Values.

  -- DEPOSITION LOGIC --
**NO GAS DEPOSITION Data Provided.
**NO PARTICLE DEPOSITION Data Provided.
**Model Uses NO DRY DEPLETION. DRYDPLT = F
**Model Uses NO WET DEPLETION. WETDPLT = F

**Model Uses URBAN Dispersion Algorithm for the SBL for 1106 Source(s),
  for Total of   1 Urban Area(s):
  Urban Population =   2035210.0 ; Urban Roughness Length = 1.000 m

**Model Uses Regulatory DEFAULT Options:
       1. Stack-tip Downwash.
       2. Model Accounts for ELEVated Terrain Effects.
       3. Use Calms Processing Routine.
       4. Use Missing Data Processing Routine.
       5. No Exponential Decay.
       6. Urban Roughness Length of 1.0 Meter Assumed.

**Other Options Specified:
       ADJ_U*   - Use ADJ_U* BETA option for SBL in AERMET
       TEMP_Sub - Meteorological data includes TEMP substitutions

**Model Assumes No FLAGPOLE Receptor Heights.

**The User Specified a Pollutant Type of: DPM

**Model Calculates PERIOD Averages Only

**This Run Includes: 1106 Source(s);   1 Source Group(s); and   1506 Receptor(s)

              with: 0 POINT(s), including
                         0 POINTCAP(s) and   0 POINTHOR(s)
               and: 1106 VOLUME source(s)
               and: 0 AREA type source(s)
               and: 0 LINE source(s)
               and: 0 OPENPIT source(s)
               and: 0 BUOYANT LINE source(s) with   0 line(s)

**Model Set To Continue RUNning After the Setup Testing.

```
**The AERMET Input Meteorological Data Version Date:  16216

**Output Options Selected:
         Model Outputs Tables of PERIOD Averages by Receptor
         Model Outputs External File(s) of High Values for Plotting (PLOTFILE Keyword)
         Model Outputs Separate Summary File of High Ranked Values (SUMMFILE Keyword)

**NOTE:  The Following Flags May Appear Following CONC Values:  c for Calm Hours
                                                                m for Missing Hours
                                                                b for Both Calm and Missing Hours

**Misc. Inputs:  Base Elev. for Pot. Temp. Profile (m MSL) =   481.00 ;  Decay Coef. =    0.000     ;  Rot. Angle =     0.0
                 Emission Units = GRAMS/SEC                              ;  Emission Rate Unit Factor =   0.10000E+07
                 Output Units   = MICROGRAMS/M**3

**Approximate Storage Requirements of Model =      4.1 MB of RAM.

**Detailed Error/Message File:   ExistingAB2.err
**File for Summary of Results:   ExistingAB2.sum
```

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0002988	0	0.51770E-05	480749.7	3774134.1	363.7	3.49	4.00	3.25	YES	
L0002989	0	0.51770E-05	480758.2	3774133.4	363.9	3.49	4.00	3.25	YES	
L0002990	0	0.51770E-05	480766.8	3774132.7	364.0	3.49	4.00	3.25	YES	
L0002991	0	0.51770E-05	480775.4	3774132.0	364.0	3.49	4.00	3.25	YES	
L0002992	0	0.51770E-05	480783.9	3774131.3	364.0	3.49	4.00	3.25	YES	
L0002993	0	0.51770E-05	480792.5	3774130.6	364.0	3.49	4.00	3.25	YES	
L0002994	0	0.51770E-05	480801.0	3774129.9	364.0	3.49	4.00	3.25	YES	
L0002995	0	0.51770E-05	480809.6	3774129.2	364.0	3.49	4.00	3.25	YES	
L0002996	0	0.51770E-05	480818.2	3774128.5	364.0	3.49	4.00	3.25	YES	
L0002997	0	0.51770E-05	480826.7	3774127.8	364.1	3.49	4.00	3.25	YES	
L0002998	0	0.51770E-05	480835.3	3774127.1	364.2	3.49	4.00	3.25	YES	
L0002999	0	0.51770E-05	480843.9	3774126.4	364.3	3.49	4.00	3.25	YES	
L0003000	0	0.51770E-05	480852.4	3774125.7	364.4	3.49	4.00	3.25	YES	
L0003001	0	0.51770E-05	480861.0	3774125.0	364.6	3.49	4.00	3.25	YES	
L0003002	0	0.51770E-05	480869.5	3774124.3	364.8	3.49	4.00	3.25	YES	
L0003003	0	0.51770E-05	480878.1	3774123.6	365.0	3.49	4.00	3.25	YES	
L0003004	0	0.51770E-05	480886.7	3774122.9	365.0	3.49	4.00	3.25	YES	
L0003005	0	0.51770E-05	480895.2	3774122.2	365.0	3.49	4.00	3.25	YES	
L0003006	0	0.51770E-05	480903.8	3774121.5	365.0	3.49	4.00	3.25	YES	
L0003007	0	0.51770E-05	480912.3	3774120.8	365.0	3.49	4.00	3.25	YES	
L0003008	0	0.51770E-05	480920.9	3774120.1	365.0	3.49	4.00	3.25	YES	
L0003009	0	0.51770E-05	480929.5	3774119.4	365.0	3.49	4.00	3.25	YES	
L0003010	0	0.51770E-05	480938.0	3774118.7	365.0	3.49	4.00	3.25	YES	
L0003011	0	0.51770E-05	480946.6	3774118.0	365.2	3.49	4.00	3.25	YES	
L0003012	0	0.51770E-05	480955.2	3774117.3	365.5	3.49	4.00	3.25	YES	
L0003013	0	0.51770E-05	480963.7	3774116.6	365.8	3.49	4.00	3.25	YES	
L0003014	0	0.51770E-05	480972.3	3774115.9	366.0	3.49	4.00	3.25	YES	
L0003015	0	0.51770E-05	480980.8	3774115.2	366.0	3.49	4.00	3.25	YES	
L0003016	0	0.51770E-05	480989.4	3774114.5	366.0	3.49	4.00	3.25	YES	
L0003017	0	0.51770E-05	480998.0	3774113.8	366.0	3.49	4.00	3.25	YES	
L0003018	0	0.51770E-05	481006.5	3774113.1	366.0	3.49	4.00	3.25	YES	
L0003019	0	0.51770E-05	481015.1	3774112.4	366.0	3.49	4.00	3.25	YES	
L0003020	0	0.51770E-05	481023.6	3774111.7	366.0	3.49	4.00	3.25	YES	
L0003021	0	0.51770E-05	481032.2	3774111.0	366.1	3.49	4.00	3.25	YES	
L0003022	0	0.51770E-05	481040.8	3774110.3	366.4	3.49	4.00	3.25	YES	
L0003023	0	0.51770E-05	481049.3	3774109.6	366.7	3.49	4.00	3.25	YES	
L0003024	0	0.51770E-05	481057.9	3774108.9	366.9	3.49	4.00	3.25	YES	
L0003025	0	0.51770E-05	481066.5	3774108.4	367.0	3.49	4.00	3.25	YES	
L0003026	0	0.51770E-05	481075.0	3774107.9	367.0	3.49	4.00	3.25	YES	
L0003027	0	0.51770E-05	481083.6	3774107.5	367.0	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0003028	0	0.51770E-05	481092.2	3774107.1	367.0	3.49	4.00	3.25	YES	
L0003029	0	0.51770E-05	481100.8	3774106.7	367.0	3.49	4.00	3.25	YES	
L0003030	0	0.51770E-05	481109.4	3774106.3	367.0	3.49	4.00	3.25	YES	
L0003031	0	0.51770E-05	481117.9	3774105.9	367.0	3.49	4.00	3.25	YES	
L0003032	0	0.51770E-05	481126.5	3774105.4	367.2	3.49	4.00	3.25	YES	
L0003033	0	0.51770E-05	481135.1	3774105.0	367.5	3.49	4.00	3.25	YES	
L0003034	0	0.51770E-05	481143.7	3774104.6	367.8	3.49	4.00	3.25	YES	
L0003035	0	0.51770E-05	481152.3	3774104.2	368.0	3.49	4.00	3.25	YES	
L0003036	0	0.51770E-05	481160.8	3774104.6	368.0	3.49	4.00	3.25	YES	
L0003037	0	0.51770E-05	481169.4	3774105.2	368.0	3.49	4.00	3.25	YES	
L0003038	0	0.51770E-05	481178.0	3774105.8	368.0	3.49	4.00	3.25	YES	
L0003039	0	0.51770E-05	481186.5	3774106.5	368.0	3.49	4.00	3.25	YES	
L0003040	0	0.51770E-05	481195.1	3774107.1	368.0	3.49	4.00	3.25	YES	
L0003041	0	0.51770E-05	481203.7	3774107.7	368.0	3.49	4.00	3.25	YES	
L0003042	0	0.51770E-05	481212.2	3774108.3	368.1	3.49	4.00	3.25	YES	
L0003043	0	0.51770E-05	481220.8	3774108.9	368.4	3.49	4.00	3.25	YES	
L0003044	0	0.51770E-05	481229.4	3774109.5	368.7	3.49	4.00	3.25	YES	
L0003045	0	0.51770E-05	481237.9	3774110.1	368.9	3.49	4.00	3.25	YES	
L0003046	0	0.51770E-05	481246.5	3774110.8	369.0	3.49	4.00	3.25	YES	
L0003047	0	0.51770E-05	481255.1	3774111.4	369.0	3.49	4.00	3.25	YES	
L0003048	0	0.51770E-05	481263.6	3774112.0	369.0	3.49	4.00	3.25	YES	
L0003049	0	0.51770E-05	481272.2	3774112.6	369.0	3.49	4.00	3.25	YES	
L0003050	0	0.51770E-05	481280.8	3774113.2	369.0	3.49	4.00	3.25	YES	
L0003051	0	0.51770E-05	481289.3	3774113.8	369.0	3.49	4.00	3.25	YES	
L0003052	0	0.51770E-05	481297.9	3774114.5	369.0	3.49	4.00	3.25	YES	
L0003053	0	0.51770E-05	481306.5	3774115.1	369.2	3.49	4.00	3.25	YES	
L0003054	0	0.51770E-05	481315.1	3774115.7	369.5	3.49	4.00	3.25	YES	
L0003055	0	0.51770E-05	481323.6	3774116.3	369.8	3.49	4.00	3.25	YES	
L0003056	0	0.51770E-05	481332.2	3774116.9	370.0	3.49	4.00	3.25	YES	
L0003057	0	0.51770E-05	481340.8	3774117.5	370.0	3.49	4.00	3.25	YES	
L0003058	0	0.51770E-05	481349.3	3774118.1	370.0	3.49	4.00	3.25	YES	
L0003059	0	0.51770E-05	481357.9	3774118.8	370.0	3.49	4.00	3.25	YES	
L0003060	0	0.51770E-05	481366.5	3774119.4	370.0	3.49	4.00	3.25	YES	
L0003061	0	0.51770E-05	481375.0	3774120.0	370.0	3.49	4.00	3.25	YES	
L0003062	0	0.51770E-05	481383.6	3774120.6	370.0	3.49	4.00	3.25	YES	
L0003063	0	0.51770E-05	481392.2	3774121.2	370.1	3.49	4.00	3.25	YES	
L0003064	0	0.51770E-05	481400.7	3774121.8	370.4	3.49	4.00	3.25	YES	
L0003065	0	0.51770E-05	481409.3	3774122.5	370.7	3.49	4.00	3.25	YES	
L0003066	0	0.51770E-05	481417.9	3774123.1	370.9	3.49	4.00	3.25	YES	
L0003067	0	0.51770E-05	481426.4	3774123.7	371.0	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0003068	0	0.51770E-05	481435.0	3774124.3	371.0	3.49	4.00	3.25	YES	
L0003069	0	0.51770E-05	481443.6	3774124.9	371.0	3.49	4.00	3.25	YES	
L0003070	0	0.51770E-05	481452.1	3774125.5	371.0	3.49	4.00	3.25	YES	
L0003071	0	0.51770E-05	481460.7	3774126.1	371.1	3.49	4.00	3.25	YES	
L0003072	0	0.51770E-05	481469.3	3774126.8	371.2	3.49	4.00	3.25	YES	
L0003073	0	0.51770E-05	481477.8	3774127.4	371.3	3.49	4.00	3.25	YES	
L0003074	0	0.51770E-05	481486.4	3774128.0	371.4	3.49	4.00	3.25	YES	
L0003075	0	0.51770E-05	481495.0	3774128.6	371.6	3.49	4.00	3.25	YES	
L0003076	0	0.51770E-05	481503.5	3774129.2	371.8	3.49	4.00	3.25	YES	
L0003077	0	0.51770E-05	481512.1	3774129.8	372.0	3.49	4.00	3.25	YES	
L0003078	0	0.51770E-05	481520.7	3774130.5	372.0	3.49	4.00	3.25	YES	
L0003079	0	0.51770E-05	481529.3	3774131.1	372.0	3.49	4.00	3.25	YES	
L0003080	0	0.51770E-05	481537.8	3774131.7	372.0	3.49	4.00	3.25	YES	
L0003081	0	0.51770E-05	481546.4	3774132.3	372.0	3.49	4.00	3.25	YES	
L0003082	0	0.51770E-05	481555.0	3774132.9	372.1	3.49	4.00	3.25	YES	
L0003083	0	0.51770E-05	481563.5	3774133.5	372.1	3.49	4.00	3.25	YES	
L0003084	0	0.51770E-05	481572.1	3774134.1	372.1	3.49	4.00	3.25	YES	
L0003085	0	0.72940E-06	479144.0	3771580.1	352.0	3.49	4.00	3.25	YES	
L0003086	0	0.72940E-06	479152.5	3771580.1	352.0	3.49	4.00	3.25	YES	
L0003087	0	0.72940E-06	479161.1	3771580.0	352.0	3.49	4.00	3.25	YES	
L0003088	0	0.72940E-06	479169.7	3771580.0	352.0	3.49	4.00	3.25	YES	
L0003089	0	0.72940E-06	479178.3	3771579.9	352.3	3.49	4.00	3.25	YES	
L0003090	0	0.72940E-06	479186.9	3771579.9	352.6	3.49	4.00	3.25	YES	
L0003091	0	0.72940E-06	479195.5	3771579.8	352.9	3.49	4.00	3.25	YES	
L0003092	0	0.72940E-06	479204.1	3771579.8	353.0	3.49	4.00	3.25	YES	
L0003093	0	0.72940E-06	479212.7	3771579.7	353.0	3.49	4.00	3.25	YES	
L0003094	0	0.72940E-06	479221.3	3771579.7	353.0	3.49	4.00	3.25	YES	
L0003095	0	0.72940E-06	479229.8	3771579.6	353.0	3.49	4.00	3.25	YES	
L0003096	0	0.72940E-06	479238.4	3771579.6	353.1	3.49	4.00	3.25	YES	
L0003097	0	0.72940E-06	479247.0	3771579.5	353.1	3.49	4.00	3.25	YES	
L0003098	0	0.72940E-06	479255.6	3771579.5	353.2	3.49	4.00	3.25	YES	
L0003099	0	0.72940E-06	479264.2	3771579.4	353.3	3.49	4.00	3.25	YES	
L0003100	0	0.72940E-06	479272.8	3771579.4	353.6	3.49	4.00	3.25	YES	
L0003101	0	0.72940E-06	479281.4	3771579.3	353.8	3.49	4.00	3.25	YES	
L0003102	0	0.72940E-06	479290.0	3771579.3	354.0	3.49	4.00	3.25	YES	
L0003103	0	0.72940E-06	479298.6	3771579.2	354.0	3.49	4.00	3.25	YES	
L0003104	0	0.72940E-06	479307.2	3771579.2	354.0	3.49	4.00	3.25	YES	
L0003105	0	0.72940E-06	479315.7	3771579.2	354.0	3.49	4.00	3.25	YES	
L0003106	0	0.72940E-06	479324.3	3771579.1	354.0	3.49	4.00	3.25	YES	
L0003107	0	0.72940E-06	479332.9	3771579.1	354.0	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0003108	0	0.72940E-06	479341.5	3771579.0	354.0	3.49	4.00	3.25	YES	
L0003109	0	0.72940E-06	479350.1	3771579.0	354.0	3.49	4.00	3.25	YES	
L0003110	0	0.72940E-06	479358.7	3771578.9	354.3	3.49	4.00	3.25	YES	
L0003111	0	0.72940E-06	479367.3	3771578.9	354.6	3.49	4.00	3.25	YES	
L0003112	0	0.72940E-06	479375.9	3771578.8	354.9	3.49	4.00	3.25	YES	
L0003113	0	0.72940E-06	479384.5	3771578.8	355.0	3.49	4.00	3.25	YES	
L0003114	0	0.72940E-06	479393.1	3771578.7	355.0	3.49	4.00	3.25	YES	
L0003115	0	0.72940E-06	479401.6	3771578.7	355.0	3.49	4.00	3.25	YES	
L0003116	0	0.72940E-06	479410.2	3771578.6	355.0	3.49	4.00	3.25	YES	
L0003117	0	0.72940E-06	479418.8	3771578.6	355.1	3.49	4.00	3.25	YES	
L0003118	0	0.72940E-06	479427.4	3771578.5	355.2	3.49	4.00	3.25	YES	
L0003119	0	0.72940E-06	479436.0	3771578.5	355.2	3.49	4.00	3.25	YES	
L0003120	0	0.72940E-06	479444.6	3771578.4	355.4	3.49	4.00	3.25	YES	
L0003121	0	0.72940E-06	479453.2	3771578.4	355.6	3.49	4.00	3.25	YES	
L0003122	0	0.72940E-06	479461.8	3771578.3	355.8	3.49	4.00	3.25	YES	
L0003123	0	0.72940E-06	479470.4	3771578.3	356.0	3.49	4.00	3.25	YES	
L0003124	0	0.72940E-06	479479.0	3771578.2	356.0	3.49	4.00	3.25	YES	
L0003125	0	0.72940E-06	479487.5	3771578.2	356.0	3.49	4.00	3.25	YES	
L0003126	0	0.72940E-06	479496.1	3771578.1	356.0	3.49	4.00	3.25	YES	
L0003127	0	0.72940E-06	479504.7	3771578.1	356.0	3.49	4.00	3.25	YES	
L0003128	0	0.72940E-06	479513.3	3771578.0	356.0	3.49	4.00	3.25	YES	
L0003129	0	0.72940E-06	479521.9	3771578.0	356.0	3.49	4.00	3.25	YES	
L0003130	0	0.72940E-06	479530.5	3771577.9	356.0	3.49	4.00	3.25	YES	
L0003131	0	0.72940E-06	479539.1	3771577.9	356.3	3.49	4.00	3.25	YES	
L0003132	0	0.72940E-06	479547.7	3771577.9	356.6	3.49	4.00	3.25	YES	
L0003133	0	0.72940E-06	479556.3	3771577.8	356.9	3.49	4.00	3.25	YES	
L0003134	0	0.72940E-06	479564.9	3771577.8	357.0	3.49	4.00	3.25	YES	
L0003135	0	0.72940E-06	479573.4	3771577.7	357.0	3.49	4.00	3.25	YES	
L0003136	0	0.72940E-06	479582.0	3771577.7	357.0	3.49	4.00	3.25	YES	
L0003137	0	0.72940E-06	479590.6	3771577.6	357.0	3.49	4.00	3.25	YES	
L0003138	0	0.72940E-06	479599.2	3771577.6	357.0	3.49	4.00	3.25	YES	
L0003139	0	0.72940E-06	479607.8	3771577.5	357.0	3.49	4.00	3.25	YES	
L0003140	0	0.72940E-06	479616.4	3771577.5	357.0	3.49	4.00	3.25	YES	
L0003141	0	0.72940E-06	479625.0	3771577.4	357.2	3.49	4.00	3.25	YES	
L0003142	0	0.72940E-06	479633.6	3771577.4	357.5	3.49	4.00	3.25	YES	
L0003143	0	0.72940E-06	479642.2	3771577.3	357.7	3.49	4.00	3.25	YES	
L0003144	0	0.72940E-06	479650.8	3771577.3	358.0	3.49	4.00	3.25	YES	
L0003145	0	0.72940E-06	479659.3	3771577.2	358.0	3.49	4.00	3.25	YES	
L0003146	0	0.72940E-06	479667.9	3771577.2	358.0	3.49	4.00	3.25	YES	
L0003147	0	0.72940E-06	479676.5	3771577.1	358.0	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0003148	0	0.72940E-06	479685.1	3771577.1	358.0	3.49	4.00	3.25	YES	
L0003149	0	0.72940E-06	479693.7	3771577.0	358.0	3.49	4.00	3.25	YES	
L0003150	0	0.72940E-06	479702.3	3771577.0	358.0	3.49	4.00	3.25	YES	
L0003151	0	0.72940E-06	479710.9	3771576.9	358.0	3.49	4.00	3.25	YES	
L0003152	0	0.72940E-06	479719.5	3771576.9	358.3	3.49	4.00	3.25	YES	
L0003153	0	0.72940E-06	479728.1	3771576.8	358.6	3.49	4.00	3.25	YES	
L0003154	0	0.72940E-06	479736.7	3771576.8	358.9	3.49	4.00	3.25	YES	
L0003155	0	0.72940E-06	479745.2	3771576.7	359.0	3.49	4.00	3.25	YES	
L0003156	0	0.72940E-06	479753.8	3771576.7	359.0	3.49	4.00	3.25	YES	
L0003157	0	0.72940E-06	479762.4	3771576.6	359.0	3.49	4.00	3.25	YES	
L0003158	0	0.72940E-06	479771.0	3771576.6	359.0	3.49	4.00	3.25	YES	
L0003159	0	0.72940E-06	479779.6	3771576.5	359.3	3.49	4.00	3.25	YES	
L0003160	0	0.72940E-06	479788.2	3771576.5	359.6	3.49	4.00	3.25	YES	
L0003161	0	0.72940E-06	479796.8	3771576.5	359.9	3.49	4.00	3.25	YES	
L0003162	0	0.72940E-06	479805.4	3771576.4	360.0	3.49	4.00	3.25	YES	
L0003163	0	0.72940E-06	479814.0	3771576.4	360.0	3.49	4.00	3.25	YES	
L0003164	0	0.72940E-06	479822.5	3771576.3	360.0	3.49	4.00	3.25	YES	
L0003165	0	0.72940E-06	479831.1	3771576.3	360.0	3.49	4.00	3.25	YES	
L0003166	0	0.72940E-06	479839.7	3771576.2	360.0	3.49	4.00	3.25	YES	
L0003167	0	0.72940E-06	479848.3	3771576.2	360.0	3.49	4.00	3.25	YES	
L0003168	0	0.72940E-06	479856.9	3771576.1	360.0	3.49	4.00	3.25	YES	
L0003169	0	0.72940E-06	479865.5	3771576.1	360.2	3.49	4.00	3.25	YES	
L0003170	0	0.72940E-06	479874.1	3771576.0	360.5	3.49	4.00	3.25	YES	
L0003171	0	0.72940E-06	479882.7	3771576.0	360.8	3.49	4.00	3.25	YES	
L0003172	0	0.72940E-06	479891.3	3771575.9	361.0	3.49	4.00	3.25	YES	
L0003173	0	0.72940E-06	479899.9	3771575.9	361.0	3.49	4.00	3.25	YES	
L0003174	0	0.72940E-06	479908.4	3771575.8	361.0	3.49	4.00	3.25	YES	
L0003175	0	0.72940E-06	479917.0	3771575.8	361.0	3.49	4.00	3.25	YES	
L0003176	0	0.72940E-06	479925.6	3771575.7	361.2	3.49	4.00	3.25	YES	
L0003177	0	0.72940E-06	479934.2	3771575.7	361.5	3.49	4.00	3.25	YES	
L0003178	0	0.72940E-06	479942.8	3771575.6	361.8	3.49	4.00	3.25	YES	
L0003179	0	0.72940E-06	479951.3	3771576.4	362.0	3.49	4.00	3.25	YES	
L0003180	0	0.72940E-06	479959.8	3771577.9	362.0	3.49	4.00	3.25	YES	
L0003181	0	0.72940E-06	479968.3	3771579.1	362.0	3.49	4.00	3.25	YES	
L0003182	0	0.72940E-06	479976.8	3771579.1	362.0	3.49	4.00	3.25	YES	
L0003183	0	0.72940E-06	479985.4	3771579.1	362.0	3.49	4.00	3.25	YES	
L0003184	0	0.72940E-06	479994.0	3771579.1	362.0	3.49	4.00	3.25	YES	
L0003185	0	0.72940E-06	480002.6	3771579.1	362.0	3.49	4.00	3.25	YES	
L0003186	0	0.72940E-06	480011.2	3771579.1	362.0	3.49	4.00	3.25	YES	
L0003187	0	0.72940E-06	480019.8	3771579.1	362.3	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0003188	0	0.72940E-06	480028.4	3771579.1	362.6	3.49	4.00	3.25	YES	
L0003189	0	0.72940E-06	480037.0	3771579.1	362.9	3.49	4.00	3.25	YES	
L0003190	0	0.72940E-06	480045.6	3771579.1	363.0	3.49	4.00	3.25	YES	
L0003191	0	0.72940E-06	480054.2	3771579.0	363.0	3.49	4.00	3.25	YES	
L0003192	0	0.72940E-06	480062.7	3771579.0	363.0	3.49	4.00	3.25	YES	
L0003193	0	0.72940E-06	480071.3	3771579.0	363.0	3.49	4.00	3.25	YES	
L0003194	0	0.72940E-06	480079.9	3771579.0	363.1	3.49	4.00	3.25	YES	
L0003195	0	0.72940E-06	480088.5	3771579.0	363.2	3.49	4.00	3.25	YES	
L0003196	0	0.72940E-06	480097.1	3771579.0	363.2	3.49	4.00	3.25	YES	
L0003197	0	0.72940E-06	480105.7	3771579.0	363.4	3.49	4.00	3.25	YES	
L0003198	0	0.72940E-06	480114.3	3771579.0	363.6	3.49	4.00	3.25	YES	
L0003199	0	0.72940E-06	480122.9	3771579.0	363.8	3.49	4.00	3.25	YES	
L0003200	0	0.72940E-06	480131.5	3771579.0	364.0	3.49	4.00	3.25	YES	
L0003201	0	0.72940E-06	480140.1	3771579.0	364.0	3.49	4.00	3.25	YES	
L0003202	0	0.72940E-06	480148.6	3771579.0	364.0	3.49	4.00	3.25	YES	
L0003203	0	0.72940E-06	480157.2	3771579.0	364.0	3.49	4.00	3.25	YES	
L0003204	0	0.72940E-06	480165.8	3771579.0	364.2	3.49	4.00	3.25	YES	
L0003205	0	0.72940E-06	480174.4	3771579.0	364.5	3.49	4.00	3.25	YES	
L0003206	0	0.72940E-06	480183.0	3771579.0	364.8	3.49	4.00	3.25	YES	
L0003207	0	0.72940E-06	480191.6	3771579.0	365.0	3.49	4.00	3.25	YES	
L0003208	0	0.72940E-06	480200.2	3771579.0	365.0	3.49	4.00	3.25	YES	
L0003209	0	0.72940E-06	480208.8	3771578.9	365.0	3.49	4.00	3.25	YES	
L0003210	0	0.72940E-06	480217.4	3771578.9	365.0	3.49	4.00	3.25	YES	
L0003211	0	0.72940E-06	480226.0	3771578.9	365.2	3.49	4.00	3.25	YES	
L0003212	0	0.72940E-06	480234.5	3771578.9	365.5	3.49	4.00	3.25	YES	
L0003213	0	0.72940E-06	480243.1	3771578.9	365.8	3.49	4.00	3.25	YES	
L0003214	0	0.72940E-06	480251.7	3771578.9	366.0	3.49	4.00	3.25	YES	
L0003215	0	0.72940E-06	480260.3	3771578.9	366.0	3.49	4.00	3.25	YES	
L0003216	0	0.72940E-06	480268.9	3771578.9	366.0	3.49	4.00	3.25	YES	
L0003217	0	0.72940E-06	480277.5	3771578.9	366.0	3.49	4.00	3.25	YES	
L0003218	0	0.72940E-06	480286.1	3771578.9	366.0	3.49	4.00	3.25	YES	
L0003219	0	0.72940E-06	480294.7	3771578.9	366.0	3.49	4.00	3.25	YES	
L0003220	0	0.72940E-06	480303.3	3771578.9	366.0	3.49	4.00	3.25	YES	
L0003221	0	0.72940E-06	480311.9	3771578.9	366.1	3.49	4.00	3.25	YES	
L0003222	0	0.72940E-06	480320.4	3771578.9	366.4	3.49	4.00	3.25	YES	
L0003223	0	0.72940E-06	480329.0	3771578.9	366.6	3.49	4.00	3.25	YES	
L0003224	0	0.72940E-06	480337.6	3771578.9	366.9	3.49	4.00	3.25	YES	
L0003225	0	0.72940E-06	480346.2	3771578.9	367.0	3.49	4.00	3.25	YES	
L0003226	0	0.72940E-06	480354.8	3771578.9	367.0	3.49	4.00	3.25	YES	
L0003227	0	0.72940E-06	480363.4	3771578.8	367.0	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

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L0003228	0	0.72940E-06	480372.0	3771578.8	367.1	3.49	4.00	3.25	YES	
L0003229	0	0.72940E-06	480380.6	3771578.8	367.4	3.49	4.00	3.25	YES	
L0003230	0	0.72940E-06	480389.2	3771578.8	367.6	3.49	4.00	3.25	YES	
L0003231	0	0.72940E-06	480397.8	3771578.8	367.9	3.49	4.00	3.25	YES	
L0003232	0	0.72940E-06	480406.3	3771578.8	368.0	3.49	4.00	3.25	YES	
L0003233	0	0.72940E-06	480414.9	3771578.8	368.0	3.49	4.00	3.25	YES	
L0003234	0	0.72940E-06	480423.5	3771578.8	368.0	3.49	4.00	3.25	YES	
L0003235	0	0.72940E-06	480432.1	3771578.8	368.1	3.49	4.00	3.25	YES	
L0003236	0	0.72940E-06	480440.7	3771578.8	368.4	3.49	4.00	3.25	YES	
L0003237	0	0.72940E-06	480449.3	3771578.8	368.7	3.49	4.00	3.25	YES	
L0003238	0	0.72940E-06	480457.9	3771578.8	368.9	3.49	4.00	3.25	YES	
L0003239	0	0.72940E-06	480466.5	3771578.8	369.0	3.49	4.00	3.25	YES	
L0003240	0	0.72940E-06	480475.1	3771578.8	369.0	3.49	4.00	3.25	YES	
L0003241	0	0.72940E-06	480483.7	3771578.8	369.0	3.49	4.00	3.25	YES	
L0003242	0	0.72940E-06	480492.2	3771578.8	369.1	3.49	4.00	3.25	YES	
L0003243	0	0.72940E-06	480500.8	3771578.8	369.4	3.49	4.00	3.25	YES	
L0003244	0	0.72940E-06	480509.4	3771578.8	369.7	3.49	4.00	3.25	YES	
L0003245	0	0.72940E-06	480518.0	3771578.8	369.9	3.49	4.00	3.25	YES	
L0003246	0	0.72940E-06	480526.6	3771578.7	370.0	3.49	4.00	3.25	YES	
L0003247	0	0.72940E-06	480535.2	3771578.7	370.0	3.49	4.00	3.25	YES	
L0003248	0	0.72940E-06	480543.8	3771578.7	370.0	3.49	4.00	3.25	YES	
L0003249	0	0.72940E-06	480552.4	3771578.7	370.0	3.49	4.00	3.25	YES	
L0003250	0	0.72940E-06	480561.0	3771578.7	370.0	3.49	4.00	3.25	YES	
L0003251	0	0.72940E-06	480569.6	3771578.7	370.0	3.49	4.00	3.25	YES	
L0003252	0	0.72940E-06	480578.1	3771578.7	370.0	3.49	4.00	3.25	YES	
L0003253	0	0.72940E-06	480586.7	3771578.7	370.2	3.49	4.00	3.25	YES	
L0003254	0	0.72940E-06	480595.3	3771578.7	370.5	3.49	4.00	3.25	YES	
L0003255	0	0.72940E-06	480603.9	3771578.7	370.8	3.49	4.00	3.25	YES	
L0003256	0	0.72940E-06	480612.5	3771578.7	371.0	3.49	4.00	3.25	YES	
L0003257	0	0.72940E-06	480621.1	3771578.7	371.0	3.49	4.00	3.25	YES	
L0003258	0	0.72940E-06	480629.7	3771578.7	371.0	3.49	4.00	3.25	YES	
L0003259	0	0.72940E-06	480638.3	3771578.7	371.0	3.49	4.00	3.25	YES	
L0003260	0	0.72940E-06	480646.9	3771578.7	371.2	3.49	4.00	3.25	YES	
L0003261	0	0.72940E-06	480655.5	3771578.7	371.5	3.49	4.00	3.25	YES	
L0003262	0	0.72940E-06	480664.0	3771578.7	371.8	3.49	4.00	3.25	YES	
L0003263	0	0.72940E-06	480672.6	3771578.7	372.0	3.49	4.00	3.25	YES	
L0003264	0	0.72940E-06	480681.2	3771578.6	372.0	3.49	4.00	3.25	YES	
L0003265	0	0.72940E-06	480689.8	3771578.6	372.0	3.49	4.00	3.25	YES	
L0003266	0	0.72940E-06	480698.4	3771578.6	372.0	3.49	4.00	3.25	YES	
L0003267	0	0.72940E-06	480707.0	3771578.6	372.2	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0003268	0	0.72940E-06	480715.6	3771578.6	372.5	3.49	4.00	3.25	YES	
L0003269	0	0.72940E-06	480724.2	3771578.6	372.8	3.49	4.00	3.25	YES	
L0003270	0	0.72940E-06	480732.8	3771578.6	373.0	3.49	4.00	3.25	YES	
L0003271	0	0.72940E-06	480741.4	3771578.6	373.0	3.49	4.00	3.25	YES	
L0003272	0	0.18700E-05	480745.7	3770768.6	374.0	3.49	4.00	3.25	YES	
L0003273	0	0.18700E-05	480754.0	3770766.6	374.0	3.49	4.00	3.25	YES	
L0003274	0	0.18700E-05	480762.4	3770764.6	374.1	3.49	4.00	3.25	YES	
L0003275	0	0.18700E-05	480770.7	3770762.6	374.4	3.49	4.00	3.25	YES	
L0003276	0	0.18700E-05	480779.1	3770760.6	374.6	3.49	4.00	3.25	YES	
L0003277	0	0.18700E-05	480787.5	3770758.6	374.9	3.49	4.00	3.25	YES	
L0003278	0	0.18700E-05	480795.8	3770756.6	375.0	3.49	4.00	3.25	YES	
L0003279	0	0.18700E-05	480804.2	3770755.1	375.0	3.49	4.00	3.25	YES	
L0003280	0	0.18700E-05	480812.8	3770755.1	375.0	3.49	4.00	3.25	YES	
L0003281	0	0.18700E-05	480821.4	3770755.0	375.1	3.49	4.00	3.25	YES	
L0003282	0	0.18700E-05	480830.0	3770755.0	375.3	3.49	4.00	3.25	YES	
L0003283	0	0.18700E-05	480838.6	3770754.9	375.6	3.49	4.00	3.25	YES	
L0003284	0	0.18700E-05	480847.2	3770754.9	375.9	3.49	4.00	3.25	YES	
L0003285	0	0.18700E-05	480855.8	3770754.9	376.0	3.49	4.00	3.25	YES	
L0003286	0	0.18700E-05	480864.4	3770754.8	376.0	3.49	4.00	3.25	YES	
L0003287	0	0.18700E-05	480872.9	3770754.8	376.0	3.49	4.00	3.25	YES	
L0003288	0	0.18700E-05	480881.5	3770754.8	376.1	3.49	4.00	3.25	YES	
L0003289	0	0.18700E-05	480890.1	3770754.7	376.3	3.49	4.00	3.25	YES	
L0003290	0	0.18700E-05	480898.7	3770754.7	376.6	3.49	4.00	3.25	YES	
L0003291	0	0.18700E-05	480907.3	3770754.7	376.9	3.49	4.00	3.25	YES	
L0003292	0	0.18700E-05	480915.9	3770754.6	377.0	3.49	4.00	3.25	YES	
L0003293	0	0.18700E-05	480924.5	3770754.6	377.0	3.49	4.00	3.25	YES	
L0003294	0	0.18700E-05	480933.1	3770754.6	377.0	3.49	4.00	3.25	YES	
L0003295	0	0.18700E-05	480941.7	3770754.5	377.1	3.49	4.00	3.25	YES	
L0003296	0	0.18700E-05	480950.3	3770754.5	377.3	3.49	4.00	3.25	YES	
L0003297	0	0.18700E-05	480958.8	3770754.5	377.6	3.49	4.00	3.25	YES	
L0003298	0	0.18700E-05	480967.4	3770754.4	377.9	3.49	4.00	3.25	YES	
L0003299	0	0.18700E-05	480976.0	3770754.4	378.0	3.49	4.00	3.25	YES	
L0003300	0	0.18700E-05	480984.6	3770754.3	378.0	3.49	4.00	3.25	YES	
L0003301	0	0.18700E-05	480993.2	3770754.3	378.0	3.49	4.00	3.25	YES	
L0003302	0	0.18700E-05	481001.8	3770754.3	378.1	3.49	4.00	3.25	YES	
L0003303	0	0.18700E-05	481010.4	3770754.2	378.4	3.49	4.00	3.25	YES	
L0003304	0	0.18700E-05	481019.0	3770754.2	378.6	3.49	4.00	3.25	YES	
L0003305	0	0.18700E-05	481027.6	3770754.2	378.9	3.49	4.00	3.25	YES	
L0003306	0	0.18700E-05	481036.2	3770754.1	379.0	3.49	4.00	3.25	YES	
L0003307	0	0.18700E-05	481044.7	3770754.1	379.0	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0003308	0	0.18700E-05	481053.3	3770754.1	379.0	3.49	4.00	3.25	YES	
L0003309	0	0.18700E-05	481061.9	3770754.0	379.1	3.49	4.00	3.25	YES	
L0003310	0	0.18700E-05	481070.5	3770754.0	379.4	3.49	4.00	3.25	YES	
L0003311	0	0.18700E-05	481079.1	3770754.0	379.6	3.49	4.00	3.25	YES	
L0003312	0	0.18700E-05	481087.7	3770753.9	379.9	3.49	4.00	3.25	YES	
L0003313	0	0.18700E-05	481096.3	3770753.9	380.0	3.49	4.00	3.25	YES	
L0003314	0	0.18700E-05	481104.9	3770753.8	380.0	3.49	4.00	3.25	YES	
L0003315	0	0.18700E-05	481113.5	3770753.8	380.0	3.49	4.00	3.25	YES	
L0003316	0	0.18700E-05	481122.0	3770753.8	380.0	3.49	4.00	3.25	YES	
L0003317	0	0.18700E-05	481130.6	3770753.7	380.0	3.49	4.00	3.25	YES	
L0003318	0	0.18700E-05	481139.2	3770753.7	380.0	3.49	4.00	3.25	YES	
L0003319	0	0.18700E-05	481147.8	3770753.7	380.0	3.49	4.00	3.25	YES	
L0003320	0	0.18700E-05	481156.4	3770753.6	380.2	3.49	4.00	3.25	YES	
L0003321	0	0.18700E-05	481165.0	3770753.6	380.5	3.49	4.00	3.25	YES	
L0003322	0	0.18700E-05	481173.6	3770753.6	380.8	3.49	4.00	3.25	YES	
L0003323	0	0.18700E-05	481182.2	3770753.5	381.1	3.49	4.00	3.25	YES	
L0003324	0	0.18700E-05	481190.8	3770753.5	381.4	3.49	4.00	3.25	YES	
L0003325	0	0.18700E-05	481199.4	3770753.5	381.7	3.49	4.00	3.25	YES	
L0003326	0	0.18700E-05	481207.9	3770753.4	381.9	3.49	4.00	3.25	YES	
L0003327	0	0.18700E-05	481216.5	3770753.4	382.0	3.49	4.00	3.25	YES	
L0003328	0	0.18700E-05	481225.1	3770753.3	382.0	3.49	4.00	3.25	YES	
L0003329	0	0.18700E-05	481233.7	3770753.3	382.0	3.49	4.00	3.25	YES	
L0003330	0	0.18700E-05	481242.3	3770753.3	382.0	3.49	4.00	3.25	YES	
L0003331	0	0.18700E-05	481250.9	3770753.2	382.0	3.49	4.00	3.25	YES	
L0003332	0	0.18700E-05	481259.5	3770753.2	382.0	3.49	4.00	3.25	YES	
L0003333	0	0.18700E-05	481268.1	3770753.2	382.0	3.49	4.00	3.25	YES	
L0003334	0	0.18700E-05	481276.7	3770753.1	382.2	3.49	4.00	3.25	YES	
L0003335	0	0.18700E-05	481285.3	3770753.1	382.5	3.49	4.00	3.25	YES	
L0003336	0	0.18700E-05	481293.8	3770753.1	382.8	3.49	4.00	3.25	YES	
L0003337	0	0.18700E-05	481302.4	3770753.0	383.0	3.49	4.00	3.25	YES	
L0003338	0	0.18700E-05	481311.0	3770753.0	383.0	3.49	4.00	3.25	YES	
L0003339	0	0.18700E-05	481319.6	3770753.0	383.0	3.49	4.00	3.25	YES	
L0003340	0	0.18700E-05	481328.2	3770752.9	383.0	3.49	4.00	3.25	YES	
L0003341	0	0.18700E-05	481336.8	3770752.9	383.2	3.49	4.00	3.25	YES	
L0003342	0	0.18700E-05	481345.4	3770752.8	383.5	3.49	4.00	3.25	YES	
L0003343	0	0.18700E-05	481354.0	3770752.8	383.8	3.49	4.00	3.25	YES	
L0003344	0	0.18700E-05	481362.6	3770752.8	384.0	3.49	4.00	3.25	YES	
L0003345	0	0.18700E-05	481371.2	3770752.7	384.0	3.49	4.00	3.25	YES	
L0003346	0	0.18700E-05	481379.7	3770752.7	384.0	3.49	4.00	3.25	YES	
L0003347	0	0.18700E-05	481388.3	3770752.7	384.0	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0003348	0	0.70000E-05	479139.8	3771569.7	352.0	3.49	4.00	3.25	YES	
L0003349	0	0.70000E-05	479139.7	3771561.1	352.0	3.49	4.00	3.25	YES	
L0003350	0	0.70000E-05	479139.6	3771552.5	352.0	3.49	4.00	3.25	YES	
L0003351	0	0.70000E-05	479139.5	3771543.9	352.0	3.49	4.00	3.25	YES	
L0003352	0	0.70000E-05	479139.4	3771535.3	352.0	3.49	4.00	3.25	YES	
L0003353	0	0.70000E-05	479139.3	3771526.7	352.0	3.49	4.00	3.25	YES	
L0003354	0	0.70000E-05	479139.2	3771518.1	352.0	3.49	4.00	3.25	YES	
L0003355	0	0.70000E-05	479139.1	3771509.6	352.0	3.49	4.00	3.25	YES	
L0003356	0	0.70000E-05	479139.0	3771501.0	352.0	3.49	4.00	3.25	YES	
L0003357	0	0.70000E-05	479138.9	3771492.4	352.0	3.49	4.00	3.25	YES	
L0003358	0	0.70000E-05	479138.8	3771483.8	352.0	3.49	4.00	3.25	YES	
L0003359	0	0.70000E-05	479138.7	3771475.2	352.0	3.49	4.00	3.25	YES	
L0003360	0	0.70000E-05	479138.6	3771466.6	352.0	3.49	4.00	3.25	YES	
L0003361	0	0.70000E-05	479138.5	3771458.0	352.0	3.49	4.00	3.25	YES	
L0003362	0	0.70000E-05	479138.4	3771449.4	352.0	3.49	4.00	3.25	YES	
L0003363	0	0.70000E-05	479138.3	3771440.8	352.0	3.49	4.00	3.25	YES	
L0003364	0	0.70000E-05	479138.2	3771432.2	352.0	3.49	4.00	3.25	YES	
L0003365	0	0.70000E-05	479138.1	3771423.7	352.0	3.49	4.00	3.25	YES	
L0003366	0	0.70000E-05	479138.0	3771415.1	352.0	3.49	4.00	3.25	YES	
L0003367	0	0.70000E-05	479137.9	3771406.5	352.0	3.49	4.00	3.25	YES	
L0003368	0	0.70000E-05	479137.8	3771397.9	352.0	3.49	4.00	3.25	YES	
L0003369	0	0.70000E-05	479137.7	3771389.3	352.0	3.49	4.00	3.25	YES	
L0003370	0	0.70000E-05	479137.6	3771380.7	352.0	3.49	4.00	3.25	YES	
L0003371	0	0.70000E-05	479137.5	3771372.1	352.0	3.49	4.00	3.25	YES	
L0003372	0	0.70000E-05	479137.4	3771363.5	352.0	3.49	4.00	3.25	YES	
L0003373	0	0.70000E-05	479137.3	3771354.9	352.0	3.49	4.00	3.25	YES	
L0003374	0	0.70000E-05	479137.2	3771346.4	352.0	3.49	4.00	3.25	YES	
L0003375	0	0.70000E-05	479137.1	3771337.8	352.0	3.49	4.00	3.25	YES	
L0003376	0	0.70000E-05	479137.0	3771329.2	352.0	3.49	4.00	3.25	YES	
L0003377	0	0.70000E-05	479136.9	3771320.6	352.0	3.49	4.00	3.25	YES	
L0003378	0	0.70000E-05	479136.8	3771312.0	352.0	3.49	4.00	3.25	YES	
L0003379	0	0.70000E-05	479136.7	3771303.4	352.0	3.49	4.00	3.25	YES	
L0003380	0	0.70000E-05	479136.6	3771294.8	352.0	3.49	4.00	3.25	YES	
L0003381	0	0.70000E-05	479136.5	3771286.2	352.0	3.49	4.00	3.25	YES	
L0003382	0	0.70000E-05	479136.4	3771277.6	352.0	3.49	4.00	3.25	YES	
L0003383	0	0.70000E-05	479136.3	3771269.1	352.0	3.49	4.00	3.25	YES	
L0003384	0	0.70000E-05	479136.2	3771260.5	352.0	3.49	4.00	3.25	YES	
L0003385	0	0.70000E-05	479136.1	3771251.9	352.0	3.49	4.00	3.25	YES	
L0003386	0	0.70000E-05	479136.0	3771243.3	352.0	3.49	4.00	3.25	YES	
L0003387	0	0.70000E-05	479135.9	3771234.7	352.0	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0003388	0	0.70000E-05	479135.8	3771226.1	352.0	3.49	4.00	3.25	YES	
L0003389	0	0.70000E-05	479135.7	3771217.5	352.0	3.49	4.00	3.25	YES	
L0003390	0	0.70000E-05	479135.6	3771208.9	352.0	3.49	4.00	3.25	YES	
L0003391	0	0.70000E-05	479135.5	3771200.3	352.0	3.49	4.00	3.25	YES	
L0003392	0	0.70000E-05	479135.4	3771191.7	352.0	3.49	4.00	3.25	YES	
L0003393	0	0.70000E-05	479135.3	3771183.2	352.0	3.49	4.00	3.25	YES	
L0003394	0	0.70000E-05	479135.2	3771174.6	352.0	3.49	4.00	3.25	YES	
L0003395	0	0.70000E-05	479135.1	3771166.0	352.0	3.49	4.00	3.25	YES	
L0003396	0	0.70000E-05	479135.0	3771157.4	352.0	3.49	4.00	3.25	YES	
L0003397	0	0.70000E-05	479135.0	3771148.8	352.0	3.49	4.00	3.25	YES	
L0003398	0	0.70000E-05	479134.9	3771140.2	352.0	3.49	4.00	3.25	YES	
L0003399	0	0.70000E-05	479134.8	3771131.6	352.0	3.49	4.00	3.25	YES	
L0003400	0	0.70000E-05	479134.7	3771123.0	352.0	3.49	4.00	3.25	YES	
L0003401	0	0.70000E-05	479134.6	3771114.4	352.0	3.49	4.00	3.25	YES	
L0003402	0	0.70000E-05	479134.5	3771105.9	352.0	3.49	4.00	3.25	YES	
L0003403	0	0.70000E-05	479134.4	3771097.3	352.0	3.49	4.00	3.25	YES	
L0003404	0	0.70000E-05	479134.3	3771088.7	352.0	3.49	4.00	3.25	YES	
L0003405	0	0.70000E-05	479134.2	3771080.1	352.0	3.49	4.00	3.25	YES	
L0003406	0	0.70000E-05	479134.1	3771071.5	352.0	3.49	4.00	3.25	YES	
L0003407	0	0.70000E-05	479134.0	3771062.9	352.0	3.49	4.00	3.25	YES	
L0003408	0	0.70000E-05	479133.9	3771054.3	352.0	3.49	4.00	3.25	YES	
L0003409	0	0.70000E-05	479133.8	3771045.7	352.0	3.49	4.00	3.25	YES	
L0003410	0	0.70000E-05	479133.7	3771037.1	352.0	3.49	4.00	3.25	YES	
L0003411	0	0.70000E-05	479133.6	3771028.5	352.0	3.49	4.00	3.25	YES	
L0003412	0	0.70000E-05	479133.5	3771020.0	352.0	3.49	4.00	3.25	YES	
L0003413	0	0.70000E-05	479133.4	3771011.4	352.0	3.49	4.00	3.25	YES	
L0003414	0	0.70000E-05	479133.3	3771002.8	352.0	3.49	4.00	3.25	YES	
L0003415	0	0.70000E-05	479133.2	3770994.2	352.0	3.49	4.00	3.25	YES	
L0003416	0	0.70000E-05	479133.1	3770985.6	352.0	3.49	4.00	3.25	YES	
L0003417	0	0.70000E-05	479133.0	3770977.0	352.2	3.49	4.00	3.25	YES	
L0003418	0	0.70000E-05	479132.9	3770968.4	352.5	3.49	4.00	3.25	YES	
L0003419	0	0.70000E-05	479132.8	3770959.8	352.7	3.49	4.00	3.25	YES	
L0003420	0	0.70000E-05	479132.7	3770951.2	352.8	3.49	4.00	3.25	YES	
L0003421	0	0.70000E-05	479132.6	3770942.7	352.8	3.49	4.00	3.25	YES	
L0003422	0	0.70000E-05	479132.5	3770934.1	352.8	3.49	4.00	3.25	YES	
L0003423	0	0.70000E-05	479132.4	3770925.5	352.8	3.49	4.00	3.25	YES	
L0003424	0	0.70000E-05	479132.3	3770916.9	352.8	3.49	4.00	3.25	YES	
L0003425	0	0.70000E-05	479132.2	3770908.3	352.7	3.49	4.00	3.25	YES	
L0003426	0	0.70000E-05	479132.1	3770899.7	352.7	3.49	4.00	3.25	YES	
L0003427	0	0.70000E-05	479132.0	3770891.1	352.7	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0003428	0	0.70000E-05	479131.9	3770882.5	352.7	3.49	4.00	3.25	YES	
L0003429	0	0.70000E-05	479131.8	3770873.9	352.7	3.49	4.00	3.25	YES	
L0003430	0	0.70000E-05	479131.7	3770865.3	352.7	3.49	4.00	3.25	YES	
L0003431	0	0.70000E-05	479131.6	3770856.8	352.7	3.49	4.00	3.25	YES	
L0003432	0	0.70000E-05	479131.5	3770848.2	352.7	3.49	4.00	3.25	YES	
L0003433	0	0.70000E-05	479131.4	3770839.6	352.7	3.49	4.00	3.25	YES	
L0003434	0	0.70000E-05	479131.3	3770831.0	352.8	3.49	4.00	3.25	YES	
L0003435	0	0.70000E-05	479131.2	3770822.4	352.9	3.49	4.00	3.25	YES	
L0003436	0	0.70000E-05	479131.1	3770813.8	352.9	3.49	4.00	3.25	YES	
L0003437	0	0.70000E-05	479131.0	3770805.2	353.0	3.49	4.00	3.25	YES	
L0003438	0	0.70000E-05	479130.9	3770796.6	353.0	3.49	4.00	3.25	YES	
L0003439	0	0.70000E-05	479130.8	3770788.0	353.0	3.49	4.00	3.25	YES	
L0003440	0	0.70000E-05	479130.7	3770779.5	353.0	3.49	4.00	3.25	YES	
L0003441	0	0.70000E-05	479130.6	3770770.9	353.0	3.49	4.00	3.25	YES	
L0003442	0	0.70000E-05	479130.5	3770762.3	353.0	3.49	4.00	3.25	YES	
L0003443	0	0.70000E-05	479130.4	3770753.7	353.0	3.49	4.00	3.25	YES	
L0003444	0	0.70000E-05	479130.3	3770745.1	353.0	3.49	4.00	3.25	YES	
L0003445	0	0.70000E-05	479130.2	3770736.5	353.0	3.49	4.00	3.25	YES	
L0003446	0	0.70000E-05	479130.1	3770727.9	353.0	3.49	4.00	3.25	YES	
L0003447	0	0.70000E-05	479130.0	3770719.3	353.0	3.49	4.00	3.25	YES	
L0003448	0	0.70000E-05	479130.0	3770710.7	353.0	3.49	4.00	3.25	YES	
L0003449	0	0.70000E-05	479129.9	3770702.1	353.0	3.49	4.00	3.25	YES	
L0003450	0	0.70000E-05	479129.8	3770693.6	353.0	3.49	4.00	3.25	YES	
L0003451	0	0.70000E-05	479129.7	3770685.0	353.0	3.49	4.00	3.25	YES	
L0003452	0	0.70000E-05	479129.6	3770676.4	353.0	3.49	4.00	3.25	YES	
L0003453	0	0.70000E-05	479129.5	3770667.8	353.0	3.49	4.00	3.25	YES	
L0003454	0	0.70000E-05	479129.4	3770659.2	353.0	3.49	4.00	3.25	YES	
L0003455	0	0.70000E-05	479129.3	3770650.6	353.0	3.49	4.00	3.25	YES	
L0003456	0	0.70000E-05	479129.2	3770642.0	353.0	3.49	4.00	3.25	YES	
L0003457	0	0.70000E-05	479129.1	3770633.4	353.0	3.49	4.00	3.25	YES	
L0003458	0	0.70000E-05	479129.0	3770624.8	353.0	3.49	4.00	3.25	YES	
L0003459	0	0.70000E-05	479128.9	3770616.3	353.0	3.49	4.00	3.25	YES	
L0003460	0	0.70000E-05	479128.8	3770607.7	353.0	3.49	4.00	3.25	YES	
L0003461	0	0.70000E-05	479128.7	3770599.1	353.0	3.49	4.00	3.25	YES	
L0003462	0	0.70000E-05	479128.6	3770590.5	353.1	3.49	4.00	3.25	YES	
L0003463	0	0.70000E-05	479128.5	3770581.9	353.3	3.49	4.00	3.25	YES	
L0003464	0	0.70000E-05	479128.4	3770573.3	353.5	3.49	4.00	3.25	YES	
L0003465	0	0.70000E-05	479128.3	3770564.7	353.6	3.49	4.00	3.25	YES	
L0003466	0	0.70000E-05	479128.2	3770556.1	353.7	3.49	4.00	3.25	YES	
L0003467	0	0.70000E-05	479128.1	3770547.5	353.9	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0003468	0	0.70000E-05	479128.0	3770538.9	354.0	3.49	4.00	3.25	YES	
L0003469	0	0.70000E-05	479127.9	3770530.4	354.0	3.49	4.00	3.25	YES	
L0003470	0	0.70000E-05	479127.8	3770521.8	354.0	3.49	4.00	3.25	YES	
L0003471	0	0.70000E-05	479127.7	3770513.2	354.0	3.49	4.00	3.25	YES	
L0003472	0	0.70000E-05	479127.6	3770504.6	354.0	3.49	4.00	3.25	YES	
L0003473	0	0.70000E-05	479127.5	3770496.0	354.0	3.49	4.00	3.25	YES	
L0003474	0	0.70000E-05	479127.4	3770487.4	354.0	3.49	4.00	3.25	YES	
L0003475	0	0.70000E-05	479127.3	3770478.8	354.0	3.49	4.00	3.25	YES	
L0003476	0	0.70000E-05	479127.2	3770470.2	354.0	3.49	4.00	3.25	YES	
L0003477	0	0.70000E-05	479127.1	3770461.6	354.0	3.49	4.00	3.25	YES	
L0003478	0	0.70000E-05	479127.0	3770453.1	354.0	3.49	4.00	3.25	YES	
L0003479	0	0.70000E-05	479126.9	3770444.5	354.0	3.49	4.00	3.25	YES	
L0003480	0	0.70000E-05	479126.8	3770435.9	354.0	3.49	4.00	3.25	YES	
L0003481	0	0.70000E-05	479126.7	3770427.3	354.0	3.49	4.00	3.25	YES	
L0003482	0	0.70000E-05	479126.6	3770418.7	354.0	3.49	4.00	3.25	YES	
L0003483	0	0.70000E-05	479126.5	3770410.1	354.0	3.49	4.00	3.25	YES	
L0003484	0	0.70000E-05	479126.4	3770401.5	354.0	3.49	4.00	3.25	YES	
L0003485	0	0.70000E-05	479126.3	3770392.9	354.0	3.49	4.00	3.25	YES	
L0003486	0	0.70000E-05	479126.2	3770384.3	354.0	3.49	4.00	3.25	YES	
L0003487	0	0.70000E-05	479126.1	3770375.7	354.0	3.49	4.00	3.25	YES	
L0003488	0	0.70000E-05	479126.2	3770367.2	354.0	3.49	4.00	3.25	YES	
L0003489	0	0.70000E-05	479126.2	3770358.6	354.0	3.49	4.00	3.25	YES	
L0003490	0	0.70000E-05	479126.3	3770350.0	354.0	3.49	4.00	3.25	YES	
L0003491	0	0.70000E-05	479126.4	3770341.4	354.0	3.49	4.00	3.25	YES	
L0003492	0	0.70000E-05	479126.4	3770332.8	354.0	3.49	4.00	3.25	YES	
L0003493	0	0.70000E-05	479126.5	3770324.2	354.0	3.49	4.00	3.25	YES	
L0003494	0	0.70000E-05	479126.5	3770315.6	353.8	3.49	4.00	3.25	YES	
L0003495	0	0.70000E-05	479126.6	3770307.0	353.7	3.49	4.00	3.25	YES	
L0003496	0	0.70000E-05	479126.7	3770298.4	353.6	3.49	4.00	3.25	YES	
L0003497	0	0.70000E-05	479126.7	3770289.9	353.4	3.49	4.00	3.25	YES	
L0003498	0	0.70000E-05	479126.8	3770281.3	353.3	3.49	4.00	3.25	YES	
L0003499	0	0.70000E-05	479126.8	3770272.7	353.1	3.49	4.00	3.25	YES	
L0003500	0	0.70000E-05	479126.9	3770264.1	353.0	3.49	4.00	3.25	YES	
L0003501	0	0.70000E-05	479127.0	3770255.5	353.0	3.49	4.00	3.25	YES	
L0003502	0	0.70000E-05	479127.0	3770246.9	353.0	3.49	4.00	3.25	YES	
L0003503	0	0.70000E-05	479127.1	3770238.3	353.0	3.49	4.00	3.25	YES	
L0003504	0	0.70000E-05	479127.1	3770229.7	353.0	3.49	4.00	3.25	YES	
L0003505	0	0.70000E-05	479127.2	3770221.1	353.0	3.49	4.00	3.25	YES	
L0003506	0	0.70000E-05	479127.2	3770212.5	353.0	3.49	4.00	3.25	YES	
L0003507	0	0.70000E-05	479127.3	3770204.0	353.0	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0003508	0	0.70000E-05	479127.4	3770195.4	353.0	3.49	4.00	3.25	YES	
L0003509	0	0.70000E-05	479127.4	3770186.8	353.0	3.49	4.00	3.25	YES	
L0003510	0	0.70000E-05	479127.5	3770178.2	353.0	3.49	4.00	3.25	YES	
L0003511	0	0.70000E-05	479127.5	3770169.6	353.0	3.49	4.00	3.25	YES	
L0003512	0	0.70000E-05	479127.6	3770161.0	353.0	3.49	4.00	3.25	YES	
L0003513	0	0.70000E-05	479127.7	3770152.4	353.0	3.49	4.00	3.25	YES	
L0003514	0	0.70000E-05	479127.7	3770143.8	353.0	3.49	4.00	3.25	YES	
L0003515	0	0.70000E-05	479127.8	3770135.2	353.0	3.49	4.00	3.25	YES	
L0003516	0	0.70000E-05	479127.8	3770126.6	353.0	3.49	4.00	3.25	YES	
L0003517	0	0.70000E-05	479127.9	3770118.1	353.0	3.49	4.00	3.25	YES	
L0003518	0	0.70000E-05	479128.0	3770109.5	353.0	3.49	4.00	3.25	YES	
L0003519	0	0.70000E-05	479128.0	3770100.9	353.0	3.49	4.00	3.25	YES	
L0003520	0	0.70000E-05	479128.1	3770092.3	353.0	3.49	4.00	3.25	YES	
L0003521	0	0.70000E-05	479128.1	3770083.7	353.0	3.49	4.00	3.25	YES	
L0003522	0	0.70000E-05	479128.2	3770075.1	353.0	3.49	4.00	3.25	YES	
L0003523	0	0.70000E-05	479128.3	3770066.5	353.0	3.49	4.00	3.25	YES	
L0003524	0	0.70000E-05	479128.3	3770057.9	353.0	3.49	4.00	3.25	YES	
L0003525	0	0.70000E-05	479128.4	3770049.3	353.0	3.49	4.00	3.25	YES	
L0003526	0	0.70000E-05	479128.4	3770040.7	353.0	3.49	4.00	3.25	YES	
L0003527	0	0.70000E-05	479128.5	3770032.2	353.0	3.49	4.00	3.25	YES	
L0003528	0	0.70000E-05	479128.6	3770023.6	353.0	3.49	4.00	3.25	YES	
L0003529	0	0.70000E-05	479128.6	3770015.0	353.0	3.49	4.00	3.25	YES	
L0003530	0	0.70000E-05	479128.7	3770006.4	353.0	3.49	4.00	3.25	YES	
L0003531	0	0.70000E-05	479128.7	3769997.8	353.0	3.49	4.00	3.25	YES	
L0003532	0	0.70000E-05	479128.8	3769989.2	353.0	3.49	4.00	3.25	YES	
L0003533	0	0.70000E-05	479128.9	3769980.6	353.0	3.49	4.00	3.25	YES	
L0003534	0	0.70000E-05	479128.9	3769972.0	353.0	3.49	4.00	3.25	YES	
L0003535	0	0.70000E-05	479129.0	3769963.4	353.0	3.49	4.00	3.25	YES	
L0003536	0	0.70000E-05	479129.0	3769954.8	353.0	3.49	4.00	3.25	YES	
L0003537	0	0.70000E-05	479129.1	3769946.3	353.0	3.49	4.00	3.25	YES	
L0003538	0	0.70000E-05	479129.1	3769937.7	353.0	3.49	4.00	3.25	YES	
L0003539	0	0.70000E-05	479129.2	3769929.1	353.2	3.49	4.00	3.25	YES	
L0003540	0	0.70000E-05	479129.3	3769920.5	353.3	3.49	4.00	3.25	YES	
L0003541	0	0.70000E-05	479129.3	3769911.9	353.5	3.49	4.00	3.25	YES	
L0003542	0	0.70000E-05	479129.4	3769903.3	353.7	3.49	4.00	3.25	YES	
L0003543	0	0.70000E-05	479129.4	3769894.7	353.8	3.49	4.00	3.25	YES	
L0003544	0	0.70000E-05	479129.5	3769886.1	353.9	3.49	4.00	3.25	YES	
L0003545	0	0.70000E-05	479129.6	3769877.5	354.0	3.49	4.00	3.25	YES	
L0003546	0	0.70000E-05	479129.6	3769869.0	354.0	3.49	4.00	3.25	YES	
L0003547	0	0.70000E-05	479129.7	3769860.4	354.0	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0003548	0	0.70000E-05	479129.7	3769851.8	354.0	3.49	4.00	3.25	YES	
L0003549	0	0.70000E-05	479129.8	3769843.2	354.0	3.49	4.00	3.25	YES	
L0003550	0	0.70000E-05	479129.9	3769834.6	354.0	3.49	4.00	3.25	YES	
L0003551	0	0.70000E-05	479129.9	3769826.0	354.0	3.49	4.00	3.25	YES	
L0003552	0	0.70000E-05	479130.0	3769817.4	354.0	3.49	4.00	3.25	YES	
L0003553	0	0.70000E-05	479130.0	3769808.8	354.0	3.49	4.00	3.25	YES	
L0003554	0	0.70000E-05	479130.1	3769800.2	354.0	3.49	4.00	3.25	YES	
L0003555	0	0.70000E-05	479130.2	3769791.6	354.0	3.49	4.00	3.25	YES	
L0003556	0	0.70000E-05	479130.2	3769783.1	354.0	3.49	4.00	3.25	YES	
L0003557	0	0.70000E-05	479130.3	3769774.5	354.0	3.49	4.00	3.25	YES	
L0003558	0	0.70000E-05	479130.3	3769765.9	354.0	3.49	4.00	3.25	YES	
L0003559	0	0.70000E-05	479130.4	3769757.3	354.0	3.49	4.00	3.25	YES	
L0003560	0	0.70000E-05	479130.5	3769748.7	354.0	3.49	4.00	3.25	YES	
L0003561	0	0.70000E-05	479130.5	3769740.1	354.0	3.49	4.00	3.25	YES	
L0003562	0	0.70000E-05	479130.6	3769731.5	354.0	3.49	4.00	3.25	YES	
L0003563	0	0.70000E-05	479130.6	3769722.9	354.0	3.49	4.00	3.25	YES	
L0003564	0	0.70000E-05	479130.7	3769714.3	354.0	3.49	4.00	3.25	YES	
L0003565	0	0.70000E-05	479130.8	3769705.7	354.0	3.49	4.00	3.25	YES	
L0003566	0	0.70000E-05	479130.8	3769697.2	354.0	3.49	4.00	3.25	YES	
L0003567	0	0.70000E-05	479130.9	3769688.6	354.2	3.49	4.00	3.25	YES	
L0003568	0	0.70000E-05	479130.9	3769680.0	354.4	3.49	4.00	3.25	YES	
L0003569	0	0.70000E-05	479131.0	3769671.4	354.6	3.49	4.00	3.25	YES	
L0003570	0	0.70000E-05	479131.1	3769662.8	354.7	3.49	4.00	3.25	YES	
L0003571	0	0.70000E-05	479131.1	3769654.2	354.8	3.49	4.00	3.25	YES	
L0003572	0	0.70000E-05	479131.2	3769645.6	354.9	3.49	4.00	3.25	YES	
L0003573	0	0.70000E-05	479131.2	3769637.0	355.0	3.49	4.00	3.25	YES	
L0003574	0	0.70000E-05	479131.3	3769628.4	355.6	3.49	4.00	3.25	YES	
L0003575	0	0.70000E-05	479131.3	3769619.8	356.3	3.49	4.00	3.25	YES	
L0003576	0	0.37290E-05	480742.6	3774121.5	363.4	3.49	4.00	3.25	YES	
L0003577	0	0.37290E-05	480742.7	3774112.9	363.4	3.49	4.00	3.25	YES	
L0003578	0	0.37290E-05	480742.7	3774104.3	363.4	3.49	4.00	3.25	YES	
L0003579	0	0.37290E-05	480742.8	3774095.7	363.4	3.49	4.00	3.25	YES	
L0003580	0	0.37290E-05	480742.9	3774087.1	363.4	3.49	4.00	3.25	YES	
L0003581	0	0.37290E-05	480743.0	3774078.5	363.4	3.49	4.00	3.25	YES	
L0003582	0	0.37290E-05	480743.1	3774069.9	363.6	3.49	4.00	3.25	YES	
L0003583	0	0.37290E-05	480743.2	3774061.3	363.7	3.49	4.00	3.25	YES	
L0003584	0	0.37290E-05	480743.2	3774052.7	363.9	3.49	4.00	3.25	YES	
L0003585	0	0.37290E-05	480743.3	3774044.2	364.0	3.49	4.00	3.25	YES	
L0003586	0	0.37290E-05	480743.4	3774035.6	364.0	3.49	4.00	3.25	YES	
L0003587	0	0.37290E-05	480743.5	3774027.0	364.0	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0003588	0	0.37290E-05	480743.6	3774018.4	364.0	3.49	4.00	3.25	YES	
L0003589	0	0.37290E-05	480743.7	3774009.8	364.1	3.49	4.00	3.25	YES	
L0003590	0	0.37290E-05	480743.7	3774001.2	364.2	3.49	4.00	3.25	YES	
L0003591	0	0.37290E-05	480743.8	3773992.6	364.4	3.49	4.00	3.25	YES	
L0003592	0	0.37290E-05	480743.9	3773984.0	364.5	3.49	4.00	3.25	YES	
L0003593	0	0.37290E-05	480744.0	3773975.4	364.7	3.49	4.00	3.25	YES	
L0003594	0	0.37290E-05	480744.1	3773966.8	364.8	3.49	4.00	3.25	YES	
L0003595	0	0.37290E-05	480744.1	3773958.3	365.0	3.49	4.00	3.25	YES	
L0003596	0	0.37290E-05	480744.2	3773949.7	365.1	3.49	4.00	3.25	YES	
L0003597	0	0.37290E-05	480744.3	3773941.1	365.2	3.49	4.00	3.25	YES	
L0003598	0	0.37290E-05	480744.4	3773932.5	365.4	3.49	4.00	3.25	YES	
L0003599	0	0.37290E-05	480744.5	3773923.9	365.5	3.49	4.00	3.25	YES	
L0003600	0	0.37290E-05	480744.6	3773915.3	365.5	3.49	4.00	3.25	YES	
L0003601	0	0.37290E-05	480744.6	3773906.7	365.5	3.49	4.00	3.25	YES	
L0003602	0	0.37290E-05	480744.7	3773898.1	365.5	3.49	4.00	3.25	YES	
L0003603	0	0.37290E-05	480744.8	3773889.5	365.5	3.49	4.00	3.25	YES	
L0003604	0	0.37290E-05	480744.9	3773881.0	365.5	3.49	4.00	3.25	YES	
L0003605	0	0.37290E-05	480745.0	3773872.4	365.5	3.49	4.00	3.25	YES	
L0003606	0	0.37290E-05	480745.0	3773863.8	365.5	3.49	4.00	3.25	YES	
L0003607	0	0.37290E-05	480745.1	3773855.2	365.5	3.49	4.00	3.25	YES	
L0003608	0	0.37290E-05	480745.2	3773846.6	365.5	3.49	4.00	3.25	YES	
L0003609	0	0.37290E-05	480745.3	3773838.0	365.5	3.49	4.00	3.25	YES	
L0003610	0	0.37290E-05	480745.4	3773829.4	365.5	3.49	4.00	3.25	YES	
L0003611	0	0.37290E-05	480745.5	3773820.8	365.5	3.49	4.00	3.25	YES	
L0003612	0	0.37290E-05	480745.5	3773812.2	365.5	3.49	4.00	3.25	YES	
L0003613	0	0.37290E-05	480745.6	3773803.6	365.5	3.49	4.00	3.25	YES	
L0003614	0	0.37290E-05	480745.7	3773795.1	365.5	3.49	4.00	3.25	YES	
L0003615	0	0.37290E-05	480745.8	3773786.5	365.5	3.49	4.00	3.25	YES	
L0003616	0	0.37290E-05	480745.9	3773777.9	365.5	3.49	4.00	3.25	YES	
L0003617	0	0.37290E-05	480746.0	3773769.3	365.5	3.49	4.00	3.25	YES	
L0003618	0	0.37290E-05	480746.0	3773760.7	365.5	3.49	4.00	3.25	YES	
L0003619	0	0.37290E-05	480746.1	3773752.1	365.5	3.49	4.00	3.25	YES	
L0003620	0	0.37290E-05	480746.2	3773743.5	365.5	3.49	4.00	3.25	YES	
L0003621	0	0.37290E-05	480746.3	3773734.9	365.6	3.49	4.00	3.25	YES	
L0003622	0	0.37290E-05	480746.4	3773726.3	365.6	3.49	4.00	3.25	YES	
L0003623	0	0.37290E-05	480746.4	3773717.7	365.6	3.49	4.00	3.25	YES	
L0003624	0	0.37290E-05	480746.5	3773709.2	365.6	3.49	4.00	3.25	YES	
L0003625	0	0.37290E-05	480746.6	3773700.6	365.6	3.49	4.00	3.25	YES	
L0003626	0	0.37290E-05	480746.7	3773692.0	365.6	3.49	4.00	3.25	YES	
L0003627	0	0.37290E-05	480746.8	3773683.4	365.6	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0003628	0	0.37290E-05	480746.9	3773674.8	365.6	3.49	4.00	3.25	YES	
L0003629	0	0.37290E-05	480746.9	3773666.2	365.6	3.49	4.00	3.25	YES	
L0003630	0	0.37290E-05	480747.0	3773657.6	365.6	3.49	4.00	3.25	YES	
L0003631	0	0.37290E-05	480747.1	3773649.0	365.6	3.49	4.00	3.25	YES	
L0003632	0	0.37290E-05	480747.2	3773640.4	365.6	3.49	4.00	3.25	YES	
L0003633	0	0.37290E-05	480747.3	3773631.9	365.6	3.49	4.00	3.25	YES	
L0003634	0	0.37290E-05	480747.4	3773623.3	365.5	3.49	4.00	3.25	YES	
L0003635	0	0.37290E-05	480747.4	3773614.7	365.2	3.49	4.00	3.25	YES	
L0003636	0	0.37290E-05	480747.5	3773606.1	364.9	3.49	4.00	3.25	YES	
L0003637	0	0.37290E-05	480747.6	3773597.5	364.6	3.49	4.00	3.25	YES	
L0003638	0	0.37290E-05	480747.7	3773588.9	364.4	3.49	4.00	3.25	YES	
L0003639	0	0.37290E-05	480747.8	3773580.3	364.3	3.49	4.00	3.25	YES	
L0003640	0	0.37290E-05	480747.8	3773571.7	364.1	3.49	4.00	3.25	YES	
L0003641	0	0.37290E-05	480747.9	3773563.1	364.0	3.49	4.00	3.25	YES	
L0003642	0	0.37290E-05	480748.0	3773554.5	363.9	3.49	4.00	3.25	YES	
L0003643	0	0.37290E-05	480748.1	3773546.0	363.7	3.49	4.00	3.25	YES	
L0003644	0	0.37290E-05	480748.2	3773537.4	363.6	3.49	4.00	3.25	YES	
L0003645	0	0.37290E-05	480748.3	3773528.8	363.5	3.49	4.00	3.25	YES	
L0003646	0	0.37290E-05	480748.3	3773520.2	363.3	3.49	4.00	3.25	YES	
L0003647	0	0.37290E-05	480748.4	3773511.6	363.1	3.49	4.00	3.25	YES	
L0003648	0	0.37290E-05	480748.5	3773503.0	363.0	3.49	4.00	3.25	YES	
L0003649	0	0.37290E-05	480748.5	3773494.4	362.9	3.49	4.00	3.25	YES	
L0003650	0	0.37290E-05	480748.5	3773485.8	362.7	3.49	4.00	3.25	YES	
L0003651	0	0.37290E-05	480748.6	3773477.2	362.6	3.49	4.00	3.25	YES	
L0003652	0	0.37290E-05	480748.6	3773468.6	362.6	3.49	4.00	3.25	YES	
L0003653	0	0.37290E-05	480748.6	3773460.1	362.6	3.49	4.00	3.25	YES	
L0003654	0	0.37290E-05	480748.6	3773451.5	362.6	3.49	4.00	3.25	YES	
L0003655	0	0.37290E-05	480748.6	3773442.9	362.6	3.49	4.00	3.25	YES	
L0003656	0	0.37290E-05	480748.7	3773434.3	362.4	3.49	4.00	3.25	YES	
L0003657	0	0.37290E-05	480748.7	3773425.7	362.2	3.49	4.00	3.25	YES	
L0003658	0	0.37290E-05	480748.7	3773417.1	362.0	3.49	4.00	3.25	YES	
L0003659	0	0.37290E-05	480748.7	3773408.5	362.0	3.49	4.00	3.25	YES	
L0003660	0	0.37290E-05	480748.8	3773399.9	362.0	3.49	4.00	3.25	YES	
L0003661	0	0.37290E-05	480748.8	3773391.3	362.0	3.49	4.00	3.25	YES	
L0003662	0	0.37290E-05	480748.8	3773382.8	362.0	3.49	4.00	3.25	YES	
L0003663	0	0.37290E-05	480748.8	3773374.2	362.0	3.49	4.00	3.25	YES	
L0003664	0	0.37290E-05	480748.8	3773365.6	362.0	3.49	4.00	3.25	YES	
L0003665	0	0.37290E-05	480748.9	3773357.0	362.0	3.49	4.00	3.25	YES	
L0003666	0	0.37290E-05	480748.9	3773348.4	362.0	3.49	4.00	3.25	YES	
L0003667	0	0.37290E-05	480748.9	3773339.8	362.0	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0003668	0	0.37290E-05	480748.9	3773331.2	362.0	3.49	4.00	3.25	YES	
L0003669	0	0.37290E-05	480749.0	3773322.6	362.0	3.49	4.00	3.25	YES	
L0003670	0	0.37290E-05	480749.0	3773314.0	362.0	3.49	4.00	3.25	YES	
L0003671	0	0.37290E-05	480749.0	3773305.4	362.0	3.49	4.00	3.25	YES	
L0003672	0	0.37290E-05	480749.0	3773296.8	362.0	3.49	4.00	3.25	YES	
L0003673	0	0.37290E-05	480749.0	3773288.3	362.0	3.49	4.00	3.25	YES	
L0003674	0	0.37290E-05	480749.1	3773279.7	362.0	3.49	4.00	3.25	YES	
L0003675	0	0.37290E-05	480749.1	3773271.1	362.0	3.49	4.00	3.25	YES	
L0003676	0	0.37290E-05	480749.1	3773262.5	362.0	3.49	4.00	3.25	YES	
L0003677	0	0.37290E-05	480749.1	3773253.9	362.0	3.49	4.00	3.25	YES	
L0003678	0	0.37290E-05	480749.2	3773245.3	362.0	3.49	4.00	3.25	YES	
L0003679	0	0.37290E-05	480749.2	3773236.7	362.0	3.49	4.00	3.25	YES	
L0003680	0	0.37290E-05	480749.2	3773228.1	362.0	3.49	4.00	3.25	YES	
L0003681	0	0.37290E-05	480749.2	3773219.5	362.0	3.49	4.00	3.25	YES	
L0003682	0	0.37290E-05	480749.2	3773210.9	362.0	3.49	4.00	3.25	YES	
L0003683	0	0.37290E-05	480749.3	3773202.4	362.0	3.49	4.00	3.25	YES	
L0003684	0	0.37290E-05	480749.3	3773193.8	362.0	3.49	4.00	3.25	YES	
L0003685	0	0.37290E-05	480749.3	3773185.2	362.0	3.49	4.00	3.25	YES	
L0003686	0	0.37290E-05	480749.3	3773176.6	362.0	3.49	4.00	3.25	YES	
L0003687	0	0.37290E-05	480749.3	3773168.0	361.9	3.49	4.00	3.25	YES	
L0003688	0	0.37290E-05	480749.4	3773159.4	361.8	3.49	4.00	3.25	YES	
L0003689	0	0.37290E-05	480749.4	3773150.8	361.7	3.49	4.00	3.25	YES	
L0003690	0	0.37290E-05	480749.4	3773142.2	361.7	3.49	4.00	3.25	YES	
L0003691	0	0.37290E-05	480749.4	3773133.6	361.7	3.49	4.00	3.25	YES	
L0003692	0	0.37290E-05	480749.5	3773125.0	361.7	3.49	4.00	3.25	YES	
L0003693	0	0.37290E-05	480749.5	3773116.5	361.7	3.49	4.00	3.25	YES	
L0003694	0	0.37290E-05	480749.5	3773107.9	361.7	3.49	4.00	3.25	YES	
L0003695	0	0.37290E-05	480749.5	3773099.3	361.7	3.49	4.00	3.25	YES	
L0003696	0	0.37290E-05	480749.5	3773090.7	361.7	3.49	4.00	3.25	YES	
L0003697	0	0.37290E-05	480749.6	3773082.1	361.7	3.49	4.00	3.25	YES	
L0003698	0	0.37290E-05	480749.6	3773073.5	361.7	3.49	4.00	3.25	YES	
L0003699	0	0.37290E-05	480749.6	3773064.9	361.7	3.49	4.00	3.25	YES	
L0003700	0	0.37290E-05	480749.6	3773056.3	361.7	3.49	4.00	3.25	YES	
L0003701	0	0.37290E-05	480749.7	3773047.7	361.7	3.49	4.00	3.25	YES	
L0003702	0	0.37290E-05	480749.7	3773039.2	361.7	3.49	4.00	3.25	YES	
L0003703	0	0.37290E-05	480749.7	3773030.6	361.7	3.49	4.00	3.25	YES	
L0003704	0	0.37290E-05	480749.7	3773022.0	361.7	3.49	4.00	3.25	YES	
L0003705	0	0.37290E-05	480749.7	3773013.4	361.7	3.49	4.00	3.25	YES	
L0003706	0	0.37290E-05	480749.8	3773004.8	361.7	3.49	4.00	3.25	YES	
L0003707	0	0.37290E-05	480749.8	3772996.2	361.7	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0003708	0	0.37290E-05	480749.8	3772987.6	361.7	3.49	4.00	3.25	YES	
L0003709	0	0.37290E-05	480749.8	3772979.0	361.7	3.49	4.00	3.25	YES	
L0003710	0	0.37290E-05	480749.8	3772970.4	361.7	3.49	4.00	3.25	YES	
L0003711	0	0.37290E-05	480749.9	3772961.8	361.7	3.49	4.00	3.25	YES	
L0003712	0	0.37290E-05	480749.9	3772953.3	361.7	3.49	4.00	3.25	YES	
L0003713	0	0.37290E-05	480749.9	3772944.7	361.7	3.49	4.00	3.25	YES	
L0003714	0	0.37290E-05	480749.9	3772936.1	361.7	3.49	4.00	3.25	YES	
L0003715	0	0.37290E-05	480750.0	3772927.5	361.7	3.49	4.00	3.25	YES	
L0003716	0	0.37290E-05	480750.0	3772918.9	361.7	3.49	4.00	3.25	YES	
L0003717	0	0.37290E-05	480750.0	3772910.3	361.7	3.49	4.00	3.25	YES	
L0003718	0	0.37290E-05	480750.0	3772901.7	361.7	3.49	4.00	3.25	YES	
L0003719	0	0.37290E-05	480750.0	3772893.1	361.7	3.49	4.00	3.25	YES	
L0003720	0	0.37290E-05	480750.1	3772884.5	361.7	3.49	4.00	3.25	YES	
L0003721	0	0.37290E-05	480750.1	3772875.9	361.7	3.49	4.00	3.25	YES	
L0003722	0	0.37290E-05	480750.1	3772867.4	361.7	3.49	4.00	3.25	YES	
L0003723	0	0.37290E-05	480750.1	3772858.8	361.7	3.49	4.00	3.25	YES	
L0003724	0	0.37290E-05	480750.2	3772850.2	361.7	3.49	4.00	3.25	YES	
L0003725	0	0.37290E-05	480750.2	3772841.6	361.7	3.49	4.00	3.25	YES	
L0003726	0	0.37290E-05	480750.2	3772833.0	361.7	3.49	4.00	3.25	YES	
L0003727	0	0.37290E-05	480750.2	3772824.4	361.7	3.49	4.00	3.25	YES	
L0003728	0	0.37290E-05	480750.2	3772815.8	361.7	3.49	4.00	3.25	YES	
L0003729	0	0.37290E-05	480750.3	3772807.2	361.7	3.49	4.00	3.25	YES	
L0003730	0	0.37290E-05	480750.3	3772798.6	361.7	3.49	4.00	3.25	YES	
L0003731	0	0.37290E-05	480750.3	3772790.0	361.7	3.49	4.00	3.25	YES	
L0003732	0	0.37290E-05	480750.3	3772781.5	361.7	3.49	4.00	3.25	YES	
L0003733	0	0.37290E-05	480750.3	3772772.9	361.7	3.49	4.00	3.25	YES	
L0003734	0	0.37290E-05	480750.4	3772764.3	361.7	3.49	4.00	3.25	YES	
L0003735	0	0.37290E-05	480750.4	3772755.7	361.7	3.49	4.00	3.25	YES	
L0003736	0	0.37290E-05	480750.4	3772747.1	361.7	3.49	4.00	3.25	YES	
L0003737	0	0.37290E-05	480750.4	3772738.5	361.7	3.49	4.00	3.25	YES	
L0003738	0	0.37290E-05	480750.5	3772729.9	361.7	3.49	4.00	3.25	YES	
L0003739	0	0.37290E-05	480750.5	3772721.3	361.7	3.49	4.00	3.25	YES	
L0003740	0	0.37290E-05	480750.5	3772712.7	361.7	3.49	4.00	3.25	YES	
L0003741	0	0.37290E-05	480750.5	3772704.1	361.7	3.49	4.00	3.25	YES	
L0003742	0	0.37290E-05	480750.5	3772695.6	361.7	3.49	4.00	3.25	YES	
L0003743	0	0.37290E-05	480750.6	3772687.0	361.7	3.49	4.00	3.25	YES	
L0003744	0	0.37290E-05	480750.6	3772678.4	361.7	3.49	4.00	3.25	YES	
L0003745	0	0.37290E-05	480750.6	3772669.8	361.7	3.49	4.00	3.25	YES	
L0003746	0	0.37290E-05	480750.6	3772661.2	361.6	3.49	4.00	3.25	YES	
L0003747	0	0.37290E-05	480750.7	3772652.6	361.4	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0003748	0	0.37290E-05	480750.7	3772644.0	361.2	3.49	4.00	3.25	YES	
L0003749	0	0.37290E-05	480750.7	3772635.4	361.0	3.49	4.00	3.25	YES	
L0003750	0	0.37290E-05	480750.7	3772626.8	361.0	3.49	4.00	3.25	YES	
L0003751	0	0.37290E-05	480750.7	3772618.2	361.0	3.49	4.00	3.25	YES	
L0003752	0	0.37290E-05	480750.8	3772609.7	361.0	3.49	4.00	3.25	YES	
L0003753	0	0.37290E-05	480750.8	3772601.1	361.0	3.49	4.00	3.25	YES	
L0003754	0	0.37290E-05	480750.8	3772592.5	361.0	3.49	4.00	3.25	YES	
L0003755	0	0.37290E-05	480750.8	3772583.9	361.0	3.49	4.00	3.25	YES	
L0003756	0	0.37290E-05	480750.9	3772575.3	361.0	3.49	4.00	3.25	YES	
L0003757	0	0.37290E-05	480750.9	3772566.7	360.9	3.49	4.00	3.25	YES	
L0003758	0	0.37290E-05	480750.9	3772558.1	360.8	3.49	4.00	3.25	YES	
L0003759	0	0.37290E-05	480750.9	3772549.5	360.7	3.49	4.00	3.25	YES	
L0003760	0	0.37290E-05	480750.9	3772540.9	360.7	3.49	4.00	3.25	YES	
L0003761	0	0.37290E-05	480751.0	3772532.3	360.7	3.49	4.00	3.25	YES	
L0003762	0	0.37290E-05	480751.0	3772523.8	360.7	3.49	4.00	3.25	YES	
L0003763	0	0.37290E-05	480751.0	3772515.2	360.7	3.49	4.00	3.25	YES	
L0003764	0	0.37290E-05	480751.0	3772506.6	360.5	3.49	4.00	3.25	YES	
L0003765	0	0.37290E-05	480751.0	3772498.0	360.3	3.49	4.00	3.25	YES	
L0003766	0	0.37290E-05	480751.1	3772489.4	360.1	3.49	4.00	3.25	YES	
L0003767	0	0.37290E-05	480751.1	3772480.8	360.1	3.49	4.00	3.25	YES	
L0003768	0	0.37290E-05	480751.1	3772472.2	360.3	3.49	4.00	3.25	YES	
L0003769	0	0.37290E-05	480751.1	3772463.6	360.5	3.49	4.00	3.25	YES	
L0003770	0	0.37290E-05	480751.2	3772455.0	360.7	3.49	4.00	3.25	YES	
L0003771	0	0.37290E-05	480751.2	3772446.4	360.7	3.49	4.00	3.25	YES	
L0003772	0	0.37290E-05	480751.2	3772437.9	360.7	3.49	4.00	3.25	YES	
L0003773	0	0.37290E-05	480751.2	3772429.3	360.7	3.49	4.00	3.25	YES	
L0003774	0	0.37290E-05	480751.2	3772420.7	360.9	3.49	4.00	3.25	YES	
L0003775	0	0.37290E-05	480751.3	3772412.1	361.2	3.49	4.00	3.25	YES	
L0003776	0	0.37290E-05	480751.3	3772403.5	361.5	3.49	4.00	3.25	YES	
L0003777	0	0.37290E-05	480751.3	3772394.9	361.7	3.49	4.00	3.25	YES	
L0003778	0	0.37290E-05	480751.3	3772386.3	361.7	3.49	4.00	3.25	YES	
L0003779	0	0.37290E-05	480751.4	3772377.7	361.7	3.49	4.00	3.25	YES	
L0003780	0	0.37290E-05	480751.4	3772369.1	361.7	3.49	4.00	3.25	YES	
L0003781	0	0.37290E-05	480751.4	3772360.5	361.8	3.49	4.00	3.25	YES	
L0003782	0	0.37290E-05	480751.4	3772352.0	361.9	3.49	4.00	3.25	YES	
L0003783	0	0.37290E-05	480751.4	3772343.4	361.9	3.49	4.00	3.25	YES	
L0003784	0	0.37290E-05	480751.5	3772334.8	362.0	3.49	4.00	3.25	YES	
L0003785	0	0.37290E-05	480751.5	3772326.2	362.2	3.49	4.00	3.25	YES	
L0003786	0	0.37290E-05	480751.5	3772317.6	362.4	3.49	4.00	3.25	YES	
L0003787	0	0.37290E-05	480751.5	3772309.0	362.7	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0003788	0	0.37290E-05	480751.5	3772300.4	362.8	3.49	4.00	3.25	YES	
L0003789	0	0.37290E-05	480751.6	3772291.8	362.9	3.49	4.00	3.25	YES	
L0003790	0	0.37290E-05	480751.6	3772283.2	362.9	3.49	4.00	3.25	YES	
L0003791	0	0.37290E-05	480751.6	3772274.6	363.0	3.49	4.00	3.25	YES	
L0003792	0	0.37290E-05	480751.6	3772266.1	363.0	3.49	4.00	3.25	YES	
L0003793	0	0.37290E-05	480751.7	3772257.5	363.0	3.49	4.00	3.25	YES	
L0003794	0	0.37290E-05	480751.7	3772248.9	363.0	3.49	4.00	3.25	YES	
L0003795	0	0.37290E-05	480751.7	3772240.3	363.2	3.49	4.00	3.25	YES	
L0003796	0	0.37290E-05	480751.7	3772231.7	363.4	3.49	4.00	3.25	YES	
L0003797	0	0.37290E-05	480751.7	3772223.1	363.6	3.49	4.00	3.25	YES	
L0003798	0	0.37290E-05	480751.8	3772214.5	363.7	3.49	4.00	3.25	YES	
L0003799	0	0.37290E-05	480751.8	3772205.9	363.8	3.49	4.00	3.25	YES	
L0003800	0	0.37290E-05	480751.8	3772197.3	363.9	3.49	4.00	3.25	YES	
L0003801	0	0.37290E-05	480751.8	3772188.7	364.0	3.49	4.00	3.25	YES	
L0003802	0	0.37290E-05	480751.9	3772180.2	364.0	3.49	4.00	3.25	YES	
L0003803	0	0.37290E-05	480751.9	3772171.6	364.0	3.49	4.00	3.25	YES	
L0003804	0	0.37290E-05	480751.9	3772163.0	364.0	3.49	4.00	3.25	YES	
L0003805	0	0.37290E-05	480751.9	3772154.4	364.1	3.49	4.00	3.25	YES	
L0003806	0	0.37290E-05	480751.9	3772145.8	364.3	3.49	4.00	3.25	YES	
L0003807	0	0.37290E-05	480752.0	3772137.2	364.5	3.49	4.00	3.25	YES	
L0003808	0	0.37290E-05	480752.0	3772128.6	364.7	3.49	4.00	3.25	YES	
L0003809	0	0.37290E-05	480752.0	3772120.0	364.8	3.49	4.00	3.25	YES	
L0003810	0	0.37290E-05	480752.0	3772111.4	364.9	3.49	4.00	3.25	YES	
L0003811	0	0.37290E-05	480752.0	3772102.8	364.9	3.49	4.00	3.25	YES	
L0003812	0	0.37290E-05	480752.1	3772094.3	365.1	3.49	4.00	3.25	YES	
L0003813	0	0.37290E-05	480752.1	3772085.7	365.3	3.49	4.00	3.25	YES	
L0003814	0	0.37290E-05	480752.1	3772077.1	365.5	3.49	4.00	3.25	YES	
L0003815	0	0.37290E-05	480752.1	3772068.5	365.7	3.49	4.00	3.25	YES	
L0003816	0	0.37290E-05	480752.2	3772059.9	365.9	3.49	4.00	3.25	YES	
L0003817	0	0.37290E-05	480752.2	3772051.3	366.2	3.49	4.00	3.25	YES	
L0003818	0	0.37290E-05	480752.2	3772042.7	366.5	3.49	4.00	3.25	YES	
L0003819	0	0.37290E-05	480752.2	3772034.1	366.9	3.49	4.00	3.25	YES	
L0003820	0	0.37290E-05	480752.2	3772025.5	367.7	3.49	4.00	3.25	YES	
L0003821	0	0.37290E-05	480752.3	3772016.9	368.5	3.49	4.00	3.25	YES	
L0003822	0	0.37290E-05	480752.3	3772008.4	369.3	3.49	4.00	3.25	YES	
L0003823	0	0.37290E-05	480752.3	3771999.8	369.8	3.49	4.00	3.25	YES	
L0003824	0	0.37290E-05	480752.3	3771991.2	370.1	3.49	4.00	3.25	YES	
L0003825	0	0.37290E-05	480752.4	3771982.6	370.5	3.49	4.00	3.25	YES	
L0003826	0	0.37290E-05	480752.4	3771974.0	370.8	3.49	4.00	3.25	YES	
L0003827	0	0.37290E-05	480752.4	3771965.4	370.8	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0003828	0	0.37290E-05	480752.4	3771956.8	370.8	3.49	4.00	3.25	YES	
L0003829	0	0.37290E-05	480752.4	3771948.2	370.8	3.49	4.00	3.25	YES	
L0003830	0	0.37290E-05	480752.5	3771939.6	371.0	3.49	4.00	3.25	YES	
L0003831	0	0.37290E-05	480752.5	3771931.0	371.3	3.49	4.00	3.25	YES	
L0003832	0	0.37290E-05	480752.5	3771922.5	371.6	3.49	4.00	3.25	YES	
L0003833	0	0.37290E-05	480752.5	3771913.9	371.8	3.49	4.00	3.25	YES	
L0003834	0	0.37290E-05	480752.6	3771905.3	371.8	3.49	4.00	3.25	YES	
L0003835	0	0.37290E-05	480752.6	3771896.7	371.8	3.49	4.00	3.25	YES	
L0003836	0	0.37290E-05	480752.6	3771888.1	371.8	3.49	4.00	3.25	YES	
L0003837	0	0.37290E-05	480752.6	3771879.5	371.8	3.49	4.00	3.25	YES	
L0003838	0	0.37290E-05	480752.6	3771870.9	371.8	3.49	4.00	3.25	YES	
L0003839	0	0.37290E-05	480752.7	3771862.3	371.8	3.49	4.00	3.25	YES	
L0003840	0	0.37290E-05	480752.7	3771853.7	371.8	3.49	4.00	3.25	YES	
L0003841	0	0.37290E-05	480752.7	3771845.1	371.8	3.49	4.00	3.25	YES	
L0003842	0	0.37290E-05	480752.7	3771836.6	371.8	3.49	4.00	3.25	YES	
L0003843	0	0.37290E-05	480752.7	3771828.0	371.8	3.49	4.00	3.25	YES	
L0003844	0	0.37290E-05	480752.8	3771819.4	371.8	3.49	4.00	3.25	YES	
L0003845	0	0.39310E-05	480750.9	3771805.7	371.7	3.49	4.00	3.25	YES	
L0003846	0	0.39310E-05	480750.8	3771797.2	371.7	3.49	4.00	3.25	YES	
L0003847	0	0.39310E-05	480750.6	3771788.6	371.7	3.49	4.00	3.25	YES	
L0003848	0	0.39310E-05	480750.5	3771780.0	371.7	3.49	4.00	3.25	YES	
L0003849	0	0.39310E-05	480750.4	3771771.4	371.7	3.49	4.00	3.25	YES	
L0003850	0	0.39310E-05	480750.2	3771762.8	371.7	3.49	4.00	3.25	YES	
L0003851	0	0.39310E-05	480750.1	3771754.2	371.8	3.49	4.00	3.25	YES	
L0003852	0	0.39310E-05	480750.0	3771745.6	371.9	3.49	4.00	3.25	YES	
L0003853	0	0.39310E-05	480749.8	3771737.0	372.0	3.49	4.00	3.25	YES	
L0003854	0	0.39310E-05	480749.7	3771728.4	372.0	3.49	4.00	3.25	YES	
L0003855	0	0.39310E-05	480749.6	3771719.9	372.0	3.49	4.00	3.25	YES	
L0003856	0	0.39310E-05	480749.4	3771711.3	372.0	3.49	4.00	3.25	YES	
L0003857	0	0.39310E-05	480749.3	3771702.7	372.1	3.49	4.00	3.25	YES	
L0003858	0	0.39310E-05	480749.2	3771694.1	372.3	3.49	4.00	3.25	YES	
L0003859	0	0.39310E-05	480749.0	3771685.5	372.4	3.49	4.00	3.25	YES	
L0003860	0	0.39310E-05	480748.9	3771676.9	372.6	3.49	4.00	3.25	YES	
L0003861	0	0.39310E-05	480748.7	3771668.3	372.6	3.49	4.00	3.25	YES	
L0003862	0	0.39310E-05	480748.6	3771659.7	372.6	3.49	4.00	3.25	YES	
L0003863	0	0.39310E-05	480748.5	3771651.1	372.6	3.49	4.00	3.25	YES	
L0003864	0	0.39310E-05	480748.3	3771642.6	372.7	3.49	4.00	3.25	YES	
L0003865	0	0.39310E-05	480748.2	3771634.0	372.8	3.49	4.00	3.25	YES	
L0003866	0	0.39310E-05	480748.1	3771625.4	372.9	3.49	4.00	3.25	YES	
L0003867	0	0.39310E-05	480747.9	3771616.8	373.0	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0003868	0	0.39310E-05	480747.8	3771608.2	373.0	3.49	4.00	3.25	YES	
L0003869	0	0.39310E-05	480747.7	3771599.6	373.0	3.49	4.00	3.25	YES	
L0003870	0	0.39310E-05	480747.5	3771591.0	373.0	3.49	4.00	3.25	YES	
L0003871	0	0.47140E-05	480747.0	3771564.5	373.0	3.49	4.00	3.25	YES	
L0003872	0	0.47140E-05	480747.0	3771555.9	373.0	3.49	4.00	3.25	YES	
L0003873	0	0.47140E-05	480747.0	3771547.3	373.0	3.49	4.00	3.25	YES	
L0003874	0	0.47140E-05	480747.0	3771538.7	373.0	3.49	4.00	3.25	YES	
L0003875	0	0.47140E-05	480746.9	3771530.1	373.0	3.49	4.00	3.25	YES	
L0003876	0	0.47140E-05	480746.9	3771521.5	373.1	3.49	4.00	3.25	YES	
L0003877	0	0.47140E-05	480746.9	3771512.9	373.2	3.49	4.00	3.25	YES	
L0003878	0	0.47140E-05	480746.9	3771504.4	373.4	3.49	4.00	3.25	YES	
L0003879	0	0.47140E-05	480746.8	3771495.8	373.6	3.49	4.00	3.25	YES	
L0003880	0	0.47140E-05	480746.8	3771487.2	373.6	3.49	4.00	3.25	YES	
L0003881	0	0.47140E-05	480746.8	3771478.6	373.6	3.49	4.00	3.25	YES	
L0003882	0	0.47140E-05	480746.8	3771470.0	373.6	3.49	4.00	3.25	YES	
L0003883	0	0.47140E-05	480746.8	3771461.4	373.6	3.49	4.00	3.25	YES	
L0003884	0	0.47140E-05	480746.7	3771452.8	373.6	3.49	4.00	3.25	YES	
L0003885	0	0.47140E-05	480746.7	3771444.2	373.6	3.49	4.00	3.25	YES	
L0003886	0	0.47140E-05	480746.7	3771435.6	373.6	3.49	4.00	3.25	YES	
L0003887	0	0.47140E-05	480746.7	3771427.0	373.6	3.49	4.00	3.25	YES	
L0003888	0	0.47140E-05	480746.6	3771418.5	373.6	3.49	4.00	3.25	YES	
L0003889	0	0.47140E-05	480746.6	3771409.9	373.6	3.49	4.00	3.25	YES	
L0003890	0	0.47140E-05	480746.6	3771401.3	373.6	3.49	4.00	3.25	YES	
L0003891	0	0.47140E-05	480746.6	3771392.7	373.6	3.49	4.00	3.25	YES	
L0003892	0	0.47140E-05	480746.6	3771384.1	373.6	3.49	4.00	3.25	YES	
L0003893	0	0.47140E-05	480746.5	3771375.5	373.6	3.49	4.00	3.25	YES	
L0003894	0	0.47140E-05	480746.5	3771366.9	373.7	3.49	4.00	3.25	YES	
L0003895	0	0.47140E-05	480746.5	3771358.3	373.8	3.49	4.00	3.25	YES	
L0003896	0	0.47140E-05	480746.5	3771349.7	373.9	3.49	4.00	3.25	YES	
L0003897	0	0.47140E-05	480746.5	3771341.1	374.0	3.49	4.00	3.25	YES	
L0003898	0	0.47140E-05	480746.4	3771332.6	374.0	3.49	4.00	3.25	YES	
L0003899	0	0.47140E-05	480746.4	3771324.0	374.0	3.49	4.00	3.25	YES	
L0003900	0	0.47140E-05	480746.4	3771315.4	374.0	3.49	4.00	3.25	YES	
L0003901	0	0.47140E-05	480746.4	3771306.8	374.0	3.49	4.00	3.25	YES	
L0003902	0	0.47140E-05	480746.3	3771298.2	374.0	3.49	4.00	3.25	YES	
L0003903	0	0.47140E-05	480746.3	3771289.6	374.0	3.49	4.00	3.25	YES	
L0003904	0	0.47140E-05	480746.3	3771281.0	374.0	3.49	4.00	3.25	YES	
L0003905	0	0.47140E-05	480746.3	3771272.4	374.0	3.49	4.00	3.25	YES	
L0003906	0	0.47140E-05	480746.3	3771263.8	374.0	3.49	4.00	3.25	YES	
L0003907	0	0.47140E-05	480746.2	3771255.2	374.0	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0003908	0	0.47140E-05	480746.2	3771246.7	374.0	3.49	4.00	3.25	YES	
L0003909	0	0.47140E-05	480746.2	3771238.1	374.0	3.49	4.00	3.25	YES	
L0003910	0	0.47140E-05	480746.2	3771229.5	374.0	3.49	4.00	3.25	YES	
L0003911	0	0.47140E-05	480746.1	3771220.9	374.0	3.49	4.00	3.25	YES	
L0003912	0	0.47140E-05	480746.1	3771212.3	374.0	3.49	4.00	3.25	YES	
L0003913	0	0.47140E-05	480746.1	3771203.7	374.0	3.49	4.00	3.25	YES	
L0003914	0	0.47140E-05	480746.1	3771195.1	374.0	3.49	4.00	3.25	YES	
L0003915	0	0.47140E-05	480746.1	3771186.5	374.0	3.49	4.00	3.25	YES	
L0003916	0	0.47140E-05	480746.0	3771177.9	374.0	3.49	4.00	3.25	YES	
L0003917	0	0.47140E-05	480746.0	3771169.3	374.0	3.49	4.00	3.25	YES	
L0003918	0	0.47140E-05	480746.0	3771160.8	374.0	3.49	4.00	3.25	YES	
L0003919	0	0.47140E-05	480746.0	3771152.2	374.0	3.49	4.00	3.25	YES	
L0003920	0	0.47140E-05	480746.0	3771143.6	374.0	3.49	4.00	3.25	YES	
L0003921	0	0.47140E-05	480745.9	3771135.0	374.0	3.49	4.00	3.25	YES	
L0003922	0	0.47140E-05	480745.9	3771126.4	374.0	3.49	4.00	3.25	YES	
L0003923	0	0.47140E-05	480745.9	3771117.8	374.0	3.49	4.00	3.25	YES	
L0003924	0	0.47140E-05	480745.9	3771109.2	374.0	3.49	4.00	3.25	YES	
L0003925	0	0.47140E-05	480745.8	3771100.6	374.0	3.49	4.00	3.25	YES	
L0003926	0	0.47140E-05	480745.8	3771092.0	374.0	3.49	4.00	3.25	YES	
L0003927	0	0.47140E-05	480745.8	3771083.4	374.0	3.49	4.00	3.25	YES	
L0003928	0	0.47140E-05	480745.8	3771074.9	374.0	3.49	4.00	3.25	YES	
L0003929	0	0.47140E-05	480745.8	3771066.3	374.0	3.49	4.00	3.25	YES	
L0003930	0	0.47140E-05	480745.7	3771057.7	374.0	3.49	4.00	3.25	YES	
L0003931	0	0.47140E-05	480745.7	3771049.1	374.0	3.49	4.00	3.25	YES	
L0003932	0	0.47140E-05	480745.7	3771040.5	374.0	3.49	4.00	3.25	YES	
L0003933	0	0.47140E-05	480745.7	3771031.9	374.0	3.49	4.00	3.25	YES	
L0003934	0	0.47140E-05	480745.6	3771023.3	374.0	3.49	4.00	3.25	YES	
L0003935	0	0.47140E-05	480745.6	3771014.7	374.0	3.49	4.00	3.25	YES	
L0003936	0	0.47140E-05	480745.6	3771006.1	374.0	3.49	4.00	3.25	YES	
L0003937	0	0.47140E-05	480745.6	3770997.5	374.0	3.49	4.00	3.25	YES	
L0003938	0	0.47140E-05	480745.6	3770989.0	374.0	3.49	4.00	3.25	YES	
L0003939	0	0.47140E-05	480745.5	3770980.4	374.0	3.49	4.00	3.25	YES	
L0003940	0	0.47140E-05	480745.5	3770971.8	374.0	3.49	4.00	3.25	YES	
L0003941	0	0.47140E-05	480745.5	3770963.2	374.0	3.49	4.00	3.25	YES	
L0003942	0	0.47140E-05	480745.5	3770954.6	374.0	3.49	4.00	3.25	YES	
L0003943	0	0.47140E-05	480745.5	3770946.0	374.0	3.49	4.00	3.25	YES	
L0003944	0	0.47140E-05	480745.4	3770937.4	374.0	3.49	4.00	3.25	YES	
L0003945	0	0.47140E-05	480745.4	3770928.8	374.0	3.49	4.00	3.25	YES	
L0003946	0	0.47140E-05	480745.4	3770920.2	374.0	3.49	4.00	3.25	YES	
L0003947	0	0.47140E-05	480745.4	3770911.6	374.0	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0003948	0	0.47140E-05	480745.3	3770903.1	374.0	3.49	4.00	3.25	YES	
L0003949	0	0.47140E-05	480745.3	3770894.5	374.0	3.49	4.00	3.25	YES	
L0003950	0	0.47140E-05	480745.3	3770885.9	374.0	3.49	4.00	3.25	YES	
L0003951	0	0.47140E-05	480745.3	3770877.3	374.0	3.49	4.00	3.25	YES	
L0003952	0	0.47140E-05	480745.3	3770868.7	374.0	3.49	4.00	3.25	YES	
L0003953	0	0.47140E-05	480745.2	3770860.1	374.0	3.49	4.00	3.25	YES	
L0003954	0	0.47140E-05	480745.2	3770851.5	374.0	3.49	4.00	3.25	YES	
L0003955	0	0.47140E-05	480745.2	3770842.9	374.0	3.49	4.00	3.25	YES	
L0003956	0	0.47140E-05	480745.2	3770834.3	374.0	3.49	4.00	3.25	YES	
L0003957	0	0.47140E-05	480745.1	3770825.7	374.0	3.49	4.00	3.25	YES	
L0003958	0	0.47140E-05	480745.1	3770817.2	374.0	3.49	4.00	3.25	YES	
L0003959	0	0.47140E-05	480745.1	3770808.6	374.0	3.49	4.00	3.25	YES	
L0003960	0	0.47140E-05	480745.1	3770800.0	374.0	3.49	4.00	3.25	YES	
L0003961	0	0.47140E-05	480745.1	3770791.4	374.0	3.49	4.00	3.25	YES	
L0003962	0	0.47140E-05	480745.0	3770782.8	374.0	3.49	4.00	3.25	YES	
L0003963	0	0.42620E-05	480741.4	3770754.2	374.0	3.49	4.00	3.25	YES	
L0003964	0	0.42620E-05	480741.4	3770745.6	374.0	3.49	4.00	3.25	YES	
L0003965	0	0.42620E-05	480741.4	3770737.0	374.0	3.49	4.00	3.25	YES	
L0003966	0	0.42620E-05	480741.4	3770728.4	374.0	3.49	4.00	3.25	YES	
L0003967	0	0.42620E-05	480741.4	3770719.9	374.0	3.49	4.00	3.25	YES	
L0003968	0	0.42620E-05	480741.4	3770711.3	374.0	3.49	4.00	3.25	YES	
L0003969	0	0.42620E-05	480741.4	3770702.7	374.0	3.49	4.00	3.25	YES	
L0003970	0	0.42620E-05	480741.4	3770694.1	374.0	3.49	4.00	3.25	YES	
L0003971	0	0.42620E-05	480741.4	3770685.5	374.0	3.49	4.00	3.25	YES	
L0003972	0	0.42620E-05	480741.4	3770676.9	374.0	3.49	4.00	3.25	YES	
L0003973	0	0.42620E-05	480741.4	3770668.3	374.0	3.49	4.00	3.25	YES	
L0003974	0	0.42620E-05	480741.4	3770659.7	374.0	3.49	4.00	3.25	YES	
L0003975	0	0.42620E-05	480741.4	3770651.1	374.1	3.49	4.00	3.25	YES	
L0003976	0	0.42620E-05	480741.4	3770642.5	374.2	3.49	4.00	3.25	YES	
L0003977	0	0.42620E-05	480741.4	3770634.0	374.3	3.49	4.00	3.25	YES	
L0003978	0	0.42620E-05	480741.4	3770625.4	374.4	3.49	4.00	3.25	YES	
L0003979	0	0.42620E-05	480741.4	3770616.8	374.4	3.49	4.00	3.25	YES	
L0003980	0	0.42620E-05	480741.4	3770608.2	374.4	3.49	4.00	3.25	YES	
L0003981	0	0.42620E-05	480741.4	3770599.6	374.4	3.49	4.00	3.25	YES	
L0003982	0	0.42620E-05	480741.4	3770591.0	374.4	3.49	4.00	3.25	YES	
L0003983	0	0.42620E-05	480741.4	3770582.4	374.4	3.49	4.00	3.25	YES	
L0003984	0	0.42620E-05	480741.4	3770573.8	374.4	3.49	4.00	3.25	YES	
L0003985	0	0.42620E-05	480741.4	3770565.2	374.4	3.49	4.00	3.25	YES	
L0003986	0	0.42620E-05	480741.4	3770556.6	374.4	3.49	4.00	3.25	YES	
L0003987	0	0.42620E-05	480741.4	3770548.1	374.4	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0003988	0	0.42620E-05	480741.4	3770539.5	374.4	3.49	4.00	3.25	YES	
L0003989	0	0.42620E-05	480741.4	3770530.9	374.4	3.49	4.00	3.25	YES	
L0003990	0	0.42620E-05	480741.4	3770522.3	374.4	3.49	4.00	3.25	YES	
L0003991	0	0.42620E-05	480741.4	3770513.7	374.4	3.49	4.00	3.25	YES	
L0003992	0	0.42620E-05	480741.4	3770505.1	374.4	3.49	4.00	3.25	YES	
L0003993	0	0.42620E-05	480741.4	3770496.5	374.4	3.49	4.00	3.25	YES	
L0003994	0	0.42620E-05	480741.4	3770487.9	374.4	3.49	4.00	3.25	YES	
L0003995	0	0.42620E-05	480741.4	3770479.3	374.4	3.49	4.00	3.25	YES	
L0003996	0	0.42620E-05	480741.4	3770470.7	374.5	3.49	4.00	3.25	YES	
L0003997	0	0.42620E-05	480741.4	3770462.2	374.7	3.49	4.00	3.25	YES	
L0003998	0	0.42620E-05	480741.4	3770453.6	374.9	3.49	4.00	3.25	YES	
L0003999	0	0.42620E-05	480741.4	3770445.0	375.0	3.49	4.00	3.25	YES	
L0004000	0	0.42620E-05	480741.4	3770436.4	375.0	3.49	4.00	3.25	YES	
L0004001	0	0.42620E-05	480741.4	3770427.8	375.0	3.49	4.00	3.25	YES	
L0004002	0	0.42620E-05	480741.4	3770419.2	375.0	3.49	4.00	3.25	YES	
L0004003	0	0.42620E-05	480741.4	3770410.6	375.0	3.49	4.00	3.25	YES	
L0004004	0	0.42620E-05	480741.4	3770402.0	375.0	3.49	4.00	3.25	YES	
L0004005	0	0.42620E-05	480741.4	3770393.4	375.0	3.49	4.00	3.25	YES	
L0004006	0	0.42620E-05	480741.4	3770384.8	375.0	3.49	4.00	3.25	YES	
L0004007	0	0.42620E-05	480741.4	3770376.3	375.1	3.49	4.00	3.25	YES	
L0004008	0	0.42620E-05	480741.4	3770367.7	375.2	3.49	4.00	3.25	YES	
L0004009	0	0.42620E-05	480741.4	3770359.1	375.4	3.49	4.00	3.25	YES	
L0004010	0	0.42620E-05	480741.4	3770350.5	375.4	3.49	4.00	3.25	YES	
L0004011	0	0.42620E-05	480741.4	3770341.9	375.4	3.49	4.00	3.25	YES	
L0004012	0	0.42620E-05	480741.4	3770333.3	375.4	3.49	4.00	3.25	YES	
L0004013	0	0.42620E-05	480741.4	3770324.7	375.4	3.49	4.00	3.25	YES	
L0004014	0	0.42620E-05	480741.4	3770316.1	375.4	3.49	4.00	3.25	YES	
L0004015	0	0.42620E-05	480741.4	3770307.5	375.4	3.49	4.00	3.25	YES	
L0004016	0	0.42620E-05	480741.4	3770298.9	375.4	3.49	4.00	3.25	YES	
L0004017	0	0.42620E-05	480741.4	3770290.4	375.4	3.49	4.00	3.25	YES	
L0004018	0	0.42620E-05	480741.4	3770281.8	375.4	3.49	4.00	3.25	YES	
L0004019	0	0.42620E-05	480741.4	3770273.2	375.4	3.49	4.00	3.25	YES	
L0004020	0	0.42620E-05	480741.4	3770264.6	375.4	3.49	4.00	3.25	YES	
L0004021	0	0.42620E-05	480741.4	3770256.0	375.4	3.49	4.00	3.25	YES	
L0004022	0	0.42620E-05	480741.4	3770247.4	375.4	3.49	4.00	3.25	YES	
L0004023	0	0.42620E-05	480741.4	3770238.8	375.4	3.49	4.00	3.25	YES	
L0004024	0	0.42620E-05	480741.4	3770230.2	375.4	3.49	4.00	3.25	YES	
L0004025	0	0.42620E-05	480741.4	3770221.6	375.4	3.49	4.00	3.25	YES	
L0004026	0	0.42620E-05	480741.4	3770213.0	375.4	3.49	4.00	3.25	YES	
L0004027	0	0.42620E-05	480741.4	3770204.5	375.4	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0004028	0	0.42620E-05	480741.4	3770195.9	375.4	3.49	4.00	3.25	YES	
L0004029	0	0.42620E-05	480741.4	3770187.3	375.4	3.49	4.00	3.25	YES	
L0004030	0	0.42620E-05	480741.4	3770178.7	375.4	3.49	4.00	3.25	YES	
L0004031	0	0.42620E-05	480741.4	3770170.1	375.4	3.49	4.00	3.25	YES	
L0004032	0	0.42620E-05	480741.4	3770161.5	375.4	3.49	4.00	3.25	YES	
L0004033	0	0.42620E-05	480741.4	3770152.9	375.4	3.49	4.00	3.25	YES	
L0004034	0	0.42620E-05	480741.4	3770144.3	375.4	3.49	4.00	3.25	YES	
L0004035	0	0.42620E-05	480741.4	3770135.7	375.4	3.49	4.00	3.25	YES	
L0004036	0	0.42620E-05	480741.4	3770127.1	375.4	3.49	4.00	3.25	YES	
L0004037	0	0.42620E-05	480741.4	3770118.6	375.4	3.49	4.00	3.25	YES	
L0004038	0	0.42620E-05	480741.4	3770110.0	375.4	3.49	4.00	3.25	YES	
L0004039	0	0.42620E-05	480741.4	3770101.4	375.4	3.49	4.00	3.25	YES	
L0004040	0	0.42620E-05	480741.4	3770092.8	375.4	3.49	4.00	3.25	YES	
L0004041	0	0.42620E-05	480741.4	3770084.2	375.4	3.49	4.00	3.25	YES	
L0004042	0	0.42620E-05	480741.4	3770075.6	375.4	3.49	4.00	3.25	YES	
L0004043	0	0.42620E-05	480741.4	3770067.0	375.4	3.49	4.00	3.25	YES	
L0004044	0	0.42620E-05	480741.4	3770058.4	375.4	3.49	4.00	3.25	YES	
L0004045	0	0.42620E-05	480741.4	3770049.8	375.4	3.49	4.00	3.25	YES	
L0004046	0	0.42620E-05	480741.4	3770041.2	375.4	3.49	4.00	3.25	YES	
L0004047	0	0.42620E-05	480741.4	3770032.7	375.4	3.49	4.00	3.25	YES	
L0004048	0	0.42620E-05	480741.4	3770024.1	375.4	3.49	4.00	3.25	YES	
L0004049	0	0.42620E-05	480741.4	3770015.5	375.4	3.49	4.00	3.25	YES	
L0004050	0	0.42620E-05	480741.4	3770006.9	375.4	3.49	4.00	3.25	YES	
L0004051	0	0.42620E-05	480741.4	3769998.3	375.4	3.49	4.00	3.25	YES	
L0004052	0	0.42620E-05	480741.4	3769989.7	375.4	3.49	4.00	3.25	YES	
L0004053	0	0.42620E-05	480741.4	3769981.1	375.4	3.49	4.00	3.25	YES	
L0004054	0	0.42620E-05	480741.4	3769972.5	375.4	3.49	4.00	3.25	YES	
L0004055	0	0.42620E-05	480741.4	3769963.9	375.4	3.49	4.00	3.25	YES	
L0004056	0	0.42620E-05	480741.4	3769955.3	375.4	3.49	4.00	3.25	YES	
L0004057	0	0.42620E-05	480741.4	3769946.8	375.4	3.49	4.00	3.25	YES	
L0004058	0	0.42620E-05	480741.4	3769938.2	375.4	3.49	4.00	3.25	YES	
L0004059	0	0.42620E-05	480741.4	3769929.6	375.4	3.49	4.00	3.25	YES	
L0004060	0	0.42620E-05	480741.4	3769921.0	375.4	3.49	4.00	3.25	YES	
L0004061	0	0.42620E-05	480741.4	3769912.4	375.4	3.49	4.00	3.25	YES	
L0004062	0	0.42620E-05	480741.4	3769903.8	375.4	3.49	4.00	3.25	YES	
L0004063	0	0.42620E-05	480741.4	3769895.2	375.6	3.49	4.00	3.25	YES	
L0004064	0	0.42620E-05	480741.4	3769886.6	375.8	3.49	4.00	3.25	YES	
L0004065	0	0.42620E-05	480741.4	3769878.0	376.0	3.49	4.00	3.25	YES	
L0004066	0	0.42620E-05	480741.4	3769869.4	376.1	3.49	4.00	3.25	YES	
L0004067	0	0.42620E-05	480741.4	3769860.9	376.2	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0004068	0	0.42620E-05	480741.4	3769852.3	376.3	3.49	4.00	3.25	YES	
L0004069	0	0.42620E-05	480741.4	3769843.7	376.5	3.49	4.00	3.25	YES	
L0004070	0	0.42620E-05	480741.4	3769835.1	377.0	3.49	4.00	3.25	YES	
L0004071	0	0.42620E-05	480741.4	3769826.5	377.4	3.49	4.00	3.25	YES	
L0004072	0	0.42620E-05	480741.4	3769817.9	377.9	3.49	4.00	3.25	YES	
L0004073	0	0.42620E-05	480741.4	3769809.3	378.0	3.49	4.00	3.25	YES	
L0004074	0	0.42620E-05	480741.4	3769800.7	378.0	3.49	4.00	3.25	YES	
L0004075	0	0.42620E-05	480741.4	3769792.1	378.0	3.49	4.00	3.25	YES	
L0004076	0	0.42620E-05	480741.4	3769783.5	378.0	3.49	4.00	3.25	YES	
L0004077	0	0.42620E-05	480741.4	3769775.0	378.0	3.49	4.00	3.25	YES	
L0004078	0	0.42620E-05	480741.4	3769766.4	378.0	3.49	4.00	3.25	YES	
L0004079	0	0.42620E-05	480741.4	3769757.8	378.0	3.49	4.00	3.25	YES	
L0004080	0	0.42620E-05	480741.4	3769749.2	378.0	3.49	4.00	3.25	YES	
L0004081	0	0.42620E-05	480741.4	3769740.6	378.0	3.49	4.00	3.25	YES	
L0004082	0	0.42620E-05	480741.4	3769732.0	378.0	3.49	4.00	3.25	YES	
L0004083	0	0.42620E-05	480741.4	3769723.4	378.0	3.49	4.00	3.25	YES	
L0004084	0	0.42620E-05	480741.4	3769714.8	378.0	3.49	4.00	3.25	YES	
L0004085	0	0.42620E-05	480741.4	3769706.2	378.0	3.49	4.00	3.25	YES	
L0004086	0	0.42620E-05	480741.4	3769697.6	378.0	3.49	4.00	3.25	YES	
L0004087	0	0.42620E-05	480741.4	3769689.1	378.0	3.49	4.00	3.25	YES	
L0004088	0	0.42620E-05	480741.4	3769680.5	378.0	3.49	4.00	3.25	YES	
L0004089	0	0.42620E-05	480741.4	3769671.9	378.0	3.49	4.00	3.25	YES	
L0004090	0	0.42620E-05	480741.4	3769663.3	378.0	3.49	4.00	3.25	YES	
L0004091	0	0.42620E-05	480741.4	3769654.7	378.0	3.49	4.00	3.25	YES	
L0004092	0	0.42620E-05	480741.4	3769646.1	378.0	3.49	4.00	3.25	YES	
L0004093	0	0.42620E-05	480741.4	3769637.5	378.0	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs
ALL	L0002988 , L0002989 , L0002990 , L0002991 , L0002992 , L0002993 , L0002994 , L0002995 ,
	L0002996 , L0002997 , L0002998 , L0002999 , L0003000 , L0003001 , L0003002 , L0003003 ,
	L0003004 , L0003005 , L0003006 , L0003007 , L0003008 , L0003009 , L0003010 , L0003011 ,
	L0003012 , L0003013 , L0003014 , L0003015 , L0003016 , L0003017 , L0003018 , L0003019 ,
	L0003020 , L0003021 , L0003022 , L0003023 , L0003024 , L0003025 , L0003026 , L0003027 ,
	L0003028 , L0003029 , L0003030 , L0003031 , L0003032 , L0003033 , L0003034 , L0003035 ,
	L0003036 , L0003037 , L0003038 , L0003039 , L0003040 , L0003041 , L0003042 , L0003043 ,
	L0003044 , L0003045 , L0003046 , L0003047 , L0003048 , L0003049 , L0003050 , L0003051 ,
	L0003052 , L0003053 , L0003054 , L0003055 , L0003056 , L0003057 , L0003058 , L0003059 ,
	L0003060 , L0003061 , L0003062 , L0003063 , L0003064 , L0003065 , L0003066 , L0003067 ,
	L0003068 , L0003069 , L0003070 , L0003071 , L0003072 , L0003073 , L0003074 , L0003075 ,
	L0003076 , L0003077 , L0003078 , L0003079 , L0003080 , L0003081 , L0003082 , L0003083 ,
	L0003084 , L0003085 , L0003086 , L0003087 , L0003088 , L0003089 , L0003090 , L0003091 ,
	L0003092 , L0003093 , L0003094 , L0003095 , L0003096 , L0003097 , L0003098 , L0003099 ,
	L0003100 , L0003101 , L0003102 , L0003103 , L0003104 , L0003105 , L0003106 , L0003107 ,
	L0003108 , L0003109 , L0003110 , L0003111 , L0003112 , L0003113 , L0003114 , L0003115 ,
	L0003116 , L0003117 , L0003118 , L0003119 , L0003120 , L0003121 , L0003122 , L0003123 ,
	L0003124 , L0003125 , L0003126 , L0003127 , L0003128 , L0003129 , L0003130 , L0003131 ,
	L0003132 , L0003133 , L0003134 , L0003135 , L0003136 , L0003137 , L0003138 , L0003139 ,
	L0003140 , L0003141 , L0003142 , L0003143 , L0003144 , L0003145 , L0003146 , L0003147 ,

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs
	L0003148 , L0003149 , L0003150 , L0003151 , L0003152 , L0003153 , L0003154 , L0003155 ,
	L0003156 , L0003157 , L0003158 , L0003159 , L0003160 , L0003161 , L0003162 , L0003163 ,
	L0003164 , L0003165 , L0003166 , L0003167 , L0003168 , L0003169 , L0003170 , L0003171 ,
	L0003172 , L0003173 , L0003174 , L0003175 , L0003176 , L0003177 , L0003178 , L0003179 ,
	L0003180 , L0003181 , L0003182 , L0003183 , L0003184 , L0003185 , L0003186 , L0003187 ,
	L0003188 , L0003189 , L0003190 , L0003191 , L0003192 , L0003193 , L0003194 , L0003195 ,
	L0003196 , L0003197 , L0003198 , L0003199 , L0003200 , L0003201 , L0003202 , L0003203 ,
	L0003204 , L0003205 , L0003206 , L0003207 , L0003208 , L0003209 , L0003210 , L0003211 ,
	L0003212 , L0003213 , L0003214 , L0003215 , L0003216 , L0003217 , L0003218 , L0003219 ,
	L0003220 , L0003221 , L0003222 , L0003223 , L0003224 , L0003225 , L0003226 , L0003227 ,
	L0003228 , L0003229 , L0003230 , L0003231 , L0003232 , L0003233 , L0003234 , L0003235 ,
	L0003236 , L0003237 , L0003238 , L0003239 , L0003240 , L0003241 , L0003242 , L0003243 ,
	L0003244 , L0003245 , L0003246 , L0003247 , L0003248 , L0003249 , L0003250 , L0003251 ,
	L0003252 , L0003253 , L0003254 , L0003255 , L0003256 , L0003257 , L0003258 , L0003259 ,
	L0003260 , L0003261 , L0003262 , L0003263 , L0003264 , L0003265 , L0003266 , L0003267 ,
	L0003268 , L0003269 , L0003270 , L0003271 , L0003272 , L0003273 , L0003274 , L0003275 ,
	L0003276 , L0003277 , L0003278 , L0003279 , L0003280 , L0003281 , L0003282 , L0003283 ,
	L0003284 , L0003285 , L0003286 , L0003287 , L0003288 , L0003289 , L0003290 , L0003291 ,
	L0003292 , L0003293 , L0003294 , L0003295 , L0003296 , L0003297 , L0003298 , L0003299 ,
	L0003300 , L0003301 , L0003302 , L0003303 , L0003304 , L0003305 , L0003306 , L0003307 ,

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs
	L0003308 , L0003309 , L0003310 , L0003311 , L0003312 , L0003313 , L0003314 , L0003315 ,
	L0003316 , L0003317 , L0003318 , L0003319 , L0003320 , L0003321 , L0003322 , L0003323 ,
	L0003324 , L0003325 , L0003326 , L0003327 , L0003328 , L0003329 , L0003330 , L0003331 ,
	L0003332 , L0003333 , L0003334 , L0003335 , L0003336 , L0003337 , L0003338 , L0003339 ,
	L0003340 , L0003341 , L0003342 , L0003343 , L0003344 , L0003345 , L0003346 , L0003347 ,
	L0003348 , L0003349 , L0003350 , L0003351 , L0003352 , L0003353 , L0003354 , L0003355 ,
	L0003356 , L0003357 , L0003358 , L0003359 , L0003360 , L0003361 , L0003362 , L0003363 ,
	L0003364 , L0003365 , L0003366 , L0003367 , L0003368 , L0003369 , L0003370 , L0003371 ,
	L0003372 , L0003373 , L0003374 , L0003375 , L0003376 , L0003377 , L0003378 , L0003379 ,
	L0003380 , L0003381 , L0003382 , L0003383 , L0003384 , L0003385 , L0003386 , L0003387 ,
	L0003388 , L0003389 , L0003390 , L0003391 , L0003392 , L0003393 , L0003394 , L0003395 ,
	L0003396 , L0003397 , L0003398 , L0003399 , L0003400 , L0003401 , L0003402 , L0003403 ,
	L0003404 , L0003405 , L0003406 , L0003407 , L0003408 , L0003409 , L0003410 , L0003411 ,
	L0003412 , L0003413 , L0003414 , L0003415 , L0003416 , L0003417 , L0003418 , L0003419 ,
	L0003420 , L0003421 , L0003422 , L0003423 , L0003424 , L0003425 , L0003426 , L0003427 ,
	L0003428 , L0003429 , L0003430 , L0003431 , L0003432 , L0003433 , L0003434 , L0003435 ,
	L0003436 , L0003437 , L0003438 , L0003439 , L0003440 , L0003441 , L0003442 , L0003443 ,
	L0003444 , L0003445 , L0003446 , L0003447 , L0003448 , L0003449 , L0003450 , L0003451 ,
	L0003452 , L0003453 , L0003454 , L0003455 , L0003456 , L0003457 , L0003458 , L0003459 ,
	L0003460 , L0003461 , L0003462 , L0003463 , L0003464 , L0003465 , L0003466 , L0003467 ,

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs
	L0003468 , L0003469 , L0003470 , L0003471 , L0003472 , L0003473 , L0003474 , L0003475 ,
	L0003476 , L0003477 , L0003478 , L0003479 , L0003480 , L0003481 , L0003482 , L0003483 ,
	L0003484 , L0003485 , L0003486 , L0003487 , L0003488 , L0003489 , L0003490 , L0003491 ,
	L0003492 , L0003493 , L0003494 , L0003495 , L0003496 , L0003497 , L0003498 , L0003499 ,
	L0003500 , L0003501 , L0003502 , L0003503 , L0003504 , L0003505 , L0003506 , L0003507 ,
	L0003508 , L0003509 , L0003510 , L0003511 , L0003512 , L0003513 , L0003514 , L0003515 ,
	L0003516 , L0003517 , L0003518 , L0003519 , L0003520 , L0003521 , L0003522 , L0003523 ,
	L0003524 , L0003525 , L0003526 , L0003527 , L0003528 , L0003529 , L0003530 , L0003531 ,
	L0003532 , L0003533 , L0003534 , L0003535 , L0003536 , L0003537 , L0003538 , L0003539 ,
	L0003540 , L0003541 , L0003542 , L0003543 , L0003544 , L0003545 , L0003546 , L0003547 ,
	L0003548 , L0003549 , L0003550 , L0003551 , L0003552 , L0003553 , L0003554 , L0003555 ,
	L0003556 , L0003557 , L0003558 , L0003559 , L0003560 , L0003561 , L0003562 , L0003563 ,
	L0003564 , L0003565 , L0003566 , L0003567 , L0003568 , L0003569 , L0003570 , L0003571 ,
	L0003572 , L0003573 , L0003574 , L0003575 , L0003576 , L0003577 , L0003578 , L0003579 ,
	L0003580 , L0003581 , L0003582 , L0003583 , L0003584 , L0003585 , L0003586 , L0003587 ,
	L0003588 , L0003589 , L0003590 , L0003591 , L0003592 , L0003593 , L0003594 , L0003595 ,
	L0003596 , L0003597 , L0003598 , L0003599 , L0003600 , L0003601 , L0003602 , L0003603 ,
	L0003604 , L0003605 , L0003606 , L0003607 , L0003608 , L0003609 , L0003610 , L0003611 ,
	L0003612 , L0003613 , L0003614 , L0003615 , L0003616 , L0003617 , L0003618 , L0003619 ,
	L0003620 , L0003621 , L0003622 , L0003623 , L0003624 , L0003625 , L0003626 , L0003627 ,

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs
	L0003628 , L0003629 , L0003630 , L0003631 , L0003632 , L0003633 , L0003634 , L0003635 ,
	L0003636 , L0003637 , L0003638 , L0003639 , L0003640 , L0003641 , L0003642 , L0003643 ,
	L0003644 , L0003645 , L0003646 , L0003647 , L0003648 , L0003649 , L0003650 , L0003651 ,
	L0003652 , L0003653 , L0003654 , L0003655 , L0003656 , L0003657 , L0003658 , L0003659 ,
	L0003660 , L0003661 , L0003662 , L0003663 , L0003664 , L0003665 , L0003666 , L0003667 ,
	L0003668 , L0003669 , L0003670 , L0003671 , L0003672 , L0003673 , L0003674 , L0003675 ,
	L0003676 , L0003677 , L0003678 , L0003679 , L0003680 , L0003681 , L0003682 , L0003683 ,
	L0003684 , L0003685 , L0003686 , L0003687 , L0003688 , L0003689 , L0003690 , L0003691 ,
	L0003692 , L0003693 , L0003694 , L0003695 , L0003696 , L0003697 , L0003698 , L0003699 ,
	L0003700 , L0003701 , L0003702 , L0003703 , L0003704 , L0003705 , L0003706 , L0003707 ,
	L0003708 , L0003709 , L0003710 , L0003711 , L0003712 , L0003713 , L0003714 , L0003715 ,
	L0003716 , L0003717 , L0003718 , L0003719 , L0003720 , L0003721 , L0003722 , L0003723 ,
	L0003724 , L0003725 , L0003726 , L0003727 , L0003728 , L0003729 , L0003730 , L0003731 ,
	L0003732 , L0003733 , L0003734 , L0003735 , L0003736 , L0003737 , L0003738 , L0003739 ,
	L0003740 , L0003741 , L0003742 , L0003743 , L0003744 , L0003745 , L0003746 , L0003747 ,
	L0003748 , L0003749 , L0003750 , L0003751 , L0003752 , L0003753 , L0003754 , L0003755 ,
	L0003756 , L0003757 , L0003758 , L0003759 , L0003760 , L0003761 , L0003762 , L0003763 ,
	L0003764 , L0003765 , L0003766 , L0003767 , L0003768 , L0003769 , L0003770 , L0003771 ,
	L0003772 , L0003773 , L0003774 , L0003775 , L0003776 , L0003777 , L0003778 , L0003779 ,
	L0003780 , L0003781 , L0003782 , L0003783 , L0003784 , L0003785 , L0003786 , L0003787 ,

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs
	L0003788 , L0003789 , L0003790 , L0003791 , L0003792 , L0003793 , L0003794 , L0003795 ,
	L0003796 , L0003797 , L0003798 , L0003799 , L0003800 , L0003801 , L0003802 , L0003803 ,
	L0003804 , L0003805 , L0003806 , L0003807 , L0003808 , L0003809 , L0003810 , L0003811 ,
	L0003812 , L0003813 , L0003814 , L0003815 , L0003816 , L0003817 , L0003818 , L0003819 ,
	L0003820 , L0003821 , L0003822 , L0003823 , L0003824 , L0003825 , L0003826 , L0003827 ,
	L0003828 , L0003829 , L0003830 , L0003831 , L0003832 , L0003833 , L0003834 , L0003835 ,
	L0003836 , L0003837 , L0003838 , L0003839 , L0003840 , L0003841 , L0003842 , L0003843 ,
	L0003844 , L0003845 , L0003846 , L0003847 , L0003848 , L0003849 , L0003850 , L0003851 ,
	L0003852 , L0003853 , L0003854 , L0003855 , L0003856 , L0003857 , L0003858 , L0003859 ,
	L0003860 , L0003861 , L0003862 , L0003863 , L0003864 , L0003865 , L0003866 , L0003867 ,
	L0003868 , L0003869 , L0003870 , L0003871 , L0003872 , L0003873 , L0003874 , L0003875 ,
	L0003876 , L0003877 , L0003878 , L0003879 , L0003880 , L0003881 , L0003882 , L0003883 ,
	L0003884 , L0003885 , L0003886 , L0003887 , L0003888 , L0003889 , L0003890 , L0003891 ,
	L0003892 , L0003893 , L0003894 , L0003895 , L0003896 , L0003897 , L0003898 , L0003899 ,
	L0003900 , L0003901 , L0003902 , L0003903 , L0003904 , L0003905 , L0003906 , L0003907 ,
	L0003908 , L0003909 , L0003910 , L0003911 , L0003912 , L0003913 , L0003914 , L0003915 ,
	L0003916 , L0003917 , L0003918 , L0003919 , L0003920 , L0003921 , L0003922 , L0003923 ,
	L0003924 , L0003925 , L0003926 , L0003927 , L0003928 , L0003929 , L0003930 , L0003931 ,
	L0003932 , L0003933 , L0003934 , L0003935 , L0003936 , L0003937 , L0003938 , L0003939 ,
	L0003940 , L0003941 , L0003942 , L0003943 , L0003944 , L0003945 , L0003946 , L0003947 ,

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs
	L0003948 , L0003949 , L0003950 , L0003951 , L0003952 , L0003953 , L0003954 , L0003955 ,
	L0003956 , L0003957 , L0003958 , L0003959 , L0003960 , L0003961 , L0003962 , L0003963 ,
	L0003964 , L0003965 , L0003966 , L0003967 , L0003968 , L0003969 , L0003970 , L0003971 ,
	L0003972 , L0003973 , L0003974 , L0003975 , L0003976 , L0003977 , L0003978 , L0003979 ,
	L0003980 , L0003981 , L0003982 , L0003983 , L0003984 , L0003985 , L0003986 , L0003987 ,
	L0003988 , L0003989 , L0003990 , L0003991 , L0003992 , L0003993 , L0003994 , L0003995 ,
	L0003996 , L0003997 , L0003998 , L0003999 , L0004000 , L0004001 , L0004002 , L0004003 ,
	L0004004 , L0004005 , L0004006 , L0004007 , L0004008 , L0004009 , L0004010 , L0004011 ,
	L0004012 , L0004013 , L0004014 , L0004015 , L0004016 , L0004017 , L0004018 , L0004019 ,
	L0004020 , L0004021 , L0004022 , L0004023 , L0004024 , L0004025 , L0004026 , L0004027 ,
	L0004028 , L0004029 , L0004030 , L0004031 , L0004032 , L0004033 , L0004034 , L0004035 ,
	L0004036 , L0004037 , L0004038 , L0004039 , L0004040 , L0004041 , L0004042 , L0004043 ,
	L0004044 , L0004045 , L0004046 , L0004047 , L0004048 , L0004049 , L0004050 , L0004051 ,
	L0004052 , L0004053 , L0004054 , L0004055 , L0004056 , L0004057 , L0004058 , L0004059 ,
	L0004060 , L0004061 , L0004062 , L0004063 , L0004064 , L0004065 , L0004066 , L0004067 ,
	L0004068 , L0004069 , L0004070 , L0004071 , L0004072 , L0004073 , L0004074 , L0004075 ,
	L0004076 , L0004077 , L0004078 , L0004079 , L0004080 , L0004081 , L0004082 , L0004083 ,
	L0004084 , L0004085 , L0004086 , L0004087 , L0004088 , L0004089 , L0004090 , L0004091 ,
	L0004092 , L0004093 ,

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** SOURCE IDs DEFINED AS URBAN SOURCES ***

URBAN ID	URBAN POP	SOURCE IDs
	2035210.	L0002988 , L0002989 , L0002990 , L0002991 , L0002992 , L0002993 , L0002994 , L0002995 ,
		L0002996 , L0002997 , L0002998 , L0002999 , L0003000 , L0003001 , L0003002 , L0003003 ,
		L0003004 , L0003005 , L0003006 , L0003007 , L0003008 , L0003009 , L0003010 , L0003011 ,
		L0003012 , L0003013 , L0003014 , L0003015 , L0003016 , L0003017 , L0003018 , L0003019 ,
		L0003020 , L0003021 , L0003022 , L0003023 , L0003024 , L0003025 , L0003026 , L0003027 ,
		L0003028 , L0003029 , L0003030 , L0003031 , L0003032 , L0003033 , L0003034 , L0003035 ,
		L0003036 , L0003037 , L0003038 , L0003039 , L0003040 , L0003041 , L0003042 , L0003043 ,
		L0003044 , L0003045 , L0003046 , L0003047 , L0003048 , L0003049 , L0003050 , L0003051 ,
		L0003052 , L0003053 , L0003054 , L0003055 , L0003056 , L0003057 , L0003058 , L0003059 ,
		L0003060 , L0003061 , L0003062 , L0003063 , L0003064 , L0003065 , L0003066 , L0003067 ,
		L0003068 , L0003069 , L0003070 , L0003071 , L0003072 , L0003073 , L0003074 , L0003075 ,
		L0003076 , L0003077 , L0003078 , L0003079 , L0003080 , L0003081 , L0003082 , L0003083 ,
		L0003084 , L0003085 , L0003086 , L0003087 , L0003088 , L0003089 , L0003090 , L0003091 ,
		L0003092 , L0003093 , L0003094 , L0003095 , L0003096 , L0003097 , L0003098 , L0003099 ,
		L0003100 , L0003101 , L0003102 , L0003103 , L0003104 , L0003105 , L0003106 , L0003107 ,
		L0003108 , L0003109 , L0003110 , L0003111 , L0003112 , L0003113 , L0003114 , L0003115 ,
		L0003116 , L0003117 , L0003118 , L0003119 , L0003120 , L0003121 , L0003122 , L0003123 ,
		L0003124 , L0003125 , L0003126 , L0003127 , L0003128 , L0003129 , L0003130 , L0003131 ,
		L0003132 , L0003133 , L0003134 , L0003135 , L0003136 , L0003137 , L0003138 , L0003139 ,
		L0003140 , L0003141 , L0003142 , L0003143 , L0003144 , L0003145 , L0003146 , L0003147 ,

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** SOURCE IDs DEFINED AS URBAN SOURCES ***

URBAN ID	URBAN POP	SOURCE IDs
		L0003148 , L0003149 , L0003150 , L0003151 , L0003152 , L0003153 , L0003154 , L0003155 ,
		L0003156 , L0003157 , L0003158 , L0003159 , L0003160 , L0003161 , L0003162 , L0003163 ,
		L0003164 , L0003165 , L0003166 , L0003167 , L0003168 , L0003169 , L0003170 , L0003171 ,
		L0003172 , L0003173 , L0003174 , L0003175 , L0003176 , L0003177 , L0003178 , L0003179 ,
		L0003180 , L0003181 , L0003182 , L0003183 , L0003184 , L0003185 , L0003186 , L0003187 ,
		L0003188 , L0003189 , L0003190 , L0003191 , L0003192 , L0003193 , L0003194 , L0003195 ,
		L0003196 , L0003197 , L0003198 , L0003199 , L0003200 , L0003201 , L0003202 , L0003203 ,
		L0003204 , L0003205 , L0003206 , L0003207 , L0003208 , L0003209 , L0003210 , L0003211 ,
		L0003212 , L0003213 , L0003214 , L0003215 , L0003216 , L0003217 , L0003218 , L0003219 ,
		L0003220 , L0003221 , L0003222 , L0003223 , L0003224 , L0003225 , L0003226 , L0003227 ,
		L0003228 , L0003229 , L0003230 , L0003231 , L0003232 , L0003233 , L0003234 , L0003235 ,
		L0003236 , L0003237 , L0003238 , L0003239 , L0003240 , L0003241 , L0003242 , L0003243 ,
		L0003244 , L0003245 , L0003246 , L0003247 , L0003248 , L0003249 , L0003250 , L0003251 ,
		L0003252 , L0003253 , L0003254 , L0003255 , L0003256 , L0003257 , L0003258 , L0003259 ,
		L0003260 , L0003261 , L0003262 , L0003263 , L0003264 , L0003265 , L0003266 , L0003267 ,
		L0003268 , L0003269 , L0003270 , L0003271 , L0003272 , L0003273 , L0003274 , L0003275 ,
		L0003276 , L0003277 , L0003278 , L0003279 , L0003280 , L0003281 , L0003282 , L0003283 ,
		L0003284 , L0003285 , L0003286 , L0003287 , L0003288 , L0003289 , L0003290 , L0003291 ,
		L0003292 , L0003293 , L0003294 , L0003295 , L0003296 , L0003297 , L0003298 , L0003299 ,
		L0003300 , L0003301 , L0003302 , L0003303 , L0003304 , L0003305 , L0003306 , L0003307 ,

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** SOURCE IDs DEFINED AS URBAN SOURCES ***

URBAN ID	URBAN POP	SOURCE IDs
		L0003308 , L0003309 , L0003310 , L0003311 , L0003312 , L0003313 , L0003314 , L0003315 ,
		L0003316 , L0003317 , L0003318 , L0003319 , L0003320 , L0003321 , L0003322 , L0003323 ,
		L0003324 , L0003325 , L0003326 , L0003327 , L0003328 , L0003329 , L0003330 , L0003331 ,
		L0003332 , L0003333 , L0003334 , L0003335 , L0003336 , L0003337 , L0003338 , L0003339 ,
		L0003340 , L0003341 , L0003342 , L0003343 , L0003344 , L0003345 , L0003346 , L0003347 ,
		L0003348 , L0003349 , L0003350 , L0003351 , L0003352 , L0003353 , L0003354 , L0003355 ,
		L0003356 , L0003357 , L0003358 , L0003359 , L0003360 , L0003361 , L0003362 , L0003363 ,
		L0003364 , L0003365 , L0003366 , L0003367 , L0003368 , L0003369 , L0003370 , L0003371 ,
		L0003372 , L0003373 , L0003374 , L0003375 , L0003376 , L0003377 , L0003378 , L0003379 ,
		L0003380 , L0003381 , L0003382 , L0003383 , L0003384 , L0003385 , L0003386 , L0003387 ,
		L0003388 , L0003389 , L0003390 , L0003391 , L0003392 , L0003393 , L0003394 , L0003395 ,
		L0003396 , L0003397 , L0003398 , L0003399 , L0003400 , L0003401 , L0003402 , L0003403 ,
		L0003404 , L0003405 , L0003406 , L0003407 , L0003408 , L0003409 , L0003410 , L0003411 ,
		L0003412 , L0003413 , L0003414 , L0003415 , L0003416 , L0003417 , L0003418 , L0003419 ,
		L0003420 , L0003421 , L0003422 , L0003423 , L0003424 , L0003425 , L0003426 , L0003427 ,
		L0003428 , L0003429 , L0003430 , L0003431 , L0003432 , L0003433 , L0003434 , L0003435 ,
		L0003436 , L0003437 , L0003438 , L0003439 , L0003440 , L0003441 , L0003442 , L0003443 ,
		L0003444 , L0003445 , L0003446 , L0003447 , L0003448 , L0003449 , L0003450 , L0003451 ,
		L0003452 , L0003453 , L0003454 , L0003455 , L0003456 , L0003457 , L0003458 , L0003459 ,
		L0003460 , L0003461 , L0003462 , L0003463 , L0003464 , L0003465 , L0003466 , L0003467 ,

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** SOURCE IDs DEFINED AS URBAN SOURCES ***

URBAN ID	URBAN POP	SOURCE IDs
		L0003468 , L0003469 , L0003470 , L0003471 , L0003472 , L0003473 , L0003474 , L0003475 ,
		L0003476 , L0003477 , L0003478 , L0003479 , L0003480 , L0003481 , L0003482 , L0003483 ,
		L0003484 , L0003485 , L0003486 , L0003487 , L0003488 , L0003489 , L0003490 , L0003491 ,
		L0003492 , L0003493 , L0003494 , L0003495 , L0003496 , L0003497 , L0003498 , L0003499 ,
		L0003500 , L0003501 , L0003502 , L0003503 , L0003504 , L0003505 , L0003506 , L0003507 ,
		L0003508 , L0003509 , L0003510 , L0003511 , L0003512 , L0003513 , L0003514 , L0003515 ,
		L0003516 , L0003517 , L0003518 , L0003519 , L0003520 , L0003521 , L0003522 , L0003523 ,
		L0003524 , L0003525 , L0003526 , L0003527 , L0003528 , L0003529 , L0003530 , L0003531 ,
		L0003532 , L0003533 , L0003534 , L0003535 , L0003536 , L0003537 , L0003538 , L0003539 ,
		L0003540 , L0003541 , L0003542 , L0003543 , L0003544 , L0003545 , L0003546 , L0003547 ,
		L0003548 , L0003549 , L0003550 , L0003551 , L0003552 , L0003553 , L0003554 , L0003555 ,
		L0003556 , L0003557 , L0003558 , L0003559 , L0003560 , L0003561 , L0003562 , L0003563 ,
		L0003564 , L0003565 , L0003566 , L0003567 , L0003568 , L0003569 , L0003570 , L0003571 ,
		L0003572 , L0003573 , L0003574 , L0003575 , L0003576 , L0003577 , L0003578 , L0003579 ,
		L0003580 , L0003581 , L0003582 , L0003583 , L0003584 , L0003585 , L0003586 , L0003587 ,
		L0003588 , L0003589 , L0003590 , L0003591 , L0003592 , L0003593 , L0003594 , L0003595 ,
		L0003596 , L0003597 , L0003598 , L0003599 , L0003600 , L0003601 , L0003602 , L0003603 ,
		L0003604 , L0003605 , L0003606 , L0003607 , L0003608 , L0003609 , L0003610 , L0003611 ,
		L0003612 , L0003613 , L0003614 , L0003615 , L0003616 , L0003617 , L0003618 , L0003619 ,
		L0003620 , L0003621 , L0003622 , L0003623 , L0003624 , L0003625 , L0003626 , L0003627 ,

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** SOURCE IDs DEFINED AS URBAN SOURCES ***

URBAN ID	URBAN POP	SOURCE IDs
		L0003628 , L0003629 , L0003630 , L0003631 , L0003632 , L0003633 , L0003634 , L0003635 ,
		L0003636 , L0003637 , L0003638 , L0003639 , L0003640 , L0003641 , L0003642 , L0003643 ,
		L0003644 , L0003645 , L0003646 , L0003647 , L0003648 , L0003649 , L0003650 , L0003651 ,
		L0003652 , L0003653 , L0003654 , L0003655 , L0003656 , L0003657 , L0003658 , L0003659 ,
		L0003660 , L0003661 , L0003662 , L0003663 , L0003664 , L0003665 , L0003666 , L0003667 ,
		L0003668 , L0003669 , L0003670 , L0003671 , L0003672 , L0003673 , L0003674 , L0003675 ,
		L0003676 , L0003677 , L0003678 , L0003679 , L0003680 , L0003681 , L0003682 , L0003683 ,
		L0003684 , L0003685 , L0003686 , L0003687 , L0003688 , L0003689 , L0003690 , L0003691 ,
		L0003692 , L0003693 , L0003694 , L0003695 , L0003696 , L0003697 , L0003698 , L0003699 ,
		L0003700 , L0003701 , L0003702 , L0003703 , L0003704 , L0003705 , L0003706 , L0003707 ,
		L0003708 , L0003709 , L0003710 , L0003711 , L0003712 , L0003713 , L0003714 , L0003715 ,
		L0003716 , L0003717 , L0003718 , L0003719 , L0003720 , L0003721 , L0003722 , L0003723 ,
		L0003724 , L0003725 , L0003726 , L0003727 , L0003728 , L0003729 , L0003730 , L0003731 ,
		L0003732 , L0003733 , L0003734 , L0003735 , L0003736 , L0003737 , L0003738 , L0003739 ,
		L0003740 , L0003741 , L0003742 , L0003743 , L0003744 , L0003745 , L0003746 , L0003747 ,
		L0003748 , L0003749 , L0003750 , L0003751 , L0003752 , L0003753 , L0003754 , L0003755 ,
		L0003756 , L0003757 , L0003758 , L0003759 , L0003760 , L0003761 , L0003762 , L0003763 ,
		L0003764 , L0003765 , L0003766 , L0003767 , L0003768 , L0003769 , L0003770 , L0003771 ,
		L0003772 , L0003773 , L0003774 , L0003775 , L0003776 , L0003777 , L0003778 , L0003779 ,
		L0003780 , L0003781 , L0003782 , L0003783 , L0003784 , L0003785 , L0003786 , L0003787 ,

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** SOURCE IDs DEFINED AS URBAN SOURCES ***

URBAN ID	URBAN POP	SOURCE IDs
		L0003788 , L0003789 , L0003790 , L0003791 , L0003792 , L0003793 , L0003794 , L0003795 ,
		L0003796 , L0003797 , L0003798 , L0003799 , L0003800 , L0003801 , L0003802 , L0003803 ,
		L0003804 , L0003805 , L0003806 , L0003807 , L0003808 , L0003809 , L0003810 , L0003811 ,
		L0003812 , L0003813 , L0003814 , L0003815 , L0003816 , L0003817 , L0003818 , L0003819 ,
		L0003820 , L0003821 , L0003822 , L0003823 , L0003824 , L0003825 , L0003826 , L0003827 ,
		L0003828 , L0003829 , L0003830 , L0003831 , L0003832 , L0003833 , L0003834 , L0003835 ,
		L0003836 , L0003837 , L0003838 , L0003839 , L0003840 , L0003841 , L0003842 , L0003843 ,
		L0003844 , L0003845 , L0003846 , L0003847 , L0003848 , L0003849 , L0003850 , L0003851 ,
		L0003852 , L0003853 , L0003854 , L0003855 , L0003856 , L0003857 , L0003858 , L0003859 ,
		L0003860 , L0003861 , L0003862 , L0003863 , L0003864 , L0003865 , L0003866 , L0003867 ,
		L0003868 , L0003869 , L0003870 , L0003871 , L0003872 , L0003873 , L0003874 , L0003875 ,
		L0003876 , L0003877 , L0003878 , L0003879 , L0003880 , L0003881 , L0003882 , L0003883 ,
		L0003884 , L0003885 , L0003886 , L0003887 , L0003888 , L0003889 , L0003890 , L0003891 ,
		L0003892 , L0003893 , L0003894 , L0003895 , L0003896 , L0003897 , L0003898 , L0003899 ,
		L0003900 , L0003901 , L0003902 , L0003903 , L0003904 , L0003905 , L0003906 , L0003907 ,
		L0003908 , L0003909 , L0003910 , L0003911 , L0003912 , L0003913 , L0003914 , L0003915 ,
		L0003916 , L0003917 , L0003918 , L0003919 , L0003920 , L0003921 , L0003922 , L0003923 ,
		L0003924 , L0003925 , L0003926 , L0003927 , L0003928 , L0003929 , L0003930 , L0003931 ,
		L0003932 , L0003933 , L0003934 , L0003935 , L0003936 , L0003937 , L0003938 , L0003939 ,
		L0003940 , L0003941 , L0003942 , L0003943 , L0003944 , L0003945 , L0003946 , L0003947 ,

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** SOURCE IDs DEFINED AS URBAN SOURCES ***

URBAN ID	URBAN POP	SOURCE IDs

L0003948 , L0003949 , L0003950 , L0003951 , L0003952 , L0003953 , L0003954 , L0003955 ,
L0003956 , L0003957 , L0003958 , L0003959 , L0003960 , L0003961 , L0003962 , L0003963 ,
L0003964 , L0003965 , L0003966 , L0003967 , L0003968 , L0003969 , L0003970 , L0003971 ,
L0003972 , L0003973 , L0003974 , L0003975 , L0003976 , L0003977 , L0003978 , L0003979 ,
L0003980 , L0003981 , L0003982 , L0003983 , L0003984 , L0003985 , L0003986 , L0003987 ,
L0003988 , L0003989 , L0003990 , L0003991 , L0003992 , L0003993 , L0003994 , L0003995 ,
L0003996 , L0003997 , L0003998 , L0003999 , L0004000 , L0004001 , L0004002 , L0004003 ,
L0004004 , L0004005 , L0004006 , L0004007 , L0004008 , L0004009 , L0004010 , L0004011 ,
L0004012 , L0004013 , L0004014 , L0004015 , L0004016 , L0004017 , L0004018 , L0004019 ,
L0004020 , L0004021 , L0004022 , L0004023 , L0004024 , L0004025 , L0004026 , L0004027 ,
L0004028 , L0004029 , L0004030 , L0004031 , L0004032 , L0004033 , L0004034 , L0004035 ,
L0004036 , L0004037 , L0004038 , L0004039 , L0004040 , L0004041 , L0004042 , L0004043 ,
L0004044 , L0004045 , L0004046 , L0004047 , L0004048 , L0004049 , L0004050 , L0004051 ,
L0004052 , L0004053 , L0004054 , L0004055 , L0004056 , L0004057 , L0004058 , L0004059 ,
L0004060 , L0004061 , L0004062 , L0004063 , L0004064 , L0004065 , L0004066 , L0004067 ,
L0004068 , L0004069 , L0004070 , L0004071 , L0004072 , L0004073 , L0004074 , L0004075 ,
L0004076 , L0004077 , L0004078 , L0004079 , L0004080 , L0004081 , L0004082 , L0004083 ,
L0004084 , L0004085 , L0004086 , L0004087 , L0004088 , L0004089 , L0004090 , L0004091 ,
L0004092 , L0004093 ,

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** GRIDDED RECEPTOR NETWORK SUMMARY ***

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

*** X-COORDINATES OF GRID ***
(METERS)

478868.2, 478968.2, 479068.2, 479168.2, 479268.2, 479368.2, 479468.2, 479568.2, 479668.2, 479768.2,
479868.2, 479968.2, 480068.2, 480168.2, 480268.2, 480368.2, 480468.2, 480568.2, 480668.2, 480768.2,
480868.2, 480968.2, 481068.2, 481168.2, 481268.2, 481368.2, 481468.2, 481568.2, 481668.2, 481768.2,

*** Y-COORDINATES OF GRID ***
(METERS)

3769389.7, 3769489.7, 3769589.7, 3769689.7, 3769789.7, 3769889.7, 3769989.7, 3770089.7, 3770189.7, 3770289.7,
3770389.7, 3770489.7, 3770589.7, 3770689.7, 3770789.7, 3770889.7, 3770989.7, 3771089.7, 3771189.7, 3771289.7,
3771389.7, 3771489.7, 3771589.7, 3771689.7, 3771789.7, 3771889.7, 3771989.7, 3772089.7, 3772189.7, 3772289.7,
3772389.7, 3772489.7, 3772589.7, 3772689.7, 3772789.7, 3772889.7, 3772989.7, 3773089.7, 3773189.7, 3773289.7,
3773389.7, 3773489.7, 3773589.7, 3773689.7, 3773789.7, 3773889.7, 3773989.7, 3774089.7, 3774189.7, 3774289.7,

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

* ELEVATION HEIGHTS IN METERS *

Y-COORD (METERS)	X-COORD (METERS)								
	478868.21	478968.21	479068.21	479168.21	479268.21	479368.21	479468.21	479568.21	479668.21
3774289.70	346.00	347.30	348.00	349.00	350.00	350.60	351.00	352.00	353.00
3774189.70	346.00	347.00	348.00	348.70	349.30	350.00	351.00	352.00	352.90
3774089.70	346.00	347.00	347.60	348.00	349.00	350.00	351.00	352.00	352.30
3773989.70	345.90	346.30	347.00	347.10	348.30	350.00	350.90	351.40	352.00
3773889.70	345.90	346.30	347.00	348.00	349.00	350.00	350.90	352.00	352.00
3773789.70	345.00	346.30	347.00	348.00	349.00	350.00	350.90	352.00	352.60
3773689.70	345.00	346.30	347.60	348.00	349.00	350.00	350.00	351.40	352.60
3773589.70	345.00	346.00	347.00	348.00	349.00	349.60	350.00	351.30	352.60
3773489.70	345.00	346.00	347.00	347.90	348.30	349.30	350.00	351.00	352.00
3773389.70	344.90	346.00	347.00	347.90	348.30	349.00	350.00	351.00	352.00
3773289.70	344.90	346.00	347.00	347.90	348.00	349.00	350.00	351.00	351.60
3773189.70	344.00	346.00	346.60	347.90	348.00	349.00	349.90	350.10	351.00
3773089.70	344.00	345.30	346.10	347.00	348.00	348.10	349.00	350.00	351.00
3772989.70	344.00	345.00	346.00	346.70	347.00	347.90	348.00	349.30	350.00
3772889.70	343.90	344.60	345.60	346.00	346.60	347.00	347.90	349.00	350.00
3772789.70	343.00	344.00	345.00	346.00	346.00	347.00	347.00	348.00	349.70
3772689.70	342.80	343.80	344.50	345.00	346.00	347.00	347.20	348.00	349.60
3772589.70	342.00	342.10	343.80	345.00	346.00	346.80	347.90	348.30	349.60
3772489.70	341.00	342.00	343.00	344.00	345.30	346.60	347.90	348.00	349.60
3772389.70	340.90	341.30	342.60	344.00	345.00	346.00	347.00	347.80	349.60
3772289.70	340.90	341.30	342.60	344.00	345.30	346.00	346.90	347.30	349.60
3772189.70	340.90	341.30	343.50	345.00	346.00	347.00	347.00	347.90	350.50
3772089.70	340.90	341.50	344.80	347.00	347.20	348.80	351.60	354.00	354.00
3771989.70	342.60	346.50	347.80	348.00	349.80	353.40	354.00	355.00	355.30
3771889.70	348.00	348.00	349.00	350.00	351.30	353.00	354.80	355.90	356.50
3771789.70	348.00	349.10	350.00	351.00	353.00	354.00	354.90	356.00	357.10
3771689.70	348.90	350.00	350.60	352.00	353.20	354.00	355.00	356.20	357.60
3771589.70	348.90	350.00	351.00	352.00	353.30	354.60	355.90	356.90	358.00
3771489.70	348.90	350.00	351.00	352.20	354.00	355.00	356.00	357.00	358.00
3771389.70	349.00	350.00	351.60	352.90	354.00	355.00	356.00	357.30	358.60
3771289.70	349.00	350.00	351.60	352.90	354.00	355.00	356.00	357.30	359.00
3771189.70	349.00	350.30	351.60	352.90	354.00	355.00	356.00	358.00	359.00
3771089.70	349.00	350.30	351.60	352.90	354.00	355.00	356.90	358.00	359.00
3770989.70	349.90	350.30	352.00	352.90	354.00	355.60	356.90	358.00	359.00
3770889.70	350.00	351.00	352.00	353.00	354.10	355.60	357.00	358.00	359.60
3770789.70	350.00	351.00	352.00	353.00	354.30	356.00	357.00	358.20	359.60
3770689.70	350.00	351.00	352.00	353.90	355.00	356.00	357.00	358.30	359.60
3770589.70	350.00	351.30	352.70	354.00	355.00	356.00	357.00	358.30	360.00
3770489.70	350.00	352.00	353.00	354.00	355.20	356.00	357.00	358.30	359.80
3770389.70	350.00	352.00	353.50	354.00	355.30	356.00	357.00	358.30	359.60

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

* ELEVATION HEIGHTS IN METERS *

Y-COORD (METERS)	X-COORD (METERS)								
	478868.21	478968.21	479068.21	479168.21	479268.21	479368.21	479468.21	479568.21	479668.21
3770289.70	350.00	352.00	353.00	354.00	355.00	356.00	357.00	358.30	359.60
3770189.70	350.90	352.00	352.60	353.90	355.00	356.00	357.00	358.30	359.60
3770089.70	350.90	351.90	352.60	353.90	355.00	356.00	357.90	358.90	360.00
3769989.70	350.90	352.00	352.60	353.90	355.00	356.60	357.90	359.00	360.00
3769889.70	351.00	352.00	353.00	354.00	355.30	356.80	358.00	359.00	360.60
3769789.70	351.00	352.00	353.00	354.90	356.00	357.00	358.00	359.00	360.60
3769689.70	352.20	353.00	353.00	355.90	358.10	358.70	359.00	359.30	361.60
3769589.70	353.60	354.20	357.90	359.50	360.00	360.00	360.00	360.20	365.00
3769489.70	350.20	353.00	354.10	358.00	358.10	359.00	359.00	359.90	363.40
3769389.70	349.90	352.00	353.00	354.90	356.20	357.50	358.00	359.00	360.00

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*
*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

* ELEVATION HEIGHTS IN METERS *

Y-COORD (METERS)	X-COORD (METERS)								
	479768.21	479868.21	479968.21	480068.21	480168.21	480268.21	480368.21	480468.21	480568.21
3774289.70	353.80	354.00	355.10	356.10	357.30	358.00	359.80	360.00	361.60
3774189.70	353.00	354.00	354.60	356.00	357.00	358.00	359.00	360.00	361.60
3774089.70	353.00	354.00	355.00	356.00	357.00	358.00	359.00	360.20	361.60
3773989.70	353.00	354.00	355.00	356.00	357.00	358.00	359.00	360.30	362.00
3773889.70	353.00	354.00	355.00	356.00	357.00	358.00	359.00	360.30	362.00
3773789.70	353.00	354.00	355.00	356.00	357.00	358.00	359.00	360.00	362.00
3773689.70	353.90	354.00	355.00	356.00	357.00	358.00	359.00	360.00	362.00
3773589.70	353.70	354.00	355.00	356.00	357.00	358.00	359.00	360.00	360.90
3773489.70	353.00	354.00	355.00	355.90	356.30	357.60	358.40	359.00	360.00
3773389.70	352.90	354.00	354.60	355.10	356.00	357.00	358.00	359.00	359.10
3773289.70	352.00	353.30	354.00	355.00	356.00	356.90	357.90	358.30	359.00
3773189.70	352.00	353.00	354.00	355.00	355.60	356.60	357.40	358.70	359.80
3773089.70	352.00	352.40	353.10	354.00	355.00	356.00	357.00	358.40	359.50
3772989.70	351.00	352.00	353.00	353.00	354.30	355.90	356.90	358.00	359.00
3772889.70	351.00	352.00	352.30	353.00	354.30	356.00	356.90	358.00	359.00
3772789.70	350.90	352.00	352.60	353.80	354.30	356.00	356.90	358.00	359.60
3772689.70	350.90	351.40	352.60	353.90	354.30	356.00	356.90	358.00	359.60
3772589.70	350.40	351.30	352.30	353.40	354.00	355.60	356.90	358.00	359.00
3772489.70	350.00	351.30	352.00	353.00	354.00	355.60	356.90	358.00	358.60
3772389.70	351.00	352.00	352.00	353.00	354.00	355.60	357.00	358.40	359.10
3772289.70	351.90	354.00	353.00	353.00	354.20	356.80	358.00	359.20	360.80
3772189.70	352.00	354.20	353.00	354.80	359.80	359.90	359.90	359.00	361.60
3772089.70	354.20	356.90	359.20	360.20	361.20	362.80	365.20	365.80	366.00
3771989.70	356.50	359.30	359.60	361.00	362.70	364.30	366.00	367.00	367.60
3771889.70	358.00	360.00	360.50	362.00	363.30	365.00	366.80	367.90	368.50
3771789.70	358.90	360.00	361.00	362.20	364.00	365.60	367.00	368.00	369.10
3771689.70	359.00	360.20	361.60	362.90	364.00	365.60	367.00	368.30	369.80
3771589.70	359.00	360.30	362.00	363.00	364.30	366.00	367.00	368.90	370.00
3771489.70	359.90	361.00	362.00	363.00	364.30	366.00	367.00	369.00	370.60
3771389.70	360.00	361.00	362.00	363.50	364.70	366.00	367.90	369.30	370.60
3771289.70	360.00	361.30	362.60	363.90	365.00	366.50	367.90	369.30	371.00
3771189.70	360.00	361.40	362.60	364.00	365.30	366.60	368.00	369.40	371.00
3771089.70	360.00	362.00	363.00	364.00	365.30	367.00	368.00	370.00	371.00
3770989.70	360.90	362.00	363.00	364.00	366.00	367.00	368.00	370.00	371.00
3770889.70	360.90	362.00	363.60	364.90	366.00	367.60	368.90	370.00	371.00
3770789.70	360.90	362.00	363.60	365.00	366.30	367.60	368.90	370.00	371.60
3770689.70	361.00	362.00	363.60	365.00	366.30	367.60	368.90	370.30	372.00
3770589.70	361.00	362.00	363.60	364.90	366.00	367.60	368.90	370.00	371.60
3770489.70	361.00	362.00	363.60	364.90	366.00	367.60	369.00	370.30	372.00
3770389.70	360.90	362.00	363.60	364.90	366.00	367.60	369.00	370.30	372.00

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

* ELEVATION HEIGHTS IN METERS *

Y-COORD (METERS)	X-COORD (METERS)								
	479768.21	479868.21	479968.21	480068.21	480168.21	480268.21	480368.21	480468.21	480568.21
3770289.70	360.90	362.30	364.00	365.00	366.30	368.00	369.00	371.00	372.00
3770189.70	360.90	362.30	364.00	365.90	367.00	368.00	369.50	371.00	372.60
3770089.70	361.00	363.00	364.60	366.00	367.00	368.00	369.90	371.00	372.60
3769989.70	361.90	363.00	364.60	366.00	367.30	368.10	369.90	371.00	372.00
3769889.70	362.00	363.30	364.60	366.00	367.30	368.60	369.90	371.00	372.00
3769789.70	362.00	363.90	364.60	366.00	367.30	368.60	370.00	371.00	372.50
3769689.70	364.00	364.20	365.00	366.00	367.40	369.00	370.20	371.10	373.50
3769589.70	366.00	365.80	366.00	366.00	368.00	369.60	372.00	372.00	374.30
3769489.70	365.10	365.00	365.00	366.00	368.00	369.60	371.10	373.00	374.60
3769389.70	362.00	363.30	364.60	366.00	367.30	369.00	370.90	372.00	374.50

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*
*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

* ELEVATION HEIGHTS IN METERS *

Y-COORD (METERS)	X-COORD (METERS)								
	480668.21	480768.21	480868.21	480968.21	481068.21	481168.21	481268.21	481368.21	481468.21
3774289.70	362.80	363.30	364.00	365.00	366.00	367.60	368.90	370.00	371.00
3774189.70	362.00	363.30	364.60	365.90	366.30	368.00	368.90	370.00	371.00
3774089.70	362.90	364.00	365.00	366.00	367.00	368.00	369.00	370.20	371.60
3773989.70	363.00	364.90	365.60	366.00	367.20	368.00	369.00	371.00	372.00
3773889.70	363.90	366.00	366.00	366.00	366.80	367.60	368.90	370.20	371.00
3773789.70	363.90	366.00	366.00	365.50	366.00	366.60	368.00	370.00	370.60
3773689.70	363.90	366.00	365.50	365.00	366.00	366.60	368.00	370.00	371.00
3773589.70	362.90	364.80	365.00	366.00	366.40	367.60	368.20	370.00	371.70
3773489.70	361.40	363.10	364.80	366.00	366.60	367.60	368.00	369.70	368.00
3773389.70	360.00	362.30	364.60	366.00	366.30	367.00	368.00	369.00	368.00
3773289.70	360.00	362.30	364.60	366.00	366.00	366.90	368.00	368.00	369.10
3773189.70	360.50	362.30	364.60	366.00	366.00	366.00	367.00	366.40	367.70
3773089.70	360.00	362.00	363.70	366.00	365.00	366.00	367.00	366.00	366.00
3772989.70	360.00	362.00	363.00	364.00	365.40	366.10	367.00	367.20	368.10
3772889.70	360.00	362.00	363.00	364.00	365.30	366.60	367.90	368.20	369.30
3772789.70	360.90	362.00	363.00	364.00	366.00	366.60	367.90	368.30	369.60
3772689.70	360.00	362.00	363.00	364.00	365.30	366.60	367.90	369.00	370.00
3772589.70	360.00	361.30	363.00	364.50	366.00	366.60	368.00	369.00	370.00
3772489.70	359.10	360.60	363.00	364.90	366.00	367.00	368.00	369.30	370.00
3772389.70	360.00	362.00	363.60	364.90	366.00	367.00	368.20	370.00	371.00
3772289.70	361.60	363.20	364.00	365.00	365.60	367.20	369.50	371.00	372.20
3772189.70	363.00	364.00	365.50	365.90	366.00	371.70	371.90	376.80	378.00
3772089.70	365.20	365.20	368.00	370.20	373.10	374.80	377.20	378.20	378.10
3771989.70	367.60	371.00	372.60	373.50	374.70	376.80	378.00	379.20	379.20
3771889.70	369.90	372.00	373.00	374.00	376.00	378.00	379.00	380.00	381.00
3771789.70	370.90	372.00	373.60	375.00	376.30	378.00	379.90	381.00	382.10
3771689.70	371.00	372.70	374.00	375.50	377.00	378.60	380.00	381.30	383.00
3771589.70	371.90	373.20	374.50	376.00	377.00	378.60	380.00	382.00	383.60
3771489.70	372.00	374.00	375.00	376.90	378.00	379.60	381.00	382.30	384.00
3771389.70	372.00	374.00	375.60	377.50	379.00	380.00	381.90	383.20	384.60
3771289.70	372.90	374.30	376.00	378.00	379.30	380.60	382.00	384.00	385.50
3771189.70	372.90	374.30	376.50	378.00	379.30	381.00	382.90	384.30	386.00
3771089.70	372.90	374.30	376.00	377.90	379.30	381.00	382.90	384.30	386.00
3770989.70	372.90	374.30	376.00	377.90	379.30	381.00	382.90	384.30	386.00
3770889.70	372.90	374.30	376.00	377.90	379.30	380.60	382.70	384.00	385.90
3770789.70	372.90	374.30	376.00	377.90	379.30	380.60	382.00	384.00	385.60
3770689.70	372.90	374.30	376.00	377.90	379.30	381.00	382.00	384.00	385.60
3770589.70	373.00	375.00	376.60	378.00	379.40	381.00	382.20	384.00	385.60
3770489.70	373.50	375.20	376.60	378.00	380.00	381.60	382.90	384.20	386.00
3770389.70	373.90	375.30	377.00	378.90	380.00	382.00	383.00	385.00	386.60

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

* ELEVATION HEIGHTS IN METERS *

Y-COORD (METERS)	X-COORD (METERS) 480668.21	480768.21	480868.21	480968.21	481068.21	481168.21	481268.21	481368.21	481468.21
3770289.70	374.00	376.00	377.70	379.00	380.30	382.00	384.00	385.30	387.00
3770189.70	374.00	376.00	378.00	379.00	381.00	382.60	384.00	386.00	387.60
3770089.70	374.00	376.00	377.60	379.00	381.00	382.60	384.00	386.00	387.60
3769989.70	374.00	376.00	377.60	379.00	380.80	382.50	384.00	386.00	387.60
3769889.70	374.00	376.00	377.00	378.90	380.30	382.00	383.90	385.30	387.60
3769789.70	376.80	377.70	377.60	379.00	381.00	382.60	384.00	386.00	387.60
3769689.70	378.00	378.00	378.00	379.90	381.10	382.70	384.00	386.10	388.00
3769589.70	377.00	377.60	378.30	379.90	381.30	383.80	384.90	386.70	388.60
3769489.70	376.90	378.00	378.00	379.90	381.40	383.10	384.90	387.30	389.60
3769389.70	376.90	377.90	378.60	380.00	381.30	383.00	384.90	387.30	389.10

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*
*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

* ELEVATION HEIGHTS IN METERS *

Y-COORD (METERS)	X-COORD (METERS) 481568.21	481668.21	481768.21
3774289.70	372.00	373.30	374.60
3774189.70	372.00	374.00	375.00
3774089.70	372.90	374.70	375.80
3773989.70	373.90	376.90	377.00
3773889.70	374.90	377.10	377.80
3773789.70	372.00	372.10	375.30
3773689.70	371.90	373.00	374.00
3773589.70	372.00	373.00	372.80
3773489.70	371.40	368.70	367.40
3773389.70	366.20	366.00	366.00
3773289.70	365.80	366.00	366.00
3773189.70	371.40	372.00	372.00
3773089.70	369.90	371.90	372.00
3772989.70	370.00	372.00	372.10
3772889.70	370.50	372.00	372.80
3772789.70	371.00	372.00	372.60
3772689.70	371.20	372.10	373.10
3772589.70	372.00	372.70	374.00
3772489.70	371.10	372.00	374.50
3772389.70	371.00	372.10	376.70
3772289.70	375.10	378.80	382.30
3772189.70	378.00	381.20	384.00
3772089.70	378.00	382.50	385.00
3771989.70	378.00	384.30	385.60
3771889.70	380.80	384.90	386.00
3771789.70	384.00	385.30	386.70
3771689.70	384.00	386.00	387.60
3771589.70	384.10	386.20	388.00
3771489.70	385.90	387.30	388.70
3771389.70	386.00	388.00	389.80
3771289.70	386.90	388.30	390.00
3771189.70	387.00	389.00	390.60
3771089.70	387.90	389.30	391.00
3770989.70	387.90	389.30	391.00
3770889.70	387.90	389.30	390.90
3770789.70	387.00	389.00	390.60
3770689.70	387.00	389.00	390.60
3770589.70	387.90	389.10	390.60
3770489.70	388.00	389.70	391.30
3770389.70	388.00	390.20	392.00

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

* ELEVATION HEIGHTS IN METERS *

Y-COORD (METERS)	X-COORD (METERS) 481568.21	481668.21	481768.21
3770289.70	388.90	390.40	392.10
3770189.70	389.00	391.00	392.60
3770089.70	389.10	391.00	392.60
3769989.70	389.00	391.00	392.60
3769889.70	389.00	390.30	392.60
3769789.70	389.00	391.00	392.60
3769689.70	389.20	391.10	392.70
3769589.70	394.20	393.80	393.00
3769489.70	390.30	391.00	394.00
3769389.70	390.70	391.40	396.00

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*
*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

* HILL HEIGHT SCALES IN METERS *

Y-COORD (METERS)	X-COORD (METERS)								
	478868.21	478968.21	479068.21	479168.21	479268.21	479368.21	479468.21	479568.21	479668.21
3774289.70	346.00	347.30	348.00	349.00	350.00	350.60	351.00	352.00	353.00
3774189.70	346.00	347.00	348.00	348.70	349.30	350.00	351.00	352.00	352.90
3774089.70	346.00	347.00	347.60	348.00	349.00	350.00	351.00	352.00	352.30
3773989.70	345.90	346.30	347.00	347.10	348.30	350.00	350.90	351.40	352.00
3773889.70	345.90	346.30	347.00	348.00	349.00	350.00	350.90	352.00	352.00
3773789.70	345.00	346.30	347.00	348.00	349.00	350.00	350.90	352.00	352.60
3773689.70	345.00	346.30	347.60	348.00	349.00	350.00	350.00	351.40	352.60
3773589.70	345.00	346.00	347.00	348.00	349.00	349.60	350.00	351.30	352.60
3773489.70	345.00	346.00	347.00	347.90	348.30	349.30	350.00	351.00	352.00
3773389.70	344.90	346.00	347.00	347.90	348.30	349.00	350.00	351.00	352.00
3773289.70	344.90	346.00	347.00	347.90	348.00	349.00	350.00	351.00	351.60
3773189.70	344.00	346.00	346.60	347.90	348.00	349.00	349.90	350.10	351.00
3773089.70	344.00	345.30	346.10	347.00	348.00	348.10	349.00	350.00	351.00
3772989.70	344.00	345.00	346.00	346.70	347.00	347.90	348.00	349.30	350.00
3772889.70	343.90	344.60	345.60	346.00	346.60	347.00	347.90	349.00	350.00
3772789.70	343.00	344.00	345.00	346.00	346.00	347.00	347.00	348.00	349.70
3772689.70	342.80	343.80	344.50	345.00	346.00	347.00	347.20	348.00	349.60
3772589.70	342.00	342.10	343.80	345.00	346.00	346.80	347.90	348.30	349.60
3772489.70	341.00	342.00	343.00	344.00	345.30	346.60	347.90	348.00	349.60
3772389.70	340.90	341.30	342.60	344.00	345.00	346.00	347.00	347.80	349.60
3772289.70	340.90	341.30	342.60	344.00	345.30	346.00	346.90	347.30	349.60
3772189.70	340.90	341.30	343.50	345.00	346.00	347.00	347.00	347.90	350.50
3772089.70	340.90	341.50	344.80	347.00	347.20	354.00	354.00	354.00	354.00
3771989.70	348.00	346.50	347.80	348.00	349.80	353.40	354.00	355.00	355.30
3771889.70	348.00	348.00	349.00	350.00	351.30	353.00	354.80	355.90	356.50
3771789.70	348.00	349.10	350.00	351.00	353.00	354.00	354.90	356.00	357.10
3771689.70	348.90	350.00	350.60	352.00	353.20	354.00	355.00	356.20	357.60
3771589.70	348.90	350.00	351.00	352.00	353.30	354.60	355.90	356.90	358.00
3771489.70	348.90	350.00	351.00	352.20	354.00	355.00	356.00	357.00	358.00
3771389.70	349.00	350.00	351.60	352.90	354.00	355.00	356.00	357.30	358.60
3771289.70	349.00	350.00	351.60	352.90	354.00	355.00	356.00	357.30	359.00
3771189.70	349.00	350.30	351.60	352.90	354.00	355.00	356.00	358.00	359.00
3771089.70	349.00	350.30	351.60	352.90	354.00	355.00	356.90	358.00	359.00
3770989.70	349.90	350.30	352.00	352.90	354.00	355.60	356.90	358.00	359.00
3770889.70	350.00	351.00	352.00	353.00	354.10	355.60	357.00	358.00	359.60
3770789.70	350.00	351.00	352.00	353.00	354.30	356.00	357.00	358.20	359.60
3770689.70	350.00	351.00	352.00	353.90	355.00	356.00	357.00	358.30	359.60
3770589.70	350.00	351.30	352.70	354.00	355.00	356.00	357.00	358.30	360.00
3770489.70	350.00	352.00	353.00	354.00	355.20	356.00	357.00	358.30	359.80
3770389.70	350.00	352.00	353.50	354.00	355.30	356.00	357.00	358.30	359.60

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

* HILL HEIGHT SCALES IN METERS *

Y-COORD (METERS)	X-COORD (METERS)								
	478868.21	478968.21	479068.21	479168.21	479268.21	479368.21	479468.21	479568.21	479668.21
3770289.70	350.00	352.00	353.00	354.00	355.00	356.00	357.00	358.30	359.60
3770189.70	350.90	352.00	352.60	353.90	355.00	356.00	357.00	358.30	359.60
3770089.70	350.90	351.90	352.60	353.90	355.00	356.00	357.90	358.90	360.00
3769989.70	350.90	352.00	352.60	353.90	355.00	356.60	357.90	359.00	360.00
3769889.70	351.00	352.00	353.00	354.00	355.30	356.80	358.00	359.00	360.60
3769789.70	351.00	352.00	353.00	354.90	356.00	357.00	358.00	359.00	360.60
3769689.70	352.20	353.00	353.00	355.90	358.10	358.70	359.00	359.30	361.60
3769589.70	353.60	354.20	360.00	359.50	360.00	360.00	360.00	360.20	365.00
3769489.70	350.20	353.00	360.00	358.00	358.10	359.00	359.00	359.90	363.40
3769389.70	349.90	352.00	353.00	354.90	356.20	357.50	358.00	359.00	360.00

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*
*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

* HILL HEIGHT SCALES IN METERS *

Y-COORD (METERS)	X-COORD (METERS)								
	479768.21	479868.21	479968.21	480068.21	480168.21	480268.21	480368.21	480468.21	480568.21
3774289.70	353.80	354.00	355.10	356.10	357.30	358.00	359.80	360.00	361.60
3774189.70	353.00	354.00	354.60	356.00	357.00	358.00	359.00	360.00	361.60
3774089.70	353.00	354.00	355.00	356.00	357.00	358.00	359.00	360.20	361.60
3773989.70	353.00	354.00	355.00	356.00	357.00	358.00	359.00	360.30	362.00
3773889.70	353.00	354.00	355.00	356.00	357.00	358.00	359.00	360.30	362.00
3773789.70	353.00	354.00	355.00	356.00	357.00	358.00	359.00	360.00	362.00
3773689.70	353.90	354.00	355.00	356.00	357.00	358.00	359.00	360.00	362.00
3773589.70	353.70	354.00	355.00	356.00	357.00	358.00	359.00	360.00	360.90
3773489.70	353.00	354.00	355.00	355.90	356.30	357.60	358.40	359.00	360.00
3773389.70	352.90	354.00	354.60	355.10	356.00	357.00	358.00	359.00	359.10
3773289.70	352.00	353.30	354.00	355.00	356.00	356.90	357.90	358.30	359.00
3773189.70	352.00	353.00	354.00	355.00	355.60	356.60	357.40	358.70	359.80
3773089.70	352.00	352.40	353.10	354.00	355.00	356.00	357.00	358.40	359.50
3772989.70	351.00	352.00	353.00	353.00	354.30	355.90	356.90	358.00	359.00
3772889.70	351.00	352.00	352.30	353.00	354.30	356.00	356.90	358.00	359.00
3772789.70	350.90	352.00	352.60	353.80	354.30	356.00	356.90	358.00	359.60
3772689.70	350.90	351.40	352.60	353.90	354.30	356.00	356.90	358.00	359.60
3772589.70	350.40	351.30	352.30	353.40	354.00	355.60	356.90	358.00	359.00
3772489.70	350.00	351.30	352.00	353.00	354.00	355.60	356.90	358.00	358.60
3772389.70	351.00	352.00	352.00	353.00	354.00	355.60	357.00	358.40	359.10
3772289.70	351.90	354.00	353.00	353.00	354.20	356.80	358.00	359.20	360.80
3772189.70	352.00	354.20	359.00	360.00	359.80	359.90	359.90	359.00	361.60
3772089.70	354.20	356.90	359.20	360.20	361.20	362.80	365.20	365.80	366.00
3771989.70	356.50	359.30	359.60	361.00	362.70	364.30	366.00	367.00	367.60
3771889.70	358.00	360.00	360.50	362.00	363.30	365.00	366.80	367.90	368.50
3771789.70	358.90	360.00	361.00	362.20	364.00	365.60	367.00	368.00	369.10
3771689.70	359.00	360.20	361.60	362.90	364.00	365.60	367.00	368.30	369.80
3771589.70	359.00	360.30	362.00	363.00	364.30	366.00	367.00	368.90	370.00
3771489.70	359.90	361.00	362.00	363.00	364.30	366.00	367.00	369.00	370.60
3771389.70	360.00	361.00	362.00	363.50	364.70	366.00	367.90	369.30	370.60
3771289.70	360.00	361.30	362.60	363.90	365.00	366.50	367.90	369.30	371.00
3771189.70	360.00	361.40	362.60	364.00	365.30	366.60	368.00	369.40	371.00
3771089.70	360.00	362.00	363.00	364.00	365.30	367.00	368.00	370.00	371.00
3770989.70	360.90	362.00	363.00	364.00	366.00	367.00	368.00	370.00	371.00
3770889.70	360.90	362.00	363.60	364.90	366.00	367.60	368.90	370.00	371.00
3770789.70	360.90	362.00	363.60	365.00	366.30	367.60	368.90	370.00	371.60
3770689.70	361.00	362.00	363.60	365.00	366.30	367.60	368.90	370.30	372.00
3770589.70	361.00	362.00	363.60	364.90	366.00	367.60	368.90	370.00	371.60
3770489.70	361.00	362.00	363.60	364.90	366.00	367.60	369.00	370.30	372.00
3770389.70	360.90	362.00	363.60	364.90	366.00	367.60	369.00	370.30	372.00

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

* HILL HEIGHT SCALES IN METERS *

Y-COORD (METERS)	X-COORD (METERS) 479768.21	479868.21	479968.21	480068.21	480168.21	480268.21	480368.21	480468.21	480568.21
3770289.70	360.90	362.30	364.00	365.00	366.30	368.00	369.00	371.00	372.00
3770189.70	360.90	362.30	364.00	365.90	367.00	368.00	369.50	371.00	372.60
3770089.70	361.00	363.00	364.60	366.00	367.00	368.00	369.90	371.00	372.60
3769989.70	361.90	363.00	364.60	366.00	367.30	368.10	369.90	371.00	372.00
3769889.70	362.00	363.30	364.60	366.00	367.30	368.60	369.90	371.00	372.00
3769789.70	362.00	363.90	364.60	366.00	367.30	368.60	370.00	371.00	372.50
3769689.70	364.00	364.20	365.00	366.00	367.40	369.00	370.20	371.10	373.50
3769589.70	366.00	365.80	366.00	366.00	368.00	369.60	372.00	372.00	374.30
3769489.70	365.10	365.00	365.00	366.00	368.00	369.60	371.10	373.00	374.60
3769389.70	362.00	363.30	364.60	366.00	367.30	369.00	370.90	372.00	374.50

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*
*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

* HILL HEIGHT SCALES IN METERS *

Y-COORD (METERS)	X-COORD (METERS)								
	480668.21	480768.21	480868.21	480968.21	481068.21	481168.21	481268.21	481368.21	481468.21
3774289.70	362.80	363.30	364.00	365.00	366.00	367.60	368.90	370.00	371.00
3774189.70	362.00	363.30	364.60	365.90	366.30	368.00	368.90	370.00	371.00
3774089.70	362.90	364.00	365.00	366.00	367.00	368.00	369.00	370.20	371.60
3773989.70	363.00	364.90	365.60	366.00	367.20	368.00	369.00	371.00	372.00
3773889.70	363.90	366.00	366.00	366.00	366.80	367.60	368.90	370.20	371.00
3773789.70	363.90	366.00	366.00	365.50	366.00	366.60	368.00	370.00	370.60
3773689.70	363.90	366.00	365.50	365.00	366.00	366.60	368.00	370.00	371.00
3773589.70	362.90	364.80	365.00	366.00	366.40	367.60	368.20	370.00	371.70
3773489.70	361.40	363.10	364.80	366.00	366.60	367.60	368.00	369.70	368.00
3773389.70	360.00	362.30	364.60	366.00	366.30	367.00	368.00	369.00	368.00
3773289.70	360.00	362.30	364.60	366.00	366.00	366.90	368.00	368.00	369.10
3773189.70	360.50	362.30	364.60	366.00	366.00	366.00	367.00	366.40	367.70
3773089.70	360.00	362.00	363.70	366.00	365.00	366.00	367.00	366.00	366.00
3772989.70	360.00	362.00	363.00	364.00	365.40	366.10	367.00	367.20	368.10
3772889.70	360.00	362.00	363.00	364.00	365.30	366.60	367.90	368.20	369.30
3772789.70	360.90	362.00	363.00	364.00	366.00	366.60	367.90	368.30	369.60
3772689.70	360.00	362.00	363.00	364.00	365.30	366.60	367.90	369.00	370.00
3772589.70	360.00	361.30	363.00	364.50	366.00	366.60	368.00	369.00	370.00
3772489.70	359.10	360.60	363.00	364.90	366.00	367.00	368.00	369.30	370.00
3772389.70	360.00	362.00	363.60	364.90	366.00	367.00	368.20	370.00	371.00
3772289.70	361.60	363.20	364.00	365.00	365.60	367.20	369.50	371.00	378.00
3772189.70	363.00	364.00	365.50	365.90	372.00	371.70	371.90	376.80	378.00
3772089.70	365.20	365.20	371.00	370.20	373.10	374.80	377.20	378.20	378.10
3771989.70	367.60	371.00	372.60	373.50	374.70	376.80	378.00	379.20	379.20
3771889.70	369.90	372.00	373.00	374.00	376.00	378.00	379.00	380.00	381.00
3771789.70	370.90	372.00	373.60	375.00	376.30	378.00	379.90	381.00	382.10
3771689.70	371.00	372.70	374.00	375.50	377.00	378.60	380.00	381.30	383.00
3771589.70	371.90	373.20	374.50	376.00	377.00	378.60	380.00	382.00	383.60
3771489.70	372.00	374.00	375.00	376.90	378.00	379.60	381.00	382.30	384.00
3771389.70	372.00	374.00	375.60	377.50	379.00	380.00	381.90	383.20	384.60
3771289.70	372.90	374.30	376.00	378.00	379.30	380.60	382.00	384.00	385.50
3771189.70	372.90	374.30	376.50	378.00	379.30	381.00	382.90	384.30	386.00
3771089.70	372.90	374.30	376.00	377.90	379.30	381.00	382.90	384.30	386.00
3770989.70	372.90	374.30	376.00	377.90	379.30	381.00	382.90	384.30	386.00
3770889.70	372.90	374.30	376.00	377.90	379.30	380.60	382.70	384.00	385.90
3770789.70	372.90	374.30	376.00	377.90	379.30	380.60	382.00	384.00	385.60
3770689.70	372.90	374.30	376.00	377.90	379.30	381.00	382.00	384.00	385.60
3770589.70	373.00	375.00	376.60	378.00	379.40	381.00	382.20	384.00	385.60
3770489.70	373.50	375.20	376.60	378.00	380.00	381.60	382.90	384.20	386.00
3770389.70	373.90	375.30	377.00	378.90	380.00	382.00	383.00	385.00	386.60

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

* HILL HEIGHT SCALES IN METERS *

Y-COORD (METERS)	X-COORD (METERS)								
	480668.21	480768.21	480868.21	480968.21	481068.21	481168.21	481268.21	481368.21	481468.21
3770289.70	374.00	376.00	377.70	379.00	380.30	382.00	384.00	385.30	387.00
3770189.70	374.00	376.00	378.00	379.00	381.00	382.60	384.00	386.00	387.60
3770089.70	374.00	376.00	377.60	379.00	381.00	382.60	384.00	386.00	387.60
3769989.70	374.00	376.00	377.60	379.00	380.80	382.50	384.00	386.00	387.60
3769889.70	374.00	376.00	377.00	378.90	380.30	382.00	383.90	385.30	387.60
3769789.70	376.80	377.70	377.60	379.00	381.00	382.60	384.00	386.00	387.60
3769689.70	378.00	378.00	378.00	379.90	381.10	382.70	384.00	386.10	388.00
3769589.70	377.00	377.60	378.30	379.90	381.30	383.80	384.90	386.70	399.00
3769489.70	376.90	378.00	378.00	379.90	381.40	383.10	384.90	387.30	399.00
3769389.70	376.90	377.90	378.60	380.00	381.30	383.00	384.90	387.30	389.10

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*
*** NETWORK ID: UCART1   ; NETWORK TYPE: GRIDCART ***

* HILL HEIGHT SCALES IN METERS *

Y-COORD (METERS)	X-COORD (METERS)		
	481568.21	481668.21	481768.21
3774289.70	372.00	373.30	374.60
3774189.70	372.00	374.00	375.00
3774089.70	372.90	374.70	375.80
3773989.70	373.90	376.90	377.00
3773889.70	376.00	377.10	377.80
3773789.70	372.00	372.10	375.30
3773689.70	371.90	373.00	374.00
3773589.70	372.00	373.00	372.80
3773489.70	371.40	372.00	371.00
3773389.70	366.20	366.00	366.00
3773289.70	373.00	366.00	366.00
3773189.70	371.40	372.00	372.00
3773089.70	369.90	371.90	372.00
3772989.70	370.00	372.00	372.10
3772889.70	370.50	372.00	372.80
3772789.70	371.00	372.00	372.60
3772689.70	371.20	372.10	373.10
3772589.70	372.00	372.70	374.00
3772489.70	371.10	372.00	374.50
3772389.70	371.00	378.00	376.70
3772289.70	375.10	378.80	382.30
3772189.70	378.00	381.20	384.00
3772089.70	378.00	382.50	385.00
3771989.70	378.00	384.30	385.60
3771889.70	380.80	384.90	386.00
3771789.70	384.00	385.30	386.70
3771689.70	384.00	386.00	387.60
3771589.70	384.10	386.20	388.00
3771489.70	385.90	387.30	388.70
3771389.70	386.00	388.00	389.80
3771289.70	386.90	388.30	390.00
3771189.70	387.00	389.00	390.60
3771089.70	387.90	389.30	391.00
3770989.70	387.90	389.30	391.00
3770889.70	387.90	389.30	390.90
3770789.70	387.00	389.00	390.60
3770689.70	387.00	389.00	390.60
3770589.70	387.90	389.10	390.60
3770489.70	388.00	389.70	391.30
3770389.70	388.00	390.20	392.00

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

* HILL HEIGHT SCALES IN METERS *

Y-COORD (METERS)	X-COORD (METERS) 481568.21	481668.21	481768.21
3770289.70	388.90	390.40	392.10
3770189.70	389.00	391.00	392.60
3770089.70	389.10	391.00	392.60
3769989.70	389.00	391.00	392.60
3769889.70	389.00	390.30	392.60
3769789.70	389.00	391.00	392.60
3769689.70	389.20	391.10	392.70
3769589.70	397.00	393.80	393.00
3769489.70	399.00	391.00	394.00
3769389.70	390.70	391.40	396.00

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** DISCRETE CARTESIAN RECEPTORS ***
(X-COORD, Y-COORD, ZELEV, ZHILL, ZFLAG)
(METERS)

```
( 480726.1, 3770758.2,     373.9,     373.9,       0.0);        ( 479114.5, 3769998.8,     353.0,     353.0,       0.0);
( 479109.7, 3769953.9,     353.0,     353.0,       0.0);        ( 480558.0, 3774226.4,     361.3,     361.3,       0.0);
( 480766.0, 3771834.4,     372.0,     372.0,       0.0);        ( 480235.5, 3771590.9,     365.5,     365.5,       0.0);
```

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** METEOROLOGICAL DAYS SELECTED FOR PROCESSING ***
(1=YES; 0=NO)

1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1

NOTE: METEOROLOGICAL DATA ACTUALLY PROCESSED WILL ALSO DEPEND ON WHAT IS INCLUDED IN THE DATA FILE.

*** UPPER BOUND OF FIRST THROUGH FIFTH WIND SPEED CATEGORIES ***
(METERS/SEC)

1.54, 3.09, 5.14, 8.23, 10.80,

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: ..\RedlandsADJU\RDLD_V9_ADJU\RDLD_v9.SFC Met Version: 16216
Profile file: ..\RedlandsADJU\RDLD_V9_ADJU\RDLD_v9.PFL
Surface format: FREE
Profile format: FREE
Surface station no.: 3171 Upper air station no.: 3190
Name: UNKNOWN Name: UNKNOWN
Year: 2012 Year: 2012

First 24 hours of scalar data

YR	MO	DY	JDY	HR	H0	U*	W*	DT/DZ	ZICNV	ZIMCH	M-O LEN	Z0	BOWEN	ALBEDO	REF WS	WD	HT	REF TA	HT
12	01	01	1	01	-10.6	0.149	-9.000	-9.000	-999.	138.	26.7	0.32	3.22	1.00	1.30	110.	9.1	285.4	5.5
12	01	01	1	02	-5.0	0.102	-9.000	-9.000	-999.	78.	17.9	0.32	3.22	1.00	0.90	130.	9.1	284.5	5.5
12	01	01	1	03	-5.0	0.102	-9.000	-9.000	-999.	78.	17.9	0.32	3.22	1.00	0.90	100.	9.1	285.0	5.5
12	01	01	1	04	-5.0	0.102	-9.000	-9.000	-999.	78.	17.9	0.32	3.22	1.00	0.90	107.	9.1	284.6	5.5
12	01	01	1	05	-10.7	0.149	-9.000	-9.000	-999.	138.	26.7	0.32	3.22	1.00	1.30	98.	9.1	284.9	5.5
12	01	01	1	06	-5.0	0.102	-9.000	-9.000	-999.	78.	17.9	0.32	3.22	1.00	0.90	86.	9.1	284.5	5.5
12	01	01	1	07	-5.0	0.102	-9.000	-9.000	-999.	78.	17.9	0.32	3.22	1.00	0.90	91.	9.1	284.0	5.5
12	01	01	1	08	-4.0	0.102	-9.000	-9.000	-999.	78.	22.9	0.32	3.22	0.54	0.90	107.	9.1	285.0	5.5
12	01	01	1	09	44.6	0.237	0.382	0.006	43.	276.	-25.6	0.15	3.22	0.33	2.10	81.	10.1	289.1	5.5
12	01	01	1	10	134.3	0.111	0.882	0.008	176.	99.	-1.0	0.32	3.22	0.26	0.40	72.	9.1	295.1	5.5
12	01	01	1	11	199.8	0.409	1.429	0.005	503.	627.	-29.4	0.15	3.22	0.23	3.68	78.	10.1	297.9	5.5
12	01	01	1	12	232.3	0.300	1.889	0.005	999.	402.	-10.0	0.32	3.22	0.22	1.80	333.	9.1	299.4	5.5
12	01	01	1	13	230.0	0.300	2.134	0.005	1453.	394.	-10.1	0.32	3.22	0.22	1.80	72.	9.1	300.4	5.5
12	01	01	1	14	194.0	0.294	2.109	0.005	1663.	382.	-11.2	0.32	3.22	0.24	1.80	277.	9.1	301.0	5.5
12	01	01	1	15	126.3	0.378	1.872	0.005	1784.	557.	-36.5	0.32	3.22	0.27	2.70	243.	9.1	301.0	5.5
12	01	01	1	16	39.5	0.199	1.278	0.005	1817.	240.	-17.2	0.32	3.22	0.36	1.30	274.	9.1	300.1	5.5
12	01	01	1	17	-4.7	0.101	-9.000	-9.000	-999.	85.	19.0	0.32	3.22	0.65	0.90	252.	9.1	298.2	5.5
12	01	01	1	18	-4.9	0.102	-9.000	-9.000	-999.	78.	18.2	0.32	3.22	1.00	0.90	116.	9.1	296.4	5.5
12	01	01	1	19	-18.8	0.204	-9.000	-9.000	-999.	220.	45.6	0.15	3.22	1.00	2.27	79.	10.1	292.2	5.5
12	01	01	1	20	-5.0	0.102	-9.000	-9.000	-999.	83.	18.1	0.32	3.22	1.00	0.90	95.	9.1	290.2	5.5
12	01	01	1	21	-5.0	0.102	-9.000	-9.000	-999.	78.	18.0	0.32	3.22	1.00	0.90	99.	9.1	287.8	5.5
12	01	01	1	22	-5.0	0.102	-9.000	-9.000	-999.	78.	18.0	0.32	3.22	1.00	0.90	110.	9.1	287.6	5.5
12	01	01	1	23	-10.6	0.149	-9.000	-9.000	-999.	138.	26.8	0.32	3.22	1.00	1.30	89.	9.1	287.2	5.5
12	01	01	1	24	-5.0	0.102	-9.000	-9.000	-999.	78.	17.9	0.32	3.22	1.00	0.90	105.	9.1	285.9	5.5

First hour of profile data

YR	MO	DY	HR	HEIGHT	F	WDIR	WSPD	AMB_TMP	sigmaA	sigmaW	sigmaV
12	01	01	01	5.5	0	-999.	-99.00	285.5	99.0	-99.00	-99.00
12	01	01	01	9.1	1	110.	1.30	-999.0	99.0	-99.00	-99.00

F indicates top of profile (=1) or below (=0)

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): L0002988 , L0002989 , L0002990 , L0002991 , L0002992 ,
L0002993 , L0002994 , L0002995 , L0002996 , L0002997 , L0002998 , L0002999 , L0003000 ,
L0003001 , L0003002 , L0003003 , L0003004 , L0003005 , L0003006 , L0003007 , L0003008 ,
L0003009 , L0003010 , L0003011 , L0003012 , L0003013 , L0003014 , L0003015 , . . . ,

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

** CONC OF DPM IN MICROGRAMS/M**3 **

Y-COORD (METERS)	X-COORD (METERS)								
	478868.21	478968.21	479068.21	479168.21	479268.21	479368.21	479468.21	479568.21	479668.21
3774289.70	0.00118	0.00123	0.00128	0.00134	0.00140	0.00148	0.00156	0.00166	0.00177
3774189.70	0.00121	0.00127	0.00132	0.00139	0.00146	0.00153	0.00162	0.00173	0.00185
3774089.70	0.00125	0.00131	0.00137	0.00143	0.00151	0.00159	0.00169	0.00179	0.00192
3773989.70	0.00129	0.00135	0.00141	0.00148	0.00156	0.00165	0.00175	0.00186	0.00200
3773889.70	0.00134	0.00139	0.00146	0.00153	0.00161	0.00170	0.00181	0.00193	0.00207
3773789.70	0.00138	0.00144	0.00151	0.00158	0.00167	0.00176	0.00187	0.00199	0.00214
3773689.70	0.00142	0.00149	0.00156	0.00163	0.00172	0.00182	0.00193	0.00205	0.00221
3773589.70	0.00147	0.00153	0.00160	0.00168	0.00177	0.00187	0.00198	0.00212	0.00227
3773489.70	0.00151	0.00158	0.00166	0.00174	0.00183	0.00193	0.00204	0.00218	0.00233
3773389.70	0.00156	0.00163	0.00171	0.00179	0.00188	0.00199	0.00210	0.00224	0.00239
3773289.70	0.00162	0.00169	0.00177	0.00185	0.00194	0.00205	0.00217	0.00230	0.00246
3773189.70	0.00167	0.00175	0.00183	0.00191	0.00201	0.00211	0.00223	0.00236	0.00252
3773089.70	0.00173	0.00181	0.00189	0.00198	0.00207	0.00218	0.00230	0.00243	0.00259
3772989.70	0.00180	0.00188	0.00196	0.00205	0.00215	0.00225	0.00237	0.00250	0.00265
3772889.70	0.00187	0.00195	0.00204	0.00213	0.00223	0.00233	0.00245	0.00258	0.00273
3772789.70	0.00195	0.00204	0.00213	0.00222	0.00232	0.00242	0.00253	0.00266	0.00281
3772689.70	0.00205	0.00214	0.00223	0.00232	0.00242	0.00252	0.00264	0.00276	0.00291
3772589.70	0.00215	0.00224	0.00234	0.00244	0.00254	0.00264	0.00275	0.00288	0.00302
3772489.70	0.00227	0.00238	0.00248	0.00258	0.00268	0.00278	0.00289	0.00301	0.00314
3772389.70	0.00242	0.00253	0.00264	0.00275	0.00285	0.00295	0.00305	0.00316	0.00329
3772289.70	0.00260	0.00273	0.00285	0.00296	0.00306	0.00315	0.00325	0.00335	0.00346
3772189.70	0.00282	0.00297	0.00311	0.00323	0.00333	0.00342	0.00350	0.00358	0.00368
3772089.70	0.00310	0.00329	0.00347	0.00361	0.00370	0.00377	0.00383	0.00389	0.00395
3771989.70	0.00347	0.00374	0.00397	0.00413	0.00422	0.00426	0.00426	0.00427	0.00429
3771889.70	0.00399	0.00438	0.00472	0.00494	0.00499	0.00494	0.00486	0.00479	0.00475
3771789.70	0.00466	0.00534	0.00601	0.00638	0.00631	0.00602	0.00575	0.00555	0.00540
3771689.70	0.00556	0.00688	0.00874	0.00987	0.00902	0.00806	0.00741	0.00700	0.00674
3771589.70	0.00666	0.00921	0.01649	0.03717	0.02396	0.02060	0.01892	0.01784	0.01718
3771489.70	0.00779	0.01169	0.02628	0.05966	0.01767	0.01191	0.00977	0.00871	0.00831
3771389.70	0.00873	0.01340	0.02992	0.06128	0.01879	0.01190	0.00922	0.00817	0.00738
3771289.70	0.00942	0.01443	0.03161	0.06082	0.01949	0.01229	0.00934	0.00817	0.00727
3771189.70	0.00990	0.01509	0.03271	0.05985	0.01986	0.01258	0.00952	0.00828	0.00729

3771089.70	0.01024	0.01553	0.03356	0.05871	0.02005	0.01278	0.00965	0.00837	0.00733
3770989.70	0.01050	0.01585	0.03430	0.05754	0.02012	0.01289	0.00974	0.00841	0.00736
3770889.70	0.01067	0.01610	0.03487	0.05629	0.02011	0.01294	0.00979	0.00837	0.00735
3770789.70	0.01078	0.01626	0.03542	0.05508	0.02004	0.01294	0.00981	0.00837	0.00733
3770689.70	0.01084	0.01638	0.03594	0.05387	0.01993	0.01291	0.00978	0.00830	0.00728
3770589.70	0.01086	0.01646	0.03654	0.05270	0.01978	0.01283	0.00972	0.00813	0.00721
3770489.70	0.01083	0.01650	0.03697	0.05149	0.01959	0.01272	0.00963	0.00793	0.00711
3770389.70	0.01076	0.01645	0.03742	0.05044	0.01939	0.01259	0.00951	0.00777	0.00698

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): L0002988 , L0002989 , L0002990 , L0002991 , L0002992 ,
L0002993 , L0002994 , L0002995 , L0002996 , L0002997 , L0002998 , L0002999 , L0003000 ,
L0003001 , L0003002 , L0003003 , L0003004 , L0003005 , L0003006 , L0003007 , L0003008 ,
L0003009 , L0003010 , L0003011 , L0003012 , L0003013 , L0003014 , L0003015 , . . . ,

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

** CONC OF DPM IN MICROGRAMS/M**3 **

Y-COORD (METERS)	X-COORD (METERS) 478868.21	478968.21	479068.21	479168.21	479268.21	479368.21	479468.21	479568.21	479668.21
3770289.70	0.01062	0.01630	0.03713	0.05052	0.01923	0.01242	0.00935	0.00769	0.00685
3770189.70	0.01043	0.01604	0.03656	0.05095	0.01906	0.01221	0.00915	0.00762	0.00670
3770089.70	0.01013	0.01567	0.03589	0.05126	0.01879	0.01192	0.00883	0.00750	0.00651
3769989.70	0.00973	0.01515	0.03502	0.05143	0.01838	0.01152	0.00849	0.00721	0.00626
3769889.70	0.00916	0.01439	0.03382	0.05125	0.01769	0.01094	0.00803	0.00675	0.00596
3769789.70	0.00838	0.01319	0.03186	0.05032	0.01648	0.01008	0.00742	0.00615	0.00556
3769689.70	0.00735	0.01124	0.02743	0.04622	0.01398	0.00866	0.00658	0.00567	0.00510
3769589.70	0.00612	0.00848	0.01480	0.01837	0.00975	0.00708	0.00576	0.00498	0.00445
3769489.70	0.00494	0.00604	0.00734	0.00758	0.00645	0.00538	0.00467	0.00422	0.00389
3769389.70	0.00402	0.00453	0.00495	0.00505	0.00478	0.00437	0.00399	0.00364	0.00343

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION   VALUES FOR SOURCE GROUP: ALL   ***
INCLUDING SOURCE(S):   L0002988   , L0002989   , L0002990   , L0002991   , L0002992   ,
L0002993   , L0002994   , L0002995   , L0002996   , L0002997   , L0002998   , L0002999   , L0003000   ,
L0003001   , L0003002   , L0003003   , L0003004   , L0003005   , L0003006   , L0003007   , L0003008   ,
L0003009   , L0003010   , L0003011   , L0003012   , L0003013   , L0003014   , L0003015   , . . .   ,

*** NETWORK ID: UCART1   ; NETWORK TYPE: GRIDCART ***

** CONC OF DPM   IN MICROGRAMS/M**3   **

Y-COORD (METERS)	X-COORD (METERS)								
	479768.21	479868.21	479968.21	480068.21	480168.21	480268.21	480368.21	480468.21	480568.21
3774289.70	0.00190	0.00205	0.00223	0.00247	0.00276	0.00314	0.00366	0.00442	0.00558
3774189.70	0.00198	0.00215	0.00236	0.00263	0.00297	0.00343	0.00409	0.00514	0.00707
3774089.70	0.00207	0.00226	0.00249	0.00278	0.00316	0.00369	0.00447	0.00579	0.00847
3773989.70	0.00216	0.00235	0.00260	0.00291	0.00333	0.00390	0.00477	0.00623	0.00918
3773889.70	0.00224	0.00244	0.00270	0.00303	0.00347	0.00407	0.00498	0.00647	0.00936
3773789.70	0.00231	0.00253	0.00279	0.00313	0.00358	0.00420	0.00510	0.00657	0.00936
3773689.70	0.00239	0.00260	0.00287	0.00322	0.00367	0.00429	0.00518	0.00661	0.00931
3773589.70	0.00245	0.00267	0.00295	0.00329	0.00375	0.00435	0.00523	0.00663	0.00925
3773489.70	0.00252	0.00274	0.00301	0.00336	0.00381	0.00441	0.00527	0.00663	0.00920
3773389.70	0.00258	0.00280	0.00307	0.00341	0.00386	0.00446	0.00530	0.00665	0.00917
3773289.70	0.00264	0.00286	0.00313	0.00347	0.00391	0.00450	0.00533	0.00666	0.00917
3773189.70	0.00270	0.00292	0.00319	0.00352	0.00395	0.00454	0.00536	0.00668	0.00918
3773089.70	0.00277	0.00298	0.00325	0.00358	0.00400	0.00458	0.00540	0.00670	0.00918
3772989.70	0.00283	0.00305	0.00331	0.00363	0.00405	0.00462	0.00544	0.00673	0.00920
3772889.70	0.00291	0.00312	0.00337	0.00369	0.00411	0.00467	0.00548	0.00676	0.00922
3772789.70	0.00299	0.00319	0.00345	0.00376	0.00417	0.00473	0.00553	0.00680	0.00925
3772689.70	0.00308	0.00328	0.00353	0.00384	0.00424	0.00479	0.00559	0.00685	0.00929
3772589.70	0.00318	0.00337	0.00362	0.00392	0.00432	0.00486	0.00565	0.00691	0.00933
3772489.70	0.00330	0.00349	0.00372	0.00401	0.00440	0.00494	0.00573	0.00697	0.00937
3772389.70	0.00344	0.00362	0.00384	0.00412	0.00451	0.00504	0.00581	0.00704	0.00943
3772289.70	0.00360	0.00377	0.00398	0.00425	0.00463	0.00515	0.00590	0.00712	0.00951
3772189.70	0.00380	0.00395	0.00415	0.00442	0.00474	0.00525	0.00600	0.00723	0.00959
3772089.70	0.00405	0.00418	0.00430	0.00455	0.00490	0.00538	0.00609	0.00730	0.00966
3771989.70	0.00436	0.00439	0.00456	0.00479	0.00511	0.00557	0.00629	0.00746	0.00977
3771889.70	0.00473	0.00476	0.00491	0.00512	0.00543	0.00589	0.00657	0.00775	0.01006
3771789.70	0.00532	0.00535	0.00547	0.00567	0.00595	0.00641	0.00711	0.00830	0.01062
3771689.70	0.00659	0.00657	0.00666	0.00684	0.00713	0.00758	0.00829	0.00949	0.01185
3771589.70	0.01657	0.01618	0.01781	0.01821	0.01838	0.01886	0.01947	0.02070	0.02313
3771489.70	0.00796	0.00781	0.00775	0.00782	0.00807	0.00852	0.00926	0.01058	0.01325
3771389.70	0.00693	0.00670	0.00662	0.00668	0.00691	0.00736	0.00812	0.00950	0.01237
3771289.70	0.00674	0.00646	0.00633	0.00637	0.00659	0.00704	0.00783	0.00926	0.01224
3771189.70	0.00671	0.00639	0.00625	0.00626	0.00648	0.00693	0.00774	0.00921	0.01225

3771089.70	0.00671	0.00637	0.00621	0.00622	0.00643	0.00688	0.00771	0.00921	0.01231
3770989.70	0.00673	0.00637	0.00619	0.00619	0.00639	0.00685	0.00770	0.00922	0.01237
3770889.70	0.00672	0.00635	0.00615	0.00615	0.00636	0.00681	0.00766	0.00921	0.01240
3770789.70	0.00669	0.00631	0.00611	0.00610	0.00631	0.00677	0.00761	0.00916	0.01236
3770689.70	0.00664	0.00626	0.00605	0.00604	0.00624	0.00670	0.00753	0.00906	0.01222
3770589.70	0.00657	0.00619	0.00598	0.00597	0.00616	0.00660	0.00742	0.00892	0.01200
3770489.70	0.00648	0.00609	0.00589	0.00587	0.00606	0.00649	0.00728	0.00874	0.01174
3770389.70	0.00636	0.00598	0.00577	0.00575	0.00593	0.00635	0.00712	0.00854	0.01148

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION   VALUES FOR SOURCE GROUP: ALL   ***
INCLUDING SOURCE(S):   L0002988   , L0002989   , L0002990   , L0002991   , L0002992   ,
L0002993   , L0002994   , L0002995   , L0002996   , L0002997   , L0002998   , L0002999   , L0003000   ,
L0003001   , L0003002   , L0003003   , L0003004   , L0003005   , L0003006   , L0003007   , L0003008   ,
L0003009   , L0003010   , L0003011   , L0003012   , L0003013   , L0003014   , L0003015   , . . .   ,

*** NETWORK ID: UCART1   ; NETWORK TYPE: GRIDCART ***

** CONC OF DPM   IN MICROGRAMS/M**3   **

Y-COORD (METERS)	X-COORD (METERS)								
	479768.21	479868.21	479968.21	480068.21	480168.21	480268.21	480368.21	480468.21	480568.21
3770289.70	0.00623	0.00585	0.00563	0.00561	0.00578	0.00618	0.00694	0.00832	0.01122
3770189.70	0.00607	0.00570	0.00548	0.00544	0.00560	0.00599	0.00673	0.00809	0.01096
3770089.70	0.00589	0.00551	0.00530	0.00526	0.00541	0.00578	0.00648	0.00780	0.01064
3769989.70	0.00568	0.00530	0.00509	0.00505	0.00517	0.00552	0.00618	0.00746	0.01022
3769889.70	0.00541	0.00505	0.00485	0.00480	0.00491	0.00521	0.00582	0.00701	0.00966
3769789.70	0.00507	0.00474	0.00456	0.00451	0.00460	0.00486	0.00539	0.00643	0.00882
3769689.70	0.00464	0.00437	0.00422	0.00418	0.00425	0.00446	0.00487	0.00569	0.00755
3769589.70	0.00412	0.00394	0.00384	0.00382	0.00386	0.00402	0.00431	0.00486	0.00591
3769489.70	0.00365	0.00353	0.00347	0.00345	0.00348	0.00359	0.00378	0.00408	0.00453
3769389.70	0.00328	0.00318	0.00311	0.00309	0.00312	0.00319	0.00329	0.00345	0.00362

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): L0002988 , L0002989 , L0002990 , L0002991 , L0002992 ,
L0002993 , L0002994 , L0002995 , L0002996 , L0002997 , L0002998 , L0002999 , L0003000 ,
L0003001 , L0003002 , L0003003 , L0003004 , L0003005 , L0003006 , L0003007 , L0003008 ,
L0003009 , L0003010 , L0003011 , L0003012 , L0003013 , L0003014 , L0003015 , . . . ,

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

** CONC OF DPM IN MICROGRAMS/M**3 **

Y-COORD (METERS)	X-COORD (METERS)								
	480668.21	480768.21	480868.21	480968.21	481068.21	481168.21	481268.21	481368.21	481468.21
3774289.70	0.00732	0.00933	0.01045	0.01066	0.01051	0.01029	0.01009	0.00974	0.00889
3774189.70	0.01159	0.02255	0.02463	0.02306	0.02144	0.02074	0.02137	0.02228	0.02234
3774089.70	0.01738	0.05337	0.04428	0.05316	0.06767	0.07606	0.05857	0.04689	0.03739
3773989.70	0.01821	0.04449	0.01886	0.01676	0.01636	0.01592	0.01492	0.01368	0.01175
3773889.70	0.01789	0.04404	0.01540	0.01191	0.01064	0.00983	0.00908	0.00831	0.00735
3773789.70	0.01751	0.04461	0.01422	0.01021	0.00861	0.00768	0.00690	0.00626	0.00566
3773689.70	0.01720	0.04555	0.01369	0.00941	0.00765	0.00663	0.00586	0.00528	0.00482
3773589.70	0.01694	0.04663	0.01342	0.00897	0.00712	0.00601	0.00531	0.00476	0.00435
3773489.70	0.01675	0.04791	0.01329	0.00873	0.00681	0.00572	0.00502	0.00449	0.00401
3773389.70	0.01661	0.04833	0.01320	0.00857	0.00663	0.00549	0.00487	0.00433	0.00386
3773289.70	0.01657	0.04871	0.01314	0.00848	0.00652	0.00537	0.00478	0.00422	0.00379
3773189.70	0.01657	0.04911	0.01311	0.00842	0.00645	0.00532	0.00460	0.00402	0.00372
3773089.70	0.01651	0.04955	0.01313	0.00839	0.00643	0.00527	0.00460	0.00398	0.00356
3772989.70	0.01649	0.05000	0.01315	0.00842	0.00640	0.00524	0.00461	0.00409	0.00367
3772889.70	0.01647	0.05047	0.01318	0.00843	0.00640	0.00522	0.00464	0.00409	0.00366
3772789.70	0.01652	0.05096	0.01321	0.00844	0.00638	0.00524	0.00465	0.00409	0.00366
3772689.70	0.01648	0.05144	0.01326	0.00847	0.00642	0.00530	0.00466	0.00411	0.00367
3772589.70	0.01651	0.05198	0.01331	0.00850	0.00651	0.00540	0.00469	0.00413	0.00369
3772489.70	0.01648	0.05250	0.01338	0.00854	0.00663	0.00550	0.00471	0.00415	0.00371
3772389.70	0.01652	0.05301	0.01344	0.00859	0.00664	0.00550	0.00473	0.00417	0.00372
3772289.70	0.01657	0.05358	0.01351	0.00865	0.00659	0.00547	0.00476	0.00418	0.00373
3772189.70	0.01662	0.05420	0.01358	0.00870	0.00664	0.00557	0.00477	0.00409	0.00363
3772089.70	0.01666	0.05454	0.01353	0.00880	0.00673	0.00551	0.00468	0.00409	0.00368
3771989.70	0.01662	0.05445	0.01343	0.00870	0.00667	0.00552	0.00472	0.00410	0.00368
3771889.70	0.01683	0.05578	0.01359	0.00872	0.00668	0.00558	0.00477	0.00415	0.00369
3771789.70	0.01761	0.05279	0.01389	0.00889	0.00677	0.00571	0.00483	0.00421	0.00374
3771689.70	0.01913	0.05219	0.01434	0.00919	0.00704	0.00588	0.00497	0.00433	0.00382
3771589.70	0.03030	0.04578	0.01482	0.00954	0.00723	0.00607	0.00513	0.00445	0.00391
3771489.70	0.02192	0.05629	0.01558	0.00986	0.00747	0.00622	0.00527	0.00458	0.00402
3771389.70	0.02168	0.05658	0.01598	0.01011	0.00783	0.00640	0.00541	0.00470	0.00411
3771289.70	0.02181	0.05634	0.01618	0.01030	0.00803	0.00657	0.00558	0.00481	0.00420
3771189.70	0.02194	0.05607	0.01636	0.01055	0.00827	0.00679	0.00577	0.00497	0.00432

3771089.70	0.02211	0.05585	0.01665	0.01090	0.00864	0.00715	0.00609	0.00524	0.00452
3770989.70	0.02230	0.05573	0.01713	0.01153	0.00933	0.00783	0.00670	0.00571	0.00482
3770889.70	0.02248	0.05591	0.01839	0.01313	0.01105	0.00954	0.00828	0.00686	0.00540
3770789.70	0.02229	0.05803	0.02751	0.02288	0.02082	0.01921	0.01766	0.01392	0.00650
3770689.70	0.02232	0.04847	0.02130	0.01704	0.01519	0.01387	0.01255	0.01001	0.00626
3770589.70	0.02183	0.04602	0.01667	0.01200	0.01006	0.00869	0.00757	0.00639	0.00524
3770489.70	0.02141	0.04522	0.01549	0.01063	0.00859	0.00727	0.00627	0.00541	0.00465
3770389.70	0.02106	0.04476	0.01488	0.00993	0.00778	0.00659	0.00567	0.00490	0.00427

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): L0002988 , L0002989 , L0002990 , L0002991 , L0002992 ,
L0002993 , L0002994 , L0002995 , L0002996 , L0002997 , L0002998 , L0002999 , L0003000 ,
L0003001 , L0003002 , L0003003 , L0003004 , L0003005 , L0003006 , L0003007 , L0003008 ,
L0003009 , L0003010 , L0003011 , L0003012 , L0003013 , L0003014 , L0003015 , . . . ,

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

** CONC OF DPM IN MICROGRAMS/M**3 **

Y-COORD (METERS)	X-COORD (METERS) 480668.21	480768.21	480868.21	480968.21	481068.21	481168.21	481268.21	481368.21	481468.21
3770289.70	0.02074	0.04437	0.01446	0.00950	0.00732	0.00618	0.00526	0.00457	0.00401
3770189.70	0.02043	0.04404	0.01410	0.00915	0.00713	0.00586	0.00499	0.00431	0.00380
3770089.70	0.02008	0.04368	0.01376	0.00881	0.00682	0.00559	0.00475	0.00411	0.00363
3769989.70	0.01962	0.04322	0.01333	0.00843	0.00648	0.00530	0.00451	0.00391	0.00346
3769889.70	0.01890	0.04249	0.01273	0.00794	0.00587	0.00494	0.00425	0.00371	0.00328
3769789.70	0.01781	0.04108	0.01173	0.00726	0.00543	0.00449	0.00393	0.00345	0.00308
3769689.70	0.01495	0.03702	0.00984	0.00624	0.00476	0.00398	0.00356	0.00315	0.00283
3769589.70	0.00845	0.01069	0.00678	0.00503	0.00405	0.00355	0.00315	0.00282	0.00255
3769489.70	0.00506	0.00519	0.00465	0.00398	0.00341	0.00305	0.00275	0.00249	0.00227
3769389.70	0.00376	0.00375	0.00356	0.00324	0.00291	0.00264	0.00241	0.00220	0.00204

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): L0002988 , L0002989 , L0002990 , L0002991 , L0002992 ,
L0002993 , L0002994 , L0002995 , L0002996 , L0002997 , L0002998 , L0002999 , L0003000 ,
L0003001 , L0003002 , L0003003 , L0003004 , L0003005 , L0003006 , L0003007 , L0003008 ,
L0003009 , L0003010 , L0003011 , L0003012 , L0003013 , L0003014 , L0003015 , . . . ,

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

** CONC OF DPM IN MICROGRAMS/M**3 **

Y-COORD (METERS)	X-COORD (METERS) 481568.21	481668.21	481768.21
3774289.70	0.00720	0.00527	0.00397
3774189.70	0.01669	0.00758	0.00486
3774089.70	0.02241	0.00852	0.00537
3773989.70	0.00912	0.00666	0.00499
3773889.70	0.00625	0.00508	0.00424
3773789.70	0.00496	0.00428	0.00372
3773689.70	0.00430	0.00381	0.00339
3773589.70	0.00391	0.00352	0.00317
3773489.70	0.00368	0.00327	0.00295
3773389.70	0.00343	0.00312	0.00284
3773289.70	0.00333	0.00303	0.00277
3773189.70	0.00338	0.00308	0.00283
3773089.70	0.00335	0.00305	0.00280
3772989.70	0.00333	0.00303	0.00279
3772889.70	0.00332	0.00302	0.00277
3772789.70	0.00331	0.00302	0.00277
3772689.70	0.00332	0.00302	0.00277
3772589.70	0.00332	0.00303	0.00277
3772489.70	0.00335	0.00305	0.00278
3772389.70	0.00337	0.00307	0.00276
3772289.70	0.00333	0.00297	0.00263
3772189.70	0.00330	0.00292	0.00261
3772089.70	0.00334	0.00292	0.00261
3771989.70	0.00338	0.00290	0.00264
3771889.70	0.00335	0.00294	0.00268
3771789.70	0.00332	0.00299	0.00272
3771689.70	0.00342	0.00305	0.00276
3771589.70	0.00351	0.00313	0.00282
3771489.70	0.00354	0.00318	0.00288
3771389.70	0.00364	0.00324	0.00292
3771289.70	0.00372	0.00332	0.00298
3771189.70	0.00383	0.00338	0.00304

3771089.70	0.00393	0.00347	0.00310
3770989.70	0.00412	0.00360	0.00320
3770889.70	0.00441	0.00378	0.00333
3770789.70	0.00474	0.00397	0.00346
3770689.70	0.00472	0.00399	0.00348
3770589.70	0.00438	0.00380	0.00337
3770489.70	0.00403	0.00356	0.00319
3770389.70	0.00378	0.00336	0.00303

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

                          *** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION   VALUES FOR SOURCE GROUP: ALL   ***
                              INCLUDING SOURCE(S):   L0002988   , L0002989   , L0002990   , L0002991   , L0002992   ,
              L0002993   , L0002994   , L0002995   , L0002996   , L0002997   , L0002998   , L0002999   , L0003000   ,
              L0003001   , L0003002   , L0003003   , L0003004   , L0003005   , L0003006   , L0003007   , L0003008   ,
              L0003009   , L0003010   , L0003011   , L0003012   , L0003013   , L0003014   , L0003015   , . . .   ,

                               *** NETWORK ID: UCART1   ; NETWORK TYPE: GRIDCART ***

                                    ** CONC OF DPM   IN MICROGRAMS/M**3   **

   Y-COORD | X-COORD (METERS)
   (METERS) | 481568.21   481668.21   481768.21
- - - -

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): L0002988 , L0002989 , L0002990 , L0002991 , L0002992 ,
L0002993 , L0002994 , L0002995 , L0002996 , L0002997 , L0002998 , L0002999 , L0003000 ,
L0003001 , L0003002 , L0003003 , L0003004 , L0003005 , L0003006 , L0003007 , L0003008 ,
L0003009 , L0003010 , L0003011 , L0003012 , L0003013 , L0003014 , L0003015 , . . . ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF DPM IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
480726.12	3770758.20	0.05808	479114.46	3769998.76	0.10544
479109.70	3769953.87	0.08545	480558.05	3774226.36	0.00628
480766.03	3771834.40	0.06032	480235.52	3771590.86	0.01788

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** THE SUMMARY OF MAXIMUM PERIOD (43848 HRS) RESULTS ***

** CONC OF DPM IN MICROGRAMS/M**3 **

GROUP ID		AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)					OF TYPE	NETWORK GRID-ID
ALL	1ST HIGHEST VALUE IS	0.10544 AT	479114.46,	3769998.76,	353.00,	353.00,	0.00)	DC	
	2ND HIGHEST VALUE IS	0.08545 AT	479109.70,	3769953.87,	353.00,	353.00,	0.00)	DC	
	3RD HIGHEST VALUE IS	0.07606 AT	481168.21,	3774089.70,	368.00,	368.00,	0.00)	GC	UCART1
	4TH HIGHEST VALUE IS	0.06767 AT	481068.21,	3774089.70,	367.00,	367.00,	0.00)	GC	UCART1
	5TH HIGHEST VALUE IS	0.06128 AT	479168.21,	3771389.70,	352.90,	352.90,	0.00)	GC	UCART1
	6TH HIGHEST VALUE IS	0.06082 AT	479168.21,	3771289.70,	352.90,	352.90,	0.00)	GC	UCART1
	7TH HIGHEST VALUE IS	0.06032 AT	480766.03,	3771834.40,	372.00,	372.00,	0.00)	DC	
	8TH HIGHEST VALUE IS	0.05985 AT	479168.21,	3771189.70,	352.90,	352.90,	0.00)	GC	UCART1
	9TH HIGHEST VALUE IS	0.05966 AT	479168.21,	3771489.70,	352.20,	352.20,	0.00)	GC	UCART1
	10TH HIGHEST VALUE IS	0.05871 AT	479168.21,	3771089.70,	352.90,	352.90,	0.00)	GC	UCART1

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** Message Summary : AERMOD Model Execution ***

 --------- Summary of Total Messages --------

A Total of   0 Fatal Error Message(s)
A Total of   2 Warning Message(s)
A Total of   388 Informational Message(s)

A Total of   43848 Hours Were Processed

A Total of   191 Calm Hours Identified

A Total of   197 Missing Hours Identified (0.45 Percent)

   ******** FATAL ERROR MESSAGES ********
              *** NONE ***

   ********   WARNING MESSAGES   ********
ME W186   2419   MEOPEN: THRESH_1MIN 1-min ASOS wind speed threshold used   0.50
ME W187   2419   MEOPEN: ADJ_U* Option for Low Winds used in AERMET

   ****
   *** AERMOD Finishes Successfully ***
   ****

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**
**************************************
**
** AERMOD Input Produced by:
** AERMOD View Ver. 9.5.0
** Lakes Environmental Software Inc.
** Date: 4/9/2018
** File: C:\Users\eliza\Desktop\Duke  Alabama\ExistingAB3\ExistingAB3.ADI
**
**************************************
**
**
**************************************
** AERMOD Control Pathway
**************************************
**
**
CO STARTING
   TITLEONE Duke Warehouse at Alabama and Palmetto
   TITLETWO Existing DPM Concentrations (2018) - AB3
   MODELOPT DFAULT CONC
   AVERTIME PERIOD
   URBANOPT 2035210 San_Bernardino_County
   POLLUTID DPM
   RUNORNOT RUN
   ERRORFIL ExistingAB3.err
CO FINISHED
**
**************************************
** AERMOD Source Pathway
**************************************
**
**
SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **
** ----------------------------------------------------------------------
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE1
** DESCRSRC 5th St b/n Alabama St and SR-210
** PREFIX
** Length of Side = 8.59
** Configuration = Adjacent
** Emission Rate = 0.0002339
** Vertical Dimension = 6.99
** SZINIT = 3.25
** Nodes = 4
** 480745.401, 3774134.486, 363.46, 3.49, 4.00
** 481061.555, 3774108.608, 366.99, 3.49, 4.00
** 481153.813, 3774104.108, 367.98, 3.49, 4.00
** 481576.850, 3774134.486, 372.13, 3.49, 4.00
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** ------------------------------------------------------------------
   LOCATION L0004094     VOLUME   480749.682 3774134.135 363.66
   LOCATION L0004095     VOLUME   480758.243 3774133.434 363.94
   LOCATION L0004096     VOLUME   480766.805 3774132.734 364.00
   LOCATION L0004097     VOLUME   480775.366 3774132.033 364.00
   LOCATION L0004098     VOLUME   480783.927 3774131.332 364.00
   LOCATION L0004099     VOLUME   480792.489 3774130.631 364.00
   LOCATION L0004100     VOLUME   480801.050 3774129.931 364.00
   LOCATION L0004101     VOLUME   480809.612 3774129.230 364.00
   LOCATION L0004102     VOLUME   480818.173 3774128.529 364.00
   LOCATION L0004103     VOLUME   480826.734 3774127.828 364.06
   LOCATION L0004104     VOLUME   480835.296 3774127.128 364.16
   LOCATION L0004105     VOLUME   480843.857 3774126.427 364.26
   LOCATION L0004106     VOLUME   480852.418 3774125.726 364.41
   LOCATION L0004107     VOLUME   480860.980 3774125.025 364.61
   LOCATION L0004108     VOLUME   480869.541 3774124.325 364.79
   LOCATION L0004109     VOLUME   480878.103 3774123.624 364.97
   LOCATION L0004110     VOLUME   480886.664 3774122.923 365.00
   LOCATION L0004111     VOLUME   480895.225 3774122.222 365.00
   LOCATION L0004112     VOLUME   480903.787 3774121.522 365.00
   LOCATION L0004113     VOLUME   480912.348 3774120.821 365.00
   LOCATION L0004114     VOLUME   480920.909 3774120.120 365.00
   LOCATION L0004115     VOLUME   480929.471 3774119.419 365.00
   LOCATION L0004116     VOLUME   480938.032 3774118.719 365.00
   LOCATION L0004117     VOLUME   480946.593 3774118.018 365.22
   LOCATION L0004118     VOLUME   480955.155 3774117.317 365.51
   LOCATION L0004119     VOLUME   480963.716 3774116.616 365.79
   LOCATION L0004120     VOLUME   480972.278 3774115.916 366.00
   LOCATION L0004121     VOLUME   480980.839 3774115.215 366.00
   LOCATION L0004122     VOLUME   480989.400 3774114.514 366.00
   LOCATION L0004123     VOLUME   480997.962 3774113.813 366.00
   LOCATION L0004124     VOLUME   481006.523 3774113.113 366.00
   LOCATION L0004125     VOLUME   481015.084 3774112.412 366.00
   LOCATION L0004126     VOLUME   481023.646 3774111.711 366.00
   LOCATION L0004127     VOLUME   481032.207 3774111.010 366.08
   LOCATION L0004128     VOLUME   481040.769 3774110.310 366.36
   LOCATION L0004129     VOLUME   481049.330 3774109.609 366.65
   LOCATION L0004130     VOLUME   481057.891 3774108.908 366.93
   LOCATION L0004131     VOLUME   481066.463 3774108.369 367.00
   LOCATION L0004132     VOLUME   481075.043 3774107.950 367.00
   LOCATION L0004133     VOLUME   481083.623 3774107.532 367.00
   LOCATION L0004134     VOLUME   481092.203 3774107.113 367.00
   LOCATION L0004135     VOLUME   481100.782 3774106.695 367.00
   LOCATION L0004136     VOLUME   481109.362 3774106.276 367.00
   LOCATION L0004137     VOLUME   481117.942 3774105.858 367.01
   LOCATION L0004138     VOLUME   481126.522 3774105.439 367.24
   LOCATION L0004139     VOLUME   481135.102 3774105.021 367.53
   LOCATION L0004140     VOLUME   481143.681 3774104.602 367.80
   LOCATION L0004141     VOLUME   481152.261 3774104.184 368.00
   LOCATION L0004142     VOLUME   481160.831 3774104.612 368.00
   LOCATION L0004143     VOLUME   481169.399 3774105.227 368.00
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   LOCATION L0004144     VOLUME   481177.967 3774105.842 368.00
   LOCATION L0004145     VOLUME   481186.535 3774106.458 368.00
   LOCATION L0004146     VOLUME   481195.103 3774107.073 368.00
   LOCATION L0004147     VOLUME   481203.671 3774107.688 368.00
   LOCATION L0004148     VOLUME   481212.239 3774108.303 368.08
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   LOCATION L0004150     VOLUME   481229.375 3774109.534 368.65
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   LOCATION L0004152     VOLUME   481246.511 3774110.764 369.00
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   LOCATION L0004156     VOLUME   481280.782 3774113.225 369.00
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   LOCATION L0004159     VOLUME   481306.486 3774115.071 369.22
   LOCATION L0004160     VOLUME   481315.054 3774115.686 369.50
   LOCATION L0004161     VOLUME   481323.622 3774116.302 369.79
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   LOCATION L0004163     VOLUME   481340.758 3774117.532 370.00
   LOCATION L0004164     VOLUME   481349.326 3774118.147 370.00
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   LOCATION L0004168     VOLUME   481383.598 3774120.608 370.00
   LOCATION L0004169     VOLUME   481392.166 3774121.224 370.08
   LOCATION L0004170     VOLUME   481400.734 3774121.839 370.36
   LOCATION L0004171     VOLUME   481409.301 3774122.454 370.65
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   LOCATION L0004177     VOLUME   481460.709 3774126.146 371.12
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   LOCATION L0004179     VOLUME   481477.845 3774127.376 371.28
   LOCATION L0004180     VOLUME   481486.413 3774127.991 371.43
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   LOCATION L0004184     VOLUME   481520.685 3774130.452 372.00
   LOCATION L0004185     VOLUME   481529.253 3774131.068 372.00
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   LOCATION L0004188     VOLUME   481554.956 3774132.913 372.06
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** End of LINE VOLUME Source ID = SLINE1
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** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE2
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** Configuration = Adjacent
** Emission Rate = 0.00006329
** Vertical Dimension = 6.99
** SZINIT = 3.25
** Nodes = 4
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   LOCATION L0004215     VOLUME   479350.107 3771578.961 354.01
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   LOCATION L0004218     VOLUME   479375.876 3771578.817 354.87
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   LOCATION L0004224     VOLUME   479427.415 3771578.527 355.15
   LOCATION L0004225     VOLUME   479436.005 3771578.479 355.23
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LOCATION L0004236     VOLUME   479530.494 3771577.949 356.02
LOCATION L0004237     VOLUME   479539.084 3771577.900 356.31
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LOCATION L0004240     VOLUME   479564.853 3771577.756 357.00
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LOCATION L0004244     VOLUME   479599.213 3771577.563 357.00
LOCATION L0004245     VOLUME   479607.803 3771577.515 357.00
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LOCATION L0004275     VOLUME   479865.499 3771576.068 360.19
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LOCATION L0004286     VOLUME   479959.777 3771577.913 362.00
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LOCATION L0004289     VOLUME   479985.438 3771579.092 362.00
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LOCATION L0004298     VOLUME   480062.748 3771579.042 363.00
LOCATION L0004299     VOLUME   480071.338 3771579.037 363.01
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LOCATION L0004301     VOLUME   480088.518 3771579.026 363.15
LOCATION L0004302     VOLUME   480097.108 3771579.020 363.22
LOCATION L0004303     VOLUME   480105.698 3771579.015 363.39
LOCATION L0004304     VOLUME   480114.288 3771579.009 363.61
LOCATION L0004305     VOLUME   480122.878 3771579.004 363.82
LOCATION L0004306     VOLUME   480131.468 3771578.998 364.00
LOCATION L0004307     VOLUME   480140.058 3771578.993 364.00
LOCATION L0004308     VOLUME   480148.648 3771578.987 364.00
LOCATION L0004309     VOLUME   480157.238 3771578.982 364.00
LOCATION L0004310     VOLUME   480165.828 3771578.976 364.20
LOCATION L0004311     VOLUME   480174.418 3771578.971 364.48
LOCATION L0004312     VOLUME   480183.008 3771578.965 364.77
LOCATION L0004313     VOLUME   480191.598 3771578.960 365.00
LOCATION L0004314     VOLUME   480200.188 3771578.954 365.00
LOCATION L0004315     VOLUME   480208.778 3771578.949 365.00
LOCATION L0004316     VOLUME   480217.368 3771578.943 365.00
LOCATION L0004317     VOLUME   480225.958 3771578.938 365.20
LOCATION L0004318     VOLUME   480234.548 3771578.932 365.49
LOCATION L0004319     VOLUME   480243.138 3771578.927 365.77
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LOCATION L0004322     VOLUME   480268.908 3771578.910 366.00
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   LOCATION L0004355     VOLUME   480552.378 3771578.729 370.00
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** End of LINE VOLUME Source ID = SLINE2
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** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE3
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** DESCRSRC San Bernardino Ave b/n Alabama St and SR-210
** PREFIX
** Length of Side = 8.59
** Configuration = Adjacent
** Emission Rate = 0.00007283
** Vertical Dimension = 6.99
** SZINIT = 3.25
** Nodes = 3
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   LOCATION L0004406     VOLUME   480984.611 3770754.343 378.00
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   LOCATION L0004409     VOLUME   481010.381 3770754.236 378.35
   LOCATION L0004410     VOLUME   481018.971 3770754.201 378.64
   LOCATION L0004411     VOLUME   481027.561 3770754.165 378.92
   LOCATION L0004412     VOLUME   481036.151 3770754.129 379.00
   LOCATION L0004413     VOLUME   481044.741 3770754.094 379.00
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   LOCATION L0004416     VOLUME   481070.511 3770753.987 379.35
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   LOCATION L0004421     VOLUME   481113.460 3770753.808 380.00
   LOCATION L0004422     VOLUME   481122.050 3770753.772 380.00
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   LOCATION L0004429     VOLUME   481182.180 3770753.522 381.08
   LOCATION L0004430     VOLUME   481190.770 3770753.487 381.36
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   LOCATION L0004432     VOLUME   481207.949 3770753.415 381.93
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   LOCATION L0004441     VOLUME   481285.259 3770753.094 382.51
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   LOCATION L0004446     VOLUME   481328.208 3770752.916 383.00
   LOCATION L0004447     VOLUME   481336.798 3770752.880 383.23
   LOCATION L0004448     VOLUME   481345.388 3770752.844 383.52
   LOCATION L0004449     VOLUME   481353.978 3770752.808 383.80
   LOCATION L0004450     VOLUME   481362.568 3770752.773 384.00
   LOCATION L0004451     VOLUME   481371.158 3770752.737 384.00
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** End of LINE VOLUME Source ID = SLINE3
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** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE4
** DESCRSRC California St b/n Palmetto Ave and I-10
** PREFIX
** Length of Side = 8.59
** Configuration = Adjacent
** Emission Rate = 0.0006192
** Vertical Dimension = 6.99
** SZINIT = 3.25
** Nodes = 4
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** 479126.121, 3770375.258, 354.00, 3.49, 4.00
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   LOCATION L0004460     VOLUME   479139.165 3771518.144 352.00
   LOCATION L0004461     VOLUME   479139.067 3771509.555 352.00
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LOCATION L0004561     VOLUME   479129.264 3770650.611 353.00
LOCATION L0004562     VOLUME   479129.166 3770642.022 353.00
LOCATION L0004563     VOLUME   479129.068 3770633.432 353.00
LOCATION L0004564     VOLUME   479128.970 3770624.843 353.00
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LOCATION L0004568     VOLUME   479128.577 3770590.485 353.12
LOCATION L0004569     VOLUME   479128.479 3770581.895 353.30
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LOCATION L0004610     VOLUME   479127.128 3770229.722 353.00
LOCATION L0004611     VOLUME   479127.187 3770221.133 353.00
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LOCATION L0004613     VOLUME   479127.306 3770203.953 353.00
LOCATION L0004614     VOLUME   479127.366 3770195.363 353.00
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LOCATION L0004618     VOLUME   479127.603 3770161.004 353.00
LOCATION L0004619     VOLUME   479127.663 3770152.414 353.00
LOCATION L0004620     VOLUME   479127.722 3770143.824 353.00
LOCATION L0004621     VOLUME   479127.782 3770135.235 353.00
LOCATION L0004622     VOLUME   479127.841 3770126.645 353.00
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LOCATION L0004639     VOLUME   479128.852 3769980.618 353.00
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LOCATION L0004641     VOLUME   479128.970 3769963.439 353.00
LOCATION L0004642     VOLUME   479129.030 3769954.849 353.00
LOCATION L0004643     VOLUME   479129.089 3769946.259 353.00
LOCATION L0004644     VOLUME   479129.149 3769937.669 353.00
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LOCATION L0004647     VOLUME   479129.327 3769911.900 353.53
LOCATION L0004648     VOLUME   479129.386 3769903.310 353.69
LOCATION L0004649     VOLUME   479129.446 3769894.720 353.79
LOCATION L0004650     VOLUME   479129.505 3769886.131 353.89
LOCATION L0004651     VOLUME   479129.565 3769877.541 353.99
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   LOCATION L0004675     VOLUME   479130.991 3769671.386 354.59
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   LOCATION L0004678     VOLUME   479131.169 3769645.616 354.91
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   LOCATION L0004681     VOLUME   479131.348 3769619.847 356.34
** End of LINE VOLUME Source ID = SLINE4
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** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE5
** DESCRSRC Alabama St b/n 5th St and River Bluff Ave
** PREFIX
** Length of Side = 8.59
** Configuration = Adjacent
** Emission Rate = 0.0003625
** Vertical Dimension = 6.99
** SZINIT = 3.25
** Nodes = 3
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** 480748.495, 3773503.950, 362.89, 3.49, 4.00
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   LOCATION L0004689     VOLUME   480743.157 3774061.334 363.72
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LOCATION L0004693     VOLUME   480743.487 3774026.975 364.00
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LOCATION L0004701     VOLUME   480744.145 3773958.258 364.97
LOCATION L0004702     VOLUME   480744.227 3773949.669 365.10
LOCATION L0004703     VOLUME   480744.309 3773941.079 365.24
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LOCATION L0004706     VOLUME   480744.556 3773915.310 365.49
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LOCATION L0004709     VOLUME   480744.803 3773889.542 365.50
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LOCATION L0004720     VOLUME   480745.707 3773795.056 365.53
LOCATION L0004721     VOLUME   480745.790 3773786.466 365.53
LOCATION L0004722     VOLUME   480745.872 3773777.877 365.53
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LOCATION L0004733     VOLUME   480746.777 3773683.391 365.56
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LOCATION L0004745     VOLUME   480747.764 3773580.316 364.28
LOCATION L0004746     VOLUME   480747.846 3773571.726 364.11
LOCATION L0004747     VOLUME   480747.928 3773563.136 363.96
LOCATION L0004748     VOLUME   480748.010 3773554.547 363.85
LOCATION L0004749     VOLUME   480748.093 3773545.957 363.73
LOCATION L0004750     VOLUME   480748.175 3773537.368 363.62
LOCATION L0004751     VOLUME   480748.257 3773528.778 363.46
LOCATION L0004752     VOLUME   480748.339 3773520.188 363.29
LOCATION L0004753     VOLUME   480748.422 3773511.599 363.11
LOCATION L0004754     VOLUME   480748.497 3773503.009 362.96
LOCATION L0004755     VOLUME   480748.519 3773494.419 362.85
LOCATION L0004756     VOLUME   480748.541 3773485.829 362.74
LOCATION L0004757     VOLUME   480748.563 3773477.239 362.63
LOCATION L0004758     VOLUME   480748.585 3773468.649 362.62
LOCATION L0004759     VOLUME   480748.606 3773460.059 362.62
LOCATION L0004760     VOLUME   480748.628 3773451.469 362.62
LOCATION L0004761     VOLUME   480748.650 3773442.879 362.55
LOCATION L0004762     VOLUME   480748.672 3773434.289 362.38
LOCATION L0004763     VOLUME   480748.693 3773425.699 362.20
LOCATION L0004764     VOLUME   480748.715 3773417.109 362.02
LOCATION L0004765     VOLUME   480748.737 3773408.520 362.00
LOCATION L0004766     VOLUME   480748.759 3773399.930 362.00
LOCATION L0004767     VOLUME   480748.781 3773391.340 362.00
LOCATION L0004768     VOLUME   480748.802 3773382.750 362.00
LOCATION L0004769     VOLUME   480748.824 3773374.160 362.00
LOCATION L0004770     VOLUME   480748.846 3773365.570 362.00
LOCATION L0004771     VOLUME   480748.868 3773356.980 362.00
LOCATION L0004772     VOLUME   480748.890 3773348.390 362.00
LOCATION L0004773     VOLUME   480748.911 3773339.800 362.00
LOCATION L0004774     VOLUME   480748.933 3773331.210 362.00
LOCATION L0004775     VOLUME   480748.955 3773322.620 362.00
LOCATION L0004776     VOLUME   480748.977 3773314.030 362.00
LOCATION L0004777     VOLUME   480748.999 3773305.440 362.00
LOCATION L0004778     VOLUME   480749.020 3773296.850 362.00
LOCATION L0004779     VOLUME   480749.042 3773288.260 362.00
LOCATION L0004780     VOLUME   480749.064 3773279.670 362.00
LOCATION L0004781     VOLUME   480749.086 3773271.080 362.00
LOCATION L0004782     VOLUME   480749.108 3773262.490 362.00
LOCATION L0004783     VOLUME   480749.129 3773253.900 362.00
LOCATION L0004784     VOLUME   480749.151 3773245.310 362.00
LOCATION L0004785     VOLUME   480749.173 3773236.720 362.00
LOCATION L0004786     VOLUME   480749.195 3773228.130 362.00
LOCATION L0004787     VOLUME   480749.217 3773219.540 362.00
LOCATION L0004788     VOLUME   480749.238 3773210.950 362.00
LOCATION L0004789     VOLUME   480749.260 3773202.360 362.00
LOCATION L0004790     VOLUME   480749.282 3773193.770 362.00
LOCATION L0004791     VOLUME   480749.304 3773185.180 362.00
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LOCATION L0004792     VOLUME   480749.326 3773176.590 362.00
LOCATION L0004793     VOLUME   480749.347 3773168.000 361.90
LOCATION L0004794     VOLUME   480749.369 3773159.410 361.80
LOCATION L0004795     VOLUME   480749.391 3773150.820 361.70
LOCATION L0004796     VOLUME   480749.413 3773142.230 361.65
LOCATION L0004797     VOLUME   480749.435 3773133.640 361.65
LOCATION L0004798     VOLUME   480749.456 3773125.050 361.65
LOCATION L0004799     VOLUME   480749.478 3773116.460 361.65
LOCATION L0004800     VOLUME   480749.500 3773107.870 361.65
LOCATION L0004801     VOLUME   480749.522 3773099.281 361.65
LOCATION L0004802     VOLUME   480749.544 3773090.691 361.65
LOCATION L0004803     VOLUME   480749.565 3773082.101 361.66
LOCATION L0004804     VOLUME   480749.587 3773073.511 361.66
LOCATION L0004805     VOLUME   480749.609 3773064.921 361.66
LOCATION L0004806     VOLUME   480749.631 3773056.331 361.66
LOCATION L0004807     VOLUME   480749.652 3773047.741 361.66
LOCATION L0004808     VOLUME   480749.674 3773039.151 361.66
LOCATION L0004809     VOLUME   480749.696 3773030.561 361.66
LOCATION L0004810     VOLUME   480749.718 3773021.971 361.66
LOCATION L0004811     VOLUME   480749.740 3773013.381 361.66
LOCATION L0004812     VOLUME   480749.761 3773004.791 361.66
LOCATION L0004813     VOLUME   480749.783 3772996.201 361.66
LOCATION L0004814     VOLUME   480749.805 3772987.611 361.66
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LOCATION L0004816     VOLUME   480749.849 3772970.431 361.67
LOCATION L0004817     VOLUME   480749.870 3772961.841 361.67
LOCATION L0004818     VOLUME   480749.892 3772953.251 361.67
LOCATION L0004819     VOLUME   480749.914 3772944.661 361.67
LOCATION L0004820     VOLUME   480749.936 3772936.071 361.67
LOCATION L0004821     VOLUME   480749.958 3772927.481 361.67
LOCATION L0004822     VOLUME   480749.979 3772918.891 361.67
LOCATION L0004823     VOLUME   480750.001 3772910.301 361.67
LOCATION L0004824     VOLUME   480750.023 3772901.711 361.67
LOCATION L0004825     VOLUME   480750.045 3772893.121 361.67
LOCATION L0004826     VOLUME   480750.067 3772884.531 361.67
LOCATION L0004827     VOLUME   480750.088 3772875.941 361.67
LOCATION L0004828     VOLUME   480750.110 3772867.351 361.67
LOCATION L0004829     VOLUME   480750.132 3772858.761 361.67
LOCATION L0004830     VOLUME   480750.154 3772850.171 361.68
LOCATION L0004831     VOLUME   480750.176 3772841.581 361.68
LOCATION L0004832     VOLUME   480750.197 3772832.991 361.68
LOCATION L0004833     VOLUME   480750.219 3772824.401 361.68
LOCATION L0004834     VOLUME   480750.241 3772815.811 361.68
LOCATION L0004835     VOLUME   480750.263 3772807.221 361.68
LOCATION L0004836     VOLUME   480750.285 3772798.631 361.68
LOCATION L0004837     VOLUME   480750.306 3772790.042 361.68
LOCATION L0004838     VOLUME   480750.328 3772781.452 361.68
LOCATION L0004839     VOLUME   480750.350 3772772.862 361.68
LOCATION L0004840     VOLUME   480750.372 3772764.272 361.68
LOCATION L0004841     VOLUME   480750.394 3772755.682 361.68
LOCATION L0004842     VOLUME   480750.415 3772747.092 361.68
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LOCATION L0004843     VOLUME   480750.437 3772738.502 361.68
LOCATION L0004844     VOLUME   480750.459 3772729.912 361.69
LOCATION L0004845     VOLUME   480750.481 3772721.322 361.69
LOCATION L0004846     VOLUME   480750.502 3772712.732 361.69
LOCATION L0004847     VOLUME   480750.524 3772704.142 361.69
LOCATION L0004848     VOLUME   480750.546 3772695.552 361.69
LOCATION L0004849     VOLUME   480750.568 3772686.962 361.69
LOCATION L0004850     VOLUME   480750.590 3772678.372 361.69
LOCATION L0004851     VOLUME   480750.611 3772669.782 361.69
LOCATION L0004852     VOLUME   480750.633 3772661.192 361.57
LOCATION L0004853     VOLUME   480750.655 3772652.602 361.38
LOCATION L0004854     VOLUME   480750.677 3772644.012 361.18
LOCATION L0004855     VOLUME   480750.699 3772635.422 361.00
LOCATION L0004856     VOLUME   480750.720 3772626.832 361.00
LOCATION L0004857     VOLUME   480750.742 3772618.242 361.00
LOCATION L0004858     VOLUME   480750.764 3772609.652 361.00
LOCATION L0004859     VOLUME   480750.786 3772601.062 361.00
LOCATION L0004860     VOLUME   480750.808 3772592.472 361.00
LOCATION L0004861     VOLUME   480750.829 3772583.882 361.00
LOCATION L0004862     VOLUME   480750.851 3772575.292 360.99
LOCATION L0004863     VOLUME   480750.873 3772566.702 360.90
LOCATION L0004864     VOLUME   480750.895 3772558.112 360.82
LOCATION L0004865     VOLUME   480750.917 3772549.522 360.73
LOCATION L0004866     VOLUME   480750.938 3772540.932 360.70
LOCATION L0004867     VOLUME   480750.960 3772532.342 360.70
LOCATION L0004868     VOLUME   480750.982 3772523.752 360.70
LOCATION L0004869     VOLUME   480751.004 3772515.162 360.68
LOCATION L0004870     VOLUME   480751.026 3772506.572 360.48
LOCATION L0004871     VOLUME   480751.047 3772497.982 360.28
LOCATION L0004872     VOLUME   480751.069 3772489.392 360.07
LOCATION L0004873     VOLUME   480751.091 3772480.803 360.13
LOCATION L0004874     VOLUME   480751.113 3772472.213 360.33
LOCATION L0004875     VOLUME   480751.135 3772463.623 360.53
LOCATION L0004876     VOLUME   480751.156 3772455.033 360.71
LOCATION L0004877     VOLUME   480751.178 3772446.443 360.71
LOCATION L0004878     VOLUME   480751.200 3772437.853 360.71
LOCATION L0004879     VOLUME   480751.222 3772429.263 360.71
LOCATION L0004880     VOLUME   480751.244 3772420.673 360.90
LOCATION L0004881     VOLUME   480751.265 3772412.083 361.19
LOCATION L0004882     VOLUME   480751.287 3772403.493 361.47
LOCATION L0004883     VOLUME   480751.309 3772394.903 361.71
LOCATION L0004884     VOLUME   480751.331 3772386.313 361.71
LOCATION L0004885     VOLUME   480751.352 3772377.723 361.72
LOCATION L0004886     VOLUME   480751.374 3772369.133 361.72
LOCATION L0004887     VOLUME   480751.396 3772360.543 361.77
LOCATION L0004888     VOLUME   480751.418 3772351.953 361.85
LOCATION L0004889     VOLUME   480751.440 3772343.363 361.93
LOCATION L0004890     VOLUME   480751.461 3772334.773 362.04
LOCATION L0004891     VOLUME   480751.483 3772326.183 362.24
LOCATION L0004892     VOLUME   480751.505 3772317.593 362.45
LOCATION L0004893     VOLUME   480751.527 3772309.003 362.66
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LOCATION L0004894     VOLUME   480751.549 3772300.413 362.78
LOCATION L0004895     VOLUME   480751.570 3772291.823 362.86
LOCATION L0004896     VOLUME   480751.592 3772283.233 362.94
LOCATION L0004897     VOLUME   480751.614 3772274.643 363.00
LOCATION L0004898     VOLUME   480751.636 3772266.053 363.00
LOCATION L0004899     VOLUME   480751.658 3772257.463 363.00
LOCATION L0004900     VOLUME   480751.679 3772248.873 363.00
LOCATION L0004901     VOLUME   480751.701 3772240.283 363.15
LOCATION L0004902     VOLUME   480751.723 3772231.693 363.35
LOCATION L0004903     VOLUME   480751.745 3772223.103 363.56
LOCATION L0004904     VOLUME   480751.767 3772214.513 363.74
LOCATION L0004905     VOLUME   480751.788 3772205.923 363.82
LOCATION L0004906     VOLUME   480751.810 3772197.333 363.90
LOCATION L0004907     VOLUME   480751.832 3772188.743 363.98
LOCATION L0004908     VOLUME   480751.854 3772180.153 364.00
LOCATION L0004909     VOLUME   480751.876 3772171.563 364.00
LOCATION L0004910     VOLUME   480751.897 3772162.974 364.00
LOCATION L0004911     VOLUME   480751.919 3772154.384 364.05
LOCATION L0004912     VOLUME   480751.941 3772145.794 364.26
LOCATION L0004913     VOLUME   480751.963 3772137.204 364.47
LOCATION L0004914     VOLUME   480751.985 3772128.614 364.68
LOCATION L0004915     VOLUME   480752.006 3772120.024 364.79
LOCATION L0004916     VOLUME   480752.028 3772111.434 364.87
LOCATION L0004917     VOLUME   480752.050 3772102.844 364.94
LOCATION L0004918     VOLUME   480752.072 3772094.254 365.05
LOCATION L0004919     VOLUME   480752.094 3772085.664 365.26
LOCATION L0004920     VOLUME   480752.115 3772077.074 365.47
LOCATION L0004921     VOLUME   480752.137 3772068.484 365.69
LOCATION L0004922     VOLUME   480752.159 3772059.894 365.95
LOCATION L0004923     VOLUME   480752.181 3772051.304 366.24
LOCATION L0004924     VOLUME   480752.203 3772042.714 366.53
LOCATION L0004925     VOLUME   480752.224 3772034.124 366.94
LOCATION L0004926     VOLUME   480752.246 3772025.534 367.73
LOCATION L0004927     VOLUME   480752.268 3772016.944 368.52
LOCATION L0004928     VOLUME   480752.290 3772008.354 369.30
LOCATION L0004929     VOLUME   480752.311 3771999.764 369.77
LOCATION L0004930     VOLUME   480752.333 3771991.174 370.13
LOCATION L0004931     VOLUME   480752.355 3771982.584 370.49
LOCATION L0004932     VOLUME   480752.377 3771973.994 370.75
LOCATION L0004933     VOLUME   480752.399 3771965.404 370.75
LOCATION L0004934     VOLUME   480752.420 3771956.814 370.75
LOCATION L0004935     VOLUME   480752.442 3771948.224 370.75
LOCATION L0004936     VOLUME   480752.464 3771939.634 370.97
LOCATION L0004937     VOLUME   480752.486 3771931.044 371.26
LOCATION L0004938     VOLUME   480752.508 3771922.454 371.55
LOCATION L0004939     VOLUME   480752.529 3771913.864 371.75
LOCATION L0004940     VOLUME   480752.551 3771905.274 371.76
LOCATION L0004941     VOLUME   480752.573 3771896.684 371.76
LOCATION L0004942     VOLUME   480752.595 3771888.094 371.76
LOCATION L0004943     VOLUME   480752.617 3771879.504 371.76
LOCATION L0004944     VOLUME   480752.638 3771870.914 371.76
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   LOCATION L0004945     VOLUME   480752.660 3771862.324 371.76
   LOCATION L0004946     VOLUME   480752.682 3771853.735 371.76
   LOCATION L0004947     VOLUME   480752.704 3771845.145 371.76
   LOCATION L0004948     VOLUME   480752.726 3771836.555 371.76
   LOCATION L0004949     VOLUME   480752.747 3771827.965 371.76
   LOCATION L0004950     VOLUME   480752.769 3771819.375 371.76
** End of LINE VOLUME Source ID = SLINE5
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** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE6
** DESCRSRC Alabama St b/n River Bluff Ave and Palmetto Ave
** PREFIX
** Length of Side = 8.59
** Configuration = Adjacent
** Emission Rate = 0.00003765
** Vertical Dimension = 6.99
** SZINIT = 3.25
** Nodes = 2
** 480750.988, 3771810.041, 371.84, 3.49, 4.00
** 480747.435, 3771585.792, 372.96, 3.49, 4.00
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   LOCATION L0004952     VOLUME   480750.784 3771797.158 371.70
   LOCATION L0004953     VOLUME   480750.647 3771788.569 371.69
   LOCATION L0004954     VOLUME   480750.511 3771779.980 371.69
   LOCATION L0004955     VOLUME   480750.375 3771771.391 371.68
   LOCATION L0004956     VOLUME   480750.239 3771762.802 371.72
   LOCATION L0004957     VOLUME   480750.103 3771754.213 371.80
   LOCATION L0004958     VOLUME   480749.967 3771745.624 371.90
   LOCATION L0004959     VOLUME   480749.831 3771737.035 371.99
   LOCATION L0004960     VOLUME   480749.695 3771728.446 372.00
   LOCATION L0004961     VOLUME   480749.559 3771719.857 372.00
   LOCATION L0004962     VOLUME   480749.423 3771711.268 372.00
   LOCATION L0004963     VOLUME   480749.287 3771702.679 372.08
   LOCATION L0004964     VOLUME   480749.151 3771694.090 372.26
   LOCATION L0004965     VOLUME   480749.015 3771685.502 372.44
   LOCATION L0004966     VOLUME   480748.879 3771676.913 372.62
   LOCATION L0004967     VOLUME   480748.743 3771668.324 372.63
   LOCATION L0004968     VOLUME   480748.607 3771659.735 372.62
   LOCATION L0004969     VOLUME   480748.470 3771651.146 372.62
   LOCATION L0004970     VOLUME   480748.334 3771642.557 372.66
   LOCATION L0004971     VOLUME   480748.198 3771633.968 372.77
   LOCATION L0004972     VOLUME   480748.062 3771625.379 372.88
   LOCATION L0004973     VOLUME   480747.926 3771616.790 372.99
   LOCATION L0004974     VOLUME   480747.790 3771608.201 373.00
   LOCATION L0004975     VOLUME   480747.654 3771599.612 373.00
   LOCATION L0004976     VOLUME   480747.518 3771591.023 373.00
** End of LINE VOLUME Source ID = SLINE6
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** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE7
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** DESCRSRC Alabama St b/n Palmetto Ave and San Bernardino Ave
** PREFIX
** Length of Side = 8.59
** Configuration = Adjacent
** Emission Rate = 0.0001634
** Vertical Dimension = 6.99
** SZINIT = 3.25
** Nodes = 2
** 480747.029, 3771568.778, 372.93, 3.49, 4.00
** 480745.027, 3770777.988, 373.95, 3.49, 4.00
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   LOCATION L0004978     VOLUME   480746.996 3771555.893 373.00
   LOCATION L0004979     VOLUME   480746.974 3771547.303 373.00
   LOCATION L0004980     VOLUME   480746.953 3771538.713 373.00
   LOCATION L0004981     VOLUME   480746.931 3771530.123 373.00
   LOCATION L0004982     VOLUME   480746.909 3771521.533 373.09
   LOCATION L0004983     VOLUME   480746.887 3771512.943 373.25
   LOCATION L0004984     VOLUME   480746.866 3771504.353 373.41
   LOCATION L0004985     VOLUME   480746.844 3771495.763 373.56
   LOCATION L0004986     VOLUME   480746.822 3771487.173 373.56
   LOCATION L0004987     VOLUME   480746.801 3771478.583 373.56
   LOCATION L0004988     VOLUME   480746.779 3771469.993 373.56
   LOCATION L0004989     VOLUME   480746.757 3771461.403 373.56
   LOCATION L0004990     VOLUME   480746.735 3771452.813 373.56
   LOCATION L0004991     VOLUME   480746.714 3771444.223 373.56
   LOCATION L0004992     VOLUME   480746.692 3771435.633 373.56
   LOCATION L0004993     VOLUME   480746.670 3771427.043 373.56
   LOCATION L0004994     VOLUME   480746.648 3771418.453 373.56
   LOCATION L0004995     VOLUME   480746.627 3771409.863 373.56
   LOCATION L0004996     VOLUME   480746.605 3771401.273 373.56
   LOCATION L0004997     VOLUME   480746.583 3771392.683 373.56
   LOCATION L0004998     VOLUME   480746.561 3771384.093 373.56
   LOCATION L0004999     VOLUME   480746.540 3771375.504 373.57
   LOCATION L0005000     VOLUME   480746.518 3771366.914 373.69
   LOCATION L0005001     VOLUME   480746.496 3771358.324 373.82
   LOCATION L0005002     VOLUME   480746.474 3771349.734 373.95
   LOCATION L0005003     VOLUME   480746.453 3771341.144 374.00
   LOCATION L0005004     VOLUME   480746.431 3771332.554 374.00
   LOCATION L0005005     VOLUME   480746.409 3771323.964 374.00
   LOCATION L0005006     VOLUME   480746.387 3771315.374 374.00
   LOCATION L0005007     VOLUME   480746.366 3771306.784 374.00
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   LOCATION L0005012     VOLUME   480746.257 3771263.834 374.00
   LOCATION L0005013     VOLUME   480746.235 3771255.244 374.00
   LOCATION L0005014     VOLUME   480746.213 3771246.654 374.00
   LOCATION L0005015     VOLUME   480746.192 3771238.064 374.00
   LOCATION L0005016     VOLUME   480746.170 3771229.474 374.00
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LOCATION L0005017     VOLUME   480746.148 3771220.884 374.00
LOCATION L0005018     VOLUME   480746.126 3771212.294 374.00
LOCATION L0005019     VOLUME   480746.105 3771203.704 374.00
LOCATION L0005020     VOLUME   480746.083 3771195.114 374.00
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LOCATION L0005023     VOLUME   480746.018 3771169.344 374.00
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LOCATION L0005029     VOLUME   480745.887 3771117.804 374.00
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LOCATION L0005035     VOLUME   480745.757 3771066.264 374.00
LOCATION L0005036     VOLUME   480745.735 3771057.675 374.00
LOCATION L0005037     VOLUME   480745.713 3771049.085 374.00
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LOCATION L0005041     VOLUME   480745.626 3771014.725 374.00
LOCATION L0005042     VOLUME   480745.605 3771006.135 374.00
LOCATION L0005043     VOLUME   480745.583 3770997.545 374.00
LOCATION L0005044     VOLUME   480745.561 3770988.955 374.00
LOCATION L0005045     VOLUME   480745.539 3770980.365 374.00
LOCATION L0005046     VOLUME   480745.518 3770971.775 374.00
LOCATION L0005047     VOLUME   480745.496 3770963.185 374.00
LOCATION L0005048     VOLUME   480745.474 3770954.595 374.00
LOCATION L0005049     VOLUME   480745.452 3770946.005 374.00
LOCATION L0005050     VOLUME   480745.431 3770937.415 374.00
LOCATION L0005051     VOLUME   480745.409 3770928.825 374.00
LOCATION L0005052     VOLUME   480745.387 3770920.235 374.00
LOCATION L0005053     VOLUME   480745.365 3770911.645 374.00
LOCATION L0005054     VOLUME   480745.344 3770903.055 374.00
LOCATION L0005055     VOLUME   480745.322 3770894.465 374.00
LOCATION L0005056     VOLUME   480745.300 3770885.875 374.00
LOCATION L0005057     VOLUME   480745.278 3770877.285 374.00
LOCATION L0005058     VOLUME   480745.257 3770868.695 374.00
LOCATION L0005059     VOLUME   480745.235 3770860.105 374.00
LOCATION L0005060     VOLUME   480745.213 3770851.515 374.00
LOCATION L0005061     VOLUME   480745.191 3770842.925 374.00
LOCATION L0005062     VOLUME   480745.170 3770834.335 374.00
LOCATION L0005063     VOLUME   480745.148 3770825.745 374.00
LOCATION L0005064     VOLUME   480745.126 3770817.155 374.00
LOCATION L0005065     VOLUME   480745.105 3770808.565 374.00
LOCATION L0005066     VOLUME   480745.083 3770799.975 374.00
LOCATION L0005067     VOLUME   480745.061 3770791.385 374.00
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   LOCATION L0005068     VOLUME   480745.039 3770782.795 374.00
** End of LINE VOLUME Source ID = SLINE7
** ----------------------------------------------------------------------
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE8
** DESCRSRC Alabama St b/n San Bernardino Ave and I-10
** PREFIX
** Length of Side = 8.59
** Configuration = Adjacent
** Emission Rate = 0.0002456
** Vertical Dimension = 6.99
** SZINIT = 3.25
** Nodes = 2
** 480741.352, 3770758.508, 373.92, 3.49, 4.00
** 480741.352, 3769636.638, 378.00, 3.49, 4.00
** ----------------------------------------------------------------------
   LOCATION L0005069     VOLUME   480741.352 3770754.213 374.00
   LOCATION L0005070     VOLUME   480741.352 3770745.623 374.00
   LOCATION L0005071     VOLUME   480741.352 3770737.033 374.00
   LOCATION L0005072     VOLUME   480741.352 3770728.443 374.00
   LOCATION L0005073     VOLUME   480741.352 3770719.853 374.00
   LOCATION L0005074     VOLUME   480741.352 3770711.263 374.00
   LOCATION L0005075     VOLUME   480741.352 3770702.673 374.00
   LOCATION L0005076     VOLUME   480741.352 3770694.083 374.00
   LOCATION L0005077     VOLUME   480741.352 3770685.493 374.00
   LOCATION L0005078     VOLUME   480741.352 3770676.903 374.00
   LOCATION L0005079     VOLUME   480741.352 3770668.313 374.00
   LOCATION L0005080     VOLUME   480741.352 3770659.723 374.00
   LOCATION L0005081     VOLUME   480741.352 3770651.133 374.07
   LOCATION L0005082     VOLUME   480741.352 3770642.543 374.17
   LOCATION L0005083     VOLUME   480741.352 3770633.953 374.28
   LOCATION L0005084     VOLUME   480741.352 3770625.363 374.38
   LOCATION L0005085     VOLUME   480741.352 3770616.773 374.38
   LOCATION L0005086     VOLUME   480741.352 3770608.183 374.38
   LOCATION L0005087     VOLUME   480741.352 3770599.593 374.38
   LOCATION L0005088     VOLUME   480741.352 3770591.003 374.38
   LOCATION L0005089     VOLUME   480741.352 3770582.413 374.38
   LOCATION L0005090     VOLUME   480741.352 3770573.823 374.38
   LOCATION L0005091     VOLUME   480741.352 3770565.233 374.38
   LOCATION L0005092     VOLUME   480741.352 3770556.643 374.38
   LOCATION L0005093     VOLUME   480741.352 3770548.053 374.38
   LOCATION L0005094     VOLUME   480741.352 3770539.463 374.38
   LOCATION L0005095     VOLUME   480741.352 3770530.873 374.38
   LOCATION L0005096     VOLUME   480741.352 3770522.283 374.38
   LOCATION L0005097     VOLUME   480741.352 3770513.693 374.38
   LOCATION L0005098     VOLUME   480741.352 3770505.103 374.38
   LOCATION L0005099     VOLUME   480741.352 3770496.513 374.38
   LOCATION L0005100     VOLUME   480741.352 3770487.923 374.38
   LOCATION L0005101     VOLUME   480741.352 3770479.333 374.38
   LOCATION L0005102     VOLUME   480741.352 3770470.743 374.50
   LOCATION L0005103     VOLUME   480741.352 3770462.153 374.67
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LOCATION L0005104     VOLUME   480741.352 3770453.563 374.85
LOCATION L0005105     VOLUME   480741.352 3770444.973 375.00
LOCATION L0005106     VOLUME   480741.352 3770436.383 375.00
LOCATION L0005107     VOLUME   480741.352 3770427.793 375.00
LOCATION L0005108     VOLUME   480741.352 3770419.203 375.00
LOCATION L0005109     VOLUME   480741.352 3770410.613 375.00
LOCATION L0005110     VOLUME   480741.352 3770402.023 375.00
LOCATION L0005111     VOLUME   480741.352 3770393.433 375.00
LOCATION L0005112     VOLUME   480741.352 3770384.843 375.02
LOCATION L0005113     VOLUME   480741.352 3770376.253 375.13
LOCATION L0005114     VOLUME   480741.352 3770367.663 375.24
LOCATION L0005115     VOLUME   480741.352 3770359.073 375.35
LOCATION L0005116     VOLUME   480741.352 3770350.483 375.38
LOCATION L0005117     VOLUME   480741.352 3770341.893 375.38
LOCATION L0005118     VOLUME   480741.352 3770333.303 375.38
LOCATION L0005119     VOLUME   480741.352 3770324.713 375.38
LOCATION L0005120     VOLUME   480741.352 3770316.123 375.38
LOCATION L0005121     VOLUME   480741.352 3770307.533 375.38
LOCATION L0005122     VOLUME   480741.352 3770298.943 375.38
LOCATION L0005123     VOLUME   480741.352 3770290.353 375.38
LOCATION L0005124     VOLUME   480741.352 3770281.763 375.38
LOCATION L0005125     VOLUME   480741.352 3770273.173 375.38
LOCATION L0005126     VOLUME   480741.352 3770264.583 375.38
LOCATION L0005127     VOLUME   480741.352 3770255.993 375.38
LOCATION L0005128     VOLUME   480741.352 3770247.403 375.38
LOCATION L0005129     VOLUME   480741.352 3770238.813 375.38
LOCATION L0005130     VOLUME   480741.352 3770230.223 375.38
LOCATION L0005131     VOLUME   480741.352 3770221.633 375.38
LOCATION L0005132     VOLUME   480741.352 3770213.043 375.38
LOCATION L0005133     VOLUME   480741.352 3770204.453 375.38
LOCATION L0005134     VOLUME   480741.352 3770195.863 375.38
LOCATION L0005135     VOLUME   480741.352 3770187.273 375.38
LOCATION L0005136     VOLUME   480741.352 3770178.683 375.38
LOCATION L0005137     VOLUME   480741.352 3770170.093 375.38
LOCATION L0005138     VOLUME   480741.352 3770161.503 375.38
LOCATION L0005139     VOLUME   480741.352 3770152.913 375.38
LOCATION L0005140     VOLUME   480741.352 3770144.323 375.38
LOCATION L0005141     VOLUME   480741.352 3770135.733 375.38
LOCATION L0005142     VOLUME   480741.352 3770127.143 375.38
LOCATION L0005143     VOLUME   480741.352 3770118.553 375.38
LOCATION L0005144     VOLUME   480741.352 3770109.963 375.38
LOCATION L0005145     VOLUME   480741.352 3770101.373 375.38
LOCATION L0005146     VOLUME   480741.352 3770092.783 375.38
LOCATION L0005147     VOLUME   480741.352 3770084.193 375.38
LOCATION L0005148     VOLUME   480741.352 3770075.603 375.38
LOCATION L0005149     VOLUME   480741.352 3770067.013 375.38
LOCATION L0005150     VOLUME   480741.352 3770058.423 375.38
LOCATION L0005151     VOLUME   480741.352 3770049.833 375.38
LOCATION L0005152     VOLUME   480741.352 3770041.243 375.38
LOCATION L0005153     VOLUME   480741.352 3770032.653 375.38
LOCATION L0005154     VOLUME   480741.352 3770024.063 375.38
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   LOCATION L0005155     VOLUME   480741.352 3770015.473 375.38
   LOCATION L0005156     VOLUME   480741.352 3770006.883 375.38
   LOCATION L0005157     VOLUME   480741.352 3769998.293 375.38
   LOCATION L0005158     VOLUME   480741.352 3769989.703 375.38
   LOCATION L0005159     VOLUME   480741.352 3769981.113 375.38
   LOCATION L0005160     VOLUME   480741.352 3769972.523 375.38
   LOCATION L0005161     VOLUME   480741.352 3769963.933 375.38
   LOCATION L0005162     VOLUME   480741.352 3769955.343 375.38
   LOCATION L0005163     VOLUME   480741.352 3769946.753 375.38
   LOCATION L0005164     VOLUME   480741.352 3769938.163 375.38
   LOCATION L0005165     VOLUME   480741.352 3769929.573 375.38
   LOCATION L0005166     VOLUME   480741.352 3769920.983 375.38
   LOCATION L0005167     VOLUME   480741.352 3769912.393 375.38
   LOCATION L0005168     VOLUME   480741.352 3769903.803 375.43
   LOCATION L0005169     VOLUME   480741.352 3769895.213 375.61
   LOCATION L0005170     VOLUME   480741.352 3769886.623 375.79
   LOCATION L0005171     VOLUME   480741.352 3769878.033 375.96
   LOCATION L0005172     VOLUME   480741.352 3769869.443 376.09
   LOCATION L0005173     VOLUME   480741.352 3769860.853 376.20
   LOCATION L0005174     VOLUME   480741.352 3769852.263 376.31
   LOCATION L0005175     VOLUME   480741.352 3769843.673 376.52
   LOCATION L0005176     VOLUME   480741.352 3769835.083 376.99
   LOCATION L0005177     VOLUME   480741.352 3769826.493 377.45
   LOCATION L0005178     VOLUME   480741.352 3769817.903 377.91
   LOCATION L0005179     VOLUME   480741.352 3769809.313 378.00
   LOCATION L0005180     VOLUME   480741.352 3769800.723 378.00
   LOCATION L0005181     VOLUME   480741.352 3769792.133 378.00
   LOCATION L0005182     VOLUME   480741.352 3769783.543 378.00
   LOCATION L0005183     VOLUME   480741.352 3769774.953 378.00
   LOCATION L0005184     VOLUME   480741.352 3769766.363 378.00
   LOCATION L0005185     VOLUME   480741.352 3769757.773 378.00
   LOCATION L0005186     VOLUME   480741.352 3769749.183 378.00
   LOCATION L0005187     VOLUME   480741.352 3769740.593 378.00
   LOCATION L0005188     VOLUME   480741.352 3769732.003 378.00
   LOCATION L0005189     VOLUME   480741.352 3769723.413 378.00
   LOCATION L0005190     VOLUME   480741.352 3769714.823 378.00
   LOCATION L0005191     VOLUME   480741.352 3769706.233 378.00
   LOCATION L0005192     VOLUME   480741.352 3769697.643 378.00
   LOCATION L0005193     VOLUME   480741.352 3769689.053 378.00
   LOCATION L0005194     VOLUME   480741.352 3769680.463 378.00
   LOCATION L0005195     VOLUME   480741.352 3769671.873 378.00
   LOCATION L0005196     VOLUME   480741.352 3769663.283 378.00
   LOCATION L0005197     VOLUME   480741.352 3769654.693 378.00
   LOCATION L0005198     VOLUME   480741.352 3769646.103 378.00
   LOCATION L0005199     VOLUME   480741.352 3769637.513 378.00
** End of LINE VOLUME Source ID = SLINE8
** Source Parameters **
** LINE VOLUME Source ID = SLINE1
   SRCPARAM L0004094     0.000002411      3.49      4.00      3.25
   SRCPARAM L0004095     0.000002411      3.49      4.00      3.25
   SRCPARAM L0004096     0.000002411      3.49      4.00      3.25
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SRCPARAM L0004097     0.000002411      3.49      4.00      3.25
SRCPARAM L0004098     0.000002411      3.49      4.00      3.25
SRCPARAM L0004099     0.000002411      3.49      4.00      3.25
SRCPARAM L0004100     0.000002411      3.49      4.00      3.25
SRCPARAM L0004101     0.000002411      3.49      4.00      3.25
SRCPARAM L0004102     0.000002411      3.49      4.00      3.25
SRCPARAM L0004103     0.000002411      3.49      4.00      3.25
SRCPARAM L0004104     0.000002411      3.49      4.00      3.25
SRCPARAM L0004105     0.000002411      3.49      4.00      3.25
SRCPARAM L0004106     0.000002411      3.49      4.00      3.25
SRCPARAM L0004107     0.000002411      3.49      4.00      3.25
SRCPARAM L0004108     0.000002411      3.49      4.00      3.25
SRCPARAM L0004109     0.000002411      3.49      4.00      3.25
SRCPARAM L0004110     0.000002411      3.49      4.00      3.25
SRCPARAM L0004111     0.000002411      3.49      4.00      3.25
SRCPARAM L0004112     0.000002411      3.49      4.00      3.25
SRCPARAM L0004113     0.000002411      3.49      4.00      3.25
SRCPARAM L0004114     0.000002411      3.49      4.00      3.25
SRCPARAM L0004115     0.000002411      3.49      4.00      3.25
SRCPARAM L0004116     0.000002411      3.49      4.00      3.25
SRCPARAM L0004117     0.000002411      3.49      4.00      3.25
SRCPARAM L0004118     0.000002411      3.49      4.00      3.25
SRCPARAM L0004119     0.000002411      3.49      4.00      3.25
SRCPARAM L0004120     0.000002411      3.49      4.00      3.25
SRCPARAM L0004121     0.000002411      3.49      4.00      3.25
SRCPARAM L0004122     0.000002411      3.49      4.00      3.25
SRCPARAM L0004123     0.000002411      3.49      4.00      3.25
SRCPARAM L0004124     0.000002411      3.49      4.00      3.25
SRCPARAM L0004125     0.000002411      3.49      4.00      3.25
SRCPARAM L0004126     0.000002411      3.49      4.00      3.25
SRCPARAM L0004127     0.000002411      3.49      4.00      3.25
SRCPARAM L0004128     0.000002411      3.49      4.00      3.25
SRCPARAM L0004129     0.000002411      3.49      4.00      3.25
SRCPARAM L0004130     0.000002411      3.49      4.00      3.25
SRCPARAM L0004131     0.000002411      3.49      4.00      3.25
SRCPARAM L0004132     0.000002411      3.49      4.00      3.25
SRCPARAM L0004133     0.000002411      3.49      4.00      3.25
SRCPARAM L0004134     0.000002411      3.49      4.00      3.25
SRCPARAM L0004135     0.000002411      3.49      4.00      3.25
SRCPARAM L0004136     0.000002411      3.49      4.00      3.25
SRCPARAM L0004137     0.000002411      3.49      4.00      3.25
SRCPARAM L0004138     0.000002411      3.49      4.00      3.25
SRCPARAM L0004139     0.000002411      3.49      4.00      3.25
SRCPARAM L0004140     0.000002411      3.49      4.00      3.25
SRCPARAM L0004141     0.000002411      3.49      4.00      3.25
SRCPARAM L0004142     0.000002411      3.49      4.00      3.25
SRCPARAM L0004143     0.000002411      3.49      4.00      3.25
SRCPARAM L0004144     0.000002411      3.49      4.00      3.25
SRCPARAM L0004145     0.000002411      3.49      4.00      3.25
SRCPARAM L0004146     0.000002411      3.49      4.00      3.25
SRCPARAM L0004147     0.000002411      3.49      4.00      3.25
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   SRCPARAM L0004148     0.000002411      3.49      4.00      3.25
   SRCPARAM L0004149     0.000002411      3.49      4.00      3.25
   SRCPARAM L0004150     0.000002411      3.49      4.00      3.25
   SRCPARAM L0004151     0.000002411      3.49      4.00      3.25
   SRCPARAM L0004152     0.000002411      3.49      4.00      3.25
   SRCPARAM L0004153     0.000002411      3.49      4.00      3.25
   SRCPARAM L0004154     0.000002411      3.49      4.00      3.25
   SRCPARAM L0004155     0.000002411      3.49      4.00      3.25
   SRCPARAM L0004156     0.000002411      3.49      4.00      3.25
   SRCPARAM L0004157     0.000002411      3.49      4.00      3.25
   SRCPARAM L0004158     0.000002411      3.49      4.00      3.25
   SRCPARAM L0004159     0.000002411      3.49      4.00      3.25
   SRCPARAM L0004160     0.000002411      3.49      4.00      3.25
   SRCPARAM L0004161     0.000002411      3.49      4.00      3.25
   SRCPARAM L0004162     0.000002411      3.49      4.00      3.25
   SRCPARAM L0004163     0.000002411      3.49      4.00      3.25
   SRCPARAM L0004164     0.000002411      3.49      4.00      3.25
   SRCPARAM L0004165     0.000002411      3.49      4.00      3.25
   SRCPARAM L0004166     0.000002411      3.49      4.00      3.25
   SRCPARAM L0004167     0.000002411      3.49      4.00      3.25
   SRCPARAM L0004168     0.000002411      3.49      4.00      3.25
   SRCPARAM L0004169     0.000002411      3.49      4.00      3.25
   SRCPARAM L0004170     0.000002411      3.49      4.00      3.25
   SRCPARAM L0004171     0.000002411      3.49      4.00      3.25
   SRCPARAM L0004172     0.000002411      3.49      4.00      3.25
   SRCPARAM L0004173     0.000002411      3.49      4.00      3.25
   SRCPARAM L0004174     0.000002411      3.49      4.00      3.25
   SRCPARAM L0004175     0.000002411      3.49      4.00      3.25
   SRCPARAM L0004176     0.000002411      3.49      4.00      3.25
   SRCPARAM L0004177     0.000002411      3.49      4.00      3.25
   SRCPARAM L0004178     0.000002411      3.49      4.00      3.25
   SRCPARAM L0004179     0.000002411      3.49      4.00      3.25
   SRCPARAM L0004180     0.000002411      3.49      4.00      3.25
   SRCPARAM L0004181     0.000002411      3.49      4.00      3.25
   SRCPARAM L0004182     0.000002411      3.49      4.00      3.25
   SRCPARAM L0004183     0.000002411      3.49      4.00      3.25
   SRCPARAM L0004184     0.000002411      3.49      4.00      3.25
   SRCPARAM L0004185     0.000002411      3.49      4.00      3.25
   SRCPARAM L0004186     0.000002411      3.49      4.00      3.25
   SRCPARAM L0004187     0.000002411      3.49      4.00      3.25
   SRCPARAM L0004188     0.000002411      3.49      4.00      3.25
   SRCPARAM L0004189     0.000002411      3.49      4.00      3.25
   SRCPARAM L0004190     0.000002411      3.49      4.00      3.25
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** LINE VOLUME Source ID = SLINE2
   SRCPARAM L0004191     0.0000003384      3.49      4.00      3.25
   SRCPARAM L0004192     0.0000003384      3.49      4.00      3.25
   SRCPARAM L0004193     0.0000003384      3.49      4.00      3.25
   SRCPARAM L0004194     0.0000003384      3.49      4.00      3.25
   SRCPARAM L0004195     0.0000003384      3.49      4.00      3.25
   SRCPARAM L0004196     0.0000003384      3.49      4.00      3.25
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SRCPARAM L0004197     0.0000003384      3.49      4.00      3.25
SRCPARAM L0004198     0.0000003384      3.49      4.00      3.25
SRCPARAM L0004199     0.0000003384      3.49      4.00      3.25
SRCPARAM L0004200     0.0000003384      3.49      4.00      3.25
SRCPARAM L0004201     0.0000003384      3.49      4.00      3.25
SRCPARAM L0004202     0.0000003384      3.49      4.00      3.25
SRCPARAM L0004203     0.0000003384      3.49      4.00      3.25
SRCPARAM L0004204     0.0000003384      3.49      4.00      3.25
SRCPARAM L0004205     0.0000003384      3.49      4.00      3.25
SRCPARAM L0004206     0.0000003384      3.49      4.00      3.25
SRCPARAM L0004207     0.0000003384      3.49      4.00      3.25
SRCPARAM L0004208     0.0000003384      3.49      4.00      3.25
SRCPARAM L0004209     0.0000003384      3.49      4.00      3.25
SRCPARAM L0004210     0.0000003384      3.49      4.00      3.25
SRCPARAM L0004211     0.0000003384      3.49      4.00      3.25
SRCPARAM L0004212     0.0000003384      3.49      4.00      3.25
SRCPARAM L0004213     0.0000003384      3.49      4.00      3.25
SRCPARAM L0004214     0.0000003384      3.49      4.00      3.25
SRCPARAM L0004215     0.0000003384      3.49      4.00      3.25
SRCPARAM L0004216     0.0000003384      3.49      4.00      3.25
SRCPARAM L0004217     0.0000003384      3.49      4.00      3.25
SRCPARAM L0004218     0.0000003384      3.49      4.00      3.25
SRCPARAM L0004219     0.0000003384      3.49      4.00      3.25
SRCPARAM L0004220     0.0000003384      3.49      4.00      3.25
SRCPARAM L0004221     0.0000003384      3.49      4.00      3.25
SRCPARAM L0004222     0.0000003384      3.49      4.00      3.25
SRCPARAM L0004223     0.0000003384      3.49      4.00      3.25
SRCPARAM L0004224     0.0000003384      3.49      4.00      3.25
SRCPARAM L0004225     0.0000003384      3.49      4.00      3.25
SRCPARAM L0004226     0.0000003384      3.49      4.00      3.25
SRCPARAM L0004227     0.0000003384      3.49      4.00      3.25
SRCPARAM L0004228     0.0000003384      3.49      4.00      3.25
SRCPARAM L0004229     0.0000003384      3.49      4.00      3.25
SRCPARAM L0004230     0.0000003384      3.49      4.00      3.25
SRCPARAM L0004231     0.0000003384      3.49      4.00      3.25
SRCPARAM L0004232     0.0000003384      3.49      4.00      3.25
SRCPARAM L0004233     0.0000003384      3.49      4.00      3.25
SRCPARAM L0004234     0.0000003384      3.49      4.00      3.25
SRCPARAM L0004235     0.0000003384      3.49      4.00      3.25
SRCPARAM L0004236     0.0000003384      3.49      4.00      3.25
SRCPARAM L0004237     0.0000003384      3.49      4.00      3.25
SRCPARAM L0004238     0.0000003384      3.49      4.00      3.25
SRCPARAM L0004239     0.0000003384      3.49      4.00      3.25
SRCPARAM L0004240     0.0000003384      3.49      4.00      3.25
SRCPARAM L0004241     0.0000003384      3.49      4.00      3.25
SRCPARAM L0004242     0.0000003384      3.49      4.00      3.25
SRCPARAM L0004243     0.0000003384      3.49      4.00      3.25
SRCPARAM L0004244     0.0000003384      3.49      4.00      3.25
SRCPARAM L0004245     0.0000003384      3.49      4.00      3.25
SRCPARAM L0004246     0.0000003384      3.49      4.00      3.25
SRCPARAM L0004247     0.0000003384      3.49      4.00      3.25
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SRCPARAM L0004248     0.0000003384      3.49      4.00      3.25
SRCPARAM L0004249     0.0000003384      3.49      4.00      3.25
SRCPARAM L0004250     0.0000003384      3.49      4.00      3.25
SRCPARAM L0004251     0.0000003384      3.49      4.00      3.25
SRCPARAM L0004252     0.0000003384      3.49      4.00      3.25
SRCPARAM L0004253     0.0000003384      3.49      4.00      3.25
SRCPARAM L0004254     0.0000003384      3.49      4.00      3.25
SRCPARAM L0004255     0.0000003384      3.49      4.00      3.25
SRCPARAM L0004256     0.0000003384      3.49      4.00      3.25
SRCPARAM L0004257     0.0000003384      3.49      4.00      3.25
SRCPARAM L0004258     0.0000003384      3.49      4.00      3.25
SRCPARAM L0004259     0.0000003384      3.49      4.00      3.25
SRCPARAM L0004260     0.0000003384      3.49      4.00      3.25
SRCPARAM L0004261     0.0000003384      3.49      4.00      3.25
SRCPARAM L0004262     0.0000003384      3.49      4.00      3.25
SRCPARAM L0004263     0.0000003384      3.49      4.00      3.25
SRCPARAM L0004264     0.0000003384      3.49      4.00      3.25
SRCPARAM L0004265     0.0000003384      3.49      4.00      3.25
SRCPARAM L0004266     0.0000003384      3.49      4.00      3.25
SRCPARAM L0004267     0.0000003384      3.49      4.00      3.25
SRCPARAM L0004268     0.0000003384      3.49      4.00      3.25
SRCPARAM L0004269     0.0000003384      3.49      4.00      3.25
SRCPARAM L0004270     0.0000003384      3.49      4.00      3.25
SRCPARAM L0004271     0.0000003384      3.49      4.00      3.25
SRCPARAM L0004272     0.0000003384      3.49      4.00      3.25
SRCPARAM L0004273     0.0000003384      3.49      4.00      3.25
SRCPARAM L0004274     0.0000003384      3.49      4.00      3.25
SRCPARAM L0004275     0.0000003384      3.49      4.00      3.25
SRCPARAM L0004276     0.0000003384      3.49      4.00      3.25
SRCPARAM L0004277     0.0000003384      3.49      4.00      3.25
SRCPARAM L0004278     0.0000003384      3.49      4.00      3.25
SRCPARAM L0004279     0.0000003384      3.49      4.00      3.25
SRCPARAM L0004280     0.0000003384      3.49      4.00      3.25
SRCPARAM L0004281     0.0000003384      3.49      4.00      3.25
SRCPARAM L0004282     0.0000003384      3.49      4.00      3.25
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SRCPARAM L0004289     0.0000003384      3.49      4.00      3.25
SRCPARAM L0004290     0.0000003384      3.49      4.00      3.25
SRCPARAM L0004291     0.0000003384      3.49      4.00      3.25
SRCPARAM L0004292     0.0000003384      3.49      4.00      3.25
SRCPARAM L0004293     0.0000003384      3.49      4.00      3.25
SRCPARAM L0004294     0.0000003384      3.49      4.00      3.25
SRCPARAM L0004295     0.0000003384      3.49      4.00      3.25
SRCPARAM L0004296     0.0000003384      3.49      4.00      3.25
SRCPARAM L0004297     0.0000003384      3.49      4.00      3.25
SRCPARAM L0004298     0.0000003384      3.49      4.00      3.25
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SRCPARAM L0004299     0.0000003384      3.49      4.00      3.25
SRCPARAM L0004300     0.0000003384      3.49      4.00      3.25
SRCPARAM L0004301     0.0000003384      3.49      4.00      3.25
SRCPARAM L0004302     0.0000003384      3.49      4.00      3.25
SRCPARAM L0004303     0.0000003384      3.49      4.00      3.25
SRCPARAM L0004304     0.0000003384      3.49      4.00      3.25
SRCPARAM L0004305     0.0000003384      3.49      4.00      3.25
SRCPARAM L0004306     0.0000003384      3.49      4.00      3.25
SRCPARAM L0004307     0.0000003384      3.49      4.00      3.25
SRCPARAM L0004308     0.0000003384      3.49      4.00      3.25
SRCPARAM L0004309     0.0000003384      3.49      4.00      3.25
SRCPARAM L0004310     0.0000003384      3.49      4.00      3.25
SRCPARAM L0004311     0.0000003384      3.49      4.00      3.25
SRCPARAM L0004312     0.0000003384      3.49      4.00      3.25
SRCPARAM L0004313     0.0000003384      3.49      4.00      3.25
SRCPARAM L0004314     0.0000003384      3.49      4.00      3.25
SRCPARAM L0004315     0.0000003384      3.49      4.00      3.25
SRCPARAM L0004316     0.0000003384      3.49      4.00      3.25
SRCPARAM L0004317     0.0000003384      3.49      4.00      3.25
SRCPARAM L0004318     0.0000003384      3.49      4.00      3.25
SRCPARAM L0004319     0.0000003384      3.49      4.00      3.25
SRCPARAM L0004320     0.0000003384      3.49      4.00      3.25
SRCPARAM L0004321     0.0000003384      3.49      4.00      3.25
SRCPARAM L0004322     0.0000003384      3.49      4.00      3.25
SRCPARAM L0004323     0.0000003384      3.49      4.00      3.25
SRCPARAM L0004324     0.0000003384      3.49      4.00      3.25
SRCPARAM L0004325     0.0000003384      3.49      4.00      3.25
SRCPARAM L0004326     0.0000003384      3.49      4.00      3.25
SRCPARAM L0004327     0.0000003384      3.49      4.00      3.25
SRCPARAM L0004328     0.0000003384      3.49      4.00      3.25
SRCPARAM L0004329     0.0000003384      3.49      4.00      3.25
SRCPARAM L0004330     0.0000003384      3.49      4.00      3.25
SRCPARAM L0004331     0.0000003384      3.49      4.00      3.25
SRCPARAM L0004332     0.0000003384      3.49      4.00      3.25
SRCPARAM L0004333     0.0000003384      3.49      4.00      3.25
SRCPARAM L0004334     0.0000003384      3.49      4.00      3.25
SRCPARAM L0004335     0.0000003384      3.49      4.00      3.25
SRCPARAM L0004336     0.0000003384      3.49      4.00      3.25
SRCPARAM L0004337     0.0000003384      3.49      4.00      3.25
SRCPARAM L0004338     0.0000003384      3.49      4.00      3.25
SRCPARAM L0004339     0.0000003384      3.49      4.00      3.25
SRCPARAM L0004340     0.0000003384      3.49      4.00      3.25
SRCPARAM L0004341     0.0000003384      3.49      4.00      3.25
SRCPARAM L0004342     0.0000003384      3.49      4.00      3.25
SRCPARAM L0004343     0.0000003384      3.49      4.00      3.25
SRCPARAM L0004344     0.0000003384      3.49      4.00      3.25
SRCPARAM L0004345     0.0000003384      3.49      4.00      3.25
SRCPARAM L0004346     0.0000003384      3.49      4.00      3.25
SRCPARAM L0004347     0.0000003384      3.49      4.00      3.25
SRCPARAM L0004348     0.0000003384      3.49      4.00      3.25
SRCPARAM L0004349     0.0000003384      3.49      4.00      3.25
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   SRCPARAM L0004350     0.0000003384      3.49      4.00      3.25
   SRCPARAM L0004351     0.0000003384      3.49      4.00      3.25
   SRCPARAM L0004352     0.0000003384      3.49      4.00      3.25
   SRCPARAM L0004353     0.0000003384      3.49      4.00      3.25
   SRCPARAM L0004354     0.0000003384      3.49      4.00      3.25
   SRCPARAM L0004355     0.0000003384      3.49      4.00      3.25
   SRCPARAM L0004356     0.0000003384      3.49      4.00      3.25
   SRCPARAM L0004357     0.0000003384      3.49      4.00      3.25
   SRCPARAM L0004358     0.0000003384      3.49      4.00      3.25
   SRCPARAM L0004359     0.0000003384      3.49      4.00      3.25
   SRCPARAM L0004360     0.0000003384      3.49      4.00      3.25
   SRCPARAM L0004361     0.0000003384      3.49      4.00      3.25
   SRCPARAM L0004362     0.0000003384      3.49      4.00      3.25
   SRCPARAM L0004363     0.0000003384      3.49      4.00      3.25
   SRCPARAM L0004364     0.0000003384      3.49      4.00      3.25
   SRCPARAM L0004365     0.0000003384      3.49      4.00      3.25
   SRCPARAM L0004366     0.0000003384      3.49      4.00      3.25
   SRCPARAM L0004367     0.0000003384      3.49      4.00      3.25
   SRCPARAM L0004368     0.0000003384      3.49      4.00      3.25
   SRCPARAM L0004369     0.0000003384      3.49      4.00      3.25
   SRCPARAM L0004370     0.0000003384      3.49      4.00      3.25
   SRCPARAM L0004371     0.0000003384      3.49      4.00      3.25
   SRCPARAM L0004372     0.0000003384      3.49      4.00      3.25
   SRCPARAM L0004373     0.0000003384      3.49      4.00      3.25
   SRCPARAM L0004374     0.0000003384      3.49      4.00      3.25
   SRCPARAM L0004375     0.0000003384      3.49      4.00      3.25
   SRCPARAM L0004376     0.0000003384      3.49      4.00      3.25
   SRCPARAM L0004377     0.0000003384      3.49      4.00      3.25
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** LINE VOLUME Source ID = SLINE3
   SRCPARAM L0004378     0.0000009583      3.49      4.00      3.25
   SRCPARAM L0004379     0.0000009583      3.49      4.00      3.25
   SRCPARAM L0004380     0.0000009583      3.49      4.00      3.25
   SRCPARAM L0004381     0.0000009583      3.49      4.00      3.25
   SRCPARAM L0004382     0.0000009583      3.49      4.00      3.25
   SRCPARAM L0004383     0.0000009583      3.49      4.00      3.25
   SRCPARAM L0004384     0.0000009583      3.49      4.00      3.25
   SRCPARAM L0004385     0.0000009583      3.49      4.00      3.25
   SRCPARAM L0004386     0.0000009583      3.49      4.00      3.25
   SRCPARAM L0004387     0.0000009583      3.49      4.00      3.25
   SRCPARAM L0004388     0.0000009583      3.49      4.00      3.25
   SRCPARAM L0004389     0.0000009583      3.49      4.00      3.25
   SRCPARAM L0004390     0.0000009583      3.49      4.00      3.25
   SRCPARAM L0004391     0.0000009583      3.49      4.00      3.25
   SRCPARAM L0004392     0.0000009583      3.49      4.00      3.25
   SRCPARAM L0004393     0.0000009583      3.49      4.00      3.25
   SRCPARAM L0004394     0.0000009583      3.49      4.00      3.25
   SRCPARAM L0004395     0.0000009583      3.49      4.00      3.25
   SRCPARAM L0004396     0.0000009583      3.49      4.00      3.25
   SRCPARAM L0004397     0.0000009583      3.49      4.00      3.25
   SRCPARAM L0004398     0.0000009583      3.49      4.00      3.25
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SRCPARAM L0004399     0.0000009583      3.49      4.00      3.25
SRCPARAM L0004400     0.0000009583      3.49      4.00      3.25
SRCPARAM L0004401     0.0000009583      3.49      4.00      3.25
SRCPARAM L0004402     0.0000009583      3.49      4.00      3.25
SRCPARAM L0004403     0.0000009583      3.49      4.00      3.25
SRCPARAM L0004404     0.0000009583      3.49      4.00      3.25
SRCPARAM L0004405     0.0000009583      3.49      4.00      3.25
SRCPARAM L0004406     0.0000009583      3.49      4.00      3.25
SRCPARAM L0004407     0.0000009583      3.49      4.00      3.25
SRCPARAM L0004408     0.0000009583      3.49      4.00      3.25
SRCPARAM L0004409     0.0000009583      3.49      4.00      3.25
SRCPARAM L0004410     0.0000009583      3.49      4.00      3.25
SRCPARAM L0004411     0.0000009583      3.49      4.00      3.25
SRCPARAM L0004412     0.0000009583      3.49      4.00      3.25
SRCPARAM L0004413     0.0000009583      3.49      4.00      3.25
SRCPARAM L0004414     0.0000009583      3.49      4.00      3.25
SRCPARAM L0004415     0.0000009583      3.49      4.00      3.25
SRCPARAM L0004416     0.0000009583      3.49      4.00      3.25
SRCPARAM L0004417     0.0000009583      3.49      4.00      3.25
SRCPARAM L0004418     0.0000009583      3.49      4.00      3.25
SRCPARAM L0004419     0.0000009583      3.49      4.00      3.25
SRCPARAM L0004420     0.0000009583      3.49      4.00      3.25
SRCPARAM L0004421     0.0000009583      3.49      4.00      3.25
SRCPARAM L0004422     0.0000009583      3.49      4.00      3.25
SRCPARAM L0004423     0.0000009583      3.49      4.00      3.25
SRCPARAM L0004424     0.0000009583      3.49      4.00      3.25
SRCPARAM L0004425     0.0000009583      3.49      4.00      3.25
SRCPARAM L0004426     0.0000009583      3.49      4.00      3.25
SRCPARAM L0004427     0.0000009583      3.49      4.00      3.25
SRCPARAM L0004428     0.0000009583      3.49      4.00      3.25
SRCPARAM L0004429     0.0000009583      3.49      4.00      3.25
SRCPARAM L0004430     0.0000009583      3.49      4.00      3.25
SRCPARAM L0004431     0.0000009583      3.49      4.00      3.25
SRCPARAM L0004432     0.0000009583      3.49      4.00      3.25
SRCPARAM L0004433     0.0000009583      3.49      4.00      3.25
SRCPARAM L0004434     0.0000009583      3.49      4.00      3.25
SRCPARAM L0004435     0.0000009583      3.49      4.00      3.25
SRCPARAM L0004436     0.0000009583      3.49      4.00      3.25
SRCPARAM L0004437     0.0000009583      3.49      4.00      3.25
SRCPARAM L0004438     0.0000009583      3.49      4.00      3.25
SRCPARAM L0004439     0.0000009583      3.49      4.00      3.25
SRCPARAM L0004440     0.0000009583      3.49      4.00      3.25
SRCPARAM L0004441     0.0000009583      3.49      4.00      3.25
SRCPARAM L0004442     0.0000009583      3.49      4.00      3.25
SRCPARAM L0004443     0.0000009583      3.49      4.00      3.25
SRCPARAM L0004444     0.0000009583      3.49      4.00      3.25
SRCPARAM L0004445     0.0000009583      3.49      4.00      3.25
SRCPARAM L0004446     0.0000009583      3.49      4.00      3.25
SRCPARAM L0004447     0.0000009583      3.49      4.00      3.25
SRCPARAM L0004448     0.0000009583      3.49      4.00      3.25
SRCPARAM L0004449     0.0000009583      3.49      4.00      3.25
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   SRCPARAM L0004450     0.0000009583      3.49      4.00      3.25
   SRCPARAM L0004451     0.0000009583      3.49      4.00      3.25
   SRCPARAM L0004452     0.0000009583      3.49      4.00      3.25
   SRCPARAM L0004453     0.0000009583      3.49      4.00      3.25
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** LINE VOLUME Source ID = SLINE4
   SRCPARAM L0004454     0.000002716      3.49      4.00      3.25
   SRCPARAM L0004455     0.000002716      3.49      4.00      3.25
   SRCPARAM L0004456     0.000002716      3.49      4.00      3.25
   SRCPARAM L0004457     0.000002716      3.49      4.00      3.25
   SRCPARAM L0004458     0.000002716      3.49      4.00      3.25
   SRCPARAM L0004459     0.000002716      3.49      4.00      3.25
   SRCPARAM L0004460     0.000002716      3.49      4.00      3.25
   SRCPARAM L0004461     0.000002716      3.49      4.00      3.25
   SRCPARAM L0004462     0.000002716      3.49      4.00      3.25
   SRCPARAM L0004463     0.000002716      3.49      4.00      3.25
   SRCPARAM L0004464     0.000002716      3.49      4.00      3.25
   SRCPARAM L0004465     0.000002716      3.49      4.00      3.25
   SRCPARAM L0004466     0.000002716      3.49      4.00      3.25
   SRCPARAM L0004467     0.000002716      3.49      4.00      3.25
   SRCPARAM L0004468     0.000002716      3.49      4.00      3.25
   SRCPARAM L0004469     0.000002716      3.49      4.00      3.25
   SRCPARAM L0004470     0.000002716      3.49      4.00      3.25
   SRCPARAM L0004471     0.000002716      3.49      4.00      3.25
   SRCPARAM L0004472     0.000002716      3.49      4.00      3.25
   SRCPARAM L0004473     0.000002716      3.49      4.00      3.25
   SRCPARAM L0004474     0.000002716      3.49      4.00      3.25
   SRCPARAM L0004475     0.000002716      3.49      4.00      3.25
   SRCPARAM L0004476     0.000002716      3.49      4.00      3.25
   SRCPARAM L0004477     0.000002716      3.49      4.00      3.25
   SRCPARAM L0004478     0.000002716      3.49      4.00      3.25
   SRCPARAM L0004479     0.000002716      3.49      4.00      3.25
   SRCPARAM L0004480     0.000002716      3.49      4.00      3.25
   SRCPARAM L0004481     0.000002716      3.49      4.00      3.25
   SRCPARAM L0004482     0.000002716      3.49      4.00      3.25
   SRCPARAM L0004483     0.000002716      3.49      4.00      3.25
   SRCPARAM L0004484     0.000002716      3.49      4.00      3.25
   SRCPARAM L0004485     0.000002716      3.49      4.00      3.25
   SRCPARAM L0004486     0.000002716      3.49      4.00      3.25
   SRCPARAM L0004487     0.000002716      3.49      4.00      3.25
   SRCPARAM L0004488     0.000002716      3.49      4.00      3.25
   SRCPARAM L0004489     0.000002716      3.49      4.00      3.25
   SRCPARAM L0004490     0.000002716      3.49      4.00      3.25
   SRCPARAM L0004491     0.000002716      3.49      4.00      3.25
   SRCPARAM L0004492     0.000002716      3.49      4.00      3.25
   SRCPARAM L0004493     0.000002716      3.49      4.00      3.25
   SRCPARAM L0004494     0.000002716      3.49      4.00      3.25
   SRCPARAM L0004495     0.000002716      3.49      4.00      3.25
   SRCPARAM L0004496     0.000002716      3.49      4.00      3.25
   SRCPARAM L0004497     0.000002716      3.49      4.00      3.25
   SRCPARAM L0004498     0.000002716      3.49      4.00      3.25
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SRCPARAM L0004499     0.000002716      3.49      4.00      3.25
SRCPARAM L0004500     0.000002716      3.49      4.00      3.25
SRCPARAM L0004501     0.000002716      3.49      4.00      3.25
SRCPARAM L0004502     0.000002716      3.49      4.00      3.25
SRCPARAM L0004503     0.000002716      3.49      4.00      3.25
SRCPARAM L0004504     0.000002716      3.49      4.00      3.25
SRCPARAM L0004505     0.000002716      3.49      4.00      3.25
SRCPARAM L0004506     0.000002716      3.49      4.00      3.25
SRCPARAM L0004507     0.000002716      3.49      4.00      3.25
SRCPARAM L0004508     0.000002716      3.49      4.00      3.25
SRCPARAM L0004509     0.000002716      3.49      4.00      3.25
SRCPARAM L0004510     0.000002716      3.49      4.00      3.25
SRCPARAM L0004511     0.000002716      3.49      4.00      3.25
SRCPARAM L0004512     0.000002716      3.49      4.00      3.25
SRCPARAM L0004513     0.000002716      3.49      4.00      3.25
SRCPARAM L0004514     0.000002716      3.49      4.00      3.25
SRCPARAM L0004515     0.000002716      3.49      4.00      3.25
SRCPARAM L0004516     0.000002716      3.49      4.00      3.25
SRCPARAM L0004517     0.000002716      3.49      4.00      3.25
SRCPARAM L0004518     0.000002716      3.49      4.00      3.25
SRCPARAM L0004519     0.000002716      3.49      4.00      3.25
SRCPARAM L0004520     0.000002716      3.49      4.00      3.25
SRCPARAM L0004521     0.000002716      3.49      4.00      3.25
SRCPARAM L0004522     0.000002716      3.49      4.00      3.25
SRCPARAM L0004523     0.000002716      3.49      4.00      3.25
SRCPARAM L0004524     0.000002716      3.49      4.00      3.25
SRCPARAM L0004525     0.000002716      3.49      4.00      3.25
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SRCPARAM L0004547     0.000002716      3.49      4.00      3.25
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SRCPARAM L0004818     0.000001348      3.49      4.00      3.25
SRCPARAM L0004819     0.000001348      3.49      4.00      3.25
SRCPARAM L0004820     0.000001348      3.49      4.00      3.25
SRCPARAM L0004821     0.000001348      3.49      4.00      3.25
SRCPARAM L0004822     0.000001348      3.49      4.00      3.25
SRCPARAM L0004823     0.000001348      3.49      4.00      3.25
SRCPARAM L0004824     0.000001348      3.49      4.00      3.25
SRCPARAM L0004825     0.000001348      3.49      4.00      3.25
SRCPARAM L0004826     0.000001348      3.49      4.00      3.25
SRCPARAM L0004827     0.000001348      3.49      4.00      3.25
SRCPARAM L0004828     0.000001348      3.49      4.00      3.25
SRCPARAM L0004829     0.000001348      3.49      4.00      3.25
SRCPARAM L0004830     0.000001348      3.49      4.00      3.25
SRCPARAM L0004831     0.000001348      3.49      4.00      3.25
SRCPARAM L0004832     0.000001348      3.49      4.00      3.25
SRCPARAM L0004833     0.000001348      3.49      4.00      3.25
SRCPARAM L0004834     0.000001348      3.49      4.00      3.25
SRCPARAM L0004835     0.000001348      3.49      4.00      3.25
SRCPARAM L0004836     0.000001348      3.49      4.00      3.25
SRCPARAM L0004837     0.000001348      3.49      4.00      3.25
SRCPARAM L0004838     0.000001348      3.49      4.00      3.25
SRCPARAM L0004839     0.000001348      3.49      4.00      3.25
SRCPARAM L0004840     0.000001348      3.49      4.00      3.25
SRCPARAM L0004841     0.000001348      3.49      4.00      3.25
SRCPARAM L0004842     0.000001348      3.49      4.00      3.25
SRCPARAM L0004843     0.000001348      3.49      4.00      3.25
SRCPARAM L0004844     0.000001348      3.49      4.00      3.25
SRCPARAM L0004845     0.000001348      3.49      4.00      3.25
SRCPARAM L0004846     0.000001348      3.49      4.00      3.25
SRCPARAM L0004847     0.000001348      3.49      4.00      3.25
SRCPARAM L0004848     0.000001348      3.49      4.00      3.25
SRCPARAM L0004849     0.000001348      3.49      4.00      3.25
SRCPARAM L0004850     0.000001348      3.49      4.00      3.25
SRCPARAM L0004851     0.000001348      3.49      4.00      3.25
SRCPARAM L0004852     0.000001348      3.49      4.00      3.25
SRCPARAM L0004853     0.000001348      3.49      4.00      3.25
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SRCPARAM L0004854     0.000001348      3.49      4.00      3.25
SRCPARAM L0004855     0.000001348      3.49      4.00      3.25
SRCPARAM L0004856     0.000001348      3.49      4.00      3.25
SRCPARAM L0004857     0.000001348      3.49      4.00      3.25
SRCPARAM L0004858     0.000001348      3.49      4.00      3.25
SRCPARAM L0004859     0.000001348      3.49      4.00      3.25
SRCPARAM L0004860     0.000001348      3.49      4.00      3.25
SRCPARAM L0004861     0.000001348      3.49      4.00      3.25
SRCPARAM L0004862     0.000001348      3.49      4.00      3.25
SRCPARAM L0004863     0.000001348      3.49      4.00      3.25
SRCPARAM L0004864     0.000001348      3.49      4.00      3.25
SRCPARAM L0004865     0.000001348      3.49      4.00      3.25
SRCPARAM L0004866     0.000001348      3.49      4.00      3.25
SRCPARAM L0004867     0.000001348      3.49      4.00      3.25
SRCPARAM L0004868     0.000001348      3.49      4.00      3.25
SRCPARAM L0004869     0.000001348      3.49      4.00      3.25
SRCPARAM L0004870     0.000001348      3.49      4.00      3.25
SRCPARAM L0004871     0.000001348      3.49      4.00      3.25
SRCPARAM L0004872     0.000001348      3.49      4.00      3.25
SRCPARAM L0004873     0.000001348      3.49      4.00      3.25
SRCPARAM L0004874     0.000001348      3.49      4.00      3.25
SRCPARAM L0004875     0.000001348      3.49      4.00      3.25
SRCPARAM L0004876     0.000001348      3.49      4.00      3.25
SRCPARAM L0004877     0.000001348      3.49      4.00      3.25
SRCPARAM L0004878     0.000001348      3.49      4.00      3.25
SRCPARAM L0004879     0.000001348      3.49      4.00      3.25
SRCPARAM L0004880     0.000001348      3.49      4.00      3.25
SRCPARAM L0004881     0.000001348      3.49      4.00      3.25
SRCPARAM L0004882     0.000001348      3.49      4.00      3.25
SRCPARAM L0004883     0.000001348      3.49      4.00      3.25
SRCPARAM L0004884     0.000001348      3.49      4.00      3.25
SRCPARAM L0004885     0.000001348      3.49      4.00      3.25
SRCPARAM L0004886     0.000001348      3.49      4.00      3.25
SRCPARAM L0004887     0.000001348      3.49      4.00      3.25
SRCPARAM L0004888     0.000001348      3.49      4.00      3.25
SRCPARAM L0004889     0.000001348      3.49      4.00      3.25
SRCPARAM L0004890     0.000001348      3.49      4.00      3.25
SRCPARAM L0004891     0.000001348      3.49      4.00      3.25
SRCPARAM L0004892     0.000001348      3.49      4.00      3.25
SRCPARAM L0004893     0.000001348      3.49      4.00      3.25
SRCPARAM L0004894     0.000001348      3.49      4.00      3.25
SRCPARAM L0004895     0.000001348      3.49      4.00      3.25
SRCPARAM L0004896     0.000001348      3.49      4.00      3.25
SRCPARAM L0004897     0.000001348      3.49      4.00      3.25
SRCPARAM L0004898     0.000001348      3.49      4.00      3.25
SRCPARAM L0004899     0.000001348      3.49      4.00      3.25
SRCPARAM L0004900     0.000001348      3.49      4.00      3.25
SRCPARAM L0004901     0.000001348      3.49      4.00      3.25
SRCPARAM L0004902     0.000001348      3.49      4.00      3.25
SRCPARAM L0004903     0.000001348      3.49      4.00      3.25
SRCPARAM L0004904     0.000001348      3.49      4.00      3.25
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   SRCPARAM L0004905     0.000001348      3.49      4.00      3.25
   SRCPARAM L0004906     0.000001348      3.49      4.00      3.25
   SRCPARAM L0004907     0.000001348      3.49      4.00      3.25
   SRCPARAM L0004908     0.000001348      3.49      4.00      3.25
   SRCPARAM L0004909     0.000001348      3.49      4.00      3.25
   SRCPARAM L0004910     0.000001348      3.49      4.00      3.25
   SRCPARAM L0004911     0.000001348      3.49      4.00      3.25
   SRCPARAM L0004912     0.000001348      3.49      4.00      3.25
   SRCPARAM L0004913     0.000001348      3.49      4.00      3.25
   SRCPARAM L0004914     0.000001348      3.49      4.00      3.25
   SRCPARAM L0004915     0.000001348      3.49      4.00      3.25
   SRCPARAM L0004916     0.000001348      3.49      4.00      3.25
   SRCPARAM L0004917     0.000001348      3.49      4.00      3.25
   SRCPARAM L0004918     0.000001348      3.49      4.00      3.25
   SRCPARAM L0004919     0.000001348      3.49      4.00      3.25
   SRCPARAM L0004920     0.000001348      3.49      4.00      3.25
   SRCPARAM L0004921     0.000001348      3.49      4.00      3.25
   SRCPARAM L0004922     0.000001348      3.49      4.00      3.25
   SRCPARAM L0004923     0.000001348      3.49      4.00      3.25
   SRCPARAM L0004924     0.000001348      3.49      4.00      3.25
   SRCPARAM L0004925     0.000001348      3.49      4.00      3.25
   SRCPARAM L0004926     0.000001348      3.49      4.00      3.25
   SRCPARAM L0004927     0.000001348      3.49      4.00      3.25
   SRCPARAM L0004928     0.000001348      3.49      4.00      3.25
   SRCPARAM L0004929     0.000001348      3.49      4.00      3.25
   SRCPARAM L0004930     0.000001348      3.49      4.00      3.25
   SRCPARAM L0004931     0.000001348      3.49      4.00      3.25
   SRCPARAM L0004932     0.000001348      3.49      4.00      3.25
   SRCPARAM L0004933     0.000001348      3.49      4.00      3.25
   SRCPARAM L0004934     0.000001348      3.49      4.00      3.25
   SRCPARAM L0004935     0.000001348      3.49      4.00      3.25
   SRCPARAM L0004936     0.000001348      3.49      4.00      3.25
   SRCPARAM L0004937     0.000001348      3.49      4.00      3.25
   SRCPARAM L0004938     0.000001348      3.49      4.00      3.25
   SRCPARAM L0004939     0.000001348      3.49      4.00      3.25
   SRCPARAM L0004940     0.000001348      3.49      4.00      3.25
   SRCPARAM L0004941     0.000001348      3.49      4.00      3.25
   SRCPARAM L0004942     0.000001348      3.49      4.00      3.25
   SRCPARAM L0004943     0.000001348      3.49      4.00      3.25
   SRCPARAM L0004944     0.000001348      3.49      4.00      3.25
   SRCPARAM L0004945     0.000001348      3.49      4.00      3.25
   SRCPARAM L0004946     0.000001348      3.49      4.00      3.25
   SRCPARAM L0004947     0.000001348      3.49      4.00      3.25
   SRCPARAM L0004948     0.000001348      3.49      4.00      3.25
   SRCPARAM L0004949     0.000001348      3.49      4.00      3.25
   SRCPARAM L0004950     0.000001348      3.49      4.00      3.25
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** LINE VOLUME Source ID = SLINE6
   SRCPARAM L0004951     0.000001448      3.49      4.00      3.25
   SRCPARAM L0004952     0.000001448      3.49      4.00      3.25
   SRCPARAM L0004953     0.000001448      3.49      4.00      3.25
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   SRCPARAM L0004954     0.000001448      3.49      4.00      3.25
   SRCPARAM L0004955     0.000001448      3.49      4.00      3.25
   SRCPARAM L0004956     0.000001448      3.49      4.00      3.25
   SRCPARAM L0004957     0.000001448      3.49      4.00      3.25
   SRCPARAM L0004958     0.000001448      3.49      4.00      3.25
   SRCPARAM L0004959     0.000001448      3.49      4.00      3.25
   SRCPARAM L0004960     0.000001448      3.49      4.00      3.25
   SRCPARAM L0004961     0.000001448      3.49      4.00      3.25
   SRCPARAM L0004962     0.000001448      3.49      4.00      3.25
   SRCPARAM L0004963     0.000001448      3.49      4.00      3.25
   SRCPARAM L0004964     0.000001448      3.49      4.00      3.25
   SRCPARAM L0004965     0.000001448      3.49      4.00      3.25
   SRCPARAM L0004966     0.000001448      3.49      4.00      3.25
   SRCPARAM L0004967     0.000001448      3.49      4.00      3.25
   SRCPARAM L0004968     0.000001448      3.49      4.00      3.25
   SRCPARAM L0004969     0.000001448      3.49      4.00      3.25
   SRCPARAM L0004970     0.000001448      3.49      4.00      3.25
   SRCPARAM L0004971     0.000001448      3.49      4.00      3.25
   SRCPARAM L0004972     0.000001448      3.49      4.00      3.25
   SRCPARAM L0004973     0.000001448      3.49      4.00      3.25
   SRCPARAM L0004974     0.000001448      3.49      4.00      3.25
   SRCPARAM L0004975     0.000001448      3.49      4.00      3.25
   SRCPARAM L0004976     0.000001448      3.49      4.00      3.25
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** LINE VOLUME Source ID = SLINE7
   SRCPARAM L0004977     0.000001776      3.49      4.00      3.25
   SRCPARAM L0004978     0.000001776      3.49      4.00      3.25
   SRCPARAM L0004979     0.000001776      3.49      4.00      3.25
   SRCPARAM L0004980     0.000001776      3.49      4.00      3.25
   SRCPARAM L0004981     0.000001776      3.49      4.00      3.25
   SRCPARAM L0004982     0.000001776      3.49      4.00      3.25
   SRCPARAM L0004983     0.000001776      3.49      4.00      3.25
   SRCPARAM L0004984     0.000001776      3.49      4.00      3.25
   SRCPARAM L0004985     0.000001776      3.49      4.00      3.25
   SRCPARAM L0004986     0.000001776      3.49      4.00      3.25
   SRCPARAM L0004987     0.000001776      3.49      4.00      3.25
   SRCPARAM L0004988     0.000001776      3.49      4.00      3.25
   SRCPARAM L0004989     0.000001776      3.49      4.00      3.25
   SRCPARAM L0004990     0.000001776      3.49      4.00      3.25
   SRCPARAM L0004991     0.000001776      3.49      4.00      3.25
   SRCPARAM L0004992     0.000001776      3.49      4.00      3.25
   SRCPARAM L0004993     0.000001776      3.49      4.00      3.25
   SRCPARAM L0004994     0.000001776      3.49      4.00      3.25
   SRCPARAM L0004995     0.000001776      3.49      4.00      3.25
   SRCPARAM L0004996     0.000001776      3.49      4.00      3.25
   SRCPARAM L0004997     0.000001776      3.49      4.00      3.25
   SRCPARAM L0004998     0.000001776      3.49      4.00      3.25
   SRCPARAM L0004999     0.000001776      3.49      4.00      3.25
   SRCPARAM L0005000     0.000001776      3.49      4.00      3.25
   SRCPARAM L0005001     0.000001776      3.49      4.00      3.25
   SRCPARAM L0005002     0.000001776      3.49      4.00      3.25
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SRCPARAM L0005003     0.000001776      3.49      4.00      3.25
SRCPARAM L0005004     0.000001776      3.49      4.00      3.25
SRCPARAM L0005005     0.000001776      3.49      4.00      3.25
SRCPARAM L0005006     0.000001776      3.49      4.00      3.25
SRCPARAM L0005007     0.000001776      3.49      4.00      3.25
SRCPARAM L0005008     0.000001776      3.49      4.00      3.25
SRCPARAM L0005009     0.000001776      3.49      4.00      3.25
SRCPARAM L0005010     0.000001776      3.49      4.00      3.25
SRCPARAM L0005011     0.000001776      3.49      4.00      3.25
SRCPARAM L0005012     0.000001776      3.49      4.00      3.25
SRCPARAM L0005013     0.000001776      3.49      4.00      3.25
SRCPARAM L0005014     0.000001776      3.49      4.00      3.25
SRCPARAM L0005015     0.000001776      3.49      4.00      3.25
SRCPARAM L0005016     0.000001776      3.49      4.00      3.25
SRCPARAM L0005017     0.000001776      3.49      4.00      3.25
SRCPARAM L0005018     0.000001776      3.49      4.00      3.25
SRCPARAM L0005019     0.000001776      3.49      4.00      3.25
SRCPARAM L0005020     0.000001776      3.49      4.00      3.25
SRCPARAM L0005021     0.000001776      3.49      4.00      3.25
SRCPARAM L0005022     0.000001776      3.49      4.00      3.25
SRCPARAM L0005023     0.000001776      3.49      4.00      3.25
SRCPARAM L0005024     0.000001776      3.49      4.00      3.25
SRCPARAM L0005025     0.000001776      3.49      4.00      3.25
SRCPARAM L0005026     0.000001776      3.49      4.00      3.25
SRCPARAM L0005027     0.000001776      3.49      4.00      3.25
SRCPARAM L0005028     0.000001776      3.49      4.00      3.25
SRCPARAM L0005029     0.000001776      3.49      4.00      3.25
SRCPARAM L0005030     0.000001776      3.49      4.00      3.25
SRCPARAM L0005031     0.000001776      3.49      4.00      3.25
SRCPARAM L0005032     0.000001776      3.49      4.00      3.25
SRCPARAM L0005033     0.000001776      3.49      4.00      3.25
SRCPARAM L0005034     0.000001776      3.49      4.00      3.25
SRCPARAM L0005035     0.000001776      3.49      4.00      3.25
SRCPARAM L0005036     0.000001776      3.49      4.00      3.25
SRCPARAM L0005037     0.000001776      3.49      4.00      3.25
SRCPARAM L0005038     0.000001776      3.49      4.00      3.25
SRCPARAM L0005039     0.000001776      3.49      4.00      3.25
SRCPARAM L0005040     0.000001776      3.49      4.00      3.25
SRCPARAM L0005041     0.000001776      3.49      4.00      3.25
SRCPARAM L0005042     0.000001776      3.49      4.00      3.25
SRCPARAM L0005043     0.000001776      3.49      4.00      3.25
SRCPARAM L0005044     0.000001776      3.49      4.00      3.25
SRCPARAM L0005045     0.000001776      3.49      4.00      3.25
SRCPARAM L0005046     0.000001776      3.49      4.00      3.25
SRCPARAM L0005047     0.000001776      3.49      4.00      3.25
SRCPARAM L0005048     0.000001776      3.49      4.00      3.25
SRCPARAM L0005049     0.000001776      3.49      4.00      3.25
SRCPARAM L0005050     0.000001776      3.49      4.00      3.25
SRCPARAM L0005051     0.000001776      3.49      4.00      3.25
SRCPARAM L0005052     0.000001776      3.49      4.00      3.25
SRCPARAM L0005053     0.000001776      3.49      4.00      3.25
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   SRCPARAM L0005054     0.000001776      3.49      4.00      3.25
   SRCPARAM L0005055     0.000001776      3.49      4.00      3.25
   SRCPARAM L0005056     0.000001776      3.49      4.00      3.25
   SRCPARAM L0005057     0.000001776      3.49      4.00      3.25
   SRCPARAM L0005058     0.000001776      3.49      4.00      3.25
   SRCPARAM L0005059     0.000001776      3.49      4.00      3.25
   SRCPARAM L0005060     0.000001776      3.49      4.00      3.25
   SRCPARAM L0005061     0.000001776      3.49      4.00      3.25
   SRCPARAM L0005062     0.000001776      3.49      4.00      3.25
   SRCPARAM L0005063     0.000001776      3.49      4.00      3.25
   SRCPARAM L0005064     0.000001776      3.49      4.00      3.25
   SRCPARAM L0005065     0.000001776      3.49      4.00      3.25
   SRCPARAM L0005066     0.000001776      3.49      4.00      3.25
   SRCPARAM L0005067     0.000001776      3.49      4.00      3.25
   SRCPARAM L0005068     0.000001776      3.49      4.00      3.25
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** LINE VOLUME Source ID = SLINE8
   SRCPARAM L0005069     0.000001875      3.49      4.00      3.25
   SRCPARAM L0005070     0.000001875      3.49      4.00      3.25
   SRCPARAM L0005071     0.000001875      3.49      4.00      3.25
   SRCPARAM L0005072     0.000001875      3.49      4.00      3.25
   SRCPARAM L0005073     0.000001875      3.49      4.00      3.25
   SRCPARAM L0005074     0.000001875      3.49      4.00      3.25
   SRCPARAM L0005075     0.000001875      3.49      4.00      3.25
   SRCPARAM L0005076     0.000001875      3.49      4.00      3.25
   SRCPARAM L0005077     0.000001875      3.49      4.00      3.25
   SRCPARAM L0005078     0.000001875      3.49      4.00      3.25
   SRCPARAM L0005079     0.000001875      3.49      4.00      3.25
   SRCPARAM L0005080     0.000001875      3.49      4.00      3.25
   SRCPARAM L0005081     0.000001875      3.49      4.00      3.25
   SRCPARAM L0005082     0.000001875      3.49      4.00      3.25
   SRCPARAM L0005083     0.000001875      3.49      4.00      3.25
   SRCPARAM L0005084     0.000001875      3.49      4.00      3.25
   SRCPARAM L0005085     0.000001875      3.49      4.00      3.25
   SRCPARAM L0005086     0.000001875      3.49      4.00      3.25
   SRCPARAM L0005087     0.000001875      3.49      4.00      3.25
   SRCPARAM L0005088     0.000001875      3.49      4.00      3.25
   SRCPARAM L0005089     0.000001875      3.49      4.00      3.25
   SRCPARAM L0005090     0.000001875      3.49      4.00      3.25
   SRCPARAM L0005091     0.000001875      3.49      4.00      3.25
   SRCPARAM L0005092     0.000001875      3.49      4.00      3.25
   SRCPARAM L0005093     0.000001875      3.49      4.00      3.25
   SRCPARAM L0005094     0.000001875      3.49      4.00      3.25
   SRCPARAM L0005095     0.000001875      3.49      4.00      3.25
   SRCPARAM L0005096     0.000001875      3.49      4.00      3.25
   SRCPARAM L0005097     0.000001875      3.49      4.00      3.25
   SRCPARAM L0005098     0.000001875      3.49      4.00      3.25
   SRCPARAM L0005099     0.000001875      3.49      4.00      3.25
   SRCPARAM L0005100     0.000001875      3.49      4.00      3.25
   SRCPARAM L0005101     0.000001875      3.49      4.00      3.25
   SRCPARAM L0005102     0.000001875      3.49      4.00      3.25
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SRCPARAM L0005103     0.000001875      3.49      4.00      3.25
SRCPARAM L0005104     0.000001875      3.49      4.00      3.25
SRCPARAM L0005105     0.000001875      3.49      4.00      3.25
SRCPARAM L0005106     0.000001875      3.49      4.00      3.25
SRCPARAM L0005107     0.000001875      3.49      4.00      3.25
SRCPARAM L0005108     0.000001875      3.49      4.00      3.25
SRCPARAM L0005109     0.000001875      3.49      4.00      3.25
SRCPARAM L0005110     0.000001875      3.49      4.00      3.25
SRCPARAM L0005111     0.000001875      3.49      4.00      3.25
SRCPARAM L0005112     0.000001875      3.49      4.00      3.25
SRCPARAM L0005113     0.000001875      3.49      4.00      3.25
SRCPARAM L0005114     0.000001875      3.49      4.00      3.25
SRCPARAM L0005115     0.000001875      3.49      4.00      3.25
SRCPARAM L0005116     0.000001875      3.49      4.00      3.25
SRCPARAM L0005117     0.000001875      3.49      4.00      3.25
SRCPARAM L0005118     0.000001875      3.49      4.00      3.25
SRCPARAM L0005119     0.000001875      3.49      4.00      3.25
SRCPARAM L0005120     0.000001875      3.49      4.00      3.25
SRCPARAM L0005121     0.000001875      3.49      4.00      3.25
SRCPARAM L0005122     0.000001875      3.49      4.00      3.25
SRCPARAM L0005123     0.000001875      3.49      4.00      3.25
SRCPARAM L0005124     0.000001875      3.49      4.00      3.25
SRCPARAM L0005125     0.000001875      3.49      4.00      3.25
SRCPARAM L0005126     0.000001875      3.49      4.00      3.25
SRCPARAM L0005127     0.000001875      3.49      4.00      3.25
SRCPARAM L0005128     0.000001875      3.49      4.00      3.25
SRCPARAM L0005129     0.000001875      3.49      4.00      3.25
SRCPARAM L0005130     0.000001875      3.49      4.00      3.25
SRCPARAM L0005131     0.000001875      3.49      4.00      3.25
SRCPARAM L0005132     0.000001875      3.49      4.00      3.25
SRCPARAM L0005133     0.000001875      3.49      4.00      3.25
SRCPARAM L0005134     0.000001875      3.49      4.00      3.25
SRCPARAM L0005135     0.000001875      3.49      4.00      3.25
SRCPARAM L0005136     0.000001875      3.49      4.00      3.25
SRCPARAM L0005137     0.000001875      3.49      4.00      3.25
SRCPARAM L0005138     0.000001875      3.49      4.00      3.25
SRCPARAM L0005139     0.000001875      3.49      4.00      3.25
SRCPARAM L0005140     0.000001875      3.49      4.00      3.25
SRCPARAM L0005141     0.000001875      3.49      4.00      3.25
SRCPARAM L0005142     0.000001875      3.49      4.00      3.25
SRCPARAM L0005143     0.000001875      3.49      4.00      3.25
SRCPARAM L0005144     0.000001875      3.49      4.00      3.25
SRCPARAM L0005145     0.000001875      3.49      4.00      3.25
SRCPARAM L0005146     0.000001875      3.49      4.00      3.25
SRCPARAM L0005147     0.000001875      3.49      4.00      3.25
SRCPARAM L0005148     0.000001875      3.49      4.00      3.25
SRCPARAM L0005149     0.000001875      3.49      4.00      3.25
SRCPARAM L0005150     0.000001875      3.49      4.00      3.25
SRCPARAM L0005151     0.000001875      3.49      4.00      3.25
SRCPARAM L0005152     0.000001875      3.49      4.00      3.25
SRCPARAM L0005153     0.000001875      3.49      4.00      3.25
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   SRCPARAM L0005154     0.000001875      3.49      4.00      3.25
   SRCPARAM L0005155     0.000001875      3.49      4.00      3.25
   SRCPARAM L0005156     0.000001875      3.49      4.00      3.25
   SRCPARAM L0005157     0.000001875      3.49      4.00      3.25
   SRCPARAM L0005158     0.000001875      3.49      4.00      3.25
   SRCPARAM L0005159     0.000001875      3.49      4.00      3.25
   SRCPARAM L0005160     0.000001875      3.49      4.00      3.25
   SRCPARAM L0005161     0.000001875      3.49      4.00      3.25
   SRCPARAM L0005162     0.000001875      3.49      4.00      3.25
   SRCPARAM L0005163     0.000001875      3.49      4.00      3.25
   SRCPARAM L0005164     0.000001875      3.49      4.00      3.25
   SRCPARAM L0005165     0.000001875      3.49      4.00      3.25
   SRCPARAM L0005166     0.000001875      3.49      4.00      3.25
   SRCPARAM L0005167     0.000001875      3.49      4.00      3.25
   SRCPARAM L0005168     0.000001875      3.49      4.00      3.25
   SRCPARAM L0005169     0.000001875      3.49      4.00      3.25
   SRCPARAM L0005170     0.000001875      3.49      4.00      3.25
   SRCPARAM L0005171     0.000001875      3.49      4.00      3.25
   SRCPARAM L0005172     0.000001875      3.49      4.00      3.25
   SRCPARAM L0005173     0.000001875      3.49      4.00      3.25
   SRCPARAM L0005174     0.000001875      3.49      4.00      3.25
   SRCPARAM L0005175     0.000001875      3.49      4.00      3.25
   SRCPARAM L0005176     0.000001875      3.49      4.00      3.25
   SRCPARAM L0005177     0.000001875      3.49      4.00      3.25
   SRCPARAM L0005178     0.000001875      3.49      4.00      3.25
   SRCPARAM L0005179     0.000001875      3.49      4.00      3.25
   SRCPARAM L0005180     0.000001875      3.49      4.00      3.25
   SRCPARAM L0005181     0.000001875      3.49      4.00      3.25
   SRCPARAM L0005182     0.000001875      3.49      4.00      3.25
   SRCPARAM L0005183     0.000001875      3.49      4.00      3.25
   SRCPARAM L0005184     0.000001875      3.49      4.00      3.25
   SRCPARAM L0005185     0.000001875      3.49      4.00      3.25
   SRCPARAM L0005186     0.000001875      3.49      4.00      3.25
   SRCPARAM L0005187     0.000001875      3.49      4.00      3.25
   SRCPARAM L0005188     0.000001875      3.49      4.00      3.25
   SRCPARAM L0005189     0.000001875      3.49      4.00      3.25
   SRCPARAM L0005190     0.000001875      3.49      4.00      3.25
   SRCPARAM L0005191     0.000001875      3.49      4.00      3.25
   SRCPARAM L0005192     0.000001875      3.49      4.00      3.25
   SRCPARAM L0005193     0.000001875      3.49      4.00      3.25
   SRCPARAM L0005194     0.000001875      3.49      4.00      3.25
   SRCPARAM L0005195     0.000001875      3.49      4.00      3.25
   SRCPARAM L0005196     0.000001875      3.49      4.00      3.25
   SRCPARAM L0005197     0.000001875      3.49      4.00      3.25
   SRCPARAM L0005198     0.000001875      3.49      4.00      3.25
   SRCPARAM L0005199     0.000001875      3.49      4.00      3.25
** ------------------------------------------------------------------
   URBANSRC ALL
   SRCGROUP ALL
SO FINISHED
**
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**************************************
** AERMOD Receptor Pathway
**************************************
**
**
RE STARTING
   INCLUDED ExistingAB3.rou
RE FINISHED
**
**************************************
** AERMOD Meteorology Pathway
**************************************
**
**
ME STARTING
   SURFFILE ..\RedlandsADJU\RDLD_V9_ADJU\RDLD_v9.SFC
   PROFFILE ..\RedlandsADJU\RDLD_V9_ADJU\RDLD_v9.PFL
   SURFDATA 3171 2012
   UAIRDATA 3190 2012
   SITEDATA 99999 2012
   PROFBASE 481.0 METERS
ME FINISHED
**
**************************************
** AERMOD Output Pathway
**************************************
**
**
OU STARTING
** Auto-Generated Plotfiles
   PLOTFILE PERIOD ALL EXISTINGAB3.AD\PE00GALL.PLT 31
   SUMMFILE ExistingAB3.sum
OU FINISHED


  *** Message Summary For AERMOD Model Setup ***

  --------- Summary of Total Messages --------

 A Total of            0 Fatal Error Message(s)
 A Total of            2 Warning Message(s)
 A Total of            0 Informational Message(s)


    ******** FATAL ERROR MESSAGES ********
               ***  NONE  ***


    ********   WARNING MESSAGES   ********
 ME W186    2419       MEOPEN: THRESH_1MIN 1-min ASOS wind speed threshold used          0.50
 ME W187    2419       MEOPEN: ADJ_U* Option for Low Winds used in AERMET
```

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**********************************
*** SETUP Finishes Successfully ***
**********************************
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*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

                                        ***   MODEL SETUP OPTIONS SUMMARY   ***
- -

**Model Is Setup For Calculation of Average CONCentration Values.

  -- DEPOSITION LOGIC --
**NO GAS DEPOSITION Data Provided.
**NO PARTICLE DEPOSITION Data Provided.
**Model Uses NO DRY DEPLETION. DRYDPLT = F
**Model Uses NO WET DEPLETION. WETDPLT = F

**Model Uses URBAN Dispersion Algorithm for the SBL for 1106 Source(s),
  for Total of   1 Urban Area(s):
  Urban Population =   2035210.0 ; Urban Roughness Length = 1.000 m

**Model Uses Regulatory DEFAULT Options:
       1. Stack-tip Downwash.
       2. Model Accounts for ELEVated Terrain Effects.
       3. Use Calms Processing Routine.
       4. Use Missing Data Processing Routine.
       5. No Exponential Decay.
       6. Urban Roughness Length of 1.0 Meter Assumed.

**Other Options Specified:
       ADJ_U*   - Use ADJ_U* BETA option for SBL in AERMET
       TEMP_Sub - Meteorological data includes TEMP substitutions

**Model Assumes No FLAGPOLE Receptor Heights.

**The User Specified a Pollutant Type of: DPM

**Model Calculates PERIOD Averages Only

**This Run Includes: 1106 Source(s);   1 Source Group(s); and   1506 Receptor(s)

              with: 0 POINT(s), including
                         0 POINTCAP(s) and   0 POINTHOR(s)
               and: 1106 VOLUME source(s)
               and: 0 AREA type source(s)
               and: 0 LINE source(s)
               and: 0 OPENPIT source(s)
               and: 0 BUOYANT LINE source(s) with   0 line(s)

**Model Set To Continue RUNning After the Setup Testing.

```
**The AERMET Input Meteorological Data Version Date:  16216

**Output Options Selected:
         Model Outputs Tables of PERIOD Averages by Receptor
         Model Outputs External File(s) of High Values for Plotting (PLOTFILE Keyword)
         Model Outputs Separate Summary File of High Ranked Values (SUMMFILE Keyword)

**NOTE:  The Following Flags May Appear Following CONC Values:  c for Calm Hours
                                                                m for Missing Hours
                                                                b for Both Calm and Missing Hours

**Misc. Inputs:  Base Elev. for Pot. Temp. Profile (m MSL) =   481.00 ;  Decay Coef. =    0.000     ;  Rot. Angle =     0.0
                 Emission Units = GRAMS/SEC                             ;  Emission Rate Unit Factor =   0.10000E+07
                 Output Units   = MICROGRAMS/M**3

**Approximate Storage Requirements of Model =      4.1 MB of RAM.

**Detailed Error/Message File:   ExistingAB3.err
**File for Summary of Results:   ExistingAB3.sum
```

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0004094	0	0.24110E-05	480749.7	3774134.1	363.7	3.49	4.00	3.25	YES	
L0004095	0	0.24110E-05	480758.2	3774133.4	363.9	3.49	4.00	3.25	YES	
L0004096	0	0.24110E-05	480766.8	3774132.7	364.0	3.49	4.00	3.25	YES	
L0004097	0	0.24110E-05	480775.4	3774132.0	364.0	3.49	4.00	3.25	YES	
L0004098	0	0.24110E-05	480783.9	3774131.3	364.0	3.49	4.00	3.25	YES	
L0004099	0	0.24110E-05	480792.5	3774130.6	364.0	3.49	4.00	3.25	YES	
L0004100	0	0.24110E-05	480801.0	3774129.9	364.0	3.49	4.00	3.25	YES	
L0004101	0	0.24110E-05	480809.6	3774129.2	364.0	3.49	4.00	3.25	YES	
L0004102	0	0.24110E-05	480818.2	3774128.5	364.0	3.49	4.00	3.25	YES	
L0004103	0	0.24110E-05	480826.7	3774127.8	364.1	3.49	4.00	3.25	YES	
L0004104	0	0.24110E-05	480835.3	3774127.1	364.2	3.49	4.00	3.25	YES	
L0004105	0	0.24110E-05	480843.9	3774126.4	364.3	3.49	4.00	3.25	YES	
L0004106	0	0.24110E-05	480852.4	3774125.7	364.4	3.49	4.00	3.25	YES	
L0004107	0	0.24110E-05	480861.0	3774125.0	364.6	3.49	4.00	3.25	YES	
L0004108	0	0.24110E-05	480869.5	3774124.3	364.8	3.49	4.00	3.25	YES	
L0004109	0	0.24110E-05	480878.1	3774123.6	365.0	3.49	4.00	3.25	YES	
L0004110	0	0.24110E-05	480886.7	3774122.9	365.0	3.49	4.00	3.25	YES	
L0004111	0	0.24110E-05	480895.2	3774122.2	365.0	3.49	4.00	3.25	YES	
L0004112	0	0.24110E-05	480903.8	3774121.5	365.0	3.49	4.00	3.25	YES	
L0004113	0	0.24110E-05	480912.3	3774120.8	365.0	3.49	4.00	3.25	YES	
L0004114	0	0.24110E-05	480920.9	3774120.1	365.0	3.49	4.00	3.25	YES	
L0004115	0	0.24110E-05	480929.5	3774119.4	365.0	3.49	4.00	3.25	YES	
L0004116	0	0.24110E-05	480938.0	3774118.7	365.0	3.49	4.00	3.25	YES	
L0004117	0	0.24110E-05	480946.6	3774118.0	365.2	3.49	4.00	3.25	YES	
L0004118	0	0.24110E-05	480955.2	3774117.3	365.5	3.49	4.00	3.25	YES	
L0004119	0	0.24110E-05	480963.7	3774116.6	365.8	3.49	4.00	3.25	YES	
L0004120	0	0.24110E-05	480972.3	3774115.9	366.0	3.49	4.00	3.25	YES	
L0004121	0	0.24110E-05	480980.8	3774115.2	366.0	3.49	4.00	3.25	YES	
L0004122	0	0.24110E-05	480989.4	3774114.5	366.0	3.49	4.00	3.25	YES	
L0004123	0	0.24110E-05	480998.0	3774113.8	366.0	3.49	4.00	3.25	YES	
L0004124	0	0.24110E-05	481006.5	3774113.1	366.0	3.49	4.00	3.25	YES	
L0004125	0	0.24110E-05	481015.1	3774112.4	366.0	3.49	4.00	3.25	YES	
L0004126	0	0.24110E-05	481023.6	3774111.7	366.0	3.49	4.00	3.25	YES	
L0004127	0	0.24110E-05	481032.2	3774111.0	366.1	3.49	4.00	3.25	YES	
L0004128	0	0.24110E-05	481040.8	3774110.3	366.4	3.49	4.00	3.25	YES	
L0004129	0	0.24110E-05	481049.3	3774109.6	366.7	3.49	4.00	3.25	YES	
L0004130	0	0.24110E-05	481057.9	3774108.9	366.9	3.49	4.00	3.25	YES	
L0004131	0	0.24110E-05	481066.5	3774108.4	367.0	3.49	4.00	3.25	YES	
L0004132	0	0.24110E-05	481075.0	3774107.9	367.0	3.49	4.00	3.25	YES	
L0004133	0	0.24110E-05	481083.6	3774107.5	367.0	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0004134	0	0.24110E-05	481092.2	3774107.1	367.0	3.49	4.00	3.25	YES	
L0004135	0	0.24110E-05	481100.8	3774106.7	367.0	3.49	4.00	3.25	YES	
L0004136	0	0.24110E-05	481109.4	3774106.3	367.0	3.49	4.00	3.25	YES	
L0004137	0	0.24110E-05	481117.9	3774105.9	367.0	3.49	4.00	3.25	YES	
L0004138	0	0.24110E-05	481126.5	3774105.4	367.2	3.49	4.00	3.25	YES	
L0004139	0	0.24110E-05	481135.1	3774105.0	367.5	3.49	4.00	3.25	YES	
L0004140	0	0.24110E-05	481143.7	3774104.6	367.8	3.49	4.00	3.25	YES	
L0004141	0	0.24110E-05	481152.3	3774104.2	368.0	3.49	4.00	3.25	YES	
L0004142	0	0.24110E-05	481160.8	3774104.6	368.0	3.49	4.00	3.25	YES	
L0004143	0	0.24110E-05	481169.4	3774105.2	368.0	3.49	4.00	3.25	YES	
L0004144	0	0.24110E-05	481178.0	3774105.8	368.0	3.49	4.00	3.25	YES	
L0004145	0	0.24110E-05	481186.5	3774106.5	368.0	3.49	4.00	3.25	YES	
L0004146	0	0.24110E-05	481195.1	3774107.1	368.0	3.49	4.00	3.25	YES	
L0004147	0	0.24110E-05	481203.7	3774107.7	368.0	3.49	4.00	3.25	YES	
L0004148	0	0.24110E-05	481212.2	3774108.3	368.1	3.49	4.00	3.25	YES	
L0004149	0	0.24110E-05	481220.8	3774108.9	368.4	3.49	4.00	3.25	YES	
L0004150	0	0.24110E-05	481229.4	3774109.5	368.7	3.49	4.00	3.25	YES	
L0004151	0	0.24110E-05	481237.9	3774110.1	368.9	3.49	4.00	3.25	YES	
L0004152	0	0.24110E-05	481246.5	3774110.8	369.0	3.49	4.00	3.25	YES	
L0004153	0	0.24110E-05	481255.1	3774111.4	369.0	3.49	4.00	3.25	YES	
L0004154	0	0.24110E-05	481263.6	3774112.0	369.0	3.49	4.00	3.25	YES	
L0004155	0	0.24110E-05	481272.2	3774112.6	369.0	3.49	4.00	3.25	YES	
L0004156	0	0.24110E-05	481280.8	3774113.2	369.0	3.49	4.00	3.25	YES	
L0004157	0	0.24110E-05	481289.3	3774113.8	369.0	3.49	4.00	3.25	YES	
L0004158	0	0.24110E-05	481297.9	3774114.5	369.0	3.49	4.00	3.25	YES	
L0004159	0	0.24110E-05	481306.5	3774115.1	369.2	3.49	4.00	3.25	YES	
L0004160	0	0.24110E-05	481315.1	3774115.7	369.5	3.49	4.00	3.25	YES	
L0004161	0	0.24110E-05	481323.6	3774116.3	369.8	3.49	4.00	3.25	YES	
L0004162	0	0.24110E-05	481332.2	3774116.9	370.0	3.49	4.00	3.25	YES	
L0004163	0	0.24110E-05	481340.8	3774117.5	370.0	3.49	4.00	3.25	YES	
L0004164	0	0.24110E-05	481349.3	3774118.1	370.0	3.49	4.00	3.25	YES	
L0004165	0	0.24110E-05	481357.9	3774118.8	370.0	3.49	4.00	3.25	YES	
L0004166	0	0.24110E-05	481366.5	3774119.4	370.0	3.49	4.00	3.25	YES	
L0004167	0	0.24110E-05	481375.0	3774120.0	370.0	3.49	4.00	3.25	YES	
L0004168	0	0.24110E-05	481383.6	3774120.6	370.0	3.49	4.00	3.25	YES	
L0004169	0	0.24110E-05	481392.2	3774121.2	370.1	3.49	4.00	3.25	YES	
L0004170	0	0.24110E-05	481400.7	3774121.8	370.4	3.49	4.00	3.25	YES	
L0004171	0	0.24110E-05	481409.3	3774122.5	370.7	3.49	4.00	3.25	YES	
L0004172	0	0.24110E-05	481417.9	3774123.1	370.9	3.49	4.00	3.25	YES	
L0004173	0	0.24110E-05	481426.4	3774123.7	371.0	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0004174	0	0.24110E-05	481435.0	3774124.3	371.0	3.49	4.00	3.25	YES	
L0004175	0	0.24110E-05	481443.6	3774124.9	371.0	3.49	4.00	3.25	YES	
L0004176	0	0.24110E-05	481452.1	3774125.5	371.0	3.49	4.00	3.25	YES	
L0004177	0	0.24110E-05	481460.7	3774126.1	371.1	3.49	4.00	3.25	YES	
L0004178	0	0.24110E-05	481469.3	3774126.8	371.2	3.49	4.00	3.25	YES	
L0004179	0	0.24110E-05	481477.8	3774127.4	371.3	3.49	4.00	3.25	YES	
L0004180	0	0.24110E-05	481486.4	3774128.0	371.4	3.49	4.00	3.25	YES	
L0004181	0	0.24110E-05	481495.0	3774128.6	371.6	3.49	4.00	3.25	YES	
L0004182	0	0.24110E-05	481503.5	3774129.2	371.8	3.49	4.00	3.25	YES	
L0004183	0	0.24110E-05	481512.1	3774129.8	372.0	3.49	4.00	3.25	YES	
L0004184	0	0.24110E-05	481520.7	3774130.5	372.0	3.49	4.00	3.25	YES	
L0004185	0	0.24110E-05	481529.3	3774131.1	372.0	3.49	4.00	3.25	YES	
L0004186	0	0.24110E-05	481537.8	3774131.7	372.0	3.49	4.00	3.25	YES	
L0004187	0	0.24110E-05	481546.4	3774132.3	372.0	3.49	4.00	3.25	YES	
L0004188	0	0.24110E-05	481555.0	3774132.9	372.1	3.49	4.00	3.25	YES	
L0004189	0	0.24110E-05	481563.5	3774133.5	372.1	3.49	4.00	3.25	YES	
L0004190	0	0.24110E-05	481572.1	3774134.1	372.1	3.49	4.00	3.25	YES	
L0004191	0	0.33840E-06	479144.0	3771580.1	352.0	3.49	4.00	3.25	YES	
L0004192	0	0.33840E-06	479152.5	3771580.1	352.0	3.49	4.00	3.25	YES	
L0004193	0	0.33840E-06	479161.1	3771580.0	352.0	3.49	4.00	3.25	YES	
L0004194	0	0.33840E-06	479169.7	3771580.0	352.0	3.49	4.00	3.25	YES	
L0004195	0	0.33840E-06	479178.3	3771579.9	352.3	3.49	4.00	3.25	YES	
L0004196	0	0.33840E-06	479186.9	3771579.9	352.6	3.49	4.00	3.25	YES	
L0004197	0	0.33840E-06	479195.5	3771579.8	352.9	3.49	4.00	3.25	YES	
L0004198	0	0.33840E-06	479204.1	3771579.8	353.0	3.49	4.00	3.25	YES	
L0004199	0	0.33840E-06	479212.7	3771579.7	353.0	3.49	4.00	3.25	YES	
L0004200	0	0.33840E-06	479221.3	3771579.7	353.0	3.49	4.00	3.25	YES	
L0004201	0	0.33840E-06	479229.8	3771579.6	353.0	3.49	4.00	3.25	YES	
L0004202	0	0.33840E-06	479238.4	3771579.6	353.1	3.49	4.00	3.25	YES	
L0004203	0	0.33840E-06	479247.0	3771579.5	353.1	3.49	4.00	3.25	YES	
L0004204	0	0.33840E-06	479255.6	3771579.5	353.2	3.49	4.00	3.25	YES	
L0004205	0	0.33840E-06	479264.2	3771579.4	353.3	3.49	4.00	3.25	YES	
L0004206	0	0.33840E-06	479272.8	3771579.4	353.6	3.49	4.00	3.25	YES	
L0004207	0	0.33840E-06	479281.4	3771579.3	353.8	3.49	4.00	3.25	YES	
L0004208	0	0.33840E-06	479290.0	3771579.3	354.0	3.49	4.00	3.25	YES	
L0004209	0	0.33840E-06	479298.6	3771579.2	354.0	3.49	4.00	3.25	YES	
L0004210	0	0.33840E-06	479307.2	3771579.2	354.0	3.49	4.00	3.25	YES	
L0004211	0	0.33840E-06	479315.7	3771579.2	354.0	3.49	4.00	3.25	YES	
L0004212	0	0.33840E-06	479324.3	3771579.1	354.0	3.49	4.00	3.25	YES	
L0004213	0	0.33840E-06	479332.9	3771579.1	354.0	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0004214	0	0.33840E-06	479341.5	3771579.0	354.0	3.49	4.00	3.25	YES	
L0004215	0	0.33840E-06	479350.1	3771579.0	354.0	3.49	4.00	3.25	YES	
L0004216	0	0.33840E-06	479358.7	3771578.9	354.3	3.49	4.00	3.25	YES	
L0004217	0	0.33840E-06	479367.3	3771578.9	354.6	3.49	4.00	3.25	YES	
L0004218	0	0.33840E-06	479375.9	3771578.8	354.9	3.49	4.00	3.25	YES	
L0004219	0	0.33840E-06	479384.5	3771578.8	355.0	3.49	4.00	3.25	YES	
L0004220	0	0.33840E-06	479393.1	3771578.7	355.0	3.49	4.00	3.25	YES	
L0004221	0	0.33840E-06	479401.6	3771578.7	355.0	3.49	4.00	3.25	YES	
L0004222	0	0.33840E-06	479410.2	3771578.6	355.0	3.49	4.00	3.25	YES	
L0004223	0	0.33840E-06	479418.8	3771578.6	355.1	3.49	4.00	3.25	YES	
L0004224	0	0.33840E-06	479427.4	3771578.5	355.2	3.49	4.00	3.25	YES	
L0004225	0	0.33840E-06	479436.0	3771578.5	355.2	3.49	4.00	3.25	YES	
L0004226	0	0.33840E-06	479444.6	3771578.4	355.4	3.49	4.00	3.25	YES	
L0004227	0	0.33840E-06	479453.2	3771578.4	355.6	3.49	4.00	3.25	YES	
L0004228	0	0.33840E-06	479461.8	3771578.3	355.8	3.49	4.00	3.25	YES	
L0004229	0	0.33840E-06	479470.4	3771578.3	356.0	3.49	4.00	3.25	YES	
L0004230	0	0.33840E-06	479479.0	3771578.2	356.0	3.49	4.00	3.25	YES	
L0004231	0	0.33840E-06	479487.5	3771578.2	356.0	3.49	4.00	3.25	YES	
L0004232	0	0.33840E-06	479496.1	3771578.1	356.0	3.49	4.00	3.25	YES	
L0004233	0	0.33840E-06	479504.7	3771578.1	356.0	3.49	4.00	3.25	YES	
L0004234	0	0.33840E-06	479513.3	3771578.0	356.0	3.49	4.00	3.25	YES	
L0004235	0	0.33840E-06	479521.9	3771578.0	356.0	3.49	4.00	3.25	YES	
L0004236	0	0.33840E-06	479530.5	3771577.9	356.0	3.49	4.00	3.25	YES	
L0004237	0	0.33840E-06	479539.1	3771577.9	356.3	3.49	4.00	3.25	YES	
L0004238	0	0.33840E-06	479547.7	3771577.9	356.6	3.49	4.00	3.25	YES	
L0004239	0	0.33840E-06	479556.3	3771577.8	356.9	3.49	4.00	3.25	YES	
L0004240	0	0.33840E-06	479564.9	3771577.8	357.0	3.49	4.00	3.25	YES	
L0004241	0	0.33840E-06	479573.4	3771577.7	357.0	3.49	4.00	3.25	YES	
L0004242	0	0.33840E-06	479582.0	3771577.7	357.0	3.49	4.00	3.25	YES	
L0004243	0	0.33840E-06	479590.6	3771577.6	357.0	3.49	4.00	3.25	YES	
L0004244	0	0.33840E-06	479599.2	3771577.6	357.0	3.49	4.00	3.25	YES	
L0004245	0	0.33840E-06	479607.8	3771577.5	357.0	3.49	4.00	3.25	YES	
L0004246	0	0.33840E-06	479616.4	3771577.5	357.0	3.49	4.00	3.25	YES	
L0004247	0	0.33840E-06	479625.0	3771577.4	357.2	3.49	4.00	3.25	YES	
L0004248	0	0.33840E-06	479633.6	3771577.4	357.5	3.49	4.00	3.25	YES	
L0004249	0	0.33840E-06	479642.2	3771577.3	357.7	3.49	4.00	3.25	YES	
L0004250	0	0.33840E-06	479650.8	3771577.3	358.0	3.49	4.00	3.25	YES	
L0004251	0	0.33840E-06	479659.3	3771577.2	358.0	3.49	4.00	3.25	YES	
L0004252	0	0.33840E-06	479667.9	3771577.2	358.0	3.49	4.00	3.25	YES	
L0004253	0	0.33840E-06	479676.5	3771577.1	358.0	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0004254	0	0.33840E-06	479685.1	3771577.1	358.0	3.49	4.00	3.25	YES	
L0004255	0	0.33840E-06	479693.7	3771577.0	358.0	3.49	4.00	3.25	YES	
L0004256	0	0.33840E-06	479702.3	3771577.0	358.0	3.49	4.00	3.25	YES	
L0004257	0	0.33840E-06	479710.9	3771576.9	358.0	3.49	4.00	3.25	YES	
L0004258	0	0.33840E-06	479719.5	3771576.9	358.3	3.49	4.00	3.25	YES	
L0004259	0	0.33840E-06	479728.1	3771576.8	358.6	3.49	4.00	3.25	YES	
L0004260	0	0.33840E-06	479736.7	3771576.8	358.9	3.49	4.00	3.25	YES	
L0004261	0	0.33840E-06	479745.2	3771576.7	359.0	3.49	4.00	3.25	YES	
L0004262	0	0.33840E-06	479753.8	3771576.7	359.0	3.49	4.00	3.25	YES	
L0004263	0	0.33840E-06	479762.4	3771576.6	359.0	3.49	4.00	3.25	YES	
L0004264	0	0.33840E-06	479771.0	3771576.6	359.0	3.49	4.00	3.25	YES	
L0004265	0	0.33840E-06	479779.6	3771576.5	359.3	3.49	4.00	3.25	YES	
L0004266	0	0.33840E-06	479788.2	3771576.5	359.6	3.49	4.00	3.25	YES	
L0004267	0	0.33840E-06	479796.8	3771576.5	359.9	3.49	4.00	3.25	YES	
L0004268	0	0.33840E-06	479805.4	3771576.4	360.0	3.49	4.00	3.25	YES	
L0004269	0	0.33840E-06	479814.0	3771576.4	360.0	3.49	4.00	3.25	YES	
L0004270	0	0.33840E-06	479822.5	3771576.3	360.0	3.49	4.00	3.25	YES	
L0004271	0	0.33840E-06	479831.1	3771576.3	360.0	3.49	4.00	3.25	YES	
L0004272	0	0.33840E-06	479839.7	3771576.2	360.0	3.49	4.00	3.25	YES	
L0004273	0	0.33840E-06	479848.3	3771576.2	360.0	3.49	4.00	3.25	YES	
L0004274	0	0.33840E-06	479856.9	3771576.1	360.0	3.49	4.00	3.25	YES	
L0004275	0	0.33840E-06	479865.5	3771576.1	360.2	3.49	4.00	3.25	YES	
L0004276	0	0.33840E-06	479874.1	3771576.0	360.5	3.49	4.00	3.25	YES	
L0004277	0	0.33840E-06	479882.7	3771576.0	360.8	3.49	4.00	3.25	YES	
L0004278	0	0.33840E-06	479891.3	3771575.9	361.0	3.49	4.00	3.25	YES	
L0004279	0	0.33840E-06	479899.9	3771575.9	361.0	3.49	4.00	3.25	YES	
L0004280	0	0.33840E-06	479908.4	3771575.8	361.0	3.49	4.00	3.25	YES	
L0004281	0	0.33840E-06	479917.0	3771575.8	361.0	3.49	4.00	3.25	YES	
L0004282	0	0.33840E-06	479925.6	3771575.7	361.2	3.49	4.00	3.25	YES	
L0004283	0	0.33840E-06	479934.2	3771575.7	361.5	3.49	4.00	3.25	YES	
L0004284	0	0.33840E-06	479942.8	3771575.6	361.8	3.49	4.00	3.25	YES	
L0004285	0	0.33840E-06	479951.3	3771576.4	362.0	3.49	4.00	3.25	YES	
L0004286	0	0.33840E-06	479959.8	3771577.9	362.0	3.49	4.00	3.25	YES	
L0004287	0	0.33840E-06	479968.3	3771579.1	362.0	3.49	4.00	3.25	YES	
L0004288	0	0.33840E-06	479976.8	3771579.1	362.0	3.49	4.00	3.25	YES	
L0004289	0	0.33840E-06	479985.4	3771579.1	362.0	3.49	4.00	3.25	YES	
L0004290	0	0.33840E-06	479994.0	3771579.1	362.0	3.49	4.00	3.25	YES	
L0004291	0	0.33840E-06	480002.6	3771579.1	362.0	3.49	4.00	3.25	YES	
L0004292	0	0.33840E-06	480011.2	3771579.1	362.0	3.49	4.00	3.25	YES	
L0004293	0	0.33840E-06	480019.8	3771579.1	362.3	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0004294	0	0.33840E-06	480028.4	3771579.1	362.6	3.49	4.00	3.25	YES	
L0004295	0	0.33840E-06	480037.0	3771579.1	362.9	3.49	4.00	3.25	YES	
L0004296	0	0.33840E-06	480045.6	3771579.1	363.0	3.49	4.00	3.25	YES	
L0004297	0	0.33840E-06	480054.2	3771579.0	363.0	3.49	4.00	3.25	YES	
L0004298	0	0.33840E-06	480062.7	3771579.0	363.0	3.49	4.00	3.25	YES	
L0004299	0	0.33840E-06	480071.3	3771579.0	363.0	3.49	4.00	3.25	YES	
L0004300	0	0.33840E-06	480079.9	3771579.0	363.1	3.49	4.00	3.25	YES	
L0004301	0	0.33840E-06	480088.5	3771579.0	363.2	3.49	4.00	3.25	YES	
L0004302	0	0.33840E-06	480097.1	3771579.0	363.2	3.49	4.00	3.25	YES	
L0004303	0	0.33840E-06	480105.7	3771579.0	363.4	3.49	4.00	3.25	YES	
L0004304	0	0.33840E-06	480114.3	3771579.0	363.6	3.49	4.00	3.25	YES	
L0004305	0	0.33840E-06	480122.9	3771579.0	363.8	3.49	4.00	3.25	YES	
L0004306	0	0.33840E-06	480131.5	3771579.0	364.0	3.49	4.00	3.25	YES	
L0004307	0	0.33840E-06	480140.1	3771579.0	364.0	3.49	4.00	3.25	YES	
L0004308	0	0.33840E-06	480148.6	3771579.0	364.0	3.49	4.00	3.25	YES	
L0004309	0	0.33840E-06	480157.2	3771579.0	364.0	3.49	4.00	3.25	YES	
L0004310	0	0.33840E-06	480165.8	3771579.0	364.2	3.49	4.00	3.25	YES	
L0004311	0	0.33840E-06	480174.4	3771579.0	364.5	3.49	4.00	3.25	YES	
L0004312	0	0.33840E-06	480183.0	3771579.0	364.8	3.49	4.00	3.25	YES	
L0004313	0	0.33840E-06	480191.6	3771579.0	365.0	3.49	4.00	3.25	YES	
L0004314	0	0.33840E-06	480200.2	3771579.0	365.0	3.49	4.00	3.25	YES	
L0004315	0	0.33840E-06	480208.8	3771578.9	365.0	3.49	4.00	3.25	YES	
L0004316	0	0.33840E-06	480217.4	3771578.9	365.0	3.49	4.00	3.25	YES	
L0004317	0	0.33840E-06	480226.0	3771578.9	365.2	3.49	4.00	3.25	YES	
L0004318	0	0.33840E-06	480234.5	3771578.9	365.5	3.49	4.00	3.25	YES	
L0004319	0	0.33840E-06	480243.1	3771578.9	365.8	3.49	4.00	3.25	YES	
L0004320	0	0.33840E-06	480251.7	3771578.9	366.0	3.49	4.00	3.25	YES	
L0004321	0	0.33840E-06	480260.3	3771578.9	366.0	3.49	4.00	3.25	YES	
L0004322	0	0.33840E-06	480268.9	3771578.9	366.0	3.49	4.00	3.25	YES	
L0004323	0	0.33840E-06	480277.5	3771578.9	366.0	3.49	4.00	3.25	YES	
L0004324	0	0.33840E-06	480286.1	3771578.9	366.0	3.49	4.00	3.25	YES	
L0004325	0	0.33840E-06	480294.7	3771578.9	366.0	3.49	4.00	3.25	YES	
L0004326	0	0.33840E-06	480303.3	3771578.9	366.0	3.49	4.00	3.25	YES	
L0004327	0	0.33840E-06	480311.9	3771578.9	366.1	3.49	4.00	3.25	YES	
L0004328	0	0.33840E-06	480320.4	3771578.9	366.4	3.49	4.00	3.25	YES	
L0004329	0	0.33840E-06	480329.0	3771578.9	366.6	3.49	4.00	3.25	YES	
L0004330	0	0.33840E-06	480337.6	3771578.9	366.9	3.49	4.00	3.25	YES	
L0004331	0	0.33840E-06	480346.2	3771578.9	367.0	3.49	4.00	3.25	YES	
L0004332	0	0.33840E-06	480354.8	3771578.9	367.0	3.49	4.00	3.25	YES	
L0004333	0	0.33840E-06	480363.4	3771578.8	367.0	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0004334	0	0.33840E-06	480372.0	3771578.8	367.1	3.49	4.00	3.25	YES	
L0004335	0	0.33840E-06	480380.6	3771578.8	367.4	3.49	4.00	3.25	YES	
L0004336	0	0.33840E-06	480389.2	3771578.8	367.6	3.49	4.00	3.25	YES	
L0004337	0	0.33840E-06	480397.8	3771578.8	367.9	3.49	4.00	3.25	YES	
L0004338	0	0.33840E-06	480406.3	3771578.8	368.0	3.49	4.00	3.25	YES	
L0004339	0	0.33840E-06	480414.9	3771578.8	368.0	3.49	4.00	3.25	YES	
L0004340	0	0.33840E-06	480423.5	3771578.8	368.0	3.49	4.00	3.25	YES	
L0004341	0	0.33840E-06	480432.1	3771578.8	368.1	3.49	4.00	3.25	YES	
L0004342	0	0.33840E-06	480440.7	3771578.8	368.4	3.49	4.00	3.25	YES	
L0004343	0	0.33840E-06	480449.3	3771578.8	368.7	3.49	4.00	3.25	YES	
L0004344	0	0.33840E-06	480457.9	3771578.8	368.9	3.49	4.00	3.25	YES	
L0004345	0	0.33840E-06	480466.5	3771578.8	369.0	3.49	4.00	3.25	YES	
L0004346	0	0.33840E-06	480475.1	3771578.8	369.0	3.49	4.00	3.25	YES	
L0004347	0	0.33840E-06	480483.7	3771578.8	369.0	3.49	4.00	3.25	YES	
L0004348	0	0.33840E-06	480492.2	3771578.8	369.1	3.49	4.00	3.25	YES	
L0004349	0	0.33840E-06	480500.8	3771578.8	369.4	3.49	4.00	3.25	YES	
L0004350	0	0.33840E-06	480509.4	3771578.8	369.7	3.49	4.00	3.25	YES	
L0004351	0	0.33840E-06	480518.0	3771578.8	369.9	3.49	4.00	3.25	YES	
L0004352	0	0.33840E-06	480526.6	3771578.7	370.0	3.49	4.00	3.25	YES	
L0004353	0	0.33840E-06	480535.2	3771578.7	370.0	3.49	4.00	3.25	YES	
L0004354	0	0.33840E-06	480543.8	3771578.7	370.0	3.49	4.00	3.25	YES	
L0004355	0	0.33840E-06	480552.4	3771578.7	370.0	3.49	4.00	3.25	YES	
L0004356	0	0.33840E-06	480561.0	3771578.7	370.0	3.49	4.00	3.25	YES	
L0004357	0	0.33840E-06	480569.6	3771578.7	370.0	3.49	4.00	3.25	YES	
L0004358	0	0.33840E-06	480578.1	3771578.7	370.0	3.49	4.00	3.25	YES	
L0004359	0	0.33840E-06	480586.7	3771578.7	370.2	3.49	4.00	3.25	YES	
L0004360	0	0.33840E-06	480595.3	3771578.7	370.5	3.49	4.00	3.25	YES	
L0004361	0	0.33840E-06	480603.9	3771578.7	370.8	3.49	4.00	3.25	YES	
L0004362	0	0.33840E-06	480612.5	3771578.7	371.0	3.49	4.00	3.25	YES	
L0004363	0	0.33840E-06	480621.1	3771578.7	371.0	3.49	4.00	3.25	YES	
L0004364	0	0.33840E-06	480629.7	3771578.7	371.0	3.49	4.00	3.25	YES	
L0004365	0	0.33840E-06	480638.3	3771578.7	371.0	3.49	4.00	3.25	YES	
L0004366	0	0.33840E-06	480646.9	3771578.7	371.2	3.49	4.00	3.25	YES	
L0004367	0	0.33840E-06	480655.5	3771578.7	371.5	3.49	4.00	3.25	YES	
L0004368	0	0.33840E-06	480664.0	3771578.7	371.8	3.49	4.00	3.25	YES	
L0004369	0	0.33840E-06	480672.6	3771578.7	372.0	3.49	4.00	3.25	YES	
L0004370	0	0.33840E-06	480681.2	3771578.6	372.0	3.49	4.00	3.25	YES	
L0004371	0	0.33840E-06	480689.8	3771578.6	372.0	3.49	4.00	3.25	YES	
L0004372	0	0.33840E-06	480698.4	3771578.6	372.0	3.49	4.00	3.25	YES	
L0004373	0	0.33840E-06	480707.0	3771578.6	372.2	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0004374	0	0.33840E-06	480715.6	3771578.6	372.5	3.49	4.00	3.25	YES	
L0004375	0	0.33840E-06	480724.2	3771578.6	372.8	3.49	4.00	3.25	YES	
L0004376	0	0.33840E-06	480732.8	3771578.6	373.0	3.49	4.00	3.25	YES	
L0004377	0	0.33840E-06	480741.4	3771578.6	373.0	3.49	4.00	3.25	YES	
L0004378	0	0.95830E-06	480745.7	3770768.6	374.0	3.49	4.00	3.25	YES	
L0004379	0	0.95830E-06	480754.0	3770766.6	374.0	3.49	4.00	3.25	YES	
L0004380	0	0.95830E-06	480762.4	3770764.6	374.1	3.49	4.00	3.25	YES	
L0004381	0	0.95830E-06	480770.7	3770762.6	374.4	3.49	4.00	3.25	YES	
L0004382	0	0.95830E-06	480779.1	3770760.6	374.6	3.49	4.00	3.25	YES	
L0004383	0	0.95830E-06	480787.5	3770758.6	374.9	3.49	4.00	3.25	YES	
L0004384	0	0.95830E-06	480795.8	3770756.6	375.0	3.49	4.00	3.25	YES	
L0004385	0	0.95830E-06	480804.2	3770755.1	375.0	3.49	4.00	3.25	YES	
L0004386	0	0.95830E-06	480812.8	3770755.1	375.0	3.49	4.00	3.25	YES	
L0004387	0	0.95830E-06	480821.4	3770755.0	375.1	3.49	4.00	3.25	YES	
L0004388	0	0.95830E-06	480830.0	3770755.0	375.3	3.49	4.00	3.25	YES	
L0004389	0	0.95830E-06	480838.6	3770754.9	375.6	3.49	4.00	3.25	YES	
L0004390	0	0.95830E-06	480847.2	3770754.9	375.9	3.49	4.00	3.25	YES	
L0004391	0	0.95830E-06	480855.8	3770754.9	376.0	3.49	4.00	3.25	YES	
L0004392	0	0.95830E-06	480864.4	3770754.8	376.0	3.49	4.00	3.25	YES	
L0004393	0	0.95830E-06	480872.9	3770754.8	376.0	3.49	4.00	3.25	YES	
L0004394	0	0.95830E-06	480881.5	3770754.8	376.1	3.49	4.00	3.25	YES	
L0004395	0	0.95830E-06	480890.1	3770754.7	376.3	3.49	4.00	3.25	YES	
L0004396	0	0.95830E-06	480898.7	3770754.7	376.6	3.49	4.00	3.25	YES	
L0004397	0	0.95830E-06	480907.3	3770754.7	376.9	3.49	4.00	3.25	YES	
L0004398	0	0.95830E-06	480915.9	3770754.6	377.0	3.49	4.00	3.25	YES	
L0004399	0	0.95830E-06	480924.5	3770754.6	377.0	3.49	4.00	3.25	YES	
L0004400	0	0.95830E-06	480933.1	3770754.6	377.0	3.49	4.00	3.25	YES	
L0004401	0	0.95830E-06	480941.7	3770754.5	377.1	3.49	4.00	3.25	YES	
L0004402	0	0.95830E-06	480950.3	3770754.5	377.3	3.49	4.00	3.25	YES	
L0004403	0	0.95830E-06	480958.8	3770754.5	377.6	3.49	4.00	3.25	YES	
L0004404	0	0.95830E-06	480967.4	3770754.4	377.9	3.49	4.00	3.25	YES	
L0004405	0	0.95830E-06	480976.0	3770754.4	378.0	3.49	4.00	3.25	YES	
L0004406	0	0.95830E-06	480984.6	3770754.3	378.0	3.49	4.00	3.25	YES	
L0004407	0	0.95830E-06	480993.2	3770754.3	378.0	3.49	4.00	3.25	YES	
L0004408	0	0.95830E-06	481001.8	3770754.3	378.1	3.49	4.00	3.25	YES	
L0004409	0	0.95830E-06	481010.4	3770754.2	378.4	3.49	4.00	3.25	YES	
L0004410	0	0.95830E-06	481019.0	3770754.2	378.6	3.49	4.00	3.25	YES	
L0004411	0	0.95830E-06	481027.6	3770754.2	378.9	3.49	4.00	3.25	YES	
L0004412	0	0.95830E-06	481036.2	3770754.1	379.0	3.49	4.00	3.25	YES	
L0004413	0	0.95830E-06	481044.7	3770754.1	379.0	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0004414	0	0.95830E-06	481053.3	3770754.1	379.0	3.49	4.00	3.25	YES	
L0004415	0	0.95830E-06	481061.9	3770754.0	379.1	3.49	4.00	3.25	YES	
L0004416	0	0.95830E-06	481070.5	3770754.0	379.4	3.49	4.00	3.25	YES	
L0004417	0	0.95830E-06	481079.1	3770754.0	379.6	3.49	4.00	3.25	YES	
L0004418	0	0.95830E-06	481087.7	3770753.9	379.9	3.49	4.00	3.25	YES	
L0004419	0	0.95830E-06	481096.3	3770753.9	380.0	3.49	4.00	3.25	YES	
L0004420	0	0.95830E-06	481104.9	3770753.8	380.0	3.49	4.00	3.25	YES	
L0004421	0	0.95830E-06	481113.5	3770753.8	380.0	3.49	4.00	3.25	YES	
L0004422	0	0.95830E-06	481122.0	3770753.8	380.0	3.49	4.00	3.25	YES	
L0004423	0	0.95830E-06	481130.6	3770753.7	380.0	3.49	4.00	3.25	YES	
L0004424	0	0.95830E-06	481139.2	3770753.7	380.0	3.49	4.00	3.25	YES	
L0004425	0	0.95830E-06	481147.8	3770753.7	380.0	3.49	4.00	3.25	YES	
L0004426	0	0.95830E-06	481156.4	3770753.6	380.2	3.49	4.00	3.25	YES	
L0004427	0	0.95830E-06	481165.0	3770753.6	380.5	3.49	4.00	3.25	YES	
L0004428	0	0.95830E-06	481173.6	3770753.6	380.8	3.49	4.00	3.25	YES	
L0004429	0	0.95830E-06	481182.2	3770753.5	381.1	3.49	4.00	3.25	YES	
L0004430	0	0.95830E-06	481190.8	3770753.5	381.4	3.49	4.00	3.25	YES	
L0004431	0	0.95830E-06	481199.4	3770753.5	381.7	3.49	4.00	3.25	YES	
L0004432	0	0.95830E-06	481207.9	3770753.4	381.9	3.49	4.00	3.25	YES	
L0004433	0	0.95830E-06	481216.5	3770753.4	382.0	3.49	4.00	3.25	YES	
L0004434	0	0.95830E-06	481225.1	3770753.3	382.0	3.49	4.00	3.25	YES	
L0004435	0	0.95830E-06	481233.7	3770753.3	382.0	3.49	4.00	3.25	YES	
L0004436	0	0.95830E-06	481242.3	3770753.3	382.0	3.49	4.00	3.25	YES	
L0004437	0	0.95830E-06	481250.9	3770753.2	382.0	3.49	4.00	3.25	YES	
L0004438	0	0.95830E-06	481259.5	3770753.2	382.0	3.49	4.00	3.25	YES	
L0004439	0	0.95830E-06	481268.1	3770753.2	382.0	3.49	4.00	3.25	YES	
L0004440	0	0.95830E-06	481276.7	3770753.1	382.2	3.49	4.00	3.25	YES	
L0004441	0	0.95830E-06	481285.3	3770753.1	382.5	3.49	4.00	3.25	YES	
L0004442	0	0.95830E-06	481293.8	3770753.1	382.8	3.49	4.00	3.25	YES	
L0004443	0	0.95830E-06	481302.4	3770753.0	383.0	3.49	4.00	3.25	YES	
L0004444	0	0.95830E-06	481311.0	3770753.0	383.0	3.49	4.00	3.25	YES	
L0004445	0	0.95830E-06	481319.6	3770753.0	383.0	3.49	4.00	3.25	YES	
L0004446	0	0.95830E-06	481328.2	3770752.9	383.0	3.49	4.00	3.25	YES	
L0004447	0	0.95830E-06	481336.8	3770752.9	383.2	3.49	4.00	3.25	YES	
L0004448	0	0.95830E-06	481345.4	3770752.8	383.5	3.49	4.00	3.25	YES	
L0004449	0	0.95830E-06	481354.0	3770752.8	383.8	3.49	4.00	3.25	YES	
L0004450	0	0.95830E-06	481362.6	3770752.8	384.0	3.49	4.00	3.25	YES	
L0004451	0	0.95830E-06	481371.2	3770752.7	384.0	3.49	4.00	3.25	YES	
L0004452	0	0.95830E-06	481379.7	3770752.7	384.0	3.49	4.00	3.25	YES	
L0004453	0	0.95830E-06	481388.3	3770752.7	384.0	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0004454	0	0.27160E-05	479139.8	3771569.7	352.0	3.49	4.00	3.25	YES	
L0004455	0	0.27160E-05	479139.7	3771561.1	352.0	3.49	4.00	3.25	YES	
L0004456	0	0.27160E-05	479139.6	3771552.5	352.0	3.49	4.00	3.25	YES	
L0004457	0	0.27160E-05	479139.5	3771543.9	352.0	3.49	4.00	3.25	YES	
L0004458	0	0.27160E-05	479139.4	3771535.3	352.0	3.49	4.00	3.25	YES	
L0004459	0	0.27160E-05	479139.3	3771526.7	352.0	3.49	4.00	3.25	YES	
L0004460	0	0.27160E-05	479139.2	3771518.1	352.0	3.49	4.00	3.25	YES	
L0004461	0	0.27160E-05	479139.1	3771509.6	352.0	3.49	4.00	3.25	YES	
L0004462	0	0.27160E-05	479139.0	3771501.0	352.0	3.49	4.00	3.25	YES	
L0004463	0	0.27160E-05	479138.9	3771492.4	352.0	3.49	4.00	3.25	YES	
L0004464	0	0.27160E-05	479138.8	3771483.8	352.0	3.49	4.00	3.25	YES	
L0004465	0	0.27160E-05	479138.7	3771475.2	352.0	3.49	4.00	3.25	YES	
L0004466	0	0.27160E-05	479138.6	3771466.6	352.0	3.49	4.00	3.25	YES	
L0004467	0	0.27160E-05	479138.5	3771458.0	352.0	3.49	4.00	3.25	YES	
L0004468	0	0.27160E-05	479138.4	3771449.4	352.0	3.49	4.00	3.25	YES	
L0004469	0	0.27160E-05	479138.3	3771440.8	352.0	3.49	4.00	3.25	YES	
L0004470	0	0.27160E-05	479138.2	3771432.2	352.0	3.49	4.00	3.25	YES	
L0004471	0	0.27160E-05	479138.1	3771423.7	352.0	3.49	4.00	3.25	YES	
L0004472	0	0.27160E-05	479138.0	3771415.1	352.0	3.49	4.00	3.25	YES	
L0004473	0	0.27160E-05	479137.9	3771406.5	352.0	3.49	4.00	3.25	YES	
L0004474	0	0.27160E-05	479137.8	3771397.9	352.0	3.49	4.00	3.25	YES	
L0004475	0	0.27160E-05	479137.7	3771389.3	352.0	3.49	4.00	3.25	YES	
L0004476	0	0.27160E-05	479137.6	3771380.7	352.0	3.49	4.00	3.25	YES	
L0004477	0	0.27160E-05	479137.5	3771372.1	352.0	3.49	4.00	3.25	YES	
L0004478	0	0.27160E-05	479137.4	3771363.5	352.0	3.49	4.00	3.25	YES	
L0004479	0	0.27160E-05	479137.3	3771354.9	352.0	3.49	4.00	3.25	YES	
L0004480	0	0.27160E-05	479137.2	3771346.4	352.0	3.49	4.00	3.25	YES	
L0004481	0	0.27160E-05	479137.1	3771337.8	352.0	3.49	4.00	3.25	YES	
L0004482	0	0.27160E-05	479137.0	3771329.2	352.0	3.49	4.00	3.25	YES	
L0004483	0	0.27160E-05	479136.9	3771320.6	352.0	3.49	4.00	3.25	YES	
L0004484	0	0.27160E-05	479136.8	3771312.0	352.0	3.49	4.00	3.25	YES	
L0004485	0	0.27160E-05	479136.7	3771303.4	352.0	3.49	4.00	3.25	YES	
L0004486	0	0.27160E-05	479136.6	3771294.8	352.0	3.49	4.00	3.25	YES	
L0004487	0	0.27160E-05	479136.5	3771286.2	352.0	3.49	4.00	3.25	YES	
L0004488	0	0.27160E-05	479136.4	3771277.6	352.0	3.49	4.00	3.25	YES	
L0004489	0	0.27160E-05	479136.3	3771269.1	352.0	3.49	4.00	3.25	YES	
L0004490	0	0.27160E-05	479136.2	3771260.5	352.0	3.49	4.00	3.25	YES	
L0004491	0	0.27160E-05	479136.1	3771251.9	352.0	3.49	4.00	3.25	YES	
L0004492	0	0.27160E-05	479136.0	3771243.3	352.0	3.49	4.00	3.25	YES	
L0004493	0	0.27160E-05	479135.9	3771234.7	352.0	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0004494	0	0.27160E-05	479135.8	3771226.1	352.0	3.49	4.00	3.25	YES	
L0004495	0	0.27160E-05	479135.7	3771217.5	352.0	3.49	4.00	3.25	YES	
L0004496	0	0.27160E-05	479135.6	3771208.9	352.0	3.49	4.00	3.25	YES	
L0004497	0	0.27160E-05	479135.5	3771200.3	352.0	3.49	4.00	3.25	YES	
L0004498	0	0.27160E-05	479135.4	3771191.7	352.0	3.49	4.00	3.25	YES	
L0004499	0	0.27160E-05	479135.3	3771183.2	352.0	3.49	4.00	3.25	YES	
L0004500	0	0.27160E-05	479135.2	3771174.6	352.0	3.49	4.00	3.25	YES	
L0004501	0	0.27160E-05	479135.1	3771166.0	352.0	3.49	4.00	3.25	YES	
L0004502	0	0.27160E-05	479135.0	3771157.4	352.0	3.49	4.00	3.25	YES	
L0004503	0	0.27160E-05	479135.0	3771148.8	352.0	3.49	4.00	3.25	YES	
L0004504	0	0.27160E-05	479134.9	3771140.2	352.0	3.49	4.00	3.25	YES	
L0004505	0	0.27160E-05	479134.8	3771131.6	352.0	3.49	4.00	3.25	YES	
L0004506	0	0.27160E-05	479134.7	3771123.0	352.0	3.49	4.00	3.25	YES	
L0004507	0	0.27160E-05	479134.6	3771114.4	352.0	3.49	4.00	3.25	YES	
L0004508	0	0.27160E-05	479134.5	3771105.9	352.0	3.49	4.00	3.25	YES	
L0004509	0	0.27160E-05	479134.4	3771097.3	352.0	3.49	4.00	3.25	YES	
L0004510	0	0.27160E-05	479134.3	3771088.7	352.0	3.49	4.00	3.25	YES	
L0004511	0	0.27160E-05	479134.2	3771080.1	352.0	3.49	4.00	3.25	YES	
L0004512	0	0.27160E-05	479134.1	3771071.5	352.0	3.49	4.00	3.25	YES	
L0004513	0	0.27160E-05	479134.0	3771062.9	352.0	3.49	4.00	3.25	YES	
L0004514	0	0.27160E-05	479133.9	3771054.3	352.0	3.49	4.00	3.25	YES	
L0004515	0	0.27160E-05	479133.8	3771045.7	352.0	3.49	4.00	3.25	YES	
L0004516	0	0.27160E-05	479133.7	3771037.1	352.0	3.49	4.00	3.25	YES	
L0004517	0	0.27160E-05	479133.6	3771028.5	352.0	3.49	4.00	3.25	YES	
L0004518	0	0.27160E-05	479133.5	3771020.0	352.0	3.49	4.00	3.25	YES	
L0004519	0	0.27160E-05	479133.4	3771011.4	352.0	3.49	4.00	3.25	YES	
L0004520	0	0.27160E-05	479133.3	3771002.8	352.0	3.49	4.00	3.25	YES	
L0004521	0	0.27160E-05	479133.2	3770994.2	352.0	3.49	4.00	3.25	YES	
L0004522	0	0.27160E-05	479133.1	3770985.6	352.0	3.49	4.00	3.25	YES	
L0004523	0	0.27160E-05	479133.0	3770977.0	352.2	3.49	4.00	3.25	YES	
L0004524	0	0.27160E-05	479132.9	3770968.4	352.5	3.49	4.00	3.25	YES	
L0004525	0	0.27160E-05	479132.8	3770959.8	352.7	3.49	4.00	3.25	YES	
L0004526	0	0.27160E-05	479132.7	3770951.2	352.8	3.49	4.00	3.25	YES	
L0004527	0	0.27160E-05	479132.6	3770942.7	352.8	3.49	4.00	3.25	YES	
L0004528	0	0.27160E-05	479132.5	3770934.1	352.8	3.49	4.00	3.25	YES	
L0004529	0	0.27160E-05	479132.4	3770925.5	352.8	3.49	4.00	3.25	YES	
L0004530	0	0.27160E-05	479132.3	3770916.9	352.8	3.49	4.00	3.25	YES	
L0004531	0	0.27160E-05	479132.2	3770908.3	352.7	3.49	4.00	3.25	YES	
L0004532	0	0.27160E-05	479132.1	3770899.7	352.7	3.49	4.00	3.25	YES	
L0004533	0	0.27160E-05	479132.0	3770891.1	352.7	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0004534	0	0.27160E-05	479131.9	3770882.5	352.7	3.49	4.00	3.25	YES	
L0004535	0	0.27160E-05	479131.8	3770873.9	352.7	3.49	4.00	3.25	YES	
L0004536	0	0.27160E-05	479131.7	3770865.3	352.7	3.49	4.00	3.25	YES	
L0004537	0	0.27160E-05	479131.6	3770856.8	352.7	3.49	4.00	3.25	YES	
L0004538	0	0.27160E-05	479131.5	3770848.2	352.7	3.49	4.00	3.25	YES	
L0004539	0	0.27160E-05	479131.4	3770839.6	352.7	3.49	4.00	3.25	YES	
L0004540	0	0.27160E-05	479131.3	3770831.0	352.8	3.49	4.00	3.25	YES	
L0004541	0	0.27160E-05	479131.2	3770822.4	352.9	3.49	4.00	3.25	YES	
L0004542	0	0.27160E-05	479131.1	3770813.8	352.9	3.49	4.00	3.25	YES	
L0004543	0	0.27160E-05	479131.0	3770805.2	353.0	3.49	4.00	3.25	YES	
L0004544	0	0.27160E-05	479130.9	3770796.6	353.0	3.49	4.00	3.25	YES	
L0004545	0	0.27160E-05	479130.8	3770788.0	353.0	3.49	4.00	3.25	YES	
L0004546	0	0.27160E-05	479130.7	3770779.5	353.0	3.49	4.00	3.25	YES	
L0004547	0	0.27160E-05	479130.6	3770770.9	353.0	3.49	4.00	3.25	YES	
L0004548	0	0.27160E-05	479130.5	3770762.3	353.0	3.49	4.00	3.25	YES	
L0004549	0	0.27160E-05	479130.4	3770753.7	353.0	3.49	4.00	3.25	YES	
L0004550	0	0.27160E-05	479130.3	3770745.1	353.0	3.49	4.00	3.25	YES	
L0004551	0	0.27160E-05	479130.2	3770736.5	353.0	3.49	4.00	3.25	YES	
L0004552	0	0.27160E-05	479130.1	3770727.9	353.0	3.49	4.00	3.25	YES	
L0004553	0	0.27160E-05	479130.0	3770719.3	353.0	3.49	4.00	3.25	YES	
L0004554	0	0.27160E-05	479130.0	3770710.7	353.0	3.49	4.00	3.25	YES	
L0004555	0	0.27160E-05	479129.9	3770702.1	353.0	3.49	4.00	3.25	YES	
L0004556	0	0.27160E-05	479129.8	3770693.6	353.0	3.49	4.00	3.25	YES	
L0004557	0	0.27160E-05	479129.7	3770685.0	353.0	3.49	4.00	3.25	YES	
L0004558	0	0.27160E-05	479129.6	3770676.4	353.0	3.49	4.00	3.25	YES	
L0004559	0	0.27160E-05	479129.5	3770667.8	353.0	3.49	4.00	3.25	YES	
L0004560	0	0.27160E-05	479129.4	3770659.2	353.0	3.49	4.00	3.25	YES	
L0004561	0	0.27160E-05	479129.3	3770650.6	353.0	3.49	4.00	3.25	YES	
L0004562	0	0.27160E-05	479129.2	3770642.0	353.0	3.49	4.00	3.25	YES	
L0004563	0	0.27160E-05	479129.1	3770633.4	353.0	3.49	4.00	3.25	YES	
L0004564	0	0.27160E-05	479129.0	3770624.8	353.0	3.49	4.00	3.25	YES	
L0004565	0	0.27160E-05	479128.9	3770616.3	353.0	3.49	4.00	3.25	YES	
L0004566	0	0.27160E-05	479128.8	3770607.7	353.0	3.49	4.00	3.25	YES	
L0004567	0	0.27160E-05	479128.7	3770599.1	353.0	3.49	4.00	3.25	YES	
L0004568	0	0.27160E-05	479128.6	3770590.5	353.1	3.49	4.00	3.25	YES	
L0004569	0	0.27160E-05	479128.5	3770581.9	353.3	3.49	4.00	3.25	YES	
L0004570	0	0.27160E-05	479128.4	3770573.3	353.5	3.49	4.00	3.25	YES	
L0004571	0	0.27160E-05	479128.3	3770564.7	353.6	3.49	4.00	3.25	YES	
L0004572	0	0.27160E-05	479128.2	3770556.1	353.7	3.49	4.00	3.25	YES	
L0004573	0	0.27160E-05	479128.1	3770547.5	353.9	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0004574	0	0.27160E-05	479128.0	3770538.9	354.0	3.49	4.00	3.25	YES	
L0004575	0	0.27160E-05	479127.9	3770530.4	354.0	3.49	4.00	3.25	YES	
L0004576	0	0.27160E-05	479127.8	3770521.8	354.0	3.49	4.00	3.25	YES	
L0004577	0	0.27160E-05	479127.7	3770513.2	354.0	3.49	4.00	3.25	YES	
L0004578	0	0.27160E-05	479127.6	3770504.6	354.0	3.49	4.00	3.25	YES	
L0004579	0	0.27160E-05	479127.5	3770496.0	354.0	3.49	4.00	3.25	YES	
L0004580	0	0.27160E-05	479127.4	3770487.4	354.0	3.49	4.00	3.25	YES	
L0004581	0	0.27160E-05	479127.3	3770478.8	354.0	3.49	4.00	3.25	YES	
L0004582	0	0.27160E-05	479127.2	3770470.2	354.0	3.49	4.00	3.25	YES	
L0004583	0	0.27160E-05	479127.1	3770461.6	354.0	3.49	4.00	3.25	YES	
L0004584	0	0.27160E-05	479127.0	3770453.1	354.0	3.49	4.00	3.25	YES	
L0004585	0	0.27160E-05	479126.9	3770444.5	354.0	3.49	4.00	3.25	YES	
L0004586	0	0.27160E-05	479126.8	3770435.9	354.0	3.49	4.00	3.25	YES	
L0004587	0	0.27160E-05	479126.7	3770427.3	354.0	3.49	4.00	3.25	YES	
L0004588	0	0.27160E-05	479126.6	3770418.7	354.0	3.49	4.00	3.25	YES	
L0004589	0	0.27160E-05	479126.5	3770410.1	354.0	3.49	4.00	3.25	YES	
L0004590	0	0.27160E-05	479126.4	3770401.5	354.0	3.49	4.00	3.25	YES	
L0004591	0	0.27160E-05	479126.3	3770392.9	354.0	3.49	4.00	3.25	YES	
L0004592	0	0.27160E-05	479126.2	3770384.3	354.0	3.49	4.00	3.25	YES	
L0004593	0	0.27160E-05	479126.1	3770375.7	354.0	3.49	4.00	3.25	YES	
L0004594	0	0.27160E-05	479126.2	3770367.2	354.0	3.49	4.00	3.25	YES	
L0004595	0	0.27160E-05	479126.2	3770358.6	354.0	3.49	4.00	3.25	YES	
L0004596	0	0.27160E-05	479126.3	3770350.0	354.0	3.49	4.00	3.25	YES	
L0004597	0	0.27160E-05	479126.4	3770341.4	354.0	3.49	4.00	3.25	YES	
L0004598	0	0.27160E-05	479126.4	3770332.8	354.0	3.49	4.00	3.25	YES	
L0004599	0	0.27160E-05	479126.5	3770324.2	354.0	3.49	4.00	3.25	YES	
L0004600	0	0.27160E-05	479126.5	3770315.6	353.8	3.49	4.00	3.25	YES	
L0004601	0	0.27160E-05	479126.6	3770307.0	353.7	3.49	4.00	3.25	YES	
L0004602	0	0.27160E-05	479126.7	3770298.4	353.6	3.49	4.00	3.25	YES	
L0004603	0	0.27160E-05	479126.7	3770289.9	353.4	3.49	4.00	3.25	YES	
L0004604	0	0.27160E-05	479126.8	3770281.3	353.3	3.49	4.00	3.25	YES	
L0004605	0	0.27160E-05	479126.8	3770272.7	353.1	3.49	4.00	3.25	YES	
L0004606	0	0.27160E-05	479126.9	3770264.1	353.0	3.49	4.00	3.25	YES	
L0004607	0	0.27160E-05	479127.0	3770255.5	353.0	3.49	4.00	3.25	YES	
L0004608	0	0.27160E-05	479127.0	3770246.9	353.0	3.49	4.00	3.25	YES	
L0004609	0	0.27160E-05	479127.1	3770238.3	353.0	3.49	4.00	3.25	YES	
L0004610	0	0.27160E-05	479127.1	3770229.7	353.0	3.49	4.00	3.25	YES	
L0004611	0	0.27160E-05	479127.2	3770221.1	353.0	3.49	4.00	3.25	YES	
L0004612	0	0.27160E-05	479127.2	3770212.5	353.0	3.49	4.00	3.25	YES	
L0004613	0	0.27160E-05	479127.3	3770204.0	353.0	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0004614	0	0.27160E-05	479127.4	3770195.4	353.0	3.49	4.00	3.25	YES	
L0004615	0	0.27160E-05	479127.4	3770186.8	353.0	3.49	4.00	3.25	YES	
L0004616	0	0.27160E-05	479127.5	3770178.2	353.0	3.49	4.00	3.25	YES	
L0004617	0	0.27160E-05	479127.5	3770169.6	353.0	3.49	4.00	3.25	YES	
L0004618	0	0.27160E-05	479127.6	3770161.0	353.0	3.49	4.00	3.25	YES	
L0004619	0	0.27160E-05	479127.7	3770152.4	353.0	3.49	4.00	3.25	YES	
L0004620	0	0.27160E-05	479127.7	3770143.8	353.0	3.49	4.00	3.25	YES	
L0004621	0	0.27160E-05	479127.8	3770135.2	353.0	3.49	4.00	3.25	YES	
L0004622	0	0.27160E-05	479127.8	3770126.6	353.0	3.49	4.00	3.25	YES	
L0004623	0	0.27160E-05	479127.9	3770118.1	353.0	3.49	4.00	3.25	YES	
L0004624	0	0.27160E-05	479128.0	3770109.5	353.0	3.49	4.00	3.25	YES	
L0004625	0	0.27160E-05	479128.0	3770100.9	353.0	3.49	4.00	3.25	YES	
L0004626	0	0.27160E-05	479128.1	3770092.3	353.0	3.49	4.00	3.25	YES	
L0004627	0	0.27160E-05	479128.1	3770083.7	353.0	3.49	4.00	3.25	YES	
L0004628	0	0.27160E-05	479128.2	3770075.1	353.0	3.49	4.00	3.25	YES	
L0004629	0	0.27160E-05	479128.3	3770066.5	353.0	3.49	4.00	3.25	YES	
L0004630	0	0.27160E-05	479128.3	3770057.9	353.0	3.49	4.00	3.25	YES	
L0004631	0	0.27160E-05	479128.4	3770049.3	353.0	3.49	4.00	3.25	YES	
L0004632	0	0.27160E-05	479128.4	3770040.7	353.0	3.49	4.00	3.25	YES	
L0004633	0	0.27160E-05	479128.5	3770032.2	353.0	3.49	4.00	3.25	YES	
L0004634	0	0.27160E-05	479128.6	3770023.6	353.0	3.49	4.00	3.25	YES	
L0004635	0	0.27160E-05	479128.6	3770015.0	353.0	3.49	4.00	3.25	YES	
L0004636	0	0.27160E-05	479128.7	3770006.4	353.0	3.49	4.00	3.25	YES	
L0004637	0	0.27160E-05	479128.7	3769997.8	353.0	3.49	4.00	3.25	YES	
L0004638	0	0.27160E-05	479128.8	3769989.2	353.0	3.49	4.00	3.25	YES	
L0004639	0	0.27160E-05	479128.9	3769980.6	353.0	3.49	4.00	3.25	YES	
L0004640	0	0.27160E-05	479128.9	3769972.0	353.0	3.49	4.00	3.25	YES	
L0004641	0	0.27160E-05	479129.0	3769963.4	353.0	3.49	4.00	3.25	YES	
L0004642	0	0.27160E-05	479129.0	3769954.8	353.0	3.49	4.00	3.25	YES	
L0004643	0	0.27160E-05	479129.1	3769946.3	353.0	3.49	4.00	3.25	YES	
L0004644	0	0.27160E-05	479129.1	3769937.7	353.0	3.49	4.00	3.25	YES	
L0004645	0	0.27160E-05	479129.2	3769929.1	353.2	3.49	4.00	3.25	YES	
L0004646	0	0.27160E-05	479129.3	3769920.5	353.3	3.49	4.00	3.25	YES	
L0004647	0	0.27160E-05	479129.3	3769911.9	353.5	3.49	4.00	3.25	YES	
L0004648	0	0.27160E-05	479129.4	3769903.3	353.7	3.49	4.00	3.25	YES	
L0004649	0	0.27160E-05	479129.4	3769894.7	353.8	3.49	4.00	3.25	YES	
L0004650	0	0.27160E-05	479129.5	3769886.1	353.9	3.49	4.00	3.25	YES	
L0004651	0	0.27160E-05	479129.6	3769877.5	354.0	3.49	4.00	3.25	YES	
L0004652	0	0.27160E-05	479129.6	3769869.0	354.0	3.49	4.00	3.25	YES	
L0004653	0	0.27160E-05	479129.7	3769860.4	354.0	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0004654	0	0.27160E-05	479129.7	3769851.8	354.0	3.49	4.00	3.25	YES	
L0004655	0	0.27160E-05	479129.8	3769843.2	354.0	3.49	4.00	3.25	YES	
L0004656	0	0.27160E-05	479129.9	3769834.6	354.0	3.49	4.00	3.25	YES	
L0004657	0	0.27160E-05	479129.9	3769826.0	354.0	3.49	4.00	3.25	YES	
L0004658	0	0.27160E-05	479130.0	3769817.4	354.0	3.49	4.00	3.25	YES	
L0004659	0	0.27160E-05	479130.0	3769808.8	354.0	3.49	4.00	3.25	YES	
L0004660	0	0.27160E-05	479130.1	3769800.2	354.0	3.49	4.00	3.25	YES	
L0004661	0	0.27160E-05	479130.2	3769791.6	354.0	3.49	4.00	3.25	YES	
L0004662	0	0.27160E-05	479130.2	3769783.1	354.0	3.49	4.00	3.25	YES	
L0004663	0	0.27160E-05	479130.3	3769774.5	354.0	3.49	4.00	3.25	YES	
L0004664	0	0.27160E-05	479130.3	3769765.9	354.0	3.49	4.00	3.25	YES	
L0004665	0	0.27160E-05	479130.4	3769757.3	354.0	3.49	4.00	3.25	YES	
L0004666	0	0.27160E-05	479130.5	3769748.7	354.0	3.49	4.00	3.25	YES	
L0004667	0	0.27160E-05	479130.5	3769740.1	354.0	3.49	4.00	3.25	YES	
L0004668	0	0.27160E-05	479130.6	3769731.5	354.0	3.49	4.00	3.25	YES	
L0004669	0	0.27160E-05	479130.6	3769722.9	354.0	3.49	4.00	3.25	YES	
L0004670	0	0.27160E-05	479130.7	3769714.3	354.0	3.49	4.00	3.25	YES	
L0004671	0	0.27160E-05	479130.8	3769705.7	354.0	3.49	4.00	3.25	YES	
L0004672	0	0.27160E-05	479130.8	3769697.2	354.0	3.49	4.00	3.25	YES	
L0004673	0	0.27160E-05	479130.9	3769688.6	354.2	3.49	4.00	3.25	YES	
L0004674	0	0.27160E-05	479130.9	3769680.0	354.4	3.49	4.00	3.25	YES	
L0004675	0	0.27160E-05	479131.0	3769671.4	354.6	3.49	4.00	3.25	YES	
L0004676	0	0.27160E-05	479131.1	3769662.8	354.7	3.49	4.00	3.25	YES	
L0004677	0	0.27160E-05	479131.1	3769654.2	354.8	3.49	4.00	3.25	YES	
L0004678	0	0.27160E-05	479131.2	3769645.6	354.9	3.49	4.00	3.25	YES	
L0004679	0	0.27160E-05	479131.2	3769637.0	355.0	3.49	4.00	3.25	YES	
L0004680	0	0.27160E-05	479131.3	3769628.4	355.6	3.49	4.00	3.25	YES	
L0004681	0	0.27160E-05	479131.3	3769619.8	356.3	3.49	4.00	3.25	YES	
L0004682	0	0.13480E-05	480742.6	3774121.5	363.4	3.49	4.00	3.25	YES	
L0004683	0	0.13480E-05	480742.7	3774112.9	363.4	3.49	4.00	3.25	YES	
L0004684	0	0.13480E-05	480742.7	3774104.3	363.4	3.49	4.00	3.25	YES	
L0004685	0	0.13480E-05	480742.8	3774095.7	363.4	3.49	4.00	3.25	YES	
L0004686	0	0.13480E-05	480742.9	3774087.1	363.4	3.49	4.00	3.25	YES	
L0004687	0	0.13480E-05	480743.0	3774078.5	363.4	3.49	4.00	3.25	YES	
L0004688	0	0.13480E-05	480743.1	3774069.9	363.6	3.49	4.00	3.25	YES	
L0004689	0	0.13480E-05	480743.2	3774061.3	363.7	3.49	4.00	3.25	YES	
L0004690	0	0.13480E-05	480743.2	3774052.7	363.9	3.49	4.00	3.25	YES	
L0004691	0	0.13480E-05	480743.3	3774044.2	364.0	3.49	4.00	3.25	YES	
L0004692	0	0.13480E-05	480743.4	3774035.6	364.0	3.49	4.00	3.25	YES	
L0004693	0	0.13480E-05	480743.5	3774027.0	364.0	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0004694	0	0.13480E-05	480743.6	3774018.4	364.0	3.49	4.00	3.25	YES	
L0004695	0	0.13480E-05	480743.7	3774009.8	364.1	3.49	4.00	3.25	YES	
L0004696	0	0.13480E-05	480743.7	3774001.2	364.2	3.49	4.00	3.25	YES	
L0004697	0	0.13480E-05	480743.8	3773992.6	364.4	3.49	4.00	3.25	YES	
L0004698	0	0.13480E-05	480743.9	3773984.0	364.5	3.49	4.00	3.25	YES	
L0004699	0	0.13480E-05	480744.0	3773975.4	364.7	3.49	4.00	3.25	YES	
L0004700	0	0.13480E-05	480744.1	3773966.8	364.8	3.49	4.00	3.25	YES	
L0004701	0	0.13480E-05	480744.1	3773958.3	365.0	3.49	4.00	3.25	YES	
L0004702	0	0.13480E-05	480744.2	3773949.7	365.1	3.49	4.00	3.25	YES	
L0004703	0	0.13480E-05	480744.3	3773941.1	365.2	3.49	4.00	3.25	YES	
L0004704	0	0.13480E-05	480744.4	3773932.5	365.4	3.49	4.00	3.25	YES	
L0004705	0	0.13480E-05	480744.5	3773923.9	365.5	3.49	4.00	3.25	YES	
L0004706	0	0.13480E-05	480744.6	3773915.3	365.5	3.49	4.00	3.25	YES	
L0004707	0	0.13480E-05	480744.6	3773906.7	365.5	3.49	4.00	3.25	YES	
L0004708	0	0.13480E-05	480744.7	3773898.1	365.5	3.49	4.00	3.25	YES	
L0004709	0	0.13480E-05	480744.8	3773889.5	365.5	3.49	4.00	3.25	YES	
L0004710	0	0.13480E-05	480744.9	3773881.0	365.5	3.49	4.00	3.25	YES	
L0004711	0	0.13480E-05	480745.0	3773872.4	365.5	3.49	4.00	3.25	YES	
L0004712	0	0.13480E-05	480745.0	3773863.8	365.5	3.49	4.00	3.25	YES	
L0004713	0	0.13480E-05	480745.1	3773855.2	365.5	3.49	4.00	3.25	YES	
L0004714	0	0.13480E-05	480745.2	3773846.6	365.5	3.49	4.00	3.25	YES	
L0004715	0	0.13480E-05	480745.3	3773838.0	365.5	3.49	4.00	3.25	YES	
L0004716	0	0.13480E-05	480745.4	3773829.4	365.5	3.49	4.00	3.25	YES	
L0004717	0	0.13480E-05	480745.5	3773820.8	365.5	3.49	4.00	3.25	YES	
L0004718	0	0.13480E-05	480745.5	3773812.2	365.5	3.49	4.00	3.25	YES	
L0004719	0	0.13480E-05	480745.6	3773803.6	365.5	3.49	4.00	3.25	YES	
L0004720	0	0.13480E-05	480745.7	3773795.1	365.5	3.49	4.00	3.25	YES	
L0004721	0	0.13480E-05	480745.8	3773786.5	365.5	3.49	4.00	3.25	YES	
L0004722	0	0.13480E-05	480745.9	3773777.9	365.5	3.49	4.00	3.25	YES	
L0004723	0	0.13480E-05	480746.0	3773769.3	365.5	3.49	4.00	3.25	YES	
L0004724	0	0.13480E-05	480746.0	3773760.7	365.5	3.49	4.00	3.25	YES	
L0004725	0	0.13480E-05	480746.1	3773752.1	365.5	3.49	4.00	3.25	YES	
L0004726	0	0.13480E-05	480746.2	3773743.5	365.5	3.49	4.00	3.25	YES	
L0004727	0	0.13480E-05	480746.3	3773734.9	365.6	3.49	4.00	3.25	YES	
L0004728	0	0.13480E-05	480746.4	3773726.3	365.6	3.49	4.00	3.25	YES	
L0004729	0	0.13480E-05	480746.4	3773717.7	365.6	3.49	4.00	3.25	YES	
L0004730	0	0.13480E-05	480746.5	3773709.2	365.6	3.49	4.00	3.25	YES	
L0004731	0	0.13480E-05	480746.6	3773700.6	365.6	3.49	4.00	3.25	YES	
L0004732	0	0.13480E-05	480746.7	3773692.0	365.6	3.49	4.00	3.25	YES	
L0004733	0	0.13480E-05	480746.8	3773683.4	365.6	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0004734	0	0.13480E-05	480746.9	3773674.8	365.6	3.49	4.00	3.25	YES	
L0004735	0	0.13480E-05	480746.9	3773666.2	365.6	3.49	4.00	3.25	YES	
L0004736	0	0.13480E-05	480747.0	3773657.6	365.6	3.49	4.00	3.25	YES	
L0004737	0	0.13480E-05	480747.1	3773649.0	365.6	3.49	4.00	3.25	YES	
L0004738	0	0.13480E-05	480747.2	3773640.4	365.6	3.49	4.00	3.25	YES	
L0004739	0	0.13480E-05	480747.3	3773631.9	365.6	3.49	4.00	3.25	YES	
L0004740	0	0.13480E-05	480747.4	3773623.3	365.5	3.49	4.00	3.25	YES	
L0004741	0	0.13480E-05	480747.4	3773614.7	365.2	3.49	4.00	3.25	YES	
L0004742	0	0.13480E-05	480747.5	3773606.1	364.9	3.49	4.00	3.25	YES	
L0004743	0	0.13480E-05	480747.6	3773597.5	364.6	3.49	4.00	3.25	YES	
L0004744	0	0.13480E-05	480747.7	3773588.9	364.4	3.49	4.00	3.25	YES	
L0004745	0	0.13480E-05	480747.8	3773580.3	364.3	3.49	4.00	3.25	YES	
L0004746	0	0.13480E-05	480747.8	3773571.7	364.1	3.49	4.00	3.25	YES	
L0004747	0	0.13480E-05	480747.9	3773563.1	364.0	3.49	4.00	3.25	YES	
L0004748	0	0.13480E-05	480748.0	3773554.5	363.9	3.49	4.00	3.25	YES	
L0004749	0	0.13480E-05	480748.1	3773546.0	363.7	3.49	4.00	3.25	YES	
L0004750	0	0.13480E-05	480748.2	3773537.4	363.6	3.49	4.00	3.25	YES	
L0004751	0	0.13480E-05	480748.3	3773528.8	363.5	3.49	4.00	3.25	YES	
L0004752	0	0.13480E-05	480748.3	3773520.2	363.3	3.49	4.00	3.25	YES	
L0004753	0	0.13480E-05	480748.4	3773511.6	363.1	3.49	4.00	3.25	YES	
L0004754	0	0.13480E-05	480748.5	3773503.0	363.0	3.49	4.00	3.25	YES	
L0004755	0	0.13480E-05	480748.5	3773494.4	362.9	3.49	4.00	3.25	YES	
L0004756	0	0.13480E-05	480748.5	3773485.8	362.7	3.49	4.00	3.25	YES	
L0004757	0	0.13480E-05	480748.6	3773477.2	362.6	3.49	4.00	3.25	YES	
L0004758	0	0.13480E-05	480748.6	3773468.6	362.6	3.49	4.00	3.25	YES	
L0004759	0	0.13480E-05	480748.6	3773460.1	362.6	3.49	4.00	3.25	YES	
L0004760	0	0.13480E-05	480748.6	3773451.5	362.6	3.49	4.00	3.25	YES	
L0004761	0	0.13480E-05	480748.6	3773442.9	362.6	3.49	4.00	3.25	YES	
L0004762	0	0.13480E-05	480748.7	3773434.3	362.4	3.49	4.00	3.25	YES	
L0004763	0	0.13480E-05	480748.7	3773425.7	362.2	3.49	4.00	3.25	YES	
L0004764	0	0.13480E-05	480748.7	3773417.1	362.0	3.49	4.00	3.25	YES	
L0004765	0	0.13480E-05	480748.7	3773408.5	362.0	3.49	4.00	3.25	YES	
L0004766	0	0.13480E-05	480748.8	3773399.9	362.0	3.49	4.00	3.25	YES	
L0004767	0	0.13480E-05	480748.8	3773391.3	362.0	3.49	4.00	3.25	YES	
L0004768	0	0.13480E-05	480748.8	3773382.8	362.0	3.49	4.00	3.25	YES	
L0004769	0	0.13480E-05	480748.8	3773374.2	362.0	3.49	4.00	3.25	YES	
L0004770	0	0.13480E-05	480748.8	3773365.6	362.0	3.49	4.00	3.25	YES	
L0004771	0	0.13480E-05	480748.9	3773357.0	362.0	3.49	4.00	3.25	YES	
L0004772	0	0.13480E-05	480748.9	3773348.4	362.0	3.49	4.00	3.25	YES	
L0004773	0	0.13480E-05	480748.9	3773339.8	362.0	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0004774	0	0.13480E-05	480748.9	3773331.2	362.0	3.49	4.00	3.25	YES	
L0004775	0	0.13480E-05	480749.0	3773322.6	362.0	3.49	4.00	3.25	YES	
L0004776	0	0.13480E-05	480749.0	3773314.0	362.0	3.49	4.00	3.25	YES	
L0004777	0	0.13480E-05	480749.0	3773305.4	362.0	3.49	4.00	3.25	YES	
L0004778	0	0.13480E-05	480749.0	3773296.8	362.0	3.49	4.00	3.25	YES	
L0004779	0	0.13480E-05	480749.0	3773288.3	362.0	3.49	4.00	3.25	YES	
L0004780	0	0.13480E-05	480749.1	3773279.7	362.0	3.49	4.00	3.25	YES	
L0004781	0	0.13480E-05	480749.1	3773271.1	362.0	3.49	4.00	3.25	YES	
L0004782	0	0.13480E-05	480749.1	3773262.5	362.0	3.49	4.00	3.25	YES	
L0004783	0	0.13480E-05	480749.1	3773253.9	362.0	3.49	4.00	3.25	YES	
L0004784	0	0.13480E-05	480749.2	3773245.3	362.0	3.49	4.00	3.25	YES	
L0004785	0	0.13480E-05	480749.2	3773236.7	362.0	3.49	4.00	3.25	YES	
L0004786	0	0.13480E-05	480749.2	3773228.1	362.0	3.49	4.00	3.25	YES	
L0004787	0	0.13480E-05	480749.2	3773219.5	362.0	3.49	4.00	3.25	YES	
L0004788	0	0.13480E-05	480749.2	3773210.9	362.0	3.49	4.00	3.25	YES	
L0004789	0	0.13480E-05	480749.3	3773202.4	362.0	3.49	4.00	3.25	YES	
L0004790	0	0.13480E-05	480749.3	3773193.8	362.0	3.49	4.00	3.25	YES	
L0004791	0	0.13480E-05	480749.3	3773185.2	362.0	3.49	4.00	3.25	YES	
L0004792	0	0.13480E-05	480749.3	3773176.6	362.0	3.49	4.00	3.25	YES	
L0004793	0	0.13480E-05	480749.3	3773168.0	361.9	3.49	4.00	3.25	YES	
L0004794	0	0.13480E-05	480749.4	3773159.4	361.8	3.49	4.00	3.25	YES	
L0004795	0	0.13480E-05	480749.4	3773150.8	361.7	3.49	4.00	3.25	YES	
L0004796	0	0.13480E-05	480749.4	3773142.2	361.7	3.49	4.00	3.25	YES	
L0004797	0	0.13480E-05	480749.4	3773133.6	361.7	3.49	4.00	3.25	YES	
L0004798	0	0.13480E-05	480749.5	3773125.0	361.7	3.49	4.00	3.25	YES	
L0004799	0	0.13480E-05	480749.5	3773116.5	361.7	3.49	4.00	3.25	YES	
L0004800	0	0.13480E-05	480749.5	3773107.9	361.7	3.49	4.00	3.25	YES	
L0004801	0	0.13480E-05	480749.5	3773099.3	361.7	3.49	4.00	3.25	YES	
L0004802	0	0.13480E-05	480749.5	3773090.7	361.7	3.49	4.00	3.25	YES	
L0004803	0	0.13480E-05	480749.6	3773082.1	361.7	3.49	4.00	3.25	YES	
L0004804	0	0.13480E-05	480749.6	3773073.5	361.7	3.49	4.00	3.25	YES	
L0004805	0	0.13480E-05	480749.6	3773064.9	361.7	3.49	4.00	3.25	YES	
L0004806	0	0.13480E-05	480749.6	3773056.3	361.7	3.49	4.00	3.25	YES	
L0004807	0	0.13480E-05	480749.7	3773047.7	361.7	3.49	4.00	3.25	YES	
L0004808	0	0.13480E-05	480749.7	3773039.2	361.7	3.49	4.00	3.25	YES	
L0004809	0	0.13480E-05	480749.7	3773030.6	361.7	3.49	4.00	3.25	YES	
L0004810	0	0.13480E-05	480749.7	3773022.0	361.7	3.49	4.00	3.25	YES	
L0004811	0	0.13480E-05	480749.7	3773013.4	361.7	3.49	4.00	3.25	YES	
L0004812	0	0.13480E-05	480749.8	3773004.8	361.7	3.49	4.00	3.25	YES	
L0004813	0	0.13480E-05	480749.8	3772996.2	361.7	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0004814	0	0.13480E-05	480749.8	3772987.6	361.7	3.49	4.00	3.25	YES	
L0004815	0	0.13480E-05	480749.8	3772979.0	361.7	3.49	4.00	3.25	YES	
L0004816	0	0.13480E-05	480749.8	3772970.4	361.7	3.49	4.00	3.25	YES	
L0004817	0	0.13480E-05	480749.9	3772961.8	361.7	3.49	4.00	3.25	YES	
L0004818	0	0.13480E-05	480749.9	3772953.3	361.7	3.49	4.00	3.25	YES	
L0004819	0	0.13480E-05	480749.9	3772944.7	361.7	3.49	4.00	3.25	YES	
L0004820	0	0.13480E-05	480749.9	3772936.1	361.7	3.49	4.00	3.25	YES	
L0004821	0	0.13480E-05	480750.0	3772927.5	361.7	3.49	4.00	3.25	YES	
L0004822	0	0.13480E-05	480750.0	3772918.9	361.7	3.49	4.00	3.25	YES	
L0004823	0	0.13480E-05	480750.0	3772910.3	361.7	3.49	4.00	3.25	YES	
L0004824	0	0.13480E-05	480750.0	3772901.7	361.7	3.49	4.00	3.25	YES	
L0004825	0	0.13480E-05	480750.0	3772893.1	361.7	3.49	4.00	3.25	YES	
L0004826	0	0.13480E-05	480750.1	3772884.5	361.7	3.49	4.00	3.25	YES	
L0004827	0	0.13480E-05	480750.1	3772875.9	361.7	3.49	4.00	3.25	YES	
L0004828	0	0.13480E-05	480750.1	3772867.4	361.7	3.49	4.00	3.25	YES	
L0004829	0	0.13480E-05	480750.1	3772858.8	361.7	3.49	4.00	3.25	YES	
L0004830	0	0.13480E-05	480750.2	3772850.2	361.7	3.49	4.00	3.25	YES	
L0004831	0	0.13480E-05	480750.2	3772841.6	361.7	3.49	4.00	3.25	YES	
L0004832	0	0.13480E-05	480750.2	3772833.0	361.7	3.49	4.00	3.25	YES	
L0004833	0	0.13480E-05	480750.2	3772824.4	361.7	3.49	4.00	3.25	YES	
L0004834	0	0.13480E-05	480750.2	3772815.8	361.7	3.49	4.00	3.25	YES	
L0004835	0	0.13480E-05	480750.3	3772807.2	361.7	3.49	4.00	3.25	YES	
L0004836	0	0.13480E-05	480750.3	3772798.6	361.7	3.49	4.00	3.25	YES	
L0004837	0	0.13480E-05	480750.3	3772790.0	361.7	3.49	4.00	3.25	YES	
L0004838	0	0.13480E-05	480750.3	3772781.5	361.7	3.49	4.00	3.25	YES	
L0004839	0	0.13480E-05	480750.3	3772772.9	361.7	3.49	4.00	3.25	YES	
L0004840	0	0.13480E-05	480750.4	3772764.3	361.7	3.49	4.00	3.25	YES	
L0004841	0	0.13480E-05	480750.4	3772755.7	361.7	3.49	4.00	3.25	YES	
L0004842	0	0.13480E-05	480750.4	3772747.1	361.7	3.49	4.00	3.25	YES	
L0004843	0	0.13480E-05	480750.4	3772738.5	361.7	3.49	4.00	3.25	YES	
L0004844	0	0.13480E-05	480750.5	3772729.9	361.7	3.49	4.00	3.25	YES	
L0004845	0	0.13480E-05	480750.5	3772721.3	361.7	3.49	4.00	3.25	YES	
L0004846	0	0.13480E-05	480750.5	3772712.7	361.7	3.49	4.00	3.25	YES	
L0004847	0	0.13480E-05	480750.5	3772704.1	361.7	3.49	4.00	3.25	YES	
L0004848	0	0.13480E-05	480750.5	3772695.6	361.7	3.49	4.00	3.25	YES	
L0004849	0	0.13480E-05	480750.6	3772687.0	361.7	3.49	4.00	3.25	YES	
L0004850	0	0.13480E-05	480750.6	3772678.4	361.7	3.49	4.00	3.25	YES	
L0004851	0	0.13480E-05	480750.6	3772669.8	361.7	3.49	4.00	3.25	YES	
L0004852	0	0.13480E-05	480750.6	3772661.2	361.6	3.49	4.00	3.25	YES	
L0004853	0	0.13480E-05	480750.7	3772652.6	361.4	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0004854	0	0.13480E-05	480750.7	3772644.0	361.2	3.49	4.00	3.25	YES	
L0004855	0	0.13480E-05	480750.7	3772635.4	361.0	3.49	4.00	3.25	YES	
L0004856	0	0.13480E-05	480750.7	3772626.8	361.0	3.49	4.00	3.25	YES	
L0004857	0	0.13480E-05	480750.7	3772618.2	361.0	3.49	4.00	3.25	YES	
L0004858	0	0.13480E-05	480750.8	3772609.7	361.0	3.49	4.00	3.25	YES	
L0004859	0	0.13480E-05	480750.8	3772601.1	361.0	3.49	4.00	3.25	YES	
L0004860	0	0.13480E-05	480750.8	3772592.5	361.0	3.49	4.00	3.25	YES	
L0004861	0	0.13480E-05	480750.8	3772583.9	361.0	3.49	4.00	3.25	YES	
L0004862	0	0.13480E-05	480750.9	3772575.3	361.0	3.49	4.00	3.25	YES	
L0004863	0	0.13480E-05	480750.9	3772566.7	360.9	3.49	4.00	3.25	YES	
L0004864	0	0.13480E-05	480750.9	3772558.1	360.8	3.49	4.00	3.25	YES	
L0004865	0	0.13480E-05	480750.9	3772549.5	360.7	3.49	4.00	3.25	YES	
L0004866	0	0.13480E-05	480750.9	3772540.9	360.7	3.49	4.00	3.25	YES	
L0004867	0	0.13480E-05	480751.0	3772532.3	360.7	3.49	4.00	3.25	YES	
L0004868	0	0.13480E-05	480751.0	3772523.8	360.7	3.49	4.00	3.25	YES	
L0004869	0	0.13480E-05	480751.0	3772515.2	360.7	3.49	4.00	3.25	YES	
L0004870	0	0.13480E-05	480751.0	3772506.6	360.5	3.49	4.00	3.25	YES	
L0004871	0	0.13480E-05	480751.0	3772498.0	360.3	3.49	4.00	3.25	YES	
L0004872	0	0.13480E-05	480751.1	3772489.4	360.1	3.49	4.00	3.25	YES	
L0004873	0	0.13480E-05	480751.1	3772480.8	360.1	3.49	4.00	3.25	YES	
L0004874	0	0.13480E-05	480751.1	3772472.2	360.3	3.49	4.00	3.25	YES	
L0004875	0	0.13480E-05	480751.1	3772463.6	360.5	3.49	4.00	3.25	YES	
L0004876	0	0.13480E-05	480751.2	3772455.0	360.7	3.49	4.00	3.25	YES	
L0004877	0	0.13480E-05	480751.2	3772446.4	360.7	3.49	4.00	3.25	YES	
L0004878	0	0.13480E-05	480751.2	3772437.9	360.7	3.49	4.00	3.25	YES	
L0004879	0	0.13480E-05	480751.2	3772429.3	360.7	3.49	4.00	3.25	YES	
L0004880	0	0.13480E-05	480751.2	3772420.7	360.9	3.49	4.00	3.25	YES	
L0004881	0	0.13480E-05	480751.3	3772412.1	361.2	3.49	4.00	3.25	YES	
L0004882	0	0.13480E-05	480751.3	3772403.5	361.5	3.49	4.00	3.25	YES	
L0004883	0	0.13480E-05	480751.3	3772394.9	361.7	3.49	4.00	3.25	YES	
L0004884	0	0.13480E-05	480751.3	3772386.3	361.7	3.49	4.00	3.25	YES	
L0004885	0	0.13480E-05	480751.4	3772377.7	361.7	3.49	4.00	3.25	YES	
L0004886	0	0.13480E-05	480751.4	3772369.1	361.7	3.49	4.00	3.25	YES	
L0004887	0	0.13480E-05	480751.4	3772360.5	361.8	3.49	4.00	3.25	YES	
L0004888	0	0.13480E-05	480751.4	3772352.0	361.9	3.49	4.00	3.25	YES	
L0004889	0	0.13480E-05	480751.4	3772343.4	361.9	3.49	4.00	3.25	YES	
L0004890	0	0.13480E-05	480751.5	3772334.8	362.0	3.49	4.00	3.25	YES	
L0004891	0	0.13480E-05	480751.5	3772326.2	362.2	3.49	4.00	3.25	YES	
L0004892	0	0.13480E-05	480751.5	3772317.6	362.4	3.49	4.00	3.25	YES	
L0004893	0	0.13480E-05	480751.5	3772309.0	362.7	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0004894	0	0.13480E-05	480751.5	3772300.4	362.8	3.49	4.00	3.25	YES	
L0004895	0	0.13480E-05	480751.6	3772291.8	362.9	3.49	4.00	3.25	YES	
L0004896	0	0.13480E-05	480751.6	3772283.2	362.9	3.49	4.00	3.25	YES	
L0004897	0	0.13480E-05	480751.6	3772274.6	363.0	3.49	4.00	3.25	YES	
L0004898	0	0.13480E-05	480751.6	3772266.1	363.0	3.49	4.00	3.25	YES	
L0004899	0	0.13480E-05	480751.7	3772257.5	363.0	3.49	4.00	3.25	YES	
L0004900	0	0.13480E-05	480751.7	3772248.9	363.0	3.49	4.00	3.25	YES	
L0004901	0	0.13480E-05	480751.7	3772240.3	363.2	3.49	4.00	3.25	YES	
L0004902	0	0.13480E-05	480751.7	3772231.7	363.4	3.49	4.00	3.25	YES	
L0004903	0	0.13480E-05	480751.7	3772223.1	363.6	3.49	4.00	3.25	YES	
L0004904	0	0.13480E-05	480751.8	3772214.5	363.7	3.49	4.00	3.25	YES	
L0004905	0	0.13480E-05	480751.8	3772205.9	363.8	3.49	4.00	3.25	YES	
L0004906	0	0.13480E-05	480751.8	3772197.3	363.9	3.49	4.00	3.25	YES	
L0004907	0	0.13480E-05	480751.8	3772188.7	364.0	3.49	4.00	3.25	YES	
L0004908	0	0.13480E-05	480751.9	3772180.2	364.0	3.49	4.00	3.25	YES	
L0004909	0	0.13480E-05	480751.9	3772171.6	364.0	3.49	4.00	3.25	YES	
L0004910	0	0.13480E-05	480751.9	3772163.0	364.0	3.49	4.00	3.25	YES	
L0004911	0	0.13480E-05	480751.9	3772154.4	364.1	3.49	4.00	3.25	YES	
L0004912	0	0.13480E-05	480751.9	3772145.8	364.3	3.49	4.00	3.25	YES	
L0004913	0	0.13480E-05	480752.0	3772137.2	364.5	3.49	4.00	3.25	YES	
L0004914	0	0.13480E-05	480752.0	3772128.6	364.7	3.49	4.00	3.25	YES	
L0004915	0	0.13480E-05	480752.0	3772120.0	364.8	3.49	4.00	3.25	YES	
L0004916	0	0.13480E-05	480752.0	3772111.4	364.9	3.49	4.00	3.25	YES	
L0004917	0	0.13480E-05	480752.0	3772102.8	364.9	3.49	4.00	3.25	YES	
L0004918	0	0.13480E-05	480752.1	3772094.3	365.1	3.49	4.00	3.25	YES	
L0004919	0	0.13480E-05	480752.1	3772085.7	365.3	3.49	4.00	3.25	YES	
L0004920	0	0.13480E-05	480752.1	3772077.1	365.5	3.49	4.00	3.25	YES	
L0004921	0	0.13480E-05	480752.1	3772068.5	365.7	3.49	4.00	3.25	YES	
L0004922	0	0.13480E-05	480752.2	3772059.9	365.9	3.49	4.00	3.25	YES	
L0004923	0	0.13480E-05	480752.2	3772051.3	366.2	3.49	4.00	3.25	YES	
L0004924	0	0.13480E-05	480752.2	3772042.7	366.5	3.49	4.00	3.25	YES	
L0004925	0	0.13480E-05	480752.2	3772034.1	366.9	3.49	4.00	3.25	YES	
L0004926	0	0.13480E-05	480752.2	3772025.5	367.7	3.49	4.00	3.25	YES	
L0004927	0	0.13480E-05	480752.3	3772016.9	368.5	3.49	4.00	3.25	YES	
L0004928	0	0.13480E-05	480752.3	3772008.4	369.3	3.49	4.00	3.25	YES	
L0004929	0	0.13480E-05	480752.3	3771999.8	369.8	3.49	4.00	3.25	YES	
L0004930	0	0.13480E-05	480752.3	3771991.2	370.1	3.49	4.00	3.25	YES	
L0004931	0	0.13480E-05	480752.4	3771982.6	370.5	3.49	4.00	3.25	YES	
L0004932	0	0.13480E-05	480752.4	3771974.0	370.8	3.49	4.00	3.25	YES	
L0004933	0	0.13480E-05	480752.4	3771965.4	370.8	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0004934	0	0.13480E-05	480752.4	3771956.8	370.8	3.49	4.00	3.25	YES	
L0004935	0	0.13480E-05	480752.4	3771948.2	370.8	3.49	4.00	3.25	YES	
L0004936	0	0.13480E-05	480752.5	3771939.6	371.0	3.49	4.00	3.25	YES	
L0004937	0	0.13480E-05	480752.5	3771931.0	371.3	3.49	4.00	3.25	YES	
L0004938	0	0.13480E-05	480752.5	3771922.5	371.6	3.49	4.00	3.25	YES	
L0004939	0	0.13480E-05	480752.5	3771913.9	371.8	3.49	4.00	3.25	YES	
L0004940	0	0.13480E-05	480752.6	3771905.3	371.8	3.49	4.00	3.25	YES	
L0004941	0	0.13480E-05	480752.6	3771896.7	371.8	3.49	4.00	3.25	YES	
L0004942	0	0.13480E-05	480752.6	3771888.1	371.8	3.49	4.00	3.25	YES	
L0004943	0	0.13480E-05	480752.6	3771879.5	371.8	3.49	4.00	3.25	YES	
L0004944	0	0.13480E-05	480752.6	3771870.9	371.8	3.49	4.00	3.25	YES	
L0004945	0	0.13480E-05	480752.7	3771862.3	371.8	3.49	4.00	3.25	YES	
L0004946	0	0.13480E-05	480752.7	3771853.7	371.8	3.49	4.00	3.25	YES	
L0004947	0	0.13480E-05	480752.7	3771845.1	371.8	3.49	4.00	3.25	YES	
L0004948	0	0.13480E-05	480752.7	3771836.6	371.8	3.49	4.00	3.25	YES	
L0004949	0	0.13480E-05	480752.7	3771828.0	371.8	3.49	4.00	3.25	YES	
L0004950	0	0.13480E-05	480752.8	3771819.4	371.8	3.49	4.00	3.25	YES	
L0004951	0	0.14480E-05	480750.9	3771805.7	371.7	3.49	4.00	3.25	YES	
L0004952	0	0.14480E-05	480750.8	3771797.2	371.7	3.49	4.00	3.25	YES	
L0004953	0	0.14480E-05	480750.6	3771788.6	371.7	3.49	4.00	3.25	YES	
L0004954	0	0.14480E-05	480750.5	3771780.0	371.7	3.49	4.00	3.25	YES	
L0004955	0	0.14480E-05	480750.4	3771771.4	371.7	3.49	4.00	3.25	YES	
L0004956	0	0.14480E-05	480750.2	3771762.8	371.7	3.49	4.00	3.25	YES	
L0004957	0	0.14480E-05	480750.1	3771754.2	371.8	3.49	4.00	3.25	YES	
L0004958	0	0.14480E-05	480750.0	3771745.6	371.9	3.49	4.00	3.25	YES	
L0004959	0	0.14480E-05	480749.8	3771737.0	372.0	3.49	4.00	3.25	YES	
L0004960	0	0.14480E-05	480749.7	3771728.4	372.0	3.49	4.00	3.25	YES	
L0004961	0	0.14480E-05	480749.6	3771719.9	372.0	3.49	4.00	3.25	YES	
L0004962	0	0.14480E-05	480749.4	3771711.3	372.0	3.49	4.00	3.25	YES	
L0004963	0	0.14480E-05	480749.3	3771702.7	372.1	3.49	4.00	3.25	YES	
L0004964	0	0.14480E-05	480749.2	3771694.1	372.3	3.49	4.00	3.25	YES	
L0004965	0	0.14480E-05	480749.0	3771685.5	372.4	3.49	4.00	3.25	YES	
L0004966	0	0.14480E-05	480748.9	3771676.9	372.6	3.49	4.00	3.25	YES	
L0004967	0	0.14480E-05	480748.7	3771668.3	372.6	3.49	4.00	3.25	YES	
L0004968	0	0.14480E-05	480748.6	3771659.7	372.6	3.49	4.00	3.25	YES	
L0004969	0	0.14480E-05	480748.5	3771651.1	372.6	3.49	4.00	3.25	YES	
L0004970	0	0.14480E-05	480748.3	3771642.6	372.7	3.49	4.00	3.25	YES	
L0004971	0	0.14480E-05	480748.2	3771634.0	372.8	3.49	4.00	3.25	YES	
L0004972	0	0.14480E-05	480748.1	3771625.4	372.9	3.49	4.00	3.25	YES	
L0004973	0	0.14480E-05	480747.9	3771616.8	373.0	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0004974	0	0.14480E-05	480747.8	3771608.2	373.0	3.49	4.00	3.25	YES	
L0004975	0	0.14480E-05	480747.7	3771599.6	373.0	3.49	4.00	3.25	YES	
L0004976	0	0.14480E-05	480747.5	3771591.0	373.0	3.49	4.00	3.25	YES	
L0004977	0	0.17760E-05	480747.0	3771564.5	373.0	3.49	4.00	3.25	YES	
L0004978	0	0.17760E-05	480747.0	3771555.9	373.0	3.49	4.00	3.25	YES	
L0004979	0	0.17760E-05	480747.0	3771547.3	373.0	3.49	4.00	3.25	YES	
L0004980	0	0.17760E-05	480747.0	3771538.7	373.0	3.49	4.00	3.25	YES	
L0004981	0	0.17760E-05	480746.9	3771530.1	373.0	3.49	4.00	3.25	YES	
L0004982	0	0.17760E-05	480746.9	3771521.5	373.1	3.49	4.00	3.25	YES	
L0004983	0	0.17760E-05	480746.9	3771512.9	373.2	3.49	4.00	3.25	YES	
L0004984	0	0.17760E-05	480746.9	3771504.4	373.4	3.49	4.00	3.25	YES	
L0004985	0	0.17760E-05	480746.8	3771495.8	373.6	3.49	4.00	3.25	YES	
L0004986	0	0.17760E-05	480746.8	3771487.2	373.6	3.49	4.00	3.25	YES	
L0004987	0	0.17760E-05	480746.8	3771478.6	373.6	3.49	4.00	3.25	YES	
L0004988	0	0.17760E-05	480746.8	3771470.0	373.6	3.49	4.00	3.25	YES	
L0004989	0	0.17760E-05	480746.8	3771461.4	373.6	3.49	4.00	3.25	YES	
L0004990	0	0.17760E-05	480746.7	3771452.8	373.6	3.49	4.00	3.25	YES	
L0004991	0	0.17760E-05	480746.7	3771444.2	373.6	3.49	4.00	3.25	YES	
L0004992	0	0.17760E-05	480746.7	3771435.6	373.6	3.49	4.00	3.25	YES	
L0004993	0	0.17760E-05	480746.7	3771427.0	373.6	3.49	4.00	3.25	YES	
L0004994	0	0.17760E-05	480746.6	3771418.5	373.6	3.49	4.00	3.25	YES	
L0004995	0	0.17760E-05	480746.6	3771409.9	373.6	3.49	4.00	3.25	YES	
L0004996	0	0.17760E-05	480746.6	3771401.3	373.6	3.49	4.00	3.25	YES	
L0004997	0	0.17760E-05	480746.6	3771392.7	373.6	3.49	4.00	3.25	YES	
L0004998	0	0.17760E-05	480746.6	3771384.1	373.6	3.49	4.00	3.25	YES	
L0004999	0	0.17760E-05	480746.5	3771375.5	373.6	3.49	4.00	3.25	YES	
L0005000	0	0.17760E-05	480746.5	3771366.9	373.7	3.49	4.00	3.25	YES	
L0005001	0	0.17760E-05	480746.5	3771358.3	373.8	3.49	4.00	3.25	YES	
L0005002	0	0.17760E-05	480746.5	3771349.7	373.9	3.49	4.00	3.25	YES	
L0005003	0	0.17760E-05	480746.5	3771341.1	374.0	3.49	4.00	3.25	YES	
L0005004	0	0.17760E-05	480746.4	3771332.6	374.0	3.49	4.00	3.25	YES	
L0005005	0	0.17760E-05	480746.4	3771324.0	374.0	3.49	4.00	3.25	YES	
L0005006	0	0.17760E-05	480746.4	3771315.4	374.0	3.49	4.00	3.25	YES	
L0005007	0	0.17760E-05	480746.4	3771306.8	374.0	3.49	4.00	3.25	YES	
L0005008	0	0.17760E-05	480746.3	3771298.2	374.0	3.49	4.00	3.25	YES	
L0005009	0	0.17760E-05	480746.3	3771289.6	374.0	3.49	4.00	3.25	YES	
L0005010	0	0.17760E-05	480746.3	3771281.0	374.0	3.49	4.00	3.25	YES	
L0005011	0	0.17760E-05	480746.3	3771272.4	374.0	3.49	4.00	3.25	YES	
L0005012	0	0.17760E-05	480746.3	3771263.8	374.0	3.49	4.00	3.25	YES	
L0005013	0	0.17760E-05	480746.2	3771255.2	374.0	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0005014	0	0.17760E-05	480746.2	3771246.7	374.0	3.49	4.00	3.25	YES	
L0005015	0	0.17760E-05	480746.2	3771238.1	374.0	3.49	4.00	3.25	YES	
L0005016	0	0.17760E-05	480746.2	3771229.5	374.0	3.49	4.00	3.25	YES	
L0005017	0	0.17760E-05	480746.1	3771220.9	374.0	3.49	4.00	3.25	YES	
L0005018	0	0.17760E-05	480746.1	3771212.3	374.0	3.49	4.00	3.25	YES	
L0005019	0	0.17760E-05	480746.1	3771203.7	374.0	3.49	4.00	3.25	YES	
L0005020	0	0.17760E-05	480746.1	3771195.1	374.0	3.49	4.00	3.25	YES	
L0005021	0	0.17760E-05	480746.1	3771186.5	374.0	3.49	4.00	3.25	YES	
L0005022	0	0.17760E-05	480746.0	3771177.9	374.0	3.49	4.00	3.25	YES	
L0005023	0	0.17760E-05	480746.0	3771169.3	374.0	3.49	4.00	3.25	YES	
L0005024	0	0.17760E-05	480746.0	3771160.8	374.0	3.49	4.00	3.25	YES	
L0005025	0	0.17760E-05	480746.0	3771152.2	374.0	3.49	4.00	3.25	YES	
L0005026	0	0.17760E-05	480746.0	3771143.6	374.0	3.49	4.00	3.25	YES	
L0005027	0	0.17760E-05	480745.9	3771135.0	374.0	3.49	4.00	3.25	YES	
L0005028	0	0.17760E-05	480745.9	3771126.4	374.0	3.49	4.00	3.25	YES	
L0005029	0	0.17760E-05	480745.9	3771117.8	374.0	3.49	4.00	3.25	YES	
L0005030	0	0.17760E-05	480745.9	3771109.2	374.0	3.49	4.00	3.25	YES	
L0005031	0	0.17760E-05	480745.8	3771100.6	374.0	3.49	4.00	3.25	YES	
L0005032	0	0.17760E-05	480745.8	3771092.0	374.0	3.49	4.00	3.25	YES	
L0005033	0	0.17760E-05	480745.8	3771083.4	374.0	3.49	4.00	3.25	YES	
L0005034	0	0.17760E-05	480745.8	3771074.9	374.0	3.49	4.00	3.25	YES	
L0005035	0	0.17760E-05	480745.8	3771066.3	374.0	3.49	4.00	3.25	YES	
L0005036	0	0.17760E-05	480745.7	3771057.7	374.0	3.49	4.00	3.25	YES	
L0005037	0	0.17760E-05	480745.7	3771049.1	374.0	3.49	4.00	3.25	YES	
L0005038	0	0.17760E-05	480745.7	3771040.5	374.0	3.49	4.00	3.25	YES	
L0005039	0	0.17760E-05	480745.7	3771031.9	374.0	3.49	4.00	3.25	YES	
L0005040	0	0.17760E-05	480745.6	3771023.3	374.0	3.49	4.00	3.25	YES	
L0005041	0	0.17760E-05	480745.6	3771014.7	374.0	3.49	4.00	3.25	YES	
L0005042	0	0.17760E-05	480745.6	3771006.1	374.0	3.49	4.00	3.25	YES	
L0005043	0	0.17760E-05	480745.6	3770997.5	374.0	3.49	4.00	3.25	YES	
L0005044	0	0.17760E-05	480745.6	3770989.0	374.0	3.49	4.00	3.25	YES	
L0005045	0	0.17760E-05	480745.5	3770980.4	374.0	3.49	4.00	3.25	YES	
L0005046	0	0.17760E-05	480745.5	3770971.8	374.0	3.49	4.00	3.25	YES	
L0005047	0	0.17760E-05	480745.5	3770963.2	374.0	3.49	4.00	3.25	YES	
L0005048	0	0.17760E-05	480745.5	3770954.6	374.0	3.49	4.00	3.25	YES	
L0005049	0	0.17760E-05	480745.5	3770946.0	374.0	3.49	4.00	3.25	YES	
L0005050	0	0.17760E-05	480745.4	3770937.4	374.0	3.49	4.00	3.25	YES	
L0005051	0	0.17760E-05	480745.4	3770928.8	374.0	3.49	4.00	3.25	YES	
L0005052	0	0.17760E-05	480745.4	3770920.2	374.0	3.49	4.00	3.25	YES	
L0005053	0	0.17760E-05	480745.4	3770911.6	374.0	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0005054	0	0.17760E-05	480745.3	3770903.1	374.0	3.49	4.00	3.25	YES	
L0005055	0	0.17760E-05	480745.3	3770894.5	374.0	3.49	4.00	3.25	YES	
L0005056	0	0.17760E-05	480745.3	3770885.9	374.0	3.49	4.00	3.25	YES	
L0005057	0	0.17760E-05	480745.3	3770877.3	374.0	3.49	4.00	3.25	YES	
L0005058	0	0.17760E-05	480745.3	3770868.7	374.0	3.49	4.00	3.25	YES	
L0005059	0	0.17760E-05	480745.2	3770860.1	374.0	3.49	4.00	3.25	YES	
L0005060	0	0.17760E-05	480745.2	3770851.5	374.0	3.49	4.00	3.25	YES	
L0005061	0	0.17760E-05	480745.2	3770842.9	374.0	3.49	4.00	3.25	YES	
L0005062	0	0.17760E-05	480745.2	3770834.3	374.0	3.49	4.00	3.25	YES	
L0005063	0	0.17760E-05	480745.1	3770825.7	374.0	3.49	4.00	3.25	YES	
L0005064	0	0.17760E-05	480745.1	3770817.2	374.0	3.49	4.00	3.25	YES	
L0005065	0	0.17760E-05	480745.1	3770808.6	374.0	3.49	4.00	3.25	YES	
L0005066	0	0.17760E-05	480745.1	3770800.0	374.0	3.49	4.00	3.25	YES	
L0005067	0	0.17760E-05	480745.1	3770791.4	374.0	3.49	4.00	3.25	YES	
L0005068	0	0.17760E-05	480745.0	3770782.8	374.0	3.49	4.00	3.25	YES	
L0005069	0	0.18750E-05	480741.4	3770754.2	374.0	3.49	4.00	3.25	YES	
L0005070	0	0.18750E-05	480741.4	3770745.6	374.0	3.49	4.00	3.25	YES	
L0005071	0	0.18750E-05	480741.4	3770737.0	374.0	3.49	4.00	3.25	YES	
L0005072	0	0.18750E-05	480741.4	3770728.4	374.0	3.49	4.00	3.25	YES	
L0005073	0	0.18750E-05	480741.4	3770719.9	374.0	3.49	4.00	3.25	YES	
L0005074	0	0.18750E-05	480741.4	3770711.3	374.0	3.49	4.00	3.25	YES	
L0005075	0	0.18750E-05	480741.4	3770702.7	374.0	3.49	4.00	3.25	YES	
L0005076	0	0.18750E-05	480741.4	3770694.1	374.0	3.49	4.00	3.25	YES	
L0005077	0	0.18750E-05	480741.4	3770685.5	374.0	3.49	4.00	3.25	YES	
L0005078	0	0.18750E-05	480741.4	3770676.9	374.0	3.49	4.00	3.25	YES	
L0005079	0	0.18750E-05	480741.4	3770668.3	374.0	3.49	4.00	3.25	YES	
L0005080	0	0.18750E-05	480741.4	3770659.7	374.0	3.49	4.00	3.25	YES	
L0005081	0	0.18750E-05	480741.4	3770651.1	374.1	3.49	4.00	3.25	YES	
L0005082	0	0.18750E-05	480741.4	3770642.5	374.2	3.49	4.00	3.25	YES	
L0005083	0	0.18750E-05	480741.4	3770634.0	374.3	3.49	4.00	3.25	YES	
L0005084	0	0.18750E-05	480741.4	3770625.4	374.4	3.49	4.00	3.25	YES	
L0005085	0	0.18750E-05	480741.4	3770616.8	374.4	3.49	4.00	3.25	YES	
L0005086	0	0.18750E-05	480741.4	3770608.2	374.4	3.49	4.00	3.25	YES	
L0005087	0	0.18750E-05	480741.4	3770599.6	374.4	3.49	4.00	3.25	YES	
L0005088	0	0.18750E-05	480741.4	3770591.0	374.4	3.49	4.00	3.25	YES	
L0005089	0	0.18750E-05	480741.4	3770582.4	374.4	3.49	4.00	3.25	YES	
L0005090	0	0.18750E-05	480741.4	3770573.8	374.4	3.49	4.00	3.25	YES	
L0005091	0	0.18750E-05	480741.4	3770565.2	374.4	3.49	4.00	3.25	YES	
L0005092	0	0.18750E-05	480741.4	3770556.6	374.4	3.49	4.00	3.25	YES	
L0005093	0	0.18750E-05	480741.4	3770548.1	374.4	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0005094	0	0.18750E-05	480741.4	3770539.5	374.4	3.49	4.00	3.25	YES	
L0005095	0	0.18750E-05	480741.4	3770530.9	374.4	3.49	4.00	3.25	YES	
L0005096	0	0.18750E-05	480741.4	3770522.3	374.4	3.49	4.00	3.25	YES	
L0005097	0	0.18750E-05	480741.4	3770513.7	374.4	3.49	4.00	3.25	YES	
L0005098	0	0.18750E-05	480741.4	3770505.1	374.4	3.49	4.00	3.25	YES	
L0005099	0	0.18750E-05	480741.4	3770496.5	374.4	3.49	4.00	3.25	YES	
L0005100	0	0.18750E-05	480741.4	3770487.9	374.4	3.49	4.00	3.25	YES	
L0005101	0	0.18750E-05	480741.4	3770479.3	374.4	3.49	4.00	3.25	YES	
L0005102	0	0.18750E-05	480741.4	3770470.7	374.5	3.49	4.00	3.25	YES	
L0005103	0	0.18750E-05	480741.4	3770462.2	374.7	3.49	4.00	3.25	YES	
L0005104	0	0.18750E-05	480741.4	3770453.6	374.9	3.49	4.00	3.25	YES	
L0005105	0	0.18750E-05	480741.4	3770445.0	375.0	3.49	4.00	3.25	YES	
L0005106	0	0.18750E-05	480741.4	3770436.4	375.0	3.49	4.00	3.25	YES	
L0005107	0	0.18750E-05	480741.4	3770427.8	375.0	3.49	4.00	3.25	YES	
L0005108	0	0.18750E-05	480741.4	3770419.2	375.0	3.49	4.00	3.25	YES	
L0005109	0	0.18750E-05	480741.4	3770410.6	375.0	3.49	4.00	3.25	YES	
L0005110	0	0.18750E-05	480741.4	3770402.0	375.0	3.49	4.00	3.25	YES	
L0005111	0	0.18750E-05	480741.4	3770393.4	375.0	3.49	4.00	3.25	YES	
L0005112	0	0.18750E-05	480741.4	3770384.8	375.0	3.49	4.00	3.25	YES	
L0005113	0	0.18750E-05	480741.4	3770376.3	375.1	3.49	4.00	3.25	YES	
L0005114	0	0.18750E-05	480741.4	3770367.7	375.2	3.49	4.00	3.25	YES	
L0005115	0	0.18750E-05	480741.4	3770359.1	375.4	3.49	4.00	3.25	YES	
L0005116	0	0.18750E-05	480741.4	3770350.5	375.4	3.49	4.00	3.25	YES	
L0005117	0	0.18750E-05	480741.4	3770341.9	375.4	3.49	4.00	3.25	YES	
L0005118	0	0.18750E-05	480741.4	3770333.3	375.4	3.49	4.00	3.25	YES	
L0005119	0	0.18750E-05	480741.4	3770324.7	375.4	3.49	4.00	3.25	YES	
L0005120	0	0.18750E-05	480741.4	3770316.1	375.4	3.49	4.00	3.25	YES	
L0005121	0	0.18750E-05	480741.4	3770307.5	375.4	3.49	4.00	3.25	YES	
L0005122	0	0.18750E-05	480741.4	3770298.9	375.4	3.49	4.00	3.25	YES	
L0005123	0	0.18750E-05	480741.4	3770290.4	375.4	3.49	4.00	3.25	YES	
L0005124	0	0.18750E-05	480741.4	3770281.8	375.4	3.49	4.00	3.25	YES	
L0005125	0	0.18750E-05	480741.4	3770273.2	375.4	3.49	4.00	3.25	YES	
L0005126	0	0.18750E-05	480741.4	3770264.6	375.4	3.49	4.00	3.25	YES	
L0005127	0	0.18750E-05	480741.4	3770256.0	375.4	3.49	4.00	3.25	YES	
L0005128	0	0.18750E-05	480741.4	3770247.4	375.4	3.49	4.00	3.25	YES	
L0005129	0	0.18750E-05	480741.4	3770238.8	375.4	3.49	4.00	3.25	YES	
L0005130	0	0.18750E-05	480741.4	3770230.2	375.4	3.49	4.00	3.25	YES	
L0005131	0	0.18750E-05	480741.4	3770221.6	375.4	3.49	4.00	3.25	YES	
L0005132	0	0.18750E-05	480741.4	3770213.0	375.4	3.49	4.00	3.25	YES	
L0005133	0	0.18750E-05	480741.4	3770204.5	375.4	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0005134	0	0.18750E-05	480741.4	3770195.9	375.4	3.49	4.00	3.25	YES	
L0005135	0	0.18750E-05	480741.4	3770187.3	375.4	3.49	4.00	3.25	YES	
L0005136	0	0.18750E-05	480741.4	3770178.7	375.4	3.49	4.00	3.25	YES	
L0005137	0	0.18750E-05	480741.4	3770170.1	375.4	3.49	4.00	3.25	YES	
L0005138	0	0.18750E-05	480741.4	3770161.5	375.4	3.49	4.00	3.25	YES	
L0005139	0	0.18750E-05	480741.4	3770152.9	375.4	3.49	4.00	3.25	YES	
L0005140	0	0.18750E-05	480741.4	3770144.3	375.4	3.49	4.00	3.25	YES	
L0005141	0	0.18750E-05	480741.4	3770135.7	375.4	3.49	4.00	3.25	YES	
L0005142	0	0.18750E-05	480741.4	3770127.1	375.4	3.49	4.00	3.25	YES	
L0005143	0	0.18750E-05	480741.4	3770118.6	375.4	3.49	4.00	3.25	YES	
L0005144	0	0.18750E-05	480741.4	3770110.0	375.4	3.49	4.00	3.25	YES	
L0005145	0	0.18750E-05	480741.4	3770101.4	375.4	3.49	4.00	3.25	YES	
L0005146	0	0.18750E-05	480741.4	3770092.8	375.4	3.49	4.00	3.25	YES	
L0005147	0	0.18750E-05	480741.4	3770084.2	375.4	3.49	4.00	3.25	YES	
L0005148	0	0.18750E-05	480741.4	3770075.6	375.4	3.49	4.00	3.25	YES	
L0005149	0	0.18750E-05	480741.4	3770067.0	375.4	3.49	4.00	3.25	YES	
L0005150	0	0.18750E-05	480741.4	3770058.4	375.4	3.49	4.00	3.25	YES	
L0005151	0	0.18750E-05	480741.4	3770049.8	375.4	3.49	4.00	3.25	YES	
L0005152	0	0.18750E-05	480741.4	3770041.2	375.4	3.49	4.00	3.25	YES	
L0005153	0	0.18750E-05	480741.4	3770032.7	375.4	3.49	4.00	3.25	YES	
L0005154	0	0.18750E-05	480741.4	3770024.1	375.4	3.49	4.00	3.25	YES	
L0005155	0	0.18750E-05	480741.4	3770015.5	375.4	3.49	4.00	3.25	YES	
L0005156	0	0.18750E-05	480741.4	3770006.9	375.4	3.49	4.00	3.25	YES	
L0005157	0	0.18750E-05	480741.4	3769998.3	375.4	3.49	4.00	3.25	YES	
L0005158	0	0.18750E-05	480741.4	3769989.7	375.4	3.49	4.00	3.25	YES	
L0005159	0	0.18750E-05	480741.4	3769981.1	375.4	3.49	4.00	3.25	YES	
L0005160	0	0.18750E-05	480741.4	3769972.5	375.4	3.49	4.00	3.25	YES	
L0005161	0	0.18750E-05	480741.4	3769963.9	375.4	3.49	4.00	3.25	YES	
L0005162	0	0.18750E-05	480741.4	3769955.3	375.4	3.49	4.00	3.25	YES	
L0005163	0	0.18750E-05	480741.4	3769946.8	375.4	3.49	4.00	3.25	YES	
L0005164	0	0.18750E-05	480741.4	3769938.2	375.4	3.49	4.00	3.25	YES	
L0005165	0	0.18750E-05	480741.4	3769929.6	375.4	3.49	4.00	3.25	YES	
L0005166	0	0.18750E-05	480741.4	3769921.0	375.4	3.49	4.00	3.25	YES	
L0005167	0	0.18750E-05	480741.4	3769912.4	375.4	3.49	4.00	3.25	YES	
L0005168	0	0.18750E-05	480741.4	3769903.8	375.4	3.49	4.00	3.25	YES	
L0005169	0	0.18750E-05	480741.4	3769895.2	375.6	3.49	4.00	3.25	YES	
L0005170	0	0.18750E-05	480741.4	3769886.6	375.8	3.49	4.00	3.25	YES	
L0005171	0	0.18750E-05	480741.4	3769878.0	376.0	3.49	4.00	3.25	YES	
L0005172	0	0.18750E-05	480741.4	3769869.4	376.1	3.49	4.00	3.25	YES	
L0005173	0	0.18750E-05	480741.4	3769860.9	376.2	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0005174	0	0.18750E-05	480741.4	3769852.3	376.3	3.49	4.00	3.25	YES	
L0005175	0	0.18750E-05	480741.4	3769843.7	376.5	3.49	4.00	3.25	YES	
L0005176	0	0.18750E-05	480741.4	3769835.1	377.0	3.49	4.00	3.25	YES	
L0005177	0	0.18750E-05	480741.4	3769826.5	377.4	3.49	4.00	3.25	YES	
L0005178	0	0.18750E-05	480741.4	3769817.9	377.9	3.49	4.00	3.25	YES	
L0005179	0	0.18750E-05	480741.4	3769809.3	378.0	3.49	4.00	3.25	YES	
L0005180	0	0.18750E-05	480741.4	3769800.7	378.0	3.49	4.00	3.25	YES	
L0005181	0	0.18750E-05	480741.4	3769792.1	378.0	3.49	4.00	3.25	YES	
L0005182	0	0.18750E-05	480741.4	3769783.5	378.0	3.49	4.00	3.25	YES	
L0005183	0	0.18750E-05	480741.4	3769775.0	378.0	3.49	4.00	3.25	YES	
L0005184	0	0.18750E-05	480741.4	3769766.4	378.0	3.49	4.00	3.25	YES	
L0005185	0	0.18750E-05	480741.4	3769757.8	378.0	3.49	4.00	3.25	YES	
L0005186	0	0.18750E-05	480741.4	3769749.2	378.0	3.49	4.00	3.25	YES	
L0005187	0	0.18750E-05	480741.4	3769740.6	378.0	3.49	4.00	3.25	YES	
L0005188	0	0.18750E-05	480741.4	3769732.0	378.0	3.49	4.00	3.25	YES	
L0005189	0	0.18750E-05	480741.4	3769723.4	378.0	3.49	4.00	3.25	YES	
L0005190	0	0.18750E-05	480741.4	3769714.8	378.0	3.49	4.00	3.25	YES	
L0005191	0	0.18750E-05	480741.4	3769706.2	378.0	3.49	4.00	3.25	YES	
L0005192	0	0.18750E-05	480741.4	3769697.6	378.0	3.49	4.00	3.25	YES	
L0005193	0	0.18750E-05	480741.4	3769689.1	378.0	3.49	4.00	3.25	YES	
L0005194	0	0.18750E-05	480741.4	3769680.5	378.0	3.49	4.00	3.25	YES	
L0005195	0	0.18750E-05	480741.4	3769671.9	378.0	3.49	4.00	3.25	YES	
L0005196	0	0.18750E-05	480741.4	3769663.3	378.0	3.49	4.00	3.25	YES	
L0005197	0	0.18750E-05	480741.4	3769654.7	378.0	3.49	4.00	3.25	YES	
L0005198	0	0.18750E-05	480741.4	3769646.1	378.0	3.49	4.00	3.25	YES	
L0005199	0	0.18750E-05	480741.4	3769637.5	378.0	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs
ALL	L0004094 , L0004095 , L0004096 , L0004097 , L0004098 , L0004099 , L0004100 , L0004101 ,
	L0004102 , L0004103 , L0004104 , L0004105 , L0004106 , L0004107 , L0004108 , L0004109 ,
	L0004110 , L0004111 , L0004112 , L0004113 , L0004114 , L0004115 , L0004116 , L0004117 ,
	L0004118 , L0004119 , L0004120 , L0004121 , L0004122 , L0004123 , L0004124 , L0004125 ,
	L0004126 , L0004127 , L0004128 , L0004129 , L0004130 , L0004131 , L0004132 , L0004133 ,
	L0004134 , L0004135 , L0004136 , L0004137 , L0004138 , L0004139 , L0004140 , L0004141 ,
	L0004142 , L0004143 , L0004144 , L0004145 , L0004146 , L0004147 , L0004148 , L0004149 ,
	L0004150 , L0004151 , L0004152 , L0004153 , L0004154 , L0004155 , L0004156 , L0004157 ,
	L0004158 , L0004159 , L0004160 , L0004161 , L0004162 , L0004163 , L0004164 , L0004165 ,
	L0004166 , L0004167 , L0004168 , L0004169 , L0004170 , L0004171 , L0004172 , L0004173 ,
	L0004174 , L0004175 , L0004176 , L0004177 , L0004178 , L0004179 , L0004180 , L0004181 ,
	L0004182 , L0004183 , L0004184 , L0004185 , L0004186 , L0004187 , L0004188 , L0004189 ,
	L0004190 , L0004191 , L0004192 , L0004193 , L0004194 , L0004195 , L0004196 , L0004197 ,
	L0004198 , L0004199 , L0004200 , L0004201 , L0004202 , L0004203 , L0004204 , L0004205 ,
	L0004206 , L0004207 , L0004208 , L0004209 , L0004210 , L0004211 , L0004212 , L0004213 ,
	L0004214 , L0004215 , L0004216 , L0004217 , L0004218 , L0004219 , L0004220 , L0004221 ,
	L0004222 , L0004223 , L0004224 , L0004225 , L0004226 , L0004227 , L0004228 , L0004229 ,
	L0004230 , L0004231 , L0004232 , L0004233 , L0004234 , L0004235 , L0004236 , L0004237 ,
	L0004238 , L0004239 , L0004240 , L0004241 , L0004242 , L0004243 , L0004244 , L0004245 ,
	L0004246 , L0004247 , L0004248 , L0004249 , L0004250 , L0004251 , L0004252 , L0004253 ,

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs
	L0004254 , L0004255 , L0004256 , L0004257 , L0004258 , L0004259 , L0004260 , L0004261 ,
	L0004262 , L0004263 , L0004264 , L0004265 , L0004266 , L0004267 , L0004268 , L0004269 ,
	L0004270 , L0004271 , L0004272 , L0004273 , L0004274 , L0004275 , L0004276 , L0004277 ,
	L0004278 , L0004279 , L0004280 , L0004281 , L0004282 , L0004283 , L0004284 , L0004285 ,
	L0004286 , L0004287 , L0004288 , L0004289 , L0004290 , L0004291 , L0004292 , L0004293 ,
	L0004294 , L0004295 , L0004296 , L0004297 , L0004298 , L0004299 , L0004300 , L0004301 ,
	L0004302 , L0004303 , L0004304 , L0004305 , L0004306 , L0004307 , L0004308 , L0004309 ,
	L0004310 , L0004311 , L0004312 , L0004313 , L0004314 , L0004315 , L0004316 , L0004317 ,
	L0004318 , L0004319 , L0004320 , L0004321 , L0004322 , L0004323 , L0004324 , L0004325 ,
	L0004326 , L0004327 , L0004328 , L0004329 , L0004330 , L0004331 , L0004332 , L0004333 ,
	L0004334 , L0004335 , L0004336 , L0004337 , L0004338 , L0004339 , L0004340 , L0004341 ,
	L0004342 , L0004343 , L0004344 , L0004345 , L0004346 , L0004347 , L0004348 , L0004349 ,
	L0004350 , L0004351 , L0004352 , L0004353 , L0004354 , L0004355 , L0004356 , L0004357 ,
	L0004358 , L0004359 , L0004360 , L0004361 , L0004362 , L0004363 , L0004364 , L0004365 ,
	L0004366 , L0004367 , L0004368 , L0004369 , L0004370 , L0004371 , L0004372 , L0004373 ,
	L0004374 , L0004375 , L0004376 , L0004377 , L0004378 , L0004379 , L0004380 , L0004381 ,
	L0004382 , L0004383 , L0004384 , L0004385 , L0004386 , L0004387 , L0004388 , L0004389 ,
	L0004390 , L0004391 , L0004392 , L0004393 , L0004394 , L0004395 , L0004396 , L0004397 ,
	L0004398 , L0004399 , L0004400 , L0004401 , L0004402 , L0004403 , L0004404 , L0004405 ,
	L0004406 , L0004407 , L0004408 , L0004409 , L0004410 , L0004411 , L0004412 , L0004413 ,

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs
	L0004414 , L0004415 , L0004416 , L0004417 , L0004418 , L0004419 , L0004420 , L0004421 ,
	L0004422 , L0004423 , L0004424 , L0004425 , L0004426 , L0004427 , L0004428 , L0004429 ,
	L0004430 , L0004431 , L0004432 , L0004433 , L0004434 , L0004435 , L0004436 , L0004437 ,
	L0004438 , L0004439 , L0004440 , L0004441 , L0004442 , L0004443 , L0004444 , L0004445 ,
	L0004446 , L0004447 , L0004448 , L0004449 , L0004450 , L0004451 , L0004452 , L0004453 ,
	L0004454 , L0004455 , L0004456 , L0004457 , L0004458 , L0004459 , L0004460 , L0004461 ,
	L0004462 , L0004463 , L0004464 , L0004465 , L0004466 , L0004467 , L0004468 , L0004469 ,
	L0004470 , L0004471 , L0004472 , L0004473 , L0004474 , L0004475 , L0004476 , L0004477 ,
	L0004478 , L0004479 , L0004480 , L0004481 , L0004482 , L0004483 , L0004484 , L0004485 ,
	L0004486 , L0004487 , L0004488 , L0004489 , L0004490 , L0004491 , L0004492 , L0004493 ,
	L0004494 , L0004495 , L0004496 , L0004497 , L0004498 , L0004499 , L0004500 , L0004501 ,
	L0004502 , L0004503 , L0004504 , L0004505 , L0004506 , L0004507 , L0004508 , L0004509 ,
	L0004510 , L0004511 , L0004512 , L0004513 , L0004514 , L0004515 , L0004516 , L0004517 ,
	L0004518 , L0004519 , L0004520 , L0004521 , L0004522 , L0004523 , L0004524 , L0004525 ,
	L0004526 , L0004527 , L0004528 , L0004529 , L0004530 , L0004531 , L0004532 , L0004533 ,
	L0004534 , L0004535 , L0004536 , L0004537 , L0004538 , L0004539 , L0004540 , L0004541 ,
	L0004542 , L0004543 , L0004544 , L0004545 , L0004546 , L0004547 , L0004548 , L0004549 ,
	L0004550 , L0004551 , L0004552 , L0004553 , L0004554 , L0004555 , L0004556 , L0004557 ,
	L0004558 , L0004559 , L0004560 , L0004561 , L0004562 , L0004563 , L0004564 , L0004565 ,
	L0004566 , L0004567 , L0004568 , L0004569 , L0004570 , L0004571 , L0004572 , L0004573 ,

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs
	L0004574 , L0004575 , L0004576 , L0004577 , L0004578 , L0004579 , L0004580 , L0004581 ,
	L0004582 , L0004583 , L0004584 , L0004585 , L0004586 , L0004587 , L0004588 , L0004589 ,
	L0004590 , L0004591 , L0004592 , L0004593 , L0004594 , L0004595 , L0004596 , L0004597 ,
	L0004598 , L0004599 , L0004600 , L0004601 , L0004602 , L0004603 , L0004604 , L0004605 ,
	L0004606 , L0004607 , L0004608 , L0004609 , L0004610 , L0004611 , L0004612 , L0004613 ,
	L0004614 , L0004615 , L0004616 , L0004617 , L0004618 , L0004619 , L0004620 , L0004621 ,
	L0004622 , L0004623 , L0004624 , L0004625 , L0004626 , L0004627 , L0004628 , L0004629 ,
	L0004630 , L0004631 , L0004632 , L0004633 , L0004634 , L0004635 , L0004636 , L0004637 ,
	L0004638 , L0004639 , L0004640 , L0004641 , L0004642 , L0004643 , L0004644 , L0004645 ,
	L0004646 , L0004647 , L0004648 , L0004649 , L0004650 , L0004651 , L0004652 , L0004653 ,
	L0004654 , L0004655 , L0004656 , L0004657 , L0004658 , L0004659 , L0004660 , L0004661 ,
	L0004662 , L0004663 , L0004664 , L0004665 , L0004666 , L0004667 , L0004668 , L0004669 ,
	L0004670 , L0004671 , L0004672 , L0004673 , L0004674 , L0004675 , L0004676 , L0004677 ,
	L0004678 , L0004679 , L0004680 , L0004681 , L0004682 , L0004683 , L0004684 , L0004685 ,
	L0004686 , L0004687 , L0004688 , L0004689 , L0004690 , L0004691 , L0004692 , L0004693 ,
	L0004694 , L0004695 , L0004696 , L0004697 , L0004698 , L0004699 , L0004700 , L0004701 ,
	L0004702 , L0004703 , L0004704 , L0004705 , L0004706 , L0004707 , L0004708 , L0004709 ,
	L0004710 , L0004711 , L0004712 , L0004713 , L0004714 , L0004715 , L0004716 , L0004717 ,
	L0004718 , L0004719 , L0004720 , L0004721 , L0004722 , L0004723 , L0004724 , L0004725 ,
	L0004726 , L0004727 , L0004728 , L0004729 , L0004730 , L0004731 , L0004732 , L0004733 ,

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs
	L0004734 , L0004735 , L0004736 , L0004737 , L0004738 , L0004739 , L0004740 , L0004741 ,
	L0004742 , L0004743 , L0004744 , L0004745 , L0004746 , L0004747 , L0004748 , L0004749 ,
	L0004750 , L0004751 , L0004752 , L0004753 , L0004754 , L0004755 , L0004756 , L0004757 ,
	L0004758 , L0004759 , L0004760 , L0004761 , L0004762 , L0004763 , L0004764 , L0004765 ,
	L0004766 , L0004767 , L0004768 , L0004769 , L0004770 , L0004771 , L0004772 , L0004773 ,
	L0004774 , L0004775 , L0004776 , L0004777 , L0004778 , L0004779 , L0004780 , L0004781 ,
	L0004782 , L0004783 , L0004784 , L0004785 , L0004786 , L0004787 , L0004788 , L0004789 ,
	L0004790 , L0004791 , L0004792 , L0004793 , L0004794 , L0004795 , L0004796 , L0004797 ,
	L0004798 , L0004799 , L0004800 , L0004801 , L0004802 , L0004803 , L0004804 , L0004805 ,
	L0004806 , L0004807 , L0004808 , L0004809 , L0004810 , L0004811 , L0004812 , L0004813 ,
	L0004814 , L0004815 , L0004816 , L0004817 , L0004818 , L0004819 , L0004820 , L0004821 ,
	L0004822 , L0004823 , L0004824 , L0004825 , L0004826 , L0004827 , L0004828 , L0004829 ,
	L0004830 , L0004831 , L0004832 , L0004833 , L0004834 , L0004835 , L0004836 , L0004837 ,
	L0004838 , L0004839 , L0004840 , L0004841 , L0004842 , L0004843 , L0004844 , L0004845 ,
	L0004846 , L0004847 , L0004848 , L0004849 , L0004850 , L0004851 , L0004852 , L0004853 ,
	L0004854 , L0004855 , L0004856 , L0004857 , L0004858 , L0004859 , L0004860 , L0004861 ,
	L0004862 , L0004863 , L0004864 , L0004865 , L0004866 , L0004867 , L0004868 , L0004869 ,
	L0004870 , L0004871 , L0004872 , L0004873 , L0004874 , L0004875 , L0004876 , L0004877 ,
	L0004878 , L0004879 , L0004880 , L0004881 , L0004882 , L0004883 , L0004884 , L0004885 ,
	L0004886 , L0004887 , L0004888 , L0004889 , L0004890 , L0004891 , L0004892 , L0004893 ,

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs
	L0004894 , L0004895 , L0004896 , L0004897 , L0004898 , L0004899 , L0004900 , L0004901 ,
	L0004902 , L0004903 , L0004904 , L0004905 , L0004906 , L0004907 , L0004908 , L0004909 ,
	L0004910 , L0004911 , L0004912 , L0004913 , L0004914 , L0004915 , L0004916 , L0004917 ,
	L0004918 , L0004919 , L0004920 , L0004921 , L0004922 , L0004923 , L0004924 , L0004925 ,
	L0004926 , L0004927 , L0004928 , L0004929 , L0004930 , L0004931 , L0004932 , L0004933 ,
	L0004934 , L0004935 , L0004936 , L0004937 , L0004938 , L0004939 , L0004940 , L0004941 ,
	L0004942 , L0004943 , L0004944 , L0004945 , L0004946 , L0004947 , L0004948 , L0004949 ,
	L0004950 , L0004951 , L0004952 , L0004953 , L0004954 , L0004955 , L0004956 , L0004957 ,
	L0004958 , L0004959 , L0004960 , L0004961 , L0004962 , L0004963 , L0004964 , L0004965 ,
	L0004966 , L0004967 , L0004968 , L0004969 , L0004970 , L0004971 , L0004972 , L0004973 ,
	L0004974 , L0004975 , L0004976 , L0004977 , L0004978 , L0004979 , L0004980 , L0004981 ,
	L0004982 , L0004983 , L0004984 , L0004985 , L0004986 , L0004987 , L0004988 , L0004989 ,
	L0004990 , L0004991 , L0004992 , L0004993 , L0004994 , L0004995 , L0004996 , L0004997 ,
	L0004998 , L0004999 , L0005000 , L0005001 , L0005002 , L0005003 , L0005004 , L0005005 ,
	L0005006 , L0005007 , L0005008 , L0005009 , L0005010 , L0005011 , L0005012 , L0005013 ,
	L0005014 , L0005015 , L0005016 , L0005017 , L0005018 , L0005019 , L0005020 , L0005021 ,
	L0005022 , L0005023 , L0005024 , L0005025 , L0005026 , L0005027 , L0005028 , L0005029 ,
	L0005030 , L0005031 , L0005032 , L0005033 , L0005034 , L0005035 , L0005036 , L0005037 ,
	L0005038 , L0005039 , L0005040 , L0005041 , L0005042 , L0005043 , L0005044 , L0005045 ,
	L0005046 , L0005047 , L0005048 , L0005049 , L0005050 , L0005051 , L0005052 , L0005053 ,

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs
	L0005054 , L0005055 , L0005056 , L0005057 , L0005058 , L0005059 , L0005060 , L0005061 ,
	L0005062 , L0005063 , L0005064 , L0005065 , L0005066 , L0005067 , L0005068 , L0005069 ,
	L0005070 , L0005071 , L0005072 , L0005073 , L0005074 , L0005075 , L0005076 , L0005077 ,
	L0005078 , L0005079 , L0005080 , L0005081 , L0005082 , L0005083 , L0005084 , L0005085 ,
	L0005086 , L0005087 , L0005088 , L0005089 , L0005090 , L0005091 , L0005092 , L0005093 ,
	L0005094 , L0005095 , L0005096 , L0005097 , L0005098 , L0005099 , L0005100 , L0005101 ,
	L0005102 , L0005103 , L0005104 , L0005105 , L0005106 , L0005107 , L0005108 , L0005109 ,
	L0005110 , L0005111 , L0005112 , L0005113 , L0005114 , L0005115 , L0005116 , L0005117 ,
	L0005118 , L0005119 , L0005120 , L0005121 , L0005122 , L0005123 , L0005124 , L0005125 ,
	L0005126 , L0005127 , L0005128 , L0005129 , L0005130 , L0005131 , L0005132 , L0005133 ,
	L0005134 , L0005135 , L0005136 , L0005137 , L0005138 , L0005139 , L0005140 , L0005141 ,
	L0005142 , L0005143 , L0005144 , L0005145 , L0005146 , L0005147 , L0005148 , L0005149 ,
	L0005150 , L0005151 , L0005152 , L0005153 , L0005154 , L0005155 , L0005156 , L0005157 ,
	L0005158 , L0005159 , L0005160 , L0005161 , L0005162 , L0005163 , L0005164 , L0005165 ,
	L0005166 , L0005167 , L0005168 , L0005169 , L0005170 , L0005171 , L0005172 , L0005173 ,
	L0005174 , L0005175 , L0005176 , L0005177 , L0005178 , L0005179 , L0005180 , L0005181 ,
	L0005182 , L0005183 , L0005184 , L0005185 , L0005186 , L0005187 , L0005188 , L0005189 ,
	L0005190 , L0005191 , L0005192 , L0005193 , L0005194 , L0005195 , L0005196 , L0005197 ,
	L0005198 , L0005199 ,

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** SOURCE IDs DEFINED AS URBAN SOURCES ***

URBAN ID	URBAN POP	SOURCE IDs
	2035210.	L0004094 , L0004095 , L0004096 , L0004097 , L0004098 , L0004099 , L0004100 , L0004101 ,
		L0004102 , L0004103 , L0004104 , L0004105 , L0004106 , L0004107 , L0004108 , L0004109 ,
		L0004110 , L0004111 , L0004112 , L0004113 , L0004114 , L0004115 , L0004116 , L0004117 ,
		L0004118 , L0004119 , L0004120 , L0004121 , L0004122 , L0004123 , L0004124 , L0004125 ,
		L0004126 , L0004127 , L0004128 , L0004129 , L0004130 , L0004131 , L0004132 , L0004133 ,
		L0004134 , L0004135 , L0004136 , L0004137 , L0004138 , L0004139 , L0004140 , L0004141 ,
		L0004142 , L0004143 , L0004144 , L0004145 , L0004146 , L0004147 , L0004148 , L0004149 ,
		L0004150 , L0004151 , L0004152 , L0004153 , L0004154 , L0004155 , L0004156 , L0004157 ,
		L0004158 , L0004159 , L0004160 , L0004161 , L0004162 , L0004163 , L0004164 , L0004165 ,
		L0004166 , L0004167 , L0004168 , L0004169 , L0004170 , L0004171 , L0004172 , L0004173 ,
		L0004174 , L0004175 , L0004176 , L0004177 , L0004178 , L0004179 , L0004180 , L0004181 ,
		L0004182 , L0004183 , L0004184 , L0004185 , L0004186 , L0004187 , L0004188 , L0004189 ,
		L0004190 , L0004191 , L0004192 , L0004193 , L0004194 , L0004195 , L0004196 , L0004197 ,
		L0004198 , L0004199 , L0004200 , L0004201 , L0004202 , L0004203 , L0004204 , L0004205 ,
		L0004206 , L0004207 , L0004208 , L0004209 , L0004210 , L0004211 , L0004212 , L0004213 ,
		L0004214 , L0004215 , L0004216 , L0004217 , L0004218 , L0004219 , L0004220 , L0004221 ,
		L0004222 , L0004223 , L0004224 , L0004225 , L0004226 , L0004227 , L0004228 , L0004229 ,
		L0004230 , L0004231 , L0004232 , L0004233 , L0004234 , L0004235 , L0004236 , L0004237 ,
		L0004238 , L0004239 , L0004240 , L0004241 , L0004242 , L0004243 , L0004244 , L0004245 ,
		L0004246 , L0004247 , L0004248 , L0004249 , L0004250 , L0004251 , L0004252 , L0004253 ,

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** SOURCE IDs DEFINED AS URBAN SOURCES ***

URBAN ID	URBAN POP	SOURCE IDs
		L0004254 , L0004255 , L0004256 , L0004257 , L0004258 , L0004259 , L0004260 , L0004261 ,
		L0004262 , L0004263 , L0004264 , L0004265 , L0004266 , L0004267 , L0004268 , L0004269 ,
		L0004270 , L0004271 , L0004272 , L0004273 , L0004274 , L0004275 , L0004276 , L0004277 ,
		L0004278 , L0004279 , L0004280 , L0004281 , L0004282 , L0004283 , L0004284 , L0004285 ,
		L0004286 , L0004287 , L0004288 , L0004289 , L0004290 , L0004291 , L0004292 , L0004293 ,
		L0004294 , L0004295 , L0004296 , L0004297 , L0004298 , L0004299 , L0004300 , L0004301 ,
		L0004302 , L0004303 , L0004304 , L0004305 , L0004306 , L0004307 , L0004308 , L0004309 ,
		L0004310 , L0004311 , L0004312 , L0004313 , L0004314 , L0004315 , L0004316 , L0004317 ,
		L0004318 , L0004319 , L0004320 , L0004321 , L0004322 , L0004323 , L0004324 , L0004325 ,
		L0004326 , L0004327 , L0004328 , L0004329 , L0004330 , L0004331 , L0004332 , L0004333 ,
		L0004334 , L0004335 , L0004336 , L0004337 , L0004338 , L0004339 , L0004340 , L0004341 ,
		L0004342 , L0004343 , L0004344 , L0004345 , L0004346 , L0004347 , L0004348 , L0004349 ,
		L0004350 , L0004351 , L0004352 , L0004353 , L0004354 , L0004355 , L0004356 , L0004357 ,
		L0004358 , L0004359 , L0004360 , L0004361 , L0004362 , L0004363 , L0004364 , L0004365 ,
		L0004366 , L0004367 , L0004368 , L0004369 , L0004370 , L0004371 , L0004372 , L0004373 ,
		L0004374 , L0004375 , L0004376 , L0004377 , L0004378 , L0004379 , L0004380 , L0004381 ,
		L0004382 , L0004383 , L0004384 , L0004385 , L0004386 , L0004387 , L0004388 , L0004389 ,
		L0004390 , L0004391 , L0004392 , L0004393 , L0004394 , L0004395 , L0004396 , L0004397 ,
		L0004398 , L0004399 , L0004400 , L0004401 , L0004402 , L0004403 , L0004404 , L0004405 ,
		L0004406 , L0004407 , L0004408 , L0004409 , L0004410 , L0004411 , L0004412 , L0004413 ,

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** SOURCE IDs DEFINED AS URBAN SOURCES ***

URBAN ID	URBAN POP	SOURCE IDs
		L0004414 , L0004415 , L0004416 , L0004417 , L0004418 , L0004419 , L0004420 , L0004421 ,
		L0004422 , L0004423 , L0004424 , L0004425 , L0004426 , L0004427 , L0004428 , L0004429 ,
		L0004430 , L0004431 , L0004432 , L0004433 , L0004434 , L0004435 , L0004436 , L0004437 ,
		L0004438 , L0004439 , L0004440 , L0004441 , L0004442 , L0004443 , L0004444 , L0004445 ,
		L0004446 , L0004447 , L0004448 , L0004449 , L0004450 , L0004451 , L0004452 , L0004453 ,
		L0004454 , L0004455 , L0004456 , L0004457 , L0004458 , L0004459 , L0004460 , L0004461 ,
		L0004462 , L0004463 , L0004464 , L0004465 , L0004466 , L0004467 , L0004468 , L0004469 ,
		L0004470 , L0004471 , L0004472 , L0004473 , L0004474 , L0004475 , L0004476 , L0004477 ,
		L0004478 , L0004479 , L0004480 , L0004481 , L0004482 , L0004483 , L0004484 , L0004485 ,
		L0004486 , L0004487 , L0004488 , L0004489 , L0004490 , L0004491 , L0004492 , L0004493 ,
		L0004494 , L0004495 , L0004496 , L0004497 , L0004498 , L0004499 , L0004500 , L0004501 ,
		L0004502 , L0004503 , L0004504 , L0004505 , L0004506 , L0004507 , L0004508 , L0004509 ,
		L0004510 , L0004511 , L0004512 , L0004513 , L0004514 , L0004515 , L0004516 , L0004517 ,
		L0004518 , L0004519 , L0004520 , L0004521 , L0004522 , L0004523 , L0004524 , L0004525 ,
		L0004526 , L0004527 , L0004528 , L0004529 , L0004530 , L0004531 , L0004532 , L0004533 ,
		L0004534 , L0004535 , L0004536 , L0004537 , L0004538 , L0004539 , L0004540 , L0004541 ,
		L0004542 , L0004543 , L0004544 , L0004545 , L0004546 , L0004547 , L0004548 , L0004549 ,
		L0004550 , L0004551 , L0004552 , L0004553 , L0004554 , L0004555 , L0004556 , L0004557 ,
		L0004558 , L0004559 , L0004560 , L0004561 , L0004562 , L0004563 , L0004564 , L0004565 ,
		L0004566 , L0004567 , L0004568 , L0004569 , L0004570 , L0004571 , L0004572 , L0004573 ,

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** SOURCE IDs DEFINED AS URBAN SOURCES ***

URBAN ID	URBAN POP	SOURCE IDs
		L0004574 , L0004575 , L0004576 , L0004577 , L0004578 , L0004579 , L0004580 , L0004581 ,
		L0004582 , L0004583 , L0004584 , L0004585 , L0004586 , L0004587 , L0004588 , L0004589 ,
		L0004590 , L0004591 , L0004592 , L0004593 , L0004594 , L0004595 , L0004596 , L0004597 ,
		L0004598 , L0004599 , L0004600 , L0004601 , L0004602 , L0004603 , L0004604 , L0004605 ,
		L0004606 , L0004607 , L0004608 , L0004609 , L0004610 , L0004611 , L0004612 , L0004613 ,
		L0004614 , L0004615 , L0004616 , L0004617 , L0004618 , L0004619 , L0004620 , L0004621 ,
		L0004622 , L0004623 , L0004624 , L0004625 , L0004626 , L0004627 , L0004628 , L0004629 ,
		L0004630 , L0004631 , L0004632 , L0004633 , L0004634 , L0004635 , L0004636 , L0004637 ,
		L0004638 , L0004639 , L0004640 , L0004641 , L0004642 , L0004643 , L0004644 , L0004645 ,
		L0004646 , L0004647 , L0004648 , L0004649 , L0004650 , L0004651 , L0004652 , L0004653 ,
		L0004654 , L0004655 , L0004656 , L0004657 , L0004658 , L0004659 , L0004660 , L0004661 ,
		L0004662 , L0004663 , L0004664 , L0004665 , L0004666 , L0004667 , L0004668 , L0004669 ,
		L0004670 , L0004671 , L0004672 , L0004673 , L0004674 , L0004675 , L0004676 , L0004677 ,
		L0004678 , L0004679 , L0004680 , L0004681 , L0004682 , L0004683 , L0004684 , L0004685 ,
		L0004686 , L0004687 , L0004688 , L0004689 , L0004690 , L0004691 , L0004692 , L0004693 ,
		L0004694 , L0004695 , L0004696 , L0004697 , L0004698 , L0004699 , L0004700 , L0004701 ,
		L0004702 , L0004703 , L0004704 , L0004705 , L0004706 , L0004707 , L0004708 , L0004709 ,
		L0004710 , L0004711 , L0004712 , L0004713 , L0004714 , L0004715 , L0004716 , L0004717 ,
		L0004718 , L0004719 , L0004720 , L0004721 , L0004722 , L0004723 , L0004724 , L0004725 ,
		L0004726 , L0004727 , L0004728 , L0004729 , L0004730 , L0004731 , L0004732 , L0004733 ,

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** SOURCE IDs DEFINED AS URBAN SOURCES ***

URBAN ID	URBAN POP	SOURCE IDs
		L0004734 , L0004735 , L0004736 , L0004737 , L0004738 , L0004739 , L0004740 , L0004741 ,
		L0004742 , L0004743 , L0004744 , L0004745 , L0004746 , L0004747 , L0004748 , L0004749 ,
		L0004750 , L0004751 , L0004752 , L0004753 , L0004754 , L0004755 , L0004756 , L0004757 ,
		L0004758 , L0004759 , L0004760 , L0004761 , L0004762 , L0004763 , L0004764 , L0004765 ,
		L0004766 , L0004767 , L0004768 , L0004769 , L0004770 , L0004771 , L0004772 , L0004773 ,
		L0004774 , L0004775 , L0004776 , L0004777 , L0004778 , L0004779 , L0004780 , L0004781 ,
		L0004782 , L0004783 , L0004784 , L0004785 , L0004786 , L0004787 , L0004788 , L0004789 ,
		L0004790 , L0004791 , L0004792 , L0004793 , L0004794 , L0004795 , L0004796 , L0004797 ,
		L0004798 , L0004799 , L0004800 , L0004801 , L0004802 , L0004803 , L0004804 , L0004805 ,
		L0004806 , L0004807 , L0004808 , L0004809 , L0004810 , L0004811 , L0004812 , L0004813 ,
		L0004814 , L0004815 , L0004816 , L0004817 , L0004818 , L0004819 , L0004820 , L0004821 ,
		L0004822 , L0004823 , L0004824 , L0004825 , L0004826 , L0004827 , L0004828 , L0004829 ,
		L0004830 , L0004831 , L0004832 , L0004833 , L0004834 , L0004835 , L0004836 , L0004837 ,
		L0004838 , L0004839 , L0004840 , L0004841 , L0004842 , L0004843 , L0004844 , L0004845 ,
		L0004846 , L0004847 , L0004848 , L0004849 , L0004850 , L0004851 , L0004852 , L0004853 ,
		L0004854 , L0004855 , L0004856 , L0004857 , L0004858 , L0004859 , L0004860 , L0004861 ,
		L0004862 , L0004863 , L0004864 , L0004865 , L0004866 , L0004867 , L0004868 , L0004869 ,
		L0004870 , L0004871 , L0004872 , L0004873 , L0004874 , L0004875 , L0004876 , L0004877 ,
		L0004878 , L0004879 , L0004880 , L0004881 , L0004882 , L0004883 , L0004884 , L0004885 ,
		L0004886 , L0004887 , L0004888 , L0004889 , L0004890 , L0004891 , L0004892 , L0004893 ,

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** SOURCE IDs DEFINED AS URBAN SOURCES ***

URBAN ID	URBAN POP	SOURCE IDs
		L0004894 , L0004895 , L0004896 , L0004897 , L0004898 , L0004899 , L0004900 , L0004901 ,
		L0004902 , L0004903 , L0004904 , L0004905 , L0004906 , L0004907 , L0004908 , L0004909 ,
		L0004910 , L0004911 , L0004912 , L0004913 , L0004914 , L0004915 , L0004916 , L0004917 ,
		L0004918 , L0004919 , L0004920 , L0004921 , L0004922 , L0004923 , L0004924 , L0004925 ,
		L0004926 , L0004927 , L0004928 , L0004929 , L0004930 , L0004931 , L0004932 , L0004933 ,
		L0004934 , L0004935 , L0004936 , L0004937 , L0004938 , L0004939 , L0004940 , L0004941 ,
		L0004942 , L0004943 , L0004944 , L0004945 , L0004946 , L0004947 , L0004948 , L0004949 ,
		L0004950 , L0004951 , L0004952 , L0004953 , L0004954 , L0004955 , L0004956 , L0004957 ,
		L0004958 , L0004959 , L0004960 , L0004961 , L0004962 , L0004963 , L0004964 , L0004965 ,
		L0004966 , L0004967 , L0004968 , L0004969 , L0004970 , L0004971 , L0004972 , L0004973 ,
		L0004974 , L0004975 , L0004976 , L0004977 , L0004978 , L0004979 , L0004980 , L0004981 ,
		L0004982 , L0004983 , L0004984 , L0004985 , L0004986 , L0004987 , L0004988 , L0004989 ,
		L0004990 , L0004991 , L0004992 , L0004993 , L0004994 , L0004995 , L0004996 , L0004997 ,
		L0004998 , L0004999 , L0005000 , L0005001 , L0005002 , L0005003 , L0005004 , L0005005 ,
		L0005006 , L0005007 , L0005008 , L0005009 , L0005010 , L0005011 , L0005012 , L0005013 ,
		L0005014 , L0005015 , L0005016 , L0005017 , L0005018 , L0005019 , L0005020 , L0005021 ,
		L0005022 , L0005023 , L0005024 , L0005025 , L0005026 , L0005027 , L0005028 , L0005029 ,
		L0005030 , L0005031 , L0005032 , L0005033 , L0005034 , L0005035 , L0005036 , L0005037 ,
		L0005038 , L0005039 , L0005040 , L0005041 , L0005042 , L0005043 , L0005044 , L0005045 ,
		L0005046 , L0005047 , L0005048 , L0005049 , L0005050 , L0005051 , L0005052 , L0005053 ,

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** SOURCE IDs DEFINED AS URBAN SOURCES ***

URBAN ID	URBAN POP	SOURCE IDs
		L0005054 , L0005055 , L0005056 , L0005057 , L0005058 , L0005059 , L0005060 , L0005061 ,
		L0005062 , L0005063 , L0005064 , L0005065 , L0005066 , L0005067 , L0005068 , L0005069 ,
		L0005070 , L0005071 , L0005072 , L0005073 , L0005074 , L0005075 , L0005076 , L0005077 ,
		L0005078 , L0005079 , L0005080 , L0005081 , L0005082 , L0005083 , L0005084 , L0005085 ,
		L0005086 , L0005087 , L0005088 , L0005089 , L0005090 , L0005091 , L0005092 , L0005093 ,
		L0005094 , L0005095 , L0005096 , L0005097 , L0005098 , L0005099 , L0005100 , L0005101 ,
		L0005102 , L0005103 , L0005104 , L0005105 , L0005106 , L0005107 , L0005108 , L0005109 ,
		L0005110 , L0005111 , L0005112 , L0005113 , L0005114 , L0005115 , L0005116 , L0005117 ,
		L0005118 , L0005119 , L0005120 , L0005121 , L0005122 , L0005123 , L0005124 , L0005125 ,
		L0005126 , L0005127 , L0005128 , L0005129 , L0005130 , L0005131 , L0005132 , L0005133 ,
		L0005134 , L0005135 , L0005136 , L0005137 , L0005138 , L0005139 , L0005140 , L0005141 ,
		L0005142 , L0005143 , L0005144 , L0005145 , L0005146 , L0005147 , L0005148 , L0005149 ,
		L0005150 , L0005151 , L0005152 , L0005153 , L0005154 , L0005155 , L0005156 , L0005157 ,
		L0005158 , L0005159 , L0005160 , L0005161 , L0005162 , L0005163 , L0005164 , L0005165 ,
		L0005166 , L0005167 , L0005168 , L0005169 , L0005170 , L0005171 , L0005172 , L0005173 ,
		L0005174 , L0005175 , L0005176 , L0005177 , L0005178 , L0005179 , L0005180 , L0005181 ,
		L0005182 , L0005183 , L0005184 , L0005185 , L0005186 , L0005187 , L0005188 , L0005189 ,
		L0005190 , L0005191 , L0005192 , L0005193 , L0005194 , L0005195 , L0005196 , L0005197 ,
		L0005198 , L0005199 ,

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** GRIDDED RECEPTOR NETWORK SUMMARY ***

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

*** X-COORDINATES OF GRID ***
(METERS)

478868.2, 478968.2, 479068.2, 479168.2, 479268.2, 479368.2, 479468.2, 479568.2, 479668.2, 479768.2,
479868.2, 479968.2, 480068.2, 480168.2, 480268.2, 480368.2, 480468.2, 480568.2, 480668.2, 480768.2,
480868.2, 480968.2, 481068.2, 481168.2, 481268.2, 481368.2, 481468.2, 481568.2, 481668.2, 481768.2,

*** Y-COORDINATES OF GRID ***
(METERS)

3769389.7, 3769489.7, 3769589.7, 3769689.7, 3769789.7, 3769889.7, 3769989.7, 3770089.7, 3770189.7, 3770289.7,
3770389.7, 3770489.7, 3770589.7, 3770689.7, 3770789.7, 3770889.7, 3770989.7, 3771089.7, 3771189.7, 3771289.7,
3771389.7, 3771489.7, 3771589.7, 3771689.7, 3771789.7, 3771889.7, 3771989.7, 3772089.7, 3772189.7, 3772289.7,
3772389.7, 3772489.7, 3772589.7, 3772689.7, 3772789.7, 3772889.7, 3772989.7, 3773089.7, 3773189.7, 3773289.7,
3773389.7, 3773489.7, 3773589.7, 3773689.7, 3773789.7, 3773889.7, 3773989.7, 3774089.7, 3774189.7, 3774289.7,

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*
*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

* ELEVATION HEIGHTS IN METERS *

Y-COORD (METERS)	X-COORD (METERS)								
	478868.21	478968.21	479068.21	479168.21	479268.21	479368.21	479468.21	479568.21	479668.21
3774289.70	346.00	347.30	348.00	349.00	350.00	350.60	351.00	352.00	353.00
3774189.70	346.00	347.00	348.00	348.70	349.30	350.00	351.00	352.00	352.90
3774089.70	346.00	347.00	347.60	348.00	349.00	350.00	351.00	352.00	352.30
3773989.70	345.90	346.30	347.00	347.10	348.30	350.00	350.90	351.40	352.00
3773889.70	345.90	346.30	347.00	348.00	349.00	350.00	350.90	352.00	352.00
3773789.70	345.00	346.30	347.00	348.00	349.00	350.00	350.90	352.00	352.60
3773689.70	345.00	346.30	347.60	348.00	349.00	350.00	350.00	351.40	352.60
3773589.70	345.00	346.00	347.00	348.00	349.00	349.60	350.00	351.30	352.60
3773489.70	345.00	346.00	347.00	347.90	348.30	349.30	350.00	351.00	352.00
3773389.70	344.90	346.00	347.00	347.90	348.30	349.00	350.00	351.00	352.00
3773289.70	344.90	346.00	347.00	347.90	348.00	349.00	350.00	351.00	351.60
3773189.70	344.00	346.00	346.60	347.90	348.00	349.00	349.90	350.10	351.00
3773089.70	344.00	345.30	346.10	347.00	348.00	348.10	349.00	350.00	351.00
3772989.70	344.00	345.00	346.00	346.70	347.00	347.90	348.00	349.30	350.00
3772889.70	343.90	344.60	345.60	346.00	346.60	347.00	347.90	349.00	350.00
3772789.70	343.00	344.00	345.00	346.00	346.00	347.00	347.00	348.00	349.70
3772689.70	342.80	343.80	344.50	345.00	346.00	347.00	347.20	348.00	349.60
3772589.70	342.00	342.10	343.80	345.00	346.00	346.80	347.90	348.30	349.60
3772489.70	341.00	342.00	343.00	344.00	345.30	346.60	347.90	348.00	349.60
3772389.70	340.90	341.30	342.60	344.00	345.00	346.00	347.00	347.80	349.60
3772289.70	340.90	341.30	342.60	344.00	345.30	346.00	346.90	347.30	349.60
3772189.70	340.90	341.30	343.50	345.00	346.00	347.00	347.00	347.90	350.50
3772089.70	340.90	341.50	344.80	347.00	347.20	348.80	351.60	354.00	354.00
3771989.70	342.60	346.50	347.80	348.00	349.80	353.40	354.00	355.00	355.30
3771889.70	348.00	348.00	349.00	350.00	351.30	353.00	354.80	355.90	356.50
3771789.70	348.00	349.10	350.00	351.00	353.00	354.00	354.90	356.00	357.10
3771689.70	348.90	350.00	350.60	352.00	353.20	354.00	355.00	356.20	357.60
3771589.70	348.90	350.00	351.00	352.00	353.30	354.60	355.90	356.90	358.00
3771489.70	348.90	350.00	351.00	352.20	354.00	355.00	356.00	357.00	358.00
3771389.70	349.00	350.00	351.60	352.90	354.00	355.00	356.00	357.30	358.60
3771289.70	349.00	350.00	351.60	352.90	354.00	355.00	356.00	357.30	359.00
3771189.70	349.00	350.30	351.60	352.90	354.00	355.00	356.00	358.00	359.00
3771089.70	349.00	350.30	351.60	352.90	354.00	355.00	356.90	358.00	359.00
3770989.70	349.90	350.30	352.00	352.90	354.00	355.60	356.90	358.00	359.00
3770889.70	350.00	351.00	352.00	353.00	354.10	355.60	357.00	358.00	359.60
3770789.70	350.00	351.00	352.00	353.00	354.30	356.00	357.00	358.20	359.60
3770689.70	350.00	351.00	352.00	353.90	355.00	356.00	357.00	358.30	359.60
3770589.70	350.00	351.30	352.70	354.00	355.00	356.00	357.00	358.30	360.00
3770489.70	350.00	352.00	353.00	354.00	355.20	356.00	357.00	358.30	359.80
3770389.70	350.00	352.00	353.50	354.00	355.30	356.00	357.00	358.30	359.60

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

* ELEVATION HEIGHTS IN METERS *

Y-COORD (METERS)	X-COORD (METERS)								
	478868.21	478968.21	479068.21	479168.21	479268.21	479368.21	479468.21	479568.21	479668.21
3770289.70	350.00	352.00	353.00	354.00	355.00	356.00	357.00	358.30	359.60
3770189.70	350.90	352.00	352.60	353.90	355.00	356.00	357.00	358.30	359.60
3770089.70	350.90	351.90	352.60	353.90	355.00	356.00	357.90	358.90	360.00
3769989.70	350.90	352.00	352.60	353.90	355.00	356.60	357.90	359.00	360.00
3769889.70	351.00	352.00	353.00	354.00	355.30	356.80	358.00	359.00	360.60
3769789.70	351.00	352.00	353.00	354.90	356.00	357.00	358.00	359.00	360.60
3769689.70	352.20	353.00	353.00	355.90	358.10	358.70	359.00	359.30	361.60
3769589.70	353.60	354.20	357.90	359.50	360.00	360.00	360.00	360.20	365.00
3769489.70	350.20	353.00	354.10	358.00	358.10	359.00	359.00	359.90	363.40
3769389.70	349.90	352.00	353.00	354.90	356.20	357.50	358.00	359.00	360.00

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*
*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

* ELEVATION HEIGHTS IN METERS *

Y-COORD (METERS)	X-COORD (METERS)								
	479768.21	479868.21	479968.21	480068.21	480168.21	480268.21	480368.21	480468.21	480568.21
3774289.70	353.80	354.00	355.10	356.10	357.30	358.00	359.80	360.00	361.60
3774189.70	353.00	354.00	354.60	356.00	357.00	358.00	359.00	360.00	361.60
3774089.70	353.00	354.00	355.00	356.00	357.00	358.00	359.00	360.20	361.60
3773989.70	353.00	354.00	355.00	356.00	357.00	358.00	359.00	360.30	362.00
3773889.70	353.00	354.00	355.00	356.00	357.00	358.00	359.00	360.30	362.00
3773789.70	353.00	354.00	355.00	356.00	357.00	358.00	359.00	360.00	362.00
3773689.70	353.90	354.00	355.00	356.00	357.00	358.00	359.00	360.00	362.00
3773589.70	353.70	354.00	355.00	356.00	357.00	358.00	359.00	360.00	360.90
3773489.70	353.00	354.00	355.00	355.90	356.30	357.60	358.40	359.00	360.00
3773389.70	352.90	354.00	354.60	355.10	356.00	357.00	358.00	359.00	359.10
3773289.70	352.00	353.30	354.00	355.00	356.00	356.90	357.90	358.30	359.00
3773189.70	352.00	353.00	354.00	355.00	355.60	356.60	357.40	358.70	359.80
3773089.70	352.00	352.40	353.10	354.00	355.00	356.00	357.00	358.40	359.50
3772989.70	351.00	352.00	353.00	353.00	354.30	355.90	356.90	358.00	359.00
3772889.70	351.00	352.00	352.30	353.00	354.30	356.00	356.90	358.00	359.00
3772789.70	350.90	352.00	352.60	353.80	354.30	356.00	356.90	358.00	359.60
3772689.70	350.90	351.40	352.60	353.90	354.30	356.00	356.90	358.00	359.60
3772589.70	350.40	351.30	352.30	353.40	354.00	355.60	356.90	358.00	359.00
3772489.70	350.00	351.30	352.00	353.00	354.00	355.60	356.90	358.00	358.60
3772389.70	351.00	352.00	352.00	353.00	354.00	355.60	357.00	358.40	359.10
3772289.70	351.90	354.00	353.00	353.00	354.20	356.80	358.00	359.20	360.80
3772189.70	352.00	354.20	353.00	354.80	359.80	359.90	359.90	359.00	361.60
3772089.70	354.20	356.90	359.20	360.20	361.20	362.80	365.20	365.80	366.00
3771989.70	356.50	359.30	359.60	361.00	362.70	364.30	366.00	367.00	367.60
3771889.70	358.00	360.00	360.50	362.00	363.30	365.00	366.80	367.90	368.50
3771789.70	358.90	360.00	361.00	362.20	364.00	365.60	367.00	368.00	369.10
3771689.70	359.00	360.20	361.60	362.90	364.00	365.60	367.00	368.30	369.80
3771589.70	359.00	360.30	362.00	363.00	364.30	366.00	367.00	368.90	370.00
3771489.70	359.90	361.00	362.00	363.00	364.30	366.00	367.00	369.00	370.60
3771389.70	360.00	361.00	362.00	363.50	364.70	366.00	367.90	369.30	370.60
3771289.70	360.00	361.30	362.60	363.90	365.00	366.50	367.90	369.30	371.00
3771189.70	360.00	361.40	362.60	364.00	365.30	366.60	368.00	369.40	371.00
3771089.70	360.00	362.00	363.00	364.00	365.30	367.00	368.00	370.00	371.00
3770989.70	360.90	362.00	363.00	364.00	366.00	367.00	368.00	370.00	371.00
3770889.70	360.90	362.00	363.60	364.90	366.00	367.60	368.90	370.00	371.00
3770789.70	360.90	362.00	363.60	365.00	366.30	367.60	368.90	370.00	371.60
3770689.70	361.00	362.00	363.60	365.00	366.30	367.60	368.90	370.30	372.00
3770589.70	361.00	362.00	363.60	364.90	366.00	367.60	368.90	370.00	371.60
3770489.70	361.00	362.00	363.60	364.90	366.00	367.60	369.00	370.30	372.00
3770389.70	360.90	362.00	363.60	364.90	366.00	367.60	369.00	370.30	372.00

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

* ELEVATION HEIGHTS IN METERS *

Y-COORD (METERS)	X-COORD (METERS)								
	479768.21	479868.21	479968.21	480068.21	480168.21	480268.21	480368.21	480468.21	480568.21
3770289.70	360.90	362.30	364.00	365.00	366.30	368.00	369.00	371.00	372.00
3770189.70	360.90	362.30	364.00	365.90	367.00	368.00	369.50	371.00	372.60
3770089.70	361.00	363.00	364.60	366.00	367.00	368.00	369.90	371.00	372.60
3769989.70	361.90	363.00	364.60	366.00	367.30	368.10	369.90	371.00	372.00
3769889.70	362.00	363.30	364.60	366.00	367.30	368.60	369.90	371.00	372.00
3769789.70	362.00	363.90	364.60	366.00	367.30	368.60	370.00	371.00	372.50
3769689.70	364.00	364.20	365.00	366.00	367.40	369.00	370.20	371.10	373.50
3769589.70	366.00	365.80	366.00	366.00	368.00	369.60	372.00	372.00	374.30
3769489.70	365.10	365.00	365.00	366.00	368.00	369.60	371.10	373.00	374.60
3769389.70	362.00	363.30	364.60	366.00	367.30	369.00	370.90	372.00	374.50

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*
*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

* ELEVATION HEIGHTS IN METERS *

Y-COORD (METERS)	X-COORD (METERS)								
	480668.21	480768.21	480868.21	480968.21	481068.21	481168.21	481268.21	481368.21	481468.21
3774289.70	362.80	363.30	364.00	365.00	366.00	367.60	368.90	370.00	371.00
3774189.70	362.00	363.30	364.60	365.90	366.30	368.00	368.90	370.00	371.00
3774089.70	362.90	364.00	365.00	366.00	367.00	368.00	369.00	370.20	371.60
3773989.70	363.00	364.90	365.60	366.00	367.20	368.00	369.00	371.00	372.00
3773889.70	363.90	366.00	366.00	366.00	366.80	367.60	368.90	370.20	371.00
3773789.70	363.90	366.00	366.00	365.50	366.00	366.60	368.00	370.00	370.60
3773689.70	363.90	366.00	365.50	365.00	366.00	366.60	368.00	370.00	371.00
3773589.70	362.90	364.80	365.00	366.00	366.40	367.60	368.20	370.00	371.70
3773489.70	361.40	363.10	364.80	366.00	366.60	367.60	368.00	369.70	368.00
3773389.70	360.00	362.30	364.60	366.00	366.30	367.00	368.00	369.00	368.00
3773289.70	360.00	362.30	364.60	366.00	366.00	366.90	368.00	368.00	369.10
3773189.70	360.50	362.30	364.60	366.00	366.00	366.00	367.00	366.40	367.70
3773089.70	360.00	362.00	363.70	366.00	365.00	366.00	367.00	366.00	366.00
3772989.70	360.00	362.00	363.00	364.00	365.40	366.10	367.00	367.20	368.10
3772889.70	360.00	362.00	363.00	364.00	365.30	366.60	367.90	368.20	369.30
3772789.70	360.90	362.00	363.00	364.00	366.00	366.60	367.90	368.30	369.60
3772689.70	360.00	362.00	363.00	364.00	365.30	366.60	367.90	369.00	370.00
3772589.70	360.00	361.30	363.00	364.50	366.00	366.60	368.00	369.00	370.00
3772489.70	359.10	360.60	363.00	364.90	366.00	367.00	368.00	369.30	370.00
3772389.70	360.00	362.00	363.60	364.90	366.00	367.00	368.20	370.00	371.00
3772289.70	361.60	363.20	364.00	365.00	365.60	367.20	369.50	371.00	372.20
3772189.70	363.00	364.00	365.50	365.90	366.00	371.70	371.90	376.80	378.00
3772089.70	365.20	365.20	368.00	370.20	373.10	374.80	377.20	378.20	378.10
3771989.70	367.60	371.00	372.60	373.50	374.70	376.80	378.00	379.20	379.20
3771889.70	369.90	372.00	373.00	374.00	376.00	378.00	379.00	380.00	381.00
3771789.70	370.90	372.00	373.60	375.00	376.30	378.00	379.90	381.00	382.10
3771689.70	371.00	372.70	374.00	375.50	377.00	378.60	380.00	381.30	383.00
3771589.70	371.90	373.20	374.50	376.00	377.00	378.60	380.00	382.00	383.60
3771489.70	372.00	374.00	375.00	376.90	378.00	379.60	381.00	382.30	384.00
3771389.70	372.00	374.00	375.60	377.50	379.00	380.00	381.90	383.20	384.60
3771289.70	372.90	374.30	376.00	378.00	379.30	380.60	382.00	384.00	385.50
3771189.70	372.90	374.30	376.50	378.00	379.30	381.00	382.90	384.30	386.00
3771089.70	372.90	374.30	376.00	377.90	379.30	381.00	382.90	384.30	386.00
3770989.70	372.90	374.30	376.00	377.90	379.30	381.00	382.90	384.30	386.00
3770889.70	372.90	374.30	376.00	377.90	379.30	380.60	382.70	384.00	385.90
3770789.70	372.90	374.30	376.00	377.90	379.30	380.60	382.00	384.00	385.60
3770689.70	372.90	374.30	376.00	377.90	379.30	381.00	382.00	384.00	385.60
3770589.70	373.00	375.00	376.60	378.00	379.40	381.00	382.20	384.00	385.60
3770489.70	373.50	375.20	376.60	378.00	380.00	381.60	382.90	384.20	386.00
3770389.70	373.90	375.30	377.00	378.90	380.00	382.00	383.00	385.00	386.60

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

* ELEVATION HEIGHTS IN METERS *

Y-COORD (METERS)	X-COORD (METERS) 480668.21	480768.21	480868.21	480968.21	481068.21	481168.21	481268.21	481368.21	481468.21
3770289.70	374.00	376.00	377.70	379.00	380.30	382.00	384.00	385.30	387.00
3770189.70	374.00	376.00	378.00	379.00	381.00	382.60	384.00	386.00	387.60
3770089.70	374.00	376.00	377.60	379.00	381.00	382.60	384.00	386.00	387.60
3769989.70	374.00	376.00	377.60	379.00	380.80	382.50	384.00	386.00	387.60
3769889.70	374.00	376.00	377.00	378.90	380.30	382.00	383.90	385.30	387.60
3769789.70	376.80	377.70	377.60	379.00	381.00	382.60	384.00	386.00	387.60
3769689.70	378.00	378.00	378.00	379.90	381.10	382.70	384.00	386.10	388.00
3769589.70	377.00	377.60	378.30	379.90	381.30	383.80	384.90	386.70	388.60
3769489.70	376.90	378.00	378.00	379.90	381.40	383.10	384.90	387.30	389.60
3769389.70	376.90	377.90	378.60	380.00	381.30	383.00	384.90	387.30	389.10

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*
*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

* ELEVATION HEIGHTS IN METERS *

Y-COORD (METERS)	X-COORD (METERS) 481568.21	481668.21	481768.21
3774289.70	372.00	373.30	374.60
3774189.70	372.00	374.00	375.00
3774089.70	372.90	374.70	375.80
3773989.70	373.90	376.90	377.00
3773889.70	374.90	377.10	377.80
3773789.70	372.00	372.10	375.30
3773689.70	371.90	373.00	374.00
3773589.70	372.00	373.00	372.80
3773489.70	371.40	368.70	367.40
3773389.70	366.20	366.00	366.00
3773289.70	365.80	366.00	366.00
3773189.70	371.40	372.00	372.00
3773089.70	369.90	371.90	372.00
3772989.70	370.00	372.00	372.10
3772889.70	370.50	372.00	372.80
3772789.70	371.00	372.00	372.60
3772689.70	371.20	372.10	373.10
3772589.70	372.00	372.70	374.00
3772489.70	371.10	372.00	374.50
3772389.70	371.00	372.10	376.70
3772289.70	375.10	378.80	382.30
3772189.70	378.00	381.20	384.00
3772089.70	378.00	382.50	385.00
3771989.70	378.00	384.30	385.60
3771889.70	380.80	384.90	386.00
3771789.70	384.00	385.30	386.70
3771689.70	384.00	386.00	387.60
3771589.70	384.10	386.20	388.00
3771489.70	385.90	387.30	388.70
3771389.70	386.00	388.00	389.80
3771289.70	386.90	388.30	390.00
3771189.70	387.00	389.00	390.60
3771089.70	387.90	389.30	391.00
3770989.70	387.90	389.30	391.00
3770889.70	387.90	389.30	390.90
3770789.70	387.00	389.00	390.60
3770689.70	387.00	389.00	390.60
3770589.70	387.90	389.10	390.60
3770489.70	388.00	389.70	391.30
3770389.70	388.00	390.20	392.00

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

* ELEVATION HEIGHTS IN METERS *

Y-COORD (METERS)	X-COORD (METERS) 481568.21	481668.21	481768.21
3770289.70	388.90	390.40	392.10
3770189.70	389.00	391.00	392.60
3770089.70	389.10	391.00	392.60
3769989.70	389.00	391.00	392.60
3769889.70	389.00	390.30	392.60
3769789.70	389.00	391.00	392.60
3769689.70	389.20	391.10	392.70
3769589.70	394.20	393.80	393.00
3769489.70	390.30	391.00	394.00
3769389.70	390.70	391.40	396.00

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*
*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

* HILL HEIGHT SCALES IN METERS *

Y-COORD (METERS)	X-COORD (METERS)								
	478868.21	478968.21	479068.21	479168.21	479268.21	479368.21	479468.21	479568.21	479668.21
3774289.70	346.00	347.30	348.00	349.00	350.00	350.60	351.00	352.00	353.00
3774189.70	346.00	347.00	348.00	348.70	349.30	350.00	351.00	352.00	352.90
3774089.70	346.00	347.00	347.60	348.00	349.00	350.00	351.00	352.00	352.30
3773989.70	345.90	346.30	347.00	347.10	348.30	350.00	350.90	351.40	352.00
3773889.70	345.90	346.30	347.00	348.00	349.00	350.00	350.90	352.00	352.00
3773789.70	345.00	346.30	347.00	348.00	349.00	350.00	350.90	352.00	352.60
3773689.70	345.00	346.30	347.60	348.00	349.00	350.00	350.00	351.40	352.60
3773589.70	345.00	346.00	347.00	348.00	349.00	349.60	350.00	351.30	352.60
3773489.70	345.00	346.00	347.00	347.90	348.30	349.30	350.00	351.00	352.00
3773389.70	344.90	346.00	347.00	347.90	348.30	349.00	350.00	351.00	352.00
3773289.70	344.90	346.00	347.00	347.90	348.00	349.00	350.00	351.00	351.60
3773189.70	344.00	346.00	346.60	347.90	348.00	349.00	349.90	350.10	351.00
3773089.70	344.00	345.30	346.10	347.00	348.00	348.10	349.00	350.00	351.00
3772989.70	344.00	345.00	346.00	346.70	347.00	347.90	348.00	349.30	350.00
3772889.70	343.90	344.60	345.60	346.00	346.60	347.00	347.90	349.00	350.00
3772789.70	343.00	344.00	345.00	346.00	346.00	347.00	347.00	348.00	349.70
3772689.70	342.80	343.80	344.50	345.00	346.00	347.00	347.20	348.00	349.60
3772589.70	342.00	342.10	343.80	345.00	346.00	346.80	347.90	348.30	349.60
3772489.70	341.00	342.00	343.00	344.00	345.30	346.60	347.90	348.00	349.60
3772389.70	340.90	341.30	342.60	344.00	345.00	346.00	347.00	347.80	349.60
3772289.70	340.90	341.30	342.60	344.00	345.30	346.00	346.90	347.30	349.60
3772189.70	340.90	341.30	343.50	345.00	346.00	347.00	347.00	347.90	350.50
3772089.70	340.90	341.50	344.80	347.00	347.20	354.00	354.00	354.00	354.00
3771989.70	348.00	346.50	347.80	348.00	349.80	353.40	354.00	355.00	355.30
3771889.70	348.00	348.00	349.00	350.00	351.30	353.00	354.80	355.90	356.50
3771789.70	348.00	349.10	350.00	351.00	353.00	354.00	354.90	356.00	357.10
3771689.70	348.90	350.00	350.60	352.00	353.20	354.00	355.00	356.20	357.60
3771589.70	348.90	350.00	351.00	352.00	353.30	354.60	355.90	356.90	358.00
3771489.70	348.90	350.00	351.00	352.20	354.00	355.00	356.00	357.00	358.00
3771389.70	349.00	350.00	351.60	352.90	354.00	355.00	356.00	357.30	358.60
3771289.70	349.00	350.00	351.60	352.90	354.00	355.00	356.00	357.30	359.00
3771189.70	349.00	350.30	351.60	352.90	354.00	355.00	356.00	358.00	359.00
3771089.70	349.00	350.30	351.60	352.90	354.00	355.00	356.90	358.00	359.00
3770989.70	349.90	350.30	352.00	352.90	354.00	355.60	356.90	358.00	359.00
3770889.70	350.00	351.00	352.00	353.00	354.10	355.60	357.00	358.00	359.60
3770789.70	350.00	351.00	352.00	353.00	354.30	356.00	357.00	358.20	359.60
3770689.70	350.00	351.00	352.00	353.90	355.00	356.00	357.00	358.30	359.60
3770589.70	350.00	351.30	352.70	354.00	355.00	356.00	357.00	358.30	360.00
3770489.70	350.00	352.00	353.00	354.00	355.20	356.00	357.00	358.30	359.80
3770389.70	350.00	352.00	353.50	354.00	355.30	356.00	357.00	358.30	359.60

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

* HILL HEIGHT SCALES IN METERS *

Y-COORD (METERS)	X-COORD (METERS)								
	478868.21	478968.21	479068.21	479168.21	479268.21	479368.21	479468.21	479568.21	479668.21
3770289.70	350.00	352.00	353.00	354.00	355.00	356.00	357.00	358.30	359.60
3770189.70	350.90	352.00	352.60	353.90	355.00	356.00	357.00	358.30	359.60
3770089.70	350.90	351.90	352.60	353.90	355.00	356.00	357.90	358.90	360.00
3769989.70	350.90	352.00	352.60	353.90	355.00	356.60	357.90	359.00	360.00
3769889.70	351.00	352.00	353.00	354.00	355.30	356.80	358.00	359.00	360.60
3769789.70	351.00	352.00	353.00	354.90	356.00	357.00	358.00	359.00	360.60
3769689.70	352.20	353.00	353.00	355.90	358.10	358.70	359.00	359.30	361.60
3769589.70	353.60	354.20	360.00	359.50	360.00	360.00	360.00	360.20	365.00
3769489.70	350.20	353.00	360.00	358.00	358.10	359.00	359.00	359.90	363.40
3769389.70	349.90	352.00	353.00	354.90	356.20	357.50	358.00	359.00	360.00

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*
*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

* HILL HEIGHT SCALES IN METERS *

Y-COORD (METERS)	X-COORD (METERS)								
	479768.21	479868.21	479968.21	480068.21	480168.21	480268.21	480368.21	480468.21	480568.21
3774289.70	353.80	354.00	355.10	356.10	357.30	358.00	359.80	360.00	361.60
3774189.70	353.00	354.00	354.60	356.00	357.00	358.00	359.00	360.00	361.60
3774089.70	353.00	354.00	355.00	356.00	357.00	358.00	359.00	360.20	361.60
3773989.70	353.00	354.00	355.00	356.00	357.00	358.00	359.00	360.30	362.00
3773889.70	353.00	354.00	355.00	356.00	357.00	358.00	359.00	360.30	362.00
3773789.70	353.00	354.00	355.00	356.00	357.00	358.00	359.00	360.00	362.00
3773689.70	353.90	354.00	355.00	356.00	357.00	358.00	359.00	360.00	362.00
3773589.70	353.70	354.00	355.00	356.00	357.00	358.00	359.00	360.00	360.90
3773489.70	353.00	354.00	355.00	355.90	356.30	357.60	358.40	359.00	360.00
3773389.70	352.90	354.00	354.60	355.10	356.00	357.00	358.00	359.00	359.10
3773289.70	352.00	353.30	354.00	355.00	356.00	356.90	357.90	358.30	359.00
3773189.70	352.00	353.00	354.00	355.00	355.60	356.60	357.40	358.70	359.80
3773089.70	352.00	352.40	353.10	354.00	355.00	356.00	357.00	358.40	359.50
3772989.70	351.00	352.00	353.00	353.00	354.30	355.90	356.90	358.00	359.00
3772889.70	351.00	352.00	352.30	353.00	354.30	356.00	356.90	358.00	359.00
3772789.70	350.90	352.00	352.60	353.80	354.30	356.00	356.90	358.00	359.60
3772689.70	350.90	351.40	352.60	353.90	354.30	356.00	356.90	358.00	359.60
3772589.70	350.40	351.30	352.30	353.40	354.00	355.60	356.90	358.00	359.00
3772489.70	350.00	351.30	352.00	353.00	354.00	355.60	356.90	358.00	358.60
3772389.70	351.00	352.00	352.00	353.00	354.00	355.60	357.00	358.40	359.10
3772289.70	351.90	354.00	353.00	353.00	354.20	356.80	358.00	359.20	360.80
3772189.70	352.00	354.20	359.00	360.00	359.80	359.90	359.90	359.00	361.60
3772089.70	354.20	356.90	359.20	360.20	361.20	362.80	365.20	365.80	366.00
3771989.70	356.50	359.30	359.60	361.00	362.70	364.30	366.00	367.00	367.60
3771889.70	358.00	360.00	360.50	362.00	363.30	365.00	366.80	367.90	368.50
3771789.70	358.90	360.00	361.00	362.20	364.00	365.60	367.00	368.00	369.10
3771689.70	359.00	360.20	361.60	362.90	364.00	365.60	367.00	368.30	369.80
3771589.70	359.00	360.30	362.00	363.00	364.30	366.00	367.00	368.90	370.00
3771489.70	359.90	361.00	362.00	363.00	364.30	366.00	367.00	369.00	370.60
3771389.70	360.00	361.00	362.00	363.50	364.70	366.00	367.90	369.30	370.60
3771289.70	360.00	361.30	362.60	363.90	365.00	366.50	367.90	369.30	371.00
3771189.70	360.00	361.40	362.60	364.00	365.30	366.60	368.00	369.40	371.00
3771089.70	360.00	362.00	363.00	364.00	365.30	367.00	368.00	370.00	371.00
3770989.70	360.90	362.00	363.00	364.00	366.00	367.00	368.00	370.00	371.00
3770889.70	360.90	362.00	363.60	364.90	366.00	367.60	368.90	370.00	371.00
3770789.70	360.90	362.00	363.60	365.00	366.30	367.60	368.90	370.00	371.60
3770689.70	361.00	362.00	363.60	365.00	366.30	367.60	368.90	370.30	372.00
3770589.70	361.00	362.00	363.60	364.90	366.00	367.60	368.90	370.00	371.60
3770489.70	361.00	362.00	363.60	364.90	366.00	367.60	369.00	370.30	372.00
3770389.70	360.90	362.00	363.60	364.90	366.00	367.60	369.00	370.30	372.00

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

* HILL HEIGHT SCALES IN METERS *

Y-COORD (METERS)	X-COORD (METERS) 479768.21	479868.21	479968.21	480068.21	480168.21	480268.21	480368.21	480468.21	480568.21
3770289.70	360.90	362.30	364.00	365.00	366.30	368.00	369.00	371.00	372.00
3770189.70	360.90	362.30	364.00	365.90	367.00	368.00	369.50	371.00	372.60
3770089.70	361.00	363.00	364.60	366.00	367.00	368.00	369.90	371.00	372.60
3769989.70	361.90	363.00	364.60	366.00	367.30	368.10	369.90	371.00	372.00
3769889.70	362.00	363.30	364.60	366.00	367.30	368.60	369.90	371.00	372.00
3769789.70	362.00	363.90	364.60	366.00	367.30	368.60	370.00	371.00	372.50
3769689.70	364.00	364.20	365.00	366.00	367.40	369.00	370.20	371.10	373.50
3769589.70	366.00	365.80	366.00	366.00	368.00	369.60	372.00	372.00	374.30
3769489.70	365.10	365.00	365.00	366.00	368.00	369.60	371.10	373.00	374.60
3769389.70	362.00	363.30	364.60	366.00	367.30	369.00	370.90	372.00	374.50

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*
*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

* HILL HEIGHT SCALES IN METERS *

Y-COORD (METERS)	X-COORD (METERS)								
	480668.21	480768.21	480868.21	480968.21	481068.21	481168.21	481268.21	481368.21	481468.21
3774289.70	362.80	363.30	364.00	365.00	366.00	367.60	368.90	370.00	371.00
3774189.70	362.00	363.30	364.60	365.90	366.30	368.00	368.90	370.00	371.00
3774089.70	362.90	364.00	365.00	366.00	367.00	368.00	369.00	370.20	371.60
3773989.70	363.00	364.90	365.60	366.00	367.20	368.00	369.00	371.00	372.00
3773889.70	363.90	366.00	366.00	366.00	366.80	367.60	368.90	370.20	371.00
3773789.70	363.90	366.00	366.00	365.50	366.00	366.60	368.00	370.00	370.60
3773689.70	363.90	366.00	365.50	365.00	366.00	366.60	368.00	370.00	371.00
3773589.70	362.90	364.80	365.00	366.00	366.40	367.60	368.20	370.00	371.70
3773489.70	361.40	363.10	364.80	366.00	366.60	367.60	368.00	369.70	368.00
3773389.70	360.00	362.30	364.60	366.00	366.30	367.00	368.00	369.00	368.00
3773289.70	360.00	362.30	364.60	366.00	366.00	366.90	368.00	368.00	369.10
3773189.70	360.50	362.30	364.60	366.00	366.00	366.00	367.00	366.40	367.70
3773089.70	360.00	362.00	363.70	366.00	365.00	366.00	367.00	366.00	366.00
3772989.70	360.00	362.00	363.00	364.00	365.40	366.10	367.00	367.20	368.10
3772889.70	360.00	362.00	363.00	364.00	365.30	366.60	367.90	368.20	369.30
3772789.70	360.90	362.00	363.00	364.00	366.00	366.60	367.90	368.30	369.60
3772689.70	360.00	362.00	363.00	364.00	365.30	366.60	367.90	369.00	370.00
3772589.70	360.00	361.30	363.00	364.50	366.00	366.60	368.00	369.00	370.00
3772489.70	359.10	360.60	363.00	364.90	366.00	367.00	368.00	369.30	370.00
3772389.70	360.00	362.00	363.60	364.90	366.00	367.00	368.20	370.00	371.00
3772289.70	361.60	363.20	364.00	365.00	365.60	367.20	369.50	371.00	378.00
3772189.70	363.00	364.00	365.50	365.90	372.00	371.70	371.90	376.80	378.00
3772089.70	365.20	365.20	371.00	370.20	373.10	374.80	377.20	378.20	378.10
3771989.70	367.60	371.00	372.60	373.50	374.70	376.80	378.00	379.20	379.20
3771889.70	369.90	372.00	373.00	374.00	376.00	378.00	379.00	380.00	381.00
3771789.70	370.90	372.00	373.60	375.00	376.30	378.00	379.90	381.00	382.10
3771689.70	371.00	372.70	374.00	375.50	377.00	378.60	380.00	381.30	383.00
3771589.70	371.90	373.20	374.50	376.00	377.00	378.60	380.00	382.00	383.60
3771489.70	372.00	374.00	375.00	376.90	378.00	379.60	381.00	382.30	384.00
3771389.70	372.00	374.00	375.60	377.50	379.00	380.00	381.90	383.20	384.60
3771289.70	372.90	374.30	376.00	378.00	379.30	380.60	382.00	384.00	385.50
3771189.70	372.90	374.30	376.50	378.00	379.30	381.00	382.90	384.30	386.00
3771089.70	372.90	374.30	376.00	377.90	379.30	381.00	382.90	384.30	386.00
3770989.70	372.90	374.30	376.00	377.90	379.30	381.00	382.90	384.30	386.00
3770889.70	372.90	374.30	376.00	377.90	379.30	380.60	382.70	384.00	385.90
3770789.70	372.90	374.30	376.00	377.90	379.30	380.60	382.00	384.00	385.60
3770689.70	372.90	374.30	376.00	377.90	379.30	381.00	382.00	384.00	385.60
3770589.70	373.00	375.00	376.60	378.00	379.40	381.00	382.20	384.00	385.60
3770489.70	373.50	375.20	376.60	378.00	380.00	381.60	382.90	384.20	386.00
3770389.70	373.90	375.30	377.00	378.90	380.00	382.00	383.00	385.00	386.60

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

* HILL HEIGHT SCALES IN METERS *

Y-COORD (METERS)	X-COORD (METERS)								
	480668.21	480768.21	480868.21	480968.21	481068.21	481168.21	481268.21	481368.21	481468.21
3770289.70	374.00	376.00	377.70	379.00	380.30	382.00	384.00	385.30	387.00
3770189.70	374.00	376.00	378.00	379.00	381.00	382.60	384.00	386.00	387.60
3770089.70	374.00	376.00	377.60	379.00	381.00	382.60	384.00	386.00	387.60
3769989.70	374.00	376.00	377.60	379.00	380.80	382.50	384.00	386.00	387.60
3769889.70	374.00	376.00	377.00	378.90	380.30	382.00	383.90	385.30	387.60
3769789.70	376.80	377.70	377.60	379.00	381.00	382.60	384.00	386.00	387.60
3769689.70	378.00	378.00	378.00	379.90	381.10	382.70	384.00	386.10	388.00
3769589.70	377.00	377.60	378.30	379.90	381.30	383.80	384.90	386.70	399.00
3769489.70	376.90	378.00	378.00	379.90	381.40	383.10	384.90	387.30	399.00
3769389.70	376.90	377.90	378.60	380.00	381.30	383.00	384.90	387.30	389.10

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*
*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

* HILL HEIGHT SCALES IN METERS *

Y-COORD (METERS)	X-COORD (METERS) 481568.21	481668.21	481768.21
3774289.70	372.00	373.30	374.60
3774189.70	372.00	374.00	375.00
3774089.70	372.90	374.70	375.80
3773989.70	373.90	376.90	377.00
3773889.70	376.00	377.10	377.80
3773789.70	372.00	372.10	375.30
3773689.70	371.90	373.00	374.00
3773589.70	372.00	373.00	372.80
3773489.70	371.40	372.00	371.00
3773389.70	366.20	366.00	366.00
3773289.70	373.00	366.00	366.00
3773189.70	371.40	372.00	372.00
3773089.70	369.90	371.90	372.00
3772989.70	370.00	372.00	372.10
3772889.70	370.50	372.00	372.80
3772789.70	371.00	372.00	372.60
3772689.70	371.20	372.10	373.10
3772589.70	372.00	372.70	374.00
3772489.70	371.10	372.00	374.50
3772389.70	371.00	378.00	376.70
3772289.70	375.10	378.80	382.30
3772189.70	378.00	381.20	384.00
3772089.70	378.00	382.50	385.00
3771989.70	378.00	384.30	385.60
3771889.70	380.80	384.90	386.00
3771789.70	384.00	385.30	386.70
3771689.70	384.00	386.00	387.60
3771589.70	384.10	386.20	388.00
3771489.70	385.90	387.30	388.70
3771389.70	386.00	388.00	389.80
3771289.70	386.90	388.30	390.00
3771189.70	387.00	389.00	390.60
3771089.70	387.90	389.30	391.00
3770989.70	387.90	389.30	391.00
3770889.70	387.90	389.30	390.90
3770789.70	387.00	389.00	390.60
3770689.70	387.00	389.00	390.60
3770589.70	387.90	389.10	390.60
3770489.70	388.00	389.70	391.30
3770389.70	388.00	390.20	392.00

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

* HILL HEIGHT SCALES IN METERS *

Y-COORD (METERS)	X-COORD (METERS) 481568.21	481668.21	481768.21
3770289.70	388.90	390.40	392.10
3770189.70	389.00	391.00	392.60
3770089.70	389.10	391.00	392.60
3769989.70	389.00	391.00	392.60
3769889.70	389.00	390.30	392.60
3769789.70	389.00	391.00	392.60
3769689.70	389.20	391.10	392.70
3769589.70	397.00	393.80	393.00
3769489.70	399.00	391.00	394.00
3769389.70	390.70	391.40	396.00

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** DISCRETE CARTESIAN RECEPTORS ***
(X-COORD, Y-COORD, ZELEV, ZHILL, ZFLAG)
(METERS)

(	480726.1,	3770758.2,	373.9,	373.9,	0.0);	(	479114.5,	3769998.8,	353.0,	353.0,	0.0);
(	479109.7,	3769953.9,	353.0,	353.0,	0.0);	(	480558.0,	3774226.4,	361.3,	361.3,	0.0);
(	480766.0,	3771834.4,	372.0,	372.0,	0.0);	(	480235.5,	3771590.9,	365.5,	365.5,	0.0);

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** METEOROLOGICAL DAYS SELECTED FOR PROCESSING ***
(1=YES; 0=NO)

1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
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NOTE: METEOROLOGICAL DATA ACTUALLY PROCESSED WILL ALSO DEPEND ON WHAT IS INCLUDED IN THE DATA FILE.

*** UPPER BOUND OF FIRST THROUGH FIFTH WIND SPEED CATEGORIES ***
(METERS/SEC)

1.54, 3.09, 5.14, 8.23, 10.80,

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: ..\RedlandsADJU\RDLD_V9_ADJU\RDLD_v9.SFC Met Version: 16216
Profile file: ..\RedlandsADJU\RDLD_V9_ADJU\RDLD_v9.PFL
Surface format: FREE
Profile format: FREE
Surface station no.: 3171 Upper air station no.: 3190
Name: UNKNOWN Name: UNKNOWN
Year: 2012 Year: 2012

First 24 hours of scalar data

YR	MO	DY	JDY	HR	H0	U*	W*	DT/DZ	ZICNV	ZIMCH	M-O LEN	Z0	BOWEN	ALBEDO	REF WS	WD	HT	REF TA	HT
12	01	01	1	01	-10.6	0.149	-9.000	-9.000	-999.	138.	26.7	0.32	3.22	1.00	1.30	110.	9.1	285.4	5.5
12	01	01	1	02	-5.0	0.102	-9.000	-9.000	-999.	78.	17.9	0.32	3.22	1.00	0.90	130.	9.1	284.5	5.5
12	01	01	1	03	-5.0	0.102	-9.000	-9.000	-999.	78.	17.9	0.32	3.22	1.00	0.90	100.	9.1	285.0	5.5
12	01	01	1	04	-5.0	0.102	-9.000	-9.000	-999.	78.	17.9	0.32	3.22	1.00	0.90	107.	9.1	284.6	5.5
12	01	01	1	05	-10.7	0.149	-9.000	-9.000	-999.	138.	26.7	0.32	3.22	1.00	1.30	98.	9.1	284.9	5.5
12	01	01	1	06	-5.0	0.102	-9.000	-9.000	-999.	78.	17.9	0.32	3.22	1.00	0.90	86.	9.1	284.5	5.5
12	01	01	1	07	-5.0	0.102	-9.000	-9.000	-999.	78.	17.9	0.32	3.22	1.00	0.90	91.	9.1	284.0	5.5
12	01	01	1	08	-4.0	0.102	-9.000	-9.000	-999.	78.	22.9	0.32	3.22	0.54	0.90	107.	9.1	285.0	5.5
12	01	01	1	09	44.6	0.237	0.382	0.006	43.	276.	-25.6	0.15	3.22	0.33	2.10	81.	10.1	289.1	5.5
12	01	01	1	10	134.3	0.111	0.882	0.008	176.	99.	-1.0	0.32	3.22	0.26	0.40	72.	9.1	295.1	5.5
12	01	01	1	11	199.8	0.409	1.429	0.005	503.	627.	-29.4	0.15	3.22	0.23	3.68	78.	10.1	297.9	5.5
12	01	01	1	12	232.3	0.300	1.889	0.005	999.	402.	-10.0	0.32	3.22	0.22	1.80	333.	9.1	299.4	5.5
12	01	01	1	13	230.0	0.300	2.134	0.005	1453.	394.	-10.1	0.32	3.22	0.22	1.80	72.	9.1	300.4	5.5
12	01	01	1	14	194.0	0.294	2.109	0.005	1663.	382.	-11.2	0.32	3.22	0.24	1.80	277.	9.1	301.0	5.5
12	01	01	1	15	126.3	0.378	1.872	0.005	1784.	557.	-36.5	0.32	3.22	0.27	2.70	243.	9.1	301.0	5.5
12	01	01	1	16	39.5	0.199	1.278	0.005	1817.	240.	-17.2	0.32	3.22	0.36	1.30	274.	9.1	300.1	5.5
12	01	01	1	17	-4.7	0.101	-9.000	-9.000	-999.	85.	19.0	0.32	3.22	0.65	0.90	252.	9.1	298.2	5.5
12	01	01	1	18	-4.9	0.102	-9.000	-9.000	-999.	78.	18.2	0.32	3.22	1.00	0.90	116.	9.1	296.4	5.5
12	01	01	1	19	-18.8	0.204	-9.000	-9.000	-999.	220.	45.6	0.15	3.22	1.00	2.27	79.	10.1	292.2	5.5
12	01	01	1	20	-5.0	0.102	-9.000	-9.000	-999.	83.	18.1	0.32	3.22	1.00	0.90	95.	9.1	290.2	5.5
12	01	01	1	21	-5.0	0.102	-9.000	-9.000	-999.	78.	18.0	0.32	3.22	1.00	0.90	99.	9.1	287.8	5.5
12	01	01	1	22	-5.0	0.102	-9.000	-9.000	-999.	78.	18.0	0.32	3.22	1.00	0.90	110.	9.1	287.6	5.5
12	01	01	1	23	-10.6	0.149	-9.000	-9.000	-999.	138.	26.8	0.32	3.22	1.00	1.30	89.	9.1	287.2	5.5
12	01	01	1	24	-5.0	0.102	-9.000	-9.000	-999.	78.	17.9	0.32	3.22	1.00	0.90	105.	9.1	285.9	5.5

First hour of profile data

YR	MO	DY	HR	HEIGHT	F	WDIR	WSPD	AMB_TMP	sigmaA	sigmaW	sigmaV
12	01	01	01	5.5	0	-999.	-99.00	285.5	99.0	-99.00	-99.00
12	01	01	01	9.1	1	110.	1.30	-999.0	99.0	-99.00	-99.00

F indicates top of profile (=1) or below (=0)

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): L0004094 , L0004095 , L0004096 , L0004097 , L0004098 ,
L0004099 , L0004100 , L0004101 , L0004102 , L0004103 , L0004104 , L0004105 , L0004106 ,
L0004107 , L0004108 , L0004109 , L0004110 , L0004111 , L0004112 , L0004113 , L0004114 ,
L0004115 , L0004116 , L0004117 , L0004118 , L0004119 , L0004120 , L0004121 , . . . ,

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

** CONC OF DPM IN MICROGRAMS/M**3 **

Y-COORD (METERS)	X-COORD (METERS)								
	478868.21	478968.21	479068.21	479168.21	479268.21	479368.21	479468.21	479568.21	479668.21
3774289.70	0.00047	0.00049	0.00051	0.00053	0.00056	0.00059	0.00062	0.00066	0.00071
3774189.70	0.00048	0.00051	0.00053	0.00055	0.00058	0.00061	0.00065	0.00069	0.00074
3774089.70	0.00050	0.00052	0.00055	0.00057	0.00060	0.00063	0.00067	0.00072	0.00077
3773989.70	0.00052	0.00054	0.00056	0.00059	0.00062	0.00066	0.00070	0.00074	0.00080
3773889.70	0.00053	0.00056	0.00058	0.00061	0.00064	0.00068	0.00072	0.00077	0.00082
3773789.70	0.00055	0.00057	0.00060	0.00063	0.00066	0.00070	0.00074	0.00079	0.00085
3773689.70	0.00056	0.00059	0.00062	0.00065	0.00068	0.00072	0.00076	0.00081	0.00087
3773589.70	0.00058	0.00061	0.00064	0.00067	0.00070	0.00074	0.00079	0.00084	0.00090
3773489.70	0.00060	0.00063	0.00066	0.00069	0.00072	0.00076	0.00081	0.00086	0.00092
3773389.70	0.00062	0.00065	0.00068	0.00071	0.00075	0.00079	0.00083	0.00088	0.00094
3773289.70	0.00064	0.00067	0.00070	0.00073	0.00077	0.00081	0.00085	0.00091	0.00097
3773189.70	0.00066	0.00069	0.00072	0.00076	0.00079	0.00083	0.00088	0.00093	0.00099
3773089.70	0.00069	0.00072	0.00075	0.00078	0.00082	0.00086	0.00090	0.00096	0.00101
3772989.70	0.00071	0.00074	0.00078	0.00081	0.00085	0.00089	0.00093	0.00098	0.00104
3772889.70	0.00074	0.00077	0.00081	0.00084	0.00088	0.00092	0.00096	0.00101	0.00107
3772789.70	0.00077	0.00081	0.00084	0.00088	0.00091	0.00095	0.00100	0.00105	0.00110
3772689.70	0.00081	0.00085	0.00088	0.00092	0.00096	0.00100	0.00104	0.00109	0.00114
3772589.70	0.00085	0.00089	0.00093	0.00096	0.00100	0.00104	0.00109	0.00113	0.00119
3772489.70	0.00090	0.00094	0.00098	0.00102	0.00106	0.00110	0.00114	0.00118	0.00124
3772389.70	0.00096	0.00100	0.00105	0.00109	0.00113	0.00117	0.00121	0.00125	0.00130
3772289.70	0.00103	0.00108	0.00113	0.00117	0.00121	0.00125	0.00129	0.00132	0.00137
3772189.70	0.00112	0.00118	0.00123	0.00128	0.00132	0.00136	0.00139	0.00142	0.00146
3772089.70	0.00123	0.00130	0.00138	0.00143	0.00147	0.00150	0.00152	0.00155	0.00157
3771989.70	0.00138	0.00148	0.00158	0.00164	0.00168	0.00170	0.00170	0.00170	0.00172
3771889.70	0.00158	0.00173	0.00187	0.00197	0.00199	0.00198	0.00195	0.00192	0.00191
3771789.70	0.00184	0.00211	0.00238	0.00254	0.00253	0.00243	0.00232	0.00225	0.00219
3771689.70	0.00219	0.00272	0.00346	0.00394	0.00365	0.00329	0.00304	0.00289	0.00279
3771589.70	0.00262	0.00363	0.00649	0.01532	0.01029	0.00898	0.00832	0.00787	0.00760
3771489.70	0.00306	0.00459	0.01027	0.02328	0.00704	0.00482	0.00400	0.00360	0.00344
3771389.70	0.00342	0.00524	0.01167	0.02385	0.00738	0.00472	0.00369	0.00329	0.00299
3771289.70	0.00369	0.00564	0.01232	0.02366	0.00763	0.00484	0.00370	0.00325	0.00291
3771189.70	0.00388	0.00589	0.01274	0.02327	0.00776	0.00494	0.00376	0.00328	0.00290

3771089.70	0.00401	0.00606	0.01306	0.02283	0.00783	0.00501	0.00380	0.00331	0.00291
3770989.70	0.00410	0.00618	0.01334	0.02237	0.00785	0.00505	0.00383	0.00332	0.00292
3770889.70	0.00417	0.00628	0.01357	0.02188	0.00784	0.00507	0.00385	0.00330	0.00291
3770789.70	0.00421	0.00634	0.01378	0.02141	0.00782	0.00507	0.00385	0.00330	0.00290
3770689.70	0.00423	0.00639	0.01398	0.02094	0.00777	0.00505	0.00384	0.00327	0.00288
3770589.70	0.00424	0.00642	0.01421	0.02048	0.00771	0.00502	0.00382	0.00321	0.00286
3770489.70	0.00423	0.00643	0.01438	0.02001	0.00764	0.00498	0.00378	0.00313	0.00281
3770389.70	0.00420	0.00641	0.01455	0.01961	0.00756	0.00492	0.00374	0.00307	0.00277

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): L0004094 , L0004095 , L0004096 , L0004097 , L0004098 ,
L0004099 , L0004100 , L0004101 , L0004102 , L0004103 , L0004104 , L0004105 , L0004106 ,
L0004107 , L0004108 , L0004109 , L0004110 , L0004111 , L0004112 , L0004113 , L0004114 ,
L0004115 , L0004116 , L0004117 , L0004118 , L0004119 , L0004120 , L0004121 , . . . ,

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

** CONC OF DPM IN MICROGRAMS/M**3 **

Y-COORD (METERS)	X-COORD (METERS) 478868.21	478968.21	479068.21	479168.21	479268.21	479368.21	479468.21	479568.21	479668.21
3770289.70	0.00415	0.00635	0.01444	0.01964	0.00750	0.00486	0.00367	0.00303	0.00271
3770189.70	0.00407	0.00625	0.01422	0.01980	0.00743	0.00478	0.00359	0.00301	0.00265
3770089.70	0.00396	0.00611	0.01395	0.01992	0.00733	0.00466	0.00347	0.00296	0.00258
3769989.70	0.00380	0.00591	0.01362	0.01999	0.00716	0.00451	0.00334	0.00284	0.00248
3769889.70	0.00358	0.00561	0.01315	0.01991	0.00690	0.00428	0.00316	0.00266	0.00236
3769789.70	0.00328	0.00514	0.01239	0.01955	0.00643	0.00395	0.00292	0.00243	0.00221
3769689.70	0.00287	0.00439	0.01067	0.01796	0.00545	0.00340	0.00259	0.00224	0.00202
3769589.70	0.00240	0.00331	0.00577	0.00716	0.00381	0.00278	0.00227	0.00197	0.00177
3769489.70	0.00194	0.00237	0.00287	0.00297	0.00253	0.00212	0.00185	0.00167	0.00155
3769389.70	0.00158	0.00178	0.00194	0.00198	0.00188	0.00172	0.00158	0.00145	0.00137

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): L0004094 , L0004095 , L0004096 , L0004097 , L0004098 ,
L0004099 , L0004100 , L0004101 , L0004102 , L0004103 , L0004104 , L0004105 , L0004106 ,
L0004107 , L0004108 , L0004109 , L0004110 , L0004111 , L0004112 , L0004113 , L0004114 ,
L0004115 , L0004116 , L0004117 , L0004118 , L0004119 , L0004120 , L0004121 , . . . ,

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

** CONC OF DPM IN MICROGRAMS/M**3 **

Y-COORD (METERS)	X-COORD (METERS)								
	479768.21	479868.21	479968.21	480068.21	480168.21	480268.21	480368.21	480468.21	480568.21
3774289.70	0.00076	0.00082	0.00090	0.00100	0.00112	0.00128	0.00149	0.00182	0.00231
3774189.70	0.00080	0.00086	0.00095	0.00106	0.00120	0.00138	0.00166	0.00210	0.00290
3774089.70	0.00083	0.00090	0.00099	0.00111	0.00127	0.00148	0.00180	0.00234	0.00342
3773989.70	0.00086	0.00094	0.00104	0.00116	0.00133	0.00156	0.00190	0.00248	0.00364
3773889.70	0.00089	0.00097	0.00107	0.00120	0.00138	0.00161	0.00197	0.00255	0.00365
3773789.70	0.00092	0.00100	0.00110	0.00124	0.00141	0.00165	0.00200	0.00256	0.00361
3773689.70	0.00094	0.00103	0.00113	0.00127	0.00144	0.00168	0.00202	0.00256	0.00356
3773589.70	0.00097	0.00105	0.00116	0.00129	0.00146	0.00169	0.00203	0.00254	0.00351
3773489.70	0.00099	0.00108	0.00118	0.00131	0.00148	0.00171	0.00203	0.00253	0.00347
3773389.70	0.00101	0.00110	0.00120	0.00133	0.00150	0.00172	0.00203	0.00253	0.00345
3773289.70	0.00104	0.00112	0.00122	0.00135	0.00151	0.00173	0.00204	0.00252	0.00344
3773189.70	0.00106	0.00114	0.00124	0.00137	0.00153	0.00174	0.00204	0.00252	0.00343
3773089.70	0.00108	0.00116	0.00126	0.00138	0.00154	0.00175	0.00206	0.00253	0.00343
3772989.70	0.00111	0.00119	0.00129	0.00140	0.00156	0.00177	0.00207	0.00254	0.00343
3772889.70	0.00114	0.00122	0.00131	0.00143	0.00158	0.00179	0.00208	0.00255	0.00344
3772789.70	0.00117	0.00125	0.00134	0.00146	0.00160	0.00181	0.00210	0.00256	0.00345
3772689.70	0.00120	0.00128	0.00137	0.00148	0.00163	0.00183	0.00212	0.00258	0.00346
3772589.70	0.00125	0.00132	0.00141	0.00152	0.00166	0.00186	0.00215	0.00260	0.00348
3772489.70	0.00129	0.00136	0.00145	0.00156	0.00170	0.00189	0.00218	0.00263	0.00350
3772389.70	0.00135	0.00142	0.00150	0.00160	0.00174	0.00193	0.00222	0.00266	0.00352
3772289.70	0.00142	0.00148	0.00156	0.00166	0.00179	0.00199	0.00225	0.00269	0.00356
3772189.70	0.00150	0.00156	0.00163	0.00173	0.00184	0.00203	0.00230	0.00274	0.00360
3772089.70	0.00161	0.00166	0.00170	0.00179	0.00192	0.00209	0.00235	0.00278	0.00363
3771989.70	0.00174	0.00175	0.00181	0.00190	0.00201	0.00218	0.00244	0.00286	0.00369
3771889.70	0.00190	0.00191	0.00197	0.00204	0.00215	0.00232	0.00257	0.00300	0.00383
3771789.70	0.00216	0.00217	0.00222	0.00229	0.00239	0.00256	0.00281	0.00325	0.00409
3771689.70	0.00273	0.00272	0.00276	0.00282	0.00293	0.00310	0.00336	0.00380	0.00466
3771589.70	0.00733	0.00716	0.00791	0.00809	0.00815	0.00833	0.00854	0.00899	0.00988
3771489.70	0.00331	0.00326	0.00324	0.00326	0.00335	0.00352	0.00380	0.00429	0.00528
3771389.70	0.00281	0.00273	0.00270	0.00272	0.00281	0.00298	0.00327	0.00378	0.00486
3771289.70	0.00271	0.00260	0.00255	0.00257	0.00266	0.00283	0.00313	0.00367	0.00480
3771189.70	0.00268	0.00256	0.00251	0.00252	0.00260	0.00278	0.00309	0.00365	0.00481

3771089.70	0.00267	0.00255	0.00248	0.00249	0.00258	0.00276	0.00309	0.00367	0.00486
3770989.70	0.00268	0.00254	0.00248	0.00248	0.00257	0.00276	0.00310	0.00370	0.00493
3770889.70	0.00267	0.00253	0.00246	0.00247	0.00256	0.00275	0.00310	0.00373	0.00501
3770789.70	0.00266	0.00252	0.00245	0.00246	0.00255	0.00275	0.00311	0.00376	0.00509
3770689.70	0.00264	0.00250	0.00243	0.00244	0.00253	0.00273	0.00310	0.00376	0.00513
3770589.70	0.00261	0.00247	0.00240	0.00241	0.00251	0.00271	0.00307	0.00373	0.00508
3770489.70	0.00258	0.00244	0.00237	0.00238	0.00247	0.00267	0.00302	0.00367	0.00500
3770389.70	0.00253	0.00239	0.00232	0.00233	0.00242	0.00262	0.00297	0.00360	0.00490

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): L0004094 , L0004095 , L0004096 , L0004097 , L0004098 ,
L0004099 , L0004100 , L0004101 , L0004102 , L0004103 , L0004104 , L0004105 , L0004106 ,
L0004107 , L0004108 , L0004109 , L0004110 , L0004111 , L0004112 , L0004113 , L0004114 ,
L0004115 , L0004116 , L0004117 , L0004118 , L0004119 , L0004120 , L0004121 , . . . ,

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

** CONC OF DPM IN MICROGRAMS/M**3 **

Y-COORD (METERS)	X-COORD (METERS) 479768.21	479868.21	479968.21	480068.21	480168.21	480268.21	480368.21	480468.21	480568.21
3770289.70	0.00248	0.00234	0.00227	0.00228	0.00237	0.00255	0.00290	0.00351	0.00480
3770189.70	0.00242	0.00228	0.00221	0.00221	0.00230	0.00248	0.00281	0.00342	0.00469
3770089.70	0.00235	0.00221	0.00214	0.00214	0.00222	0.00239	0.00271	0.00330	0.00456
3769989.70	0.00226	0.00213	0.00205	0.00205	0.00212	0.00228	0.00259	0.00315	0.00438
3769889.70	0.00216	0.00202	0.00196	0.00195	0.00201	0.00216	0.00243	0.00296	0.00414
3769789.70	0.00202	0.00190	0.00184	0.00183	0.00188	0.00201	0.00225	0.00271	0.00377
3769689.70	0.00185	0.00176	0.00171	0.00170	0.00174	0.00184	0.00203	0.00240	0.00322
3769589.70	0.00165	0.00158	0.00155	0.00155	0.00158	0.00166	0.00179	0.00204	0.00251
3769489.70	0.00146	0.00142	0.00140	0.00140	0.00142	0.00148	0.00157	0.00171	0.00191
3769389.70	0.00132	0.00128	0.00126	0.00126	0.00128	0.00131	0.00136	0.00144	0.00152

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): L0004094 , L0004095 , L0004096 , L0004097 , L0004098 ,
L0004099 , L0004100 , L0004101 , L0004102 , L0004103 , L0004104 , L0004105 , L0004106 ,
L0004107 , L0004108 , L0004109 , L0004110 , L0004111 , L0004112 , L0004113 , L0004114 ,
L0004115 , L0004116 , L0004117 , L0004118 , L0004119 , L0004120 , L0004121 , . . . ,

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

** CONC OF DPM IN MICROGRAMS/M**3 **

Y-COORD (METERS)	X-COORD (METERS)								
	480668.21	480768.21	480868.21	480968.21	481068.21	481168.21	481268.21	481368.21	481468.21
3774289.70	0.00308	0.00400	0.00456	0.00470	0.00467	0.00460	0.00453	0.00439	0.00400
3774189.70	0.00484	0.00983	0.01101	0.01040	0.00971	0.00944	0.00976	0.01021	0.01025
3774089.70	0.00698	0.02168	0.01988	0.02431	0.03119	0.03516	0.02705	0.02165	0.01724
3773989.70	0.00707	0.01684	0.00784	0.00726	0.00724	0.00712	0.00671	0.00615	0.00528
3773889.70	0.00682	0.01637	0.00613	0.00494	0.00453	0.00426	0.00397	0.00364	0.00322
3773789.70	0.00660	0.01645	0.00552	0.00411	0.00355	0.00322	0.00293	0.00268	0.00242
3773689.70	0.00644	0.01672	0.00523	0.00370	0.00308	0.00272	0.00243	0.00221	0.00202
3773589.70	0.00631	0.01706	0.00507	0.00348	0.00282	0.00242	0.00216	0.00195	0.00179
3773489.70	0.00622	0.01749	0.00499	0.00335	0.00266	0.00226	0.00201	0.00181	0.00163
3773389.70	0.00615	0.01762	0.00493	0.00326	0.00256	0.00215	0.00192	0.00172	0.00155
3773289.70	0.00612	0.01774	0.00489	0.00321	0.00250	0.00209	0.00187	0.00166	0.00150
3773189.70	0.00611	0.01788	0.00487	0.00317	0.00246	0.00205	0.00179	0.00158	0.00146
3773089.70	0.00608	0.01803	0.00486	0.00315	0.00244	0.00202	0.00178	0.00155	0.00140
3772989.70	0.00607	0.01818	0.00486	0.00316	0.00242	0.00200	0.00178	0.00158	0.00143
3772889.70	0.00606	0.01835	0.00487	0.00315	0.00242	0.00199	0.00178	0.00158	0.00142
3772789.70	0.00608	0.01852	0.00488	0.00316	0.00241	0.00199	0.00178	0.00158	0.00142
3772689.70	0.00606	0.01870	0.00489	0.00316	0.00242	0.00202	0.00178	0.00158	0.00142
3772589.70	0.00607	0.01889	0.00492	0.00317	0.00245	0.00205	0.00179	0.00158	0.00142
3772489.70	0.00607	0.01908	0.00494	0.00319	0.00250	0.00209	0.00180	0.00159	0.00143
3772389.70	0.00608	0.01927	0.00497	0.00321	0.00250	0.00209	0.00181	0.00160	0.00144
3772289.70	0.00611	0.01949	0.00500	0.00324	0.00249	0.00208	0.00182	0.00161	0.00144
3772189.70	0.00614	0.01972	0.00503	0.00326	0.00252	0.00212	0.00183	0.00157	0.00141
3772089.70	0.00616	0.01985	0.00503	0.00331	0.00255	0.00211	0.00180	0.00158	0.00143
3771989.70	0.00617	0.01984	0.00500	0.00328	0.00254	0.00212	0.00182	0.00159	0.00143
3771889.70	0.00628	0.02036	0.00509	0.00331	0.00256	0.00215	0.00185	0.00161	0.00144
3771789.70	0.00664	0.01954	0.00524	0.00340	0.00261	0.00221	0.00188	0.00165	0.00147
3771689.70	0.00731	0.01945	0.00546	0.00354	0.00273	0.00229	0.00195	0.00170	0.00151
3771589.70	0.01250	0.01738	0.00570	0.00370	0.00283	0.00239	0.00203	0.00176	0.00155
3771489.70	0.00851	0.02139	0.00602	0.00385	0.00294	0.00246	0.00209	0.00183	0.00160
3771389.70	0.00835	0.02149	0.00618	0.00396	0.00310	0.00255	0.00216	0.00188	0.00165
3771289.70	0.00840	0.02141	0.00628	0.00406	0.00319	0.00263	0.00225	0.00194	0.00170
3771189.70	0.00847	0.02134	0.00638	0.00419	0.00332	0.00275	0.00235	0.00203	0.00176

3771089.70	0.00857	0.02130	0.00655	0.00438	0.00352	0.00294	0.00252	0.00217	0.00187
3770989.70	0.00872	0.02136	0.00684	0.00474	0.00390	0.00330	0.00284	0.00242	0.00203
3770889.70	0.00893	0.02168	0.00759	0.00561	0.00481	0.00420	0.00366	0.00302	0.00233
3770789.70	0.00921	0.02431	0.01249	0.01069	0.00987	0.00919	0.00849	0.00665	0.00291
3770689.70	0.00956	0.02123	0.00954	0.00779	0.00704	0.00649	0.00590	0.00467	0.00280
3770589.70	0.00943	0.02012	0.00727	0.00526	0.00445	0.00387	0.00338	0.00283	0.00229
3770489.70	0.00927	0.01977	0.00672	0.00460	0.00373	0.00317	0.00273	0.00235	0.00200
3770389.70	0.00913	0.01957	0.00644	0.00428	0.00336	0.00284	0.00244	0.00210	0.00183

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): L0004094 , L0004095 , L0004096 , L0004097 , L0004098 ,
L0004099 , L0004100 , L0004101 , L0004102 , L0004103 , L0004104 , L0004105 , L0004106 ,
L0004107 , L0004108 , L0004109 , L0004110 , L0004111 , L0004112 , L0004113 , L0004114 ,
L0004115 , L0004116 , L0004117 , L0004118 , L0004119 , L0004120 , L0004121 , . . . ,

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

** CONC OF DPM IN MICROGRAMS/M**3 **

Y-COORD (METERS)	X-COORD (METERS) 480668.21	480768.21	480868.21	480968.21	481068.21	481168.21	481268.21	481368.21	481468.21
3770289.70	0.00900	0.01940	0.00626	0.00409	0.00314	0.00265	0.00225	0.00195	0.00171
3770189.70	0.00887	0.01926	0.00610	0.00393	0.00305	0.00251	0.00213	0.00183	0.00161
3770089.70	0.00872	0.01911	0.00596	0.00379	0.00292	0.00238	0.00202	0.00174	0.00153
3769989.70	0.00852	0.01891	0.00577	0.00362	0.00277	0.00226	0.00192	0.00166	0.00146
3769889.70	0.00821	0.01859	0.00551	0.00341	0.00250	0.00210	0.00180	0.00157	0.00138
3769789.70	0.00774	0.01798	0.00507	0.00311	0.00231	0.00191	0.00166	0.00145	0.00129
3769689.70	0.00649	0.01620	0.00424	0.00267	0.00202	0.00168	0.00150	0.00133	0.00119
3769589.70	0.00363	0.00462	0.00290	0.00214	0.00172	0.00150	0.00132	0.00118	0.00107
3769489.70	0.00215	0.00221	0.00197	0.00168	0.00144	0.00128	0.00115	0.00104	0.00095
3769389.70	0.00158	0.00158	0.00150	0.00136	0.00122	0.00110	0.00101	0.00092	0.00085

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): L0004094 , L0004095 , L0004096 , L0004097 , L0004098 ,
L0004099 , L0004100 , L0004101 , L0004102 , L0004103 , L0004104 , L0004105 , L0004106 ,
L0004107 , L0004108 , L0004109 , L0004110 , L0004111 , L0004112 , L0004113 , L0004114 ,
L0004115 , L0004116 , L0004117 , L0004118 , L0004119 , L0004120 , L0004121 , . . . ,

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

** CONC OF DPM IN MICROGRAMS/M**3 **

Y-COORD (METERS)	X-COORD (METERS) 481568.21	481668.21	481768.21
3774289.70	0.00323	0.00234	0.00174
3774189.70	0.00764	0.00341	0.00215
3774089.70	0.01029	0.00383	0.00238
3773989.70	0.00408	0.00296	0.00219
3773889.70	0.00273	0.00221	0.00183
3773789.70	0.00212	0.00182	0.00158
3773689.70	0.00180	0.00160	0.00142
3773589.70	0.00161	0.00145	0.00131
3773489.70	0.00150	0.00134	0.00121
3773389.70	0.00138	0.00126	0.00115
3773289.70	0.00133	0.00122	0.00111
3773189.70	0.00134	0.00122	0.00113
3773089.70	0.00132	0.00120	0.00111
3772989.70	0.00130	0.00119	0.00110
3772889.70	0.00129	0.00118	0.00109
3772789.70	0.00129	0.00118	0.00109
3772689.70	0.00129	0.00118	0.00108
3772589.70	0.00129	0.00118	0.00108
3772489.70	0.00130	0.00119	0.00109
3772389.70	0.00131	0.00119	0.00108
3772289.70	0.00129	0.00115	0.00103
3772189.70	0.00128	0.00114	0.00102
3772089.70	0.00130	0.00114	0.00102
3771989.70	0.00132	0.00113	0.00103
3771889.70	0.00131	0.00115	0.00105
3771789.70	0.00131	0.00118	0.00107
3771689.70	0.00135	0.00121	0.00109
3771589.70	0.00140	0.00124	0.00112
3771489.70	0.00142	0.00127	0.00115
3771389.70	0.00146	0.00130	0.00117
3771289.70	0.00150	0.00134	0.00120
3771189.70	0.00156	0.00137	0.00123

3771089.70	0.00161	0.00142	0.00127
3770989.70	0.00172	0.00149	0.00132
3770889.70	0.00187	0.00159	0.00139
3770789.70	0.00205	0.00170	0.00146
3770689.70	0.00205	0.00171	0.00148
3770589.70	0.00189	0.00163	0.00143
3770489.70	0.00173	0.00152	0.00135
3770389.70	0.00161	0.00142	0.00128

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION   VALUES FOR SOURCE GROUP: ALL   ***
INCLUDING SOURCE(S):   L0004094   , L0004095   , L0004096   , L0004097   , L0004098   ,
L0004099   , L0004100   , L0004101   , L0004102   , L0004103   , L0004104   , L0004105   , L0004106   ,
L0004107   , L0004108   , L0004109   , L0004110   , L0004111   , L0004112   , L0004113   , L0004114   ,
L0004115   , L0004116   , L0004117   , L0004118   , L0004119   , L0004120   , L0004121   , . . .   ,

*** NETWORK ID: UCART1   ; NETWORK TYPE: GRIDCART ***

** CONC OF DPM   IN MICROGRAMS/M**3   **

Y-COORD (METERS)	X-COORD (METERS)		
	481568.21	481668.21	481768.21
3770289.70	0.00151	0.00135	0.00122
3770189.70	0.00143	0.00129	0.00117
3770089.70	0.00137	0.00123	0.00112
3769989.70	0.00131	0.00118	0.00108
3769889.70	0.00124	0.00113	0.00103
3769789.70	0.00117	0.00106	0.00097
3769689.70	0.00108	0.00099	0.00091
3769589.70	0.00095	0.00089	0.00084
3769489.70	0.00088	0.00083	0.00076
3769389.70	0.00079	0.00075	0.00068

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): L0004094 , L0004095 , L0004096 , L0004097 , L0004098 ,
L0004099 , L0004100 , L0004101 , L0004102 , L0004103 , L0004104 , L0004105 , L0004106 ,
L0004107 , L0004108 , L0004109 , L0004110 , L0004111 , L0004112 , L0004113 , L0004114 ,
L0004115 , L0004116 , L0004117 , L0004118 , L0004119 , L0004120 , L0004121 , . . . ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF DPM IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
480726.12	3770758.20	0.02504	479114.46	3769998.76	0.04094
479109.70	3769953.87	0.03318	480558.05	3774226.36	0.00259
480766.03	3771834.40	0.02207	480235.52	3771590.86	0.00789

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** THE SUMMARY OF MAXIMUM PERIOD (43848 HRS) RESULTS ***

** CONC OF DPM IN MICROGRAMS/M**3 **

GROUP ID		AVERAGE CONC		RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)					OF TYPE	NETWORK GRID-ID
ALL	1ST HIGHEST VALUE IS	0.04094	AT (	479114.46,	3769998.76,	353.00,	353.00,	0.00)	DC	
	2ND HIGHEST VALUE IS	0.03516	AT (	481168.21,	3774089.70,	368.00,	368.00,	0.00)	GC	UCART1
	3RD HIGHEST VALUE IS	0.03318	AT (	479109.70,	3769953.87,	353.00,	353.00,	0.00)	DC	
	4TH HIGHEST VALUE IS	0.03119	AT (	481068.21,	3774089.70,	367.00,	367.00,	0.00)	GC	UCART1
	5TH HIGHEST VALUE IS	0.02705	AT (	481268.21,	3774089.70,	369.00,	369.00,	0.00)	GC	UCART1
	6TH HIGHEST VALUE IS	0.02504	AT (	480726.12,	3770758.20,	373.87,	373.87,	0.00)	DC	
	7TH HIGHEST VALUE IS	0.02431	AT (	480768.21,	3770789.70,	374.30,	374.30,	0.00)	GC	UCART1
	8TH HIGHEST VALUE IS	0.02431	AT (	480968.21,	3774089.70,	366.00,	366.00,	0.00)	GC	UCART1
	9TH HIGHEST VALUE IS	0.02385	AT (	479168.21,	3771389.70,	352.90,	352.90,	0.00)	GC	UCART1
	10TH HIGHEST VALUE IS	0.02366	AT (	479168.21,	3771289.70,	352.90,	352.90,	0.00)	GC	UCART1

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** Message Summary : AERMOD Model Execution ***

 --------- Summary of Total Messages --------

A Total of   0 Fatal Error Message(s)
A Total of   2 Warning Message(s)
A Total of   388 Informational Message(s)

A Total of   43848 Hours Were Processed

A Total of   191 Calm Hours Identified

A Total of   197 Missing Hours Identified (0.45 Percent)

   ******** FATAL ERROR MESSAGES ********
              *** NONE ***

   ********   WARNING MESSAGES   ********
ME W186   2419   MEOPEN: THRESH_1MIN 1-min ASOS wind speed threshold used   0.50
ME W187   2419   MEOPEN: ADJ_U* Option for Low Winds used in AERMET

   ****
   *** AERMOD Finishes Successfully ***
   ****

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**
**************************************
**
** AERMOD Input Produced by:
** AERMOD View Ver. 9.5.0
** Lakes Environmental Software Inc.
** Date: 4/5/2018
** File: C:\Users\noemia\Desktop\Duke Alabama\Project AB1\Project AB1.ADI
**
**************************************
**
**
**************************************
** AERMOD Control Pathway
**************************************
**
**
CO STARTING
   TITLEONE Duke Warehouse at Alabama and Palmetto
   TITLETWO Project DPM Concentrations (2020) - AB1
   MODELOPT DFAULT CONC
   AVERTIME PERIOD
   URBANOPT 2035210 San_Bernardino_County
   POLLUTID DPM
   RUNORNOT RUN
   ERRORFIL "Project AB1.err"
CO FINISHED
**
**************************************
** AERMOD Source Pathway
**************************************
**
**
SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **
** ----------------------------------------------------------------------
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE1
** DESCRSRC 5th St b/n Alabama St and SR-210
** PREFIX
** Length of Side = 8.59
** Configuration = Adjacent
** Emission Rate = 0.00002206
** Vertical Dimension = 6.99
** SZINIT = 3.25
** Nodes = 4
** 480745.401, 3774134.486, 363.46, 3.49, 4.00
** 481061.555, 3774108.608, 366.99, 3.49, 4.00
** 481153.813, 3774104.108, 367.98, 3.49, 4.00
** 481576.850, 3774134.486, 372.13, 3.49, 4.00
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** ------------------------------------------------------------------
   LOCATION L0005586     VOLUME   480749.682 3774134.135 363.66
   LOCATION L0005587     VOLUME   480758.243 3774133.434 363.94
   LOCATION L0005588     VOLUME   480766.805 3774132.734 364.00
   LOCATION L0005589     VOLUME   480775.366 3774132.033 364.00
   LOCATION L0005590     VOLUME   480783.927 3774131.332 364.00
   LOCATION L0005591     VOLUME   480792.489 3774130.631 364.00
   LOCATION L0005592     VOLUME   480801.050 3774129.931 364.00
   LOCATION L0005593     VOLUME   480809.612 3774129.230 364.00
   LOCATION L0005594     VOLUME   480818.173 3774128.529 364.00
   LOCATION L0005595     VOLUME   480826.734 3774127.828 364.06
   LOCATION L0005596     VOLUME   480835.296 3774127.128 364.16
   LOCATION L0005597     VOLUME   480843.857 3774126.427 364.26
   LOCATION L0005598     VOLUME   480852.418 3774125.726 364.41
   LOCATION L0005599     VOLUME   480860.980 3774125.025 364.61
   LOCATION L0005600     VOLUME   480869.541 3774124.325 364.79
   LOCATION L0005601     VOLUME   480878.103 3774123.624 364.97
   LOCATION L0005602     VOLUME   480886.664 3774122.923 365.00
   LOCATION L0005603     VOLUME   480895.225 3774122.222 365.00
   LOCATION L0005604     VOLUME   480903.787 3774121.522 365.00
   LOCATION L0005605     VOLUME   480912.348 3774120.821 365.00
   LOCATION L0005606     VOLUME   480920.909 3774120.120 365.00
   LOCATION L0005607     VOLUME   480929.471 3774119.419 365.00
   LOCATION L0005608     VOLUME   480938.032 3774118.719 365.00
   LOCATION L0005609     VOLUME   480946.593 3774118.018 365.22
   LOCATION L0005610     VOLUME   480955.155 3774117.317 365.51
   LOCATION L0005611     VOLUME   480963.716 3774116.616 365.79
   LOCATION L0005612     VOLUME   480972.278 3774115.916 366.00
   LOCATION L0005613     VOLUME   480980.839 3774115.215 366.00
   LOCATION L0005614     VOLUME   480989.400 3774114.514 366.00
   LOCATION L0005615     VOLUME   480997.962 3774113.813 366.00
   LOCATION L0005616     VOLUME   481006.523 3774113.113 366.00
   LOCATION L0005617     VOLUME   481015.084 3774112.412 366.00
   LOCATION L0005618     VOLUME   481023.646 3774111.711 366.00
   LOCATION L0005619     VOLUME   481032.207 3774111.010 366.08
   LOCATION L0005620     VOLUME   481040.769 3774110.310 366.36
   LOCATION L0005621     VOLUME   481049.330 3774109.609 366.65
   LOCATION L0005622     VOLUME   481057.891 3774108.908 366.93
   LOCATION L0005623     VOLUME   481066.463 3774108.369 367.00
   LOCATION L0005624     VOLUME   481075.043 3774107.950 367.00
   LOCATION L0005625     VOLUME   481083.623 3774107.532 367.00
   LOCATION L0005626     VOLUME   481092.203 3774107.113 367.00
   LOCATION L0005627     VOLUME   481100.782 3774106.695 367.00
   LOCATION L0005628     VOLUME   481109.362 3774106.276 367.00
   LOCATION L0005629     VOLUME   481117.942 3774105.858 367.01
   LOCATION L0005630     VOLUME   481126.522 3774105.439 367.24
   LOCATION L0005631     VOLUME   481135.102 3774105.021 367.53
   LOCATION L0005632     VOLUME   481143.681 3774104.602 367.80
   LOCATION L0005633     VOLUME   481152.261 3774104.184 368.00
   LOCATION L0005634     VOLUME   481160.831 3774104.612 368.00
   LOCATION L0005635     VOLUME   481169.399 3774105.227 368.00
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   LOCATION L0005636     VOLUME   481177.967 3774105.842 368.00
   LOCATION L0005637     VOLUME   481186.535 3774106.458 368.00
   LOCATION L0005638     VOLUME   481195.103 3774107.073 368.00
   LOCATION L0005639     VOLUME   481203.671 3774107.688 368.00
   LOCATION L0005640     VOLUME   481212.239 3774108.303 368.08
   LOCATION L0005641     VOLUME   481220.807 3774108.919 368.36
   LOCATION L0005642     VOLUME   481229.375 3774109.534 368.65
   LOCATION L0005643     VOLUME   481237.943 3774110.149 368.93
   LOCATION L0005644     VOLUME   481246.511 3774110.764 369.00
   LOCATION L0005645     VOLUME   481255.079 3774111.380 369.00
   LOCATION L0005646     VOLUME   481263.647 3774111.995 369.00
   LOCATION L0005647     VOLUME   481272.214 3774112.610 369.00
   LOCATION L0005648     VOLUME   481280.782 3774113.225 369.00
   LOCATION L0005649     VOLUME   481289.350 3774113.841 369.00
   LOCATION L0005650     VOLUME   481297.918 3774114.456 369.00
   LOCATION L0005651     VOLUME   481306.486 3774115.071 369.22
   LOCATION L0005652     VOLUME   481315.054 3774115.686 369.50
   LOCATION L0005653     VOLUME   481323.622 3774116.302 369.79
   LOCATION L0005654     VOLUME   481332.190 3774116.917 370.00
   LOCATION L0005655     VOLUME   481340.758 3774117.532 370.00
   LOCATION L0005656     VOLUME   481349.326 3774118.147 370.00
   LOCATION L0005657     VOLUME   481357.894 3774118.763 370.00
   LOCATION L0005658     VOLUME   481366.462 3774119.378 370.00
   LOCATION L0005659     VOLUME   481375.030 3774119.993 370.00
   LOCATION L0005660     VOLUME   481383.598 3774120.608 370.00
   LOCATION L0005661     VOLUME   481392.166 3774121.224 370.08
   LOCATION L0005662     VOLUME   481400.734 3774121.839 370.36
   LOCATION L0005663     VOLUME   481409.301 3774122.454 370.65
   LOCATION L0005664     VOLUME   481417.869 3774123.069 370.93
   LOCATION L0005665     VOLUME   481426.437 3774123.685 371.00
   LOCATION L0005666     VOLUME   481435.005 3774124.300 371.00
   LOCATION L0005667     VOLUME   481443.573 3774124.915 371.00
   LOCATION L0005668     VOLUME   481452.141 3774125.530 371.03
   LOCATION L0005669     VOLUME   481460.709 3774126.146 371.12
   LOCATION L0005670     VOLUME   481469.277 3774126.761 371.20
   LOCATION L0005671     VOLUME   481477.845 3774127.376 371.28
   LOCATION L0005672     VOLUME   481486.413 3774127.991 371.43
   LOCATION L0005673     VOLUME   481494.981 3774128.607 371.63
   LOCATION L0005674     VOLUME   481503.549 3774129.222 371.84
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   LOCATION L0005676     VOLUME   481520.685 3774130.452 372.00
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   LOCATION L0005679     VOLUME   481546.388 3774132.298 372.03
   LOCATION L0005680     VOLUME   481554.956 3774132.913 372.06
   LOCATION L0005681     VOLUME   481563.524 3774133.529 372.07
   LOCATION L0005682     VOLUME   481572.092 3774134.144 372.14
** End of LINE VOLUME Source ID = SLINE1
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** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE2
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** DESCRSRC Palmetto Ave b/n California St and Alabama St
** PREFIX
** Length of Side = 8.59
** Configuration = Adjacent
** Emission Rate = 0.00001731
** Vertical Dimension = 6.99
** SZINIT = 3.25
** Nodes = 4
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LOCATION L0006217     VOLUME   479513.314 3771578.045 356.00
LOCATION L0006218     VOLUME   479521.904 3771577.997 356.00
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LOCATION L0006244     VOLUME   479745.240 3771576.743 359.00
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LOCATION L0006248     VOLUME   479779.600 3771576.550 359.32
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LOCATION L0006251     VOLUME   479805.369 3771576.406 360.00
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LOCATION L0006262     VOLUME   479899.858 3771575.875 361.00
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LOCATION L0006272     VOLUME   479985.438 3771579.092 362.00
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LOCATION L0006281     VOLUME   480062.748 3771579.042 363.00
LOCATION L0006282     VOLUME   480071.338 3771579.037 363.01
LOCATION L0006283     VOLUME   480079.928 3771579.031 363.08
LOCATION L0006284     VOLUME   480088.518 3771579.026 363.15
LOCATION L0006285     VOLUME   480097.108 3771579.020 363.22
LOCATION L0006286     VOLUME   480105.698 3771579.015 363.39
LOCATION L0006287     VOLUME   480114.288 3771579.009 363.61
LOCATION L0006288     VOLUME   480122.878 3771579.004 363.82
LOCATION L0006289     VOLUME   480131.468 3771578.998 364.00
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LOCATION L0006293     VOLUME   480165.828 3771578.976 364.20
LOCATION L0006294     VOLUME   480174.418 3771578.971 364.48
LOCATION L0006295     VOLUME   480183.008 3771578.965 364.77
LOCATION L0006296     VOLUME   480191.598 3771578.960 365.00
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LOCATION L0006300     VOLUME   480225.958 3771578.938 365.20
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   LOCATION L0006325     VOLUME   480440.708 3771578.800 368.36
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   LOCATION L0006327     VOLUME   480457.888 3771578.789 368.93
   LOCATION L0006328     VOLUME   480466.478 3771578.784 369.00
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   LOCATION L0006332     VOLUME   480500.838 3771578.762 369.36
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   LOCATION L0006338     VOLUME   480552.378 3771578.729 370.00
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   LOCATION L0006341     VOLUME   480578.148 3771578.713 370.00
   LOCATION L0006342     VOLUME   480586.738 3771578.707 370.23
   LOCATION L0006343     VOLUME   480595.328 3771578.702 370.51
   LOCATION L0006344     VOLUME   480603.918 3771578.696 370.80
   LOCATION L0006345     VOLUME   480612.508 3771578.691 371.00
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   LOCATION L0006350     VOLUME   480655.458 3771578.663 371.52
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** End of LINE VOLUME Source ID = SLINE2
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** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE3
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** DESCRSRC San Bernardino Ave b/n Alabama St and SR-210
** PREFIX
** Length of Side = 8.59
** Configuration = Adjacent
** Emission Rate = 0.00001222
** Vertical Dimension = 6.99
** SZINIT = 3.25
** Nodes = 3
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   LOCATION L0006364     VOLUME   480770.745 3770762.615 374.36
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   LOCATION L0006388     VOLUME   480976.021 3770754.379 378.00
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   LOCATION L0006392     VOLUME   481010.381 3770754.236 378.35
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   LOCATION L0006395     VOLUME   481036.151 3770754.129 379.00
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   LOCATION L0006406     VOLUME   481130.640 3770753.737 380.00
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   LOCATION L0006412     VOLUME   481182.180 3770753.522 381.08
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   LOCATION L0006424     VOLUME   481285.259 3770753.094 382.51
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** End of LINE VOLUME Source ID = SLINE3
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** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE4
** DESCRSRC California St b/n Palmetto Ave and I-10
** PREFIX
** Length of Side = 8.59
** Configuration = Adjacent
** Emission Rate = 0.00002109
** Vertical Dimension = 6.99
** SZINIT = 3.25
** Nodes = 4
** 479139.802, 3771573.976, 351.92, 3.49, 4.00
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** Line Source Represented by Adjacent Volume Sources
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** DESCRSRC Alabama St b/n 5th St and River Bluff Ave
** PREFIX
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** Configuration = Adjacent
** Emission Rate = 0.00005793
** Vertical Dimension = 6.99
** SZINIT = 3.25
** Nodes = 3
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LOCATION L0006757     VOLUME   480748.933 3773331.210 362.00
LOCATION L0006758     VOLUME   480748.955 3773322.620 362.00
LOCATION L0006759     VOLUME   480748.977 3773314.030 362.00
LOCATION L0006760     VOLUME   480748.999 3773305.440 362.00
LOCATION L0006761     VOLUME   480749.020 3773296.850 362.00
LOCATION L0006762     VOLUME   480749.042 3773288.260 362.00
LOCATION L0006763     VOLUME   480749.064 3773279.670 362.00
LOCATION L0006764     VOLUME   480749.086 3773271.080 362.00
LOCATION L0006765     VOLUME   480749.108 3773262.490 362.00
LOCATION L0006766     VOLUME   480749.129 3773253.900 362.00
LOCATION L0006767     VOLUME   480749.151 3773245.310 362.00
LOCATION L0006768     VOLUME   480749.173 3773236.720 362.00
LOCATION L0006769     VOLUME   480749.195 3773228.130 362.00
LOCATION L0006770     VOLUME   480749.217 3773219.540 362.00
LOCATION L0006771     VOLUME   480749.238 3773210.950 362.00
LOCATION L0006772     VOLUME   480749.260 3773202.360 362.00
LOCATION L0006773     VOLUME   480749.282 3773193.770 362.00
LOCATION L0006774     VOLUME   480749.304 3773185.180 362.00
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LOCATION L0006775     VOLUME   480749.326 3773176.590 362.00
LOCATION L0006776     VOLUME   480749.347 3773168.000 361.90
LOCATION L0006777     VOLUME   480749.369 3773159.410 361.80
LOCATION L0006778     VOLUME   480749.391 3773150.820 361.70
LOCATION L0006779     VOLUME   480749.413 3773142.230 361.65
LOCATION L0006780     VOLUME   480749.435 3773133.640 361.65
LOCATION L0006781     VOLUME   480749.456 3773125.050 361.65
LOCATION L0006782     VOLUME   480749.478 3773116.460 361.65
LOCATION L0006783     VOLUME   480749.500 3773107.870 361.65
LOCATION L0006784     VOLUME   480749.522 3773099.281 361.65
LOCATION L0006785     VOLUME   480749.544 3773090.691 361.65
LOCATION L0006786     VOLUME   480749.565 3773082.101 361.66
LOCATION L0006787     VOLUME   480749.587 3773073.511 361.66
LOCATION L0006788     VOLUME   480749.609 3773064.921 361.66
LOCATION L0006789     VOLUME   480749.631 3773056.331 361.66
LOCATION L0006790     VOLUME   480749.652 3773047.741 361.66
LOCATION L0006791     VOLUME   480749.674 3773039.151 361.66
LOCATION L0006792     VOLUME   480749.696 3773030.561 361.66
LOCATION L0006793     VOLUME   480749.718 3773021.971 361.66
LOCATION L0006794     VOLUME   480749.740 3773013.381 361.66
LOCATION L0006795     VOLUME   480749.761 3773004.791 361.66
LOCATION L0006796     VOLUME   480749.783 3772996.201 361.66
LOCATION L0006797     VOLUME   480749.805 3772987.611 361.66
LOCATION L0006798     VOLUME   480749.827 3772979.021 361.66
LOCATION L0006799     VOLUME   480749.849 3772970.431 361.67
LOCATION L0006800     VOLUME   480749.870 3772961.841 361.67
LOCATION L0006801     VOLUME   480749.892 3772953.251 361.67
LOCATION L0006802     VOLUME   480749.914 3772944.661 361.67
LOCATION L0006803     VOLUME   480749.936 3772936.071 361.67
LOCATION L0006804     VOLUME   480749.958 3772927.481 361.67
LOCATION L0006805     VOLUME   480749.979 3772918.891 361.67
LOCATION L0006806     VOLUME   480750.001 3772910.301 361.67
LOCATION L0006807     VOLUME   480750.023 3772901.711 361.67
LOCATION L0006808     VOLUME   480750.045 3772893.121 361.67
LOCATION L0006809     VOLUME   480750.067 3772884.531 361.67
LOCATION L0006810     VOLUME   480750.088 3772875.941 361.67
LOCATION L0006811     VOLUME   480750.110 3772867.351 361.67
LOCATION L0006812     VOLUME   480750.132 3772858.761 361.67
LOCATION L0006813     VOLUME   480750.154 3772850.171 361.68
LOCATION L0006814     VOLUME   480750.176 3772841.581 361.68
LOCATION L0006815     VOLUME   480750.197 3772832.991 361.68
LOCATION L0006816     VOLUME   480750.219 3772824.401 361.68
LOCATION L0006817     VOLUME   480750.241 3772815.811 361.68
LOCATION L0006818     VOLUME   480750.263 3772807.221 361.68
LOCATION L0006819     VOLUME   480750.285 3772798.631 361.68
LOCATION L0006820     VOLUME   480750.306 3772790.042 361.68
LOCATION L0006821     VOLUME   480750.328 3772781.452 361.68
LOCATION L0006822     VOLUME   480750.350 3772772.862 361.68
LOCATION L0006823     VOLUME   480750.372 3772764.272 361.68
LOCATION L0006824     VOLUME   480750.394 3772755.682 361.68
LOCATION L0006825     VOLUME   480750.415 3772747.092 361.68
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LOCATION L0006826     VOLUME   480750.437 3772738.502 361.68
LOCATION L0006827     VOLUME   480750.459 3772729.912 361.69
LOCATION L0006828     VOLUME   480750.481 3772721.322 361.69
LOCATION L0006829     VOLUME   480750.502 3772712.732 361.69
LOCATION L0006830     VOLUME   480750.524 3772704.142 361.69
LOCATION L0006831     VOLUME   480750.546 3772695.552 361.69
LOCATION L0006832     VOLUME   480750.568 3772686.962 361.69
LOCATION L0006833     VOLUME   480750.590 3772678.372 361.69
LOCATION L0006834     VOLUME   480750.611 3772669.782 361.69
LOCATION L0006835     VOLUME   480750.633 3772661.192 361.57
LOCATION L0006836     VOLUME   480750.655 3772652.602 361.38
LOCATION L0006837     VOLUME   480750.677 3772644.012 361.18
LOCATION L0006838     VOLUME   480750.699 3772635.422 361.00
LOCATION L0006839     VOLUME   480750.720 3772626.832 361.00
LOCATION L0006840     VOLUME   480750.742 3772618.242 361.00
LOCATION L0006841     VOLUME   480750.764 3772609.652 361.00
LOCATION L0006842     VOLUME   480750.786 3772601.062 361.00
LOCATION L0006843     VOLUME   480750.808 3772592.472 361.00
LOCATION L0006844     VOLUME   480750.829 3772583.882 361.00
LOCATION L0006845     VOLUME   480750.851 3772575.292 360.99
LOCATION L0006846     VOLUME   480750.873 3772566.702 360.90
LOCATION L0006847     VOLUME   480750.895 3772558.112 360.82
LOCATION L0006848     VOLUME   480750.917 3772549.522 360.73
LOCATION L0006849     VOLUME   480750.938 3772540.932 360.70
LOCATION L0006850     VOLUME   480750.960 3772532.342 360.70
LOCATION L0006851     VOLUME   480750.982 3772523.752 360.70
LOCATION L0006852     VOLUME   480751.004 3772515.162 360.68
LOCATION L0006853     VOLUME   480751.026 3772506.572 360.48
LOCATION L0006854     VOLUME   480751.047 3772497.982 360.28
LOCATION L0006855     VOLUME   480751.069 3772489.392 360.07
LOCATION L0006856     VOLUME   480751.091 3772480.803 360.13
LOCATION L0006857     VOLUME   480751.113 3772472.213 360.33
LOCATION L0006858     VOLUME   480751.135 3772463.623 360.53
LOCATION L0006859     VOLUME   480751.156 3772455.033 360.71
LOCATION L0006860     VOLUME   480751.178 3772446.443 360.71
LOCATION L0006861     VOLUME   480751.200 3772437.853 360.71
LOCATION L0006862     VOLUME   480751.222 3772429.263 360.71
LOCATION L0006863     VOLUME   480751.244 3772420.673 360.90
LOCATION L0006864     VOLUME   480751.265 3772412.083 361.19
LOCATION L0006865     VOLUME   480751.287 3772403.493 361.47
LOCATION L0006866     VOLUME   480751.309 3772394.903 361.71
LOCATION L0006867     VOLUME   480751.331 3772386.313 361.71
LOCATION L0006868     VOLUME   480751.352 3772377.723 361.72
LOCATION L0006869     VOLUME   480751.374 3772369.133 361.72
LOCATION L0006870     VOLUME   480751.396 3772360.543 361.77
LOCATION L0006871     VOLUME   480751.418 3772351.953 361.85
LOCATION L0006872     VOLUME   480751.440 3772343.363 361.93
LOCATION L0006873     VOLUME   480751.461 3772334.773 362.04
LOCATION L0006874     VOLUME   480751.483 3772326.183 362.24
LOCATION L0006875     VOLUME   480751.505 3772317.593 362.45
LOCATION L0006876     VOLUME   480751.527 3772309.003 362.66
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LOCATION L0006877     VOLUME   480751.549 3772300.413 362.78
LOCATION L0006878     VOLUME   480751.570 3772291.823 362.86
LOCATION L0006879     VOLUME   480751.592 3772283.233 362.94
LOCATION L0006880     VOLUME   480751.614 3772274.643 363.00
LOCATION L0006881     VOLUME   480751.636 3772266.053 363.00
LOCATION L0006882     VOLUME   480751.658 3772257.463 363.00
LOCATION L0006883     VOLUME   480751.679 3772248.873 363.00
LOCATION L0006884     VOLUME   480751.701 3772240.283 363.15
LOCATION L0006885     VOLUME   480751.723 3772231.693 363.35
LOCATION L0006886     VOLUME   480751.745 3772223.103 363.56
LOCATION L0006887     VOLUME   480751.767 3772214.513 363.74
LOCATION L0006888     VOLUME   480751.788 3772205.923 363.82
LOCATION L0006889     VOLUME   480751.810 3772197.333 363.90
LOCATION L0006890     VOLUME   480751.832 3772188.743 363.98
LOCATION L0006891     VOLUME   480751.854 3772180.153 364.00
LOCATION L0006892     VOLUME   480751.876 3772171.563 364.00
LOCATION L0006893     VOLUME   480751.897 3772162.974 364.00
LOCATION L0006894     VOLUME   480751.919 3772154.384 364.05
LOCATION L0006895     VOLUME   480751.941 3772145.794 364.26
LOCATION L0006896     VOLUME   480751.963 3772137.204 364.47
LOCATION L0006897     VOLUME   480751.985 3772128.614 364.68
LOCATION L0006898     VOLUME   480752.006 3772120.024 364.79
LOCATION L0006899     VOLUME   480752.028 3772111.434 364.87
LOCATION L0006900     VOLUME   480752.050 3772102.844 364.94
LOCATION L0006901     VOLUME   480752.072 3772094.254 365.05
LOCATION L0006902     VOLUME   480752.094 3772085.664 365.26
LOCATION L0006903     VOLUME   480752.115 3772077.074 365.47
LOCATION L0006904     VOLUME   480752.137 3772068.484 365.69
LOCATION L0006905     VOLUME   480752.159 3772059.894 365.95
LOCATION L0006906     VOLUME   480752.181 3772051.304 366.24
LOCATION L0006907     VOLUME   480752.203 3772042.714 366.53
LOCATION L0006908     VOLUME   480752.224 3772034.124 366.94
LOCATION L0006909     VOLUME   480752.246 3772025.534 367.73
LOCATION L0006910     VOLUME   480752.268 3772016.944 368.52
LOCATION L0006911     VOLUME   480752.290 3772008.354 369.30
LOCATION L0006912     VOLUME   480752.311 3771999.764 369.77
LOCATION L0006913     VOLUME   480752.333 3771991.174 370.13
LOCATION L0006914     VOLUME   480752.355 3771982.584 370.49
LOCATION L0006915     VOLUME   480752.377 3771973.994 370.75
LOCATION L0006916     VOLUME   480752.399 3771965.404 370.75
LOCATION L0006917     VOLUME   480752.420 3771956.814 370.75
LOCATION L0006918     VOLUME   480752.442 3771948.224 370.75
LOCATION L0006919     VOLUME   480752.464 3771939.634 370.97
LOCATION L0006920     VOLUME   480752.486 3771931.044 371.26
LOCATION L0006921     VOLUME   480752.508 3771922.454 371.55
LOCATION L0006922     VOLUME   480752.529 3771913.864 371.75
LOCATION L0006923     VOLUME   480752.551 3771905.274 371.76
LOCATION L0006924     VOLUME   480752.573 3771896.684 371.76
LOCATION L0006925     VOLUME   480752.595 3771888.094 371.76
LOCATION L0006926     VOLUME   480752.617 3771879.504 371.76
LOCATION L0006927     VOLUME   480752.638 3771870.914 371.76
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   LOCATION L0006928     VOLUME   480752.660 3771862.324 371.76
   LOCATION L0006929     VOLUME   480752.682 3771853.735 371.76
   LOCATION L0006930     VOLUME   480752.704 3771845.145 371.76
   LOCATION L0006931     VOLUME   480752.726 3771836.555 371.76
   LOCATION L0006932     VOLUME   480752.747 3771827.965 371.76
   LOCATION L0006933     VOLUME   480752.769 3771819.375 371.76
** End of LINE VOLUME Source ID = SLINE5
** ----------------------------------------------------------------------
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE6
** DESCRSRC Alabama St b/n River Bluff Ave and Palmetto Ave
** PREFIX
** Length of Side = 8.59
** Configuration = Adjacent
** Emission Rate = 4.222E-06
** Vertical Dimension = 6.99
** SZINIT = 3.25
** Nodes = 2
** 480750.988, 3771810.041, 371.84, 3.49, 4.00
** 480747.435, 3771585.792, 372.96, 3.49, 4.00
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   LOCATION L0006934     VOLUME   480750.920 3771805.746 371.70
   LOCATION L0006935     VOLUME   480750.784 3771797.158 371.70
   LOCATION L0006936     VOLUME   480750.647 3771788.569 371.69
   LOCATION L0006937     VOLUME   480750.511 3771779.980 371.69
   LOCATION L0006938     VOLUME   480750.375 3771771.391 371.68
   LOCATION L0006939     VOLUME   480750.239 3771762.802 371.72
   LOCATION L0006940     VOLUME   480750.103 3771754.213 371.80
   LOCATION L0006941     VOLUME   480749.967 3771745.624 371.90
   LOCATION L0006942     VOLUME   480749.831 3771737.035 371.99
   LOCATION L0006943     VOLUME   480749.695 3771728.446 372.00
   LOCATION L0006944     VOLUME   480749.559 3771719.857 372.00
   LOCATION L0006945     VOLUME   480749.423 3771711.268 372.00
   LOCATION L0006946     VOLUME   480749.287 3771702.679 372.08
   LOCATION L0006947     VOLUME   480749.151 3771694.090 372.26
   LOCATION L0006948     VOLUME   480749.015 3771685.502 372.44
   LOCATION L0006949     VOLUME   480748.879 3771676.913 372.62
   LOCATION L0006950     VOLUME   480748.743 3771668.324 372.63
   LOCATION L0006951     VOLUME   480748.607 3771659.735 372.62
   LOCATION L0006952     VOLUME   480748.470 3771651.146 372.62
   LOCATION L0006953     VOLUME   480748.334 3771642.557 372.66
   LOCATION L0006954     VOLUME   480748.198 3771633.968 372.77
   LOCATION L0006955     VOLUME   480748.062 3771625.379 372.88
   LOCATION L0006956     VOLUME   480747.926 3771616.790 372.99
   LOCATION L0006957     VOLUME   480747.790 3771608.201 373.00
   LOCATION L0006958     VOLUME   480747.654 3771599.612 373.00
   LOCATION L0006959     VOLUME   480747.518 3771591.023 373.00
** End of LINE VOLUME Source ID = SLINE6
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** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE7
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** DESCRSRC Alabama St b/n Palmetto Ave and San Bernardino Ave
** PREFIX
** Length of Side = 8.59
** Configuration = Adjacent
** Emission Rate = 0.00002226
** Vertical Dimension = 6.99
** SZINIT = 3.25
** Nodes = 2
** 480747.029, 3771568.778, 372.93, 3.49, 4.00
** 480745.027, 3770777.988, 373.95, 3.49, 4.00
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   LOCATION L0006960     VOLUME   480747.018 3771564.483 373.00
   LOCATION L0006961     VOLUME   480746.996 3771555.893 373.00
   LOCATION L0006962     VOLUME   480746.974 3771547.303 373.00
   LOCATION L0006963     VOLUME   480746.953 3771538.713 373.00
   LOCATION L0006964     VOLUME   480746.931 3771530.123 373.00
   LOCATION L0006965     VOLUME   480746.909 3771521.533 373.09
   LOCATION L0006966     VOLUME   480746.887 3771512.943 373.25
   LOCATION L0006967     VOLUME   480746.866 3771504.353 373.41
   LOCATION L0006968     VOLUME   480746.844 3771495.763 373.56
   LOCATION L0006969     VOLUME   480746.822 3771487.173 373.56
   LOCATION L0006970     VOLUME   480746.801 3771478.583 373.56
   LOCATION L0006971     VOLUME   480746.779 3771469.993 373.56
   LOCATION L0006972     VOLUME   480746.757 3771461.403 373.56
   LOCATION L0006973     VOLUME   480746.735 3771452.813 373.56
   LOCATION L0006974     VOLUME   480746.714 3771444.223 373.56
   LOCATION L0006975     VOLUME   480746.692 3771435.633 373.56
   LOCATION L0006976     VOLUME   480746.670 3771427.043 373.56
   LOCATION L0006977     VOLUME   480746.648 3771418.453 373.56
   LOCATION L0006978     VOLUME   480746.627 3771409.863 373.56
   LOCATION L0006979     VOLUME   480746.605 3771401.273 373.56
   LOCATION L0006980     VOLUME   480746.583 3771392.683 373.56
   LOCATION L0006981     VOLUME   480746.561 3771384.093 373.56
   LOCATION L0006982     VOLUME   480746.540 3771375.504 373.57
   LOCATION L0006983     VOLUME   480746.518 3771366.914 373.69
   LOCATION L0006984     VOLUME   480746.496 3771358.324 373.82
   LOCATION L0006985     VOLUME   480746.474 3771349.734 373.95
   LOCATION L0006986     VOLUME   480746.453 3771341.144 374.00
   LOCATION L0006987     VOLUME   480746.431 3771332.554 374.00
   LOCATION L0006988     VOLUME   480746.409 3771323.964 374.00
   LOCATION L0006989     VOLUME   480746.387 3771315.374 374.00
   LOCATION L0006990     VOLUME   480746.366 3771306.784 374.00
   LOCATION L0006991     VOLUME   480746.344 3771298.194 374.00
   LOCATION L0006992     VOLUME   480746.322 3771289.604 374.00
   LOCATION L0006993     VOLUME   480746.300 3771281.014 374.00
   LOCATION L0006994     VOLUME   480746.279 3771272.424 374.00
   LOCATION L0006995     VOLUME   480746.257 3771263.834 374.00
   LOCATION L0006996     VOLUME   480746.235 3771255.244 374.00
   LOCATION L0006997     VOLUME   480746.213 3771246.654 374.00
   LOCATION L0006998     VOLUME   480746.192 3771238.064 374.00
   LOCATION L0006999     VOLUME   480746.170 3771229.474 374.00
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LOCATION L0007000     VOLUME   480746.148 3771220.884 374.00
LOCATION L0007001     VOLUME   480746.126 3771212.294 374.00
LOCATION L0007002     VOLUME   480746.105 3771203.704 374.00
LOCATION L0007003     VOLUME   480746.083 3771195.114 374.00
LOCATION L0007004     VOLUME   480746.061 3771186.524 374.00
LOCATION L0007005     VOLUME   480746.039 3771177.934 374.00
LOCATION L0007006     VOLUME   480746.018 3771169.344 374.00
LOCATION L0007007     VOLUME   480745.996 3771160.754 374.00
LOCATION L0007008     VOLUME   480745.974 3771152.164 374.00
LOCATION L0007009     VOLUME   480745.953 3771143.574 374.00
LOCATION L0007010     VOLUME   480745.931 3771134.984 374.00
LOCATION L0007011     VOLUME   480745.909 3771126.394 374.00
LOCATION L0007012     VOLUME   480745.887 3771117.804 374.00
LOCATION L0007013     VOLUME   480745.866 3771109.214 374.00
LOCATION L0007014     VOLUME   480745.844 3771100.624 374.00
LOCATION L0007015     VOLUME   480745.822 3771092.034 374.00
LOCATION L0007016     VOLUME   480745.800 3771083.444 374.00
LOCATION L0007017     VOLUME   480745.779 3771074.854 374.00
LOCATION L0007018     VOLUME   480745.757 3771066.264 374.00
LOCATION L0007019     VOLUME   480745.735 3771057.675 374.00
LOCATION L0007020     VOLUME   480745.713 3771049.085 374.00
LOCATION L0007021     VOLUME   480745.692 3771040.495 374.00
LOCATION L0007022     VOLUME   480745.670 3771031.905 374.00
LOCATION L0007023     VOLUME   480745.648 3771023.315 374.00
LOCATION L0007024     VOLUME   480745.626 3771014.725 374.00
LOCATION L0007025     VOLUME   480745.605 3771006.135 374.00
LOCATION L0007026     VOLUME   480745.583 3770997.545 374.00
LOCATION L0007027     VOLUME   480745.561 3770988.955 374.00
LOCATION L0007028     VOLUME   480745.539 3770980.365 374.00
LOCATION L0007029     VOLUME   480745.518 3770971.775 374.00
LOCATION L0007030     VOLUME   480745.496 3770963.185 374.00
LOCATION L0007031     VOLUME   480745.474 3770954.595 374.00
LOCATION L0007032     VOLUME   480745.452 3770946.005 374.00
LOCATION L0007033     VOLUME   480745.431 3770937.415 374.00
LOCATION L0007034     VOLUME   480745.409 3770928.825 374.00
LOCATION L0007035     VOLUME   480745.387 3770920.235 374.00
LOCATION L0007036     VOLUME   480745.365 3770911.645 374.00
LOCATION L0007037     VOLUME   480745.344 3770903.055 374.00
LOCATION L0007038     VOLUME   480745.322 3770894.465 374.00
LOCATION L0007039     VOLUME   480745.300 3770885.875 374.00
LOCATION L0007040     VOLUME   480745.278 3770877.285 374.00
LOCATION L0007041     VOLUME   480745.257 3770868.695 374.00
LOCATION L0007042     VOLUME   480745.235 3770860.105 374.00
LOCATION L0007043     VOLUME   480745.213 3770851.515 374.00
LOCATION L0007044     VOLUME   480745.191 3770842.925 374.00
LOCATION L0007045     VOLUME   480745.170 3770834.335 374.00
LOCATION L0007046     VOLUME   480745.148 3770825.745 374.00
LOCATION L0007047     VOLUME   480745.126 3770817.155 374.00
LOCATION L0007048     VOLUME   480745.105 3770808.565 374.00
LOCATION L0007049     VOLUME   480745.083 3770799.975 374.00
LOCATION L0007050     VOLUME   480745.061 3770791.385 374.00
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   LOCATION L0007051     VOLUME   480745.039 3770782.795 374.00
** End of LINE VOLUME Source ID = SLINE7
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** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE8
** DESCRSRC Alabama St b/n San Bernardino Ave and I-10
** PREFIX
** Length of Side = 8.59
** Configuration = Adjacent
** Emission Rate = 0.00001046
** Vertical Dimension = 6.99
** SZINIT = 3.25
** Nodes = 2
** 480741.352, 3770758.508, 373.92, 3.49, 4.00
** 480741.352, 3769636.638, 378.00, 3.49, 4.00
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   LOCATION L0007062     VOLUME   480741.352 3770668.313 374.00
   LOCATION L0007063     VOLUME   480741.352 3770659.723 374.00
   LOCATION L0007064     VOLUME   480741.352 3770651.133 374.07
   LOCATION L0007065     VOLUME   480741.352 3770642.543 374.17
   LOCATION L0007066     VOLUME   480741.352 3770633.953 374.28
   LOCATION L0007067     VOLUME   480741.352 3770625.363 374.38
   LOCATION L0007068     VOLUME   480741.352 3770616.773 374.38
   LOCATION L0007069     VOLUME   480741.352 3770608.183 374.38
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   LOCATION L0007072     VOLUME   480741.352 3770582.413 374.38
   LOCATION L0007073     VOLUME   480741.352 3770573.823 374.38
   LOCATION L0007074     VOLUME   480741.352 3770565.233 374.38
   LOCATION L0007075     VOLUME   480741.352 3770556.643 374.38
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   LOCATION L0007077     VOLUME   480741.352 3770539.463 374.38
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   LOCATION L0007079     VOLUME   480741.352 3770522.283 374.38
   LOCATION L0007080     VOLUME   480741.352 3770513.693 374.38
   LOCATION L0007081     VOLUME   480741.352 3770505.103 374.38
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   LOCATION L0007083     VOLUME   480741.352 3770487.923 374.38
   LOCATION L0007084     VOLUME   480741.352 3770479.333 374.38
   LOCATION L0007085     VOLUME   480741.352 3770470.743 374.50
   LOCATION L0007086     VOLUME   480741.352 3770462.153 374.67
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LOCATION L0007089     VOLUME   480741.352 3770436.383 375.00
LOCATION L0007090     VOLUME   480741.352 3770427.793 375.00
LOCATION L0007091     VOLUME   480741.352 3770419.203 375.00
LOCATION L0007092     VOLUME   480741.352 3770410.613 375.00
LOCATION L0007093     VOLUME   480741.352 3770402.023 375.00
LOCATION L0007094     VOLUME   480741.352 3770393.433 375.00
LOCATION L0007095     VOLUME   480741.352 3770384.843 375.02
LOCATION L0007096     VOLUME   480741.352 3770376.253 375.13
LOCATION L0007097     VOLUME   480741.352 3770367.663 375.24
LOCATION L0007098     VOLUME   480741.352 3770359.073 375.35
LOCATION L0007099     VOLUME   480741.352 3770350.483 375.38
LOCATION L0007100     VOLUME   480741.352 3770341.893 375.38
LOCATION L0007101     VOLUME   480741.352 3770333.303 375.38
LOCATION L0007102     VOLUME   480741.352 3770324.713 375.38
LOCATION L0007103     VOLUME   480741.352 3770316.123 375.38
LOCATION L0007104     VOLUME   480741.352 3770307.533 375.38
LOCATION L0007105     VOLUME   480741.352 3770298.943 375.38
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LOCATION L0007108     VOLUME   480741.352 3770273.173 375.38
LOCATION L0007109     VOLUME   480741.352 3770264.583 375.38
LOCATION L0007110     VOLUME   480741.352 3770255.993 375.38
LOCATION L0007111     VOLUME   480741.352 3770247.403 375.38
LOCATION L0007112     VOLUME   480741.352 3770238.813 375.38
LOCATION L0007113     VOLUME   480741.352 3770230.223 375.38
LOCATION L0007114     VOLUME   480741.352 3770221.633 375.38
LOCATION L0007115     VOLUME   480741.352 3770213.043 375.38
LOCATION L0007116     VOLUME   480741.352 3770204.453 375.38
LOCATION L0007117     VOLUME   480741.352 3770195.863 375.38
LOCATION L0007118     VOLUME   480741.352 3770187.273 375.38
LOCATION L0007119     VOLUME   480741.352 3770178.683 375.38
LOCATION L0007120     VOLUME   480741.352 3770170.093 375.38
LOCATION L0007121     VOLUME   480741.352 3770161.503 375.38
LOCATION L0007122     VOLUME   480741.352 3770152.913 375.38
LOCATION L0007123     VOLUME   480741.352 3770144.323 375.38
LOCATION L0007124     VOLUME   480741.352 3770135.733 375.38
LOCATION L0007125     VOLUME   480741.352 3770127.143 375.38
LOCATION L0007126     VOLUME   480741.352 3770118.553 375.38
LOCATION L0007127     VOLUME   480741.352 3770109.963 375.38
LOCATION L0007128     VOLUME   480741.352 3770101.373 375.38
LOCATION L0007129     VOLUME   480741.352 3770092.783 375.38
LOCATION L0007130     VOLUME   480741.352 3770084.193 375.38
LOCATION L0007131     VOLUME   480741.352 3770075.603 375.38
LOCATION L0007132     VOLUME   480741.352 3770067.013 375.38
LOCATION L0007133     VOLUME   480741.352 3770058.423 375.38
LOCATION L0007134     VOLUME   480741.352 3770049.833 375.38
LOCATION L0007135     VOLUME   480741.352 3770041.243 375.38
LOCATION L0007136     VOLUME   480741.352 3770032.653 375.38
LOCATION L0007137     VOLUME   480741.352 3770024.063 375.38
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   LOCATION L0007139     VOLUME   480741.352 3770006.883 375.38
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   LOCATION L0007141     VOLUME   480741.352 3769989.703 375.38
   LOCATION L0007142     VOLUME   480741.352 3769981.113 375.38
   LOCATION L0007143     VOLUME   480741.352 3769972.523 375.38
   LOCATION L0007144     VOLUME   480741.352 3769963.933 375.38
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   LOCATION L0007146     VOLUME   480741.352 3769946.753 375.38
   LOCATION L0007147     VOLUME   480741.352 3769938.163 375.38
   LOCATION L0007148     VOLUME   480741.352 3769929.573 375.38
   LOCATION L0007149     VOLUME   480741.352 3769920.983 375.38
   LOCATION L0007150     VOLUME   480741.352 3769912.393 375.38
   LOCATION L0007151     VOLUME   480741.352 3769903.803 375.43
   LOCATION L0007152     VOLUME   480741.352 3769895.213 375.61
   LOCATION L0007153     VOLUME   480741.352 3769886.623 375.79
   LOCATION L0007154     VOLUME   480741.352 3769878.033 375.96
   LOCATION L0007155     VOLUME   480741.352 3769869.443 376.09
   LOCATION L0007156     VOLUME   480741.352 3769860.853 376.20
   LOCATION L0007157     VOLUME   480741.352 3769852.263 376.31
   LOCATION L0007158     VOLUME   480741.352 3769843.673 376.52
   LOCATION L0007159     VOLUME   480741.352 3769835.083 376.99
   LOCATION L0007160     VOLUME   480741.352 3769826.493 377.45
   LOCATION L0007161     VOLUME   480741.352 3769817.903 377.91
   LOCATION L0007162     VOLUME   480741.352 3769809.313 378.00
   LOCATION L0007163     VOLUME   480741.352 3769800.723 378.00
   LOCATION L0007164     VOLUME   480741.352 3769792.133 378.00
   LOCATION L0007165     VOLUME   480741.352 3769783.543 378.00
   LOCATION L0007166     VOLUME   480741.352 3769774.953 378.00
   LOCATION L0007167     VOLUME   480741.352 3769766.363 378.00
   LOCATION L0007168     VOLUME   480741.352 3769757.773 378.00
   LOCATION L0007169     VOLUME   480741.352 3769749.183 378.00
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   LOCATION L0007172     VOLUME   480741.352 3769723.413 378.00
   LOCATION L0007173     VOLUME   480741.352 3769714.823 378.00
   LOCATION L0007174     VOLUME   480741.352 3769706.233 378.00
   LOCATION L0007175     VOLUME   480741.352 3769697.643 378.00
   LOCATION L0007176     VOLUME   480741.352 3769689.053 378.00
   LOCATION L0007177     VOLUME   480741.352 3769680.463 378.00
   LOCATION L0007178     VOLUME   480741.352 3769671.873 378.00
   LOCATION L0007179     VOLUME   480741.352 3769663.283 378.00
   LOCATION L0007180     VOLUME   480741.352 3769654.693 378.00
   LOCATION L0007181     VOLUME   480741.352 3769646.103 378.00
   LOCATION L0007182     VOLUME   480741.352 3769637.513 378.00
** End of LINE VOLUME Source ID = SLINE8
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** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE9
** DESCRSRC Eastern Drive Isle
** PREFIX
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** Length of Side = 8.59
** Configuration = Adjacent
** Emission Rate = 0.00007091
** Vertical Dimension = 6.99
** SZINIT = 3.25
** Nodes = 18
** 480726.925, 3771831.449, 371.03, 3.49, 4.00
** 480683.393, 3771831.449, 370.43, 3.49, 4.00
** 480672.510, 3771828.728, 370.03, 3.49, 4.00
** 480669.789, 3771820.566, 370.08, 3.49, 4.00
** 480668.429, 3771685.889, 371.12, 3.49, 4.00
** 480665.708, 3771680.447, 371.05, 3.49, 4.00
** 480654.825, 3771679.087, 370.95, 3.49, 4.00
** 480645.827, 3771675.124, 370.97, 3.49, 4.00
** 480628.172, 3771678.281, 370.70, 3.49, 4.00
** 480623.161, 3771697.237, 370.32, 3.49, 4.00
** 480633.059, 3771994.694, 367.25, 3.49, 4.00
** 480638.501, 3771998.775, 367.09, 3.49, 4.00
** 480650.744, 3772002.856, 367.10, 3.49, 4.00
** 480667.446, 3772002.485, 367.04, 3.49, 4.00
** 480676.098, 3771998.282, 367.25, 3.49, 4.00
** 480679.438, 3771987.892, 368.32, 3.49, 4.00
** 480676.469, 3771862.363, 370.11, 3.49, 4.00
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   LOCATION L0002989     VOLUME   480714.040 3771831.449 371.00
   LOCATION L0002990     VOLUME   480705.450 3771831.449 371.00
   LOCATION L0002991     VOLUME   480696.860 3771831.449 370.90
   LOCATION L0002992     VOLUME   480688.270 3771831.449 370.61
   LOCATION L0002993     VOLUME   480679.791 3771830.548 370.33
   LOCATION L0002994     VOLUME   480672.167 3771827.699 370.08
   LOCATION L0002995     VOLUME   480669.778 3771819.495 370.23
   LOCATION L0002996     VOLUME   480669.692 3771810.905 370.51
   LOCATION L0002997     VOLUME   480669.605 3771802.315 370.79
   LOCATION L0002998     VOLUME   480669.518 3771793.726 370.99
   LOCATION L0002999     VOLUME   480669.431 3771785.136 370.98
   LOCATION L0003000     VOLUME   480669.345 3771776.547 370.98
   LOCATION L0003001     VOLUME   480669.258 3771767.957 370.98
   LOCATION L0003002     VOLUME   480669.171 3771759.368 370.98
   LOCATION L0003003     VOLUME   480669.084 3771750.778 370.99
   LOCATION L0003004     VOLUME   480668.998 3771742.188 370.99
   LOCATION L0003005     VOLUME   480668.911 3771733.599 371.00
   LOCATION L0003006     VOLUME   480668.824 3771725.009 371.00
   LOCATION L0003007     VOLUME   480668.737 3771716.420 371.00
   LOCATION L0003008     VOLUME   480668.651 3771707.830 371.00
   LOCATION L0003009     VOLUME   480668.564 3771699.241 371.00
   LOCATION L0003010     VOLUME   480668.477 3771690.651 371.00
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   LOCATION L0003013     VOLUME   480651.205 3771677.492 371.00
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LOCATION L0003014     VOLUME   480643.156 3771675.601 371.00
LOCATION L0003015     VOLUME   480634.700 3771677.113 370.83
LOCATION L0003016     VOLUME   480627.671 3771680.174 370.59
LOCATION L0003017     VOLUME   480625.476 3771688.479 370.52
LOCATION L0003018     VOLUME   480623.281 3771696.784 370.45
LOCATION L0003019     VOLUME   480623.431 3771705.354 370.45
LOCATION L0003020     VOLUME   480623.717 3771713.939 370.46
LOCATION L0003021     VOLUME   480624.003 3771722.524 370.47
LOCATION L0003022     VOLUME   480624.288 3771731.109 370.48
LOCATION L0003023     VOLUME   480624.574 3771739.695 370.43
LOCATION L0003024     VOLUME   480624.860 3771748.280 370.30
LOCATION L0003025     VOLUME   480625.145 3771756.865 370.16
LOCATION L0003026     VOLUME   480625.431 3771765.450 370.01
LOCATION L0003027     VOLUME   480625.717 3771774.036 370.00
LOCATION L0003028     VOLUME   480626.002 3771782.621 370.00
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LOCATION L0003030     VOLUME   480626.574 3771799.791 370.00
LOCATION L0003031     VOLUME   480626.859 3771808.377 370.00
LOCATION L0003032     VOLUME   480627.145 3771816.962 370.00
LOCATION L0003033     VOLUME   480627.431 3771825.547 370.00
LOCATION L0003034     VOLUME   480627.716 3771834.132 369.89
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LOCATION L0003038     VOLUME   480628.859 3771868.473 369.38
LOCATION L0003039     VOLUME   480629.145 3771877.059 369.20
LOCATION L0003040     VOLUME   480629.431 3771885.644 369.01
LOCATION L0003041     VOLUME   480629.716 3771894.229 369.00
LOCATION L0003042     VOLUME   480630.002 3771902.814 369.00
LOCATION L0003043     VOLUME   480630.288 3771911.400 369.00
LOCATION L0003044     VOLUME   480630.573 3771919.985 368.88
LOCATION L0003045     VOLUME   480630.859 3771928.570 368.59
LOCATION L0003046     VOLUME   480631.145 3771937.155 368.30
LOCATION L0003047     VOLUME   480631.430 3771945.741 368.02
LOCATION L0003048     VOLUME   480631.716 3771954.326 368.00
LOCATION L0003049     VOLUME   480632.002 3771962.911 368.00
LOCATION L0003050     VOLUME   480632.287 3771971.496 368.00
LOCATION L0003051     VOLUME   480632.573 3771980.082 367.87
LOCATION L0003052     VOLUME   480632.859 3771988.667 367.59
LOCATION L0003053     VOLUME   480635.107 3771996.230 367.34
LOCATION L0003054     VOLUME   480642.626 3772000.150 367.20
LOCATION L0003055     VOLUME   480650.776 3772002.855 367.11
LOCATION L0003056     VOLUME   480659.364 3772002.665 367.12
LOCATION L0003057     VOLUME   480667.901 3772002.264 367.13
LOCATION L0003058     VOLUME   480675.628 3771998.510 367.45
LOCATION L0003059     VOLUME   480678.567 3771990.602 367.81
LOCATION L0003060     VOLUME   480679.302 3771982.150 368.12
LOCATION L0003061     VOLUME   480679.099 3771973.562 368.40
LOCATION L0003062     VOLUME   480678.896 3771964.975 368.68
LOCATION L0003063     VOLUME   480678.693 3771956.387 368.96
LOCATION L0003064     VOLUME   480678.489 3771947.799 369.24
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   LOCATION L0003066     VOLUME   480678.083 3771930.624 369.65
   LOCATION L0003067     VOLUME   480677.880 3771922.037 369.86
   LOCATION L0003068     VOLUME   480677.677 3771913.449 370.00
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   LOCATION L0003070     VOLUME   480677.271 3771896.274 370.00
   LOCATION L0003071     VOLUME   480677.068 3771887.686 370.00
   LOCATION L0003072     VOLUME   480676.865 3771879.099 370.06
   LOCATION L0003073     VOLUME   480676.661 3771870.511 370.12
   LOCATION L0003074     VOLUME   480676.060 3771862.200 370.16
** End of LINE VOLUME Source ID = SLINE9
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** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE10
** DESCRSRC Western Driveway
** PREFIX
** Length of Side = 8.59
** Configuration = Adjacent
** Emission Rate = 7.583E-06
** Vertical Dimension = 6.99
** SZINIT = 3.25
** Nodes = 7
** 480268.158, 3771594.369, 365.95, 3.49, 4.00
** 480268.158, 3771672.071, 365.61, 3.49, 4.00
** 480271.500, 3771680.426, 365.87, 3.49, 4.00
** 480280.691, 3771682.933, 365.96, 3.49, 4.00
** 480353.943, 3771682.933, 366.94, 3.49, 4.00
** 480357.901, 3771686.590, 366.94, 3.49, 4.00
** 480359.641, 3771697.300, 366.96, 3.49, 4.00
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   LOCATION L0005411     VOLUME   480268.158 3771607.254 366.00
   LOCATION L0005412     VOLUME   480268.158 3771615.844 366.00
   LOCATION L0005413     VOLUME   480268.158 3771624.434 365.89
   LOCATION L0005414     VOLUME   480268.158 3771633.024 365.78
   LOCATION L0005415     VOLUME   480268.158 3771641.614 365.67
   LOCATION L0005416     VOLUME   480268.158 3771650.204 365.61
   LOCATION L0005417     VOLUME   480268.158 3771658.794 365.61
   LOCATION L0005418     VOLUME   480268.158 3771667.384 365.61
   LOCATION L0005419     VOLUME   480269.608 3771675.695 365.66
   LOCATION L0005420     VOLUME   480274.871 3771681.346 365.83
   LOCATION L0005421     VOLUME   480283.249 3771682.933 366.00
   LOCATION L0005422     VOLUME   480291.839 3771682.933 366.00
   LOCATION L0005423     VOLUME   480300.429 3771682.933 366.00
   LOCATION L0005424     VOLUME   480309.019 3771682.933 366.00
   LOCATION L0005425     VOLUME   480317.609 3771682.933 366.26
   LOCATION L0005426     VOLUME   480326.199 3771682.933 366.54
   LOCATION L0005427     VOLUME   480334.789 3771682.933 366.83
   LOCATION L0005428     VOLUME   480343.379 3771682.933 367.00
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   LOCATION L0005430     VOLUME   480358.098 3771687.801 367.00
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   LOCATION L0005431     VOLUME   480359.475 3771696.280 367.00
** End of LINE VOLUME Source ID = SLINE10
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** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE11
** DESCRSRC Western Drive Isle
** PREFIX
** Length of Side = 8.59
** Configuration = Adjacent
** Emission Rate = 0.00003534
** Vertical Dimension = 6.99
** SZINIT = 3.25
** Nodes = 4
** 480626.927, 3772016.036, 367.07, 3.49, 4.00
** 480551.199, 3772076.720, 366.05, 3.49, 4.00
** 480366.004, 3772081.208, 365.37, 3.49, 4.00
** 480361.816, 3771712.846, 367.00, 3.49, 4.00
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   LOCATION L0005433     VOLUME   480616.872 3772024.094 366.41
   LOCATION L0005434     VOLUME   480610.168 3772029.466 366.23
   LOCATION L0005435     VOLUME   480603.465 3772034.837 366.05
   LOCATION L0005436     VOLUME   480596.762 3772040.209 366.00
   LOCATION L0005437     VOLUME   480590.059 3772045.580 366.00
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   LOCATION L0005439     VOLUME   480576.652 3772056.324 366.04
   LOCATION L0005440     VOLUME   480569.949 3772061.695 366.05
   LOCATION L0005441     VOLUME   480563.246 3772067.067 366.00
   LOCATION L0005442     VOLUME   480556.542 3772072.439 366.00
   LOCATION L0005443     VOLUME   480549.457 3772076.762 366.00
   LOCATION L0005444     VOLUME   480540.869 3772076.971 366.00
   LOCATION L0005445     VOLUME   480532.282 3772077.179 366.00
   LOCATION L0005446     VOLUME   480523.694 3772077.387 366.00
   LOCATION L0005447     VOLUME   480515.107 3772077.595 365.94
   LOCATION L0005448     VOLUME   480506.519 3772077.803 365.83
   LOCATION L0005449     VOLUME   480497.932 3772078.011 365.71
   LOCATION L0005450     VOLUME   480489.344 3772078.219 365.61
   LOCATION L0005451     VOLUME   480480.757 3772078.427 365.72
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   LOCATION L0005454     VOLUME   480454.994 3772079.051 366.00
   LOCATION L0005455     VOLUME   480446.407 3772079.259 366.00
   LOCATION L0005456     VOLUME   480437.819 3772079.468 366.00
   LOCATION L0005457     VOLUME   480429.232 3772079.676 366.00
   LOCATION L0005458     VOLUME   480420.645 3772079.884 366.00
   LOCATION L0005459     VOLUME   480412.057 3772080.092 366.00
   LOCATION L0005460     VOLUME   480403.470 3772080.300 366.00
   LOCATION L0005461     VOLUME   480394.882 3772080.508 365.92
   LOCATION L0005462     VOLUME   480386.295 3772080.716 365.78
   LOCATION L0005463     VOLUME   480377.707 3772080.924 365.64
   LOCATION L0005464     VOLUME   480369.120 3772081.132 365.48
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```
   LOCATION L0005465     VOLUME   480365.942 3772075.734 365.55
   LOCATION L0005466     VOLUME   480365.844 3772067.145 365.84
   LOCATION L0005467     VOLUME   480365.747 3772058.555 365.86
   LOCATION L0005468     VOLUME   480365.649 3772049.966 365.86
   LOCATION L0005469     VOLUME   480365.551 3772041.377 365.86
   LOCATION L0005470     VOLUME   480365.454 3772032.787 365.85
   LOCATION L0005471     VOLUME   480365.356 3772024.198 365.85
   LOCATION L0005472     VOLUME   480365.258 3772015.608 365.85
   LOCATION L0005473     VOLUME   480365.161 3772007.019 365.84
   LOCATION L0005474     VOLUME   480365.063 3771998.429 365.88
   LOCATION L0005475     VOLUME   480364.965 3771989.840 365.93
   LOCATION L0005476     VOLUME   480364.868 3771981.250 365.97
   LOCATION L0005477     VOLUME   480364.770 3771972.661 366.00
   LOCATION L0005478     VOLUME   480364.673 3771964.072 366.00
   LOCATION L0005479     VOLUME   480364.575 3771955.482 366.00
   LOCATION L0005480     VOLUME   480364.477 3771946.893 366.00
   LOCATION L0005481     VOLUME   480364.380 3771938.303 366.00
   LOCATION L0005482     VOLUME   480364.282 3771929.714 366.00
   LOCATION L0005483     VOLUME   480364.184 3771921.124 366.00
   LOCATION L0005484     VOLUME   480364.087 3771912.535 366.10
   LOCATION L0005485     VOLUME   480363.989 3771903.945 366.33
   LOCATION L0005486     VOLUME   480363.891 3771895.356 366.56
   LOCATION L0005487     VOLUME   480363.794 3771886.767 366.78
   LOCATION L0005488     VOLUME   480363.696 3771878.177 366.79
   LOCATION L0005489     VOLUME   480363.598 3771869.588 366.79
   LOCATION L0005490     VOLUME   480363.501 3771860.998 366.79
   LOCATION L0005491     VOLUME   480363.403 3771852.409 366.78
   LOCATION L0005492     VOLUME   480363.305 3771843.819 366.78
   LOCATION L0005493     VOLUME   480363.208 3771835.230 366.78
   LOCATION L0005494     VOLUME   480363.110 3771826.640 366.77
   LOCATION L0005495     VOLUME   480363.012 3771818.051 366.77
   LOCATION L0005496     VOLUME   480362.915 3771809.462 366.77
   LOCATION L0005497     VOLUME   480362.817 3771800.872 366.76
   LOCATION L0005498     VOLUME   480362.719 3771792.283 366.79
   LOCATION L0005499     VOLUME   480362.622 3771783.693 366.86
   LOCATION L0005500     VOLUME   480362.524 3771775.104 366.93
   LOCATION L0005501     VOLUME   480362.426 3771766.514 367.00
   LOCATION L0005502     VOLUME   480362.329 3771757.925 367.00
   LOCATION L0005503     VOLUME   480362.231 3771749.335 367.00
   LOCATION L0005504     VOLUME   480362.133 3771740.746 367.00
   LOCATION L0005505     VOLUME   480362.036 3771732.157 367.00
   LOCATION L0005506     VOLUME   480361.938 3771723.567 367.00
   LOCATION L0005507     VOLUME   480361.840 3771714.978 367.00
** End of LINE VOLUME Source ID = SLINE11
** ----------------------------------------------------------------------
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE12
** DESCRSRC West Loading Area
** PREFIX
** Length of Side = 8.59
** Configuration = Adjacent
```

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** Emission Rate = 0.00008602
** Vertical Dimension = 6.99
** SZINIT = 3.25
** Nodes = 2
** 480394.917, 3772058.037, 366.00, 3.49, 4.00
** 480393.245, 3771708.599, 367.07, 3.49, 4.00
** ----------------------------------------------------------------
   LOCATION L0005508     VOLUME   480394.896 3772053.742 366.00
   LOCATION L0005509     VOLUME   480394.855 3772045.152 366.00
   LOCATION L0005510     VOLUME   480394.814 3772036.562 366.00
   LOCATION L0005511     VOLUME   480394.773 3772027.973 366.00
   LOCATION L0005512     VOLUME   480394.732 3772019.383 366.00
   LOCATION L0005513     VOLUME   480394.691 3772010.793 366.00
   LOCATION L0005514     VOLUME   480394.649 3772002.203 366.00
   LOCATION L0005515     VOLUME   480394.608 3771993.613 366.00
   LOCATION L0005516     VOLUME   480394.567 3771985.023 366.00
   LOCATION L0005517     VOLUME   480394.526 3771976.433 366.00
   LOCATION L0005518     VOLUME   480394.485 3771967.843 366.23
   LOCATION L0005519     VOLUME   480394.444 3771959.253 366.46
   LOCATION L0005520     VOLUME   480394.403 3771950.663 366.70
   LOCATION L0005521     VOLUME   480394.362 3771942.073 366.82
   LOCATION L0005522     VOLUME   480394.321 3771933.484 366.81
   LOCATION L0005523     VOLUME   480394.280 3771924.894 366.81
   LOCATION L0005524     VOLUME   480394.238 3771916.304 366.81
   LOCATION L0005525     VOLUME   480394.197 3771907.714 366.86
   LOCATION L0005526     VOLUME   480394.156 3771899.124 366.92
   LOCATION L0005527     VOLUME   480394.115 3771890.534 366.97
   LOCATION L0005528     VOLUME   480394.074 3771881.944 367.00
   LOCATION L0005529     VOLUME   480394.033 3771873.354 367.00
   LOCATION L0005530     VOLUME   480393.992 3771864.764 367.00
   LOCATION L0005531     VOLUME   480393.951 3771856.174 367.00
   LOCATION L0005532     VOLUME   480393.910 3771847.585 367.00
   LOCATION L0005533     VOLUME   480393.869 3771838.995 367.00
   LOCATION L0005534     VOLUME   480393.827 3771830.405 367.00
   LOCATION L0005535     VOLUME   480393.786 3771821.815 367.00
   LOCATION L0005536     VOLUME   480393.745 3771813.225 367.00
   LOCATION L0005537     VOLUME   480393.704 3771804.635 367.00
   LOCATION L0005538     VOLUME   480393.663 3771796.045 367.00
   LOCATION L0005539     VOLUME   480393.622 3771787.455 367.00
   LOCATION L0005540     VOLUME   480393.581 3771778.865 367.00
   LOCATION L0005541     VOLUME   480393.540 3771770.275 367.00
   LOCATION L0005542     VOLUME   480393.499 3771761.686 367.00
   LOCATION L0005543     VOLUME   480393.458 3771753.096 367.00
   LOCATION L0005544     VOLUME   480393.416 3771744.506 367.00
   LOCATION L0005545     VOLUME   480393.375 3771735.916 367.00
   LOCATION L0005546     VOLUME   480393.334 3771727.326 367.00
   LOCATION L0005547     VOLUME   480393.293 3771718.736 367.00
   LOCATION L0005548     VOLUME   480393.252 3771710.146 367.00
** End of LINE VOLUME Source ID = SLINE12
** ----------------------------------------------------------------
** Line Source Represented by Adjacent Volume Sources
```

```
** LINE VOLUME Source ID = SLINE13
** DESCRSRC East Loading Area
** PREFIX
** Length of Side = 8.59
** Configuration = Adjacent
** Emission Rate = 0.00008552
** Vertical Dimension = 6.99
** SZINIT = 3.25
** Nodes = 2
** 480598.059, 3772002.027, 367.09, 3.49, 4.00
** 480589.699, 3771688.536, 370.00, 3.49, 4.00
** ----------------------------------------------------------------------
   LOCATION L0005549     VOLUME   480597.944 3771997.733 367.28
   LOCATION L0005550     VOLUME   480597.715 3771989.146 367.57
   LOCATION L0005551     VOLUME   480597.486 3771980.559 367.86
   LOCATION L0005552     VOLUME   480597.257 3771971.972 368.00
   LOCATION L0005553     VOLUME   480597.028 3771963.386 368.00
   LOCATION L0005554     VOLUME   480596.799 3771954.799 368.00
   LOCATION L0005555     VOLUME   480596.570 3771946.212 368.00
   LOCATION L0005556     VOLUME   480596.341 3771937.625 368.16
   LOCATION L0005557     VOLUME   480596.112 3771929.038 368.31
   LOCATION L0005558     VOLUME   480595.883 3771920.451 368.46
   LOCATION L0005559     VOLUME   480595.654 3771911.864 368.60
   LOCATION L0005560     VOLUME   480595.425 3771903.277 368.73
   LOCATION L0005561     VOLUME   480595.196 3771894.690 368.86
   LOCATION L0005562     VOLUME   480594.967 3771886.103 369.00
   LOCATION L0005563     VOLUME   480594.738 3771877.516 369.00
   LOCATION L0005564     VOLUME   480594.509 3771868.929 369.00
   LOCATION L0005565     VOLUME   480594.281 3771860.342 369.00
   LOCATION L0005566     VOLUME   480594.052 3771851.755 369.07
   LOCATION L0005567     VOLUME   480593.823 3771843.168 369.20
   LOCATION L0005568     VOLUME   480593.594 3771834.581 369.33
   LOCATION L0005569     VOLUME   480593.365 3771825.994 369.45
   LOCATION L0005570     VOLUME   480593.136 3771817.407 369.44
   LOCATION L0005571     VOLUME   480592.907 3771808.820 369.43
   LOCATION L0005572     VOLUME   480592.678 3771800.234 369.43
   LOCATION L0005573     VOLUME   480592.449 3771791.647 369.51
   LOCATION L0005574     VOLUME   480592.220 3771783.060 369.67
   LOCATION L0005575     VOLUME   480591.991 3771774.473 369.84
   LOCATION L0005576     VOLUME   480591.762 3771765.886 370.00
   LOCATION L0005577     VOLUME   480591.533 3771757.299 370.00
   LOCATION L0005578     VOLUME   480591.304 3771748.712 370.00
   LOCATION L0005579     VOLUME   480591.075 3771740.125 370.00
   LOCATION L0005580     VOLUME   480590.846 3771731.538 370.00
   LOCATION L0005581     VOLUME   480590.617 3771722.951 370.00
   LOCATION L0005582     VOLUME   480590.388 3771714.364 370.00
   LOCATION L0005583     VOLUME   480590.159 3771705.777 370.00
   LOCATION L0005584     VOLUME   480589.930 3771697.190 370.00
   LOCATION L0005585     VOLUME   480589.701 3771688.603 370.00
** End of LINE VOLUME Source ID = SLINE13
** Source Parameters **
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** LINE VOLUME Source ID = SLINE1
   SRCPARAM L0005586     0.0000002274      3.49      4.00      3.25
   SRCPARAM L0005587     0.0000002274      3.49      4.00      3.25
   SRCPARAM L0005588     0.0000002274      3.49      4.00      3.25
   SRCPARAM L0005589     0.0000002274      3.49      4.00      3.25
   SRCPARAM L0005590     0.0000002274      3.49      4.00      3.25
   SRCPARAM L0005591     0.0000002274      3.49      4.00      3.25
   SRCPARAM L0005592     0.0000002274      3.49      4.00      3.25
   SRCPARAM L0005593     0.0000002274      3.49      4.00      3.25
   SRCPARAM L0005594     0.0000002274      3.49      4.00      3.25
   SRCPARAM L0005595     0.0000002274      3.49      4.00      3.25
   SRCPARAM L0005596     0.0000002274      3.49      4.00      3.25
   SRCPARAM L0005597     0.0000002274      3.49      4.00      3.25
   SRCPARAM L0005598     0.0000002274      3.49      4.00      3.25
   SRCPARAM L0005599     0.0000002274      3.49      4.00      3.25
   SRCPARAM L0005600     0.0000002274      3.49      4.00      3.25
   SRCPARAM L0005601     0.0000002274      3.49      4.00      3.25
   SRCPARAM L0005602     0.0000002274      3.49      4.00      3.25
   SRCPARAM L0005603     0.0000002274      3.49      4.00      3.25
   SRCPARAM L0005604     0.0000002274      3.49      4.00      3.25
   SRCPARAM L0005605     0.0000002274      3.49      4.00      3.25
   SRCPARAM L0005606     0.0000002274      3.49      4.00      3.25
   SRCPARAM L0005607     0.0000002274      3.49      4.00      3.25
   SRCPARAM L0005608     0.0000002274      3.49      4.00      3.25
   SRCPARAM L0005609     0.0000002274      3.49      4.00      3.25
   SRCPARAM L0005610     0.0000002274      3.49      4.00      3.25
   SRCPARAM L0005611     0.0000002274      3.49      4.00      3.25
   SRCPARAM L0005612     0.0000002274      3.49      4.00      3.25
   SRCPARAM L0005613     0.0000002274      3.49      4.00      3.25
   SRCPARAM L0005614     0.0000002274      3.49      4.00      3.25
   SRCPARAM L0005615     0.0000002274      3.49      4.00      3.25
   SRCPARAM L0005616     0.0000002274      3.49      4.00      3.25
   SRCPARAM L0005617     0.0000002274      3.49      4.00      3.25
   SRCPARAM L0005618     0.0000002274      3.49      4.00      3.25
   SRCPARAM L0005619     0.0000002274      3.49      4.00      3.25
   SRCPARAM L0005620     0.0000002274      3.49      4.00      3.25
   SRCPARAM L0005621     0.0000002274      3.49      4.00      3.25
   SRCPARAM L0005622     0.0000002274      3.49      4.00      3.25
   SRCPARAM L0005623     0.0000002274      3.49      4.00      3.25
   SRCPARAM L0005624     0.0000002274      3.49      4.00      3.25
   SRCPARAM L0005625     0.0000002274      3.49      4.00      3.25
   SRCPARAM L0005626     0.0000002274      3.49      4.00      3.25
   SRCPARAM L0005627     0.0000002274      3.49      4.00      3.25
   SRCPARAM L0005628     0.0000002274      3.49      4.00      3.25
   SRCPARAM L0005629     0.0000002274      3.49      4.00      3.25
   SRCPARAM L0005630     0.0000002274      3.49      4.00      3.25
   SRCPARAM L0005631     0.0000002274      3.49      4.00      3.25
   SRCPARAM L0005632     0.0000002274      3.49      4.00      3.25
   SRCPARAM L0005633     0.0000002274      3.49      4.00      3.25
   SRCPARAM L0005634     0.0000002274      3.49      4.00      3.25
   SRCPARAM L0005635     0.0000002274      3.49      4.00      3.25
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   SRCPARAM L0005636     0.0000002274      3.49      4.00      3.25
   SRCPARAM L0005637     0.0000002274      3.49      4.00      3.25
   SRCPARAM L0005638     0.0000002274      3.49      4.00      3.25
   SRCPARAM L0005639     0.0000002274      3.49      4.00      3.25
   SRCPARAM L0005640     0.0000002274      3.49      4.00      3.25
   SRCPARAM L0005641     0.0000002274      3.49      4.00      3.25
   SRCPARAM L0005642     0.0000002274      3.49      4.00      3.25
   SRCPARAM L0005643     0.0000002274      3.49      4.00      3.25
   SRCPARAM L0005644     0.0000002274      3.49      4.00      3.25
   SRCPARAM L0005645     0.0000002274      3.49      4.00      3.25
   SRCPARAM L0005646     0.0000002274      3.49      4.00      3.25
   SRCPARAM L0005647     0.0000002274      3.49      4.00      3.25
   SRCPARAM L0005648     0.0000002274      3.49      4.00      3.25
   SRCPARAM L0005649     0.0000002274      3.49      4.00      3.25
   SRCPARAM L0005650     0.0000002274      3.49      4.00      3.25
   SRCPARAM L0005651     0.0000002274      3.49      4.00      3.25
   SRCPARAM L0005652     0.0000002274      3.49      4.00      3.25
   SRCPARAM L0005653     0.0000002274      3.49      4.00      3.25
   SRCPARAM L0005654     0.0000002274      3.49      4.00      3.25
   SRCPARAM L0005655     0.0000002274      3.49      4.00      3.25
   SRCPARAM L0005656     0.0000002274      3.49      4.00      3.25
   SRCPARAM L0005657     0.0000002274      3.49      4.00      3.25
   SRCPARAM L0005658     0.0000002274      3.49      4.00      3.25
   SRCPARAM L0005659     0.0000002274      3.49      4.00      3.25
   SRCPARAM L0005660     0.0000002274      3.49      4.00      3.25
   SRCPARAM L0005661     0.0000002274      3.49      4.00      3.25
   SRCPARAM L0005662     0.0000002274      3.49      4.00      3.25
   SRCPARAM L0005663     0.0000002274      3.49      4.00      3.25
   SRCPARAM L0005664     0.0000002274      3.49      4.00      3.25
   SRCPARAM L0005665     0.0000002274      3.49      4.00      3.25
   SRCPARAM L0005666     0.0000002274      3.49      4.00      3.25
   SRCPARAM L0005667     0.0000002274      3.49      4.00      3.25
   SRCPARAM L0005668     0.0000002274      3.49      4.00      3.25
   SRCPARAM L0005669     0.0000002274      3.49      4.00      3.25
   SRCPARAM L0005670     0.0000002274      3.49      4.00      3.25
   SRCPARAM L0005671     0.0000002274      3.49      4.00      3.25
   SRCPARAM L0005672     0.0000002274      3.49      4.00      3.25
   SRCPARAM L0005673     0.0000002274      3.49      4.00      3.25
   SRCPARAM L0005674     0.0000002274      3.49      4.00      3.25
   SRCPARAM L0005675     0.0000002274      3.49      4.00      3.25
   SRCPARAM L0005676     0.0000002274      3.49      4.00      3.25
   SRCPARAM L0005677     0.0000002274      3.49      4.00      3.25
   SRCPARAM L0005678     0.0000002274      3.49      4.00      3.25
   SRCPARAM L0005679     0.0000002274      3.49      4.00      3.25
   SRCPARAM L0005680     0.0000002274      3.49      4.00      3.25
   SRCPARAM L0005681     0.0000002274      3.49      4.00      3.25
   SRCPARAM L0005682     0.0000002274      3.49      4.00      3.25
** ------------------------------------------------------------------
** LINE VOLUME Source ID = SLINE2
   SRCPARAM L0006174     0.00000009257      3.49      4.00      3.25
   SRCPARAM L0006175     0.00000009257      3.49      4.00      3.25
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SRCPARAM L0006176     0.00000009257      3.49      4.00      3.25
SRCPARAM L0006177     0.00000009257      3.49      4.00      3.25
SRCPARAM L0006178     0.00000009257      3.49      4.00      3.25
SRCPARAM L0006179     0.00000009257      3.49      4.00      3.25
SRCPARAM L0006180     0.00000009257      3.49      4.00      3.25
SRCPARAM L0006181     0.00000009257      3.49      4.00      3.25
SRCPARAM L0006182     0.00000009257      3.49      4.00      3.25
SRCPARAM L0006183     0.00000009257      3.49      4.00      3.25
SRCPARAM L0006184     0.00000009257      3.49      4.00      3.25
SRCPARAM L0006185     0.00000009257      3.49      4.00      3.25
SRCPARAM L0006186     0.00000009257      3.49      4.00      3.25
SRCPARAM L0006187     0.00000009257      3.49      4.00      3.25
SRCPARAM L0006188     0.00000009257      3.49      4.00      3.25
SRCPARAM L0006189     0.00000009257      3.49      4.00      3.25
SRCPARAM L0006190     0.00000009257      3.49      4.00      3.25
SRCPARAM L0006191     0.00000009257      3.49      4.00      3.25
SRCPARAM L0006192     0.00000009257      3.49      4.00      3.25
SRCPARAM L0006193     0.00000009257      3.49      4.00      3.25
SRCPARAM L0006194     0.00000009257      3.49      4.00      3.25
SRCPARAM L0006195     0.00000009257      3.49      4.00      3.25
SRCPARAM L0006196     0.00000009257      3.49      4.00      3.25
SRCPARAM L0006197     0.00000009257      3.49      4.00      3.25
SRCPARAM L0006198     0.00000009257      3.49      4.00      3.25
SRCPARAM L0006199     0.00000009257      3.49      4.00      3.25
SRCPARAM L0006200     0.00000009257      3.49      4.00      3.25
SRCPARAM L0006201     0.00000009257      3.49      4.00      3.25
SRCPARAM L0006202     0.00000009257      3.49      4.00      3.25
SRCPARAM L0006203     0.00000009257      3.49      4.00      3.25
SRCPARAM L0006204     0.00000009257      3.49      4.00      3.25
SRCPARAM L0006205     0.00000009257      3.49      4.00      3.25
SRCPARAM L0006206     0.00000009257      3.49      4.00      3.25
SRCPARAM L0006207     0.00000009257      3.49      4.00      3.25
SRCPARAM L0006208     0.00000009257      3.49      4.00      3.25
SRCPARAM L0006209     0.00000009257      3.49      4.00      3.25
SRCPARAM L0006210     0.00000009257      3.49      4.00      3.25
SRCPARAM L0006211     0.00000009257      3.49      4.00      3.25
SRCPARAM L0006212     0.00000009257      3.49      4.00      3.25
SRCPARAM L0006213     0.00000009257      3.49      4.00      3.25
SRCPARAM L0006214     0.00000009257      3.49      4.00      3.25
SRCPARAM L0006215     0.00000009257      3.49      4.00      3.25
SRCPARAM L0006216     0.00000009257      3.49      4.00      3.25
SRCPARAM L0006217     0.00000009257      3.49      4.00      3.25
SRCPARAM L0006218     0.00000009257      3.49      4.00      3.25
SRCPARAM L0006219     0.00000009257      3.49      4.00      3.25
SRCPARAM L0006220     0.00000009257      3.49      4.00      3.25
SRCPARAM L0006221     0.00000009257      3.49      4.00      3.25
SRCPARAM L0006222     0.00000009257      3.49      4.00      3.25
SRCPARAM L0006223     0.00000009257      3.49      4.00      3.25
SRCPARAM L0006224     0.00000009257      3.49      4.00      3.25
SRCPARAM L0006225     0.00000009257      3.49      4.00      3.25
SRCPARAM L0006226     0.00000009257      3.49      4.00      3.25
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SRCPARAM L0006227     0.00000009257      3.49      4.00      3.25
SRCPARAM L0006228     0.00000009257      3.49      4.00      3.25
SRCPARAM L0006229     0.00000009257      3.49      4.00      3.25
SRCPARAM L0006230     0.00000009257      3.49      4.00      3.25
SRCPARAM L0006231     0.00000009257      3.49      4.00      3.25
SRCPARAM L0006232     0.00000009257      3.49      4.00      3.25
SRCPARAM L0006233     0.00000009257      3.49      4.00      3.25
SRCPARAM L0006234     0.00000009257      3.49      4.00      3.25
SRCPARAM L0006235     0.00000009257      3.49      4.00      3.25
SRCPARAM L0006236     0.00000009257      3.49      4.00      3.25
SRCPARAM L0006237     0.00000009257      3.49      4.00      3.25
SRCPARAM L0006238     0.00000009257      3.49      4.00      3.25
SRCPARAM L0006239     0.00000009257      3.49      4.00      3.25
SRCPARAM L0006240     0.00000009257      3.49      4.00      3.25
SRCPARAM L0006241     0.00000009257      3.49      4.00      3.25
SRCPARAM L0006242     0.00000009257      3.49      4.00      3.25
SRCPARAM L0006243     0.00000009257      3.49      4.00      3.25
SRCPARAM L0006244     0.00000009257      3.49      4.00      3.25
SRCPARAM L0006245     0.00000009257      3.49      4.00      3.25
SRCPARAM L0006246     0.00000009257      3.49      4.00      3.25
SRCPARAM L0006247     0.00000009257      3.49      4.00      3.25
SRCPARAM L0006248     0.00000009257      3.49      4.00      3.25
SRCPARAM L0006249     0.00000009257      3.49      4.00      3.25
SRCPARAM L0006250     0.00000009257      3.49      4.00      3.25
SRCPARAM L0006251     0.00000009257      3.49      4.00      3.25
SRCPARAM L0006252     0.00000009257      3.49      4.00      3.25
SRCPARAM L0006253     0.00000009257      3.49      4.00      3.25
SRCPARAM L0006254     0.00000009257      3.49      4.00      3.25
SRCPARAM L0006255     0.00000009257      3.49      4.00      3.25
SRCPARAM L0006256     0.00000009257      3.49      4.00      3.25
SRCPARAM L0006257     0.00000009257      3.49      4.00      3.25
SRCPARAM L0006258     0.00000009257      3.49      4.00      3.25
SRCPARAM L0006259     0.00000009257      3.49      4.00      3.25
SRCPARAM L0006260     0.00000009257      3.49      4.00      3.25
SRCPARAM L0006261     0.00000009257      3.49      4.00      3.25
SRCPARAM L0006262     0.00000009257      3.49      4.00      3.25
SRCPARAM L0006263     0.00000009257      3.49      4.00      3.25
SRCPARAM L0006264     0.00000009257      3.49      4.00      3.25
SRCPARAM L0006265     0.00000009257      3.49      4.00      3.25
SRCPARAM L0006266     0.00000009257      3.49      4.00      3.25
SRCPARAM L0006267     0.00000009257      3.49      4.00      3.25
SRCPARAM L0006268     0.00000009257      3.49      4.00      3.25
SRCPARAM L0006269     0.00000009257      3.49      4.00      3.25
SRCPARAM L0006270     0.00000009257      3.49      4.00      3.25
SRCPARAM L0006271     0.00000009257      3.49      4.00      3.25
SRCPARAM L0006272     0.00000009257      3.49      4.00      3.25
SRCPARAM L0006273     0.00000009257      3.49      4.00      3.25
SRCPARAM L0006274     0.00000009257      3.49      4.00      3.25
SRCPARAM L0006275     0.00000009257      3.49      4.00      3.25
SRCPARAM L0006276     0.00000009257      3.49      4.00      3.25
SRCPARAM L0006277     0.00000009257      3.49      4.00      3.25
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SRCPARAM L0006278     0.00000009257      3.49      4.00      3.25
SRCPARAM L0006279     0.00000009257      3.49      4.00      3.25
SRCPARAM L0006280     0.00000009257      3.49      4.00      3.25
SRCPARAM L0006281     0.00000009257      3.49      4.00      3.25
SRCPARAM L0006282     0.00000009257      3.49      4.00      3.25
SRCPARAM L0006283     0.00000009257      3.49      4.00      3.25
SRCPARAM L0006284     0.00000009257      3.49      4.00      3.25
SRCPARAM L0006285     0.00000009257      3.49      4.00      3.25
SRCPARAM L0006286     0.00000009257      3.49      4.00      3.25
SRCPARAM L0006287     0.00000009257      3.49      4.00      3.25
SRCPARAM L0006288     0.00000009257      3.49      4.00      3.25
SRCPARAM L0006289     0.00000009257      3.49      4.00      3.25
SRCPARAM L0006290     0.00000009257      3.49      4.00      3.25
SRCPARAM L0006291     0.00000009257      3.49      4.00      3.25
SRCPARAM L0006292     0.00000009257      3.49      4.00      3.25
SRCPARAM L0006293     0.00000009257      3.49      4.00      3.25
SRCPARAM L0006294     0.00000009257      3.49      4.00      3.25
SRCPARAM L0006295     0.00000009257      3.49      4.00      3.25
SRCPARAM L0006296     0.00000009257      3.49      4.00      3.25
SRCPARAM L0006297     0.00000009257      3.49      4.00      3.25
SRCPARAM L0006298     0.00000009257      3.49      4.00      3.25
SRCPARAM L0006299     0.00000009257      3.49      4.00      3.25
SRCPARAM L0006300     0.00000009257      3.49      4.00      3.25
SRCPARAM L0006301     0.00000009257      3.49      4.00      3.25
SRCPARAM L0006302     0.00000009257      3.49      4.00      3.25
SRCPARAM L0006303     0.00000009257      3.49      4.00      3.25
SRCPARAM L0006304     0.00000009257      3.49      4.00      3.25
SRCPARAM L0006305     0.00000009257      3.49      4.00      3.25
SRCPARAM L0006306     0.00000009257      3.49      4.00      3.25
SRCPARAM L0006307     0.00000009257      3.49      4.00      3.25
SRCPARAM L0006308     0.00000009257      3.49      4.00      3.25
SRCPARAM L0006309     0.00000009257      3.49      4.00      3.25
SRCPARAM L0006310     0.00000009257      3.49      4.00      3.25
SRCPARAM L0006311     0.00000009257      3.49      4.00      3.25
SRCPARAM L0006312     0.00000009257      3.49      4.00      3.25
SRCPARAM L0006313     0.00000009257      3.49      4.00      3.25
SRCPARAM L0006314     0.00000009257      3.49      4.00      3.25
SRCPARAM L0006315     0.00000009257      3.49      4.00      3.25
SRCPARAM L0006316     0.00000009257      3.49      4.00      3.25
SRCPARAM L0006317     0.00000009257      3.49      4.00      3.25
SRCPARAM L0006318     0.00000009257      3.49      4.00      3.25
SRCPARAM L0006319     0.00000009257      3.49      4.00      3.25
SRCPARAM L0006320     0.00000009257      3.49      4.00      3.25
SRCPARAM L0006321     0.00000009257      3.49      4.00      3.25
SRCPARAM L0006322     0.00000009257      3.49      4.00      3.25
SRCPARAM L0006323     0.00000009257      3.49      4.00      3.25
SRCPARAM L0006324     0.00000009257      3.49      4.00      3.25
SRCPARAM L0006325     0.00000009257      3.49      4.00      3.25
SRCPARAM L0006326     0.00000009257      3.49      4.00      3.25
SRCPARAM L0006327     0.00000009257      3.49      4.00      3.25
SRCPARAM L0006328     0.00000009257      3.49      4.00      3.25
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   SRCPARAM L0006329     0.00000009257      3.49      4.00      3.25
   SRCPARAM L0006330     0.00000009257      3.49      4.00      3.25
   SRCPARAM L0006331     0.00000009257      3.49      4.00      3.25
   SRCPARAM L0006332     0.00000009257      3.49      4.00      3.25
   SRCPARAM L0006333     0.00000009257      3.49      4.00      3.25
   SRCPARAM L0006334     0.00000009257      3.49      4.00      3.25
   SRCPARAM L0006335     0.00000009257      3.49      4.00      3.25
   SRCPARAM L0006336     0.00000009257      3.49      4.00      3.25
   SRCPARAM L0006337     0.00000009257      3.49      4.00      3.25
   SRCPARAM L0006338     0.00000009257      3.49      4.00      3.25
   SRCPARAM L0006339     0.00000009257      3.49      4.00      3.25
   SRCPARAM L0006340     0.00000009257      3.49      4.00      3.25
   SRCPARAM L0006341     0.00000009257      3.49      4.00      3.25
   SRCPARAM L0006342     0.00000009257      3.49      4.00      3.25
   SRCPARAM L0006343     0.00000009257      3.49      4.00      3.25
   SRCPARAM L0006344     0.00000009257      3.49      4.00      3.25
   SRCPARAM L0006345     0.00000009257      3.49      4.00      3.25
   SRCPARAM L0006346     0.00000009257      3.49      4.00      3.25
   SRCPARAM L0006347     0.00000009257      3.49      4.00      3.25
   SRCPARAM L0006348     0.00000009257      3.49      4.00      3.25
   SRCPARAM L0006349     0.00000009257      3.49      4.00      3.25
   SRCPARAM L0006350     0.00000009257      3.49      4.00      3.25
   SRCPARAM L0006351     0.00000009257      3.49      4.00      3.25
   SRCPARAM L0006352     0.00000009257      3.49      4.00      3.25
   SRCPARAM L0006353     0.00000009257      3.49      4.00      3.25
   SRCPARAM L0006354     0.00000009257      3.49      4.00      3.25
   SRCPARAM L0006355     0.00000009257      3.49      4.00      3.25
   SRCPARAM L0006356     0.00000009257      3.49      4.00      3.25
   SRCPARAM L0006357     0.00000009257      3.49      4.00      3.25
   SRCPARAM L0006358     0.00000009257      3.49      4.00      3.25
   SRCPARAM L0006359     0.00000009257      3.49      4.00      3.25
   SRCPARAM L0006360     0.00000009257      3.49      4.00      3.25
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** LINE VOLUME Source ID = SLINE3
   SRCPARAM L0006361     0.0000001608      3.49      4.00      3.25
   SRCPARAM L0006362     0.0000001608      3.49      4.00      3.25
   SRCPARAM L0006363     0.0000001608      3.49      4.00      3.25
   SRCPARAM L0006364     0.0000001608      3.49      4.00      3.25
   SRCPARAM L0006365     0.0000001608      3.49      4.00      3.25
   SRCPARAM L0006366     0.0000001608      3.49      4.00      3.25
   SRCPARAM L0006367     0.0000001608      3.49      4.00      3.25
   SRCPARAM L0006368     0.0000001608      3.49      4.00      3.25
   SRCPARAM L0006369     0.0000001608      3.49      4.00      3.25
   SRCPARAM L0006370     0.0000001608      3.49      4.00      3.25
   SRCPARAM L0006371     0.0000001608      3.49      4.00      3.25
   SRCPARAM L0006372     0.0000001608      3.49      4.00      3.25
   SRCPARAM L0006373     0.0000001608      3.49      4.00      3.25
   SRCPARAM L0006374     0.0000001608      3.49      4.00      3.25
   SRCPARAM L0006375     0.0000001608      3.49      4.00      3.25
   SRCPARAM L0006376     0.0000001608      3.49      4.00      3.25
   SRCPARAM L0006377     0.0000001608      3.49      4.00      3.25
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SRCPARAM L0006378     0.0000001608      3.49      4.00      3.25
SRCPARAM L0006379     0.0000001608      3.49      4.00      3.25
SRCPARAM L0006380     0.0000001608      3.49      4.00      3.25
SRCPARAM L0006381     0.0000001608      3.49      4.00      3.25
SRCPARAM L0006382     0.0000001608      3.49      4.00      3.25
SRCPARAM L0006383     0.0000001608      3.49      4.00      3.25
SRCPARAM L0006384     0.0000001608      3.49      4.00      3.25
SRCPARAM L0006385     0.0000001608      3.49      4.00      3.25
SRCPARAM L0006386     0.0000001608      3.49      4.00      3.25
SRCPARAM L0006387     0.0000001608      3.49      4.00      3.25
SRCPARAM L0006388     0.0000001608      3.49      4.00      3.25
SRCPARAM L0006389     0.0000001608      3.49      4.00      3.25
SRCPARAM L0006390     0.0000001608      3.49      4.00      3.25
SRCPARAM L0006391     0.0000001608      3.49      4.00      3.25
SRCPARAM L0006392     0.0000001608      3.49      4.00      3.25
SRCPARAM L0006393     0.0000001608      3.49      4.00      3.25
SRCPARAM L0006394     0.0000001608      3.49      4.00      3.25
SRCPARAM L0006395     0.0000001608      3.49      4.00      3.25
SRCPARAM L0006396     0.0000001608      3.49      4.00      3.25
SRCPARAM L0006397     0.0000001608      3.49      4.00      3.25
SRCPARAM L0006398     0.0000001608      3.49      4.00      3.25
SRCPARAM L0006399     0.0000001608      3.49      4.00      3.25
SRCPARAM L0006400     0.0000001608      3.49      4.00      3.25
SRCPARAM L0006401     0.0000001608      3.49      4.00      3.25
SRCPARAM L0006402     0.0000001608      3.49      4.00      3.25
SRCPARAM L0006403     0.0000001608      3.49      4.00      3.25
SRCPARAM L0006404     0.0000001608      3.49      4.00      3.25
SRCPARAM L0006405     0.0000001608      3.49      4.00      3.25
SRCPARAM L0006406     0.0000001608      3.49      4.00      3.25
SRCPARAM L0006407     0.0000001608      3.49      4.00      3.25
SRCPARAM L0006408     0.0000001608      3.49      4.00      3.25
SRCPARAM L0006409     0.0000001608      3.49      4.00      3.25
SRCPARAM L0006410     0.0000001608      3.49      4.00      3.25
SRCPARAM L0006411     0.0000001608      3.49      4.00      3.25
SRCPARAM L0006412     0.0000001608      3.49      4.00      3.25
SRCPARAM L0006413     0.0000001608      3.49      4.00      3.25
SRCPARAM L0006414     0.0000001608      3.49      4.00      3.25
SRCPARAM L0006415     0.0000001608      3.49      4.00      3.25
SRCPARAM L0006416     0.0000001608      3.49      4.00      3.25
SRCPARAM L0006417     0.0000001608      3.49      4.00      3.25
SRCPARAM L0006418     0.0000001608      3.49      4.00      3.25
SRCPARAM L0006419     0.0000001608      3.49      4.00      3.25
SRCPARAM L0006420     0.0000001608      3.49      4.00      3.25
SRCPARAM L0006421     0.0000001608      3.49      4.00      3.25
SRCPARAM L0006422     0.0000001608      3.49      4.00      3.25
SRCPARAM L0006423     0.0000001608      3.49      4.00      3.25
SRCPARAM L0006424     0.0000001608      3.49      4.00      3.25
SRCPARAM L0006425     0.0000001608      3.49      4.00      3.25
SRCPARAM L0006426     0.0000001608      3.49      4.00      3.25
SRCPARAM L0006427     0.0000001608      3.49      4.00      3.25
SRCPARAM L0006428     0.0000001608      3.49      4.00      3.25
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   SRCPARAM L0006429     0.0000001608      3.49      4.00      3.25
   SRCPARAM L0006430     0.0000001608      3.49      4.00      3.25
   SRCPARAM L0006431     0.0000001608      3.49      4.00      3.25
   SRCPARAM L0006432     0.0000001608      3.49      4.00      3.25
   SRCPARAM L0006433     0.0000001608      3.49      4.00      3.25
   SRCPARAM L0006434     0.0000001608      3.49      4.00      3.25
   SRCPARAM L0006435     0.0000001608      3.49      4.00      3.25
   SRCPARAM L0006436     0.0000001608      3.49      4.00      3.25
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** LINE VOLUME Source ID = SLINE4
   SRCPARAM L0006437     0.0000000925      3.49      4.00      3.25
   SRCPARAM L0006438     0.0000000925      3.49      4.00      3.25
   SRCPARAM L0006439     0.0000000925      3.49      4.00      3.25
   SRCPARAM L0006440     0.0000000925      3.49      4.00      3.25
   SRCPARAM L0006441     0.0000000925      3.49      4.00      3.25
   SRCPARAM L0006442     0.0000000925      3.49      4.00      3.25
   SRCPARAM L0006443     0.0000000925      3.49      4.00      3.25
   SRCPARAM L0006444     0.0000000925      3.49      4.00      3.25
   SRCPARAM L0006445     0.0000000925      3.49      4.00      3.25
   SRCPARAM L0006446     0.0000000925      3.49      4.00      3.25
   SRCPARAM L0006447     0.0000000925      3.49      4.00      3.25
   SRCPARAM L0006448     0.0000000925      3.49      4.00      3.25
   SRCPARAM L0006449     0.0000000925      3.49      4.00      3.25
   SRCPARAM L0006450     0.0000000925      3.49      4.00      3.25
   SRCPARAM L0006451     0.0000000925      3.49      4.00      3.25
   SRCPARAM L0006452     0.0000000925      3.49      4.00      3.25
   SRCPARAM L0006453     0.0000000925      3.49      4.00      3.25
   SRCPARAM L0006454     0.0000000925      3.49      4.00      3.25
   SRCPARAM L0006455     0.0000000925      3.49      4.00      3.25
   SRCPARAM L0006456     0.0000000925      3.49      4.00      3.25
   SRCPARAM L0006457     0.0000000925      3.49      4.00      3.25
   SRCPARAM L0006458     0.0000000925      3.49      4.00      3.25
   SRCPARAM L0006459     0.0000000925      3.49      4.00      3.25
   SRCPARAM L0006460     0.0000000925      3.49      4.00      3.25
   SRCPARAM L0006461     0.0000000925      3.49      4.00      3.25
   SRCPARAM L0006462     0.0000000925      3.49      4.00      3.25
   SRCPARAM L0006463     0.0000000925      3.49      4.00      3.25
   SRCPARAM L0006464     0.0000000925      3.49      4.00      3.25
   SRCPARAM L0006465     0.0000000925      3.49      4.00      3.25
   SRCPARAM L0006466     0.0000000925      3.49      4.00      3.25
   SRCPARAM L0006467     0.0000000925      3.49      4.00      3.25
   SRCPARAM L0006468     0.0000000925      3.49      4.00      3.25
   SRCPARAM L0006469     0.0000000925      3.49      4.00      3.25
   SRCPARAM L0006470     0.0000000925      3.49      4.00      3.25
   SRCPARAM L0006471     0.0000000925      3.49      4.00      3.25
   SRCPARAM L0006472     0.0000000925      3.49      4.00      3.25
   SRCPARAM L0006473     0.0000000925      3.49      4.00      3.25
   SRCPARAM L0006474     0.0000000925      3.49      4.00      3.25
   SRCPARAM L0006475     0.0000000925      3.49      4.00      3.25
   SRCPARAM L0006476     0.0000000925      3.49      4.00      3.25
   SRCPARAM L0006477     0.0000000925      3.49      4.00      3.25
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SRCPARAM L0006478     0.0000000925      3.49      4.00      3.25
SRCPARAM L0006479     0.0000000925      3.49      4.00      3.25
SRCPARAM L0006480     0.0000000925      3.49      4.00      3.25
SRCPARAM L0006481     0.0000000925      3.49      4.00      3.25
SRCPARAM L0006482     0.0000000925      3.49      4.00      3.25
SRCPARAM L0006483     0.0000000925      3.49      4.00      3.25
SRCPARAM L0006484     0.0000000925      3.49      4.00      3.25
SRCPARAM L0006485     0.0000000925      3.49      4.00      3.25
SRCPARAM L0006486     0.0000000925      3.49      4.00      3.25
SRCPARAM L0006487     0.0000000925      3.49      4.00      3.25
SRCPARAM L0006488     0.0000000925      3.49      4.00      3.25
SRCPARAM L0006489     0.0000000925      3.49      4.00      3.25
SRCPARAM L0006490     0.0000000925      3.49      4.00      3.25
SRCPARAM L0006491     0.0000000925      3.49      4.00      3.25
SRCPARAM L0006492     0.0000000925      3.49      4.00      3.25
SRCPARAM L0006493     0.0000000925      3.49      4.00      3.25
SRCPARAM L0006494     0.0000000925      3.49      4.00      3.25
SRCPARAM L0006495     0.0000000925      3.49      4.00      3.25
SRCPARAM L0006496     0.0000000925      3.49      4.00      3.25
SRCPARAM L0006497     0.0000000925      3.49      4.00      3.25
SRCPARAM L0006498     0.0000000925      3.49      4.00      3.25
SRCPARAM L0006499     0.0000000925      3.49      4.00      3.25
SRCPARAM L0006500     0.0000000925      3.49      4.00      3.25
SRCPARAM L0006501     0.0000000925      3.49      4.00      3.25
SRCPARAM L0006502     0.0000000925      3.49      4.00      3.25
SRCPARAM L0006503     0.0000000925      3.49      4.00      3.25
SRCPARAM L0006504     0.0000000925      3.49      4.00      3.25
SRCPARAM L0006505     0.0000000925      3.49      4.00      3.25
SRCPARAM L0006506     0.0000000925      3.49      4.00      3.25
SRCPARAM L0006507     0.0000000925      3.49      4.00      3.25
SRCPARAM L0006508     0.0000000925      3.49      4.00      3.25
SRCPARAM L0006509     0.0000000925      3.49      4.00      3.25
SRCPARAM L0006510     0.0000000925      3.49      4.00      3.25
SRCPARAM L0006511     0.0000000925      3.49      4.00      3.25
SRCPARAM L0006512     0.0000000925      3.49      4.00      3.25
SRCPARAM L0006513     0.0000000925      3.49      4.00      3.25
SRCPARAM L0006514     0.0000000925      3.49      4.00      3.25
SRCPARAM L0006515     0.0000000925      3.49      4.00      3.25
SRCPARAM L0006516     0.0000000925      3.49      4.00      3.25
SRCPARAM L0006517     0.0000000925      3.49      4.00      3.25
SRCPARAM L0006518     0.0000000925      3.49      4.00      3.25
SRCPARAM L0006519     0.0000000925      3.49      4.00      3.25
SRCPARAM L0006520     0.0000000925      3.49      4.00      3.25
SRCPARAM L0006521     0.0000000925      3.49      4.00      3.25
SRCPARAM L0006522     0.0000000925      3.49      4.00      3.25
SRCPARAM L0006523     0.0000000925      3.49      4.00      3.25
SRCPARAM L0006524     0.0000000925      3.49      4.00      3.25
SRCPARAM L0006525     0.0000000925      3.49      4.00      3.25
SRCPARAM L0006526     0.0000000925      3.49      4.00      3.25
SRCPARAM L0006527     0.0000000925      3.49      4.00      3.25
SRCPARAM L0006528     0.0000000925      3.49      4.00      3.25
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SRCPARAM L0006530     0.0000000925      3.49      4.00      3.25
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SRCPARAM L0006825     0.0000002154      3.49      4.00      3.25
SRCPARAM L0006826     0.0000002154      3.49      4.00      3.25
SRCPARAM L0006827     0.0000002154      3.49      4.00      3.25
SRCPARAM L0006828     0.0000002154      3.49      4.00      3.25
SRCPARAM L0006829     0.0000002154      3.49      4.00      3.25
SRCPARAM L0006830     0.0000002154      3.49      4.00      3.25
SRCPARAM L0006831     0.0000002154      3.49      4.00      3.25
SRCPARAM L0006832     0.0000002154      3.49      4.00      3.25
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SRCPARAM L0006833     0.0000002154      3.49      4.00      3.25
SRCPARAM L0006834     0.0000002154      3.49      4.00      3.25
SRCPARAM L0006835     0.0000002154      3.49      4.00      3.25
SRCPARAM L0006836     0.0000002154      3.49      4.00      3.25
SRCPARAM L0006837     0.0000002154      3.49      4.00      3.25
SRCPARAM L0006838     0.0000002154      3.49      4.00      3.25
SRCPARAM L0006839     0.0000002154      3.49      4.00      3.25
SRCPARAM L0006840     0.0000002154      3.49      4.00      3.25
SRCPARAM L0006841     0.0000002154      3.49      4.00      3.25
SRCPARAM L0006842     0.0000002154      3.49      4.00      3.25
SRCPARAM L0006843     0.0000002154      3.49      4.00      3.25
SRCPARAM L0006844     0.0000002154      3.49      4.00      3.25
SRCPARAM L0006845     0.0000002154      3.49      4.00      3.25
SRCPARAM L0006846     0.0000002154      3.49      4.00      3.25
SRCPARAM L0006847     0.0000002154      3.49      4.00      3.25
SRCPARAM L0006848     0.0000002154      3.49      4.00      3.25
SRCPARAM L0006849     0.0000002154      3.49      4.00      3.25
SRCPARAM L0006850     0.0000002154      3.49      4.00      3.25
SRCPARAM L0006851     0.0000002154      3.49      4.00      3.25
SRCPARAM L0006852     0.0000002154      3.49      4.00      3.25
SRCPARAM L0006853     0.0000002154      3.49      4.00      3.25
SRCPARAM L0006854     0.0000002154      3.49      4.00      3.25
SRCPARAM L0006855     0.0000002154      3.49      4.00      3.25
SRCPARAM L0006856     0.0000002154      3.49      4.00      3.25
SRCPARAM L0006857     0.0000002154      3.49      4.00      3.25
SRCPARAM L0006858     0.0000002154      3.49      4.00      3.25
SRCPARAM L0006859     0.0000002154      3.49      4.00      3.25
SRCPARAM L0006860     0.0000002154      3.49      4.00      3.25
SRCPARAM L0006861     0.0000002154      3.49      4.00      3.25
SRCPARAM L0006862     0.0000002154      3.49      4.00      3.25
SRCPARAM L0006863     0.0000002154      3.49      4.00      3.25
SRCPARAM L0006864     0.0000002154      3.49      4.00      3.25
SRCPARAM L0006865     0.0000002154      3.49      4.00      3.25
SRCPARAM L0006866     0.0000002154      3.49      4.00      3.25
SRCPARAM L0006867     0.0000002154      3.49      4.00      3.25
SRCPARAM L0006868     0.0000002154      3.49      4.00      3.25
SRCPARAM L0006869     0.0000002154      3.49      4.00      3.25
SRCPARAM L0006870     0.0000002154      3.49      4.00      3.25
SRCPARAM L0006871     0.0000002154      3.49      4.00      3.25
SRCPARAM L0006872     0.0000002154      3.49      4.00      3.25
SRCPARAM L0006873     0.0000002154      3.49      4.00      3.25
SRCPARAM L0006874     0.0000002154      3.49      4.00      3.25
SRCPARAM L0006875     0.0000002154      3.49      4.00      3.25
SRCPARAM L0006876     0.0000002154      3.49      4.00      3.25
SRCPARAM L0006877     0.0000002154      3.49      4.00      3.25
SRCPARAM L0006878     0.0000002154      3.49      4.00      3.25
SRCPARAM L0006879     0.0000002154      3.49      4.00      3.25
SRCPARAM L0006880     0.0000002154      3.49      4.00      3.25
SRCPARAM L0006881     0.0000002154      3.49      4.00      3.25
SRCPARAM L0006882     0.0000002154      3.49      4.00      3.25
SRCPARAM L0006883     0.0000002154      3.49      4.00      3.25
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   SRCPARAM L0006884     0.0000002154      3.49      4.00      3.25
   SRCPARAM L0006885     0.0000002154      3.49      4.00      3.25
   SRCPARAM L0006886     0.0000002154      3.49      4.00      3.25
   SRCPARAM L0006887     0.0000002154      3.49      4.00      3.25
   SRCPARAM L0006888     0.0000002154      3.49      4.00      3.25
   SRCPARAM L0006889     0.0000002154      3.49      4.00      3.25
   SRCPARAM L0006890     0.0000002154      3.49      4.00      3.25
   SRCPARAM L0006891     0.0000002154      3.49      4.00      3.25
   SRCPARAM L0006892     0.0000002154      3.49      4.00      3.25
   SRCPARAM L0006893     0.0000002154      3.49      4.00      3.25
   SRCPARAM L0006894     0.0000002154      3.49      4.00      3.25
   SRCPARAM L0006895     0.0000002154      3.49      4.00      3.25
   SRCPARAM L0006896     0.0000002154      3.49      4.00      3.25
   SRCPARAM L0006897     0.0000002154      3.49      4.00      3.25
   SRCPARAM L0006898     0.0000002154      3.49      4.00      3.25
   SRCPARAM L0006899     0.0000002154      3.49      4.00      3.25
   SRCPARAM L0006900     0.0000002154      3.49      4.00      3.25
   SRCPARAM L0006901     0.0000002154      3.49      4.00      3.25
   SRCPARAM L0006902     0.0000002154      3.49      4.00      3.25
   SRCPARAM L0006903     0.0000002154      3.49      4.00      3.25
   SRCPARAM L0006904     0.0000002154      3.49      4.00      3.25
   SRCPARAM L0006905     0.0000002154      3.49      4.00      3.25
   SRCPARAM L0006906     0.0000002154      3.49      4.00      3.25
   SRCPARAM L0006907     0.0000002154      3.49      4.00      3.25
   SRCPARAM L0006908     0.0000002154      3.49      4.00      3.25
   SRCPARAM L0006909     0.0000002154      3.49      4.00      3.25
   SRCPARAM L0006910     0.0000002154      3.49      4.00      3.25
   SRCPARAM L0006911     0.0000002154      3.49      4.00      3.25
   SRCPARAM L0006912     0.0000002154      3.49      4.00      3.25
   SRCPARAM L0006913     0.0000002154      3.49      4.00      3.25
   SRCPARAM L0006914     0.0000002154      3.49      4.00      3.25
   SRCPARAM L0006915     0.0000002154      3.49      4.00      3.25
   SRCPARAM L0006916     0.0000002154      3.49      4.00      3.25
   SRCPARAM L0006917     0.0000002154      3.49      4.00      3.25
   SRCPARAM L0006918     0.0000002154      3.49      4.00      3.25
   SRCPARAM L0006919     0.0000002154      3.49      4.00      3.25
   SRCPARAM L0006920     0.0000002154      3.49      4.00      3.25
   SRCPARAM L0006921     0.0000002154      3.49      4.00      3.25
   SRCPARAM L0006922     0.0000002154      3.49      4.00      3.25
   SRCPARAM L0006923     0.0000002154      3.49      4.00      3.25
   SRCPARAM L0006924     0.0000002154      3.49      4.00      3.25
   SRCPARAM L0006925     0.0000002154      3.49      4.00      3.25
   SRCPARAM L0006926     0.0000002154      3.49      4.00      3.25
   SRCPARAM L0006927     0.0000002154      3.49      4.00      3.25
   SRCPARAM L0006928     0.0000002154      3.49      4.00      3.25
   SRCPARAM L0006929     0.0000002154      3.49      4.00      3.25
   SRCPARAM L0006930     0.0000002154      3.49      4.00      3.25
   SRCPARAM L0006931     0.0000002154      3.49      4.00      3.25
   SRCPARAM L0006932     0.0000002154      3.49      4.00      3.25
   SRCPARAM L0006933     0.0000002154      3.49      4.00      3.25
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** LINE VOLUME Source ID = SLINE6
   SRCPARAM L0006934     0.0000001624      3.49      4.00      3.25
   SRCPARAM L0006935     0.0000001624      3.49      4.00      3.25
   SRCPARAM L0006936     0.0000001624      3.49      4.00      3.25
   SRCPARAM L0006937     0.0000001624      3.49      4.00      3.25
   SRCPARAM L0006938     0.0000001624      3.49      4.00      3.25
   SRCPARAM L0006939     0.0000001624      3.49      4.00      3.25
   SRCPARAM L0006940     0.0000001624      3.49      4.00      3.25
   SRCPARAM L0006941     0.0000001624      3.49      4.00      3.25
   SRCPARAM L0006942     0.0000001624      3.49      4.00      3.25
   SRCPARAM L0006943     0.0000001624      3.49      4.00      3.25
   SRCPARAM L0006944     0.0000001624      3.49      4.00      3.25
   SRCPARAM L0006945     0.0000001624      3.49      4.00      3.25
   SRCPARAM L0006946     0.0000001624      3.49      4.00      3.25
   SRCPARAM L0006947     0.0000001624      3.49      4.00      3.25
   SRCPARAM L0006948     0.0000001624      3.49      4.00      3.25
   SRCPARAM L0006949     0.0000001624      3.49      4.00      3.25
   SRCPARAM L0006950     0.0000001624      3.49      4.00      3.25
   SRCPARAM L0006951     0.0000001624      3.49      4.00      3.25
   SRCPARAM L0006952     0.0000001624      3.49      4.00      3.25
   SRCPARAM L0006953     0.0000001624      3.49      4.00      3.25
   SRCPARAM L0006954     0.0000001624      3.49      4.00      3.25
   SRCPARAM L0006955     0.0000001624      3.49      4.00      3.25
   SRCPARAM L0006956     0.0000001624      3.49      4.00      3.25
   SRCPARAM L0006957     0.0000001624      3.49      4.00      3.25
   SRCPARAM L0006958     0.0000001624      3.49      4.00      3.25
   SRCPARAM L0006959     0.0000001624      3.49      4.00      3.25
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** LINE VOLUME Source ID = SLINE7
   SRCPARAM L0006960     0.000000242       3.49      4.00      3.25
   SRCPARAM L0006961     0.000000242       3.49      4.00      3.25
   SRCPARAM L0006962     0.000000242       3.49      4.00      3.25
   SRCPARAM L0006963     0.000000242       3.49      4.00      3.25
   SRCPARAM L0006964     0.000000242       3.49      4.00      3.25
   SRCPARAM L0006965     0.000000242       3.49      4.00      3.25
   SRCPARAM L0006966     0.000000242       3.49      4.00      3.25
   SRCPARAM L0006967     0.000000242       3.49      4.00      3.25
   SRCPARAM L0006968     0.000000242       3.49      4.00      3.25
   SRCPARAM L0006969     0.000000242       3.49      4.00      3.25
   SRCPARAM L0006970     0.000000242       3.49      4.00      3.25
   SRCPARAM L0006971     0.000000242       3.49      4.00      3.25
   SRCPARAM L0006972     0.000000242       3.49      4.00      3.25
   SRCPARAM L0006973     0.000000242       3.49      4.00      3.25
   SRCPARAM L0006974     0.000000242       3.49      4.00      3.25
   SRCPARAM L0006975     0.000000242       3.49      4.00      3.25
   SRCPARAM L0006976     0.000000242       3.49      4.00      3.25
   SRCPARAM L0006977     0.000000242       3.49      4.00      3.25
   SRCPARAM L0006978     0.000000242       3.49      4.00      3.25
   SRCPARAM L0006979     0.000000242       3.49      4.00      3.25
   SRCPARAM L0006980     0.000000242       3.49      4.00      3.25
   SRCPARAM L0006981     0.000000242       3.49      4.00      3.25
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SRCPARAM L0006982     0.000000242      3.49      4.00      3.25
SRCPARAM L0006983     0.000000242      3.49      4.00      3.25
SRCPARAM L0006984     0.000000242      3.49      4.00      3.25
SRCPARAM L0006985     0.000000242      3.49      4.00      3.25
SRCPARAM L0006986     0.000000242      3.49      4.00      3.25
SRCPARAM L0006987     0.000000242      3.49      4.00      3.25
SRCPARAM L0006988     0.000000242      3.49      4.00      3.25
SRCPARAM L0006989     0.000000242      3.49      4.00      3.25
SRCPARAM L0006990     0.000000242      3.49      4.00      3.25
SRCPARAM L0006991     0.000000242      3.49      4.00      3.25
SRCPARAM L0006992     0.000000242      3.49      4.00      3.25
SRCPARAM L0006993     0.000000242      3.49      4.00      3.25
SRCPARAM L0006994     0.000000242      3.49      4.00      3.25
SRCPARAM L0006995     0.000000242      3.49      4.00      3.25
SRCPARAM L0006996     0.000000242      3.49      4.00      3.25
SRCPARAM L0006997     0.000000242      3.49      4.00      3.25
SRCPARAM L0006998     0.000000242      3.49      4.00      3.25
SRCPARAM L0006999     0.000000242      3.49      4.00      3.25
SRCPARAM L0007000     0.000000242      3.49      4.00      3.25
SRCPARAM L0007001     0.000000242      3.49      4.00      3.25
SRCPARAM L0007002     0.000000242      3.49      4.00      3.25
SRCPARAM L0007003     0.000000242      3.49      4.00      3.25
SRCPARAM L0007004     0.000000242      3.49      4.00      3.25
SRCPARAM L0007005     0.000000242      3.49      4.00      3.25
SRCPARAM L0007006     0.000000242      3.49      4.00      3.25
SRCPARAM L0007007     0.000000242      3.49      4.00      3.25
SRCPARAM L0007008     0.000000242      3.49      4.00      3.25
SRCPARAM L0007009     0.000000242      3.49      4.00      3.25
SRCPARAM L0007010     0.000000242      3.49      4.00      3.25
SRCPARAM L0007011     0.000000242      3.49      4.00      3.25
SRCPARAM L0007012     0.000000242      3.49      4.00      3.25
SRCPARAM L0007013     0.000000242      3.49      4.00      3.25
SRCPARAM L0007014     0.000000242      3.49      4.00      3.25
SRCPARAM L0007015     0.000000242      3.49      4.00      3.25
SRCPARAM L0007016     0.000000242      3.49      4.00      3.25
SRCPARAM L0007017     0.000000242      3.49      4.00      3.25
SRCPARAM L0007018     0.000000242      3.49      4.00      3.25
SRCPARAM L0007019     0.000000242      3.49      4.00      3.25
SRCPARAM L0007020     0.000000242      3.49      4.00      3.25
SRCPARAM L0007021     0.000000242      3.49      4.00      3.25
SRCPARAM L0007022     0.000000242      3.49      4.00      3.25
SRCPARAM L0007023     0.000000242      3.49      4.00      3.25
SRCPARAM L0007024     0.000000242      3.49      4.00      3.25
SRCPARAM L0007025     0.000000242      3.49      4.00      3.25
SRCPARAM L0007026     0.000000242      3.49      4.00      3.25
SRCPARAM L0007027     0.000000242      3.49      4.00      3.25
SRCPARAM L0007028     0.000000242      3.49      4.00      3.25
SRCPARAM L0007029     0.000000242      3.49      4.00      3.25
SRCPARAM L0007030     0.000000242      3.49      4.00      3.25
SRCPARAM L0007031     0.000000242      3.49      4.00      3.25
SRCPARAM L0007032     0.000000242      3.49      4.00      3.25
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   SRCPARAM L0007033     0.000000242      3.49      4.00      3.25
   SRCPARAM L0007034     0.000000242      3.49      4.00      3.25
   SRCPARAM L0007035     0.000000242      3.49      4.00      3.25
   SRCPARAM L0007036     0.000000242      3.49      4.00      3.25
   SRCPARAM L0007037     0.000000242      3.49      4.00      3.25
   SRCPARAM L0007038     0.000000242      3.49      4.00      3.25
   SRCPARAM L0007039     0.000000242      3.49      4.00      3.25
   SRCPARAM L0007040     0.000000242      3.49      4.00      3.25
   SRCPARAM L0007041     0.000000242      3.49      4.00      3.25
   SRCPARAM L0007042     0.000000242      3.49      4.00      3.25
   SRCPARAM L0007043     0.000000242      3.49      4.00      3.25
   SRCPARAM L0007044     0.000000242      3.49      4.00      3.25
   SRCPARAM L0007045     0.000000242      3.49      4.00      3.25
   SRCPARAM L0007046     0.000000242      3.49      4.00      3.25
   SRCPARAM L0007047     0.000000242      3.49      4.00      3.25
   SRCPARAM L0007048     0.000000242      3.49      4.00      3.25
   SRCPARAM L0007049     0.000000242      3.49      4.00      3.25
   SRCPARAM L0007050     0.000000242      3.49      4.00      3.25
   SRCPARAM L0007051     0.000000242      3.49      4.00      3.25
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** LINE VOLUME Source ID = SLINE8
   SRCPARAM L0007052     0.00000007985      3.49      4.00      3.25
   SRCPARAM L0007053     0.00000007985      3.49      4.00      3.25
   SRCPARAM L0007054     0.00000007985      3.49      4.00      3.25
   SRCPARAM L0007055     0.00000007985      3.49      4.00      3.25
   SRCPARAM L0007056     0.00000007985      3.49      4.00      3.25
   SRCPARAM L0007057     0.00000007985      3.49      4.00      3.25
   SRCPARAM L0007058     0.00000007985      3.49      4.00      3.25
   SRCPARAM L0007059     0.00000007985      3.49      4.00      3.25
   SRCPARAM L0007060     0.00000007985      3.49      4.00      3.25
   SRCPARAM L0007061     0.00000007985      3.49      4.00      3.25
   SRCPARAM L0007062     0.00000007985      3.49      4.00      3.25
   SRCPARAM L0007063     0.00000007985      3.49      4.00      3.25
   SRCPARAM L0007064     0.00000007985      3.49      4.00      3.25
   SRCPARAM L0007065     0.00000007985      3.49      4.00      3.25
   SRCPARAM L0007066     0.00000007985      3.49      4.00      3.25
   SRCPARAM L0007067     0.00000007985      3.49      4.00      3.25
   SRCPARAM L0007068     0.00000007985      3.49      4.00      3.25
   SRCPARAM L0007069     0.00000007985      3.49      4.00      3.25
   SRCPARAM L0007070     0.00000007985      3.49      4.00      3.25
   SRCPARAM L0007071     0.00000007985      3.49      4.00      3.25
   SRCPARAM L0007072     0.00000007985      3.49      4.00      3.25
   SRCPARAM L0007073     0.00000007985      3.49      4.00      3.25
   SRCPARAM L0007074     0.00000007985      3.49      4.00      3.25
   SRCPARAM L0007075     0.00000007985      3.49      4.00      3.25
   SRCPARAM L0007076     0.00000007985      3.49      4.00      3.25
   SRCPARAM L0007077     0.00000007985      3.49      4.00      3.25
   SRCPARAM L0007078     0.00000007985      3.49      4.00      3.25
   SRCPARAM L0007079     0.00000007985      3.49      4.00      3.25
   SRCPARAM L0007080     0.00000007985      3.49      4.00      3.25
   SRCPARAM L0007081     0.00000007985      3.49      4.00      3.25
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SRCPARAM L0007082     0.00000007985      3.49      4.00      3.25
SRCPARAM L0007083     0.00000007985      3.49      4.00      3.25
SRCPARAM L0007084     0.00000007985      3.49      4.00      3.25
SRCPARAM L0007085     0.00000007985      3.49      4.00      3.25
SRCPARAM L0007086     0.00000007985      3.49      4.00      3.25
SRCPARAM L0007087     0.00000007985      3.49      4.00      3.25
SRCPARAM L0007088     0.00000007985      3.49      4.00      3.25
SRCPARAM L0007089     0.00000007985      3.49      4.00      3.25
SRCPARAM L0007090     0.00000007985      3.49      4.00      3.25
SRCPARAM L0007091     0.00000007985      3.49      4.00      3.25
SRCPARAM L0007092     0.00000007985      3.49      4.00      3.25
SRCPARAM L0007093     0.00000007985      3.49      4.00      3.25
SRCPARAM L0007094     0.00000007985      3.49      4.00      3.25
SRCPARAM L0007095     0.00000007985      3.49      4.00      3.25
SRCPARAM L0007096     0.00000007985      3.49      4.00      3.25
SRCPARAM L0007097     0.00000007985      3.49      4.00      3.25
SRCPARAM L0007098     0.00000007985      3.49      4.00      3.25
SRCPARAM L0007099     0.00000007985      3.49      4.00      3.25
SRCPARAM L0007100     0.00000007985      3.49      4.00      3.25
SRCPARAM L0007101     0.00000007985      3.49      4.00      3.25
SRCPARAM L0007102     0.00000007985      3.49      4.00      3.25
SRCPARAM L0007103     0.00000007985      3.49      4.00      3.25
SRCPARAM L0007104     0.00000007985      3.49      4.00      3.25
SRCPARAM L0007105     0.00000007985      3.49      4.00      3.25
SRCPARAM L0007106     0.00000007985      3.49      4.00      3.25
SRCPARAM L0007107     0.00000007985      3.49      4.00      3.25
SRCPARAM L0007108     0.00000007985      3.49      4.00      3.25
SRCPARAM L0007109     0.00000007985      3.49      4.00      3.25
SRCPARAM L0007110     0.00000007985      3.49      4.00      3.25
SRCPARAM L0007111     0.00000007985      3.49      4.00      3.25
SRCPARAM L0007112     0.00000007985      3.49      4.00      3.25
SRCPARAM L0007113     0.00000007985      3.49      4.00      3.25
SRCPARAM L0007114     0.00000007985      3.49      4.00      3.25
SRCPARAM L0007115     0.00000007985      3.49      4.00      3.25
SRCPARAM L0007116     0.00000007985      3.49      4.00      3.25
SRCPARAM L0007117     0.00000007985      3.49      4.00      3.25
SRCPARAM L0007118     0.00000007985      3.49      4.00      3.25
SRCPARAM L0007119     0.00000007985      3.49      4.00      3.25
SRCPARAM L0007120     0.00000007985      3.49      4.00      3.25
SRCPARAM L0007121     0.00000007985      3.49      4.00      3.25
SRCPARAM L0007122     0.00000007985      3.49      4.00      3.25
SRCPARAM L0007123     0.00000007985      3.49      4.00      3.25
SRCPARAM L0007124     0.00000007985      3.49      4.00      3.25
SRCPARAM L0007125     0.00000007985      3.49      4.00      3.25
SRCPARAM L0007126     0.00000007985      3.49      4.00      3.25
SRCPARAM L0007127     0.00000007985      3.49      4.00      3.25
SRCPARAM L0007128     0.00000007985      3.49      4.00      3.25
SRCPARAM L0007129     0.00000007985      3.49      4.00      3.25
SRCPARAM L0007130     0.00000007985      3.49      4.00      3.25
SRCPARAM L0007131     0.00000007985      3.49      4.00      3.25
SRCPARAM L0007132     0.00000007985      3.49      4.00      3.25
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   SRCPARAM L0007133     0.00000007985      3.49      4.00      3.25
   SRCPARAM L0007134     0.00000007985      3.49      4.00      3.25
   SRCPARAM L0007135     0.00000007985      3.49      4.00      3.25
   SRCPARAM L0007136     0.00000007985      3.49      4.00      3.25
   SRCPARAM L0007137     0.00000007985      3.49      4.00      3.25
   SRCPARAM L0007138     0.00000007985      3.49      4.00      3.25
   SRCPARAM L0007139     0.00000007985      3.49      4.00      3.25
   SRCPARAM L0007140     0.00000007985      3.49      4.00      3.25
   SRCPARAM L0007141     0.00000007985      3.49      4.00      3.25
   SRCPARAM L0007142     0.00000007985      3.49      4.00      3.25
   SRCPARAM L0007143     0.00000007985      3.49      4.00      3.25
   SRCPARAM L0007144     0.00000007985      3.49      4.00      3.25
   SRCPARAM L0007145     0.00000007985      3.49      4.00      3.25
   SRCPARAM L0007146     0.00000007985      3.49      4.00      3.25
   SRCPARAM L0007147     0.00000007985      3.49      4.00      3.25
   SRCPARAM L0007148     0.00000007985      3.49      4.00      3.25
   SRCPARAM L0007149     0.00000007985      3.49      4.00      3.25
   SRCPARAM L0007150     0.00000007985      3.49      4.00      3.25
   SRCPARAM L0007151     0.00000007985      3.49      4.00      3.25
   SRCPARAM L0007152     0.00000007985      3.49      4.00      3.25
   SRCPARAM L0007153     0.00000007985      3.49      4.00      3.25
   SRCPARAM L0007154     0.00000007985      3.49      4.00      3.25
   SRCPARAM L0007155     0.00000007985      3.49      4.00      3.25
   SRCPARAM L0007156     0.00000007985      3.49      4.00      3.25
   SRCPARAM L0007157     0.00000007985      3.49      4.00      3.25
   SRCPARAM L0007158     0.00000007985      3.49      4.00      3.25
   SRCPARAM L0007159     0.00000007985      3.49      4.00      3.25
   SRCPARAM L0007160     0.00000007985      3.49      4.00      3.25
   SRCPARAM L0007161     0.00000007985      3.49      4.00      3.25
   SRCPARAM L0007162     0.00000007985      3.49      4.00      3.25
   SRCPARAM L0007163     0.00000007985      3.49      4.00      3.25
   SRCPARAM L0007164     0.00000007985      3.49      4.00      3.25
   SRCPARAM L0007165     0.00000007985      3.49      4.00      3.25
   SRCPARAM L0007166     0.00000007985      3.49      4.00      3.25
   SRCPARAM L0007167     0.00000007985      3.49      4.00      3.25
   SRCPARAM L0007168     0.00000007985      3.49      4.00      3.25
   SRCPARAM L0007169     0.00000007985      3.49      4.00      3.25
   SRCPARAM L0007170     0.00000007985      3.49      4.00      3.25
   SRCPARAM L0007171     0.00000007985      3.49      4.00      3.25
   SRCPARAM L0007172     0.00000007985      3.49      4.00      3.25
   SRCPARAM L0007173     0.00000007985      3.49      4.00      3.25
   SRCPARAM L0007174     0.00000007985      3.49      4.00      3.25
   SRCPARAM L0007175     0.00000007985      3.49      4.00      3.25
   SRCPARAM L0007176     0.00000007985      3.49      4.00      3.25
   SRCPARAM L0007177     0.00000007985      3.49      4.00      3.25
   SRCPARAM L0007178     0.00000007985      3.49      4.00      3.25
   SRCPARAM L0007179     0.00000007985      3.49      4.00      3.25
   SRCPARAM L0007180     0.00000007985      3.49      4.00      3.25
   SRCPARAM L0007181     0.00000007985      3.49      4.00      3.25
   SRCPARAM L0007182     0.00000007985      3.49      4.00      3.25
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** LINE VOLUME Source ID = SLINE9
   SRCPARAM L0002988     0.0000008151      3.49      4.00      3.25
   SRCPARAM L0002989     0.0000008151      3.49      4.00      3.25
   SRCPARAM L0002990     0.0000008151      3.49      4.00      3.25
   SRCPARAM L0002991     0.0000008151      3.49      4.00      3.25
   SRCPARAM L0002992     0.0000008151      3.49      4.00      3.25
   SRCPARAM L0002993     0.0000008151      3.49      4.00      3.25
   SRCPARAM L0002994     0.0000008151      3.49      4.00      3.25
   SRCPARAM L0002995     0.0000008151      3.49      4.00      3.25
   SRCPARAM L0002996     0.0000008151      3.49      4.00      3.25
   SRCPARAM L0002997     0.0000008151      3.49      4.00      3.25
   SRCPARAM L0002998     0.0000008151      3.49      4.00      3.25
   SRCPARAM L0002999     0.0000008151      3.49      4.00      3.25
   SRCPARAM L0003000     0.0000008151      3.49      4.00      3.25
   SRCPARAM L0003001     0.0000008151      3.49      4.00      3.25
   SRCPARAM L0003002     0.0000008151      3.49      4.00      3.25
   SRCPARAM L0003003     0.0000008151      3.49      4.00      3.25
   SRCPARAM L0003004     0.0000008151      3.49      4.00      3.25
   SRCPARAM L0003005     0.0000008151      3.49      4.00      3.25
   SRCPARAM L0003006     0.0000008151      3.49      4.00      3.25
   SRCPARAM L0003007     0.0000008151      3.49      4.00      3.25
   SRCPARAM L0003008     0.0000008151      3.49      4.00      3.25
   SRCPARAM L0003009     0.0000008151      3.49      4.00      3.25
   SRCPARAM L0003010     0.0000008151      3.49      4.00      3.25
   SRCPARAM L0003011     0.0000008151      3.49      4.00      3.25
   SRCPARAM L0003012     0.0000008151      3.49      4.00      3.25
   SRCPARAM L0003013     0.0000008151      3.49      4.00      3.25
   SRCPARAM L0003014     0.0000008151      3.49      4.00      3.25
   SRCPARAM L0003015     0.0000008151      3.49      4.00      3.25
   SRCPARAM L0003016     0.0000008151      3.49      4.00      3.25
   SRCPARAM L0003017     0.0000008151      3.49      4.00      3.25
   SRCPARAM L0003018     0.0000008151      3.49      4.00      3.25
   SRCPARAM L0003019     0.0000008151      3.49      4.00      3.25
   SRCPARAM L0003020     0.0000008151      3.49      4.00      3.25
   SRCPARAM L0003021     0.0000008151      3.49      4.00      3.25
   SRCPARAM L0003022     0.0000008151      3.49      4.00      3.25
   SRCPARAM L0003023     0.0000008151      3.49      4.00      3.25
   SRCPARAM L0003024     0.0000008151      3.49      4.00      3.25
   SRCPARAM L0003025     0.0000008151      3.49      4.00      3.25
   SRCPARAM L0003026     0.0000008151      3.49      4.00      3.25
   SRCPARAM L0003027     0.0000008151      3.49      4.00      3.25
   SRCPARAM L0003028     0.0000008151      3.49      4.00      3.25
   SRCPARAM L0003029     0.0000008151      3.49      4.00      3.25
   SRCPARAM L0003030     0.0000008151      3.49      4.00      3.25
   SRCPARAM L0003031     0.0000008151      3.49      4.00      3.25
   SRCPARAM L0003032     0.0000008151      3.49      4.00      3.25
   SRCPARAM L0003033     0.0000008151      3.49      4.00      3.25
   SRCPARAM L0003034     0.0000008151      3.49      4.00      3.25
   SRCPARAM L0003035     0.0000008151      3.49      4.00      3.25
   SRCPARAM L0003036     0.0000008151      3.49      4.00      3.25
   SRCPARAM L0003037     0.0000008151      3.49      4.00      3.25
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   SRCPARAM L0003038     0.0000008151      3.49      4.00      3.25
   SRCPARAM L0003039     0.0000008151      3.49      4.00      3.25
   SRCPARAM L0003040     0.0000008151      3.49      4.00      3.25
   SRCPARAM L0003041     0.0000008151      3.49      4.00      3.25
   SRCPARAM L0003042     0.0000008151      3.49      4.00      3.25
   SRCPARAM L0003043     0.0000008151      3.49      4.00      3.25
   SRCPARAM L0003044     0.0000008151      3.49      4.00      3.25
   SRCPARAM L0003045     0.0000008151      3.49      4.00      3.25
   SRCPARAM L0003046     0.0000008151      3.49      4.00      3.25
   SRCPARAM L0003047     0.0000008151      3.49      4.00      3.25
   SRCPARAM L0003048     0.0000008151      3.49      4.00      3.25
   SRCPARAM L0003049     0.0000008151      3.49      4.00      3.25
   SRCPARAM L0003050     0.0000008151      3.49      4.00      3.25
   SRCPARAM L0003051     0.0000008151      3.49      4.00      3.25
   SRCPARAM L0003052     0.0000008151      3.49      4.00      3.25
   SRCPARAM L0003053     0.0000008151      3.49      4.00      3.25
   SRCPARAM L0003054     0.0000008151      3.49      4.00      3.25
   SRCPARAM L0003055     0.0000008151      3.49      4.00      3.25
   SRCPARAM L0003056     0.0000008151      3.49      4.00      3.25
   SRCPARAM L0003057     0.0000008151      3.49      4.00      3.25
   SRCPARAM L0003058     0.0000008151      3.49      4.00      3.25
   SRCPARAM L0003059     0.0000008151      3.49      4.00      3.25
   SRCPARAM L0003060     0.0000008151      3.49      4.00      3.25
   SRCPARAM L0003061     0.0000008151      3.49      4.00      3.25
   SRCPARAM L0003062     0.0000008151      3.49      4.00      3.25
   SRCPARAM L0003063     0.0000008151      3.49      4.00      3.25
   SRCPARAM L0003064     0.0000008151      3.49      4.00      3.25
   SRCPARAM L0003065     0.0000008151      3.49      4.00      3.25
   SRCPARAM L0003066     0.0000008151      3.49      4.00      3.25
   SRCPARAM L0003067     0.0000008151      3.49      4.00      3.25
   SRCPARAM L0003068     0.0000008151      3.49      4.00      3.25
   SRCPARAM L0003069     0.0000008151      3.49      4.00      3.25
   SRCPARAM L0003070     0.0000008151      3.49      4.00      3.25
   SRCPARAM L0003071     0.0000008151      3.49      4.00      3.25
   SRCPARAM L0003072     0.0000008151      3.49      4.00      3.25
   SRCPARAM L0003073     0.0000008151      3.49      4.00      3.25
   SRCPARAM L0003074     0.0000008151      3.49      4.00      3.25
** ----------------------------------------------------------------
** LINE VOLUME Source ID = SLINE10
   SRCPARAM L0005410     0.0000003447      3.49      4.00      3.25
   SRCPARAM L0005411     0.0000003447      3.49      4.00      3.25
   SRCPARAM L0005412     0.0000003447      3.49      4.00      3.25
   SRCPARAM L0005413     0.0000003447      3.49      4.00      3.25
   SRCPARAM L0005414     0.0000003447      3.49      4.00      3.25
   SRCPARAM L0005415     0.0000003447      3.49      4.00      3.25
   SRCPARAM L0005416     0.0000003447      3.49      4.00      3.25
   SRCPARAM L0005417     0.0000003447      3.49      4.00      3.25
   SRCPARAM L0005418     0.0000003447      3.49      4.00      3.25
   SRCPARAM L0005419     0.0000003447      3.49      4.00      3.25
   SRCPARAM L0005420     0.0000003447      3.49      4.00      3.25
   SRCPARAM L0005421     0.0000003447      3.49      4.00      3.25
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   SRCPARAM L0005422     0.0000003447      3.49      4.00      3.25
   SRCPARAM L0005423     0.0000003447      3.49      4.00      3.25
   SRCPARAM L0005424     0.0000003447      3.49      4.00      3.25
   SRCPARAM L0005425     0.0000003447      3.49      4.00      3.25
   SRCPARAM L0005426     0.0000003447      3.49      4.00      3.25
   SRCPARAM L0005427     0.0000003447      3.49      4.00      3.25
   SRCPARAM L0005428     0.0000003447      3.49      4.00      3.25
   SRCPARAM L0005429     0.0000003447      3.49      4.00      3.25
   SRCPARAM L0005430     0.0000003447      3.49      4.00      3.25
   SRCPARAM L0005431     0.0000003447      3.49      4.00      3.25
** ------------------------------------------------------------------
** LINE VOLUME Source ID = SLINE11
   SRCPARAM L0005432     0.000000465      3.49      4.00      3.25
   SRCPARAM L0005433     0.000000465      3.49      4.00      3.25
   SRCPARAM L0005434     0.000000465      3.49      4.00      3.25
   SRCPARAM L0005435     0.000000465      3.49      4.00      3.25
   SRCPARAM L0005436     0.000000465      3.49      4.00      3.25
   SRCPARAM L0005437     0.000000465      3.49      4.00      3.25
   SRCPARAM L0005438     0.000000465      3.49      4.00      3.25
   SRCPARAM L0005439     0.000000465      3.49      4.00      3.25
   SRCPARAM L0005440     0.000000465      3.49      4.00      3.25
   SRCPARAM L0005441     0.000000465      3.49      4.00      3.25
   SRCPARAM L0005442     0.000000465      3.49      4.00      3.25
   SRCPARAM L0005443     0.000000465      3.49      4.00      3.25
   SRCPARAM L0005444     0.000000465      3.49      4.00      3.25
   SRCPARAM L0005445     0.000000465      3.49      4.00      3.25
   SRCPARAM L0005446     0.000000465      3.49      4.00      3.25
   SRCPARAM L0005447     0.000000465      3.49      4.00      3.25
   SRCPARAM L0005448     0.000000465      3.49      4.00      3.25
   SRCPARAM L0005449     0.000000465      3.49      4.00      3.25
   SRCPARAM L0005450     0.000000465      3.49      4.00      3.25
   SRCPARAM L0005451     0.000000465      3.49      4.00      3.25
   SRCPARAM L0005452     0.000000465      3.49      4.00      3.25
   SRCPARAM L0005453     0.000000465      3.49      4.00      3.25
   SRCPARAM L0005454     0.000000465      3.49      4.00      3.25
   SRCPARAM L0005455     0.000000465      3.49      4.00      3.25
   SRCPARAM L0005456     0.000000465      3.49      4.00      3.25
   SRCPARAM L0005457     0.000000465      3.49      4.00      3.25
   SRCPARAM L0005458     0.000000465      3.49      4.00      3.25
   SRCPARAM L0005459     0.000000465      3.49      4.00      3.25
   SRCPARAM L0005460     0.000000465      3.49      4.00      3.25
   SRCPARAM L0005461     0.000000465      3.49      4.00      3.25
   SRCPARAM L0005462     0.000000465      3.49      4.00      3.25
   SRCPARAM L0005463     0.000000465      3.49      4.00      3.25
   SRCPARAM L0005464     0.000000465      3.49      4.00      3.25
   SRCPARAM L0005465     0.000000465      3.49      4.00      3.25
   SRCPARAM L0005466     0.000000465      3.49      4.00      3.25
   SRCPARAM L0005467     0.000000465      3.49      4.00      3.25
   SRCPARAM L0005468     0.000000465      3.49      4.00      3.25
   SRCPARAM L0005469     0.000000465      3.49      4.00      3.25
   SRCPARAM L0005470     0.000000465      3.49      4.00      3.25
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   SRCPARAM L0005471     0.000000465      3.49      4.00      3.25
   SRCPARAM L0005472     0.000000465      3.49      4.00      3.25
   SRCPARAM L0005473     0.000000465      3.49      4.00      3.25
   SRCPARAM L0005474     0.000000465      3.49      4.00      3.25
   SRCPARAM L0005475     0.000000465      3.49      4.00      3.25
   SRCPARAM L0005476     0.000000465      3.49      4.00      3.25
   SRCPARAM L0005477     0.000000465      3.49      4.00      3.25
   SRCPARAM L0005478     0.000000465      3.49      4.00      3.25
   SRCPARAM L0005479     0.000000465      3.49      4.00      3.25
   SRCPARAM L0005480     0.000000465      3.49      4.00      3.25
   SRCPARAM L0005481     0.000000465      3.49      4.00      3.25
   SRCPARAM L0005482     0.000000465      3.49      4.00      3.25
   SRCPARAM L0005483     0.000000465      3.49      4.00      3.25
   SRCPARAM L0005484     0.000000465      3.49      4.00      3.25
   SRCPARAM L0005485     0.000000465      3.49      4.00      3.25
   SRCPARAM L0005486     0.000000465      3.49      4.00      3.25
   SRCPARAM L0005487     0.000000465      3.49      4.00      3.25
   SRCPARAM L0005488     0.000000465      3.49      4.00      3.25
   SRCPARAM L0005489     0.000000465      3.49      4.00      3.25
   SRCPARAM L0005490     0.000000465      3.49      4.00      3.25
   SRCPARAM L0005491     0.000000465      3.49      4.00      3.25
   SRCPARAM L0005492     0.000000465      3.49      4.00      3.25
   SRCPARAM L0005493     0.000000465      3.49      4.00      3.25
   SRCPARAM L0005494     0.000000465      3.49      4.00      3.25
   SRCPARAM L0005495     0.000000465      3.49      4.00      3.25
   SRCPARAM L0005496     0.000000465      3.49      4.00      3.25
   SRCPARAM L0005497     0.000000465      3.49      4.00      3.25
   SRCPARAM L0005498     0.000000465      3.49      4.00      3.25
   SRCPARAM L0005499     0.000000465      3.49      4.00      3.25
   SRCPARAM L0005500     0.000000465      3.49      4.00      3.25
   SRCPARAM L0005501     0.000000465      3.49      4.00      3.25
   SRCPARAM L0005502     0.000000465      3.49      4.00      3.25
   SRCPARAM L0005503     0.000000465      3.49      4.00      3.25
   SRCPARAM L0005504     0.000000465      3.49      4.00      3.25
   SRCPARAM L0005505     0.000000465      3.49      4.00      3.25
   SRCPARAM L0005506     0.000000465      3.49      4.00      3.25
   SRCPARAM L0005507     0.000000465      3.49      4.00      3.25
** ----------------------------------------------------------------
** LINE VOLUME Source ID = SLINE12
   SRCPARAM L0005508     0.000002098      3.49      4.00      3.25
   SRCPARAM L0005509     0.000002098      3.49      4.00      3.25
   SRCPARAM L0005510     0.000002098      3.49      4.00      3.25
   SRCPARAM L0005511     0.000002098      3.49      4.00      3.25
   SRCPARAM L0005512     0.000002098      3.49      4.00      3.25
   SRCPARAM L0005513     0.000002098      3.49      4.00      3.25
   SRCPARAM L0005514     0.000002098      3.49      4.00      3.25
   SRCPARAM L0005515     0.000002098      3.49      4.00      3.25
   SRCPARAM L0005516     0.000002098      3.49      4.00      3.25
   SRCPARAM L0005517     0.000002098      3.49      4.00      3.25
   SRCPARAM L0005518     0.000002098      3.49      4.00      3.25
   SRCPARAM L0005519     0.000002098      3.49      4.00      3.25
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   SRCPARAM L0005520     0.000002098      3.49      4.00      3.25
   SRCPARAM L0005521     0.000002098      3.49      4.00      3.25
   SRCPARAM L0005522     0.000002098      3.49      4.00      3.25
   SRCPARAM L0005523     0.000002098      3.49      4.00      3.25
   SRCPARAM L0005524     0.000002098      3.49      4.00      3.25
   SRCPARAM L0005525     0.000002098      3.49      4.00      3.25
   SRCPARAM L0005526     0.000002098      3.49      4.00      3.25
   SRCPARAM L0005527     0.000002098      3.49      4.00      3.25
   SRCPARAM L0005528     0.000002098      3.49      4.00      3.25
   SRCPARAM L0005529     0.000002098      3.49      4.00      3.25
   SRCPARAM L0005530     0.000002098      3.49      4.00      3.25
   SRCPARAM L0005531     0.000002098      3.49      4.00      3.25
   SRCPARAM L0005532     0.000002098      3.49      4.00      3.25
   SRCPARAM L0005533     0.000002098      3.49      4.00      3.25
   SRCPARAM L0005534     0.000002098      3.49      4.00      3.25
   SRCPARAM L0005535     0.000002098      3.49      4.00      3.25
   SRCPARAM L0005536     0.000002098      3.49      4.00      3.25
   SRCPARAM L0005537     0.000002098      3.49      4.00      3.25
   SRCPARAM L0005538     0.000002098      3.49      4.00      3.25
   SRCPARAM L0005539     0.000002098      3.49      4.00      3.25
   SRCPARAM L0005540     0.000002098      3.49      4.00      3.25
   SRCPARAM L0005541     0.000002098      3.49      4.00      3.25
   SRCPARAM L0005542     0.000002098      3.49      4.00      3.25
   SRCPARAM L0005543     0.000002098      3.49      4.00      3.25
   SRCPARAM L0005544     0.000002098      3.49      4.00      3.25
   SRCPARAM L0005545     0.000002098      3.49      4.00      3.25
   SRCPARAM L0005546     0.000002098      3.49      4.00      3.25
   SRCPARAM L0005547     0.000002098      3.49      4.00      3.25
   SRCPARAM L0005548     0.000002098      3.49      4.00      3.25
** ----------------------------------------------------------------------
** LINE VOLUME Source ID = SLINE13
   SRCPARAM L0005549     0.000002311      3.49      4.00      3.25
   SRCPARAM L0005550     0.000002311      3.49      4.00      3.25
   SRCPARAM L0005551     0.000002311      3.49      4.00      3.25
   SRCPARAM L0005552     0.000002311      3.49      4.00      3.25
   SRCPARAM L0005553     0.000002311      3.49      4.00      3.25
   SRCPARAM L0005554     0.000002311      3.49      4.00      3.25
   SRCPARAM L0005555     0.000002311      3.49      4.00      3.25
   SRCPARAM L0005556     0.000002311      3.49      4.00      3.25
   SRCPARAM L0005557     0.000002311      3.49      4.00      3.25
   SRCPARAM L0005558     0.000002311      3.49      4.00      3.25
   SRCPARAM L0005559     0.000002311      3.49      4.00      3.25
   SRCPARAM L0005560     0.000002311      3.49      4.00      3.25
   SRCPARAM L0005561     0.000002311      3.49      4.00      3.25
   SRCPARAM L0005562     0.000002311      3.49      4.00      3.25
   SRCPARAM L0005563     0.000002311      3.49      4.00      3.25
   SRCPARAM L0005564     0.000002311      3.49      4.00      3.25
   SRCPARAM L0005565     0.000002311      3.49      4.00      3.25
   SRCPARAM L0005566     0.000002311      3.49      4.00      3.25
   SRCPARAM L0005567     0.000002311      3.49      4.00      3.25
   SRCPARAM L0005568     0.000002311      3.49      4.00      3.25
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   SRCPARAM L0005569     0.000002311      3.49      4.00      3.25
   SRCPARAM L0005570     0.000002311      3.49      4.00      3.25
   SRCPARAM L0005571     0.000002311      3.49      4.00      3.25
   SRCPARAM L0005572     0.000002311      3.49      4.00      3.25
   SRCPARAM L0005573     0.000002311      3.49      4.00      3.25
   SRCPARAM L0005574     0.000002311      3.49      4.00      3.25
   SRCPARAM L0005575     0.000002311      3.49      4.00      3.25
   SRCPARAM L0005576     0.000002311      3.49      4.00      3.25
   SRCPARAM L0005577     0.000002311      3.49      4.00      3.25
   SRCPARAM L0005578     0.000002311      3.49      4.00      3.25
   SRCPARAM L0005579     0.000002311      3.49      4.00      3.25
   SRCPARAM L0005580     0.000002311      3.49      4.00      3.25
   SRCPARAM L0005581     0.000002311      3.49      4.00      3.25
   SRCPARAM L0005582     0.000002311      3.49      4.00      3.25
   SRCPARAM L0005583     0.000002311      3.49      4.00      3.25
   SRCPARAM L0005584     0.000002311      3.49      4.00      3.25
   SRCPARAM L0005585     0.000002311      3.49      4.00      3.25
** ------------------------------------------------------------------
   URBANSRC ALL
   SRCGROUP ALL
SO FINISHED
**
**************************************
** AERMOD Receptor Pathway
**************************************
**
**
RE STARTING
   INCLUDED "Project AB1.rou"
RE FINISHED
**
**************************************
** AERMOD Meteorology Pathway
**************************************
**
**
ME STARTING
   SURFFILE ..\RDLD_V9_ADJU\RDLD_v9.SFC
   PROFFILE ..\RDLD_V9_ADJU\RDLD_v9.PFL
   SURFDATA 3171 2012
   UAIRDATA 3190 2012
   SITEDATA 99999 2012
   PROFBASE 481.0 METERS
ME FINISHED
**
**************************************
** AERMOD Output Pathway
**************************************
**
**
OU STARTING
```

```
** Auto-Generated Plotfiles
   PLOTFILE PERIOD ALL "PROJECT AB1.AD\PE00GALL.PLT" 31
   SUMMFILE "Project AB1.sum"
OU FINISHED


  *** Message Summary For AERMOD Model Setup ***

  --------- Summary of Total Messages --------

 A Total of            0 Fatal Error Message(s)
 A Total of            2 Warning Message(s)
 A Total of            0 Informational Message(s)


    ******** FATAL ERROR MESSAGES ********
               ***  NONE  ***


    ********   WARNING MESSAGES   ********
 ME W186    3053       MEOPEN: THRESH_1MIN 1-min ASOS wind speed threshold used          0.50
 ME W187    3053       MEOPEN: ADJ_U* Option for Low Winds used in AERMET

 *********************************
 *** SETUP Finishes Successfully ***
 *********************************
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*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

                                        ***   MODEL SETUP OPTIONS SUMMARY   ***
- -

**Model Is Setup For Calculation of Average CONCentration Values.

  -- DEPOSITION LOGIC --
**NO GAS DEPOSITION Data Provided.
**NO PARTICLE DEPOSITION Data Provided.
**Model Uses NO DRY DEPLETION. DRYDPLT = F
**Model Uses NO WET DEPLETION. WETDPLT = F

**Model Uses URBAN Dispersion Algorithm for the SBL for 1369 Source(s),
  for Total of   1 Urban Area(s):
  Urban Population =   2035210.0 ; Urban Roughness Length = 1.000 m

**Model Uses Regulatory DEFAULT Options:
       1. Stack-tip Downwash.
       2. Model Accounts for ELEVated Terrain Effects.
       3. Use Calms Processing Routine.
       4. Use Missing Data Processing Routine.
       5. No Exponential Decay.
       6. Urban Roughness Length of 1.0 Meter Assumed.

**Other Options Specified:
       ADJ_U*   - Use ADJ_U* BETA option for SBL in AERMET
       TEMP_Sub - Meteorological data includes TEMP substitutions

**Model Assumes No FLAGPOLE Receptor Heights.

**The User Specified a Pollutant Type of: DPM

**Model Calculates PERIOD Averages Only

**This Run Includes: 1369 Source(s);   1 Source Group(s); and   1506 Receptor(s)

              with: 0 POINT(s), including
                         0 POINTCAP(s) and   0 POINTHOR(s)
               and: 1369 VOLUME source(s)
               and: 0 AREA type source(s)
               and: 0 LINE source(s)
               and: 0 OPENPIT source(s)
               and: 0 BUOYANT LINE source(s) with   0 line(s)

**Model Set To Continue RUNning After the Setup Testing.

```
**The AERMET Input Meteorological Data Version Date:  16216

**Output Options Selected:
         Model Outputs Tables of PERIOD Averages by Receptor
         Model Outputs External File(s) of High Values for Plotting (PLOTFILE Keyword)
         Model Outputs Separate Summary File of High Ranked Values (SUMMFILE Keyword)

**NOTE:  The Following Flags May Appear Following CONC Values:  c for Calm Hours
                                                                m for Missing Hours
                                                                b for Both Calm and Missing Hours

**Misc. Inputs:  Base Elev. for Pot. Temp. Profile (m MSL) =   481.00 ;  Decay Coef. =    0.000     ;  Rot. Angle =     0.0
                 Emission Units = GRAMS/SEC                              ;  Emission Rate Unit Factor =   0.10000E+07
                 Output Units   = MICROGRAMS/M**3

**Approximate Storage Requirements of Model =      4.2 MB of RAM.

**Detailed Error/Message File:   Project AB1.err
**File for Summary of Results:   Project AB1.sum
```

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0005586	0	0.22740E-06	480749.7	3774134.1	363.7	3.49	4.00	3.25	YES	
L0005587	0	0.22740E-06	480758.2	3774133.4	363.9	3.49	4.00	3.25	YES	
L0005588	0	0.22740E-06	480766.8	3774132.7	364.0	3.49	4.00	3.25	YES	
L0005589	0	0.22740E-06	480775.4	3774132.0	364.0	3.49	4.00	3.25	YES	
L0005590	0	0.22740E-06	480783.9	3774131.3	364.0	3.49	4.00	3.25	YES	
L0005591	0	0.22740E-06	480792.5	3774130.6	364.0	3.49	4.00	3.25	YES	
L0005592	0	0.22740E-06	480801.0	3774129.9	364.0	3.49	4.00	3.25	YES	
L0005593	0	0.22740E-06	480809.6	3774129.2	364.0	3.49	4.00	3.25	YES	
L0005594	0	0.22740E-06	480818.2	3774128.5	364.0	3.49	4.00	3.25	YES	
L0005595	0	0.22740E-06	480826.7	3774127.8	364.1	3.49	4.00	3.25	YES	
L0005596	0	0.22740E-06	480835.3	3774127.1	364.2	3.49	4.00	3.25	YES	
L0005597	0	0.22740E-06	480843.9	3774126.4	364.3	3.49	4.00	3.25	YES	
L0005598	0	0.22740E-06	480852.4	3774125.7	364.4	3.49	4.00	3.25	YES	
L0005599	0	0.22740E-06	480861.0	3774125.0	364.6	3.49	4.00	3.25	YES	
L0005600	0	0.22740E-06	480869.5	3774124.3	364.8	3.49	4.00	3.25	YES	
L0005601	0	0.22740E-06	480878.1	3774123.6	365.0	3.49	4.00	3.25	YES	
L0005602	0	0.22740E-06	480886.7	3774122.9	365.0	3.49	4.00	3.25	YES	
L0005603	0	0.22740E-06	480895.2	3774122.2	365.0	3.49	4.00	3.25	YES	
L0005604	0	0.22740E-06	480903.8	3774121.5	365.0	3.49	4.00	3.25	YES	
L0005605	0	0.22740E-06	480912.3	3774120.8	365.0	3.49	4.00	3.25	YES	
L0005606	0	0.22740E-06	480920.9	3774120.1	365.0	3.49	4.00	3.25	YES	
L0005607	0	0.22740E-06	480929.5	3774119.4	365.0	3.49	4.00	3.25	YES	
L0005608	0	0.22740E-06	480938.0	3774118.7	365.0	3.49	4.00	3.25	YES	
L0005609	0	0.22740E-06	480946.6	3774118.0	365.2	3.49	4.00	3.25	YES	
L0005610	0	0.22740E-06	480955.2	3774117.3	365.5	3.49	4.00	3.25	YES	
L0005611	0	0.22740E-06	480963.7	3774116.6	365.8	3.49	4.00	3.25	YES	
L0005612	0	0.22740E-06	480972.3	3774115.9	366.0	3.49	4.00	3.25	YES	
L0005613	0	0.22740E-06	480980.8	3774115.2	366.0	3.49	4.00	3.25	YES	
L0005614	0	0.22740E-06	480989.4	3774114.5	366.0	3.49	4.00	3.25	YES	
L0005615	0	0.22740E-06	480998.0	3774113.8	366.0	3.49	4.00	3.25	YES	
L0005616	0	0.22740E-06	481006.5	3774113.1	366.0	3.49	4.00	3.25	YES	
L0005617	0	0.22740E-06	481015.1	3774112.4	366.0	3.49	4.00	3.25	YES	
L0005618	0	0.22740E-06	481023.6	3774111.7	366.0	3.49	4.00	3.25	YES	
L0005619	0	0.22740E-06	481032.2	3774111.0	366.1	3.49	4.00	3.25	YES	
L0005620	0	0.22740E-06	481040.8	3774110.3	366.4	3.49	4.00	3.25	YES	
L0005621	0	0.22740E-06	481049.3	3774109.6	366.7	3.49	4.00	3.25	YES	
L0005622	0	0.22740E-06	481057.9	3774108.9	366.9	3.49	4.00	3.25	YES	
L0005623	0	0.22740E-06	481066.5	3774108.4	367.0	3.49	4.00	3.25	YES	
L0005624	0	0.22740E-06	481075.0	3774107.9	367.0	3.49	4.00	3.25	YES	
L0005625	0	0.22740E-06	481083.6	3774107.5	367.0	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0005626	0	0.22740E-06	481092.2	3774107.1	367.0	3.49	4.00	3.25	YES	
L0005627	0	0.22740E-06	481100.8	3774106.7	367.0	3.49	4.00	3.25	YES	
L0005628	0	0.22740E-06	481109.4	3774106.3	367.0	3.49	4.00	3.25	YES	
L0005629	0	0.22740E-06	481117.9	3774105.9	367.0	3.49	4.00	3.25	YES	
L0005630	0	0.22740E-06	481126.5	3774105.4	367.2	3.49	4.00	3.25	YES	
L0005631	0	0.22740E-06	481135.1	3774105.0	367.5	3.49	4.00	3.25	YES	
L0005632	0	0.22740E-06	481143.7	3774104.6	367.8	3.49	4.00	3.25	YES	
L0005633	0	0.22740E-06	481152.3	3774104.2	368.0	3.49	4.00	3.25	YES	
L0005634	0	0.22740E-06	481160.8	3774104.6	368.0	3.49	4.00	3.25	YES	
L0005635	0	0.22740E-06	481169.4	3774105.2	368.0	3.49	4.00	3.25	YES	
L0005636	0	0.22740E-06	481178.0	3774105.8	368.0	3.49	4.00	3.25	YES	
L0005637	0	0.22740E-06	481186.5	3774106.5	368.0	3.49	4.00	3.25	YES	
L0005638	0	0.22740E-06	481195.1	3774107.1	368.0	3.49	4.00	3.25	YES	
L0005639	0	0.22740E-06	481203.7	3774107.7	368.0	3.49	4.00	3.25	YES	
L0005640	0	0.22740E-06	481212.2	3774108.3	368.1	3.49	4.00	3.25	YES	
L0005641	0	0.22740E-06	481220.8	3774108.9	368.4	3.49	4.00	3.25	YES	
L0005642	0	0.22740E-06	481229.4	3774109.5	368.7	3.49	4.00	3.25	YES	
L0005643	0	0.22740E-06	481237.9	3774110.1	368.9	3.49	4.00	3.25	YES	
L0005644	0	0.22740E-06	481246.5	3774110.8	369.0	3.49	4.00	3.25	YES	
L0005645	0	0.22740E-06	481255.1	3774111.4	369.0	3.49	4.00	3.25	YES	
L0005646	0	0.22740E-06	481263.6	3774112.0	369.0	3.49	4.00	3.25	YES	
L0005647	0	0.22740E-06	481272.2	3774112.6	369.0	3.49	4.00	3.25	YES	
L0005648	0	0.22740E-06	481280.8	3774113.2	369.0	3.49	4.00	3.25	YES	
L0005649	0	0.22740E-06	481289.3	3774113.8	369.0	3.49	4.00	3.25	YES	
L0005650	0	0.22740E-06	481297.9	3774114.5	369.0	3.49	4.00	3.25	YES	
L0005651	0	0.22740E-06	481306.5	3774115.1	369.2	3.49	4.00	3.25	YES	
L0005652	0	0.22740E-06	481315.1	3774115.7	369.5	3.49	4.00	3.25	YES	
L0005653	0	0.22740E-06	481323.6	3774116.3	369.8	3.49	4.00	3.25	YES	
L0005654	0	0.22740E-06	481332.2	3774116.9	370.0	3.49	4.00	3.25	YES	
L0005655	0	0.22740E-06	481340.8	3774117.5	370.0	3.49	4.00	3.25	YES	
L0005656	0	0.22740E-06	481349.3	3774118.1	370.0	3.49	4.00	3.25	YES	
L0005657	0	0.22740E-06	481357.9	3774118.8	370.0	3.49	4.00	3.25	YES	
L0005658	0	0.22740E-06	481366.5	3774119.4	370.0	3.49	4.00	3.25	YES	
L0005659	0	0.22740E-06	481375.0	3774120.0	370.0	3.49	4.00	3.25	YES	
L0005660	0	0.22740E-06	481383.6	3774120.6	370.0	3.49	4.00	3.25	YES	
L0005661	0	0.22740E-06	481392.2	3774121.2	370.1	3.49	4.00	3.25	YES	
L0005662	0	0.22740E-06	481400.7	3774121.8	370.4	3.49	4.00	3.25	YES	
L0005663	0	0.22740E-06	481409.3	3774122.5	370.7	3.49	4.00	3.25	YES	
L0005664	0	0.22740E-06	481417.9	3774123.1	370.9	3.49	4.00	3.25	YES	
L0005665	0	0.22740E-06	481426.4	3774123.7	371.0	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0005666	0	0.22740E-06	481435.0	3774124.3	371.0	3.49	4.00	3.25	YES	
L0005667	0	0.22740E-06	481443.6	3774124.9	371.0	3.49	4.00	3.25	YES	
L0005668	0	0.22740E-06	481452.1	3774125.5	371.0	3.49	4.00	3.25	YES	
L0005669	0	0.22740E-06	481460.7	3774126.1	371.1	3.49	4.00	3.25	YES	
L0005670	0	0.22740E-06	481469.3	3774126.8	371.2	3.49	4.00	3.25	YES	
L0005671	0	0.22740E-06	481477.8	3774127.4	371.3	3.49	4.00	3.25	YES	
L0005672	0	0.22740E-06	481486.4	3774128.0	371.4	3.49	4.00	3.25	YES	
L0005673	0	0.22740E-06	481495.0	3774128.6	371.6	3.49	4.00	3.25	YES	
L0005674	0	0.22740E-06	481503.5	3774129.2	371.8	3.49	4.00	3.25	YES	
L0005675	0	0.22740E-06	481512.1	3774129.8	372.0	3.49	4.00	3.25	YES	
L0005676	0	0.22740E-06	481520.7	3774130.5	372.0	3.49	4.00	3.25	YES	
L0005677	0	0.22740E-06	481529.3	3774131.1	372.0	3.49	4.00	3.25	YES	
L0005678	0	0.22740E-06	481537.8	3774131.7	372.0	3.49	4.00	3.25	YES	
L0005679	0	0.22740E-06	481546.4	3774132.3	372.0	3.49	4.00	3.25	YES	
L0005680	0	0.22740E-06	481555.0	3774132.9	372.1	3.49	4.00	3.25	YES	
L0005681	0	0.22740E-06	481563.5	3774133.5	372.1	3.49	4.00	3.25	YES	
L0005682	0	0.22740E-06	481572.1	3774134.1	372.1	3.49	4.00	3.25	YES	
L0006174	0	0.92570E-07	479144.0	3771580.1	352.0	3.49	4.00	3.25	YES	
L0006175	0	0.92570E-07	479152.5	3771580.1	352.0	3.49	4.00	3.25	YES	
L0006176	0	0.92570E-07	479161.1	3771580.0	352.0	3.49	4.00	3.25	YES	
L0006177	0	0.92570E-07	479169.7	3771580.0	352.0	3.49	4.00	3.25	YES	
L0006178	0	0.92570E-07	479178.3	3771579.9	352.3	3.49	4.00	3.25	YES	
L0006179	0	0.92570E-07	479186.9	3771579.9	352.6	3.49	4.00	3.25	YES	
L0006180	0	0.92570E-07	479195.5	3771579.8	352.9	3.49	4.00	3.25	YES	
L0006181	0	0.92570E-07	479204.1	3771579.8	353.0	3.49	4.00	3.25	YES	
L0006182	0	0.92570E-07	479212.7	3771579.7	353.0	3.49	4.00	3.25	YES	
L0006183	0	0.92570E-07	479221.3	3771579.7	353.0	3.49	4.00	3.25	YES	
L0006184	0	0.92570E-07	479229.8	3771579.6	353.0	3.49	4.00	3.25	YES	
L0006185	0	0.92570E-07	479238.4	3771579.6	353.1	3.49	4.00	3.25	YES	
L0006186	0	0.92570E-07	479247.0	3771579.5	353.1	3.49	4.00	3.25	YES	
L0006187	0	0.92570E-07	479255.6	3771579.5	353.2	3.49	4.00	3.25	YES	
L0006188	0	0.92570E-07	479264.2	3771579.4	353.3	3.49	4.00	3.25	YES	
L0006189	0	0.92570E-07	479272.8	3771579.4	353.6	3.49	4.00	3.25	YES	
L0006190	0	0.92570E-07	479281.4	3771579.3	353.8	3.49	4.00	3.25	YES	
L0006191	0	0.92570E-07	479290.0	3771579.3	354.0	3.49	4.00	3.25	YES	
L0006192	0	0.92570E-07	479298.6	3771579.2	354.0	3.49	4.00	3.25	YES	
L0006193	0	0.92570E-07	479307.2	3771579.2	354.0	3.49	4.00	3.25	YES	
L0006194	0	0.92570E-07	479315.7	3771579.2	354.0	3.49	4.00	3.25	YES	
L0006195	0	0.92570E-07	479324.3	3771579.1	354.0	3.49	4.00	3.25	YES	
L0006196	0	0.92570E-07	479332.9	3771579.1	354.0	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0006197	0	0.92570E-07	479341.5	3771579.0	354.0	3.49	4.00	3.25	YES	
L0006198	0	0.92570E-07	479350.1	3771579.0	354.0	3.49	4.00	3.25	YES	
L0006199	0	0.92570E-07	479358.7	3771578.9	354.3	3.49	4.00	3.25	YES	
L0006200	0	0.92570E-07	479367.3	3771578.9	354.6	3.49	4.00	3.25	YES	
L0006201	0	0.92570E-07	479375.9	3771578.8	354.9	3.49	4.00	3.25	YES	
L0006202	0	0.92570E-07	479384.5	3771578.8	355.0	3.49	4.00	3.25	YES	
L0006203	0	0.92570E-07	479393.1	3771578.7	355.0	3.49	4.00	3.25	YES	
L0006204	0	0.92570E-07	479401.6	3771578.7	355.0	3.49	4.00	3.25	YES	
L0006205	0	0.92570E-07	479410.2	3771578.6	355.0	3.49	4.00	3.25	YES	
L0006206	0	0.92570E-07	479418.8	3771578.6	355.1	3.49	4.00	3.25	YES	
L0006207	0	0.92570E-07	479427.4	3771578.5	355.2	3.49	4.00	3.25	YES	
L0006208	0	0.92570E-07	479436.0	3771578.5	355.2	3.49	4.00	3.25	YES	
L0006209	0	0.92570E-07	479444.6	3771578.4	355.4	3.49	4.00	3.25	YES	
L0006210	0	0.92570E-07	479453.2	3771578.4	355.6	3.49	4.00	3.25	YES	
L0006211	0	0.92570E-07	479461.8	3771578.3	355.8	3.49	4.00	3.25	YES	
L0006212	0	0.92570E-07	479470.4	3771578.3	356.0	3.49	4.00	3.25	YES	
L0006213	0	0.92570E-07	479479.0	3771578.2	356.0	3.49	4.00	3.25	YES	
L0006214	0	0.92570E-07	479487.5	3771578.2	356.0	3.49	4.00	3.25	YES	
L0006215	0	0.92570E-07	479496.1	3771578.1	356.0	3.49	4.00	3.25	YES	
L0006216	0	0.92570E-07	479504.7	3771578.1	356.0	3.49	4.00	3.25	YES	
L0006217	0	0.92570E-07	479513.3	3771578.0	356.0	3.49	4.00	3.25	YES	
L0006218	0	0.92570E-07	479521.9	3771578.0	356.0	3.49	4.00	3.25	YES	
L0006219	0	0.92570E-07	479530.5	3771577.9	356.0	3.49	4.00	3.25	YES	
L0006220	0	0.92570E-07	479539.1	3771577.9	356.3	3.49	4.00	3.25	YES	
L0006221	0	0.92570E-07	479547.7	3771577.9	356.6	3.49	4.00	3.25	YES	
L0006222	0	0.92570E-07	479556.3	3771577.8	356.9	3.49	4.00	3.25	YES	
L0006223	0	0.92570E-07	479564.9	3771577.8	357.0	3.49	4.00	3.25	YES	
L0006224	0	0.92570E-07	479573.4	3771577.7	357.0	3.49	4.00	3.25	YES	
L0006225	0	0.92570E-07	479582.0	3771577.7	357.0	3.49	4.00	3.25	YES	
L0006226	0	0.92570E-07	479590.6	3771577.6	357.0	3.49	4.00	3.25	YES	
L0006227	0	0.92570E-07	479599.2	3771577.6	357.0	3.49	4.00	3.25	YES	
L0006228	0	0.92570E-07	479607.8	3771577.5	357.0	3.49	4.00	3.25	YES	
L0006229	0	0.92570E-07	479616.4	3771577.5	357.0	3.49	4.00	3.25	YES	
L0006230	0	0.92570E-07	479625.0	3771577.4	357.2	3.49	4.00	3.25	YES	
L0006231	0	0.92570E-07	479633.6	3771577.4	357.5	3.49	4.00	3.25	YES	
L0006232	0	0.92570E-07	479642.2	3771577.3	357.7	3.49	4.00	3.25	YES	
L0006233	0	0.92570E-07	479650.8	3771577.3	358.0	3.49	4.00	3.25	YES	
L0006234	0	0.92570E-07	479659.3	3771577.2	358.0	3.49	4.00	3.25	YES	
L0006235	0	0.92570E-07	479667.9	3771577.2	358.0	3.49	4.00	3.25	YES	
L0006236	0	0.92570E-07	479676.5	3771577.1	358.0	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0006237	0	0.92570E-07	479685.1	3771577.1	358.0	3.49	4.00	3.25	YES	
L0006238	0	0.92570E-07	479693.7	3771577.0	358.0	3.49	4.00	3.25	YES	
L0006239	0	0.92570E-07	479702.3	3771577.0	358.0	3.49	4.00	3.25	YES	
L0006240	0	0.92570E-07	479710.9	3771576.9	358.0	3.49	4.00	3.25	YES	
L0006241	0	0.92570E-07	479719.5	3771576.9	358.3	3.49	4.00	3.25	YES	
L0006242	0	0.92570E-07	479728.1	3771576.8	358.6	3.49	4.00	3.25	YES	
L0006243	0	0.92570E-07	479736.7	3771576.8	358.9	3.49	4.00	3.25	YES	
L0006244	0	0.92570E-07	479745.2	3771576.7	359.0	3.49	4.00	3.25	YES	
L0006245	0	0.92570E-07	479753.8	3771576.7	359.0	3.49	4.00	3.25	YES	
L0006246	0	0.92570E-07	479762.4	3771576.6	359.0	3.49	4.00	3.25	YES	
L0006247	0	0.92570E-07	479771.0	3771576.6	359.0	3.49	4.00	3.25	YES	
L0006248	0	0.92570E-07	479779.6	3771576.5	359.3	3.49	4.00	3.25	YES	
L0006249	0	0.92570E-07	479788.2	3771576.5	359.6	3.49	4.00	3.25	YES	
L0006250	0	0.92570E-07	479796.8	3771576.5	359.9	3.49	4.00	3.25	YES	
L0006251	0	0.92570E-07	479805.4	3771576.4	360.0	3.49	4.00	3.25	YES	
L0006252	0	0.92570E-07	479814.0	3771576.4	360.0	3.49	4.00	3.25	YES	
L0006253	0	0.92570E-07	479822.5	3771576.3	360.0	3.49	4.00	3.25	YES	
L0006254	0	0.92570E-07	479831.1	3771576.3	360.0	3.49	4.00	3.25	YES	
L0006255	0	0.92570E-07	479839.7	3771576.2	360.0	3.49	4.00	3.25	YES	
L0006256	0	0.92570E-07	479848.3	3771576.2	360.0	3.49	4.00	3.25	YES	
L0006257	0	0.92570E-07	479856.9	3771576.1	360.0	3.49	4.00	3.25	YES	
L0006258	0	0.92570E-07	479865.5	3771576.1	360.2	3.49	4.00	3.25	YES	
L0006259	0	0.92570E-07	479874.1	3771576.0	360.5	3.49	4.00	3.25	YES	
L0006260	0	0.92570E-07	479882.7	3771576.0	360.8	3.49	4.00	3.25	YES	
L0006261	0	0.92570E-07	479891.3	3771575.9	361.0	3.49	4.00	3.25	YES	
L0006262	0	0.92570E-07	479899.9	3771575.9	361.0	3.49	4.00	3.25	YES	
L0006263	0	0.92570E-07	479908.4	3771575.8	361.0	3.49	4.00	3.25	YES	
L0006264	0	0.92570E-07	479917.0	3771575.8	361.0	3.49	4.00	3.25	YES	
L0006265	0	0.92570E-07	479925.6	3771575.7	361.2	3.49	4.00	3.25	YES	
L0006266	0	0.92570E-07	479934.2	3771575.7	361.5	3.49	4.00	3.25	YES	
L0006267	0	0.92570E-07	479942.8	3771575.6	361.8	3.49	4.00	3.25	YES	
L0006268	0	0.92570E-07	479951.3	3771576.4	362.0	3.49	4.00	3.25	YES	
L0006269	0	0.92570E-07	479959.8	3771577.9	362.0	3.49	4.00	3.25	YES	
L0006270	0	0.92570E-07	479968.3	3771579.1	362.0	3.49	4.00	3.25	YES	
L0006271	0	0.92570E-07	479976.8	3771579.1	362.0	3.49	4.00	3.25	YES	
L0006272	0	0.92570E-07	479985.4	3771579.1	362.0	3.49	4.00	3.25	YES	
L0006273	0	0.92570E-07	479994.0	3771579.1	362.0	3.49	4.00	3.25	YES	
L0006274	0	0.92570E-07	480002.6	3771579.1	362.0	3.49	4.00	3.25	YES	
L0006275	0	0.92570E-07	480011.2	3771579.1	362.0	3.49	4.00	3.25	YES	
L0006276	0	0.92570E-07	480019.8	3771579.1	362.3	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0006277	0	0.92570E-07	480028.4	3771579.1	362.6	3.49	4.00	3.25	YES	
L0006278	0	0.92570E-07	480037.0	3771579.1	362.9	3.49	4.00	3.25	YES	
L0006279	0	0.92570E-07	480045.6	3771579.1	363.0	3.49	4.00	3.25	YES	
L0006280	0	0.92570E-07	480054.2	3771579.0	363.0	3.49	4.00	3.25	YES	
L0006281	0	0.92570E-07	480062.7	3771579.0	363.0	3.49	4.00	3.25	YES	
L0006282	0	0.92570E-07	480071.3	3771579.0	363.0	3.49	4.00	3.25	YES	
L0006283	0	0.92570E-07	480079.9	3771579.0	363.1	3.49	4.00	3.25	YES	
L0006284	0	0.92570E-07	480088.5	3771579.0	363.2	3.49	4.00	3.25	YES	
L0006285	0	0.92570E-07	480097.1	3771579.0	363.2	3.49	4.00	3.25	YES	
L0006286	0	0.92570E-07	480105.7	3771579.0	363.4	3.49	4.00	3.25	YES	
L0006287	0	0.92570E-07	480114.3	3771579.0	363.6	3.49	4.00	3.25	YES	
L0006288	0	0.92570E-07	480122.9	3771579.0	363.8	3.49	4.00	3.25	YES	
L0006289	0	0.92570E-07	480131.5	3771579.0	364.0	3.49	4.00	3.25	YES	
L0006290	0	0.92570E-07	480140.1	3771579.0	364.0	3.49	4.00	3.25	YES	
L0006291	0	0.92570E-07	480148.6	3771579.0	364.0	3.49	4.00	3.25	YES	
L0006292	0	0.92570E-07	480157.2	3771579.0	364.0	3.49	4.00	3.25	YES	
L0006293	0	0.92570E-07	480165.8	3771579.0	364.2	3.49	4.00	3.25	YES	
L0006294	0	0.92570E-07	480174.4	3771579.0	364.5	3.49	4.00	3.25	YES	
L0006295	0	0.92570E-07	480183.0	3771579.0	364.8	3.49	4.00	3.25	YES	
L0006296	0	0.92570E-07	480191.6	3771579.0	365.0	3.49	4.00	3.25	YES	
L0006297	0	0.92570E-07	480200.2	3771579.0	365.0	3.49	4.00	3.25	YES	
L0006298	0	0.92570E-07	480208.8	3771578.9	365.0	3.49	4.00	3.25	YES	
L0006299	0	0.92570E-07	480217.4	3771578.9	365.0	3.49	4.00	3.25	YES	
L0006300	0	0.92570E-07	480226.0	3771578.9	365.2	3.49	4.00	3.25	YES	
L0006301	0	0.92570E-07	480234.5	3771578.9	365.5	3.49	4.00	3.25	YES	
L0006302	0	0.92570E-07	480243.1	3771578.9	365.8	3.49	4.00	3.25	YES	
L0006303	0	0.92570E-07	480251.7	3771578.9	366.0	3.49	4.00	3.25	YES	
L0006304	0	0.92570E-07	480260.3	3771578.9	366.0	3.49	4.00	3.25	YES	
L0006305	0	0.92570E-07	480268.9	3771578.9	366.0	3.49	4.00	3.25	YES	
L0006306	0	0.92570E-07	480277.5	3771578.9	366.0	3.49	4.00	3.25	YES	
L0006307	0	0.92570E-07	480286.1	3771578.9	366.0	3.49	4.00	3.25	YES	
L0006308	0	0.92570E-07	480294.7	3771578.9	366.0	3.49	4.00	3.25	YES	
L0006309	0	0.92570E-07	480303.3	3771578.9	366.0	3.49	4.00	3.25	YES	
L0006310	0	0.92570E-07	480311.9	3771578.9	366.1	3.49	4.00	3.25	YES	
L0006311	0	0.92570E-07	480320.4	3771578.9	366.4	3.49	4.00	3.25	YES	
L0006312	0	0.92570E-07	480329.0	3771578.9	366.6	3.49	4.00	3.25	YES	
L0006313	0	0.92570E-07	480337.6	3771578.9	366.9	3.49	4.00	3.25	YES	
L0006314	0	0.92570E-07	480346.2	3771578.9	367.0	3.49	4.00	3.25	YES	
L0006315	0	0.92570E-07	480354.8	3771578.9	367.0	3.49	4.00	3.25	YES	
L0006316	0	0.92570E-07	480363.4	3771578.8	367.0	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0006317	0	0.92570E-07	480372.0	3771578.8	367.1	3.49	4.00	3.25	YES	
L0006318	0	0.92570E-07	480380.6	3771578.8	367.4	3.49	4.00	3.25	YES	
L0006319	0	0.92570E-07	480389.2	3771578.8	367.6	3.49	4.00	3.25	YES	
L0006320	0	0.92570E-07	480397.8	3771578.8	367.9	3.49	4.00	3.25	YES	
L0006321	0	0.92570E-07	480406.3	3771578.8	368.0	3.49	4.00	3.25	YES	
L0006322	0	0.92570E-07	480414.9	3771578.8	368.0	3.49	4.00	3.25	YES	
L0006323	0	0.92570E-07	480423.5	3771578.8	368.0	3.49	4.00	3.25	YES	
L0006324	0	0.92570E-07	480432.1	3771578.8	368.1	3.49	4.00	3.25	YES	
L0006325	0	0.92570E-07	480440.7	3771578.8	368.4	3.49	4.00	3.25	YES	
L0006326	0	0.92570E-07	480449.3	3771578.8	368.7	3.49	4.00	3.25	YES	
L0006327	0	0.92570E-07	480457.9	3771578.8	368.9	3.49	4.00	3.25	YES	
L0006328	0	0.92570E-07	480466.5	3771578.8	369.0	3.49	4.00	3.25	YES	
L0006329	0	0.92570E-07	480475.1	3771578.8	369.0	3.49	4.00	3.25	YES	
L0006330	0	0.92570E-07	480483.7	3771578.8	369.0	3.49	4.00	3.25	YES	
L0006331	0	0.92570E-07	480492.2	3771578.8	369.1	3.49	4.00	3.25	YES	
L0006332	0	0.92570E-07	480500.8	3771578.8	369.4	3.49	4.00	3.25	YES	
L0006333	0	0.92570E-07	480509.4	3771578.8	369.7	3.49	4.00	3.25	YES	
L0006334	0	0.92570E-07	480518.0	3771578.8	369.9	3.49	4.00	3.25	YES	
L0006335	0	0.92570E-07	480526.6	3771578.7	370.0	3.49	4.00	3.25	YES	
L0006336	0	0.92570E-07	480535.2	3771578.7	370.0	3.49	4.00	3.25	YES	
L0006337	0	0.92570E-07	480543.8	3771578.7	370.0	3.49	4.00	3.25	YES	
L0006338	0	0.92570E-07	480552.4	3771578.7	370.0	3.49	4.00	3.25	YES	
L0006339	0	0.92570E-07	480561.0	3771578.7	370.0	3.49	4.00	3.25	YES	
L0006340	0	0.92570E-07	480569.6	3771578.7	370.0	3.49	4.00	3.25	YES	
L0006341	0	0.92570E-07	480578.1	3771578.7	370.0	3.49	4.00	3.25	YES	
L0006342	0	0.92570E-07	480586.7	3771578.7	370.2	3.49	4.00	3.25	YES	
L0006343	0	0.92570E-07	480595.3	3771578.7	370.5	3.49	4.00	3.25	YES	
L0006344	0	0.92570E-07	480603.9	3771578.7	370.8	3.49	4.00	3.25	YES	
L0006345	0	0.92570E-07	480612.5	3771578.7	371.0	3.49	4.00	3.25	YES	
L0006346	0	0.92570E-07	480621.1	3771578.7	371.0	3.49	4.00	3.25	YES	
L0006347	0	0.92570E-07	480629.7	3771578.7	371.0	3.49	4.00	3.25	YES	
L0006348	0	0.92570E-07	480638.3	3771578.7	371.0	3.49	4.00	3.25	YES	
L0006349	0	0.92570E-07	480646.9	3771578.7	371.2	3.49	4.00	3.25	YES	
L0006350	0	0.92570E-07	480655.5	3771578.7	371.5	3.49	4.00	3.25	YES	
L0006351	0	0.92570E-07	480664.0	3771578.7	371.8	3.49	4.00	3.25	YES	
L0006352	0	0.92570E-07	480672.6	3771578.7	372.0	3.49	4.00	3.25	YES	
L0006353	0	0.92570E-07	480681.2	3771578.6	372.0	3.49	4.00	3.25	YES	
L0006354	0	0.92570E-07	480689.8	3771578.6	372.0	3.49	4.00	3.25	YES	
L0006355	0	0.92570E-07	480698.4	3771578.6	372.0	3.49	4.00	3.25	YES	
L0006356	0	0.92570E-07	480707.0	3771578.6	372.2	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0006357	0	0.92570E-07	480715.6	3771578.6	372.5	3.49	4.00	3.25	YES	
L0006358	0	0.92570E-07	480724.2	3771578.6	372.8	3.49	4.00	3.25	YES	
L0006359	0	0.92570E-07	480732.8	3771578.6	373.0	3.49	4.00	3.25	YES	
L0006360	0	0.92570E-07	480741.4	3771578.6	373.0	3.49	4.00	3.25	YES	
L0006361	0	0.16080E-06	480745.7	3770768.6	374.0	3.49	4.00	3.25	YES	
L0006362	0	0.16080E-06	480754.0	3770766.6	374.0	3.49	4.00	3.25	YES	
L0006363	0	0.16080E-06	480762.4	3770764.6	374.1	3.49	4.00	3.25	YES	
L0006364	0	0.16080E-06	480770.7	3770762.6	374.4	3.49	4.00	3.25	YES	
L0006365	0	0.16080E-06	480779.1	3770760.6	374.6	3.49	4.00	3.25	YES	
L0006366	0	0.16080E-06	480787.5	3770758.6	374.9	3.49	4.00	3.25	YES	
L0006367	0	0.16080E-06	480795.8	3770756.6	375.0	3.49	4.00	3.25	YES	
L0006368	0	0.16080E-06	480804.2	3770755.1	375.0	3.49	4.00	3.25	YES	
L0006369	0	0.16080E-06	480812.8	3770755.1	375.0	3.49	4.00	3.25	YES	
L0006370	0	0.16080E-06	480821.4	3770755.0	375.1	3.49	4.00	3.25	YES	
L0006371	0	0.16080E-06	480830.0	3770755.0	375.3	3.49	4.00	3.25	YES	
L0006372	0	0.16080E-06	480838.6	3770754.9	375.6	3.49	4.00	3.25	YES	
L0006373	0	0.16080E-06	480847.2	3770754.9	375.9	3.49	4.00	3.25	YES	
L0006374	0	0.16080E-06	480855.8	3770754.9	376.0	3.49	4.00	3.25	YES	
L0006375	0	0.16080E-06	480864.4	3770754.8	376.0	3.49	4.00	3.25	YES	
L0006376	0	0.16080E-06	480872.9	3770754.8	376.0	3.49	4.00	3.25	YES	
L0006377	0	0.16080E-06	480881.5	3770754.8	376.1	3.49	4.00	3.25	YES	
L0006378	0	0.16080E-06	480890.1	3770754.7	376.3	3.49	4.00	3.25	YES	
L0006379	0	0.16080E-06	480898.7	3770754.7	376.6	3.49	4.00	3.25	YES	
L0006380	0	0.16080E-06	480907.3	3770754.7	376.9	3.49	4.00	3.25	YES	
L0006381	0	0.16080E-06	480915.9	3770754.6	377.0	3.49	4.00	3.25	YES	
L0006382	0	0.16080E-06	480924.5	3770754.6	377.0	3.49	4.00	3.25	YES	
L0006383	0	0.16080E-06	480933.1	3770754.6	377.0	3.49	4.00	3.25	YES	
L0006384	0	0.16080E-06	480941.7	3770754.5	377.1	3.49	4.00	3.25	YES	
L0006385	0	0.16080E-06	480950.3	3770754.5	377.3	3.49	4.00	3.25	YES	
L0006386	0	0.16080E-06	480958.8	3770754.5	377.6	3.49	4.00	3.25	YES	
L0006387	0	0.16080E-06	480967.4	3770754.4	377.9	3.49	4.00	3.25	YES	
L0006388	0	0.16080E-06	480976.0	3770754.4	378.0	3.49	4.00	3.25	YES	
L0006389	0	0.16080E-06	480984.6	3770754.3	378.0	3.49	4.00	3.25	YES	
L0006390	0	0.16080E-06	480993.2	3770754.3	378.0	3.49	4.00	3.25	YES	
L0006391	0	0.16080E-06	481001.8	3770754.3	378.1	3.49	4.00	3.25	YES	
L0006392	0	0.16080E-06	481010.4	3770754.2	378.4	3.49	4.00	3.25	YES	
L0006393	0	0.16080E-06	481019.0	3770754.2	378.6	3.49	4.00	3.25	YES	
L0006394	0	0.16080E-06	481027.6	3770754.2	378.9	3.49	4.00	3.25	YES	
L0006395	0	0.16080E-06	481036.2	3770754.1	379.0	3.49	4.00	3.25	YES	
L0006396	0	0.16080E-06	481044.7	3770754.1	379.0	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0006397	0	0.16080E-06	481053.3	3770754.1	379.0	3.49	4.00	3.25	YES	
L0006398	0	0.16080E-06	481061.9	3770754.0	379.1	3.49	4.00	3.25	YES	
L0006399	0	0.16080E-06	481070.5	3770754.0	379.4	3.49	4.00	3.25	YES	
L0006400	0	0.16080E-06	481079.1	3770754.0	379.6	3.49	4.00	3.25	YES	
L0006401	0	0.16080E-06	481087.7	3770753.9	379.9	3.49	4.00	3.25	YES	
L0006402	0	0.16080E-06	481096.3	3770753.9	380.0	3.49	4.00	3.25	YES	
L0006403	0	0.16080E-06	481104.9	3770753.8	380.0	3.49	4.00	3.25	YES	
L0006404	0	0.16080E-06	481113.5	3770753.8	380.0	3.49	4.00	3.25	YES	
L0006405	0	0.16080E-06	481122.0	3770753.8	380.0	3.49	4.00	3.25	YES	
L0006406	0	0.16080E-06	481130.6	3770753.7	380.0	3.49	4.00	3.25	YES	
L0006407	0	0.16080E-06	481139.2	3770753.7	380.0	3.49	4.00	3.25	YES	
L0006408	0	0.16080E-06	481147.8	3770753.7	380.0	3.49	4.00	3.25	YES	
L0006409	0	0.16080E-06	481156.4	3770753.6	380.2	3.49	4.00	3.25	YES	
L0006410	0	0.16080E-06	481165.0	3770753.6	380.5	3.49	4.00	3.25	YES	
L0006411	0	0.16080E-06	481173.6	3770753.6	380.8	3.49	4.00	3.25	YES	
L0006412	0	0.16080E-06	481182.2	3770753.5	381.1	3.49	4.00	3.25	YES	
L0006413	0	0.16080E-06	481190.8	3770753.5	381.4	3.49	4.00	3.25	YES	
L0006414	0	0.16080E-06	481199.4	3770753.5	381.7	3.49	4.00	3.25	YES	
L0006415	0	0.16080E-06	481207.9	3770753.4	381.9	3.49	4.00	3.25	YES	
L0006416	0	0.16080E-06	481216.5	3770753.4	382.0	3.49	4.00	3.25	YES	
L0006417	0	0.16080E-06	481225.1	3770753.3	382.0	3.49	4.00	3.25	YES	
L0006418	0	0.16080E-06	481233.7	3770753.3	382.0	3.49	4.00	3.25	YES	
L0006419	0	0.16080E-06	481242.3	3770753.3	382.0	3.49	4.00	3.25	YES	
L0006420	0	0.16080E-06	481250.9	3770753.2	382.0	3.49	4.00	3.25	YES	
L0006421	0	0.16080E-06	481259.5	3770753.2	382.0	3.49	4.00	3.25	YES	
L0006422	0	0.16080E-06	481268.1	3770753.2	382.0	3.49	4.00	3.25	YES	
L0006423	0	0.16080E-06	481276.7	3770753.1	382.2	3.49	4.00	3.25	YES	
L0006424	0	0.16080E-06	481285.3	3770753.1	382.5	3.49	4.00	3.25	YES	
L0006425	0	0.16080E-06	481293.8	3770753.1	382.8	3.49	4.00	3.25	YES	
L0006426	0	0.16080E-06	481302.4	3770753.0	383.0	3.49	4.00	3.25	YES	
L0006427	0	0.16080E-06	481311.0	3770753.0	383.0	3.49	4.00	3.25	YES	
L0006428	0	0.16080E-06	481319.6	3770753.0	383.0	3.49	4.00	3.25	YES	
L0006429	0	0.16080E-06	481328.2	3770752.9	383.0	3.49	4.00	3.25	YES	
L0006430	0	0.16080E-06	481336.8	3770752.9	383.2	3.49	4.00	3.25	YES	
L0006431	0	0.16080E-06	481345.4	3770752.8	383.5	3.49	4.00	3.25	YES	
L0006432	0	0.16080E-06	481354.0	3770752.8	383.8	3.49	4.00	3.25	YES	
L0006433	0	0.16080E-06	481362.6	3770752.8	384.0	3.49	4.00	3.25	YES	
L0006434	0	0.16080E-06	481371.2	3770752.7	384.0	3.49	4.00	3.25	YES	
L0006435	0	0.16080E-06	481379.7	3770752.7	384.0	3.49	4.00	3.25	YES	
L0006436	0	0.16080E-06	481388.3	3770752.7	384.0	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0006437	0	0.92500E-07	479139.8	3771569.7	352.0	3.49	4.00	3.25	YES	
L0006438	0	0.92500E-07	479139.7	3771561.1	352.0	3.49	4.00	3.25	YES	
L0006439	0	0.92500E-07	479139.6	3771552.5	352.0	3.49	4.00	3.25	YES	
L0006440	0	0.92500E-07	479139.5	3771543.9	352.0	3.49	4.00	3.25	YES	
L0006441	0	0.92500E-07	479139.4	3771535.3	352.0	3.49	4.00	3.25	YES	
L0006442	0	0.92500E-07	479139.3	3771526.7	352.0	3.49	4.00	3.25	YES	
L0006443	0	0.92500E-07	479139.2	3771518.1	352.0	3.49	4.00	3.25	YES	
L0006444	0	0.92500E-07	479139.1	3771509.6	352.0	3.49	4.00	3.25	YES	
L0006445	0	0.92500E-07	479139.0	3771501.0	352.0	3.49	4.00	3.25	YES	
L0006446	0	0.92500E-07	479138.9	3771492.4	352.0	3.49	4.00	3.25	YES	
L0006447	0	0.92500E-07	479138.8	3771483.8	352.0	3.49	4.00	3.25	YES	
L0006448	0	0.92500E-07	479138.7	3771475.2	352.0	3.49	4.00	3.25	YES	
L0006449	0	0.92500E-07	479138.6	3771466.6	352.0	3.49	4.00	3.25	YES	
L0006450	0	0.92500E-07	479138.5	3771458.0	352.0	3.49	4.00	3.25	YES	
L0006451	0	0.92500E-07	479138.4	3771449.4	352.0	3.49	4.00	3.25	YES	
L0006452	0	0.92500E-07	479138.3	3771440.8	352.0	3.49	4.00	3.25	YES	
L0006453	0	0.92500E-07	479138.2	3771432.2	352.0	3.49	4.00	3.25	YES	
L0006454	0	0.92500E-07	479138.1	3771423.7	352.0	3.49	4.00	3.25	YES	
L0006455	0	0.92500E-07	479138.0	3771415.1	352.0	3.49	4.00	3.25	YES	
L0006456	0	0.92500E-07	479137.9	3771406.5	352.0	3.49	4.00	3.25	YES	
L0006457	0	0.92500E-07	479137.8	3771397.9	352.0	3.49	4.00	3.25	YES	
L0006458	0	0.92500E-07	479137.7	3771389.3	352.0	3.49	4.00	3.25	YES	
L0006459	0	0.92500E-07	479137.6	3771380.7	352.0	3.49	4.00	3.25	YES	
L0006460	0	0.92500E-07	479137.5	3771372.1	352.0	3.49	4.00	3.25	YES	
L0006461	0	0.92500E-07	479137.4	3771363.5	352.0	3.49	4.00	3.25	YES	
L0006462	0	0.92500E-07	479137.3	3771354.9	352.0	3.49	4.00	3.25	YES	
L0006463	0	0.92500E-07	479137.2	3771346.4	352.0	3.49	4.00	3.25	YES	
L0006464	0	0.92500E-07	479137.1	3771337.8	352.0	3.49	4.00	3.25	YES	
L0006465	0	0.92500E-07	479137.0	3771329.2	352.0	3.49	4.00	3.25	YES	
L0006466	0	0.92500E-07	479136.9	3771320.6	352.0	3.49	4.00	3.25	YES	
L0006467	0	0.92500E-07	479136.8	3771312.0	352.0	3.49	4.00	3.25	YES	
L0006468	0	0.92500E-07	479136.7	3771303.4	352.0	3.49	4.00	3.25	YES	
L0006469	0	0.92500E-07	479136.6	3771294.8	352.0	3.49	4.00	3.25	YES	
L0006470	0	0.92500E-07	479136.5	3771286.2	352.0	3.49	4.00	3.25	YES	
L0006471	0	0.92500E-07	479136.4	3771277.6	352.0	3.49	4.00	3.25	YES	
L0006472	0	0.92500E-07	479136.3	3771269.1	352.0	3.49	4.00	3.25	YES	
L0006473	0	0.92500E-07	479136.2	3771260.5	352.0	3.49	4.00	3.25	YES	
L0006474	0	0.92500E-07	479136.1	3771251.9	352.0	3.49	4.00	3.25	YES	
L0006475	0	0.92500E-07	479136.0	3771243.3	352.0	3.49	4.00	3.25	YES	
L0006476	0	0.92500E-07	479135.9	3771234.7	352.0	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0006477	0	0.92500E-07	479135.8	3771226.1	352.0	3.49	4.00	3.25	YES	
L0006478	0	0.92500E-07	479135.7	3771217.5	352.0	3.49	4.00	3.25	YES	
L0006479	0	0.92500E-07	479135.6	3771208.9	352.0	3.49	4.00	3.25	YES	
L0006480	0	0.92500E-07	479135.5	3771200.3	352.0	3.49	4.00	3.25	YES	
L0006481	0	0.92500E-07	479135.4	3771191.7	352.0	3.49	4.00	3.25	YES	
L0006482	0	0.92500E-07	479135.3	3771183.2	352.0	3.49	4.00	3.25	YES	
L0006483	0	0.92500E-07	479135.2	3771174.6	352.0	3.49	4.00	3.25	YES	
L0006484	0	0.92500E-07	479135.1	3771166.0	352.0	3.49	4.00	3.25	YES	
L0006485	0	0.92500E-07	479135.0	3771157.4	352.0	3.49	4.00	3.25	YES	
L0006486	0	0.92500E-07	479135.0	3771148.8	352.0	3.49	4.00	3.25	YES	
L0006487	0	0.92500E-07	479134.9	3771140.2	352.0	3.49	4.00	3.25	YES	
L0006488	0	0.92500E-07	479134.8	3771131.6	352.0	3.49	4.00	3.25	YES	
L0006489	0	0.92500E-07	479134.7	3771123.0	352.0	3.49	4.00	3.25	YES	
L0006490	0	0.92500E-07	479134.6	3771114.4	352.0	3.49	4.00	3.25	YES	
L0006491	0	0.92500E-07	479134.5	3771105.9	352.0	3.49	4.00	3.25	YES	
L0006492	0	0.92500E-07	479134.4	3771097.3	352.0	3.49	4.00	3.25	YES	
L0006493	0	0.92500E-07	479134.3	3771088.7	352.0	3.49	4.00	3.25	YES	
L0006494	0	0.92500E-07	479134.2	3771080.1	352.0	3.49	4.00	3.25	YES	
L0006495	0	0.92500E-07	479134.1	3771071.5	352.0	3.49	4.00	3.25	YES	
L0006496	0	0.92500E-07	479134.0	3771062.9	352.0	3.49	4.00	3.25	YES	
L0006497	0	0.92500E-07	479133.9	3771054.3	352.0	3.49	4.00	3.25	YES	
L0006498	0	0.92500E-07	479133.8	3771045.7	352.0	3.49	4.00	3.25	YES	
L0006499	0	0.92500E-07	479133.7	3771037.1	352.0	3.49	4.00	3.25	YES	
L0006500	0	0.92500E-07	479133.6	3771028.5	352.0	3.49	4.00	3.25	YES	
L0006501	0	0.92500E-07	479133.5	3771020.0	352.0	3.49	4.00	3.25	YES	
L0006502	0	0.92500E-07	479133.4	3771011.4	352.0	3.49	4.00	3.25	YES	
L0006503	0	0.92500E-07	479133.3	3771002.8	352.0	3.49	4.00	3.25	YES	
L0006504	0	0.92500E-07	479133.2	3770994.2	352.0	3.49	4.00	3.25	YES	
L0006505	0	0.92500E-07	479133.1	3770985.6	352.0	3.49	4.00	3.25	YES	
L0006506	0	0.92500E-07	479133.0	3770977.0	352.2	3.49	4.00	3.25	YES	
L0006507	0	0.92500E-07	479132.9	3770968.4	352.5	3.49	4.00	3.25	YES	
L0006508	0	0.92500E-07	479132.8	3770959.8	352.7	3.49	4.00	3.25	YES	
L0006509	0	0.92500E-07	479132.7	3770951.2	352.8	3.49	4.00	3.25	YES	
L0006510	0	0.92500E-07	479132.6	3770942.7	352.8	3.49	4.00	3.25	YES	
L0006511	0	0.92500E-07	479132.5	3770934.1	352.8	3.49	4.00	3.25	YES	
L0006512	0	0.92500E-07	479132.4	3770925.5	352.8	3.49	4.00	3.25	YES	
L0006513	0	0.92500E-07	479132.3	3770916.9	352.8	3.49	4.00	3.25	YES	
L0006514	0	0.92500E-07	479132.2	3770908.3	352.7	3.49	4.00	3.25	YES	
L0006515	0	0.92500E-07	479132.1	3770899.7	352.7	3.49	4.00	3.25	YES	
L0006516	0	0.92500E-07	479132.0	3770891.1	352.7	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0006517	0	0.92500E-07	479131.9	3770882.5	352.7	3.49	4.00	3.25	YES	
L0006518	0	0.92500E-07	479131.8	3770873.9	352.7	3.49	4.00	3.25	YES	
L0006519	0	0.92500E-07	479131.7	3770865.3	352.7	3.49	4.00	3.25	YES	
L0006520	0	0.92500E-07	479131.6	3770856.8	352.7	3.49	4.00	3.25	YES	
L0006521	0	0.92500E-07	479131.5	3770848.2	352.7	3.49	4.00	3.25	YES	
L0006522	0	0.92500E-07	479131.4	3770839.6	352.7	3.49	4.00	3.25	YES	
L0006523	0	0.92500E-07	479131.3	3770831.0	352.8	3.49	4.00	3.25	YES	
L0006524	0	0.92500E-07	479131.2	3770822.4	352.9	3.49	4.00	3.25	YES	
L0006525	0	0.92500E-07	479131.1	3770813.8	352.9	3.49	4.00	3.25	YES	
L0006526	0	0.92500E-07	479131.0	3770805.2	353.0	3.49	4.00	3.25	YES	
L0006527	0	0.92500E-07	479130.9	3770796.6	353.0	3.49	4.00	3.25	YES	
L0006528	0	0.92500E-07	479130.8	3770788.0	353.0	3.49	4.00	3.25	YES	
L0006529	0	0.92500E-07	479130.7	3770779.5	353.0	3.49	4.00	3.25	YES	
L0006530	0	0.92500E-07	479130.6	3770770.9	353.0	3.49	4.00	3.25	YES	
L0006531	0	0.92500E-07	479130.5	3770762.3	353.0	3.49	4.00	3.25	YES	
L0006532	0	0.92500E-07	479130.4	3770753.7	353.0	3.49	4.00	3.25	YES	
L0006533	0	0.92500E-07	479130.3	3770745.1	353.0	3.49	4.00	3.25	YES	
L0006534	0	0.92500E-07	479130.2	3770736.5	353.0	3.49	4.00	3.25	YES	
L0006535	0	0.92500E-07	479130.1	3770727.9	353.0	3.49	4.00	3.25	YES	
L0006536	0	0.92500E-07	479130.0	3770719.3	353.0	3.49	4.00	3.25	YES	
L0006537	0	0.92500E-07	479130.0	3770710.7	353.0	3.49	4.00	3.25	YES	
L0006538	0	0.92500E-07	479129.9	3770702.1	353.0	3.49	4.00	3.25	YES	
L0006539	0	0.92500E-07	479129.8	3770693.6	353.0	3.49	4.00	3.25	YES	
L0006540	0	0.92500E-07	479129.7	3770685.0	353.0	3.49	4.00	3.25	YES	
L0006541	0	0.92500E-07	479129.6	3770676.4	353.0	3.49	4.00	3.25	YES	
L0006542	0	0.92500E-07	479129.5	3770667.8	353.0	3.49	4.00	3.25	YES	
L0006543	0	0.92500E-07	479129.4	3770659.2	353.0	3.49	4.00	3.25	YES	
L0006544	0	0.92500E-07	479129.3	3770650.6	353.0	3.49	4.00	3.25	YES	
L0006545	0	0.92500E-07	479129.2	3770642.0	353.0	3.49	4.00	3.25	YES	
L0006546	0	0.92500E-07	479129.1	3770633.4	353.0	3.49	4.00	3.25	YES	
L0006547	0	0.92500E-07	479129.0	3770624.8	353.0	3.49	4.00	3.25	YES	
L0006548	0	0.92500E-07	479128.9	3770616.3	353.0	3.49	4.00	3.25	YES	
L0006549	0	0.92500E-07	479128.8	3770607.7	353.0	3.49	4.00	3.25	YES	
L0006550	0	0.92500E-07	479128.7	3770599.1	353.0	3.49	4.00	3.25	YES	
L0006551	0	0.92500E-07	479128.6	3770590.5	353.1	3.49	4.00	3.25	YES	
L0006552	0	0.92500E-07	479128.5	3770581.9	353.3	3.49	4.00	3.25	YES	
L0006553	0	0.92500E-07	479128.4	3770573.3	353.5	3.49	4.00	3.25	YES	
L0006554	0	0.92500E-07	479128.3	3770564.7	353.6	3.49	4.00	3.25	YES	
L0006555	0	0.92500E-07	479128.2	3770556.1	353.7	3.49	4.00	3.25	YES	
L0006556	0	0.92500E-07	479128.1	3770547.5	353.9	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0006557	0	0.92500E-07	479128.0	3770538.9	354.0	3.49	4.00	3.25	YES	
L0006558	0	0.92500E-07	479127.9	3770530.4	354.0	3.49	4.00	3.25	YES	
L0006559	0	0.92500E-07	479127.8	3770521.8	354.0	3.49	4.00	3.25	YES	
L0006560	0	0.92500E-07	479127.7	3770513.2	354.0	3.49	4.00	3.25	YES	
L0006561	0	0.92500E-07	479127.6	3770504.6	354.0	3.49	4.00	3.25	YES	
L0006562	0	0.92500E-07	479127.5	3770496.0	354.0	3.49	4.00	3.25	YES	
L0006563	0	0.92500E-07	479127.4	3770487.4	354.0	3.49	4.00	3.25	YES	
L0006564	0	0.92500E-07	479127.3	3770478.8	354.0	3.49	4.00	3.25	YES	
L0006565	0	0.92500E-07	479127.2	3770470.2	354.0	3.49	4.00	3.25	YES	
L0006566	0	0.92500E-07	479127.1	3770461.6	354.0	3.49	4.00	3.25	YES	
L0006567	0	0.92500E-07	479127.0	3770453.1	354.0	3.49	4.00	3.25	YES	
L0006568	0	0.92500E-07	479126.9	3770444.5	354.0	3.49	4.00	3.25	YES	
L0006569	0	0.92500E-07	479126.8	3770435.9	354.0	3.49	4.00	3.25	YES	
L0006570	0	0.92500E-07	479126.7	3770427.3	354.0	3.49	4.00	3.25	YES	
L0006571	0	0.92500E-07	479126.6	3770418.7	354.0	3.49	4.00	3.25	YES	
L0006572	0	0.92500E-07	479126.5	3770410.1	354.0	3.49	4.00	3.25	YES	
L0006573	0	0.92500E-07	479126.4	3770401.5	354.0	3.49	4.00	3.25	YES	
L0006574	0	0.92500E-07	479126.3	3770392.9	354.0	3.49	4.00	3.25	YES	
L0006575	0	0.92500E-07	479126.2	3770384.3	354.0	3.49	4.00	3.25	YES	
L0006576	0	0.92500E-07	479126.1	3770375.7	354.0	3.49	4.00	3.25	YES	
L0006577	0	0.92500E-07	479126.2	3770367.2	354.0	3.49	4.00	3.25	YES	
L0006578	0	0.92500E-07	479126.2	3770358.6	354.0	3.49	4.00	3.25	YES	
L0006579	0	0.92500E-07	479126.3	3770350.0	354.0	3.49	4.00	3.25	YES	
L0006580	0	0.92500E-07	479126.4	3770341.4	354.0	3.49	4.00	3.25	YES	
L0006581	0	0.92500E-07	479126.4	3770332.8	354.0	3.49	4.00	3.25	YES	
L0006582	0	0.92500E-07	479126.5	3770324.2	354.0	3.49	4.00	3.25	YES	
L0006583	0	0.92500E-07	479126.5	3770315.6	353.8	3.49	4.00	3.25	YES	
L0006584	0	0.92500E-07	479126.6	3770307.0	353.7	3.49	4.00	3.25	YES	
L0006585	0	0.92500E-07	479126.7	3770298.4	353.6	3.49	4.00	3.25	YES	
L0006586	0	0.92500E-07	479126.7	3770289.9	353.4	3.49	4.00	3.25	YES	
L0006587	0	0.92500E-07	479126.8	3770281.3	353.3	3.49	4.00	3.25	YES	
L0006588	0	0.92500E-07	479126.8	3770272.7	353.1	3.49	4.00	3.25	YES	
L0006589	0	0.92500E-07	479126.9	3770264.1	353.0	3.49	4.00	3.25	YES	
L0006590	0	0.92500E-07	479127.0	3770255.5	353.0	3.49	4.00	3.25	YES	
L0006591	0	0.92500E-07	479127.0	3770246.9	353.0	3.49	4.00	3.25	YES	
L0006592	0	0.92500E-07	479127.1	3770238.3	353.0	3.49	4.00	3.25	YES	
L0006593	0	0.92500E-07	479127.1	3770229.7	353.0	3.49	4.00	3.25	YES	
L0006594	0	0.92500E-07	479127.2	3770221.1	353.0	3.49	4.00	3.25	YES	
L0006595	0	0.92500E-07	479127.2	3770212.5	353.0	3.49	4.00	3.25	YES	
L0006596	0	0.92500E-07	479127.3	3770204.0	353.0	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0006597	0	0.92500E-07	479127.4	3770195.4	353.0	3.49	4.00	3.25	YES	
L0006598	0	0.92500E-07	479127.4	3770186.8	353.0	3.49	4.00	3.25	YES	
L0006599	0	0.92500E-07	479127.5	3770178.2	353.0	3.49	4.00	3.25	YES	
L0006600	0	0.92500E-07	479127.5	3770169.6	353.0	3.49	4.00	3.25	YES	
L0006601	0	0.92500E-07	479127.6	3770161.0	353.0	3.49	4.00	3.25	YES	
L0006602	0	0.92500E-07	479127.7	3770152.4	353.0	3.49	4.00	3.25	YES	
L0006603	0	0.92500E-07	479127.7	3770143.8	353.0	3.49	4.00	3.25	YES	
L0006604	0	0.92500E-07	479127.8	3770135.2	353.0	3.49	4.00	3.25	YES	
L0006605	0	0.92500E-07	479127.8	3770126.6	353.0	3.49	4.00	3.25	YES	
L0006606	0	0.92500E-07	479127.9	3770118.1	353.0	3.49	4.00	3.25	YES	
L0006607	0	0.92500E-07	479128.0	3770109.5	353.0	3.49	4.00	3.25	YES	
L0006608	0	0.92500E-07	479128.0	3770100.9	353.0	3.49	4.00	3.25	YES	
L0006609	0	0.92500E-07	479128.1	3770092.3	353.0	3.49	4.00	3.25	YES	
L0006610	0	0.92500E-07	479128.1	3770083.7	353.0	3.49	4.00	3.25	YES	
L0006611	0	0.92500E-07	479128.2	3770075.1	353.0	3.49	4.00	3.25	YES	
L0006612	0	0.92500E-07	479128.3	3770066.5	353.0	3.49	4.00	3.25	YES	
L0006613	0	0.92500E-07	479128.3	3770057.9	353.0	3.49	4.00	3.25	YES	
L0006614	0	0.92500E-07	479128.4	3770049.3	353.0	3.49	4.00	3.25	YES	
L0006615	0	0.92500E-07	479128.4	3770040.7	353.0	3.49	4.00	3.25	YES	
L0006616	0	0.92500E-07	479128.5	3770032.2	353.0	3.49	4.00	3.25	YES	
L0006617	0	0.92500E-07	479128.6	3770023.6	353.0	3.49	4.00	3.25	YES	
L0006618	0	0.92500E-07	479128.6	3770015.0	353.0	3.49	4.00	3.25	YES	
L0006619	0	0.92500E-07	479128.7	3770006.4	353.0	3.49	4.00	3.25	YES	
L0006620	0	0.92500E-07	479128.7	3769997.8	353.0	3.49	4.00	3.25	YES	
L0006621	0	0.92500E-07	479128.8	3769989.2	353.0	3.49	4.00	3.25	YES	
L0006622	0	0.92500E-07	479128.9	3769980.6	353.0	3.49	4.00	3.25	YES	
L0006623	0	0.92500E-07	479128.9	3769972.0	353.0	3.49	4.00	3.25	YES	
L0006624	0	0.92500E-07	479129.0	3769963.4	353.0	3.49	4.00	3.25	YES	
L0006625	0	0.92500E-07	479129.0	3769954.8	353.0	3.49	4.00	3.25	YES	
L0006626	0	0.92500E-07	479129.1	3769946.3	353.0	3.49	4.00	3.25	YES	
L0006627	0	0.92500E-07	479129.1	3769937.7	353.0	3.49	4.00	3.25	YES	
L0006628	0	0.92500E-07	479129.2	3769929.1	353.2	3.49	4.00	3.25	YES	
L0006629	0	0.92500E-07	479129.3	3769920.5	353.3	3.49	4.00	3.25	YES	
L0006630	0	0.92500E-07	479129.3	3769911.9	353.5	3.49	4.00	3.25	YES	
L0006631	0	0.92500E-07	479129.4	3769903.3	353.7	3.49	4.00	3.25	YES	
L0006632	0	0.92500E-07	479129.4	3769894.7	353.8	3.49	4.00	3.25	YES	
L0006633	0	0.92500E-07	479129.5	3769886.1	353.9	3.49	4.00	3.25	YES	
L0006634	0	0.92500E-07	479129.6	3769877.5	354.0	3.49	4.00	3.25	YES	
L0006635	0	0.92500E-07	479129.6	3769869.0	354.0	3.49	4.00	3.25	YES	
L0006636	0	0.92500E-07	479129.7	3769860.4	354.0	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0006637	0	0.92500E-07	479129.7	3769851.8	354.0	3.49	4.00	3.25	YES	
L0006638	0	0.92500E-07	479129.8	3769843.2	354.0	3.49	4.00	3.25	YES	
L0006639	0	0.92500E-07	479129.9	3769834.6	354.0	3.49	4.00	3.25	YES	
L0006640	0	0.92500E-07	479129.9	3769826.0	354.0	3.49	4.00	3.25	YES	
L0006641	0	0.92500E-07	479130.0	3769817.4	354.0	3.49	4.00	3.25	YES	
L0006642	0	0.92500E-07	479130.0	3769808.8	354.0	3.49	4.00	3.25	YES	
L0006643	0	0.92500E-07	479130.1	3769800.2	354.0	3.49	4.00	3.25	YES	
L0006644	0	0.92500E-07	479130.2	3769791.6	354.0	3.49	4.00	3.25	YES	
L0006645	0	0.92500E-07	479130.2	3769783.1	354.0	3.49	4.00	3.25	YES	
L0006646	0	0.92500E-07	479130.3	3769774.5	354.0	3.49	4.00	3.25	YES	
L0006647	0	0.92500E-07	479130.3	3769765.9	354.0	3.49	4.00	3.25	YES	
L0006648	0	0.92500E-07	479130.4	3769757.3	354.0	3.49	4.00	3.25	YES	
L0006649	0	0.92500E-07	479130.5	3769748.7	354.0	3.49	4.00	3.25	YES	
L0006650	0	0.92500E-07	479130.5	3769740.1	354.0	3.49	4.00	3.25	YES	
L0006651	0	0.92500E-07	479130.6	3769731.5	354.0	3.49	4.00	3.25	YES	
L0006652	0	0.92500E-07	479130.6	3769722.9	354.0	3.49	4.00	3.25	YES	
L0006653	0	0.92500E-07	479130.7	3769714.3	354.0	3.49	4.00	3.25	YES	
L0006654	0	0.92500E-07	479130.8	3769705.7	354.0	3.49	4.00	3.25	YES	
L0006655	0	0.92500E-07	479130.8	3769697.2	354.0	3.49	4.00	3.25	YES	
L0006656	0	0.92500E-07	479130.9	3769688.6	354.2	3.49	4.00	3.25	YES	
L0006657	0	0.92500E-07	479130.9	3769680.0	354.4	3.49	4.00	3.25	YES	
L0006658	0	0.92500E-07	479131.0	3769671.4	354.6	3.49	4.00	3.25	YES	
L0006659	0	0.92500E-07	479131.1	3769662.8	354.7	3.49	4.00	3.25	YES	
L0006660	0	0.92500E-07	479131.1	3769654.2	354.8	3.49	4.00	3.25	YES	
L0006661	0	0.92500E-07	479131.2	3769645.6	354.9	3.49	4.00	3.25	YES	
L0006662	0	0.92500E-07	479131.2	3769637.0	355.0	3.49	4.00	3.25	YES	
L0006663	0	0.92500E-07	479131.3	3769628.4	355.6	3.49	4.00	3.25	YES	
L0006664	0	0.92500E-07	479131.3	3769619.8	356.3	3.49	4.00	3.25	YES	
L0006665	0	0.21540E-06	480742.6	3774121.5	363.4	3.49	4.00	3.25	YES	
L0006666	0	0.21540E-06	480742.7	3774112.9	363.4	3.49	4.00	3.25	YES	
L0006667	0	0.21540E-06	480742.7	3774104.3	363.4	3.49	4.00	3.25	YES	
L0006668	0	0.21540E-06	480742.8	3774095.7	363.4	3.49	4.00	3.25	YES	
L0006669	0	0.21540E-06	480742.9	3774087.1	363.4	3.49	4.00	3.25	YES	
L0006670	0	0.21540E-06	480743.0	3774078.5	363.4	3.49	4.00	3.25	YES	
L0006671	0	0.21540E-06	480743.1	3774069.9	363.6	3.49	4.00	3.25	YES	
L0006672	0	0.21540E-06	480743.2	3774061.3	363.7	3.49	4.00	3.25	YES	
L0006673	0	0.21540E-06	480743.2	3774052.7	363.9	3.49	4.00	3.25	YES	
L0006674	0	0.21540E-06	480743.3	3774044.2	364.0	3.49	4.00	3.25	YES	
L0006675	0	0.21540E-06	480743.4	3774035.6	364.0	3.49	4.00	3.25	YES	
L0006676	0	0.21540E-06	480743.5	3774027.0	364.0	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0006677	0	0.21540E-06	480743.6	3774018.4	364.0	3.49	4.00	3.25	YES	
L0006678	0	0.21540E-06	480743.7	3774009.8	364.1	3.49	4.00	3.25	YES	
L0006679	0	0.21540E-06	480743.7	3774001.2	364.2	3.49	4.00	3.25	YES	
L0006680	0	0.21540E-06	480743.8	3773992.6	364.4	3.49	4.00	3.25	YES	
L0006681	0	0.21540E-06	480743.9	3773984.0	364.5	3.49	4.00	3.25	YES	
L0006682	0	0.21540E-06	480744.0	3773975.4	364.7	3.49	4.00	3.25	YES	
L0006683	0	0.21540E-06	480744.1	3773966.8	364.8	3.49	4.00	3.25	YES	
L0006684	0	0.21540E-06	480744.1	3773958.3	365.0	3.49	4.00	3.25	YES	
L0006685	0	0.21540E-06	480744.2	3773949.7	365.1	3.49	4.00	3.25	YES	
L0006686	0	0.21540E-06	480744.3	3773941.1	365.2	3.49	4.00	3.25	YES	
L0006687	0	0.21540E-06	480744.4	3773932.5	365.4	3.49	4.00	3.25	YES	
L0006688	0	0.21540E-06	480744.5	3773923.9	365.5	3.49	4.00	3.25	YES	
L0006689	0	0.21540E-06	480744.6	3773915.3	365.5	3.49	4.00	3.25	YES	
L0006690	0	0.21540E-06	480744.6	3773906.7	365.5	3.49	4.00	3.25	YES	
L0006691	0	0.21540E-06	480744.7	3773898.1	365.5	3.49	4.00	3.25	YES	
L0006692	0	0.21540E-06	480744.8	3773889.5	365.5	3.49	4.00	3.25	YES	
L0006693	0	0.21540E-06	480744.9	3773881.0	365.5	3.49	4.00	3.25	YES	
L0006694	0	0.21540E-06	480745.0	3773872.4	365.5	3.49	4.00	3.25	YES	
L0006695	0	0.21540E-06	480745.0	3773863.8	365.5	3.49	4.00	3.25	YES	
L0006696	0	0.21540E-06	480745.1	3773855.2	365.5	3.49	4.00	3.25	YES	
L0006697	0	0.21540E-06	480745.2	3773846.6	365.5	3.49	4.00	3.25	YES	
L0006698	0	0.21540E-06	480745.3	3773838.0	365.5	3.49	4.00	3.25	YES	
L0006699	0	0.21540E-06	480745.4	3773829.4	365.5	3.49	4.00	3.25	YES	
L0006700	0	0.21540E-06	480745.5	3773820.8	365.5	3.49	4.00	3.25	YES	
L0006701	0	0.21540E-06	480745.5	3773812.2	365.5	3.49	4.00	3.25	YES	
L0006702	0	0.21540E-06	480745.6	3773803.6	365.5	3.49	4.00	3.25	YES	
L0006703	0	0.21540E-06	480745.7	3773795.1	365.5	3.49	4.00	3.25	YES	
L0006704	0	0.21540E-06	480745.8	3773786.5	365.5	3.49	4.00	3.25	YES	
L0006705	0	0.21540E-06	480745.9	3773777.9	365.5	3.49	4.00	3.25	YES	
L0006706	0	0.21540E-06	480746.0	3773769.3	365.5	3.49	4.00	3.25	YES	
L0006707	0	0.21540E-06	480746.0	3773760.7	365.5	3.49	4.00	3.25	YES	
L0006708	0	0.21540E-06	480746.1	3773752.1	365.5	3.49	4.00	3.25	YES	
L0006709	0	0.21540E-06	480746.2	3773743.5	365.5	3.49	4.00	3.25	YES	
L0006710	0	0.21540E-06	480746.3	3773734.9	365.6	3.49	4.00	3.25	YES	
L0006711	0	0.21540E-06	480746.4	3773726.3	365.6	3.49	4.00	3.25	YES	
L0006712	0	0.21540E-06	480746.4	3773717.7	365.6	3.49	4.00	3.25	YES	
L0006713	0	0.21540E-06	480746.5	3773709.2	365.6	3.49	4.00	3.25	YES	
L0006714	0	0.21540E-06	480746.6	3773700.6	365.6	3.49	4.00	3.25	YES	
L0006715	0	0.21540E-06	480746.7	3773692.0	365.6	3.49	4.00	3.25	YES	
L0006716	0	0.21540E-06	480746.8	3773683.4	365.6	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0006717	0	0.21540E-06	480746.9	3773674.8	365.6	3.49	4.00	3.25	YES	
L0006718	0	0.21540E-06	480746.9	3773666.2	365.6	3.49	4.00	3.25	YES	
L0006719	0	0.21540E-06	480747.0	3773657.6	365.6	3.49	4.00	3.25	YES	
L0006720	0	0.21540E-06	480747.1	3773649.0	365.6	3.49	4.00	3.25	YES	
L0006721	0	0.21540E-06	480747.2	3773640.4	365.6	3.49	4.00	3.25	YES	
L0006722	0	0.21540E-06	480747.3	3773631.9	365.6	3.49	4.00	3.25	YES	
L0006723	0	0.21540E-06	480747.4	3773623.3	365.5	3.49	4.00	3.25	YES	
L0006724	0	0.21540E-06	480747.4	3773614.7	365.2	3.49	4.00	3.25	YES	
L0006725	0	0.21540E-06	480747.5	3773606.1	364.9	3.49	4.00	3.25	YES	
L0006726	0	0.21540E-06	480747.6	3773597.5	364.6	3.49	4.00	3.25	YES	
L0006727	0	0.21540E-06	480747.7	3773588.9	364.4	3.49	4.00	3.25	YES	
L0006728	0	0.21540E-06	480747.8	3773580.3	364.3	3.49	4.00	3.25	YES	
L0006729	0	0.21540E-06	480747.8	3773571.7	364.1	3.49	4.00	3.25	YES	
L0006730	0	0.21540E-06	480747.9	3773563.1	364.0	3.49	4.00	3.25	YES	
L0006731	0	0.21540E-06	480748.0	3773554.5	363.9	3.49	4.00	3.25	YES	
L0006732	0	0.21540E-06	480748.1	3773546.0	363.7	3.49	4.00	3.25	YES	
L0006733	0	0.21540E-06	480748.2	3773537.4	363.6	3.49	4.00	3.25	YES	
L0006734	0	0.21540E-06	480748.3	3773528.8	363.5	3.49	4.00	3.25	YES	
L0006735	0	0.21540E-06	480748.3	3773520.2	363.3	3.49	4.00	3.25	YES	
L0006736	0	0.21540E-06	480748.4	3773511.6	363.1	3.49	4.00	3.25	YES	
L0006737	0	0.21540E-06	480748.5	3773503.0	363.0	3.49	4.00	3.25	YES	
L0006738	0	0.21540E-06	480748.5	3773494.4	362.9	3.49	4.00	3.25	YES	
L0006739	0	0.21540E-06	480748.5	3773485.8	362.7	3.49	4.00	3.25	YES	
L0006740	0	0.21540E-06	480748.6	3773477.2	362.6	3.49	4.00	3.25	YES	
L0006741	0	0.21540E-06	480748.6	3773468.6	362.6	3.49	4.00	3.25	YES	
L0006742	0	0.21540E-06	480748.6	3773460.1	362.6	3.49	4.00	3.25	YES	
L0006743	0	0.21540E-06	480748.6	3773451.5	362.6	3.49	4.00	3.25	YES	
L0006744	0	0.21540E-06	480748.6	3773442.9	362.6	3.49	4.00	3.25	YES	
L0006745	0	0.21540E-06	480748.7	3773434.3	362.4	3.49	4.00	3.25	YES	
L0006746	0	0.21540E-06	480748.7	3773425.7	362.2	3.49	4.00	3.25	YES	
L0006747	0	0.21540E-06	480748.7	3773417.1	362.0	3.49	4.00	3.25	YES	
L0006748	0	0.21540E-06	480748.7	3773408.5	362.0	3.49	4.00	3.25	YES	
L0006749	0	0.21540E-06	480748.8	3773399.9	362.0	3.49	4.00	3.25	YES	
L0006750	0	0.21540E-06	480748.8	3773391.3	362.0	3.49	4.00	3.25	YES	
L0006751	0	0.21540E-06	480748.8	3773382.8	362.0	3.49	4.00	3.25	YES	
L0006752	0	0.21540E-06	480748.8	3773374.2	362.0	3.49	4.00	3.25	YES	
L0006753	0	0.21540E-06	480748.8	3773365.6	362.0	3.49	4.00	3.25	YES	
L0006754	0	0.21540E-06	480748.9	3773357.0	362.0	3.49	4.00	3.25	YES	
L0006755	0	0.21540E-06	480748.9	3773348.4	362.0	3.49	4.00	3.25	YES	
L0006756	0	0.21540E-06	480748.9	3773339.8	362.0	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0006757	0	0.21540E-06	480748.9	3773331.2	362.0	3.49	4.00	3.25	YES	
L0006758	0	0.21540E-06	480749.0	3773322.6	362.0	3.49	4.00	3.25	YES	
L0006759	0	0.21540E-06	480749.0	3773314.0	362.0	3.49	4.00	3.25	YES	
L0006760	0	0.21540E-06	480749.0	3773305.4	362.0	3.49	4.00	3.25	YES	
L0006761	0	0.21540E-06	480749.0	3773296.8	362.0	3.49	4.00	3.25	YES	
L0006762	0	0.21540E-06	480749.0	3773288.3	362.0	3.49	4.00	3.25	YES	
L0006763	0	0.21540E-06	480749.1	3773279.7	362.0	3.49	4.00	3.25	YES	
L0006764	0	0.21540E-06	480749.1	3773271.1	362.0	3.49	4.00	3.25	YES	
L0006765	0	0.21540E-06	480749.1	3773262.5	362.0	3.49	4.00	3.25	YES	
L0006766	0	0.21540E-06	480749.1	3773253.9	362.0	3.49	4.00	3.25	YES	
L0006767	0	0.21540E-06	480749.2	3773245.3	362.0	3.49	4.00	3.25	YES	
L0006768	0	0.21540E-06	480749.2	3773236.7	362.0	3.49	4.00	3.25	YES	
L0006769	0	0.21540E-06	480749.2	3773228.1	362.0	3.49	4.00	3.25	YES	
L0006770	0	0.21540E-06	480749.2	3773219.5	362.0	3.49	4.00	3.25	YES	
L0006771	0	0.21540E-06	480749.2	3773210.9	362.0	3.49	4.00	3.25	YES	
L0006772	0	0.21540E-06	480749.3	3773202.4	362.0	3.49	4.00	3.25	YES	
L0006773	0	0.21540E-06	480749.3	3773193.8	362.0	3.49	4.00	3.25	YES	
L0006774	0	0.21540E-06	480749.3	3773185.2	362.0	3.49	4.00	3.25	YES	
L0006775	0	0.21540E-06	480749.3	3773176.6	362.0	3.49	4.00	3.25	YES	
L0006776	0	0.21540E-06	480749.3	3773168.0	361.9	3.49	4.00	3.25	YES	
L0006777	0	0.21540E-06	480749.4	3773159.4	361.8	3.49	4.00	3.25	YES	
L0006778	0	0.21540E-06	480749.4	3773150.8	361.7	3.49	4.00	3.25	YES	
L0006779	0	0.21540E-06	480749.4	3773142.2	361.7	3.49	4.00	3.25	YES	
L0006780	0	0.21540E-06	480749.4	3773133.6	361.7	3.49	4.00	3.25	YES	
L0006781	0	0.21540E-06	480749.5	3773125.0	361.7	3.49	4.00	3.25	YES	
L0006782	0	0.21540E-06	480749.5	3773116.5	361.7	3.49	4.00	3.25	YES	
L0006783	0	0.21540E-06	480749.5	3773107.9	361.7	3.49	4.00	3.25	YES	
L0006784	0	0.21540E-06	480749.5	3773099.3	361.7	3.49	4.00	3.25	YES	
L0006785	0	0.21540E-06	480749.5	3773090.7	361.7	3.49	4.00	3.25	YES	
L0006786	0	0.21540E-06	480749.6	3773082.1	361.7	3.49	4.00	3.25	YES	
L0006787	0	0.21540E-06	480749.6	3773073.5	361.7	3.49	4.00	3.25	YES	
L0006788	0	0.21540E-06	480749.6	3773064.9	361.7	3.49	4.00	3.25	YES	
L0006789	0	0.21540E-06	480749.6	3773056.3	361.7	3.49	4.00	3.25	YES	
L0006790	0	0.21540E-06	480749.7	3773047.7	361.7	3.49	4.00	3.25	YES	
L0006791	0	0.21540E-06	480749.7	3773039.2	361.7	3.49	4.00	3.25	YES	
L0006792	0	0.21540E-06	480749.7	3773030.6	361.7	3.49	4.00	3.25	YES	
L0006793	0	0.21540E-06	480749.7	3773022.0	361.7	3.49	4.00	3.25	YES	
L0006794	0	0.21540E-06	480749.7	3773013.4	361.7	3.49	4.00	3.25	YES	
L0006795	0	0.21540E-06	480749.8	3773004.8	361.7	3.49	4.00	3.25	YES	
L0006796	0	0.21540E-06	480749.8	3772996.2	361.7	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0006797	0	0.21540E-06	480749.8	3772987.6	361.7	3.49	4.00	3.25	YES	
L0006798	0	0.21540E-06	480749.8	3772979.0	361.7	3.49	4.00	3.25	YES	
L0006799	0	0.21540E-06	480749.8	3772970.4	361.7	3.49	4.00	3.25	YES	
L0006800	0	0.21540E-06	480749.9	3772961.8	361.7	3.49	4.00	3.25	YES	
L0006801	0	0.21540E-06	480749.9	3772953.3	361.7	3.49	4.00	3.25	YES	
L0006802	0	0.21540E-06	480749.9	3772944.7	361.7	3.49	4.00	3.25	YES	
L0006803	0	0.21540E-06	480749.9	3772936.1	361.7	3.49	4.00	3.25	YES	
L0006804	0	0.21540E-06	480750.0	3772927.5	361.7	3.49	4.00	3.25	YES	
L0006805	0	0.21540E-06	480750.0	3772918.9	361.7	3.49	4.00	3.25	YES	
L0006806	0	0.21540E-06	480750.0	3772910.3	361.7	3.49	4.00	3.25	YES	
L0006807	0	0.21540E-06	480750.0	3772901.7	361.7	3.49	4.00	3.25	YES	
L0006808	0	0.21540E-06	480750.0	3772893.1	361.7	3.49	4.00	3.25	YES	
L0006809	0	0.21540E-06	480750.1	3772884.5	361.7	3.49	4.00	3.25	YES	
L0006810	0	0.21540E-06	480750.1	3772875.9	361.7	3.49	4.00	3.25	YES	
L0006811	0	0.21540E-06	480750.1	3772867.4	361.7	3.49	4.00	3.25	YES	
L0006812	0	0.21540E-06	480750.1	3772858.8	361.7	3.49	4.00	3.25	YES	
L0006813	0	0.21540E-06	480750.2	3772850.2	361.7	3.49	4.00	3.25	YES	
L0006814	0	0.21540E-06	480750.2	3772841.6	361.7	3.49	4.00	3.25	YES	
L0006815	0	0.21540E-06	480750.2	3772833.0	361.7	3.49	4.00	3.25	YES	
L0006816	0	0.21540E-06	480750.2	3772824.4	361.7	3.49	4.00	3.25	YES	
L0006817	0	0.21540E-06	480750.2	3772815.8	361.7	3.49	4.00	3.25	YES	
L0006818	0	0.21540E-06	480750.3	3772807.2	361.7	3.49	4.00	3.25	YES	
L0006819	0	0.21540E-06	480750.3	3772798.6	361.7	3.49	4.00	3.25	YES	
L0006820	0	0.21540E-06	480750.3	3772790.0	361.7	3.49	4.00	3.25	YES	
L0006821	0	0.21540E-06	480750.3	3772781.5	361.7	3.49	4.00	3.25	YES	
L0006822	0	0.21540E-06	480750.3	3772772.9	361.7	3.49	4.00	3.25	YES	
L0006823	0	0.21540E-06	480750.4	3772764.3	361.7	3.49	4.00	3.25	YES	
L0006824	0	0.21540E-06	480750.4	3772755.7	361.7	3.49	4.00	3.25	YES	
L0006825	0	0.21540E-06	480750.4	3772747.1	361.7	3.49	4.00	3.25	YES	
L0006826	0	0.21540E-06	480750.4	3772738.5	361.7	3.49	4.00	3.25	YES	
L0006827	0	0.21540E-06	480750.5	3772729.9	361.7	3.49	4.00	3.25	YES	
L0006828	0	0.21540E-06	480750.5	3772721.3	361.7	3.49	4.00	3.25	YES	
L0006829	0	0.21540E-06	480750.5	3772712.7	361.7	3.49	4.00	3.25	YES	
L0006830	0	0.21540E-06	480750.5	3772704.1	361.7	3.49	4.00	3.25	YES	
L0006831	0	0.21540E-06	480750.5	3772695.6	361.7	3.49	4.00	3.25	YES	
L0006832	0	0.21540E-06	480750.6	3772687.0	361.7	3.49	4.00	3.25	YES	
L0006833	0	0.21540E-06	480750.6	3772678.4	361.7	3.49	4.00	3.25	YES	
L0006834	0	0.21540E-06	480750.6	3772669.8	361.7	3.49	4.00	3.25	YES	
L0006835	0	0.21540E-06	480750.6	3772661.2	361.6	3.49	4.00	3.25	YES	
L0006836	0	0.21540E-06	480750.7	3772652.6	361.4	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0006837	0	0.21540E-06	480750.7	3772644.0	361.2	3.49	4.00	3.25	YES	
L0006838	0	0.21540E-06	480750.7	3772635.4	361.0	3.49	4.00	3.25	YES	
L0006839	0	0.21540E-06	480750.7	3772626.8	361.0	3.49	4.00	3.25	YES	
L0006840	0	0.21540E-06	480750.7	3772618.2	361.0	3.49	4.00	3.25	YES	
L0006841	0	0.21540E-06	480750.8	3772609.7	361.0	3.49	4.00	3.25	YES	
L0006842	0	0.21540E-06	480750.8	3772601.1	361.0	3.49	4.00	3.25	YES	
L0006843	0	0.21540E-06	480750.8	3772592.5	361.0	3.49	4.00	3.25	YES	
L0006844	0	0.21540E-06	480750.8	3772583.9	361.0	3.49	4.00	3.25	YES	
L0006845	0	0.21540E-06	480750.9	3772575.3	361.0	3.49	4.00	3.25	YES	
L0006846	0	0.21540E-06	480750.9	3772566.7	360.9	3.49	4.00	3.25	YES	
L0006847	0	0.21540E-06	480750.9	3772558.1	360.8	3.49	4.00	3.25	YES	
L0006848	0	0.21540E-06	480750.9	3772549.5	360.7	3.49	4.00	3.25	YES	
L0006849	0	0.21540E-06	480750.9	3772540.9	360.7	3.49	4.00	3.25	YES	
L0006850	0	0.21540E-06	480751.0	3772532.3	360.7	3.49	4.00	3.25	YES	
L0006851	0	0.21540E-06	480751.0	3772523.8	360.7	3.49	4.00	3.25	YES	
L0006852	0	0.21540E-06	480751.0	3772515.2	360.7	3.49	4.00	3.25	YES	
L0006853	0	0.21540E-06	480751.0	3772506.6	360.5	3.49	4.00	3.25	YES	
L0006854	0	0.21540E-06	480751.0	3772498.0	360.3	3.49	4.00	3.25	YES	
L0006855	0	0.21540E-06	480751.1	3772489.4	360.1	3.49	4.00	3.25	YES	
L0006856	0	0.21540E-06	480751.1	3772480.8	360.1	3.49	4.00	3.25	YES	
L0006857	0	0.21540E-06	480751.1	3772472.2	360.3	3.49	4.00	3.25	YES	
L0006858	0	0.21540E-06	480751.1	3772463.6	360.5	3.49	4.00	3.25	YES	
L0006859	0	0.21540E-06	480751.2	3772455.0	360.7	3.49	4.00	3.25	YES	
L0006860	0	0.21540E-06	480751.2	3772446.4	360.7	3.49	4.00	3.25	YES	
L0006861	0	0.21540E-06	480751.2	3772437.9	360.7	3.49	4.00	3.25	YES	
L0006862	0	0.21540E-06	480751.2	3772429.3	360.7	3.49	4.00	3.25	YES	
L0006863	0	0.21540E-06	480751.2	3772420.7	360.9	3.49	4.00	3.25	YES	
L0006864	0	0.21540E-06	480751.3	3772412.1	361.2	3.49	4.00	3.25	YES	
L0006865	0	0.21540E-06	480751.3	3772403.5	361.5	3.49	4.00	3.25	YES	
L0006866	0	0.21540E-06	480751.3	3772394.9	361.7	3.49	4.00	3.25	YES	
L0006867	0	0.21540E-06	480751.3	3772386.3	361.7	3.49	4.00	3.25	YES	
L0006868	0	0.21540E-06	480751.4	3772377.7	361.7	3.49	4.00	3.25	YES	
L0006869	0	0.21540E-06	480751.4	3772369.1	361.7	3.49	4.00	3.25	YES	
L0006870	0	0.21540E-06	480751.4	3772360.5	361.8	3.49	4.00	3.25	YES	
L0006871	0	0.21540E-06	480751.4	3772352.0	361.9	3.49	4.00	3.25	YES	
L0006872	0	0.21540E-06	480751.4	3772343.4	361.9	3.49	4.00	3.25	YES	
L0006873	0	0.21540E-06	480751.5	3772334.8	362.0	3.49	4.00	3.25	YES	
L0006874	0	0.21540E-06	480751.5	3772326.2	362.2	3.49	4.00	3.25	YES	
L0006875	0	0.21540E-06	480751.5	3772317.6	362.4	3.49	4.00	3.25	YES	
L0006876	0	0.21540E-06	480751.5	3772309.0	362.7	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0006877	0	0.21540E-06	480751.5	3772300.4	362.8	3.49	4.00	3.25	YES	
L0006878	0	0.21540E-06	480751.6	3772291.8	362.9	3.49	4.00	3.25	YES	
L0006879	0	0.21540E-06	480751.6	3772283.2	362.9	3.49	4.00	3.25	YES	
L0006880	0	0.21540E-06	480751.6	3772274.6	363.0	3.49	4.00	3.25	YES	
L0006881	0	0.21540E-06	480751.6	3772266.1	363.0	3.49	4.00	3.25	YES	
L0006882	0	0.21540E-06	480751.7	3772257.5	363.0	3.49	4.00	3.25	YES	
L0006883	0	0.21540E-06	480751.7	3772248.9	363.0	3.49	4.00	3.25	YES	
L0006884	0	0.21540E-06	480751.7	3772240.3	363.2	3.49	4.00	3.25	YES	
L0006885	0	0.21540E-06	480751.7	3772231.7	363.4	3.49	4.00	3.25	YES	
L0006886	0	0.21540E-06	480751.7	3772223.1	363.6	3.49	4.00	3.25	YES	
L0006887	0	0.21540E-06	480751.8	3772214.5	363.7	3.49	4.00	3.25	YES	
L0006888	0	0.21540E-06	480751.8	3772205.9	363.8	3.49	4.00	3.25	YES	
L0006889	0	0.21540E-06	480751.8	3772197.3	363.9	3.49	4.00	3.25	YES	
L0006890	0	0.21540E-06	480751.8	3772188.7	364.0	3.49	4.00	3.25	YES	
L0006891	0	0.21540E-06	480751.9	3772180.2	364.0	3.49	4.00	3.25	YES	
L0006892	0	0.21540E-06	480751.9	3772171.6	364.0	3.49	4.00	3.25	YES	
L0006893	0	0.21540E-06	480751.9	3772163.0	364.0	3.49	4.00	3.25	YES	
L0006894	0	0.21540E-06	480751.9	3772154.4	364.1	3.49	4.00	3.25	YES	
L0006895	0	0.21540E-06	480751.9	3772145.8	364.3	3.49	4.00	3.25	YES	
L0006896	0	0.21540E-06	480752.0	3772137.2	364.5	3.49	4.00	3.25	YES	
L0006897	0	0.21540E-06	480752.0	3772128.6	364.7	3.49	4.00	3.25	YES	
L0006898	0	0.21540E-06	480752.0	3772120.0	364.8	3.49	4.00	3.25	YES	
L0006899	0	0.21540E-06	480752.0	3772111.4	364.9	3.49	4.00	3.25	YES	
L0006900	0	0.21540E-06	480752.0	3772102.8	364.9	3.49	4.00	3.25	YES	
L0006901	0	0.21540E-06	480752.1	3772094.3	365.1	3.49	4.00	3.25	YES	
L0006902	0	0.21540E-06	480752.1	3772085.7	365.3	3.49	4.00	3.25	YES	
L0006903	0	0.21540E-06	480752.1	3772077.1	365.5	3.49	4.00	3.25	YES	
L0006904	0	0.21540E-06	480752.1	3772068.5	365.7	3.49	4.00	3.25	YES	
L0006905	0	0.21540E-06	480752.2	3772059.9	365.9	3.49	4.00	3.25	YES	
L0006906	0	0.21540E-06	480752.2	3772051.3	366.2	3.49	4.00	3.25	YES	
L0006907	0	0.21540E-06	480752.2	3772042.7	366.5	3.49	4.00	3.25	YES	
L0006908	0	0.21540E-06	480752.2	3772034.1	366.9	3.49	4.00	3.25	YES	
L0006909	0	0.21540E-06	480752.2	3772025.5	367.7	3.49	4.00	3.25	YES	
L0006910	0	0.21540E-06	480752.3	3772016.9	368.5	3.49	4.00	3.25	YES	
L0006911	0	0.21540E-06	480752.3	3772008.4	369.3	3.49	4.00	3.25	YES	
L0006912	0	0.21540E-06	480752.3	3771999.8	369.8	3.49	4.00	3.25	YES	
L0006913	0	0.21540E-06	480752.3	3771991.2	370.1	3.49	4.00	3.25	YES	
L0006914	0	0.21540E-06	480752.4	3771982.6	370.5	3.49	4.00	3.25	YES	
L0006915	0	0.21540E-06	480752.4	3771974.0	370.8	3.49	4.00	3.25	YES	
L0006916	0	0.21540E-06	480752.4	3771965.4	370.8	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0006917	0	0.21540E-06	480752.4	3771956.8	370.8	3.49	4.00	3.25	YES	
L0006918	0	0.21540E-06	480752.4	3771948.2	370.8	3.49	4.00	3.25	YES	
L0006919	0	0.21540E-06	480752.5	3771939.6	371.0	3.49	4.00	3.25	YES	
L0006920	0	0.21540E-06	480752.5	3771931.0	371.3	3.49	4.00	3.25	YES	
L0006921	0	0.21540E-06	480752.5	3771922.5	371.6	3.49	4.00	3.25	YES	
L0006922	0	0.21540E-06	480752.5	3771913.9	371.8	3.49	4.00	3.25	YES	
L0006923	0	0.21540E-06	480752.6	3771905.3	371.8	3.49	4.00	3.25	YES	
L0006924	0	0.21540E-06	480752.6	3771896.7	371.8	3.49	4.00	3.25	YES	
L0006925	0	0.21540E-06	480752.6	3771888.1	371.8	3.49	4.00	3.25	YES	
L0006926	0	0.21540E-06	480752.6	3771879.5	371.8	3.49	4.00	3.25	YES	
L0006927	0	0.21540E-06	480752.6	3771870.9	371.8	3.49	4.00	3.25	YES	
L0006928	0	0.21540E-06	480752.7	3771862.3	371.8	3.49	4.00	3.25	YES	
L0006929	0	0.21540E-06	480752.7	3771853.7	371.8	3.49	4.00	3.25	YES	
L0006930	0	0.21540E-06	480752.7	3771845.1	371.8	3.49	4.00	3.25	YES	
L0006931	0	0.21540E-06	480752.7	3771836.6	371.8	3.49	4.00	3.25	YES	
L0006932	0	0.21540E-06	480752.7	3771828.0	371.8	3.49	4.00	3.25	YES	
L0006933	0	0.21540E-06	480752.8	3771819.4	371.8	3.49	4.00	3.25	YES	
L0006934	0	0.16240E-06	480750.9	3771805.7	371.7	3.49	4.00	3.25	YES	
L0006935	0	0.16240E-06	480750.8	3771797.2	371.7	3.49	4.00	3.25	YES	
L0006936	0	0.16240E-06	480750.6	3771788.6	371.7	3.49	4.00	3.25	YES	
L0006937	0	0.16240E-06	480750.5	3771780.0	371.7	3.49	4.00	3.25	YES	
L0006938	0	0.16240E-06	480750.4	3771771.4	371.7	3.49	4.00	3.25	YES	
L0006939	0	0.16240E-06	480750.2	3771762.8	371.7	3.49	4.00	3.25	YES	
L0006940	0	0.16240E-06	480750.1	3771754.2	371.8	3.49	4.00	3.25	YES	
L0006941	0	0.16240E-06	480750.0	3771745.6	371.9	3.49	4.00	3.25	YES	
L0006942	0	0.16240E-06	480749.8	3771737.0	372.0	3.49	4.00	3.25	YES	
L0006943	0	0.16240E-06	480749.7	3771728.4	372.0	3.49	4.00	3.25	YES	
L0006944	0	0.16240E-06	480749.6	3771719.9	372.0	3.49	4.00	3.25	YES	
L0006945	0	0.16240E-06	480749.4	3771711.3	372.0	3.49	4.00	3.25	YES	
L0006946	0	0.16240E-06	480749.3	3771702.7	372.1	3.49	4.00	3.25	YES	
L0006947	0	0.16240E-06	480749.2	3771694.1	372.3	3.49	4.00	3.25	YES	
L0006948	0	0.16240E-06	480749.0	3771685.5	372.4	3.49	4.00	3.25	YES	
L0006949	0	0.16240E-06	480748.9	3771676.9	372.6	3.49	4.00	3.25	YES	
L0006950	0	0.16240E-06	480748.7	3771668.3	372.6	3.49	4.00	3.25	YES	
L0006951	0	0.16240E-06	480748.6	3771659.7	372.6	3.49	4.00	3.25	YES	
L0006952	0	0.16240E-06	480748.5	3771651.1	372.6	3.49	4.00	3.25	YES	
L0006953	0	0.16240E-06	480748.3	3771642.6	372.7	3.49	4.00	3.25	YES	
L0006954	0	0.16240E-06	480748.2	3771634.0	372.8	3.49	4.00	3.25	YES	
L0006955	0	0.16240E-06	480748.1	3771625.4	372.9	3.49	4.00	3.25	YES	
L0006956	0	0.16240E-06	480747.9	3771616.8	373.0	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0006957	0	0.16240E-06	480747.8	3771608.2	373.0	3.49	4.00	3.25	YES	
L0006958	0	0.16240E-06	480747.7	3771599.6	373.0	3.49	4.00	3.25	YES	
L0006959	0	0.16240E-06	480747.5	3771591.0	373.0	3.49	4.00	3.25	YES	
L0006960	0	0.24200E-06	480747.0	3771564.5	373.0	3.49	4.00	3.25	YES	
L0006961	0	0.24200E-06	480747.0	3771555.9	373.0	3.49	4.00	3.25	YES	
L0006962	0	0.24200E-06	480747.0	3771547.3	373.0	3.49	4.00	3.25	YES	
L0006963	0	0.24200E-06	480747.0	3771538.7	373.0	3.49	4.00	3.25	YES	
L0006964	0	0.24200E-06	480746.9	3771530.1	373.0	3.49	4.00	3.25	YES	
L0006965	0	0.24200E-06	480746.9	3771521.5	373.1	3.49	4.00	3.25	YES	
L0006966	0	0.24200E-06	480746.9	3771512.9	373.2	3.49	4.00	3.25	YES	
L0006967	0	0.24200E-06	480746.9	3771504.4	373.4	3.49	4.00	3.25	YES	
L0006968	0	0.24200E-06	480746.8	3771495.8	373.6	3.49	4.00	3.25	YES	
L0006969	0	0.24200E-06	480746.8	3771487.2	373.6	3.49	4.00	3.25	YES	
L0006970	0	0.24200E-06	480746.8	3771478.6	373.6	3.49	4.00	3.25	YES	
L0006971	0	0.24200E-06	480746.8	3771470.0	373.6	3.49	4.00	3.25	YES	
L0006972	0	0.24200E-06	480746.8	3771461.4	373.6	3.49	4.00	3.25	YES	
L0006973	0	0.24200E-06	480746.7	3771452.8	373.6	3.49	4.00	3.25	YES	
L0006974	0	0.24200E-06	480746.7	3771444.2	373.6	3.49	4.00	3.25	YES	
L0006975	0	0.24200E-06	480746.7	3771435.6	373.6	3.49	4.00	3.25	YES	
L0006976	0	0.24200E-06	480746.7	3771427.0	373.6	3.49	4.00	3.25	YES	
L0006977	0	0.24200E-06	480746.6	3771418.5	373.6	3.49	4.00	3.25	YES	
L0006978	0	0.24200E-06	480746.6	3771409.9	373.6	3.49	4.00	3.25	YES	
L0006979	0	0.24200E-06	480746.6	3771401.3	373.6	3.49	4.00	3.25	YES	
L0006980	0	0.24200E-06	480746.6	3771392.7	373.6	3.49	4.00	3.25	YES	
L0006981	0	0.24200E-06	480746.6	3771384.1	373.6	3.49	4.00	3.25	YES	
L0006982	0	0.24200E-06	480746.5	3771375.5	373.6	3.49	4.00	3.25	YES	
L0006983	0	0.24200E-06	480746.5	3771366.9	373.7	3.49	4.00	3.25	YES	
L0006984	0	0.24200E-06	480746.5	3771358.3	373.8	3.49	4.00	3.25	YES	
L0006985	0	0.24200E-06	480746.5	3771349.7	373.9	3.49	4.00	3.25	YES	
L0006986	0	0.24200E-06	480746.5	3771341.1	374.0	3.49	4.00	3.25	YES	
L0006987	0	0.24200E-06	480746.4	3771332.6	374.0	3.49	4.00	3.25	YES	
L0006988	0	0.24200E-06	480746.4	3771324.0	374.0	3.49	4.00	3.25	YES	
L0006989	0	0.24200E-06	480746.4	3771315.4	374.0	3.49	4.00	3.25	YES	
L0006990	0	0.24200E-06	480746.4	3771306.8	374.0	3.49	4.00	3.25	YES	
L0006991	0	0.24200E-06	480746.3	3771298.2	374.0	3.49	4.00	3.25	YES	
L0006992	0	0.24200E-06	480746.3	3771289.6	374.0	3.49	4.00	3.25	YES	
L0006993	0	0.24200E-06	480746.3	3771281.0	374.0	3.49	4.00	3.25	YES	
L0006994	0	0.24200E-06	480746.3	3771272.4	374.0	3.49	4.00	3.25	YES	
L0006995	0	0.24200E-06	480746.3	3771263.8	374.0	3.49	4.00	3.25	YES	
L0006996	0	0.24200E-06	480746.2	3771255.2	374.0	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0006997	0	0.24200E-06	480746.2	3771246.7	374.0	3.49	4.00	3.25	YES	
L0006998	0	0.24200E-06	480746.2	3771238.1	374.0	3.49	4.00	3.25	YES	
L0006999	0	0.24200E-06	480746.2	3771229.5	374.0	3.49	4.00	3.25	YES	
L0007000	0	0.24200E-06	480746.1	3771220.9	374.0	3.49	4.00	3.25	YES	
L0007001	0	0.24200E-06	480746.1	3771212.3	374.0	3.49	4.00	3.25	YES	
L0007002	0	0.24200E-06	480746.1	3771203.7	374.0	3.49	4.00	3.25	YES	
L0007003	0	0.24200E-06	480746.1	3771195.1	374.0	3.49	4.00	3.25	YES	
L0007004	0	0.24200E-06	480746.1	3771186.5	374.0	3.49	4.00	3.25	YES	
L0007005	0	0.24200E-06	480746.0	3771177.9	374.0	3.49	4.00	3.25	YES	
L0007006	0	0.24200E-06	480746.0	3771169.3	374.0	3.49	4.00	3.25	YES	
L0007007	0	0.24200E-06	480746.0	3771160.8	374.0	3.49	4.00	3.25	YES	
L0007008	0	0.24200E-06	480746.0	3771152.2	374.0	3.49	4.00	3.25	YES	
L0007009	0	0.24200E-06	480746.0	3771143.6	374.0	3.49	4.00	3.25	YES	
L0007010	0	0.24200E-06	480745.9	3771135.0	374.0	3.49	4.00	3.25	YES	
L0007011	0	0.24200E-06	480745.9	3771126.4	374.0	3.49	4.00	3.25	YES	
L0007012	0	0.24200E-06	480745.9	3771117.8	374.0	3.49	4.00	3.25	YES	
L0007013	0	0.24200E-06	480745.9	3771109.2	374.0	3.49	4.00	3.25	YES	
L0007014	0	0.24200E-06	480745.8	3771100.6	374.0	3.49	4.00	3.25	YES	
L0007015	0	0.24200E-06	480745.8	3771092.0	374.0	3.49	4.00	3.25	YES	
L0007016	0	0.24200E-06	480745.8	3771083.4	374.0	3.49	4.00	3.25	YES	
L0007017	0	0.24200E-06	480745.8	3771074.9	374.0	3.49	4.00	3.25	YES	
L0007018	0	0.24200E-06	480745.8	3771066.3	374.0	3.49	4.00	3.25	YES	
L0007019	0	0.24200E-06	480745.7	3771057.7	374.0	3.49	4.00	3.25	YES	
L0007020	0	0.24200E-06	480745.7	3771049.1	374.0	3.49	4.00	3.25	YES	
L0007021	0	0.24200E-06	480745.7	3771040.5	374.0	3.49	4.00	3.25	YES	
L0007022	0	0.24200E-06	480745.7	3771031.9	374.0	3.49	4.00	3.25	YES	
L0007023	0	0.24200E-06	480745.6	3771023.3	374.0	3.49	4.00	3.25	YES	
L0007024	0	0.24200E-06	480745.6	3771014.7	374.0	3.49	4.00	3.25	YES	
L0007025	0	0.24200E-06	480745.6	3771006.1	374.0	3.49	4.00	3.25	YES	
L0007026	0	0.24200E-06	480745.6	3770997.5	374.0	3.49	4.00	3.25	YES	
L0007027	0	0.24200E-06	480745.6	3770989.0	374.0	3.49	4.00	3.25	YES	
L0007028	0	0.24200E-06	480745.5	3770980.4	374.0	3.49	4.00	3.25	YES	
L0007029	0	0.24200E-06	480745.5	3770971.8	374.0	3.49	4.00	3.25	YES	
L0007030	0	0.24200E-06	480745.5	3770963.2	374.0	3.49	4.00	3.25	YES	
L0007031	0	0.24200E-06	480745.5	3770954.6	374.0	3.49	4.00	3.25	YES	
L0007032	0	0.24200E-06	480745.5	3770946.0	374.0	3.49	4.00	3.25	YES	
L0007033	0	0.24200E-06	480745.4	3770937.4	374.0	3.49	4.00	3.25	YES	
L0007034	0	0.24200E-06	480745.4	3770928.8	374.0	3.49	4.00	3.25	YES	
L0007035	0	0.24200E-06	480745.4	3770920.2	374.0	3.49	4.00	3.25	YES	
L0007036	0	0.24200E-06	480745.4	3770911.6	374.0	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0007037	0	0.24200E-06	480745.3	3770903.1	374.0	3.49	4.00	3.25	YES	
L0007038	0	0.24200E-06	480745.3	3770894.5	374.0	3.49	4.00	3.25	YES	
L0007039	0	0.24200E-06	480745.3	3770885.9	374.0	3.49	4.00	3.25	YES	
L0007040	0	0.24200E-06	480745.3	3770877.3	374.0	3.49	4.00	3.25	YES	
L0007041	0	0.24200E-06	480745.3	3770868.7	374.0	3.49	4.00	3.25	YES	
L0007042	0	0.24200E-06	480745.2	3770860.1	374.0	3.49	4.00	3.25	YES	
L0007043	0	0.24200E-06	480745.2	3770851.5	374.0	3.49	4.00	3.25	YES	
L0007044	0	0.24200E-06	480745.2	3770842.9	374.0	3.49	4.00	3.25	YES	
L0007045	0	0.24200E-06	480745.2	3770834.3	374.0	3.49	4.00	3.25	YES	
L0007046	0	0.24200E-06	480745.1	3770825.7	374.0	3.49	4.00	3.25	YES	
L0007047	0	0.24200E-06	480745.1	3770817.2	374.0	3.49	4.00	3.25	YES	
L0007048	0	0.24200E-06	480745.1	3770808.6	374.0	3.49	4.00	3.25	YES	
L0007049	0	0.24200E-06	480745.1	3770800.0	374.0	3.49	4.00	3.25	YES	
L0007050	0	0.24200E-06	480745.1	3770791.4	374.0	3.49	4.00	3.25	YES	
L0007051	0	0.24200E-06	480745.0	3770782.8	374.0	3.49	4.00	3.25	YES	
L0007052	0	0.79850E-07	480741.4	3770754.2	374.0	3.49	4.00	3.25	YES	
L0007053	0	0.79850E-07	480741.4	3770745.6	374.0	3.49	4.00	3.25	YES	
L0007054	0	0.79850E-07	480741.4	3770737.0	374.0	3.49	4.00	3.25	YES	
L0007055	0	0.79850E-07	480741.4	3770728.4	374.0	3.49	4.00	3.25	YES	
L0007056	0	0.79850E-07	480741.4	3770719.9	374.0	3.49	4.00	3.25	YES	
L0007057	0	0.79850E-07	480741.4	3770711.3	374.0	3.49	4.00	3.25	YES	
L0007058	0	0.79850E-07	480741.4	3770702.7	374.0	3.49	4.00	3.25	YES	
L0007059	0	0.79850E-07	480741.4	3770694.1	374.0	3.49	4.00	3.25	YES	
L0007060	0	0.79850E-07	480741.4	3770685.5	374.0	3.49	4.00	3.25	YES	
L0007061	0	0.79850E-07	480741.4	3770676.9	374.0	3.49	4.00	3.25	YES	
L0007062	0	0.79850E-07	480741.4	3770668.3	374.0	3.49	4.00	3.25	YES	
L0007063	0	0.79850E-07	480741.4	3770659.7	374.0	3.49	4.00	3.25	YES	
L0007064	0	0.79850E-07	480741.4	3770651.1	374.1	3.49	4.00	3.25	YES	
L0007065	0	0.79850E-07	480741.4	3770642.5	374.2	3.49	4.00	3.25	YES	
L0007066	0	0.79850E-07	480741.4	3770634.0	374.3	3.49	4.00	3.25	YES	
L0007067	0	0.79850E-07	480741.4	3770625.4	374.4	3.49	4.00	3.25	YES	
L0007068	0	0.79850E-07	480741.4	3770616.8	374.4	3.49	4.00	3.25	YES	
L0007069	0	0.79850E-07	480741.4	3770608.2	374.4	3.49	4.00	3.25	YES	
L0007070	0	0.79850E-07	480741.4	3770599.6	374.4	3.49	4.00	3.25	YES	
L0007071	0	0.79850E-07	480741.4	3770591.0	374.4	3.49	4.00	3.25	YES	
L0007072	0	0.79850E-07	480741.4	3770582.4	374.4	3.49	4.00	3.25	YES	
L0007073	0	0.79850E-07	480741.4	3770573.8	374.4	3.49	4.00	3.25	YES	
L0007074	0	0.79850E-07	480741.4	3770565.2	374.4	3.49	4.00	3.25	YES	
L0007075	0	0.79850E-07	480741.4	3770556.6	374.4	3.49	4.00	3.25	YES	
L0007076	0	0.79850E-07	480741.4	3770548.1	374.4	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0007077	0	0.79850E-07	480741.4	3770539.5	374.4	3.49	4.00	3.25	YES	
L0007078	0	0.79850E-07	480741.4	3770530.9	374.4	3.49	4.00	3.25	YES	
L0007079	0	0.79850E-07	480741.4	3770522.3	374.4	3.49	4.00	3.25	YES	
L0007080	0	0.79850E-07	480741.4	3770513.7	374.4	3.49	4.00	3.25	YES	
L0007081	0	0.79850E-07	480741.4	3770505.1	374.4	3.49	4.00	3.25	YES	
L0007082	0	0.79850E-07	480741.4	3770496.5	374.4	3.49	4.00	3.25	YES	
L0007083	0	0.79850E-07	480741.4	3770487.9	374.4	3.49	4.00	3.25	YES	
L0007084	0	0.79850E-07	480741.4	3770479.3	374.4	3.49	4.00	3.25	YES	
L0007085	0	0.79850E-07	480741.4	3770470.7	374.5	3.49	4.00	3.25	YES	
L0007086	0	0.79850E-07	480741.4	3770462.2	374.7	3.49	4.00	3.25	YES	
L0007087	0	0.79850E-07	480741.4	3770453.6	374.9	3.49	4.00	3.25	YES	
L0007088	0	0.79850E-07	480741.4	3770445.0	375.0	3.49	4.00	3.25	YES	
L0007089	0	0.79850E-07	480741.4	3770436.4	375.0	3.49	4.00	3.25	YES	
L0007090	0	0.79850E-07	480741.4	3770427.8	375.0	3.49	4.00	3.25	YES	
L0007091	0	0.79850E-07	480741.4	3770419.2	375.0	3.49	4.00	3.25	YES	
L0007092	0	0.79850E-07	480741.4	3770410.6	375.0	3.49	4.00	3.25	YES	
L0007093	0	0.79850E-07	480741.4	3770402.0	375.0	3.49	4.00	3.25	YES	
L0007094	0	0.79850E-07	480741.4	3770393.4	375.0	3.49	4.00	3.25	YES	
L0007095	0	0.79850E-07	480741.4	3770384.8	375.0	3.49	4.00	3.25	YES	
L0007096	0	0.79850E-07	480741.4	3770376.3	375.1	3.49	4.00	3.25	YES	
L0007097	0	0.79850E-07	480741.4	3770367.7	375.2	3.49	4.00	3.25	YES	
L0007098	0	0.79850E-07	480741.4	3770359.1	375.4	3.49	4.00	3.25	YES	
L0007099	0	0.79850E-07	480741.4	3770350.5	375.4	3.49	4.00	3.25	YES	
L0007100	0	0.79850E-07	480741.4	3770341.9	375.4	3.49	4.00	3.25	YES	
L0007101	0	0.79850E-07	480741.4	3770333.3	375.4	3.49	4.00	3.25	YES	
L0007102	0	0.79850E-07	480741.4	3770324.7	375.4	3.49	4.00	3.25	YES	
L0007103	0	0.79850E-07	480741.4	3770316.1	375.4	3.49	4.00	3.25	YES	
L0007104	0	0.79850E-07	480741.4	3770307.5	375.4	3.49	4.00	3.25	YES	
L0007105	0	0.79850E-07	480741.4	3770298.9	375.4	3.49	4.00	3.25	YES	
L0007106	0	0.79850E-07	480741.4	3770290.4	375.4	3.49	4.00	3.25	YES	
L0007107	0	0.79850E-07	480741.4	3770281.8	375.4	3.49	4.00	3.25	YES	
L0007108	0	0.79850E-07	480741.4	3770273.2	375.4	3.49	4.00	3.25	YES	
L0007109	0	0.79850E-07	480741.4	3770264.6	375.4	3.49	4.00	3.25	YES	
L0007110	0	0.79850E-07	480741.4	3770256.0	375.4	3.49	4.00	3.25	YES	
L0007111	0	0.79850E-07	480741.4	3770247.4	375.4	3.49	4.00	3.25	YES	
L0007112	0	0.79850E-07	480741.4	3770238.8	375.4	3.49	4.00	3.25	YES	
L0007113	0	0.79850E-07	480741.4	3770230.2	375.4	3.49	4.00	3.25	YES	
L0007114	0	0.79850E-07	480741.4	3770221.6	375.4	3.49	4.00	3.25	YES	
L0007115	0	0.79850E-07	480741.4	3770213.0	375.4	3.49	4.00	3.25	YES	
L0007116	0	0.79850E-07	480741.4	3770204.5	375.4	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0007117	0	0.79850E-07	480741.4	3770195.9	375.4	3.49	4.00	3.25	YES	
L0007118	0	0.79850E-07	480741.4	3770187.3	375.4	3.49	4.00	3.25	YES	
L0007119	0	0.79850E-07	480741.4	3770178.7	375.4	3.49	4.00	3.25	YES	
L0007120	0	0.79850E-07	480741.4	3770170.1	375.4	3.49	4.00	3.25	YES	
L0007121	0	0.79850E-07	480741.4	3770161.5	375.4	3.49	4.00	3.25	YES	
L0007122	0	0.79850E-07	480741.4	3770152.9	375.4	3.49	4.00	3.25	YES	
L0007123	0	0.79850E-07	480741.4	3770144.3	375.4	3.49	4.00	3.25	YES	
L0007124	0	0.79850E-07	480741.4	3770135.7	375.4	3.49	4.00	3.25	YES	
L0007125	0	0.79850E-07	480741.4	3770127.1	375.4	3.49	4.00	3.25	YES	
L0007126	0	0.79850E-07	480741.4	3770118.6	375.4	3.49	4.00	3.25	YES	
L0007127	0	0.79850E-07	480741.4	3770110.0	375.4	3.49	4.00	3.25	YES	
L0007128	0	0.79850E-07	480741.4	3770101.4	375.4	3.49	4.00	3.25	YES	
L0007129	0	0.79850E-07	480741.4	3770092.8	375.4	3.49	4.00	3.25	YES	
L0007130	0	0.79850E-07	480741.4	3770084.2	375.4	3.49	4.00	3.25	YES	
L0007131	0	0.79850E-07	480741.4	3770075.6	375.4	3.49	4.00	3.25	YES	
L0007132	0	0.79850E-07	480741.4	3770067.0	375.4	3.49	4.00	3.25	YES	
L0007133	0	0.79850E-07	480741.4	3770058.4	375.4	3.49	4.00	3.25	YES	
L0007134	0	0.79850E-07	480741.4	3770049.8	375.4	3.49	4.00	3.25	YES	
L0007135	0	0.79850E-07	480741.4	3770041.2	375.4	3.49	4.00	3.25	YES	
L0007136	0	0.79850E-07	480741.4	3770032.7	375.4	3.49	4.00	3.25	YES	
L0007137	0	0.79850E-07	480741.4	3770024.1	375.4	3.49	4.00	3.25	YES	
L0007138	0	0.79850E-07	480741.4	3770015.5	375.4	3.49	4.00	3.25	YES	
L0007139	0	0.79850E-07	480741.4	3770006.9	375.4	3.49	4.00	3.25	YES	
L0007140	0	0.79850E-07	480741.4	3769998.3	375.4	3.49	4.00	3.25	YES	
L0007141	0	0.79850E-07	480741.4	3769989.7	375.4	3.49	4.00	3.25	YES	
L0007142	0	0.79850E-07	480741.4	3769981.1	375.4	3.49	4.00	3.25	YES	
L0007143	0	0.79850E-07	480741.4	3769972.5	375.4	3.49	4.00	3.25	YES	
L0007144	0	0.79850E-07	480741.4	3769963.9	375.4	3.49	4.00	3.25	YES	
L0007145	0	0.79850E-07	480741.4	3769955.3	375.4	3.49	4.00	3.25	YES	
L0007146	0	0.79850E-07	480741.4	3769946.8	375.4	3.49	4.00	3.25	YES	
L0007147	0	0.79850E-07	480741.4	3769938.2	375.4	3.49	4.00	3.25	YES	
L0007148	0	0.79850E-07	480741.4	3769929.6	375.4	3.49	4.00	3.25	YES	
L0007149	0	0.79850E-07	480741.4	3769921.0	375.4	3.49	4.00	3.25	YES	
L0007150	0	0.79850E-07	480741.4	3769912.4	375.4	3.49	4.00	3.25	YES	
L0007151	0	0.79850E-07	480741.4	3769903.8	375.4	3.49	4.00	3.25	YES	
L0007152	0	0.79850E-07	480741.4	3769895.2	375.6	3.49	4.00	3.25	YES	
L0007153	0	0.79850E-07	480741.4	3769886.6	375.8	3.49	4.00	3.25	YES	
L0007154	0	0.79850E-07	480741.4	3769878.0	376.0	3.49	4.00	3.25	YES	
L0007155	0	0.79850E-07	480741.4	3769869.4	376.1	3.49	4.00	3.25	YES	
L0007156	0	0.79850E-07	480741.4	3769860.9	376.2	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0007157	0	0.79850E-07	480741.4	3769852.3	376.3	3.49	4.00	3.25	YES	
L0007158	0	0.79850E-07	480741.4	3769843.7	376.5	3.49	4.00	3.25	YES	
L0007159	0	0.79850E-07	480741.4	3769835.1	377.0	3.49	4.00	3.25	YES	
L0007160	0	0.79850E-07	480741.4	3769826.5	377.4	3.49	4.00	3.25	YES	
L0007161	0	0.79850E-07	480741.4	3769817.9	377.9	3.49	4.00	3.25	YES	
L0007162	0	0.79850E-07	480741.4	3769809.3	378.0	3.49	4.00	3.25	YES	
L0007163	0	0.79850E-07	480741.4	3769800.7	378.0	3.49	4.00	3.25	YES	
L0007164	0	0.79850E-07	480741.4	3769792.1	378.0	3.49	4.00	3.25	YES	
L0007165	0	0.79850E-07	480741.4	3769783.5	378.0	3.49	4.00	3.25	YES	
L0007166	0	0.79850E-07	480741.4	3769775.0	378.0	3.49	4.00	3.25	YES	
L0007167	0	0.79850E-07	480741.4	3769766.4	378.0	3.49	4.00	3.25	YES	
L0007168	0	0.79850E-07	480741.4	3769757.8	378.0	3.49	4.00	3.25	YES	
L0007169	0	0.79850E-07	480741.4	3769749.2	378.0	3.49	4.00	3.25	YES	
L0007170	0	0.79850E-07	480741.4	3769740.6	378.0	3.49	4.00	3.25	YES	
L0007171	0	0.79850E-07	480741.4	3769732.0	378.0	3.49	4.00	3.25	YES	
L0007172	0	0.79850E-07	480741.4	3769723.4	378.0	3.49	4.00	3.25	YES	
L0007173	0	0.79850E-07	480741.4	3769714.8	378.0	3.49	4.00	3.25	YES	
L0007174	0	0.79850E-07	480741.4	3769706.2	378.0	3.49	4.00	3.25	YES	
L0007175	0	0.79850E-07	480741.4	3769697.6	378.0	3.49	4.00	3.25	YES	
L0007176	0	0.79850E-07	480741.4	3769689.1	378.0	3.49	4.00	3.25	YES	
L0007177	0	0.79850E-07	480741.4	3769680.5	378.0	3.49	4.00	3.25	YES	
L0007178	0	0.79850E-07	480741.4	3769671.9	378.0	3.49	4.00	3.25	YES	
L0007179	0	0.79850E-07	480741.4	3769663.3	378.0	3.49	4.00	3.25	YES	
L0007180	0	0.79850E-07	480741.4	3769654.7	378.0	3.49	4.00	3.25	YES	
L0007181	0	0.79850E-07	480741.4	3769646.1	378.0	3.49	4.00	3.25	YES	
L0007182	0	0.79850E-07	480741.4	3769637.5	378.0	3.49	4.00	3.25	YES	
L0002988	0	0.81510E-06	480722.6	3771831.4	371.0	3.49	4.00	3.25	YES	
L0002989	0	0.81510E-06	480714.0	3771831.4	371.0	3.49	4.00	3.25	YES	
L0002990	0	0.81510E-06	480705.5	3771831.4	371.0	3.49	4.00	3.25	YES	
L0002991	0	0.81510E-06	480696.9	3771831.4	370.9	3.49	4.00	3.25	YES	
L0002992	0	0.81510E-06	480688.3	3771831.4	370.6	3.49	4.00	3.25	YES	
L0002993	0	0.81510E-06	480679.8	3771830.5	370.3	3.49	4.00	3.25	YES	
L0002994	0	0.81510E-06	480672.2	3771827.7	370.1	3.49	4.00	3.25	YES	
L0002995	0	0.81510E-06	480669.8	3771819.5	370.2	3.49	4.00	3.25	YES	
L0002996	0	0.81510E-06	480669.7	3771810.9	370.5	3.49	4.00	3.25	YES	
L0002997	0	0.81510E-06	480669.6	3771802.3	370.8	3.49	4.00	3.25	YES	
L0002998	0	0.81510E-06	480669.5	3771793.7	371.0	3.49	4.00	3.25	YES	
L0002999	0	0.81510E-06	480669.4	3771785.1	371.0	3.49	4.00	3.25	YES	
L0003000	0	0.81510E-06	480669.3	3771776.5	371.0	3.49	4.00	3.25	YES	
L0003001	0	0.81510E-06	480669.3	3771768.0	371.0	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0003002	0	0.81510E-06	480669.2	3771759.4	371.0	3.49	4.00	3.25	YES	
L0003003	0	0.81510E-06	480669.1	3771750.8	371.0	3.49	4.00	3.25	YES	
L0003004	0	0.81510E-06	480669.0	3771742.2	371.0	3.49	4.00	3.25	YES	
L0003005	0	0.81510E-06	480668.9	3771733.6	371.0	3.49	4.00	3.25	YES	
L0003006	0	0.81510E-06	480668.8	3771725.0	371.0	3.49	4.00	3.25	YES	
L0003007	0	0.81510E-06	480668.7	3771716.4	371.0	3.49	4.00	3.25	YES	
L0003008	0	0.81510E-06	480668.7	3771707.8	371.0	3.49	4.00	3.25	YES	
L0003009	0	0.81510E-06	480668.6	3771699.2	371.0	3.49	4.00	3.25	YES	
L0003010	0	0.81510E-06	480668.5	3771690.7	371.0	3.49	4.00	3.25	YES	
L0003011	0	0.81510E-06	480666.7	3771682.5	371.0	3.49	4.00	3.25	YES	
L0003012	0	0.81510E-06	480659.4	3771679.7	371.0	3.49	4.00	3.25	YES	
L0003013	0	0.81510E-06	480651.2	3771677.5	371.0	3.49	4.00	3.25	YES	
L0003014	0	0.81510E-06	480643.2	3771675.6	371.0	3.49	4.00	3.25	YES	
L0003015	0	0.81510E-06	480634.7	3771677.1	370.8	3.49	4.00	3.25	YES	
L0003016	0	0.81510E-06	480627.7	3771680.2	370.6	3.49	4.00	3.25	YES	
L0003017	0	0.81510E-06	480625.5	3771688.5	370.5	3.49	4.00	3.25	YES	
L0003018	0	0.81510E-06	480623.3	3771696.8	370.4	3.49	4.00	3.25	YES	
L0003019	0	0.81510E-06	480623.4	3771705.4	370.4	3.49	4.00	3.25	YES	
L0003020	0	0.81510E-06	480623.7	3771713.9	370.5	3.49	4.00	3.25	YES	
L0003021	0	0.81510E-06	480624.0	3771722.5	370.5	3.49	4.00	3.25	YES	
L0003022	0	0.81510E-06	480624.3	3771731.1	370.5	3.49	4.00	3.25	YES	
L0003023	0	0.81510E-06	480624.6	3771739.7	370.4	3.49	4.00	3.25	YES	
L0003024	0	0.81510E-06	480624.9	3771748.3	370.3	3.49	4.00	3.25	YES	
L0003025	0	0.81510E-06	480625.1	3771756.9	370.2	3.49	4.00	3.25	YES	
L0003026	0	0.81510E-06	480625.4	3771765.4	370.0	3.49	4.00	3.25	YES	
L0003027	0	0.81510E-06	480625.7	3771774.0	370.0	3.49	4.00	3.25	YES	
L0003028	0	0.81510E-06	480626.0	3771782.6	370.0	3.49	4.00	3.25	YES	
L0003029	0	0.81510E-06	480626.3	3771791.2	370.0	3.49	4.00	3.25	YES	
L0003030	0	0.81510E-06	480626.6	3771799.8	370.0	3.49	4.00	3.25	YES	
L0003031	0	0.81510E-06	480626.9	3771808.4	370.0	3.49	4.00	3.25	YES	
L0003032	0	0.81510E-06	480627.1	3771817.0	370.0	3.49	4.00	3.25	YES	
L0003033	0	0.81510E-06	480627.4	3771825.5	370.0	3.49	4.00	3.25	YES	
L0003034	0	0.81510E-06	480627.7	3771834.1	369.9	3.49	4.00	3.25	YES	
L0003035	0	0.81510E-06	480628.0	3771842.7	369.8	3.49	4.00	3.25	YES	
L0003036	0	0.81510E-06	480628.3	3771851.3	369.7	3.49	4.00	3.25	YES	
L0003037	0	0.81510E-06	480628.6	3771859.9	369.6	3.49	4.00	3.25	YES	
L0003038	0	0.81510E-06	480628.9	3771868.5	369.4	3.49	4.00	3.25	YES	
L0003039	0	0.81510E-06	480629.1	3771877.1	369.2	3.49	4.00	3.25	YES	
L0003040	0	0.81510E-06	480629.4	3771885.6	369.0	3.49	4.00	3.25	YES	
L0003041	0	0.81510E-06	480629.7	3771894.2	369.0	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0003042	0	0.81510E-06	480630.0	3771902.8	369.0	3.49	4.00	3.25	YES	
L0003043	0	0.81510E-06	480630.3	3771911.4	369.0	3.49	4.00	3.25	YES	
L0003044	0	0.81510E-06	480630.6	3771920.0	368.9	3.49	4.00	3.25	YES	
L0003045	0	0.81510E-06	480630.9	3771928.6	368.6	3.49	4.00	3.25	YES	
L0003046	0	0.81510E-06	480631.1	3771937.2	368.3	3.49	4.00	3.25	YES	
L0003047	0	0.81510E-06	480631.4	3771945.7	368.0	3.49	4.00	3.25	YES	
L0003048	0	0.81510E-06	480631.7	3771954.3	368.0	3.49	4.00	3.25	YES	
L0003049	0	0.81510E-06	480632.0	3771962.9	368.0	3.49	4.00	3.25	YES	
L0003050	0	0.81510E-06	480632.3	3771971.5	368.0	3.49	4.00	3.25	YES	
L0003051	0	0.81510E-06	480632.6	3771980.1	367.9	3.49	4.00	3.25	YES	
L0003052	0	0.81510E-06	480632.9	3771988.7	367.6	3.49	4.00	3.25	YES	
L0003053	0	0.81510E-06	480635.1	3771996.2	367.3	3.49	4.00	3.25	YES	
L0003054	0	0.81510E-06	480642.6	3772000.1	367.2	3.49	4.00	3.25	YES	
L0003055	0	0.81510E-06	480650.8	3772002.9	367.1	3.49	4.00	3.25	YES	
L0003056	0	0.81510E-06	480659.4	3772002.7	367.1	3.49	4.00	3.25	YES	
L0003057	0	0.81510E-06	480667.9	3772002.3	367.1	3.49	4.00	3.25	YES	
L0003058	0	0.81510E-06	480675.6	3771998.5	367.4	3.49	4.00	3.25	YES	
L0003059	0	0.81510E-06	480678.6	3771990.6	367.8	3.49	4.00	3.25	YES	
L0003060	0	0.81510E-06	480679.3	3771982.1	368.1	3.49	4.00	3.25	YES	
L0003061	0	0.81510E-06	480679.1	3771973.6	368.4	3.49	4.00	3.25	YES	
L0003062	0	0.81510E-06	480678.9	3771965.0	368.7	3.49	4.00	3.25	YES	
L0003063	0	0.81510E-06	480678.7	3771956.4	369.0	3.49	4.00	3.25	YES	
L0003064	0	0.81510E-06	480678.5	3771947.8	369.2	3.49	4.00	3.25	YES	
L0003065	0	0.81510E-06	480678.3	3771939.2	369.4	3.49	4.00	3.25	YES	
L0003066	0	0.81510E-06	480678.1	3771930.6	369.7	3.49	4.00	3.25	YES	
L0003067	0	0.81510E-06	480677.9	3771922.0	369.9	3.49	4.00	3.25	YES	
L0003068	0	0.81510E-06	480677.7	3771913.4	370.0	3.49	4.00	3.25	YES	
L0003069	0	0.81510E-06	480677.5	3771904.9	370.0	3.49	4.00	3.25	YES	
L0003070	0	0.81510E-06	480677.3	3771896.3	370.0	3.49	4.00	3.25	YES	
L0003071	0	0.81510E-06	480677.1	3771887.7	370.0	3.49	4.00	3.25	YES	
L0003072	0	0.81510E-06	480676.9	3771879.1	370.1	3.49	4.00	3.25	YES	
L0003073	0	0.81510E-06	480676.7	3771870.5	370.1	3.49	4.00	3.25	YES	
L0003074	0	0.81510E-06	480676.1	3771862.2	370.2	3.49	4.00	3.25	YES	
L0005410	0	0.34470E-06	480268.2	3771598.7	366.0	3.49	4.00	3.25	YES	
L0005411	0	0.34470E-06	480268.2	3771607.3	366.0	3.49	4.00	3.25	YES	
L0005412	0	0.34470E-06	480268.2	3771615.8	366.0	3.49	4.00	3.25	YES	
L0005413	0	0.34470E-06	480268.2	3771624.4	365.9	3.49	4.00	3.25	YES	
L0005414	0	0.34470E-06	480268.2	3771633.0	365.8	3.49	4.00	3.25	YES	
L0005415	0	0.34470E-06	480268.2	3771641.6	365.7	3.49	4.00	3.25	YES	
L0005416	0	0.34470E-06	480268.2	3771650.2	365.6	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0005417	0	0.34470E-06	480268.2	3771658.8	365.6	3.49	4.00	3.25	YES	
L0005418	0	0.34470E-06	480268.2	3771667.4	365.6	3.49	4.00	3.25	YES	
L0005419	0	0.34470E-06	480269.6	3771675.7	365.7	3.49	4.00	3.25	YES	
L0005420	0	0.34470E-06	480274.9	3771681.3	365.8	3.49	4.00	3.25	YES	
L0005421	0	0.34470E-06	480283.2	3771682.9	366.0	3.49	4.00	3.25	YES	
L0005422	0	0.34470E-06	480291.8	3771682.9	366.0	3.49	4.00	3.25	YES	
L0005423	0	0.34470E-06	480300.4	3771682.9	366.0	3.49	4.00	3.25	YES	
L0005424	0	0.34470E-06	480309.0	3771682.9	366.0	3.49	4.00	3.25	YES	
L0005425	0	0.34470E-06	480317.6	3771682.9	366.3	3.49	4.00	3.25	YES	
L0005426	0	0.34470E-06	480326.2	3771682.9	366.5	3.49	4.00	3.25	YES	
L0005427	0	0.34470E-06	480334.8	3771682.9	366.8	3.49	4.00	3.25	YES	
L0005428	0	0.34470E-06	480343.4	3771682.9	367.0	3.49	4.00	3.25	YES	
L0005429	0	0.34470E-06	480352.0	3771682.9	367.0	3.49	4.00	3.25	YES	
L0005430	0	0.34470E-06	480358.1	3771687.8	367.0	3.49	4.00	3.25	YES	
L0005431	0	0.34470E-06	480359.5	3771696.3	367.0	3.49	4.00	3.25	YES	
L0005432	0	0.46500E-06	480623.6	3772018.7	366.6	3.49	4.00	3.25	YES	
L0005433	0	0.46500E-06	480616.9	3772024.1	366.4	3.49	4.00	3.25	YES	
L0005434	0	0.46500E-06	480610.2	3772029.5	366.2	3.49	4.00	3.25	YES	
L0005435	0	0.46500E-06	480603.5	3772034.8	366.1	3.49	4.00	3.25	YES	
L0005436	0	0.46500E-06	480596.8	3772040.2	366.0	3.49	4.00	3.25	YES	
L0005437	0	0.46500E-06	480590.1	3772045.6	366.0	3.49	4.00	3.25	YES	
L0005438	0	0.46500E-06	480583.4	3772051.0	366.0	3.49	4.00	3.25	YES	
L0005439	0	0.46500E-06	480576.7	3772056.3	366.0	3.49	4.00	3.25	YES	
L0005440	0	0.46500E-06	480569.9	3772061.7	366.1	3.49	4.00	3.25	YES	
L0005441	0	0.46500E-06	480563.2	3772067.1	366.0	3.49	4.00	3.25	YES	
L0005442	0	0.46500E-06	480556.5	3772072.4	366.0	3.49	4.00	3.25	YES	
L0005443	0	0.46500E-06	480549.5	3772076.8	366.0	3.49	4.00	3.25	YES	
L0005444	0	0.46500E-06	480540.9	3772077.0	366.0	3.49	4.00	3.25	YES	
L0005445	0	0.46500E-06	480532.3	3772077.2	366.0	3.49	4.00	3.25	YES	
L0005446	0	0.46500E-06	480523.7	3772077.4	366.0	3.49	4.00	3.25	YES	
L0005447	0	0.46500E-06	480515.1	3772077.6	365.9	3.49	4.00	3.25	YES	
L0005448	0	0.46500E-06	480506.5	3772077.8	365.8	3.49	4.00	3.25	YES	
L0005449	0	0.46500E-06	480497.9	3772078.0	365.7	3.49	4.00	3.25	YES	
L0005450	0	0.46500E-06	480489.3	3772078.2	365.6	3.49	4.00	3.25	YES	
L0005451	0	0.46500E-06	480480.8	3772078.4	365.7	3.49	4.00	3.25	YES	
L0005452	0	0.46500E-06	480472.2	3772078.6	365.8	3.49	4.00	3.25	YES	
L0005453	0	0.46500E-06	480463.6	3772078.8	365.9	3.49	4.00	3.25	YES	
L0005454	0	0.46500E-06	480455.0	3772079.1	366.0	3.49	4.00	3.25	YES	
L0005455	0	0.46500E-06	480446.4	3772079.3	366.0	3.49	4.00	3.25	YES	
L0005456	0	0.46500E-06	480437.8	3772079.5	366.0	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0005457	0	0.46500E-06	480429.2	3772079.7	366.0	3.49	4.00	3.25	YES	
L0005458	0	0.46500E-06	480420.6	3772079.9	366.0	3.49	4.00	3.25	YES	
L0005459	0	0.46500E-06	480412.1	3772080.1	366.0	3.49	4.00	3.25	YES	
L0005460	0	0.46500E-06	480403.5	3772080.3	366.0	3.49	4.00	3.25	YES	
L0005461	0	0.46500E-06	480394.9	3772080.5	365.9	3.49	4.00	3.25	YES	
L0005462	0	0.46500E-06	480386.3	3772080.7	365.8	3.49	4.00	3.25	YES	
L0005463	0	0.46500E-06	480377.7	3772080.9	365.6	3.49	4.00	3.25	YES	
L0005464	0	0.46500E-06	480369.1	3772081.1	365.5	3.49	4.00	3.25	YES	
L0005465	0	0.46500E-06	480365.9	3772075.7	365.6	3.49	4.00	3.25	YES	
L0005466	0	0.46500E-06	480365.8	3772067.1	365.8	3.49	4.00	3.25	YES	
L0005467	0	0.46500E-06	480365.7	3772058.6	365.9	3.49	4.00	3.25	YES	
L0005468	0	0.46500E-06	480365.6	3772050.0	365.9	3.49	4.00	3.25	YES	
L0005469	0	0.46500E-06	480365.6	3772041.4	365.9	3.49	4.00	3.25	YES	
L0005470	0	0.46500E-06	480365.5	3772032.8	365.9	3.49	4.00	3.25	YES	
L0005471	0	0.46500E-06	480365.4	3772024.2	365.9	3.49	4.00	3.25	YES	
L0005472	0	0.46500E-06	480365.3	3772015.6	365.9	3.49	4.00	3.25	YES	
L0005473	0	0.46500E-06	480365.2	3772007.0	365.8	3.49	4.00	3.25	YES	
L0005474	0	0.46500E-06	480365.1	3771998.4	365.9	3.49	4.00	3.25	YES	
L0005475	0	0.46500E-06	480365.0	3771989.8	365.9	3.49	4.00	3.25	YES	
L0005476	0	0.46500E-06	480364.9	3771981.2	366.0	3.49	4.00	3.25	YES	
L0005477	0	0.46500E-06	480364.8	3771972.7	366.0	3.49	4.00	3.25	YES	
L0005478	0	0.46500E-06	480364.7	3771964.1	366.0	3.49	4.00	3.25	YES	
L0005479	0	0.46500E-06	480364.6	3771955.5	366.0	3.49	4.00	3.25	YES	
L0005480	0	0.46500E-06	480364.5	3771946.9	366.0	3.49	4.00	3.25	YES	
L0005481	0	0.46500E-06	480364.4	3771938.3	366.0	3.49	4.00	3.25	YES	
L0005482	0	0.46500E-06	480364.3	3771929.7	366.0	3.49	4.00	3.25	YES	
L0005483	0	0.46500E-06	480364.2	3771921.1	366.0	3.49	4.00	3.25	YES	
L0005484	0	0.46500E-06	480364.1	3771912.5	366.1	3.49	4.00	3.25	YES	
L0005485	0	0.46500E-06	480364.0	3771903.9	366.3	3.49	4.00	3.25	YES	
L0005486	0	0.46500E-06	480363.9	3771895.4	366.6	3.49	4.00	3.25	YES	
L0005487	0	0.46500E-06	480363.8	3771886.8	366.8	3.49	4.00	3.25	YES	
L0005488	0	0.46500E-06	480363.7	3771878.2	366.8	3.49	4.00	3.25	YES	
L0005489	0	0.46500E-06	480363.6	3771869.6	366.8	3.49	4.00	3.25	YES	
L0005490	0	0.46500E-06	480363.5	3771861.0	366.8	3.49	4.00	3.25	YES	
L0005491	0	0.46500E-06	480363.4	3771852.4	366.8	3.49	4.00	3.25	YES	
L0005492	0	0.46500E-06	480363.3	3771843.8	366.8	3.49	4.00	3.25	YES	
L0005493	0	0.46500E-06	480363.2	3771835.2	366.8	3.49	4.00	3.25	YES	
L0005494	0	0.46500E-06	480363.1	3771826.6	366.8	3.49	4.00	3.25	YES	
L0005495	0	0.46500E-06	480363.0	3771818.1	366.8	3.49	4.00	3.25	YES	
L0005496	0	0.46500E-06	480362.9	3771809.5	366.8	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0005497	0	0.46500E-06	480362.8	3771800.9	366.8	3.49	4.00	3.25	YES	
L0005498	0	0.46500E-06	480362.7	3771792.3	366.8	3.49	4.00	3.25	YES	
L0005499	0	0.46500E-06	480362.6	3771783.7	366.9	3.49	4.00	3.25	YES	
L0005500	0	0.46500E-06	480362.5	3771775.1	366.9	3.49	4.00	3.25	YES	
L0005501	0	0.46500E-06	480362.4	3771766.5	367.0	3.49	4.00	3.25	YES	
L0005502	0	0.46500E-06	480362.3	3771757.9	367.0	3.49	4.00	3.25	YES	
L0005503	0	0.46500E-06	480362.2	3771749.3	367.0	3.49	4.00	3.25	YES	
L0005504	0	0.46500E-06	480362.1	3771740.7	367.0	3.49	4.00	3.25	YES	
L0005505	0	0.46500E-06	480362.0	3771732.2	367.0	3.49	4.00	3.25	YES	
L0005506	0	0.46500E-06	480361.9	3771723.6	367.0	3.49	4.00	3.25	YES	
L0005507	0	0.46500E-06	480361.8	3771715.0	367.0	3.49	4.00	3.25	YES	
L0005508	0	0.20980E-05	480394.9	3772053.7	366.0	3.49	4.00	3.25	YES	
L0005509	0	0.20980E-05	480394.9	3772045.2	366.0	3.49	4.00	3.25	YES	
L0005510	0	0.20980E-05	480394.8	3772036.6	366.0	3.49	4.00	3.25	YES	
L0005511	0	0.20980E-05	480394.8	3772028.0	366.0	3.49	4.00	3.25	YES	
L0005512	0	0.20980E-05	480394.7	3772019.4	366.0	3.49	4.00	3.25	YES	
L0005513	0	0.20980E-05	480394.7	3772010.8	366.0	3.49	4.00	3.25	YES	
L0005514	0	0.20980E-05	480394.6	3772002.2	366.0	3.49	4.00	3.25	YES	
L0005515	0	0.20980E-05	480394.6	3771993.6	366.0	3.49	4.00	3.25	YES	
L0005516	0	0.20980E-05	480394.6	3771985.0	366.0	3.49	4.00	3.25	YES	
L0005517	0	0.20980E-05	480394.5	3771976.4	366.0	3.49	4.00	3.25	YES	
L0005518	0	0.20980E-05	480394.5	3771967.8	366.2	3.49	4.00	3.25	YES	
L0005519	0	0.20980E-05	480394.4	3771959.3	366.5	3.49	4.00	3.25	YES	
L0005520	0	0.20980E-05	480394.4	3771950.7	366.7	3.49	4.00	3.25	YES	
L0005521	0	0.20980E-05	480394.4	3771942.1	366.8	3.49	4.00	3.25	YES	
L0005522	0	0.20980E-05	480394.3	3771933.5	366.8	3.49	4.00	3.25	YES	
L0005523	0	0.20980E-05	480394.3	3771924.9	366.8	3.49	4.00	3.25	YES	
L0005524	0	0.20980E-05	480394.2	3771916.3	366.8	3.49	4.00	3.25	YES	
L0005525	0	0.20980E-05	480394.2	3771907.7	366.9	3.49	4.00	3.25	YES	
L0005526	0	0.20980E-05	480394.2	3771899.1	366.9	3.49	4.00	3.25	YES	
L0005527	0	0.20980E-05	480394.1	3771890.5	367.0	3.49	4.00	3.25	YES	
L0005528	0	0.20980E-05	480394.1	3771881.9	367.0	3.49	4.00	3.25	YES	
L0005529	0	0.20980E-05	480394.0	3771873.4	367.0	3.49	4.00	3.25	YES	
L0005530	0	0.20980E-05	480394.0	3771864.8	367.0	3.49	4.00	3.25	YES	
L0005531	0	0.20980E-05	480394.0	3771856.2	367.0	3.49	4.00	3.25	YES	
L0005532	0	0.20980E-05	480393.9	3771847.6	367.0	3.49	4.00	3.25	YES	
L0005533	0	0.20980E-05	480393.9	3771839.0	367.0	3.49	4.00	3.25	YES	
L0005534	0	0.20980E-05	480393.8	3771830.4	367.0	3.49	4.00	3.25	YES	
L0005535	0	0.20980E-05	480393.8	3771821.8	367.0	3.49	4.00	3.25	YES	
L0005536	0	0.20980E-05	480393.7	3771813.2	367.0	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0005537	0	0.20980E-05	480393.7	3771804.6	367.0	3.49	4.00	3.25	YES	
L0005538	0	0.20980E-05	480393.7	3771796.0	367.0	3.49	4.00	3.25	YES	
L0005539	0	0.20980E-05	480393.6	3771787.5	367.0	3.49	4.00	3.25	YES	
L0005540	0	0.20980E-05	480393.6	3771778.9	367.0	3.49	4.00	3.25	YES	
L0005541	0	0.20980E-05	480393.5	3771770.3	367.0	3.49	4.00	3.25	YES	
L0005542	0	0.20980E-05	480393.5	3771761.7	367.0	3.49	4.00	3.25	YES	
L0005543	0	0.20980E-05	480393.5	3771753.1	367.0	3.49	4.00	3.25	YES	
L0005544	0	0.20980E-05	480393.4	3771744.5	367.0	3.49	4.00	3.25	YES	
L0005545	0	0.20980E-05	480393.4	3771735.9	367.0	3.49	4.00	3.25	YES	
L0005546	0	0.20980E-05	480393.3	3771727.3	367.0	3.49	4.00	3.25	YES	
L0005547	0	0.20980E-05	480393.3	3771718.7	367.0	3.49	4.00	3.25	YES	
L0005548	0	0.20980E-05	480393.3	3771710.1	367.0	3.49	4.00	3.25	YES	
L0005549	0	0.23110E-05	480597.9	3771997.7	367.3	3.49	4.00	3.25	YES	
L0005550	0	0.23110E-05	480597.7	3771989.1	367.6	3.49	4.00	3.25	YES	
L0005551	0	0.23110E-05	480597.5	3771980.6	367.9	3.49	4.00	3.25	YES	
L0005552	0	0.23110E-05	480597.3	3771972.0	368.0	3.49	4.00	3.25	YES	
L0005553	0	0.23110E-05	480597.0	3771963.4	368.0	3.49	4.00	3.25	YES	
L0005554	0	0.23110E-05	480596.8	3771954.8	368.0	3.49	4.00	3.25	YES	
L0005555	0	0.23110E-05	480596.6	3771946.2	368.0	3.49	4.00	3.25	YES	
L0005556	0	0.23110E-05	480596.3	3771937.6	368.2	3.49	4.00	3.25	YES	
L0005557	0	0.23110E-05	480596.1	3771929.0	368.3	3.49	4.00	3.25	YES	
L0005558	0	0.23110E-05	480595.9	3771920.5	368.5	3.49	4.00	3.25	YES	
L0005559	0	0.23110E-05	480595.7	3771911.9	368.6	3.49	4.00	3.25	YES	
L0005560	0	0.23110E-05	480595.4	3771903.3	368.7	3.49	4.00	3.25	YES	
L0005561	0	0.23110E-05	480595.2	3771894.7	368.9	3.49	4.00	3.25	YES	
L0005562	0	0.23110E-05	480595.0	3771886.1	369.0	3.49	4.00	3.25	YES	
L0005563	0	0.23110E-05	480594.7	3771877.5	369.0	3.49	4.00	3.25	YES	
L0005564	0	0.23110E-05	480594.5	3771868.9	369.0	3.49	4.00	3.25	YES	
L0005565	0	0.23110E-05	480594.3	3771860.3	369.0	3.49	4.00	3.25	YES	
L0005566	0	0.23110E-05	480594.1	3771851.8	369.1	3.49	4.00	3.25	YES	
L0005567	0	0.23110E-05	480593.8	3771843.2	369.2	3.49	4.00	3.25	YES	
L0005568	0	0.23110E-05	480593.6	3771834.6	369.3	3.49	4.00	3.25	YES	
L0005569	0	0.23110E-05	480593.4	3771826.0	369.4	3.49	4.00	3.25	YES	
L0005570	0	0.23110E-05	480593.1	3771817.4	369.4	3.49	4.00	3.25	YES	
L0005571	0	0.23110E-05	480592.9	3771808.8	369.4	3.49	4.00	3.25	YES	
L0005572	0	0.23110E-05	480592.7	3771800.2	369.4	3.49	4.00	3.25	YES	
L0005573	0	0.23110E-05	480592.4	3771791.6	369.5	3.49	4.00	3.25	YES	
L0005574	0	0.23110E-05	480592.2	3771783.1	369.7	3.49	4.00	3.25	YES	
L0005575	0	0.23110E-05	480592.0	3771774.5	369.8	3.49	4.00	3.25	YES	
L0005576	0	0.23110E-05	480591.8	3771765.9	370.0	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0005577	0	0.23110E-05	480591.5	3771757.3	370.0	3.49	4.00	3.25	YES	
L0005578	0	0.23110E-05	480591.3	3771748.7	370.0	3.49	4.00	3.25	YES	
L0005579	0	0.23110E-05	480591.1	3771740.1	370.0	3.49	4.00	3.25	YES	
L0005580	0	0.23110E-05	480590.8	3771731.5	370.0	3.49	4.00	3.25	YES	
L0005581	0	0.23110E-05	480590.6	3771723.0	370.0	3.49	4.00	3.25	YES	
L0005582	0	0.23110E-05	480590.4	3771714.4	370.0	3.49	4.00	3.25	YES	
L0005583	0	0.23110E-05	480590.2	3771705.8	370.0	3.49	4.00	3.25	YES	
L0005584	0	0.23110E-05	480589.9	3771697.2	370.0	3.49	4.00	3.25	YES	
L0005585	0	0.23110E-05	480589.7	3771688.6	370.0	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs
ALL	L0005586 , L0005587 , L0005588 , L0005589 , L0005590 , L0005591 , L0005592 , L0005593 ,
	L0005594 , L0005595 , L0005596 , L0005597 , L0005598 , L0005599 , L0005600 , L0005601 ,
	L0005602 , L0005603 , L0005604 , L0005605 , L0005606 , L0005607 , L0005608 , L0005609 ,
	L0005610 , L0005611 , L0005612 , L0005613 , L0005614 , L0005615 , L0005616 , L0005617 ,
	L0005618 , L0005619 , L0005620 , L0005621 , L0005622 , L0005623 , L0005624 , L0005625 ,
	L0005626 , L0005627 , L0005628 , L0005629 , L0005630 , L0005631 , L0005632 , L0005633 ,
	L0005634 , L0005635 , L0005636 , L0005637 , L0005638 , L0005639 , L0005640 , L0005641 ,
	L0005642 , L0005643 , L0005644 , L0005645 , L0005646 , L0005647 , L0005648 , L0005649 ,
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	L0005658 , L0005659 , L0005660 , L0005661 , L0005662 , L0005663 , L0005664 , L0005665 ,
	L0005666 , L0005667 , L0005668 , L0005669 , L0005670 , L0005671 , L0005672 , L0005673 ,
	L0005674 , L0005675 , L0005676 , L0005677 , L0005678 , L0005679 , L0005680 , L0005681 ,
	L0005682 , L0006174 , L0006175 , L0006176 , L0006177 , L0006178 , L0006179 , L0006180 ,
	L0006181 , L0006182 , L0006183 , L0006184 , L0006185 , L0006186 , L0006187 , L0006188 ,
	L0006189 , L0006190 , L0006191 , L0006192 , L0006193 , L0006194 , L0006195 , L0006196 ,
	L0006197 , L0006198 , L0006199 , L0006200 , L0006201 , L0006202 , L0006203 , L0006204 ,
	L0006205 , L0006206 , L0006207 , L0006208 , L0006209 , L0006210 , L0006211 , L0006212 ,
	L0006213 , L0006214 , L0006215 , L0006216 , L0006217 , L0006218 , L0006219 , L0006220 ,
	L0006221 , L0006222 , L0006223 , L0006224 , L0006225 , L0006226 , L0006227 , L0006228 ,
	L0006229 , L0006230 , L0006231 , L0006232 , L0006233 , L0006234 , L0006235 , L0006236 ,

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs
	L0006237 , L0006238 , L0006239 , L0006240 , L0006241 , L0006242 , L0006243 , L0006244 ,
	L0006245 , L0006246 , L0006247 , L0006248 , L0006249 , L0006250 , L0006251 , L0006252 ,
	L0006253 , L0006254 , L0006255 , L0006256 , L0006257 , L0006258 , L0006259 , L0006260 ,
	L0006261 , L0006262 , L0006263 , L0006264 , L0006265 , L0006266 , L0006267 , L0006268 ,
	L0006269 , L0006270 , L0006271 , L0006272 , L0006273 , L0006274 , L0006275 , L0006276 ,
	L0006277 , L0006278 , L0006279 , L0006280 , L0006281 , L0006282 , L0006283 , L0006284 ,
	L0006285 , L0006286 , L0006287 , L0006288 , L0006289 , L0006290 , L0006291 , L0006292 ,
	L0006293 , L0006294 , L0006295 , L0006296 , L0006297 , L0006298 , L0006299 , L0006300 ,
	L0006301 , L0006302 , L0006303 , L0006304 , L0006305 , L0006306 , L0006307 , L0006308 ,
	L0006309 , L0006310 , L0006311 , L0006312 , L0006313 , L0006314 , L0006315 , L0006316 ,
	L0006317 , L0006318 , L0006319 , L0006320 , L0006321 , L0006322 , L0006323 , L0006324 ,
	L0006325 , L0006326 , L0006327 , L0006328 , L0006329 , L0006330 , L0006331 , L0006332 ,
	L0006333 , L0006334 , L0006335 , L0006336 , L0006337 , L0006338 , L0006339 , L0006340 ,
	L0006341 , L0006342 , L0006343 , L0006344 , L0006345 , L0006346 , L0006347 , L0006348 ,
	L0006349 , L0006350 , L0006351 , L0006352 , L0006353 , L0006354 , L0006355 , L0006356 ,
	L0006357 , L0006358 , L0006359 , L0006360 , L0006361 , L0006362 , L0006363 , L0006364 ,
	L0006365 , L0006366 , L0006367 , L0006368 , L0006369 , L0006370 , L0006371 , L0006372 ,
	L0006373 , L0006374 , L0006375 , L0006376 , L0006377 , L0006378 , L0006379 , L0006380 ,
	L0006381 , L0006382 , L0006383 , L0006384 , L0006385 , L0006386 , L0006387 , L0006388 ,
	L0006389 , L0006390 , L0006391 , L0006392 , L0006393 , L0006394 , L0006395 , L0006396 ,

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs
	L0006397 , L0006398 , L0006399 , L0006400 , L0006401 , L0006402 , L0006403 , L0006404 ,
	L0006405 , L0006406 , L0006407 , L0006408 , L0006409 , L0006410 , L0006411 , L0006412 ,
	L0006413 , L0006414 , L0006415 , L0006416 , L0006417 , L0006418 , L0006419 , L0006420 ,
	L0006421 , L0006422 , L0006423 , L0006424 , L0006425 , L0006426 , L0006427 , L0006428 ,
	L0006429 , L0006430 , L0006431 , L0006432 , L0006433 , L0006434 , L0006435 , L0006436 ,
	L0006437 , L0006438 , L0006439 , L0006440 , L0006441 , L0006442 , L0006443 , L0006444 ,
	L0006445 , L0006446 , L0006447 , L0006448 , L0006449 , L0006450 , L0006451 , L0006452 ,
	L0006453 , L0006454 , L0006455 , L0006456 , L0006457 , L0006458 , L0006459 , L0006460 ,
	L0006461 , L0006462 , L0006463 , L0006464 , L0006465 , L0006466 , L0006467 , L0006468 ,
	L0006469 , L0006470 , L0006471 , L0006472 , L0006473 , L0006474 , L0006475 , L0006476 ,
	L0006477 , L0006478 , L0006479 , L0006480 , L0006481 , L0006482 , L0006483 , L0006484 ,
	L0006485 , L0006486 , L0006487 , L0006488 , L0006489 , L0006490 , L0006491 , L0006492 ,
	L0006493 , L0006494 , L0006495 , L0006496 , L0006497 , L0006498 , L0006499 , L0006500 ,
	L0006501 , L0006502 , L0006503 , L0006504 , L0006505 , L0006506 , L0006507 , L0006508 ,
	L0006509 , L0006510 , L0006511 , L0006512 , L0006513 , L0006514 , L0006515 , L0006516 ,
	L0006517 , L0006518 , L0006519 , L0006520 , L0006521 , L0006522 , L0006523 , L0006524 ,
	L0006525 , L0006526 , L0006527 , L0006528 , L0006529 , L0006530 , L0006531 , L0006532 ,
	L0006533 , L0006534 , L0006535 , L0006536 , L0006537 , L0006538 , L0006539 , L0006540 ,
	L0006541 , L0006542 , L0006543 , L0006544 , L0006545 , L0006546 , L0006547 , L0006548 ,
	L0006549 , L0006550 , L0006551 , L0006552 , L0006553 , L0006554 , L0006555 , L0006556 ,

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs
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	L0006581 , L0006582 , L0006583 , L0006584 , L0006585 , L0006586 , L0006587 , L0006588 ,
	L0006589 , L0006590 , L0006591 , L0006592 , L0006593 , L0006594 , L0006595 , L0006596 ,
	L0006597 , L0006598 , L0006599 , L0006600 , L0006601 , L0006602 , L0006603 , L0006604 ,
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	L0006685 , L0006686 , L0006687 , L0006688 , L0006689 , L0006690 , L0006691 , L0006692 ,
	L0006693 , L0006694 , L0006695 , L0006696 , L0006697 , L0006698 , L0006699 , L0006700 ,
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	L0006709 , L0006710 , L0006711 , L0006712 , L0006713 , L0006714 , L0006715 , L0006716 ,

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs
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	L0006757 , L0006758 , L0006759 , L0006760 , L0006761 , L0006762 , L0006763 , L0006764 ,
	L0006765 , L0006766 , L0006767 , L0006768 , L0006769 , L0006770 , L0006771 , L0006772 ,
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	L0006797 , L0006798 , L0006799 , L0006800 , L0006801 , L0006802 , L0006803 , L0006804 ,
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*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs
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	L0006981 , L0006982 , L0006983 , L0006984 , L0006985 , L0006986 , L0006987 , L0006988 ,
	L0006989 , L0006990 , L0006991 , L0006992 , L0006993 , L0006994 , L0006995 , L0006996 ,
	L0006997 , L0006998 , L0006999 , L0007000 , L0007001 , L0007002 , L0007003 , L0007004 ,
	L0007005 , L0007006 , L0007007 , L0007008 , L0007009 , L0007010 , L0007011 , L0007012 ,
	L0007013 , L0007014 , L0007015 , L0007016 , L0007017 , L0007018 , L0007019 , L0007020 ,
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	L0007029 , L0007030 , L0007031 , L0007032 , L0007033 , L0007034 , L0007035 , L0007036 ,

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs
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	L0007053 , L0007054 , L0007055 , L0007056 , L0007057 , L0007058 , L0007059 , L0007060 ,
	L0007061 , L0007062 , L0007063 , L0007064 , L0007065 , L0007066 , L0007067 , L0007068 ,
	L0007069 , L0007070 , L0007071 , L0007072 , L0007073 , L0007074 , L0007075 , L0007076 ,
	L0007077 , L0007078 , L0007079 , L0007080 , L0007081 , L0007082 , L0007083 , L0007084 ,
	L0007085 , L0007086 , L0007087 , L0007088 , L0007089 , L0007090 , L0007091 , L0007092 ,
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	L0007125 , L0007126 , L0007127 , L0007128 , L0007129 , L0007130 , L0007131 , L0007132 ,
	L0007133 , L0007134 , L0007135 , L0007136 , L0007137 , L0007138 , L0007139 , L0007140 ,
	L0007141 , L0007142 , L0007143 , L0007144 , L0007145 , L0007146 , L0007147 , L0007148 ,
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	L0007165 , L0007166 , L0007167 , L0007168 , L0007169 , L0007170 , L0007171 , L0007172 ,
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*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs
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	L0003010 , L0003011 , L0003012 , L0003013 , L0003014 , L0003015 , L0003016 , L0003017 ,
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	L0003026 , L0003027 , L0003028 , L0003029 , L0003030 , L0003031 , L0003032 , L0003033 ,
	L0003034 , L0003035 , L0003036 , L0003037 , L0003038 , L0003039 , L0003040 , L0003041 ,
	L0003042 , L0003043 , L0003044 , L0003045 , L0003046 , L0003047 , L0003048 , L0003049 ,
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*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs
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	L0005585 ,

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** SOURCE IDs DEFINED AS URBAN SOURCES ***

URBAN ID	URBAN POP	SOURCE IDs
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		L0005602 , L0005603 , L0005604 , L0005605 , L0005606 , L0005607 , L0005608 , L0005609 ,
		L0005610 , L0005611 , L0005612 , L0005613 , L0005614 , L0005615 , L0005616 , L0005617 ,
		L0005618 , L0005619 , L0005620 , L0005621 , L0005622 , L0005623 , L0005624 , L0005625 ,
		L0005626 , L0005627 , L0005628 , L0005629 , L0005630 , L0005631 , L0005632 , L0005633 ,
		L0005634 , L0005635 , L0005636 , L0005637 , L0005638 , L0005639 , L0005640 , L0005641 ,
		L0005642 , L0005643 , L0005644 , L0005645 , L0005646 , L0005647 , L0005648 , L0005649 ,
		L0005650 , L0005651 , L0005652 , L0005653 , L0005654 , L0005655 , L0005656 , L0005657 ,
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		L0005682 , L0006174 , L0006175 , L0006176 , L0006177 , L0006178 , L0006179 , L0006180 ,
		L0006181 , L0006182 , L0006183 , L0006184 , L0006185 , L0006186 , L0006187 , L0006188 ,
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*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** SOURCE IDs DEFINED AS URBAN SOURCES ***

URBAN ID	URBAN POP	SOURCE IDs
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		L0006269 , L0006270 , L0006271 , L0006272 , L0006273 , L0006274 , L0006275 , L0006276 ,
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		L0006333 , L0006334 , L0006335 , L0006336 , L0006337 , L0006338 , L0006339 , L0006340 ,
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*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** SOURCE IDs DEFINED AS URBAN SOURCES ***

URBAN ID	URBAN POP	SOURCE IDs
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*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** SOURCE IDs DEFINED AS URBAN SOURCES ***

URBAN ID	URBAN POP	SOURCE IDs
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		L0006709 , L0006710 , L0006711 , L0006712 , L0006713 , L0006714 , L0006715 , L0006716 ,

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** SOURCE IDs DEFINED AS URBAN SOURCES ***

URBAN ID	URBAN POP	SOURCE IDs
		L0006717 , L0006718 , L0006719 , L0006720 , L0006721 , L0006722 , L0006723 , L0006724 ,
		L0006725 , L0006726 , L0006727 , L0006728 , L0006729 , L0006730 , L0006731 , L0006732 ,
		L0006733 , L0006734 , L0006735 , L0006736 , L0006737 , L0006738 , L0006739 , L0006740 ,
		L0006741 , L0006742 , L0006743 , L0006744 , L0006745 , L0006746 , L0006747 , L0006748 ,
		L0006749 , L0006750 , L0006751 , L0006752 , L0006753 , L0006754 , L0006755 , L0006756 ,
		L0006757 , L0006758 , L0006759 , L0006760 , L0006761 , L0006762 , L0006763 , L0006764 ,
		L0006765 , L0006766 , L0006767 , L0006768 , L0006769 , L0006770 , L0006771 , L0006772 ,
		L0006773 , L0006774 , L0006775 , L0006776 , L0006777 , L0006778 , L0006779 , L0006780 ,
		L0006781 , L0006782 , L0006783 , L0006784 , L0006785 , L0006786 , L0006787 , L0006788 ,
		L0006789 , L0006790 , L0006791 , L0006792 , L0006793 , L0006794 , L0006795 , L0006796 ,
		L0006797 , L0006798 , L0006799 , L0006800 , L0006801 , L0006802 , L0006803 , L0006804 ,
		L0006805 , L0006806 , L0006807 , L0006808 , L0006809 , L0006810 , L0006811 , L0006812 ,
		L0006813 , L0006814 , L0006815 , L0006816 , L0006817 , L0006818 , L0006819 , L0006820 ,
		L0006821 , L0006822 , L0006823 , L0006824 , L0006825 , L0006826 , L0006827 , L0006828 ,
		L0006829 , L0006830 , L0006831 , L0006832 , L0006833 , L0006834 , L0006835 , L0006836 ,
		L0006837 , L0006838 , L0006839 , L0006840 , L0006841 , L0006842 , L0006843 , L0006844 ,
		L0006845 , L0006846 , L0006847 , L0006848 , L0006849 , L0006850 , L0006851 , L0006852 ,
		L0006853 , L0006854 , L0006855 , L0006856 , L0006857 , L0006858 , L0006859 , L0006860 ,
		L0006861 , L0006862 , L0006863 , L0006864 , L0006865 , L0006866 , L0006867 , L0006868 ,
		L0006869 , L0006870 , L0006871 , L0006872 , L0006873 , L0006874 , L0006875 , L0006876 ,

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** SOURCE IDs DEFINED AS URBAN SOURCES ***

URBAN ID	URBAN POP	SOURCE IDs
		L0006877 , L0006878 , L0006879 , L0006880 , L0006881 , L0006882 , L0006883 , L0006884 ,
		L0006885 , L0006886 , L0006887 , L0006888 , L0006889 , L0006890 , L0006891 , L0006892 ,
		L0006893 , L0006894 , L0006895 , L0006896 , L0006897 , L0006898 , L0006899 , L0006900 ,
		L0006901 , L0006902 , L0006903 , L0006904 , L0006905 , L0006906 , L0006907 , L0006908 ,
		L0006909 , L0006910 , L0006911 , L0006912 , L0006913 , L0006914 , L0006915 , L0006916 ,
		L0006917 , L0006918 , L0006919 , L0006920 , L0006921 , L0006922 , L0006923 , L0006924 ,
		L0006925 , L0006926 , L0006927 , L0006928 , L0006929 , L0006930 , L0006931 , L0006932 ,
		L0006933 , L0006934 , L0006935 , L0006936 , L0006937 , L0006938 , L0006939 , L0006940 ,
		L0006941 , L0006942 , L0006943 , L0006944 , L0006945 , L0006946 , L0006947 , L0006948 ,
		L0006949 , L0006950 , L0006951 , L0006952 , L0006953 , L0006954 , L0006955 , L0006956 ,
		L0006957 , L0006958 , L0006959 , L0006960 , L0006961 , L0006962 , L0006963 , L0006964 ,
		L0006965 , L0006966 , L0006967 , L0006968 , L0006969 , L0006970 , L0006971 , L0006972 ,
		L0006973 , L0006974 , L0006975 , L0006976 , L0006977 , L0006978 , L0006979 , L0006980 ,
		L0006981 , L0006982 , L0006983 , L0006984 , L0006985 , L0006986 , L0006987 , L0006988 ,
		L0006989 , L0006990 , L0006991 , L0006992 , L0006993 , L0006994 , L0006995 , L0006996 ,
		L0006997 , L0006998 , L0006999 , L0007000 , L0007001 , L0007002 , L0007003 , L0007004 ,
		L0007005 , L0007006 , L0007007 , L0007008 , L0007009 , L0007010 , L0007011 , L0007012 ,
		L0007013 , L0007014 , L0007015 , L0007016 , L0007017 , L0007018 , L0007019 , L0007020 ,
		L0007021 , L0007022 , L0007023 , L0007024 , L0007025 , L0007026 , L0007027 , L0007028 ,
		L0007029 , L0007030 , L0007031 , L0007032 , L0007033 , L0007034 , L0007035 , L0007036 ,

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** SOURCE IDs DEFINED AS URBAN SOURCES ***

URBAN ID	URBAN POP	SOURCE IDs

L0007037 , L0007038 , L0007039 , L0007040 , L0007041 , L0007042 , L0007043 , L0007044 ,
L0007045 , L0007046 , L0007047 , L0007048 , L0007049 , L0007050 , L0007051 , L0007052 ,
L0007053 , L0007054 , L0007055 , L0007056 , L0007057 , L0007058 , L0007059 , L0007060 ,
L0007061 , L0007062 , L0007063 , L0007064 , L0007065 , L0007066 , L0007067 , L0007068 ,
L0007069 , L0007070 , L0007071 , L0007072 , L0007073 , L0007074 , L0007075 , L0007076 ,
L0007077 , L0007078 , L0007079 , L0007080 , L0007081 , L0007082 , L0007083 , L0007084 ,
L0007085 , L0007086 , L0007087 , L0007088 , L0007089 , L0007090 , L0007091 , L0007092 ,
L0007093 , L0007094 , L0007095 , L0007096 , L0007097 , L0007098 , L0007099 , L0007100 ,
L0007101 , L0007102 , L0007103 , L0007104 , L0007105 , L0007106 , L0007107 , L0007108 ,
L0007109 , L0007110 , L0007111 , L0007112 , L0007113 , L0007114 , L0007115 , L0007116 ,
L0007117 , L0007118 , L0007119 , L0007120 , L0007121 , L0007122 , L0007123 , L0007124 ,
L0007125 , L0007126 , L0007127 , L0007128 , L0007129 , L0007130 , L0007131 , L0007132 ,
L0007133 , L0007134 , L0007135 , L0007136 , L0007137 , L0007138 , L0007139 , L0007140 ,
L0007141 , L0007142 , L0007143 , L0007144 , L0007145 , L0007146 , L0007147 , L0007148 ,
L0007149 , L0007150 , L0007151 , L0007152 , L0007153 , L0007154 , L0007155 , L0007156 ,
L0007157 , L0007158 , L0007159 , L0007160 , L0007161 , L0007162 , L0007163 , L0007164 ,
L0007165 , L0007166 , L0007167 , L0007168 , L0007169 , L0007170 , L0007171 , L0007172 ,
L0007173 , L0007174 , L0007175 , L0007176 , L0007177 , L0007178 , L0007179 , L0007180 ,
L0007181 , L0007182 , L0002988 , L0002989 , L0002990 , L0002991 , L0002992 , L0002993 ,
L0002994 , L0002995 , L0002996 , L0002997 , L0002998 , L0002999 , L0003000 , L0003001 ,

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** SOURCE IDs DEFINED AS URBAN SOURCES ***

URBAN ID	URBAN POP	SOURCE IDs
		L0003002 , L0003003 , L0003004 , L0003005 , L0003006 , L0003007 , L0003008 , L0003009 ,
		L0003010 , L0003011 , L0003012 , L0003013 , L0003014 , L0003015 , L0003016 , L0003017 ,
		L0003018 , L0003019 , L0003020 , L0003021 , L0003022 , L0003023 , L0003024 , L0003025 ,
		L0003026 , L0003027 , L0003028 , L0003029 , L0003030 , L0003031 , L0003032 , L0003033 ,
		L0003034 , L0003035 , L0003036 , L0003037 , L0003038 , L0003039 , L0003040 , L0003041 ,
		L0003042 , L0003043 , L0003044 , L0003045 , L0003046 , L0003047 , L0003048 , L0003049 ,
		L0003050 , L0003051 , L0003052 , L0003053 , L0003054 , L0003055 , L0003056 , L0003057 ,
		L0003058 , L0003059 , L0003060 , L0003061 , L0003062 , L0003063 , L0003064 , L0003065 ,
		L0003066 , L0003067 , L0003068 , L0003069 , L0003070 , L0003071 , L0003072 , L0003073 ,
		L0003074 , L0005410 , L0005411 , L0005412 , L0005413 , L0005414 , L0005415 , L0005416 ,
		L0005417 , L0005418 , L0005419 , L0005420 , L0005421 , L0005422 , L0005423 , L0005424 ,
		L0005425 , L0005426 , L0005427 , L0005428 , L0005429 , L0005430 , L0005431 , L0005432 ,
		L0005433 , L0005434 , L0005435 , L0005436 , L0005437 , L0005438 , L0005439 , L0005440 ,
		L0005441 , L0005442 , L0005443 , L0005444 , L0005445 , L0005446 , L0005447 , L0005448 ,
		L0005449 , L0005450 , L0005451 , L0005452 , L0005453 , L0005454 , L0005455 , L0005456 ,
		L0005457 , L0005458 , L0005459 , L0005460 , L0005461 , L0005462 , L0005463 , L0005464 ,
		L0005465 , L0005466 , L0005467 , L0005468 , L0005469 , L0005470 , L0005471 , L0005472 ,
		L0005473 , L0005474 , L0005475 , L0005476 , L0005477 , L0005478 , L0005479 , L0005480 ,
		L0005481 , L0005482 , L0005483 , L0005484 , L0005485 , L0005486 , L0005487 , L0005488 ,
		L0005489 , L0005490 , L0005491 , L0005492 , L0005493 , L0005494 , L0005495 , L0005496 ,

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** SOURCE IDs DEFINED AS URBAN SOURCES ***

URBAN ID	URBAN POP	SOURCE IDs
		L0005497 , L0005498 , L0005499 , L0005500 , L0005501 , L0005502 , L0005503 , L0005504 ,
		L0005505 , L0005506 , L0005507 , L0005508 , L0005509 , L0005510 , L0005511 , L0005512 ,
		L0005513 , L0005514 , L0005515 , L0005516 , L0005517 , L0005518 , L0005519 , L0005520 ,
		L0005521 , L0005522 , L0005523 , L0005524 , L0005525 , L0005526 , L0005527 , L0005528 ,
		L0005529 , L0005530 , L0005531 , L0005532 , L0005533 , L0005534 , L0005535 , L0005536 ,
		L0005537 , L0005538 , L0005539 , L0005540 , L0005541 , L0005542 , L0005543 , L0005544 ,
		L0005545 , L0005546 , L0005547 , L0005548 , L0005549 , L0005550 , L0005551 , L0005552 ,
		L0005553 , L0005554 , L0005555 , L0005556 , L0005557 , L0005558 , L0005559 , L0005560 ,
		L0005561 , L0005562 , L0005563 , L0005564 , L0005565 , L0005566 , L0005567 , L0005568 ,
		L0005569 , L0005570 , L0005571 , L0005572 , L0005573 , L0005574 , L0005575 , L0005576 ,
		L0005577 , L0005578 , L0005579 , L0005580 , L0005581 , L0005582 , L0005583 , L0005584 ,
		L0005585 ,

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** GRIDDED RECEPTOR NETWORK SUMMARY ***

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

*** X-COORDINATES OF GRID ***
(METERS)

478868.2, 478968.2, 479068.2, 479168.2, 479268.2, 479368.2, 479468.2, 479568.2, 479668.2, 479768.2,
479868.2, 479968.2, 480068.2, 480168.2, 480268.2, 480368.2, 480468.2, 480568.2, 480668.2, 480768.2,
480868.2, 480968.2, 481068.2, 481168.2, 481268.2, 481368.2, 481468.2, 481568.2, 481668.2, 481768.2,

*** Y-COORDINATES OF GRID ***
(METERS)

3769389.7, 3769489.7, 3769589.7, 3769689.7, 3769789.7, 3769889.7, 3769989.7, 3770089.7, 3770189.7, 3770289.7,
3770389.7, 3770489.7, 3770589.7, 3770689.7, 3770789.7, 3770889.7, 3770989.7, 3771089.7, 3771189.7, 3771289.7,
3771389.7, 3771489.7, 3771589.7, 3771689.7, 3771789.7, 3771889.7, 3771989.7, 3772089.7, 3772189.7, 3772289.7,
3772389.7, 3772489.7, 3772589.7, 3772689.7, 3772789.7, 3772889.7, 3772989.7, 3773089.7, 3773189.7, 3773289.7,
3773389.7, 3773489.7, 3773589.7, 3773689.7, 3773789.7, 3773889.7, 3773989.7, 3774089.7, 3774189.7, 3774289.7,

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*
*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

* ELEVATION HEIGHTS IN METERS *

Y-COORD (METERS)	X-COORD (METERS)								
	478868.21	478968.21	479068.21	479168.21	479268.21	479368.21	479468.21	479568.21	479668.21
3774289.70	346.00	347.30	348.00	349.00	350.00	350.60	351.00	352.00	353.00
3774189.70	346.00	347.00	348.00	348.70	349.30	350.00	351.00	352.00	352.90
3774089.70	346.00	347.00	347.60	348.00	349.00	350.00	351.00	352.00	352.30
3773989.70	345.90	346.30	347.00	347.10	348.30	350.00	350.90	351.40	352.00
3773889.70	345.90	346.30	347.00	348.00	349.00	350.00	350.90	352.00	352.00
3773789.70	345.00	346.30	347.00	348.00	349.00	350.00	350.90	352.00	352.60
3773689.70	345.00	346.30	347.60	348.00	349.00	350.00	350.00	351.40	352.60
3773589.70	345.00	346.00	347.00	348.00	349.00	349.60	350.00	351.30	352.60
3773489.70	345.00	346.00	347.00	347.90	348.30	349.30	350.00	351.00	352.00
3773389.70	344.90	346.00	347.00	347.90	348.30	349.00	350.00	351.00	352.00
3773289.70	344.90	346.00	347.00	347.90	348.00	349.00	350.00	351.00	351.60
3773189.70	344.00	346.00	346.60	347.90	348.00	349.00	349.90	350.10	351.00
3773089.70	344.00	345.30	346.10	347.00	348.00	348.10	349.00	350.00	351.00
3772989.70	344.00	345.00	346.00	346.70	347.00	347.90	348.00	349.30	350.00
3772889.70	343.90	344.60	345.60	346.00	346.60	347.00	347.90	349.00	350.00
3772789.70	343.00	344.00	345.00	346.00	346.00	347.00	347.00	348.00	349.70
3772689.70	342.80	343.80	344.50	345.00	346.00	347.00	347.20	348.00	349.60
3772589.70	342.00	342.10	343.80	345.00	346.00	346.80	347.90	348.30	349.60
3772489.70	341.00	342.00	343.00	344.00	345.30	346.60	347.90	348.00	349.60
3772389.70	340.90	341.30	342.60	344.00	345.00	346.00	347.00	347.80	349.60
3772289.70	340.90	341.30	342.60	344.00	345.30	346.00	346.90	347.30	349.60
3772189.70	340.90	341.30	343.50	345.00	346.00	347.00	347.00	347.90	350.50
3772089.70	340.90	341.50	344.80	347.00	347.20	348.80	351.60	354.00	354.00
3771989.70	342.60	346.50	347.80	348.00	349.80	353.40	354.00	355.00	355.30
3771889.70	348.00	348.00	349.00	350.00	351.30	353.00	354.80	355.90	356.50
3771789.70	348.00	349.10	350.00	351.00	353.00	354.00	354.90	356.00	357.10
3771689.70	348.90	350.00	350.60	352.00	353.20	354.00	355.00	356.20	357.60
3771589.70	348.90	350.00	351.00	352.00	353.30	354.60	355.90	356.90	358.00
3771489.70	348.90	350.00	351.00	352.20	354.00	355.00	356.00	357.00	358.00
3771389.70	349.00	350.00	351.60	352.90	354.00	355.00	356.00	357.30	358.60
3771289.70	349.00	350.00	351.60	352.90	354.00	355.00	356.00	357.30	359.00
3771189.70	349.00	350.30	351.60	352.90	354.00	355.00	356.00	358.00	359.00
3771089.70	349.00	350.30	351.60	352.90	354.00	355.00	356.90	358.00	359.00
3770989.70	349.90	350.30	352.00	352.90	354.00	355.60	356.90	358.00	359.00
3770889.70	350.00	351.00	352.00	353.00	354.10	355.60	357.00	358.00	359.60
3770789.70	350.00	351.00	352.00	353.00	354.30	356.00	357.00	358.20	359.60
3770689.70	350.00	351.00	352.00	353.90	355.00	356.00	357.00	358.30	359.60
3770589.70	350.00	351.30	352.70	354.00	355.00	356.00	357.00	358.30	360.00
3770489.70	350.00	352.00	353.00	354.00	355.20	356.00	357.00	358.30	359.80
3770389.70	350.00	352.00	353.50	354.00	355.30	356.00	357.00	358.30	359.60

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

* ELEVATION HEIGHTS IN METERS *

Y-COORD (METERS)	X-COORD (METERS) 478868.21	478968.21	479068.21	479168.21	479268.21	479368.21	479468.21	479568.21	479668.21
3770289.70	350.00	352.00	353.00	354.00	355.00	356.00	357.00	358.30	359.60
3770189.70	350.90	352.00	352.60	353.90	355.00	356.00	357.00	358.30	359.60
3770089.70	350.90	351.90	352.60	353.90	355.00	356.00	357.90	358.90	360.00
3769989.70	350.90	352.00	352.60	353.90	355.00	356.60	357.90	359.00	360.00
3769889.70	351.00	352.00	353.00	354.00	355.30	356.80	358.00	359.00	360.60
3769789.70	351.00	352.00	353.00	354.90	356.00	357.00	358.00	359.00	360.60
3769689.70	352.20	353.00	353.00	355.90	358.10	358.70	359.00	359.30	361.60
3769589.70	353.60	354.20	357.90	359.50	360.00	360.00	360.00	360.20	365.00
3769489.70	350.20	353.00	354.10	358.00	358.10	359.00	359.00	359.90	363.40
3769389.70	349.90	352.00	353.00	354.90	356.20	357.50	358.00	359.00	360.00

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*
*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

* ELEVATION HEIGHTS IN METERS *

Y-COORD (METERS)	X-COORD (METERS) 479768.21	479868.21	479968.21	480068.21	480168.21	480268.21	480368.21	480468.21	480568.21
3774289.70	353.80	354.00	355.10	356.10	357.30	358.00	359.80	360.00	361.60
3774189.70	353.00	354.00	354.60	356.00	357.00	358.00	359.00	360.00	361.60
3774089.70	353.00	354.00	355.00	356.00	357.00	358.00	359.00	360.20	361.60
3773989.70	353.00	354.00	355.00	356.00	357.00	358.00	359.00	360.30	362.00
3773889.70	353.00	354.00	355.00	356.00	357.00	358.00	359.00	360.30	362.00
3773789.70	353.00	354.00	355.00	356.00	357.00	358.00	359.00	360.00	362.00
3773689.70	353.90	354.00	355.00	356.00	357.00	358.00	359.00	360.00	362.00
3773589.70	353.70	354.00	355.00	356.00	357.00	358.00	359.00	360.00	360.90
3773489.70	353.00	354.00	355.00	355.90	356.30	357.60	358.40	359.00	360.00
3773389.70	352.90	354.00	354.60	355.10	356.00	357.00	358.00	359.00	359.10
3773289.70	352.00	353.30	354.00	355.00	356.00	356.90	357.90	358.30	359.00
3773189.70	352.00	353.00	354.00	355.00	355.60	356.60	357.40	358.70	359.80
3773089.70	352.00	352.40	353.10	354.00	355.00	356.00	357.00	358.40	359.50
3772989.70	351.00	352.00	353.00	353.00	354.30	355.90	356.90	358.00	359.00
3772889.70	351.00	352.00	352.30	353.00	354.30	356.00	356.90	358.00	359.00
3772789.70	350.90	352.00	352.60	353.80	354.30	356.00	356.90	358.00	359.60
3772689.70	350.90	351.40	352.60	353.90	354.30	356.00	356.90	358.00	359.60
3772589.70	350.40	351.30	352.30	353.40	354.00	355.60	356.90	358.00	359.00
3772489.70	350.00	351.30	352.00	353.00	354.00	355.60	356.90	358.00	358.60
3772389.70	351.00	352.00	352.00	353.00	354.00	355.60	357.00	358.40	359.10
3772289.70	351.90	354.00	353.00	353.00	354.20	356.80	358.00	359.20	360.80
3772189.70	352.00	354.20	353.00	354.80	359.80	359.90	359.90	359.00	361.60
3772089.70	354.20	356.90	359.20	360.20	361.20	362.80	365.20	365.80	366.00
3771989.70	356.50	359.30	359.60	361.00	362.70	364.30	366.00	367.00	367.60
3771889.70	358.00	360.00	360.50	362.00	363.30	365.00	366.80	367.90	368.50
3771789.70	358.90	360.00	361.00	362.20	364.00	365.60	367.00	368.00	369.10
3771689.70	359.00	360.20	361.60	362.90	364.00	365.60	367.00	368.30	369.80
3771589.70	359.00	360.30	362.00	363.00	364.30	366.00	367.00	368.90	370.00
3771489.70	359.90	361.00	362.00	363.00	364.30	366.00	367.00	369.00	370.60
3771389.70	360.00	361.00	362.00	363.50	364.70	366.00	367.90	369.30	370.60
3771289.70	360.00	361.30	362.60	363.90	365.00	366.50	367.90	369.30	371.00
3771189.70	360.00	361.40	362.60	364.00	365.30	366.60	368.00	369.40	371.00
3771089.70	360.00	362.00	363.00	364.00	365.30	367.00	368.00	370.00	371.00
3770989.70	360.90	362.00	363.00	364.00	366.00	367.00	368.00	370.00	371.00
3770889.70	360.90	362.00	363.60	364.90	366.00	367.60	368.90	370.00	371.00
3770789.70	360.90	362.00	363.60	365.00	366.30	367.60	368.90	370.00	371.60
3770689.70	361.00	362.00	363.60	365.00	366.30	367.60	368.90	370.30	372.00
3770589.70	361.00	362.00	363.60	364.90	366.00	367.60	368.90	370.00	371.60
3770489.70	361.00	362.00	363.60	364.90	366.00	367.60	369.00	370.30	372.00
3770389.70	360.90	362.00	363.60	364.90	366.00	367.60	369.00	370.30	372.00

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

* ELEVATION HEIGHTS IN METERS *

Y-COORD (METERS)	X-COORD (METERS) 479768.21	479868.21	479968.21	480068.21	480168.21	480268.21	480368.21	480468.21	480568.21
3770289.70	360.90	362.30	364.00	365.00	366.30	368.00	369.00	371.00	372.00
3770189.70	360.90	362.30	364.00	365.90	367.00	368.00	369.50	371.00	372.60
3770089.70	361.00	363.00	364.60	366.00	367.00	368.00	369.90	371.00	372.60
3769989.70	361.90	363.00	364.60	366.00	367.30	368.10	369.90	371.00	372.00
3769889.70	362.00	363.30	364.60	366.00	367.30	368.60	369.90	371.00	372.00
3769789.70	362.00	363.90	364.60	366.00	367.30	368.60	370.00	371.00	372.50
3769689.70	364.00	364.20	365.00	366.00	367.40	369.00	370.20	371.10	373.50
3769589.70	366.00	365.80	366.00	366.00	368.00	369.60	372.00	372.00	374.30
3769489.70	365.10	365.00	365.00	366.00	368.00	369.60	371.10	373.00	374.60
3769389.70	362.00	363.30	364.60	366.00	367.30	369.00	370.90	372.00	374.50

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*
*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

* ELEVATION HEIGHTS IN METERS *

Y-COORD (METERS)	X-COORD (METERS)								
	480668.21	480768.21	480868.21	480968.21	481068.21	481168.21	481268.21	481368.21	481468.21
3774289.70	362.80	363.30	364.00	365.00	366.00	367.60	368.90	370.00	371.00
3774189.70	362.00	363.30	364.60	365.90	366.30	368.00	368.90	370.00	371.00
3774089.70	362.90	364.00	365.00	366.00	367.00	368.00	369.00	370.20	371.60
3773989.70	363.00	364.90	365.60	366.00	367.20	368.00	369.00	371.00	372.00
3773889.70	363.90	366.00	366.00	366.00	366.80	367.60	368.90	370.20	371.00
3773789.70	363.90	366.00	366.00	365.50	366.00	366.60	368.00	370.00	370.60
3773689.70	363.90	366.00	365.50	365.00	366.00	366.60	368.00	370.00	371.00
3773589.70	362.90	364.80	365.00	366.00	366.40	367.60	368.20	370.00	371.70
3773489.70	361.40	363.10	364.80	366.00	366.60	367.60	368.00	369.70	368.00
3773389.70	360.00	362.30	364.60	366.00	366.30	367.00	368.00	369.00	368.00
3773289.70	360.00	362.30	364.60	366.00	366.00	366.90	368.00	368.00	369.10
3773189.70	360.50	362.30	364.60	366.00	366.00	366.00	367.00	366.40	367.70
3773089.70	360.00	362.00	363.70	366.00	365.00	366.00	367.00	366.00	366.00
3772989.70	360.00	362.00	363.00	364.00	365.40	366.10	367.00	367.20	368.10
3772889.70	360.00	362.00	363.00	364.00	365.30	366.60	367.90	368.20	369.30
3772789.70	360.90	362.00	363.00	364.00	366.00	366.60	367.90	368.30	369.60
3772689.70	360.00	362.00	363.00	364.00	365.30	366.60	367.90	369.00	370.00
3772589.70	360.00	361.30	363.00	364.50	366.00	366.60	368.00	369.00	370.00
3772489.70	359.10	360.60	363.00	364.90	366.00	367.00	368.00	369.30	370.00
3772389.70	360.00	362.00	363.60	364.90	366.00	367.00	368.20	370.00	371.00
3772289.70	361.60	363.20	364.00	365.00	365.60	367.20	369.50	371.00	372.20
3772189.70	363.00	364.00	365.50	365.90	366.00	371.70	371.90	376.80	378.00
3772089.70	365.20	365.20	368.00	370.20	373.10	374.80	377.20	378.20	378.10
3771989.70	367.60	371.00	372.60	373.50	374.70	376.80	378.00	379.20	379.20
3771889.70	369.90	372.00	373.00	374.00	376.00	378.00	379.00	380.00	381.00
3771789.70	370.90	372.00	373.60	375.00	376.30	378.00	379.90	381.00	382.10
3771689.70	371.00	372.70	374.00	375.50	377.00	378.60	380.00	381.30	383.00
3771589.70	371.90	373.20	374.50	376.00	377.00	378.60	380.00	382.00	383.60
3771489.70	372.00	374.00	375.00	376.90	378.00	379.60	381.00	382.30	384.00
3771389.70	372.00	374.00	375.60	377.50	379.00	380.00	381.90	383.20	384.60
3771289.70	372.90	374.30	376.00	378.00	379.30	380.60	382.00	384.00	385.50
3771189.70	372.90	374.30	376.50	378.00	379.30	381.00	382.90	384.30	386.00
3771089.70	372.90	374.30	376.00	377.90	379.30	381.00	382.90	384.30	386.00
3770989.70	372.90	374.30	376.00	377.90	379.30	381.00	382.90	384.30	386.00
3770889.70	372.90	374.30	376.00	377.90	379.30	380.60	382.70	384.00	385.90
3770789.70	372.90	374.30	376.00	377.90	379.30	380.60	382.00	384.00	385.60
3770689.70	372.90	374.30	376.00	377.90	379.30	381.00	382.00	384.00	385.60
3770589.70	373.00	375.00	376.60	378.00	379.40	381.00	382.20	384.00	385.60
3770489.70	373.50	375.20	376.60	378.00	380.00	381.60	382.90	384.20	386.00
3770389.70	373.90	375.30	377.00	378.90	380.00	382.00	383.00	385.00	386.60

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

* ELEVATION HEIGHTS IN METERS *

Y-COORD (METERS)	X-COORD (METERS) 480668.21	480768.21	480868.21	480968.21	481068.21	481168.21	481268.21	481368.21	481468.21
3770289.70	374.00	376.00	377.70	379.00	380.30	382.00	384.00	385.30	387.00
3770189.70	374.00	376.00	378.00	379.00	381.00	382.60	384.00	386.00	387.60
3770089.70	374.00	376.00	377.60	379.00	381.00	382.60	384.00	386.00	387.60
3769989.70	374.00	376.00	377.60	379.00	380.80	382.50	384.00	386.00	387.60
3769889.70	374.00	376.00	377.00	378.90	380.30	382.00	383.90	385.30	387.60
3769789.70	376.80	377.70	377.60	379.00	381.00	382.60	384.00	386.00	387.60
3769689.70	378.00	378.00	378.00	379.90	381.10	382.70	384.00	386.10	388.00
3769589.70	377.00	377.60	378.30	379.90	381.30	383.80	384.90	386.70	388.60
3769489.70	376.90	378.00	378.00	379.90	381.40	383.10	384.90	387.30	389.60
3769389.70	376.90	377.90	378.60	380.00	381.30	383.00	384.90	387.30	389.10

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*
*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

* ELEVATION HEIGHTS IN METERS *

Y-COORD (METERS)	X-COORD (METERS) 481568.21	481668.21	481768.21
3774289.70	372.00	373.30	374.60
3774189.70	372.00	374.00	375.00
3774089.70	372.90	374.70	375.80
3773989.70	373.90	376.90	377.00
3773889.70	374.90	377.10	377.80
3773789.70	372.00	372.10	375.30
3773689.70	371.90	373.00	374.00
3773589.70	372.00	373.00	372.80
3773489.70	371.40	368.70	367.40
3773389.70	366.20	366.00	366.00
3773289.70	365.80	366.00	366.00
3773189.70	371.40	372.00	372.00
3773089.70	369.90	371.90	372.00
3772989.70	370.00	372.00	372.10
3772889.70	370.50	372.00	372.80
3772789.70	371.00	372.00	372.60
3772689.70	371.20	372.10	373.10
3772589.70	372.00	372.70	374.00
3772489.70	371.10	372.00	374.50
3772389.70	371.00	372.10	376.70
3772289.70	375.10	378.80	382.30
3772189.70	378.00	381.20	384.00
3772089.70	378.00	382.50	385.00
3771989.70	378.00	384.30	385.60
3771889.70	380.80	384.90	386.00
3771789.70	384.00	385.30	386.70
3771689.70	384.00	386.00	387.60
3771589.70	384.10	386.20	388.00
3771489.70	385.90	387.30	388.70
3771389.70	386.00	388.00	389.80
3771289.70	386.90	388.30	390.00
3771189.70	387.00	389.00	390.60
3771089.70	387.90	389.30	391.00
3770989.70	387.90	389.30	391.00
3770889.70	387.90	389.30	390.90
3770789.70	387.00	389.00	390.60
3770689.70	387.00	389.00	390.60
3770589.70	387.90	389.10	390.60
3770489.70	388.00	389.70	391.30
3770389.70	388.00	390.20	392.00

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

* ELEVATION HEIGHTS IN METERS *

Y-COORD (METERS)	X-COORD (METERS) 481568.21	481668.21	481768.21
3770289.70	388.90	390.40	392.10
3770189.70	389.00	391.00	392.60
3770089.70	389.10	391.00	392.60
3769989.70	389.00	391.00	392.60
3769889.70	389.00	390.30	392.60
3769789.70	389.00	391.00	392.60
3769689.70	389.20	391.10	392.70
3769589.70	394.20	393.80	393.00
3769489.70	390.30	391.00	394.00
3769389.70	390.70	391.40	396.00

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*
*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

* HILL HEIGHT SCALES IN METERS *

Y-COORD (METERS)	X-COORD (METERS)								
	478868.21	478968.21	479068.21	479168.21	479268.21	479368.21	479468.21	479568.21	479668.21
3774289.70	346.00	347.30	348.00	349.00	350.00	350.60	351.00	352.00	353.00
3774189.70	346.00	347.00	348.00	348.70	349.30	350.00	351.00	352.00	352.90
3774089.70	346.00	347.00	347.60	348.00	349.00	350.00	351.00	352.00	352.30
3773989.70	345.90	346.30	347.00	347.10	348.30	350.00	350.90	351.40	352.00
3773889.70	345.90	346.30	347.00	348.00	349.00	350.00	350.90	352.00	352.00
3773789.70	345.00	346.30	347.00	348.00	349.00	350.00	350.90	352.00	352.60
3773689.70	345.00	346.30	347.60	348.00	349.00	350.00	350.00	351.40	352.60
3773589.70	345.00	346.00	347.00	348.00	349.00	349.60	350.00	351.30	352.60
3773489.70	345.00	346.00	347.00	347.90	348.30	349.30	350.00	351.00	352.00
3773389.70	344.90	346.00	347.00	347.90	348.30	349.00	350.00	351.00	352.00
3773289.70	344.90	346.00	347.00	347.90	348.00	349.00	350.00	351.00	351.60
3773189.70	344.00	346.00	346.60	347.90	348.00	349.00	349.90	350.10	351.00
3773089.70	344.00	345.30	346.10	347.00	348.00	348.10	349.00	350.00	351.00
3772989.70	344.00	345.00	346.00	346.70	347.00	347.90	348.00	349.30	350.00
3772889.70	343.90	344.60	345.60	346.00	346.60	347.00	347.90	349.00	350.00
3772789.70	343.00	344.00	345.00	346.00	346.00	347.00	347.00	348.00	349.70
3772689.70	342.80	343.80	344.50	345.00	346.00	347.00	347.20	348.00	349.60
3772589.70	342.00	342.10	343.80	345.00	346.00	346.80	347.90	348.30	349.60
3772489.70	341.00	342.00	343.00	344.00	345.30	346.60	347.90	348.00	349.60
3772389.70	340.90	341.30	342.60	344.00	345.00	346.00	347.00	347.80	349.60
3772289.70	340.90	341.30	342.60	344.00	345.30	346.00	346.90	347.30	349.60
3772189.70	340.90	341.30	343.50	345.00	346.00	347.00	347.00	347.90	350.50
3772089.70	340.90	341.50	344.80	347.00	347.20	354.00	354.00	354.00	354.00
3771989.70	348.00	346.50	347.80	348.00	349.80	353.40	354.00	355.00	355.30
3771889.70	348.00	348.00	349.00	350.00	351.30	353.00	354.80	355.90	356.50
3771789.70	348.00	349.10	350.00	351.00	353.00	354.00	354.90	356.00	357.10
3771689.70	348.90	350.00	350.60	352.00	353.20	354.00	355.00	356.20	357.60
3771589.70	348.90	350.00	351.00	352.00	353.30	354.60	355.90	356.90	358.00
3771489.70	348.90	350.00	351.00	352.20	354.00	355.00	356.00	357.00	358.00
3771389.70	349.00	350.00	351.60	352.90	354.00	355.00	356.00	357.30	358.60
3771289.70	349.00	350.00	351.60	352.90	354.00	355.00	356.00	357.30	359.00
3771189.70	349.00	350.30	351.60	352.90	354.00	355.00	356.00	358.00	359.00
3771089.70	349.00	350.30	351.60	352.90	354.00	355.00	356.90	358.00	359.00
3770989.70	349.90	350.30	352.00	352.90	354.00	355.60	356.90	358.00	359.00
3770889.70	350.00	351.00	352.00	353.00	354.10	355.60	357.00	358.00	359.60
3770789.70	350.00	351.00	352.00	353.00	354.30	356.00	357.00	358.20	359.60
3770689.70	350.00	351.00	352.00	353.90	355.00	356.00	357.00	358.30	359.60
3770589.70	350.00	351.30	352.70	354.00	355.00	356.00	357.00	358.30	360.00
3770489.70	350.00	352.00	353.00	354.00	355.20	356.00	357.00	358.30	359.80
3770389.70	350.00	352.00	353.50	354.00	355.30	356.00	357.00	358.30	359.60

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

* HILL HEIGHT SCALES IN METERS *

Y-COORD (METERS)	X-COORD (METERS)								
	478868.21	478968.21	479068.21	479168.21	479268.21	479368.21	479468.21	479568.21	479668.21
3770289.70	350.00	352.00	353.00	354.00	355.00	356.00	357.00	358.30	359.60
3770189.70	350.90	352.00	352.60	353.90	355.00	356.00	357.00	358.30	359.60
3770089.70	350.90	351.90	352.60	353.90	355.00	356.00	357.90	358.90	360.00
3769989.70	350.90	352.00	352.60	353.90	355.00	356.60	357.90	359.00	360.00
3769889.70	351.00	352.00	353.00	354.00	355.30	356.80	358.00	359.00	360.60
3769789.70	351.00	352.00	353.00	354.90	356.00	357.00	358.00	359.00	360.60
3769689.70	352.20	353.00	353.00	355.90	358.10	358.70	359.00	359.30	361.60
3769589.70	353.60	354.20	360.00	359.50	360.00	360.00	360.00	360.20	365.00
3769489.70	350.20	353.00	360.00	358.00	358.10	359.00	359.00	359.90	363.40
3769389.70	349.90	352.00	353.00	354.90	356.20	357.50	358.00	359.00	360.00

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*
*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

* HILL HEIGHT SCALES IN METERS *

Y-COORD (METERS)	X-COORD (METERS)								
	479768.21	479868.21	479968.21	480068.21	480168.21	480268.21	480368.21	480468.21	480568.21
3774289.70	353.80	354.00	355.10	356.10	357.30	358.00	359.80	360.00	361.60
3774189.70	353.00	354.00	354.60	356.00	357.00	358.00	359.00	360.00	361.60
3774089.70	353.00	354.00	355.00	356.00	357.00	358.00	359.00	360.20	361.60
3773989.70	353.00	354.00	355.00	356.00	357.00	358.00	359.00	360.30	362.00
3773889.70	353.00	354.00	355.00	356.00	357.00	358.00	359.00	360.30	362.00
3773789.70	353.00	354.00	355.00	356.00	357.00	358.00	359.00	360.00	362.00
3773689.70	353.90	354.00	355.00	356.00	357.00	358.00	359.00	360.00	362.00
3773589.70	353.70	354.00	355.00	356.00	357.00	358.00	359.00	360.00	360.90
3773489.70	353.00	354.00	355.00	355.90	356.30	357.60	358.40	359.00	360.00
3773389.70	352.90	354.00	354.60	355.10	356.00	357.00	358.00	359.00	359.10
3773289.70	352.00	353.30	354.00	355.00	356.00	356.90	357.90	358.30	359.00
3773189.70	352.00	353.00	354.00	355.00	355.60	356.60	357.40	358.70	359.80
3773089.70	352.00	352.40	353.10	354.00	355.00	356.00	357.00	358.40	359.50
3772989.70	351.00	352.00	353.00	353.00	354.30	355.90	356.90	358.00	359.00
3772889.70	351.00	352.00	352.30	353.00	354.30	356.00	356.90	358.00	359.00
3772789.70	350.90	352.00	352.60	353.80	354.30	356.00	356.90	358.00	359.60
3772689.70	350.90	351.40	352.60	353.90	354.30	356.00	356.90	358.00	359.60
3772589.70	350.40	351.30	352.30	353.40	354.00	355.60	356.90	358.00	359.00
3772489.70	350.00	351.30	352.00	353.00	354.00	355.60	356.90	358.00	358.60
3772389.70	351.00	352.00	352.00	353.00	354.00	355.60	357.00	358.40	359.10
3772289.70	351.90	354.00	353.00	353.00	354.20	356.80	358.00	359.20	360.80
3772189.70	352.00	354.20	359.00	360.00	359.80	359.90	359.90	359.00	361.60
3772089.70	354.20	356.90	359.20	360.20	361.20	362.80	365.20	365.80	366.00
3771989.70	356.50	359.30	359.60	361.00	362.70	364.30	366.00	367.00	367.60
3771889.70	358.00	360.00	360.50	362.00	363.30	365.00	366.80	367.90	368.50
3771789.70	358.90	360.00	361.00	362.20	364.00	365.60	367.00	368.00	369.10
3771689.70	359.00	360.20	361.60	362.90	364.00	365.60	367.00	368.30	369.80
3771589.70	359.00	360.30	362.00	363.00	364.30	366.00	367.00	368.90	370.00
3771489.70	359.90	361.00	362.00	363.00	364.30	366.00	367.00	369.00	370.60
3771389.70	360.00	361.00	362.00	363.50	364.70	366.00	367.90	369.30	370.60
3771289.70	360.00	361.30	362.60	363.90	365.00	366.50	367.90	369.30	371.00
3771189.70	360.00	361.40	362.60	364.00	365.30	366.60	368.00	369.40	371.00
3771089.70	360.00	362.00	363.00	364.00	365.30	367.00	368.00	370.00	371.00
3770989.70	360.90	362.00	363.00	364.00	366.00	367.00	368.00	370.00	371.00
3770889.70	360.90	362.00	363.60	364.90	366.00	367.60	368.90	370.00	371.00
3770789.70	360.90	362.00	363.60	365.00	366.30	367.60	368.90	370.00	371.60
3770689.70	361.00	362.00	363.60	365.00	366.30	367.60	368.90	370.30	372.00
3770589.70	361.00	362.00	363.60	364.90	366.00	367.60	368.90	370.00	371.60
3770489.70	361.00	362.00	363.60	364.90	366.00	367.60	369.00	370.30	372.00
3770389.70	360.90	362.00	363.60	364.90	366.00	367.60	369.00	370.30	372.00

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

* HILL HEIGHT SCALES IN METERS *

Y-COORD (METERS)	X-COORD (METERS) 479768.21	479868.21	479968.21	480068.21	480168.21	480268.21	480368.21	480468.21	480568.21
3770289.70	360.90	362.30	364.00	365.00	366.30	368.00	369.00	371.00	372.00
3770189.70	360.90	362.30	364.00	365.90	367.00	368.00	369.50	371.00	372.60
3770089.70	361.00	363.00	364.60	366.00	367.00	368.00	369.90	371.00	372.60
3769989.70	361.90	363.00	364.60	366.00	367.30	368.10	369.90	371.00	372.00
3769889.70	362.00	363.30	364.60	366.00	367.30	368.60	369.90	371.00	372.00
3769789.70	362.00	363.90	364.60	366.00	367.30	368.60	370.00	371.00	372.50
3769689.70	364.00	364.20	365.00	366.00	367.40	369.00	370.20	371.10	373.50
3769589.70	366.00	365.80	366.00	366.00	368.00	369.60	372.00	372.00	374.30
3769489.70	365.10	365.00	365.00	366.00	368.00	369.60	371.10	373.00	374.60
3769389.70	362.00	363.30	364.60	366.00	367.30	369.00	370.90	372.00	374.50

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*
*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

* HILL HEIGHT SCALES IN METERS *

Y-COORD (METERS)	X-COORD (METERS) 480668.21	480768.21	480868.21	480968.21	481068.21	481168.21	481268.21	481368.21	481468.21
3774289.70	362.80	363.30	364.00	365.00	366.00	367.60	368.90	370.00	371.00
3774189.70	362.00	363.30	364.60	365.90	366.30	368.00	368.90	370.00	371.00
3774089.70	362.90	364.00	365.00	366.00	367.00	368.00	369.00	370.20	371.60
3773989.70	363.00	364.90	365.60	366.00	367.20	368.00	369.00	371.00	372.00
3773889.70	363.90	366.00	366.00	366.00	366.80	367.60	368.90	370.20	371.00
3773789.70	363.90	366.00	366.00	365.50	366.00	366.60	368.00	370.00	370.60
3773689.70	363.90	366.00	365.50	365.00	366.00	366.60	368.00	370.00	371.00
3773589.70	362.90	364.80	365.00	366.00	366.40	367.60	368.20	370.00	371.70
3773489.70	361.40	363.10	364.80	366.00	366.60	367.60	368.00	369.70	368.00
3773389.70	360.00	362.30	364.60	366.00	366.30	367.00	368.00	369.00	368.00
3773289.70	360.00	362.30	364.60	366.00	366.00	366.90	368.00	368.00	369.10
3773189.70	360.50	362.30	364.60	366.00	366.00	366.00	367.00	366.40	367.70
3773089.70	360.00	362.00	363.70	366.00	365.00	366.00	367.00	366.00	366.00
3772989.70	360.00	362.00	363.00	364.00	365.40	366.10	367.00	367.20	368.10
3772889.70	360.00	362.00	363.00	364.00	365.30	366.60	367.90	368.20	369.30
3772789.70	360.90	362.00	363.00	364.00	366.00	366.60	367.90	368.30	369.60
3772689.70	360.00	362.00	363.00	364.00	365.30	366.60	367.90	369.00	370.00
3772589.70	360.00	361.30	363.00	364.50	366.00	366.60	368.00	369.00	370.00
3772489.70	359.10	360.60	363.00	364.90	366.00	367.00	368.00	369.30	370.00
3772389.70	360.00	362.00	363.60	364.90	366.00	367.00	368.20	370.00	371.00
3772289.70	361.60	363.20	364.00	365.00	365.60	367.20	369.50	371.00	378.00
3772189.70	363.00	364.00	365.50	365.90	372.00	371.70	371.90	376.80	378.00
3772089.70	365.20	365.20	371.00	370.20	373.10	374.80	377.20	378.20	378.10
3771989.70	367.60	371.00	372.60	373.50	374.70	376.80	378.00	379.20	379.20
3771889.70	369.90	372.00	373.00	374.00	376.00	378.00	379.00	380.00	381.00
3771789.70	370.90	372.00	373.60	375.00	376.30	378.00	379.90	381.00	382.10
3771689.70	371.00	372.70	374.00	375.50	377.00	378.60	380.00	381.30	383.00
3771589.70	371.90	373.20	374.50	376.00	377.00	378.60	380.00	382.00	383.60
3771489.70	372.00	374.00	375.00	376.90	378.00	379.60	381.00	382.30	384.00
3771389.70	372.00	374.00	375.60	377.50	379.00	380.00	381.90	383.20	384.60
3771289.70	372.90	374.30	376.00	378.00	379.30	380.60	382.00	384.00	385.50
3771189.70	372.90	374.30	376.50	378.00	379.30	381.00	382.90	384.30	386.00
3771089.70	372.90	374.30	376.00	377.90	379.30	381.00	382.90	384.30	386.00
3770989.70	372.90	374.30	376.00	377.90	379.30	381.00	382.90	384.30	386.00
3770889.70	372.90	374.30	376.00	377.90	379.30	380.60	382.70	384.00	385.90
3770789.70	372.90	374.30	376.00	377.90	379.30	380.60	382.00	384.00	385.60
3770689.70	372.90	374.30	376.00	377.90	379.30	381.00	382.00	384.00	385.60
3770589.70	373.00	375.00	376.60	378.00	379.40	381.00	382.20	384.00	385.60
3770489.70	373.50	375.20	376.60	378.00	380.00	381.60	382.90	384.20	386.00
3770389.70	373.90	375.30	377.00	378.90	380.00	382.00	383.00	385.00	386.60

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

* HILL HEIGHT SCALES IN METERS *

Y-COORD (METERS)	X-COORD (METERS) 480668.21	480768.21	480868.21	480968.21	481068.21	481168.21	481268.21	481368.21	481468.21
3770289.70	374.00	376.00	377.70	379.00	380.30	382.00	384.00	385.30	387.00
3770189.70	374.00	376.00	378.00	379.00	381.00	382.60	384.00	386.00	387.60
3770089.70	374.00	376.00	377.60	379.00	381.00	382.60	384.00	386.00	387.60
3769989.70	374.00	376.00	377.60	379.00	380.80	382.50	384.00	386.00	387.60
3769889.70	374.00	376.00	377.00	378.90	380.30	382.00	383.90	385.30	387.60
3769789.70	376.80	377.70	377.60	379.00	381.00	382.60	384.00	386.00	387.60
3769689.70	378.00	378.00	378.00	379.90	381.10	382.70	384.00	386.10	388.00
3769589.70	377.00	377.60	378.30	379.90	381.30	383.80	384.90	386.70	399.00
3769489.70	376.90	378.00	378.00	379.90	381.40	383.10	384.90	387.30	399.00
3769389.70	376.90	377.90	378.60	380.00	381.30	383.00	384.90	387.30	389.10

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*
*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

* HILL HEIGHT SCALES IN METERS *

Y-COORD (METERS)	X-COORD (METERS) 481568.21	481668.21	481768.21
3774289.70	372.00	373.30	374.60
3774189.70	372.00	374.00	375.00
3774089.70	372.90	374.70	375.80
3773989.70	373.90	376.90	377.00
3773889.70	376.00	377.10	377.80
3773789.70	372.00	372.10	375.30
3773689.70	371.90	373.00	374.00
3773589.70	372.00	373.00	372.80
3773489.70	371.40	372.00	371.00
3773389.70	366.20	366.00	366.00
3773289.70	373.00	366.00	366.00
3773189.70	371.40	372.00	372.00
3773089.70	369.90	371.90	372.00
3772989.70	370.00	372.00	372.10
3772889.70	370.50	372.00	372.80
3772789.70	371.00	372.00	372.60
3772689.70	371.20	372.10	373.10
3772589.70	372.00	372.70	374.00
3772489.70	371.10	372.00	374.50
3772389.70	371.00	378.00	376.70
3772289.70	375.10	378.80	382.30
3772189.70	378.00	381.20	384.00
3772089.70	378.00	382.50	385.00
3771989.70	378.00	384.30	385.60
3771889.70	380.80	384.90	386.00
3771789.70	384.00	385.30	386.70
3771689.70	384.00	386.00	387.60
3771589.70	384.10	386.20	388.00
3771489.70	385.90	387.30	388.70
3771389.70	386.00	388.00	389.80
3771289.70	386.90	388.30	390.00
3771189.70	387.00	389.00	390.60
3771089.70	387.90	389.30	391.00
3770989.70	387.90	389.30	391.00
3770889.70	387.90	389.30	390.90
3770789.70	387.00	389.00	390.60
3770689.70	387.00	389.00	390.60
3770589.70	387.90	389.10	390.60
3770489.70	388.00	389.70	391.30
3770389.70	388.00	390.20	392.00

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

* HILL HEIGHT SCALES IN METERS *

Y-COORD (METERS)	X-COORD (METERS) 481568.21	481668.21	481768.21
3770289.70	388.90	390.40	392.10
3770189.70	389.00	391.00	392.60
3770089.70	389.10	391.00	392.60
3769989.70	389.00	391.00	392.60
3769889.70	389.00	390.30	392.60
3769789.70	389.00	391.00	392.60
3769689.70	389.20	391.10	392.70
3769589.70	397.00	393.80	393.00
3769489.70	399.00	391.00	394.00
3769389.70	390.70	391.40	396.00

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** DISCRETE CARTESIAN RECEPTORS ***
(X-COORD, Y-COORD, ZELEV, ZHILL, ZFLAG)
(METERS)

(	480726.1,	3770758.2,	373.9,	373.9,	0.0);	(	479114.5,	3769998.8,	353.0,	353.0,	0.0);
(	479109.7,	3769953.9,	353.0,	353.0,	0.0);	(	480558.0,	3774226.4,	361.3,	361.3,	0.0);
(	480766.0,	3771834.4,	372.0,	372.0,	0.0);	(	480235.5,	3771590.9,	365.5,	365.5,	0.0);

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

* SOURCE-RECEPTOR COMBINATIONS FOR WHICH CALCULATIONS MAY NOT BE PERFORMED *
LESS THAN 1.0 METER; WITHIN OPENPIT; OR BEYOND 80KM FOR FASTAREA/FASTALL

SOURCE ID	- - RECEPTOR LOCATION - - XR (METERS)	YR (METERS)	DISTANCE (METERS)
L0002998	480668.2	3771789.7	-4.37
L0002999	480668.2	3771789.7	-3.88
L0003009	480668.2	3771689.7	0.95
L0003010	480668.2	3771689.7	-7.61
L0003011	480668.2	3771689.7	-1.21
L0003071	480668.2	3771889.7	0.48
L0005410	480268.2	3771589.7	0.36
L0005464	480368.2	3772089.7	0.02
L0005474	480368.2	3771989.7	0.68
L0005475	480368.2	3771989.7	-5.35
L0005476	480368.2	3771989.7	0.49
L0005486	480368.2	3771889.7	-1.48
L0005487	480368.2	3771889.7	-3.30
L0005498	480368.2	3771789.7	-2.53
L0005499	480368.2	3771789.7	-0.40

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** METEOROLOGICAL DAYS SELECTED FOR PROCESSING ***
(1=YES; 0=NO)

1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
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1 1 1 1 1 1 1 1 1 1 1 1 1 1 1

NOTE: METEOROLOGICAL DATA ACTUALLY PROCESSED WILL ALSO DEPEND ON WHAT IS INCLUDED IN THE DATA FILE.

*** UPPER BOUND OF FIRST THROUGH FIFTH WIND SPEED CATEGORIES ***
(METERS/SEC)

1.54, 3.09, 5.14, 8.23, 10.80,

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: ..\RDLD_V9_ADJU\RDLD_v9.SFC Met Version: 16216
Profile file: ..\RDLD_V9_ADJU\RDLD_v9.PFL
Surface format: FREE
Profile format: FREE
Surface station no.: 3171 Upper air station no.: 3190
Name: UNKNOWN Name: UNKNOWN
Year: 2012 Year: 2012

First 24 hours of scalar data

YR	MO	DY	JDY	HR	H0	U*	W*	DT/DZ	ZICNV	ZIMCH	M-O LEN	Z0	BOWEN	ALBEDO	REF WS	WD	HT	REF TA	HT
12	01	01	1	01	-10.6	0.149	-9.000	-9.000	-999.	138.	26.7	0.32	3.22	1.00	1.30	110.	9.1	285.4	5.5
12	01	01	1	02	-5.0	0.102	-9.000	-9.000	-999.	78.	17.9	0.32	3.22	1.00	0.90	130.	9.1	284.5	5.5
12	01	01	1	03	-5.0	0.102	-9.000	-9.000	-999.	78.	17.9	0.32	3.22	1.00	0.90	100.	9.1	285.0	5.5
12	01	01	1	04	-5.0	0.102	-9.000	-9.000	-999.	78.	17.9	0.32	3.22	1.00	0.90	107.	9.1	284.6	5.5
12	01	01	1	05	-10.7	0.149	-9.000	-9.000	-999.	138.	26.7	0.32	3.22	1.00	1.30	98.	9.1	284.9	5.5
12	01	01	1	06	-5.0	0.102	-9.000	-9.000	-999.	78.	17.9	0.32	3.22	1.00	0.90	86.	9.1	284.5	5.5
12	01	01	1	07	-5.0	0.102	-9.000	-9.000	-999.	78.	17.9	0.32	3.22	1.00	0.90	91.	9.1	284.0	5.5
12	01	01	1	08	-4.0	0.102	-9.000	-9.000	-999.	78.	22.9	0.32	3.22	0.54	0.90	107.	9.1	285.0	5.5
12	01	01	1	09	44.6	0.237	0.382	0.006	43.	276.	-25.6	0.15	3.22	0.33	2.10	81.	10.1	289.1	5.5
12	01	01	1	10	134.3	0.111	0.882	0.008	176.	99.	-1.0	0.32	3.22	0.26	0.40	72.	9.1	295.1	5.5
12	01	01	1	11	199.8	0.409	1.429	0.005	503.	627.	-29.4	0.15	3.22	0.23	3.68	78.	10.1	297.9	5.5
12	01	01	1	12	232.3	0.300	1.889	0.005	999.	402.	-10.0	0.32	3.22	0.22	1.80	333.	9.1	299.4	5.5
12	01	01	1	13	230.0	0.300	2.134	0.005	1453.	394.	-10.1	0.32	3.22	0.22	1.80	72.	9.1	300.4	5.5
12	01	01	1	14	194.0	0.294	2.109	0.005	1663.	382.	-11.2	0.32	3.22	0.24	1.80	277.	9.1	301.0	5.5
12	01	01	1	15	126.3	0.378	1.872	0.005	1784.	557.	-36.5	0.32	3.22	0.27	2.70	243.	9.1	301.0	5.5
12	01	01	1	16	39.5	0.199	1.278	0.005	1817.	240.	-17.2	0.32	3.22	0.36	1.30	274.	9.1	300.1	5.5
12	01	01	1	17	-4.7	0.101	-9.000	-9.000	-999.	85.	19.0	0.32	3.22	0.65	0.90	252.	9.1	298.2	5.5
12	01	01	1	18	-4.9	0.102	-9.000	-9.000	-999.	78.	18.2	0.32	3.22	1.00	0.90	116.	9.1	296.4	5.5
12	01	01	1	19	-18.8	0.204	-9.000	-9.000	-999.	220.	45.6	0.15	3.22	1.00	2.27	79.	10.1	292.2	5.5
12	01	01	1	20	-5.0	0.102	-9.000	-9.000	-999.	83.	18.1	0.32	3.22	1.00	0.90	95.	9.1	290.2	5.5
12	01	01	1	21	-5.0	0.102	-9.000	-9.000	-999.	78.	18.0	0.32	3.22	1.00	0.90	99.	9.1	287.8	5.5
12	01	01	1	22	-5.0	0.102	-9.000	-9.000	-999.	78.	18.0	0.32	3.22	1.00	0.90	110.	9.1	287.6	5.5
12	01	01	1	23	-10.6	0.149	-9.000	-9.000	-999.	138.	26.8	0.32	3.22	1.00	1.30	89.	9.1	287.2	5.5
12	01	01	1	24	-5.0	0.102	-9.000	-9.000	-999.	78.	17.9	0.32	3.22	1.00	0.90	105.	9.1	285.9	5.5

First hour of profile data

YR	MO	DY	HR	HEIGHT	F	WDIR	WSPD	AMB_TMP	sigmaA	sigmaW	sigmaV
12	01	01	01	5.5	0	-999.	-99.00	285.5	99.0	-99.00	-99.00
12	01	01	01	9.1	1	110.	1.30	-999.0	99.0	-99.00	-99.00

F indicates top of profile (=1) or below (=0)

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION   VALUES FOR SOURCE GROUP: ALL   ***
INCLUDING SOURCE(S):   L0005586   , L0005587   , L0005588   , L0005589   , L0005590   ,
L0005591   , L0005592   , L0005593   , L0005594   , L0005595   , L0005596   , L0005597   , L0005598   ,
L0005599   , L0005600   , L0005601   , L0005602   , L0005603   , L0005604   , L0005605   , L0005606   ,
L0005607   , L0005608   , L0005609   , L0005610   , L0005611   , L0005612   , L0005613   , . . .   ,

*** NETWORK ID: UCART1   ; NETWORK TYPE: GRIDCART ***

** CONC OF DPM   IN MICROGRAMS/M**3   **

Y-COORD (METERS)	X-COORD (METERS)								
	478868.21	478968.21	479068.21	479168.21	479268.21	479368.21	479468.21	479568.21	479668.21
3774289.70	0.00013	0.00013	0.00014	0.00014	0.00015	0.00016	0.00016	0.00017	0.00018
3774189.70	0.00013	0.00014	0.00014	0.00015	0.00016	0.00016	0.00017	0.00018	0.00019
3774089.70	0.00014	0.00014	0.00015	0.00016	0.00016	0.00017	0.00018	0.00019	0.00020
3773989.70	0.00014	0.00015	0.00016	0.00016	0.00017	0.00018	0.00019	0.00020	0.00021
3773889.70	0.00015	0.00016	0.00016	0.00017	0.00018	0.00019	0.00020	0.00021	0.00022
3773789.70	0.00016	0.00016	0.00017	0.00018	0.00019	0.00020	0.00021	0.00022	0.00023
3773689.70	0.00016	0.00017	0.00018	0.00019	0.00020	0.00021	0.00022	0.00023	0.00025
3773589.70	0.00017	0.00018	0.00019	0.00020	0.00021	0.00022	0.00023	0.00025	0.00026
3773489.70	0.00018	0.00019	0.00020	0.00021	0.00022	0.00023	0.00025	0.00026	0.00028
3773389.70	0.00018	0.00019	0.00021	0.00022	0.00023	0.00024	0.00026	0.00028	0.00029
3773289.70	0.00019	0.00020	0.00022	0.00023	0.00024	0.00026	0.00027	0.00029	0.00031
3773189.70	0.00020	0.00021	0.00023	0.00024	0.00026	0.00027	0.00029	0.00031	0.00033
3773089.70	0.00021	0.00022	0.00024	0.00025	0.00027	0.00029	0.00031	0.00033	0.00035
3772989.70	0.00022	0.00023	0.00025	0.00026	0.00028	0.00030	0.00033	0.00035	0.00038
3772889.70	0.00023	0.00024	0.00026	0.00028	0.00030	0.00032	0.00035	0.00038	0.00041
3772789.70	0.00023	0.00025	0.00027	0.00029	0.00031	0.00034	0.00037	0.00040	0.00044
3772689.70	0.00024	0.00026	0.00028	0.00031	0.00033	0.00036	0.00039	0.00043	0.00047
3772589.70	0.00025	0.00027	0.00030	0.00032	0.00035	0.00038	0.00042	0.00046	0.00051
3772489.70	0.00026	0.00028	0.00031	0.00034	0.00037	0.00041	0.00045	0.00050	0.00056
3772389.70	0.00027	0.00029	0.00032	0.00035	0.00039	0.00043	0.00048	0.00053	0.00060
3772289.70	0.00028	0.00030	0.00033	0.00037	0.00041	0.00045	0.00050	0.00057	0.00065
3772189.70	0.00029	0.00032	0.00035	0.00038	0.00043	0.00047	0.00053	0.00061	0.00070
3772089.70	0.00030	0.00033	0.00036	0.00040	0.00045	0.00050	0.00057	0.00065	0.00075
3771989.70	0.00031	0.00034	0.00038	0.00042	0.00047	0.00053	0.00060	0.00068	0.00079
3771889.70	0.00032	0.00036	0.00040	0.00045	0.00050	0.00056	0.00063	0.00072	0.00083
3771789.70	0.00033	0.00038	0.00043	0.00049	0.00055	0.00061	0.00068	0.00077	0.00088
3771689.70	0.00035	0.00041	0.00049	0.00060	0.00068	0.00074	0.00081	0.00089	0.00100
3771589.70	0.00036	0.00044	0.00063	0.00213	0.00214	0.00214	0.00215	0.00218	0.00224
3771489.70	0.00037	0.00046	0.00072	0.00128	0.00083	0.00082	0.00087	0.00093	0.00102
3771389.70	0.00038	0.00047	0.00073	0.00120	0.00070	0.00066	0.00069	0.00074	0.00081
3771289.70	0.00038	0.00047	0.00073	0.00116	0.00065	0.00060	0.00062	0.00066	0.00071
3771189.70	0.00037	0.00046	0.00073	0.00112	0.00062	0.00057	0.00057	0.00060	0.00064

3771089.70	0.00037	0.00046	0.00072	0.00108	0.00060	0.00054	0.00053	0.00055	0.00059
3770989.70	0.00036	0.00045	0.00071	0.00104	0.00058	0.00051	0.00050	0.00052	0.00054
3770889.70	0.00035	0.00044	0.00071	0.00101	0.00056	0.00048	0.00047	0.00048	0.00050
3770789.70	0.00034	0.00043	0.00070	0.00098	0.00054	0.00046	0.00044	0.00045	0.00046
3770689.70	0.00034	0.00042	0.00070	0.00095	0.00052	0.00044	0.00042	0.00042	0.00043
3770589.70	0.00033	0.00041	0.00069	0.00092	0.00050	0.00042	0.00040	0.00039	0.00040
3770489.70	0.00032	0.00040	0.00069	0.00089	0.00048	0.00040	0.00038	0.00037	0.00037
3770389.70	0.00031	0.00039	0.00068	0.00086	0.00046	0.00039	0.00036	0.00035	0.00035

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): L0005586 , L0005587 , L0005588 , L0005589 , L0005590 ,
L0005591 , L0005592 , L0005593 , L0005594 , L0005595 , L0005596 , L0005597 , L0005598 ,
L0005599 , L0005600 , L0005601 , L0005602 , L0005603 , L0005604 , L0005605 , L0005606 ,
L0005607 , L0005608 , L0005609 , L0005610 , L0005611 , L0005612 , L0005613 , . . . ,

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

** CONC OF DPM IN MICROGRAMS/M**3 **

Y-COORD (METERS)	X-COORD (METERS) 478868.21	478968.21	479068.21	479168.21	479268.21	479368.21	479468.21	479568.21	479668.21
3770289.70	0.00030	0.00038	0.00067	0.00085	0.00045	0.00037	0.00034	0.00033	0.00033
3770189.70	0.00029	0.00037	0.00065	0.00085	0.00043	0.00035	0.00032	0.00031	0.00031
3770089.70	0.00028	0.00036	0.00063	0.00084	0.00042	0.00034	0.00030	0.00029	0.00029
3769989.70	0.00027	0.00034	0.00061	0.00084	0.00040	0.00032	0.00029	0.00028	0.00027
3769889.70	0.00025	0.00033	0.00059	0.00082	0.00039	0.00030	0.00027	0.00026	0.00026
3769789.70	0.00024	0.00030	0.00056	0.00080	0.00036	0.00028	0.00025	0.00024	0.00024
3769689.70	0.00022	0.00027	0.00049	0.00074	0.00032	0.00026	0.00023	0.00023	0.00022
3769589.70	0.00019	0.00023	0.00032	0.00037	0.00026	0.00023	0.00021	0.00021	0.00020
3769489.70	0.00017	0.00019	0.00021	0.00022	0.00021	0.00020	0.00019	0.00019	0.00019
3769389.70	0.00016	0.00017	0.00017	0.00018	0.00018	0.00018	0.00018	0.00017	0.00017

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): L0005586 , L0005587 , L0005588 , L0005589 , L0005590 ,
L0005591 , L0005592 , L0005593 , L0005594 , L0005595 , L0005596 , L0005597 , L0005598 ,
L0005599 , L0005600 , L0005601 , L0005602 , L0005603 , L0005604 , L0005605 , L0005606 ,
L0005607 , L0005608 , L0005609 , L0005610 , L0005611 , L0005612 , L0005613 , . . . ,

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

** CONC OF DPM IN MICROGRAMS/M**3 **

Y-COORD (METERS)	X-COORD (METERS)								
	479768.21	479868.21	479968.21	480068.21	480168.21	480268.21	480368.21	480468.21	480568.21
3774289.70	0.00019	0.00020	0.00021	0.00022	0.00024	0.00026	0.00029	0.00032	0.00038
3774189.70	0.00020	0.00021	0.00022	0.00024	0.00026	0.00028	0.00032	0.00037	0.00047
3774089.70	0.00021	0.00022	0.00024	0.00025	0.00027	0.00030	0.00035	0.00041	0.00055
3773989.70	0.00022	0.00023	0.00025	0.00027	0.00029	0.00032	0.00037	0.00045	0.00061
3773889.70	0.00023	0.00025	0.00026	0.00029	0.00031	0.00035	0.00040	0.00048	0.00064
3773789.70	0.00025	0.00026	0.00028	0.00030	0.00033	0.00036	0.00042	0.00050	0.00066
3773689.70	0.00026	0.00028	0.00030	0.00032	0.00035	0.00038	0.00044	0.00052	0.00067
3773589.70	0.00028	0.00029	0.00031	0.00034	0.00037	0.00040	0.00046	0.00054	0.00069
3773489.70	0.00029	0.00031	0.00033	0.00036	0.00039	0.00043	0.00048	0.00056	0.00070
3773389.70	0.00031	0.00033	0.00035	0.00038	0.00041	0.00045	0.00050	0.00058	0.00073
3773289.70	0.00033	0.00035	0.00038	0.00041	0.00044	0.00048	0.00053	0.00061	0.00075
3773189.70	0.00035	0.00038	0.00041	0.00044	0.00047	0.00051	0.00056	0.00064	0.00079
3773089.70	0.00038	0.00041	0.00044	0.00047	0.00051	0.00055	0.00061	0.00069	0.00083
3772989.70	0.00041	0.00044	0.00047	0.00051	0.00055	0.00060	0.00066	0.00074	0.00088
3772889.70	0.00044	0.00048	0.00052	0.00056	0.00061	0.00066	0.00072	0.00080	0.00094
3772789.70	0.00048	0.00052	0.00057	0.00062	0.00068	0.00074	0.00080	0.00089	0.00103
3772689.70	0.00052	0.00058	0.00064	0.00070	0.00077	0.00084	0.00091	0.00100	0.00115
3772589.70	0.00057	0.00064	0.00071	0.00080	0.00088	0.00098	0.00107	0.00117	0.00131
3772489.70	0.00063	0.00071	0.00081	0.00092	0.00104	0.00117	0.00129	0.00140	0.00154
3772389.70	0.00069	0.00079	0.00092	0.00107	0.00125	0.00145	0.00164	0.00179	0.00192
3772289.70	0.00075	0.00089	0.00105	0.00127	0.00156	0.00191	0.00226	0.00248	0.00258
3772189.70	0.00082	0.00098	0.00120	0.00152	0.00201	0.00274	0.00365	0.00402	0.00400
3772089.70	0.00089	0.00108	0.00136	0.00180	0.00257	0.00426	0.01265	0.01392	0.01033
3771989.70	0.00094	0.00116	0.00149	0.00204	0.00309	0.00585	0.02417	0.01246	0.01995
3771889.70	0.00099	0.00122	0.00158	0.00218	0.00337	0.00651	0.02718	0.01387	0.02739
3771789.70	0.00104	0.00127	0.00162	0.00221	0.00338	0.00637	0.02657	0.01319	0.02894
3771689.70	0.00114	0.00135	0.00167	0.00219	0.00324	0.00924	0.01536	0.00908	0.02070
3771589.70	0.00232	0.00247	0.00293	0.00337	0.00409	0.00627	0.00601	0.00636	0.00712
3771489.70	0.00113	0.00128	0.00148	0.00175	0.00214	0.00260	0.00296	0.00323	0.00345
3771389.70	0.00090	0.00102	0.00117	0.00135	0.00157	0.00181	0.00202	0.00220	0.00236
3771289.70	0.00078	0.00087	0.00098	0.00111	0.00125	0.00139	0.00153	0.00166	0.00182
3771189.70	0.00070	0.00077	0.00085	0.00094	0.00103	0.00113	0.00123	0.00134	0.00150

3771089.70	0.00063	0.00068	0.00074	0.00081	0.00088	0.00095	0.00103	0.00113	0.00130
3770989.70	0.00057	0.00061	0.00066	0.00071	0.00076	0.00082	0.00089	0.00098	0.00115
3770889.70	0.00052	0.00055	0.00059	0.00063	0.00067	0.00072	0.00078	0.00087	0.00103
3770789.70	0.00048	0.00050	0.00053	0.00056	0.00060	0.00064	0.00069	0.00077	0.00091
3770689.70	0.00044	0.00046	0.00048	0.00051	0.00054	0.00057	0.00062	0.00068	0.00079
3770589.70	0.00041	0.00042	0.00044	0.00046	0.00049	0.00052	0.00055	0.00061	0.00069
3770489.70	0.00038	0.00039	0.00041	0.00042	0.00044	0.00047	0.00050	0.00054	0.00061
3770389.70	0.00035	0.00036	0.00037	0.00039	0.00041	0.00043	0.00045	0.00049	0.00055

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): L0005586 , L0005587 , L0005588 , L0005589 , L0005590 ,
L0005591 , L0005592 , L0005593 , L0005594 , L0005595 , L0005596 , L0005597 , L0005598 ,
L0005599 , L0005600 , L0005601 , L0005602 , L0005603 , L0005604 , L0005605 , L0005606 ,
L0005607 , L0005608 , L0005609 , L0005610 , L0005611 , L0005612 , L0005613 , . . . ,

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

** CONC OF DPM IN MICROGRAMS/M**3 **

Y-COORD (METERS)	X-COORD (METERS) 479768.21	479868.21	479968.21	480068.21	480168.21	480268.21	480368.21	480468.21	480568.21
3770289.70	0.00033	0.00034	0.00035	0.00036	0.00037	0.00039	0.00041	0.00045	0.00051
3770189.70	0.00031	0.00031	0.00032	0.00033	0.00034	0.00036	0.00038	0.00041	0.00046
3770089.70	0.00029	0.00029	0.00030	0.00031	0.00032	0.00033	0.00035	0.00038	0.00043
3769989.70	0.00027	0.00027	0.00028	0.00028	0.00029	0.00031	0.00032	0.00035	0.00040
3769889.70	0.00025	0.00026	0.00026	0.00026	0.00027	0.00028	0.00030	0.00032	0.00037
3769789.70	0.00024	0.00024	0.00024	0.00025	0.00025	0.00026	0.00027	0.00029	0.00034
3769689.70	0.00022	0.00022	0.00022	0.00023	0.00023	0.00024	0.00025	0.00027	0.00030
3769589.70	0.00020	0.00021	0.00021	0.00021	0.00021	0.00022	0.00023	0.00024	0.00025
3769489.70	0.00019	0.00019	0.00019	0.00020	0.00020	0.00020	0.00021	0.00021	0.00022
3769389.70	0.00018	0.00018	0.00018	0.00018	0.00018	0.00019	0.00019	0.00019	0.00019

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): L0005586 , L0005587 , L0005588 , L0005589 , L0005590 ,
L0005591 , L0005592 , L0005593 , L0005594 , L0005595 , L0005596 , L0005597 , L0005598 ,
L0005599 , L0005600 , L0005601 , L0005602 , L0005603 , L0005604 , L0005605 , L0005606 ,
L0005607 , L0005608 , L0005609 , L0005610 , L0005611 , L0005612 , L0005613 , . . . ,

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

** CONC OF DPM IN MICROGRAMS/M**3 **

Y-COORD (METERS)	X-COORD (METERS)								
	480668.21	480768.21	480868.21	480968.21	481068.21	481168.21	481268.21	481368.21	481468.21
3774289.70	0.00046	0.00055	0.00060	0.00060	0.00059	0.00057	0.00056	0.00054	0.00050
3774189.70	0.00069	0.00118	0.00125	0.00116	0.00108	0.00104	0.00106	0.00110	0.00109
3774089.70	0.00102	0.00288	0.00215	0.00250	0.00312	0.00348	0.00271	0.00219	0.00176
3773989.70	0.00111	0.00259	0.00107	0.00093	0.00089	0.00085	0.00080	0.00074	0.00065
3773889.70	0.00112	0.00262	0.00095	0.00073	0.00065	0.00060	0.00055	0.00051	0.00046
3773789.70	0.00112	0.00268	0.00091	0.00067	0.00058	0.00052	0.00047	0.00043	0.00040
3773689.70	0.00112	0.00276	0.00091	0.00066	0.00055	0.00049	0.00044	0.00040	0.00037
3773589.70	0.00113	0.00284	0.00092	0.00065	0.00054	0.00047	0.00043	0.00039	0.00036
3773489.70	0.00114	0.00293	0.00093	0.00066	0.00055	0.00048	0.00043	0.00039	0.00036
3773389.70	0.00115	0.00298	0.00095	0.00068	0.00056	0.00048	0.00044	0.00040	0.00037
3773289.70	0.00118	0.00303	0.00097	0.00070	0.00057	0.00050	0.00046	0.00041	0.00038
3773189.70	0.00121	0.00309	0.00100	0.00072	0.00060	0.00052	0.00047	0.00042	0.00039
3773089.70	0.00125	0.00315	0.00104	0.00075	0.00063	0.00055	0.00049	0.00044	0.00040
3772989.70	0.00130	0.00322	0.00108	0.00079	0.00066	0.00058	0.00052	0.00047	0.00043
3772889.70	0.00136	0.00331	0.00114	0.00084	0.00070	0.00061	0.00055	0.00050	0.00045
3772789.70	0.00144	0.00341	0.00121	0.00090	0.00075	0.00065	0.00059	0.00053	0.00048
3772689.70	0.00155	0.00354	0.00130	0.00098	0.00082	0.00071	0.00063	0.00056	0.00051
3772589.70	0.00170	0.00370	0.00141	0.00107	0.00090	0.00077	0.00068	0.00060	0.00054
3772489.70	0.00191	0.00391	0.00156	0.00119	0.00099	0.00085	0.00074	0.00065	0.00057
3772389.70	0.00224	0.00421	0.00177	0.00135	0.00111	0.00093	0.00080	0.00069	0.00061
3772289.70	0.00280	0.00466	0.00207	0.00155	0.00124	0.00103	0.00087	0.00075	0.00066
3772189.70	0.00388	0.00540	0.00250	0.00181	0.00141	0.00116	0.00097	0.00082	0.00071
3772089.70	0.00669	0.00670	0.00311	0.00214	0.00167	0.00134	0.00110	0.00092	0.00080
3771989.70	0.02832	0.00892	0.00397	0.00264	0.00196	0.00154	0.00125	0.00104	0.00089
3771889.70	0.02680	0.01052	0.00447	0.00289	0.00219	0.00171	0.00138	0.00114	0.00096
3771789.70	0.02536	0.00970	0.00440	0.00292	0.00222	0.00175	0.00142	0.00118	0.00100
3771689.70	0.01820	0.00776	0.00379	0.00267	0.00206	0.00165	0.00136	0.00114	0.00098
3771589.70	0.00709	0.00557	0.00302	0.00222	0.00176	0.00145	0.00122	0.00105	0.00091
3771489.70	0.00368	0.00496	0.00242	0.00181	0.00147	0.00124	0.00106	0.00093	0.00082
3771389.70	0.00273	0.00431	0.00199	0.00150	0.00124	0.00106	0.00092	0.00081	0.00073
3771289.70	0.00224	0.00391	0.00171	0.00129	0.00108	0.00093	0.00081	0.00072	0.00065
3771189.70	0.00195	0.00365	0.00151	0.00114	0.00096	0.00083	0.00073	0.00065	0.00059

3771089.70	0.00177	0.00346	0.00140	0.00105	0.00089	0.00077	0.00068	0.00061	0.00054
3770989.70	0.00164	0.00333	0.00132	0.00101	0.00087	0.00076	0.00067	0.00060	0.00052
3770889.70	0.00152	0.00325	0.00133	0.00106	0.00095	0.00085	0.00076	0.00065	0.00053
3770789.70	0.00135	0.00341	0.00201	0.00182	0.00173	0.00163	0.00152	0.00122	0.00059
3770689.70	0.00108	0.00177	0.00135	0.00125	0.00119	0.00113	0.00105	0.00085	0.00054
3770589.70	0.00091	0.00140	0.00085	0.00076	0.00070	0.00064	0.00058	0.00051	0.00043
3770489.70	0.00081	0.00126	0.00070	0.00060	0.00054	0.00049	0.00045	0.00040	0.00036
3770389.70	0.00073	0.00118	0.00061	0.00051	0.00045	0.00041	0.00037	0.00034	0.00031

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): L0005586 , L0005587 , L0005588 , L0005589 , L0005590 ,
L0005591 , L0005592 , L0005593 , L0005594 , L0005595 , L0005596 , L0005597 , L0005598 ,
L0005599 , L0005600 , L0005601 , L0005602 , L0005603 , L0005604 , L0005605 , L0005606 ,
L0005607 , L0005608 , L0005609 , L0005610 , L0005611 , L0005612 , L0005613 , . . . ,

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

** CONC OF DPM IN MICROGRAMS/M**3 **

Y-COORD (METERS)	X-COORD (METERS) 480668.21	480768.21	480868.21	480968.21	481068.21	481168.21	481268.21	481368.21	481468.21
3770289.70	0.00068	0.00112	0.00055	0.00045	0.00039	0.00036	0.00032	0.00030	0.00027
3770189.70	0.00064	0.00108	0.00051	0.00041	0.00035	0.00032	0.00029	0.00026	0.00024
3770089.70	0.00061	0.00104	0.00047	0.00037	0.00032	0.00029	0.00026	0.00024	0.00022
3769989.70	0.00057	0.00101	0.00044	0.00034	0.00030	0.00026	0.00024	0.00022	0.00021
3769889.70	0.00054	0.00098	0.00041	0.00032	0.00027	0.00024	0.00022	0.00021	0.00019
3769789.70	0.00049	0.00093	0.00038	0.00029	0.00025	0.00022	0.00020	0.00019	0.00018
3769689.70	0.00042	0.00084	0.00033	0.00025	0.00022	0.00020	0.00019	0.00017	0.00016
3769589.70	0.00029	0.00033	0.00026	0.00022	0.00020	0.00018	0.00017	0.00016	0.00015
3769489.70	0.00022	0.00022	0.00021	0.00019	0.00018	0.00016	0.00015	0.00014	0.00013
3769389.70	0.00019	0.00019	0.00018	0.00017	0.00016	0.00015	0.00014	0.00013	0.00012

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): L0005586 , L0005587 , L0005588 , L0005589 , L0005590 ,
L0005591 , L0005592 , L0005593 , L0005594 , L0005595 , L0005596 , L0005597 , L0005598 ,
L0005599 , L0005600 , L0005601 , L0005602 , L0005603 , L0005604 , L0005605 , L0005606 ,
L0005607 , L0005608 , L0005609 , L0005610 , L0005611 , L0005612 , L0005613 , . . . ,

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

** CONC OF DPM IN MICROGRAMS/M**3 **

Y-COORD (METERS)	X-COORD (METERS) 481568.21	481668.21	481768.21
3774289.70	0.00042	0.00033	0.00026
3774189.70	0.00084	0.00043	0.00031
3774089.70	0.00110	0.00048	0.00034
3773989.70	0.00052	0.00040	0.00032
3773889.70	0.00040	0.00034	0.00030
3773789.70	0.00036	0.00032	0.00029
3773689.70	0.00034	0.00031	0.00028
3773589.70	0.00033	0.00031	0.00028
3773489.70	0.00034	0.00031	0.00028
3773389.70	0.00034	0.00031	0.00029
3773289.70	0.00034	0.00032	0.00030
3773189.70	0.00036	0.00033	0.00031
3773089.70	0.00038	0.00035	0.00032
3772989.70	0.00040	0.00036	0.00033
3772889.70	0.00041	0.00038	0.00034
3772789.70	0.00043	0.00039	0.00036
3772689.70	0.00046	0.00041	0.00038
3772589.70	0.00048	0.00043	0.00039
3772489.70	0.00051	0.00046	0.00041
3772389.70	0.00054	0.00049	0.00043
3772289.70	0.00058	0.00051	0.00044
3772189.70	0.00063	0.00054	0.00048
3772089.70	0.00070	0.00060	0.00053
3771989.70	0.00077	0.00066	0.00059
3771889.70	0.00083	0.00072	0.00064
3771789.70	0.00086	0.00075	0.00066
3771689.70	0.00085	0.00075	0.00066
3771589.70	0.00080	0.00071	0.00063
3771489.70	0.00073	0.00065	0.00059
3771389.70	0.00065	0.00059	0.00054
3771289.70	0.00058	0.00053	0.00049
3771189.70	0.00053	0.00048	0.00044

3771089.70	0.00049	0.00045	0.00041
3770989.70	0.00046	0.00042	0.00038
3770889.70	0.00045	0.00040	0.00036
3770789.70	0.00045	0.00039	0.00035
3770689.70	0.00042	0.00037	0.00033
3770589.70	0.00037	0.00033	0.00030
3770489.70	0.00032	0.00029	0.00027
3770389.70	0.00028	0.00026	0.00024

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION   VALUES FOR SOURCE GROUP: ALL   ***
INCLUDING SOURCE(S):   L0005586   , L0005587   , L0005588   , L0005589   , L0005590   ,
L0005591   , L0005592   , L0005593   , L0005594   , L0005595   , L0005596   , L0005597   , L0005598   ,
L0005599   , L0005600   , L0005601   , L0005602   , L0005603   , L0005604   , L0005605   , L0005606   ,
L0005607   , L0005608   , L0005609   , L0005610   , L0005611   , L0005612   , L0005613   , . . .   ,

*** NETWORK ID: UCART1   ; NETWORK TYPE: GRIDCART ***

** CONC OF DPM   IN MICROGRAMS/M**3   **

Y-COORD (METERS)	X-COORD (METERS)		
	481568.21	481668.21	481768.21
3770289.70	0.00025	0.00023	0.00022
3770189.70	0.00023	0.00021	0.00020
3770089.70	0.00021	0.00019	0.00018
3769989.70	0.00019	0.00018	0.00017
3769889.70	0.00018	0.00017	0.00016
3769789.70	0.00016	0.00015	0.00015
3769689.70	0.00015	0.00014	0.00014
3769589.70	0.00013	0.00013	0.00013
3769489.70	0.00013	0.00012	0.00012
3769389.70	0.00012	0.00011	0.00011

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): L0005586 , L0005587 , L0005588 , L0005589 , L0005590 ,
L0005591 , L0005592 , L0005593 , L0005594 , L0005595 , L0005596 , L0005597 , L0005598 ,
L0005599 , L0005600 , L0005601 , L0005602 , L0005603 , L0005604 , L0005605 , L0005606 ,
L0005607 , L0005608 , L0005609 , L0005610 , L0005611 , L0005612 , L0005613 , . . . ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF DPM IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
480726.12	3770758.20	0.00260	479114.46	3769998.76	0.00155
479109.70	3769953.87	0.00128	480558.05	3774226.36	0.00042
480766.03	3771834.40	0.01130	480235.52	3771590.86	0.00531

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** THE SUMMARY OF MAXIMUM PERIOD (43848 HRS) RESULTS ***

** CONC OF DPM IN MICROGRAMS/M**3 **

GROUP ID		AVERAGE CONC		RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)					OF TYPE	NETWORK GRID-ID
ALL	1ST HIGHEST VALUE IS	0.02894	AT (	480568.21,	3771789.70,	369.10,	369.10,	0.00)	GC	UCART1
	2ND HIGHEST VALUE IS	0.02832	AT (	480668.21,	3771989.70,	367.60,	367.60,	0.00)	GC	UCART1
	3RD HIGHEST VALUE IS	0.02739	AT (	480568.21,	3771889.70,	368.50,	368.50,	0.00)	GC	UCART1
	4TH HIGHEST VALUE IS	0.02718	AT (	480368.21,	3771889.70,	366.80,	366.80,	0.00)	GC	UCART1
	5TH HIGHEST VALUE IS	0.02680	AT (	480668.21,	3771889.70,	369.90,	369.90,	0.00)	GC	UCART1
	6TH HIGHEST VALUE IS	0.02657	AT (	480368.21,	3771789.70,	367.00,	367.00,	0.00)	GC	UCART1
	7TH HIGHEST VALUE IS	0.02536	AT (	480668.21,	3771789.70,	370.90,	370.90,	0.00)	GC	UCART1
	8TH HIGHEST VALUE IS	0.02417	AT (	480368.21,	3771989.70,	366.00,	366.00,	0.00)	GC	UCART1
	9TH HIGHEST VALUE IS	0.02070	AT (	480568.21,	3771689.70,	369.80,	369.80,	0.00)	GC	UCART1
	10TH HIGHEST VALUE IS	0.01995	AT (	480568.21,	3771989.70,	367.60,	367.60,	0.00)	GC	UCART1

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** Message Summary : AERMOD Model Execution ***

 --------- Summary of Total Messages --------

A Total of   0 Fatal Error Message(s)
A Total of   2 Warning Message(s)
A Total of   388 Informational Message(s)

A Total of   43848 Hours Were Processed

A Total of   191 Calm Hours Identified

A Total of   197 Missing Hours Identified (0.45 Percent)

   ******** FATAL ERROR MESSAGES ********
              *** NONE ***

   ********   WARNING MESSAGES   ********
ME W186   3053   MEOPEN: THRESH_1MIN 1-min ASOS wind speed threshold used   0.50
ME W187   3053   MEOPEN: ADJ_U* Option for Low Winds used in AERMET

   ****
   *** AERMOD Finishes Successfully ***
   ****

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**
**************************************
**
** AERMOD Input Produced by:
** AERMOD View Ver. 9.5.0
** Lakes Environmental Software Inc.
** Date: 4/5/2018
** File: C:\Users\NoemiA\Desktop\Duke Alabama\Project AB2\ProjectAB2.ADI
**
**************************************
**
**
**************************************
** AERMOD Control Pathway
**************************************
**
**
CO STARTING
   TITLEONE Duke Warehouse at Alabama and Palmetto
   TITLETWO Project DPM Concentrations (2020) - AB2
   MODELOPT DFAULT CONC
   AVERTIME PERIOD
   URBANOPT 2035210 San_Bernardino_County
   POLLUTID DPM
   RUNORNOT RUN
   ERRORFIL ProjectAB2.err
CO FINISHED
**
**************************************
** AERMOD Source Pathway
**************************************
**
**
SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **
** ----------------------------------------------------------------------
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE1
** DESCRSRC 5th St b/n Alabama St and SR-210
** PREFIX
** Length of Side = 8.59
** Configuration = Adjacent
** Emission Rate = 0.00001849
** Vertical Dimension = 6.99
** SZINIT = 3.25
** Nodes = 4
** 480745.401, 3774134.486, 363.46, 3.49, 4.00
** 481061.555, 3774108.608, 366.99, 3.49, 4.00
** 481153.813, 3774104.108, 367.98, 3.49, 4.00
** 481576.850, 3774134.486, 372.13, 3.49, 4.00
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** ----------------------------------------------------------------------
   LOCATION L0007183     VOLUME   480749.682 3774134.135 363.66
   LOCATION L0007184     VOLUME   480758.243 3774133.434 363.94
   LOCATION L0007185     VOLUME   480766.805 3774132.734 364.00
   LOCATION L0007186     VOLUME   480775.366 3774132.033 364.00
   LOCATION L0007187     VOLUME   480783.927 3774131.332 364.00
   LOCATION L0007188     VOLUME   480792.489 3774130.631 364.00
   LOCATION L0007189     VOLUME   480801.050 3774129.931 364.00
   LOCATION L0007190     VOLUME   480809.612 3774129.230 364.00
   LOCATION L0007191     VOLUME   480818.173 3774128.529 364.00
   LOCATION L0007192     VOLUME   480826.734 3774127.828 364.06
   LOCATION L0007193     VOLUME   480835.296 3774127.128 364.16
   LOCATION L0007194     VOLUME   480843.857 3774126.427 364.26
   LOCATION L0007195     VOLUME   480852.418 3774125.726 364.41
   LOCATION L0007196     VOLUME   480860.980 3774125.025 364.61
   LOCATION L0007197     VOLUME   480869.541 3774124.325 364.79
   LOCATION L0007198     VOLUME   480878.103 3774123.624 364.97
   LOCATION L0007199     VOLUME   480886.664 3774122.923 365.00
   LOCATION L0007200     VOLUME   480895.225 3774122.222 365.00
   LOCATION L0007201     VOLUME   480903.787 3774121.522 365.00
   LOCATION L0007202     VOLUME   480912.348 3774120.821 365.00
   LOCATION L0007203     VOLUME   480920.909 3774120.120 365.00
   LOCATION L0007204     VOLUME   480929.471 3774119.419 365.00
   LOCATION L0007205     VOLUME   480938.032 3774118.719 365.00
   LOCATION L0007206     VOLUME   480946.593 3774118.018 365.22
   LOCATION L0007207     VOLUME   480955.155 3774117.317 365.51
   LOCATION L0007208     VOLUME   480963.716 3774116.616 365.79
   LOCATION L0007209     VOLUME   480972.278 3774115.916 366.00
   LOCATION L0007210     VOLUME   480980.839 3774115.215 366.00
   LOCATION L0007211     VOLUME   480989.400 3774114.514 366.00
   LOCATION L0007212     VOLUME   480997.962 3774113.813 366.00
   LOCATION L0007213     VOLUME   481006.523 3774113.113 366.00
   LOCATION L0007214     VOLUME   481015.084 3774112.412 366.00
   LOCATION L0007215     VOLUME   481023.646 3774111.711 366.00
   LOCATION L0007216     VOLUME   481032.207 3774111.010 366.08
   LOCATION L0007217     VOLUME   481040.769 3774110.310 366.36
   LOCATION L0007218     VOLUME   481049.330 3774109.609 366.65
   LOCATION L0007219     VOLUME   481057.891 3774108.908 366.93
   LOCATION L0007220     VOLUME   481066.463 3774108.369 367.00
   LOCATION L0007221     VOLUME   481075.043 3774107.950 367.00
   LOCATION L0007222     VOLUME   481083.623 3774107.532 367.00
   LOCATION L0007223     VOLUME   481092.203 3774107.113 367.00
   LOCATION L0007224     VOLUME   481100.782 3774106.695 367.00
   LOCATION L0007225     VOLUME   481109.362 3774106.276 367.00
   LOCATION L0007226     VOLUME   481117.942 3774105.858 367.01
   LOCATION L0007227     VOLUME   481126.522 3774105.439 367.24
   LOCATION L0007228     VOLUME   481135.102 3774105.021 367.53
   LOCATION L0007229     VOLUME   481143.681 3774104.602 367.80
   LOCATION L0007230     VOLUME   481152.261 3774104.184 368.00
   LOCATION L0007231     VOLUME   481160.831 3774104.612 368.00
   LOCATION L0007232     VOLUME   481169.399 3774105.227 368.00
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   LOCATION L0007233     VOLUME   481177.967 3774105.842 368.00
   LOCATION L0007234     VOLUME   481186.535 3774106.458 368.00
   LOCATION L0007235     VOLUME   481195.103 3774107.073 368.00
   LOCATION L0007236     VOLUME   481203.671 3774107.688 368.00
   LOCATION L0007237     VOLUME   481212.239 3774108.303 368.08
   LOCATION L0007238     VOLUME   481220.807 3774108.919 368.36
   LOCATION L0007239     VOLUME   481229.375 3774109.534 368.65
   LOCATION L0007240     VOLUME   481237.943 3774110.149 368.93
   LOCATION L0007241     VOLUME   481246.511 3774110.764 369.00
   LOCATION L0007242     VOLUME   481255.079 3774111.380 369.00
   LOCATION L0007243     VOLUME   481263.647 3774111.995 369.00
   LOCATION L0007244     VOLUME   481272.214 3774112.610 369.00
   LOCATION L0007245     VOLUME   481280.782 3774113.225 369.00
   LOCATION L0007246     VOLUME   481289.350 3774113.841 369.00
   LOCATION L0007247     VOLUME   481297.918 3774114.456 369.00
   LOCATION L0007248     VOLUME   481306.486 3774115.071 369.22
   LOCATION L0007249     VOLUME   481315.054 3774115.686 369.50
   LOCATION L0007250     VOLUME   481323.622 3774116.302 369.79
   LOCATION L0007251     VOLUME   481332.190 3774116.917 370.00
   LOCATION L0007252     VOLUME   481340.758 3774117.532 370.00
   LOCATION L0007253     VOLUME   481349.326 3774118.147 370.00
   LOCATION L0007254     VOLUME   481357.894 3774118.763 370.00
   LOCATION L0007255     VOLUME   481366.462 3774119.378 370.00
   LOCATION L0007256     VOLUME   481375.030 3774119.993 370.00
   LOCATION L0007257     VOLUME   481383.598 3774120.608 370.00
   LOCATION L0007258     VOLUME   481392.166 3774121.224 370.08
   LOCATION L0007259     VOLUME   481400.734 3774121.839 370.36
   LOCATION L0007260     VOLUME   481409.301 3774122.454 370.65
   LOCATION L0007261     VOLUME   481417.869 3774123.069 370.93
   LOCATION L0007262     VOLUME   481426.437 3774123.685 371.00
   LOCATION L0007263     VOLUME   481435.005 3774124.300 371.00
   LOCATION L0007264     VOLUME   481443.573 3774124.915 371.00
   LOCATION L0007265     VOLUME   481452.141 3774125.530 371.03
   LOCATION L0007266     VOLUME   481460.709 3774126.146 371.12
   LOCATION L0007267     VOLUME   481469.277 3774126.761 371.20
   LOCATION L0007268     VOLUME   481477.845 3774127.376 371.28
   LOCATION L0007269     VOLUME   481486.413 3774127.991 371.43
   LOCATION L0007270     VOLUME   481494.981 3774128.607 371.63
   LOCATION L0007271     VOLUME   481503.549 3774129.222 371.84
   LOCATION L0007272     VOLUME   481512.117 3774129.837 372.00
   LOCATION L0007273     VOLUME   481520.685 3774130.452 372.00
   LOCATION L0007274     VOLUME   481529.253 3774131.068 372.00
   LOCATION L0007275     VOLUME   481537.821 3774131.683 372.00
   LOCATION L0007276     VOLUME   481546.388 3774132.298 372.03
   LOCATION L0007277     VOLUME   481554.956 3774132.913 372.06
   LOCATION L0007278     VOLUME   481563.524 3774133.529 372.07
   LOCATION L0007279     VOLUME   481572.092 3774134.144 372.14
** End of LINE VOLUME Source ID = SLINE1
** ----------------------------------------------------------------------
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE2
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```
** DESCRSRC Palmetto Ave b/n California St and Alabama St
** PREFIX
** Length of Side = 8.59
** Configuration = Adjacent
** Emission Rate = 0.00001464
** Vertical Dimension = 6.99
** SZINIT = 3.25
** Nodes = 4
** 479139.655, 3771580.143, 351.97, 3.49, 4.00
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LOCATION L0007324     VOLUME   479521.904 3771577.997 356.00
LOCATION L0007325     VOLUME   479530.494 3771577.949 356.02
LOCATION L0007326     VOLUME   479539.084 3771577.900 356.31
LOCATION L0007327     VOLUME   479547.674 3771577.852 356.59
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LOCATION L0007354     VOLUME   479779.600 3771576.550 359.32
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LOCATION L0007365     VOLUME   479874.088 3771576.020 360.47
LOCATION L0007366     VOLUME   479882.678 3771575.972 360.76
LOCATION L0007367     VOLUME   479891.268 3771575.923 361.00
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LOCATION L0007370     VOLUME   479917.038 3771575.779 361.00
LOCATION L0007371     VOLUME   479925.628 3771575.730 361.19
LOCATION L0007372     VOLUME   479934.217 3771575.682 361.48
LOCATION L0007373     VOLUME   479942.807 3771575.634 361.76
LOCATION L0007374     VOLUME   479951.329 3771576.357 362.00
LOCATION L0007375     VOLUME   479959.777 3771577.913 362.00
LOCATION L0007376     VOLUME   479968.258 3771579.103 362.00
LOCATION L0007377     VOLUME   479976.848 3771579.097 362.00
LOCATION L0007378     VOLUME   479985.438 3771579.092 362.00
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LOCATION L0007382     VOLUME   480019.798 3771579.070 362.33
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LOCATION L0007390     VOLUME   480088.518 3771579.026 363.15
LOCATION L0007391     VOLUME   480097.108 3771579.020 363.22
LOCATION L0007392     VOLUME   480105.698 3771579.015 363.39
LOCATION L0007393     VOLUME   480114.288 3771579.009 363.61
LOCATION L0007394     VOLUME   480122.878 3771579.004 363.82
LOCATION L0007395     VOLUME   480131.468 3771578.998 364.00
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LOCATION L0007398     VOLUME   480157.238 3771578.982 364.00
LOCATION L0007399     VOLUME   480165.828 3771578.976 364.20
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LOCATION L0007401     VOLUME   480183.008 3771578.965 364.77
LOCATION L0007402     VOLUME   480191.598 3771578.960 365.00
LOCATION L0007403     VOLUME   480200.188 3771578.954 365.00
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LOCATION L0007407     VOLUME   480234.548 3771578.932 365.49
LOCATION L0007408     VOLUME   480243.138 3771578.927 365.77
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LOCATION L0007414     VOLUME   480294.678 3771578.894 366.00
LOCATION L0007415     VOLUME   480303.268 3771578.888 366.00
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LOCATION L0007417     VOLUME   480320.448 3771578.877 366.35
LOCATION L0007418     VOLUME   480329.038 3771578.872 366.64
LOCATION L0007419     VOLUME   480337.628 3771578.866 366.92
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   LOCATION L0007422     VOLUME   480363.398 3771578.850 367.00
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   LOCATION L0007424     VOLUME   480380.578 3771578.839 367.36
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   LOCATION L0007431     VOLUME   480440.708 3771578.800 368.36
   LOCATION L0007432     VOLUME   480449.298 3771578.795 368.65
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   LOCATION L0007439     VOLUME   480509.428 3771578.757 369.65
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   LOCATION L0007445     VOLUME   480560.968 3771578.724 370.00
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   LOCATION L0007458     VOLUME   480672.638 3771578.652 372.00
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   LOCATION L0007461     VOLUME   480698.408 3771578.636 372.00
   LOCATION L0007462     VOLUME   480706.998 3771578.630 372.24
   LOCATION L0007463     VOLUME   480715.588 3771578.625 372.52
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** End of LINE VOLUME Source ID = SLINE2
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** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE3
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** DESCRSRC San Bernardino Ave b/n Alabama St and SR-210
** PREFIX
** Length of Side = 8.59
** Configuration = Adjacent
** Emission Rate = 0.00001011
** Vertical Dimension = 6.99
** SZINIT = 3.25
** Nodes = 3
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** 480802.302, 3770755.101, 374.93, 3.49, 4.00
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   LOCATION L0007470     VOLUME   480770.745 3770762.615 374.36
   LOCATION L0007471     VOLUME   480779.101 3770760.625 374.64
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   LOCATION L0007473     VOLUME   480795.814 3770756.646 375.00
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   LOCATION L0007481     VOLUME   480864.352 3770754.843 376.00
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   LOCATION L0007498     VOLUME   481010.381 3770754.236 378.35
   LOCATION L0007499     VOLUME   481018.971 3770754.201 378.64
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   LOCATION L0007542     VOLUME   481388.338 3770752.666 384.00
** End of LINE VOLUME Source ID = SLINE3
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** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE4
** DESCRSRC California St b/n Palmetto Ave and I-10
** PREFIX
** Length of Side = 8.59
** Configuration = Adjacent
** Emission Rate = 0.00001784
** Vertical Dimension = 6.99
** SZINIT = 3.25
** Nodes = 4
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   LOCATION L0007549     VOLUME   479139.165 3771518.144 352.00
   LOCATION L0007550     VOLUME   479139.067 3771509.555 352.00
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   LOCATION L0007552     VOLUME   479138.871 3771492.376 352.00
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   LOCATION L0007567     VOLUME   479137.400 3771363.535 352.00
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   LOCATION L0007569     VOLUME   479137.204 3771346.356 352.00
   LOCATION L0007570     VOLUME   479137.106 3771337.766 352.00
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** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE5
** DESCRSRC Alabama St b/n 5th St and River Bluff Ave
** PREFIX
** Length of Side = 8.59
** Configuration = Adjacent
** Emission Rate = 0.00004795
** Vertical Dimension = 6.99
** SZINIT = 3.25
** Nodes = 3
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LOCATION L0007884     VOLUME   480749.391 3773150.820 361.70
LOCATION L0007885     VOLUME   480749.413 3773142.230 361.65
LOCATION L0007886     VOLUME   480749.435 3773133.640 361.65
LOCATION L0007887     VOLUME   480749.456 3773125.050 361.65
LOCATION L0007888     VOLUME   480749.478 3773116.460 361.65
LOCATION L0007889     VOLUME   480749.500 3773107.870 361.65
LOCATION L0007890     VOLUME   480749.522 3773099.281 361.65
LOCATION L0007891     VOLUME   480749.544 3773090.691 361.65
LOCATION L0007892     VOLUME   480749.565 3773082.101 361.66
LOCATION L0007893     VOLUME   480749.587 3773073.511 361.66
LOCATION L0007894     VOLUME   480749.609 3773064.921 361.66
LOCATION L0007895     VOLUME   480749.631 3773056.331 361.66
LOCATION L0007896     VOLUME   480749.652 3773047.741 361.66
LOCATION L0007897     VOLUME   480749.674 3773039.151 361.66
LOCATION L0007898     VOLUME   480749.696 3773030.561 361.66
LOCATION L0007899     VOLUME   480749.718 3773021.971 361.66
LOCATION L0007900     VOLUME   480749.740 3773013.381 361.66
LOCATION L0007901     VOLUME   480749.761 3773004.791 361.66
LOCATION L0007902     VOLUME   480749.783 3772996.201 361.66
LOCATION L0007903     VOLUME   480749.805 3772987.611 361.66
LOCATION L0007904     VOLUME   480749.827 3772979.021 361.66
LOCATION L0007905     VOLUME   480749.849 3772970.431 361.67
LOCATION L0007906     VOLUME   480749.870 3772961.841 361.67
LOCATION L0007907     VOLUME   480749.892 3772953.251 361.67
LOCATION L0007908     VOLUME   480749.914 3772944.661 361.67
LOCATION L0007909     VOLUME   480749.936 3772936.071 361.67
LOCATION L0007910     VOLUME   480749.958 3772927.481 361.67
LOCATION L0007911     VOLUME   480749.979 3772918.891 361.67
LOCATION L0007912     VOLUME   480750.001 3772910.301 361.67
LOCATION L0007913     VOLUME   480750.023 3772901.711 361.67
LOCATION L0007914     VOLUME   480750.045 3772893.121 361.67
LOCATION L0007915     VOLUME   480750.067 3772884.531 361.67
LOCATION L0007916     VOLUME   480750.088 3772875.941 361.67
LOCATION L0007917     VOLUME   480750.110 3772867.351 361.67
LOCATION L0007918     VOLUME   480750.132 3772858.761 361.67
LOCATION L0007919     VOLUME   480750.154 3772850.171 361.68
LOCATION L0007920     VOLUME   480750.176 3772841.581 361.68
LOCATION L0007921     VOLUME   480750.197 3772832.991 361.68
LOCATION L0007922     VOLUME   480750.219 3772824.401 361.68
LOCATION L0007923     VOLUME   480750.241 3772815.811 361.68
LOCATION L0007924     VOLUME   480750.263 3772807.221 361.68
LOCATION L0007925     VOLUME   480750.285 3772798.631 361.68
LOCATION L0007926     VOLUME   480750.306 3772790.042 361.68
LOCATION L0007927     VOLUME   480750.328 3772781.452 361.68
LOCATION L0007928     VOLUME   480750.350 3772772.862 361.68
LOCATION L0007929     VOLUME   480750.372 3772764.272 361.68
LOCATION L0007930     VOLUME   480750.394 3772755.682 361.68
LOCATION L0007931     VOLUME   480750.415 3772747.092 361.68
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LOCATION L0007932     VOLUME   480750.437 3772738.502 361.68
LOCATION L0007933     VOLUME   480750.459 3772729.912 361.69
LOCATION L0007934     VOLUME   480750.481 3772721.322 361.69
LOCATION L0007935     VOLUME   480750.502 3772712.732 361.69
LOCATION L0007936     VOLUME   480750.524 3772704.142 361.69
LOCATION L0007937     VOLUME   480750.546 3772695.552 361.69
LOCATION L0007938     VOLUME   480750.568 3772686.962 361.69
LOCATION L0007939     VOLUME   480750.590 3772678.372 361.69
LOCATION L0007940     VOLUME   480750.611 3772669.782 361.69
LOCATION L0007941     VOLUME   480750.633 3772661.192 361.57
LOCATION L0007942     VOLUME   480750.655 3772652.602 361.38
LOCATION L0007943     VOLUME   480750.677 3772644.012 361.18
LOCATION L0007944     VOLUME   480750.699 3772635.422 361.00
LOCATION L0007945     VOLUME   480750.720 3772626.832 361.00
LOCATION L0007946     VOLUME   480750.742 3772618.242 361.00
LOCATION L0007947     VOLUME   480750.764 3772609.652 361.00
LOCATION L0007948     VOLUME   480750.786 3772601.062 361.00
LOCATION L0007949     VOLUME   480750.808 3772592.472 361.00
LOCATION L0007950     VOLUME   480750.829 3772583.882 361.00
LOCATION L0007951     VOLUME   480750.851 3772575.292 360.99
LOCATION L0007952     VOLUME   480750.873 3772566.702 360.90
LOCATION L0007953     VOLUME   480750.895 3772558.112 360.82
LOCATION L0007954     VOLUME   480750.917 3772549.522 360.73
LOCATION L0007955     VOLUME   480750.938 3772540.932 360.70
LOCATION L0007956     VOLUME   480750.960 3772532.342 360.70
LOCATION L0007957     VOLUME   480750.982 3772523.752 360.70
LOCATION L0007958     VOLUME   480751.004 3772515.162 360.68
LOCATION L0007959     VOLUME   480751.026 3772506.572 360.48
LOCATION L0007960     VOLUME   480751.047 3772497.982 360.28
LOCATION L0007961     VOLUME   480751.069 3772489.392 360.07
LOCATION L0007962     VOLUME   480751.091 3772480.803 360.13
LOCATION L0007963     VOLUME   480751.113 3772472.213 360.33
LOCATION L0007964     VOLUME   480751.135 3772463.623 360.53
LOCATION L0007965     VOLUME   480751.156 3772455.033 360.71
LOCATION L0007966     VOLUME   480751.178 3772446.443 360.71
LOCATION L0007967     VOLUME   480751.200 3772437.853 360.71
LOCATION L0007968     VOLUME   480751.222 3772429.263 360.71
LOCATION L0007969     VOLUME   480751.244 3772420.673 360.90
LOCATION L0007970     VOLUME   480751.265 3772412.083 361.19
LOCATION L0007971     VOLUME   480751.287 3772403.493 361.47
LOCATION L0007972     VOLUME   480751.309 3772394.903 361.71
LOCATION L0007973     VOLUME   480751.331 3772386.313 361.71
LOCATION L0007974     VOLUME   480751.352 3772377.723 361.72
LOCATION L0007975     VOLUME   480751.374 3772369.133 361.72
LOCATION L0007976     VOLUME   480751.396 3772360.543 361.77
LOCATION L0007977     VOLUME   480751.418 3772351.953 361.85
LOCATION L0007978     VOLUME   480751.440 3772343.363 361.93
LOCATION L0007979     VOLUME   480751.461 3772334.773 362.04
LOCATION L0007980     VOLUME   480751.483 3772326.183 362.24
LOCATION L0007981     VOLUME   480751.505 3772317.593 362.45
LOCATION L0007982     VOLUME   480751.527 3772309.003 362.66
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LOCATION L0007983     VOLUME   480751.549 3772300.413 362.78
LOCATION L0007984     VOLUME   480751.570 3772291.823 362.86
LOCATION L0007985     VOLUME   480751.592 3772283.233 362.94
LOCATION L0007986     VOLUME   480751.614 3772274.643 363.00
LOCATION L0007987     VOLUME   480751.636 3772266.053 363.00
LOCATION L0007988     VOLUME   480751.658 3772257.463 363.00
LOCATION L0007989     VOLUME   480751.679 3772248.873 363.00
LOCATION L0007990     VOLUME   480751.701 3772240.283 363.15
LOCATION L0007991     VOLUME   480751.723 3772231.693 363.35
LOCATION L0007992     VOLUME   480751.745 3772223.103 363.56
LOCATION L0007993     VOLUME   480751.767 3772214.513 363.74
LOCATION L0007994     VOLUME   480751.788 3772205.923 363.82
LOCATION L0007995     VOLUME   480751.810 3772197.333 363.90
LOCATION L0007996     VOLUME   480751.832 3772188.743 363.98
LOCATION L0007997     VOLUME   480751.854 3772180.153 364.00
LOCATION L0007998     VOLUME   480751.876 3772171.563 364.00
LOCATION L0007999     VOLUME   480751.897 3772162.974 364.00
LOCATION L0008000     VOLUME   480751.919 3772154.384 364.05
LOCATION L0008001     VOLUME   480751.941 3772145.794 364.26
LOCATION L0008002     VOLUME   480751.963 3772137.204 364.47
LOCATION L0008003     VOLUME   480751.985 3772128.614 364.68
LOCATION L0008004     VOLUME   480752.006 3772120.024 364.79
LOCATION L0008005     VOLUME   480752.028 3772111.434 364.87
LOCATION L0008006     VOLUME   480752.050 3772102.844 364.94
LOCATION L0008007     VOLUME   480752.072 3772094.254 365.05
LOCATION L0008008     VOLUME   480752.094 3772085.664 365.26
LOCATION L0008009     VOLUME   480752.115 3772077.074 365.47
LOCATION L0008010     VOLUME   480752.137 3772068.484 365.69
LOCATION L0008011     VOLUME   480752.159 3772059.894 365.95
LOCATION L0008012     VOLUME   480752.181 3772051.304 366.24
LOCATION L0008013     VOLUME   480752.203 3772042.714 366.53
LOCATION L0008014     VOLUME   480752.224 3772034.124 366.94
LOCATION L0008015     VOLUME   480752.246 3772025.534 367.73
LOCATION L0008016     VOLUME   480752.268 3772016.944 368.52
LOCATION L0008017     VOLUME   480752.290 3772008.354 369.30
LOCATION L0008018     VOLUME   480752.311 3771999.764 369.77
LOCATION L0008019     VOLUME   480752.333 3771991.174 370.13
LOCATION L0008020     VOLUME   480752.355 3771982.584 370.49
LOCATION L0008021     VOLUME   480752.377 3771973.994 370.75
LOCATION L0008022     VOLUME   480752.399 3771965.404 370.75
LOCATION L0008023     VOLUME   480752.420 3771956.814 370.75
LOCATION L0008024     VOLUME   480752.442 3771948.224 370.75
LOCATION L0008025     VOLUME   480752.464 3771939.634 370.97
LOCATION L0008026     VOLUME   480752.486 3771931.044 371.26
LOCATION L0008027     VOLUME   480752.508 3771922.454 371.55
LOCATION L0008028     VOLUME   480752.529 3771913.864 371.75
LOCATION L0008029     VOLUME   480752.551 3771905.274 371.76
LOCATION L0008030     VOLUME   480752.573 3771896.684 371.76
LOCATION L0008031     VOLUME   480752.595 3771888.094 371.76
LOCATION L0008032     VOLUME   480752.617 3771879.504 371.76
LOCATION L0008033     VOLUME   480752.638 3771870.914 371.76
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   LOCATION L0008034     VOLUME   480752.660 3771862.324 371.76
   LOCATION L0008035     VOLUME   480752.682 3771853.735 371.76
   LOCATION L0008036     VOLUME   480752.704 3771845.145 371.76
   LOCATION L0008037     VOLUME   480752.726 3771836.555 371.76
   LOCATION L0008038     VOLUME   480752.747 3771827.965 371.76
   LOCATION L0008039     VOLUME   480752.769 3771819.375 371.76
** End of LINE VOLUME Source ID = SLINE5
** ----------------------------------------------------------------------
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE6
** DESCRSRC Alabama St b/n River Bluff Ave and Palmetto Ave
** PREFIX
** Length of Side = 8.59
** Configuration = Adjacent
** Emission Rate = 3.495E-06
** Vertical Dimension = 6.99
** SZINIT = 3.25
** Nodes = 2
** 480750.988, 3771810.041, 371.84, 3.49, 4.00
** 480747.435, 3771585.792, 372.96, 3.49, 4.00
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   LOCATION L0008040     VOLUME   480750.920 3771805.746 371.70
   LOCATION L0008041     VOLUME   480750.784 3771797.158 371.70
   LOCATION L0008042     VOLUME   480750.647 3771788.569 371.69
   LOCATION L0008043     VOLUME   480750.511 3771779.980 371.69
   LOCATION L0008044     VOLUME   480750.375 3771771.391 371.68
   LOCATION L0008045     VOLUME   480750.239 3771762.802 371.72
   LOCATION L0008046     VOLUME   480750.103 3771754.213 371.80
   LOCATION L0008047     VOLUME   480749.967 3771745.624 371.90
   LOCATION L0008048     VOLUME   480749.831 3771737.035 371.99
   LOCATION L0008049     VOLUME   480749.695 3771728.446 372.00
   LOCATION L0008050     VOLUME   480749.559 3771719.857 372.00
   LOCATION L0008051     VOLUME   480749.423 3771711.268 372.00
   LOCATION L0008052     VOLUME   480749.287 3771702.679 372.08
   LOCATION L0008053     VOLUME   480749.151 3771694.090 372.26
   LOCATION L0008054     VOLUME   480749.015 3771685.502 372.44
   LOCATION L0008055     VOLUME   480748.879 3771676.913 372.62
   LOCATION L0008056     VOLUME   480748.743 3771668.324 372.63
   LOCATION L0008057     VOLUME   480748.607 3771659.735 372.62
   LOCATION L0008058     VOLUME   480748.470 3771651.146 372.62
   LOCATION L0008059     VOLUME   480748.334 3771642.557 372.66
   LOCATION L0008060     VOLUME   480748.198 3771633.968 372.77
   LOCATION L0008061     VOLUME   480748.062 3771625.379 372.88
   LOCATION L0008062     VOLUME   480747.926 3771616.790 372.99
   LOCATION L0008063     VOLUME   480747.790 3771608.201 373.00
   LOCATION L0008064     VOLUME   480747.654 3771599.612 373.00
   LOCATION L0008065     VOLUME   480747.518 3771591.023 373.00
** End of LINE VOLUME Source ID = SLINE6
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** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE7
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** DESCRSRC Alabama St b/n Palmetto Ave and San Bernardino Ave
** PREFIX
** Length of Side = 8.59
** Configuration = Adjacent
** Emission Rate = 0.00001843
** Vertical Dimension = 6.99
** SZINIT = 3.25
** Nodes = 2
** 480747.029, 3771568.778, 372.93, 3.49, 4.00
** 480745.027, 3770777.988, 373.95, 3.49, 4.00
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   LOCATION L0008066     VOLUME   480747.018 3771564.483 373.00
   LOCATION L0008067     VOLUME   480746.996 3771555.893 373.00
   LOCATION L0008068     VOLUME   480746.974 3771547.303 373.00
   LOCATION L0008069     VOLUME   480746.953 3771538.713 373.00
   LOCATION L0008070     VOLUME   480746.931 3771530.123 373.00
   LOCATION L0008071     VOLUME   480746.909 3771521.533 373.09
   LOCATION L0008072     VOLUME   480746.887 3771512.943 373.25
   LOCATION L0008073     VOLUME   480746.866 3771504.353 373.41
   LOCATION L0008074     VOLUME   480746.844 3771495.763 373.56
   LOCATION L0008075     VOLUME   480746.822 3771487.173 373.56
   LOCATION L0008076     VOLUME   480746.801 3771478.583 373.56
   LOCATION L0008077     VOLUME   480746.779 3771469.993 373.56
   LOCATION L0008078     VOLUME   480746.757 3771461.403 373.56
   LOCATION L0008079     VOLUME   480746.735 3771452.813 373.56
   LOCATION L0008080     VOLUME   480746.714 3771444.223 373.56
   LOCATION L0008081     VOLUME   480746.692 3771435.633 373.56
   LOCATION L0008082     VOLUME   480746.670 3771427.043 373.56
   LOCATION L0008083     VOLUME   480746.648 3771418.453 373.56
   LOCATION L0008084     VOLUME   480746.627 3771409.863 373.56
   LOCATION L0008085     VOLUME   480746.605 3771401.273 373.56
   LOCATION L0008086     VOLUME   480746.583 3771392.683 373.56
   LOCATION L0008087     VOLUME   480746.561 3771384.093 373.56
   LOCATION L0008088     VOLUME   480746.540 3771375.504 373.57
   LOCATION L0008089     VOLUME   480746.518 3771366.914 373.69
   LOCATION L0008090     VOLUME   480746.496 3771358.324 373.82
   LOCATION L0008091     VOLUME   480746.474 3771349.734 373.95
   LOCATION L0008092     VOLUME   480746.453 3771341.144 374.00
   LOCATION L0008093     VOLUME   480746.431 3771332.554 374.00
   LOCATION L0008094     VOLUME   480746.409 3771323.964 374.00
   LOCATION L0008095     VOLUME   480746.387 3771315.374 374.00
   LOCATION L0008096     VOLUME   480746.366 3771306.784 374.00
   LOCATION L0008097     VOLUME   480746.344 3771298.194 374.00
   LOCATION L0008098     VOLUME   480746.322 3771289.604 374.00
   LOCATION L0008099     VOLUME   480746.300 3771281.014 374.00
   LOCATION L0008100     VOLUME   480746.279 3771272.424 374.00
   LOCATION L0008101     VOLUME   480746.257 3771263.834 374.00
   LOCATION L0008102     VOLUME   480746.235 3771255.244 374.00
   LOCATION L0008103     VOLUME   480746.213 3771246.654 374.00
   LOCATION L0008104     VOLUME   480746.192 3771238.064 374.00
   LOCATION L0008105     VOLUME   480746.170 3771229.474 374.00
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LOCATION L0008106     VOLUME   480746.148 3771220.884 374.00
LOCATION L0008107     VOLUME   480746.126 3771212.294 374.00
LOCATION L0008108     VOLUME   480746.105 3771203.704 374.00
LOCATION L0008109     VOLUME   480746.083 3771195.114 374.00
LOCATION L0008110     VOLUME   480746.061 3771186.524 374.00
LOCATION L0008111     VOLUME   480746.039 3771177.934 374.00
LOCATION L0008112     VOLUME   480746.018 3771169.344 374.00
LOCATION L0008113     VOLUME   480745.996 3771160.754 374.00
LOCATION L0008114     VOLUME   480745.974 3771152.164 374.00
LOCATION L0008115     VOLUME   480745.953 3771143.574 374.00
LOCATION L0008116     VOLUME   480745.931 3771134.984 374.00
LOCATION L0008117     VOLUME   480745.909 3771126.394 374.00
LOCATION L0008118     VOLUME   480745.887 3771117.804 374.00
LOCATION L0008119     VOLUME   480745.866 3771109.214 374.00
LOCATION L0008120     VOLUME   480745.844 3771100.624 374.00
LOCATION L0008121     VOLUME   480745.822 3771092.034 374.00
LOCATION L0008122     VOLUME   480745.800 3771083.444 374.00
LOCATION L0008123     VOLUME   480745.779 3771074.854 374.00
LOCATION L0008124     VOLUME   480745.757 3771066.264 374.00
LOCATION L0008125     VOLUME   480745.735 3771057.675 374.00
LOCATION L0008126     VOLUME   480745.713 3771049.085 374.00
LOCATION L0008127     VOLUME   480745.692 3771040.495 374.00
LOCATION L0008128     VOLUME   480745.670 3771031.905 374.00
LOCATION L0008129     VOLUME   480745.648 3771023.315 374.00
LOCATION L0008130     VOLUME   480745.626 3771014.725 374.00
LOCATION L0008131     VOLUME   480745.605 3771006.135 374.00
LOCATION L0008132     VOLUME   480745.583 3770997.545 374.00
LOCATION L0008133     VOLUME   480745.561 3770988.955 374.00
LOCATION L0008134     VOLUME   480745.539 3770980.365 374.00
LOCATION L0008135     VOLUME   480745.518 3770971.775 374.00
LOCATION L0008136     VOLUME   480745.496 3770963.185 374.00
LOCATION L0008137     VOLUME   480745.474 3770954.595 374.00
LOCATION L0008138     VOLUME   480745.452 3770946.005 374.00
LOCATION L0008139     VOLUME   480745.431 3770937.415 374.00
LOCATION L0008140     VOLUME   480745.409 3770928.825 374.00
LOCATION L0008141     VOLUME   480745.387 3770920.235 374.00
LOCATION L0008142     VOLUME   480745.365 3770911.645 374.00
LOCATION L0008143     VOLUME   480745.344 3770903.055 374.00
LOCATION L0008144     VOLUME   480745.322 3770894.465 374.00
LOCATION L0008145     VOLUME   480745.300 3770885.875 374.00
LOCATION L0008146     VOLUME   480745.278 3770877.285 374.00
LOCATION L0008147     VOLUME   480745.257 3770868.695 374.00
LOCATION L0008148     VOLUME   480745.235 3770860.105 374.00
LOCATION L0008149     VOLUME   480745.213 3770851.515 374.00
LOCATION L0008150     VOLUME   480745.191 3770842.925 374.00
LOCATION L0008151     VOLUME   480745.170 3770834.335 374.00
LOCATION L0008152     VOLUME   480745.148 3770825.745 374.00
LOCATION L0008153     VOLUME   480745.126 3770817.155 374.00
LOCATION L0008154     VOLUME   480745.105 3770808.565 374.00
LOCATION L0008155     VOLUME   480745.083 3770799.975 374.00
LOCATION L0008156     VOLUME   480745.061 3770791.385 374.00
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   LOCATION L0008157     VOLUME   480745.039 3770782.795 374.00
** End of LINE VOLUME Source ID = SLINE7
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** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE8
** DESCRSRC Alabama St b/n San Bernardino Ave and I-10
** PREFIX
** Length of Side = 8.59
** Configuration = Adjacent
** Emission Rate = 8.657E-06
** Vertical Dimension = 6.99
** SZINIT = 3.25
** Nodes = 2
** 480741.352, 3770758.508, 373.92, 3.49, 4.00
** 480741.352, 3769636.638, 378.00, 3.49, 4.00
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   LOCATION L0008158     VOLUME   480741.352 3770754.213 374.00
   LOCATION L0008159     VOLUME   480741.352 3770745.623 374.00
   LOCATION L0008160     VOLUME   480741.352 3770737.033 374.00
   LOCATION L0008161     VOLUME   480741.352 3770728.443 374.00
   LOCATION L0008162     VOLUME   480741.352 3770719.853 374.00
   LOCATION L0008163     VOLUME   480741.352 3770711.263 374.00
   LOCATION L0008164     VOLUME   480741.352 3770702.673 374.00
   LOCATION L0008165     VOLUME   480741.352 3770694.083 374.00
   LOCATION L0008166     VOLUME   480741.352 3770685.493 374.00
   LOCATION L0008167     VOLUME   480741.352 3770676.903 374.00
   LOCATION L0008168     VOLUME   480741.352 3770668.313 374.00
   LOCATION L0008169     VOLUME   480741.352 3770659.723 374.00
   LOCATION L0008170     VOLUME   480741.352 3770651.133 374.07
   LOCATION L0008171     VOLUME   480741.352 3770642.543 374.17
   LOCATION L0008172     VOLUME   480741.352 3770633.953 374.28
   LOCATION L0008173     VOLUME   480741.352 3770625.363 374.38
   LOCATION L0008174     VOLUME   480741.352 3770616.773 374.38
   LOCATION L0008175     VOLUME   480741.352 3770608.183 374.38
   LOCATION L0008176     VOLUME   480741.352 3770599.593 374.38
   LOCATION L0008177     VOLUME   480741.352 3770591.003 374.38
   LOCATION L0008178     VOLUME   480741.352 3770582.413 374.38
   LOCATION L0008179     VOLUME   480741.352 3770573.823 374.38
   LOCATION L0008180     VOLUME   480741.352 3770565.233 374.38
   LOCATION L0008181     VOLUME   480741.352 3770556.643 374.38
   LOCATION L0008182     VOLUME   480741.352 3770548.053 374.38
   LOCATION L0008183     VOLUME   480741.352 3770539.463 374.38
   LOCATION L0008184     VOLUME   480741.352 3770530.873 374.38
   LOCATION L0008185     VOLUME   480741.352 3770522.283 374.38
   LOCATION L0008186     VOLUME   480741.352 3770513.693 374.38
   LOCATION L0008187     VOLUME   480741.352 3770505.103 374.38
   LOCATION L0008188     VOLUME   480741.352 3770496.513 374.38
   LOCATION L0008189     VOLUME   480741.352 3770487.923 374.38
   LOCATION L0008190     VOLUME   480741.352 3770479.333 374.38
   LOCATION L0008191     VOLUME   480741.352 3770470.743 374.50
   LOCATION L0008192     VOLUME   480741.352 3770462.153 374.67
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LOCATION L0008193     VOLUME   480741.352 3770453.563 374.85
LOCATION L0008194     VOLUME   480741.352 3770444.973 375.00
LOCATION L0008195     VOLUME   480741.352 3770436.383 375.00
LOCATION L0008196     VOLUME   480741.352 3770427.793 375.00
LOCATION L0008197     VOLUME   480741.352 3770419.203 375.00
LOCATION L0008198     VOLUME   480741.352 3770410.613 375.00
LOCATION L0008199     VOLUME   480741.352 3770402.023 375.00
LOCATION L0008200     VOLUME   480741.352 3770393.433 375.00
LOCATION L0008201     VOLUME   480741.352 3770384.843 375.02
LOCATION L0008202     VOLUME   480741.352 3770376.253 375.13
LOCATION L0008203     VOLUME   480741.352 3770367.663 375.24
LOCATION L0008204     VOLUME   480741.352 3770359.073 375.35
LOCATION L0008205     VOLUME   480741.352 3770350.483 375.38
LOCATION L0008206     VOLUME   480741.352 3770341.893 375.38
LOCATION L0008207     VOLUME   480741.352 3770333.303 375.38
LOCATION L0008208     VOLUME   480741.352 3770324.713 375.38
LOCATION L0008209     VOLUME   480741.352 3770316.123 375.38
LOCATION L0008210     VOLUME   480741.352 3770307.533 375.38
LOCATION L0008211     VOLUME   480741.352 3770298.943 375.38
LOCATION L0008212     VOLUME   480741.352 3770290.353 375.38
LOCATION L0008213     VOLUME   480741.352 3770281.763 375.38
LOCATION L0008214     VOLUME   480741.352 3770273.173 375.38
LOCATION L0008215     VOLUME   480741.352 3770264.583 375.38
LOCATION L0008216     VOLUME   480741.352 3770255.993 375.38
LOCATION L0008217     VOLUME   480741.352 3770247.403 375.38
LOCATION L0008218     VOLUME   480741.352 3770238.813 375.38
LOCATION L0008219     VOLUME   480741.352 3770230.223 375.38
LOCATION L0008220     VOLUME   480741.352 3770221.633 375.38
LOCATION L0008221     VOLUME   480741.352 3770213.043 375.38
LOCATION L0008222     VOLUME   480741.352 3770204.453 375.38
LOCATION L0008223     VOLUME   480741.352 3770195.863 375.38
LOCATION L0008224     VOLUME   480741.352 3770187.273 375.38
LOCATION L0008225     VOLUME   480741.352 3770178.683 375.38
LOCATION L0008226     VOLUME   480741.352 3770170.093 375.38
LOCATION L0008227     VOLUME   480741.352 3770161.503 375.38
LOCATION L0008228     VOLUME   480741.352 3770152.913 375.38
LOCATION L0008229     VOLUME   480741.352 3770144.323 375.38
LOCATION L0008230     VOLUME   480741.352 3770135.733 375.38
LOCATION L0008231     VOLUME   480741.352 3770127.143 375.38
LOCATION L0008232     VOLUME   480741.352 3770118.553 375.38
LOCATION L0008233     VOLUME   480741.352 3770109.963 375.38
LOCATION L0008234     VOLUME   480741.352 3770101.373 375.38
LOCATION L0008235     VOLUME   480741.352 3770092.783 375.38
LOCATION L0008236     VOLUME   480741.352 3770084.193 375.38
LOCATION L0008237     VOLUME   480741.352 3770075.603 375.38
LOCATION L0008238     VOLUME   480741.352 3770067.013 375.38
LOCATION L0008239     VOLUME   480741.352 3770058.423 375.38
LOCATION L0008240     VOLUME   480741.352 3770049.833 375.38
LOCATION L0008241     VOLUME   480741.352 3770041.243 375.38
LOCATION L0008242     VOLUME   480741.352 3770032.653 375.38
LOCATION L0008243     VOLUME   480741.352 3770024.063 375.38
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   LOCATION L0008244     VOLUME   480741.352 3770015.473 375.38
   LOCATION L0008245     VOLUME   480741.352 3770006.883 375.38
   LOCATION L0008246     VOLUME   480741.352 3769998.293 375.38
   LOCATION L0008247     VOLUME   480741.352 3769989.703 375.38
   LOCATION L0008248     VOLUME   480741.352 3769981.113 375.38
   LOCATION L0008249     VOLUME   480741.352 3769972.523 375.38
   LOCATION L0008250     VOLUME   480741.352 3769963.933 375.38
   LOCATION L0008251     VOLUME   480741.352 3769955.343 375.38
   LOCATION L0008252     VOLUME   480741.352 3769946.753 375.38
   LOCATION L0008253     VOLUME   480741.352 3769938.163 375.38
   LOCATION L0008254     VOLUME   480741.352 3769929.573 375.38
   LOCATION L0008255     VOLUME   480741.352 3769920.983 375.38
   LOCATION L0008256     VOLUME   480741.352 3769912.393 375.38
   LOCATION L0008257     VOLUME   480741.352 3769903.803 375.43
   LOCATION L0008258     VOLUME   480741.352 3769895.213 375.61
   LOCATION L0008259     VOLUME   480741.352 3769886.623 375.79
   LOCATION L0008260     VOLUME   480741.352 3769878.033 375.96
   LOCATION L0008261     VOLUME   480741.352 3769869.443 376.09
   LOCATION L0008262     VOLUME   480741.352 3769860.853 376.20
   LOCATION L0008263     VOLUME   480741.352 3769852.263 376.31
   LOCATION L0008264     VOLUME   480741.352 3769843.673 376.52
   LOCATION L0008265     VOLUME   480741.352 3769835.083 376.99
   LOCATION L0008266     VOLUME   480741.352 3769826.493 377.45
   LOCATION L0008267     VOLUME   480741.352 3769817.903 377.91
   LOCATION L0008268     VOLUME   480741.352 3769809.313 378.00
   LOCATION L0008269     VOLUME   480741.352 3769800.723 378.00
   LOCATION L0008270     VOLUME   480741.352 3769792.133 378.00
   LOCATION L0008271     VOLUME   480741.352 3769783.543 378.00
   LOCATION L0008272     VOLUME   480741.352 3769774.953 378.00
   LOCATION L0008273     VOLUME   480741.352 3769766.363 378.00
   LOCATION L0008274     VOLUME   480741.352 3769757.773 378.00
   LOCATION L0008275     VOLUME   480741.352 3769749.183 378.00
   LOCATION L0008276     VOLUME   480741.352 3769740.593 378.00
   LOCATION L0008277     VOLUME   480741.352 3769732.003 378.00
   LOCATION L0008278     VOLUME   480741.352 3769723.413 378.00
   LOCATION L0008279     VOLUME   480741.352 3769714.823 378.00
   LOCATION L0008280     VOLUME   480741.352 3769706.233 378.00
   LOCATION L0008281     VOLUME   480741.352 3769697.643 378.00
   LOCATION L0008282     VOLUME   480741.352 3769689.053 378.00
   LOCATION L0008283     VOLUME   480741.352 3769680.463 378.00
   LOCATION L0008284     VOLUME   480741.352 3769671.873 378.00
   LOCATION L0008285     VOLUME   480741.352 3769663.283 378.00
   LOCATION L0008286     VOLUME   480741.352 3769654.693 378.00
   LOCATION L0008287     VOLUME   480741.352 3769646.103 378.00
   LOCATION L0008288     VOLUME   480741.352 3769637.513 378.00
** End of LINE VOLUME Source ID = SLINE8
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** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE9
** DESCRSRC Eastern Drive Isle
** PREFIX
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** Length of Side = 8.59
** Configuration = Adjacent
** Emission Rate = 0.00006171
** Vertical Dimension = 6.99
** SZINIT = 3.25
** Nodes = 18
** 480726.925, 3771831.449, 371.03, 3.49, 4.00
** 480683.393, 3771831.449, 370.43, 3.49, 4.00
** 480672.510, 3771828.728, 370.03, 3.49, 4.00
** 480669.789, 3771820.566, 370.08, 3.49, 4.00
** 480668.429, 3771685.889, 371.12, 3.49, 4.00
** 480665.708, 3771680.447, 371.05, 3.49, 4.00
** 480654.825, 3771679.087, 370.95, 3.49, 4.00
** 480645.827, 3771675.124, 370.97, 3.49, 4.00
** 480628.172, 3771678.281, 370.70, 3.49, 4.00
** 480623.161, 3771697.237, 370.32, 3.49, 4.00
** 480633.059, 3771994.694, 367.25, 3.49, 4.00
** 480638.501, 3771998.775, 367.09, 3.49, 4.00
** 480650.744, 3772002.856, 367.10, 3.49, 4.00
** 480667.446, 3772002.485, 367.04, 3.49, 4.00
** 480676.098, 3771998.282, 367.25, 3.49, 4.00
** 480679.438, 3771987.892, 368.32, 3.49, 4.00
** 480676.469, 3771862.363, 370.11, 3.49, 4.00
** 480673.996, 3771861.377, 370.06, 3.49, 4.00
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   LOCATION L0008289     VOLUME   480722.630 3771831.449 371.00
   LOCATION L0008290     VOLUME   480714.040 3771831.449 371.00
   LOCATION L0008291     VOLUME   480705.450 3771831.449 371.00
   LOCATION L0008292     VOLUME   480696.860 3771831.449 370.90
   LOCATION L0008293     VOLUME   480688.270 3771831.449 370.61
   LOCATION L0008294     VOLUME   480679.791 3771830.548 370.33
   LOCATION L0008295     VOLUME   480672.167 3771827.699 370.08
   LOCATION L0008296     VOLUME   480669.778 3771819.495 370.23
   LOCATION L0008297     VOLUME   480669.692 3771810.905 370.51
   LOCATION L0008298     VOLUME   480669.605 3771802.315 370.79
   LOCATION L0008299     VOLUME   480669.518 3771793.726 370.99
   LOCATION L0008300     VOLUME   480669.431 3771785.136 370.98
   LOCATION L0008301     VOLUME   480669.345 3771776.547 370.98
   LOCATION L0008302     VOLUME   480669.258 3771767.957 370.98
   LOCATION L0008303     VOLUME   480669.171 3771759.368 370.98
   LOCATION L0008304     VOLUME   480669.084 3771750.778 370.99
   LOCATION L0008305     VOLUME   480668.998 3771742.188 370.99
   LOCATION L0008306     VOLUME   480668.911 3771733.599 371.00
   LOCATION L0008307     VOLUME   480668.824 3771725.009 371.00
   LOCATION L0008308     VOLUME   480668.737 3771716.420 371.00
   LOCATION L0008309     VOLUME   480668.651 3771707.830 371.00
   LOCATION L0008310     VOLUME   480668.564 3771699.241 371.00
   LOCATION L0008311     VOLUME   480668.477 3771690.651 371.00
   LOCATION L0008312     VOLUME   480666.717 3771682.465 371.00
   LOCATION L0008313     VOLUME   480659.423 3771679.662 371.00
   LOCATION L0008314     VOLUME   480651.205 3771677.492 371.00
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LOCATION L0008315     VOLUME   480643.156 3771675.601 371.00
LOCATION L0008316     VOLUME   480634.700 3771677.113 370.83
LOCATION L0008317     VOLUME   480627.671 3771680.174 370.59
LOCATION L0008318     VOLUME   480625.476 3771688.479 370.52
LOCATION L0008319     VOLUME   480623.281 3771696.784 370.45
LOCATION L0008320     VOLUME   480623.431 3771705.354 370.45
LOCATION L0008321     VOLUME   480623.717 3771713.939 370.46
LOCATION L0008322     VOLUME   480624.003 3771722.524 370.47
LOCATION L0008323     VOLUME   480624.288 3771731.109 370.48
LOCATION L0008324     VOLUME   480624.574 3771739.695 370.43
LOCATION L0008325     VOLUME   480624.860 3771748.280 370.30
LOCATION L0008326     VOLUME   480625.145 3771756.865 370.16
LOCATION L0008327     VOLUME   480625.431 3771765.450 370.01
LOCATION L0008328     VOLUME   480625.717 3771774.036 370.00
LOCATION L0008329     VOLUME   480626.002 3771782.621 370.00
LOCATION L0008330     VOLUME   480626.288 3771791.206 370.00
LOCATION L0008331     VOLUME   480626.574 3771799.791 370.00
LOCATION L0008332     VOLUME   480626.859 3771808.377 370.00
LOCATION L0008333     VOLUME   480627.145 3771816.962 370.00
LOCATION L0008334     VOLUME   480627.431 3771825.547 370.00
LOCATION L0008335     VOLUME   480627.716 3771834.132 369.89
LOCATION L0008336     VOLUME   480628.002 3771842.718 369.78
LOCATION L0008337     VOLUME   480628.288 3771851.303 369.68
LOCATION L0008338     VOLUME   480628.573 3771859.888 369.55
LOCATION L0008339     VOLUME   480628.859 3771868.473 369.38
LOCATION L0008340     VOLUME   480629.145 3771877.059 369.20
LOCATION L0008341     VOLUME   480629.431 3771885.644 369.01
LOCATION L0008342     VOLUME   480629.716 3771894.229 369.00
LOCATION L0008343     VOLUME   480630.002 3771902.814 369.00
LOCATION L0008344     VOLUME   480630.288 3771911.400 369.00
LOCATION L0008345     VOLUME   480630.573 3771919.985 368.88
LOCATION L0008346     VOLUME   480630.859 3771928.570 368.59
LOCATION L0008347     VOLUME   480631.145 3771937.155 368.30
LOCATION L0008348     VOLUME   480631.430 3771945.741 368.02
LOCATION L0008349     VOLUME   480631.716 3771954.326 368.00
LOCATION L0008350     VOLUME   480632.002 3771962.911 368.00
LOCATION L0008351     VOLUME   480632.287 3771971.496 368.00
LOCATION L0008352     VOLUME   480632.573 3771980.082 367.87
LOCATION L0008353     VOLUME   480632.859 3771988.667 367.59
LOCATION L0008354     VOLUME   480635.107 3771996.230 367.34
LOCATION L0008355     VOLUME   480642.626 3772000.150 367.20
LOCATION L0008356     VOLUME   480650.776 3772002.855 367.11
LOCATION L0008357     VOLUME   480659.364 3772002.665 367.12
LOCATION L0008358     VOLUME   480667.901 3772002.264 367.13
LOCATION L0008359     VOLUME   480675.628 3771998.510 367.45
LOCATION L0008360     VOLUME   480678.567 3771990.602 367.81
LOCATION L0008361     VOLUME   480679.302 3771982.150 368.12
LOCATION L0008362     VOLUME   480679.099 3771973.562 368.40
LOCATION L0008363     VOLUME   480678.896 3771964.975 368.68
LOCATION L0008364     VOLUME   480678.693 3771956.387 368.96
LOCATION L0008365     VOLUME   480678.489 3771947.799 369.24
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   LOCATION L0008366     VOLUME   480678.286 3771939.212 369.45
   LOCATION L0008367     VOLUME   480678.083 3771930.624 369.65
   LOCATION L0008368     VOLUME   480677.880 3771922.037 369.86
   LOCATION L0008369     VOLUME   480677.677 3771913.449 370.00
   LOCATION L0008370     VOLUME   480677.474 3771904.861 370.00
   LOCATION L0008371     VOLUME   480677.271 3771896.274 370.00
   LOCATION L0008372     VOLUME   480677.068 3771887.686 370.00
   LOCATION L0008373     VOLUME   480676.865 3771879.099 370.06
   LOCATION L0008374     VOLUME   480676.661 3771870.511 370.12
   LOCATION L0008375     VOLUME   480676.060 3771862.200 370.16
** End of LINE VOLUME Source ID = SLINE9
** ----------------------------------------------------------------------
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE10
** DESCRSRC Western Driveway
** PREFIX
** Length of Side = 8.59
** Configuration = Adjacent
** Emission Rate = 6.599E-06
** Vertical Dimension = 6.99
** SZINIT = 3.25
** Nodes = 7
** 480268.158, 3771594.369, 365.95, 3.49, 4.00
** 480268.158, 3771672.071, 365.61, 3.49, 4.00
** 480271.500, 3771680.426, 365.87, 3.49, 4.00
** 480280.691, 3771682.933, 365.96, 3.49, 4.00
** 480353.943, 3771682.933, 366.94, 3.49, 4.00
** 480357.901, 3771686.590, 366.94, 3.49, 4.00
** 480359.641, 3771697.300, 366.96, 3.49, 4.00
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   LOCATION L0008376     VOLUME   480268.158 3771598.664 366.00
   LOCATION L0008377     VOLUME   480268.158 3771607.254 366.00
   LOCATION L0008378     VOLUME   480268.158 3771615.844 366.00
   LOCATION L0008379     VOLUME   480268.158 3771624.434 365.89
   LOCATION L0008380     VOLUME   480268.158 3771633.024 365.78
   LOCATION L0008381     VOLUME   480268.158 3771641.614 365.67
   LOCATION L0008382     VOLUME   480268.158 3771650.204 365.61
   LOCATION L0008383     VOLUME   480268.158 3771658.794 365.61
   LOCATION L0008384     VOLUME   480268.158 3771667.384 365.61
   LOCATION L0008385     VOLUME   480269.608 3771675.695 365.66
   LOCATION L0008386     VOLUME   480274.871 3771681.346 365.83
   LOCATION L0008387     VOLUME   480283.249 3771682.933 366.00
   LOCATION L0008388     VOLUME   480291.839 3771682.933 366.00
   LOCATION L0008389     VOLUME   480300.429 3771682.933 366.00
   LOCATION L0008390     VOLUME   480309.019 3771682.933 366.00
   LOCATION L0008391     VOLUME   480317.609 3771682.933 366.26
   LOCATION L0008392     VOLUME   480326.199 3771682.933 366.54
   LOCATION L0008393     VOLUME   480334.789 3771682.933 366.83
   LOCATION L0008394     VOLUME   480343.379 3771682.933 367.00
   LOCATION L0008395     VOLUME   480351.969 3771682.933 367.00
   LOCATION L0008396     VOLUME   480358.098 3771687.801 367.00
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   LOCATION L0008397     VOLUME   480359.475 3771696.280 367.00
** End of LINE VOLUME Source ID = SLINE10
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** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE11
** DESCRSRC Western Drive Isle
** PREFIX
** Length of Side = 8.59
** Configuration = Adjacent
** Emission Rate = 0.00003076
** Vertical Dimension = 6.99
** SZINIT = 3.25
** Nodes = 4
** 480626.927, 3772016.036, 367.07, 3.49, 4.00
** 480551.199, 3772076.720, 366.05, 3.49, 4.00
** 480366.004, 3772081.208, 365.37, 3.49, 4.00
** 480361.816, 3771712.846, 367.00, 3.49, 4.00
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   LOCATION L0008398     VOLUME   480623.575 3772018.722 366.59
   LOCATION L0008399     VOLUME   480616.872 3772024.094 366.41
   LOCATION L0008400     VOLUME   480610.168 3772029.466 366.23
   LOCATION L0008401     VOLUME   480603.465 3772034.837 366.05
   LOCATION L0008402     VOLUME   480596.762 3772040.209 366.00
   LOCATION L0008403     VOLUME   480590.059 3772045.580 366.00
   LOCATION L0008404     VOLUME   480583.355 3772050.952 366.00
   LOCATION L0008405     VOLUME   480576.652 3772056.324 366.04
   LOCATION L0008406     VOLUME   480569.949 3772061.695 366.05
   LOCATION L0008407     VOLUME   480563.246 3772067.067 366.00
   LOCATION L0008408     VOLUME   480556.542 3772072.439 366.00
   LOCATION L0008409     VOLUME   480549.457 3772076.762 366.00
   LOCATION L0008410     VOLUME   480540.869 3772076.971 366.00
   LOCATION L0008411     VOLUME   480532.282 3772077.179 366.00
   LOCATION L0008412     VOLUME   480523.694 3772077.387 366.00
   LOCATION L0008413     VOLUME   480515.107 3772077.595 365.94
   LOCATION L0008414     VOLUME   480506.519 3772077.803 365.83
   LOCATION L0008415     VOLUME   480497.932 3772078.011 365.71
   LOCATION L0008416     VOLUME   480489.344 3772078.219 365.61
   LOCATION L0008417     VOLUME   480480.757 3772078.427 365.72
   LOCATION L0008418     VOLUME   480472.169 3772078.635 365.83
   LOCATION L0008419     VOLUME   480463.582 3772078.843 365.95
   LOCATION L0008420     VOLUME   480454.994 3772079.051 366.00
   LOCATION L0008421     VOLUME   480446.407 3772079.259 366.00
   LOCATION L0008422     VOLUME   480437.819 3772079.468 366.00
   LOCATION L0008423     VOLUME   480429.232 3772079.676 366.00
   LOCATION L0008424     VOLUME   480420.645 3772079.884 366.00
   LOCATION L0008425     VOLUME   480412.057 3772080.092 366.00
   LOCATION L0008426     VOLUME   480403.470 3772080.300 366.00
   LOCATION L0008427     VOLUME   480394.882 3772080.508 365.92
   LOCATION L0008428     VOLUME   480386.295 3772080.716 365.78
   LOCATION L0008429     VOLUME   480377.707 3772080.924 365.64
   LOCATION L0008430     VOLUME   480369.120 3772081.132 365.48
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   LOCATION L0008431     VOLUME   480365.942 3772075.734 365.55
   LOCATION L0008432     VOLUME   480365.844 3772067.145 365.84
   LOCATION L0008433     VOLUME   480365.747 3772058.555 365.86
   LOCATION L0008434     VOLUME   480365.649 3772049.966 365.86
   LOCATION L0008435     VOLUME   480365.551 3772041.377 365.86
   LOCATION L0008436     VOLUME   480365.454 3772032.787 365.85
   LOCATION L0008437     VOLUME   480365.356 3772024.198 365.85
   LOCATION L0008438     VOLUME   480365.258 3772015.608 365.85
   LOCATION L0008439     VOLUME   480365.161 3772007.019 365.84
   LOCATION L0008440     VOLUME   480365.063 3771998.429 365.88
   LOCATION L0008441     VOLUME   480364.965 3771989.840 365.93
   LOCATION L0008442     VOLUME   480364.868 3771981.250 365.97
   LOCATION L0008443     VOLUME   480364.770 3771972.661 366.00
   LOCATION L0008444     VOLUME   480364.673 3771964.072 366.00
   LOCATION L0008445     VOLUME   480364.575 3771955.482 366.00
   LOCATION L0008446     VOLUME   480364.477 3771946.893 366.00
   LOCATION L0008447     VOLUME   480364.380 3771938.303 366.00
   LOCATION L0008448     VOLUME   480364.282 3771929.714 366.00
   LOCATION L0008449     VOLUME   480364.184 3771921.124 366.00
   LOCATION L0008450     VOLUME   480364.087 3771912.535 366.10
   LOCATION L0008451     VOLUME   480363.989 3771903.945 366.33
   LOCATION L0008452     VOLUME   480363.891 3771895.356 366.56
   LOCATION L0008453     VOLUME   480363.794 3771886.767 366.78
   LOCATION L0008454     VOLUME   480363.696 3771878.177 366.79
   LOCATION L0008455     VOLUME   480363.598 3771869.588 366.79
   LOCATION L0008456     VOLUME   480363.501 3771860.998 366.79
   LOCATION L0008457     VOLUME   480363.403 3771852.409 366.78
   LOCATION L0008458     VOLUME   480363.305 3771843.819 366.78
   LOCATION L0008459     VOLUME   480363.208 3771835.230 366.78
   LOCATION L0008460     VOLUME   480363.110 3771826.640 366.77
   LOCATION L0008461     VOLUME   480363.012 3771818.051 366.77
   LOCATION L0008462     VOLUME   480362.915 3771809.462 366.77
   LOCATION L0008463     VOLUME   480362.817 3771800.872 366.76
   LOCATION L0008464     VOLUME   480362.719 3771792.283 366.79
   LOCATION L0008465     VOLUME   480362.622 3771783.693 366.86
   LOCATION L0008466     VOLUME   480362.524 3771775.104 366.93
   LOCATION L0008467     VOLUME   480362.426 3771766.514 367.00
   LOCATION L0008468     VOLUME   480362.329 3771757.925 367.00
   LOCATION L0008469     VOLUME   480362.231 3771749.335 367.00
   LOCATION L0008470     VOLUME   480362.133 3771740.746 367.00
   LOCATION L0008471     VOLUME   480362.036 3771732.157 367.00
   LOCATION L0008472     VOLUME   480361.938 3771723.567 367.00
   LOCATION L0008473     VOLUME   480361.840 3771714.978 367.00
** End of LINE VOLUME Source ID = SLINE11
** ----------------------------------------------------------------------
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE12
** DESCRSRC West Loading Area
** PREFIX
** Length of Side = 8.59
** Configuration = Adjacent
```

```
** Emission Rate = 0.0000786
** Vertical Dimension = 6.99
** SZINIT = 3.25
** Nodes = 2
** 480394.917, 3772058.037, 366.00, 3.49, 4.00
** 480393.245, 3771708.599, 367.07, 3.49, 4.00
** ----------------------------------------------------------------
   LOCATION L0008474     VOLUME   480394.896 3772053.742 366.00
   LOCATION L0008475     VOLUME   480394.855 3772045.152 366.00
   LOCATION L0008476     VOLUME   480394.814 3772036.562 366.00
   LOCATION L0008477     VOLUME   480394.773 3772027.973 366.00
   LOCATION L0008478     VOLUME   480394.732 3772019.383 366.00
   LOCATION L0008479     VOLUME   480394.691 3772010.793 366.00
   LOCATION L0008480     VOLUME   480394.649 3772002.203 366.00
   LOCATION L0008481     VOLUME   480394.608 3771993.613 366.00
   LOCATION L0008482     VOLUME   480394.567 3771985.023 366.00
   LOCATION L0008483     VOLUME   480394.526 3771976.433 366.00
   LOCATION L0008484     VOLUME   480394.485 3771967.843 366.23
   LOCATION L0008485     VOLUME   480394.444 3771959.253 366.46
   LOCATION L0008486     VOLUME   480394.403 3771950.663 366.70
   LOCATION L0008487     VOLUME   480394.362 3771942.073 366.82
   LOCATION L0008488     VOLUME   480394.321 3771933.484 366.81
   LOCATION L0008489     VOLUME   480394.280 3771924.894 366.81
   LOCATION L0008490     VOLUME   480394.238 3771916.304 366.81
   LOCATION L0008491     VOLUME   480394.197 3771907.714 366.86
   LOCATION L0008492     VOLUME   480394.156 3771899.124 366.92
   LOCATION L0008493     VOLUME   480394.115 3771890.534 366.97
   LOCATION L0008494     VOLUME   480394.074 3771881.944 367.00
   LOCATION L0008495     VOLUME   480394.033 3771873.354 367.00
   LOCATION L0008496     VOLUME   480393.992 3771864.764 367.00
   LOCATION L0008497     VOLUME   480393.951 3771856.174 367.00
   LOCATION L0008498     VOLUME   480393.910 3771847.585 367.00
   LOCATION L0008499     VOLUME   480393.869 3771838.995 367.00
   LOCATION L0008500     VOLUME   480393.827 3771830.405 367.00
   LOCATION L0008501     VOLUME   480393.786 3771821.815 367.00
   LOCATION L0008502     VOLUME   480393.745 3771813.225 367.00
   LOCATION L0008503     VOLUME   480393.704 3771804.635 367.00
   LOCATION L0008504     VOLUME   480393.663 3771796.045 367.00
   LOCATION L0008505     VOLUME   480393.622 3771787.455 367.00
   LOCATION L0008506     VOLUME   480393.581 3771778.865 367.00
   LOCATION L0008507     VOLUME   480393.540 3771770.275 367.00
   LOCATION L0008508     VOLUME   480393.499 3771761.686 367.00
   LOCATION L0008509     VOLUME   480393.458 3771753.096 367.00
   LOCATION L0008510     VOLUME   480393.416 3771744.506 367.00
   LOCATION L0008511     VOLUME   480393.375 3771735.916 367.00
   LOCATION L0008512     VOLUME   480393.334 3771727.326 367.00
   LOCATION L0008513     VOLUME   480393.293 3771718.736 367.00
   LOCATION L0008514     VOLUME   480393.252 3771710.146 367.00
** End of LINE VOLUME Source ID = SLINE12
** ----------------------------------------------------------------
** Line Source Represented by Adjacent Volume Sources
```

```
** LINE VOLUME Source ID = SLINE13
** DESCRSRC East Loading Area
** PREFIX
** Length of Side = 8.59
** Configuration = Adjacent
** Emission Rate = 0.00007814
** Vertical Dimension = 6.99
** SZINIT = 3.25
** Nodes = 2
** 480598.059, 3772002.027, 367.09, 3.49, 4.00
** 480589.699, 3771688.536, 370.00, 3.49, 4.00
** ----------------------------------------------------------------------
   LOCATION L0008515     VOLUME   480597.944 3771997.733 367.28
   LOCATION L0008516     VOLUME   480597.715 3771989.146 367.57
   LOCATION L0008517     VOLUME   480597.486 3771980.559 367.86
   LOCATION L0008518     VOLUME   480597.257 3771971.972 368.00
   LOCATION L0008519     VOLUME   480597.028 3771963.386 368.00
   LOCATION L0008520     VOLUME   480596.799 3771954.799 368.00
   LOCATION L0008521     VOLUME   480596.570 3771946.212 368.00
   LOCATION L0008522     VOLUME   480596.341 3771937.625 368.16
   LOCATION L0008523     VOLUME   480596.112 3771929.038 368.31
   LOCATION L0008524     VOLUME   480595.883 3771920.451 368.46
   LOCATION L0008525     VOLUME   480595.654 3771911.864 368.60
   LOCATION L0008526     VOLUME   480595.425 3771903.277 368.73
   LOCATION L0008527     VOLUME   480595.196 3771894.690 368.86
   LOCATION L0008528     VOLUME   480594.967 3771886.103 369.00
   LOCATION L0008529     VOLUME   480594.738 3771877.516 369.00
   LOCATION L0008530     VOLUME   480594.509 3771868.929 369.00
   LOCATION L0008531     VOLUME   480594.281 3771860.342 369.00
   LOCATION L0008532     VOLUME   480594.052 3771851.755 369.07
   LOCATION L0008533     VOLUME   480593.823 3771843.168 369.20
   LOCATION L0008534     VOLUME   480593.594 3771834.581 369.33
   LOCATION L0008535     VOLUME   480593.365 3771825.994 369.45
   LOCATION L0008536     VOLUME   480593.136 3771817.407 369.44
   LOCATION L0008537     VOLUME   480592.907 3771808.820 369.43
   LOCATION L0008538     VOLUME   480592.678 3771800.234 369.43
   LOCATION L0008539     VOLUME   480592.449 3771791.647 369.51
   LOCATION L0008540     VOLUME   480592.220 3771783.060 369.67
   LOCATION L0008541     VOLUME   480591.991 3771774.473 369.84
   LOCATION L0008542     VOLUME   480591.762 3771765.886 370.00
   LOCATION L0008543     VOLUME   480591.533 3771757.299 370.00
   LOCATION L0008544     VOLUME   480591.304 3771748.712 370.00
   LOCATION L0008545     VOLUME   480591.075 3771740.125 370.00
   LOCATION L0008546     VOLUME   480590.846 3771731.538 370.00
   LOCATION L0008547     VOLUME   480590.617 3771722.951 370.00
   LOCATION L0008548     VOLUME   480590.388 3771714.364 370.00
   LOCATION L0008549     VOLUME   480590.159 3771705.777 370.00
   LOCATION L0008550     VOLUME   480589.930 3771697.190 370.00
   LOCATION L0008551     VOLUME   480589.701 3771688.603 370.00
** End of LINE VOLUME Source ID = SLINE13
** Source Parameters **
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** LINE VOLUME Source ID = SLINE1
   SRCPARAM L0007183     0.0000001906      3.49      4.00      3.25
   SRCPARAM L0007184     0.0000001906      3.49      4.00      3.25
   SRCPARAM L0007185     0.0000001906      3.49      4.00      3.25
   SRCPARAM L0007186     0.0000001906      3.49      4.00      3.25
   SRCPARAM L0007187     0.0000001906      3.49      4.00      3.25
   SRCPARAM L0007188     0.0000001906      3.49      4.00      3.25
   SRCPARAM L0007189     0.0000001906      3.49      4.00      3.25
   SRCPARAM L0007190     0.0000001906      3.49      4.00      3.25
   SRCPARAM L0007191     0.0000001906      3.49      4.00      3.25
   SRCPARAM L0007192     0.0000001906      3.49      4.00      3.25
   SRCPARAM L0007193     0.0000001906      3.49      4.00      3.25
   SRCPARAM L0007194     0.0000001906      3.49      4.00      3.25
   SRCPARAM L0007195     0.0000001906      3.49      4.00      3.25
   SRCPARAM L0007196     0.0000001906      3.49      4.00      3.25
   SRCPARAM L0007197     0.0000001906      3.49      4.00      3.25
   SRCPARAM L0007198     0.0000001906      3.49      4.00      3.25
   SRCPARAM L0007199     0.0000001906      3.49      4.00      3.25
   SRCPARAM L0007200     0.0000001906      3.49      4.00      3.25
   SRCPARAM L0007201     0.0000001906      3.49      4.00      3.25
   SRCPARAM L0007202     0.0000001906      3.49      4.00      3.25
   SRCPARAM L0007203     0.0000001906      3.49      4.00      3.25
   SRCPARAM L0007204     0.0000001906      3.49      4.00      3.25
   SRCPARAM L0007205     0.0000001906      3.49      4.00      3.25
   SRCPARAM L0007206     0.0000001906      3.49      4.00      3.25
   SRCPARAM L0007207     0.0000001906      3.49      4.00      3.25
   SRCPARAM L0007208     0.0000001906      3.49      4.00      3.25
   SRCPARAM L0007209     0.0000001906      3.49      4.00      3.25
   SRCPARAM L0007210     0.0000001906      3.49      4.00      3.25
   SRCPARAM L0007211     0.0000001906      3.49      4.00      3.25
   SRCPARAM L0007212     0.0000001906      3.49      4.00      3.25
   SRCPARAM L0007213     0.0000001906      3.49      4.00      3.25
   SRCPARAM L0007214     0.0000001906      3.49      4.00      3.25
   SRCPARAM L0007215     0.0000001906      3.49      4.00      3.25
   SRCPARAM L0007216     0.0000001906      3.49      4.00      3.25
   SRCPARAM L0007217     0.0000001906      3.49      4.00      3.25
   SRCPARAM L0007218     0.0000001906      3.49      4.00      3.25
   SRCPARAM L0007219     0.0000001906      3.49      4.00      3.25
   SRCPARAM L0007220     0.0000001906      3.49      4.00      3.25
   SRCPARAM L0007221     0.0000001906      3.49      4.00      3.25
   SRCPARAM L0007222     0.0000001906      3.49      4.00      3.25
   SRCPARAM L0007223     0.0000001906      3.49      4.00      3.25
   SRCPARAM L0007224     0.0000001906      3.49      4.00      3.25
   SRCPARAM L0007225     0.0000001906      3.49      4.00      3.25
   SRCPARAM L0007226     0.0000001906      3.49      4.00      3.25
   SRCPARAM L0007227     0.0000001906      3.49      4.00      3.25
   SRCPARAM L0007228     0.0000001906      3.49      4.00      3.25
   SRCPARAM L0007229     0.0000001906      3.49      4.00      3.25
   SRCPARAM L0007230     0.0000001906      3.49      4.00      3.25
   SRCPARAM L0007231     0.0000001906      3.49      4.00      3.25
   SRCPARAM L0007232     0.0000001906      3.49      4.00      3.25
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   SRCPARAM L0007233     0.0000001906      3.49      4.00      3.25
   SRCPARAM L0007234     0.0000001906      3.49      4.00      3.25
   SRCPARAM L0007235     0.0000001906      3.49      4.00      3.25
   SRCPARAM L0007236     0.0000001906      3.49      4.00      3.25
   SRCPARAM L0007237     0.0000001906      3.49      4.00      3.25
   SRCPARAM L0007238     0.0000001906      3.49      4.00      3.25
   SRCPARAM L0007239     0.0000001906      3.49      4.00      3.25
   SRCPARAM L0007240     0.0000001906      3.49      4.00      3.25
   SRCPARAM L0007241     0.0000001906      3.49      4.00      3.25
   SRCPARAM L0007242     0.0000001906      3.49      4.00      3.25
   SRCPARAM L0007243     0.0000001906      3.49      4.00      3.25
   SRCPARAM L0007244     0.0000001906      3.49      4.00      3.25
   SRCPARAM L0007245     0.0000001906      3.49      4.00      3.25
   SRCPARAM L0007246     0.0000001906      3.49      4.00      3.25
   SRCPARAM L0007247     0.0000001906      3.49      4.00      3.25
   SRCPARAM L0007248     0.0000001906      3.49      4.00      3.25
   SRCPARAM L0007249     0.0000001906      3.49      4.00      3.25
   SRCPARAM L0007250     0.0000001906      3.49      4.00      3.25
   SRCPARAM L0007251     0.0000001906      3.49      4.00      3.25
   SRCPARAM L0007252     0.0000001906      3.49      4.00      3.25
   SRCPARAM L0007253     0.0000001906      3.49      4.00      3.25
   SRCPARAM L0007254     0.0000001906      3.49      4.00      3.25
   SRCPARAM L0007255     0.0000001906      3.49      4.00      3.25
   SRCPARAM L0007256     0.0000001906      3.49      4.00      3.25
   SRCPARAM L0007257     0.0000001906      3.49      4.00      3.25
   SRCPARAM L0007258     0.0000001906      3.49      4.00      3.25
   SRCPARAM L0007259     0.0000001906      3.49      4.00      3.25
   SRCPARAM L0007260     0.0000001906      3.49      4.00      3.25
   SRCPARAM L0007261     0.0000001906      3.49      4.00      3.25
   SRCPARAM L0007262     0.0000001906      3.49      4.00      3.25
   SRCPARAM L0007263     0.0000001906      3.49      4.00      3.25
   SRCPARAM L0007264     0.0000001906      3.49      4.00      3.25
   SRCPARAM L0007265     0.0000001906      3.49      4.00      3.25
   SRCPARAM L0007266     0.0000001906      3.49      4.00      3.25
   SRCPARAM L0007267     0.0000001906      3.49      4.00      3.25
   SRCPARAM L0007268     0.0000001906      3.49      4.00      3.25
   SRCPARAM L0007269     0.0000001906      3.49      4.00      3.25
   SRCPARAM L0007270     0.0000001906      3.49      4.00      3.25
   SRCPARAM L0007271     0.0000001906      3.49      4.00      3.25
   SRCPARAM L0007272     0.0000001906      3.49      4.00      3.25
   SRCPARAM L0007273     0.0000001906      3.49      4.00      3.25
   SRCPARAM L0007274     0.0000001906      3.49      4.00      3.25
   SRCPARAM L0007275     0.0000001906      3.49      4.00      3.25
   SRCPARAM L0007276     0.0000001906      3.49      4.00      3.25
   SRCPARAM L0007277     0.0000001906      3.49      4.00      3.25
   SRCPARAM L0007278     0.0000001906      3.49      4.00      3.25
   SRCPARAM L0007279     0.0000001906      3.49      4.00      3.25
** ------------------------------------------------------------------
** LINE VOLUME Source ID = SLINE2
   SRCPARAM L0007280     0.00000007829      3.49      4.00      3.25
   SRCPARAM L0007281     0.00000007829      3.49      4.00      3.25
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SRCPARAM L0007282     0.00000007829      3.49      4.00      3.25
SRCPARAM L0007283     0.00000007829      3.49      4.00      3.25
SRCPARAM L0007284     0.00000007829      3.49      4.00      3.25
SRCPARAM L0007285     0.00000007829      3.49      4.00      3.25
SRCPARAM L0007286     0.00000007829      3.49      4.00      3.25
SRCPARAM L0007287     0.00000007829      3.49      4.00      3.25
SRCPARAM L0007288     0.00000007829      3.49      4.00      3.25
SRCPARAM L0007289     0.00000007829      3.49      4.00      3.25
SRCPARAM L0007290     0.00000007829      3.49      4.00      3.25
SRCPARAM L0007291     0.00000007829      3.49      4.00      3.25
SRCPARAM L0007292     0.00000007829      3.49      4.00      3.25
SRCPARAM L0007293     0.00000007829      3.49      4.00      3.25
SRCPARAM L0007294     0.00000007829      3.49      4.00      3.25
SRCPARAM L0007295     0.00000007829      3.49      4.00      3.25
SRCPARAM L0007296     0.00000007829      3.49      4.00      3.25
SRCPARAM L0007297     0.00000007829      3.49      4.00      3.25
SRCPARAM L0007298     0.00000007829      3.49      4.00      3.25
SRCPARAM L0007299     0.00000007829      3.49      4.00      3.25
SRCPARAM L0007300     0.00000007829      3.49      4.00      3.25
SRCPARAM L0007301     0.00000007829      3.49      4.00      3.25
SRCPARAM L0007302     0.00000007829      3.49      4.00      3.25
SRCPARAM L0007303     0.00000007829      3.49      4.00      3.25
SRCPARAM L0007304     0.00000007829      3.49      4.00      3.25
SRCPARAM L0007305     0.00000007829      3.49      4.00      3.25
SRCPARAM L0007306     0.00000007829      3.49      4.00      3.25
SRCPARAM L0007307     0.00000007829      3.49      4.00      3.25
SRCPARAM L0007308     0.00000007829      3.49      4.00      3.25
SRCPARAM L0007309     0.00000007829      3.49      4.00      3.25
SRCPARAM L0007310     0.00000007829      3.49      4.00      3.25
SRCPARAM L0007311     0.00000007829      3.49      4.00      3.25
SRCPARAM L0007312     0.00000007829      3.49      4.00      3.25
SRCPARAM L0007313     0.00000007829      3.49      4.00      3.25
SRCPARAM L0007314     0.00000007829      3.49      4.00      3.25
SRCPARAM L0007315     0.00000007829      3.49      4.00      3.25
SRCPARAM L0007316     0.00000007829      3.49      4.00      3.25
SRCPARAM L0007317     0.00000007829      3.49      4.00      3.25
SRCPARAM L0007318     0.00000007829      3.49      4.00      3.25
SRCPARAM L0007319     0.00000007829      3.49      4.00      3.25
SRCPARAM L0007320     0.00000007829      3.49      4.00      3.25
SRCPARAM L0007321     0.00000007829      3.49      4.00      3.25
SRCPARAM L0007322     0.00000007829      3.49      4.00      3.25
SRCPARAM L0007323     0.00000007829      3.49      4.00      3.25
SRCPARAM L0007324     0.00000007829      3.49      4.00      3.25
SRCPARAM L0007325     0.00000007829      3.49      4.00      3.25
SRCPARAM L0007326     0.00000007829      3.49      4.00      3.25
SRCPARAM L0007327     0.00000007829      3.49      4.00      3.25
SRCPARAM L0007328     0.00000007829      3.49      4.00      3.25
SRCPARAM L0007329     0.00000007829      3.49      4.00      3.25
SRCPARAM L0007330     0.00000007829      3.49      4.00      3.25
SRCPARAM L0007331     0.00000007829      3.49      4.00      3.25
SRCPARAM L0007332     0.00000007829      3.49      4.00      3.25
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SRCPARAM L0007333     0.00000007829      3.49      4.00      3.25
SRCPARAM L0007334     0.00000007829      3.49      4.00      3.25
SRCPARAM L0007335     0.00000007829      3.49      4.00      3.25
SRCPARAM L0007336     0.00000007829      3.49      4.00      3.25
SRCPARAM L0007337     0.00000007829      3.49      4.00      3.25
SRCPARAM L0007338     0.00000007829      3.49      4.00      3.25
SRCPARAM L0007339     0.00000007829      3.49      4.00      3.25
SRCPARAM L0007340     0.00000007829      3.49      4.00      3.25
SRCPARAM L0007341     0.00000007829      3.49      4.00      3.25
SRCPARAM L0007342     0.00000007829      3.49      4.00      3.25
SRCPARAM L0007343     0.00000007829      3.49      4.00      3.25
SRCPARAM L0007344     0.00000007829      3.49      4.00      3.25
SRCPARAM L0007345     0.00000007829      3.49      4.00      3.25
SRCPARAM L0007346     0.00000007829      3.49      4.00      3.25
SRCPARAM L0007347     0.00000007829      3.49      4.00      3.25
SRCPARAM L0007348     0.00000007829      3.49      4.00      3.25
SRCPARAM L0007349     0.00000007829      3.49      4.00      3.25
SRCPARAM L0007350     0.00000007829      3.49      4.00      3.25
SRCPARAM L0007351     0.00000007829      3.49      4.00      3.25
SRCPARAM L0007352     0.00000007829      3.49      4.00      3.25
SRCPARAM L0007353     0.00000007829      3.49      4.00      3.25
SRCPARAM L0007354     0.00000007829      3.49      4.00      3.25
SRCPARAM L0007355     0.00000007829      3.49      4.00      3.25
SRCPARAM L0007356     0.00000007829      3.49      4.00      3.25
SRCPARAM L0007357     0.00000007829      3.49      4.00      3.25
SRCPARAM L0007358     0.00000007829      3.49      4.00      3.25
SRCPARAM L0007359     0.00000007829      3.49      4.00      3.25
SRCPARAM L0007360     0.00000007829      3.49      4.00      3.25
SRCPARAM L0007361     0.00000007829      3.49      4.00      3.25
SRCPARAM L0007362     0.00000007829      3.49      4.00      3.25
SRCPARAM L0007363     0.00000007829      3.49      4.00      3.25
SRCPARAM L0007364     0.00000007829      3.49      4.00      3.25
SRCPARAM L0007365     0.00000007829      3.49      4.00      3.25
SRCPARAM L0007366     0.00000007829      3.49      4.00      3.25
SRCPARAM L0007367     0.00000007829      3.49      4.00      3.25
SRCPARAM L0007368     0.00000007829      3.49      4.00      3.25
SRCPARAM L0007369     0.00000007829      3.49      4.00      3.25
SRCPARAM L0007370     0.00000007829      3.49      4.00      3.25
SRCPARAM L0007371     0.00000007829      3.49      4.00      3.25
SRCPARAM L0007372     0.00000007829      3.49      4.00      3.25
SRCPARAM L0007373     0.00000007829      3.49      4.00      3.25
SRCPARAM L0007374     0.00000007829      3.49      4.00      3.25
SRCPARAM L0007375     0.00000007829      3.49      4.00      3.25
SRCPARAM L0007376     0.00000007829      3.49      4.00      3.25
SRCPARAM L0007377     0.00000007829      3.49      4.00      3.25
SRCPARAM L0007378     0.00000007829      3.49      4.00      3.25
SRCPARAM L0007379     0.00000007829      3.49      4.00      3.25
SRCPARAM L0007380     0.00000007829      3.49      4.00      3.25
SRCPARAM L0007381     0.00000007829      3.49      4.00      3.25
SRCPARAM L0007382     0.00000007829      3.49      4.00      3.25
SRCPARAM L0007383     0.00000007829      3.49      4.00      3.25
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SRCPARAM L0007384     0.00000007829      3.49      4.00      3.25
SRCPARAM L0007385     0.00000007829      3.49      4.00      3.25
SRCPARAM L0007386     0.00000007829      3.49      4.00      3.25
SRCPARAM L0007387     0.00000007829      3.49      4.00      3.25
SRCPARAM L0007388     0.00000007829      3.49      4.00      3.25
SRCPARAM L0007389     0.00000007829      3.49      4.00      3.25
SRCPARAM L0007390     0.00000007829      3.49      4.00      3.25
SRCPARAM L0007391     0.00000007829      3.49      4.00      3.25
SRCPARAM L0007392     0.00000007829      3.49      4.00      3.25
SRCPARAM L0007393     0.00000007829      3.49      4.00      3.25
SRCPARAM L0007394     0.00000007829      3.49      4.00      3.25
SRCPARAM L0007395     0.00000007829      3.49      4.00      3.25
SRCPARAM L0007396     0.00000007829      3.49      4.00      3.25
SRCPARAM L0007397     0.00000007829      3.49      4.00      3.25
SRCPARAM L0007398     0.00000007829      3.49      4.00      3.25
SRCPARAM L0007399     0.00000007829      3.49      4.00      3.25
SRCPARAM L0007400     0.00000007829      3.49      4.00      3.25
SRCPARAM L0007401     0.00000007829      3.49      4.00      3.25
SRCPARAM L0007402     0.00000007829      3.49      4.00      3.25
SRCPARAM L0007403     0.00000007829      3.49      4.00      3.25
SRCPARAM L0007404     0.00000007829      3.49      4.00      3.25
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SRCPARAM L0007406     0.00000007829      3.49      4.00      3.25
SRCPARAM L0007407     0.00000007829      3.49      4.00      3.25
SRCPARAM L0007408     0.00000007829      3.49      4.00      3.25
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SRCPARAM L0007410     0.00000007829      3.49      4.00      3.25
SRCPARAM L0007411     0.00000007829      3.49      4.00      3.25
SRCPARAM L0007412     0.00000007829      3.49      4.00      3.25
SRCPARAM L0007413     0.00000007829      3.49      4.00      3.25
SRCPARAM L0007414     0.00000007829      3.49      4.00      3.25
SRCPARAM L0007415     0.00000007829      3.49      4.00      3.25
SRCPARAM L0007416     0.00000007829      3.49      4.00      3.25
SRCPARAM L0007417     0.00000007829      3.49      4.00      3.25
SRCPARAM L0007418     0.00000007829      3.49      4.00      3.25
SRCPARAM L0007419     0.00000007829      3.49      4.00      3.25
SRCPARAM L0007420     0.00000007829      3.49      4.00      3.25
SRCPARAM L0007421     0.00000007829      3.49      4.00      3.25
SRCPARAM L0007422     0.00000007829      3.49      4.00      3.25
SRCPARAM L0007423     0.00000007829      3.49      4.00      3.25
SRCPARAM L0007424     0.00000007829      3.49      4.00      3.25
SRCPARAM L0007425     0.00000007829      3.49      4.00      3.25
SRCPARAM L0007426     0.00000007829      3.49      4.00      3.25
SRCPARAM L0007427     0.00000007829      3.49      4.00      3.25
SRCPARAM L0007428     0.00000007829      3.49      4.00      3.25
SRCPARAM L0007429     0.00000007829      3.49      4.00      3.25
SRCPARAM L0007430     0.00000007829      3.49      4.00      3.25
SRCPARAM L0007431     0.00000007829      3.49      4.00      3.25
SRCPARAM L0007432     0.00000007829      3.49      4.00      3.25
SRCPARAM L0007433     0.00000007829      3.49      4.00      3.25
SRCPARAM L0007434     0.00000007829      3.49      4.00      3.25
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   SRCPARAM L0007435     0.00000007829      3.49      4.00      3.25
   SRCPARAM L0007436     0.00000007829      3.49      4.00      3.25
   SRCPARAM L0007437     0.00000007829      3.49      4.00      3.25
   SRCPARAM L0007438     0.00000007829      3.49      4.00      3.25
   SRCPARAM L0007439     0.00000007829      3.49      4.00      3.25
   SRCPARAM L0007440     0.00000007829      3.49      4.00      3.25
   SRCPARAM L0007441     0.00000007829      3.49      4.00      3.25
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   SRCPARAM L0007444     0.00000007829      3.49      4.00      3.25
   SRCPARAM L0007445     0.00000007829      3.49      4.00      3.25
   SRCPARAM L0007446     0.00000007829      3.49      4.00      3.25
   SRCPARAM L0007447     0.00000007829      3.49      4.00      3.25
   SRCPARAM L0007448     0.00000007829      3.49      4.00      3.25
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   SRCPARAM L0007450     0.00000007829      3.49      4.00      3.25
   SRCPARAM L0007451     0.00000007829      3.49      4.00      3.25
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   SRCPARAM L0007459     0.00000007829      3.49      4.00      3.25
   SRCPARAM L0007460     0.00000007829      3.49      4.00      3.25
   SRCPARAM L0007461     0.00000007829      3.49      4.00      3.25
   SRCPARAM L0007462     0.00000007829      3.49      4.00      3.25
   SRCPARAM L0007463     0.00000007829      3.49      4.00      3.25
   SRCPARAM L0007464     0.00000007829      3.49      4.00      3.25
   SRCPARAM L0007465     0.00000007829      3.49      4.00      3.25
   SRCPARAM L0007466     0.00000007829      3.49      4.00      3.25
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** LINE VOLUME Source ID = SLINE3
   SRCPARAM L0007467     0.000000133      3.49      4.00      3.25
   SRCPARAM L0007468     0.000000133      3.49      4.00      3.25
   SRCPARAM L0007469     0.000000133      3.49      4.00      3.25
   SRCPARAM L0007470     0.000000133      3.49      4.00      3.25
   SRCPARAM L0007471     0.000000133      3.49      4.00      3.25
   SRCPARAM L0007472     0.000000133      3.49      4.00      3.25
   SRCPARAM L0007473     0.000000133      3.49      4.00      3.25
   SRCPARAM L0007474     0.000000133      3.49      4.00      3.25
   SRCPARAM L0007475     0.000000133      3.49      4.00      3.25
   SRCPARAM L0007476     0.000000133      3.49      4.00      3.25
   SRCPARAM L0007477     0.000000133      3.49      4.00      3.25
   SRCPARAM L0007478     0.000000133      3.49      4.00      3.25
   SRCPARAM L0007479     0.000000133      3.49      4.00      3.25
   SRCPARAM L0007480     0.000000133      3.49      4.00      3.25
   SRCPARAM L0007481     0.000000133      3.49      4.00      3.25
   SRCPARAM L0007482     0.000000133      3.49      4.00      3.25
   SRCPARAM L0007483     0.000000133      3.49      4.00      3.25
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SRCPARAM L0007484     0.000000133      3.49      4.00      3.25
SRCPARAM L0007485     0.000000133      3.49      4.00      3.25
SRCPARAM L0007486     0.000000133      3.49      4.00      3.25
SRCPARAM L0007487     0.000000133      3.49      4.00      3.25
SRCPARAM L0007488     0.000000133      3.49      4.00      3.25
SRCPARAM L0007489     0.000000133      3.49      4.00      3.25
SRCPARAM L0007490     0.000000133      3.49      4.00      3.25
SRCPARAM L0007491     0.000000133      3.49      4.00      3.25
SRCPARAM L0007492     0.000000133      3.49      4.00      3.25
SRCPARAM L0007493     0.000000133      3.49      4.00      3.25
SRCPARAM L0007494     0.000000133      3.49      4.00      3.25
SRCPARAM L0007495     0.000000133      3.49      4.00      3.25
SRCPARAM L0007496     0.000000133      3.49      4.00      3.25
SRCPARAM L0007497     0.000000133      3.49      4.00      3.25
SRCPARAM L0007498     0.000000133      3.49      4.00      3.25
SRCPARAM L0007499     0.000000133      3.49      4.00      3.25
SRCPARAM L0007500     0.000000133      3.49      4.00      3.25
SRCPARAM L0007501     0.000000133      3.49      4.00      3.25
SRCPARAM L0007502     0.000000133      3.49      4.00      3.25
SRCPARAM L0007503     0.000000133      3.49      4.00      3.25
SRCPARAM L0007504     0.000000133      3.49      4.00      3.25
SRCPARAM L0007505     0.000000133      3.49      4.00      3.25
SRCPARAM L0007506     0.000000133      3.49      4.00      3.25
SRCPARAM L0007507     0.000000133      3.49      4.00      3.25
SRCPARAM L0007508     0.000000133      3.49      4.00      3.25
SRCPARAM L0007509     0.000000133      3.49      4.00      3.25
SRCPARAM L0007510     0.000000133      3.49      4.00      3.25
SRCPARAM L0007511     0.000000133      3.49      4.00      3.25
SRCPARAM L0007512     0.000000133      3.49      4.00      3.25
SRCPARAM L0007513     0.000000133      3.49      4.00      3.25
SRCPARAM L0007514     0.000000133      3.49      4.00      3.25
SRCPARAM L0007515     0.000000133      3.49      4.00      3.25
SRCPARAM L0007516     0.000000133      3.49      4.00      3.25
SRCPARAM L0007517     0.000000133      3.49      4.00      3.25
SRCPARAM L0007518     0.000000133      3.49      4.00      3.25
SRCPARAM L0007519     0.000000133      3.49      4.00      3.25
SRCPARAM L0007520     0.000000133      3.49      4.00      3.25
SRCPARAM L0007521     0.000000133      3.49      4.00      3.25
SRCPARAM L0007522     0.000000133      3.49      4.00      3.25
SRCPARAM L0007523     0.000000133      3.49      4.00      3.25
SRCPARAM L0007524     0.000000133      3.49      4.00      3.25
SRCPARAM L0007525     0.000000133      3.49      4.00      3.25
SRCPARAM L0007526     0.000000133      3.49      4.00      3.25
SRCPARAM L0007527     0.000000133      3.49      4.00      3.25
SRCPARAM L0007528     0.000000133      3.49      4.00      3.25
SRCPARAM L0007529     0.000000133      3.49      4.00      3.25
SRCPARAM L0007530     0.000000133      3.49      4.00      3.25
SRCPARAM L0007531     0.000000133      3.49      4.00      3.25
SRCPARAM L0007532     0.000000133      3.49      4.00      3.25
SRCPARAM L0007533     0.000000133      3.49      4.00      3.25
SRCPARAM L0007534     0.000000133      3.49      4.00      3.25
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   SRCPARAM L0007535     0.000000133      3.49      4.00      3.25
   SRCPARAM L0007536     0.000000133      3.49      4.00      3.25
   SRCPARAM L0007537     0.000000133      3.49      4.00      3.25
   SRCPARAM L0007538     0.000000133      3.49      4.00      3.25
   SRCPARAM L0007539     0.000000133      3.49      4.00      3.25
   SRCPARAM L0007540     0.000000133      3.49      4.00      3.25
   SRCPARAM L0007541     0.000000133      3.49      4.00      3.25
   SRCPARAM L0007542     0.000000133      3.49      4.00      3.25
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** LINE VOLUME Source ID = SLINE4
   SRCPARAM L0007543     0.00000007825      3.49      4.00      3.25
   SRCPARAM L0007544     0.00000007825      3.49      4.00      3.25
   SRCPARAM L0007545     0.00000007825      3.49      4.00      3.25
   SRCPARAM L0007546     0.00000007825      3.49      4.00      3.25
   SRCPARAM L0007547     0.00000007825      3.49      4.00      3.25
   SRCPARAM L0007548     0.00000007825      3.49      4.00      3.25
   SRCPARAM L0007549     0.00000007825      3.49      4.00      3.25
   SRCPARAM L0007550     0.00000007825      3.49      4.00      3.25
   SRCPARAM L0007551     0.00000007825      3.49      4.00      3.25
   SRCPARAM L0007552     0.00000007825      3.49      4.00      3.25
   SRCPARAM L0007553     0.00000007825      3.49      4.00      3.25
   SRCPARAM L0007554     0.00000007825      3.49      4.00      3.25
   SRCPARAM L0007555     0.00000007825      3.49      4.00      3.25
   SRCPARAM L0007556     0.00000007825      3.49      4.00      3.25
   SRCPARAM L0007557     0.00000007825      3.49      4.00      3.25
   SRCPARAM L0007558     0.00000007825      3.49      4.00      3.25
   SRCPARAM L0007559     0.00000007825      3.49      4.00      3.25
   SRCPARAM L0007560     0.00000007825      3.49      4.00      3.25
   SRCPARAM L0007561     0.00000007825      3.49      4.00      3.25
   SRCPARAM L0007562     0.00000007825      3.49      4.00      3.25
   SRCPARAM L0007563     0.00000007825      3.49      4.00      3.25
   SRCPARAM L0007564     0.00000007825      3.49      4.00      3.25
   SRCPARAM L0007565     0.00000007825      3.49      4.00      3.25
   SRCPARAM L0007566     0.00000007825      3.49      4.00      3.25
   SRCPARAM L0007567     0.00000007825      3.49      4.00      3.25
   SRCPARAM L0007568     0.00000007825      3.49      4.00      3.25
   SRCPARAM L0007569     0.00000007825      3.49      4.00      3.25
   SRCPARAM L0007570     0.00000007825      3.49      4.00      3.25
   SRCPARAM L0007571     0.00000007825      3.49      4.00      3.25
   SRCPARAM L0007572     0.00000007825      3.49      4.00      3.25
   SRCPARAM L0007573     0.00000007825      3.49      4.00      3.25
   SRCPARAM L0007574     0.00000007825      3.49      4.00      3.25
   SRCPARAM L0007575     0.00000007825      3.49      4.00      3.25
   SRCPARAM L0007576     0.00000007825      3.49      4.00      3.25
   SRCPARAM L0007577     0.00000007825      3.49      4.00      3.25
   SRCPARAM L0007578     0.00000007825      3.49      4.00      3.25
   SRCPARAM L0007579     0.00000007825      3.49      4.00      3.25
   SRCPARAM L0007580     0.00000007825      3.49      4.00      3.25
   SRCPARAM L0007581     0.00000007825      3.49      4.00      3.25
   SRCPARAM L0007582     0.00000007825      3.49      4.00      3.25
   SRCPARAM L0007583     0.00000007825      3.49      4.00      3.25
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SRCPARAM L0007590     0.00000007825      3.49      4.00      3.25
SRCPARAM L0007591     0.00000007825      3.49      4.00      3.25
SRCPARAM L0007592     0.00000007825      3.49      4.00      3.25
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SRCPARAM L0007594     0.00000007825      3.49      4.00      3.25
SRCPARAM L0007595     0.00000007825      3.49      4.00      3.25
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SRCPARAM L0007601     0.00000007825      3.49      4.00      3.25
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SRCPARAM L0007603     0.00000007825      3.49      4.00      3.25
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SRCPARAM L0007611     0.00000007825      3.49      4.00      3.25
SRCPARAM L0007612     0.00000007825      3.49      4.00      3.25
SRCPARAM L0007613     0.00000007825      3.49      4.00      3.25
SRCPARAM L0007614     0.00000007825      3.49      4.00      3.25
SRCPARAM L0007615     0.00000007825      3.49      4.00      3.25
SRCPARAM L0007616     0.00000007825      3.49      4.00      3.25
SRCPARAM L0007617     0.00000007825      3.49      4.00      3.25
SRCPARAM L0007618     0.00000007825      3.49      4.00      3.25
SRCPARAM L0007619     0.00000007825      3.49      4.00      3.25
SRCPARAM L0007620     0.00000007825      3.49      4.00      3.25
SRCPARAM L0007621     0.00000007825      3.49      4.00      3.25
SRCPARAM L0007622     0.00000007825      3.49      4.00      3.25
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SRCPARAM L0007625     0.00000007825      3.49      4.00      3.25
SRCPARAM L0007626     0.00000007825      3.49      4.00      3.25
SRCPARAM L0007627     0.00000007825      3.49      4.00      3.25
SRCPARAM L0007628     0.00000007825      3.49      4.00      3.25
SRCPARAM L0007629     0.00000007825      3.49      4.00      3.25
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SRCPARAM L0007631     0.00000007825      3.49      4.00      3.25
SRCPARAM L0007632     0.00000007825      3.49      4.00      3.25
SRCPARAM L0007633     0.00000007825      3.49      4.00      3.25
SRCPARAM L0007634     0.00000007825      3.49      4.00      3.25
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SRCPARAM L0007636     0.00000007825      3.49      4.00      3.25
SRCPARAM L0007637     0.00000007825      3.49      4.00      3.25
SRCPARAM L0007638     0.00000007825      3.49      4.00      3.25
SRCPARAM L0007639     0.00000007825      3.49      4.00      3.25
SRCPARAM L0007640     0.00000007825      3.49      4.00      3.25
SRCPARAM L0007641     0.00000007825      3.49      4.00      3.25
SRCPARAM L0007642     0.00000007825      3.49      4.00      3.25
SRCPARAM L0007643     0.00000007825      3.49      4.00      3.25
SRCPARAM L0007644     0.00000007825      3.49      4.00      3.25
SRCPARAM L0007645     0.00000007825      3.49      4.00      3.25
SRCPARAM L0007646     0.00000007825      3.49      4.00      3.25
SRCPARAM L0007647     0.00000007825      3.49      4.00      3.25
SRCPARAM L0007648     0.00000007825      3.49      4.00      3.25
SRCPARAM L0007649     0.00000007825      3.49      4.00      3.25
SRCPARAM L0007650     0.00000007825      3.49      4.00      3.25
SRCPARAM L0007651     0.00000007825      3.49      4.00      3.25
SRCPARAM L0007652     0.00000007825      3.49      4.00      3.25
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SRCPARAM L0007654     0.00000007825      3.49      4.00      3.25
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SRCPARAM L0007951     0.0000001783      3.49      4.00      3.25
SRCPARAM L0007952     0.0000001783      3.49      4.00      3.25
SRCPARAM L0007953     0.0000001783      3.49      4.00      3.25
SRCPARAM L0007954     0.0000001783      3.49      4.00      3.25
SRCPARAM L0007955     0.0000001783      3.49      4.00      3.25
SRCPARAM L0007956     0.0000001783      3.49      4.00      3.25
SRCPARAM L0007957     0.0000001783      3.49      4.00      3.25
SRCPARAM L0007958     0.0000001783      3.49      4.00      3.25
SRCPARAM L0007959     0.0000001783      3.49      4.00      3.25
SRCPARAM L0007960     0.0000001783      3.49      4.00      3.25
SRCPARAM L0007961     0.0000001783      3.49      4.00      3.25
SRCPARAM L0007962     0.0000001783      3.49      4.00      3.25
SRCPARAM L0007963     0.0000001783      3.49      4.00      3.25
SRCPARAM L0007964     0.0000001783      3.49      4.00      3.25
SRCPARAM L0007965     0.0000001783      3.49      4.00      3.25
SRCPARAM L0007966     0.0000001783      3.49      4.00      3.25
SRCPARAM L0007967     0.0000001783      3.49      4.00      3.25
SRCPARAM L0007968     0.0000001783      3.49      4.00      3.25
SRCPARAM L0007969     0.0000001783      3.49      4.00      3.25
SRCPARAM L0007970     0.0000001783      3.49      4.00      3.25
SRCPARAM L0007971     0.0000001783      3.49      4.00      3.25
SRCPARAM L0007972     0.0000001783      3.49      4.00      3.25
SRCPARAM L0007973     0.0000001783      3.49      4.00      3.25
SRCPARAM L0007974     0.0000001783      3.49      4.00      3.25
SRCPARAM L0007975     0.0000001783      3.49      4.00      3.25
SRCPARAM L0007976     0.0000001783      3.49      4.00      3.25
SRCPARAM L0007977     0.0000001783      3.49      4.00      3.25
SRCPARAM L0007978     0.0000001783      3.49      4.00      3.25
SRCPARAM L0007979     0.0000001783      3.49      4.00      3.25
SRCPARAM L0007980     0.0000001783      3.49      4.00      3.25
SRCPARAM L0007981     0.0000001783      3.49      4.00      3.25
SRCPARAM L0007982     0.0000001783      3.49      4.00      3.25
SRCPARAM L0007983     0.0000001783      3.49      4.00      3.25
SRCPARAM L0007984     0.0000001783      3.49      4.00      3.25
SRCPARAM L0007985     0.0000001783      3.49      4.00      3.25
SRCPARAM L0007986     0.0000001783      3.49      4.00      3.25
SRCPARAM L0007987     0.0000001783      3.49      4.00      3.25
SRCPARAM L0007988     0.0000001783      3.49      4.00      3.25
SRCPARAM L0007989     0.0000001783      3.49      4.00      3.25
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   SRCPARAM L0007990     0.0000001783      3.49      4.00      3.25
   SRCPARAM L0007991     0.0000001783      3.49      4.00      3.25
   SRCPARAM L0007992     0.0000001783      3.49      4.00      3.25
   SRCPARAM L0007993     0.0000001783      3.49      4.00      3.25
   SRCPARAM L0007994     0.0000001783      3.49      4.00      3.25
   SRCPARAM L0007995     0.0000001783      3.49      4.00      3.25
   SRCPARAM L0007996     0.0000001783      3.49      4.00      3.25
   SRCPARAM L0007997     0.0000001783      3.49      4.00      3.25
   SRCPARAM L0007998     0.0000001783      3.49      4.00      3.25
   SRCPARAM L0007999     0.0000001783      3.49      4.00      3.25
   SRCPARAM L0008000     0.0000001783      3.49      4.00      3.25
   SRCPARAM L0008001     0.0000001783      3.49      4.00      3.25
   SRCPARAM L0008002     0.0000001783      3.49      4.00      3.25
   SRCPARAM L0008003     0.0000001783      3.49      4.00      3.25
   SRCPARAM L0008004     0.0000001783      3.49      4.00      3.25
   SRCPARAM L0008005     0.0000001783      3.49      4.00      3.25
   SRCPARAM L0008006     0.0000001783      3.49      4.00      3.25
   SRCPARAM L0008007     0.0000001783      3.49      4.00      3.25
   SRCPARAM L0008008     0.0000001783      3.49      4.00      3.25
   SRCPARAM L0008009     0.0000001783      3.49      4.00      3.25
   SRCPARAM L0008010     0.0000001783      3.49      4.00      3.25
   SRCPARAM L0008011     0.0000001783      3.49      4.00      3.25
   SRCPARAM L0008012     0.0000001783      3.49      4.00      3.25
   SRCPARAM L0008013     0.0000001783      3.49      4.00      3.25
   SRCPARAM L0008014     0.0000001783      3.49      4.00      3.25
   SRCPARAM L0008015     0.0000001783      3.49      4.00      3.25
   SRCPARAM L0008016     0.0000001783      3.49      4.00      3.25
   SRCPARAM L0008017     0.0000001783      3.49      4.00      3.25
   SRCPARAM L0008018     0.0000001783      3.49      4.00      3.25
   SRCPARAM L0008019     0.0000001783      3.49      4.00      3.25
   SRCPARAM L0008020     0.0000001783      3.49      4.00      3.25
   SRCPARAM L0008021     0.0000001783      3.49      4.00      3.25
   SRCPARAM L0008022     0.0000001783      3.49      4.00      3.25
   SRCPARAM L0008023     0.0000001783      3.49      4.00      3.25
   SRCPARAM L0008024     0.0000001783      3.49      4.00      3.25
   SRCPARAM L0008025     0.0000001783      3.49      4.00      3.25
   SRCPARAM L0008026     0.0000001783      3.49      4.00      3.25
   SRCPARAM L0008027     0.0000001783      3.49      4.00      3.25
   SRCPARAM L0008028     0.0000001783      3.49      4.00      3.25
   SRCPARAM L0008029     0.0000001783      3.49      4.00      3.25
   SRCPARAM L0008030     0.0000001783      3.49      4.00      3.25
   SRCPARAM L0008031     0.0000001783      3.49      4.00      3.25
   SRCPARAM L0008032     0.0000001783      3.49      4.00      3.25
   SRCPARAM L0008033     0.0000001783      3.49      4.00      3.25
   SRCPARAM L0008034     0.0000001783      3.49      4.00      3.25
   SRCPARAM L0008035     0.0000001783      3.49      4.00      3.25
   SRCPARAM L0008036     0.0000001783      3.49      4.00      3.25
   SRCPARAM L0008037     0.0000001783      3.49      4.00      3.25
   SRCPARAM L0008038     0.0000001783      3.49      4.00      3.25
   SRCPARAM L0008039     0.0000001783      3.49      4.00      3.25
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** LINE VOLUME Source ID = SLINE6
   SRCPARAM L0008040     0.0000001344      3.49      4.00      3.25
   SRCPARAM L0008041     0.0000001344      3.49      4.00      3.25
   SRCPARAM L0008042     0.0000001344      3.49      4.00      3.25
   SRCPARAM L0008043     0.0000001344      3.49      4.00      3.25
   SRCPARAM L0008044     0.0000001344      3.49      4.00      3.25
   SRCPARAM L0008045     0.0000001344      3.49      4.00      3.25
   SRCPARAM L0008046     0.0000001344      3.49      4.00      3.25
   SRCPARAM L0008047     0.0000001344      3.49      4.00      3.25
   SRCPARAM L0008048     0.0000001344      3.49      4.00      3.25
   SRCPARAM L0008049     0.0000001344      3.49      4.00      3.25
   SRCPARAM L0008050     0.0000001344      3.49      4.00      3.25
   SRCPARAM L0008051     0.0000001344      3.49      4.00      3.25
   SRCPARAM L0008052     0.0000001344      3.49      4.00      3.25
   SRCPARAM L0008053     0.0000001344      3.49      4.00      3.25
   SRCPARAM L0008054     0.0000001344      3.49      4.00      3.25
   SRCPARAM L0008055     0.0000001344      3.49      4.00      3.25
   SRCPARAM L0008056     0.0000001344      3.49      4.00      3.25
   SRCPARAM L0008057     0.0000001344      3.49      4.00      3.25
   SRCPARAM L0008058     0.0000001344      3.49      4.00      3.25
   SRCPARAM L0008059     0.0000001344      3.49      4.00      3.25
   SRCPARAM L0008060     0.0000001344      3.49      4.00      3.25
   SRCPARAM L0008061     0.0000001344      3.49      4.00      3.25
   SRCPARAM L0008062     0.0000001344      3.49      4.00      3.25
   SRCPARAM L0008063     0.0000001344      3.49      4.00      3.25
   SRCPARAM L0008064     0.0000001344      3.49      4.00      3.25
   SRCPARAM L0008065     0.0000001344      3.49      4.00      3.25
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** LINE VOLUME Source ID = SLINE7
   SRCPARAM L0008066     0.0000002003      3.49      4.00      3.25
   SRCPARAM L0008067     0.0000002003      3.49      4.00      3.25
   SRCPARAM L0008068     0.0000002003      3.49      4.00      3.25
   SRCPARAM L0008069     0.0000002003      3.49      4.00      3.25
   SRCPARAM L0008070     0.0000002003      3.49      4.00      3.25
   SRCPARAM L0008071     0.0000002003      3.49      4.00      3.25
   SRCPARAM L0008072     0.0000002003      3.49      4.00      3.25
   SRCPARAM L0008073     0.0000002003      3.49      4.00      3.25
   SRCPARAM L0008074     0.0000002003      3.49      4.00      3.25
   SRCPARAM L0008075     0.0000002003      3.49      4.00      3.25
   SRCPARAM L0008076     0.0000002003      3.49      4.00      3.25
   SRCPARAM L0008077     0.0000002003      3.49      4.00      3.25
   SRCPARAM L0008078     0.0000002003      3.49      4.00      3.25
   SRCPARAM L0008079     0.0000002003      3.49      4.00      3.25
   SRCPARAM L0008080     0.0000002003      3.49      4.00      3.25
   SRCPARAM L0008081     0.0000002003      3.49      4.00      3.25
   SRCPARAM L0008082     0.0000002003      3.49      4.00      3.25
   SRCPARAM L0008083     0.0000002003      3.49      4.00      3.25
   SRCPARAM L0008084     0.0000002003      3.49      4.00      3.25
   SRCPARAM L0008085     0.0000002003      3.49      4.00      3.25
   SRCPARAM L0008086     0.0000002003      3.49      4.00      3.25
   SRCPARAM L0008087     0.0000002003      3.49      4.00      3.25
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SRCPARAM L0008088     0.0000002003      3.49      4.00      3.25
SRCPARAM L0008089     0.0000002003      3.49      4.00      3.25
SRCPARAM L0008090     0.0000002003      3.49      4.00      3.25
SRCPARAM L0008091     0.0000002003      3.49      4.00      3.25
SRCPARAM L0008092     0.0000002003      3.49      4.00      3.25
SRCPARAM L0008093     0.0000002003      3.49      4.00      3.25
SRCPARAM L0008094     0.0000002003      3.49      4.00      3.25
SRCPARAM L0008095     0.0000002003      3.49      4.00      3.25
SRCPARAM L0008096     0.0000002003      3.49      4.00      3.25
SRCPARAM L0008097     0.0000002003      3.49      4.00      3.25
SRCPARAM L0008098     0.0000002003      3.49      4.00      3.25
SRCPARAM L0008099     0.0000002003      3.49      4.00      3.25
SRCPARAM L0008100     0.0000002003      3.49      4.00      3.25
SRCPARAM L0008101     0.0000002003      3.49      4.00      3.25
SRCPARAM L0008102     0.0000002003      3.49      4.00      3.25
SRCPARAM L0008103     0.0000002003      3.49      4.00      3.25
SRCPARAM L0008104     0.0000002003      3.49      4.00      3.25
SRCPARAM L0008105     0.0000002003      3.49      4.00      3.25
SRCPARAM L0008106     0.0000002003      3.49      4.00      3.25
SRCPARAM L0008107     0.0000002003      3.49      4.00      3.25
SRCPARAM L0008108     0.0000002003      3.49      4.00      3.25
SRCPARAM L0008109     0.0000002003      3.49      4.00      3.25
SRCPARAM L0008110     0.0000002003      3.49      4.00      3.25
SRCPARAM L0008111     0.0000002003      3.49      4.00      3.25
SRCPARAM L0008112     0.0000002003      3.49      4.00      3.25
SRCPARAM L0008113     0.0000002003      3.49      4.00      3.25
SRCPARAM L0008114     0.0000002003      3.49      4.00      3.25
SRCPARAM L0008115     0.0000002003      3.49      4.00      3.25
SRCPARAM L0008116     0.0000002003      3.49      4.00      3.25
SRCPARAM L0008117     0.0000002003      3.49      4.00      3.25
SRCPARAM L0008118     0.0000002003      3.49      4.00      3.25
SRCPARAM L0008119     0.0000002003      3.49      4.00      3.25
SRCPARAM L0008120     0.0000002003      3.49      4.00      3.25
SRCPARAM L0008121     0.0000002003      3.49      4.00      3.25
SRCPARAM L0008122     0.0000002003      3.49      4.00      3.25
SRCPARAM L0008123     0.0000002003      3.49      4.00      3.25
SRCPARAM L0008124     0.0000002003      3.49      4.00      3.25
SRCPARAM L0008125     0.0000002003      3.49      4.00      3.25
SRCPARAM L0008126     0.0000002003      3.49      4.00      3.25
SRCPARAM L0008127     0.0000002003      3.49      4.00      3.25
SRCPARAM L0008128     0.0000002003      3.49      4.00      3.25
SRCPARAM L0008129     0.0000002003      3.49      4.00      3.25
SRCPARAM L0008130     0.0000002003      3.49      4.00      3.25
SRCPARAM L0008131     0.0000002003      3.49      4.00      3.25
SRCPARAM L0008132     0.0000002003      3.49      4.00      3.25
SRCPARAM L0008133     0.0000002003      3.49      4.00      3.25
SRCPARAM L0008134     0.0000002003      3.49      4.00      3.25
SRCPARAM L0008135     0.0000002003      3.49      4.00      3.25
SRCPARAM L0008136     0.0000002003      3.49      4.00      3.25
SRCPARAM L0008137     0.0000002003      3.49      4.00      3.25
SRCPARAM L0008138     0.0000002003      3.49      4.00      3.25
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   SRCPARAM L0008139     0.0000002003      3.49      4.00      3.25
   SRCPARAM L0008140     0.0000002003      3.49      4.00      3.25
   SRCPARAM L0008141     0.0000002003      3.49      4.00      3.25
   SRCPARAM L0008142     0.0000002003      3.49      4.00      3.25
   SRCPARAM L0008143     0.0000002003      3.49      4.00      3.25
   SRCPARAM L0008144     0.0000002003      3.49      4.00      3.25
   SRCPARAM L0008145     0.0000002003      3.49      4.00      3.25
   SRCPARAM L0008146     0.0000002003      3.49      4.00      3.25
   SRCPARAM L0008147     0.0000002003      3.49      4.00      3.25
   SRCPARAM L0008148     0.0000002003      3.49      4.00      3.25
   SRCPARAM L0008149     0.0000002003      3.49      4.00      3.25
   SRCPARAM L0008150     0.0000002003      3.49      4.00      3.25
   SRCPARAM L0008151     0.0000002003      3.49      4.00      3.25
   SRCPARAM L0008152     0.0000002003      3.49      4.00      3.25
   SRCPARAM L0008153     0.0000002003      3.49      4.00      3.25
   SRCPARAM L0008154     0.0000002003      3.49      4.00      3.25
   SRCPARAM L0008155     0.0000002003      3.49      4.00      3.25
   SRCPARAM L0008156     0.0000002003      3.49      4.00      3.25
   SRCPARAM L0008157     0.0000002003      3.49      4.00      3.25
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** LINE VOLUME Source ID = SLINE8
   SRCPARAM L0008158     0.00000006608      3.49      4.00      3.25
   SRCPARAM L0008159     0.00000006608      3.49      4.00      3.25
   SRCPARAM L0008160     0.00000006608      3.49      4.00      3.25
   SRCPARAM L0008161     0.00000006608      3.49      4.00      3.25
   SRCPARAM L0008162     0.00000006608      3.49      4.00      3.25
   SRCPARAM L0008163     0.00000006608      3.49      4.00      3.25
   SRCPARAM L0008164     0.00000006608      3.49      4.00      3.25
   SRCPARAM L0008165     0.00000006608      3.49      4.00      3.25
   SRCPARAM L0008166     0.00000006608      3.49      4.00      3.25
   SRCPARAM L0008167     0.00000006608      3.49      4.00      3.25
   SRCPARAM L0008168     0.00000006608      3.49      4.00      3.25
   SRCPARAM L0008169     0.00000006608      3.49      4.00      3.25
   SRCPARAM L0008170     0.00000006608      3.49      4.00      3.25
   SRCPARAM L0008171     0.00000006608      3.49      4.00      3.25
   SRCPARAM L0008172     0.00000006608      3.49      4.00      3.25
   SRCPARAM L0008173     0.00000006608      3.49      4.00      3.25
   SRCPARAM L0008174     0.00000006608      3.49      4.00      3.25
   SRCPARAM L0008175     0.00000006608      3.49      4.00      3.25
   SRCPARAM L0008176     0.00000006608      3.49      4.00      3.25
   SRCPARAM L0008177     0.00000006608      3.49      4.00      3.25
   SRCPARAM L0008178     0.00000006608      3.49      4.00      3.25
   SRCPARAM L0008179     0.00000006608      3.49      4.00      3.25
   SRCPARAM L0008180     0.00000006608      3.49      4.00      3.25
   SRCPARAM L0008181     0.00000006608      3.49      4.00      3.25
   SRCPARAM L0008182     0.00000006608      3.49      4.00      3.25
   SRCPARAM L0008183     0.00000006608      3.49      4.00      3.25
   SRCPARAM L0008184     0.00000006608      3.49      4.00      3.25
   SRCPARAM L0008185     0.00000006608      3.49      4.00      3.25
   SRCPARAM L0008186     0.00000006608      3.49      4.00      3.25
   SRCPARAM L0008187     0.00000006608      3.49      4.00      3.25
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SRCPARAM L0008188     0.00000006608      3.49      4.00      3.25
SRCPARAM L0008189     0.00000006608      3.49      4.00      3.25
SRCPARAM L0008190     0.00000006608      3.49      4.00      3.25
SRCPARAM L0008191     0.00000006608      3.49      4.00      3.25
SRCPARAM L0008192     0.00000006608      3.49      4.00      3.25
SRCPARAM L0008193     0.00000006608      3.49      4.00      3.25
SRCPARAM L0008194     0.00000006608      3.49      4.00      3.25
SRCPARAM L0008195     0.00000006608      3.49      4.00      3.25
SRCPARAM L0008196     0.00000006608      3.49      4.00      3.25
SRCPARAM L0008197     0.00000006608      3.49      4.00      3.25
SRCPARAM L0008198     0.00000006608      3.49      4.00      3.25
SRCPARAM L0008199     0.00000006608      3.49      4.00      3.25
SRCPARAM L0008200     0.00000006608      3.49      4.00      3.25
SRCPARAM L0008201     0.00000006608      3.49      4.00      3.25
SRCPARAM L0008202     0.00000006608      3.49      4.00      3.25
SRCPARAM L0008203     0.00000006608      3.49      4.00      3.25
SRCPARAM L0008204     0.00000006608      3.49      4.00      3.25
SRCPARAM L0008205     0.00000006608      3.49      4.00      3.25
SRCPARAM L0008206     0.00000006608      3.49      4.00      3.25
SRCPARAM L0008207     0.00000006608      3.49      4.00      3.25
SRCPARAM L0008208     0.00000006608      3.49      4.00      3.25
SRCPARAM L0008209     0.00000006608      3.49      4.00      3.25
SRCPARAM L0008210     0.00000006608      3.49      4.00      3.25
SRCPARAM L0008211     0.00000006608      3.49      4.00      3.25
SRCPARAM L0008212     0.00000006608      3.49      4.00      3.25
SRCPARAM L0008213     0.00000006608      3.49      4.00      3.25
SRCPARAM L0008214     0.00000006608      3.49      4.00      3.25
SRCPARAM L0008215     0.00000006608      3.49      4.00      3.25
SRCPARAM L0008216     0.00000006608      3.49      4.00      3.25
SRCPARAM L0008217     0.00000006608      3.49      4.00      3.25
SRCPARAM L0008218     0.00000006608      3.49      4.00      3.25
SRCPARAM L0008219     0.00000006608      3.49      4.00      3.25
SRCPARAM L0008220     0.00000006608      3.49      4.00      3.25
SRCPARAM L0008221     0.00000006608      3.49      4.00      3.25
SRCPARAM L0008222     0.00000006608      3.49      4.00      3.25
SRCPARAM L0008223     0.00000006608      3.49      4.00      3.25
SRCPARAM L0008224     0.00000006608      3.49      4.00      3.25
SRCPARAM L0008225     0.00000006608      3.49      4.00      3.25
SRCPARAM L0008226     0.00000006608      3.49      4.00      3.25
SRCPARAM L0008227     0.00000006608      3.49      4.00      3.25
SRCPARAM L0008228     0.00000006608      3.49      4.00      3.25
SRCPARAM L0008229     0.00000006608      3.49      4.00      3.25
SRCPARAM L0008230     0.00000006608      3.49      4.00      3.25
SRCPARAM L0008231     0.00000006608      3.49      4.00      3.25
SRCPARAM L0008232     0.00000006608      3.49      4.00      3.25
SRCPARAM L0008233     0.00000006608      3.49      4.00      3.25
SRCPARAM L0008234     0.00000006608      3.49      4.00      3.25
SRCPARAM L0008235     0.00000006608      3.49      4.00      3.25
SRCPARAM L0008236     0.00000006608      3.49      4.00      3.25
SRCPARAM L0008237     0.00000006608      3.49      4.00      3.25
SRCPARAM L0008238     0.00000006608      3.49      4.00      3.25
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   SRCPARAM L0008239     0.00000006608      3.49      4.00      3.25
   SRCPARAM L0008240     0.00000006608      3.49      4.00      3.25
   SRCPARAM L0008241     0.00000006608      3.49      4.00      3.25
   SRCPARAM L0008242     0.00000006608      3.49      4.00      3.25
   SRCPARAM L0008243     0.00000006608      3.49      4.00      3.25
   SRCPARAM L0008244     0.00000006608      3.49      4.00      3.25
   SRCPARAM L0008245     0.00000006608      3.49      4.00      3.25
   SRCPARAM L0008246     0.00000006608      3.49      4.00      3.25
   SRCPARAM L0008247     0.00000006608      3.49      4.00      3.25
   SRCPARAM L0008248     0.00000006608      3.49      4.00      3.25
   SRCPARAM L0008249     0.00000006608      3.49      4.00      3.25
   SRCPARAM L0008250     0.00000006608      3.49      4.00      3.25
   SRCPARAM L0008251     0.00000006608      3.49      4.00      3.25
   SRCPARAM L0008252     0.00000006608      3.49      4.00      3.25
   SRCPARAM L0008253     0.00000006608      3.49      4.00      3.25
   SRCPARAM L0008254     0.00000006608      3.49      4.00      3.25
   SRCPARAM L0008255     0.00000006608      3.49      4.00      3.25
   SRCPARAM L0008256     0.00000006608      3.49      4.00      3.25
   SRCPARAM L0008257     0.00000006608      3.49      4.00      3.25
   SRCPARAM L0008258     0.00000006608      3.49      4.00      3.25
   SRCPARAM L0008259     0.00000006608      3.49      4.00      3.25
   SRCPARAM L0008260     0.00000006608      3.49      4.00      3.25
   SRCPARAM L0008261     0.00000006608      3.49      4.00      3.25
   SRCPARAM L0008262     0.00000006608      3.49      4.00      3.25
   SRCPARAM L0008263     0.00000006608      3.49      4.00      3.25
   SRCPARAM L0008264     0.00000006608      3.49      4.00      3.25
   SRCPARAM L0008265     0.00000006608      3.49      4.00      3.25
   SRCPARAM L0008266     0.00000006608      3.49      4.00      3.25
   SRCPARAM L0008267     0.00000006608      3.49      4.00      3.25
   SRCPARAM L0008268     0.00000006608      3.49      4.00      3.25
   SRCPARAM L0008269     0.00000006608      3.49      4.00      3.25
   SRCPARAM L0008270     0.00000006608      3.49      4.00      3.25
   SRCPARAM L0008271     0.00000006608      3.49      4.00      3.25
   SRCPARAM L0008272     0.00000006608      3.49      4.00      3.25
   SRCPARAM L0008273     0.00000006608      3.49      4.00      3.25
   SRCPARAM L0008274     0.00000006608      3.49      4.00      3.25
   SRCPARAM L0008275     0.00000006608      3.49      4.00      3.25
   SRCPARAM L0008276     0.00000006608      3.49      4.00      3.25
   SRCPARAM L0008277     0.00000006608      3.49      4.00      3.25
   SRCPARAM L0008278     0.00000006608      3.49      4.00      3.25
   SRCPARAM L0008279     0.00000006608      3.49      4.00      3.25
   SRCPARAM L0008280     0.00000006608      3.49      4.00      3.25
   SRCPARAM L0008281     0.00000006608      3.49      4.00      3.25
   SRCPARAM L0008282     0.00000006608      3.49      4.00      3.25
   SRCPARAM L0008283     0.00000006608      3.49      4.00      3.25
   SRCPARAM L0008284     0.00000006608      3.49      4.00      3.25
   SRCPARAM L0008285     0.00000006608      3.49      4.00      3.25
   SRCPARAM L0008286     0.00000006608      3.49      4.00      3.25
   SRCPARAM L0008287     0.00000006608      3.49      4.00      3.25
   SRCPARAM L0008288     0.00000006608      3.49      4.00      3.25
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** LINE VOLUME Source ID = SLINE9
   SRCPARAM L0008289     0.0000007093      3.49      4.00      3.25
   SRCPARAM L0008290     0.0000007093      3.49      4.00      3.25
   SRCPARAM L0008291     0.0000007093      3.49      4.00      3.25
   SRCPARAM L0008292     0.0000007093      3.49      4.00      3.25
   SRCPARAM L0008293     0.0000007093      3.49      4.00      3.25
   SRCPARAM L0008294     0.0000007093      3.49      4.00      3.25
   SRCPARAM L0008295     0.0000007093      3.49      4.00      3.25
   SRCPARAM L0008296     0.0000007093      3.49      4.00      3.25
   SRCPARAM L0008297     0.0000007093      3.49      4.00      3.25
   SRCPARAM L0008298     0.0000007093      3.49      4.00      3.25
   SRCPARAM L0008299     0.0000007093      3.49      4.00      3.25
   SRCPARAM L0008300     0.0000007093      3.49      4.00      3.25
   SRCPARAM L0008301     0.0000007093      3.49      4.00      3.25
   SRCPARAM L0008302     0.0000007093      3.49      4.00      3.25
   SRCPARAM L0008303     0.0000007093      3.49      4.00      3.25
   SRCPARAM L0008304     0.0000007093      3.49      4.00      3.25
   SRCPARAM L0008305     0.0000007093      3.49      4.00      3.25
   SRCPARAM L0008306     0.0000007093      3.49      4.00      3.25
   SRCPARAM L0008307     0.0000007093      3.49      4.00      3.25
   SRCPARAM L0008308     0.0000007093      3.49      4.00      3.25
   SRCPARAM L0008309     0.0000007093      3.49      4.00      3.25
   SRCPARAM L0008310     0.0000007093      3.49      4.00      3.25
   SRCPARAM L0008311     0.0000007093      3.49      4.00      3.25
   SRCPARAM L0008312     0.0000007093      3.49      4.00      3.25
   SRCPARAM L0008313     0.0000007093      3.49      4.00      3.25
   SRCPARAM L0008314     0.0000007093      3.49      4.00      3.25
   SRCPARAM L0008315     0.0000007093      3.49      4.00      3.25
   SRCPARAM L0008316     0.0000007093      3.49      4.00      3.25
   SRCPARAM L0008317     0.0000007093      3.49      4.00      3.25
   SRCPARAM L0008318     0.0000007093      3.49      4.00      3.25
   SRCPARAM L0008319     0.0000007093      3.49      4.00      3.25
   SRCPARAM L0008320     0.0000007093      3.49      4.00      3.25
   SRCPARAM L0008321     0.0000007093      3.49      4.00      3.25
   SRCPARAM L0008322     0.0000007093      3.49      4.00      3.25
   SRCPARAM L0008323     0.0000007093      3.49      4.00      3.25
   SRCPARAM L0008324     0.0000007093      3.49      4.00      3.25
   SRCPARAM L0008325     0.0000007093      3.49      4.00      3.25
   SRCPARAM L0008326     0.0000007093      3.49      4.00      3.25
   SRCPARAM L0008327     0.0000007093      3.49      4.00      3.25
   SRCPARAM L0008328     0.0000007093      3.49      4.00      3.25
   SRCPARAM L0008329     0.0000007093      3.49      4.00      3.25
   SRCPARAM L0008330     0.0000007093      3.49      4.00      3.25
   SRCPARAM L0008331     0.0000007093      3.49      4.00      3.25
   SRCPARAM L0008332     0.0000007093      3.49      4.00      3.25
   SRCPARAM L0008333     0.0000007093      3.49      4.00      3.25
   SRCPARAM L0008334     0.0000007093      3.49      4.00      3.25
   SRCPARAM L0008335     0.0000007093      3.49      4.00      3.25
   SRCPARAM L0008336     0.0000007093      3.49      4.00      3.25
   SRCPARAM L0008337     0.0000007093      3.49      4.00      3.25
   SRCPARAM L0008338     0.0000007093      3.49      4.00      3.25
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   SRCPARAM L0008339     0.0000007093      3.49      4.00      3.25
   SRCPARAM L0008340     0.0000007093      3.49      4.00      3.25
   SRCPARAM L0008341     0.0000007093      3.49      4.00      3.25
   SRCPARAM L0008342     0.0000007093      3.49      4.00      3.25
   SRCPARAM L0008343     0.0000007093      3.49      4.00      3.25
   SRCPARAM L0008344     0.0000007093      3.49      4.00      3.25
   SRCPARAM L0008345     0.0000007093      3.49      4.00      3.25
   SRCPARAM L0008346     0.0000007093      3.49      4.00      3.25
   SRCPARAM L0008347     0.0000007093      3.49      4.00      3.25
   SRCPARAM L0008348     0.0000007093      3.49      4.00      3.25
   SRCPARAM L0008349     0.0000007093      3.49      4.00      3.25
   SRCPARAM L0008350     0.0000007093      3.49      4.00      3.25
   SRCPARAM L0008351     0.0000007093      3.49      4.00      3.25
   SRCPARAM L0008352     0.0000007093      3.49      4.00      3.25
   SRCPARAM L0008353     0.0000007093      3.49      4.00      3.25
   SRCPARAM L0008354     0.0000007093      3.49      4.00      3.25
   SRCPARAM L0008355     0.0000007093      3.49      4.00      3.25
   SRCPARAM L0008356     0.0000007093      3.49      4.00      3.25
   SRCPARAM L0008357     0.0000007093      3.49      4.00      3.25
   SRCPARAM L0008358     0.0000007093      3.49      4.00      3.25
   SRCPARAM L0008359     0.0000007093      3.49      4.00      3.25
   SRCPARAM L0008360     0.0000007093      3.49      4.00      3.25
   SRCPARAM L0008361     0.0000007093      3.49      4.00      3.25
   SRCPARAM L0008362     0.0000007093      3.49      4.00      3.25
   SRCPARAM L0008363     0.0000007093      3.49      4.00      3.25
   SRCPARAM L0008364     0.0000007093      3.49      4.00      3.25
   SRCPARAM L0008365     0.0000007093      3.49      4.00      3.25
   SRCPARAM L0008366     0.0000007093      3.49      4.00      3.25
   SRCPARAM L0008367     0.0000007093      3.49      4.00      3.25
   SRCPARAM L0008368     0.0000007093      3.49      4.00      3.25
   SRCPARAM L0008369     0.0000007093      3.49      4.00      3.25
   SRCPARAM L0008370     0.0000007093      3.49      4.00      3.25
   SRCPARAM L0008371     0.0000007093      3.49      4.00      3.25
   SRCPARAM L0008372     0.0000007093      3.49      4.00      3.25
   SRCPARAM L0008373     0.0000007093      3.49      4.00      3.25
   SRCPARAM L0008374     0.0000007093      3.49      4.00      3.25
   SRCPARAM L0008375     0.0000007093      3.49      4.00      3.25
** ------------------------------------------------------------------
** LINE VOLUME Source ID = SLINE10
   SRCPARAM L0008376     0.0000003      3.49      4.00      3.25
   SRCPARAM L0008377     0.0000003      3.49      4.00      3.25
   SRCPARAM L0008378     0.0000003      3.49      4.00      3.25
   SRCPARAM L0008379     0.0000003      3.49      4.00      3.25
   SRCPARAM L0008380     0.0000003      3.49      4.00      3.25
   SRCPARAM L0008381     0.0000003      3.49      4.00      3.25
   SRCPARAM L0008382     0.0000003      3.49      4.00      3.25
   SRCPARAM L0008383     0.0000003      3.49      4.00      3.25
   SRCPARAM L0008384     0.0000003      3.49      4.00      3.25
   SRCPARAM L0008385     0.0000003      3.49      4.00      3.25
   SRCPARAM L0008386     0.0000003      3.49      4.00      3.25
   SRCPARAM L0008387     0.0000003      3.49      4.00      3.25
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   SRCPARAM L0008388     0.0000003      3.49      4.00      3.25
   SRCPARAM L0008389     0.0000003      3.49      4.00      3.25
   SRCPARAM L0008390     0.0000003      3.49      4.00      3.25
   SRCPARAM L0008391     0.0000003      3.49      4.00      3.25
   SRCPARAM L0008392     0.0000003      3.49      4.00      3.25
   SRCPARAM L0008393     0.0000003      3.49      4.00      3.25
   SRCPARAM L0008394     0.0000003      3.49      4.00      3.25
   SRCPARAM L0008395     0.0000003      3.49      4.00      3.25
   SRCPARAM L0008396     0.0000003      3.49      4.00      3.25
   SRCPARAM L0008397     0.0000003      3.49      4.00      3.25
** ----------------------------------------------------------------
** LINE VOLUME Source ID = SLINE11
   SRCPARAM L0008398     0.0000004047      3.49      4.00      3.25
   SRCPARAM L0008399     0.0000004047      3.49      4.00      3.25
   SRCPARAM L0008400     0.0000004047      3.49      4.00      3.25
   SRCPARAM L0008401     0.0000004047      3.49      4.00      3.25
   SRCPARAM L0008402     0.0000004047      3.49      4.00      3.25
   SRCPARAM L0008403     0.0000004047      3.49      4.00      3.25
   SRCPARAM L0008404     0.0000004047      3.49      4.00      3.25
   SRCPARAM L0008405     0.0000004047      3.49      4.00      3.25
   SRCPARAM L0008406     0.0000004047      3.49      4.00      3.25
   SRCPARAM L0008407     0.0000004047      3.49      4.00      3.25
   SRCPARAM L0008408     0.0000004047      3.49      4.00      3.25
   SRCPARAM L0008409     0.0000004047      3.49      4.00      3.25
   SRCPARAM L0008410     0.0000004047      3.49      4.00      3.25
   SRCPARAM L0008411     0.0000004047      3.49      4.00      3.25
   SRCPARAM L0008412     0.0000004047      3.49      4.00      3.25
   SRCPARAM L0008413     0.0000004047      3.49      4.00      3.25
   SRCPARAM L0008414     0.0000004047      3.49      4.00      3.25
   SRCPARAM L0008415     0.0000004047      3.49      4.00      3.25
   SRCPARAM L0008416     0.0000004047      3.49      4.00      3.25
   SRCPARAM L0008417     0.0000004047      3.49      4.00      3.25
   SRCPARAM L0008418     0.0000004047      3.49      4.00      3.25
   SRCPARAM L0008419     0.0000004047      3.49      4.00      3.25
   SRCPARAM L0008420     0.0000004047      3.49      4.00      3.25
   SRCPARAM L0008421     0.0000004047      3.49      4.00      3.25
   SRCPARAM L0008422     0.0000004047      3.49      4.00      3.25
   SRCPARAM L0008423     0.0000004047      3.49      4.00      3.25
   SRCPARAM L0008424     0.0000004047      3.49      4.00      3.25
   SRCPARAM L0008425     0.0000004047      3.49      4.00      3.25
   SRCPARAM L0008426     0.0000004047      3.49      4.00      3.25
   SRCPARAM L0008427     0.0000004047      3.49      4.00      3.25
   SRCPARAM L0008428     0.0000004047      3.49      4.00      3.25
   SRCPARAM L0008429     0.0000004047      3.49      4.00      3.25
   SRCPARAM L0008430     0.0000004047      3.49      4.00      3.25
   SRCPARAM L0008431     0.0000004047      3.49      4.00      3.25
   SRCPARAM L0008432     0.0000004047      3.49      4.00      3.25
   SRCPARAM L0008433     0.0000004047      3.49      4.00      3.25
   SRCPARAM L0008434     0.0000004047      3.49      4.00      3.25
   SRCPARAM L0008435     0.0000004047      3.49      4.00      3.25
   SRCPARAM L0008436     0.0000004047      3.49      4.00      3.25
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   SRCPARAM L0008437     0.0000004047      3.49      4.00      3.25
   SRCPARAM L0008438     0.0000004047      3.49      4.00      3.25
   SRCPARAM L0008439     0.0000004047      3.49      4.00      3.25
   SRCPARAM L0008440     0.0000004047      3.49      4.00      3.25
   SRCPARAM L0008441     0.0000004047      3.49      4.00      3.25
   SRCPARAM L0008442     0.0000004047      3.49      4.00      3.25
   SRCPARAM L0008443     0.0000004047      3.49      4.00      3.25
   SRCPARAM L0008444     0.0000004047      3.49      4.00      3.25
   SRCPARAM L0008445     0.0000004047      3.49      4.00      3.25
   SRCPARAM L0008446     0.0000004047      3.49      4.00      3.25
   SRCPARAM L0008447     0.0000004047      3.49      4.00      3.25
   SRCPARAM L0008448     0.0000004047      3.49      4.00      3.25
   SRCPARAM L0008449     0.0000004047      3.49      4.00      3.25
   SRCPARAM L0008450     0.0000004047      3.49      4.00      3.25
   SRCPARAM L0008451     0.0000004047      3.49      4.00      3.25
   SRCPARAM L0008452     0.0000004047      3.49      4.00      3.25
   SRCPARAM L0008453     0.0000004047      3.49      4.00      3.25
   SRCPARAM L0008454     0.0000004047      3.49      4.00      3.25
   SRCPARAM L0008455     0.0000004047      3.49      4.00      3.25
   SRCPARAM L0008456     0.0000004047      3.49      4.00      3.25
   SRCPARAM L0008457     0.0000004047      3.49      4.00      3.25
   SRCPARAM L0008458     0.0000004047      3.49      4.00      3.25
   SRCPARAM L0008459     0.0000004047      3.49      4.00      3.25
   SRCPARAM L0008460     0.0000004047      3.49      4.00      3.25
   SRCPARAM L0008461     0.0000004047      3.49      4.00      3.25
   SRCPARAM L0008462     0.0000004047      3.49      4.00      3.25
   SRCPARAM L0008463     0.0000004047      3.49      4.00      3.25
   SRCPARAM L0008464     0.0000004047      3.49      4.00      3.25
   SRCPARAM L0008465     0.0000004047      3.49      4.00      3.25
   SRCPARAM L0008466     0.0000004047      3.49      4.00      3.25
   SRCPARAM L0008467     0.0000004047      3.49      4.00      3.25
   SRCPARAM L0008468     0.0000004047      3.49      4.00      3.25
   SRCPARAM L0008469     0.0000004047      3.49      4.00      3.25
   SRCPARAM L0008470     0.0000004047      3.49      4.00      3.25
   SRCPARAM L0008471     0.0000004047      3.49      4.00      3.25
   SRCPARAM L0008472     0.0000004047      3.49      4.00      3.25
   SRCPARAM L0008473     0.0000004047      3.49      4.00      3.25
** ----------------------------------------------------------------
** LINE VOLUME Source ID = SLINE12
   SRCPARAM L0008474     0.000001917      3.49      4.00      3.25
   SRCPARAM L0008475     0.000001917      3.49      4.00      3.25
   SRCPARAM L0008476     0.000001917      3.49      4.00      3.25
   SRCPARAM L0008477     0.000001917      3.49      4.00      3.25
   SRCPARAM L0008478     0.000001917      3.49      4.00      3.25
   SRCPARAM L0008479     0.000001917      3.49      4.00      3.25
   SRCPARAM L0008480     0.000001917      3.49      4.00      3.25
   SRCPARAM L0008481     0.000001917      3.49      4.00      3.25
   SRCPARAM L0008482     0.000001917      3.49      4.00      3.25
   SRCPARAM L0008483     0.000001917      3.49      4.00      3.25
   SRCPARAM L0008484     0.000001917      3.49      4.00      3.25
   SRCPARAM L0008485     0.000001917      3.49      4.00      3.25
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   SRCPARAM L0008486     0.000001917      3.49      4.00      3.25
   SRCPARAM L0008487     0.000001917      3.49      4.00      3.25
   SRCPARAM L0008488     0.000001917      3.49      4.00      3.25
   SRCPARAM L0008489     0.000001917      3.49      4.00      3.25
   SRCPARAM L0008490     0.000001917      3.49      4.00      3.25
   SRCPARAM L0008491     0.000001917      3.49      4.00      3.25
   SRCPARAM L0008492     0.000001917      3.49      4.00      3.25
   SRCPARAM L0008493     0.000001917      3.49      4.00      3.25
   SRCPARAM L0008494     0.000001917      3.49      4.00      3.25
   SRCPARAM L0008495     0.000001917      3.49      4.00      3.25
   SRCPARAM L0008496     0.000001917      3.49      4.00      3.25
   SRCPARAM L0008497     0.000001917      3.49      4.00      3.25
   SRCPARAM L0008498     0.000001917      3.49      4.00      3.25
   SRCPARAM L0008499     0.000001917      3.49      4.00      3.25
   SRCPARAM L0008500     0.000001917      3.49      4.00      3.25
   SRCPARAM L0008501     0.000001917      3.49      4.00      3.25
   SRCPARAM L0008502     0.000001917      3.49      4.00      3.25
   SRCPARAM L0008503     0.000001917      3.49      4.00      3.25
   SRCPARAM L0008504     0.000001917      3.49      4.00      3.25
   SRCPARAM L0008505     0.000001917      3.49      4.00      3.25
   SRCPARAM L0008506     0.000001917      3.49      4.00      3.25
   SRCPARAM L0008507     0.000001917      3.49      4.00      3.25
   SRCPARAM L0008508     0.000001917      3.49      4.00      3.25
   SRCPARAM L0008509     0.000001917      3.49      4.00      3.25
   SRCPARAM L0008510     0.000001917      3.49      4.00      3.25
   SRCPARAM L0008511     0.000001917      3.49      4.00      3.25
   SRCPARAM L0008512     0.000001917      3.49      4.00      3.25
   SRCPARAM L0008513     0.000001917      3.49      4.00      3.25
   SRCPARAM L0008514     0.000001917      3.49      4.00      3.25
** ------------------------------------------------------------------
** LINE VOLUME Source ID = SLINE13
   SRCPARAM L0008515     0.000002112      3.49      4.00      3.25
   SRCPARAM L0008516     0.000002112      3.49      4.00      3.25
   SRCPARAM L0008517     0.000002112      3.49      4.00      3.25
   SRCPARAM L0008518     0.000002112      3.49      4.00      3.25
   SRCPARAM L0008519     0.000002112      3.49      4.00      3.25
   SRCPARAM L0008520     0.000002112      3.49      4.00      3.25
   SRCPARAM L0008521     0.000002112      3.49      4.00      3.25
   SRCPARAM L0008522     0.000002112      3.49      4.00      3.25
   SRCPARAM L0008523     0.000002112      3.49      4.00      3.25
   SRCPARAM L0008524     0.000002112      3.49      4.00      3.25
   SRCPARAM L0008525     0.000002112      3.49      4.00      3.25
   SRCPARAM L0008526     0.000002112      3.49      4.00      3.25
   SRCPARAM L0008527     0.000002112      3.49      4.00      3.25
   SRCPARAM L0008528     0.000002112      3.49      4.00      3.25
   SRCPARAM L0008529     0.000002112      3.49      4.00      3.25
   SRCPARAM L0008530     0.000002112      3.49      4.00      3.25
   SRCPARAM L0008531     0.000002112      3.49      4.00      3.25
   SRCPARAM L0008532     0.000002112      3.49      4.00      3.25
   SRCPARAM L0008533     0.000002112      3.49      4.00      3.25
   SRCPARAM L0008534     0.000002112      3.49      4.00      3.25
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   SRCPARAM L0008535     0.000002112      3.49      4.00      3.25
   SRCPARAM L0008536     0.000002112      3.49      4.00      3.25
   SRCPARAM L0008537     0.000002112      3.49      4.00      3.25
   SRCPARAM L0008538     0.000002112      3.49      4.00      3.25
   SRCPARAM L0008539     0.000002112      3.49      4.00      3.25
   SRCPARAM L0008540     0.000002112      3.49      4.00      3.25
   SRCPARAM L0008541     0.000002112      3.49      4.00      3.25
   SRCPARAM L0008542     0.000002112      3.49      4.00      3.25
   SRCPARAM L0008543     0.000002112      3.49      4.00      3.25
   SRCPARAM L0008544     0.000002112      3.49      4.00      3.25
   SRCPARAM L0008545     0.000002112      3.49      4.00      3.25
   SRCPARAM L0008546     0.000002112      3.49      4.00      3.25
   SRCPARAM L0008547     0.000002112      3.49      4.00      3.25
   SRCPARAM L0008548     0.000002112      3.49      4.00      3.25
   SRCPARAM L0008549     0.000002112      3.49      4.00      3.25
   SRCPARAM L0008550     0.000002112      3.49      4.00      3.25
   SRCPARAM L0008551     0.000002112      3.49      4.00      3.25
** ----------------------------------------------------------------------
   URBANSRC ALL
   SRCGROUP ALL
SO FINISHED
**
**************************************
** AERMOD Receptor Pathway
**************************************
**
**
RE STARTING
   INCLUDED ProjectAB2.rou
RE FINISHED
**
**************************************
** AERMOD Meteorology Pathway
**************************************
**
**
ME STARTING
   SURFFILE ..\RedlandsADJU\RDLD_V9_ADJU\RDLD_v9.SFC
   PROFFILE ..\RedlandsADJU\RDLD_V9_ADJU\RDLD_v9.PFL
   SURFDATA 3171 2012
   UAIRDATA 3190 2012
   SITEDATA 99999 2012
   PROFBASE 481.0 METERS
ME FINISHED
**
**************************************
** AERMOD Output Pathway
**************************************
**
**
OU STARTING
```

```
** Auto-Generated Plotfiles
   PLOTFILE PERIOD ALL PROJECTAB2.AD\PE00GALL.PLT 31
   SUMMFILE ProjectAB2.sum
OU FINISHED


  *** Message Summary For AERMOD Model Setup ***

  --------- Summary of Total Messages --------

 A Total of            0 Fatal Error Message(s)
 A Total of            2 Warning Message(s)
 A Total of            0 Informational Message(s)


    ******** FATAL ERROR MESSAGES ********
               ***  NONE  ***


    ********   WARNING MESSAGES   ********
 ME W186    3053       MEOPEN: THRESH_1MIN 1-min ASOS wind speed threshold used          0.50
 ME W187    3053       MEOPEN: ADJ_U* Option for Low Winds used in AERMET

 *********************************
 *** SETUP Finishes Successfully ***
 *********************************
```

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

                                        ***   MODEL SETUP OPTIONS SUMMARY   ***
- -

**Model Is Setup For Calculation of Average CONCentration Values.

  -- DEPOSITION LOGIC --
**NO GAS DEPOSITION Data Provided.
**NO PARTICLE DEPOSITION Data Provided.
**Model Uses NO DRY DEPLETION. DRYDPLT = F
**Model Uses NO WET DEPLETION. WETDPLT = F

**Model Uses URBAN Dispersion Algorithm for the SBL for 1369 Source(s),
  for Total of   1 Urban Area(s):
  Urban Population =   2035210.0 ; Urban Roughness Length = 1.000 m

**Model Uses Regulatory DEFAULT Options:
       1. Stack-tip Downwash.
       2. Model Accounts for ELEVated Terrain Effects.
       3. Use Calms Processing Routine.
       4. Use Missing Data Processing Routine.
       5. No Exponential Decay.
       6. Urban Roughness Length of 1.0 Meter Assumed.

**Other Options Specified:
       ADJ_U*   - Use ADJ_U* BETA option for SBL in AERMET
       TEMP_Sub - Meteorological data includes TEMP substitutions

**Model Assumes No FLAGPOLE Receptor Heights.

**The User Specified a Pollutant Type of: DPM

**Model Calculates PERIOD Averages Only

**This Run Includes: 1369 Source(s);   1 Source Group(s); and   1506 Receptor(s)

              with: 0 POINT(s), including
                         0 POINTCAP(s) and   0 POINTHOR(s)
               and: 1369 VOLUME source(s)
               and: 0 AREA type source(s)
               and: 0 LINE source(s)
               and: 0 OPENPIT source(s)
               and: 0 BUOYANT LINE source(s) with   0 line(s)

**Model Set To Continue RUNning After the Setup Testing.

```
**The AERMET Input Meteorological Data Version Date:  16216

**Output Options Selected:
         Model Outputs Tables of PERIOD Averages by Receptor
         Model Outputs External File(s) of High Values for Plotting (PLOTFILE Keyword)
         Model Outputs Separate Summary File of High Ranked Values (SUMMFILE Keyword)

**NOTE:  The Following Flags May Appear Following CONC Values:  c for Calm Hours
                                                                m for Missing Hours
                                                                b for Both Calm and Missing Hours

**Misc. Inputs:  Base Elev. for Pot. Temp. Profile (m MSL) =   481.00 ;  Decay Coef. =    0.000     ;  Rot. Angle =     0.0
                 Emission Units = GRAMS/SEC                             ;  Emission Rate Unit Factor =   0.10000E+07
                 Output Units   = MICROGRAMS/M**3

**Approximate Storage Requirements of Model =      4.2 MB of RAM.

**Detailed Error/Message File:   ProjectAB2.err
**File for Summary of Results:   ProjectAB2.sum
```

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0007183	0	0.19060E-06	480749.7	3774134.1	363.7	3.49	4.00	3.25	YES	
L0007184	0	0.19060E-06	480758.2	3774133.4	363.9	3.49	4.00	3.25	YES	
L0007185	0	0.19060E-06	480766.8	3774132.7	364.0	3.49	4.00	3.25	YES	
L0007186	0	0.19060E-06	480775.4	3774132.0	364.0	3.49	4.00	3.25	YES	
L0007187	0	0.19060E-06	480783.9	3774131.3	364.0	3.49	4.00	3.25	YES	
L0007188	0	0.19060E-06	480792.5	3774130.6	364.0	3.49	4.00	3.25	YES	
L0007189	0	0.19060E-06	480801.0	3774129.9	364.0	3.49	4.00	3.25	YES	
L0007190	0	0.19060E-06	480809.6	3774129.2	364.0	3.49	4.00	3.25	YES	
L0007191	0	0.19060E-06	480818.2	3774128.5	364.0	3.49	4.00	3.25	YES	
L0007192	0	0.19060E-06	480826.7	3774127.8	364.1	3.49	4.00	3.25	YES	
L0007193	0	0.19060E-06	480835.3	3774127.1	364.2	3.49	4.00	3.25	YES	
L0007194	0	0.19060E-06	480843.9	3774126.4	364.3	3.49	4.00	3.25	YES	
L0007195	0	0.19060E-06	480852.4	3774125.7	364.4	3.49	4.00	3.25	YES	
L0007196	0	0.19060E-06	480861.0	3774125.0	364.6	3.49	4.00	3.25	YES	
L0007197	0	0.19060E-06	480869.5	3774124.3	364.8	3.49	4.00	3.25	YES	
L0007198	0	0.19060E-06	480878.1	3774123.6	365.0	3.49	4.00	3.25	YES	
L0007199	0	0.19060E-06	480886.7	3774122.9	365.0	3.49	4.00	3.25	YES	
L0007200	0	0.19060E-06	480895.2	3774122.2	365.0	3.49	4.00	3.25	YES	
L0007201	0	0.19060E-06	480903.8	3774121.5	365.0	3.49	4.00	3.25	YES	
L0007202	0	0.19060E-06	480912.3	3774120.8	365.0	3.49	4.00	3.25	YES	
L0007203	0	0.19060E-06	480920.9	3774120.1	365.0	3.49	4.00	3.25	YES	
L0007204	0	0.19060E-06	480929.5	3774119.4	365.0	3.49	4.00	3.25	YES	
L0007205	0	0.19060E-06	480938.0	3774118.7	365.0	3.49	4.00	3.25	YES	
L0007206	0	0.19060E-06	480946.6	3774118.0	365.2	3.49	4.00	3.25	YES	
L0007207	0	0.19060E-06	480955.2	3774117.3	365.5	3.49	4.00	3.25	YES	
L0007208	0	0.19060E-06	480963.7	3774116.6	365.8	3.49	4.00	3.25	YES	
L0007209	0	0.19060E-06	480972.3	3774115.9	366.0	3.49	4.00	3.25	YES	
L0007210	0	0.19060E-06	480980.8	3774115.2	366.0	3.49	4.00	3.25	YES	
L0007211	0	0.19060E-06	480989.4	3774114.5	366.0	3.49	4.00	3.25	YES	
L0007212	0	0.19060E-06	480998.0	3774113.8	366.0	3.49	4.00	3.25	YES	
L0007213	0	0.19060E-06	481006.5	3774113.1	366.0	3.49	4.00	3.25	YES	
L0007214	0	0.19060E-06	481015.1	3774112.4	366.0	3.49	4.00	3.25	YES	
L0007215	0	0.19060E-06	481023.6	3774111.7	366.0	3.49	4.00	3.25	YES	
L0007216	0	0.19060E-06	481032.2	3774111.0	366.1	3.49	4.00	3.25	YES	
L0007217	0	0.19060E-06	481040.8	3774110.3	366.4	3.49	4.00	3.25	YES	
L0007218	0	0.19060E-06	481049.3	3774109.6	366.7	3.49	4.00	3.25	YES	
L0007219	0	0.19060E-06	481057.9	3774108.9	366.9	3.49	4.00	3.25	YES	
L0007220	0	0.19060E-06	481066.5	3774108.4	367.0	3.49	4.00	3.25	YES	
L0007221	0	0.19060E-06	481075.0	3774107.9	367.0	3.49	4.00	3.25	YES	
L0007222	0	0.19060E-06	481083.6	3774107.5	367.0	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0007223	0	0.19060E-06	481092.2	3774107.1	367.0	3.49	4.00	3.25	YES	
L0007224	0	0.19060E-06	481100.8	3774106.7	367.0	3.49	4.00	3.25	YES	
L0007225	0	0.19060E-06	481109.4	3774106.3	367.0	3.49	4.00	3.25	YES	
L0007226	0	0.19060E-06	481117.9	3774105.9	367.0	3.49	4.00	3.25	YES	
L0007227	0	0.19060E-06	481126.5	3774105.4	367.2	3.49	4.00	3.25	YES	
L0007228	0	0.19060E-06	481135.1	3774105.0	367.5	3.49	4.00	3.25	YES	
L0007229	0	0.19060E-06	481143.7	3774104.6	367.8	3.49	4.00	3.25	YES	
L0007230	0	0.19060E-06	481152.3	3774104.2	368.0	3.49	4.00	3.25	YES	
L0007231	0	0.19060E-06	481160.8	3774104.6	368.0	3.49	4.00	3.25	YES	
L0007232	0	0.19060E-06	481169.4	3774105.2	368.0	3.49	4.00	3.25	YES	
L0007233	0	0.19060E-06	481178.0	3774105.8	368.0	3.49	4.00	3.25	YES	
L0007234	0	0.19060E-06	481186.5	3774106.5	368.0	3.49	4.00	3.25	YES	
L0007235	0	0.19060E-06	481195.1	3774107.1	368.0	3.49	4.00	3.25	YES	
L0007236	0	0.19060E-06	481203.7	3774107.7	368.0	3.49	4.00	3.25	YES	
L0007237	0	0.19060E-06	481212.2	3774108.3	368.1	3.49	4.00	3.25	YES	
L0007238	0	0.19060E-06	481220.8	3774108.9	368.4	3.49	4.00	3.25	YES	
L0007239	0	0.19060E-06	481229.4	3774109.5	368.7	3.49	4.00	3.25	YES	
L0007240	0	0.19060E-06	481237.9	3774110.1	368.9	3.49	4.00	3.25	YES	
L0007241	0	0.19060E-06	481246.5	3774110.8	369.0	3.49	4.00	3.25	YES	
L0007242	0	0.19060E-06	481255.1	3774111.4	369.0	3.49	4.00	3.25	YES	
L0007243	0	0.19060E-06	481263.6	3774112.0	369.0	3.49	4.00	3.25	YES	
L0007244	0	0.19060E-06	481272.2	3774112.6	369.0	3.49	4.00	3.25	YES	
L0007245	0	0.19060E-06	481280.8	3774113.2	369.0	3.49	4.00	3.25	YES	
L0007246	0	0.19060E-06	481289.3	3774113.8	369.0	3.49	4.00	3.25	YES	
L0007247	0	0.19060E-06	481297.9	3774114.5	369.0	3.49	4.00	3.25	YES	
L0007248	0	0.19060E-06	481306.5	3774115.1	369.2	3.49	4.00	3.25	YES	
L0007249	0	0.19060E-06	481315.1	3774115.7	369.5	3.49	4.00	3.25	YES	
L0007250	0	0.19060E-06	481323.6	3774116.3	369.8	3.49	4.00	3.25	YES	
L0007251	0	0.19060E-06	481332.2	3774116.9	370.0	3.49	4.00	3.25	YES	
L0007252	0	0.19060E-06	481340.8	3774117.5	370.0	3.49	4.00	3.25	YES	
L0007253	0	0.19060E-06	481349.3	3774118.1	370.0	3.49	4.00	3.25	YES	
L0007254	0	0.19060E-06	481357.9	3774118.8	370.0	3.49	4.00	3.25	YES	
L0007255	0	0.19060E-06	481366.5	3774119.4	370.0	3.49	4.00	3.25	YES	
L0007256	0	0.19060E-06	481375.0	3774120.0	370.0	3.49	4.00	3.25	YES	
L0007257	0	0.19060E-06	481383.6	3774120.6	370.0	3.49	4.00	3.25	YES	
L0007258	0	0.19060E-06	481392.2	3774121.2	370.1	3.49	4.00	3.25	YES	
L0007259	0	0.19060E-06	481400.7	3774121.8	370.4	3.49	4.00	3.25	YES	
L0007260	0	0.19060E-06	481409.3	3774122.5	370.7	3.49	4.00	3.25	YES	
L0007261	0	0.19060E-06	481417.9	3774123.1	370.9	3.49	4.00	3.25	YES	
L0007262	0	0.19060E-06	481426.4	3774123.7	371.0	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0007263	0	0.19060E-06	481435.0	3774124.3	371.0	3.49	4.00	3.25	YES	
L0007264	0	0.19060E-06	481443.6	3774124.9	371.0	3.49	4.00	3.25	YES	
L0007265	0	0.19060E-06	481452.1	3774125.5	371.0	3.49	4.00	3.25	YES	
L0007266	0	0.19060E-06	481460.7	3774126.1	371.1	3.49	4.00	3.25	YES	
L0007267	0	0.19060E-06	481469.3	3774126.8	371.2	3.49	4.00	3.25	YES	
L0007268	0	0.19060E-06	481477.8	3774127.4	371.3	3.49	4.00	3.25	YES	
L0007269	0	0.19060E-06	481486.4	3774128.0	371.4	3.49	4.00	3.25	YES	
L0007270	0	0.19060E-06	481495.0	3774128.6	371.6	3.49	4.00	3.25	YES	
L0007271	0	0.19060E-06	481503.5	3774129.2	371.8	3.49	4.00	3.25	YES	
L0007272	0	0.19060E-06	481512.1	3774129.8	372.0	3.49	4.00	3.25	YES	
L0007273	0	0.19060E-06	481520.7	3774130.5	372.0	3.49	4.00	3.25	YES	
L0007274	0	0.19060E-06	481529.3	3774131.1	372.0	3.49	4.00	3.25	YES	
L0007275	0	0.19060E-06	481537.8	3774131.7	372.0	3.49	4.00	3.25	YES	
L0007276	0	0.19060E-06	481546.4	3774132.3	372.0	3.49	4.00	3.25	YES	
L0007277	0	0.19060E-06	481555.0	3774132.9	372.1	3.49	4.00	3.25	YES	
L0007278	0	0.19060E-06	481563.5	3774133.5	372.1	3.49	4.00	3.25	YES	
L0007279	0	0.19060E-06	481572.1	3774134.1	372.1	3.49	4.00	3.25	YES	
L0007280	0	0.78290E-07	479144.0	3771580.1	352.0	3.49	4.00	3.25	YES	
L0007281	0	0.78290E-07	479152.5	3771580.1	352.0	3.49	4.00	3.25	YES	
L0007282	0	0.78290E-07	479161.1	3771580.0	352.0	3.49	4.00	3.25	YES	
L0007283	0	0.78290E-07	479169.7	3771580.0	352.0	3.49	4.00	3.25	YES	
L0007284	0	0.78290E-07	479178.3	3771579.9	352.3	3.49	4.00	3.25	YES	
L0007285	0	0.78290E-07	479186.9	3771579.9	352.6	3.49	4.00	3.25	YES	
L0007286	0	0.78290E-07	479195.5	3771579.8	352.9	3.49	4.00	3.25	YES	
L0007287	0	0.78290E-07	479204.1	3771579.8	353.0	3.49	4.00	3.25	YES	
L0007288	0	0.78290E-07	479212.7	3771579.7	353.0	3.49	4.00	3.25	YES	
L0007289	0	0.78290E-07	479221.3	3771579.7	353.0	3.49	4.00	3.25	YES	
L0007290	0	0.78290E-07	479229.8	3771579.6	353.0	3.49	4.00	3.25	YES	
L0007291	0	0.78290E-07	479238.4	3771579.6	353.1	3.49	4.00	3.25	YES	
L0007292	0	0.78290E-07	479247.0	3771579.5	353.1	3.49	4.00	3.25	YES	
L0007293	0	0.78290E-07	479255.6	3771579.5	353.2	3.49	4.00	3.25	YES	
L0007294	0	0.78290E-07	479264.2	3771579.4	353.3	3.49	4.00	3.25	YES	
L0007295	0	0.78290E-07	479272.8	3771579.4	353.6	3.49	4.00	3.25	YES	
L0007296	0	0.78290E-07	479281.4	3771579.3	353.8	3.49	4.00	3.25	YES	
L0007297	0	0.78290E-07	479290.0	3771579.3	354.0	3.49	4.00	3.25	YES	
L0007298	0	0.78290E-07	479298.6	3771579.2	354.0	3.49	4.00	3.25	YES	
L0007299	0	0.78290E-07	479307.2	3771579.2	354.0	3.49	4.00	3.25	YES	
L0007300	0	0.78290E-07	479315.7	3771579.2	354.0	3.49	4.00	3.25	YES	
L0007301	0	0.78290E-07	479324.3	3771579.1	354.0	3.49	4.00	3.25	YES	
L0007302	0	0.78290E-07	479332.9	3771579.1	354.0	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0007303	0	0.78290E-07	479341.5	3771579.0	354.0	3.49	4.00	3.25	YES	
L0007304	0	0.78290E-07	479350.1	3771579.0	354.0	3.49	4.00	3.25	YES	
L0007305	0	0.78290E-07	479358.7	3771578.9	354.3	3.49	4.00	3.25	YES	
L0007306	0	0.78290E-07	479367.3	3771578.9	354.6	3.49	4.00	3.25	YES	
L0007307	0	0.78290E-07	479375.9	3771578.8	354.9	3.49	4.00	3.25	YES	
L0007308	0	0.78290E-07	479384.5	3771578.8	355.0	3.49	4.00	3.25	YES	
L0007309	0	0.78290E-07	479393.1	3771578.7	355.0	3.49	4.00	3.25	YES	
L0007310	0	0.78290E-07	479401.6	3771578.7	355.0	3.49	4.00	3.25	YES	
L0007311	0	0.78290E-07	479410.2	3771578.6	355.0	3.49	4.00	3.25	YES	
L0007312	0	0.78290E-07	479418.8	3771578.6	355.1	3.49	4.00	3.25	YES	
L0007313	0	0.78290E-07	479427.4	3771578.5	355.2	3.49	4.00	3.25	YES	
L0007314	0	0.78290E-07	479436.0	3771578.5	355.2	3.49	4.00	3.25	YES	
L0007315	0	0.78290E-07	479444.6	3771578.4	355.4	3.49	4.00	3.25	YES	
L0007316	0	0.78290E-07	479453.2	3771578.4	355.6	3.49	4.00	3.25	YES	
L0007317	0	0.78290E-07	479461.8	3771578.3	355.8	3.49	4.00	3.25	YES	
L0007318	0	0.78290E-07	479470.4	3771578.3	356.0	3.49	4.00	3.25	YES	
L0007319	0	0.78290E-07	479479.0	3771578.2	356.0	3.49	4.00	3.25	YES	
L0007320	0	0.78290E-07	479487.5	3771578.2	356.0	3.49	4.00	3.25	YES	
L0007321	0	0.78290E-07	479496.1	3771578.1	356.0	3.49	4.00	3.25	YES	
L0007322	0	0.78290E-07	479504.7	3771578.1	356.0	3.49	4.00	3.25	YES	
L0007323	0	0.78290E-07	479513.3	3771578.0	356.0	3.49	4.00	3.25	YES	
L0007324	0	0.78290E-07	479521.9	3771578.0	356.0	3.49	4.00	3.25	YES	
L0007325	0	0.78290E-07	479530.5	3771577.9	356.0	3.49	4.00	3.25	YES	
L0007326	0	0.78290E-07	479539.1	3771577.9	356.3	3.49	4.00	3.25	YES	
L0007327	0	0.78290E-07	479547.7	3771577.9	356.6	3.49	4.00	3.25	YES	
L0007328	0	0.78290E-07	479556.3	3771577.8	356.9	3.49	4.00	3.25	YES	
L0007329	0	0.78290E-07	479564.9	3771577.8	357.0	3.49	4.00	3.25	YES	
L0007330	0	0.78290E-07	479573.4	3771577.7	357.0	3.49	4.00	3.25	YES	
L0007331	0	0.78290E-07	479582.0	3771577.7	357.0	3.49	4.00	3.25	YES	
L0007332	0	0.78290E-07	479590.6	3771577.6	357.0	3.49	4.00	3.25	YES	
L0007333	0	0.78290E-07	479599.2	3771577.6	357.0	3.49	4.00	3.25	YES	
L0007334	0	0.78290E-07	479607.8	3771577.5	357.0	3.49	4.00	3.25	YES	
L0007335	0	0.78290E-07	479616.4	3771577.5	357.0	3.49	4.00	3.25	YES	
L0007336	0	0.78290E-07	479625.0	3771577.4	357.2	3.49	4.00	3.25	YES	
L0007337	0	0.78290E-07	479633.6	3771577.4	357.5	3.49	4.00	3.25	YES	
L0007338	0	0.78290E-07	479642.2	3771577.3	357.7	3.49	4.00	3.25	YES	
L0007339	0	0.78290E-07	479650.8	3771577.3	358.0	3.49	4.00	3.25	YES	
L0007340	0	0.78290E-07	479659.3	3771577.2	358.0	3.49	4.00	3.25	YES	
L0007341	0	0.78290E-07	479667.9	3771577.2	358.0	3.49	4.00	3.25	YES	
L0007342	0	0.78290E-07	479676.5	3771577.1	358.0	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0007343	0	0.78290E-07	479685.1	3771577.1	358.0	3.49	4.00	3.25	YES	
L0007344	0	0.78290E-07	479693.7	3771577.0	358.0	3.49	4.00	3.25	YES	
L0007345	0	0.78290E-07	479702.3	3771577.0	358.0	3.49	4.00	3.25	YES	
L0007346	0	0.78290E-07	479710.9	3771576.9	358.0	3.49	4.00	3.25	YES	
L0007347	0	0.78290E-07	479719.5	3771576.9	358.3	3.49	4.00	3.25	YES	
L0007348	0	0.78290E-07	479728.1	3771576.8	358.6	3.49	4.00	3.25	YES	
L0007349	0	0.78290E-07	479736.7	3771576.8	358.9	3.49	4.00	3.25	YES	
L0007350	0	0.78290E-07	479745.2	3771576.7	359.0	3.49	4.00	3.25	YES	
L0007351	0	0.78290E-07	479753.8	3771576.7	359.0	3.49	4.00	3.25	YES	
L0007352	0	0.78290E-07	479762.4	3771576.6	359.0	3.49	4.00	3.25	YES	
L0007353	0	0.78290E-07	479771.0	3771576.6	359.0	3.49	4.00	3.25	YES	
L0007354	0	0.78290E-07	479779.6	3771576.5	359.3	3.49	4.00	3.25	YES	
L0007355	0	0.78290E-07	479788.2	3771576.5	359.6	3.49	4.00	3.25	YES	
L0007356	0	0.78290E-07	479796.8	3771576.5	359.9	3.49	4.00	3.25	YES	
L0007357	0	0.78290E-07	479805.4	3771576.4	360.0	3.49	4.00	3.25	YES	
L0007358	0	0.78290E-07	479814.0	3771576.4	360.0	3.49	4.00	3.25	YES	
L0007359	0	0.78290E-07	479822.5	3771576.3	360.0	3.49	4.00	3.25	YES	
L0007360	0	0.78290E-07	479831.1	3771576.3	360.0	3.49	4.00	3.25	YES	
L0007361	0	0.78290E-07	479839.7	3771576.2	360.0	3.49	4.00	3.25	YES	
L0007362	0	0.78290E-07	479848.3	3771576.2	360.0	3.49	4.00	3.25	YES	
L0007363	0	0.78290E-07	479856.9	3771576.1	360.0	3.49	4.00	3.25	YES	
L0007364	0	0.78290E-07	479865.5	3771576.1	360.2	3.49	4.00	3.25	YES	
L0007365	0	0.78290E-07	479874.1	3771576.0	360.5	3.49	4.00	3.25	YES	
L0007366	0	0.78290E-07	479882.7	3771576.0	360.8	3.49	4.00	3.25	YES	
L0007367	0	0.78290E-07	479891.3	3771575.9	361.0	3.49	4.00	3.25	YES	
L0007368	0	0.78290E-07	479899.9	3771575.9	361.0	3.49	4.00	3.25	YES	
L0007369	0	0.78290E-07	479908.4	3771575.8	361.0	3.49	4.00	3.25	YES	
L0007370	0	0.78290E-07	479917.0	3771575.8	361.0	3.49	4.00	3.25	YES	
L0007371	0	0.78290E-07	479925.6	3771575.7	361.2	3.49	4.00	3.25	YES	
L0007372	0	0.78290E-07	479934.2	3771575.7	361.5	3.49	4.00	3.25	YES	
L0007373	0	0.78290E-07	479942.8	3771575.6	361.8	3.49	4.00	3.25	YES	
L0007374	0	0.78290E-07	479951.3	3771576.4	362.0	3.49	4.00	3.25	YES	
L0007375	0	0.78290E-07	479959.8	3771577.9	362.0	3.49	4.00	3.25	YES	
L0007376	0	0.78290E-07	479968.3	3771579.1	362.0	3.49	4.00	3.25	YES	
L0007377	0	0.78290E-07	479976.8	3771579.1	362.0	3.49	4.00	3.25	YES	
L0007378	0	0.78290E-07	479985.4	3771579.1	362.0	3.49	4.00	3.25	YES	
L0007379	0	0.78290E-07	479994.0	3771579.1	362.0	3.49	4.00	3.25	YES	
L0007380	0	0.78290E-07	480002.6	3771579.1	362.0	3.49	4.00	3.25	YES	
L0007381	0	0.78290E-07	480011.2	3771579.1	362.0	3.49	4.00	3.25	YES	
L0007382	0	0.78290E-07	480019.8	3771579.1	362.3	3.49	4.00	3.25	YES	

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*** VOLUME SOURCE DATA ***

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L0007383	0	0.78290E-07	480028.4	3771579.1	362.6	3.49	4.00	3.25	YES	
L0007384	0	0.78290E-07	480037.0	3771579.1	362.9	3.49	4.00	3.25	YES	
L0007385	0	0.78290E-07	480045.6	3771579.1	363.0	3.49	4.00	3.25	YES	
L0007386	0	0.78290E-07	480054.2	3771579.0	363.0	3.49	4.00	3.25	YES	
L0007387	0	0.78290E-07	480062.7	3771579.0	363.0	3.49	4.00	3.25	YES	
L0007388	0	0.78290E-07	480071.3	3771579.0	363.0	3.49	4.00	3.25	YES	
L0007389	0	0.78290E-07	480079.9	3771579.0	363.1	3.49	4.00	3.25	YES	
L0007390	0	0.78290E-07	480088.5	3771579.0	363.2	3.49	4.00	3.25	YES	
L0007391	0	0.78290E-07	480097.1	3771579.0	363.2	3.49	4.00	3.25	YES	
L0007392	0	0.78290E-07	480105.7	3771579.0	363.4	3.49	4.00	3.25	YES	
L0007393	0	0.78290E-07	480114.3	3771579.0	363.6	3.49	4.00	3.25	YES	
L0007394	0	0.78290E-07	480122.9	3771579.0	363.8	3.49	4.00	3.25	YES	
L0007395	0	0.78290E-07	480131.5	3771579.0	364.0	3.49	4.00	3.25	YES	
L0007396	0	0.78290E-07	480140.1	3771579.0	364.0	3.49	4.00	3.25	YES	
L0007397	0	0.78290E-07	480148.6	3771579.0	364.0	3.49	4.00	3.25	YES	
L0007398	0	0.78290E-07	480157.2	3771579.0	364.0	3.49	4.00	3.25	YES	
L0007399	0	0.78290E-07	480165.8	3771579.0	364.2	3.49	4.00	3.25	YES	
L0007400	0	0.78290E-07	480174.4	3771579.0	364.5	3.49	4.00	3.25	YES	
L0007401	0	0.78290E-07	480183.0	3771579.0	364.8	3.49	4.00	3.25	YES	
L0007402	0	0.78290E-07	480191.6	3771579.0	365.0	3.49	4.00	3.25	YES	
L0007403	0	0.78290E-07	480200.2	3771579.0	365.0	3.49	4.00	3.25	YES	
L0007404	0	0.78290E-07	480208.8	3771578.9	365.0	3.49	4.00	3.25	YES	
L0007405	0	0.78290E-07	480217.4	3771578.9	365.0	3.49	4.00	3.25	YES	
L0007406	0	0.78290E-07	480226.0	3771578.9	365.2	3.49	4.00	3.25	YES	
L0007407	0	0.78290E-07	480234.5	3771578.9	365.5	3.49	4.00	3.25	YES	
L0007408	0	0.78290E-07	480243.1	3771578.9	365.8	3.49	4.00	3.25	YES	
L0007409	0	0.78290E-07	480251.7	3771578.9	366.0	3.49	4.00	3.25	YES	
L0007410	0	0.78290E-07	480260.3	3771578.9	366.0	3.49	4.00	3.25	YES	
L0007411	0	0.78290E-07	480268.9	3771578.9	366.0	3.49	4.00	3.25	YES	
L0007412	0	0.78290E-07	480277.5	3771578.9	366.0	3.49	4.00	3.25	YES	
L0007413	0	0.78290E-07	480286.1	3771578.9	366.0	3.49	4.00	3.25	YES	
L0007414	0	0.78290E-07	480294.7	3771578.9	366.0	3.49	4.00	3.25	YES	
L0007415	0	0.78290E-07	480303.3	3771578.9	366.0	3.49	4.00	3.25	YES	
L0007416	0	0.78290E-07	480311.9	3771578.9	366.1	3.49	4.00	3.25	YES	
L0007417	0	0.78290E-07	480320.4	3771578.9	366.4	3.49	4.00	3.25	YES	
L0007418	0	0.78290E-07	480329.0	3771578.9	366.6	3.49	4.00	3.25	YES	
L0007419	0	0.78290E-07	480337.6	3771578.9	366.9	3.49	4.00	3.25	YES	
L0007420	0	0.78290E-07	480346.2	3771578.9	367.0	3.49	4.00	3.25	YES	
L0007421	0	0.78290E-07	480354.8	3771578.9	367.0	3.49	4.00	3.25	YES	
L0007422	0	0.78290E-07	480363.4	3771578.8	367.0	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

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L0007423	0	0.78290E-07	480372.0	3771578.8	367.1	3.49	4.00	3.25	YES	
L0007424	0	0.78290E-07	480380.6	3771578.8	367.4	3.49	4.00	3.25	YES	
L0007425	0	0.78290E-07	480389.2	3771578.8	367.6	3.49	4.00	3.25	YES	
L0007426	0	0.78290E-07	480397.8	3771578.8	367.9	3.49	4.00	3.25	YES	
L0007427	0	0.78290E-07	480406.3	3771578.8	368.0	3.49	4.00	3.25	YES	
L0007428	0	0.78290E-07	480414.9	3771578.8	368.0	3.49	4.00	3.25	YES	
L0007429	0	0.78290E-07	480423.5	3771578.8	368.0	3.49	4.00	3.25	YES	
L0007430	0	0.78290E-07	480432.1	3771578.8	368.1	3.49	4.00	3.25	YES	
L0007431	0	0.78290E-07	480440.7	3771578.8	368.4	3.49	4.00	3.25	YES	
L0007432	0	0.78290E-07	480449.3	3771578.8	368.7	3.49	4.00	3.25	YES	
L0007433	0	0.78290E-07	480457.9	3771578.8	368.9	3.49	4.00	3.25	YES	
L0007434	0	0.78290E-07	480466.5	3771578.8	369.0	3.49	4.00	3.25	YES	
L0007435	0	0.78290E-07	480475.1	3771578.8	369.0	3.49	4.00	3.25	YES	
L0007436	0	0.78290E-07	480483.7	3771578.8	369.0	3.49	4.00	3.25	YES	
L0007437	0	0.78290E-07	480492.2	3771578.8	369.1	3.49	4.00	3.25	YES	
L0007438	0	0.78290E-07	480500.8	3771578.8	369.4	3.49	4.00	3.25	YES	
L0007439	0	0.78290E-07	480509.4	3771578.8	369.7	3.49	4.00	3.25	YES	
L0007440	0	0.78290E-07	480518.0	3771578.8	369.9	3.49	4.00	3.25	YES	
L0007441	0	0.78290E-07	480526.6	3771578.7	370.0	3.49	4.00	3.25	YES	
L0007442	0	0.78290E-07	480535.2	3771578.7	370.0	3.49	4.00	3.25	YES	
L0007443	0	0.78290E-07	480543.8	3771578.7	370.0	3.49	4.00	3.25	YES	
L0007444	0	0.78290E-07	480552.4	3771578.7	370.0	3.49	4.00	3.25	YES	
L0007445	0	0.78290E-07	480561.0	3771578.7	370.0	3.49	4.00	3.25	YES	
L0007446	0	0.78290E-07	480569.6	3771578.7	370.0	3.49	4.00	3.25	YES	
L0007447	0	0.78290E-07	480578.1	3771578.7	370.0	3.49	4.00	3.25	YES	
L0007448	0	0.78290E-07	480586.7	3771578.7	370.2	3.49	4.00	3.25	YES	
L0007449	0	0.78290E-07	480595.3	3771578.7	370.5	3.49	4.00	3.25	YES	
L0007450	0	0.78290E-07	480603.9	3771578.7	370.8	3.49	4.00	3.25	YES	
L0007451	0	0.78290E-07	480612.5	3771578.7	371.0	3.49	4.00	3.25	YES	
L0007452	0	0.78290E-07	480621.1	3771578.7	371.0	3.49	4.00	3.25	YES	
L0007453	0	0.78290E-07	480629.7	3771578.7	371.0	3.49	4.00	3.25	YES	
L0007454	0	0.78290E-07	480638.3	3771578.7	371.0	3.49	4.00	3.25	YES	
L0007455	0	0.78290E-07	480646.9	3771578.7	371.2	3.49	4.00	3.25	YES	
L0007456	0	0.78290E-07	480655.5	3771578.7	371.5	3.49	4.00	3.25	YES	
L0007457	0	0.78290E-07	480664.0	3771578.7	371.8	3.49	4.00	3.25	YES	
L0007458	0	0.78290E-07	480672.6	3771578.7	372.0	3.49	4.00	3.25	YES	
L0007459	0	0.78290E-07	480681.2	3771578.6	372.0	3.49	4.00	3.25	YES	
L0007460	0	0.78290E-07	480689.8	3771578.6	372.0	3.49	4.00	3.25	YES	
L0007461	0	0.78290E-07	480698.4	3771578.6	372.0	3.49	4.00	3.25	YES	
L0007462	0	0.78290E-07	480707.0	3771578.6	372.2	3.49	4.00	3.25	YES	

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L0007463	0	0.78290E-07	480715.6	3771578.6	372.5	3.49	4.00	3.25	YES	
L0007464	0	0.78290E-07	480724.2	3771578.6	372.8	3.49	4.00	3.25	YES	
L0007465	0	0.78290E-07	480732.8	3771578.6	373.0	3.49	4.00	3.25	YES	
L0007466	0	0.78290E-07	480741.4	3771578.6	373.0	3.49	4.00	3.25	YES	
L0007467	0	0.13300E-06	480745.7	3770768.6	374.0	3.49	4.00	3.25	YES	
L0007468	0	0.13300E-06	480754.0	3770766.6	374.0	3.49	4.00	3.25	YES	
L0007469	0	0.13300E-06	480762.4	3770764.6	374.1	3.49	4.00	3.25	YES	
L0007470	0	0.13300E-06	480770.7	3770762.6	374.4	3.49	4.00	3.25	YES	
L0007471	0	0.13300E-06	480779.1	3770760.6	374.6	3.49	4.00	3.25	YES	
L0007472	0	0.13300E-06	480787.5	3770758.6	374.9	3.49	4.00	3.25	YES	
L0007473	0	0.13300E-06	480795.8	3770756.6	375.0	3.49	4.00	3.25	YES	
L0007474	0	0.13300E-06	480804.2	3770755.1	375.0	3.49	4.00	3.25	YES	
L0007475	0	0.13300E-06	480812.8	3770755.1	375.0	3.49	4.00	3.25	YES	
L0007476	0	0.13300E-06	480821.4	3770755.0	375.1	3.49	4.00	3.25	YES	
L0007477	0	0.13300E-06	480830.0	3770755.0	375.3	3.49	4.00	3.25	YES	
L0007478	0	0.13300E-06	480838.6	3770754.9	375.6	3.49	4.00	3.25	YES	
L0007479	0	0.13300E-06	480847.2	3770754.9	375.9	3.49	4.00	3.25	YES	
L0007480	0	0.13300E-06	480855.8	3770754.9	376.0	3.49	4.00	3.25	YES	
L0007481	0	0.13300E-06	480864.4	3770754.8	376.0	3.49	4.00	3.25	YES	
L0007482	0	0.13300E-06	480872.9	3770754.8	376.0	3.49	4.00	3.25	YES	
L0007483	0	0.13300E-06	480881.5	3770754.8	376.1	3.49	4.00	3.25	YES	
L0007484	0	0.13300E-06	480890.1	3770754.7	376.3	3.49	4.00	3.25	YES	
L0007485	0	0.13300E-06	480898.7	3770754.7	376.6	3.49	4.00	3.25	YES	
L0007486	0	0.13300E-06	480907.3	3770754.7	376.9	3.49	4.00	3.25	YES	
L0007487	0	0.13300E-06	480915.9	3770754.6	377.0	3.49	4.00	3.25	YES	
L0007488	0	0.13300E-06	480924.5	3770754.6	377.0	3.49	4.00	3.25	YES	
L0007489	0	0.13300E-06	480933.1	3770754.6	377.0	3.49	4.00	3.25	YES	
L0007490	0	0.13300E-06	480941.7	3770754.5	377.1	3.49	4.00	3.25	YES	
L0007491	0	0.13300E-06	480950.3	3770754.5	377.3	3.49	4.00	3.25	YES	
L0007492	0	0.13300E-06	480958.8	3770754.5	377.6	3.49	4.00	3.25	YES	
L0007493	0	0.13300E-06	480967.4	3770754.4	377.9	3.49	4.00	3.25	YES	
L0007494	0	0.13300E-06	480976.0	3770754.4	378.0	3.49	4.00	3.25	YES	
L0007495	0	0.13300E-06	480984.6	3770754.3	378.0	3.49	4.00	3.25	YES	
L0007496	0	0.13300E-06	480993.2	3770754.3	378.0	3.49	4.00	3.25	YES	
L0007497	0	0.13300E-06	481001.8	3770754.3	378.1	3.49	4.00	3.25	YES	
L0007498	0	0.13300E-06	481010.4	3770754.2	378.4	3.49	4.00	3.25	YES	
L0007499	0	0.13300E-06	481019.0	3770754.2	378.6	3.49	4.00	3.25	YES	
L0007500	0	0.13300E-06	481027.6	3770754.2	378.9	3.49	4.00	3.25	YES	
L0007501	0	0.13300E-06	481036.2	3770754.1	379.0	3.49	4.00	3.25	YES	
L0007502	0	0.13300E-06	481044.7	3770754.1	379.0	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0007503	0	0.13300E-06	481053.3	3770754.1	379.0	3.49	4.00	3.25	YES	
L0007504	0	0.13300E-06	481061.9	3770754.0	379.1	3.49	4.00	3.25	YES	
L0007505	0	0.13300E-06	481070.5	3770754.0	379.4	3.49	4.00	3.25	YES	
L0007506	0	0.13300E-06	481079.1	3770754.0	379.6	3.49	4.00	3.25	YES	
L0007507	0	0.13300E-06	481087.7	3770753.9	379.9	3.49	4.00	3.25	YES	
L0007508	0	0.13300E-06	481096.3	3770753.9	380.0	3.49	4.00	3.25	YES	
L0007509	0	0.13300E-06	481104.9	3770753.8	380.0	3.49	4.00	3.25	YES	
L0007510	0	0.13300E-06	481113.5	3770753.8	380.0	3.49	4.00	3.25	YES	
L0007511	0	0.13300E-06	481122.0	3770753.8	380.0	3.49	4.00	3.25	YES	
L0007512	0	0.13300E-06	481130.6	3770753.7	380.0	3.49	4.00	3.25	YES	
L0007513	0	0.13300E-06	481139.2	3770753.7	380.0	3.49	4.00	3.25	YES	
L0007514	0	0.13300E-06	481147.8	3770753.7	380.0	3.49	4.00	3.25	YES	
L0007515	0	0.13300E-06	481156.4	3770753.6	380.2	3.49	4.00	3.25	YES	
L0007516	0	0.13300E-06	481165.0	3770753.6	380.5	3.49	4.00	3.25	YES	
L0007517	0	0.13300E-06	481173.6	3770753.6	380.8	3.49	4.00	3.25	YES	
L0007518	0	0.13300E-06	481182.2	3770753.5	381.1	3.49	4.00	3.25	YES	
L0007519	0	0.13300E-06	481190.8	3770753.5	381.4	3.49	4.00	3.25	YES	
L0007520	0	0.13300E-06	481199.4	3770753.5	381.7	3.49	4.00	3.25	YES	
L0007521	0	0.13300E-06	481207.9	3770753.4	381.9	3.49	4.00	3.25	YES	
L0007522	0	0.13300E-06	481216.5	3770753.4	382.0	3.49	4.00	3.25	YES	
L0007523	0	0.13300E-06	481225.1	3770753.3	382.0	3.49	4.00	3.25	YES	
L0007524	0	0.13300E-06	481233.7	3770753.3	382.0	3.49	4.00	3.25	YES	
L0007525	0	0.13300E-06	481242.3	3770753.3	382.0	3.49	4.00	3.25	YES	
L0007526	0	0.13300E-06	481250.9	3770753.2	382.0	3.49	4.00	3.25	YES	
L0007527	0	0.13300E-06	481259.5	3770753.2	382.0	3.49	4.00	3.25	YES	
L0007528	0	0.13300E-06	481268.1	3770753.2	382.0	3.49	4.00	3.25	YES	
L0007529	0	0.13300E-06	481276.7	3770753.1	382.2	3.49	4.00	3.25	YES	
L0007530	0	0.13300E-06	481285.3	3770753.1	382.5	3.49	4.00	3.25	YES	
L0007531	0	0.13300E-06	481293.8	3770753.1	382.8	3.49	4.00	3.25	YES	
L0007532	0	0.13300E-06	481302.4	3770753.0	383.0	3.49	4.00	3.25	YES	
L0007533	0	0.13300E-06	481311.0	3770753.0	383.0	3.49	4.00	3.25	YES	
L0007534	0	0.13300E-06	481319.6	3770753.0	383.0	3.49	4.00	3.25	YES	
L0007535	0	0.13300E-06	481328.2	3770752.9	383.0	3.49	4.00	3.25	YES	
L0007536	0	0.13300E-06	481336.8	3770752.9	383.2	3.49	4.00	3.25	YES	
L0007537	0	0.13300E-06	481345.4	3770752.8	383.5	3.49	4.00	3.25	YES	
L0007538	0	0.13300E-06	481354.0	3770752.8	383.8	3.49	4.00	3.25	YES	
L0007539	0	0.13300E-06	481362.6	3770752.8	384.0	3.49	4.00	3.25	YES	
L0007540	0	0.13300E-06	481371.2	3770752.7	384.0	3.49	4.00	3.25	YES	
L0007541	0	0.13300E-06	481379.7	3770752.7	384.0	3.49	4.00	3.25	YES	
L0007542	0	0.13300E-06	481388.3	3770752.7	384.0	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0007543	0	0.78250E-07	479139.8	3771569.7	352.0	3.49	4.00	3.25	YES	
L0007544	0	0.78250E-07	479139.7	3771561.1	352.0	3.49	4.00	3.25	YES	
L0007545	0	0.78250E-07	479139.6	3771552.5	352.0	3.49	4.00	3.25	YES	
L0007546	0	0.78250E-07	479139.5	3771543.9	352.0	3.49	4.00	3.25	YES	
L0007547	0	0.78250E-07	479139.4	3771535.3	352.0	3.49	4.00	3.25	YES	
L0007548	0	0.78250E-07	479139.3	3771526.7	352.0	3.49	4.00	3.25	YES	
L0007549	0	0.78250E-07	479139.2	3771518.1	352.0	3.49	4.00	3.25	YES	
L0007550	0	0.78250E-07	479139.1	3771509.6	352.0	3.49	4.00	3.25	YES	
L0007551	0	0.78250E-07	479139.0	3771501.0	352.0	3.49	4.00	3.25	YES	
L0007552	0	0.78250E-07	479138.9	3771492.4	352.0	3.49	4.00	3.25	YES	
L0007553	0	0.78250E-07	479138.8	3771483.8	352.0	3.49	4.00	3.25	YES	
L0007554	0	0.78250E-07	479138.7	3771475.2	352.0	3.49	4.00	3.25	YES	
L0007555	0	0.78250E-07	479138.6	3771466.6	352.0	3.49	4.00	3.25	YES	
L0007556	0	0.78250E-07	479138.5	3771458.0	352.0	3.49	4.00	3.25	YES	
L0007557	0	0.78250E-07	479138.4	3771449.4	352.0	3.49	4.00	3.25	YES	
L0007558	0	0.78250E-07	479138.3	3771440.8	352.0	3.49	4.00	3.25	YES	
L0007559	0	0.78250E-07	479138.2	3771432.2	352.0	3.49	4.00	3.25	YES	
L0007560	0	0.78250E-07	479138.1	3771423.7	352.0	3.49	4.00	3.25	YES	
L0007561	0	0.78250E-07	479138.0	3771415.1	352.0	3.49	4.00	3.25	YES	
L0007562	0	0.78250E-07	479137.9	3771406.5	352.0	3.49	4.00	3.25	YES	
L0007563	0	0.78250E-07	479137.8	3771397.9	352.0	3.49	4.00	3.25	YES	
L0007564	0	0.78250E-07	479137.7	3771389.3	352.0	3.49	4.00	3.25	YES	
L0007565	0	0.78250E-07	479137.6	3771380.7	352.0	3.49	4.00	3.25	YES	
L0007566	0	0.78250E-07	479137.5	3771372.1	352.0	3.49	4.00	3.25	YES	
L0007567	0	0.78250E-07	479137.4	3771363.5	352.0	3.49	4.00	3.25	YES	
L0007568	0	0.78250E-07	479137.3	3771354.9	352.0	3.49	4.00	3.25	YES	
L0007569	0	0.78250E-07	479137.2	3771346.4	352.0	3.49	4.00	3.25	YES	
L0007570	0	0.78250E-07	479137.1	3771337.8	352.0	3.49	4.00	3.25	YES	
L0007571	0	0.78250E-07	479137.0	3771329.2	352.0	3.49	4.00	3.25	YES	
L0007572	0	0.78250E-07	479136.9	3771320.6	352.0	3.49	4.00	3.25	YES	
L0007573	0	0.78250E-07	479136.8	3771312.0	352.0	3.49	4.00	3.25	YES	
L0007574	0	0.78250E-07	479136.7	3771303.4	352.0	3.49	4.00	3.25	YES	
L0007575	0	0.78250E-07	479136.6	3771294.8	352.0	3.49	4.00	3.25	YES	
L0007576	0	0.78250E-07	479136.5	3771286.2	352.0	3.49	4.00	3.25	YES	
L0007577	0	0.78250E-07	479136.4	3771277.6	352.0	3.49	4.00	3.25	YES	
L0007578	0	0.78250E-07	479136.3	3771269.1	352.0	3.49	4.00	3.25	YES	
L0007579	0	0.78250E-07	479136.2	3771260.5	352.0	3.49	4.00	3.25	YES	
L0007580	0	0.78250E-07	479136.1	3771251.9	352.0	3.49	4.00	3.25	YES	
L0007581	0	0.78250E-07	479136.0	3771243.3	352.0	3.49	4.00	3.25	YES	
L0007582	0	0.78250E-07	479135.9	3771234.7	352.0	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0007583	0	0.78250E-07	479135.8	3771226.1	352.0	3.49	4.00	3.25	YES	
L0007584	0	0.78250E-07	479135.7	3771217.5	352.0	3.49	4.00	3.25	YES	
L0007585	0	0.78250E-07	479135.6	3771208.9	352.0	3.49	4.00	3.25	YES	
L0007586	0	0.78250E-07	479135.5	3771200.3	352.0	3.49	4.00	3.25	YES	
L0007587	0	0.78250E-07	479135.4	3771191.7	352.0	3.49	4.00	3.25	YES	
L0007588	0	0.78250E-07	479135.3	3771183.2	352.0	3.49	4.00	3.25	YES	
L0007589	0	0.78250E-07	479135.2	3771174.6	352.0	3.49	4.00	3.25	YES	
L0007590	0	0.78250E-07	479135.1	3771166.0	352.0	3.49	4.00	3.25	YES	
L0007591	0	0.78250E-07	479135.0	3771157.4	352.0	3.49	4.00	3.25	YES	
L0007592	0	0.78250E-07	479135.0	3771148.8	352.0	3.49	4.00	3.25	YES	
L0007593	0	0.78250E-07	479134.9	3771140.2	352.0	3.49	4.00	3.25	YES	
L0007594	0	0.78250E-07	479134.8	3771131.6	352.0	3.49	4.00	3.25	YES	
L0007595	0	0.78250E-07	479134.7	3771123.0	352.0	3.49	4.00	3.25	YES	
L0007596	0	0.78250E-07	479134.6	3771114.4	352.0	3.49	4.00	3.25	YES	
L0007597	0	0.78250E-07	479134.5	3771105.9	352.0	3.49	4.00	3.25	YES	
L0007598	0	0.78250E-07	479134.4	3771097.3	352.0	3.49	4.00	3.25	YES	
L0007599	0	0.78250E-07	479134.3	3771088.7	352.0	3.49	4.00	3.25	YES	
L0007600	0	0.78250E-07	479134.2	3771080.1	352.0	3.49	4.00	3.25	YES	
L0007601	0	0.78250E-07	479134.1	3771071.5	352.0	3.49	4.00	3.25	YES	
L0007602	0	0.78250E-07	479134.0	3771062.9	352.0	3.49	4.00	3.25	YES	
L0007603	0	0.78250E-07	479133.9	3771054.3	352.0	3.49	4.00	3.25	YES	
L0007604	0	0.78250E-07	479133.8	3771045.7	352.0	3.49	4.00	3.25	YES	
L0007605	0	0.78250E-07	479133.7	3771037.1	352.0	3.49	4.00	3.25	YES	
L0007606	0	0.78250E-07	479133.6	3771028.5	352.0	3.49	4.00	3.25	YES	
L0007607	0	0.78250E-07	479133.5	3771020.0	352.0	3.49	4.00	3.25	YES	
L0007608	0	0.78250E-07	479133.4	3771011.4	352.0	3.49	4.00	3.25	YES	
L0007609	0	0.78250E-07	479133.3	3771002.8	352.0	3.49	4.00	3.25	YES	
L0007610	0	0.78250E-07	479133.2	3770994.2	352.0	3.49	4.00	3.25	YES	
L0007611	0	0.78250E-07	479133.1	3770985.6	352.0	3.49	4.00	3.25	YES	
L0007612	0	0.78250E-07	479133.0	3770977.0	352.2	3.49	4.00	3.25	YES	
L0007613	0	0.78250E-07	479132.9	3770968.4	352.5	3.49	4.00	3.25	YES	
L0007614	0	0.78250E-07	479132.8	3770959.8	352.7	3.49	4.00	3.25	YES	
L0007615	0	0.78250E-07	479132.7	3770951.2	352.8	3.49	4.00	3.25	YES	
L0007616	0	0.78250E-07	479132.6	3770942.7	352.8	3.49	4.00	3.25	YES	
L0007617	0	0.78250E-07	479132.5	3770934.1	352.8	3.49	4.00	3.25	YES	
L0007618	0	0.78250E-07	479132.4	3770925.5	352.8	3.49	4.00	3.25	YES	
L0007619	0	0.78250E-07	479132.3	3770916.9	352.8	3.49	4.00	3.25	YES	
L0007620	0	0.78250E-07	479132.2	3770908.3	352.7	3.49	4.00	3.25	YES	
L0007621	0	0.78250E-07	479132.1	3770899.7	352.7	3.49	4.00	3.25	YES	
L0007622	0	0.78250E-07	479132.0	3770891.1	352.7	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0007623	0	0.78250E-07	479131.9	3770882.5	352.7	3.49	4.00	3.25	YES	
L0007624	0	0.78250E-07	479131.8	3770873.9	352.7	3.49	4.00	3.25	YES	
L0007625	0	0.78250E-07	479131.7	3770865.3	352.7	3.49	4.00	3.25	YES	
L0007626	0	0.78250E-07	479131.6	3770856.8	352.7	3.49	4.00	3.25	YES	
L0007627	0	0.78250E-07	479131.5	3770848.2	352.7	3.49	4.00	3.25	YES	
L0007628	0	0.78250E-07	479131.4	3770839.6	352.7	3.49	4.00	3.25	YES	
L0007629	0	0.78250E-07	479131.3	3770831.0	352.8	3.49	4.00	3.25	YES	
L0007630	0	0.78250E-07	479131.2	3770822.4	352.9	3.49	4.00	3.25	YES	
L0007631	0	0.78250E-07	479131.1	3770813.8	352.9	3.49	4.00	3.25	YES	
L0007632	0	0.78250E-07	479131.0	3770805.2	353.0	3.49	4.00	3.25	YES	
L0007633	0	0.78250E-07	479130.9	3770796.6	353.0	3.49	4.00	3.25	YES	
L0007634	0	0.78250E-07	479130.8	3770788.0	353.0	3.49	4.00	3.25	YES	
L0007635	0	0.78250E-07	479130.7	3770779.5	353.0	3.49	4.00	3.25	YES	
L0007636	0	0.78250E-07	479130.6	3770770.9	353.0	3.49	4.00	3.25	YES	
L0007637	0	0.78250E-07	479130.5	3770762.3	353.0	3.49	4.00	3.25	YES	
L0007638	0	0.78250E-07	479130.4	3770753.7	353.0	3.49	4.00	3.25	YES	
L0007639	0	0.78250E-07	479130.3	3770745.1	353.0	3.49	4.00	3.25	YES	
L0007640	0	0.78250E-07	479130.2	3770736.5	353.0	3.49	4.00	3.25	YES	
L0007641	0	0.78250E-07	479130.1	3770727.9	353.0	3.49	4.00	3.25	YES	
L0007642	0	0.78250E-07	479130.0	3770719.3	353.0	3.49	4.00	3.25	YES	
L0007643	0	0.78250E-07	479130.0	3770710.7	353.0	3.49	4.00	3.25	YES	
L0007644	0	0.78250E-07	479129.9	3770702.1	353.0	3.49	4.00	3.25	YES	
L0007645	0	0.78250E-07	479129.8	3770693.6	353.0	3.49	4.00	3.25	YES	
L0007646	0	0.78250E-07	479129.7	3770685.0	353.0	3.49	4.00	3.25	YES	
L0007647	0	0.78250E-07	479129.6	3770676.4	353.0	3.49	4.00	3.25	YES	
L0007648	0	0.78250E-07	479129.5	3770667.8	353.0	3.49	4.00	3.25	YES	
L0007649	0	0.78250E-07	479129.4	3770659.2	353.0	3.49	4.00	3.25	YES	
L0007650	0	0.78250E-07	479129.3	3770650.6	353.0	3.49	4.00	3.25	YES	
L0007651	0	0.78250E-07	479129.2	3770642.0	353.0	3.49	4.00	3.25	YES	
L0007652	0	0.78250E-07	479129.1	3770633.4	353.0	3.49	4.00	3.25	YES	
L0007653	0	0.78250E-07	479129.0	3770624.8	353.0	3.49	4.00	3.25	YES	
L0007654	0	0.78250E-07	479128.9	3770616.3	353.0	3.49	4.00	3.25	YES	
L0007655	0	0.78250E-07	479128.8	3770607.7	353.0	3.49	4.00	3.25	YES	
L0007656	0	0.78250E-07	479128.7	3770599.1	353.0	3.49	4.00	3.25	YES	
L0007657	0	0.78250E-07	479128.6	3770590.5	353.1	3.49	4.00	3.25	YES	
L0007658	0	0.78250E-07	479128.5	3770581.9	353.3	3.49	4.00	3.25	YES	
L0007659	0	0.78250E-07	479128.4	3770573.3	353.5	3.49	4.00	3.25	YES	
L0007660	0	0.78250E-07	479128.3	3770564.7	353.6	3.49	4.00	3.25	YES	
L0007661	0	0.78250E-07	479128.2	3770556.1	353.7	3.49	4.00	3.25	YES	
L0007662	0	0.78250E-07	479128.1	3770547.5	353.9	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0007663	0	0.78250E-07	479128.0	3770538.9	354.0	3.49	4.00	3.25	YES	
L0007664	0	0.78250E-07	479127.9	3770530.4	354.0	3.49	4.00	3.25	YES	
L0007665	0	0.78250E-07	479127.8	3770521.8	354.0	3.49	4.00	3.25	YES	
L0007666	0	0.78250E-07	479127.7	3770513.2	354.0	3.49	4.00	3.25	YES	
L0007667	0	0.78250E-07	479127.6	3770504.6	354.0	3.49	4.00	3.25	YES	
L0007668	0	0.78250E-07	479127.5	3770496.0	354.0	3.49	4.00	3.25	YES	
L0007669	0	0.78250E-07	479127.4	3770487.4	354.0	3.49	4.00	3.25	YES	
L0007670	0	0.78250E-07	479127.3	3770478.8	354.0	3.49	4.00	3.25	YES	
L0007671	0	0.78250E-07	479127.2	3770470.2	354.0	3.49	4.00	3.25	YES	
L0007672	0	0.78250E-07	479127.1	3770461.6	354.0	3.49	4.00	3.25	YES	
L0007673	0	0.78250E-07	479127.0	3770453.1	354.0	3.49	4.00	3.25	YES	
L0007674	0	0.78250E-07	479126.9	3770444.5	354.0	3.49	4.00	3.25	YES	
L0007675	0	0.78250E-07	479126.8	3770435.9	354.0	3.49	4.00	3.25	YES	
L0007676	0	0.78250E-07	479126.7	3770427.3	354.0	3.49	4.00	3.25	YES	
L0007677	0	0.78250E-07	479126.6	3770418.7	354.0	3.49	4.00	3.25	YES	
L0007678	0	0.78250E-07	479126.5	3770410.1	354.0	3.49	4.00	3.25	YES	
L0007679	0	0.78250E-07	479126.4	3770401.5	354.0	3.49	4.00	3.25	YES	
L0007680	0	0.78250E-07	479126.3	3770392.9	354.0	3.49	4.00	3.25	YES	
L0007681	0	0.78250E-07	479126.2	3770384.3	354.0	3.49	4.00	3.25	YES	
L0007682	0	0.78250E-07	479126.1	3770375.7	354.0	3.49	4.00	3.25	YES	
L0007683	0	0.78250E-07	479126.2	3770367.2	354.0	3.49	4.00	3.25	YES	
L0007684	0	0.78250E-07	479126.2	3770358.6	354.0	3.49	4.00	3.25	YES	
L0007685	0	0.78250E-07	479126.3	3770350.0	354.0	3.49	4.00	3.25	YES	
L0007686	0	0.78250E-07	479126.4	3770341.4	354.0	3.49	4.00	3.25	YES	
L0007687	0	0.78250E-07	479126.4	3770332.8	354.0	3.49	4.00	3.25	YES	
L0007688	0	0.78250E-07	479126.5	3770324.2	354.0	3.49	4.00	3.25	YES	
L0007689	0	0.78250E-07	479126.5	3770315.6	353.8	3.49	4.00	3.25	YES	
L0007690	0	0.78250E-07	479126.6	3770307.0	353.7	3.49	4.00	3.25	YES	
L0007691	0	0.78250E-07	479126.7	3770298.4	353.6	3.49	4.00	3.25	YES	
L0007692	0	0.78250E-07	479126.7	3770289.9	353.4	3.49	4.00	3.25	YES	
L0007693	0	0.78250E-07	479126.8	3770281.3	353.3	3.49	4.00	3.25	YES	
L0007694	0	0.78250E-07	479126.8	3770272.7	353.1	3.49	4.00	3.25	YES	
L0007695	0	0.78250E-07	479126.9	3770264.1	353.0	3.49	4.00	3.25	YES	
L0007696	0	0.78250E-07	479127.0	3770255.5	353.0	3.49	4.00	3.25	YES	
L0007697	0	0.78250E-07	479127.0	3770246.9	353.0	3.49	4.00	3.25	YES	
L0007698	0	0.78250E-07	479127.1	3770238.3	353.0	3.49	4.00	3.25	YES	
L0007699	0	0.78250E-07	479127.1	3770229.7	353.0	3.49	4.00	3.25	YES	
L0007700	0	0.78250E-07	479127.2	3770221.1	353.0	3.49	4.00	3.25	YES	
L0007701	0	0.78250E-07	479127.2	3770212.5	353.0	3.49	4.00	3.25	YES	
L0007702	0	0.78250E-07	479127.3	3770204.0	353.0	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0007703	0	0.78250E-07	479127.4	3770195.4	353.0	3.49	4.00	3.25	YES	
L0007704	0	0.78250E-07	479127.4	3770186.8	353.0	3.49	4.00	3.25	YES	
L0007705	0	0.78250E-07	479127.5	3770178.2	353.0	3.49	4.00	3.25	YES	
L0007706	0	0.78250E-07	479127.5	3770169.6	353.0	3.49	4.00	3.25	YES	
L0007707	0	0.78250E-07	479127.6	3770161.0	353.0	3.49	4.00	3.25	YES	
L0007708	0	0.78250E-07	479127.7	3770152.4	353.0	3.49	4.00	3.25	YES	
L0007709	0	0.78250E-07	479127.7	3770143.8	353.0	3.49	4.00	3.25	YES	
L0007710	0	0.78250E-07	479127.8	3770135.2	353.0	3.49	4.00	3.25	YES	
L0007711	0	0.78250E-07	479127.8	3770126.6	353.0	3.49	4.00	3.25	YES	
L0007712	0	0.78250E-07	479127.9	3770118.1	353.0	3.49	4.00	3.25	YES	
L0007713	0	0.78250E-07	479128.0	3770109.5	353.0	3.49	4.00	3.25	YES	
L0007714	0	0.78250E-07	479128.0	3770100.9	353.0	3.49	4.00	3.25	YES	
L0007715	0	0.78250E-07	479128.1	3770092.3	353.0	3.49	4.00	3.25	YES	
L0007716	0	0.78250E-07	479128.1	3770083.7	353.0	3.49	4.00	3.25	YES	
L0007717	0	0.78250E-07	479128.2	3770075.1	353.0	3.49	4.00	3.25	YES	
L0007718	0	0.78250E-07	479128.3	3770066.5	353.0	3.49	4.00	3.25	YES	
L0007719	0	0.78250E-07	479128.3	3770057.9	353.0	3.49	4.00	3.25	YES	
L0007720	0	0.78250E-07	479128.4	3770049.3	353.0	3.49	4.00	3.25	YES	
L0007721	0	0.78250E-07	479128.4	3770040.7	353.0	3.49	4.00	3.25	YES	
L0007722	0	0.78250E-07	479128.5	3770032.2	353.0	3.49	4.00	3.25	YES	
L0007723	0	0.78250E-07	479128.6	3770023.6	353.0	3.49	4.00	3.25	YES	
L0007724	0	0.78250E-07	479128.6	3770015.0	353.0	3.49	4.00	3.25	YES	
L0007725	0	0.78250E-07	479128.7	3770006.4	353.0	3.49	4.00	3.25	YES	
L0007726	0	0.78250E-07	479128.7	3769997.8	353.0	3.49	4.00	3.25	YES	
L0007727	0	0.78250E-07	479128.8	3769989.2	353.0	3.49	4.00	3.25	YES	
L0007728	0	0.78250E-07	479128.9	3769980.6	353.0	3.49	4.00	3.25	YES	
L0007729	0	0.78250E-07	479128.9	3769972.0	353.0	3.49	4.00	3.25	YES	
L0007730	0	0.78250E-07	479129.0	3769963.4	353.0	3.49	4.00	3.25	YES	
L0007731	0	0.78250E-07	479129.0	3769954.8	353.0	3.49	4.00	3.25	YES	
L0007732	0	0.78250E-07	479129.1	3769946.3	353.0	3.49	4.00	3.25	YES	
L0007733	0	0.78250E-07	479129.1	3769937.7	353.0	3.49	4.00	3.25	YES	
L0007734	0	0.78250E-07	479129.2	3769929.1	353.2	3.49	4.00	3.25	YES	
L0007735	0	0.78250E-07	479129.3	3769920.5	353.3	3.49	4.00	3.25	YES	
L0007736	0	0.78250E-07	479129.3	3769911.9	353.5	3.49	4.00	3.25	YES	
L0007737	0	0.78250E-07	479129.4	3769903.3	353.7	3.49	4.00	3.25	YES	
L0007738	0	0.78250E-07	479129.4	3769894.7	353.8	3.49	4.00	3.25	YES	
L0007739	0	0.78250E-07	479129.5	3769886.1	353.9	3.49	4.00	3.25	YES	
L0007740	0	0.78250E-07	479129.6	3769877.5	354.0	3.49	4.00	3.25	YES	
L0007741	0	0.78250E-07	479129.6	3769869.0	354.0	3.49	4.00	3.25	YES	
L0007742	0	0.78250E-07	479129.7	3769860.4	354.0	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0007743	0	0.78250E-07	479129.7	3769851.8	354.0	3.49	4.00	3.25	YES	
L0007744	0	0.78250E-07	479129.8	3769843.2	354.0	3.49	4.00	3.25	YES	
L0007745	0	0.78250E-07	479129.9	3769834.6	354.0	3.49	4.00	3.25	YES	
L0007746	0	0.78250E-07	479129.9	3769826.0	354.0	3.49	4.00	3.25	YES	
L0007747	0	0.78250E-07	479130.0	3769817.4	354.0	3.49	4.00	3.25	YES	
L0007748	0	0.78250E-07	479130.0	3769808.8	354.0	3.49	4.00	3.25	YES	
L0007749	0	0.78250E-07	479130.1	3769800.2	354.0	3.49	4.00	3.25	YES	
L0007750	0	0.78250E-07	479130.2	3769791.6	354.0	3.49	4.00	3.25	YES	
L0007751	0	0.78250E-07	479130.2	3769783.1	354.0	3.49	4.00	3.25	YES	
L0007752	0	0.78250E-07	479130.3	3769774.5	354.0	3.49	4.00	3.25	YES	
L0007753	0	0.78250E-07	479130.3	3769765.9	354.0	3.49	4.00	3.25	YES	
L0007754	0	0.78250E-07	479130.4	3769757.3	354.0	3.49	4.00	3.25	YES	
L0007755	0	0.78250E-07	479130.5	3769748.7	354.0	3.49	4.00	3.25	YES	
L0007756	0	0.78250E-07	479130.5	3769740.1	354.0	3.49	4.00	3.25	YES	
L0007757	0	0.78250E-07	479130.6	3769731.5	354.0	3.49	4.00	3.25	YES	
L0007758	0	0.78250E-07	479130.6	3769722.9	354.0	3.49	4.00	3.25	YES	
L0007759	0	0.78250E-07	479130.7	3769714.3	354.0	3.49	4.00	3.25	YES	
L0007760	0	0.78250E-07	479130.8	3769705.7	354.0	3.49	4.00	3.25	YES	
L0007761	0	0.78250E-07	479130.8	3769697.2	354.0	3.49	4.00	3.25	YES	
L0007762	0	0.78250E-07	479130.9	3769688.6	354.2	3.49	4.00	3.25	YES	
L0007763	0	0.78250E-07	479130.9	3769680.0	354.4	3.49	4.00	3.25	YES	
L0007764	0	0.78250E-07	479131.0	3769671.4	354.6	3.49	4.00	3.25	YES	
L0007765	0	0.78250E-07	479131.1	3769662.8	354.7	3.49	4.00	3.25	YES	
L0007766	0	0.78250E-07	479131.1	3769654.2	354.8	3.49	4.00	3.25	YES	
L0007767	0	0.78250E-07	479131.2	3769645.6	354.9	3.49	4.00	3.25	YES	
L0007768	0	0.78250E-07	479131.2	3769637.0	355.0	3.49	4.00	3.25	YES	
L0007769	0	0.78250E-07	479131.3	3769628.4	355.6	3.49	4.00	3.25	YES	
L0007770	0	0.78250E-07	479131.3	3769619.8	356.3	3.49	4.00	3.25	YES	
L0007771	0	0.17830E-06	480742.6	3774121.5	363.4	3.49	4.00	3.25	YES	
L0007772	0	0.17830E-06	480742.7	3774112.9	363.4	3.49	4.00	3.25	YES	
L0007773	0	0.17830E-06	480742.7	3774104.3	363.4	3.49	4.00	3.25	YES	
L0007774	0	0.17830E-06	480742.8	3774095.7	363.4	3.49	4.00	3.25	YES	
L0007775	0	0.17830E-06	480742.9	3774087.1	363.4	3.49	4.00	3.25	YES	
L0007776	0	0.17830E-06	480743.0	3774078.5	363.4	3.49	4.00	3.25	YES	
L0007777	0	0.17830E-06	480743.1	3774069.9	363.6	3.49	4.00	3.25	YES	
L0007778	0	0.17830E-06	480743.2	3774061.3	363.7	3.49	4.00	3.25	YES	
L0007779	0	0.17830E-06	480743.2	3774052.7	363.9	3.49	4.00	3.25	YES	
L0007780	0	0.17830E-06	480743.3	3774044.2	364.0	3.49	4.00	3.25	YES	
L0007781	0	0.17830E-06	480743.4	3774035.6	364.0	3.49	4.00	3.25	YES	
L0007782	0	0.17830E-06	480743.5	3774027.0	364.0	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0007783	0	0.17830E-06	480743.6	3774018.4	364.0	3.49	4.00	3.25	YES	
L0007784	0	0.17830E-06	480743.7	3774009.8	364.1	3.49	4.00	3.25	YES	
L0007785	0	0.17830E-06	480743.7	3774001.2	364.2	3.49	4.00	3.25	YES	
L0007786	0	0.17830E-06	480743.8	3773992.6	364.4	3.49	4.00	3.25	YES	
L0007787	0	0.17830E-06	480743.9	3773984.0	364.5	3.49	4.00	3.25	YES	
L0007788	0	0.17830E-06	480744.0	3773975.4	364.7	3.49	4.00	3.25	YES	
L0007789	0	0.17830E-06	480744.1	3773966.8	364.8	3.49	4.00	3.25	YES	
L0007790	0	0.17830E-06	480744.1	3773958.3	365.0	3.49	4.00	3.25	YES	
L0007791	0	0.17830E-06	480744.2	3773949.7	365.1	3.49	4.00	3.25	YES	
L0007792	0	0.17830E-06	480744.3	3773941.1	365.2	3.49	4.00	3.25	YES	
L0007793	0	0.17830E-06	480744.4	3773932.5	365.4	3.49	4.00	3.25	YES	
L0007794	0	0.17830E-06	480744.5	3773923.9	365.5	3.49	4.00	3.25	YES	
L0007795	0	0.17830E-06	480744.6	3773915.3	365.5	3.49	4.00	3.25	YES	
L0007796	0	0.17830E-06	480744.6	3773906.7	365.5	3.49	4.00	3.25	YES	
L0007797	0	0.17830E-06	480744.7	3773898.1	365.5	3.49	4.00	3.25	YES	
L0007798	0	0.17830E-06	480744.8	3773889.5	365.5	3.49	4.00	3.25	YES	
L0007799	0	0.17830E-06	480744.9	3773881.0	365.5	3.49	4.00	3.25	YES	
L0007800	0	0.17830E-06	480745.0	3773872.4	365.5	3.49	4.00	3.25	YES	
L0007801	0	0.17830E-06	480745.0	3773863.8	365.5	3.49	4.00	3.25	YES	
L0007802	0	0.17830E-06	480745.1	3773855.2	365.5	3.49	4.00	3.25	YES	
L0007803	0	0.17830E-06	480745.2	3773846.6	365.5	3.49	4.00	3.25	YES	
L0007804	0	0.17830E-06	480745.3	3773838.0	365.5	3.49	4.00	3.25	YES	
L0007805	0	0.17830E-06	480745.4	3773829.4	365.5	3.49	4.00	3.25	YES	
L0007806	0	0.17830E-06	480745.5	3773820.8	365.5	3.49	4.00	3.25	YES	
L0007807	0	0.17830E-06	480745.5	3773812.2	365.5	3.49	4.00	3.25	YES	
L0007808	0	0.17830E-06	480745.6	3773803.6	365.5	3.49	4.00	3.25	YES	
L0007809	0	0.17830E-06	480745.7	3773795.1	365.5	3.49	4.00	3.25	YES	
L0007810	0	0.17830E-06	480745.8	3773786.5	365.5	3.49	4.00	3.25	YES	
L0007811	0	0.17830E-06	480745.9	3773777.9	365.5	3.49	4.00	3.25	YES	
L0007812	0	0.17830E-06	480746.0	3773769.3	365.5	3.49	4.00	3.25	YES	
L0007813	0	0.17830E-06	480746.0	3773760.7	365.5	3.49	4.00	3.25	YES	
L0007814	0	0.17830E-06	480746.1	3773752.1	365.5	3.49	4.00	3.25	YES	
L0007815	0	0.17830E-06	480746.2	3773743.5	365.5	3.49	4.00	3.25	YES	
L0007816	0	0.17830E-06	480746.3	3773734.9	365.6	3.49	4.00	3.25	YES	
L0007817	0	0.17830E-06	480746.4	3773726.3	365.6	3.49	4.00	3.25	YES	
L0007818	0	0.17830E-06	480746.4	3773717.7	365.6	3.49	4.00	3.25	YES	
L0007819	0	0.17830E-06	480746.5	3773709.2	365.6	3.49	4.00	3.25	YES	
L0007820	0	0.17830E-06	480746.6	3773700.6	365.6	3.49	4.00	3.25	YES	
L0007821	0	0.17830E-06	480746.7	3773692.0	365.6	3.49	4.00	3.25	YES	
L0007822	0	0.17830E-06	480746.8	3773683.4	365.6	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0007823	0	0.17830E-06	480746.9	3773674.8	365.6	3.49	4.00	3.25	YES	
L0007824	0	0.17830E-06	480746.9	3773666.2	365.6	3.49	4.00	3.25	YES	
L0007825	0	0.17830E-06	480747.0	3773657.6	365.6	3.49	4.00	3.25	YES	
L0007826	0	0.17830E-06	480747.1	3773649.0	365.6	3.49	4.00	3.25	YES	
L0007827	0	0.17830E-06	480747.2	3773640.4	365.6	3.49	4.00	3.25	YES	
L0007828	0	0.17830E-06	480747.3	3773631.9	365.6	3.49	4.00	3.25	YES	
L0007829	0	0.17830E-06	480747.4	3773623.3	365.5	3.49	4.00	3.25	YES	
L0007830	0	0.17830E-06	480747.4	3773614.7	365.2	3.49	4.00	3.25	YES	
L0007831	0	0.17830E-06	480747.5	3773606.1	364.9	3.49	4.00	3.25	YES	
L0007832	0	0.17830E-06	480747.6	3773597.5	364.6	3.49	4.00	3.25	YES	
L0007833	0	0.17830E-06	480747.7	3773588.9	364.4	3.49	4.00	3.25	YES	
L0007834	0	0.17830E-06	480747.8	3773580.3	364.3	3.49	4.00	3.25	YES	
L0007835	0	0.17830E-06	480747.8	3773571.7	364.1	3.49	4.00	3.25	YES	
L0007836	0	0.17830E-06	480747.9	3773563.1	364.0	3.49	4.00	3.25	YES	
L0007837	0	0.17830E-06	480748.0	3773554.5	363.9	3.49	4.00	3.25	YES	
L0007838	0	0.17830E-06	480748.1	3773546.0	363.7	3.49	4.00	3.25	YES	
L0007839	0	0.17830E-06	480748.2	3773537.4	363.6	3.49	4.00	3.25	YES	
L0007840	0	0.17830E-06	480748.3	3773528.8	363.5	3.49	4.00	3.25	YES	
L0007841	0	0.17830E-06	480748.3	3773520.2	363.3	3.49	4.00	3.25	YES	
L0007842	0	0.17830E-06	480748.4	3773511.6	363.1	3.49	4.00	3.25	YES	
L0007843	0	0.17830E-06	480748.5	3773503.0	363.0	3.49	4.00	3.25	YES	
L0007844	0	0.17830E-06	480748.5	3773494.4	362.9	3.49	4.00	3.25	YES	
L0007845	0	0.17830E-06	480748.5	3773485.8	362.7	3.49	4.00	3.25	YES	
L0007846	0	0.17830E-06	480748.6	3773477.2	362.6	3.49	4.00	3.25	YES	
L0007847	0	0.17830E-06	480748.6	3773468.6	362.6	3.49	4.00	3.25	YES	
L0007848	0	0.17830E-06	480748.6	3773460.1	362.6	3.49	4.00	3.25	YES	
L0007849	0	0.17830E-06	480748.6	3773451.5	362.6	3.49	4.00	3.25	YES	
L0007850	0	0.17830E-06	480748.6	3773442.9	362.6	3.49	4.00	3.25	YES	
L0007851	0	0.17830E-06	480748.7	3773434.3	362.4	3.49	4.00	3.25	YES	
L0007852	0	0.17830E-06	480748.7	3773425.7	362.2	3.49	4.00	3.25	YES	
L0007853	0	0.17830E-06	480748.7	3773417.1	362.0	3.49	4.00	3.25	YES	
L0007854	0	0.17830E-06	480748.7	3773408.5	362.0	3.49	4.00	3.25	YES	
L0007855	0	0.17830E-06	480748.8	3773399.9	362.0	3.49	4.00	3.25	YES	
L0007856	0	0.17830E-06	480748.8	3773391.3	362.0	3.49	4.00	3.25	YES	
L0007857	0	0.17830E-06	480748.8	3773382.8	362.0	3.49	4.00	3.25	YES	
L0007858	0	0.17830E-06	480748.8	3773374.2	362.0	3.49	4.00	3.25	YES	
L0007859	0	0.17830E-06	480748.8	3773365.6	362.0	3.49	4.00	3.25	YES	
L0007860	0	0.17830E-06	480748.9	3773357.0	362.0	3.49	4.00	3.25	YES	
L0007861	0	0.17830E-06	480748.9	3773348.4	362.0	3.49	4.00	3.25	YES	
L0007862	0	0.17830E-06	480748.9	3773339.8	362.0	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0007863	0	0.17830E-06	480748.9	3773331.2	362.0	3.49	4.00	3.25	YES	
L0007864	0	0.17830E-06	480749.0	3773322.6	362.0	3.49	4.00	3.25	YES	
L0007865	0	0.17830E-06	480749.0	3773314.0	362.0	3.49	4.00	3.25	YES	
L0007866	0	0.17830E-06	480749.0	3773305.4	362.0	3.49	4.00	3.25	YES	
L0007867	0	0.17830E-06	480749.0	3773296.8	362.0	3.49	4.00	3.25	YES	
L0007868	0	0.17830E-06	480749.0	3773288.3	362.0	3.49	4.00	3.25	YES	
L0007869	0	0.17830E-06	480749.1	3773279.7	362.0	3.49	4.00	3.25	YES	
L0007870	0	0.17830E-06	480749.1	3773271.1	362.0	3.49	4.00	3.25	YES	
L0007871	0	0.17830E-06	480749.1	3773262.5	362.0	3.49	4.00	3.25	YES	
L0007872	0	0.17830E-06	480749.1	3773253.9	362.0	3.49	4.00	3.25	YES	
L0007873	0	0.17830E-06	480749.2	3773245.3	362.0	3.49	4.00	3.25	YES	
L0007874	0	0.17830E-06	480749.2	3773236.7	362.0	3.49	4.00	3.25	YES	
L0007875	0	0.17830E-06	480749.2	3773228.1	362.0	3.49	4.00	3.25	YES	
L0007876	0	0.17830E-06	480749.2	3773219.5	362.0	3.49	4.00	3.25	YES	
L0007877	0	0.17830E-06	480749.2	3773210.9	362.0	3.49	4.00	3.25	YES	
L0007878	0	0.17830E-06	480749.3	3773202.4	362.0	3.49	4.00	3.25	YES	
L0007879	0	0.17830E-06	480749.3	3773193.8	362.0	3.49	4.00	3.25	YES	
L0007880	0	0.17830E-06	480749.3	3773185.2	362.0	3.49	4.00	3.25	YES	
L0007881	0	0.17830E-06	480749.3	3773176.6	362.0	3.49	4.00	3.25	YES	
L0007882	0	0.17830E-06	480749.3	3773168.0	361.9	3.49	4.00	3.25	YES	
L0007883	0	0.17830E-06	480749.4	3773159.4	361.8	3.49	4.00	3.25	YES	
L0007884	0	0.17830E-06	480749.4	3773150.8	361.7	3.49	4.00	3.25	YES	
L0007885	0	0.17830E-06	480749.4	3773142.2	361.7	3.49	4.00	3.25	YES	
L0007886	0	0.17830E-06	480749.4	3773133.6	361.7	3.49	4.00	3.25	YES	
L0007887	0	0.17830E-06	480749.5	3773125.0	361.7	3.49	4.00	3.25	YES	
L0007888	0	0.17830E-06	480749.5	3773116.5	361.7	3.49	4.00	3.25	YES	
L0007889	0	0.17830E-06	480749.5	3773107.9	361.7	3.49	4.00	3.25	YES	
L0007890	0	0.17830E-06	480749.5	3773099.3	361.7	3.49	4.00	3.25	YES	
L0007891	0	0.17830E-06	480749.5	3773090.7	361.7	3.49	4.00	3.25	YES	
L0007892	0	0.17830E-06	480749.6	3773082.1	361.7	3.49	4.00	3.25	YES	
L0007893	0	0.17830E-06	480749.6	3773073.5	361.7	3.49	4.00	3.25	YES	
L0007894	0	0.17830E-06	480749.6	3773064.9	361.7	3.49	4.00	3.25	YES	
L0007895	0	0.17830E-06	480749.6	3773056.3	361.7	3.49	4.00	3.25	YES	
L0007896	0	0.17830E-06	480749.7	3773047.7	361.7	3.49	4.00	3.25	YES	
L0007897	0	0.17830E-06	480749.7	3773039.2	361.7	3.49	4.00	3.25	YES	
L0007898	0	0.17830E-06	480749.7	3773030.6	361.7	3.49	4.00	3.25	YES	
L0007899	0	0.17830E-06	480749.7	3773022.0	361.7	3.49	4.00	3.25	YES	
L0007900	0	0.17830E-06	480749.7	3773013.4	361.7	3.49	4.00	3.25	YES	
L0007901	0	0.17830E-06	480749.8	3773004.8	361.7	3.49	4.00	3.25	YES	
L0007902	0	0.17830E-06	480749.8	3772996.2	361.7	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0007903	0	0.17830E-06	480749.8	3772987.6	361.7	3.49	4.00	3.25	YES	
L0007904	0	0.17830E-06	480749.8	3772979.0	361.7	3.49	4.00	3.25	YES	
L0007905	0	0.17830E-06	480749.8	3772970.4	361.7	3.49	4.00	3.25	YES	
L0007906	0	0.17830E-06	480749.9	3772961.8	361.7	3.49	4.00	3.25	YES	
L0007907	0	0.17830E-06	480749.9	3772953.3	361.7	3.49	4.00	3.25	YES	
L0007908	0	0.17830E-06	480749.9	3772944.7	361.7	3.49	4.00	3.25	YES	
L0007909	0	0.17830E-06	480749.9	3772936.1	361.7	3.49	4.00	3.25	YES	
L0007910	0	0.17830E-06	480750.0	3772927.5	361.7	3.49	4.00	3.25	YES	
L0007911	0	0.17830E-06	480750.0	3772918.9	361.7	3.49	4.00	3.25	YES	
L0007912	0	0.17830E-06	480750.0	3772910.3	361.7	3.49	4.00	3.25	YES	
L0007913	0	0.17830E-06	480750.0	3772901.7	361.7	3.49	4.00	3.25	YES	
L0007914	0	0.17830E-06	480750.0	3772893.1	361.7	3.49	4.00	3.25	YES	
L0007915	0	0.17830E-06	480750.1	3772884.5	361.7	3.49	4.00	3.25	YES	
L0007916	0	0.17830E-06	480750.1	3772875.9	361.7	3.49	4.00	3.25	YES	
L0007917	0	0.17830E-06	480750.1	3772867.4	361.7	3.49	4.00	3.25	YES	
L0007918	0	0.17830E-06	480750.1	3772858.8	361.7	3.49	4.00	3.25	YES	
L0007919	0	0.17830E-06	480750.2	3772850.2	361.7	3.49	4.00	3.25	YES	
L0007920	0	0.17830E-06	480750.2	3772841.6	361.7	3.49	4.00	3.25	YES	
L0007921	0	0.17830E-06	480750.2	3772833.0	361.7	3.49	4.00	3.25	YES	
L0007922	0	0.17830E-06	480750.2	3772824.4	361.7	3.49	4.00	3.25	YES	
L0007923	0	0.17830E-06	480750.2	3772815.8	361.7	3.49	4.00	3.25	YES	
L0007924	0	0.17830E-06	480750.3	3772807.2	361.7	3.49	4.00	3.25	YES	
L0007925	0	0.17830E-06	480750.3	3772798.6	361.7	3.49	4.00	3.25	YES	
L0007926	0	0.17830E-06	480750.3	3772790.0	361.7	3.49	4.00	3.25	YES	
L0007927	0	0.17830E-06	480750.3	3772781.5	361.7	3.49	4.00	3.25	YES	
L0007928	0	0.17830E-06	480750.3	3772772.9	361.7	3.49	4.00	3.25	YES	
L0007929	0	0.17830E-06	480750.4	3772764.3	361.7	3.49	4.00	3.25	YES	
L0007930	0	0.17830E-06	480750.4	3772755.7	361.7	3.49	4.00	3.25	YES	
L0007931	0	0.17830E-06	480750.4	3772747.1	361.7	3.49	4.00	3.25	YES	
L0007932	0	0.17830E-06	480750.4	3772738.5	361.7	3.49	4.00	3.25	YES	
L0007933	0	0.17830E-06	480750.5	3772729.9	361.7	3.49	4.00	3.25	YES	
L0007934	0	0.17830E-06	480750.5	3772721.3	361.7	3.49	4.00	3.25	YES	
L0007935	0	0.17830E-06	480750.5	3772712.7	361.7	3.49	4.00	3.25	YES	
L0007936	0	0.17830E-06	480750.5	3772704.1	361.7	3.49	4.00	3.25	YES	
L0007937	0	0.17830E-06	480750.5	3772695.6	361.7	3.49	4.00	3.25	YES	
L0007938	0	0.17830E-06	480750.6	3772687.0	361.7	3.49	4.00	3.25	YES	
L0007939	0	0.17830E-06	480750.6	3772678.4	361.7	3.49	4.00	3.25	YES	
L0007940	0	0.17830E-06	480750.6	3772669.8	361.7	3.49	4.00	3.25	YES	
L0007941	0	0.17830E-06	480750.6	3772661.2	361.6	3.49	4.00	3.25	YES	
L0007942	0	0.17830E-06	480750.7	3772652.6	361.4	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0007943	0	0.17830E-06	480750.7	3772644.0	361.2	3.49	4.00	3.25	YES	
L0007944	0	0.17830E-06	480750.7	3772635.4	361.0	3.49	4.00	3.25	YES	
L0007945	0	0.17830E-06	480750.7	3772626.8	361.0	3.49	4.00	3.25	YES	
L0007946	0	0.17830E-06	480750.7	3772618.2	361.0	3.49	4.00	3.25	YES	
L0007947	0	0.17830E-06	480750.8	3772609.7	361.0	3.49	4.00	3.25	YES	
L0007948	0	0.17830E-06	480750.8	3772601.1	361.0	3.49	4.00	3.25	YES	
L0007949	0	0.17830E-06	480750.8	3772592.5	361.0	3.49	4.00	3.25	YES	
L0007950	0	0.17830E-06	480750.8	3772583.9	361.0	3.49	4.00	3.25	YES	
L0007951	0	0.17830E-06	480750.9	3772575.3	361.0	3.49	4.00	3.25	YES	
L0007952	0	0.17830E-06	480750.9	3772566.7	360.9	3.49	4.00	3.25	YES	
L0007953	0	0.17830E-06	480750.9	3772558.1	360.8	3.49	4.00	3.25	YES	
L0007954	0	0.17830E-06	480750.9	3772549.5	360.7	3.49	4.00	3.25	YES	
L0007955	0	0.17830E-06	480750.9	3772540.9	360.7	3.49	4.00	3.25	YES	
L0007956	0	0.17830E-06	480751.0	3772532.3	360.7	3.49	4.00	3.25	YES	
L0007957	0	0.17830E-06	480751.0	3772523.8	360.7	3.49	4.00	3.25	YES	
L0007958	0	0.17830E-06	480751.0	3772515.2	360.7	3.49	4.00	3.25	YES	
L0007959	0	0.17830E-06	480751.0	3772506.6	360.5	3.49	4.00	3.25	YES	
L0007960	0	0.17830E-06	480751.0	3772498.0	360.3	3.49	4.00	3.25	YES	
L0007961	0	0.17830E-06	480751.1	3772489.4	360.1	3.49	4.00	3.25	YES	
L0007962	0	0.17830E-06	480751.1	3772480.8	360.1	3.49	4.00	3.25	YES	
L0007963	0	0.17830E-06	480751.1	3772472.2	360.3	3.49	4.00	3.25	YES	
L0007964	0	0.17830E-06	480751.1	3772463.6	360.5	3.49	4.00	3.25	YES	
L0007965	0	0.17830E-06	480751.2	3772455.0	360.7	3.49	4.00	3.25	YES	
L0007966	0	0.17830E-06	480751.2	3772446.4	360.7	3.49	4.00	3.25	YES	
L0007967	0	0.17830E-06	480751.2	3772437.9	360.7	3.49	4.00	3.25	YES	
L0007968	0	0.17830E-06	480751.2	3772429.3	360.7	3.49	4.00	3.25	YES	
L0007969	0	0.17830E-06	480751.2	3772420.7	360.9	3.49	4.00	3.25	YES	
L0007970	0	0.17830E-06	480751.3	3772412.1	361.2	3.49	4.00	3.25	YES	
L0007971	0	0.17830E-06	480751.3	3772403.5	361.5	3.49	4.00	3.25	YES	
L0007972	0	0.17830E-06	480751.3	3772394.9	361.7	3.49	4.00	3.25	YES	
L0007973	0	0.17830E-06	480751.3	3772386.3	361.7	3.49	4.00	3.25	YES	
L0007974	0	0.17830E-06	480751.4	3772377.7	361.7	3.49	4.00	3.25	YES	
L0007975	0	0.17830E-06	480751.4	3772369.1	361.7	3.49	4.00	3.25	YES	
L0007976	0	0.17830E-06	480751.4	3772360.5	361.8	3.49	4.00	3.25	YES	
L0007977	0	0.17830E-06	480751.4	3772352.0	361.9	3.49	4.00	3.25	YES	
L0007978	0	0.17830E-06	480751.4	3772343.4	361.9	3.49	4.00	3.25	YES	
L0007979	0	0.17830E-06	480751.5	3772334.8	362.0	3.49	4.00	3.25	YES	
L0007980	0	0.17830E-06	480751.5	3772326.2	362.2	3.49	4.00	3.25	YES	
L0007981	0	0.17830E-06	480751.5	3772317.6	362.4	3.49	4.00	3.25	YES	
L0007982	0	0.17830E-06	480751.5	3772309.0	362.7	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0007983	0	0.17830E-06	480751.5	3772300.4	362.8	3.49	4.00	3.25	YES	
L0007984	0	0.17830E-06	480751.6	3772291.8	362.9	3.49	4.00	3.25	YES	
L0007985	0	0.17830E-06	480751.6	3772283.2	362.9	3.49	4.00	3.25	YES	
L0007986	0	0.17830E-06	480751.6	3772274.6	363.0	3.49	4.00	3.25	YES	
L0007987	0	0.17830E-06	480751.6	3772266.1	363.0	3.49	4.00	3.25	YES	
L0007988	0	0.17830E-06	480751.7	3772257.5	363.0	3.49	4.00	3.25	YES	
L0007989	0	0.17830E-06	480751.7	3772248.9	363.0	3.49	4.00	3.25	YES	
L0007990	0	0.17830E-06	480751.7	3772240.3	363.2	3.49	4.00	3.25	YES	
L0007991	0	0.17830E-06	480751.7	3772231.7	363.4	3.49	4.00	3.25	YES	
L0007992	0	0.17830E-06	480751.7	3772223.1	363.6	3.49	4.00	3.25	YES	
L0007993	0	0.17830E-06	480751.8	3772214.5	363.7	3.49	4.00	3.25	YES	
L0007994	0	0.17830E-06	480751.8	3772205.9	363.8	3.49	4.00	3.25	YES	
L0007995	0	0.17830E-06	480751.8	3772197.3	363.9	3.49	4.00	3.25	YES	
L0007996	0	0.17830E-06	480751.8	3772188.7	364.0	3.49	4.00	3.25	YES	
L0007997	0	0.17830E-06	480751.9	3772180.2	364.0	3.49	4.00	3.25	YES	
L0007998	0	0.17830E-06	480751.9	3772171.6	364.0	3.49	4.00	3.25	YES	
L0007999	0	0.17830E-06	480751.9	3772163.0	364.0	3.49	4.00	3.25	YES	
L0008000	0	0.17830E-06	480751.9	3772154.4	364.1	3.49	4.00	3.25	YES	
L0008001	0	0.17830E-06	480751.9	3772145.8	364.3	3.49	4.00	3.25	YES	
L0008002	0	0.17830E-06	480752.0	3772137.2	364.5	3.49	4.00	3.25	YES	
L0008003	0	0.17830E-06	480752.0	3772128.6	364.7	3.49	4.00	3.25	YES	
L0008004	0	0.17830E-06	480752.0	3772120.0	364.8	3.49	4.00	3.25	YES	
L0008005	0	0.17830E-06	480752.0	3772111.4	364.9	3.49	4.00	3.25	YES	
L0008006	0	0.17830E-06	480752.0	3772102.8	364.9	3.49	4.00	3.25	YES	
L0008007	0	0.17830E-06	480752.1	3772094.3	365.1	3.49	4.00	3.25	YES	
L0008008	0	0.17830E-06	480752.1	3772085.7	365.3	3.49	4.00	3.25	YES	
L0008009	0	0.17830E-06	480752.1	3772077.1	365.5	3.49	4.00	3.25	YES	
L0008010	0	0.17830E-06	480752.1	3772068.5	365.7	3.49	4.00	3.25	YES	
L0008011	0	0.17830E-06	480752.2	3772059.9	365.9	3.49	4.00	3.25	YES	
L0008012	0	0.17830E-06	480752.2	3772051.3	366.2	3.49	4.00	3.25	YES	
L0008013	0	0.17830E-06	480752.2	3772042.7	366.5	3.49	4.00	3.25	YES	
L0008014	0	0.17830E-06	480752.2	3772034.1	366.9	3.49	4.00	3.25	YES	
L0008015	0	0.17830E-06	480752.2	3772025.5	367.7	3.49	4.00	3.25	YES	
L0008016	0	0.17830E-06	480752.3	3772016.9	368.5	3.49	4.00	3.25	YES	
L0008017	0	0.17830E-06	480752.3	3772008.4	369.3	3.49	4.00	3.25	YES	
L0008018	0	0.17830E-06	480752.3	3771999.8	369.8	3.49	4.00	3.25	YES	
L0008019	0	0.17830E-06	480752.3	3771991.2	370.1	3.49	4.00	3.25	YES	
L0008020	0	0.17830E-06	480752.4	3771982.6	370.5	3.49	4.00	3.25	YES	
L0008021	0	0.17830E-06	480752.4	3771974.0	370.8	3.49	4.00	3.25	YES	
L0008022	0	0.17830E-06	480752.4	3771965.4	370.8	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0008023	0	0.17830E-06	480752.4	3771956.8	370.8	3.49	4.00	3.25	YES	
L0008024	0	0.17830E-06	480752.4	3771948.2	370.8	3.49	4.00	3.25	YES	
L0008025	0	0.17830E-06	480752.5	3771939.6	371.0	3.49	4.00	3.25	YES	
L0008026	0	0.17830E-06	480752.5	3771931.0	371.3	3.49	4.00	3.25	YES	
L0008027	0	0.17830E-06	480752.5	3771922.5	371.6	3.49	4.00	3.25	YES	
L0008028	0	0.17830E-06	480752.5	3771913.9	371.8	3.49	4.00	3.25	YES	
L0008029	0	0.17830E-06	480752.6	3771905.3	371.8	3.49	4.00	3.25	YES	
L0008030	0	0.17830E-06	480752.6	3771896.7	371.8	3.49	4.00	3.25	YES	
L0008031	0	0.17830E-06	480752.6	3771888.1	371.8	3.49	4.00	3.25	YES	
L0008032	0	0.17830E-06	480752.6	3771879.5	371.8	3.49	4.00	3.25	YES	
L0008033	0	0.17830E-06	480752.6	3771870.9	371.8	3.49	4.00	3.25	YES	
L0008034	0	0.17830E-06	480752.7	3771862.3	371.8	3.49	4.00	3.25	YES	
L0008035	0	0.17830E-06	480752.7	3771853.7	371.8	3.49	4.00	3.25	YES	
L0008036	0	0.17830E-06	480752.7	3771845.1	371.8	3.49	4.00	3.25	YES	
L0008037	0	0.17830E-06	480752.7	3771836.6	371.8	3.49	4.00	3.25	YES	
L0008038	0	0.17830E-06	480752.7	3771828.0	371.8	3.49	4.00	3.25	YES	
L0008039	0	0.17830E-06	480752.8	3771819.4	371.8	3.49	4.00	3.25	YES	
L0008040	0	0.13440E-06	480750.9	3771805.7	371.7	3.49	4.00	3.25	YES	
L0008041	0	0.13440E-06	480750.8	3771797.2	371.7	3.49	4.00	3.25	YES	
L0008042	0	0.13440E-06	480750.6	3771788.6	371.7	3.49	4.00	3.25	YES	
L0008043	0	0.13440E-06	480750.5	3771780.0	371.7	3.49	4.00	3.25	YES	
L0008044	0	0.13440E-06	480750.4	3771771.4	371.7	3.49	4.00	3.25	YES	
L0008045	0	0.13440E-06	480750.2	3771762.8	371.7	3.49	4.00	3.25	YES	
L0008046	0	0.13440E-06	480750.1	3771754.2	371.8	3.49	4.00	3.25	YES	
L0008047	0	0.13440E-06	480750.0	3771745.6	371.9	3.49	4.00	3.25	YES	
L0008048	0	0.13440E-06	480749.8	3771737.0	372.0	3.49	4.00	3.25	YES	
L0008049	0	0.13440E-06	480749.7	3771728.4	372.0	3.49	4.00	3.25	YES	
L0008050	0	0.13440E-06	480749.6	3771719.9	372.0	3.49	4.00	3.25	YES	
L0008051	0	0.13440E-06	480749.4	3771711.3	372.0	3.49	4.00	3.25	YES	
L0008052	0	0.13440E-06	480749.3	3771702.7	372.1	3.49	4.00	3.25	YES	
L0008053	0	0.13440E-06	480749.2	3771694.1	372.3	3.49	4.00	3.25	YES	
L0008054	0	0.13440E-06	480749.0	3771685.5	372.4	3.49	4.00	3.25	YES	
L0008055	0	0.13440E-06	480748.9	3771676.9	372.6	3.49	4.00	3.25	YES	
L0008056	0	0.13440E-06	480748.7	3771668.3	372.6	3.49	4.00	3.25	YES	
L0008057	0	0.13440E-06	480748.6	3771659.7	372.6	3.49	4.00	3.25	YES	
L0008058	0	0.13440E-06	480748.5	3771651.1	372.6	3.49	4.00	3.25	YES	
L0008059	0	0.13440E-06	480748.3	3771642.6	372.7	3.49	4.00	3.25	YES	
L0008060	0	0.13440E-06	480748.2	3771634.0	372.8	3.49	4.00	3.25	YES	
L0008061	0	0.13440E-06	480748.1	3771625.4	372.9	3.49	4.00	3.25	YES	
L0008062	0	0.13440E-06	480747.9	3771616.8	373.0	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0008063	0	0.13440E-06	480747.8	3771608.2	373.0	3.49	4.00	3.25	YES	
L0008064	0	0.13440E-06	480747.7	3771599.6	373.0	3.49	4.00	3.25	YES	
L0008065	0	0.13440E-06	480747.5	3771591.0	373.0	3.49	4.00	3.25	YES	
L0008066	0	0.20030E-06	480747.0	3771564.5	373.0	3.49	4.00	3.25	YES	
L0008067	0	0.20030E-06	480747.0	3771555.9	373.0	3.49	4.00	3.25	YES	
L0008068	0	0.20030E-06	480747.0	3771547.3	373.0	3.49	4.00	3.25	YES	
L0008069	0	0.20030E-06	480747.0	3771538.7	373.0	3.49	4.00	3.25	YES	
L0008070	0	0.20030E-06	480746.9	3771530.1	373.0	3.49	4.00	3.25	YES	
L0008071	0	0.20030E-06	480746.9	3771521.5	373.1	3.49	4.00	3.25	YES	
L0008072	0	0.20030E-06	480746.9	3771512.9	373.2	3.49	4.00	3.25	YES	
L0008073	0	0.20030E-06	480746.9	3771504.4	373.4	3.49	4.00	3.25	YES	
L0008074	0	0.20030E-06	480746.8	3771495.8	373.6	3.49	4.00	3.25	YES	
L0008075	0	0.20030E-06	480746.8	3771487.2	373.6	3.49	4.00	3.25	YES	
L0008076	0	0.20030E-06	480746.8	3771478.6	373.6	3.49	4.00	3.25	YES	
L0008077	0	0.20030E-06	480746.8	3771470.0	373.6	3.49	4.00	3.25	YES	
L0008078	0	0.20030E-06	480746.8	3771461.4	373.6	3.49	4.00	3.25	YES	
L0008079	0	0.20030E-06	480746.7	3771452.8	373.6	3.49	4.00	3.25	YES	
L0008080	0	0.20030E-06	480746.7	3771444.2	373.6	3.49	4.00	3.25	YES	
L0008081	0	0.20030E-06	480746.7	3771435.6	373.6	3.49	4.00	3.25	YES	
L0008082	0	0.20030E-06	480746.7	3771427.0	373.6	3.49	4.00	3.25	YES	
L0008083	0	0.20030E-06	480746.6	3771418.5	373.6	3.49	4.00	3.25	YES	
L0008084	0	0.20030E-06	480746.6	3771409.9	373.6	3.49	4.00	3.25	YES	
L0008085	0	0.20030E-06	480746.6	3771401.3	373.6	3.49	4.00	3.25	YES	
L0008086	0	0.20030E-06	480746.6	3771392.7	373.6	3.49	4.00	3.25	YES	
L0008087	0	0.20030E-06	480746.6	3771384.1	373.6	3.49	4.00	3.25	YES	
L0008088	0	0.20030E-06	480746.5	3771375.5	373.6	3.49	4.00	3.25	YES	
L0008089	0	0.20030E-06	480746.5	3771366.9	373.7	3.49	4.00	3.25	YES	
L0008090	0	0.20030E-06	480746.5	3771358.3	373.8	3.49	4.00	3.25	YES	
L0008091	0	0.20030E-06	480746.5	3771349.7	373.9	3.49	4.00	3.25	YES	
L0008092	0	0.20030E-06	480746.5	3771341.1	374.0	3.49	4.00	3.25	YES	
L0008093	0	0.20030E-06	480746.4	3771332.6	374.0	3.49	4.00	3.25	YES	
L0008094	0	0.20030E-06	480746.4	3771324.0	374.0	3.49	4.00	3.25	YES	
L0008095	0	0.20030E-06	480746.4	3771315.4	374.0	3.49	4.00	3.25	YES	
L0008096	0	0.20030E-06	480746.4	3771306.8	374.0	3.49	4.00	3.25	YES	
L0008097	0	0.20030E-06	480746.3	3771298.2	374.0	3.49	4.00	3.25	YES	
L0008098	0	0.20030E-06	480746.3	3771289.6	374.0	3.49	4.00	3.25	YES	
L0008099	0	0.20030E-06	480746.3	3771281.0	374.0	3.49	4.00	3.25	YES	
L0008100	0	0.20030E-06	480746.3	3771272.4	374.0	3.49	4.00	3.25	YES	
L0008101	0	0.20030E-06	480746.3	3771263.8	374.0	3.49	4.00	3.25	YES	
L0008102	0	0.20030E-06	480746.2	3771255.2	374.0	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0008103	0	0.20030E-06	480746.2	3771246.7	374.0	3.49	4.00	3.25	YES	
L0008104	0	0.20030E-06	480746.2	3771238.1	374.0	3.49	4.00	3.25	YES	
L0008105	0	0.20030E-06	480746.2	3771229.5	374.0	3.49	4.00	3.25	YES	
L0008106	0	0.20030E-06	480746.1	3771220.9	374.0	3.49	4.00	3.25	YES	
L0008107	0	0.20030E-06	480746.1	3771212.3	374.0	3.49	4.00	3.25	YES	
L0008108	0	0.20030E-06	480746.1	3771203.7	374.0	3.49	4.00	3.25	YES	
L0008109	0	0.20030E-06	480746.1	3771195.1	374.0	3.49	4.00	3.25	YES	
L0008110	0	0.20030E-06	480746.1	3771186.5	374.0	3.49	4.00	3.25	YES	
L0008111	0	0.20030E-06	480746.0	3771177.9	374.0	3.49	4.00	3.25	YES	
L0008112	0	0.20030E-06	480746.0	3771169.3	374.0	3.49	4.00	3.25	YES	
L0008113	0	0.20030E-06	480746.0	3771160.8	374.0	3.49	4.00	3.25	YES	
L0008114	0	0.20030E-06	480746.0	3771152.2	374.0	3.49	4.00	3.25	YES	
L0008115	0	0.20030E-06	480746.0	3771143.6	374.0	3.49	4.00	3.25	YES	
L0008116	0	0.20030E-06	480745.9	3771135.0	374.0	3.49	4.00	3.25	YES	
L0008117	0	0.20030E-06	480745.9	3771126.4	374.0	3.49	4.00	3.25	YES	
L0008118	0	0.20030E-06	480745.9	3771117.8	374.0	3.49	4.00	3.25	YES	
L0008119	0	0.20030E-06	480745.9	3771109.2	374.0	3.49	4.00	3.25	YES	
L0008120	0	0.20030E-06	480745.8	3771100.6	374.0	3.49	4.00	3.25	YES	
L0008121	0	0.20030E-06	480745.8	3771092.0	374.0	3.49	4.00	3.25	YES	
L0008122	0	0.20030E-06	480745.8	3771083.4	374.0	3.49	4.00	3.25	YES	
L0008123	0	0.20030E-06	480745.8	3771074.9	374.0	3.49	4.00	3.25	YES	
L0008124	0	0.20030E-06	480745.8	3771066.3	374.0	3.49	4.00	3.25	YES	
L0008125	0	0.20030E-06	480745.7	3771057.7	374.0	3.49	4.00	3.25	YES	
L0008126	0	0.20030E-06	480745.7	3771049.1	374.0	3.49	4.00	3.25	YES	
L0008127	0	0.20030E-06	480745.7	3771040.5	374.0	3.49	4.00	3.25	YES	
L0008128	0	0.20030E-06	480745.7	3771031.9	374.0	3.49	4.00	3.25	YES	
L0008129	0	0.20030E-06	480745.6	3771023.3	374.0	3.49	4.00	3.25	YES	
L0008130	0	0.20030E-06	480745.6	3771014.7	374.0	3.49	4.00	3.25	YES	
L0008131	0	0.20030E-06	480745.6	3771006.1	374.0	3.49	4.00	3.25	YES	
L0008132	0	0.20030E-06	480745.6	3770997.5	374.0	3.49	4.00	3.25	YES	
L0008133	0	0.20030E-06	480745.6	3770989.0	374.0	3.49	4.00	3.25	YES	
L0008134	0	0.20030E-06	480745.5	3770980.4	374.0	3.49	4.00	3.25	YES	
L0008135	0	0.20030E-06	480745.5	3770971.8	374.0	3.49	4.00	3.25	YES	
L0008136	0	0.20030E-06	480745.5	3770963.2	374.0	3.49	4.00	3.25	YES	
L0008137	0	0.20030E-06	480745.5	3770954.6	374.0	3.49	4.00	3.25	YES	
L0008138	0	0.20030E-06	480745.5	3770946.0	374.0	3.49	4.00	3.25	YES	
L0008139	0	0.20030E-06	480745.4	3770937.4	374.0	3.49	4.00	3.25	YES	
L0008140	0	0.20030E-06	480745.4	3770928.8	374.0	3.49	4.00	3.25	YES	
L0008141	0	0.20030E-06	480745.4	3770920.2	374.0	3.49	4.00	3.25	YES	
L0008142	0	0.20030E-06	480745.4	3770911.6	374.0	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0008143	0	0.20030E-06	480745.3	3770903.1	374.0	3.49	4.00	3.25	YES	
L0008144	0	0.20030E-06	480745.3	3770894.5	374.0	3.49	4.00	3.25	YES	
L0008145	0	0.20030E-06	480745.3	3770885.9	374.0	3.49	4.00	3.25	YES	
L0008146	0	0.20030E-06	480745.3	3770877.3	374.0	3.49	4.00	3.25	YES	
L0008147	0	0.20030E-06	480745.3	3770868.7	374.0	3.49	4.00	3.25	YES	
L0008148	0	0.20030E-06	480745.2	3770860.1	374.0	3.49	4.00	3.25	YES	
L0008149	0	0.20030E-06	480745.2	3770851.5	374.0	3.49	4.00	3.25	YES	
L0008150	0	0.20030E-06	480745.2	3770842.9	374.0	3.49	4.00	3.25	YES	
L0008151	0	0.20030E-06	480745.2	3770834.3	374.0	3.49	4.00	3.25	YES	
L0008152	0	0.20030E-06	480745.1	3770825.7	374.0	3.49	4.00	3.25	YES	
L0008153	0	0.20030E-06	480745.1	3770817.2	374.0	3.49	4.00	3.25	YES	
L0008154	0	0.20030E-06	480745.1	3770808.6	374.0	3.49	4.00	3.25	YES	
L0008155	0	0.20030E-06	480745.1	3770800.0	374.0	3.49	4.00	3.25	YES	
L0008156	0	0.20030E-06	480745.1	3770791.4	374.0	3.49	4.00	3.25	YES	
L0008157	0	0.20030E-06	480745.0	3770782.8	374.0	3.49	4.00	3.25	YES	
L0008158	0	0.66080E-07	480741.4	3770754.2	374.0	3.49	4.00	3.25	YES	
L0008159	0	0.66080E-07	480741.4	3770745.6	374.0	3.49	4.00	3.25	YES	
L0008160	0	0.66080E-07	480741.4	3770737.0	374.0	3.49	4.00	3.25	YES	
L0008161	0	0.66080E-07	480741.4	3770728.4	374.0	3.49	4.00	3.25	YES	
L0008162	0	0.66080E-07	480741.4	3770719.9	374.0	3.49	4.00	3.25	YES	
L0008163	0	0.66080E-07	480741.4	3770711.3	374.0	3.49	4.00	3.25	YES	
L0008164	0	0.66080E-07	480741.4	3770702.7	374.0	3.49	4.00	3.25	YES	
L0008165	0	0.66080E-07	480741.4	3770694.1	374.0	3.49	4.00	3.25	YES	
L0008166	0	0.66080E-07	480741.4	3770685.5	374.0	3.49	4.00	3.25	YES	
L0008167	0	0.66080E-07	480741.4	3770676.9	374.0	3.49	4.00	3.25	YES	
L0008168	0	0.66080E-07	480741.4	3770668.3	374.0	3.49	4.00	3.25	YES	
L0008169	0	0.66080E-07	480741.4	3770659.7	374.0	3.49	4.00	3.25	YES	
L0008170	0	0.66080E-07	480741.4	3770651.1	374.1	3.49	4.00	3.25	YES	
L0008171	0	0.66080E-07	480741.4	3770642.5	374.2	3.49	4.00	3.25	YES	
L0008172	0	0.66080E-07	480741.4	3770634.0	374.3	3.49	4.00	3.25	YES	
L0008173	0	0.66080E-07	480741.4	3770625.4	374.4	3.49	4.00	3.25	YES	
L0008174	0	0.66080E-07	480741.4	3770616.8	374.4	3.49	4.00	3.25	YES	
L0008175	0	0.66080E-07	480741.4	3770608.2	374.4	3.49	4.00	3.25	YES	
L0008176	0	0.66080E-07	480741.4	3770599.6	374.4	3.49	4.00	3.25	YES	
L0008177	0	0.66080E-07	480741.4	3770591.0	374.4	3.49	4.00	3.25	YES	
L0008178	0	0.66080E-07	480741.4	3770582.4	374.4	3.49	4.00	3.25	YES	
L0008179	0	0.66080E-07	480741.4	3770573.8	374.4	3.49	4.00	3.25	YES	
L0008180	0	0.66080E-07	480741.4	3770565.2	374.4	3.49	4.00	3.25	YES	
L0008181	0	0.66080E-07	480741.4	3770556.6	374.4	3.49	4.00	3.25	YES	
L0008182	0	0.66080E-07	480741.4	3770548.1	374.4	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0008183	0	0.66080E-07	480741.4	3770539.5	374.4	3.49	4.00	3.25	YES	
L0008184	0	0.66080E-07	480741.4	3770530.9	374.4	3.49	4.00	3.25	YES	
L0008185	0	0.66080E-07	480741.4	3770522.3	374.4	3.49	4.00	3.25	YES	
L0008186	0	0.66080E-07	480741.4	3770513.7	374.4	3.49	4.00	3.25	YES	
L0008187	0	0.66080E-07	480741.4	3770505.1	374.4	3.49	4.00	3.25	YES	
L0008188	0	0.66080E-07	480741.4	3770496.5	374.4	3.49	4.00	3.25	YES	
L0008189	0	0.66080E-07	480741.4	3770487.9	374.4	3.49	4.00	3.25	YES	
L0008190	0	0.66080E-07	480741.4	3770479.3	374.4	3.49	4.00	3.25	YES	
L0008191	0	0.66080E-07	480741.4	3770470.7	374.5	3.49	4.00	3.25	YES	
L0008192	0	0.66080E-07	480741.4	3770462.2	374.7	3.49	4.00	3.25	YES	
L0008193	0	0.66080E-07	480741.4	3770453.6	374.9	3.49	4.00	3.25	YES	
L0008194	0	0.66080E-07	480741.4	3770445.0	375.0	3.49	4.00	3.25	YES	
L0008195	0	0.66080E-07	480741.4	3770436.4	375.0	3.49	4.00	3.25	YES	
L0008196	0	0.66080E-07	480741.4	3770427.8	375.0	3.49	4.00	3.25	YES	
L0008197	0	0.66080E-07	480741.4	3770419.2	375.0	3.49	4.00	3.25	YES	
L0008198	0	0.66080E-07	480741.4	3770410.6	375.0	3.49	4.00	3.25	YES	
L0008199	0	0.66080E-07	480741.4	3770402.0	375.0	3.49	4.00	3.25	YES	
L0008200	0	0.66080E-07	480741.4	3770393.4	375.0	3.49	4.00	3.25	YES	
L0008201	0	0.66080E-07	480741.4	3770384.8	375.0	3.49	4.00	3.25	YES	
L0008202	0	0.66080E-07	480741.4	3770376.3	375.1	3.49	4.00	3.25	YES	
L0008203	0	0.66080E-07	480741.4	3770367.7	375.2	3.49	4.00	3.25	YES	
L0008204	0	0.66080E-07	480741.4	3770359.1	375.4	3.49	4.00	3.25	YES	
L0008205	0	0.66080E-07	480741.4	3770350.5	375.4	3.49	4.00	3.25	YES	
L0008206	0	0.66080E-07	480741.4	3770341.9	375.4	3.49	4.00	3.25	YES	
L0008207	0	0.66080E-07	480741.4	3770333.3	375.4	3.49	4.00	3.25	YES	
L0008208	0	0.66080E-07	480741.4	3770324.7	375.4	3.49	4.00	3.25	YES	
L0008209	0	0.66080E-07	480741.4	3770316.1	375.4	3.49	4.00	3.25	YES	
L0008210	0	0.66080E-07	480741.4	3770307.5	375.4	3.49	4.00	3.25	YES	
L0008211	0	0.66080E-07	480741.4	3770298.9	375.4	3.49	4.00	3.25	YES	
L0008212	0	0.66080E-07	480741.4	3770290.4	375.4	3.49	4.00	3.25	YES	
L0008213	0	0.66080E-07	480741.4	3770281.8	375.4	3.49	4.00	3.25	YES	
L0008214	0	0.66080E-07	480741.4	3770273.2	375.4	3.49	4.00	3.25	YES	
L0008215	0	0.66080E-07	480741.4	3770264.6	375.4	3.49	4.00	3.25	YES	
L0008216	0	0.66080E-07	480741.4	3770256.0	375.4	3.49	4.00	3.25	YES	
L0008217	0	0.66080E-07	480741.4	3770247.4	375.4	3.49	4.00	3.25	YES	
L0008218	0	0.66080E-07	480741.4	3770238.8	375.4	3.49	4.00	3.25	YES	
L0008219	0	0.66080E-07	480741.4	3770230.2	375.4	3.49	4.00	3.25	YES	
L0008220	0	0.66080E-07	480741.4	3770221.6	375.4	3.49	4.00	3.25	YES	
L0008221	0	0.66080E-07	480741.4	3770213.0	375.4	3.49	4.00	3.25	YES	
L0008222	0	0.66080E-07	480741.4	3770204.5	375.4	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0008223	0	0.66080E-07	480741.4	3770195.9	375.4	3.49	4.00	3.25	YES	
L0008224	0	0.66080E-07	480741.4	3770187.3	375.4	3.49	4.00	3.25	YES	
L0008225	0	0.66080E-07	480741.4	3770178.7	375.4	3.49	4.00	3.25	YES	
L0008226	0	0.66080E-07	480741.4	3770170.1	375.4	3.49	4.00	3.25	YES	
L0008227	0	0.66080E-07	480741.4	3770161.5	375.4	3.49	4.00	3.25	YES	
L0008228	0	0.66080E-07	480741.4	3770152.9	375.4	3.49	4.00	3.25	YES	
L0008229	0	0.66080E-07	480741.4	3770144.3	375.4	3.49	4.00	3.25	YES	
L0008230	0	0.66080E-07	480741.4	3770135.7	375.4	3.49	4.00	3.25	YES	
L0008231	0	0.66080E-07	480741.4	3770127.1	375.4	3.49	4.00	3.25	YES	
L0008232	0	0.66080E-07	480741.4	3770118.6	375.4	3.49	4.00	3.25	YES	
L0008233	0	0.66080E-07	480741.4	3770110.0	375.4	3.49	4.00	3.25	YES	
L0008234	0	0.66080E-07	480741.4	3770101.4	375.4	3.49	4.00	3.25	YES	
L0008235	0	0.66080E-07	480741.4	3770092.8	375.4	3.49	4.00	3.25	YES	
L0008236	0	0.66080E-07	480741.4	3770084.2	375.4	3.49	4.00	3.25	YES	
L0008237	0	0.66080E-07	480741.4	3770075.6	375.4	3.49	4.00	3.25	YES	
L0008238	0	0.66080E-07	480741.4	3770067.0	375.4	3.49	4.00	3.25	YES	
L0008239	0	0.66080E-07	480741.4	3770058.4	375.4	3.49	4.00	3.25	YES	
L0008240	0	0.66080E-07	480741.4	3770049.8	375.4	3.49	4.00	3.25	YES	
L0008241	0	0.66080E-07	480741.4	3770041.2	375.4	3.49	4.00	3.25	YES	
L0008242	0	0.66080E-07	480741.4	3770032.7	375.4	3.49	4.00	3.25	YES	
L0008243	0	0.66080E-07	480741.4	3770024.1	375.4	3.49	4.00	3.25	YES	
L0008244	0	0.66080E-07	480741.4	3770015.5	375.4	3.49	4.00	3.25	YES	
L0008245	0	0.66080E-07	480741.4	3770006.9	375.4	3.49	4.00	3.25	YES	
L0008246	0	0.66080E-07	480741.4	3769998.3	375.4	3.49	4.00	3.25	YES	
L0008247	0	0.66080E-07	480741.4	3769989.7	375.4	3.49	4.00	3.25	YES	
L0008248	0	0.66080E-07	480741.4	3769981.1	375.4	3.49	4.00	3.25	YES	
L0008249	0	0.66080E-07	480741.4	3769972.5	375.4	3.49	4.00	3.25	YES	
L0008250	0	0.66080E-07	480741.4	3769963.9	375.4	3.49	4.00	3.25	YES	
L0008251	0	0.66080E-07	480741.4	3769955.3	375.4	3.49	4.00	3.25	YES	
L0008252	0	0.66080E-07	480741.4	3769946.8	375.4	3.49	4.00	3.25	YES	
L0008253	0	0.66080E-07	480741.4	3769938.2	375.4	3.49	4.00	3.25	YES	
L0008254	0	0.66080E-07	480741.4	3769929.6	375.4	3.49	4.00	3.25	YES	
L0008255	0	0.66080E-07	480741.4	3769921.0	375.4	3.49	4.00	3.25	YES	
L0008256	0	0.66080E-07	480741.4	3769912.4	375.4	3.49	4.00	3.25	YES	
L0008257	0	0.66080E-07	480741.4	3769903.8	375.4	3.49	4.00	3.25	YES	
L0008258	0	0.66080E-07	480741.4	3769895.2	375.6	3.49	4.00	3.25	YES	
L0008259	0	0.66080E-07	480741.4	3769886.6	375.8	3.49	4.00	3.25	YES	
L0008260	0	0.66080E-07	480741.4	3769878.0	376.0	3.49	4.00	3.25	YES	
L0008261	0	0.66080E-07	480741.4	3769869.4	376.1	3.49	4.00	3.25	YES	
L0008262	0	0.66080E-07	480741.4	3769860.9	376.2	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0008263	0	0.66080E-07	480741.4	3769852.3	376.3	3.49	4.00	3.25	YES	
L0008264	0	0.66080E-07	480741.4	3769843.7	376.5	3.49	4.00	3.25	YES	
L0008265	0	0.66080E-07	480741.4	3769835.1	377.0	3.49	4.00	3.25	YES	
L0008266	0	0.66080E-07	480741.4	3769826.5	377.4	3.49	4.00	3.25	YES	
L0008267	0	0.66080E-07	480741.4	3769817.9	377.9	3.49	4.00	3.25	YES	
L0008268	0	0.66080E-07	480741.4	3769809.3	378.0	3.49	4.00	3.25	YES	
L0008269	0	0.66080E-07	480741.4	3769800.7	378.0	3.49	4.00	3.25	YES	
L0008270	0	0.66080E-07	480741.4	3769792.1	378.0	3.49	4.00	3.25	YES	
L0008271	0	0.66080E-07	480741.4	3769783.5	378.0	3.49	4.00	3.25	YES	
L0008272	0	0.66080E-07	480741.4	3769775.0	378.0	3.49	4.00	3.25	YES	
L0008273	0	0.66080E-07	480741.4	3769766.4	378.0	3.49	4.00	3.25	YES	
L0008274	0	0.66080E-07	480741.4	3769757.8	378.0	3.49	4.00	3.25	YES	
L0008275	0	0.66080E-07	480741.4	3769749.2	378.0	3.49	4.00	3.25	YES	
L0008276	0	0.66080E-07	480741.4	3769740.6	378.0	3.49	4.00	3.25	YES	
L0008277	0	0.66080E-07	480741.4	3769732.0	378.0	3.49	4.00	3.25	YES	
L0008278	0	0.66080E-07	480741.4	3769723.4	378.0	3.49	4.00	3.25	YES	
L0008279	0	0.66080E-07	480741.4	3769714.8	378.0	3.49	4.00	3.25	YES	
L0008280	0	0.66080E-07	480741.4	3769706.2	378.0	3.49	4.00	3.25	YES	
L0008281	0	0.66080E-07	480741.4	3769697.6	378.0	3.49	4.00	3.25	YES	
L0008282	0	0.66080E-07	480741.4	3769689.1	378.0	3.49	4.00	3.25	YES	
L0008283	0	0.66080E-07	480741.4	3769680.5	378.0	3.49	4.00	3.25	YES	
L0008284	0	0.66080E-07	480741.4	3769671.9	378.0	3.49	4.00	3.25	YES	
L0008285	0	0.66080E-07	480741.4	3769663.3	378.0	3.49	4.00	3.25	YES	
L0008286	0	0.66080E-07	480741.4	3769654.7	378.0	3.49	4.00	3.25	YES	
L0008287	0	0.66080E-07	480741.4	3769646.1	378.0	3.49	4.00	3.25	YES	
L0008288	0	0.66080E-07	480741.4	3769637.5	378.0	3.49	4.00	3.25	YES	
L0008289	0	0.70930E-06	480722.6	3771831.4	371.0	3.49	4.00	3.25	YES	
L0008290	0	0.70930E-06	480714.0	3771831.4	371.0	3.49	4.00	3.25	YES	
L0008291	0	0.70930E-06	480705.5	3771831.4	371.0	3.49	4.00	3.25	YES	
L0008292	0	0.70930E-06	480696.9	3771831.4	370.9	3.49	4.00	3.25	YES	
L0008293	0	0.70930E-06	480688.3	3771831.4	370.6	3.49	4.00	3.25	YES	
L0008294	0	0.70930E-06	480679.8	3771830.5	370.3	3.49	4.00	3.25	YES	
L0008295	0	0.70930E-06	480672.2	3771827.7	370.1	3.49	4.00	3.25	YES	
L0008296	0	0.70930E-06	480669.8	3771819.5	370.2	3.49	4.00	3.25	YES	
L0008297	0	0.70930E-06	480669.7	3771810.9	370.5	3.49	4.00	3.25	YES	
L0008298	0	0.70930E-06	480669.6	3771802.3	370.8	3.49	4.00	3.25	YES	
L0008299	0	0.70930E-06	480669.5	3771793.7	371.0	3.49	4.00	3.25	YES	
L0008300	0	0.70930E-06	480669.4	3771785.1	371.0	3.49	4.00	3.25	YES	
L0008301	0	0.70930E-06	480669.3	3771776.5	371.0	3.49	4.00	3.25	YES	
L0008302	0	0.70930E-06	480669.3	3771768.0	371.0	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0008303	0	0.70930E-06	480669.2	3771759.4	371.0	3.49	4.00	3.25	YES	
L0008304	0	0.70930E-06	480669.1	3771750.8	371.0	3.49	4.00	3.25	YES	
L0008305	0	0.70930E-06	480669.0	3771742.2	371.0	3.49	4.00	3.25	YES	
L0008306	0	0.70930E-06	480668.9	3771733.6	371.0	3.49	4.00	3.25	YES	
L0008307	0	0.70930E-06	480668.8	3771725.0	371.0	3.49	4.00	3.25	YES	
L0008308	0	0.70930E-06	480668.7	3771716.4	371.0	3.49	4.00	3.25	YES	
L0008309	0	0.70930E-06	480668.7	3771707.8	371.0	3.49	4.00	3.25	YES	
L0008310	0	0.70930E-06	480668.6	3771699.2	371.0	3.49	4.00	3.25	YES	
L0008311	0	0.70930E-06	480668.5	3771690.7	371.0	3.49	4.00	3.25	YES	
L0008312	0	0.70930E-06	480666.7	3771682.5	371.0	3.49	4.00	3.25	YES	
L0008313	0	0.70930E-06	480659.4	3771679.7	371.0	3.49	4.00	3.25	YES	
L0008314	0	0.70930E-06	480651.2	3771677.5	371.0	3.49	4.00	3.25	YES	
L0008315	0	0.70930E-06	480643.2	3771675.6	371.0	3.49	4.00	3.25	YES	
L0008316	0	0.70930E-06	480634.7	3771677.1	370.8	3.49	4.00	3.25	YES	
L0008317	0	0.70930E-06	480627.7	3771680.2	370.6	3.49	4.00	3.25	YES	
L0008318	0	0.70930E-06	480625.5	3771688.5	370.5	3.49	4.00	3.25	YES	
L0008319	0	0.70930E-06	480623.3	3771696.8	370.4	3.49	4.00	3.25	YES	
L0008320	0	0.70930E-06	480623.4	3771705.4	370.4	3.49	4.00	3.25	YES	
L0008321	0	0.70930E-06	480623.7	3771713.9	370.5	3.49	4.00	3.25	YES	
L0008322	0	0.70930E-06	480624.0	3771722.5	370.5	3.49	4.00	3.25	YES	
L0008323	0	0.70930E-06	480624.3	3771731.1	370.5	3.49	4.00	3.25	YES	
L0008324	0	0.70930E-06	480624.6	3771739.7	370.4	3.49	4.00	3.25	YES	
L0008325	0	0.70930E-06	480624.9	3771748.3	370.3	3.49	4.00	3.25	YES	
L0008326	0	0.70930E-06	480625.1	3771756.9	370.2	3.49	4.00	3.25	YES	
L0008327	0	0.70930E-06	480625.4	3771765.4	370.0	3.49	4.00	3.25	YES	
L0008328	0	0.70930E-06	480625.7	3771774.0	370.0	3.49	4.00	3.25	YES	
L0008329	0	0.70930E-06	480626.0	3771782.6	370.0	3.49	4.00	3.25	YES	
L0008330	0	0.70930E-06	480626.3	3771791.2	370.0	3.49	4.00	3.25	YES	
L0008331	0	0.70930E-06	480626.6	3771799.8	370.0	3.49	4.00	3.25	YES	
L0008332	0	0.70930E-06	480626.9	3771808.4	370.0	3.49	4.00	3.25	YES	
L0008333	0	0.70930E-06	480627.1	3771817.0	370.0	3.49	4.00	3.25	YES	
L0008334	0	0.70930E-06	480627.4	3771825.5	370.0	3.49	4.00	3.25	YES	
L0008335	0	0.70930E-06	480627.7	3771834.1	369.9	3.49	4.00	3.25	YES	
L0008336	0	0.70930E-06	480628.0	3771842.7	369.8	3.49	4.00	3.25	YES	
L0008337	0	0.70930E-06	480628.3	3771851.3	369.7	3.49	4.00	3.25	YES	
L0008338	0	0.70930E-06	480628.6	3771859.9	369.6	3.49	4.00	3.25	YES	
L0008339	0	0.70930E-06	480628.9	3771868.5	369.4	3.49	4.00	3.25	YES	
L0008340	0	0.70930E-06	480629.1	3771877.1	369.2	3.49	4.00	3.25	YES	
L0008341	0	0.70930E-06	480629.4	3771885.6	369.0	3.49	4.00	3.25	YES	
L0008342	0	0.70930E-06	480629.7	3771894.2	369.0	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0008343	0	0.70930E-06	480630.0	3771902.8	369.0	3.49	4.00	3.25	YES	
L0008344	0	0.70930E-06	480630.3	3771911.4	369.0	3.49	4.00	3.25	YES	
L0008345	0	0.70930E-06	480630.6	3771920.0	368.9	3.49	4.00	3.25	YES	
L0008346	0	0.70930E-06	480630.9	3771928.6	368.6	3.49	4.00	3.25	YES	
L0008347	0	0.70930E-06	480631.1	3771937.2	368.3	3.49	4.00	3.25	YES	
L0008348	0	0.70930E-06	480631.4	3771945.7	368.0	3.49	4.00	3.25	YES	
L0008349	0	0.70930E-06	480631.7	3771954.3	368.0	3.49	4.00	3.25	YES	
L0008350	0	0.70930E-06	480632.0	3771962.9	368.0	3.49	4.00	3.25	YES	
L0008351	0	0.70930E-06	480632.3	3771971.5	368.0	3.49	4.00	3.25	YES	
L0008352	0	0.70930E-06	480632.6	3771980.1	367.9	3.49	4.00	3.25	YES	
L0008353	0	0.70930E-06	480632.9	3771988.7	367.6	3.49	4.00	3.25	YES	
L0008354	0	0.70930E-06	480635.1	3771996.2	367.3	3.49	4.00	3.25	YES	
L0008355	0	0.70930E-06	480642.6	3772000.1	367.2	3.49	4.00	3.25	YES	
L0008356	0	0.70930E-06	480650.8	3772002.9	367.1	3.49	4.00	3.25	YES	
L0008357	0	0.70930E-06	480659.4	3772002.7	367.1	3.49	4.00	3.25	YES	
L0008358	0	0.70930E-06	480667.9	3772002.3	367.1	3.49	4.00	3.25	YES	
L0008359	0	0.70930E-06	480675.6	3771998.5	367.4	3.49	4.00	3.25	YES	
L0008360	0	0.70930E-06	480678.6	3771990.6	367.8	3.49	4.00	3.25	YES	
L0008361	0	0.70930E-06	480679.3	3771982.1	368.1	3.49	4.00	3.25	YES	
L0008362	0	0.70930E-06	480679.1	3771973.6	368.4	3.49	4.00	3.25	YES	
L0008363	0	0.70930E-06	480678.9	3771965.0	368.7	3.49	4.00	3.25	YES	
L0008364	0	0.70930E-06	480678.7	3771956.4	369.0	3.49	4.00	3.25	YES	
L0008365	0	0.70930E-06	480678.5	3771947.8	369.2	3.49	4.00	3.25	YES	
L0008366	0	0.70930E-06	480678.3	3771939.2	369.4	3.49	4.00	3.25	YES	
L0008367	0	0.70930E-06	480678.1	3771930.6	369.7	3.49	4.00	3.25	YES	
L0008368	0	0.70930E-06	480677.9	3771922.0	369.9	3.49	4.00	3.25	YES	
L0008369	0	0.70930E-06	480677.7	3771913.4	370.0	3.49	4.00	3.25	YES	
L0008370	0	0.70930E-06	480677.5	3771904.9	370.0	3.49	4.00	3.25	YES	
L0008371	0	0.70930E-06	480677.3	3771896.3	370.0	3.49	4.00	3.25	YES	
L0008372	0	0.70930E-06	480677.1	3771887.7	370.0	3.49	4.00	3.25	YES	
L0008373	0	0.70930E-06	480676.9	3771879.1	370.1	3.49	4.00	3.25	YES	
L0008374	0	0.70930E-06	480676.7	3771870.5	370.1	3.49	4.00	3.25	YES	
L0008375	0	0.70930E-06	480676.1	3771862.2	370.2	3.49	4.00	3.25	YES	
L0008376	0	0.30000E-06	480268.2	3771598.7	366.0	3.49	4.00	3.25	YES	
L0008377	0	0.30000E-06	480268.2	3771607.3	366.0	3.49	4.00	3.25	YES	
L0008378	0	0.30000E-06	480268.2	3771615.8	366.0	3.49	4.00	3.25	YES	
L0008379	0	0.30000E-06	480268.2	3771624.4	365.9	3.49	4.00	3.25	YES	
L0008380	0	0.30000E-06	480268.2	3771633.0	365.8	3.49	4.00	3.25	YES	
L0008381	0	0.30000E-06	480268.2	3771641.6	365.7	3.49	4.00	3.25	YES	
L0008382	0	0.30000E-06	480268.2	3771650.2	365.6	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0008383	0	0.30000E-06	480268.2	3771658.8	365.6	3.49	4.00	3.25	YES	
L0008384	0	0.30000E-06	480268.2	3771667.4	365.6	3.49	4.00	3.25	YES	
L0008385	0	0.30000E-06	480269.6	3771675.7	365.7	3.49	4.00	3.25	YES	
L0008386	0	0.30000E-06	480274.9	3771681.3	365.8	3.49	4.00	3.25	YES	
L0008387	0	0.30000E-06	480283.2	3771682.9	366.0	3.49	4.00	3.25	YES	
L0008388	0	0.30000E-06	480291.8	3771682.9	366.0	3.49	4.00	3.25	YES	
L0008389	0	0.30000E-06	480300.4	3771682.9	366.0	3.49	4.00	3.25	YES	
L0008390	0	0.30000E-06	480309.0	3771682.9	366.0	3.49	4.00	3.25	YES	
L0008391	0	0.30000E-06	480317.6	3771682.9	366.3	3.49	4.00	3.25	YES	
L0008392	0	0.30000E-06	480326.2	3771682.9	366.5	3.49	4.00	3.25	YES	
L0008393	0	0.30000E-06	480334.8	3771682.9	366.8	3.49	4.00	3.25	YES	
L0008394	0	0.30000E-06	480343.4	3771682.9	367.0	3.49	4.00	3.25	YES	
L0008395	0	0.30000E-06	480352.0	3771682.9	367.0	3.49	4.00	3.25	YES	
L0008396	0	0.30000E-06	480358.1	3771687.8	367.0	3.49	4.00	3.25	YES	
L0008397	0	0.30000E-06	480359.5	3771696.3	367.0	3.49	4.00	3.25	YES	
L0008398	0	0.40470E-06	480623.6	3772018.7	366.6	3.49	4.00	3.25	YES	
L0008399	0	0.40470E-06	480616.9	3772024.1	366.4	3.49	4.00	3.25	YES	
L0008400	0	0.40470E-06	480610.2	3772029.5	366.2	3.49	4.00	3.25	YES	
L0008401	0	0.40470E-06	480603.5	3772034.8	366.1	3.49	4.00	3.25	YES	
L0008402	0	0.40470E-06	480596.8	3772040.2	366.0	3.49	4.00	3.25	YES	
L0008403	0	0.40470E-06	480590.1	3772045.6	366.0	3.49	4.00	3.25	YES	
L0008404	0	0.40470E-06	480583.4	3772051.0	366.0	3.49	4.00	3.25	YES	
L0008405	0	0.40470E-06	480576.7	3772056.3	366.0	3.49	4.00	3.25	YES	
L0008406	0	0.40470E-06	480569.9	3772061.7	366.1	3.49	4.00	3.25	YES	
L0008407	0	0.40470E-06	480563.2	3772067.1	366.0	3.49	4.00	3.25	YES	
L0008408	0	0.40470E-06	480556.5	3772072.4	366.0	3.49	4.00	3.25	YES	
L0008409	0	0.40470E-06	480549.5	3772076.8	366.0	3.49	4.00	3.25	YES	
L0008410	0	0.40470E-06	480540.9	3772077.0	366.0	3.49	4.00	3.25	YES	
L0008411	0	0.40470E-06	480532.3	3772077.2	366.0	3.49	4.00	3.25	YES	
L0008412	0	0.40470E-06	480523.7	3772077.4	366.0	3.49	4.00	3.25	YES	
L0008413	0	0.40470E-06	480515.1	3772077.6	365.9	3.49	4.00	3.25	YES	
L0008414	0	0.40470E-06	480506.5	3772077.8	365.8	3.49	4.00	3.25	YES	
L0008415	0	0.40470E-06	480497.9	3772078.0	365.7	3.49	4.00	3.25	YES	
L0008416	0	0.40470E-06	480489.3	3772078.2	365.6	3.49	4.00	3.25	YES	
L0008417	0	0.40470E-06	480480.8	3772078.4	365.7	3.49	4.00	3.25	YES	
L0008418	0	0.40470E-06	480472.2	3772078.6	365.8	3.49	4.00	3.25	YES	
L0008419	0	0.40470E-06	480463.6	3772078.8	365.9	3.49	4.00	3.25	YES	
L0008420	0	0.40470E-06	480455.0	3772079.1	366.0	3.49	4.00	3.25	YES	
L0008421	0	0.40470E-06	480446.4	3772079.3	366.0	3.49	4.00	3.25	YES	
L0008422	0	0.40470E-06	480437.8	3772079.5	366.0	3.49	4.00	3.25	YES	

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*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0008423	0	0.40470E-06	480429.2	3772079.7	366.0	3.49	4.00	3.25	YES	
L0008424	0	0.40470E-06	480420.6	3772079.9	366.0	3.49	4.00	3.25	YES	
L0008425	0	0.40470E-06	480412.1	3772080.1	366.0	3.49	4.00	3.25	YES	
L0008426	0	0.40470E-06	480403.5	3772080.3	366.0	3.49	4.00	3.25	YES	
L0008427	0	0.40470E-06	480394.9	3772080.5	365.9	3.49	4.00	3.25	YES	
L0008428	0	0.40470E-06	480386.3	3772080.7	365.8	3.49	4.00	3.25	YES	
L0008429	0	0.40470E-06	480377.7	3772080.9	365.6	3.49	4.00	3.25	YES	
L0008430	0	0.40470E-06	480369.1	3772081.1	365.5	3.49	4.00	3.25	YES	
L0008431	0	0.40470E-06	480365.9	3772075.7	365.6	3.49	4.00	3.25	YES	
L0008432	0	0.40470E-06	480365.8	3772067.1	365.8	3.49	4.00	3.25	YES	
L0008433	0	0.40470E-06	480365.7	3772058.6	365.9	3.49	4.00	3.25	YES	
L0008434	0	0.40470E-06	480365.6	3772050.0	365.9	3.49	4.00	3.25	YES	
L0008435	0	0.40470E-06	480365.6	3772041.4	365.9	3.49	4.00	3.25	YES	
L0008436	0	0.40470E-06	480365.5	3772032.8	365.9	3.49	4.00	3.25	YES	
L0008437	0	0.40470E-06	480365.4	3772024.2	365.9	3.49	4.00	3.25	YES	
L0008438	0	0.40470E-06	480365.3	3772015.6	365.9	3.49	4.00	3.25	YES	
L0008439	0	0.40470E-06	480365.2	3772007.0	365.8	3.49	4.00	3.25	YES	
L0008440	0	0.40470E-06	480365.1	3771998.4	365.9	3.49	4.00	3.25	YES	
L0008441	0	0.40470E-06	480365.0	3771989.8	365.9	3.49	4.00	3.25	YES	
L0008442	0	0.40470E-06	480364.9	3771981.2	366.0	3.49	4.00	3.25	YES	
L0008443	0	0.40470E-06	480364.8	3771972.7	366.0	3.49	4.00	3.25	YES	
L0008444	0	0.40470E-06	480364.7	3771964.1	366.0	3.49	4.00	3.25	YES	
L0008445	0	0.40470E-06	480364.6	3771955.5	366.0	3.49	4.00	3.25	YES	
L0008446	0	0.40470E-06	480364.5	3771946.9	366.0	3.49	4.00	3.25	YES	
L0008447	0	0.40470E-06	480364.4	3771938.3	366.0	3.49	4.00	3.25	YES	
L0008448	0	0.40470E-06	480364.3	3771929.7	366.0	3.49	4.00	3.25	YES	
L0008449	0	0.40470E-06	480364.2	3771921.1	366.0	3.49	4.00	3.25	YES	
L0008450	0	0.40470E-06	480364.1	3771912.5	366.1	3.49	4.00	3.25	YES	
L0008451	0	0.40470E-06	480364.0	3771903.9	366.3	3.49	4.00	3.25	YES	
L0008452	0	0.40470E-06	480363.9	3771895.4	366.6	3.49	4.00	3.25	YES	
L0008453	0	0.40470E-06	480363.8	3771886.8	366.8	3.49	4.00	3.25	YES	
L0008454	0	0.40470E-06	480363.7	3771878.2	366.8	3.49	4.00	3.25	YES	
L0008455	0	0.40470E-06	480363.6	3771869.6	366.8	3.49	4.00	3.25	YES	
L0008456	0	0.40470E-06	480363.5	3771861.0	366.8	3.49	4.00	3.25	YES	
L0008457	0	0.40470E-06	480363.4	3771852.4	366.8	3.49	4.00	3.25	YES	
L0008458	0	0.40470E-06	480363.3	3771843.8	366.8	3.49	4.00	3.25	YES	
L0008459	0	0.40470E-06	480363.2	3771835.2	366.8	3.49	4.00	3.25	YES	
L0008460	0	0.40470E-06	480363.1	3771826.6	366.8	3.49	4.00	3.25	YES	
L0008461	0	0.40470E-06	480363.0	3771818.1	366.8	3.49	4.00	3.25	YES	
L0008462	0	0.40470E-06	480362.9	3771809.5	366.8	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0008463	0	0.40470E-06	480362.8	3771800.9	366.8	3.49	4.00	3.25	YES	
L0008464	0	0.40470E-06	480362.7	3771792.3	366.8	3.49	4.00	3.25	YES	
L0008465	0	0.40470E-06	480362.6	3771783.7	366.9	3.49	4.00	3.25	YES	
L0008466	0	0.40470E-06	480362.5	3771775.1	366.9	3.49	4.00	3.25	YES	
L0008467	0	0.40470E-06	480362.4	3771766.5	367.0	3.49	4.00	3.25	YES	
L0008468	0	0.40470E-06	480362.3	3771757.9	367.0	3.49	4.00	3.25	YES	
L0008469	0	0.40470E-06	480362.2	3771749.3	367.0	3.49	4.00	3.25	YES	
L0008470	0	0.40470E-06	480362.1	3771740.7	367.0	3.49	4.00	3.25	YES	
L0008471	0	0.40470E-06	480362.0	3771732.2	367.0	3.49	4.00	3.25	YES	
L0008472	0	0.40470E-06	480361.9	3771723.6	367.0	3.49	4.00	3.25	YES	
L0008473	0	0.40470E-06	480361.8	3771715.0	367.0	3.49	4.00	3.25	YES	
L0008474	0	0.19170E-05	480394.9	3772053.7	366.0	3.49	4.00	3.25	YES	
L0008475	0	0.19170E-05	480394.9	3772045.2	366.0	3.49	4.00	3.25	YES	
L0008476	0	0.19170E-05	480394.8	3772036.6	366.0	3.49	4.00	3.25	YES	
L0008477	0	0.19170E-05	480394.8	3772028.0	366.0	3.49	4.00	3.25	YES	
L0008478	0	0.19170E-05	480394.7	3772019.4	366.0	3.49	4.00	3.25	YES	
L0008479	0	0.19170E-05	480394.7	3772010.8	366.0	3.49	4.00	3.25	YES	
L0008480	0	0.19170E-05	480394.6	3772002.2	366.0	3.49	4.00	3.25	YES	
L0008481	0	0.19170E-05	480394.6	3771993.6	366.0	3.49	4.00	3.25	YES	
L0008482	0	0.19170E-05	480394.6	3771985.0	366.0	3.49	4.00	3.25	YES	
L0008483	0	0.19170E-05	480394.5	3771976.4	366.0	3.49	4.00	3.25	YES	
L0008484	0	0.19170E-05	480394.5	3771967.8	366.2	3.49	4.00	3.25	YES	
L0008485	0	0.19170E-05	480394.4	3771959.3	366.5	3.49	4.00	3.25	YES	
L0008486	0	0.19170E-05	480394.4	3771950.7	366.7	3.49	4.00	3.25	YES	
L0008487	0	0.19170E-05	480394.4	3771942.1	366.8	3.49	4.00	3.25	YES	
L0008488	0	0.19170E-05	480394.3	3771933.5	366.8	3.49	4.00	3.25	YES	
L0008489	0	0.19170E-05	480394.3	3771924.9	366.8	3.49	4.00	3.25	YES	
L0008490	0	0.19170E-05	480394.2	3771916.3	366.8	3.49	4.00	3.25	YES	
L0008491	0	0.19170E-05	480394.2	3771907.7	366.9	3.49	4.00	3.25	YES	
L0008492	0	0.19170E-05	480394.2	3771899.1	366.9	3.49	4.00	3.25	YES	
L0008493	0	0.19170E-05	480394.1	3771890.5	367.0	3.49	4.00	3.25	YES	
L0008494	0	0.19170E-05	480394.1	3771881.9	367.0	3.49	4.00	3.25	YES	
L0008495	0	0.19170E-05	480394.0	3771873.4	367.0	3.49	4.00	3.25	YES	
L0008496	0	0.19170E-05	480394.0	3771864.8	367.0	3.49	4.00	3.25	YES	
L0008497	0	0.19170E-05	480394.0	3771856.2	367.0	3.49	4.00	3.25	YES	
L0008498	0	0.19170E-05	480393.9	3771847.6	367.0	3.49	4.00	3.25	YES	
L0008499	0	0.19170E-05	480393.9	3771839.0	367.0	3.49	4.00	3.25	YES	
L0008500	0	0.19170E-05	480393.8	3771830.4	367.0	3.49	4.00	3.25	YES	
L0008501	0	0.19170E-05	480393.8	3771821.8	367.0	3.49	4.00	3.25	YES	
L0008502	0	0.19170E-05	480393.7	3771813.2	367.0	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0008503	0	0.19170E-05	480393.7	3771804.6	367.0	3.49	4.00	3.25	YES	
L0008504	0	0.19170E-05	480393.7	3771796.0	367.0	3.49	4.00	3.25	YES	
L0008505	0	0.19170E-05	480393.6	3771787.5	367.0	3.49	4.00	3.25	YES	
L0008506	0	0.19170E-05	480393.6	3771778.9	367.0	3.49	4.00	3.25	YES	
L0008507	0	0.19170E-05	480393.5	3771770.3	367.0	3.49	4.00	3.25	YES	
L0008508	0	0.19170E-05	480393.5	3771761.7	367.0	3.49	4.00	3.25	YES	
L0008509	0	0.19170E-05	480393.5	3771753.1	367.0	3.49	4.00	3.25	YES	
L0008510	0	0.19170E-05	480393.4	3771744.5	367.0	3.49	4.00	3.25	YES	
L0008511	0	0.19170E-05	480393.4	3771735.9	367.0	3.49	4.00	3.25	YES	
L0008512	0	0.19170E-05	480393.3	3771727.3	367.0	3.49	4.00	3.25	YES	
L0008513	0	0.19170E-05	480393.3	3771718.7	367.0	3.49	4.00	3.25	YES	
L0008514	0	0.19170E-05	480393.3	3771710.1	367.0	3.49	4.00	3.25	YES	
L0008515	0	0.21120E-05	480597.9	3771997.7	367.3	3.49	4.00	3.25	YES	
L0008516	0	0.21120E-05	480597.7	3771989.1	367.6	3.49	4.00	3.25	YES	
L0008517	0	0.21120E-05	480597.5	3771980.6	367.9	3.49	4.00	3.25	YES	
L0008518	0	0.21120E-05	480597.3	3771972.0	368.0	3.49	4.00	3.25	YES	
L0008519	0	0.21120E-05	480597.0	3771963.4	368.0	3.49	4.00	3.25	YES	
L0008520	0	0.21120E-05	480596.8	3771954.8	368.0	3.49	4.00	3.25	YES	
L0008521	0	0.21120E-05	480596.6	3771946.2	368.0	3.49	4.00	3.25	YES	
L0008522	0	0.21120E-05	480596.3	3771937.6	368.2	3.49	4.00	3.25	YES	
L0008523	0	0.21120E-05	480596.1	3771929.0	368.3	3.49	4.00	3.25	YES	
L0008524	0	0.21120E-05	480595.9	3771920.5	368.5	3.49	4.00	3.25	YES	
L0008525	0	0.21120E-05	480595.7	3771911.9	368.6	3.49	4.00	3.25	YES	
L0008526	0	0.21120E-05	480595.4	3771903.3	368.7	3.49	4.00	3.25	YES	
L0008527	0	0.21120E-05	480595.2	3771894.7	368.9	3.49	4.00	3.25	YES	
L0008528	0	0.21120E-05	480595.0	3771886.1	369.0	3.49	4.00	3.25	YES	
L0008529	0	0.21120E-05	480594.7	3771877.5	369.0	3.49	4.00	3.25	YES	
L0008530	0	0.21120E-05	480594.5	3771868.9	369.0	3.49	4.00	3.25	YES	
L0008531	0	0.21120E-05	480594.3	3771860.3	369.0	3.49	4.00	3.25	YES	
L0008532	0	0.21120E-05	480594.1	3771851.8	369.1	3.49	4.00	3.25	YES	
L0008533	0	0.21120E-05	480593.8	3771843.2	369.2	3.49	4.00	3.25	YES	
L0008534	0	0.21120E-05	480593.6	3771834.6	369.3	3.49	4.00	3.25	YES	
L0008535	0	0.21120E-05	480593.4	3771826.0	369.4	3.49	4.00	3.25	YES	
L0008536	0	0.21120E-05	480593.1	3771817.4	369.4	3.49	4.00	3.25	YES	
L0008537	0	0.21120E-05	480592.9	3771808.8	369.4	3.49	4.00	3.25	YES	
L0008538	0	0.21120E-05	480592.7	3771800.2	369.4	3.49	4.00	3.25	YES	
L0008539	0	0.21120E-05	480592.4	3771791.6	369.5	3.49	4.00	3.25	YES	
L0008540	0	0.21120E-05	480592.2	3771783.1	369.7	3.49	4.00	3.25	YES	
L0008541	0	0.21120E-05	480592.0	3771774.5	369.8	3.49	4.00	3.25	YES	
L0008542	0	0.21120E-05	480591.8	3771765.9	370.0	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0008543	0	0.21120E-05	480591.5	3771757.3	370.0	3.49	4.00	3.25	YES	
L0008544	0	0.21120E-05	480591.3	3771748.7	370.0	3.49	4.00	3.25	YES	
L0008545	0	0.21120E-05	480591.1	3771740.1	370.0	3.49	4.00	3.25	YES	
L0008546	0	0.21120E-05	480590.8	3771731.5	370.0	3.49	4.00	3.25	YES	
L0008547	0	0.21120E-05	480590.6	3771723.0	370.0	3.49	4.00	3.25	YES	
L0008548	0	0.21120E-05	480590.4	3771714.4	370.0	3.49	4.00	3.25	YES	
L0008549	0	0.21120E-05	480590.2	3771705.8	370.0	3.49	4.00	3.25	YES	
L0008550	0	0.21120E-05	480589.9	3771697.2	370.0	3.49	4.00	3.25	YES	
L0008551	0	0.21120E-05	480589.7	3771688.6	370.0	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs
ALL	L0007183 , L0007184 , L0007185 , L0007186 , L0007187 , L0007188 , L0007189 , L0007190 ,
	L0007191 , L0007192 , L0007193 , L0007194 , L0007195 , L0007196 , L0007197 , L0007198 ,
	L0007199 , L0007200 , L0007201 , L0007202 , L0007203 , L0007204 , L0007205 , L0007206 ,
	L0007207 , L0007208 , L0007209 , L0007210 , L0007211 , L0007212 , L0007213 , L0007214 ,
	L0007215 , L0007216 , L0007217 , L0007218 , L0007219 , L0007220 , L0007221 , L0007222 ,
	L0007223 , L0007224 , L0007225 , L0007226 , L0007227 , L0007228 , L0007229 , L0007230 ,
	L0007231 , L0007232 , L0007233 , L0007234 , L0007235 , L0007236 , L0007237 , L0007238 ,
	L0007239 , L0007240 , L0007241 , L0007242 , L0007243 , L0007244 , L0007245 , L0007246 ,
	L0007247 , L0007248 , L0007249 , L0007250 , L0007251 , L0007252 , L0007253 , L0007254 ,
	L0007255 , L0007256 , L0007257 , L0007258 , L0007259 , L0007260 , L0007261 , L0007262 ,
	L0007263 , L0007264 , L0007265 , L0007266 , L0007267 , L0007268 , L0007269 , L0007270 ,
	L0007271 , L0007272 , L0007273 , L0007274 , L0007275 , L0007276 , L0007277 , L0007278 ,
	L0007279 , L0007280 , L0007281 , L0007282 , L0007283 , L0007284 , L0007285 , L0007286 ,
	L0007287 , L0007288 , L0007289 , L0007290 , L0007291 , L0007292 , L0007293 , L0007294 ,
	L0007295 , L0007296 , L0007297 , L0007298 , L0007299 , L0007300 , L0007301 , L0007302 ,
	L0007303 , L0007304 , L0007305 , L0007306 , L0007307 , L0007308 , L0007309 , L0007310 ,
	L0007311 , L0007312 , L0007313 , L0007314 , L0007315 , L0007316 , L0007317 , L0007318 ,
	L0007319 , L0007320 , L0007321 , L0007322 , L0007323 , L0007324 , L0007325 , L0007326 ,
	L0007327 , L0007328 , L0007329 , L0007330 , L0007331 , L0007332 , L0007333 , L0007334 ,
	L0007335 , L0007336 , L0007337 , L0007338 , L0007339 , L0007340 , L0007341 , L0007342 ,

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs
	L0007343 , L0007344 , L0007345 , L0007346 , L0007347 , L0007348 , L0007349 , L0007350 ,
	L0007351 , L0007352 , L0007353 , L0007354 , L0007355 , L0007356 , L0007357 , L0007358 ,
	L0007359 , L0007360 , L0007361 , L0007362 , L0007363 , L0007364 , L0007365 , L0007366 ,
	L0007367 , L0007368 , L0007369 , L0007370 , L0007371 , L0007372 , L0007373 , L0007374 ,
	L0007375 , L0007376 , L0007377 , L0007378 , L0007379 , L0007380 , L0007381 , L0007382 ,
	L0007383 , L0007384 , L0007385 , L0007386 , L0007387 , L0007388 , L0007389 , L0007390 ,
	L0007391 , L0007392 , L0007393 , L0007394 , L0007395 , L0007396 , L0007397 , L0007398 ,
	L0007399 , L0007400 , L0007401 , L0007402 , L0007403 , L0007404 , L0007405 , L0007406 ,
	L0007407 , L0007408 , L0007409 , L0007410 , L0007411 , L0007412 , L0007413 , L0007414 ,
	L0007415 , L0007416 , L0007417 , L0007418 , L0007419 , L0007420 , L0007421 , L0007422 ,
	L0007423 , L0007424 , L0007425 , L0007426 , L0007427 , L0007428 , L0007429 , L0007430 ,
	L0007431 , L0007432 , L0007433 , L0007434 , L0007435 , L0007436 , L0007437 , L0007438 ,
	L0007439 , L0007440 , L0007441 , L0007442 , L0007443 , L0007444 , L0007445 , L0007446 ,
	L0007447 , L0007448 , L0007449 , L0007450 , L0007451 , L0007452 , L0007453 , L0007454 ,
	L0007455 , L0007456 , L0007457 , L0007458 , L0007459 , L0007460 , L0007461 , L0007462 ,
	L0007463 , L0007464 , L0007465 , L0007466 , L0007467 , L0007468 , L0007469 , L0007470 ,
	L0007471 , L0007472 , L0007473 , L0007474 , L0007475 , L0007476 , L0007477 , L0007478 ,
	L0007479 , L0007480 , L0007481 , L0007482 , L0007483 , L0007484 , L0007485 , L0007486 ,
	L0007487 , L0007488 , L0007489 , L0007490 , L0007491 , L0007492 , L0007493 , L0007494 ,
	L0007495 , L0007496 , L0007497 , L0007498 , L0007499 , L0007500 , L0007501 , L0007502 ,

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs
	L0007503 , L0007504 , L0007505 , L0007506 , L0007507 , L0007508 , L0007509 , L0007510 ,
	L0007511 , L0007512 , L0007513 , L0007514 , L0007515 , L0007516 , L0007517 , L0007518 ,
	L0007519 , L0007520 , L0007521 , L0007522 , L0007523 , L0007524 , L0007525 , L0007526 ,
	L0007527 , L0007528 , L0007529 , L0007530 , L0007531 , L0007532 , L0007533 , L0007534 ,
	L0007535 , L0007536 , L0007537 , L0007538 , L0007539 , L0007540 , L0007541 , L0007542 ,
	L0007543 , L0007544 , L0007545 , L0007546 , L0007547 , L0007548 , L0007549 , L0007550 ,
	L0007551 , L0007552 , L0007553 , L0007554 , L0007555 , L0007556 , L0007557 , L0007558 ,
	L0007559 , L0007560 , L0007561 , L0007562 , L0007563 , L0007564 , L0007565 , L0007566 ,
	L0007567 , L0007568 , L0007569 , L0007570 , L0007571 , L0007572 , L0007573 , L0007574 ,
	L0007575 , L0007576 , L0007577 , L0007578 , L0007579 , L0007580 , L0007581 , L0007582 ,
	L0007583 , L0007584 , L0007585 , L0007586 , L0007587 , L0007588 , L0007589 , L0007590 ,
	L0007591 , L0007592 , L0007593 , L0007594 , L0007595 , L0007596 , L0007597 , L0007598 ,
	L0007599 , L0007600 , L0007601 , L0007602 , L0007603 , L0007604 , L0007605 , L0007606 ,
	L0007607 , L0007608 , L0007609 , L0007610 , L0007611 , L0007612 , L0007613 , L0007614 ,
	L0007615 , L0007616 , L0007617 , L0007618 , L0007619 , L0007620 , L0007621 , L0007622 ,
	L0007623 , L0007624 , L0007625 , L0007626 , L0007627 , L0007628 , L0007629 , L0007630 ,
	L0007631 , L0007632 , L0007633 , L0007634 , L0007635 , L0007636 , L0007637 , L0007638 ,
	L0007639 , L0007640 , L0007641 , L0007642 , L0007643 , L0007644 , L0007645 , L0007646 ,
	L0007647 , L0007648 , L0007649 , L0007650 , L0007651 , L0007652 , L0007653 , L0007654 ,
	L0007655 , L0007656 , L0007657 , L0007658 , L0007659 , L0007660 , L0007661 , L0007662 ,

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs
	L0007663 , L0007664 , L0007665 , L0007666 , L0007667 , L0007668 , L0007669 , L0007670 ,
	L0007671 , L0007672 , L0007673 , L0007674 , L0007675 , L0007676 , L0007677 , L0007678 ,
	L0007679 , L0007680 , L0007681 , L0007682 , L0007683 , L0007684 , L0007685 , L0007686 ,
	L0007687 , L0007688 , L0007689 , L0007690 , L0007691 , L0007692 , L0007693 , L0007694 ,
	L0007695 , L0007696 , L0007697 , L0007698 , L0007699 , L0007700 , L0007701 , L0007702 ,
	L0007703 , L0007704 , L0007705 , L0007706 , L0007707 , L0007708 , L0007709 , L0007710 ,
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	L0007727 , L0007728 , L0007729 , L0007730 , L0007731 , L0007732 , L0007733 , L0007734 ,
	L0007735 , L0007736 , L0007737 , L0007738 , L0007739 , L0007740 , L0007741 , L0007742 ,
	L0007743 , L0007744 , L0007745 , L0007746 , L0007747 , L0007748 , L0007749 , L0007750 ,
	L0007751 , L0007752 , L0007753 , L0007754 , L0007755 , L0007756 , L0007757 , L0007758 ,
	L0007759 , L0007760 , L0007761 , L0007762 , L0007763 , L0007764 , L0007765 , L0007766 ,
	L0007767 , L0007768 , L0007769 , L0007770 , L0007771 , L0007772 , L0007773 , L0007774 ,
	L0007775 , L0007776 , L0007777 , L0007778 , L0007779 , L0007780 , L0007781 , L0007782 ,
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	L0007791 , L0007792 , L0007793 , L0007794 , L0007795 , L0007796 , L0007797 , L0007798 ,
	L0007799 , L0007800 , L0007801 , L0007802 , L0007803 , L0007804 , L0007805 , L0007806 ,
	L0007807 , L0007808 , L0007809 , L0007810 , L0007811 , L0007812 , L0007813 , L0007814 ,
	L0007815 , L0007816 , L0007817 , L0007818 , L0007819 , L0007820 , L0007821 , L0007822 ,

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs
	L0007823 , L0007824 , L0007825 , L0007826 , L0007827 , L0007828 , L0007829 , L0007830 ,
	L0007831 , L0007832 , L0007833 , L0007834 , L0007835 , L0007836 , L0007837 , L0007838 ,
	L0007839 , L0007840 , L0007841 , L0007842 , L0007843 , L0007844 , L0007845 , L0007846 ,
	L0007847 , L0007848 , L0007849 , L0007850 , L0007851 , L0007852 , L0007853 , L0007854 ,
	L0007855 , L0007856 , L0007857 , L0007858 , L0007859 , L0007860 , L0007861 , L0007862 ,
	L0007863 , L0007864 , L0007865 , L0007866 , L0007867 , L0007868 , L0007869 , L0007870 ,
	L0007871 , L0007872 , L0007873 , L0007874 , L0007875 , L0007876 , L0007877 , L0007878 ,
	L0007879 , L0007880 , L0007881 , L0007882 , L0007883 , L0007884 , L0007885 , L0007886 ,
	L0007887 , L0007888 , L0007889 , L0007890 , L0007891 , L0007892 , L0007893 , L0007894 ,
	L0007895 , L0007896 , L0007897 , L0007898 , L0007899 , L0007900 , L0007901 , L0007902 ,
	L0007903 , L0007904 , L0007905 , L0007906 , L0007907 , L0007908 , L0007909 , L0007910 ,
	L0007911 , L0007912 , L0007913 , L0007914 , L0007915 , L0007916 , L0007917 , L0007918 ,
	L0007919 , L0007920 , L0007921 , L0007922 , L0007923 , L0007924 , L0007925 , L0007926 ,
	L0007927 , L0007928 , L0007929 , L0007930 , L0007931 , L0007932 , L0007933 , L0007934 ,
	L0007935 , L0007936 , L0007937 , L0007938 , L0007939 , L0007940 , L0007941 , L0007942 ,
	L0007943 , L0007944 , L0007945 , L0007946 , L0007947 , L0007948 , L0007949 , L0007950 ,
	L0007951 , L0007952 , L0007953 , L0007954 , L0007955 , L0007956 , L0007957 , L0007958 ,
	L0007959 , L0007960 , L0007961 , L0007962 , L0007963 , L0007964 , L0007965 , L0007966 ,
	L0007967 , L0007968 , L0007969 , L0007970 , L0007971 , L0007972 , L0007973 , L0007974 ,
	L0007975 , L0007976 , L0007977 , L0007978 , L0007979 , L0007980 , L0007981 , L0007982 ,

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs
	L0007983 , L0007984 , L0007985 , L0007986 , L0007987 , L0007988 , L0007989 , L0007990 ,
	L0007991 , L0007992 , L0007993 , L0007994 , L0007995 , L0007996 , L0007997 , L0007998 ,
	L0007999 , L0008000 , L0008001 , L0008002 , L0008003 , L0008004 , L0008005 , L0008006 ,
	L0008007 , L0008008 , L0008009 , L0008010 , L0008011 , L0008012 , L0008013 , L0008014 ,
	L0008015 , L0008016 , L0008017 , L0008018 , L0008019 , L0008020 , L0008021 , L0008022 ,
	L0008023 , L0008024 , L0008025 , L0008026 , L0008027 , L0008028 , L0008029 , L0008030 ,
	L0008031 , L0008032 , L0008033 , L0008034 , L0008035 , L0008036 , L0008037 , L0008038 ,
	L0008039 , L0008040 , L0008041 , L0008042 , L0008043 , L0008044 , L0008045 , L0008046 ,
	L0008047 , L0008048 , L0008049 , L0008050 , L0008051 , L0008052 , L0008053 , L0008054 ,
	L0008055 , L0008056 , L0008057 , L0008058 , L0008059 , L0008060 , L0008061 , L0008062 ,
	L0008063 , L0008064 , L0008065 , L0008066 , L0008067 , L0008068 , L0008069 , L0008070 ,
	L0008071 , L0008072 , L0008073 , L0008074 , L0008075 , L0008076 , L0008077 , L0008078 ,
	L0008079 , L0008080 , L0008081 , L0008082 , L0008083 , L0008084 , L0008085 , L0008086 ,
	L0008087 , L0008088 , L0008089 , L0008090 , L0008091 , L0008092 , L0008093 , L0008094 ,
	L0008095 , L0008096 , L0008097 , L0008098 , L0008099 , L0008100 , L0008101 , L0008102 ,
	L0008103 , L0008104 , L0008105 , L0008106 , L0008107 , L0008108 , L0008109 , L0008110 ,
	L0008111 , L0008112 , L0008113 , L0008114 , L0008115 , L0008116 , L0008117 , L0008118 ,
	L0008119 , L0008120 , L0008121 , L0008122 , L0008123 , L0008124 , L0008125 , L0008126 ,
	L0008127 , L0008128 , L0008129 , L0008130 , L0008131 , L0008132 , L0008133 , L0008134 ,
	L0008135 , L0008136 , L0008137 , L0008138 , L0008139 , L0008140 , L0008141 , L0008142 ,

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs
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	L0008151 , L0008152 , L0008153 , L0008154 , L0008155 , L0008156 , L0008157 , L0008158 ,
	L0008159 , L0008160 , L0008161 , L0008162 , L0008163 , L0008164 , L0008165 , L0008166 ,
	L0008167 , L0008168 , L0008169 , L0008170 , L0008171 , L0008172 , L0008173 , L0008174 ,
	L0008175 , L0008176 , L0008177 , L0008178 , L0008179 , L0008180 , L0008181 , L0008182 ,
	L0008183 , L0008184 , L0008185 , L0008186 , L0008187 , L0008188 , L0008189 , L0008190 ,
	L0008191 , L0008192 , L0008193 , L0008194 , L0008195 , L0008196 , L0008197 , L0008198 ,
	L0008199 , L0008200 , L0008201 , L0008202 , L0008203 , L0008204 , L0008205 , L0008206 ,
	L0008207 , L0008208 , L0008209 , L0008210 , L0008211 , L0008212 , L0008213 , L0008214 ,
	L0008215 , L0008216 , L0008217 , L0008218 , L0008219 , L0008220 , L0008221 , L0008222 ,
	L0008223 , L0008224 , L0008225 , L0008226 , L0008227 , L0008228 , L0008229 , L0008230 ,
	L0008231 , L0008232 , L0008233 , L0008234 , L0008235 , L0008236 , L0008237 , L0008238 ,
	L0008239 , L0008240 , L0008241 , L0008242 , L0008243 , L0008244 , L0008245 , L0008246 ,
	L0008247 , L0008248 , L0008249 , L0008250 , L0008251 , L0008252 , L0008253 , L0008254 ,
	L0008255 , L0008256 , L0008257 , L0008258 , L0008259 , L0008260 , L0008261 , L0008262 ,
	L0008263 , L0008264 , L0008265 , L0008266 , L0008267 , L0008268 , L0008269 , L0008270 ,
	L0008271 , L0008272 , L0008273 , L0008274 , L0008275 , L0008276 , L0008277 , L0008278 ,
	L0008279 , L0008280 , L0008281 , L0008282 , L0008283 , L0008284 , L0008285 , L0008286 ,
	L0008287 , L0008288 , L0008289 , L0008290 , L0008291 , L0008292 , L0008293 , L0008294 ,
	L0008295 , L0008296 , L0008297 , L0008298 , L0008299 , L0008300 , L0008301 , L0008302 ,

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs
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	L0008311 , L0008312 , L0008313 , L0008314 , L0008315 , L0008316 , L0008317 , L0008318 ,
	L0008319 , L0008320 , L0008321 , L0008322 , L0008323 , L0008324 , L0008325 , L0008326 ,
	L0008327 , L0008328 , L0008329 , L0008330 , L0008331 , L0008332 , L0008333 , L0008334 ,
	L0008335 , L0008336 , L0008337 , L0008338 , L0008339 , L0008340 , L0008341 , L0008342 ,
	L0008343 , L0008344 , L0008345 , L0008346 , L0008347 , L0008348 , L0008349 , L0008350 ,
	L0008351 , L0008352 , L0008353 , L0008354 , L0008355 , L0008356 , L0008357 , L0008358 ,
	L0008359 , L0008360 , L0008361 , L0008362 , L0008363 , L0008364 , L0008365 , L0008366 ,
	L0008367 , L0008368 , L0008369 , L0008370 , L0008371 , L0008372 , L0008373 , L0008374 ,
	L0008375 , L0008376 , L0008377 , L0008378 , L0008379 , L0008380 , L0008381 , L0008382 ,
	L0008383 , L0008384 , L0008385 , L0008386 , L0008387 , L0008388 , L0008389 , L0008390 ,
	L0008391 , L0008392 , L0008393 , L0008394 , L0008395 , L0008396 , L0008397 , L0008398 ,
	L0008399 , L0008400 , L0008401 , L0008402 , L0008403 , L0008404 , L0008405 , L0008406 ,
	L0008407 , L0008408 , L0008409 , L0008410 , L0008411 , L0008412 , L0008413 , L0008414 ,
	L0008415 , L0008416 , L0008417 , L0008418 , L0008419 , L0008420 , L0008421 , L0008422 ,
	L0008423 , L0008424 , L0008425 , L0008426 , L0008427 , L0008428 , L0008429 , L0008430 ,
	L0008431 , L0008432 , L0008433 , L0008434 , L0008435 , L0008436 , L0008437 , L0008438 ,
	L0008439 , L0008440 , L0008441 , L0008442 , L0008443 , L0008444 , L0008445 , L0008446 ,
	L0008447 , L0008448 , L0008449 , L0008450 , L0008451 , L0008452 , L0008453 , L0008454 ,
	L0008455 , L0008456 , L0008457 , L0008458 , L0008459 , L0008460 , L0008461 , L0008462 ,

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs
	L0008463 , L0008464 , L0008465 , L0008466 , L0008467 , L0008468 , L0008469 , L0008470 ,
	L0008471 , L0008472 , L0008473 , L0008474 , L0008475 , L0008476 , L0008477 , L0008478 ,
	L0008479 , L0008480 , L0008481 , L0008482 , L0008483 , L0008484 , L0008485 , L0008486 ,
	L0008487 , L0008488 , L0008489 , L0008490 , L0008491 , L0008492 , L0008493 , L0008494 ,
	L0008495 , L0008496 , L0008497 , L0008498 , L0008499 , L0008500 , L0008501 , L0008502 ,
	L0008503 , L0008504 , L0008505 , L0008506 , L0008507 , L0008508 , L0008509 , L0008510 ,
	L0008511 , L0008512 , L0008513 , L0008514 , L0008515 , L0008516 , L0008517 , L0008518 ,
	L0008519 , L0008520 , L0008521 , L0008522 , L0008523 , L0008524 , L0008525 , L0008526 ,
	L0008527 , L0008528 , L0008529 , L0008530 , L0008531 , L0008532 , L0008533 , L0008534 ,
	L0008535 , L0008536 , L0008537 , L0008538 , L0008539 , L0008540 , L0008541 , L0008542 ,
	L0008543 , L0008544 , L0008545 , L0008546 , L0008547 , L0008548 , L0008549 , L0008550 ,
	L0008551 ,

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** SOURCE IDs DEFINED AS URBAN SOURCES ***

URBAN ID	URBAN POP	SOURCE IDs
	2035210.	L0007183 , L0007184 , L0007185 , L0007186 , L0007187 , L0007188 , L0007189 , L0007190 ,
		L0007191 , L0007192 , L0007193 , L0007194 , L0007195 , L0007196 , L0007197 , L0007198 ,
		L0007199 , L0007200 , L0007201 , L0007202 , L0007203 , L0007204 , L0007205 , L0007206 ,
		L0007207 , L0007208 , L0007209 , L0007210 , L0007211 , L0007212 , L0007213 , L0007214 ,
		L0007215 , L0007216 , L0007217 , L0007218 , L0007219 , L0007220 , L0007221 , L0007222 ,
		L0007223 , L0007224 , L0007225 , L0007226 , L0007227 , L0007228 , L0007229 , L0007230 ,
		L0007231 , L0007232 , L0007233 , L0007234 , L0007235 , L0007236 , L0007237 , L0007238 ,
		L0007239 , L0007240 , L0007241 , L0007242 , L0007243 , L0007244 , L0007245 , L0007246 ,
		L0007247 , L0007248 , L0007249 , L0007250 , L0007251 , L0007252 , L0007253 , L0007254 ,
		L0007255 , L0007256 , L0007257 , L0007258 , L0007259 , L0007260 , L0007261 , L0007262 ,
		L0007263 , L0007264 , L0007265 , L0007266 , L0007267 , L0007268 , L0007269 , L0007270 ,
		L0007271 , L0007272 , L0007273 , L0007274 , L0007275 , L0007276 , L0007277 , L0007278 ,
		L0007279 , L0007280 , L0007281 , L0007282 , L0007283 , L0007284 , L0007285 , L0007286 ,
		L0007287 , L0007288 , L0007289 , L0007290 , L0007291 , L0007292 , L0007293 , L0007294 ,
		L0007295 , L0007296 , L0007297 , L0007298 , L0007299 , L0007300 , L0007301 , L0007302 ,
		L0007303 , L0007304 , L0007305 , L0007306 , L0007307 , L0007308 , L0007309 , L0007310 ,
		L0007311 , L0007312 , L0007313 , L0007314 , L0007315 , L0007316 , L0007317 , L0007318 ,
		L0007319 , L0007320 , L0007321 , L0007322 , L0007323 , L0007324 , L0007325 , L0007326 ,
		L0007327 , L0007328 , L0007329 , L0007330 , L0007331 , L0007332 , L0007333 , L0007334 ,
		L0007335 , L0007336 , L0007337 , L0007338 , L0007339 , L0007340 , L0007341 , L0007342 ,

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** SOURCE IDs DEFINED AS URBAN SOURCES ***

URBAN ID	URBAN POP	SOURCE IDs
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		L0007351 , L0007352 , L0007353 , L0007354 , L0007355 , L0007356 , L0007357 , L0007358 ,
		L0007359 , L0007360 , L0007361 , L0007362 , L0007363 , L0007364 , L0007365 , L0007366 ,
		L0007367 , L0007368 , L0007369 , L0007370 , L0007371 , L0007372 , L0007373 , L0007374 ,
		L0007375 , L0007376 , L0007377 , L0007378 , L0007379 , L0007380 , L0007381 , L0007382 ,
		L0007383 , L0007384 , L0007385 , L0007386 , L0007387 , L0007388 , L0007389 , L0007390 ,
		L0007391 , L0007392 , L0007393 , L0007394 , L0007395 , L0007396 , L0007397 , L0007398 ,
		L0007399 , L0007400 , L0007401 , L0007402 , L0007403 , L0007404 , L0007405 , L0007406 ,
		L0007407 , L0007408 , L0007409 , L0007410 , L0007411 , L0007412 , L0007413 , L0007414 ,
		L0007415 , L0007416 , L0007417 , L0007418 , L0007419 , L0007420 , L0007421 , L0007422 ,
		L0007423 , L0007424 , L0007425 , L0007426 , L0007427 , L0007428 , L0007429 , L0007430 ,
		L0007431 , L0007432 , L0007433 , L0007434 , L0007435 , L0007436 , L0007437 , L0007438 ,
		L0007439 , L0007440 , L0007441 , L0007442 , L0007443 , L0007444 , L0007445 , L0007446 ,
		L0007447 , L0007448 , L0007449 , L0007450 , L0007451 , L0007452 , L0007453 , L0007454 ,
		L0007455 , L0007456 , L0007457 , L0007458 , L0007459 , L0007460 , L0007461 , L0007462 ,
		L0007463 , L0007464 , L0007465 , L0007466 , L0007467 , L0007468 , L0007469 , L0007470 ,
		L0007471 , L0007472 , L0007473 , L0007474 , L0007475 , L0007476 , L0007477 , L0007478 ,
		L0007479 , L0007480 , L0007481 , L0007482 , L0007483 , L0007484 , L0007485 , L0007486 ,
		L0007487 , L0007488 , L0007489 , L0007490 , L0007491 , L0007492 , L0007493 , L0007494 ,
		L0007495 , L0007496 , L0007497 , L0007498 , L0007499 , L0007500 , L0007501 , L0007502 ,

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** SOURCE IDs DEFINED AS URBAN SOURCES ***

URBAN ID	URBAN POP	SOURCE IDs
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		L0007511 , L0007512 , L0007513 , L0007514 , L0007515 , L0007516 , L0007517 , L0007518 ,
		L0007519 , L0007520 , L0007521 , L0007522 , L0007523 , L0007524 , L0007525 , L0007526 ,
		L0007527 , L0007528 , L0007529 , L0007530 , L0007531 , L0007532 , L0007533 , L0007534 ,
		L0007535 , L0007536 , L0007537 , L0007538 , L0007539 , L0007540 , L0007541 , L0007542 ,
		L0007543 , L0007544 , L0007545 , L0007546 , L0007547 , L0007548 , L0007549 , L0007550 ,
		L0007551 , L0007552 , L0007553 , L0007554 , L0007555 , L0007556 , L0007557 , L0007558 ,
		L0007559 , L0007560 , L0007561 , L0007562 , L0007563 , L0007564 , L0007565 , L0007566 ,
		L0007567 , L0007568 , L0007569 , L0007570 , L0007571 , L0007572 , L0007573 , L0007574 ,
		L0007575 , L0007576 , L0007577 , L0007578 , L0007579 , L0007580 , L0007581 , L0007582 ,
		L0007583 , L0007584 , L0007585 , L0007586 , L0007587 , L0007588 , L0007589 , L0007590 ,
		L0007591 , L0007592 , L0007593 , L0007594 , L0007595 , L0007596 , L0007597 , L0007598 ,
		L0007599 , L0007600 , L0007601 , L0007602 , L0007603 , L0007604 , L0007605 , L0007606 ,
		L0007607 , L0007608 , L0007609 , L0007610 , L0007611 , L0007612 , L0007613 , L0007614 ,
		L0007615 , L0007616 , L0007617 , L0007618 , L0007619 , L0007620 , L0007621 , L0007622 ,
		L0007623 , L0007624 , L0007625 , L0007626 , L0007627 , L0007628 , L0007629 , L0007630 ,
		L0007631 , L0007632 , L0007633 , L0007634 , L0007635 , L0007636 , L0007637 , L0007638 ,
		L0007639 , L0007640 , L0007641 , L0007642 , L0007643 , L0007644 , L0007645 , L0007646 ,
		L0007647 , L0007648 , L0007649 , L0007650 , L0007651 , L0007652 , L0007653 , L0007654 ,
		L0007655 , L0007656 , L0007657 , L0007658 , L0007659 , L0007660 , L0007661 , L0007662 ,

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** SOURCE IDs DEFINED AS URBAN SOURCES ***

URBAN ID	URBAN POP	SOURCE IDs
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		L0007671 , L0007672 , L0007673 , L0007674 , L0007675 , L0007676 , L0007677 , L0007678 ,
		L0007679 , L0007680 , L0007681 , L0007682 , L0007683 , L0007684 , L0007685 , L0007686 ,
		L0007687 , L0007688 , L0007689 , L0007690 , L0007691 , L0007692 , L0007693 , L0007694 ,
		L0007695 , L0007696 , L0007697 , L0007698 , L0007699 , L0007700 , L0007701 , L0007702 ,
		L0007703 , L0007704 , L0007705 , L0007706 , L0007707 , L0007708 , L0007709 , L0007710 ,
		L0007711 , L0007712 , L0007713 , L0007714 , L0007715 , L0007716 , L0007717 , L0007718 ,
		L0007719 , L0007720 , L0007721 , L0007722 , L0007723 , L0007724 , L0007725 , L0007726 ,
		L0007727 , L0007728 , L0007729 , L0007730 , L0007731 , L0007732 , L0007733 , L0007734 ,
		L0007735 , L0007736 , L0007737 , L0007738 , L0007739 , L0007740 , L0007741 , L0007742 ,
		L0007743 , L0007744 , L0007745 , L0007746 , L0007747 , L0007748 , L0007749 , L0007750 ,
		L0007751 , L0007752 , L0007753 , L0007754 , L0007755 , L0007756 , L0007757 , L0007758 ,
		L0007759 , L0007760 , L0007761 , L0007762 , L0007763 , L0007764 , L0007765 , L0007766 ,
		L0007767 , L0007768 , L0007769 , L0007770 , L0007771 , L0007772 , L0007773 , L0007774 ,
		L0007775 , L0007776 , L0007777 , L0007778 , L0007779 , L0007780 , L0007781 , L0007782 ,
		L0007783 , L0007784 , L0007785 , L0007786 , L0007787 , L0007788 , L0007789 , L0007790 ,
		L0007791 , L0007792 , L0007793 , L0007794 , L0007795 , L0007796 , L0007797 , L0007798 ,
		L0007799 , L0007800 , L0007801 , L0007802 , L0007803 , L0007804 , L0007805 , L0007806 ,
		L0007807 , L0007808 , L0007809 , L0007810 , L0007811 , L0007812 , L0007813 , L0007814 ,
		L0007815 , L0007816 , L0007817 , L0007818 , L0007819 , L0007820 , L0007821 , L0007822 ,

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** SOURCE IDs DEFINED AS URBAN SOURCES ***

URBAN ID	URBAN POP	SOURCE IDs
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		L0007831 , L0007832 , L0007833 , L0007834 , L0007835 , L0007836 , L0007837 , L0007838 ,
		L0007839 , L0007840 , L0007841 , L0007842 , L0007843 , L0007844 , L0007845 , L0007846 ,
		L0007847 , L0007848 , L0007849 , L0007850 , L0007851 , L0007852 , L0007853 , L0007854 ,
		L0007855 , L0007856 , L0007857 , L0007858 , L0007859 , L0007860 , L0007861 , L0007862 ,
		L0007863 , L0007864 , L0007865 , L0007866 , L0007867 , L0007868 , L0007869 , L0007870 ,
		L0007871 , L0007872 , L0007873 , L0007874 , L0007875 , L0007876 , L0007877 , L0007878 ,
		L0007879 , L0007880 , L0007881 , L0007882 , L0007883 , L0007884 , L0007885 , L0007886 ,
		L0007887 , L0007888 , L0007889 , L0007890 , L0007891 , L0007892 , L0007893 , L0007894 ,
		L0007895 , L0007896 , L0007897 , L0007898 , L0007899 , L0007900 , L0007901 , L0007902 ,
		L0007903 , L0007904 , L0007905 , L0007906 , L0007907 , L0007908 , L0007909 , L0007910 ,
		L0007911 , L0007912 , L0007913 , L0007914 , L0007915 , L0007916 , L0007917 , L0007918 ,
		L0007919 , L0007920 , L0007921 , L0007922 , L0007923 , L0007924 , L0007925 , L0007926 ,
		L0007927 , L0007928 , L0007929 , L0007930 , L0007931 , L0007932 , L0007933 , L0007934 ,
		L0007935 , L0007936 , L0007937 , L0007938 , L0007939 , L0007940 , L0007941 , L0007942 ,
		L0007943 , L0007944 , L0007945 , L0007946 , L0007947 , L0007948 , L0007949 , L0007950 ,
		L0007951 , L0007952 , L0007953 , L0007954 , L0007955 , L0007956 , L0007957 , L0007958 ,
		L0007959 , L0007960 , L0007961 , L0007962 , L0007963 , L0007964 , L0007965 , L0007966 ,
		L0007967 , L0007968 , L0007969 , L0007970 , L0007971 , L0007972 , L0007973 , L0007974 ,
		L0007975 , L0007976 , L0007977 , L0007978 , L0007979 , L0007980 , L0007981 , L0007982 ,

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** SOURCE IDs DEFINED AS URBAN SOURCES ***

URBAN ID	URBAN POP	SOURCE IDs
		L0007983 , L0007984 , L0007985 , L0007986 , L0007987 , L0007988 , L0007989 , L0007990 ,
		L0007991 , L0007992 , L0007993 , L0007994 , L0007995 , L0007996 , L0007997 , L0007998 ,
		L0007999 , L0008000 , L0008001 , L0008002 , L0008003 , L0008004 , L0008005 , L0008006 ,
		L0008007 , L0008008 , L0008009 , L0008010 , L0008011 , L0008012 , L0008013 , L0008014 ,
		L0008015 , L0008016 , L0008017 , L0008018 , L0008019 , L0008020 , L0008021 , L0008022 ,
		L0008023 , L0008024 , L0008025 , L0008026 , L0008027 , L0008028 , L0008029 , L0008030 ,
		L0008031 , L0008032 , L0008033 , L0008034 , L0008035 , L0008036 , L0008037 , L0008038 ,
		L0008039 , L0008040 , L0008041 , L0008042 , L0008043 , L0008044 , L0008045 , L0008046 ,
		L0008047 , L0008048 , L0008049 , L0008050 , L0008051 , L0008052 , L0008053 , L0008054 ,
		L0008055 , L0008056 , L0008057 , L0008058 , L0008059 , L0008060 , L0008061 , L0008062 ,
		L0008063 , L0008064 , L0008065 , L0008066 , L0008067 , L0008068 , L0008069 , L0008070 ,
		L0008071 , L0008072 , L0008073 , L0008074 , L0008075 , L0008076 , L0008077 , L0008078 ,
		L0008079 , L0008080 , L0008081 , L0008082 , L0008083 , L0008084 , L0008085 , L0008086 ,
		L0008087 , L0008088 , L0008089 , L0008090 , L0008091 , L0008092 , L0008093 , L0008094 ,
		L0008095 , L0008096 , L0008097 , L0008098 , L0008099 , L0008100 , L0008101 , L0008102 ,
		L0008103 , L0008104 , L0008105 , L0008106 , L0008107 , L0008108 , L0008109 , L0008110 ,
		L0008111 , L0008112 , L0008113 , L0008114 , L0008115 , L0008116 , L0008117 , L0008118 ,
		L0008119 , L0008120 , L0008121 , L0008122 , L0008123 , L0008124 , L0008125 , L0008126 ,
		L0008127 , L0008128 , L0008129 , L0008130 , L0008131 , L0008132 , L0008133 , L0008134 ,
		L0008135 , L0008136 , L0008137 , L0008138 , L0008139 , L0008140 , L0008141 , L0008142 ,

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** SOURCE IDs DEFINED AS URBAN SOURCES ***

URBAN ID	URBAN POP	SOURCE IDs
		L0008143 , L0008144 , L0008145 , L0008146 , L0008147 , L0008148 , L0008149 , L0008150 ,
		L0008151 , L0008152 , L0008153 , L0008154 , L0008155 , L0008156 , L0008157 , L0008158 ,
		L0008159 , L0008160 , L0008161 , L0008162 , L0008163 , L0008164 , L0008165 , L0008166 ,
		L0008167 , L0008168 , L0008169 , L0008170 , L0008171 , L0008172 , L0008173 , L0008174 ,
		L0008175 , L0008176 , L0008177 , L0008178 , L0008179 , L0008180 , L0008181 , L0008182 ,
		L0008183 , L0008184 , L0008185 , L0008186 , L0008187 , L0008188 , L0008189 , L0008190 ,
		L0008191 , L0008192 , L0008193 , L0008194 , L0008195 , L0008196 , L0008197 , L0008198 ,
		L0008199 , L0008200 , L0008201 , L0008202 , L0008203 , L0008204 , L0008205 , L0008206 ,
		L0008207 , L0008208 , L0008209 , L0008210 , L0008211 , L0008212 , L0008213 , L0008214 ,
		L0008215 , L0008216 , L0008217 , L0008218 , L0008219 , L0008220 , L0008221 , L0008222 ,
		L0008223 , L0008224 , L0008225 , L0008226 , L0008227 , L0008228 , L0008229 , L0008230 ,
		L0008231 , L0008232 , L0008233 , L0008234 , L0008235 , L0008236 , L0008237 , L0008238 ,
		L0008239 , L0008240 , L0008241 , L0008242 , L0008243 , L0008244 , L0008245 , L0008246 ,
		L0008247 , L0008248 , L0008249 , L0008250 , L0008251 , L0008252 , L0008253 , L0008254 ,
		L0008255 , L0008256 , L0008257 , L0008258 , L0008259 , L0008260 , L0008261 , L0008262 ,
		L0008263 , L0008264 , L0008265 , L0008266 , L0008267 , L0008268 , L0008269 , L0008270 ,
		L0008271 , L0008272 , L0008273 , L0008274 , L0008275 , L0008276 , L0008277 , L0008278 ,
		L0008279 , L0008280 , L0008281 , L0008282 , L0008283 , L0008284 , L0008285 , L0008286 ,
		L0008287 , L0008288 , L0008289 , L0008290 , L0008291 , L0008292 , L0008293 , L0008294 ,
		L0008295 , L0008296 , L0008297 , L0008298 , L0008299 , L0008300 , L0008301 , L0008302 ,

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** SOURCE IDs DEFINED AS URBAN SOURCES ***

URBAN ID	URBAN POP	SOURCE IDs
		L0008303 , L0008304 , L0008305 , L0008306 , L0008307 , L0008308 , L0008309 , L0008310 ,
		L0008311 , L0008312 , L0008313 , L0008314 , L0008315 , L0008316 , L0008317 , L0008318 ,
		L0008319 , L0008320 , L0008321 , L0008322 , L0008323 , L0008324 , L0008325 , L0008326 ,
		L0008327 , L0008328 , L0008329 , L0008330 , L0008331 , L0008332 , L0008333 , L0008334 ,
		L0008335 , L0008336 , L0008337 , L0008338 , L0008339 , L0008340 , L0008341 , L0008342 ,
		L0008343 , L0008344 , L0008345 , L0008346 , L0008347 , L0008348 , L0008349 , L0008350 ,
		L0008351 , L0008352 , L0008353 , L0008354 , L0008355 , L0008356 , L0008357 , L0008358 ,
		L0008359 , L0008360 , L0008361 , L0008362 , L0008363 , L0008364 , L0008365 , L0008366 ,
		L0008367 , L0008368 , L0008369 , L0008370 , L0008371 , L0008372 , L0008373 , L0008374 ,
		L0008375 , L0008376 , L0008377 , L0008378 , L0008379 , L0008380 , L0008381 , L0008382 ,
		L0008383 , L0008384 , L0008385 , L0008386 , L0008387 , L0008388 , L0008389 , L0008390 ,
		L0008391 , L0008392 , L0008393 , L0008394 , L0008395 , L0008396 , L0008397 , L0008398 ,
		L0008399 , L0008400 , L0008401 , L0008402 , L0008403 , L0008404 , L0008405 , L0008406 ,
		L0008407 , L0008408 , L0008409 , L0008410 , L0008411 , L0008412 , L0008413 , L0008414 ,
		L0008415 , L0008416 , L0008417 , L0008418 , L0008419 , L0008420 , L0008421 , L0008422 ,
		L0008423 , L0008424 , L0008425 , L0008426 , L0008427 , L0008428 , L0008429 , L0008430 ,
		L0008431 , L0008432 , L0008433 , L0008434 , L0008435 , L0008436 , L0008437 , L0008438 ,
		L0008439 , L0008440 , L0008441 , L0008442 , L0008443 , L0008444 , L0008445 , L0008446 ,
		L0008447 , L0008448 , L0008449 , L0008450 , L0008451 , L0008452 , L0008453 , L0008454 ,
		L0008455 , L0008456 , L0008457 , L0008458 , L0008459 , L0008460 , L0008461 , L0008462 ,

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** SOURCE IDs DEFINED AS URBAN SOURCES ***

URBAN ID	URBAN POP	SOURCE IDs
		L0008463 , L0008464 , L0008465 , L0008466 , L0008467 , L0008468 , L0008469 , L0008470 ,
		L0008471 , L0008472 , L0008473 , L0008474 , L0008475 , L0008476 , L0008477 , L0008478 ,
		L0008479 , L0008480 , L0008481 , L0008482 , L0008483 , L0008484 , L0008485 , L0008486 ,
		L0008487 , L0008488 , L0008489 , L0008490 , L0008491 , L0008492 , L0008493 , L0008494 ,
		L0008495 , L0008496 , L0008497 , L0008498 , L0008499 , L0008500 , L0008501 , L0008502 ,
		L0008503 , L0008504 , L0008505 , L0008506 , L0008507 , L0008508 , L0008509 , L0008510 ,
		L0008511 , L0008512 , L0008513 , L0008514 , L0008515 , L0008516 , L0008517 , L0008518 ,
		L0008519 , L0008520 , L0008521 , L0008522 , L0008523 , L0008524 , L0008525 , L0008526 ,
		L0008527 , L0008528 , L0008529 , L0008530 , L0008531 , L0008532 , L0008533 , L0008534 ,
		L0008535 , L0008536 , L0008537 , L0008538 , L0008539 , L0008540 , L0008541 , L0008542 ,
		L0008543 , L0008544 , L0008545 , L0008546 , L0008547 , L0008548 , L0008549 , L0008550 ,
		L0008551 ,

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** GRIDDED RECEPTOR NETWORK SUMMARY ***

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

*** X-COORDINATES OF GRID ***
(METERS)

478868.2, 478968.2, 479068.2, 479168.2, 479268.2, 479368.2, 479468.2, 479568.2, 479668.2, 479768.2,
479868.2, 479968.2, 480068.2, 480168.2, 480268.2, 480368.2, 480468.2, 480568.2, 480668.2, 480768.2,
480868.2, 480968.2, 481068.2, 481168.2, 481268.2, 481368.2, 481468.2, 481568.2, 481668.2, 481768.2,

*** Y-COORDINATES OF GRID ***
(METERS)

3769389.7, 3769489.7, 3769589.7, 3769689.7, 3769789.7, 3769889.7, 3769989.7, 3770089.7, 3770189.7, 3770289.7,
3770389.7, 3770489.7, 3770589.7, 3770689.7, 3770789.7, 3770889.7, 3770989.7, 3771089.7, 3771189.7, 3771289.7,
3771389.7, 3771489.7, 3771589.7, 3771689.7, 3771789.7, 3771889.7, 3771989.7, 3772089.7, 3772189.7, 3772289.7,
3772389.7, 3772489.7, 3772589.7, 3772689.7, 3772789.7, 3772889.7, 3772989.7, 3773089.7, 3773189.7, 3773289.7,
3773389.7, 3773489.7, 3773589.7, 3773689.7, 3773789.7, 3773889.7, 3773989.7, 3774089.7, 3774189.7, 3774289.7,

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***
* ELEVATION HEIGHTS IN METERS *

Y-COORD (METERS)	X-COORD (METERS)								
	478868.21	478968.21	479068.21	479168.21	479268.21	479368.21	479468.21	479568.21	479668.21
3774289.70	346.00	347.30	348.00	349.00	350.00	350.60	351.00	352.00	353.00
3774189.70	346.00	347.00	348.00	348.70	349.30	350.00	351.00	352.00	352.90
3774089.70	346.00	347.00	347.60	348.00	349.00	350.00	351.00	352.00	352.30
3773989.70	345.90	346.30	347.00	347.10	348.30	350.00	350.90	351.40	352.00
3773889.70	345.90	346.30	347.00	348.00	349.00	350.00	350.90	352.00	352.00
3773789.70	345.00	346.30	347.00	348.00	349.00	350.00	350.90	352.00	352.60
3773689.70	345.00	346.30	347.60	348.00	349.00	350.00	350.00	351.40	352.60
3773589.70	345.00	346.00	347.00	348.00	349.00	349.60	350.00	351.30	352.60
3773489.70	345.00	346.00	347.00	347.90	348.30	349.30	350.00	351.00	352.00
3773389.70	344.90	346.00	347.00	347.90	348.30	349.00	350.00	351.00	352.00
3773289.70	344.90	346.00	347.00	347.90	348.00	349.00	350.00	351.00	351.60
3773189.70	344.00	346.00	346.60	347.90	348.00	349.00	349.90	350.10	351.00
3773089.70	344.00	345.30	346.10	347.00	348.00	348.10	349.00	350.00	351.00
3772989.70	344.00	345.00	346.00	346.70	347.00	347.90	348.00	349.30	350.00
3772889.70	343.90	344.60	345.60	346.00	346.60	347.00	347.90	349.00	350.00
3772789.70	343.00	344.00	345.00	346.00	346.00	347.00	347.00	348.00	349.70
3772689.70	342.80	343.80	344.50	345.00	346.00	347.00	347.20	348.00	349.60
3772589.70	342.00	342.10	343.80	345.00	346.00	346.80	347.90	348.30	349.60
3772489.70	341.00	342.00	343.00	344.00	345.30	346.60	347.90	348.00	349.60
3772389.70	340.90	341.30	342.60	344.00	345.00	346.00	347.00	347.80	349.60
3772289.70	340.90	341.30	342.60	344.00	345.30	346.00	346.90	347.30	349.60
3772189.70	340.90	341.30	343.50	345.00	346.00	347.00	347.00	347.90	350.50
3772089.70	340.90	341.50	344.80	347.00	347.20	348.80	351.60	354.00	354.00
3771989.70	342.60	346.50	347.80	348.00	349.80	353.40	354.00	355.00	355.30
3771889.70	348.00	348.00	349.00	350.00	351.30	353.00	354.80	355.90	356.50
3771789.70	348.00	349.10	350.00	351.00	353.00	354.00	354.90	356.00	357.10
3771689.70	348.90	350.00	350.60	352.00	353.20	354.00	355.00	356.20	357.60
3771589.70	348.90	350.00	351.00	352.00	353.30	354.60	355.90	356.90	358.00
3771489.70	348.90	350.00	351.00	352.20	354.00	355.00	356.00	357.00	358.00
3771389.70	349.00	350.00	351.60	352.90	354.00	355.00	356.00	357.30	358.60
3771289.70	349.00	350.00	351.60	352.90	354.00	355.00	356.00	357.30	359.00
3771189.70	349.00	350.30	351.60	352.90	354.00	355.00	356.00	358.00	359.00
3771089.70	349.00	350.30	351.60	352.90	354.00	355.00	356.90	358.00	359.00
3770989.70	349.90	350.30	352.00	352.90	354.00	355.60	356.90	358.00	359.00
3770889.70	350.00	351.00	352.00	353.00	354.10	355.60	357.00	358.00	359.60
3770789.70	350.00	351.00	352.00	353.00	354.30	356.00	357.00	358.20	359.60
3770689.70	350.00	351.00	352.00	353.90	355.00	356.00	357.00	358.30	359.60
3770589.70	350.00	351.30	352.70	354.00	355.00	356.00	357.00	358.30	360.00
3770489.70	350.00	352.00	353.00	354.00	355.20	356.00	357.00	358.30	359.80
3770389.70	350.00	352.00	353.50	354.00	355.30	356.00	357.00	358.30	359.60

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

* ELEVATION HEIGHTS IN METERS *

Y-COORD (METERS)	X-COORD (METERS) 478868.21	478968.21	479068.21	479168.21	479268.21	479368.21	479468.21	479568.21	479668.21
3770289.70	350.00	352.00	353.00	354.00	355.00	356.00	357.00	358.30	359.60
3770189.70	350.90	352.00	352.60	353.90	355.00	356.00	357.00	358.30	359.60
3770089.70	350.90	351.90	352.60	353.90	355.00	356.00	357.90	358.90	360.00
3769989.70	350.90	352.00	352.60	353.90	355.00	356.60	357.90	359.00	360.00
3769889.70	351.00	352.00	353.00	354.00	355.30	356.80	358.00	359.00	360.60
3769789.70	351.00	352.00	353.00	354.90	356.00	357.00	358.00	359.00	360.60
3769689.70	352.20	353.00	353.00	355.90	358.10	358.70	359.00	359.30	361.60
3769589.70	353.60	354.20	357.90	359.50	360.00	360.00	360.00	360.20	365.00
3769489.70	350.20	353.00	354.10	358.00	358.10	359.00	359.00	359.90	363.40
3769389.70	349.90	352.00	353.00	354.90	356.20	357.50	358.00	359.00	360.00

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

* ELEVATION HEIGHTS IN METERS *

Y-COORD (METERS)	X-COORD (METERS)								
	479768.21	479868.21	479968.21	480068.21	480168.21	480268.21	480368.21	480468.21	480568.21
3774289.70	353.80	354.00	355.10	356.10	357.30	358.00	359.80	360.00	361.60
3774189.70	353.00	354.00	354.60	356.00	357.00	358.00	359.00	360.00	361.60
3774089.70	353.00	354.00	355.00	356.00	357.00	358.00	359.00	360.20	361.60
3773989.70	353.00	354.00	355.00	356.00	357.00	358.00	359.00	360.30	362.00
3773889.70	353.00	354.00	355.00	356.00	357.00	358.00	359.00	360.30	362.00
3773789.70	353.00	354.00	355.00	356.00	357.00	358.00	359.00	360.00	362.00
3773689.70	353.90	354.00	355.00	356.00	357.00	358.00	359.00	360.00	362.00
3773589.70	353.70	354.00	355.00	356.00	357.00	358.00	359.00	360.00	360.90
3773489.70	353.00	354.00	355.00	355.90	356.30	357.60	358.40	359.00	360.00
3773389.70	352.90	354.00	354.60	355.10	356.00	357.00	358.00	359.00	359.10
3773289.70	352.00	353.30	354.00	355.00	356.00	356.90	357.90	358.30	359.00
3773189.70	352.00	353.00	354.00	355.00	355.60	356.60	357.40	358.70	359.80
3773089.70	352.00	352.40	353.10	354.00	355.00	356.00	357.00	358.40	359.50
3772989.70	351.00	352.00	353.00	353.00	354.30	355.90	356.90	358.00	359.00
3772889.70	351.00	352.00	352.30	353.00	354.30	356.00	356.90	358.00	359.00
3772789.70	350.90	352.00	352.60	353.80	354.30	356.00	356.90	358.00	359.60
3772689.70	350.90	351.40	352.60	353.90	354.30	356.00	356.90	358.00	359.60
3772589.70	350.40	351.30	352.30	353.40	354.00	355.60	356.90	358.00	359.00
3772489.70	350.00	351.30	352.00	353.00	354.00	355.60	356.90	358.00	358.60
3772389.70	351.00	352.00	352.00	353.00	354.00	355.60	357.00	358.40	359.10
3772289.70	351.90	354.00	353.00	353.00	354.20	356.80	358.00	359.20	360.80
3772189.70	352.00	354.20	353.00	354.80	359.80	359.90	359.90	359.00	361.60
3772089.70	354.20	356.90	359.20	360.20	361.20	362.80	365.20	365.80	366.00
3771989.70	356.50	359.30	359.60	361.00	362.70	364.30	366.00	367.00	367.60
3771889.70	358.00	360.00	360.50	362.00	363.30	365.00	366.80	367.90	368.50
3771789.70	358.90	360.00	361.00	362.20	364.00	365.60	367.00	368.00	369.10
3771689.70	359.00	360.20	361.60	362.90	364.00	365.60	367.00	368.30	369.80
3771589.70	359.00	360.30	362.00	363.00	364.30	366.00	367.00	368.90	370.00
3771489.70	359.90	361.00	362.00	363.00	364.30	366.00	367.00	369.00	370.60
3771389.70	360.00	361.00	362.00	363.50	364.70	366.00	367.90	369.30	370.60
3771289.70	360.00	361.30	362.60	363.90	365.00	366.50	367.90	369.30	371.00
3771189.70	360.00	361.40	362.60	364.00	365.30	366.60	368.00	369.40	371.00
3771089.70	360.00	362.00	363.00	364.00	365.30	367.00	368.00	370.00	371.00
3770989.70	360.90	362.00	363.00	364.00	366.00	367.00	368.00	370.00	371.00
3770889.70	360.90	362.00	363.60	364.90	366.00	367.60	368.90	370.00	371.00
3770789.70	360.90	362.00	363.60	365.00	366.30	367.60	368.90	370.00	371.60
3770689.70	361.00	362.00	363.60	365.00	366.30	367.60	368.90	370.30	372.00
3770589.70	361.00	362.00	363.60	364.90	366.00	367.60	368.90	370.00	371.60
3770489.70	361.00	362.00	363.60	364.90	366.00	367.60	369.00	370.30	372.00
3770389.70	360.90	362.00	363.60	364.90	366.00	367.60	369.00	370.30	372.00

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

* ELEVATION HEIGHTS IN METERS *

Y-COORD (METERS)	X-COORD (METERS)								
	479768.21	479868.21	479968.21	480068.21	480168.21	480268.21	480368.21	480468.21	480568.21
3770289.70	360.90	362.30	364.00	365.00	366.30	368.00	369.00	371.00	372.00
3770189.70	360.90	362.30	364.00	365.90	367.00	368.00	369.50	371.00	372.60
3770089.70	361.00	363.00	364.60	366.00	367.00	368.00	369.90	371.00	372.60
3769989.70	361.90	363.00	364.60	366.00	367.30	368.10	369.90	371.00	372.00
3769889.70	362.00	363.30	364.60	366.00	367.30	368.60	369.90	371.00	372.00
3769789.70	362.00	363.90	364.60	366.00	367.30	368.60	370.00	371.00	372.50
3769689.70	364.00	364.20	365.00	366.00	367.40	369.00	370.20	371.10	373.50
3769589.70	366.00	365.80	366.00	366.00	368.00	369.60	372.00	372.00	374.30
3769489.70	365.10	365.00	365.00	366.00	368.00	369.60	371.10	373.00	374.60
3769389.70	362.00	363.30	364.60	366.00	367.30	369.00	370.90	372.00	374.50

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

* ELEVATION HEIGHTS IN METERS *

Y-COORD (METERS)	X-COORD (METERS) 480668.21	480768.21	480868.21	480968.21	481068.21	481168.21	481268.21	481368.21	481468.21
3774289.70	362.80	363.30	364.00	365.00	366.00	367.60	368.90	370.00	371.00
3774189.70	362.00	363.30	364.60	365.90	366.30	368.00	368.90	370.00	371.00
3774089.70	362.90	364.00	365.00	366.00	367.00	368.00	369.00	370.20	371.60
3773989.70	363.00	364.90	365.60	366.00	367.20	368.00	369.00	371.00	372.00
3773889.70	363.90	366.00	366.00	366.00	366.80	367.60	368.90	370.20	371.00
3773789.70	363.90	366.00	366.00	365.50	366.00	366.60	368.00	370.00	370.60
3773689.70	363.90	366.00	365.50	365.00	366.00	366.60	368.00	370.00	371.00
3773589.70	362.90	364.80	365.00	366.00	366.40	367.60	368.20	370.00	371.70
3773489.70	361.40	363.10	364.80	366.00	366.60	367.60	368.00	369.70	368.00
3773389.70	360.00	362.30	364.60	366.00	366.30	367.00	368.00	369.00	368.00
3773289.70	360.00	362.30	364.60	366.00	366.00	366.90	368.00	368.00	369.10
3773189.70	360.50	362.30	364.60	366.00	366.00	366.00	367.00	366.40	367.70
3773089.70	360.00	362.00	363.70	366.00	365.00	366.00	367.00	366.00	366.00
3772989.70	360.00	362.00	363.00	364.00	365.40	366.10	367.00	367.20	368.10
3772889.70	360.00	362.00	363.00	364.00	365.30	366.60	367.90	368.20	369.30
3772789.70	360.90	362.00	363.00	364.00	366.00	366.60	367.90	368.30	369.60
3772689.70	360.00	362.00	363.00	364.00	365.30	366.60	367.90	369.00	370.00
3772589.70	360.00	361.30	363.00	364.50	366.00	366.60	368.00	369.00	370.00
3772489.70	359.10	360.60	363.00	364.90	366.00	367.00	368.00	369.30	370.00
3772389.70	360.00	362.00	363.60	364.90	366.00	367.00	368.20	370.00	371.00
3772289.70	361.60	363.20	364.00	365.00	365.60	367.20	369.50	371.00	372.20
3772189.70	363.00	364.00	365.50	365.90	366.00	371.70	371.90	376.80	378.00
3772089.70	365.20	365.20	368.00	370.20	373.10	374.80	377.20	378.20	378.10
3771989.70	367.60	371.00	372.60	373.50	374.70	376.80	378.00	379.20	379.20
3771889.70	369.90	372.00	373.00	374.00	376.00	378.00	379.00	380.00	381.00
3771789.70	370.90	372.00	373.60	375.00	376.30	378.00	379.90	381.00	382.10
3771689.70	371.00	372.70	374.00	375.50	377.00	378.60	380.00	381.30	383.00
3771589.70	371.90	373.20	374.50	376.00	377.00	378.60	380.00	382.00	383.60
3771489.70	372.00	374.00	375.00	376.90	378.00	379.60	381.00	382.30	384.00
3771389.70	372.00	374.00	375.60	377.50	379.00	380.00	381.90	383.20	384.60
3771289.70	372.90	374.30	376.00	378.00	379.30	380.60	382.00	384.00	385.50
3771189.70	372.90	374.30	376.50	378.00	379.30	381.00	382.90	384.30	386.00
3771089.70	372.90	374.30	376.00	377.90	379.30	381.00	382.90	384.30	386.00
3770989.70	372.90	374.30	376.00	377.90	379.30	381.00	382.90	384.30	386.00
3770889.70	372.90	374.30	376.00	377.90	379.30	380.60	382.70	384.00	385.90
3770789.70	372.90	374.30	376.00	377.90	379.30	380.60	382.00	384.00	385.60
3770689.70	372.90	374.30	376.00	377.90	379.30	381.00	382.00	384.00	385.60
3770589.70	373.00	375.00	376.60	378.00	379.40	381.00	382.20	384.00	385.60
3770489.70	373.50	375.20	376.60	378.00	380.00	381.60	382.90	384.20	386.00
3770389.70	373.90	375.30	377.00	378.90	380.00	382.00	383.00	385.00	386.60

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

* ELEVATION HEIGHTS IN METERS *

Y-COORD (METERS)	X-COORD (METERS)								
	480668.21	480768.21	480868.21	480968.21	481068.21	481168.21	481268.21	481368.21	481468.21
3770289.70	374.00	376.00	377.70	379.00	380.30	382.00	384.00	385.30	387.00
3770189.70	374.00	376.00	378.00	379.00	381.00	382.60	384.00	386.00	387.60
3770089.70	374.00	376.00	377.60	379.00	381.00	382.60	384.00	386.00	387.60
3769989.70	374.00	376.00	377.60	379.00	380.80	382.50	384.00	386.00	387.60
3769889.70	374.00	376.00	377.00	378.90	380.30	382.00	383.90	385.30	387.60
3769789.70	376.80	377.70	377.60	379.00	381.00	382.60	384.00	386.00	387.60
3769689.70	378.00	378.00	378.00	379.90	381.10	382.70	384.00	386.10	388.00
3769589.70	377.00	377.60	378.30	379.90	381.30	383.80	384.90	386.70	388.60
3769489.70	376.90	378.00	378.00	379.90	381.40	383.10	384.90	387.30	389.60
3769389.70	376.90	377.90	378.60	380.00	381.30	383.00	384.90	387.30	389.10

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

* ELEVATION HEIGHTS IN METERS *

Y-COORD (METERS)	X-COORD (METERS) 481568.21	481668.21	481768.21
3774289.70	372.00	373.30	374.60
3774189.70	372.00	374.00	375.00
3774089.70	372.90	374.70	375.80
3773989.70	373.90	376.90	377.00
3773889.70	374.90	377.10	377.80
3773789.70	372.00	372.10	375.30
3773689.70	371.90	373.00	374.00
3773589.70	372.00	373.00	372.80
3773489.70	371.40	368.70	367.40
3773389.70	366.20	366.00	366.00
3773289.70	365.80	366.00	366.00
3773189.70	371.40	372.00	372.00
3773089.70	369.90	371.90	372.00
3772989.70	370.00	372.00	372.10
3772889.70	370.50	372.00	372.80
3772789.70	371.00	372.00	372.60
3772689.70	371.20	372.10	373.10
3772589.70	372.00	372.70	374.00
3772489.70	371.10	372.00	374.50
3772389.70	371.00	372.10	376.70
3772289.70	375.10	378.80	382.30
3772189.70	378.00	381.20	384.00
3772089.70	378.00	382.50	385.00
3771989.70	378.00	384.30	385.60
3771889.70	380.80	384.90	386.00
3771789.70	384.00	385.30	386.70
3771689.70	384.00	386.00	387.60
3771589.70	384.10	386.20	388.00
3771489.70	385.90	387.30	388.70
3771389.70	386.00	388.00	389.80
3771289.70	386.90	388.30	390.00
3771189.70	387.00	389.00	390.60
3771089.70	387.90	389.30	391.00
3770989.70	387.90	389.30	391.00
3770889.70	387.90	389.30	390.90
3770789.70	387.00	389.00	390.60
3770689.70	387.00	389.00	390.60
3770589.70	387.90	389.10	390.60
3770489.70	388.00	389.70	391.30
3770389.70	388.00	390.20	392.00

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

* ELEVATION HEIGHTS IN METERS *

Y-COORD (METERS)	X-COORD (METERS) 481568.21	481668.21	481768.21
3770289.70	388.90	390.40	392.10
3770189.70	389.00	391.00	392.60
3770089.70	389.10	391.00	392.60
3769989.70	389.00	391.00	392.60
3769889.70	389.00	390.30	392.60
3769789.70	389.00	391.00	392.60
3769689.70	389.20	391.10	392.70
3769589.70	394.20	393.80	393.00
3769489.70	390.30	391.00	394.00
3769389.70	390.70	391.40	396.00

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

* HILL HEIGHT SCALES IN METERS *

Y-COORD (METERS)	X-COORD (METERS) 478868.21	478968.21	479068.21	479168.21	479268.21	479368.21	479468.21	479568.21	479668.21
3774289.70	346.00	347.30	348.00	349.00	350.00	350.60	351.00	352.00	353.00
3774189.70	346.00	347.00	348.00	348.70	349.30	350.00	351.00	352.00	352.90
3774089.70	346.00	347.00	347.60	348.00	349.00	350.00	351.00	352.00	352.30
3773989.70	345.90	346.30	347.00	347.10	348.30	350.00	350.90	351.40	352.00
3773889.70	345.90	346.30	347.00	348.00	349.00	350.00	350.90	352.00	352.00
3773789.70	345.00	346.30	347.00	348.00	349.00	350.00	350.90	352.00	352.60
3773689.70	345.00	346.30	347.60	348.00	349.00	350.00	350.00	351.40	352.60
3773589.70	345.00	346.00	347.00	348.00	349.00	349.60	350.00	351.30	352.60
3773489.70	345.00	346.00	347.00	347.90	348.30	349.30	350.00	351.00	352.00
3773389.70	344.90	346.00	347.00	347.90	348.30	349.00	350.00	351.00	352.00
3773289.70	344.90	346.00	347.00	347.90	348.00	349.00	350.00	351.00	351.60
3773189.70	344.00	346.00	346.60	347.90	348.00	349.00	349.90	350.10	351.00
3773089.70	344.00	345.30	346.10	347.00	348.00	348.10	349.00	350.00	351.00
3772989.70	344.00	345.00	346.00	346.70	347.00	347.90	348.00	349.30	350.00
3772889.70	343.90	344.60	345.60	346.00	346.60	347.00	347.90	349.00	350.00
3772789.70	343.00	344.00	345.00	346.00	346.00	347.00	347.00	348.00	349.70
3772689.70	342.80	343.80	344.50	345.00	346.00	347.00	347.20	348.00	349.60
3772589.70	342.00	342.10	343.80	345.00	346.00	346.80	347.90	348.30	349.60
3772489.70	341.00	342.00	343.00	344.00	345.30	346.60	347.90	348.00	349.60
3772389.70	340.90	341.30	342.60	344.00	345.00	346.00	347.00	347.80	349.60
3772289.70	340.90	341.30	342.60	344.00	345.30	346.00	346.90	347.30	349.60
3772189.70	340.90	341.30	343.50	345.00	346.00	347.00	347.00	347.90	350.50
3772089.70	340.90	341.50	344.80	347.00	347.20	354.00	354.00	354.00	354.00
3771989.70	348.00	346.50	347.80	348.00	349.80	353.40	354.00	355.00	355.30
3771889.70	348.00	348.00	349.00	350.00	351.30	353.00	354.80	355.90	356.50
3771789.70	348.00	349.10	350.00	351.00	353.00	354.00	354.90	356.00	357.10
3771689.70	348.90	350.00	350.60	352.00	353.20	354.00	355.00	356.20	357.60
3771589.70	348.90	350.00	351.00	352.00	353.30	354.60	355.90	356.90	358.00
3771489.70	348.90	350.00	351.00	352.20	354.00	355.00	356.00	357.00	358.00
3771389.70	349.00	350.00	351.60	352.90	354.00	355.00	356.00	357.30	358.60
3771289.70	349.00	350.00	351.60	352.90	354.00	355.00	356.00	357.30	359.00
3771189.70	349.00	350.30	351.60	352.90	354.00	355.00	356.00	358.00	359.00
3771089.70	349.00	350.30	351.60	352.90	354.00	355.00	356.90	358.00	359.00
3770989.70	349.90	350.30	352.00	352.90	354.00	355.60	356.90	358.00	359.00
3770889.70	350.00	351.00	352.00	353.00	354.10	355.60	357.00	358.00	359.60
3770789.70	350.00	351.00	352.00	353.00	354.30	356.00	357.00	358.20	359.60
3770689.70	350.00	351.00	352.00	353.90	355.00	356.00	357.00	358.30	359.60
3770589.70	350.00	351.30	352.70	354.00	355.00	356.00	357.00	358.30	360.00
3770489.70	350.00	352.00	353.00	354.00	355.20	356.00	357.00	358.30	359.80
3770389.70	350.00	352.00	353.50	354.00	355.30	356.00	357.00	358.30	359.60

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

* HILL HEIGHT SCALES IN METERS *

Y-COORD (METERS)	X-COORD (METERS)								
	478868.21	478968.21	479068.21	479168.21	479268.21	479368.21	479468.21	479568.21	479668.21
3770289.70	350.00	352.00	353.00	354.00	355.00	356.00	357.00	358.30	359.60
3770189.70	350.90	352.00	352.60	353.90	355.00	356.00	357.00	358.30	359.60
3770089.70	350.90	351.90	352.60	353.90	355.00	356.00	357.90	358.90	360.00
3769989.70	350.90	352.00	352.60	353.90	355.00	356.60	357.90	359.00	360.00
3769889.70	351.00	352.00	353.00	354.00	355.30	356.80	358.00	359.00	360.60
3769789.70	351.00	352.00	353.00	354.90	356.00	357.00	358.00	359.00	360.60
3769689.70	352.20	353.00	353.00	355.90	358.10	358.70	359.00	359.30	361.60
3769589.70	353.60	354.20	360.00	359.50	360.00	360.00	360.00	360.20	365.00
3769489.70	350.20	353.00	360.00	358.00	358.10	359.00	359.00	359.90	363.40
3769389.70	349.90	352.00	353.00	354.90	356.20	357.50	358.00	359.00	360.00

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

* HILL HEIGHT SCALES IN METERS *

Y-COORD (METERS)	X-COORD (METERS)								
	479768.21	479868.21	479968.21	480068.21	480168.21	480268.21	480368.21	480468.21	480568.21
3774289.70	353.80	354.00	355.10	356.10	357.30	358.00	359.80	360.00	361.60
3774189.70	353.00	354.00	354.60	356.00	357.00	358.00	359.00	360.00	361.60
3774089.70	353.00	354.00	355.00	356.00	357.00	358.00	359.00	360.20	361.60
3773989.70	353.00	354.00	355.00	356.00	357.00	358.00	359.00	360.30	362.00
3773889.70	353.00	354.00	355.00	356.00	357.00	358.00	359.00	360.30	362.00
3773789.70	353.00	354.00	355.00	356.00	357.00	358.00	359.00	360.00	362.00
3773689.70	353.90	354.00	355.00	356.00	357.00	358.00	359.00	360.00	362.00
3773589.70	353.70	354.00	355.00	356.00	357.00	358.00	359.00	360.00	360.90
3773489.70	353.00	354.00	355.00	355.90	356.30	357.60	358.40	359.00	360.00
3773389.70	352.90	354.00	354.60	355.10	356.00	357.00	358.00	359.00	359.10
3773289.70	352.00	353.30	354.00	355.00	356.00	356.90	357.90	358.30	359.00
3773189.70	352.00	353.00	354.00	355.00	355.60	356.60	357.40	358.70	359.80
3773089.70	352.00	352.40	353.10	354.00	355.00	356.00	357.00	358.40	359.50
3772989.70	351.00	352.00	353.00	353.00	354.30	355.90	356.90	358.00	359.00
3772889.70	351.00	352.00	352.30	353.00	354.30	356.00	356.90	358.00	359.00
3772789.70	350.90	352.00	352.60	353.80	354.30	356.00	356.90	358.00	359.60
3772689.70	350.90	351.40	352.60	353.90	354.30	356.00	356.90	358.00	359.60
3772589.70	350.40	351.30	352.30	353.40	354.00	355.60	356.90	358.00	359.00
3772489.70	350.00	351.30	352.00	353.00	354.00	355.60	356.90	358.00	358.60
3772389.70	351.00	352.00	352.00	353.00	354.00	355.60	357.00	358.40	359.10
3772289.70	351.90	354.00	353.00	353.00	354.20	356.80	358.00	359.20	360.80
3772189.70	352.00	354.20	359.00	360.00	359.80	359.90	359.90	359.00	361.60
3772089.70	354.20	356.90	359.20	360.20	361.20	362.80	365.20	365.80	366.00
3771989.70	356.50	359.30	359.60	361.00	362.70	364.30	366.00	367.00	367.60
3771889.70	358.00	360.00	360.50	362.00	363.30	365.00	366.80	367.90	368.50
3771789.70	358.90	360.00	361.00	362.20	364.00	365.60	367.00	368.00	369.10
3771689.70	359.00	360.20	361.60	362.90	364.00	365.60	367.00	368.30	369.80
3771589.70	359.00	360.30	362.00	363.00	364.30	366.00	367.00	368.90	370.00
3771489.70	359.90	361.00	362.00	363.00	364.30	366.00	367.00	369.00	370.60
3771389.70	360.00	361.00	362.00	363.50	364.70	366.00	367.90	369.30	370.60
3771289.70	360.00	361.30	362.60	363.90	365.00	366.50	367.90	369.30	371.00
3771189.70	360.00	361.40	362.60	364.00	365.30	366.60	368.00	369.40	371.00
3771089.70	360.00	362.00	363.00	364.00	365.30	367.00	368.00	370.00	371.00
3770989.70	360.90	362.00	363.00	364.00	366.00	367.00	368.00	370.00	371.00
3770889.70	360.90	362.00	363.60	364.90	366.00	367.60	368.90	370.00	371.00
3770789.70	360.90	362.00	363.60	365.00	366.30	367.60	368.90	370.00	371.60
3770689.70	361.00	362.00	363.60	365.00	366.30	367.60	368.90	370.30	372.00
3770589.70	361.00	362.00	363.60	364.90	366.00	367.60	368.90	370.00	371.60
3770489.70	361.00	362.00	363.60	364.90	366.00	367.60	369.00	370.30	372.00
3770389.70	360.90	362.00	363.60	364.90	366.00	367.60	369.00	370.30	372.00

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

* HILL HEIGHT SCALES IN METERS *

Y-COORD (METERS)	X-COORD (METERS)								
	479768.21	479868.21	479968.21	480068.21	480168.21	480268.21	480368.21	480468.21	480568.21
3770289.70	360.90	362.30	364.00	365.00	366.30	368.00	369.00	371.00	372.00
3770189.70	360.90	362.30	364.00	365.90	367.00	368.00	369.50	371.00	372.60
3770089.70	361.00	363.00	364.60	366.00	367.00	368.00	369.90	371.00	372.60
3769989.70	361.90	363.00	364.60	366.00	367.30	368.10	369.90	371.00	372.00
3769889.70	362.00	363.30	364.60	366.00	367.30	368.60	369.90	371.00	372.00
3769789.70	362.00	363.90	364.60	366.00	367.30	368.60	370.00	371.00	372.50
3769689.70	364.00	364.20	365.00	366.00	367.40	369.00	370.20	371.10	373.50
3769589.70	366.00	365.80	366.00	366.00	368.00	369.60	372.00	372.00	374.30
3769489.70	365.10	365.00	365.00	366.00	368.00	369.60	371.10	373.00	374.60
3769389.70	362.00	363.30	364.60	366.00	367.30	369.00	370.90	372.00	374.50

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

* HILL HEIGHT SCALES IN METERS *

Y-COORD (METERS)	X-COORD (METERS) 480668.21	480768.21	480868.21	480968.21	481068.21	481168.21	481268.21	481368.21	481468.21
3774289.70	362.80	363.30	364.00	365.00	366.00	367.60	368.90	370.00	371.00
3774189.70	362.00	363.30	364.60	365.90	366.30	368.00	368.90	370.00	371.00
3774089.70	362.90	364.00	365.00	366.00	367.00	368.00	369.00	370.20	371.60
3773989.70	363.00	364.90	365.60	366.00	367.20	368.00	369.00	371.00	372.00
3773889.70	363.90	366.00	366.00	366.00	366.80	367.60	368.90	370.20	371.00
3773789.70	363.90	366.00	366.00	365.50	366.00	366.60	368.00	370.00	370.60
3773689.70	363.90	366.00	365.50	365.00	366.00	366.60	368.00	370.00	371.00
3773589.70	362.90	364.80	365.00	366.00	366.40	367.60	368.20	370.00	371.70
3773489.70	361.40	363.10	364.80	366.00	366.60	367.60	368.00	369.70	368.00
3773389.70	360.00	362.30	364.60	366.00	366.30	367.00	368.00	369.00	368.00
3773289.70	360.00	362.30	364.60	366.00	366.00	366.90	368.00	368.00	369.10
3773189.70	360.50	362.30	364.60	366.00	366.00	366.00	367.00	366.40	367.70
3773089.70	360.00	362.00	363.70	366.00	365.00	366.00	367.00	366.00	366.00
3772989.70	360.00	362.00	363.00	364.00	365.40	366.10	367.00	367.20	368.10
3772889.70	360.00	362.00	363.00	364.00	365.30	366.60	367.90	368.20	369.30
3772789.70	360.90	362.00	363.00	364.00	366.00	366.60	367.90	368.30	369.60
3772689.70	360.00	362.00	363.00	364.00	365.30	366.60	367.90	369.00	370.00
3772589.70	360.00	361.30	363.00	364.50	366.00	366.60	368.00	369.00	370.00
3772489.70	359.10	360.60	363.00	364.90	366.00	367.00	368.00	369.30	370.00
3772389.70	360.00	362.00	363.60	364.90	366.00	367.00	368.20	370.00	371.00
3772289.70	361.60	363.20	364.00	365.00	365.60	367.20	369.50	371.00	378.00
3772189.70	363.00	364.00	365.50	365.90	372.00	371.70	371.90	376.80	378.00
3772089.70	365.20	365.20	371.00	370.20	373.10	374.80	377.20	378.20	378.10
3771989.70	367.60	371.00	372.60	373.50	374.70	376.80	378.00	379.20	379.20
3771889.70	369.90	372.00	373.00	374.00	376.00	378.00	379.00	380.00	381.00
3771789.70	370.90	372.00	373.60	375.00	376.30	378.00	379.90	381.00	382.10
3771689.70	371.00	372.70	374.00	375.50	377.00	378.60	380.00	381.30	383.00
3771589.70	371.90	373.20	374.50	376.00	377.00	378.60	380.00	382.00	383.60
3771489.70	372.00	374.00	375.00	376.90	378.00	379.60	381.00	382.30	384.00
3771389.70	372.00	374.00	375.60	377.50	379.00	380.00	381.90	383.20	384.60
3771289.70	372.90	374.30	376.00	378.00	379.30	380.60	382.00	384.00	385.50
3771189.70	372.90	374.30	376.50	378.00	379.30	381.00	382.90	384.30	386.00
3771089.70	372.90	374.30	376.00	377.90	379.30	381.00	382.90	384.30	386.00
3770989.70	372.90	374.30	376.00	377.90	379.30	381.00	382.90	384.30	386.00
3770889.70	372.90	374.30	376.00	377.90	379.30	380.60	382.70	384.00	385.90
3770789.70	372.90	374.30	376.00	377.90	379.30	380.60	382.00	384.00	385.60
3770689.70	372.90	374.30	376.00	377.90	379.30	381.00	382.00	384.00	385.60
3770589.70	373.00	375.00	376.60	378.00	379.40	381.00	382.20	384.00	385.60
3770489.70	373.50	375.20	376.60	378.00	380.00	381.60	382.90	384.20	386.00
3770389.70	373.90	375.30	377.00	378.90	380.00	382.00	383.00	385.00	386.60

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

* HILL HEIGHT SCALES IN METERS *

Y-COORD (METERS)	X-COORD (METERS)								
	480668.21	480768.21	480868.21	480968.21	481068.21	481168.21	481268.21	481368.21	481468.21
3770289.70	374.00	376.00	377.70	379.00	380.30	382.00	384.00	385.30	387.00
3770189.70	374.00	376.00	378.00	379.00	381.00	382.60	384.00	386.00	387.60
3770089.70	374.00	376.00	377.60	379.00	381.00	382.60	384.00	386.00	387.60
3769989.70	374.00	376.00	377.60	379.00	380.80	382.50	384.00	386.00	387.60
3769889.70	374.00	376.00	377.00	378.90	380.30	382.00	383.90	385.30	387.60
3769789.70	376.80	377.70	377.60	379.00	381.00	382.60	384.00	386.00	387.60
3769689.70	378.00	378.00	378.00	379.90	381.10	382.70	384.00	386.10	388.00
3769589.70	377.00	377.60	378.30	379.90	381.30	383.80	384.90	386.70	399.00
3769489.70	376.90	378.00	378.00	379.90	381.40	383.10	384.90	387.30	399.00
3769389.70	376.90	377.90	378.60	380.00	381.30	383.00	384.90	387.30	389.10

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

* HILL HEIGHT SCALES IN METERS *

Y-COORD (METERS)	X-COORD (METERS) 481568.21	481668.21	481768.21
3774289.70	372.00	373.30	374.60
3774189.70	372.00	374.00	375.00
3774089.70	372.90	374.70	375.80
3773989.70	373.90	376.90	377.00
3773889.70	376.00	377.10	377.80
3773789.70	372.00	372.10	375.30
3773689.70	371.90	373.00	374.00
3773589.70	372.00	373.00	372.80
3773489.70	371.40	372.00	371.00
3773389.70	366.20	366.00	366.00
3773289.70	373.00	366.00	366.00
3773189.70	371.40	372.00	372.00
3773089.70	369.90	371.90	372.00
3772989.70	370.00	372.00	372.10
3772889.70	370.50	372.00	372.80
3772789.70	371.00	372.00	372.60
3772689.70	371.20	372.10	373.10
3772589.70	372.00	372.70	374.00
3772489.70	371.10	372.00	374.50
3772389.70	371.00	378.00	376.70
3772289.70	375.10	378.80	382.30
3772189.70	378.00	381.20	384.00
3772089.70	378.00	382.50	385.00
3771989.70	378.00	384.30	385.60
3771889.70	380.80	384.90	386.00
3771789.70	384.00	385.30	386.70
3771689.70	384.00	386.00	387.60
3771589.70	384.10	386.20	388.00
3771489.70	385.90	387.30	388.70
3771389.70	386.00	388.00	389.80
3771289.70	386.90	388.30	390.00
3771189.70	387.00	389.00	390.60
3771089.70	387.90	389.30	391.00
3770989.70	387.90	389.30	391.00
3770889.70	387.90	389.30	390.90
3770789.70	387.00	389.00	390.60
3770689.70	387.00	389.00	390.60
3770589.70	387.90	389.10	390.60
3770489.70	388.00	389.70	391.30
3770389.70	388.00	390.20	392.00

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

* HILL HEIGHT SCALES IN METERS *

Y-COORD (METERS)	X-COORD (METERS) 481568.21	481668.21	481768.21
3770289.70	388.90	390.40	392.10
3770189.70	389.00	391.00	392.60
3770089.70	389.10	391.00	392.60
3769989.70	389.00	391.00	392.60
3769889.70	389.00	390.30	392.60
3769789.70	389.00	391.00	392.60
3769689.70	389.20	391.10	392.70
3769589.70	397.00	393.80	393.00
3769489.70	399.00	391.00	394.00
3769389.70	390.70	391.40	396.00

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** DISCRETE CARTESIAN RECEPTORS ***
(X-COORD, Y-COORD, ZELEV, ZHILL, ZFLAG)
(METERS)

(	480726.1,	3770758.2,	373.9,	373.9,	0.0);	(	479114.5,	3769998.8,	353.0,	353.0,	0.0);
(	479109.7,	3769953.9,	353.0,	353.0,	0.0);	(	480558.0,	3774226.4,	361.3,	361.3,	0.0);
(	480766.0,	3771834.4,	372.0,	372.0,	0.0);	(	480235.5,	3771590.9,	365.5,	365.5,	0.0);

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

* SOURCE-RECEPTOR COMBINATIONS FOR WHICH CALCULATIONS MAY NOT BE PERFORMED *
LESS THAN 1.0 METER; WITHIN OPENPIT; OR BEYOND 80KM FOR FASTAREA/FASTALL

SOURCE ID	- - RECEPTOR LOCATION - - XR (METERS)	YR (METERS)	DISTANCE (METERS)
L0008299	480668.2	3771789.7	-4.37
L0008300	480668.2	3771789.7	-3.88
L0008310	480668.2	3771689.7	0.95
L0008311	480668.2	3771689.7	-7.61
L0008312	480668.2	3771689.7	-1.21
L0008372	480668.2	3771889.7	0.48
L0008376	480268.2	3771589.7	0.36
L0008430	480368.2	3772089.7	0.02
L0008440	480368.2	3771989.7	0.68
L0008441	480368.2	3771989.7	-5.35
L0008442	480368.2	3771989.7	0.49
L0008452	480368.2	3771889.7	-1.48
L0008453	480368.2	3771889.7	-3.30
L0008464	480368.2	3771789.7	-2.53
L0008465	480368.2	3771789.7	-0.40

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** METEOROLOGICAL DAYS SELECTED FOR PROCESSING ***
(1=YES; 0=NO)

1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
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1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1

NOTE: METEOROLOGICAL DATA ACTUALLY PROCESSED WILL ALSO DEPEND ON WHAT IS INCLUDED IN THE DATA FILE.

*** UPPER BOUND OF FIRST THROUGH FIFTH WIND SPEED CATEGORIES ***
(METERS/SEC)

1.54, 3.09, 5.14, 8.23, 10.80,

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: ..\RedlandsADJU\RDLD_V9_ADJU\RDLD_v9.SFC Met Version: 16216
Profile file: ..\RedlandsADJU\RDLD_V9_ADJU\RDLD_v9.PFL
Surface format: FREE
Profile format: FREE
Surface station no.: 3171 Upper air station no.: 3190
Name: UNKNOWN Name: UNKNOWN
Year: 2012 Year: 2012

First 24 hours of scalar data

YR	MO	DY	JDY	HR	H0	U*	W*	DT/DZ	ZICNV	ZIMCH	M-O LEN	Z0	BOWEN	ALBEDO	REF WS	WD	HT	REF TA	HT
12	01	01	1	01	-10.6	0.149	-9.000	-9.000	-999.	138.	26.7	0.32	3.22	1.00	1.30	110.	9.1	285.4	5.5
12	01	01	1	02	-5.0	0.102	-9.000	-9.000	-999.	78.	17.9	0.32	3.22	1.00	0.90	130.	9.1	284.5	5.5
12	01	01	1	03	-5.0	0.102	-9.000	-9.000	-999.	78.	17.9	0.32	3.22	1.00	0.90	100.	9.1	285.0	5.5
12	01	01	1	04	-5.0	0.102	-9.000	-9.000	-999.	78.	17.9	0.32	3.22	1.00	0.90	107.	9.1	284.6	5.5
12	01	01	1	05	-10.7	0.149	-9.000	-9.000	-999.	138.	26.7	0.32	3.22	1.00	1.30	98.	9.1	284.9	5.5
12	01	01	1	06	-5.0	0.102	-9.000	-9.000	-999.	78.	17.9	0.32	3.22	1.00	0.90	86.	9.1	284.5	5.5
12	01	01	1	07	-5.0	0.102	-9.000	-9.000	-999.	78.	17.9	0.32	3.22	1.00	0.90	91.	9.1	284.0	5.5
12	01	01	1	08	-4.0	0.102	-9.000	-9.000	-999.	78.	22.9	0.32	3.22	0.54	0.90	107.	9.1	285.0	5.5
12	01	01	1	09	44.6	0.237	0.382	0.006	43.	276.	-25.6	0.15	3.22	0.33	2.10	81.	10.1	289.1	5.5
12	01	01	1	10	134.3	0.111	0.882	0.008	176.	99.	-1.0	0.32	3.22	0.26	0.40	72.	9.1	295.1	5.5
12	01	01	1	11	199.8	0.409	1.429	0.005	503.	627.	-29.4	0.15	3.22	0.23	3.68	78.	10.1	297.9	5.5
12	01	01	1	12	232.3	0.300	1.889	0.005	999.	402.	-10.0	0.32	3.22	0.22	1.80	333.	9.1	299.4	5.5
12	01	01	1	13	230.0	0.300	2.134	0.005	1453.	394.	-10.1	0.32	3.22	0.22	1.80	72.	9.1	300.4	5.5
12	01	01	1	14	194.0	0.294	2.109	0.005	1663.	382.	-11.2	0.32	3.22	0.24	1.80	277.	9.1	301.0	5.5
12	01	01	1	15	126.3	0.378	1.872	0.005	1784.	557.	-36.5	0.32	3.22	0.27	2.70	243.	9.1	301.0	5.5
12	01	01	1	16	39.5	0.199	1.278	0.005	1817.	240.	-17.2	0.32	3.22	0.36	1.30	274.	9.1	300.1	5.5
12	01	01	1	17	-4.7	0.101	-9.000	-9.000	-999.	85.	19.0	0.32	3.22	0.65	0.90	252.	9.1	298.2	5.5
12	01	01	1	18	-4.9	0.102	-9.000	-9.000	-999.	78.	18.2	0.32	3.22	1.00	0.90	116.	9.1	296.4	5.5
12	01	01	1	19	-18.8	0.204	-9.000	-9.000	-999.	220.	45.6	0.15	3.22	1.00	2.27	79.	10.1	292.2	5.5
12	01	01	1	20	-5.0	0.102	-9.000	-9.000	-999.	83.	18.1	0.32	3.22	1.00	0.90	95.	9.1	290.2	5.5
12	01	01	1	21	-5.0	0.102	-9.000	-9.000	-999.	78.	18.0	0.32	3.22	1.00	0.90	99.	9.1	287.8	5.5
12	01	01	1	22	-5.0	0.102	-9.000	-9.000	-999.	78.	18.0	0.32	3.22	1.00	0.90	110.	9.1	287.6	5.5
12	01	01	1	23	-10.6	0.149	-9.000	-9.000	-999.	138.	26.8	0.32	3.22	1.00	1.30	89.	9.1	287.2	5.5
12	01	01	1	24	-5.0	0.102	-9.000	-9.000	-999.	78.	17.9	0.32	3.22	1.00	0.90	105.	9.1	285.9	5.5

First hour of profile data

YR	MO	DY	HR	HEIGHT	F	WDIR	WSPD	AMB_TMP	sigmaA	sigmaW	sigmaV
12	01	01	01	5.5	0	-999.	-99.00	285.5	99.0	-99.00	-99.00
12	01	01	01	9.1	1	110.	1.30	-999.0	99.0	-99.00	-99.00

F indicates top of profile (=1) or below (=0)

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION   VALUES FOR SOURCE GROUP: ALL   ***
INCLUDING SOURCE(S):   L0007183   , L0007184   , L0007185   , L0007186   , L0007187   ,
L0007188   , L0007189   , L0007190   , L0007191   , L0007192   , L0007193   , L0007194   , L0007195   ,
L0007196   , L0007197   , L0007198   , L0007199   , L0007200   , L0007201   , L0007202   , L0007203   ,
L0007204   , L0007205   , L0007206   , L0007207   , L0007208   , L0007209   , L0007210   , . . .   ,

*** NETWORK ID: UCART1   ; NETWORK TYPE: GRIDCART ***

** CONC OF DPM   IN MICROGRAMS/M**3   **

Y-COORD (METERS)	X-COORD (METERS)								
	478868.21	478968.21	479068.21	479168.21	479268.21	479368.21	479468.21	479568.21	479668.21
3774289.70	0.00011	0.00012	0.00012	0.00013	0.00013	0.00014	0.00014	0.00015	0.00015
3774189.70	0.00012	0.00012	0.00013	0.00013	0.00014	0.00014	0.00015	0.00016	0.00016
3774089.70	0.00012	0.00013	0.00013	0.00014	0.00014	0.00015	0.00016	0.00016	0.00017
3773989.70	0.00013	0.00013	0.00014	0.00014	0.00015	0.00016	0.00016	0.00017	0.00018
3773889.70	0.00013	0.00014	0.00014	0.00015	0.00016	0.00016	0.00017	0.00018	0.00019
3773789.70	0.00014	0.00014	0.00015	0.00016	0.00017	0.00017	0.00018	0.00019	0.00020
3773689.70	0.00014	0.00015	0.00016	0.00016	0.00017	0.00018	0.00019	0.00020	0.00021
3773589.70	0.00015	0.00016	0.00016	0.00017	0.00018	0.00019	0.00020	0.00021	0.00023
3773489.70	0.00015	0.00016	0.00017	0.00018	0.00019	0.00020	0.00021	0.00023	0.00024
3773389.70	0.00016	0.00017	0.00018	0.00019	0.00020	0.00021	0.00023	0.00024	0.00026
3773289.70	0.00017	0.00018	0.00019	0.00020	0.00021	0.00023	0.00024	0.00025	0.00027
3773189.70	0.00017	0.00019	0.00020	0.00021	0.00022	0.00024	0.00025	0.00027	0.00029
3773089.70	0.00018	0.00019	0.00021	0.00022	0.00024	0.00025	0.00027	0.00029	0.00031
3772989.70	0.00019	0.00020	0.00022	0.00023	0.00025	0.00027	0.00029	0.00031	0.00033
3772889.70	0.00020	0.00021	0.00023	0.00024	0.00026	0.00028	0.00031	0.00033	0.00036
3772789.70	0.00021	0.00022	0.00024	0.00026	0.00028	0.00030	0.00032	0.00035	0.00039
3772689.70	0.00021	0.00023	0.00025	0.00027	0.00029	0.00032	0.00035	0.00038	0.00042
3772589.70	0.00022	0.00024	0.00026	0.00028	0.00031	0.00034	0.00037	0.00041	0.00045
3772489.70	0.00023	0.00025	0.00027	0.00030	0.00032	0.00036	0.00039	0.00044	0.00049
3772389.70	0.00024	0.00026	0.00028	0.00031	0.00034	0.00038	0.00042	0.00047	0.00053
3772289.70	0.00025	0.00027	0.00029	0.00032	0.00036	0.00040	0.00044	0.00050	0.00057
3772189.70	0.00025	0.00028	0.00030	0.00034	0.00037	0.00042	0.00047	0.00053	0.00062
3772089.70	0.00026	0.00029	0.00032	0.00035	0.00039	0.00044	0.00050	0.00057	0.00066
3771989.70	0.00027	0.00030	0.00033	0.00037	0.00041	0.00046	0.00053	0.00060	0.00070
3771889.70	0.00028	0.00031	0.00035	0.00039	0.00044	0.00049	0.00056	0.00063	0.00074
3771789.70	0.00029	0.00033	0.00038	0.00043	0.00048	0.00054	0.00060	0.00068	0.00078
3771689.70	0.00030	0.00035	0.00043	0.00052	0.00059	0.00064	0.00070	0.00077	0.00087
3771589.70	0.00032	0.00038	0.00054	0.00182	0.00182	0.00183	0.00184	0.00187	0.00192
3771489.70	0.00032	0.00040	0.00062	0.00110	0.00071	0.00071	0.00075	0.00081	0.00089
3771389.70	0.00033	0.00041	0.00063	0.00103	0.00060	0.00058	0.00060	0.00065	0.00071
3771289.70	0.00033	0.00041	0.00063	0.00099	0.00056	0.00052	0.00054	0.00057	0.00062
3771189.70	0.00032	0.00040	0.00062	0.00096	0.00054	0.00049	0.00050	0.00053	0.00056

3771089.70	0.00032	0.00040	0.00062	0.00092	0.00052	0.00047	0.00046	0.00049	0.00051
3770989.70	0.00031	0.00039	0.00061	0.00089	0.00050	0.00044	0.00043	0.00045	0.00047
3770889.70	0.00031	0.00038	0.00061	0.00086	0.00048	0.00042	0.00041	0.00042	0.00043
3770789.70	0.00030	0.00037	0.00060	0.00084	0.00046	0.00040	0.00039	0.00039	0.00040
3770689.70	0.00029	0.00036	0.00060	0.00081	0.00045	0.00038	0.00036	0.00037	0.00037
3770589.70	0.00028	0.00036	0.00059	0.00078	0.00043	0.00037	0.00034	0.00034	0.00035
3770489.70	0.00027	0.00035	0.00059	0.00076	0.00041	0.00035	0.00033	0.00032	0.00032
3770389.70	0.00027	0.00034	0.00058	0.00074	0.00040	0.00033	0.00031	0.00030	0.00030

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): L0007183 , L0007184 , L0007185 , L0007186 , L0007187 ,
L0007188 , L0007189 , L0007190 , L0007191 , L0007192 , L0007193 , L0007194 , L0007195 ,
L0007196 , L0007197 , L0007198 , L0007199 , L0007200 , L0007201 , L0007202 , L0007203 ,
L0007204 , L0007205 , L0007206 , L0007207 , L0007208 , L0007209 , L0007210 , . . . ,

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

** CONC OF DPM IN MICROGRAMS/M**3 **

Y-COORD (METERS)	X-COORD (METERS) 478868.21	478968.21	479068.21	479168.21	479268.21	479368.21	479468.21	479568.21	479668.21
3770289.70	0.00026	0.00033	0.00057	0.00073	0.00039	0.00032	0.00029	0.00028	0.00029
3770189.70	0.00025	0.00032	0.00055	0.00072	0.00037	0.00031	0.00028	0.00027	0.00027
3770089.70	0.00024	0.00031	0.00054	0.00072	0.00036	0.00029	0.00026	0.00026	0.00025
3769989.70	0.00023	0.00030	0.00052	0.00071	0.00035	0.00028	0.00025	0.00024	0.00024
3769889.70	0.00022	0.00028	0.00050	0.00070	0.00033	0.00026	0.00023	0.00023	0.00022
3769789.70	0.00020	0.00026	0.00047	0.00068	0.00031	0.00024	0.00022	0.00021	0.00021
3769689.70	0.00019	0.00023	0.00042	0.00063	0.00028	0.00022	0.00020	0.00020	0.00019
3769589.70	0.00017	0.00020	0.00027	0.00032	0.00022	0.00020	0.00018	0.00018	0.00018
3769489.70	0.00015	0.00017	0.00018	0.00019	0.00018	0.00017	0.00017	0.00016	0.00016
3769389.70	0.00014	0.00014	0.00015	0.00016	0.00016	0.00015	0.00015	0.00015	0.00015

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): L0007183 , L0007184 , L0007185 , L0007186 , L0007187 ,
L0007188 , L0007189 , L0007190 , L0007191 , L0007192 , L0007193 , L0007194 , L0007195 ,
L0007196 , L0007197 , L0007198 , L0007199 , L0007200 , L0007201 , L0007202 , L0007203 ,
L0007204 , L0007205 , L0007206 , L0007207 , L0007208 , L0007209 , L0007210 , . . . ,

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

** CONC OF DPM IN MICROGRAMS/M**3 **

Y-COORD (METERS)	X-COORD (METERS)								
	479768.21	479868.21	479968.21	480068.21	480168.21	480268.21	480368.21	480468.21	480568.21
3774289.70	0.00016	0.00017	0.00018	0.00019	0.00020	0.00022	0.00024	0.00028	0.00032
3774189.70	0.00017	0.00018	0.00019	0.00020	0.00022	0.00024	0.00027	0.00031	0.00040
3774089.70	0.00018	0.00019	0.00020	0.00022	0.00024	0.00026	0.00030	0.00035	0.00047
3773989.70	0.00019	0.00020	0.00022	0.00023	0.00025	0.00028	0.00032	0.00038	0.00052
3773889.70	0.00020	0.00021	0.00023	0.00025	0.00027	0.00030	0.00034	0.00041	0.00054
3773789.70	0.00021	0.00023	0.00024	0.00026	0.00028	0.00031	0.00036	0.00042	0.00055
3773689.70	0.00023	0.00024	0.00026	0.00028	0.00030	0.00033	0.00037	0.00044	0.00057
3773589.70	0.00024	0.00026	0.00027	0.00029	0.00032	0.00035	0.00039	0.00046	0.00058
3773489.70	0.00025	0.00027	0.00029	0.00031	0.00034	0.00037	0.00041	0.00048	0.00060
3773389.70	0.00027	0.00029	0.00031	0.00033	0.00036	0.00039	0.00043	0.00050	0.00062
3773289.70	0.00029	0.00031	0.00033	0.00035	0.00038	0.00041	0.00046	0.00052	0.00064
3773189.70	0.00031	0.00033	0.00035	0.00038	0.00041	0.00044	0.00049	0.00055	0.00067
3773089.70	0.00033	0.00036	0.00038	0.00041	0.00044	0.00048	0.00052	0.00059	0.00071
3772989.70	0.00036	0.00039	0.00042	0.00045	0.00048	0.00052	0.00057	0.00064	0.00075
3772889.70	0.00039	0.00042	0.00045	0.00049	0.00053	0.00058	0.00063	0.00070	0.00081
3772789.70	0.00042	0.00046	0.00050	0.00055	0.00059	0.00065	0.00070	0.00077	0.00089
3772689.70	0.00046	0.00051	0.00056	0.00062	0.00067	0.00074	0.00080	0.00088	0.00099
3772589.70	0.00050	0.00056	0.00063	0.00070	0.00078	0.00086	0.00094	0.00102	0.00114
3772489.70	0.00055	0.00063	0.00071	0.00081	0.00092	0.00103	0.00114	0.00123	0.00135
3772389.70	0.00061	0.00070	0.00081	0.00095	0.00111	0.00129	0.00145	0.00158	0.00168
3772289.70	0.00067	0.00079	0.00093	0.00113	0.00138	0.00170	0.00200	0.00220	0.00228
3772189.70	0.00073	0.00087	0.00106	0.00135	0.00179	0.00244	0.00325	0.00358	0.00354
3772089.70	0.00078	0.00096	0.00121	0.00160	0.00229	0.00380	0.01124	0.01229	0.00913
3771989.70	0.00084	0.00103	0.00132	0.00182	0.00276	0.00524	0.02180	0.01121	0.01796
3771889.70	0.00088	0.00108	0.00140	0.00194	0.00301	0.00584	0.02449	0.01250	0.02474
3771789.70	0.00092	0.00112	0.00143	0.00196	0.00301	0.00571	0.02394	0.01189	0.02616
3771689.70	0.00100	0.00119	0.00147	0.00194	0.00288	0.00815	0.01370	0.00814	0.01867
3771589.70	0.00200	0.00213	0.00253	0.00292	0.00356	0.00549	0.00529	0.00560	0.00627
3771489.70	0.00099	0.00112	0.00130	0.00154	0.00188	0.00229	0.00262	0.00286	0.00304
3771389.70	0.00079	0.00089	0.00103	0.00119	0.00139	0.00160	0.00178	0.00194	0.00207
3771289.70	0.00069	0.00077	0.00086	0.00098	0.00110	0.00123	0.00135	0.00146	0.00159
3771189.70	0.00061	0.00067	0.00074	0.00082	0.00091	0.00100	0.00108	0.00118	0.00131

3771089.70	0.00055	0.00060	0.00065	0.00071	0.00077	0.00084	0.00091	0.00099	0.00112
3770989.70	0.00050	0.00054	0.00058	0.00062	0.00067	0.00072	0.00078	0.00086	0.00099
3770889.70	0.00046	0.00048	0.00051	0.00055	0.00059	0.00063	0.00068	0.00075	0.00088
3770789.70	0.00042	0.00044	0.00046	0.00049	0.00052	0.00056	0.00060	0.00066	0.00078
3770689.70	0.00039	0.00040	0.00042	0.00044	0.00047	0.00050	0.00054	0.00059	0.00068
3770589.70	0.00036	0.00037	0.00039	0.00040	0.00042	0.00045	0.00048	0.00052	0.00059
3770489.70	0.00033	0.00034	0.00035	0.00037	0.00039	0.00041	0.00043	0.00047	0.00053
3770389.70	0.00031	0.00032	0.00033	0.00034	0.00035	0.00037	0.00039	0.00042	0.00047

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): L0007183 , L0007184 , L0007185 , L0007186 , L0007187 ,
L0007188 , L0007189 , L0007190 , L0007191 , L0007192 , L0007193 , L0007194 , L0007195 ,
L0007196 , L0007197 , L0007198 , L0007199 , L0007200 , L0007201 , L0007202 , L0007203 ,
L0007204 , L0007205 , L0007206 , L0007207 , L0007208 , L0007209 , L0007210 , . . . ,

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

** CONC OF DPM IN MICROGRAMS/M**3 **

Y-COORD (METERS)	X-COORD (METERS) 479768.21	479868.21	479968.21	480068.21	480168.21	480268.21	480368.21	480468.21	480568.21
3770289.70	0.00029	0.00029	0.00030	0.00031	0.00032	0.00034	0.00036	0.00039	0.00043
3770189.70	0.00027	0.00027	0.00028	0.00029	0.00030	0.00031	0.00033	0.00035	0.00040
3770089.70	0.00025	0.00026	0.00026	0.00027	0.00028	0.00029	0.00030	0.00033	0.00037
3769989.70	0.00024	0.00024	0.00024	0.00025	0.00025	0.00026	0.00028	0.00030	0.00034
3769889.70	0.00022	0.00022	0.00023	0.00023	0.00024	0.00024	0.00026	0.00028	0.00032
3769789.70	0.00021	0.00021	0.00021	0.00021	0.00022	0.00023	0.00024	0.00025	0.00029
3769689.70	0.00019	0.00019	0.00019	0.00020	0.00020	0.00021	0.00022	0.00023	0.00026
3769589.70	0.00018	0.00018	0.00018	0.00018	0.00019	0.00019	0.00020	0.00021	0.00022
3769489.70	0.00016	0.00017	0.00017	0.00017	0.00017	0.00018	0.00018	0.00018	0.00019
3769389.70	0.00015	0.00015	0.00016	0.00016	0.00016	0.00016	0.00016	0.00017	0.00017

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION   VALUES FOR SOURCE GROUP: ALL   ***
INCLUDING SOURCE(S):   L0007183   , L0007184   , L0007185   , L0007186   , L0007187   ,
L0007188   , L0007189   , L0007190   , L0007191   , L0007192   , L0007193   , L0007194   , L0007195   ,
L0007196   , L0007197   , L0007198   , L0007199   , L0007200   , L0007201   , L0007202   , L0007203   ,
L0007204   , L0007205   , L0007206   , L0007207   , L0007208   , L0007209   , L0007210   , . . .   ,

*** NETWORK ID: UCART1   ; NETWORK TYPE: GRIDCART ***

** CONC OF DPM   IN MICROGRAMS/M**3   **

Y-COORD (METERS)	X-COORD (METERS)								
	480668.21	480768.21	480868.21	480968.21	481068.21	481168.21	481268.21	481368.21	481468.21
3774289.70	0.00039	0.00047	0.00050	0.00051	0.00050	0.00048	0.00047	0.00046	0.00042
3774189.70	0.00058	0.00100	0.00105	0.00098	0.00091	0.00088	0.00090	0.00092	0.00092
3774089.70	0.00086	0.00240	0.00181	0.00210	0.00262	0.00292	0.00227	0.00184	0.00148
3773989.70	0.00093	0.00216	0.00090	0.00078	0.00075	0.00072	0.00068	0.00062	0.00055
3773889.70	0.00094	0.00218	0.00080	0.00062	0.00055	0.00051	0.00047	0.00044	0.00039
3773789.70	0.00094	0.00223	0.00077	0.00057	0.00049	0.00044	0.00040	0.00037	0.00034
3773689.70	0.00094	0.00229	0.00076	0.00056	0.00047	0.00041	0.00037	0.00034	0.00032
3773589.70	0.00095	0.00236	0.00077	0.00055	0.00046	0.00040	0.00037	0.00034	0.00031
3773489.70	0.00096	0.00244	0.00078	0.00056	0.00047	0.00041	0.00037	0.00034	0.00031
3773389.70	0.00097	0.00249	0.00080	0.00058	0.00048	0.00042	0.00038	0.00035	0.00032
3773289.70	0.00099	0.00253	0.00082	0.00059	0.00049	0.00043	0.00039	0.00036	0.00033
3773189.70	0.00102	0.00258	0.00085	0.00062	0.00051	0.00045	0.00040	0.00037	0.00034
3773089.70	0.00106	0.00263	0.00088	0.00064	0.00054	0.00047	0.00043	0.00038	0.00035
3772989.70	0.00110	0.00269	0.00092	0.00068	0.00057	0.00050	0.00045	0.00041	0.00037
3772889.70	0.00115	0.00277	0.00097	0.00072	0.00061	0.00053	0.00048	0.00043	0.00039
3772789.70	0.00123	0.00286	0.00103	0.00078	0.00065	0.00057	0.00051	0.00046	0.00042
3772689.70	0.00132	0.00297	0.00111	0.00084	0.00071	0.00062	0.00055	0.00049	0.00044
3772589.70	0.00146	0.00311	0.00121	0.00093	0.00078	0.00067	0.00059	0.00053	0.00047
3772489.70	0.00164	0.00330	0.00135	0.00104	0.00087	0.00074	0.00064	0.00056	0.00050
3772389.70	0.00194	0.00357	0.00154	0.00118	0.00097	0.00082	0.00070	0.00061	0.00053
3772289.70	0.00244	0.00397	0.00180	0.00136	0.00109	0.00090	0.00076	0.00066	0.00058
3772189.70	0.00340	0.00462	0.00219	0.00159	0.00124	0.00102	0.00085	0.00072	0.00062
3772089.70	0.00591	0.00578	0.00273	0.00189	0.00147	0.00118	0.00097	0.00081	0.00070
3771989.70	0.02488	0.00775	0.00350	0.00233	0.00173	0.00136	0.00110	0.00092	0.00078
3771889.70	0.02366	0.00917	0.00394	0.00256	0.00194	0.00151	0.00122	0.00101	0.00085
3771789.70	0.02239	0.00848	0.00388	0.00259	0.00197	0.00155	0.00126	0.00104	0.00088
3771689.70	0.01604	0.00677	0.00334	0.00236	0.00182	0.00146	0.00120	0.00101	0.00087
3771589.70	0.00621	0.00483	0.00265	0.00196	0.00155	0.00128	0.00108	0.00092	0.00080
3771489.70	0.00321	0.00425	0.00211	0.00159	0.00129	0.00109	0.00094	0.00082	0.00072
3771389.70	0.00237	0.00366	0.00173	0.00131	0.00109	0.00093	0.00081	0.00071	0.00064
3771289.70	0.00193	0.00330	0.00148	0.00112	0.00094	0.00081	0.00071	0.00063	0.00057
3771189.70	0.00168	0.00307	0.00130	0.00099	0.00084	0.00072	0.00064	0.00057	0.00051

3771089.70	0.00151	0.00291	0.00120	0.00091	0.00077	0.00067	0.00059	0.00053	0.00047
3770989.70	0.00139	0.00280	0.00113	0.00086	0.00075	0.00066	0.00058	0.00051	0.00045
3770889.70	0.00129	0.00272	0.00113	0.00091	0.00081	0.00073	0.00065	0.00056	0.00046
3770789.70	0.00115	0.00285	0.00169	0.00153	0.00145	0.00137	0.00128	0.00102	0.00051
3770689.70	0.00092	0.00149	0.00114	0.00105	0.00100	0.00095	0.00088	0.00072	0.00046
3770589.70	0.00077	0.00117	0.00073	0.00064	0.00059	0.00055	0.00050	0.00043	0.00037
3770489.70	0.00069	0.00106	0.00060	0.00051	0.00046	0.00042	0.00038	0.00034	0.00031
3770389.70	0.00062	0.00099	0.00052	0.00043	0.00039	0.00035	0.00032	0.00029	0.00026

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): L0007183 , L0007184 , L0007185 , L0007186 , L0007187 ,
L0007188 , L0007189 , L0007190 , L0007191 , L0007192 , L0007193 , L0007194 , L0007195 ,
L0007196 , L0007197 , L0007198 , L0007199 , L0007200 , L0007201 , L0007202 , L0007203 ,
L0007204 , L0007205 , L0007206 , L0007207 , L0007208 , L0007209 , L0007210 , . . . ,

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

** CONC OF DPM IN MICROGRAMS/M**3 **

Y-COORD (METERS)	X-COORD (METERS) 480668.21	480768.21	480868.21	480968.21	481068.21	481168.21	481268.21	481368.21	481468.21
3770289.70	0.00058	0.00094	0.00047	0.00038	0.00034	0.00031	0.00028	0.00025	0.00023
3770189.70	0.00054	0.00090	0.00043	0.00035	0.00030	0.00027	0.00025	0.00023	0.00021
3770089.70	0.00051	0.00087	0.00040	0.00032	0.00028	0.00025	0.00023	0.00021	0.00019
3769989.70	0.00049	0.00085	0.00038	0.00029	0.00025	0.00023	0.00021	0.00019	0.00018
3769889.70	0.00046	0.00082	0.00035	0.00027	0.00023	0.00021	0.00019	0.00018	0.00016
3769789.70	0.00042	0.00078	0.00032	0.00025	0.00021	0.00019	0.00018	0.00016	0.00015
3769689.70	0.00036	0.00070	0.00028	0.00022	0.00019	0.00017	0.00016	0.00015	0.00014
3769589.70	0.00025	0.00028	0.00022	0.00019	0.00017	0.00015	0.00014	0.00014	0.00013
3769489.70	0.00019	0.00019	0.00018	0.00016	0.00015	0.00014	0.00013	0.00012	0.00012
3769389.70	0.00016	0.00016	0.00015	0.00015	0.00014	0.00013	0.00012	0.00011	0.00011

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): L0007183 , L0007184 , L0007185 , L0007186 , L0007187 ,
L0007188 , L0007189 , L0007190 , L0007191 , L0007192 , L0007193 , L0007194 , L0007195 ,
L0007196 , L0007197 , L0007198 , L0007199 , L0007200 , L0007201 , L0007202 , L0007203 ,
L0007204 , L0007205 , L0007206 , L0007207 , L0007208 , L0007209 , L0007210 , . . . ,

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

** CONC OF DPM IN MICROGRAMS/M**3 **

Y-COORD (METERS)	X-COORD (METERS) 481568.21	481668.21	481768.21
3774289.70	0.00035	0.00028	0.00023
3774189.70	0.00071	0.00037	0.00026
3774089.70	0.00093	0.00041	0.00029
3773989.70	0.00044	0.00034	0.00028
3773889.70	0.00034	0.00029	0.00025
3773789.70	0.00031	0.00028	0.00024
3773689.70	0.00029	0.00027	0.00024
3773589.70	0.00029	0.00026	0.00024
3773489.70	0.00029	0.00027	0.00025
3773389.70	0.00029	0.00027	0.00025
3773289.70	0.00030	0.00028	0.00026
3773189.70	0.00031	0.00029	0.00027
3773089.70	0.00033	0.00030	0.00028
3772989.70	0.00034	0.00031	0.00029
3772889.70	0.00036	0.00033	0.00030
3772789.70	0.00038	0.00034	0.00031
3772689.70	0.00040	0.00036	0.00033
3772589.70	0.00042	0.00038	0.00034
3772489.70	0.00045	0.00040	0.00036
3772389.70	0.00047	0.00043	0.00038
3772289.70	0.00051	0.00044	0.00038
3772189.70	0.00055	0.00048	0.00042
3772089.70	0.00062	0.00053	0.00046
3771989.70	0.00068	0.00058	0.00052
3771889.70	0.00073	0.00064	0.00056
3771789.70	0.00076	0.00066	0.00058
3771689.70	0.00075	0.00066	0.00058
3771589.70	0.00071	0.00063	0.00056
3771489.70	0.00064	0.00057	0.00052
3771389.70	0.00057	0.00052	0.00047
3771289.70	0.00051	0.00047	0.00043
3771189.70	0.00046	0.00042	0.00039

3771089.70	0.00043	0.00039	0.00036
3770989.70	0.00040	0.00036	0.00033
3770889.70	0.00039	0.00035	0.00032
3770789.70	0.00039	0.00034	0.00030
3770689.70	0.00036	0.00032	0.00029
3770589.70	0.00032	0.00028	0.00026
3770489.70	0.00027	0.00025	0.00023
3770389.70	0.00024	0.00022	0.00021

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION   VALUES FOR SOURCE GROUP: ALL   ***
INCLUDING SOURCE(S):   L0007183   , L0007184   , L0007185   , L0007186   , L0007187   ,
L0007188   , L0007189   , L0007190   , L0007191   , L0007192   , L0007193   , L0007194   , L0007195   ,
L0007196   , L0007197   , L0007198   , L0007199   , L0007200   , L0007201   , L0007202   , L0007203   ,
L0007204   , L0007205   , L0007206   , L0007207   , L0007208   , L0007209   , L0007210   , . . .   ,

*** NETWORK ID: UCART1   ; NETWORK TYPE: GRIDCART ***

** CONC OF DPM   IN MICROGRAMS/M**3   **

Y-COORD (METERS)	X-COORD (METERS)		
	481568.21	481668.21	481768.21
3770289.70	0.00022	0.00020	0.00019
3770189.70	0.00020	0.00018	0.00017
3770089.70	0.00018	0.00017	0.00016
3769989.70	0.00017	0.00016	0.00015
3769889.70	0.00015	0.00015	0.00014
3769789.70	0.00014	0.00013	0.00013
3769689.70	0.00013	0.00012	0.00012
3769589.70	0.00012	0.00011	0.00011
3769489.70	0.00011	0.00011	0.00010
3769389.70	0.00010	0.00010	0.00009

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): L0007183 , L0007184 , L0007185 , L0007186 , L0007187 ,
L0007188 , L0007189 , L0007190 , L0007191 , L0007192 , L0007193 , L0007194 , L0007195 ,
L0007196 , L0007197 , L0007198 , L0007199 , L0007200 , L0007201 , L0007202 , L0007203 ,
L0007204 , L0007205 , L0007206 , L0007207 , L0007208 , L0007209 , L0007210 , . . . ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF DPM IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
480726.12	3770758.20	0.00217	479114.46	3769998.76	0.00131
479109.70	3769953.87	0.00109	480558.05	3774226.36	0.00036
480766.03	3771834.40	0.00984	480235.52	3771590.86	0.00464

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** THE SUMMARY OF MAXIMUM PERIOD (43848 HRS) RESULTS ***

** CONC OF DPM IN MICROGRAMS/M**3 **

GROUP ID		AVERAGE CONC		RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)					OF TYPE	NETWORK GRID-ID
ALL	1ST HIGHEST VALUE IS	0.02616	AT (	480568.21,	3771789.70,	369.10,	369.10,	0.00)	GC	UCART1
	2ND HIGHEST VALUE IS	0.02488	AT (	480668.21,	3771989.70,	367.60,	367.60,	0.00)	GC	UCART1
	3RD HIGHEST VALUE IS	0.02474	AT (	480568.21,	3771889.70,	368.50,	368.50,	0.00)	GC	UCART1
	4TH HIGHEST VALUE IS	0.02449	AT (	480368.21,	3771889.70,	366.80,	366.80,	0.00)	GC	UCART1
	5TH HIGHEST VALUE IS	0.02394	AT (	480368.21,	3771789.70,	367.00,	367.00,	0.00)	GC	UCART1
	6TH HIGHEST VALUE IS	0.02366	AT (	480668.21,	3771889.70,	369.90,	369.90,	0.00)	GC	UCART1
	7TH HIGHEST VALUE IS	0.02239	AT (	480668.21,	3771789.70,	370.90,	370.90,	0.00)	GC	UCART1
	8TH HIGHEST VALUE IS	0.02180	AT (	480368.21,	3771989.70,	366.00,	366.00,	0.00)	GC	UCART1
	9TH HIGHEST VALUE IS	0.01867	AT (	480568.21,	3771689.70,	369.80,	369.80,	0.00)	GC	UCART1
	10TH HIGHEST VALUE IS	0.01796	AT (	480568.21,	3771989.70,	367.60,	367.60,	0.00)	GC	UCART1

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** Message Summary : AERMOD Model Execution ***

 --------- Summary of Total Messages --------

A Total of   0 Fatal Error Message(s)
A Total of   2 Warning Message(s)
A Total of   388 Informational Message(s)

A Total of   43848 Hours Were Processed

A Total of   191 Calm Hours Identified

A Total of   197 Missing Hours Identified (0.45 Percent)

   ******** FATAL ERROR MESSAGES ********
              *** NONE ***

   ********   WARNING MESSAGES   ********
ME W186   3053   MEOPEN: THRESH_1MIN 1-min ASOS wind speed threshold used   0.50
ME W187   3053   MEOPEN: ADJ_U* Option for Low Winds used in AERMET

   ****
   *** AERMOD Finishes Successfully ***
   ****

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**
**************************************
**
** AERMOD Input Produced by:
** AERMOD View Ver. 9.5.0
** Lakes Environmental Software Inc.
** Date: 4/9/2018
** File: C:\Users\NoemiA\Desktop\Duke Alabama\Project AB3\Project AB3.ADI
**
**************************************
**
**
**************************************
** AERMOD Control Pathway
**************************************
**
**
CO STARTING
   TITLEONE Duke Warehouse at Alabama and Palmetto
   TITLETWO Project DPM Concentrations (2020) - AB3
   MODELOPT DFAULT CONC
   AVERTIME PERIOD
   URBANOPT 2035210 San_Bernardino_County
   POLLUTID DPM
   RUNORNOT RUN
   ERRORFIL "Project AB3.err"
CO FINISHED
**
**************************************
** AERMOD Source Pathway
**************************************
**
**
SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **
** ----------------------------------------------------------------------
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE1
** DESCRSRC 5th St b/n Alabama St and SR-210
** PREFIX
** Length of Side = 8.59
** Configuration = Adjacent
** Emission Rate = 8.556E-06
** Vertical Dimension = 6.99
** SZINIT = 3.25
** Nodes = 4
** 480745.401, 3774134.486, 363.46, 3.49, 4.00
** 481061.555, 3774108.608, 366.99, 3.49, 4.00
** 481153.813, 3774104.108, 367.98, 3.49, 4.00
** 481576.850, 3774134.486, 372.13, 3.49, 4.00
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   LOCATION L0008552     VOLUME   480749.682 3774134.135 363.66
   LOCATION L0008553     VOLUME   480758.243 3774133.434 363.94
   LOCATION L0008554     VOLUME   480766.805 3774132.734 364.00
   LOCATION L0008555     VOLUME   480775.366 3774132.033 364.00
   LOCATION L0008556     VOLUME   480783.927 3774131.332 364.00
   LOCATION L0008557     VOLUME   480792.489 3774130.631 364.00
   LOCATION L0008558     VOLUME   480801.050 3774129.931 364.00
   LOCATION L0008559     VOLUME   480809.612 3774129.230 364.00
   LOCATION L0008560     VOLUME   480818.173 3774128.529 364.00
   LOCATION L0008561     VOLUME   480826.734 3774127.828 364.06
   LOCATION L0008562     VOLUME   480835.296 3774127.128 364.16
   LOCATION L0008563     VOLUME   480843.857 3774126.427 364.26
   LOCATION L0008564     VOLUME   480852.418 3774125.726 364.41
   LOCATION L0008565     VOLUME   480860.980 3774125.025 364.61
   LOCATION L0008566     VOLUME   480869.541 3774124.325 364.79
   LOCATION L0008567     VOLUME   480878.103 3774123.624 364.97
   LOCATION L0008568     VOLUME   480886.664 3774122.923 365.00
   LOCATION L0008569     VOLUME   480895.225 3774122.222 365.00
   LOCATION L0008570     VOLUME   480903.787 3774121.522 365.00
   LOCATION L0008571     VOLUME   480912.348 3774120.821 365.00
   LOCATION L0008572     VOLUME   480920.909 3774120.120 365.00
   LOCATION L0008573     VOLUME   480929.471 3774119.419 365.00
   LOCATION L0008574     VOLUME   480938.032 3774118.719 365.00
   LOCATION L0008575     VOLUME   480946.593 3774118.018 365.22
   LOCATION L0008576     VOLUME   480955.155 3774117.317 365.51
   LOCATION L0008577     VOLUME   480963.716 3774116.616 365.79
   LOCATION L0008578     VOLUME   480972.278 3774115.916 366.00
   LOCATION L0008579     VOLUME   480980.839 3774115.215 366.00
   LOCATION L0008580     VOLUME   480989.400 3774114.514 366.00
   LOCATION L0008581     VOLUME   480997.962 3774113.813 366.00
   LOCATION L0008582     VOLUME   481006.523 3774113.113 366.00
   LOCATION L0008583     VOLUME   481015.084 3774112.412 366.00
   LOCATION L0008584     VOLUME   481023.646 3774111.711 366.00
   LOCATION L0008585     VOLUME   481032.207 3774111.010 366.08
   LOCATION L0008586     VOLUME   481040.769 3774110.310 366.36
   LOCATION L0008587     VOLUME   481049.330 3774109.609 366.65
   LOCATION L0008588     VOLUME   481057.891 3774108.908 366.93
   LOCATION L0008589     VOLUME   481066.463 3774108.369 367.00
   LOCATION L0008590     VOLUME   481075.043 3774107.950 367.00
   LOCATION L0008591     VOLUME   481083.623 3774107.532 367.00
   LOCATION L0008592     VOLUME   481092.203 3774107.113 367.00
   LOCATION L0008593     VOLUME   481100.782 3774106.695 367.00
   LOCATION L0008594     VOLUME   481109.362 3774106.276 367.00
   LOCATION L0008595     VOLUME   481117.942 3774105.858 367.01
   LOCATION L0008596     VOLUME   481126.522 3774105.439 367.24
   LOCATION L0008597     VOLUME   481135.102 3774105.021 367.53
   LOCATION L0008598     VOLUME   481143.681 3774104.602 367.80
   LOCATION L0008599     VOLUME   481152.261 3774104.184 368.00
   LOCATION L0008600     VOLUME   481160.831 3774104.612 368.00
   LOCATION L0008601     VOLUME   481169.399 3774105.227 368.00
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   LOCATION L0008602     VOLUME   481177.967 3774105.842 368.00
   LOCATION L0008603     VOLUME   481186.535 3774106.458 368.00
   LOCATION L0008604     VOLUME   481195.103 3774107.073 368.00
   LOCATION L0008605     VOLUME   481203.671 3774107.688 368.00
   LOCATION L0008606     VOLUME   481212.239 3774108.303 368.08
   LOCATION L0008607     VOLUME   481220.807 3774108.919 368.36
   LOCATION L0008608     VOLUME   481229.375 3774109.534 368.65
   LOCATION L0008609     VOLUME   481237.943 3774110.149 368.93
   LOCATION L0008610     VOLUME   481246.511 3774110.764 369.00
   LOCATION L0008611     VOLUME   481255.079 3774111.380 369.00
   LOCATION L0008612     VOLUME   481263.647 3774111.995 369.00
   LOCATION L0008613     VOLUME   481272.214 3774112.610 369.00
   LOCATION L0008614     VOLUME   481280.782 3774113.225 369.00
   LOCATION L0008615     VOLUME   481289.350 3774113.841 369.00
   LOCATION L0008616     VOLUME   481297.918 3774114.456 369.00
   LOCATION L0008617     VOLUME   481306.486 3774115.071 369.22
   LOCATION L0008618     VOLUME   481315.054 3774115.686 369.50
   LOCATION L0008619     VOLUME   481323.622 3774116.302 369.79
   LOCATION L0008620     VOLUME   481332.190 3774116.917 370.00
   LOCATION L0008621     VOLUME   481340.758 3774117.532 370.00
   LOCATION L0008622     VOLUME   481349.326 3774118.147 370.00
   LOCATION L0008623     VOLUME   481357.894 3774118.763 370.00
   LOCATION L0008624     VOLUME   481366.462 3774119.378 370.00
   LOCATION L0008625     VOLUME   481375.030 3774119.993 370.00
   LOCATION L0008626     VOLUME   481383.598 3774120.608 370.00
   LOCATION L0008627     VOLUME   481392.166 3774121.224 370.08
   LOCATION L0008628     VOLUME   481400.734 3774121.839 370.36
   LOCATION L0008629     VOLUME   481409.301 3774122.454 370.65
   LOCATION L0008630     VOLUME   481417.869 3774123.069 370.93
   LOCATION L0008631     VOLUME   481426.437 3774123.685 371.00
   LOCATION L0008632     VOLUME   481435.005 3774124.300 371.00
   LOCATION L0008633     VOLUME   481443.573 3774124.915 371.00
   LOCATION L0008634     VOLUME   481452.141 3774125.530 371.03
   LOCATION L0008635     VOLUME   481460.709 3774126.146 371.12
   LOCATION L0008636     VOLUME   481469.277 3774126.761 371.20
   LOCATION L0008637     VOLUME   481477.845 3774127.376 371.28
   LOCATION L0008638     VOLUME   481486.413 3774127.991 371.43
   LOCATION L0008639     VOLUME   481494.981 3774128.607 371.63
   LOCATION L0008640     VOLUME   481503.549 3774129.222 371.84
   LOCATION L0008641     VOLUME   481512.117 3774129.837 372.00
   LOCATION L0008642     VOLUME   481520.685 3774130.452 372.00
   LOCATION L0008643     VOLUME   481529.253 3774131.068 372.00
   LOCATION L0008644     VOLUME   481537.821 3774131.683 372.00
   LOCATION L0008645     VOLUME   481546.388 3774132.298 372.03
   LOCATION L0008646     VOLUME   481554.956 3774132.913 372.06
   LOCATION L0008647     VOLUME   481563.524 3774133.529 372.07
   LOCATION L0008648     VOLUME   481572.092 3774134.144 372.14
** End of LINE VOLUME Source ID = SLINE1
** ----------------------------------------------------------------------
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE2
```

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** DESCRSRC Palmetto Ave b/n California St and Alabama St
** PREFIX
** Length of Side = 8.59
** Configuration = Adjacent
** Emission Rate = 6.876E-06
** Vertical Dimension = 6.99
** SZINIT = 3.25
** Nodes = 4
** 479139.655, 3771580.143, 351.97, 3.49, 4.00
** 479947.267, 3771575.609, 361.91, 3.49, 4.00
** 479966.240, 3771579.104, 361.95, 3.49, 4.00
** 480746.634, 3771578.605, 372.95, 3.49, 4.00
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   LOCATION L0008649     VOLUME   479143.950 3771580.118 352.00
   LOCATION L0008650     VOLUME   479152.540 3771580.070 352.00
   LOCATION L0008651     VOLUME   479161.130 3771580.022 352.00
   LOCATION L0008652     VOLUME   479169.720 3771579.974 352.00
   LOCATION L0008653     VOLUME   479178.309 3771579.926 352.28
   LOCATION L0008654     VOLUME   479186.899 3771579.877 352.57
   LOCATION L0008655     VOLUME   479195.489 3771579.829 352.85
   LOCATION L0008656     VOLUME   479204.079 3771579.781 353.00
   LOCATION L0008657     VOLUME   479212.669 3771579.733 353.00
   LOCATION L0008658     VOLUME   479221.259 3771579.684 353.00
   LOCATION L0008659     VOLUME   479229.849 3771579.636 353.00
   LOCATION L0008660     VOLUME   479238.438 3771579.588 353.06
   LOCATION L0008661     VOLUME   479247.028 3771579.540 353.13
   LOCATION L0008662     VOLUME   479255.618 3771579.492 353.19
   LOCATION L0008663     VOLUME   479264.208 3771579.443 353.34
   LOCATION L0008664     VOLUME   479272.798 3771579.395 353.56
   LOCATION L0008665     VOLUME   479281.388 3771579.347 353.78
   LOCATION L0008666     VOLUME   479289.978 3771579.299 354.00
   LOCATION L0008667     VOLUME   479298.567 3771579.250 354.00
   LOCATION L0008668     VOLUME   479307.157 3771579.202 354.00
   LOCATION L0008669     VOLUME   479315.747 3771579.154 354.00
   LOCATION L0008670     VOLUME   479324.337 3771579.106 354.00
   LOCATION L0008671     VOLUME   479332.927 3771579.058 354.00
   LOCATION L0008672     VOLUME   479341.517 3771579.009 354.00
   LOCATION L0008673     VOLUME   479350.107 3771578.961 354.01
   LOCATION L0008674     VOLUME   479358.697 3771578.913 354.29
   LOCATION L0008675     VOLUME   479367.286 3771578.865 354.58
   LOCATION L0008676     VOLUME   479375.876 3771578.817 354.87
   LOCATION L0008677     VOLUME   479384.466 3771578.768 355.00
   LOCATION L0008678     VOLUME   479393.056 3771578.720 355.00
   LOCATION L0008679     VOLUME   479401.646 3771578.672 355.00
   LOCATION L0008680     VOLUME   479410.236 3771578.624 355.00
   LOCATION L0008681     VOLUME   479418.826 3771578.575 355.08
   LOCATION L0008682     VOLUME   479427.415 3771578.527 355.15
   LOCATION L0008683     VOLUME   479436.005 3771578.479 355.23
   LOCATION L0008684     VOLUME   479444.595 3771578.431 355.38
   LOCATION L0008685     VOLUME   479453.185 3771578.383 355.59
   LOCATION L0008686     VOLUME   479461.775 3771578.334 355.80
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LOCATION L0008687     VOLUME   479470.365 3771578.286 356.00
LOCATION L0008688     VOLUME   479478.955 3771578.238 356.00
LOCATION L0008689     VOLUME   479487.545 3771578.190 356.00
LOCATION L0008690     VOLUME   479496.134 3771578.141 356.00
LOCATION L0008691     VOLUME   479504.724 3771578.093 356.00
LOCATION L0008692     VOLUME   479513.314 3771578.045 356.00
LOCATION L0008693     VOLUME   479521.904 3771577.997 356.00
LOCATION L0008694     VOLUME   479530.494 3771577.949 356.02
LOCATION L0008695     VOLUME   479539.084 3771577.900 356.31
LOCATION L0008696     VOLUME   479547.674 3771577.852 356.59
LOCATION L0008697     VOLUME   479556.263 3771577.804 356.88
LOCATION L0008698     VOLUME   479564.853 3771577.756 357.00
LOCATION L0008699     VOLUME   479573.443 3771577.707 357.00
LOCATION L0008700     VOLUME   479582.033 3771577.659 357.00
LOCATION L0008701     VOLUME   479590.623 3771577.611 357.00
LOCATION L0008702     VOLUME   479599.213 3771577.563 357.00
LOCATION L0008703     VOLUME   479607.803 3771577.515 357.00
LOCATION L0008704     VOLUME   479616.392 3771577.466 357.00
LOCATION L0008705     VOLUME   479624.982 3771577.418 357.17
LOCATION L0008706     VOLUME   479633.572 3771577.370 357.46
LOCATION L0008707     VOLUME   479642.162 3771577.322 357.74
LOCATION L0008708     VOLUME   479650.752 3771577.273 358.00
LOCATION L0008709     VOLUME   479659.342 3771577.225 358.00
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LOCATION L0008711     VOLUME   479676.522 3771577.129 358.00
LOCATION L0008712     VOLUME   479685.111 3771577.081 358.00
LOCATION L0008713     VOLUME   479693.701 3771577.032 358.00
LOCATION L0008714     VOLUME   479702.291 3771576.984 358.00
LOCATION L0008715     VOLUME   479710.881 3771576.936 358.03
LOCATION L0008716     VOLUME   479719.471 3771576.888 358.32
LOCATION L0008717     VOLUME   479728.061 3771576.840 358.61
LOCATION L0008718     VOLUME   479736.651 3771576.791 358.89
LOCATION L0008719     VOLUME   479745.240 3771576.743 359.00
LOCATION L0008720     VOLUME   479753.830 3771576.695 359.00
LOCATION L0008721     VOLUME   479762.420 3771576.647 359.00
LOCATION L0008722     VOLUME   479771.010 3771576.598 359.04
LOCATION L0008723     VOLUME   479779.600 3771576.550 359.32
LOCATION L0008724     VOLUME   479788.190 3771576.502 359.61
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LOCATION L0008726     VOLUME   479805.369 3771576.406 360.00
LOCATION L0008727     VOLUME   479813.959 3771576.357 360.00
LOCATION L0008728     VOLUME   479822.549 3771576.309 360.00
LOCATION L0008729     VOLUME   479831.139 3771576.261 360.00
LOCATION L0008730     VOLUME   479839.729 3771576.213 360.00
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LOCATION L0008732     VOLUME   479856.909 3771576.116 360.00
LOCATION L0008733     VOLUME   479865.499 3771576.068 360.19
LOCATION L0008734     VOLUME   479874.088 3771576.020 360.47
LOCATION L0008735     VOLUME   479882.678 3771575.972 360.76
LOCATION L0008736     VOLUME   479891.268 3771575.923 361.00
LOCATION L0008737     VOLUME   479899.858 3771575.875 361.00
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LOCATION L0008739     VOLUME   479917.038 3771575.779 361.00
LOCATION L0008740     VOLUME   479925.628 3771575.730 361.19
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LOCATION L0008742     VOLUME   479942.807 3771575.634 361.76
LOCATION L0008743     VOLUME   479951.329 3771576.357 362.00
LOCATION L0008744     VOLUME   479959.777 3771577.913 362.00
LOCATION L0008745     VOLUME   479968.258 3771579.103 362.00
LOCATION L0008746     VOLUME   479976.848 3771579.097 362.00
LOCATION L0008747     VOLUME   479985.438 3771579.092 362.00
LOCATION L0008748     VOLUME   479994.028 3771579.086 362.00
LOCATION L0008749     VOLUME   480002.618 3771579.081 362.00
LOCATION L0008750     VOLUME   480011.208 3771579.075 362.04
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LOCATION L0008752     VOLUME   480028.388 3771579.064 362.62
LOCATION L0008753     VOLUME   480036.978 3771579.059 362.90
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LOCATION L0008755     VOLUME   480054.158 3771579.048 363.00
LOCATION L0008756     VOLUME   480062.748 3771579.042 363.00
LOCATION L0008757     VOLUME   480071.338 3771579.037 363.01
LOCATION L0008758     VOLUME   480079.928 3771579.031 363.08
LOCATION L0008759     VOLUME   480088.518 3771579.026 363.15
LOCATION L0008760     VOLUME   480097.108 3771579.020 363.22
LOCATION L0008761     VOLUME   480105.698 3771579.015 363.39
LOCATION L0008762     VOLUME   480114.288 3771579.009 363.61
LOCATION L0008763     VOLUME   480122.878 3771579.004 363.82
LOCATION L0008764     VOLUME   480131.468 3771578.998 364.00
LOCATION L0008765     VOLUME   480140.058 3771578.993 364.00
LOCATION L0008766     VOLUME   480148.648 3771578.987 364.00
LOCATION L0008767     VOLUME   480157.238 3771578.982 364.00
LOCATION L0008768     VOLUME   480165.828 3771578.976 364.20
LOCATION L0008769     VOLUME   480174.418 3771578.971 364.48
LOCATION L0008770     VOLUME   480183.008 3771578.965 364.77
LOCATION L0008771     VOLUME   480191.598 3771578.960 365.00
LOCATION L0008772     VOLUME   480200.188 3771578.954 365.00
LOCATION L0008773     VOLUME   480208.778 3771578.949 365.00
LOCATION L0008774     VOLUME   480217.368 3771578.943 365.00
LOCATION L0008775     VOLUME   480225.958 3771578.938 365.20
LOCATION L0008776     VOLUME   480234.548 3771578.932 365.49
LOCATION L0008777     VOLUME   480243.138 3771578.927 365.77
LOCATION L0008778     VOLUME   480251.728 3771578.921 366.00
LOCATION L0008779     VOLUME   480260.318 3771578.916 366.00
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LOCATION L0008781     VOLUME   480277.498 3771578.905 366.00
LOCATION L0008782     VOLUME   480286.088 3771578.899 366.00
LOCATION L0008783     VOLUME   480294.678 3771578.894 366.00
LOCATION L0008784     VOLUME   480303.268 3771578.888 366.00
LOCATION L0008785     VOLUME   480311.858 3771578.883 366.07
LOCATION L0008786     VOLUME   480320.448 3771578.877 366.35
LOCATION L0008787     VOLUME   480329.038 3771578.872 366.64
LOCATION L0008788     VOLUME   480337.628 3771578.866 366.92
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   LOCATION L0008789     VOLUME   480346.218 3771578.861 367.00
   LOCATION L0008790     VOLUME   480354.808 3771578.855 367.00
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   LOCATION L0008795     VOLUME   480397.758 3771578.828 367.93
   LOCATION L0008796     VOLUME   480406.348 3771578.822 368.00
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   LOCATION L0008800     VOLUME   480440.708 3771578.800 368.36
   LOCATION L0008801     VOLUME   480449.298 3771578.795 368.65
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   LOCATION L0008803     VOLUME   480466.478 3771578.784 369.00
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   LOCATION L0008807     VOLUME   480500.838 3771578.762 369.36
   LOCATION L0008808     VOLUME   480509.428 3771578.757 369.65
   LOCATION L0008809     VOLUME   480518.018 3771578.751 369.94
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   LOCATION L0008817     VOLUME   480586.738 3771578.707 370.23
   LOCATION L0008818     VOLUME   480595.328 3771578.702 370.51
   LOCATION L0008819     VOLUME   480603.918 3771578.696 370.80
   LOCATION L0008820     VOLUME   480612.508 3771578.691 371.00
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   LOCATION L0008823     VOLUME   480638.278 3771578.674 371.00
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   LOCATION L0008825     VOLUME   480655.458 3771578.663 371.52
   LOCATION L0008826     VOLUME   480664.048 3771578.658 371.81
   LOCATION L0008827     VOLUME   480672.638 3771578.652 372.00
   LOCATION L0008828     VOLUME   480681.228 3771578.647 372.00
   LOCATION L0008829     VOLUME   480689.818 3771578.641 372.00
   LOCATION L0008830     VOLUME   480698.408 3771578.636 372.00
   LOCATION L0008831     VOLUME   480706.998 3771578.630 372.24
   LOCATION L0008832     VOLUME   480715.588 3771578.625 372.52
   LOCATION L0008833     VOLUME   480724.178 3771578.619 372.81
   LOCATION L0008834     VOLUME   480732.768 3771578.614 373.00
   LOCATION L0008835     VOLUME   480741.358 3771578.608 373.00
** End of LINE VOLUME Source ID = SLINE2
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** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE3
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** DESCRSRC San Bernardino Ave b/n Alabama St and SR-210
** PREFIX
** Length of Side = 8.59
** Configuration = Adjacent
** Emission Rate = 4.596E-06
** Vertical Dimension = 6.99
** SZINIT = 3.25
** Nodes = 3
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** 480802.302, 3770755.101, 374.93, 3.49, 4.00
** 481389.460, 3770752.661, 384.04, 3.49, 4.00
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   LOCATION L0008838     VOLUME   480762.389 3770764.604 374.08
   LOCATION L0008839     VOLUME   480770.745 3770762.615 374.36
   LOCATION L0008840     VOLUME   480779.101 3770760.625 374.64
   LOCATION L0008841     VOLUME   480787.458 3770758.636 374.92
   LOCATION L0008842     VOLUME   480795.814 3770756.646 375.00
   LOCATION L0008843     VOLUME   480804.223 3770755.093 375.00
   LOCATION L0008844     VOLUME   480812.813 3770755.057 375.00
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   LOCATION L0008846     VOLUME   480829.993 3770754.986 375.34
   LOCATION L0008847     VOLUME   480838.583 3770754.950 375.62
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   LOCATION L0008849     VOLUME   480855.762 3770754.879 376.00
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   LOCATION L0008852     VOLUME   480881.532 3770754.772 376.05
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   LOCATION L0008861     VOLUME   480958.842 3770754.451 377.63
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   LOCATION L0008866     VOLUME   481001.791 3770754.272 378.06
   LOCATION L0008867     VOLUME   481010.381 3770754.236 378.35
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   LOCATION L0008869     VOLUME   481027.561 3770754.165 378.92
   LOCATION L0008870     VOLUME   481036.151 3770754.129 379.00
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   LOCATION L0008876     VOLUME   481087.690 3770753.915 379.93
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   LOCATION L0008879     VOLUME   481113.460 3770753.808 380.00
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   LOCATION L0008884     VOLUME   481156.410 3770753.630 380.22
   LOCATION L0008885     VOLUME   481165.000 3770753.594 380.50
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   LOCATION L0008887     VOLUME   481182.180 3770753.522 381.08
   LOCATION L0008888     VOLUME   481190.770 3770753.487 381.36
   LOCATION L0008889     VOLUME   481199.359 3770753.451 381.65
   LOCATION L0008890     VOLUME   481207.949 3770753.415 381.93
   LOCATION L0008891     VOLUME   481216.539 3770753.380 382.00
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   LOCATION L0008893     VOLUME   481233.719 3770753.308 382.00
   LOCATION L0008894     VOLUME   481242.309 3770753.273 382.00
   LOCATION L0008895     VOLUME   481250.899 3770753.237 382.00
   LOCATION L0008896     VOLUME   481259.489 3770753.201 382.00
   LOCATION L0008897     VOLUME   481268.079 3770753.165 382.00
   LOCATION L0008898     VOLUME   481276.669 3770753.130 382.23
   LOCATION L0008899     VOLUME   481285.259 3770753.094 382.51
   LOCATION L0008900     VOLUME   481293.849 3770753.058 382.80
   LOCATION L0008901     VOLUME   481302.439 3770753.023 383.00
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   LOCATION L0008904     VOLUME   481328.208 3770752.916 383.00
   LOCATION L0008905     VOLUME   481336.798 3770752.880 383.23
   LOCATION L0008906     VOLUME   481345.388 3770752.844 383.52
   LOCATION L0008907     VOLUME   481353.978 3770752.808 383.80
   LOCATION L0008908     VOLUME   481362.568 3770752.773 384.00
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   LOCATION L0008910     VOLUME   481379.748 3770752.701 384.00
   LOCATION L0008911     VOLUME   481388.338 3770752.666 384.00
** End of LINE VOLUME Source ID = SLINE3
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** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE4
** DESCRSRC California St b/n Palmetto Ave and I-10
** PREFIX
** Length of Side = 8.59
** Configuration = Adjacent
** Emission Rate = 8.379E-06
** Vertical Dimension = 6.99
** SZINIT = 3.25
** Nodes = 4
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   LOCATION L0008918     VOLUME   479139.165 3771518.144 352.00
   LOCATION L0008919     VOLUME   479139.067 3771509.555 352.00
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   LOCATION L0008921     VOLUME   479138.871 3771492.376 352.00
   LOCATION L0008922     VOLUME   479138.773 3771483.787 352.00
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   LOCATION L0008936     VOLUME   479137.400 3771363.535 352.00
   LOCATION L0008937     VOLUME   479137.302 3771354.945 352.00
   LOCATION L0008938     VOLUME   479137.204 3771346.356 352.00
   LOCATION L0008939     VOLUME   479137.106 3771337.766 352.00
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   LOCATION L0008944     VOLUME   479136.616 3771294.819 352.00
   LOCATION L0008945     VOLUME   479136.518 3771286.230 352.00
   LOCATION L0008946     VOLUME   479136.420 3771277.640 352.00
   LOCATION L0008947     VOLUME   479136.322 3771269.051 352.00
   LOCATION L0008948     VOLUME   479136.224 3771260.461 352.00
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   LOCATION L0008951     VOLUME   479135.930 3771234.693 352.00
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   LOCATION L0008958     VOLUME   479135.244 3771174.567 352.00
   LOCATION L0008959     VOLUME   479135.146 3771165.977 352.00
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LOCATION L0008961     VOLUME   479134.950 3771148.799 352.00
LOCATION L0008962     VOLUME   479134.852 3771140.209 352.00
LOCATION L0008963     VOLUME   479134.754 3771131.620 352.00
LOCATION L0008964     VOLUME   479134.656 3771123.030 352.00
LOCATION L0008965     VOLUME   479134.557 3771114.441 352.00
LOCATION L0008966     VOLUME   479134.459 3771105.851 352.00
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LOCATION L0008968     VOLUME   479134.263 3771088.672 352.00
LOCATION L0008969     VOLUME   479134.165 3771080.083 352.00
LOCATION L0008970     VOLUME   479134.067 3771071.494 352.00
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LOCATION L0008982     VOLUME   479132.891 3770968.420 352.46
LOCATION L0008983     VOLUME   479132.793 3770959.831 352.67
LOCATION L0008984     VOLUME   479132.695 3770951.241 352.76
LOCATION L0008985     VOLUME   479132.597 3770942.652 352.76
LOCATION L0008986     VOLUME   479132.499 3770934.062 352.75
LOCATION L0008987     VOLUME   479132.401 3770925.473 352.75
LOCATION L0008988     VOLUME   479132.303 3770916.884 352.75
LOCATION L0008989     VOLUME   479132.205 3770908.294 352.74
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** Line Source Represented by Adjacent Volume Sources
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** DESCRSRC Alabama St b/n 5th St and River Bluff Ave
** PREFIX
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** Configuration = Adjacent
** Emission Rate = 0.00002179
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LOCATION L0009308     VOLUME   480750.590 3772678.372 361.69
LOCATION L0009309     VOLUME   480750.611 3772669.782 361.69
LOCATION L0009310     VOLUME   480750.633 3772661.192 361.57
LOCATION L0009311     VOLUME   480750.655 3772652.602 361.38
LOCATION L0009312     VOLUME   480750.677 3772644.012 361.18
LOCATION L0009313     VOLUME   480750.699 3772635.422 361.00
LOCATION L0009314     VOLUME   480750.720 3772626.832 361.00
LOCATION L0009315     VOLUME   480750.742 3772618.242 361.00
LOCATION L0009316     VOLUME   480750.764 3772609.652 361.00
LOCATION L0009317     VOLUME   480750.786 3772601.062 361.00
LOCATION L0009318     VOLUME   480750.808 3772592.472 361.00
LOCATION L0009319     VOLUME   480750.829 3772583.882 361.00
LOCATION L0009320     VOLUME   480750.851 3772575.292 360.99
LOCATION L0009321     VOLUME   480750.873 3772566.702 360.90
LOCATION L0009322     VOLUME   480750.895 3772558.112 360.82
LOCATION L0009323     VOLUME   480750.917 3772549.522 360.73
LOCATION L0009324     VOLUME   480750.938 3772540.932 360.70
LOCATION L0009325     VOLUME   480750.960 3772532.342 360.70
LOCATION L0009326     VOLUME   480750.982 3772523.752 360.70
LOCATION L0009327     VOLUME   480751.004 3772515.162 360.68
LOCATION L0009328     VOLUME   480751.026 3772506.572 360.48
LOCATION L0009329     VOLUME   480751.047 3772497.982 360.28
LOCATION L0009330     VOLUME   480751.069 3772489.392 360.07
LOCATION L0009331     VOLUME   480751.091 3772480.803 360.13
LOCATION L0009332     VOLUME   480751.113 3772472.213 360.33
LOCATION L0009333     VOLUME   480751.135 3772463.623 360.53
LOCATION L0009334     VOLUME   480751.156 3772455.033 360.71
LOCATION L0009335     VOLUME   480751.178 3772446.443 360.71
LOCATION L0009336     VOLUME   480751.200 3772437.853 360.71
LOCATION L0009337     VOLUME   480751.222 3772429.263 360.71
LOCATION L0009338     VOLUME   480751.244 3772420.673 360.90
LOCATION L0009339     VOLUME   480751.265 3772412.083 361.19
LOCATION L0009340     VOLUME   480751.287 3772403.493 361.47
LOCATION L0009341     VOLUME   480751.309 3772394.903 361.71
LOCATION L0009342     VOLUME   480751.331 3772386.313 361.71
LOCATION L0009343     VOLUME   480751.352 3772377.723 361.72
LOCATION L0009344     VOLUME   480751.374 3772369.133 361.72
LOCATION L0009345     VOLUME   480751.396 3772360.543 361.77
LOCATION L0009346     VOLUME   480751.418 3772351.953 361.85
LOCATION L0009347     VOLUME   480751.440 3772343.363 361.93
LOCATION L0009348     VOLUME   480751.461 3772334.773 362.04
LOCATION L0009349     VOLUME   480751.483 3772326.183 362.24
LOCATION L0009350     VOLUME   480751.505 3772317.593 362.45
LOCATION L0009351     VOLUME   480751.527 3772309.003 362.66
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LOCATION L0009352     VOLUME   480751.549 3772300.413 362.78
LOCATION L0009353     VOLUME   480751.570 3772291.823 362.86
LOCATION L0009354     VOLUME   480751.592 3772283.233 362.94
LOCATION L0009355     VOLUME   480751.614 3772274.643 363.00
LOCATION L0009356     VOLUME   480751.636 3772266.053 363.00
LOCATION L0009357     VOLUME   480751.658 3772257.463 363.00
LOCATION L0009358     VOLUME   480751.679 3772248.873 363.00
LOCATION L0009359     VOLUME   480751.701 3772240.283 363.15
LOCATION L0009360     VOLUME   480751.723 3772231.693 363.35
LOCATION L0009361     VOLUME   480751.745 3772223.103 363.56
LOCATION L0009362     VOLUME   480751.767 3772214.513 363.74
LOCATION L0009363     VOLUME   480751.788 3772205.923 363.82
LOCATION L0009364     VOLUME   480751.810 3772197.333 363.90
LOCATION L0009365     VOLUME   480751.832 3772188.743 363.98
LOCATION L0009366     VOLUME   480751.854 3772180.153 364.00
LOCATION L0009367     VOLUME   480751.876 3772171.563 364.00
LOCATION L0009368     VOLUME   480751.897 3772162.974 364.00
LOCATION L0009369     VOLUME   480751.919 3772154.384 364.05
LOCATION L0009370     VOLUME   480751.941 3772145.794 364.26
LOCATION L0009371     VOLUME   480751.963 3772137.204 364.47
LOCATION L0009372     VOLUME   480751.985 3772128.614 364.68
LOCATION L0009373     VOLUME   480752.006 3772120.024 364.79
LOCATION L0009374     VOLUME   480752.028 3772111.434 364.87
LOCATION L0009375     VOLUME   480752.050 3772102.844 364.94
LOCATION L0009376     VOLUME   480752.072 3772094.254 365.05
LOCATION L0009377     VOLUME   480752.094 3772085.664 365.26
LOCATION L0009378     VOLUME   480752.115 3772077.074 365.47
LOCATION L0009379     VOLUME   480752.137 3772068.484 365.69
LOCATION L0009380     VOLUME   480752.159 3772059.894 365.95
LOCATION L0009381     VOLUME   480752.181 3772051.304 366.24
LOCATION L0009382     VOLUME   480752.203 3772042.714 366.53
LOCATION L0009383     VOLUME   480752.224 3772034.124 366.94
LOCATION L0009384     VOLUME   480752.246 3772025.534 367.73
LOCATION L0009385     VOLUME   480752.268 3772016.944 368.52
LOCATION L0009386     VOLUME   480752.290 3772008.354 369.30
LOCATION L0009387     VOLUME   480752.311 3771999.764 369.77
LOCATION L0009388     VOLUME   480752.333 3771991.174 370.13
LOCATION L0009389     VOLUME   480752.355 3771982.584 370.49
LOCATION L0009390     VOLUME   480752.377 3771973.994 370.75
LOCATION L0009391     VOLUME   480752.399 3771965.404 370.75
LOCATION L0009392     VOLUME   480752.420 3771956.814 370.75
LOCATION L0009393     VOLUME   480752.442 3771948.224 370.75
LOCATION L0009394     VOLUME   480752.464 3771939.634 370.97
LOCATION L0009395     VOLUME   480752.486 3771931.044 371.26
LOCATION L0009396     VOLUME   480752.508 3771922.454 371.55
LOCATION L0009397     VOLUME   480752.529 3771913.864 371.75
LOCATION L0009398     VOLUME   480752.551 3771905.274 371.76
LOCATION L0009399     VOLUME   480752.573 3771896.684 371.76
LOCATION L0009400     VOLUME   480752.595 3771888.094 371.76
LOCATION L0009401     VOLUME   480752.617 3771879.504 371.76
LOCATION L0009402     VOLUME   480752.638 3771870.914 371.76
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   LOCATION L0009403     VOLUME   480752.660 3771862.324 371.76
   LOCATION L0009404     VOLUME   480752.682 3771853.735 371.76
   LOCATION L0009405     VOLUME   480752.704 3771845.145 371.76
   LOCATION L0009406     VOLUME   480752.726 3771836.555 371.76
   LOCATION L0009407     VOLUME   480752.747 3771827.965 371.76
   LOCATION L0009408     VOLUME   480752.769 3771819.375 371.76
** End of LINE VOLUME Source ID = SLINE5
** ----------------------------------------------------------------------
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE6
** DESCRSRC Alabama St b/n River Bluff Ave and Palmetto Ave
** PREFIX
** Length of Side = 8.59
** Configuration = Adjacent
** Emission Rate = 1.588E-06
** Vertical Dimension = 6.99
** SZINIT = 3.25
** Nodes = 2
** 480750.988, 3771810.041, 371.84, 3.49, 4.00
** 480747.435, 3771585.792, 372.96, 3.49, 4.00
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   LOCATION L0009409     VOLUME   480750.920 3771805.746 371.70
   LOCATION L0009410     VOLUME   480750.784 3771797.158 371.70
   LOCATION L0009411     VOLUME   480750.647 3771788.569 371.69
   LOCATION L0009412     VOLUME   480750.511 3771779.980 371.69
   LOCATION L0009413     VOLUME   480750.375 3771771.391 371.68
   LOCATION L0009414     VOLUME   480750.239 3771762.802 371.72
   LOCATION L0009415     VOLUME   480750.103 3771754.213 371.80
   LOCATION L0009416     VOLUME   480749.967 3771745.624 371.90
   LOCATION L0009417     VOLUME   480749.831 3771737.035 371.99
   LOCATION L0009418     VOLUME   480749.695 3771728.446 372.00
   LOCATION L0009419     VOLUME   480749.559 3771719.857 372.00
   LOCATION L0009420     VOLUME   480749.423 3771711.268 372.00
   LOCATION L0009421     VOLUME   480749.287 3771702.679 372.08
   LOCATION L0009422     VOLUME   480749.151 3771694.090 372.26
   LOCATION L0009423     VOLUME   480749.015 3771685.502 372.44
   LOCATION L0009424     VOLUME   480748.879 3771676.913 372.62
   LOCATION L0009425     VOLUME   480748.743 3771668.324 372.63
   LOCATION L0009426     VOLUME   480748.607 3771659.735 372.62
   LOCATION L0009427     VOLUME   480748.470 3771651.146 372.62
   LOCATION L0009428     VOLUME   480748.334 3771642.557 372.66
   LOCATION L0009429     VOLUME   480748.198 3771633.968 372.77
   LOCATION L0009430     VOLUME   480748.062 3771625.379 372.88
   LOCATION L0009431     VOLUME   480747.926 3771616.790 372.99
   LOCATION L0009432     VOLUME   480747.790 3771608.201 373.00
   LOCATION L0009433     VOLUME   480747.654 3771599.612 373.00
   LOCATION L0009434     VOLUME   480747.518 3771591.023 373.00
** End of LINE VOLUME Source ID = SLINE6
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** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE7
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** DESCRSRC Alabama St b/n Palmetto Ave and San Bernardino Ave
** PREFIX
** Length of Side = 8.59
** Configuration = Adjacent
** Emission Rate = 8.373E-06
** Vertical Dimension = 6.99
** SZINIT = 3.25
** Nodes = 2
** 480747.029, 3771568.778, 372.93, 3.49, 4.00
** 480745.027, 3770777.988, 373.95, 3.49, 4.00
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   LOCATION L0009435     VOLUME   480747.018 3771564.483 373.00
   LOCATION L0009436     VOLUME   480746.996 3771555.893 373.00
   LOCATION L0009437     VOLUME   480746.974 3771547.303 373.00
   LOCATION L0009438     VOLUME   480746.953 3771538.713 373.00
   LOCATION L0009439     VOLUME   480746.931 3771530.123 373.00
   LOCATION L0009440     VOLUME   480746.909 3771521.533 373.09
   LOCATION L0009441     VOLUME   480746.887 3771512.943 373.25
   LOCATION L0009442     VOLUME   480746.866 3771504.353 373.41
   LOCATION L0009443     VOLUME   480746.844 3771495.763 373.56
   LOCATION L0009444     VOLUME   480746.822 3771487.173 373.56
   LOCATION L0009445     VOLUME   480746.801 3771478.583 373.56
   LOCATION L0009446     VOLUME   480746.779 3771469.993 373.56
   LOCATION L0009447     VOLUME   480746.757 3771461.403 373.56
   LOCATION L0009448     VOLUME   480746.735 3771452.813 373.56
   LOCATION L0009449     VOLUME   480746.714 3771444.223 373.56
   LOCATION L0009450     VOLUME   480746.692 3771435.633 373.56
   LOCATION L0009451     VOLUME   480746.670 3771427.043 373.56
   LOCATION L0009452     VOLUME   480746.648 3771418.453 373.56
   LOCATION L0009453     VOLUME   480746.627 3771409.863 373.56
   LOCATION L0009454     VOLUME   480746.605 3771401.273 373.56
   LOCATION L0009455     VOLUME   480746.583 3771392.683 373.56
   LOCATION L0009456     VOLUME   480746.561 3771384.093 373.56
   LOCATION L0009457     VOLUME   480746.540 3771375.504 373.57
   LOCATION L0009458     VOLUME   480746.518 3771366.914 373.69
   LOCATION L0009459     VOLUME   480746.496 3771358.324 373.82
   LOCATION L0009460     VOLUME   480746.474 3771349.734 373.95
   LOCATION L0009461     VOLUME   480746.453 3771341.144 374.00
   LOCATION L0009462     VOLUME   480746.431 3771332.554 374.00
   LOCATION L0009463     VOLUME   480746.409 3771323.964 374.00
   LOCATION L0009464     VOLUME   480746.387 3771315.374 374.00
   LOCATION L0009465     VOLUME   480746.366 3771306.784 374.00
   LOCATION L0009466     VOLUME   480746.344 3771298.194 374.00
   LOCATION L0009467     VOLUME   480746.322 3771289.604 374.00
   LOCATION L0009468     VOLUME   480746.300 3771281.014 374.00
   LOCATION L0009469     VOLUME   480746.279 3771272.424 374.00
   LOCATION L0009470     VOLUME   480746.257 3771263.834 374.00
   LOCATION L0009471     VOLUME   480746.235 3771255.244 374.00
   LOCATION L0009472     VOLUME   480746.213 3771246.654 374.00
   LOCATION L0009473     VOLUME   480746.192 3771238.064 374.00
   LOCATION L0009474     VOLUME   480746.170 3771229.474 374.00
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LOCATION L0009475     VOLUME   480746.148 3771220.884 374.00
LOCATION L0009476     VOLUME   480746.126 3771212.294 374.00
LOCATION L0009477     VOLUME   480746.105 3771203.704 374.00
LOCATION L0009478     VOLUME   480746.083 3771195.114 374.00
LOCATION L0009479     VOLUME   480746.061 3771186.524 374.00
LOCATION L0009480     VOLUME   480746.039 3771177.934 374.00
LOCATION L0009481     VOLUME   480746.018 3771169.344 374.00
LOCATION L0009482     VOLUME   480745.996 3771160.754 374.00
LOCATION L0009483     VOLUME   480745.974 3771152.164 374.00
LOCATION L0009484     VOLUME   480745.953 3771143.574 374.00
LOCATION L0009485     VOLUME   480745.931 3771134.984 374.00
LOCATION L0009486     VOLUME   480745.909 3771126.394 374.00
LOCATION L0009487     VOLUME   480745.887 3771117.804 374.00
LOCATION L0009488     VOLUME   480745.866 3771109.214 374.00
LOCATION L0009489     VOLUME   480745.844 3771100.624 374.00
LOCATION L0009490     VOLUME   480745.822 3771092.034 374.00
LOCATION L0009491     VOLUME   480745.800 3771083.444 374.00
LOCATION L0009492     VOLUME   480745.779 3771074.854 374.00
LOCATION L0009493     VOLUME   480745.757 3771066.264 374.00
LOCATION L0009494     VOLUME   480745.735 3771057.675 374.00
LOCATION L0009495     VOLUME   480745.713 3771049.085 374.00
LOCATION L0009496     VOLUME   480745.692 3771040.495 374.00
LOCATION L0009497     VOLUME   480745.670 3771031.905 374.00
LOCATION L0009498     VOLUME   480745.648 3771023.315 374.00
LOCATION L0009499     VOLUME   480745.626 3771014.725 374.00
LOCATION L0009500     VOLUME   480745.605 3771006.135 374.00
LOCATION L0009501     VOLUME   480745.583 3770997.545 374.00
LOCATION L0009502     VOLUME   480745.561 3770988.955 374.00
LOCATION L0009503     VOLUME   480745.539 3770980.365 374.00
LOCATION L0009504     VOLUME   480745.518 3770971.775 374.00
LOCATION L0009505     VOLUME   480745.496 3770963.185 374.00
LOCATION L0009506     VOLUME   480745.474 3770954.595 374.00
LOCATION L0009507     VOLUME   480745.452 3770946.005 374.00
LOCATION L0009508     VOLUME   480745.431 3770937.415 374.00
LOCATION L0009509     VOLUME   480745.409 3770928.825 374.00
LOCATION L0009510     VOLUME   480745.387 3770920.235 374.00
LOCATION L0009511     VOLUME   480745.365 3770911.645 374.00
LOCATION L0009512     VOLUME   480745.344 3770903.055 374.00
LOCATION L0009513     VOLUME   480745.322 3770894.465 374.00
LOCATION L0009514     VOLUME   480745.300 3770885.875 374.00
LOCATION L0009515     VOLUME   480745.278 3770877.285 374.00
LOCATION L0009516     VOLUME   480745.257 3770868.695 374.00
LOCATION L0009517     VOLUME   480745.235 3770860.105 374.00
LOCATION L0009518     VOLUME   480745.213 3770851.515 374.00
LOCATION L0009519     VOLUME   480745.191 3770842.925 374.00
LOCATION L0009520     VOLUME   480745.170 3770834.335 374.00
LOCATION L0009521     VOLUME   480745.148 3770825.745 374.00
LOCATION L0009522     VOLUME   480745.126 3770817.155 374.00
LOCATION L0009523     VOLUME   480745.105 3770808.565 374.00
LOCATION L0009524     VOLUME   480745.083 3770799.975 374.00
LOCATION L0009525     VOLUME   480745.061 3770791.385 374.00
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   LOCATION L0009526     VOLUME   480745.039 3770782.795 374.00
** End of LINE VOLUME Source ID = SLINE7
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** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE8
** DESCRSRC Alabama St b/n San Bernardino Ave and I-10
** PREFIX
** Length of Side = 8.59
** Configuration = Adjacent
** Emission Rate = 3.934E-06
** Vertical Dimension = 6.99
** SZINIT = 3.25
** Nodes = 2
** 480741.352, 3770758.508, 373.92, 3.49, 4.00
** 480741.352, 3769636.638, 378.00, 3.49, 4.00
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   LOCATION L0009527     VOLUME   480741.352 3770754.213 374.00
   LOCATION L0009528     VOLUME   480741.352 3770745.623 374.00
   LOCATION L0009529     VOLUME   480741.352 3770737.033 374.00
   LOCATION L0009530     VOLUME   480741.352 3770728.443 374.00
   LOCATION L0009531     VOLUME   480741.352 3770719.853 374.00
   LOCATION L0009532     VOLUME   480741.352 3770711.263 374.00
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   LOCATION L0009534     VOLUME   480741.352 3770694.083 374.00
   LOCATION L0009535     VOLUME   480741.352 3770685.493 374.00
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   LOCATION L0009537     VOLUME   480741.352 3770668.313 374.00
   LOCATION L0009538     VOLUME   480741.352 3770659.723 374.00
   LOCATION L0009539     VOLUME   480741.352 3770651.133 374.07
   LOCATION L0009540     VOLUME   480741.352 3770642.543 374.17
   LOCATION L0009541     VOLUME   480741.352 3770633.953 374.28
   LOCATION L0009542     VOLUME   480741.352 3770625.363 374.38
   LOCATION L0009543     VOLUME   480741.352 3770616.773 374.38
   LOCATION L0009544     VOLUME   480741.352 3770608.183 374.38
   LOCATION L0009545     VOLUME   480741.352 3770599.593 374.38
   LOCATION L0009546     VOLUME   480741.352 3770591.003 374.38
   LOCATION L0009547     VOLUME   480741.352 3770582.413 374.38
   LOCATION L0009548     VOLUME   480741.352 3770573.823 374.38
   LOCATION L0009549     VOLUME   480741.352 3770565.233 374.38
   LOCATION L0009550     VOLUME   480741.352 3770556.643 374.38
   LOCATION L0009551     VOLUME   480741.352 3770548.053 374.38
   LOCATION L0009552     VOLUME   480741.352 3770539.463 374.38
   LOCATION L0009553     VOLUME   480741.352 3770530.873 374.38
   LOCATION L0009554     VOLUME   480741.352 3770522.283 374.38
   LOCATION L0009555     VOLUME   480741.352 3770513.693 374.38
   LOCATION L0009556     VOLUME   480741.352 3770505.103 374.38
   LOCATION L0009557     VOLUME   480741.352 3770496.513 374.38
   LOCATION L0009558     VOLUME   480741.352 3770487.923 374.38
   LOCATION L0009559     VOLUME   480741.352 3770479.333 374.38
   LOCATION L0009560     VOLUME   480741.352 3770470.743 374.50
   LOCATION L0009561     VOLUME   480741.352 3770462.153 374.67
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LOCATION L0009562     VOLUME   480741.352 3770453.563 374.85
LOCATION L0009563     VOLUME   480741.352 3770444.973 375.00
LOCATION L0009564     VOLUME   480741.352 3770436.383 375.00
LOCATION L0009565     VOLUME   480741.352 3770427.793 375.00
LOCATION L0009566     VOLUME   480741.352 3770419.203 375.00
LOCATION L0009567     VOLUME   480741.352 3770410.613 375.00
LOCATION L0009568     VOLUME   480741.352 3770402.023 375.00
LOCATION L0009569     VOLUME   480741.352 3770393.433 375.00
LOCATION L0009570     VOLUME   480741.352 3770384.843 375.02
LOCATION L0009571     VOLUME   480741.352 3770376.253 375.13
LOCATION L0009572     VOLUME   480741.352 3770367.663 375.24
LOCATION L0009573     VOLUME   480741.352 3770359.073 375.35
LOCATION L0009574     VOLUME   480741.352 3770350.483 375.38
LOCATION L0009575     VOLUME   480741.352 3770341.893 375.38
LOCATION L0009576     VOLUME   480741.352 3770333.303 375.38
LOCATION L0009577     VOLUME   480741.352 3770324.713 375.38
LOCATION L0009578     VOLUME   480741.352 3770316.123 375.38
LOCATION L0009579     VOLUME   480741.352 3770307.533 375.38
LOCATION L0009580     VOLUME   480741.352 3770298.943 375.38
LOCATION L0009581     VOLUME   480741.352 3770290.353 375.38
LOCATION L0009582     VOLUME   480741.352 3770281.763 375.38
LOCATION L0009583     VOLUME   480741.352 3770273.173 375.38
LOCATION L0009584     VOLUME   480741.352 3770264.583 375.38
LOCATION L0009585     VOLUME   480741.352 3770255.993 375.38
LOCATION L0009586     VOLUME   480741.352 3770247.403 375.38
LOCATION L0009587     VOLUME   480741.352 3770238.813 375.38
LOCATION L0009588     VOLUME   480741.352 3770230.223 375.38
LOCATION L0009589     VOLUME   480741.352 3770221.633 375.38
LOCATION L0009590     VOLUME   480741.352 3770213.043 375.38
LOCATION L0009591     VOLUME   480741.352 3770204.453 375.38
LOCATION L0009592     VOLUME   480741.352 3770195.863 375.38
LOCATION L0009593     VOLUME   480741.352 3770187.273 375.38
LOCATION L0009594     VOLUME   480741.352 3770178.683 375.38
LOCATION L0009595     VOLUME   480741.352 3770170.093 375.38
LOCATION L0009596     VOLUME   480741.352 3770161.503 375.38
LOCATION L0009597     VOLUME   480741.352 3770152.913 375.38
LOCATION L0009598     VOLUME   480741.352 3770144.323 375.38
LOCATION L0009599     VOLUME   480741.352 3770135.733 375.38
LOCATION L0009600     VOLUME   480741.352 3770127.143 375.38
LOCATION L0009601     VOLUME   480741.352 3770118.553 375.38
LOCATION L0009602     VOLUME   480741.352 3770109.963 375.38
LOCATION L0009603     VOLUME   480741.352 3770101.373 375.38
LOCATION L0009604     VOLUME   480741.352 3770092.783 375.38
LOCATION L0009605     VOLUME   480741.352 3770084.193 375.38
LOCATION L0009606     VOLUME   480741.352 3770075.603 375.38
LOCATION L0009607     VOLUME   480741.352 3770067.013 375.38
LOCATION L0009608     VOLUME   480741.352 3770058.423 375.38
LOCATION L0009609     VOLUME   480741.352 3770049.833 375.38
LOCATION L0009610     VOLUME   480741.352 3770041.243 375.38
LOCATION L0009611     VOLUME   480741.352 3770032.653 375.38
LOCATION L0009612     VOLUME   480741.352 3770024.063 375.38
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   LOCATION L0009613     VOLUME   480741.352 3770015.473 375.38
   LOCATION L0009614     VOLUME   480741.352 3770006.883 375.38
   LOCATION L0009615     VOLUME   480741.352 3769998.293 375.38
   LOCATION L0009616     VOLUME   480741.352 3769989.703 375.38
   LOCATION L0009617     VOLUME   480741.352 3769981.113 375.38
   LOCATION L0009618     VOLUME   480741.352 3769972.523 375.38
   LOCATION L0009619     VOLUME   480741.352 3769963.933 375.38
   LOCATION L0009620     VOLUME   480741.352 3769955.343 375.38
   LOCATION L0009621     VOLUME   480741.352 3769946.753 375.38
   LOCATION L0009622     VOLUME   480741.352 3769938.163 375.38
   LOCATION L0009623     VOLUME   480741.352 3769929.573 375.38
   LOCATION L0009624     VOLUME   480741.352 3769920.983 375.38
   LOCATION L0009625     VOLUME   480741.352 3769912.393 375.38
   LOCATION L0009626     VOLUME   480741.352 3769903.803 375.43
   LOCATION L0009627     VOLUME   480741.352 3769895.213 375.61
   LOCATION L0009628     VOLUME   480741.352 3769886.623 375.79
   LOCATION L0009629     VOLUME   480741.352 3769878.033 375.96
   LOCATION L0009630     VOLUME   480741.352 3769869.443 376.09
   LOCATION L0009631     VOLUME   480741.352 3769860.853 376.20
   LOCATION L0009632     VOLUME   480741.352 3769852.263 376.31
   LOCATION L0009633     VOLUME   480741.352 3769843.673 376.52
   LOCATION L0009634     VOLUME   480741.352 3769835.083 376.99
   LOCATION L0009635     VOLUME   480741.352 3769826.493 377.45
   LOCATION L0009636     VOLUME   480741.352 3769817.903 377.91
   LOCATION L0009637     VOLUME   480741.352 3769809.313 378.00
   LOCATION L0009638     VOLUME   480741.352 3769800.723 378.00
   LOCATION L0009639     VOLUME   480741.352 3769792.133 378.00
   LOCATION L0009640     VOLUME   480741.352 3769783.543 378.00
   LOCATION L0009641     VOLUME   480741.352 3769774.953 378.00
   LOCATION L0009642     VOLUME   480741.352 3769766.363 378.00
   LOCATION L0009643     VOLUME   480741.352 3769757.773 378.00
   LOCATION L0009644     VOLUME   480741.352 3769749.183 378.00
   LOCATION L0009645     VOLUME   480741.352 3769740.593 378.00
   LOCATION L0009646     VOLUME   480741.352 3769732.003 378.00
   LOCATION L0009647     VOLUME   480741.352 3769723.413 378.00
   LOCATION L0009648     VOLUME   480741.352 3769714.823 378.00
   LOCATION L0009649     VOLUME   480741.352 3769706.233 378.00
   LOCATION L0009650     VOLUME   480741.352 3769697.643 378.00
   LOCATION L0009651     VOLUME   480741.352 3769689.053 378.00
   LOCATION L0009652     VOLUME   480741.352 3769680.463 378.00
   LOCATION L0009653     VOLUME   480741.352 3769671.873 378.00
   LOCATION L0009654     VOLUME   480741.352 3769663.283 378.00
   LOCATION L0009655     VOLUME   480741.352 3769654.693 378.00
   LOCATION L0009656     VOLUME   480741.352 3769646.103 378.00
   LOCATION L0009657     VOLUME   480741.352 3769637.513 378.00
** End of LINE VOLUME Source ID = SLINE8
** ----------------------------------------------------------------
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE9
** DESCRSRC Eastern Drive Isle
** PREFIX
```

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** Length of Side = 8.59
** Configuration = Adjacent
** Emission Rate = 0.00002986
** Vertical Dimension = 6.99
** SZINIT = 3.25
** Nodes = 18
** 480726.925, 3771831.449, 371.03, 3.49, 4.00
** 480683.393, 3771831.449, 370.43, 3.49, 4.00
** 480672.510, 3771828.728, 370.03, 3.49, 4.00
** 480669.789, 3771820.566, 370.08, 3.49, 4.00
** 480668.429, 3771685.889, 371.12, 3.49, 4.00
** 480665.708, 3771680.447, 371.05, 3.49, 4.00
** 480654.825, 3771679.087, 370.95, 3.49, 4.00
** 480645.827, 3771675.124, 370.97, 3.49, 4.00
** 480628.172, 3771678.281, 370.70, 3.49, 4.00
** 480623.161, 3771697.237, 370.32, 3.49, 4.00
** 480633.059, 3771994.694, 367.25, 3.49, 4.00
** 480638.501, 3771998.775, 367.09, 3.49, 4.00
** 480650.744, 3772002.856, 367.10, 3.49, 4.00
** 480667.446, 3772002.485, 367.04, 3.49, 4.00
** 480676.098, 3771998.282, 367.25, 3.49, 4.00
** 480679.438, 3771987.892, 368.32, 3.49, 4.00
** 480676.469, 3771862.363, 370.11, 3.49, 4.00
** 480673.996, 3771861.377, 370.06, 3.49, 4.00
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   LOCATION L0009658     VOLUME   480722.630 3771831.449 371.00
   LOCATION L0009659     VOLUME   480714.040 3771831.449 371.00
   LOCATION L0009660     VOLUME   480705.450 3771831.449 371.00
   LOCATION L0009661     VOLUME   480696.860 3771831.449 370.90
   LOCATION L0009662     VOLUME   480688.270 3771831.449 370.61
   LOCATION L0009663     VOLUME   480679.791 3771830.548 370.33
   LOCATION L0009664     VOLUME   480672.167 3771827.699 370.08
   LOCATION L0009665     VOLUME   480669.778 3771819.495 370.23
   LOCATION L0009666     VOLUME   480669.692 3771810.905 370.51
   LOCATION L0009667     VOLUME   480669.605 3771802.315 370.79
   LOCATION L0009668     VOLUME   480669.518 3771793.726 370.99
   LOCATION L0009669     VOLUME   480669.431 3771785.136 370.98
   LOCATION L0009670     VOLUME   480669.345 3771776.547 370.98
   LOCATION L0009671     VOLUME   480669.258 3771767.957 370.98
   LOCATION L0009672     VOLUME   480669.171 3771759.368 370.98
   LOCATION L0009673     VOLUME   480669.084 3771750.778 370.99
   LOCATION L0009674     VOLUME   480668.998 3771742.188 370.99
   LOCATION L0009675     VOLUME   480668.911 3771733.599 371.00
   LOCATION L0009676     VOLUME   480668.824 3771725.009 371.00
   LOCATION L0009677     VOLUME   480668.737 3771716.420 371.00
   LOCATION L0009678     VOLUME   480668.651 3771707.830 371.00
   LOCATION L0009679     VOLUME   480668.564 3771699.241 371.00
   LOCATION L0009680     VOLUME   480668.477 3771690.651 371.00
   LOCATION L0009681     VOLUME   480666.717 3771682.465 371.00
   LOCATION L0009682     VOLUME   480659.423 3771679.662 371.00
   LOCATION L0009683     VOLUME   480651.205 3771677.492 371.00
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LOCATION L0009684     VOLUME   480643.156 3771675.601 371.00
LOCATION L0009685     VOLUME   480634.700 3771677.113 370.83
LOCATION L0009686     VOLUME   480627.671 3771680.174 370.59
LOCATION L0009687     VOLUME   480625.476 3771688.479 370.52
LOCATION L0009688     VOLUME   480623.281 3771696.784 370.45
LOCATION L0009689     VOLUME   480623.431 3771705.354 370.45
LOCATION L0009690     VOLUME   480623.717 3771713.939 370.46
LOCATION L0009691     VOLUME   480624.003 3771722.524 370.47
LOCATION L0009692     VOLUME   480624.288 3771731.109 370.48
LOCATION L0009693     VOLUME   480624.574 3771739.695 370.43
LOCATION L0009694     VOLUME   480624.860 3771748.280 370.30
LOCATION L0009695     VOLUME   480625.145 3771756.865 370.16
LOCATION L0009696     VOLUME   480625.431 3771765.450 370.01
LOCATION L0009697     VOLUME   480625.717 3771774.036 370.00
LOCATION L0009698     VOLUME   480626.002 3771782.621 370.00
LOCATION L0009699     VOLUME   480626.288 3771791.206 370.00
LOCATION L0009700     VOLUME   480626.574 3771799.791 370.00
LOCATION L0009701     VOLUME   480626.859 3771808.377 370.00
LOCATION L0009702     VOLUME   480627.145 3771816.962 370.00
LOCATION L0009703     VOLUME   480627.431 3771825.547 370.00
LOCATION L0009704     VOLUME   480627.716 3771834.132 369.89
LOCATION L0009705     VOLUME   480628.002 3771842.718 369.78
LOCATION L0009706     VOLUME   480628.288 3771851.303 369.68
LOCATION L0009707     VOLUME   480628.573 3771859.888 369.55
LOCATION L0009708     VOLUME   480628.859 3771868.473 369.38
LOCATION L0009709     VOLUME   480629.145 3771877.059 369.20
LOCATION L0009710     VOLUME   480629.431 3771885.644 369.01
LOCATION L0009711     VOLUME   480629.716 3771894.229 369.00
LOCATION L0009712     VOLUME   480630.002 3771902.814 369.00
LOCATION L0009713     VOLUME   480630.288 3771911.400 369.00
LOCATION L0009714     VOLUME   480630.573 3771919.985 368.88
LOCATION L0009715     VOLUME   480630.859 3771928.570 368.59
LOCATION L0009716     VOLUME   480631.145 3771937.155 368.30
LOCATION L0009717     VOLUME   480631.430 3771945.741 368.02
LOCATION L0009718     VOLUME   480631.716 3771954.326 368.00
LOCATION L0009719     VOLUME   480632.002 3771962.911 368.00
LOCATION L0009720     VOLUME   480632.287 3771971.496 368.00
LOCATION L0009721     VOLUME   480632.573 3771980.082 367.87
LOCATION L0009722     VOLUME   480632.859 3771988.667 367.59
LOCATION L0009723     VOLUME   480635.107 3771996.230 367.34
LOCATION L0009724     VOLUME   480642.626 3772000.150 367.20
LOCATION L0009725     VOLUME   480650.776 3772002.855 367.11
LOCATION L0009726     VOLUME   480659.364 3772002.665 367.12
LOCATION L0009727     VOLUME   480667.901 3772002.264 367.13
LOCATION L0009728     VOLUME   480675.628 3771998.510 367.45
LOCATION L0009729     VOLUME   480678.567 3771990.602 367.81
LOCATION L0009730     VOLUME   480679.302 3771982.150 368.12
LOCATION L0009731     VOLUME   480679.099 3771973.562 368.40
LOCATION L0009732     VOLUME   480678.896 3771964.975 368.68
LOCATION L0009733     VOLUME   480678.693 3771956.387 368.96
LOCATION L0009734     VOLUME   480678.489 3771947.799 369.24
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   LOCATION L0009735     VOLUME   480678.286 3771939.212 369.45
   LOCATION L0009736     VOLUME   480678.083 3771930.624 369.65
   LOCATION L0009737     VOLUME   480677.880 3771922.037 369.86
   LOCATION L0009738     VOLUME   480677.677 3771913.449 370.00
   LOCATION L0009739     VOLUME   480677.474 3771904.861 370.00
   LOCATION L0009740     VOLUME   480677.271 3771896.274 370.00
   LOCATION L0009741     VOLUME   480677.068 3771887.686 370.00
   LOCATION L0009742     VOLUME   480676.865 3771879.099 370.06
   LOCATION L0009743     VOLUME   480676.661 3771870.511 370.12
   LOCATION L0009744     VOLUME   480676.060 3771862.200 370.16
** End of LINE VOLUME Source ID = SLINE9
** ----------------------------------------------------------------------
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE10
** DESCRSRC Western Driveway
** PREFIX
** Length of Side = 8.59
** Configuration = Adjacent
** Emission Rate = 3.193E-06
** Vertical Dimension = 6.99
** SZINIT = 3.25
** Nodes = 7
** 480268.158, 3771594.369, 365.95, 3.49, 4.00
** 480268.158, 3771672.071, 365.61, 3.49, 4.00
** 480271.500, 3771680.426, 365.87, 3.49, 4.00
** 480280.691, 3771682.933, 365.96, 3.49, 4.00
** 480353.943, 3771682.933, 366.94, 3.49, 4.00
** 480357.901, 3771686.590, 366.94, 3.49, 4.00
** 480359.641, 3771697.300, 366.96, 3.49, 4.00
** ----------------------------------------------------------------------
   LOCATION L0009745     VOLUME   480268.158 3771598.664 366.00
   LOCATION L0009746     VOLUME   480268.158 3771607.254 366.00
   LOCATION L0009747     VOLUME   480268.158 3771615.844 366.00
   LOCATION L0009748     VOLUME   480268.158 3771624.434 365.89
   LOCATION L0009749     VOLUME   480268.158 3771633.024 365.78
   LOCATION L0009750     VOLUME   480268.158 3771641.614 365.67
   LOCATION L0009751     VOLUME   480268.158 3771650.204 365.61
   LOCATION L0009752     VOLUME   480268.158 3771658.794 365.61
   LOCATION L0009753     VOLUME   480268.158 3771667.384 365.61
   LOCATION L0009754     VOLUME   480269.608 3771675.695 365.66
   LOCATION L0009755     VOLUME   480274.871 3771681.346 365.83
   LOCATION L0009756     VOLUME   480283.249 3771682.933 366.00
   LOCATION L0009757     VOLUME   480291.839 3771682.933 366.00
   LOCATION L0009758     VOLUME   480300.429 3771682.933 366.00
   LOCATION L0009759     VOLUME   480309.019 3771682.933 366.00
   LOCATION L0009760     VOLUME   480317.609 3771682.933 366.26
   LOCATION L0009761     VOLUME   480326.199 3771682.933 366.54
   LOCATION L0009762     VOLUME   480334.789 3771682.933 366.83
   LOCATION L0009763     VOLUME   480343.379 3771682.933 367.00
   LOCATION L0009764     VOLUME   480351.969 3771682.933 367.00
   LOCATION L0009765     VOLUME   480358.098 3771687.801 367.00
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   LOCATION L0009766     VOLUME   480359.475 3771696.280 367.00
** End of LINE VOLUME Source ID = SLINE10
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** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE11
** DESCRSRC Western Drive Isle
** PREFIX
** Length of Side = 8.59
** Configuration = Adjacent
** Emission Rate = 0.00001488
** Vertical Dimension = 6.99
** SZINIT = 3.25
** Nodes = 4
** 480626.927, 3772016.036, 367.07, 3.49, 4.00
** 480551.199, 3772076.720, 366.05, 3.49, 4.00
** 480366.004, 3772081.208, 365.37, 3.49, 4.00
** 480361.816, 3771712.846, 367.00, 3.49, 4.00
** ----------------------------------------------------------------------
   LOCATION L0009767     VOLUME   480623.575 3772018.722 366.59
   LOCATION L0009768     VOLUME   480616.872 3772024.094 366.41
   LOCATION L0009769     VOLUME   480610.168 3772029.466 366.23
   LOCATION L0009770     VOLUME   480603.465 3772034.837 366.05
   LOCATION L0009771     VOLUME   480596.762 3772040.209 366.00
   LOCATION L0009772     VOLUME   480590.059 3772045.580 366.00
   LOCATION L0009773     VOLUME   480583.355 3772050.952 366.00
   LOCATION L0009774     VOLUME   480576.652 3772056.324 366.04
   LOCATION L0009775     VOLUME   480569.949 3772061.695 366.05
   LOCATION L0009776     VOLUME   480563.246 3772067.067 366.00
   LOCATION L0009777     VOLUME   480556.542 3772072.439 366.00
   LOCATION L0009778     VOLUME   480549.457 3772076.762 366.00
   LOCATION L0009779     VOLUME   480540.869 3772076.971 366.00
   LOCATION L0009780     VOLUME   480532.282 3772077.179 366.00
   LOCATION L0009781     VOLUME   480523.694 3772077.387 366.00
   LOCATION L0009782     VOLUME   480515.107 3772077.595 365.94
   LOCATION L0009783     VOLUME   480506.519 3772077.803 365.83
   LOCATION L0009784     VOLUME   480497.932 3772078.011 365.71
   LOCATION L0009785     VOLUME   480489.344 3772078.219 365.61
   LOCATION L0009786     VOLUME   480480.757 3772078.427 365.72
   LOCATION L0009787     VOLUME   480472.169 3772078.635 365.83
   LOCATION L0009788     VOLUME   480463.582 3772078.843 365.95
   LOCATION L0009789     VOLUME   480454.994 3772079.051 366.00
   LOCATION L0009790     VOLUME   480446.407 3772079.259 366.00
   LOCATION L0009791     VOLUME   480437.819 3772079.468 366.00
   LOCATION L0009792     VOLUME   480429.232 3772079.676 366.00
   LOCATION L0009793     VOLUME   480420.645 3772079.884 366.00
   LOCATION L0009794     VOLUME   480412.057 3772080.092 366.00
   LOCATION L0009795     VOLUME   480403.470 3772080.300 366.00
   LOCATION L0009796     VOLUME   480394.882 3772080.508 365.92
   LOCATION L0009797     VOLUME   480386.295 3772080.716 365.78
   LOCATION L0009798     VOLUME   480377.707 3772080.924 365.64
   LOCATION L0009799     VOLUME   480369.120 3772081.132 365.48
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   LOCATION L0009800     VOLUME   480365.942 3772075.734 365.55
   LOCATION L0009801     VOLUME   480365.844 3772067.145 365.84
   LOCATION L0009802     VOLUME   480365.747 3772058.555 365.86
   LOCATION L0009803     VOLUME   480365.649 3772049.966 365.86
   LOCATION L0009804     VOLUME   480365.551 3772041.377 365.86
   LOCATION L0009805     VOLUME   480365.454 3772032.787 365.85
   LOCATION L0009806     VOLUME   480365.356 3772024.198 365.85
   LOCATION L0009807     VOLUME   480365.258 3772015.608 365.85
   LOCATION L0009808     VOLUME   480365.161 3772007.019 365.84
   LOCATION L0009809     VOLUME   480365.063 3771998.429 365.88
   LOCATION L0009810     VOLUME   480364.965 3771989.840 365.93
   LOCATION L0009811     VOLUME   480364.868 3771981.250 365.97
   LOCATION L0009812     VOLUME   480364.770 3771972.661 366.00
   LOCATION L0009813     VOLUME   480364.673 3771964.072 366.00
   LOCATION L0009814     VOLUME   480364.575 3771955.482 366.00
   LOCATION L0009815     VOLUME   480364.477 3771946.893 366.00
   LOCATION L0009816     VOLUME   480364.380 3771938.303 366.00
   LOCATION L0009817     VOLUME   480364.282 3771929.714 366.00
   LOCATION L0009818     VOLUME   480364.184 3771921.124 366.00
   LOCATION L0009819     VOLUME   480364.087 3771912.535 366.10
   LOCATION L0009820     VOLUME   480363.989 3771903.945 366.33
   LOCATION L0009821     VOLUME   480363.891 3771895.356 366.56
   LOCATION L0009822     VOLUME   480363.794 3771886.767 366.78
   LOCATION L0009823     VOLUME   480363.696 3771878.177 366.79
   LOCATION L0009824     VOLUME   480363.598 3771869.588 366.79
   LOCATION L0009825     VOLUME   480363.501 3771860.998 366.79
   LOCATION L0009826     VOLUME   480363.403 3771852.409 366.78
   LOCATION L0009827     VOLUME   480363.305 3771843.819 366.78
   LOCATION L0009828     VOLUME   480363.208 3771835.230 366.78
   LOCATION L0009829     VOLUME   480363.110 3771826.640 366.77
   LOCATION L0009830     VOLUME   480363.012 3771818.051 366.77
   LOCATION L0009831     VOLUME   480362.915 3771809.462 366.77
   LOCATION L0009832     VOLUME   480362.817 3771800.872 366.76
   LOCATION L0009833     VOLUME   480362.719 3771792.283 366.79
   LOCATION L0009834     VOLUME   480362.622 3771783.693 366.86
   LOCATION L0009835     VOLUME   480362.524 3771775.104 366.93
   LOCATION L0009836     VOLUME   480362.426 3771766.514 367.00
   LOCATION L0009837     VOLUME   480362.329 3771757.925 367.00
   LOCATION L0009838     VOLUME   480362.231 3771749.335 367.00
   LOCATION L0009839     VOLUME   480362.133 3771740.746 367.00
   LOCATION L0009840     VOLUME   480362.036 3771732.157 367.00
   LOCATION L0009841     VOLUME   480361.938 3771723.567 367.00
   LOCATION L0009842     VOLUME   480361.840 3771714.978 367.00
** End of LINE VOLUME Source ID = SLINE11
** ----------------------------------------------------------------------
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE12
** DESCRSRC West Loading Area
** PREFIX
** Length of Side = 8.59
** Configuration = Adjacent
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** Emission Rate = 0.00005798
** Vertical Dimension = 6.99
** SZINIT = 3.25
** Nodes = 2
** 480394.917, 3772058.037, 366.00, 3.49, 4.00
** 480393.245, 3771708.599, 367.07, 3.49, 4.00
** ----------------------------------------------------------------
   LOCATION L0009843     VOLUME   480394.896 3772053.742 366.00
   LOCATION L0009844     VOLUME   480394.855 3772045.152 366.00
   LOCATION L0009845     VOLUME   480394.814 3772036.562 366.00
   LOCATION L0009846     VOLUME   480394.773 3772027.973 366.00
   LOCATION L0009847     VOLUME   480394.732 3772019.383 366.00
   LOCATION L0009848     VOLUME   480394.691 3772010.793 366.00
   LOCATION L0009849     VOLUME   480394.649 3772002.203 366.00
   LOCATION L0009850     VOLUME   480394.608 3771993.613 366.00
   LOCATION L0009851     VOLUME   480394.567 3771985.023 366.00
   LOCATION L0009852     VOLUME   480394.526 3771976.433 366.00
   LOCATION L0009853     VOLUME   480394.485 3771967.843 366.23
   LOCATION L0009854     VOLUME   480394.444 3771959.253 366.46
   LOCATION L0009855     VOLUME   480394.403 3771950.663 366.70
   LOCATION L0009856     VOLUME   480394.362 3771942.073 366.82
   LOCATION L0009857     VOLUME   480394.321 3771933.484 366.81
   LOCATION L0009858     VOLUME   480394.280 3771924.894 366.81
   LOCATION L0009859     VOLUME   480394.238 3771916.304 366.81
   LOCATION L0009860     VOLUME   480394.197 3771907.714 366.86
   LOCATION L0009861     VOLUME   480394.156 3771899.124 366.92
   LOCATION L0009862     VOLUME   480394.115 3771890.534 366.97
   LOCATION L0009863     VOLUME   480394.074 3771881.944 367.00
   LOCATION L0009864     VOLUME   480394.033 3771873.354 367.00
   LOCATION L0009865     VOLUME   480393.992 3771864.764 367.00
   LOCATION L0009866     VOLUME   480393.951 3771856.174 367.00
   LOCATION L0009867     VOLUME   480393.910 3771847.585 367.00
   LOCATION L0009868     VOLUME   480393.869 3771838.995 367.00
   LOCATION L0009869     VOLUME   480393.827 3771830.405 367.00
   LOCATION L0009870     VOLUME   480393.786 3771821.815 367.00
   LOCATION L0009871     VOLUME   480393.745 3771813.225 367.00
   LOCATION L0009872     VOLUME   480393.704 3771804.635 367.00
   LOCATION L0009873     VOLUME   480393.663 3771796.045 367.00
   LOCATION L0009874     VOLUME   480393.622 3771787.455 367.00
   LOCATION L0009875     VOLUME   480393.581 3771778.865 367.00
   LOCATION L0009876     VOLUME   480393.540 3771770.275 367.00
   LOCATION L0009877     VOLUME   480393.499 3771761.686 367.00
   LOCATION L0009878     VOLUME   480393.458 3771753.096 367.00
   LOCATION L0009879     VOLUME   480393.416 3771744.506 367.00
   LOCATION L0009880     VOLUME   480393.375 3771735.916 367.00
   LOCATION L0009881     VOLUME   480393.334 3771727.326 367.00
   LOCATION L0009882     VOLUME   480393.293 3771718.736 367.00
   LOCATION L0009883     VOLUME   480393.252 3771710.146 367.00
** End of LINE VOLUME Source ID = SLINE12
** ----------------------------------------------------------------
** Line Source Represented by Adjacent Volume Sources
```

```
** LINE VOLUME Source ID = SLINE13
** DESCRSRC East Loading Area
** PREFIX
** Length of Side = 8.59
** Configuration = Adjacent
** Emission Rate = 0.00005765
** Vertical Dimension = 6.99
** SZINIT = 3.25
** Nodes = 2
** 480598.059, 3772002.027, 367.09, 3.49, 4.00
** 480589.699, 3771688.536, 370.00, 3.49, 4.00
** ----------------------------------------------------------------------
   LOCATION L0009884     VOLUME   480597.944 3771997.733 367.28
   LOCATION L0009885     VOLUME   480597.715 3771989.146 367.57
   LOCATION L0009886     VOLUME   480597.486 3771980.559 367.86
   LOCATION L0009887     VOLUME   480597.257 3771971.972 368.00
   LOCATION L0009888     VOLUME   480597.028 3771963.386 368.00
   LOCATION L0009889     VOLUME   480596.799 3771954.799 368.00
   LOCATION L0009890     VOLUME   480596.570 3771946.212 368.00
   LOCATION L0009891     VOLUME   480596.341 3771937.625 368.16
   LOCATION L0009892     VOLUME   480596.112 3771929.038 368.31
   LOCATION L0009893     VOLUME   480595.883 3771920.451 368.46
   LOCATION L0009894     VOLUME   480595.654 3771911.864 368.60
   LOCATION L0009895     VOLUME   480595.425 3771903.277 368.73
   LOCATION L0009896     VOLUME   480595.196 3771894.690 368.86
   LOCATION L0009897     VOLUME   480594.967 3771886.103 369.00
   LOCATION L0009898     VOLUME   480594.738 3771877.516 369.00
   LOCATION L0009899     VOLUME   480594.509 3771868.929 369.00
   LOCATION L0009900     VOLUME   480594.281 3771860.342 369.00
   LOCATION L0009901     VOLUME   480594.052 3771851.755 369.07
   LOCATION L0009902     VOLUME   480593.823 3771843.168 369.20
   LOCATION L0009903     VOLUME   480593.594 3771834.581 369.33
   LOCATION L0009904     VOLUME   480593.365 3771825.994 369.45
   LOCATION L0009905     VOLUME   480593.136 3771817.407 369.44
   LOCATION L0009906     VOLUME   480592.907 3771808.820 369.43
   LOCATION L0009907     VOLUME   480592.678 3771800.234 369.43
   LOCATION L0009908     VOLUME   480592.449 3771791.647 369.51
   LOCATION L0009909     VOLUME   480592.220 3771783.060 369.67
   LOCATION L0009910     VOLUME   480591.991 3771774.473 369.84
   LOCATION L0009911     VOLUME   480591.762 3771765.886 370.00
   LOCATION L0009912     VOLUME   480591.533 3771757.299 370.00
   LOCATION L0009913     VOLUME   480591.304 3771748.712 370.00
   LOCATION L0009914     VOLUME   480591.075 3771740.125 370.00
   LOCATION L0009915     VOLUME   480590.846 3771731.538 370.00
   LOCATION L0009916     VOLUME   480590.617 3771722.951 370.00
   LOCATION L0009917     VOLUME   480590.388 3771714.364 370.00
   LOCATION L0009918     VOLUME   480590.159 3771705.777 370.00
   LOCATION L0009919     VOLUME   480589.930 3771697.190 370.00
   LOCATION L0009920     VOLUME   480589.701 3771688.603 370.00
** End of LINE VOLUME Source ID = SLINE13
** Source Parameters **
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   SRCPARAM L0008553     0.00000008821      3.49      4.00      3.25
   SRCPARAM L0008554     0.00000008821      3.49      4.00      3.25
   SRCPARAM L0008555     0.00000008821      3.49      4.00      3.25
   SRCPARAM L0008556     0.00000008821      3.49      4.00      3.25
   SRCPARAM L0008557     0.00000008821      3.49      4.00      3.25
   SRCPARAM L0008558     0.00000008821      3.49      4.00      3.25
   SRCPARAM L0008559     0.00000008821      3.49      4.00      3.25
   SRCPARAM L0008560     0.00000008821      3.49      4.00      3.25
   SRCPARAM L0008561     0.00000008821      3.49      4.00      3.25
   SRCPARAM L0008562     0.00000008821      3.49      4.00      3.25
   SRCPARAM L0008563     0.00000008821      3.49      4.00      3.25
   SRCPARAM L0008564     0.00000008821      3.49      4.00      3.25
   SRCPARAM L0008565     0.00000008821      3.49      4.00      3.25
   SRCPARAM L0008566     0.00000008821      3.49      4.00      3.25
   SRCPARAM L0008567     0.00000008821      3.49      4.00      3.25
   SRCPARAM L0008568     0.00000008821      3.49      4.00      3.25
   SRCPARAM L0008569     0.00000008821      3.49      4.00      3.25
   SRCPARAM L0008570     0.00000008821      3.49      4.00      3.25
   SRCPARAM L0008571     0.00000008821      3.49      4.00      3.25
   SRCPARAM L0008572     0.00000008821      3.49      4.00      3.25
   SRCPARAM L0008573     0.00000008821      3.49      4.00      3.25
   SRCPARAM L0008574     0.00000008821      3.49      4.00      3.25
   SRCPARAM L0008575     0.00000008821      3.49      4.00      3.25
   SRCPARAM L0008576     0.00000008821      3.49      4.00      3.25
   SRCPARAM L0008577     0.00000008821      3.49      4.00      3.25
   SRCPARAM L0008578     0.00000008821      3.49      4.00      3.25
   SRCPARAM L0008579     0.00000008821      3.49      4.00      3.25
   SRCPARAM L0008580     0.00000008821      3.49      4.00      3.25
   SRCPARAM L0008581     0.00000008821      3.49      4.00      3.25
   SRCPARAM L0008582     0.00000008821      3.49      4.00      3.25
   SRCPARAM L0008583     0.00000008821      3.49      4.00      3.25
   SRCPARAM L0008584     0.00000008821      3.49      4.00      3.25
   SRCPARAM L0008585     0.00000008821      3.49      4.00      3.25
   SRCPARAM L0008586     0.00000008821      3.49      4.00      3.25
   SRCPARAM L0008587     0.00000008821      3.49      4.00      3.25
   SRCPARAM L0008588     0.00000008821      3.49      4.00      3.25
   SRCPARAM L0008589     0.00000008821      3.49      4.00      3.25
   SRCPARAM L0008590     0.00000008821      3.49      4.00      3.25
   SRCPARAM L0008591     0.00000008821      3.49      4.00      3.25
   SRCPARAM L0008592     0.00000008821      3.49      4.00      3.25
   SRCPARAM L0008593     0.00000008821      3.49      4.00      3.25
   SRCPARAM L0008594     0.00000008821      3.49      4.00      3.25
   SRCPARAM L0008595     0.00000008821      3.49      4.00      3.25
   SRCPARAM L0008596     0.00000008821      3.49      4.00      3.25
   SRCPARAM L0008597     0.00000008821      3.49      4.00      3.25
   SRCPARAM L0008598     0.00000008821      3.49      4.00      3.25
   SRCPARAM L0008599     0.00000008821      3.49      4.00      3.25
   SRCPARAM L0008600     0.00000008821      3.49      4.00      3.25
   SRCPARAM L0008601     0.00000008821      3.49      4.00      3.25
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   SRCPARAM L0008602     0.00000008821      3.49      4.00      3.25
   SRCPARAM L0008603     0.00000008821      3.49      4.00      3.25
   SRCPARAM L0008604     0.00000008821      3.49      4.00      3.25
   SRCPARAM L0008605     0.00000008821      3.49      4.00      3.25
   SRCPARAM L0008606     0.00000008821      3.49      4.00      3.25
   SRCPARAM L0008607     0.00000008821      3.49      4.00      3.25
   SRCPARAM L0008608     0.00000008821      3.49      4.00      3.25
   SRCPARAM L0008609     0.00000008821      3.49      4.00      3.25
   SRCPARAM L0008610     0.00000008821      3.49      4.00      3.25
   SRCPARAM L0008611     0.00000008821      3.49      4.00      3.25
   SRCPARAM L0008612     0.00000008821      3.49      4.00      3.25
   SRCPARAM L0008613     0.00000008821      3.49      4.00      3.25
   SRCPARAM L0008614     0.00000008821      3.49      4.00      3.25
   SRCPARAM L0008615     0.00000008821      3.49      4.00      3.25
   SRCPARAM L0008616     0.00000008821      3.49      4.00      3.25
   SRCPARAM L0008617     0.00000008821      3.49      4.00      3.25
   SRCPARAM L0008618     0.00000008821      3.49      4.00      3.25
   SRCPARAM L0008619     0.00000008821      3.49      4.00      3.25
   SRCPARAM L0008620     0.00000008821      3.49      4.00      3.25
   SRCPARAM L0008621     0.00000008821      3.49      4.00      3.25
   SRCPARAM L0008622     0.00000008821      3.49      4.00      3.25
   SRCPARAM L0008623     0.00000008821      3.49      4.00      3.25
   SRCPARAM L0008624     0.00000008821      3.49      4.00      3.25
   SRCPARAM L0008625     0.00000008821      3.49      4.00      3.25
   SRCPARAM L0008626     0.00000008821      3.49      4.00      3.25
   SRCPARAM L0008627     0.00000008821      3.49      4.00      3.25
   SRCPARAM L0008628     0.00000008821      3.49      4.00      3.25
   SRCPARAM L0008629     0.00000008821      3.49      4.00      3.25
   SRCPARAM L0008630     0.00000008821      3.49      4.00      3.25
   SRCPARAM L0008631     0.00000008821      3.49      4.00      3.25
   SRCPARAM L0008632     0.00000008821      3.49      4.00      3.25
   SRCPARAM L0008633     0.00000008821      3.49      4.00      3.25
   SRCPARAM L0008634     0.00000008821      3.49      4.00      3.25
   SRCPARAM L0008635     0.00000008821      3.49      4.00      3.25
   SRCPARAM L0008636     0.00000008821      3.49      4.00      3.25
   SRCPARAM L0008637     0.00000008821      3.49      4.00      3.25
   SRCPARAM L0008638     0.00000008821      3.49      4.00      3.25
   SRCPARAM L0008639     0.00000008821      3.49      4.00      3.25
   SRCPARAM L0008640     0.00000008821      3.49      4.00      3.25
   SRCPARAM L0008641     0.00000008821      3.49      4.00      3.25
   SRCPARAM L0008642     0.00000008821      3.49      4.00      3.25
   SRCPARAM L0008643     0.00000008821      3.49      4.00      3.25
   SRCPARAM L0008644     0.00000008821      3.49      4.00      3.25
   SRCPARAM L0008645     0.00000008821      3.49      4.00      3.25
   SRCPARAM L0008646     0.00000008821      3.49      4.00      3.25
   SRCPARAM L0008647     0.00000008821      3.49      4.00      3.25
   SRCPARAM L0008648     0.00000008821      3.49      4.00      3.25
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** LINE VOLUME Source ID = SLINE2
   SRCPARAM L0008649     0.00000003677      3.49      4.00      3.25
   SRCPARAM L0008650     0.00000003677      3.49      4.00      3.25
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SRCPARAM L0008651     0.00000003677      3.49      4.00      3.25
SRCPARAM L0008652     0.00000003677      3.49      4.00      3.25
SRCPARAM L0008653     0.00000003677      3.49      4.00      3.25
SRCPARAM L0008654     0.00000003677      3.49      4.00      3.25
SRCPARAM L0008655     0.00000003677      3.49      4.00      3.25
SRCPARAM L0008656     0.00000003677      3.49      4.00      3.25
SRCPARAM L0008657     0.00000003677      3.49      4.00      3.25
SRCPARAM L0008658     0.00000003677      3.49      4.00      3.25
SRCPARAM L0008659     0.00000003677      3.49      4.00      3.25
SRCPARAM L0008660     0.00000003677      3.49      4.00      3.25
SRCPARAM L0008661     0.00000003677      3.49      4.00      3.25
SRCPARAM L0008662     0.00000003677      3.49      4.00      3.25
SRCPARAM L0008663     0.00000003677      3.49      4.00      3.25
SRCPARAM L0008664     0.00000003677      3.49      4.00      3.25
SRCPARAM L0008665     0.00000003677      3.49      4.00      3.25
SRCPARAM L0008666     0.00000003677      3.49      4.00      3.25
SRCPARAM L0008667     0.00000003677      3.49      4.00      3.25
SRCPARAM L0008668     0.00000003677      3.49      4.00      3.25
SRCPARAM L0008669     0.00000003677      3.49      4.00      3.25
SRCPARAM L0008670     0.00000003677      3.49      4.00      3.25
SRCPARAM L0008671     0.00000003677      3.49      4.00      3.25
SRCPARAM L0008672     0.00000003677      3.49      4.00      3.25
SRCPARAM L0008673     0.00000003677      3.49      4.00      3.25
SRCPARAM L0008674     0.00000003677      3.49      4.00      3.25
SRCPARAM L0008675     0.00000003677      3.49      4.00      3.25
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SRCPARAM L0008683     0.00000003677      3.49      4.00      3.25
SRCPARAM L0008684     0.00000003677      3.49      4.00      3.25
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SRCPARAM L0008690     0.00000003677      3.49      4.00      3.25
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SRCPARAM L0008696     0.00000003677      3.49      4.00      3.25
SRCPARAM L0008697     0.00000003677      3.49      4.00      3.25
SRCPARAM L0008698     0.00000003677      3.49      4.00      3.25
SRCPARAM L0008699     0.00000003677      3.49      4.00      3.25
SRCPARAM L0008700     0.00000003677      3.49      4.00      3.25
SRCPARAM L0008701     0.00000003677      3.49      4.00      3.25
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SRCPARAM L0008704     0.00000003677      3.49      4.00      3.25
SRCPARAM L0008705     0.00000003677      3.49      4.00      3.25
SRCPARAM L0008706     0.00000003677      3.49      4.00      3.25
SRCPARAM L0008707     0.00000003677      3.49      4.00      3.25
SRCPARAM L0008708     0.00000003677      3.49      4.00      3.25
SRCPARAM L0008709     0.00000003677      3.49      4.00      3.25
SRCPARAM L0008710     0.00000003677      3.49      4.00      3.25
SRCPARAM L0008711     0.00000003677      3.49      4.00      3.25
SRCPARAM L0008712     0.00000003677      3.49      4.00      3.25
SRCPARAM L0008713     0.00000003677      3.49      4.00      3.25
SRCPARAM L0008714     0.00000003677      3.49      4.00      3.25
SRCPARAM L0008715     0.00000003677      3.49      4.00      3.25
SRCPARAM L0008716     0.00000003677      3.49      4.00      3.25
SRCPARAM L0008717     0.00000003677      3.49      4.00      3.25
SRCPARAM L0008718     0.00000003677      3.49      4.00      3.25
SRCPARAM L0008719     0.00000003677      3.49      4.00      3.25
SRCPARAM L0008720     0.00000003677      3.49      4.00      3.25
SRCPARAM L0008721     0.00000003677      3.49      4.00      3.25
SRCPARAM L0008722     0.00000003677      3.49      4.00      3.25
SRCPARAM L0008723     0.00000003677      3.49      4.00      3.25
SRCPARAM L0008724     0.00000003677      3.49      4.00      3.25
SRCPARAM L0008725     0.00000003677      3.49      4.00      3.25
SRCPARAM L0008726     0.00000003677      3.49      4.00      3.25
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SRCPARAM L0008729     0.00000003677      3.49      4.00      3.25
SRCPARAM L0008730     0.00000003677      3.49      4.00      3.25
SRCPARAM L0008731     0.00000003677      3.49      4.00      3.25
SRCPARAM L0008732     0.00000003677      3.49      4.00      3.25
SRCPARAM L0008733     0.00000003677      3.49      4.00      3.25
SRCPARAM L0008734     0.00000003677      3.49      4.00      3.25
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SRCPARAM L0008743     0.00000003677      3.49      4.00      3.25
SRCPARAM L0008744     0.00000003677      3.49      4.00      3.25
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SRCPARAM L0008748     0.00000003677      3.49      4.00      3.25
SRCPARAM L0008749     0.00000003677      3.49      4.00      3.25
SRCPARAM L0008750     0.00000003677      3.49      4.00      3.25
SRCPARAM L0008751     0.00000003677      3.49      4.00      3.25
SRCPARAM L0008752     0.00000003677      3.49      4.00      3.25
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SRCPARAM L0008756     0.00000003677      3.49      4.00      3.25
SRCPARAM L0008757     0.00000003677      3.49      4.00      3.25
SRCPARAM L0008758     0.00000003677      3.49      4.00      3.25
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SRCPARAM L0008760     0.00000003677      3.49      4.00      3.25
SRCPARAM L0008761     0.00000003677      3.49      4.00      3.25
SRCPARAM L0008762     0.00000003677      3.49      4.00      3.25
SRCPARAM L0008763     0.00000003677      3.49      4.00      3.25
SRCPARAM L0008764     0.00000003677      3.49      4.00      3.25
SRCPARAM L0008765     0.00000003677      3.49      4.00      3.25
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SRCPARAM L0008767     0.00000003677      3.49      4.00      3.25
SRCPARAM L0008768     0.00000003677      3.49      4.00      3.25
SRCPARAM L0008769     0.00000003677      3.49      4.00      3.25
SRCPARAM L0008770     0.00000003677      3.49      4.00      3.25
SRCPARAM L0008771     0.00000003677      3.49      4.00      3.25
SRCPARAM L0008772     0.00000003677      3.49      4.00      3.25
SRCPARAM L0008773     0.00000003677      3.49      4.00      3.25
SRCPARAM L0008774     0.00000003677      3.49      4.00      3.25
SRCPARAM L0008775     0.00000003677      3.49      4.00      3.25
SRCPARAM L0008776     0.00000003677      3.49      4.00      3.25
SRCPARAM L0008777     0.00000003677      3.49      4.00      3.25
SRCPARAM L0008778     0.00000003677      3.49      4.00      3.25
SRCPARAM L0008779     0.00000003677      3.49      4.00      3.25
SRCPARAM L0008780     0.00000003677      3.49      4.00      3.25
SRCPARAM L0008781     0.00000003677      3.49      4.00      3.25
SRCPARAM L0008782     0.00000003677      3.49      4.00      3.25
SRCPARAM L0008783     0.00000003677      3.49      4.00      3.25
SRCPARAM L0008784     0.00000003677      3.49      4.00      3.25
SRCPARAM L0008785     0.00000003677      3.49      4.00      3.25
SRCPARAM L0008786     0.00000003677      3.49      4.00      3.25
SRCPARAM L0008787     0.00000003677      3.49      4.00      3.25
SRCPARAM L0008788     0.00000003677      3.49      4.00      3.25
SRCPARAM L0008789     0.00000003677      3.49      4.00      3.25
SRCPARAM L0008790     0.00000003677      3.49      4.00      3.25
SRCPARAM L0008791     0.00000003677      3.49      4.00      3.25
SRCPARAM L0008792     0.00000003677      3.49      4.00      3.25
SRCPARAM L0008793     0.00000003677      3.49      4.00      3.25
SRCPARAM L0008794     0.00000003677      3.49      4.00      3.25
SRCPARAM L0008795     0.00000003677      3.49      4.00      3.25
SRCPARAM L0008796     0.00000003677      3.49      4.00      3.25
SRCPARAM L0008797     0.00000003677      3.49      4.00      3.25
SRCPARAM L0008798     0.00000003677      3.49      4.00      3.25
SRCPARAM L0008799     0.00000003677      3.49      4.00      3.25
SRCPARAM L0008800     0.00000003677      3.49      4.00      3.25
SRCPARAM L0008801     0.00000003677      3.49      4.00      3.25
SRCPARAM L0008802     0.00000003677      3.49      4.00      3.25
SRCPARAM L0008803     0.00000003677      3.49      4.00      3.25
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   SRCPARAM L0008804     0.00000003677      3.49      4.00      3.25
   SRCPARAM L0008805     0.00000003677      3.49      4.00      3.25
   SRCPARAM L0008806     0.00000003677      3.49      4.00      3.25
   SRCPARAM L0008807     0.00000003677      3.49      4.00      3.25
   SRCPARAM L0008808     0.00000003677      3.49      4.00      3.25
   SRCPARAM L0008809     0.00000003677      3.49      4.00      3.25
   SRCPARAM L0008810     0.00000003677      3.49      4.00      3.25
   SRCPARAM L0008811     0.00000003677      3.49      4.00      3.25
   SRCPARAM L0008812     0.00000003677      3.49      4.00      3.25
   SRCPARAM L0008813     0.00000003677      3.49      4.00      3.25
   SRCPARAM L0008814     0.00000003677      3.49      4.00      3.25
   SRCPARAM L0008815     0.00000003677      3.49      4.00      3.25
   SRCPARAM L0008816     0.00000003677      3.49      4.00      3.25
   SRCPARAM L0008817     0.00000003677      3.49      4.00      3.25
   SRCPARAM L0008818     0.00000003677      3.49      4.00      3.25
   SRCPARAM L0008819     0.00000003677      3.49      4.00      3.25
   SRCPARAM L0008820     0.00000003677      3.49      4.00      3.25
   SRCPARAM L0008821     0.00000003677      3.49      4.00      3.25
   SRCPARAM L0008822     0.00000003677      3.49      4.00      3.25
   SRCPARAM L0008823     0.00000003677      3.49      4.00      3.25
   SRCPARAM L0008824     0.00000003677      3.49      4.00      3.25
   SRCPARAM L0008825     0.00000003677      3.49      4.00      3.25
   SRCPARAM L0008826     0.00000003677      3.49      4.00      3.25
   SRCPARAM L0008827     0.00000003677      3.49      4.00      3.25
   SRCPARAM L0008828     0.00000003677      3.49      4.00      3.25
   SRCPARAM L0008829     0.00000003677      3.49      4.00      3.25
   SRCPARAM L0008830     0.00000003677      3.49      4.00      3.25
   SRCPARAM L0008831     0.00000003677      3.49      4.00      3.25
   SRCPARAM L0008832     0.00000003677      3.49      4.00      3.25
   SRCPARAM L0008833     0.00000003677      3.49      4.00      3.25
   SRCPARAM L0008834     0.00000003677      3.49      4.00      3.25
   SRCPARAM L0008835     0.00000003677      3.49      4.00      3.25
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** LINE VOLUME Source ID = SLINE3
   SRCPARAM L0008836     0.00000006047      3.49      4.00      3.25
   SRCPARAM L0008837     0.00000006047      3.49      4.00      3.25
   SRCPARAM L0008838     0.00000006047      3.49      4.00      3.25
   SRCPARAM L0008839     0.00000006047      3.49      4.00      3.25
   SRCPARAM L0008840     0.00000006047      3.49      4.00      3.25
   SRCPARAM L0008841     0.00000006047      3.49      4.00      3.25
   SRCPARAM L0008842     0.00000006047      3.49      4.00      3.25
   SRCPARAM L0008843     0.00000006047      3.49      4.00      3.25
   SRCPARAM L0008844     0.00000006047      3.49      4.00      3.25
   SRCPARAM L0008845     0.00000006047      3.49      4.00      3.25
   SRCPARAM L0008846     0.00000006047      3.49      4.00      3.25
   SRCPARAM L0008847     0.00000006047      3.49      4.00      3.25
   SRCPARAM L0008848     0.00000006047      3.49      4.00      3.25
   SRCPARAM L0008849     0.00000006047      3.49      4.00      3.25
   SRCPARAM L0008850     0.00000006047      3.49      4.00      3.25
   SRCPARAM L0008851     0.00000006047      3.49      4.00      3.25
   SRCPARAM L0008852     0.00000006047      3.49      4.00      3.25
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SRCPARAM L0008853     0.00000006047      3.49      4.00      3.25
SRCPARAM L0008854     0.00000006047      3.49      4.00      3.25
SRCPARAM L0008855     0.00000006047      3.49      4.00      3.25
SRCPARAM L0008856     0.00000006047      3.49      4.00      3.25
SRCPARAM L0008857     0.00000006047      3.49      4.00      3.25
SRCPARAM L0008858     0.00000006047      3.49      4.00      3.25
SRCPARAM L0008859     0.00000006047      3.49      4.00      3.25
SRCPARAM L0008860     0.00000006047      3.49      4.00      3.25
SRCPARAM L0008861     0.00000006047      3.49      4.00      3.25
SRCPARAM L0008862     0.00000006047      3.49      4.00      3.25
SRCPARAM L0008863     0.00000006047      3.49      4.00      3.25
SRCPARAM L0008864     0.00000006047      3.49      4.00      3.25
SRCPARAM L0008865     0.00000006047      3.49      4.00      3.25
SRCPARAM L0008866     0.00000006047      3.49      4.00      3.25
SRCPARAM L0008867     0.00000006047      3.49      4.00      3.25
SRCPARAM L0008868     0.00000006047      3.49      4.00      3.25
SRCPARAM L0008869     0.00000006047      3.49      4.00      3.25
SRCPARAM L0008870     0.00000006047      3.49      4.00      3.25
SRCPARAM L0008871     0.00000006047      3.49      4.00      3.25
SRCPARAM L0008872     0.00000006047      3.49      4.00      3.25
SRCPARAM L0008873     0.00000006047      3.49      4.00      3.25
SRCPARAM L0008874     0.00000006047      3.49      4.00      3.25
SRCPARAM L0008875     0.00000006047      3.49      4.00      3.25
SRCPARAM L0008876     0.00000006047      3.49      4.00      3.25
SRCPARAM L0008877     0.00000006047      3.49      4.00      3.25
SRCPARAM L0008878     0.00000006047      3.49      4.00      3.25
SRCPARAM L0008879     0.00000006047      3.49      4.00      3.25
SRCPARAM L0008880     0.00000006047      3.49      4.00      3.25
SRCPARAM L0008881     0.00000006047      3.49      4.00      3.25
SRCPARAM L0008882     0.00000006047      3.49      4.00      3.25
SRCPARAM L0008883     0.00000006047      3.49      4.00      3.25
SRCPARAM L0008884     0.00000006047      3.49      4.00      3.25
SRCPARAM L0008885     0.00000006047      3.49      4.00      3.25
SRCPARAM L0008886     0.00000006047      3.49      4.00      3.25
SRCPARAM L0008887     0.00000006047      3.49      4.00      3.25
SRCPARAM L0008888     0.00000006047      3.49      4.00      3.25
SRCPARAM L0008889     0.00000006047      3.49      4.00      3.25
SRCPARAM L0008890     0.00000006047      3.49      4.00      3.25
SRCPARAM L0008891     0.00000006047      3.49      4.00      3.25
SRCPARAM L0008892     0.00000006047      3.49      4.00      3.25
SRCPARAM L0008893     0.00000006047      3.49      4.00      3.25
SRCPARAM L0008894     0.00000006047      3.49      4.00      3.25
SRCPARAM L0008895     0.00000006047      3.49      4.00      3.25
SRCPARAM L0008896     0.00000006047      3.49      4.00      3.25
SRCPARAM L0008897     0.00000006047      3.49      4.00      3.25
SRCPARAM L0008898     0.00000006047      3.49      4.00      3.25
SRCPARAM L0008899     0.00000006047      3.49      4.00      3.25
SRCPARAM L0008900     0.00000006047      3.49      4.00      3.25
SRCPARAM L0008901     0.00000006047      3.49      4.00      3.25
SRCPARAM L0008902     0.00000006047      3.49      4.00      3.25
SRCPARAM L0008903     0.00000006047      3.49      4.00      3.25
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   SRCPARAM L0008904     0.00000006047      3.49      4.00      3.25
   SRCPARAM L0008905     0.00000006047      3.49      4.00      3.25
   SRCPARAM L0008906     0.00000006047      3.49      4.00      3.25
   SRCPARAM L0008907     0.00000006047      3.49      4.00      3.25
   SRCPARAM L0008908     0.00000006047      3.49      4.00      3.25
   SRCPARAM L0008909     0.00000006047      3.49      4.00      3.25
   SRCPARAM L0008910     0.00000006047      3.49      4.00      3.25
   SRCPARAM L0008911     0.00000006047      3.49      4.00      3.25
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** LINE VOLUME Source ID = SLINE4
   SRCPARAM L0008912     0.00000003675      3.49      4.00      3.25
   SRCPARAM L0008913     0.00000003675      3.49      4.00      3.25
   SRCPARAM L0008914     0.00000003675      3.49      4.00      3.25
   SRCPARAM L0008915     0.00000003675      3.49      4.00      3.25
   SRCPARAM L0008916     0.00000003675      3.49      4.00      3.25
   SRCPARAM L0008917     0.00000003675      3.49      4.00      3.25
   SRCPARAM L0008918     0.00000003675      3.49      4.00      3.25
   SRCPARAM L0008919     0.00000003675      3.49      4.00      3.25
   SRCPARAM L0008920     0.00000003675      3.49      4.00      3.25
   SRCPARAM L0008921     0.00000003675      3.49      4.00      3.25
   SRCPARAM L0008922     0.00000003675      3.49      4.00      3.25
   SRCPARAM L0008923     0.00000003675      3.49      4.00      3.25
   SRCPARAM L0008924     0.00000003675      3.49      4.00      3.25
   SRCPARAM L0008925     0.00000003675      3.49      4.00      3.25
   SRCPARAM L0008926     0.00000003675      3.49      4.00      3.25
   SRCPARAM L0008927     0.00000003675      3.49      4.00      3.25
   SRCPARAM L0008928     0.00000003675      3.49      4.00      3.25
   SRCPARAM L0008929     0.00000003675      3.49      4.00      3.25
   SRCPARAM L0008930     0.00000003675      3.49      4.00      3.25
   SRCPARAM L0008931     0.00000003675      3.49      4.00      3.25
   SRCPARAM L0008932     0.00000003675      3.49      4.00      3.25
   SRCPARAM L0008933     0.00000003675      3.49      4.00      3.25
   SRCPARAM L0008934     0.00000003675      3.49      4.00      3.25
   SRCPARAM L0008935     0.00000003675      3.49      4.00      3.25
   SRCPARAM L0008936     0.00000003675      3.49      4.00      3.25
   SRCPARAM L0008937     0.00000003675      3.49      4.00      3.25
   SRCPARAM L0008938     0.00000003675      3.49      4.00      3.25
   SRCPARAM L0008939     0.00000003675      3.49      4.00      3.25
   SRCPARAM L0008940     0.00000003675      3.49      4.00      3.25
   SRCPARAM L0008941     0.00000003675      3.49      4.00      3.25
   SRCPARAM L0008942     0.00000003675      3.49      4.00      3.25
   SRCPARAM L0008943     0.00000003675      3.49      4.00      3.25
   SRCPARAM L0008944     0.00000003675      3.49      4.00      3.25
   SRCPARAM L0008945     0.00000003675      3.49      4.00      3.25
   SRCPARAM L0008946     0.00000003675      3.49      4.00      3.25
   SRCPARAM L0008947     0.00000003675      3.49      4.00      3.25
   SRCPARAM L0008948     0.00000003675      3.49      4.00      3.25
   SRCPARAM L0008949     0.00000003675      3.49      4.00      3.25
   SRCPARAM L0008950     0.00000003675      3.49      4.00      3.25
   SRCPARAM L0008951     0.00000003675      3.49      4.00      3.25
   SRCPARAM L0008952     0.00000003675      3.49      4.00      3.25
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SRCPARAM L0008953     0.00000003675      3.49      4.00      3.25
SRCPARAM L0008954     0.00000003675      3.49      4.00      3.25
SRCPARAM L0008955     0.00000003675      3.49      4.00      3.25
SRCPARAM L0008956     0.00000003675      3.49      4.00      3.25
SRCPARAM L0008957     0.00000003675      3.49      4.00      3.25
SRCPARAM L0008958     0.00000003675      3.49      4.00      3.25
SRCPARAM L0008959     0.00000003675      3.49      4.00      3.25
SRCPARAM L0008960     0.00000003675      3.49      4.00      3.25
SRCPARAM L0008961     0.00000003675      3.49      4.00      3.25
SRCPARAM L0008962     0.00000003675      3.49      4.00      3.25
SRCPARAM L0008963     0.00000003675      3.49      4.00      3.25
SRCPARAM L0008964     0.00000003675      3.49      4.00      3.25
SRCPARAM L0008965     0.00000003675      3.49      4.00      3.25
SRCPARAM L0008966     0.00000003675      3.49      4.00      3.25
SRCPARAM L0008967     0.00000003675      3.49      4.00      3.25
SRCPARAM L0008968     0.00000003675      3.49      4.00      3.25
SRCPARAM L0008969     0.00000003675      3.49      4.00      3.25
SRCPARAM L0008970     0.00000003675      3.49      4.00      3.25
SRCPARAM L0008971     0.00000003675      3.49      4.00      3.25
SRCPARAM L0008972     0.00000003675      3.49      4.00      3.25
SRCPARAM L0008973     0.00000003675      3.49      4.00      3.25
SRCPARAM L0008974     0.00000003675      3.49      4.00      3.25
SRCPARAM L0008975     0.00000003675      3.49      4.00      3.25
SRCPARAM L0008976     0.00000003675      3.49      4.00      3.25
SRCPARAM L0008977     0.00000003675      3.49      4.00      3.25
SRCPARAM L0008978     0.00000003675      3.49      4.00      3.25
SRCPARAM L0008979     0.00000003675      3.49      4.00      3.25
SRCPARAM L0008980     0.00000003675      3.49      4.00      3.25
SRCPARAM L0008981     0.00000003675      3.49      4.00      3.25
SRCPARAM L0008982     0.00000003675      3.49      4.00      3.25
SRCPARAM L0008983     0.00000003675      3.49      4.00      3.25
SRCPARAM L0008984     0.00000003675      3.49      4.00      3.25
SRCPARAM L0008985     0.00000003675      3.49      4.00      3.25
SRCPARAM L0008986     0.00000003675      3.49      4.00      3.25
SRCPARAM L0008987     0.00000003675      3.49      4.00      3.25
SRCPARAM L0008988     0.00000003675      3.49      4.00      3.25
SRCPARAM L0008989     0.00000003675      3.49      4.00      3.25
SRCPARAM L0008990     0.00000003675      3.49      4.00      3.25
SRCPARAM L0008991     0.00000003675      3.49      4.00      3.25
SRCPARAM L0008992     0.00000003675      3.49      4.00      3.25
SRCPARAM L0008993     0.00000003675      3.49      4.00      3.25
SRCPARAM L0008994     0.00000003675      3.49      4.00      3.25
SRCPARAM L0008995     0.00000003675      3.49      4.00      3.25
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SRCPARAM L0008997     0.00000003675      3.49      4.00      3.25
SRCPARAM L0008998     0.00000003675      3.49      4.00      3.25
SRCPARAM L0008999     0.00000003675      3.49      4.00      3.25
SRCPARAM L0009000     0.00000003675      3.49      4.00      3.25
SRCPARAM L0009001     0.00000003675      3.49      4.00      3.25
SRCPARAM L0009002     0.00000003675      3.49      4.00      3.25
SRCPARAM L0009003     0.00000003675      3.49      4.00      3.25
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SRCPARAM L0009005     0.00000003675      3.49      4.00      3.25
SRCPARAM L0009006     0.00000003675      3.49      4.00      3.25
SRCPARAM L0009007     0.00000003675      3.49      4.00      3.25
SRCPARAM L0009008     0.00000003675      3.49      4.00      3.25
SRCPARAM L0009009     0.00000003675      3.49      4.00      3.25
SRCPARAM L0009010     0.00000003675      3.49      4.00      3.25
SRCPARAM L0009011     0.00000003675      3.49      4.00      3.25
SRCPARAM L0009012     0.00000003675      3.49      4.00      3.25
SRCPARAM L0009013     0.00000003675      3.49      4.00      3.25
SRCPARAM L0009014     0.00000003675      3.49      4.00      3.25
SRCPARAM L0009015     0.00000003675      3.49      4.00      3.25
SRCPARAM L0009016     0.00000003675      3.49      4.00      3.25
SRCPARAM L0009017     0.00000003675      3.49      4.00      3.25
SRCPARAM L0009018     0.00000003675      3.49      4.00      3.25
SRCPARAM L0009019     0.00000003675      3.49      4.00      3.25
SRCPARAM L0009020     0.00000003675      3.49      4.00      3.25
SRCPARAM L0009021     0.00000003675      3.49      4.00      3.25
SRCPARAM L0009022     0.00000003675      3.49      4.00      3.25
SRCPARAM L0009023     0.00000003675      3.49      4.00      3.25
SRCPARAM L0009024     0.00000003675      3.49      4.00      3.25
SRCPARAM L0009025     0.00000003675      3.49      4.00      3.25
SRCPARAM L0009026     0.00000003675      3.49      4.00      3.25
SRCPARAM L0009027     0.00000003675      3.49      4.00      3.25
SRCPARAM L0009028     0.00000003675      3.49      4.00      3.25
SRCPARAM L0009029     0.00000003675      3.49      4.00      3.25
SRCPARAM L0009030     0.00000003675      3.49      4.00      3.25
SRCPARAM L0009031     0.00000003675      3.49      4.00      3.25
SRCPARAM L0009032     0.00000003675      3.49      4.00      3.25
SRCPARAM L0009033     0.00000003675      3.49      4.00      3.25
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SRCPARAM L0009036     0.00000003675      3.49      4.00      3.25
SRCPARAM L0009037     0.00000003675      3.49      4.00      3.25
SRCPARAM L0009038     0.00000003675      3.49      4.00      3.25
SRCPARAM L0009039     0.00000003675      3.49      4.00      3.25
SRCPARAM L0009040     0.00000003675      3.49      4.00      3.25
SRCPARAM L0009041     0.00000003675      3.49      4.00      3.25
SRCPARAM L0009042     0.00000003675      3.49      4.00      3.25
SRCPARAM L0009043     0.00000003675      3.49      4.00      3.25
SRCPARAM L0009044     0.00000003675      3.49      4.00      3.25
SRCPARAM L0009045     0.00000003675      3.49      4.00      3.25
SRCPARAM L0009046     0.00000003675      3.49      4.00      3.25
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SRCPARAM L0009048     0.00000003675      3.49      4.00      3.25
SRCPARAM L0009049     0.00000003675      3.49      4.00      3.25
SRCPARAM L0009050     0.00000003675      3.49      4.00      3.25
SRCPARAM L0009051     0.00000003675      3.49      4.00      3.25
SRCPARAM L0009052     0.00000003675      3.49      4.00      3.25
SRCPARAM L0009053     0.00000003675      3.49      4.00      3.25
SRCPARAM L0009054     0.00000003675      3.49      4.00      3.25
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SRCPARAM L0009055     0.00000003675      3.49      4.00      3.25
SRCPARAM L0009056     0.00000003675      3.49      4.00      3.25
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SRCPARAM L0009059     0.00000003675      3.49      4.00      3.25
SRCPARAM L0009060     0.00000003675      3.49      4.00      3.25
SRCPARAM L0009061     0.00000003675      3.49      4.00      3.25
SRCPARAM L0009062     0.00000003675      3.49      4.00      3.25
SRCPARAM L0009063     0.00000003675      3.49      4.00      3.25
SRCPARAM L0009064     0.00000003675      3.49      4.00      3.25
SRCPARAM L0009065     0.00000003675      3.49      4.00      3.25
SRCPARAM L0009066     0.00000003675      3.49      4.00      3.25
SRCPARAM L0009067     0.00000003675      3.49      4.00      3.25
SRCPARAM L0009068     0.00000003675      3.49      4.00      3.25
SRCPARAM L0009069     0.00000003675      3.49      4.00      3.25
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SRCPARAM L0009086     0.00000003675      3.49      4.00      3.25
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SRCPARAM L0009091     0.00000003675      3.49      4.00      3.25
SRCPARAM L0009092     0.00000003675      3.49      4.00      3.25
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SRCPARAM L0009101     0.00000003675      3.49      4.00      3.25
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   SRCPARAM L0009154     0.000000081      3.49      4.00      3.25
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   SRCPARAM L0009370     0.000000081      3.49      4.00      3.25
   SRCPARAM L0009371     0.000000081      3.49      4.00      3.25
   SRCPARAM L0009372     0.000000081      3.49      4.00      3.25
   SRCPARAM L0009373     0.000000081      3.49      4.00      3.25
   SRCPARAM L0009374     0.000000081      3.49      4.00      3.25
   SRCPARAM L0009375     0.000000081      3.49      4.00      3.25
   SRCPARAM L0009376     0.000000081      3.49      4.00      3.25
   SRCPARAM L0009377     0.000000081      3.49      4.00      3.25
   SRCPARAM L0009378     0.000000081      3.49      4.00      3.25
   SRCPARAM L0009379     0.000000081      3.49      4.00      3.25
   SRCPARAM L0009380     0.000000081      3.49      4.00      3.25
   SRCPARAM L0009381     0.000000081      3.49      4.00      3.25
   SRCPARAM L0009382     0.000000081      3.49      4.00      3.25
   SRCPARAM L0009383     0.000000081      3.49      4.00      3.25
   SRCPARAM L0009384     0.000000081      3.49      4.00      3.25
   SRCPARAM L0009385     0.000000081      3.49      4.00      3.25
   SRCPARAM L0009386     0.000000081      3.49      4.00      3.25
   SRCPARAM L0009387     0.000000081      3.49      4.00      3.25
   SRCPARAM L0009388     0.000000081      3.49      4.00      3.25
   SRCPARAM L0009389     0.000000081      3.49      4.00      3.25
   SRCPARAM L0009390     0.000000081      3.49      4.00      3.25
   SRCPARAM L0009391     0.000000081      3.49      4.00      3.25
   SRCPARAM L0009392     0.000000081      3.49      4.00      3.25
   SRCPARAM L0009393     0.000000081      3.49      4.00      3.25
   SRCPARAM L0009394     0.000000081      3.49      4.00      3.25
   SRCPARAM L0009395     0.000000081      3.49      4.00      3.25
   SRCPARAM L0009396     0.000000081      3.49      4.00      3.25
   SRCPARAM L0009397     0.000000081      3.49      4.00      3.25
   SRCPARAM L0009398     0.000000081      3.49      4.00      3.25
   SRCPARAM L0009399     0.000000081      3.49      4.00      3.25
   SRCPARAM L0009400     0.000000081      3.49      4.00      3.25
   SRCPARAM L0009401     0.000000081      3.49      4.00      3.25
   SRCPARAM L0009402     0.000000081      3.49      4.00      3.25
   SRCPARAM L0009403     0.000000081      3.49      4.00      3.25
   SRCPARAM L0009404     0.000000081      3.49      4.00      3.25
   SRCPARAM L0009405     0.000000081      3.49      4.00      3.25
   SRCPARAM L0009406     0.000000081      3.49      4.00      3.25
   SRCPARAM L0009407     0.000000081      3.49      4.00      3.25
   SRCPARAM L0009408     0.000000081      3.49      4.00      3.25
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** LINE VOLUME Source ID = SLINE6
   SRCPARAM L0009409     0.00000006108      3.49      4.00      3.25
   SRCPARAM L0009410     0.00000006108      3.49      4.00      3.25
   SRCPARAM L0009411     0.00000006108      3.49      4.00      3.25
   SRCPARAM L0009412     0.00000006108      3.49      4.00      3.25
   SRCPARAM L0009413     0.00000006108      3.49      4.00      3.25
   SRCPARAM L0009414     0.00000006108      3.49      4.00      3.25
   SRCPARAM L0009415     0.00000006108      3.49      4.00      3.25
   SRCPARAM L0009416     0.00000006108      3.49      4.00      3.25
   SRCPARAM L0009417     0.00000006108      3.49      4.00      3.25
   SRCPARAM L0009418     0.00000006108      3.49      4.00      3.25
   SRCPARAM L0009419     0.00000006108      3.49      4.00      3.25
   SRCPARAM L0009420     0.00000006108      3.49      4.00      3.25
   SRCPARAM L0009421     0.00000006108      3.49      4.00      3.25
   SRCPARAM L0009422     0.00000006108      3.49      4.00      3.25
   SRCPARAM L0009423     0.00000006108      3.49      4.00      3.25
   SRCPARAM L0009424     0.00000006108      3.49      4.00      3.25
   SRCPARAM L0009425     0.00000006108      3.49      4.00      3.25
   SRCPARAM L0009426     0.00000006108      3.49      4.00      3.25
   SRCPARAM L0009427     0.00000006108      3.49      4.00      3.25
   SRCPARAM L0009428     0.00000006108      3.49      4.00      3.25
   SRCPARAM L0009429     0.00000006108      3.49      4.00      3.25
   SRCPARAM L0009430     0.00000006108      3.49      4.00      3.25
   SRCPARAM L0009431     0.00000006108      3.49      4.00      3.25
   SRCPARAM L0009432     0.00000006108      3.49      4.00      3.25
   SRCPARAM L0009433     0.00000006108      3.49      4.00      3.25
   SRCPARAM L0009434     0.00000006108      3.49      4.00      3.25
** ----------------------------------------------------------------------
** LINE VOLUME Source ID = SLINE7
   SRCPARAM L0009435     0.00000009101      3.49      4.00      3.25
   SRCPARAM L0009436     0.00000009101      3.49      4.00      3.25
   SRCPARAM L0009437     0.00000009101      3.49      4.00      3.25
   SRCPARAM L0009438     0.00000009101      3.49      4.00      3.25
   SRCPARAM L0009439     0.00000009101      3.49      4.00      3.25
   SRCPARAM L0009440     0.00000009101      3.49      4.00      3.25
   SRCPARAM L0009441     0.00000009101      3.49      4.00      3.25
   SRCPARAM L0009442     0.00000009101      3.49      4.00      3.25
   SRCPARAM L0009443     0.00000009101      3.49      4.00      3.25
   SRCPARAM L0009444     0.00000009101      3.49      4.00      3.25
   SRCPARAM L0009445     0.00000009101      3.49      4.00      3.25
   SRCPARAM L0009446     0.00000009101      3.49      4.00      3.25
   SRCPARAM L0009447     0.00000009101      3.49      4.00      3.25
   SRCPARAM L0009448     0.00000009101      3.49      4.00      3.25
   SRCPARAM L0009449     0.00000009101      3.49      4.00      3.25
   SRCPARAM L0009450     0.00000009101      3.49      4.00      3.25
   SRCPARAM L0009451     0.00000009101      3.49      4.00      3.25
   SRCPARAM L0009452     0.00000009101      3.49      4.00      3.25
   SRCPARAM L0009453     0.00000009101      3.49      4.00      3.25
   SRCPARAM L0009454     0.00000009101      3.49      4.00      3.25
   SRCPARAM L0009455     0.00000009101      3.49      4.00      3.25
   SRCPARAM L0009456     0.00000009101      3.49      4.00      3.25
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SRCPARAM L0009457     0.00000009101      3.49      4.00      3.25
SRCPARAM L0009458     0.00000009101      3.49      4.00      3.25
SRCPARAM L0009459     0.00000009101      3.49      4.00      3.25
SRCPARAM L0009460     0.00000009101      3.49      4.00      3.25
SRCPARAM L0009461     0.00000009101      3.49      4.00      3.25
SRCPARAM L0009462     0.00000009101      3.49      4.00      3.25
SRCPARAM L0009463     0.00000009101      3.49      4.00      3.25
SRCPARAM L0009464     0.00000009101      3.49      4.00      3.25
SRCPARAM L0009465     0.00000009101      3.49      4.00      3.25
SRCPARAM L0009466     0.00000009101      3.49      4.00      3.25
SRCPARAM L0009467     0.00000009101      3.49      4.00      3.25
SRCPARAM L0009468     0.00000009101      3.49      4.00      3.25
SRCPARAM L0009469     0.00000009101      3.49      4.00      3.25
SRCPARAM L0009470     0.00000009101      3.49      4.00      3.25
SRCPARAM L0009471     0.00000009101      3.49      4.00      3.25
SRCPARAM L0009472     0.00000009101      3.49      4.00      3.25
SRCPARAM L0009473     0.00000009101      3.49      4.00      3.25
SRCPARAM L0009474     0.00000009101      3.49      4.00      3.25
SRCPARAM L0009475     0.00000009101      3.49      4.00      3.25
SRCPARAM L0009476     0.00000009101      3.49      4.00      3.25
SRCPARAM L0009477     0.00000009101      3.49      4.00      3.25
SRCPARAM L0009478     0.00000009101      3.49      4.00      3.25
SRCPARAM L0009479     0.00000009101      3.49      4.00      3.25
SRCPARAM L0009480     0.00000009101      3.49      4.00      3.25
SRCPARAM L0009481     0.00000009101      3.49      4.00      3.25
SRCPARAM L0009482     0.00000009101      3.49      4.00      3.25
SRCPARAM L0009483     0.00000009101      3.49      4.00      3.25
SRCPARAM L0009484     0.00000009101      3.49      4.00      3.25
SRCPARAM L0009485     0.00000009101      3.49      4.00      3.25
SRCPARAM L0009486     0.00000009101      3.49      4.00      3.25
SRCPARAM L0009487     0.00000009101      3.49      4.00      3.25
SRCPARAM L0009488     0.00000009101      3.49      4.00      3.25
SRCPARAM L0009489     0.00000009101      3.49      4.00      3.25
SRCPARAM L0009490     0.00000009101      3.49      4.00      3.25
SRCPARAM L0009491     0.00000009101      3.49      4.00      3.25
SRCPARAM L0009492     0.00000009101      3.49      4.00      3.25
SRCPARAM L0009493     0.00000009101      3.49      4.00      3.25
SRCPARAM L0009494     0.00000009101      3.49      4.00      3.25
SRCPARAM L0009495     0.00000009101      3.49      4.00      3.25
SRCPARAM L0009496     0.00000009101      3.49      4.00      3.25
SRCPARAM L0009497     0.00000009101      3.49      4.00      3.25
SRCPARAM L0009498     0.00000009101      3.49      4.00      3.25
SRCPARAM L0009499     0.00000009101      3.49      4.00      3.25
SRCPARAM L0009500     0.00000009101      3.49      4.00      3.25
SRCPARAM L0009501     0.00000009101      3.49      4.00      3.25
SRCPARAM L0009502     0.00000009101      3.49      4.00      3.25
SRCPARAM L0009503     0.00000009101      3.49      4.00      3.25
SRCPARAM L0009504     0.00000009101      3.49      4.00      3.25
SRCPARAM L0009505     0.00000009101      3.49      4.00      3.25
SRCPARAM L0009506     0.00000009101      3.49      4.00      3.25
SRCPARAM L0009507     0.00000009101      3.49      4.00      3.25
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   SRCPARAM L0009508     0.00000009101      3.49      4.00      3.25
   SRCPARAM L0009509     0.00000009101      3.49      4.00      3.25
   SRCPARAM L0009510     0.00000009101      3.49      4.00      3.25
   SRCPARAM L0009511     0.00000009101      3.49      4.00      3.25
   SRCPARAM L0009512     0.00000009101      3.49      4.00      3.25
   SRCPARAM L0009513     0.00000009101      3.49      4.00      3.25
   SRCPARAM L0009514     0.00000009101      3.49      4.00      3.25
   SRCPARAM L0009515     0.00000009101      3.49      4.00      3.25
   SRCPARAM L0009516     0.00000009101      3.49      4.00      3.25
   SRCPARAM L0009517     0.00000009101      3.49      4.00      3.25
   SRCPARAM L0009518     0.00000009101      3.49      4.00      3.25
   SRCPARAM L0009519     0.00000009101      3.49      4.00      3.25
   SRCPARAM L0009520     0.00000009101      3.49      4.00      3.25
   SRCPARAM L0009521     0.00000009101      3.49      4.00      3.25
   SRCPARAM L0009522     0.00000009101      3.49      4.00      3.25
   SRCPARAM L0009523     0.00000009101      3.49      4.00      3.25
   SRCPARAM L0009524     0.00000009101      3.49      4.00      3.25
   SRCPARAM L0009525     0.00000009101      3.49      4.00      3.25
   SRCPARAM L0009526     0.00000009101      3.49      4.00      3.25
** ------------------------------------------------------------------
** LINE VOLUME Source ID = SLINE8
   SRCPARAM L0009527     0.00000003003      3.49      4.00      3.25
   SRCPARAM L0009528     0.00000003003      3.49      4.00      3.25
   SRCPARAM L0009529     0.00000003003      3.49      4.00      3.25
   SRCPARAM L0009530     0.00000003003      3.49      4.00      3.25
   SRCPARAM L0009531     0.00000003003      3.49      4.00      3.25
   SRCPARAM L0009532     0.00000003003      3.49      4.00      3.25
   SRCPARAM L0009533     0.00000003003      3.49      4.00      3.25
   SRCPARAM L0009534     0.00000003003      3.49      4.00      3.25
   SRCPARAM L0009535     0.00000003003      3.49      4.00      3.25
   SRCPARAM L0009536     0.00000003003      3.49      4.00      3.25
   SRCPARAM L0009537     0.00000003003      3.49      4.00      3.25
   SRCPARAM L0009538     0.00000003003      3.49      4.00      3.25
   SRCPARAM L0009539     0.00000003003      3.49      4.00      3.25
   SRCPARAM L0009540     0.00000003003      3.49      4.00      3.25
   SRCPARAM L0009541     0.00000003003      3.49      4.00      3.25
   SRCPARAM L0009542     0.00000003003      3.49      4.00      3.25
   SRCPARAM L0009543     0.00000003003      3.49      4.00      3.25
   SRCPARAM L0009544     0.00000003003      3.49      4.00      3.25
   SRCPARAM L0009545     0.00000003003      3.49      4.00      3.25
   SRCPARAM L0009546     0.00000003003      3.49      4.00      3.25
   SRCPARAM L0009547     0.00000003003      3.49      4.00      3.25
   SRCPARAM L0009548     0.00000003003      3.49      4.00      3.25
   SRCPARAM L0009549     0.00000003003      3.49      4.00      3.25
   SRCPARAM L0009550     0.00000003003      3.49      4.00      3.25
   SRCPARAM L0009551     0.00000003003      3.49      4.00      3.25
   SRCPARAM L0009552     0.00000003003      3.49      4.00      3.25
   SRCPARAM L0009553     0.00000003003      3.49      4.00      3.25
   SRCPARAM L0009554     0.00000003003      3.49      4.00      3.25
   SRCPARAM L0009555     0.00000003003      3.49      4.00      3.25
   SRCPARAM L0009556     0.00000003003      3.49      4.00      3.25
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SRCPARAM L0009557     0.00000003003      3.49      4.00      3.25
SRCPARAM L0009558     0.00000003003      3.49      4.00      3.25
SRCPARAM L0009559     0.00000003003      3.49      4.00      3.25
SRCPARAM L0009560     0.00000003003      3.49      4.00      3.25
SRCPARAM L0009561     0.00000003003      3.49      4.00      3.25
SRCPARAM L0009562     0.00000003003      3.49      4.00      3.25
SRCPARAM L0009563     0.00000003003      3.49      4.00      3.25
SRCPARAM L0009564     0.00000003003      3.49      4.00      3.25
SRCPARAM L0009565     0.00000003003      3.49      4.00      3.25
SRCPARAM L0009566     0.00000003003      3.49      4.00      3.25
SRCPARAM L0009567     0.00000003003      3.49      4.00      3.25
SRCPARAM L0009568     0.00000003003      3.49      4.00      3.25
SRCPARAM L0009569     0.00000003003      3.49      4.00      3.25
SRCPARAM L0009570     0.00000003003      3.49      4.00      3.25
SRCPARAM L0009571     0.00000003003      3.49      4.00      3.25
SRCPARAM L0009572     0.00000003003      3.49      4.00      3.25
SRCPARAM L0009573     0.00000003003      3.49      4.00      3.25
SRCPARAM L0009574     0.00000003003      3.49      4.00      3.25
SRCPARAM L0009575     0.00000003003      3.49      4.00      3.25
SRCPARAM L0009576     0.00000003003      3.49      4.00      3.25
SRCPARAM L0009577     0.00000003003      3.49      4.00      3.25
SRCPARAM L0009578     0.00000003003      3.49      4.00      3.25
SRCPARAM L0009579     0.00000003003      3.49      4.00      3.25
SRCPARAM L0009580     0.00000003003      3.49      4.00      3.25
SRCPARAM L0009581     0.00000003003      3.49      4.00      3.25
SRCPARAM L0009582     0.00000003003      3.49      4.00      3.25
SRCPARAM L0009583     0.00000003003      3.49      4.00      3.25
SRCPARAM L0009584     0.00000003003      3.49      4.00      3.25
SRCPARAM L0009585     0.00000003003      3.49      4.00      3.25
SRCPARAM L0009586     0.00000003003      3.49      4.00      3.25
SRCPARAM L0009587     0.00000003003      3.49      4.00      3.25
SRCPARAM L0009588     0.00000003003      3.49      4.00      3.25
SRCPARAM L0009589     0.00000003003      3.49      4.00      3.25
SRCPARAM L0009590     0.00000003003      3.49      4.00      3.25
SRCPARAM L0009591     0.00000003003      3.49      4.00      3.25
SRCPARAM L0009592     0.00000003003      3.49      4.00      3.25
SRCPARAM L0009593     0.00000003003      3.49      4.00      3.25
SRCPARAM L0009594     0.00000003003      3.49      4.00      3.25
SRCPARAM L0009595     0.00000003003      3.49      4.00      3.25
SRCPARAM L0009596     0.00000003003      3.49      4.00      3.25
SRCPARAM L0009597     0.00000003003      3.49      4.00      3.25
SRCPARAM L0009598     0.00000003003      3.49      4.00      3.25
SRCPARAM L0009599     0.00000003003      3.49      4.00      3.25
SRCPARAM L0009600     0.00000003003      3.49      4.00      3.25
SRCPARAM L0009601     0.00000003003      3.49      4.00      3.25
SRCPARAM L0009602     0.00000003003      3.49      4.00      3.25
SRCPARAM L0009603     0.00000003003      3.49      4.00      3.25
SRCPARAM L0009604     0.00000003003      3.49      4.00      3.25
SRCPARAM L0009605     0.00000003003      3.49      4.00      3.25
SRCPARAM L0009606     0.00000003003      3.49      4.00      3.25
SRCPARAM L0009607     0.00000003003      3.49      4.00      3.25
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   SRCPARAM L0009608     0.00000003003      3.49      4.00      3.25
   SRCPARAM L0009609     0.00000003003      3.49      4.00      3.25
   SRCPARAM L0009610     0.00000003003      3.49      4.00      3.25
   SRCPARAM L0009611     0.00000003003      3.49      4.00      3.25
   SRCPARAM L0009612     0.00000003003      3.49      4.00      3.25
   SRCPARAM L0009613     0.00000003003      3.49      4.00      3.25
   SRCPARAM L0009614     0.00000003003      3.49      4.00      3.25
   SRCPARAM L0009615     0.00000003003      3.49      4.00      3.25
   SRCPARAM L0009616     0.00000003003      3.49      4.00      3.25
   SRCPARAM L0009617     0.00000003003      3.49      4.00      3.25
   SRCPARAM L0009618     0.00000003003      3.49      4.00      3.25
   SRCPARAM L0009619     0.00000003003      3.49      4.00      3.25
   SRCPARAM L0009620     0.00000003003      3.49      4.00      3.25
   SRCPARAM L0009621     0.00000003003      3.49      4.00      3.25
   SRCPARAM L0009622     0.00000003003      3.49      4.00      3.25
   SRCPARAM L0009623     0.00000003003      3.49      4.00      3.25
   SRCPARAM L0009624     0.00000003003      3.49      4.00      3.25
   SRCPARAM L0009625     0.00000003003      3.49      4.00      3.25
   SRCPARAM L0009626     0.00000003003      3.49      4.00      3.25
   SRCPARAM L0009627     0.00000003003      3.49      4.00      3.25
   SRCPARAM L0009628     0.00000003003      3.49      4.00      3.25
   SRCPARAM L0009629     0.00000003003      3.49      4.00      3.25
   SRCPARAM L0009630     0.00000003003      3.49      4.00      3.25
   SRCPARAM L0009631     0.00000003003      3.49      4.00      3.25
   SRCPARAM L0009632     0.00000003003      3.49      4.00      3.25
   SRCPARAM L0009633     0.00000003003      3.49      4.00      3.25
   SRCPARAM L0009634     0.00000003003      3.49      4.00      3.25
   SRCPARAM L0009635     0.00000003003      3.49      4.00      3.25
   SRCPARAM L0009636     0.00000003003      3.49      4.00      3.25
   SRCPARAM L0009637     0.00000003003      3.49      4.00      3.25
   SRCPARAM L0009638     0.00000003003      3.49      4.00      3.25
   SRCPARAM L0009639     0.00000003003      3.49      4.00      3.25
   SRCPARAM L0009640     0.00000003003      3.49      4.00      3.25
   SRCPARAM L0009641     0.00000003003      3.49      4.00      3.25
   SRCPARAM L0009642     0.00000003003      3.49      4.00      3.25
   SRCPARAM L0009643     0.00000003003      3.49      4.00      3.25
   SRCPARAM L0009644     0.00000003003      3.49      4.00      3.25
   SRCPARAM L0009645     0.00000003003      3.49      4.00      3.25
   SRCPARAM L0009646     0.00000003003      3.49      4.00      3.25
   SRCPARAM L0009647     0.00000003003      3.49      4.00      3.25
   SRCPARAM L0009648     0.00000003003      3.49      4.00      3.25
   SRCPARAM L0009649     0.00000003003      3.49      4.00      3.25
   SRCPARAM L0009650     0.00000003003      3.49      4.00      3.25
   SRCPARAM L0009651     0.00000003003      3.49      4.00      3.25
   SRCPARAM L0009652     0.00000003003      3.49      4.00      3.25
   SRCPARAM L0009653     0.00000003003      3.49      4.00      3.25
   SRCPARAM L0009654     0.00000003003      3.49      4.00      3.25
   SRCPARAM L0009655     0.00000003003      3.49      4.00      3.25
   SRCPARAM L0009656     0.00000003003      3.49      4.00      3.25
   SRCPARAM L0009657     0.00000003003      3.49      4.00      3.25
** ------------------------------------------------------------------
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** LINE VOLUME Source ID = SLINE9
   SRCPARAM L0009658     0.0000003432      3.49      4.00      3.25
   SRCPARAM L0009659     0.0000003432      3.49      4.00      3.25
   SRCPARAM L0009660     0.0000003432      3.49      4.00      3.25
   SRCPARAM L0009661     0.0000003432      3.49      4.00      3.25
   SRCPARAM L0009662     0.0000003432      3.49      4.00      3.25
   SRCPARAM L0009663     0.0000003432      3.49      4.00      3.25
   SRCPARAM L0009664     0.0000003432      3.49      4.00      3.25
   SRCPARAM L0009665     0.0000003432      3.49      4.00      3.25
   SRCPARAM L0009666     0.0000003432      3.49      4.00      3.25
   SRCPARAM L0009667     0.0000003432      3.49      4.00      3.25
   SRCPARAM L0009668     0.0000003432      3.49      4.00      3.25
   SRCPARAM L0009669     0.0000003432      3.49      4.00      3.25
   SRCPARAM L0009670     0.0000003432      3.49      4.00      3.25
   SRCPARAM L0009671     0.0000003432      3.49      4.00      3.25
   SRCPARAM L0009672     0.0000003432      3.49      4.00      3.25
   SRCPARAM L0009673     0.0000003432      3.49      4.00      3.25
   SRCPARAM L0009674     0.0000003432      3.49      4.00      3.25
   SRCPARAM L0009675     0.0000003432      3.49      4.00      3.25
   SRCPARAM L0009676     0.0000003432      3.49      4.00      3.25
   SRCPARAM L0009677     0.0000003432      3.49      4.00      3.25
   SRCPARAM L0009678     0.0000003432      3.49      4.00      3.25
   SRCPARAM L0009679     0.0000003432      3.49      4.00      3.25
   SRCPARAM L0009680     0.0000003432      3.49      4.00      3.25
   SRCPARAM L0009681     0.0000003432      3.49      4.00      3.25
   SRCPARAM L0009682     0.0000003432      3.49      4.00      3.25
   SRCPARAM L0009683     0.0000003432      3.49      4.00      3.25
   SRCPARAM L0009684     0.0000003432      3.49      4.00      3.25
   SRCPARAM L0009685     0.0000003432      3.49      4.00      3.25
   SRCPARAM L0009686     0.0000003432      3.49      4.00      3.25
   SRCPARAM L0009687     0.0000003432      3.49      4.00      3.25
   SRCPARAM L0009688     0.0000003432      3.49      4.00      3.25
   SRCPARAM L0009689     0.0000003432      3.49      4.00      3.25
   SRCPARAM L0009690     0.0000003432      3.49      4.00      3.25
   SRCPARAM L0009691     0.0000003432      3.49      4.00      3.25
   SRCPARAM L0009692     0.0000003432      3.49      4.00      3.25
   SRCPARAM L0009693     0.0000003432      3.49      4.00      3.25
   SRCPARAM L0009694     0.0000003432      3.49      4.00      3.25
   SRCPARAM L0009695     0.0000003432      3.49      4.00      3.25
   SRCPARAM L0009696     0.0000003432      3.49      4.00      3.25
   SRCPARAM L0009697     0.0000003432      3.49      4.00      3.25
   SRCPARAM L0009698     0.0000003432      3.49      4.00      3.25
   SRCPARAM L0009699     0.0000003432      3.49      4.00      3.25
   SRCPARAM L0009700     0.0000003432      3.49      4.00      3.25
   SRCPARAM L0009701     0.0000003432      3.49      4.00      3.25
   SRCPARAM L0009702     0.0000003432      3.49      4.00      3.25
   SRCPARAM L0009703     0.0000003432      3.49      4.00      3.25
   SRCPARAM L0009704     0.0000003432      3.49      4.00      3.25
   SRCPARAM L0009705     0.0000003432      3.49      4.00      3.25
   SRCPARAM L0009706     0.0000003432      3.49      4.00      3.25
   SRCPARAM L0009707     0.0000003432      3.49      4.00      3.25
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   SRCPARAM L0009708     0.0000003432      3.49      4.00      3.25
   SRCPARAM L0009709     0.0000003432      3.49      4.00      3.25
   SRCPARAM L0009710     0.0000003432      3.49      4.00      3.25
   SRCPARAM L0009711     0.0000003432      3.49      4.00      3.25
   SRCPARAM L0009712     0.0000003432      3.49      4.00      3.25
   SRCPARAM L0009713     0.0000003432      3.49      4.00      3.25
   SRCPARAM L0009714     0.0000003432      3.49      4.00      3.25
   SRCPARAM L0009715     0.0000003432      3.49      4.00      3.25
   SRCPARAM L0009716     0.0000003432      3.49      4.00      3.25
   SRCPARAM L0009717     0.0000003432      3.49      4.00      3.25
   SRCPARAM L0009718     0.0000003432      3.49      4.00      3.25
   SRCPARAM L0009719     0.0000003432      3.49      4.00      3.25
   SRCPARAM L0009720     0.0000003432      3.49      4.00      3.25
   SRCPARAM L0009721     0.0000003432      3.49      4.00      3.25
   SRCPARAM L0009722     0.0000003432      3.49      4.00      3.25
   SRCPARAM L0009723     0.0000003432      3.49      4.00      3.25
   SRCPARAM L0009724     0.0000003432      3.49      4.00      3.25
   SRCPARAM L0009725     0.0000003432      3.49      4.00      3.25
   SRCPARAM L0009726     0.0000003432      3.49      4.00      3.25
   SRCPARAM L0009727     0.0000003432      3.49      4.00      3.25
   SRCPARAM L0009728     0.0000003432      3.49      4.00      3.25
   SRCPARAM L0009729     0.0000003432      3.49      4.00      3.25
   SRCPARAM L0009730     0.0000003432      3.49      4.00      3.25
   SRCPARAM L0009731     0.0000003432      3.49      4.00      3.25
   SRCPARAM L0009732     0.0000003432      3.49      4.00      3.25
   SRCPARAM L0009733     0.0000003432      3.49      4.00      3.25
   SRCPARAM L0009734     0.0000003432      3.49      4.00      3.25
   SRCPARAM L0009735     0.0000003432      3.49      4.00      3.25
   SRCPARAM L0009736     0.0000003432      3.49      4.00      3.25
   SRCPARAM L0009737     0.0000003432      3.49      4.00      3.25
   SRCPARAM L0009738     0.0000003432      3.49      4.00      3.25
   SRCPARAM L0009739     0.0000003432      3.49      4.00      3.25
   SRCPARAM L0009740     0.0000003432      3.49      4.00      3.25
   SRCPARAM L0009741     0.0000003432      3.49      4.00      3.25
   SRCPARAM L0009742     0.0000003432      3.49      4.00      3.25
   SRCPARAM L0009743     0.0000003432      3.49      4.00      3.25
   SRCPARAM L0009744     0.0000003432      3.49      4.00      3.25
** ------------------------------------------------------------------
** LINE VOLUME Source ID = SLINE10
   SRCPARAM L0009745     0.0000001451      3.49      4.00      3.25
   SRCPARAM L0009746     0.0000001451      3.49      4.00      3.25
   SRCPARAM L0009747     0.0000001451      3.49      4.00      3.25
   SRCPARAM L0009748     0.0000001451      3.49      4.00      3.25
   SRCPARAM L0009749     0.0000001451      3.49      4.00      3.25
   SRCPARAM L0009750     0.0000001451      3.49      4.00      3.25
   SRCPARAM L0009751     0.0000001451      3.49      4.00      3.25
   SRCPARAM L0009752     0.0000001451      3.49      4.00      3.25
   SRCPARAM L0009753     0.0000001451      3.49      4.00      3.25
   SRCPARAM L0009754     0.0000001451      3.49      4.00      3.25
   SRCPARAM L0009755     0.0000001451      3.49      4.00      3.25
   SRCPARAM L0009756     0.0000001451      3.49      4.00      3.25
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   SRCPARAM L0009757     0.0000001451      3.49      4.00      3.25
   SRCPARAM L0009758     0.0000001451      3.49      4.00      3.25
   SRCPARAM L0009759     0.0000001451      3.49      4.00      3.25
   SRCPARAM L0009760     0.0000001451      3.49      4.00      3.25
   SRCPARAM L0009761     0.0000001451      3.49      4.00      3.25
   SRCPARAM L0009762     0.0000001451      3.49      4.00      3.25
   SRCPARAM L0009763     0.0000001451      3.49      4.00      3.25
   SRCPARAM L0009764     0.0000001451      3.49      4.00      3.25
   SRCPARAM L0009765     0.0000001451      3.49      4.00      3.25
   SRCPARAM L0009766     0.0000001451      3.49      4.00      3.25
** ----------------------------------------------------------------
** LINE VOLUME Source ID = SLINE11
   SRCPARAM L0009767     0.0000001958      3.49      4.00      3.25
   SRCPARAM L0009768     0.0000001958      3.49      4.00      3.25
   SRCPARAM L0009769     0.0000001958      3.49      4.00      3.25
   SRCPARAM L0009770     0.0000001958      3.49      4.00      3.25
   SRCPARAM L0009771     0.0000001958      3.49      4.00      3.25
   SRCPARAM L0009772     0.0000001958      3.49      4.00      3.25
   SRCPARAM L0009773     0.0000001958      3.49      4.00      3.25
   SRCPARAM L0009774     0.0000001958      3.49      4.00      3.25
   SRCPARAM L0009775     0.0000001958      3.49      4.00      3.25
   SRCPARAM L0009776     0.0000001958      3.49      4.00      3.25
   SRCPARAM L0009777     0.0000001958      3.49      4.00      3.25
   SRCPARAM L0009778     0.0000001958      3.49      4.00      3.25
   SRCPARAM L0009779     0.0000001958      3.49      4.00      3.25
   SRCPARAM L0009780     0.0000001958      3.49      4.00      3.25
   SRCPARAM L0009781     0.0000001958      3.49      4.00      3.25
   SRCPARAM L0009782     0.0000001958      3.49      4.00      3.25
   SRCPARAM L0009783     0.0000001958      3.49      4.00      3.25
   SRCPARAM L0009784     0.0000001958      3.49      4.00      3.25
   SRCPARAM L0009785     0.0000001958      3.49      4.00      3.25
   SRCPARAM L0009786     0.0000001958      3.49      4.00      3.25
   SRCPARAM L0009787     0.0000001958      3.49      4.00      3.25
   SRCPARAM L0009788     0.0000001958      3.49      4.00      3.25
   SRCPARAM L0009789     0.0000001958      3.49      4.00      3.25
   SRCPARAM L0009790     0.0000001958      3.49      4.00      3.25
   SRCPARAM L0009791     0.0000001958      3.49      4.00      3.25
   SRCPARAM L0009792     0.0000001958      3.49      4.00      3.25
   SRCPARAM L0009793     0.0000001958      3.49      4.00      3.25
   SRCPARAM L0009794     0.0000001958      3.49      4.00      3.25
   SRCPARAM L0009795     0.0000001958      3.49      4.00      3.25
   SRCPARAM L0009796     0.0000001958      3.49      4.00      3.25
   SRCPARAM L0009797     0.0000001958      3.49      4.00      3.25
   SRCPARAM L0009798     0.0000001958      3.49      4.00      3.25
   SRCPARAM L0009799     0.0000001958      3.49      4.00      3.25
   SRCPARAM L0009800     0.0000001958      3.49      4.00      3.25
   SRCPARAM L0009801     0.0000001958      3.49      4.00      3.25
   SRCPARAM L0009802     0.0000001958      3.49      4.00      3.25
   SRCPARAM L0009803     0.0000001958      3.49      4.00      3.25
   SRCPARAM L0009804     0.0000001958      3.49      4.00      3.25
   SRCPARAM L0009805     0.0000001958      3.49      4.00      3.25
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   SRCPARAM L0009806     0.0000001958      3.49      4.00      3.25
   SRCPARAM L0009807     0.0000001958      3.49      4.00      3.25
   SRCPARAM L0009808     0.0000001958      3.49      4.00      3.25
   SRCPARAM L0009809     0.0000001958      3.49      4.00      3.25
   SRCPARAM L0009810     0.0000001958      3.49      4.00      3.25
   SRCPARAM L0009811     0.0000001958      3.49      4.00      3.25
   SRCPARAM L0009812     0.0000001958      3.49      4.00      3.25
   SRCPARAM L0009813     0.0000001958      3.49      4.00      3.25
   SRCPARAM L0009814     0.0000001958      3.49      4.00      3.25
   SRCPARAM L0009815     0.0000001958      3.49      4.00      3.25
   SRCPARAM L0009816     0.0000001958      3.49      4.00      3.25
   SRCPARAM L0009817     0.0000001958      3.49      4.00      3.25
   SRCPARAM L0009818     0.0000001958      3.49      4.00      3.25
   SRCPARAM L0009819     0.0000001958      3.49      4.00      3.25
   SRCPARAM L0009820     0.0000001958      3.49      4.00      3.25
   SRCPARAM L0009821     0.0000001958      3.49      4.00      3.25
   SRCPARAM L0009822     0.0000001958      3.49      4.00      3.25
   SRCPARAM L0009823     0.0000001958      3.49      4.00      3.25
   SRCPARAM L0009824     0.0000001958      3.49      4.00      3.25
   SRCPARAM L0009825     0.0000001958      3.49      4.00      3.25
   SRCPARAM L0009826     0.0000001958      3.49      4.00      3.25
   SRCPARAM L0009827     0.0000001958      3.49      4.00      3.25
   SRCPARAM L0009828     0.0000001958      3.49      4.00      3.25
   SRCPARAM L0009829     0.0000001958      3.49      4.00      3.25
   SRCPARAM L0009830     0.0000001958      3.49      4.00      3.25
   SRCPARAM L0009831     0.0000001958      3.49      4.00      3.25
   SRCPARAM L0009832     0.0000001958      3.49      4.00      3.25
   SRCPARAM L0009833     0.0000001958      3.49      4.00      3.25
   SRCPARAM L0009834     0.0000001958      3.49      4.00      3.25
   SRCPARAM L0009835     0.0000001958      3.49      4.00      3.25
   SRCPARAM L0009836     0.0000001958      3.49      4.00      3.25
   SRCPARAM L0009837     0.0000001958      3.49      4.00      3.25
   SRCPARAM L0009838     0.0000001958      3.49      4.00      3.25
   SRCPARAM L0009839     0.0000001958      3.49      4.00      3.25
   SRCPARAM L0009840     0.0000001958      3.49      4.00      3.25
   SRCPARAM L0009841     0.0000001958      3.49      4.00      3.25
   SRCPARAM L0009842     0.0000001958      3.49      4.00      3.25
** ----------------------------------------------------------------
** LINE VOLUME Source ID = SLINE12
   SRCPARAM L0009843     0.000001414      3.49      4.00      3.25
   SRCPARAM L0009844     0.000001414      3.49      4.00      3.25
   SRCPARAM L0009845     0.000001414      3.49      4.00      3.25
   SRCPARAM L0009846     0.000001414      3.49      4.00      3.25
   SRCPARAM L0009847     0.000001414      3.49      4.00      3.25
   SRCPARAM L0009848     0.000001414      3.49      4.00      3.25
   SRCPARAM L0009849     0.000001414      3.49      4.00      3.25
   SRCPARAM L0009850     0.000001414      3.49      4.00      3.25
   SRCPARAM L0009851     0.000001414      3.49      4.00      3.25
   SRCPARAM L0009852     0.000001414      3.49      4.00      3.25
   SRCPARAM L0009853     0.000001414      3.49      4.00      3.25
   SRCPARAM L0009854     0.000001414      3.49      4.00      3.25
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   SRCPARAM L0009855     0.000001414      3.49      4.00      3.25
   SRCPARAM L0009856     0.000001414      3.49      4.00      3.25
   SRCPARAM L0009857     0.000001414      3.49      4.00      3.25
   SRCPARAM L0009858     0.000001414      3.49      4.00      3.25
   SRCPARAM L0009859     0.000001414      3.49      4.00      3.25
   SRCPARAM L0009860     0.000001414      3.49      4.00      3.25
   SRCPARAM L0009861     0.000001414      3.49      4.00      3.25
   SRCPARAM L0009862     0.000001414      3.49      4.00      3.25
   SRCPARAM L0009863     0.000001414      3.49      4.00      3.25
   SRCPARAM L0009864     0.000001414      3.49      4.00      3.25
   SRCPARAM L0009865     0.000001414      3.49      4.00      3.25
   SRCPARAM L0009866     0.000001414      3.49      4.00      3.25
   SRCPARAM L0009867     0.000001414      3.49      4.00      3.25
   SRCPARAM L0009868     0.000001414      3.49      4.00      3.25
   SRCPARAM L0009869     0.000001414      3.49      4.00      3.25
   SRCPARAM L0009870     0.000001414      3.49      4.00      3.25
   SRCPARAM L0009871     0.000001414      3.49      4.00      3.25
   SRCPARAM L0009872     0.000001414      3.49      4.00      3.25
   SRCPARAM L0009873     0.000001414      3.49      4.00      3.25
   SRCPARAM L0009874     0.000001414      3.49      4.00      3.25
   SRCPARAM L0009875     0.000001414      3.49      4.00      3.25
   SRCPARAM L0009876     0.000001414      3.49      4.00      3.25
   SRCPARAM L0009877     0.000001414      3.49      4.00      3.25
   SRCPARAM L0009878     0.000001414      3.49      4.00      3.25
   SRCPARAM L0009879     0.000001414      3.49      4.00      3.25
   SRCPARAM L0009880     0.000001414      3.49      4.00      3.25
   SRCPARAM L0009881     0.000001414      3.49      4.00      3.25
   SRCPARAM L0009882     0.000001414      3.49      4.00      3.25
   SRCPARAM L0009883     0.000001414      3.49      4.00      3.25
** ----------------------------------------------------------------------
** LINE VOLUME Source ID = SLINE13
   SRCPARAM L0009884     0.000001558      3.49      4.00      3.25
   SRCPARAM L0009885     0.000001558      3.49      4.00      3.25
   SRCPARAM L0009886     0.000001558      3.49      4.00      3.25
   SRCPARAM L0009887     0.000001558      3.49      4.00      3.25
   SRCPARAM L0009888     0.000001558      3.49      4.00      3.25
   SRCPARAM L0009889     0.000001558      3.49      4.00      3.25
   SRCPARAM L0009890     0.000001558      3.49      4.00      3.25
   SRCPARAM L0009891     0.000001558      3.49      4.00      3.25
   SRCPARAM L0009892     0.000001558      3.49      4.00      3.25
   SRCPARAM L0009893     0.000001558      3.49      4.00      3.25
   SRCPARAM L0009894     0.000001558      3.49      4.00      3.25
   SRCPARAM L0009895     0.000001558      3.49      4.00      3.25
   SRCPARAM L0009896     0.000001558      3.49      4.00      3.25
   SRCPARAM L0009897     0.000001558      3.49      4.00      3.25
   SRCPARAM L0009898     0.000001558      3.49      4.00      3.25
   SRCPARAM L0009899     0.000001558      3.49      4.00      3.25
   SRCPARAM L0009900     0.000001558      3.49      4.00      3.25
   SRCPARAM L0009901     0.000001558      3.49      4.00      3.25
   SRCPARAM L0009902     0.000001558      3.49      4.00      3.25
   SRCPARAM L0009903     0.000001558      3.49      4.00      3.25
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   SRCPARAM L0009904     0.000001558      3.49      4.00      3.25
   SRCPARAM L0009905     0.000001558      3.49      4.00      3.25
   SRCPARAM L0009906     0.000001558      3.49      4.00      3.25
   SRCPARAM L0009907     0.000001558      3.49      4.00      3.25
   SRCPARAM L0009908     0.000001558      3.49      4.00      3.25
   SRCPARAM L0009909     0.000001558      3.49      4.00      3.25
   SRCPARAM L0009910     0.000001558      3.49      4.00      3.25
   SRCPARAM L0009911     0.000001558      3.49      4.00      3.25
   SRCPARAM L0009912     0.000001558      3.49      4.00      3.25
   SRCPARAM L0009913     0.000001558      3.49      4.00      3.25
   SRCPARAM L0009914     0.000001558      3.49      4.00      3.25
   SRCPARAM L0009915     0.000001558      3.49      4.00      3.25
   SRCPARAM L0009916     0.000001558      3.49      4.00      3.25
   SRCPARAM L0009917     0.000001558      3.49      4.00      3.25
   SRCPARAM L0009918     0.000001558      3.49      4.00      3.25
   SRCPARAM L0009919     0.000001558      3.49      4.00      3.25
   SRCPARAM L0009920     0.000001558      3.49      4.00      3.25
** ------------------------------------------------------------------
   URBANSRC ALL
   SRCGROUP ALL
SO FINISHED
**
**************************************
** AERMOD Receptor Pathway
**************************************
**
**
RE STARTING
   INCLUDED "Project AB3.rou"
RE FINISHED
**
**************************************
** AERMOD Meteorology Pathway
**************************************
**
**
ME STARTING
   SURFFILE ..\RedlandsADJU\RDLD_V9_ADJU\RDLD_v9.SFC
   PROFFILE ..\RedlandsADJU\RDLD_V9_ADJU\RDLD_v9.PFL
   SURFDATA 3171 2012
   UAIRDATA 3190 2012
   SITEDATA 99999 2012
   PROFBASE 481.0 METERS
ME FINISHED
**
**************************************
** AERMOD Output Pathway
**************************************
**
**
OU STARTING
```

```
** Auto-Generated Plotfiles
   PLOTFILE PERIOD ALL "PROJECT AB3.AD\PE00GALL.PLT" 31
   SUMMFILE "Project AB3.sum"
OU FINISHED


  *** Message Summary For AERMOD Model Setup ***

  --------- Summary of Total Messages --------

 A Total of            0 Fatal Error Message(s)
 A Total of            2 Warning Message(s)
 A Total of            0 Informational Message(s)


    ******** FATAL ERROR MESSAGES ********
               ***  NONE  ***


    ********   WARNING MESSAGES   ********
 ME W186    3053       MEOPEN: THRESH_1MIN 1-min ASOS wind speed threshold used          0.50
 ME W187    3053       MEOPEN: ADJ_U* Option for Low Winds used in AERMET

 *********************************
 *** SETUP Finishes Successfully ***
 *********************************
```

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

                                        ***   MODEL SETUP OPTIONS SUMMARY   ***
- -

**Model Is Setup For Calculation of Average CONCentration Values.

  -- DEPOSITION LOGIC --
**NO GAS DEPOSITION Data Provided.
**NO PARTICLE DEPOSITION Data Provided.
**Model Uses NO DRY DEPLETION. DRYDPLT = F
**Model Uses NO WET DEPLETION. WETDPLT = F

**Model Uses URBAN Dispersion Algorithm for the SBL for 1369 Source(s),
  for Total of   1 Urban Area(s):
  Urban Population =   2035210.0 ; Urban Roughness Length = 1.000 m

**Model Uses Regulatory DEFAULT Options:
       1. Stack-tip Downwash.
       2. Model Accounts for ELEVated Terrain Effects.
       3. Use Calms Processing Routine.
       4. Use Missing Data Processing Routine.
       5. No Exponential Decay.
       6. Urban Roughness Length of 1.0 Meter Assumed.

**Other Options Specified:
       ADJ_U*   - Use ADJ_U* BETA option for SBL in AERMET
       TEMP_Sub - Meteorological data includes TEMP substitutions

**Model Assumes No FLAGPOLE Receptor Heights.

**The User Specified a Pollutant Type of: DPM

**Model Calculates PERIOD Averages Only

**This Run Includes: 1369 Source(s);   1 Source Group(s); and   1506 Receptor(s)

              with: 0 POINT(s), including
                         0 POINTCAP(s) and   0 POINTHOR(s)
               and: 1369 VOLUME source(s)
               and: 0 AREA type source(s)
               and: 0 LINE source(s)
               and: 0 OPENPIT source(s)
               and: 0 BUOYANT LINE source(s) with   0 line(s)

**Model Set To Continue RUNning After the Setup Testing.

```
**The AERMET Input Meteorological Data Version Date:  16216

**Output Options Selected:
         Model Outputs Tables of PERIOD Averages by Receptor
         Model Outputs External File(s) of High Values for Plotting (PLOTFILE Keyword)
         Model Outputs Separate Summary File of High Ranked Values (SUMMFILE Keyword)

**NOTE:  The Following Flags May Appear Following CONC Values:  c for Calm Hours
                                                                m for Missing Hours
                                                                b for Both Calm and Missing Hours

**Misc. Inputs:  Base Elev. for Pot. Temp. Profile (m MSL) =   481.00 ;  Decay Coef. =    0.000     ;  Rot. Angle =     0.0
                 Emission Units = GRAMS/SEC                             ;  Emission Rate Unit Factor =   0.10000E+07
                 Output Units   = MICROGRAMS/M**3

**Approximate Storage Requirements of Model =      4.2 MB of RAM.

**Detailed Error/Message File:   Project AB3.err
**File for Summary of Results:   Project AB3.sum
```

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0008552	0	0.88210E-07	480749.7	3774134.1	363.7	3.49	4.00	3.25	YES	
L0008553	0	0.88210E-07	480758.2	3774133.4	363.9	3.49	4.00	3.25	YES	
L0008554	0	0.88210E-07	480766.8	3774132.7	364.0	3.49	4.00	3.25	YES	
L0008555	0	0.88210E-07	480775.4	3774132.0	364.0	3.49	4.00	3.25	YES	
L0008556	0	0.88210E-07	480783.9	3774131.3	364.0	3.49	4.00	3.25	YES	
L0008557	0	0.88210E-07	480792.5	3774130.6	364.0	3.49	4.00	3.25	YES	
L0008558	0	0.88210E-07	480801.0	3774129.9	364.0	3.49	4.00	3.25	YES	
L0008559	0	0.88210E-07	480809.6	3774129.2	364.0	3.49	4.00	3.25	YES	
L0008560	0	0.88210E-07	480818.2	3774128.5	364.0	3.49	4.00	3.25	YES	
L0008561	0	0.88210E-07	480826.7	3774127.8	364.1	3.49	4.00	3.25	YES	
L0008562	0	0.88210E-07	480835.3	3774127.1	364.2	3.49	4.00	3.25	YES	
L0008563	0	0.88210E-07	480843.9	3774126.4	364.3	3.49	4.00	3.25	YES	
L0008564	0	0.88210E-07	480852.4	3774125.7	364.4	3.49	4.00	3.25	YES	
L0008565	0	0.88210E-07	480861.0	3774125.0	364.6	3.49	4.00	3.25	YES	
L0008566	0	0.88210E-07	480869.5	3774124.3	364.8	3.49	4.00	3.25	YES	
L0008567	0	0.88210E-07	480878.1	3774123.6	365.0	3.49	4.00	3.25	YES	
L0008568	0	0.88210E-07	480886.7	3774122.9	365.0	3.49	4.00	3.25	YES	
L0008569	0	0.88210E-07	480895.2	3774122.2	365.0	3.49	4.00	3.25	YES	
L0008570	0	0.88210E-07	480903.8	3774121.5	365.0	3.49	4.00	3.25	YES	
L0008571	0	0.88210E-07	480912.3	3774120.8	365.0	3.49	4.00	3.25	YES	
L0008572	0	0.88210E-07	480920.9	3774120.1	365.0	3.49	4.00	3.25	YES	
L0008573	0	0.88210E-07	480929.5	3774119.4	365.0	3.49	4.00	3.25	YES	
L0008574	0	0.88210E-07	480938.0	3774118.7	365.0	3.49	4.00	3.25	YES	
L0008575	0	0.88210E-07	480946.6	3774118.0	365.2	3.49	4.00	3.25	YES	
L0008576	0	0.88210E-07	480955.2	3774117.3	365.5	3.49	4.00	3.25	YES	
L0008577	0	0.88210E-07	480963.7	3774116.6	365.8	3.49	4.00	3.25	YES	
L0008578	0	0.88210E-07	480972.3	3774115.9	366.0	3.49	4.00	3.25	YES	
L0008579	0	0.88210E-07	480980.8	3774115.2	366.0	3.49	4.00	3.25	YES	
L0008580	0	0.88210E-07	480989.4	3774114.5	366.0	3.49	4.00	3.25	YES	
L0008581	0	0.88210E-07	480998.0	3774113.8	366.0	3.49	4.00	3.25	YES	
L0008582	0	0.88210E-07	481006.5	3774113.1	366.0	3.49	4.00	3.25	YES	
L0008583	0	0.88210E-07	481015.1	3774112.4	366.0	3.49	4.00	3.25	YES	
L0008584	0	0.88210E-07	481023.6	3774111.7	366.0	3.49	4.00	3.25	YES	
L0008585	0	0.88210E-07	481032.2	3774111.0	366.1	3.49	4.00	3.25	YES	
L0008586	0	0.88210E-07	481040.8	3774110.3	366.4	3.49	4.00	3.25	YES	
L0008587	0	0.88210E-07	481049.3	3774109.6	366.7	3.49	4.00	3.25	YES	
L0008588	0	0.88210E-07	481057.9	3774108.9	366.9	3.49	4.00	3.25	YES	
L0008589	0	0.88210E-07	481066.5	3774108.4	367.0	3.49	4.00	3.25	YES	
L0008590	0	0.88210E-07	481075.0	3774107.9	367.0	3.49	4.00	3.25	YES	
L0008591	0	0.88210E-07	481083.6	3774107.5	367.0	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0008592	0	0.88210E-07	481092.2	3774107.1	367.0	3.49	4.00	3.25	YES	
L0008593	0	0.88210E-07	481100.8	3774106.7	367.0	3.49	4.00	3.25	YES	
L0008594	0	0.88210E-07	481109.4	3774106.3	367.0	3.49	4.00	3.25	YES	
L0008595	0	0.88210E-07	481117.9	3774105.9	367.0	3.49	4.00	3.25	YES	
L0008596	0	0.88210E-07	481126.5	3774105.4	367.2	3.49	4.00	3.25	YES	
L0008597	0	0.88210E-07	481135.1	3774105.0	367.5	3.49	4.00	3.25	YES	
L0008598	0	0.88210E-07	481143.7	3774104.6	367.8	3.49	4.00	3.25	YES	
L0008599	0	0.88210E-07	481152.3	3774104.2	368.0	3.49	4.00	3.25	YES	
L0008600	0	0.88210E-07	481160.8	3774104.6	368.0	3.49	4.00	3.25	YES	
L0008601	0	0.88210E-07	481169.4	3774105.2	368.0	3.49	4.00	3.25	YES	
L0008602	0	0.88210E-07	481178.0	3774105.8	368.0	3.49	4.00	3.25	YES	
L0008603	0	0.88210E-07	481186.5	3774106.5	368.0	3.49	4.00	3.25	YES	
L0008604	0	0.88210E-07	481195.1	3774107.1	368.0	3.49	4.00	3.25	YES	
L0008605	0	0.88210E-07	481203.7	3774107.7	368.0	3.49	4.00	3.25	YES	
L0008606	0	0.88210E-07	481212.2	3774108.3	368.1	3.49	4.00	3.25	YES	
L0008607	0	0.88210E-07	481220.8	3774108.9	368.4	3.49	4.00	3.25	YES	
L0008608	0	0.88210E-07	481229.4	3774109.5	368.7	3.49	4.00	3.25	YES	
L0008609	0	0.88210E-07	481237.9	3774110.1	368.9	3.49	4.00	3.25	YES	
L0008610	0	0.88210E-07	481246.5	3774110.8	369.0	3.49	4.00	3.25	YES	
L0008611	0	0.88210E-07	481255.1	3774111.4	369.0	3.49	4.00	3.25	YES	
L0008612	0	0.88210E-07	481263.6	3774112.0	369.0	3.49	4.00	3.25	YES	
L0008613	0	0.88210E-07	481272.2	3774112.6	369.0	3.49	4.00	3.25	YES	
L0008614	0	0.88210E-07	481280.8	3774113.2	369.0	3.49	4.00	3.25	YES	
L0008615	0	0.88210E-07	481289.3	3774113.8	369.0	3.49	4.00	3.25	YES	
L0008616	0	0.88210E-07	481297.9	3774114.5	369.0	3.49	4.00	3.25	YES	
L0008617	0	0.88210E-07	481306.5	3774115.1	369.2	3.49	4.00	3.25	YES	
L0008618	0	0.88210E-07	481315.1	3774115.7	369.5	3.49	4.00	3.25	YES	
L0008619	0	0.88210E-07	481323.6	3774116.3	369.8	3.49	4.00	3.25	YES	
L0008620	0	0.88210E-07	481332.2	3774116.9	370.0	3.49	4.00	3.25	YES	
L0008621	0	0.88210E-07	481340.8	3774117.5	370.0	3.49	4.00	3.25	YES	
L0008622	0	0.88210E-07	481349.3	3774118.1	370.0	3.49	4.00	3.25	YES	
L0008623	0	0.88210E-07	481357.9	3774118.8	370.0	3.49	4.00	3.25	YES	
L0008624	0	0.88210E-07	481366.5	3774119.4	370.0	3.49	4.00	3.25	YES	
L0008625	0	0.88210E-07	481375.0	3774120.0	370.0	3.49	4.00	3.25	YES	
L0008626	0	0.88210E-07	481383.6	3774120.6	370.0	3.49	4.00	3.25	YES	
L0008627	0	0.88210E-07	481392.2	3774121.2	370.1	3.49	4.00	3.25	YES	
L0008628	0	0.88210E-07	481400.7	3774121.8	370.4	3.49	4.00	3.25	YES	
L0008629	0	0.88210E-07	481409.3	3774122.5	370.7	3.49	4.00	3.25	YES	
L0008630	0	0.88210E-07	481417.9	3774123.1	370.9	3.49	4.00	3.25	YES	
L0008631	0	0.88210E-07	481426.4	3774123.7	371.0	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0008632	0	0.88210E-07	481435.0	3774124.3	371.0	3.49	4.00	3.25	YES	
L0008633	0	0.88210E-07	481443.6	3774124.9	371.0	3.49	4.00	3.25	YES	
L0008634	0	0.88210E-07	481452.1	3774125.5	371.0	3.49	4.00	3.25	YES	
L0008635	0	0.88210E-07	481460.7	3774126.1	371.1	3.49	4.00	3.25	YES	
L0008636	0	0.88210E-07	481469.3	3774126.8	371.2	3.49	4.00	3.25	YES	
L0008637	0	0.88210E-07	481477.8	3774127.4	371.3	3.49	4.00	3.25	YES	
L0008638	0	0.88210E-07	481486.4	3774128.0	371.4	3.49	4.00	3.25	YES	
L0008639	0	0.88210E-07	481495.0	3774128.6	371.6	3.49	4.00	3.25	YES	
L0008640	0	0.88210E-07	481503.5	3774129.2	371.8	3.49	4.00	3.25	YES	
L0008641	0	0.88210E-07	481512.1	3774129.8	372.0	3.49	4.00	3.25	YES	
L0008642	0	0.88210E-07	481520.7	3774130.5	372.0	3.49	4.00	3.25	YES	
L0008643	0	0.88210E-07	481529.3	3774131.1	372.0	3.49	4.00	3.25	YES	
L0008644	0	0.88210E-07	481537.8	3774131.7	372.0	3.49	4.00	3.25	YES	
L0008645	0	0.88210E-07	481546.4	3774132.3	372.0	3.49	4.00	3.25	YES	
L0008646	0	0.88210E-07	481555.0	3774132.9	372.1	3.49	4.00	3.25	YES	
L0008647	0	0.88210E-07	481563.5	3774133.5	372.1	3.49	4.00	3.25	YES	
L0008648	0	0.88210E-07	481572.1	3774134.1	372.1	3.49	4.00	3.25	YES	
L0008649	0	0.36770E-07	479144.0	3771580.1	352.0	3.49	4.00	3.25	YES	
L0008650	0	0.36770E-07	479152.5	3771580.1	352.0	3.49	4.00	3.25	YES	
L0008651	0	0.36770E-07	479161.1	3771580.0	352.0	3.49	4.00	3.25	YES	
L0008652	0	0.36770E-07	479169.7	3771580.0	352.0	3.49	4.00	3.25	YES	
L0008653	0	0.36770E-07	479178.3	3771579.9	352.3	3.49	4.00	3.25	YES	
L0008654	0	0.36770E-07	479186.9	3771579.9	352.6	3.49	4.00	3.25	YES	
L0008655	0	0.36770E-07	479195.5	3771579.8	352.9	3.49	4.00	3.25	YES	
L0008656	0	0.36770E-07	479204.1	3771579.8	353.0	3.49	4.00	3.25	YES	
L0008657	0	0.36770E-07	479212.7	3771579.7	353.0	3.49	4.00	3.25	YES	
L0008658	0	0.36770E-07	479221.3	3771579.7	353.0	3.49	4.00	3.25	YES	
L0008659	0	0.36770E-07	479229.8	3771579.6	353.0	3.49	4.00	3.25	YES	
L0008660	0	0.36770E-07	479238.4	3771579.6	353.1	3.49	4.00	3.25	YES	
L0008661	0	0.36770E-07	479247.0	3771579.5	353.1	3.49	4.00	3.25	YES	
L0008662	0	0.36770E-07	479255.6	3771579.5	353.2	3.49	4.00	3.25	YES	
L0008663	0	0.36770E-07	479264.2	3771579.4	353.3	3.49	4.00	3.25	YES	
L0008664	0	0.36770E-07	479272.8	3771579.4	353.6	3.49	4.00	3.25	YES	
L0008665	0	0.36770E-07	479281.4	3771579.3	353.8	3.49	4.00	3.25	YES	
L0008666	0	0.36770E-07	479290.0	3771579.3	354.0	3.49	4.00	3.25	YES	
L0008667	0	0.36770E-07	479298.6	3771579.2	354.0	3.49	4.00	3.25	YES	
L0008668	0	0.36770E-07	479307.2	3771579.2	354.0	3.49	4.00	3.25	YES	
L0008669	0	0.36770E-07	479315.7	3771579.2	354.0	3.49	4.00	3.25	YES	
L0008670	0	0.36770E-07	479324.3	3771579.1	354.0	3.49	4.00	3.25	YES	
L0008671	0	0.36770E-07	479332.9	3771579.1	354.0	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0008672	0	0.36770E-07	479341.5	3771579.0	354.0	3.49	4.00	3.25	YES	
L0008673	0	0.36770E-07	479350.1	3771579.0	354.0	3.49	4.00	3.25	YES	
L0008674	0	0.36770E-07	479358.7	3771578.9	354.3	3.49	4.00	3.25	YES	
L0008675	0	0.36770E-07	479367.3	3771578.9	354.6	3.49	4.00	3.25	YES	
L0008676	0	0.36770E-07	479375.9	3771578.8	354.9	3.49	4.00	3.25	YES	
L0008677	0	0.36770E-07	479384.5	3771578.8	355.0	3.49	4.00	3.25	YES	
L0008678	0	0.36770E-07	479393.1	3771578.7	355.0	3.49	4.00	3.25	YES	
L0008679	0	0.36770E-07	479401.6	3771578.7	355.0	3.49	4.00	3.25	YES	
L0008680	0	0.36770E-07	479410.2	3771578.6	355.0	3.49	4.00	3.25	YES	
L0008681	0	0.36770E-07	479418.8	3771578.6	355.1	3.49	4.00	3.25	YES	
L0008682	0	0.36770E-07	479427.4	3771578.5	355.2	3.49	4.00	3.25	YES	
L0008683	0	0.36770E-07	479436.0	3771578.5	355.2	3.49	4.00	3.25	YES	
L0008684	0	0.36770E-07	479444.6	3771578.4	355.4	3.49	4.00	3.25	YES	
L0008685	0	0.36770E-07	479453.2	3771578.4	355.6	3.49	4.00	3.25	YES	
L0008686	0	0.36770E-07	479461.8	3771578.3	355.8	3.49	4.00	3.25	YES	
L0008687	0	0.36770E-07	479470.4	3771578.3	356.0	3.49	4.00	3.25	YES	
L0008688	0	0.36770E-07	479479.0	3771578.2	356.0	3.49	4.00	3.25	YES	
L0008689	0	0.36770E-07	479487.5	3771578.2	356.0	3.49	4.00	3.25	YES	
L0008690	0	0.36770E-07	479496.1	3771578.1	356.0	3.49	4.00	3.25	YES	
L0008691	0	0.36770E-07	479504.7	3771578.1	356.0	3.49	4.00	3.25	YES	
L0008692	0	0.36770E-07	479513.3	3771578.0	356.0	3.49	4.00	3.25	YES	
L0008693	0	0.36770E-07	479521.9	3771578.0	356.0	3.49	4.00	3.25	YES	
L0008694	0	0.36770E-07	479530.5	3771577.9	356.0	3.49	4.00	3.25	YES	
L0008695	0	0.36770E-07	479539.1	3771577.9	356.3	3.49	4.00	3.25	YES	
L0008696	0	0.36770E-07	479547.7	3771577.9	356.6	3.49	4.00	3.25	YES	
L0008697	0	0.36770E-07	479556.3	3771577.8	356.9	3.49	4.00	3.25	YES	
L0008698	0	0.36770E-07	479564.9	3771577.8	357.0	3.49	4.00	3.25	YES	
L0008699	0	0.36770E-07	479573.4	3771577.7	357.0	3.49	4.00	3.25	YES	
L0008700	0	0.36770E-07	479582.0	3771577.7	357.0	3.49	4.00	3.25	YES	
L0008701	0	0.36770E-07	479590.6	3771577.6	357.0	3.49	4.00	3.25	YES	
L0008702	0	0.36770E-07	479599.2	3771577.6	357.0	3.49	4.00	3.25	YES	
L0008703	0	0.36770E-07	479607.8	3771577.5	357.0	3.49	4.00	3.25	YES	
L0008704	0	0.36770E-07	479616.4	3771577.5	357.0	3.49	4.00	3.25	YES	
L0008705	0	0.36770E-07	479625.0	3771577.4	357.2	3.49	4.00	3.25	YES	
L0008706	0	0.36770E-07	479633.6	3771577.4	357.5	3.49	4.00	3.25	YES	
L0008707	0	0.36770E-07	479642.2	3771577.3	357.7	3.49	4.00	3.25	YES	
L0008708	0	0.36770E-07	479650.8	3771577.3	358.0	3.49	4.00	3.25	YES	
L0008709	0	0.36770E-07	479659.3	3771577.2	358.0	3.49	4.00	3.25	YES	
L0008710	0	0.36770E-07	479667.9	3771577.2	358.0	3.49	4.00	3.25	YES	
L0008711	0	0.36770E-07	479676.5	3771577.1	358.0	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0008712	0	0.36770E-07	479685.1	3771577.1	358.0	3.49	4.00	3.25	YES	
L0008713	0	0.36770E-07	479693.7	3771577.0	358.0	3.49	4.00	3.25	YES	
L0008714	0	0.36770E-07	479702.3	3771577.0	358.0	3.49	4.00	3.25	YES	
L0008715	0	0.36770E-07	479710.9	3771576.9	358.0	3.49	4.00	3.25	YES	
L0008716	0	0.36770E-07	479719.5	3771576.9	358.3	3.49	4.00	3.25	YES	
L0008717	0	0.36770E-07	479728.1	3771576.8	358.6	3.49	4.00	3.25	YES	
L0008718	0	0.36770E-07	479736.7	3771576.8	358.9	3.49	4.00	3.25	YES	
L0008719	0	0.36770E-07	479745.2	3771576.7	359.0	3.49	4.00	3.25	YES	
L0008720	0	0.36770E-07	479753.8	3771576.7	359.0	3.49	4.00	3.25	YES	
L0008721	0	0.36770E-07	479762.4	3771576.6	359.0	3.49	4.00	3.25	YES	
L0008722	0	0.36770E-07	479771.0	3771576.6	359.0	3.49	4.00	3.25	YES	
L0008723	0	0.36770E-07	479779.6	3771576.5	359.3	3.49	4.00	3.25	YES	
L0008724	0	0.36770E-07	479788.2	3771576.5	359.6	3.49	4.00	3.25	YES	
L0008725	0	0.36770E-07	479796.8	3771576.5	359.9	3.49	4.00	3.25	YES	
L0008726	0	0.36770E-07	479805.4	3771576.4	360.0	3.49	4.00	3.25	YES	
L0008727	0	0.36770E-07	479814.0	3771576.4	360.0	3.49	4.00	3.25	YES	
L0008728	0	0.36770E-07	479822.5	3771576.3	360.0	3.49	4.00	3.25	YES	
L0008729	0	0.36770E-07	479831.1	3771576.3	360.0	3.49	4.00	3.25	YES	
L0008730	0	0.36770E-07	479839.7	3771576.2	360.0	3.49	4.00	3.25	YES	
L0008731	0	0.36770E-07	479848.3	3771576.2	360.0	3.49	4.00	3.25	YES	
L0008732	0	0.36770E-07	479856.9	3771576.1	360.0	3.49	4.00	3.25	YES	
L0008733	0	0.36770E-07	479865.5	3771576.1	360.2	3.49	4.00	3.25	YES	
L0008734	0	0.36770E-07	479874.1	3771576.0	360.5	3.49	4.00	3.25	YES	
L0008735	0	0.36770E-07	479882.7	3771576.0	360.8	3.49	4.00	3.25	YES	
L0008736	0	0.36770E-07	479891.3	3771575.9	361.0	3.49	4.00	3.25	YES	
L0008737	0	0.36770E-07	479899.9	3771575.9	361.0	3.49	4.00	3.25	YES	
L0008738	0	0.36770E-07	479908.4	3771575.8	361.0	3.49	4.00	3.25	YES	
L0008739	0	0.36770E-07	479917.0	3771575.8	361.0	3.49	4.00	3.25	YES	
L0008740	0	0.36770E-07	479925.6	3771575.7	361.2	3.49	4.00	3.25	YES	
L0008741	0	0.36770E-07	479934.2	3771575.7	361.5	3.49	4.00	3.25	YES	
L0008742	0	0.36770E-07	479942.8	3771575.6	361.8	3.49	4.00	3.25	YES	
L0008743	0	0.36770E-07	479951.3	3771576.4	362.0	3.49	4.00	3.25	YES	
L0008744	0	0.36770E-07	479959.8	3771577.9	362.0	3.49	4.00	3.25	YES	
L0008745	0	0.36770E-07	479968.3	3771579.1	362.0	3.49	4.00	3.25	YES	
L0008746	0	0.36770E-07	479976.8	3771579.1	362.0	3.49	4.00	3.25	YES	
L0008747	0	0.36770E-07	479985.4	3771579.1	362.0	3.49	4.00	3.25	YES	
L0008748	0	0.36770E-07	479994.0	3771579.1	362.0	3.49	4.00	3.25	YES	
L0008749	0	0.36770E-07	480002.6	3771579.1	362.0	3.49	4.00	3.25	YES	
L0008750	0	0.36770E-07	480011.2	3771579.1	362.0	3.49	4.00	3.25	YES	
L0008751	0	0.36770E-07	480019.8	3771579.1	362.3	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0008752	0	0.36770E-07	480028.4	3771579.1	362.6	3.49	4.00	3.25	YES	
L0008753	0	0.36770E-07	480037.0	3771579.1	362.9	3.49	4.00	3.25	YES	
L0008754	0	0.36770E-07	480045.6	3771579.1	363.0	3.49	4.00	3.25	YES	
L0008755	0	0.36770E-07	480054.2	3771579.0	363.0	3.49	4.00	3.25	YES	
L0008756	0	0.36770E-07	480062.7	3771579.0	363.0	3.49	4.00	3.25	YES	
L0008757	0	0.36770E-07	480071.3	3771579.0	363.0	3.49	4.00	3.25	YES	
L0008758	0	0.36770E-07	480079.9	3771579.0	363.1	3.49	4.00	3.25	YES	
L0008759	0	0.36770E-07	480088.5	3771579.0	363.2	3.49	4.00	3.25	YES	
L0008760	0	0.36770E-07	480097.1	3771579.0	363.2	3.49	4.00	3.25	YES	
L0008761	0	0.36770E-07	480105.7	3771579.0	363.4	3.49	4.00	3.25	YES	
L0008762	0	0.36770E-07	480114.3	3771579.0	363.6	3.49	4.00	3.25	YES	
L0008763	0	0.36770E-07	480122.9	3771579.0	363.8	3.49	4.00	3.25	YES	
L0008764	0	0.36770E-07	480131.5	3771579.0	364.0	3.49	4.00	3.25	YES	
L0008765	0	0.36770E-07	480140.1	3771579.0	364.0	3.49	4.00	3.25	YES	
L0008766	0	0.36770E-07	480148.6	3771579.0	364.0	3.49	4.00	3.25	YES	
L0008767	0	0.36770E-07	480157.2	3771579.0	364.0	3.49	4.00	3.25	YES	
L0008768	0	0.36770E-07	480165.8	3771579.0	364.2	3.49	4.00	3.25	YES	
L0008769	0	0.36770E-07	480174.4	3771579.0	364.5	3.49	4.00	3.25	YES	
L0008770	0	0.36770E-07	480183.0	3771579.0	364.8	3.49	4.00	3.25	YES	
L0008771	0	0.36770E-07	480191.6	3771579.0	365.0	3.49	4.00	3.25	YES	
L0008772	0	0.36770E-07	480200.2	3771579.0	365.0	3.49	4.00	3.25	YES	
L0008773	0	0.36770E-07	480208.8	3771578.9	365.0	3.49	4.00	3.25	YES	
L0008774	0	0.36770E-07	480217.4	3771578.9	365.0	3.49	4.00	3.25	YES	
L0008775	0	0.36770E-07	480226.0	3771578.9	365.2	3.49	4.00	3.25	YES	
L0008776	0	0.36770E-07	480234.5	3771578.9	365.5	3.49	4.00	3.25	YES	
L0008777	0	0.36770E-07	480243.1	3771578.9	365.8	3.49	4.00	3.25	YES	
L0008778	0	0.36770E-07	480251.7	3771578.9	366.0	3.49	4.00	3.25	YES	
L0008779	0	0.36770E-07	480260.3	3771578.9	366.0	3.49	4.00	3.25	YES	
L0008780	0	0.36770E-07	480268.9	3771578.9	366.0	3.49	4.00	3.25	YES	
L0008781	0	0.36770E-07	480277.5	3771578.9	366.0	3.49	4.00	3.25	YES	
L0008782	0	0.36770E-07	480286.1	3771578.9	366.0	3.49	4.00	3.25	YES	
L0008783	0	0.36770E-07	480294.7	3771578.9	366.0	3.49	4.00	3.25	YES	
L0008784	0	0.36770E-07	480303.3	3771578.9	366.0	3.49	4.00	3.25	YES	
L0008785	0	0.36770E-07	480311.9	3771578.9	366.1	3.49	4.00	3.25	YES	
L0008786	0	0.36770E-07	480320.4	3771578.9	366.4	3.49	4.00	3.25	YES	
L0008787	0	0.36770E-07	480329.0	3771578.9	366.6	3.49	4.00	3.25	YES	
L0008788	0	0.36770E-07	480337.6	3771578.9	366.9	3.49	4.00	3.25	YES	
L0008789	0	0.36770E-07	480346.2	3771578.9	367.0	3.49	4.00	3.25	YES	
L0008790	0	0.36770E-07	480354.8	3771578.9	367.0	3.49	4.00	3.25	YES	
L0008791	0	0.36770E-07	480363.4	3771578.8	367.0	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0008792	0	0.36770E-07	480372.0	3771578.8	367.1	3.49	4.00	3.25	YES	
L0008793	0	0.36770E-07	480380.6	3771578.8	367.4	3.49	4.00	3.25	YES	
L0008794	0	0.36770E-07	480389.2	3771578.8	367.6	3.49	4.00	3.25	YES	
L0008795	0	0.36770E-07	480397.8	3771578.8	367.9	3.49	4.00	3.25	YES	
L0008796	0	0.36770E-07	480406.3	3771578.8	368.0	3.49	4.00	3.25	YES	
L0008797	0	0.36770E-07	480414.9	3771578.8	368.0	3.49	4.00	3.25	YES	
L0008798	0	0.36770E-07	480423.5	3771578.8	368.0	3.49	4.00	3.25	YES	
L0008799	0	0.36770E-07	480432.1	3771578.8	368.1	3.49	4.00	3.25	YES	
L0008800	0	0.36770E-07	480440.7	3771578.8	368.4	3.49	4.00	3.25	YES	
L0008801	0	0.36770E-07	480449.3	3771578.8	368.7	3.49	4.00	3.25	YES	
L0008802	0	0.36770E-07	480457.9	3771578.8	368.9	3.49	4.00	3.25	YES	
L0008803	0	0.36770E-07	480466.5	3771578.8	369.0	3.49	4.00	3.25	YES	
L0008804	0	0.36770E-07	480475.1	3771578.8	369.0	3.49	4.00	3.25	YES	
L0008805	0	0.36770E-07	480483.7	3771578.8	369.0	3.49	4.00	3.25	YES	
L0008806	0	0.36770E-07	480492.2	3771578.8	369.1	3.49	4.00	3.25	YES	
L0008807	0	0.36770E-07	480500.8	3771578.8	369.4	3.49	4.00	3.25	YES	
L0008808	0	0.36770E-07	480509.4	3771578.8	369.7	3.49	4.00	3.25	YES	
L0008809	0	0.36770E-07	480518.0	3771578.8	369.9	3.49	4.00	3.25	YES	
L0008810	0	0.36770E-07	480526.6	3771578.7	370.0	3.49	4.00	3.25	YES	
L0008811	0	0.36770E-07	480535.2	3771578.7	370.0	3.49	4.00	3.25	YES	
L0008812	0	0.36770E-07	480543.8	3771578.7	370.0	3.49	4.00	3.25	YES	
L0008813	0	0.36770E-07	480552.4	3771578.7	370.0	3.49	4.00	3.25	YES	
L0008814	0	0.36770E-07	480561.0	3771578.7	370.0	3.49	4.00	3.25	YES	
L0008815	0	0.36770E-07	480569.6	3771578.7	370.0	3.49	4.00	3.25	YES	
L0008816	0	0.36770E-07	480578.1	3771578.7	370.0	3.49	4.00	3.25	YES	
L0008817	0	0.36770E-07	480586.7	3771578.7	370.2	3.49	4.00	3.25	YES	
L0008818	0	0.36770E-07	480595.3	3771578.7	370.5	3.49	4.00	3.25	YES	
L0008819	0	0.36770E-07	480603.9	3771578.7	370.8	3.49	4.00	3.25	YES	
L0008820	0	0.36770E-07	480612.5	3771578.7	371.0	3.49	4.00	3.25	YES	
L0008821	0	0.36770E-07	480621.1	3771578.7	371.0	3.49	4.00	3.25	YES	
L0008822	0	0.36770E-07	480629.7	3771578.7	371.0	3.49	4.00	3.25	YES	
L0008823	0	0.36770E-07	480638.3	3771578.7	371.0	3.49	4.00	3.25	YES	
L0008824	0	0.36770E-07	480646.9	3771578.7	371.2	3.49	4.00	3.25	YES	
L0008825	0	0.36770E-07	480655.5	3771578.7	371.5	3.49	4.00	3.25	YES	
L0008826	0	0.36770E-07	480664.0	3771578.7	371.8	3.49	4.00	3.25	YES	
L0008827	0	0.36770E-07	480672.6	3771578.7	372.0	3.49	4.00	3.25	YES	
L0008828	0	0.36770E-07	480681.2	3771578.6	372.0	3.49	4.00	3.25	YES	
L0008829	0	0.36770E-07	480689.8	3771578.6	372.0	3.49	4.00	3.25	YES	
L0008830	0	0.36770E-07	480698.4	3771578.6	372.0	3.49	4.00	3.25	YES	
L0008831	0	0.36770E-07	480707.0	3771578.6	372.2	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0008832	0	0.36770E-07	480715.6	3771578.6	372.5	3.49	4.00	3.25	YES	
L0008833	0	0.36770E-07	480724.2	3771578.6	372.8	3.49	4.00	3.25	YES	
L0008834	0	0.36770E-07	480732.8	3771578.6	373.0	3.49	4.00	3.25	YES	
L0008835	0	0.36770E-07	480741.4	3771578.6	373.0	3.49	4.00	3.25	YES	
L0008836	0	0.60470E-07	480745.7	3770768.6	374.0	3.49	4.00	3.25	YES	
L0008837	0	0.60470E-07	480754.0	3770766.6	374.0	3.49	4.00	3.25	YES	
L0008838	0	0.60470E-07	480762.4	3770764.6	374.1	3.49	4.00	3.25	YES	
L0008839	0	0.60470E-07	480770.7	3770762.6	374.4	3.49	4.00	3.25	YES	
L0008840	0	0.60470E-07	480779.1	3770760.6	374.6	3.49	4.00	3.25	YES	
L0008841	0	0.60470E-07	480787.5	3770758.6	374.9	3.49	4.00	3.25	YES	
L0008842	0	0.60470E-07	480795.8	3770756.6	375.0	3.49	4.00	3.25	YES	
L0008843	0	0.60470E-07	480804.2	3770755.1	375.0	3.49	4.00	3.25	YES	
L0008844	0	0.60470E-07	480812.8	3770755.1	375.0	3.49	4.00	3.25	YES	
L0008845	0	0.60470E-07	480821.4	3770755.0	375.1	3.49	4.00	3.25	YES	
L0008846	0	0.60470E-07	480830.0	3770755.0	375.3	3.49	4.00	3.25	YES	
L0008847	0	0.60470E-07	480838.6	3770754.9	375.6	3.49	4.00	3.25	YES	
L0008848	0	0.60470E-07	480847.2	3770754.9	375.9	3.49	4.00	3.25	YES	
L0008849	0	0.60470E-07	480855.8	3770754.9	376.0	3.49	4.00	3.25	YES	
L0008850	0	0.60470E-07	480864.4	3770754.8	376.0	3.49	4.00	3.25	YES	
L0008851	0	0.60470E-07	480872.9	3770754.8	376.0	3.49	4.00	3.25	YES	
L0008852	0	0.60470E-07	480881.5	3770754.8	376.1	3.49	4.00	3.25	YES	
L0008853	0	0.60470E-07	480890.1	3770754.7	376.3	3.49	4.00	3.25	YES	
L0008854	0	0.60470E-07	480898.7	3770754.7	376.6	3.49	4.00	3.25	YES	
L0008855	0	0.60470E-07	480907.3	3770754.7	376.9	3.49	4.00	3.25	YES	
L0008856	0	0.60470E-07	480915.9	3770754.6	377.0	3.49	4.00	3.25	YES	
L0008857	0	0.60470E-07	480924.5	3770754.6	377.0	3.49	4.00	3.25	YES	
L0008858	0	0.60470E-07	480933.1	3770754.6	377.0	3.49	4.00	3.25	YES	
L0008859	0	0.60470E-07	480941.7	3770754.5	377.1	3.49	4.00	3.25	YES	
L0008860	0	0.60470E-07	480950.3	3770754.5	377.3	3.49	4.00	3.25	YES	
L0008861	0	0.60470E-07	480958.8	3770754.5	377.6	3.49	4.00	3.25	YES	
L0008862	0	0.60470E-07	480967.4	3770754.4	377.9	3.49	4.00	3.25	YES	
L0008863	0	0.60470E-07	480976.0	3770754.4	378.0	3.49	4.00	3.25	YES	
L0008864	0	0.60470E-07	480984.6	3770754.3	378.0	3.49	4.00	3.25	YES	
L0008865	0	0.60470E-07	480993.2	3770754.3	378.0	3.49	4.00	3.25	YES	
L0008866	0	0.60470E-07	481001.8	3770754.3	378.1	3.49	4.00	3.25	YES	
L0008867	0	0.60470E-07	481010.4	3770754.2	378.4	3.49	4.00	3.25	YES	
L0008868	0	0.60470E-07	481019.0	3770754.2	378.6	3.49	4.00	3.25	YES	
L0008869	0	0.60470E-07	481027.6	3770754.2	378.9	3.49	4.00	3.25	YES	
L0008870	0	0.60470E-07	481036.2	3770754.1	379.0	3.49	4.00	3.25	YES	
L0008871	0	0.60470E-07	481044.7	3770754.1	379.0	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0008872	0	0.60470E-07	481053.3	3770754.1	379.0	3.49	4.00	3.25	YES	
L0008873	0	0.60470E-07	481061.9	3770754.0	379.1	3.49	4.00	3.25	YES	
L0008874	0	0.60470E-07	481070.5	3770754.0	379.4	3.49	4.00	3.25	YES	
L0008875	0	0.60470E-07	481079.1	3770754.0	379.6	3.49	4.00	3.25	YES	
L0008876	0	0.60470E-07	481087.7	3770753.9	379.9	3.49	4.00	3.25	YES	
L0008877	0	0.60470E-07	481096.3	3770753.9	380.0	3.49	4.00	3.25	YES	
L0008878	0	0.60470E-07	481104.9	3770753.8	380.0	3.49	4.00	3.25	YES	
L0008879	0	0.60470E-07	481113.5	3770753.8	380.0	3.49	4.00	3.25	YES	
L0008880	0	0.60470E-07	481122.0	3770753.8	380.0	3.49	4.00	3.25	YES	
L0008881	0	0.60470E-07	481130.6	3770753.7	380.0	3.49	4.00	3.25	YES	
L0008882	0	0.60470E-07	481139.2	3770753.7	380.0	3.49	4.00	3.25	YES	
L0008883	0	0.60470E-07	481147.8	3770753.7	380.0	3.49	4.00	3.25	YES	
L0008884	0	0.60470E-07	481156.4	3770753.6	380.2	3.49	4.00	3.25	YES	
L0008885	0	0.60470E-07	481165.0	3770753.6	380.5	3.49	4.00	3.25	YES	
L0008886	0	0.60470E-07	481173.6	3770753.6	380.8	3.49	4.00	3.25	YES	
L0008887	0	0.60470E-07	481182.2	3770753.5	381.1	3.49	4.00	3.25	YES	
L0008888	0	0.60470E-07	481190.8	3770753.5	381.4	3.49	4.00	3.25	YES	
L0008889	0	0.60470E-07	481199.4	3770753.5	381.7	3.49	4.00	3.25	YES	
L0008890	0	0.60470E-07	481207.9	3770753.4	381.9	3.49	4.00	3.25	YES	
L0008891	0	0.60470E-07	481216.5	3770753.4	382.0	3.49	4.00	3.25	YES	
L0008892	0	0.60470E-07	481225.1	3770753.3	382.0	3.49	4.00	3.25	YES	
L0008893	0	0.60470E-07	481233.7	3770753.3	382.0	3.49	4.00	3.25	YES	
L0008894	0	0.60470E-07	481242.3	3770753.3	382.0	3.49	4.00	3.25	YES	
L0008895	0	0.60470E-07	481250.9	3770753.2	382.0	3.49	4.00	3.25	YES	
L0008896	0	0.60470E-07	481259.5	3770753.2	382.0	3.49	4.00	3.25	YES	
L0008897	0	0.60470E-07	481268.1	3770753.2	382.0	3.49	4.00	3.25	YES	
L0008898	0	0.60470E-07	481276.7	3770753.1	382.2	3.49	4.00	3.25	YES	
L0008899	0	0.60470E-07	481285.3	3770753.1	382.5	3.49	4.00	3.25	YES	
L0008900	0	0.60470E-07	481293.8	3770753.1	382.8	3.49	4.00	3.25	YES	
L0008901	0	0.60470E-07	481302.4	3770753.0	383.0	3.49	4.00	3.25	YES	
L0008902	0	0.60470E-07	481311.0	3770753.0	383.0	3.49	4.00	3.25	YES	
L0008903	0	0.60470E-07	481319.6	3770753.0	383.0	3.49	4.00	3.25	YES	
L0008904	0	0.60470E-07	481328.2	3770752.9	383.0	3.49	4.00	3.25	YES	
L0008905	0	0.60470E-07	481336.8	3770752.9	383.2	3.49	4.00	3.25	YES	
L0008906	0	0.60470E-07	481345.4	3770752.8	383.5	3.49	4.00	3.25	YES	
L0008907	0	0.60470E-07	481354.0	3770752.8	383.8	3.49	4.00	3.25	YES	
L0008908	0	0.60470E-07	481362.6	3770752.8	384.0	3.49	4.00	3.25	YES	
L0008909	0	0.60470E-07	481371.2	3770752.7	384.0	3.49	4.00	3.25	YES	
L0008910	0	0.60470E-07	481379.7	3770752.7	384.0	3.49	4.00	3.25	YES	
L0008911	0	0.60470E-07	481388.3	3770752.7	384.0	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0008912	0	0.36750E-07	479139.8	3771569.7	352.0	3.49	4.00	3.25	YES	
L0008913	0	0.36750E-07	479139.7	3771561.1	352.0	3.49	4.00	3.25	YES	
L0008914	0	0.36750E-07	479139.6	3771552.5	352.0	3.49	4.00	3.25	YES	
L0008915	0	0.36750E-07	479139.5	3771543.9	352.0	3.49	4.00	3.25	YES	
L0008916	0	0.36750E-07	479139.4	3771535.3	352.0	3.49	4.00	3.25	YES	
L0008917	0	0.36750E-07	479139.3	3771526.7	352.0	3.49	4.00	3.25	YES	
L0008918	0	0.36750E-07	479139.2	3771518.1	352.0	3.49	4.00	3.25	YES	
L0008919	0	0.36750E-07	479139.1	3771509.6	352.0	3.49	4.00	3.25	YES	
L0008920	0	0.36750E-07	479139.0	3771501.0	352.0	3.49	4.00	3.25	YES	
L0008921	0	0.36750E-07	479138.9	3771492.4	352.0	3.49	4.00	3.25	YES	
L0008922	0	0.36750E-07	479138.8	3771483.8	352.0	3.49	4.00	3.25	YES	
L0008923	0	0.36750E-07	479138.7	3771475.2	352.0	3.49	4.00	3.25	YES	
L0008924	0	0.36750E-07	479138.6	3771466.6	352.0	3.49	4.00	3.25	YES	
L0008925	0	0.36750E-07	479138.5	3771458.0	352.0	3.49	4.00	3.25	YES	
L0008926	0	0.36750E-07	479138.4	3771449.4	352.0	3.49	4.00	3.25	YES	
L0008927	0	0.36750E-07	479138.3	3771440.8	352.0	3.49	4.00	3.25	YES	
L0008928	0	0.36750E-07	479138.2	3771432.2	352.0	3.49	4.00	3.25	YES	
L0008929	0	0.36750E-07	479138.1	3771423.7	352.0	3.49	4.00	3.25	YES	
L0008930	0	0.36750E-07	479138.0	3771415.1	352.0	3.49	4.00	3.25	YES	
L0008931	0	0.36750E-07	479137.9	3771406.5	352.0	3.49	4.00	3.25	YES	
L0008932	0	0.36750E-07	479137.8	3771397.9	352.0	3.49	4.00	3.25	YES	
L0008933	0	0.36750E-07	479137.7	3771389.3	352.0	3.49	4.00	3.25	YES	
L0008934	0	0.36750E-07	479137.6	3771380.7	352.0	3.49	4.00	3.25	YES	
L0008935	0	0.36750E-07	479137.5	3771372.1	352.0	3.49	4.00	3.25	YES	
L0008936	0	0.36750E-07	479137.4	3771363.5	352.0	3.49	4.00	3.25	YES	
L0008937	0	0.36750E-07	479137.3	3771354.9	352.0	3.49	4.00	3.25	YES	
L0008938	0	0.36750E-07	479137.2	3771346.4	352.0	3.49	4.00	3.25	YES	
L0008939	0	0.36750E-07	479137.1	3771337.8	352.0	3.49	4.00	3.25	YES	
L0008940	0	0.36750E-07	479137.0	3771329.2	352.0	3.49	4.00	3.25	YES	
L0008941	0	0.36750E-07	479136.9	3771320.6	352.0	3.49	4.00	3.25	YES	
L0008942	0	0.36750E-07	479136.8	3771312.0	352.0	3.49	4.00	3.25	YES	
L0008943	0	0.36750E-07	479136.7	3771303.4	352.0	3.49	4.00	3.25	YES	
L0008944	0	0.36750E-07	479136.6	3771294.8	352.0	3.49	4.00	3.25	YES	
L0008945	0	0.36750E-07	479136.5	3771286.2	352.0	3.49	4.00	3.25	YES	
L0008946	0	0.36750E-07	479136.4	3771277.6	352.0	3.49	4.00	3.25	YES	
L0008947	0	0.36750E-07	479136.3	3771269.1	352.0	3.49	4.00	3.25	YES	
L0008948	0	0.36750E-07	479136.2	3771260.5	352.0	3.49	4.00	3.25	YES	
L0008949	0	0.36750E-07	479136.1	3771251.9	352.0	3.49	4.00	3.25	YES	
L0008950	0	0.36750E-07	479136.0	3771243.3	352.0	3.49	4.00	3.25	YES	
L0008951	0	0.36750E-07	479135.9	3771234.7	352.0	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0008952	0	0.36750E-07	479135.8	3771226.1	352.0	3.49	4.00	3.25	YES	
L0008953	0	0.36750E-07	479135.7	3771217.5	352.0	3.49	4.00	3.25	YES	
L0008954	0	0.36750E-07	479135.6	3771208.9	352.0	3.49	4.00	3.25	YES	
L0008955	0	0.36750E-07	479135.5	3771200.3	352.0	3.49	4.00	3.25	YES	
L0008956	0	0.36750E-07	479135.4	3771191.7	352.0	3.49	4.00	3.25	YES	
L0008957	0	0.36750E-07	479135.3	3771183.2	352.0	3.49	4.00	3.25	YES	
L0008958	0	0.36750E-07	479135.2	3771174.6	352.0	3.49	4.00	3.25	YES	
L0008959	0	0.36750E-07	479135.1	3771166.0	352.0	3.49	4.00	3.25	YES	
L0008960	0	0.36750E-07	479135.0	3771157.4	352.0	3.49	4.00	3.25	YES	
L0008961	0	0.36750E-07	479135.0	3771148.8	352.0	3.49	4.00	3.25	YES	
L0008962	0	0.36750E-07	479134.9	3771140.2	352.0	3.49	4.00	3.25	YES	
L0008963	0	0.36750E-07	479134.8	3771131.6	352.0	3.49	4.00	3.25	YES	
L0008964	0	0.36750E-07	479134.7	3771123.0	352.0	3.49	4.00	3.25	YES	
L0008965	0	0.36750E-07	479134.6	3771114.4	352.0	3.49	4.00	3.25	YES	
L0008966	0	0.36750E-07	479134.5	3771105.9	352.0	3.49	4.00	3.25	YES	
L0008967	0	0.36750E-07	479134.4	3771097.3	352.0	3.49	4.00	3.25	YES	
L0008968	0	0.36750E-07	479134.3	3771088.7	352.0	3.49	4.00	3.25	YES	
L0008969	0	0.36750E-07	479134.2	3771080.1	352.0	3.49	4.00	3.25	YES	
L0008970	0	0.36750E-07	479134.1	3771071.5	352.0	3.49	4.00	3.25	YES	
L0008971	0	0.36750E-07	479134.0	3771062.9	352.0	3.49	4.00	3.25	YES	
L0008972	0	0.36750E-07	479133.9	3771054.3	352.0	3.49	4.00	3.25	YES	
L0008973	0	0.36750E-07	479133.8	3771045.7	352.0	3.49	4.00	3.25	YES	
L0008974	0	0.36750E-07	479133.7	3771037.1	352.0	3.49	4.00	3.25	YES	
L0008975	0	0.36750E-07	479133.6	3771028.5	352.0	3.49	4.00	3.25	YES	
L0008976	0	0.36750E-07	479133.5	3771020.0	352.0	3.49	4.00	3.25	YES	
L0008977	0	0.36750E-07	479133.4	3771011.4	352.0	3.49	4.00	3.25	YES	
L0008978	0	0.36750E-07	479133.3	3771002.8	352.0	3.49	4.00	3.25	YES	
L0008979	0	0.36750E-07	479133.2	3770994.2	352.0	3.49	4.00	3.25	YES	
L0008980	0	0.36750E-07	479133.1	3770985.6	352.0	3.49	4.00	3.25	YES	
L0008981	0	0.36750E-07	479133.0	3770977.0	352.2	3.49	4.00	3.25	YES	
L0008982	0	0.36750E-07	479132.9	3770968.4	352.5	3.49	4.00	3.25	YES	
L0008983	0	0.36750E-07	479132.8	3770959.8	352.7	3.49	4.00	3.25	YES	
L0008984	0	0.36750E-07	479132.7	3770951.2	352.8	3.49	4.00	3.25	YES	
L0008985	0	0.36750E-07	479132.6	3770942.7	352.8	3.49	4.00	3.25	YES	
L0008986	0	0.36750E-07	479132.5	3770934.1	352.8	3.49	4.00	3.25	YES	
L0008987	0	0.36750E-07	479132.4	3770925.5	352.8	3.49	4.00	3.25	YES	
L0008988	0	0.36750E-07	479132.3	3770916.9	352.8	3.49	4.00	3.25	YES	
L0008989	0	0.36750E-07	479132.2	3770908.3	352.7	3.49	4.00	3.25	YES	
L0008990	0	0.36750E-07	479132.1	3770899.7	352.7	3.49	4.00	3.25	YES	
L0008991	0	0.36750E-07	479132.0	3770891.1	352.7	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0008992	0	0.36750E-07	479131.9	3770882.5	352.7	3.49	4.00	3.25	YES	
L0008993	0	0.36750E-07	479131.8	3770873.9	352.7	3.49	4.00	3.25	YES	
L0008994	0	0.36750E-07	479131.7	3770865.3	352.7	3.49	4.00	3.25	YES	
L0008995	0	0.36750E-07	479131.6	3770856.8	352.7	3.49	4.00	3.25	YES	
L0008996	0	0.36750E-07	479131.5	3770848.2	352.7	3.49	4.00	3.25	YES	
L0008997	0	0.36750E-07	479131.4	3770839.6	352.7	3.49	4.00	3.25	YES	
L0008998	0	0.36750E-07	479131.3	3770831.0	352.8	3.49	4.00	3.25	YES	
L0008999	0	0.36750E-07	479131.2	3770822.4	352.9	3.49	4.00	3.25	YES	
L0009000	0	0.36750E-07	479131.1	3770813.8	352.9	3.49	4.00	3.25	YES	
L0009001	0	0.36750E-07	479131.0	3770805.2	353.0	3.49	4.00	3.25	YES	
L0009002	0	0.36750E-07	479130.9	3770796.6	353.0	3.49	4.00	3.25	YES	
L0009003	0	0.36750E-07	479130.8	3770788.0	353.0	3.49	4.00	3.25	YES	
L0009004	0	0.36750E-07	479130.7	3770779.5	353.0	3.49	4.00	3.25	YES	
L0009005	0	0.36750E-07	479130.6	3770770.9	353.0	3.49	4.00	3.25	YES	
L0009006	0	0.36750E-07	479130.5	3770762.3	353.0	3.49	4.00	3.25	YES	
L0009007	0	0.36750E-07	479130.4	3770753.7	353.0	3.49	4.00	3.25	YES	
L0009008	0	0.36750E-07	479130.3	3770745.1	353.0	3.49	4.00	3.25	YES	
L0009009	0	0.36750E-07	479130.2	3770736.5	353.0	3.49	4.00	3.25	YES	
L0009010	0	0.36750E-07	479130.1	3770727.9	353.0	3.49	4.00	3.25	YES	
L0009011	0	0.36750E-07	479130.0	3770719.3	353.0	3.49	4.00	3.25	YES	
L0009012	0	0.36750E-07	479130.0	3770710.7	353.0	3.49	4.00	3.25	YES	
L0009013	0	0.36750E-07	479129.9	3770702.1	353.0	3.49	4.00	3.25	YES	
L0009014	0	0.36750E-07	479129.8	3770693.6	353.0	3.49	4.00	3.25	YES	
L0009015	0	0.36750E-07	479129.7	3770685.0	353.0	3.49	4.00	3.25	YES	
L0009016	0	0.36750E-07	479129.6	3770676.4	353.0	3.49	4.00	3.25	YES	
L0009017	0	0.36750E-07	479129.5	3770667.8	353.0	3.49	4.00	3.25	YES	
L0009018	0	0.36750E-07	479129.4	3770659.2	353.0	3.49	4.00	3.25	YES	
L0009019	0	0.36750E-07	479129.3	3770650.6	353.0	3.49	4.00	3.25	YES	
L0009020	0	0.36750E-07	479129.2	3770642.0	353.0	3.49	4.00	3.25	YES	
L0009021	0	0.36750E-07	479129.1	3770633.4	353.0	3.49	4.00	3.25	YES	
L0009022	0	0.36750E-07	479129.0	3770624.8	353.0	3.49	4.00	3.25	YES	
L0009023	0	0.36750E-07	479128.9	3770616.3	353.0	3.49	4.00	3.25	YES	
L0009024	0	0.36750E-07	479128.8	3770607.7	353.0	3.49	4.00	3.25	YES	
L0009025	0	0.36750E-07	479128.7	3770599.1	353.0	3.49	4.00	3.25	YES	
L0009026	0	0.36750E-07	479128.6	3770590.5	353.1	3.49	4.00	3.25	YES	
L0009027	0	0.36750E-07	479128.5	3770581.9	353.3	3.49	4.00	3.25	YES	
L0009028	0	0.36750E-07	479128.4	3770573.3	353.5	3.49	4.00	3.25	YES	
L0009029	0	0.36750E-07	479128.3	3770564.7	353.6	3.49	4.00	3.25	YES	
L0009030	0	0.36750E-07	479128.2	3770556.1	353.7	3.49	4.00	3.25	YES	
L0009031	0	0.36750E-07	479128.1	3770547.5	353.9	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0009032	0	0.36750E-07	479128.0	3770538.9	354.0	3.49	4.00	3.25	YES	
L0009033	0	0.36750E-07	479127.9	3770530.4	354.0	3.49	4.00	3.25	YES	
L0009034	0	0.36750E-07	479127.8	3770521.8	354.0	3.49	4.00	3.25	YES	
L0009035	0	0.36750E-07	479127.7	3770513.2	354.0	3.49	4.00	3.25	YES	
L0009036	0	0.36750E-07	479127.6	3770504.6	354.0	3.49	4.00	3.25	YES	
L0009037	0	0.36750E-07	479127.5	3770496.0	354.0	3.49	4.00	3.25	YES	
L0009038	0	0.36750E-07	479127.4	3770487.4	354.0	3.49	4.00	3.25	YES	
L0009039	0	0.36750E-07	479127.3	3770478.8	354.0	3.49	4.00	3.25	YES	
L0009040	0	0.36750E-07	479127.2	3770470.2	354.0	3.49	4.00	3.25	YES	
L0009041	0	0.36750E-07	479127.1	3770461.6	354.0	3.49	4.00	3.25	YES	
L0009042	0	0.36750E-07	479127.0	3770453.1	354.0	3.49	4.00	3.25	YES	
L0009043	0	0.36750E-07	479126.9	3770444.5	354.0	3.49	4.00	3.25	YES	
L0009044	0	0.36750E-07	479126.8	3770435.9	354.0	3.49	4.00	3.25	YES	
L0009045	0	0.36750E-07	479126.7	3770427.3	354.0	3.49	4.00	3.25	YES	
L0009046	0	0.36750E-07	479126.6	3770418.7	354.0	3.49	4.00	3.25	YES	
L0009047	0	0.36750E-07	479126.5	3770410.1	354.0	3.49	4.00	3.25	YES	
L0009048	0	0.36750E-07	479126.4	3770401.5	354.0	3.49	4.00	3.25	YES	
L0009049	0	0.36750E-07	479126.3	3770392.9	354.0	3.49	4.00	3.25	YES	
L0009050	0	0.36750E-07	479126.2	3770384.3	354.0	3.49	4.00	3.25	YES	
L0009051	0	0.36750E-07	479126.1	3770375.7	354.0	3.49	4.00	3.25	YES	
L0009052	0	0.36750E-07	479126.2	3770367.2	354.0	3.49	4.00	3.25	YES	
L0009053	0	0.36750E-07	479126.2	3770358.6	354.0	3.49	4.00	3.25	YES	
L0009054	0	0.36750E-07	479126.3	3770350.0	354.0	3.49	4.00	3.25	YES	
L0009055	0	0.36750E-07	479126.4	3770341.4	354.0	3.49	4.00	3.25	YES	
L0009056	0	0.36750E-07	479126.4	3770332.8	354.0	3.49	4.00	3.25	YES	
L0009057	0	0.36750E-07	479126.5	3770324.2	354.0	3.49	4.00	3.25	YES	
L0009058	0	0.36750E-07	479126.5	3770315.6	353.8	3.49	4.00	3.25	YES	
L0009059	0	0.36750E-07	479126.6	3770307.0	353.7	3.49	4.00	3.25	YES	
L0009060	0	0.36750E-07	479126.7	3770298.4	353.6	3.49	4.00	3.25	YES	
L0009061	0	0.36750E-07	479126.7	3770289.9	353.4	3.49	4.00	3.25	YES	
L0009062	0	0.36750E-07	479126.8	3770281.3	353.3	3.49	4.00	3.25	YES	
L0009063	0	0.36750E-07	479126.8	3770272.7	353.1	3.49	4.00	3.25	YES	
L0009064	0	0.36750E-07	479126.9	3770264.1	353.0	3.49	4.00	3.25	YES	
L0009065	0	0.36750E-07	479127.0	3770255.5	353.0	3.49	4.00	3.25	YES	
L0009066	0	0.36750E-07	479127.0	3770246.9	353.0	3.49	4.00	3.25	YES	
L0009067	0	0.36750E-07	479127.1	3770238.3	353.0	3.49	4.00	3.25	YES	
L0009068	0	0.36750E-07	479127.1	3770229.7	353.0	3.49	4.00	3.25	YES	
L0009069	0	0.36750E-07	479127.2	3770221.1	353.0	3.49	4.00	3.25	YES	
L0009070	0	0.36750E-07	479127.2	3770212.5	353.0	3.49	4.00	3.25	YES	
L0009071	0	0.36750E-07	479127.3	3770204.0	353.0	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0009072	0	0.36750E-07	479127.4	3770195.4	353.0	3.49	4.00	3.25	YES	
L0009073	0	0.36750E-07	479127.4	3770186.8	353.0	3.49	4.00	3.25	YES	
L0009074	0	0.36750E-07	479127.5	3770178.2	353.0	3.49	4.00	3.25	YES	
L0009075	0	0.36750E-07	479127.5	3770169.6	353.0	3.49	4.00	3.25	YES	
L0009076	0	0.36750E-07	479127.6	3770161.0	353.0	3.49	4.00	3.25	YES	
L0009077	0	0.36750E-07	479127.7	3770152.4	353.0	3.49	4.00	3.25	YES	
L0009078	0	0.36750E-07	479127.7	3770143.8	353.0	3.49	4.00	3.25	YES	
L0009079	0	0.36750E-07	479127.8	3770135.2	353.0	3.49	4.00	3.25	YES	
L0009080	0	0.36750E-07	479127.8	3770126.6	353.0	3.49	4.00	3.25	YES	
L0009081	0	0.36750E-07	479127.9	3770118.1	353.0	3.49	4.00	3.25	YES	
L0009082	0	0.36750E-07	479128.0	3770109.5	353.0	3.49	4.00	3.25	YES	
L0009083	0	0.36750E-07	479128.0	3770100.9	353.0	3.49	4.00	3.25	YES	
L0009084	0	0.36750E-07	479128.1	3770092.3	353.0	3.49	4.00	3.25	YES	
L0009085	0	0.36750E-07	479128.1	3770083.7	353.0	3.49	4.00	3.25	YES	
L0009086	0	0.36750E-07	479128.2	3770075.1	353.0	3.49	4.00	3.25	YES	
L0009087	0	0.36750E-07	479128.3	3770066.5	353.0	3.49	4.00	3.25	YES	
L0009088	0	0.36750E-07	479128.3	3770057.9	353.0	3.49	4.00	3.25	YES	
L0009089	0	0.36750E-07	479128.4	3770049.3	353.0	3.49	4.00	3.25	YES	
L0009090	0	0.36750E-07	479128.4	3770040.7	353.0	3.49	4.00	3.25	YES	
L0009091	0	0.36750E-07	479128.5	3770032.2	353.0	3.49	4.00	3.25	YES	
L0009092	0	0.36750E-07	479128.6	3770023.6	353.0	3.49	4.00	3.25	YES	
L0009093	0	0.36750E-07	479128.6	3770015.0	353.0	3.49	4.00	3.25	YES	
L0009094	0	0.36750E-07	479128.7	3770006.4	353.0	3.49	4.00	3.25	YES	
L0009095	0	0.36750E-07	479128.7	3769997.8	353.0	3.49	4.00	3.25	YES	
L0009096	0	0.36750E-07	479128.8	3769989.2	353.0	3.49	4.00	3.25	YES	
L0009097	0	0.36750E-07	479128.9	3769980.6	353.0	3.49	4.00	3.25	YES	
L0009098	0	0.36750E-07	479128.9	3769972.0	353.0	3.49	4.00	3.25	YES	
L0009099	0	0.36750E-07	479129.0	3769963.4	353.0	3.49	4.00	3.25	YES	
L0009100	0	0.36750E-07	479129.0	3769954.8	353.0	3.49	4.00	3.25	YES	
L0009101	0	0.36750E-07	479129.1	3769946.3	353.0	3.49	4.00	3.25	YES	
L0009102	0	0.36750E-07	479129.1	3769937.7	353.0	3.49	4.00	3.25	YES	
L0009103	0	0.36750E-07	479129.2	3769929.1	353.2	3.49	4.00	3.25	YES	
L0009104	0	0.36750E-07	479129.3	3769920.5	353.3	3.49	4.00	3.25	YES	
L0009105	0	0.36750E-07	479129.3	3769911.9	353.5	3.49	4.00	3.25	YES	
L0009106	0	0.36750E-07	479129.4	3769903.3	353.7	3.49	4.00	3.25	YES	
L0009107	0	0.36750E-07	479129.4	3769894.7	353.8	3.49	4.00	3.25	YES	
L0009108	0	0.36750E-07	479129.5	3769886.1	353.9	3.49	4.00	3.25	YES	
L0009109	0	0.36750E-07	479129.6	3769877.5	354.0	3.49	4.00	3.25	YES	
L0009110	0	0.36750E-07	479129.6	3769869.0	354.0	3.49	4.00	3.25	YES	
L0009111	0	0.36750E-07	479129.7	3769860.4	354.0	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0009112	0	0.36750E-07	479129.7	3769851.8	354.0	3.49	4.00	3.25	YES	
L0009113	0	0.36750E-07	479129.8	3769843.2	354.0	3.49	4.00	3.25	YES	
L0009114	0	0.36750E-07	479129.9	3769834.6	354.0	3.49	4.00	3.25	YES	
L0009115	0	0.36750E-07	479129.9	3769826.0	354.0	3.49	4.00	3.25	YES	
L0009116	0	0.36750E-07	479130.0	3769817.4	354.0	3.49	4.00	3.25	YES	
L0009117	0	0.36750E-07	479130.0	3769808.8	354.0	3.49	4.00	3.25	YES	
L0009118	0	0.36750E-07	479130.1	3769800.2	354.0	3.49	4.00	3.25	YES	
L0009119	0	0.36750E-07	479130.2	3769791.6	354.0	3.49	4.00	3.25	YES	
L0009120	0	0.36750E-07	479130.2	3769783.1	354.0	3.49	4.00	3.25	YES	
L0009121	0	0.36750E-07	479130.3	3769774.5	354.0	3.49	4.00	3.25	YES	
L0009122	0	0.36750E-07	479130.3	3769765.9	354.0	3.49	4.00	3.25	YES	
L0009123	0	0.36750E-07	479130.4	3769757.3	354.0	3.49	4.00	3.25	YES	
L0009124	0	0.36750E-07	479130.5	3769748.7	354.0	3.49	4.00	3.25	YES	
L0009125	0	0.36750E-07	479130.5	3769740.1	354.0	3.49	4.00	3.25	YES	
L0009126	0	0.36750E-07	479130.6	3769731.5	354.0	3.49	4.00	3.25	YES	
L0009127	0	0.36750E-07	479130.6	3769722.9	354.0	3.49	4.00	3.25	YES	
L0009128	0	0.36750E-07	479130.7	3769714.3	354.0	3.49	4.00	3.25	YES	
L0009129	0	0.36750E-07	479130.8	3769705.7	354.0	3.49	4.00	3.25	YES	
L0009130	0	0.36750E-07	479130.8	3769697.2	354.0	3.49	4.00	3.25	YES	
L0009131	0	0.36750E-07	479130.9	3769688.6	354.2	3.49	4.00	3.25	YES	
L0009132	0	0.36750E-07	479130.9	3769680.0	354.4	3.49	4.00	3.25	YES	
L0009133	0	0.36750E-07	479131.0	3769671.4	354.6	3.49	4.00	3.25	YES	
L0009134	0	0.36750E-07	479131.1	3769662.8	354.7	3.49	4.00	3.25	YES	
L0009135	0	0.36750E-07	479131.1	3769654.2	354.8	3.49	4.00	3.25	YES	
L0009136	0	0.36750E-07	479131.2	3769645.6	354.9	3.49	4.00	3.25	YES	
L0009137	0	0.36750E-07	479131.2	3769637.0	355.0	3.49	4.00	3.25	YES	
L0009138	0	0.36750E-07	479131.3	3769628.4	355.6	3.49	4.00	3.25	YES	
L0009139	0	0.36750E-07	479131.3	3769619.8	356.3	3.49	4.00	3.25	YES	
L0009140	0	0.81000E-07	480742.6	3774121.5	363.4	3.49	4.00	3.25	YES	
L0009141	0	0.81000E-07	480742.7	3774112.9	363.4	3.49	4.00	3.25	YES	
L0009142	0	0.81000E-07	480742.7	3774104.3	363.4	3.49	4.00	3.25	YES	
L0009143	0	0.81000E-07	480742.8	3774095.7	363.4	3.49	4.00	3.25	YES	
L0009144	0	0.81000E-07	480742.9	3774087.1	363.4	3.49	4.00	3.25	YES	
L0009145	0	0.81000E-07	480743.0	3774078.5	363.4	3.49	4.00	3.25	YES	
L0009146	0	0.81000E-07	480743.1	3774069.9	363.6	3.49	4.00	3.25	YES	
L0009147	0	0.81000E-07	480743.2	3774061.3	363.7	3.49	4.00	3.25	YES	
L0009148	0	0.81000E-07	480743.2	3774052.7	363.9	3.49	4.00	3.25	YES	
L0009149	0	0.81000E-07	480743.3	3774044.2	364.0	3.49	4.00	3.25	YES	
L0009150	0	0.81000E-07	480743.4	3774035.6	364.0	3.49	4.00	3.25	YES	
L0009151	0	0.81000E-07	480743.5	3774027.0	364.0	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0009152	0	0.81000E-07	480743.6	3774018.4	364.0	3.49	4.00	3.25	YES	
L0009153	0	0.81000E-07	480743.7	3774009.8	364.1	3.49	4.00	3.25	YES	
L0009154	0	0.81000E-07	480743.7	3774001.2	364.2	3.49	4.00	3.25	YES	
L0009155	0	0.81000E-07	480743.8	3773992.6	364.4	3.49	4.00	3.25	YES	
L0009156	0	0.81000E-07	480743.9	3773984.0	364.5	3.49	4.00	3.25	YES	
L0009157	0	0.81000E-07	480744.0	3773975.4	364.7	3.49	4.00	3.25	YES	
L0009158	0	0.81000E-07	480744.1	3773966.8	364.8	3.49	4.00	3.25	YES	
L0009159	0	0.81000E-07	480744.1	3773958.3	365.0	3.49	4.00	3.25	YES	
L0009160	0	0.81000E-07	480744.2	3773949.7	365.1	3.49	4.00	3.25	YES	
L0009161	0	0.81000E-07	480744.3	3773941.1	365.2	3.49	4.00	3.25	YES	
L0009162	0	0.81000E-07	480744.4	3773932.5	365.4	3.49	4.00	3.25	YES	
L0009163	0	0.81000E-07	480744.5	3773923.9	365.5	3.49	4.00	3.25	YES	
L0009164	0	0.81000E-07	480744.6	3773915.3	365.5	3.49	4.00	3.25	YES	
L0009165	0	0.81000E-07	480744.6	3773906.7	365.5	3.49	4.00	3.25	YES	
L0009166	0	0.81000E-07	480744.7	3773898.1	365.5	3.49	4.00	3.25	YES	
L0009167	0	0.81000E-07	480744.8	3773889.5	365.5	3.49	4.00	3.25	YES	
L0009168	0	0.81000E-07	480744.9	3773881.0	365.5	3.49	4.00	3.25	YES	
L0009169	0	0.81000E-07	480745.0	3773872.4	365.5	3.49	4.00	3.25	YES	
L0009170	0	0.81000E-07	480745.0	3773863.8	365.5	3.49	4.00	3.25	YES	
L0009171	0	0.81000E-07	480745.1	3773855.2	365.5	3.49	4.00	3.25	YES	
L0009172	0	0.81000E-07	480745.2	3773846.6	365.5	3.49	4.00	3.25	YES	
L0009173	0	0.81000E-07	480745.3	3773838.0	365.5	3.49	4.00	3.25	YES	
L0009174	0	0.81000E-07	480745.4	3773829.4	365.5	3.49	4.00	3.25	YES	
L0009175	0	0.81000E-07	480745.5	3773820.8	365.5	3.49	4.00	3.25	YES	
L0009176	0	0.81000E-07	480745.5	3773812.2	365.5	3.49	4.00	3.25	YES	
L0009177	0	0.81000E-07	480745.6	3773803.6	365.5	3.49	4.00	3.25	YES	
L0009178	0	0.81000E-07	480745.7	3773795.1	365.5	3.49	4.00	3.25	YES	
L0009179	0	0.81000E-07	480745.8	3773786.5	365.5	3.49	4.00	3.25	YES	
L0009180	0	0.81000E-07	480745.9	3773777.9	365.5	3.49	4.00	3.25	YES	
L0009181	0	0.81000E-07	480746.0	3773769.3	365.5	3.49	4.00	3.25	YES	
L0009182	0	0.81000E-07	480746.0	3773760.7	365.5	3.49	4.00	3.25	YES	
L0009183	0	0.81000E-07	480746.1	3773752.1	365.5	3.49	4.00	3.25	YES	
L0009184	0	0.81000E-07	480746.2	3773743.5	365.5	3.49	4.00	3.25	YES	
L0009185	0	0.81000E-07	480746.3	3773734.9	365.6	3.49	4.00	3.25	YES	
L0009186	0	0.81000E-07	480746.4	3773726.3	365.6	3.49	4.00	3.25	YES	
L0009187	0	0.81000E-07	480746.4	3773717.7	365.6	3.49	4.00	3.25	YES	
L0009188	0	0.81000E-07	480746.5	3773709.2	365.6	3.49	4.00	3.25	YES	
L0009189	0	0.81000E-07	480746.6	3773700.6	365.6	3.49	4.00	3.25	YES	
L0009190	0	0.81000E-07	480746.7	3773692.0	365.6	3.49	4.00	3.25	YES	
L0009191	0	0.81000E-07	480746.8	3773683.4	365.6	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0009192	0	0.81000E-07	480746.9	3773674.8	365.6	3.49	4.00	3.25	YES	
L0009193	0	0.81000E-07	480746.9	3773666.2	365.6	3.49	4.00	3.25	YES	
L0009194	0	0.81000E-07	480747.0	3773657.6	365.6	3.49	4.00	3.25	YES	
L0009195	0	0.81000E-07	480747.1	3773649.0	365.6	3.49	4.00	3.25	YES	
L0009196	0	0.81000E-07	480747.2	3773640.4	365.6	3.49	4.00	3.25	YES	
L0009197	0	0.81000E-07	480747.3	3773631.9	365.6	3.49	4.00	3.25	YES	
L0009198	0	0.81000E-07	480747.4	3773623.3	365.5	3.49	4.00	3.25	YES	
L0009199	0	0.81000E-07	480747.4	3773614.7	365.2	3.49	4.00	3.25	YES	
L0009200	0	0.81000E-07	480747.5	3773606.1	364.9	3.49	4.00	3.25	YES	
L0009201	0	0.81000E-07	480747.6	3773597.5	364.6	3.49	4.00	3.25	YES	
L0009202	0	0.81000E-07	480747.7	3773588.9	364.4	3.49	4.00	3.25	YES	
L0009203	0	0.81000E-07	480747.8	3773580.3	364.3	3.49	4.00	3.25	YES	
L0009204	0	0.81000E-07	480747.8	3773571.7	364.1	3.49	4.00	3.25	YES	
L0009205	0	0.81000E-07	480747.9	3773563.1	364.0	3.49	4.00	3.25	YES	
L0009206	0	0.81000E-07	480748.0	3773554.5	363.9	3.49	4.00	3.25	YES	
L0009207	0	0.81000E-07	480748.1	3773546.0	363.7	3.49	4.00	3.25	YES	
L0009208	0	0.81000E-07	480748.2	3773537.4	363.6	3.49	4.00	3.25	YES	
L0009209	0	0.81000E-07	480748.3	3773528.8	363.5	3.49	4.00	3.25	YES	
L0009210	0	0.81000E-07	480748.3	3773520.2	363.3	3.49	4.00	3.25	YES	
L0009211	0	0.81000E-07	480748.4	3773511.6	363.1	3.49	4.00	3.25	YES	
L0009212	0	0.81000E-07	480748.5	3773503.0	363.0	3.49	4.00	3.25	YES	
L0009213	0	0.81000E-07	480748.5	3773494.4	362.9	3.49	4.00	3.25	YES	
L0009214	0	0.81000E-07	480748.5	3773485.8	362.7	3.49	4.00	3.25	YES	
L0009215	0	0.81000E-07	480748.6	3773477.2	362.6	3.49	4.00	3.25	YES	
L0009216	0	0.81000E-07	480748.6	3773468.6	362.6	3.49	4.00	3.25	YES	
L0009217	0	0.81000E-07	480748.6	3773460.1	362.6	3.49	4.00	3.25	YES	
L0009218	0	0.81000E-07	480748.6	3773451.5	362.6	3.49	4.00	3.25	YES	
L0009219	0	0.81000E-07	480748.6	3773442.9	362.6	3.49	4.00	3.25	YES	
L0009220	0	0.81000E-07	480748.7	3773434.3	362.4	3.49	4.00	3.25	YES	
L0009221	0	0.81000E-07	480748.7	3773425.7	362.2	3.49	4.00	3.25	YES	
L0009222	0	0.81000E-07	480748.7	3773417.1	362.0	3.49	4.00	3.25	YES	
L0009223	0	0.81000E-07	480748.7	3773408.5	362.0	3.49	4.00	3.25	YES	
L0009224	0	0.81000E-07	480748.8	3773399.9	362.0	3.49	4.00	3.25	YES	
L0009225	0	0.81000E-07	480748.8	3773391.3	362.0	3.49	4.00	3.25	YES	
L0009226	0	0.81000E-07	480748.8	3773382.8	362.0	3.49	4.00	3.25	YES	
L0009227	0	0.81000E-07	480748.8	3773374.2	362.0	3.49	4.00	3.25	YES	
L0009228	0	0.81000E-07	480748.8	3773365.6	362.0	3.49	4.00	3.25	YES	
L0009229	0	0.81000E-07	480748.9	3773357.0	362.0	3.49	4.00	3.25	YES	
L0009230	0	0.81000E-07	480748.9	3773348.4	362.0	3.49	4.00	3.25	YES	
L0009231	0	0.81000E-07	480748.9	3773339.8	362.0	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0009232	0	0.81000E-07	480748.9	3773331.2	362.0	3.49	4.00	3.25	YES	
L0009233	0	0.81000E-07	480749.0	3773322.6	362.0	3.49	4.00	3.25	YES	
L0009234	0	0.81000E-07	480749.0	3773314.0	362.0	3.49	4.00	3.25	YES	
L0009235	0	0.81000E-07	480749.0	3773305.4	362.0	3.49	4.00	3.25	YES	
L0009236	0	0.81000E-07	480749.0	3773296.8	362.0	3.49	4.00	3.25	YES	
L0009237	0	0.81000E-07	480749.0	3773288.3	362.0	3.49	4.00	3.25	YES	
L0009238	0	0.81000E-07	480749.1	3773279.7	362.0	3.49	4.00	3.25	YES	
L0009239	0	0.81000E-07	480749.1	3773271.1	362.0	3.49	4.00	3.25	YES	
L0009240	0	0.81000E-07	480749.1	3773262.5	362.0	3.49	4.00	3.25	YES	
L0009241	0	0.81000E-07	480749.1	3773253.9	362.0	3.49	4.00	3.25	YES	
L0009242	0	0.81000E-07	480749.2	3773245.3	362.0	3.49	4.00	3.25	YES	
L0009243	0	0.81000E-07	480749.2	3773236.7	362.0	3.49	4.00	3.25	YES	
L0009244	0	0.81000E-07	480749.2	3773228.1	362.0	3.49	4.00	3.25	YES	
L0009245	0	0.81000E-07	480749.2	3773219.5	362.0	3.49	4.00	3.25	YES	
L0009246	0	0.81000E-07	480749.2	3773210.9	362.0	3.49	4.00	3.25	YES	
L0009247	0	0.81000E-07	480749.3	3773202.4	362.0	3.49	4.00	3.25	YES	
L0009248	0	0.81000E-07	480749.3	3773193.8	362.0	3.49	4.00	3.25	YES	
L0009249	0	0.81000E-07	480749.3	3773185.2	362.0	3.49	4.00	3.25	YES	
L0009250	0	0.81000E-07	480749.3	3773176.6	362.0	3.49	4.00	3.25	YES	
L0009251	0	0.81000E-07	480749.3	3773168.0	361.9	3.49	4.00	3.25	YES	
L0009252	0	0.81000E-07	480749.4	3773159.4	361.8	3.49	4.00	3.25	YES	
L0009253	0	0.81000E-07	480749.4	3773150.8	361.7	3.49	4.00	3.25	YES	
L0009254	0	0.81000E-07	480749.4	3773142.2	361.7	3.49	4.00	3.25	YES	
L0009255	0	0.81000E-07	480749.4	3773133.6	361.7	3.49	4.00	3.25	YES	
L0009256	0	0.81000E-07	480749.5	3773125.0	361.7	3.49	4.00	3.25	YES	
L0009257	0	0.81000E-07	480749.5	3773116.5	361.7	3.49	4.00	3.25	YES	
L0009258	0	0.81000E-07	480749.5	3773107.9	361.7	3.49	4.00	3.25	YES	
L0009259	0	0.81000E-07	480749.5	3773099.3	361.7	3.49	4.00	3.25	YES	
L0009260	0	0.81000E-07	480749.5	3773090.7	361.7	3.49	4.00	3.25	YES	
L0009261	0	0.81000E-07	480749.6	3773082.1	361.7	3.49	4.00	3.25	YES	
L0009262	0	0.81000E-07	480749.6	3773073.5	361.7	3.49	4.00	3.25	YES	
L0009263	0	0.81000E-07	480749.6	3773064.9	361.7	3.49	4.00	3.25	YES	
L0009264	0	0.81000E-07	480749.6	3773056.3	361.7	3.49	4.00	3.25	YES	
L0009265	0	0.81000E-07	480749.7	3773047.7	361.7	3.49	4.00	3.25	YES	
L0009266	0	0.81000E-07	480749.7	3773039.2	361.7	3.49	4.00	3.25	YES	
L0009267	0	0.81000E-07	480749.7	3773030.6	361.7	3.49	4.00	3.25	YES	
L0009268	0	0.81000E-07	480749.7	3773022.0	361.7	3.49	4.00	3.25	YES	
L0009269	0	0.81000E-07	480749.7	3773013.4	361.7	3.49	4.00	3.25	YES	
L0009270	0	0.81000E-07	480749.8	3773004.8	361.7	3.49	4.00	3.25	YES	
L0009271	0	0.81000E-07	480749.8	3772996.2	361.7	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0009272	0	0.81000E-07	480749.8	3772987.6	361.7	3.49	4.00	3.25	YES	
L0009273	0	0.81000E-07	480749.8	3772979.0	361.7	3.49	4.00	3.25	YES	
L0009274	0	0.81000E-07	480749.8	3772970.4	361.7	3.49	4.00	3.25	YES	
L0009275	0	0.81000E-07	480749.9	3772961.8	361.7	3.49	4.00	3.25	YES	
L0009276	0	0.81000E-07	480749.9	3772953.3	361.7	3.49	4.00	3.25	YES	
L0009277	0	0.81000E-07	480749.9	3772944.7	361.7	3.49	4.00	3.25	YES	
L0009278	0	0.81000E-07	480749.9	3772936.1	361.7	3.49	4.00	3.25	YES	
L0009279	0	0.81000E-07	480750.0	3772927.5	361.7	3.49	4.00	3.25	YES	
L0009280	0	0.81000E-07	480750.0	3772918.9	361.7	3.49	4.00	3.25	YES	
L0009281	0	0.81000E-07	480750.0	3772910.3	361.7	3.49	4.00	3.25	YES	
L0009282	0	0.81000E-07	480750.0	3772901.7	361.7	3.49	4.00	3.25	YES	
L0009283	0	0.81000E-07	480750.0	3772893.1	361.7	3.49	4.00	3.25	YES	
L0009284	0	0.81000E-07	480750.1	3772884.5	361.7	3.49	4.00	3.25	YES	
L0009285	0	0.81000E-07	480750.1	3772875.9	361.7	3.49	4.00	3.25	YES	
L0009286	0	0.81000E-07	480750.1	3772867.4	361.7	3.49	4.00	3.25	YES	
L0009287	0	0.81000E-07	480750.1	3772858.8	361.7	3.49	4.00	3.25	YES	
L0009288	0	0.81000E-07	480750.2	3772850.2	361.7	3.49	4.00	3.25	YES	
L0009289	0	0.81000E-07	480750.2	3772841.6	361.7	3.49	4.00	3.25	YES	
L0009290	0	0.81000E-07	480750.2	3772833.0	361.7	3.49	4.00	3.25	YES	
L0009291	0	0.81000E-07	480750.2	3772824.4	361.7	3.49	4.00	3.25	YES	
L0009292	0	0.81000E-07	480750.2	3772815.8	361.7	3.49	4.00	3.25	YES	
L0009293	0	0.81000E-07	480750.3	3772807.2	361.7	3.49	4.00	3.25	YES	
L0009294	0	0.81000E-07	480750.3	3772798.6	361.7	3.49	4.00	3.25	YES	
L0009295	0	0.81000E-07	480750.3	3772790.0	361.7	3.49	4.00	3.25	YES	
L0009296	0	0.81000E-07	480750.3	3772781.5	361.7	3.49	4.00	3.25	YES	
L0009297	0	0.81000E-07	480750.3	3772772.9	361.7	3.49	4.00	3.25	YES	
L0009298	0	0.81000E-07	480750.4	3772764.3	361.7	3.49	4.00	3.25	YES	
L0009299	0	0.81000E-07	480750.4	3772755.7	361.7	3.49	4.00	3.25	YES	
L0009300	0	0.81000E-07	480750.4	3772747.1	361.7	3.49	4.00	3.25	YES	
L0009301	0	0.81000E-07	480750.4	3772738.5	361.7	3.49	4.00	3.25	YES	
L0009302	0	0.81000E-07	480750.5	3772729.9	361.7	3.49	4.00	3.25	YES	
L0009303	0	0.81000E-07	480750.5	3772721.3	361.7	3.49	4.00	3.25	YES	
L0009304	0	0.81000E-07	480750.5	3772712.7	361.7	3.49	4.00	3.25	YES	
L0009305	0	0.81000E-07	480750.5	3772704.1	361.7	3.49	4.00	3.25	YES	
L0009306	0	0.81000E-07	480750.5	3772695.6	361.7	3.49	4.00	3.25	YES	
L0009307	0	0.81000E-07	480750.6	3772687.0	361.7	3.49	4.00	3.25	YES	
L0009308	0	0.81000E-07	480750.6	3772678.4	361.7	3.49	4.00	3.25	YES	
L0009309	0	0.81000E-07	480750.6	3772669.8	361.7	3.49	4.00	3.25	YES	
L0009310	0	0.81000E-07	480750.6	3772661.2	361.6	3.49	4.00	3.25	YES	
L0009311	0	0.81000E-07	480750.7	3772652.6	361.4	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0009312	0	0.81000E-07	480750.7	3772644.0	361.2	3.49	4.00	3.25	YES	
L0009313	0	0.81000E-07	480750.7	3772635.4	361.0	3.49	4.00	3.25	YES	
L0009314	0	0.81000E-07	480750.7	3772626.8	361.0	3.49	4.00	3.25	YES	
L0009315	0	0.81000E-07	480750.7	3772618.2	361.0	3.49	4.00	3.25	YES	
L0009316	0	0.81000E-07	480750.8	3772609.7	361.0	3.49	4.00	3.25	YES	
L0009317	0	0.81000E-07	480750.8	3772601.1	361.0	3.49	4.00	3.25	YES	
L0009318	0	0.81000E-07	480750.8	3772592.5	361.0	3.49	4.00	3.25	YES	
L0009319	0	0.81000E-07	480750.8	3772583.9	361.0	3.49	4.00	3.25	YES	
L0009320	0	0.81000E-07	480750.9	3772575.3	361.0	3.49	4.00	3.25	YES	
L0009321	0	0.81000E-07	480750.9	3772566.7	360.9	3.49	4.00	3.25	YES	
L0009322	0	0.81000E-07	480750.9	3772558.1	360.8	3.49	4.00	3.25	YES	
L0009323	0	0.81000E-07	480750.9	3772549.5	360.7	3.49	4.00	3.25	YES	
L0009324	0	0.81000E-07	480750.9	3772540.9	360.7	3.49	4.00	3.25	YES	
L0009325	0	0.81000E-07	480751.0	3772532.3	360.7	3.49	4.00	3.25	YES	
L0009326	0	0.81000E-07	480751.0	3772523.8	360.7	3.49	4.00	3.25	YES	
L0009327	0	0.81000E-07	480751.0	3772515.2	360.7	3.49	4.00	3.25	YES	
L0009328	0	0.81000E-07	480751.0	3772506.6	360.5	3.49	4.00	3.25	YES	
L0009329	0	0.81000E-07	480751.0	3772498.0	360.3	3.49	4.00	3.25	YES	
L0009330	0	0.81000E-07	480751.1	3772489.4	360.1	3.49	4.00	3.25	YES	
L0009331	0	0.81000E-07	480751.1	3772480.8	360.1	3.49	4.00	3.25	YES	
L0009332	0	0.81000E-07	480751.1	3772472.2	360.3	3.49	4.00	3.25	YES	
L0009333	0	0.81000E-07	480751.1	3772463.6	360.5	3.49	4.00	3.25	YES	
L0009334	0	0.81000E-07	480751.2	3772455.0	360.7	3.49	4.00	3.25	YES	
L0009335	0	0.81000E-07	480751.2	3772446.4	360.7	3.49	4.00	3.25	YES	
L0009336	0	0.81000E-07	480751.2	3772437.9	360.7	3.49	4.00	3.25	YES	
L0009337	0	0.81000E-07	480751.2	3772429.3	360.7	3.49	4.00	3.25	YES	
L0009338	0	0.81000E-07	480751.2	3772420.7	360.9	3.49	4.00	3.25	YES	
L0009339	0	0.81000E-07	480751.3	3772412.1	361.2	3.49	4.00	3.25	YES	
L0009340	0	0.81000E-07	480751.3	3772403.5	361.5	3.49	4.00	3.25	YES	
L0009341	0	0.81000E-07	480751.3	3772394.9	361.7	3.49	4.00	3.25	YES	
L0009342	0	0.81000E-07	480751.3	3772386.3	361.7	3.49	4.00	3.25	YES	
L0009343	0	0.81000E-07	480751.4	3772377.7	361.7	3.49	4.00	3.25	YES	
L0009344	0	0.81000E-07	480751.4	3772369.1	361.7	3.49	4.00	3.25	YES	
L0009345	0	0.81000E-07	480751.4	3772360.5	361.8	3.49	4.00	3.25	YES	
L0009346	0	0.81000E-07	480751.4	3772352.0	361.9	3.49	4.00	3.25	YES	
L0009347	0	0.81000E-07	480751.4	3772343.4	361.9	3.49	4.00	3.25	YES	
L0009348	0	0.81000E-07	480751.5	3772334.8	362.0	3.49	4.00	3.25	YES	
L0009349	0	0.81000E-07	480751.5	3772326.2	362.2	3.49	4.00	3.25	YES	
L0009350	0	0.81000E-07	480751.5	3772317.6	362.4	3.49	4.00	3.25	YES	
L0009351	0	0.81000E-07	480751.5	3772309.0	362.7	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0009352	0	0.81000E-07	480751.5	3772300.4	362.8	3.49	4.00	3.25	YES	
L0009353	0	0.81000E-07	480751.6	3772291.8	362.9	3.49	4.00	3.25	YES	
L0009354	0	0.81000E-07	480751.6	3772283.2	362.9	3.49	4.00	3.25	YES	
L0009355	0	0.81000E-07	480751.6	3772274.6	363.0	3.49	4.00	3.25	YES	
L0009356	0	0.81000E-07	480751.6	3772266.1	363.0	3.49	4.00	3.25	YES	
L0009357	0	0.81000E-07	480751.7	3772257.5	363.0	3.49	4.00	3.25	YES	
L0009358	0	0.81000E-07	480751.7	3772248.9	363.0	3.49	4.00	3.25	YES	
L0009359	0	0.81000E-07	480751.7	3772240.3	363.2	3.49	4.00	3.25	YES	
L0009360	0	0.81000E-07	480751.7	3772231.7	363.4	3.49	4.00	3.25	YES	
L0009361	0	0.81000E-07	480751.7	3772223.1	363.6	3.49	4.00	3.25	YES	
L0009362	0	0.81000E-07	480751.8	3772214.5	363.7	3.49	4.00	3.25	YES	
L0009363	0	0.81000E-07	480751.8	3772205.9	363.8	3.49	4.00	3.25	YES	
L0009364	0	0.81000E-07	480751.8	3772197.3	363.9	3.49	4.00	3.25	YES	
L0009365	0	0.81000E-07	480751.8	3772188.7	364.0	3.49	4.00	3.25	YES	
L0009366	0	0.81000E-07	480751.9	3772180.2	364.0	3.49	4.00	3.25	YES	
L0009367	0	0.81000E-07	480751.9	3772171.6	364.0	3.49	4.00	3.25	YES	
L0009368	0	0.81000E-07	480751.9	3772163.0	364.0	3.49	4.00	3.25	YES	
L0009369	0	0.81000E-07	480751.9	3772154.4	364.1	3.49	4.00	3.25	YES	
L0009370	0	0.81000E-07	480751.9	3772145.8	364.3	3.49	4.00	3.25	YES	
L0009371	0	0.81000E-07	480752.0	3772137.2	364.5	3.49	4.00	3.25	YES	
L0009372	0	0.81000E-07	480752.0	3772128.6	364.7	3.49	4.00	3.25	YES	
L0009373	0	0.81000E-07	480752.0	3772120.0	364.8	3.49	4.00	3.25	YES	
L0009374	0	0.81000E-07	480752.0	3772111.4	364.9	3.49	4.00	3.25	YES	
L0009375	0	0.81000E-07	480752.0	3772102.8	364.9	3.49	4.00	3.25	YES	
L0009376	0	0.81000E-07	480752.1	3772094.3	365.1	3.49	4.00	3.25	YES	
L0009377	0	0.81000E-07	480752.1	3772085.7	365.3	3.49	4.00	3.25	YES	
L0009378	0	0.81000E-07	480752.1	3772077.1	365.5	3.49	4.00	3.25	YES	
L0009379	0	0.81000E-07	480752.1	3772068.5	365.7	3.49	4.00	3.25	YES	
L0009380	0	0.81000E-07	480752.2	3772059.9	365.9	3.49	4.00	3.25	YES	
L0009381	0	0.81000E-07	480752.2	3772051.3	366.2	3.49	4.00	3.25	YES	
L0009382	0	0.81000E-07	480752.2	3772042.7	366.5	3.49	4.00	3.25	YES	
L0009383	0	0.81000E-07	480752.2	3772034.1	366.9	3.49	4.00	3.25	YES	
L0009384	0	0.81000E-07	480752.2	3772025.5	367.7	3.49	4.00	3.25	YES	
L0009385	0	0.81000E-07	480752.3	3772016.9	368.5	3.49	4.00	3.25	YES	
L0009386	0	0.81000E-07	480752.3	3772008.4	369.3	3.49	4.00	3.25	YES	
L0009387	0	0.81000E-07	480752.3	3771999.8	369.8	3.49	4.00	3.25	YES	
L0009388	0	0.81000E-07	480752.3	3771991.2	370.1	3.49	4.00	3.25	YES	
L0009389	0	0.81000E-07	480752.4	3771982.6	370.5	3.49	4.00	3.25	YES	
L0009390	0	0.81000E-07	480752.4	3771974.0	370.8	3.49	4.00	3.25	YES	
L0009391	0	0.81000E-07	480752.4	3771965.4	370.8	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0009392	0	0.81000E-07	480752.4	3771956.8	370.8	3.49	4.00	3.25	YES	
L0009393	0	0.81000E-07	480752.4	3771948.2	370.8	3.49	4.00	3.25	YES	
L0009394	0	0.81000E-07	480752.5	3771939.6	371.0	3.49	4.00	3.25	YES	
L0009395	0	0.81000E-07	480752.5	3771931.0	371.3	3.49	4.00	3.25	YES	
L0009396	0	0.81000E-07	480752.5	3771922.5	371.6	3.49	4.00	3.25	YES	
L0009397	0	0.81000E-07	480752.5	3771913.9	371.8	3.49	4.00	3.25	YES	
L0009398	0	0.81000E-07	480752.6	3771905.3	371.8	3.49	4.00	3.25	YES	
L0009399	0	0.81000E-07	480752.6	3771896.7	371.8	3.49	4.00	3.25	YES	
L0009400	0	0.81000E-07	480752.6	3771888.1	371.8	3.49	4.00	3.25	YES	
L0009401	0	0.81000E-07	480752.6	3771879.5	371.8	3.49	4.00	3.25	YES	
L0009402	0	0.81000E-07	480752.6	3771870.9	371.8	3.49	4.00	3.25	YES	
L0009403	0	0.81000E-07	480752.7	3771862.3	371.8	3.49	4.00	3.25	YES	
L0009404	0	0.81000E-07	480752.7	3771853.7	371.8	3.49	4.00	3.25	YES	
L0009405	0	0.81000E-07	480752.7	3771845.1	371.8	3.49	4.00	3.25	YES	
L0009406	0	0.81000E-07	480752.7	3771836.6	371.8	3.49	4.00	3.25	YES	
L0009407	0	0.81000E-07	480752.7	3771828.0	371.8	3.49	4.00	3.25	YES	
L0009408	0	0.81000E-07	480752.8	3771819.4	371.8	3.49	4.00	3.25	YES	
L0009409	0	0.61080E-07	480750.9	3771805.7	371.7	3.49	4.00	3.25	YES	
L0009410	0	0.61080E-07	480750.8	3771797.2	371.7	3.49	4.00	3.25	YES	
L0009411	0	0.61080E-07	480750.6	3771788.6	371.7	3.49	4.00	3.25	YES	
L0009412	0	0.61080E-07	480750.5	3771780.0	371.7	3.49	4.00	3.25	YES	
L0009413	0	0.61080E-07	480750.4	3771771.4	371.7	3.49	4.00	3.25	YES	
L0009414	0	0.61080E-07	480750.2	3771762.8	371.7	3.49	4.00	3.25	YES	
L0009415	0	0.61080E-07	480750.1	3771754.2	371.8	3.49	4.00	3.25	YES	
L0009416	0	0.61080E-07	480750.0	3771745.6	371.9	3.49	4.00	3.25	YES	
L0009417	0	0.61080E-07	480749.8	3771737.0	372.0	3.49	4.00	3.25	YES	
L0009418	0	0.61080E-07	480749.7	3771728.4	372.0	3.49	4.00	3.25	YES	
L0009419	0	0.61080E-07	480749.6	3771719.9	372.0	3.49	4.00	3.25	YES	
L0009420	0	0.61080E-07	480749.4	3771711.3	372.0	3.49	4.00	3.25	YES	
L0009421	0	0.61080E-07	480749.3	3771702.7	372.1	3.49	4.00	3.25	YES	
L0009422	0	0.61080E-07	480749.2	3771694.1	372.3	3.49	4.00	3.25	YES	
L0009423	0	0.61080E-07	480749.0	3771685.5	372.4	3.49	4.00	3.25	YES	
L0009424	0	0.61080E-07	480748.9	3771676.9	372.6	3.49	4.00	3.25	YES	
L0009425	0	0.61080E-07	480748.7	3771668.3	372.6	3.49	4.00	3.25	YES	
L0009426	0	0.61080E-07	480748.6	3771659.7	372.6	3.49	4.00	3.25	YES	
L0009427	0	0.61080E-07	480748.5	3771651.1	372.6	3.49	4.00	3.25	YES	
L0009428	0	0.61080E-07	480748.3	3771642.6	372.7	3.49	4.00	3.25	YES	
L0009429	0	0.61080E-07	480748.2	3771634.0	372.8	3.49	4.00	3.25	YES	
L0009430	0	0.61080E-07	480748.1	3771625.4	372.9	3.49	4.00	3.25	YES	
L0009431	0	0.61080E-07	480747.9	3771616.8	373.0	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0009432	0	0.61080E-07	480747.8	3771608.2	373.0	3.49	4.00	3.25	YES	
L0009433	0	0.61080E-07	480747.7	3771599.6	373.0	3.49	4.00	3.25	YES	
L0009434	0	0.61080E-07	480747.5	3771591.0	373.0	3.49	4.00	3.25	YES	
L0009435	0	0.91010E-07	480747.0	3771564.5	373.0	3.49	4.00	3.25	YES	
L0009436	0	0.91010E-07	480747.0	3771555.9	373.0	3.49	4.00	3.25	YES	
L0009437	0	0.91010E-07	480747.0	3771547.3	373.0	3.49	4.00	3.25	YES	
L0009438	0	0.91010E-07	480747.0	3771538.7	373.0	3.49	4.00	3.25	YES	
L0009439	0	0.91010E-07	480746.9	3771530.1	373.0	3.49	4.00	3.25	YES	
L0009440	0	0.91010E-07	480746.9	3771521.5	373.1	3.49	4.00	3.25	YES	
L0009441	0	0.91010E-07	480746.9	3771512.9	373.2	3.49	4.00	3.25	YES	
L0009442	0	0.91010E-07	480746.9	3771504.4	373.4	3.49	4.00	3.25	YES	
L0009443	0	0.91010E-07	480746.8	3771495.8	373.6	3.49	4.00	3.25	YES	
L0009444	0	0.91010E-07	480746.8	3771487.2	373.6	3.49	4.00	3.25	YES	
L0009445	0	0.91010E-07	480746.8	3771478.6	373.6	3.49	4.00	3.25	YES	
L0009446	0	0.91010E-07	480746.8	3771470.0	373.6	3.49	4.00	3.25	YES	
L0009447	0	0.91010E-07	480746.8	3771461.4	373.6	3.49	4.00	3.25	YES	
L0009448	0	0.91010E-07	480746.7	3771452.8	373.6	3.49	4.00	3.25	YES	
L0009449	0	0.91010E-07	480746.7	3771444.2	373.6	3.49	4.00	3.25	YES	
L0009450	0	0.91010E-07	480746.7	3771435.6	373.6	3.49	4.00	3.25	YES	
L0009451	0	0.91010E-07	480746.7	3771427.0	373.6	3.49	4.00	3.25	YES	
L0009452	0	0.91010E-07	480746.6	3771418.5	373.6	3.49	4.00	3.25	YES	
L0009453	0	0.91010E-07	480746.6	3771409.9	373.6	3.49	4.00	3.25	YES	
L0009454	0	0.91010E-07	480746.6	3771401.3	373.6	3.49	4.00	3.25	YES	
L0009455	0	0.91010E-07	480746.6	3771392.7	373.6	3.49	4.00	3.25	YES	
L0009456	0	0.91010E-07	480746.6	3771384.1	373.6	3.49	4.00	3.25	YES	
L0009457	0	0.91010E-07	480746.5	3771375.5	373.6	3.49	4.00	3.25	YES	
L0009458	0	0.91010E-07	480746.5	3771366.9	373.7	3.49	4.00	3.25	YES	
L0009459	0	0.91010E-07	480746.5	3771358.3	373.8	3.49	4.00	3.25	YES	
L0009460	0	0.91010E-07	480746.5	3771349.7	373.9	3.49	4.00	3.25	YES	
L0009461	0	0.91010E-07	480746.5	3771341.1	374.0	3.49	4.00	3.25	YES	
L0009462	0	0.91010E-07	480746.4	3771332.6	374.0	3.49	4.00	3.25	YES	
L0009463	0	0.91010E-07	480746.4	3771324.0	374.0	3.49	4.00	3.25	YES	
L0009464	0	0.91010E-07	480746.4	3771315.4	374.0	3.49	4.00	3.25	YES	
L0009465	0	0.91010E-07	480746.4	3771306.8	374.0	3.49	4.00	3.25	YES	
L0009466	0	0.91010E-07	480746.3	3771298.2	374.0	3.49	4.00	3.25	YES	
L0009467	0	0.91010E-07	480746.3	3771289.6	374.0	3.49	4.00	3.25	YES	
L0009468	0	0.91010E-07	480746.3	3771281.0	374.0	3.49	4.00	3.25	YES	
L0009469	0	0.91010E-07	480746.3	3771272.4	374.0	3.49	4.00	3.25	YES	
L0009470	0	0.91010E-07	480746.3	3771263.8	374.0	3.49	4.00	3.25	YES	
L0009471	0	0.91010E-07	480746.2	3771255.2	374.0	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0009472	0	0.91010E-07	480746.2	3771246.7	374.0	3.49	4.00	3.25	YES	
L0009473	0	0.91010E-07	480746.2	3771238.1	374.0	3.49	4.00	3.25	YES	
L0009474	0	0.91010E-07	480746.2	3771229.5	374.0	3.49	4.00	3.25	YES	
L0009475	0	0.91010E-07	480746.1	3771220.9	374.0	3.49	4.00	3.25	YES	
L0009476	0	0.91010E-07	480746.1	3771212.3	374.0	3.49	4.00	3.25	YES	
L0009477	0	0.91010E-07	480746.1	3771203.7	374.0	3.49	4.00	3.25	YES	
L0009478	0	0.91010E-07	480746.1	3771195.1	374.0	3.49	4.00	3.25	YES	
L0009479	0	0.91010E-07	480746.1	3771186.5	374.0	3.49	4.00	3.25	YES	
L0009480	0	0.91010E-07	480746.0	3771177.9	374.0	3.49	4.00	3.25	YES	
L0009481	0	0.91010E-07	480746.0	3771169.3	374.0	3.49	4.00	3.25	YES	
L0009482	0	0.91010E-07	480746.0	3771160.8	374.0	3.49	4.00	3.25	YES	
L0009483	0	0.91010E-07	480746.0	3771152.2	374.0	3.49	4.00	3.25	YES	
L0009484	0	0.91010E-07	480746.0	3771143.6	374.0	3.49	4.00	3.25	YES	
L0009485	0	0.91010E-07	480745.9	3771135.0	374.0	3.49	4.00	3.25	YES	
L0009486	0	0.91010E-07	480745.9	3771126.4	374.0	3.49	4.00	3.25	YES	
L0009487	0	0.91010E-07	480745.9	3771117.8	374.0	3.49	4.00	3.25	YES	
L0009488	0	0.91010E-07	480745.9	3771109.2	374.0	3.49	4.00	3.25	YES	
L0009489	0	0.91010E-07	480745.8	3771100.6	374.0	3.49	4.00	3.25	YES	
L0009490	0	0.91010E-07	480745.8	3771092.0	374.0	3.49	4.00	3.25	YES	
L0009491	0	0.91010E-07	480745.8	3771083.4	374.0	3.49	4.00	3.25	YES	
L0009492	0	0.91010E-07	480745.8	3771074.9	374.0	3.49	4.00	3.25	YES	
L0009493	0	0.91010E-07	480745.8	3771066.3	374.0	3.49	4.00	3.25	YES	
L0009494	0	0.91010E-07	480745.7	3771057.7	374.0	3.49	4.00	3.25	YES	
L0009495	0	0.91010E-07	480745.7	3771049.1	374.0	3.49	4.00	3.25	YES	
L0009496	0	0.91010E-07	480745.7	3771040.5	374.0	3.49	4.00	3.25	YES	
L0009497	0	0.91010E-07	480745.7	3771031.9	374.0	3.49	4.00	3.25	YES	
L0009498	0	0.91010E-07	480745.6	3771023.3	374.0	3.49	4.00	3.25	YES	
L0009499	0	0.91010E-07	480745.6	3771014.7	374.0	3.49	4.00	3.25	YES	
L0009500	0	0.91010E-07	480745.6	3771006.1	374.0	3.49	4.00	3.25	YES	
L0009501	0	0.91010E-07	480745.6	3770997.5	374.0	3.49	4.00	3.25	YES	
L0009502	0	0.91010E-07	480745.6	3770989.0	374.0	3.49	4.00	3.25	YES	
L0009503	0	0.91010E-07	480745.5	3770980.4	374.0	3.49	4.00	3.25	YES	
L0009504	0	0.91010E-07	480745.5	3770971.8	374.0	3.49	4.00	3.25	YES	
L0009505	0	0.91010E-07	480745.5	3770963.2	374.0	3.49	4.00	3.25	YES	
L0009506	0	0.91010E-07	480745.5	3770954.6	374.0	3.49	4.00	3.25	YES	
L0009507	0	0.91010E-07	480745.5	3770946.0	374.0	3.49	4.00	3.25	YES	
L0009508	0	0.91010E-07	480745.4	3770937.4	374.0	3.49	4.00	3.25	YES	
L0009509	0	0.91010E-07	480745.4	3770928.8	374.0	3.49	4.00	3.25	YES	
L0009510	0	0.91010E-07	480745.4	3770920.2	374.0	3.49	4.00	3.25	YES	
L0009511	0	0.91010E-07	480745.4	3770911.6	374.0	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0009512	0	0.91010E-07	480745.3	3770903.1	374.0	3.49	4.00	3.25	YES	
L0009513	0	0.91010E-07	480745.3	3770894.5	374.0	3.49	4.00	3.25	YES	
L0009514	0	0.91010E-07	480745.3	3770885.9	374.0	3.49	4.00	3.25	YES	
L0009515	0	0.91010E-07	480745.3	3770877.3	374.0	3.49	4.00	3.25	YES	
L0009516	0	0.91010E-07	480745.3	3770868.7	374.0	3.49	4.00	3.25	YES	
L0009517	0	0.91010E-07	480745.2	3770860.1	374.0	3.49	4.00	3.25	YES	
L0009518	0	0.91010E-07	480745.2	3770851.5	374.0	3.49	4.00	3.25	YES	
L0009519	0	0.91010E-07	480745.2	3770842.9	374.0	3.49	4.00	3.25	YES	
L0009520	0	0.91010E-07	480745.2	3770834.3	374.0	3.49	4.00	3.25	YES	
L0009521	0	0.91010E-07	480745.1	3770825.7	374.0	3.49	4.00	3.25	YES	
L0009522	0	0.91010E-07	480745.1	3770817.2	374.0	3.49	4.00	3.25	YES	
L0009523	0	0.91010E-07	480745.1	3770808.6	374.0	3.49	4.00	3.25	YES	
L0009524	0	0.91010E-07	480745.1	3770800.0	374.0	3.49	4.00	3.25	YES	
L0009525	0	0.91010E-07	480745.1	3770791.4	374.0	3.49	4.00	3.25	YES	
L0009526	0	0.91010E-07	480745.0	3770782.8	374.0	3.49	4.00	3.25	YES	
L0009527	0	0.30030E-07	480741.4	3770754.2	374.0	3.49	4.00	3.25	YES	
L0009528	0	0.30030E-07	480741.4	3770745.6	374.0	3.49	4.00	3.25	YES	
L0009529	0	0.30030E-07	480741.4	3770737.0	374.0	3.49	4.00	3.25	YES	
L0009530	0	0.30030E-07	480741.4	3770728.4	374.0	3.49	4.00	3.25	YES	
L0009531	0	0.30030E-07	480741.4	3770719.9	374.0	3.49	4.00	3.25	YES	
L0009532	0	0.30030E-07	480741.4	3770711.3	374.0	3.49	4.00	3.25	YES	
L0009533	0	0.30030E-07	480741.4	3770702.7	374.0	3.49	4.00	3.25	YES	
L0009534	0	0.30030E-07	480741.4	3770694.1	374.0	3.49	4.00	3.25	YES	
L0009535	0	0.30030E-07	480741.4	3770685.5	374.0	3.49	4.00	3.25	YES	
L0009536	0	0.30030E-07	480741.4	3770676.9	374.0	3.49	4.00	3.25	YES	
L0009537	0	0.30030E-07	480741.4	3770668.3	374.0	3.49	4.00	3.25	YES	
L0009538	0	0.30030E-07	480741.4	3770659.7	374.0	3.49	4.00	3.25	YES	
L0009539	0	0.30030E-07	480741.4	3770651.1	374.1	3.49	4.00	3.25	YES	
L0009540	0	0.30030E-07	480741.4	3770642.5	374.2	3.49	4.00	3.25	YES	
L0009541	0	0.30030E-07	480741.4	3770634.0	374.3	3.49	4.00	3.25	YES	
L0009542	0	0.30030E-07	480741.4	3770625.4	374.4	3.49	4.00	3.25	YES	
L0009543	0	0.30030E-07	480741.4	3770616.8	374.4	3.49	4.00	3.25	YES	
L0009544	0	0.30030E-07	480741.4	3770608.2	374.4	3.49	4.00	3.25	YES	
L0009545	0	0.30030E-07	480741.4	3770599.6	374.4	3.49	4.00	3.25	YES	
L0009546	0	0.30030E-07	480741.4	3770591.0	374.4	3.49	4.00	3.25	YES	
L0009547	0	0.30030E-07	480741.4	3770582.4	374.4	3.49	4.00	3.25	YES	
L0009548	0	0.30030E-07	480741.4	3770573.8	374.4	3.49	4.00	3.25	YES	
L0009549	0	0.30030E-07	480741.4	3770565.2	374.4	3.49	4.00	3.25	YES	
L0009550	0	0.30030E-07	480741.4	3770556.6	374.4	3.49	4.00	3.25	YES	
L0009551	0	0.30030E-07	480741.4	3770548.1	374.4	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0009552	0	0.30030E-07	480741.4	3770539.5	374.4	3.49	4.00	3.25	YES	
L0009553	0	0.30030E-07	480741.4	3770530.9	374.4	3.49	4.00	3.25	YES	
L0009554	0	0.30030E-07	480741.4	3770522.3	374.4	3.49	4.00	3.25	YES	
L0009555	0	0.30030E-07	480741.4	3770513.7	374.4	3.49	4.00	3.25	YES	
L0009556	0	0.30030E-07	480741.4	3770505.1	374.4	3.49	4.00	3.25	YES	
L0009557	0	0.30030E-07	480741.4	3770496.5	374.4	3.49	4.00	3.25	YES	
L0009558	0	0.30030E-07	480741.4	3770487.9	374.4	3.49	4.00	3.25	YES	
L0009559	0	0.30030E-07	480741.4	3770479.3	374.4	3.49	4.00	3.25	YES	
L0009560	0	0.30030E-07	480741.4	3770470.7	374.5	3.49	4.00	3.25	YES	
L0009561	0	0.30030E-07	480741.4	3770462.2	374.7	3.49	4.00	3.25	YES	
L0009562	0	0.30030E-07	480741.4	3770453.6	374.9	3.49	4.00	3.25	YES	
L0009563	0	0.30030E-07	480741.4	3770445.0	375.0	3.49	4.00	3.25	YES	
L0009564	0	0.30030E-07	480741.4	3770436.4	375.0	3.49	4.00	3.25	YES	
L0009565	0	0.30030E-07	480741.4	3770427.8	375.0	3.49	4.00	3.25	YES	
L0009566	0	0.30030E-07	480741.4	3770419.2	375.0	3.49	4.00	3.25	YES	
L0009567	0	0.30030E-07	480741.4	3770410.6	375.0	3.49	4.00	3.25	YES	
L0009568	0	0.30030E-07	480741.4	3770402.0	375.0	3.49	4.00	3.25	YES	
L0009569	0	0.30030E-07	480741.4	3770393.4	375.0	3.49	4.00	3.25	YES	
L0009570	0	0.30030E-07	480741.4	3770384.8	375.0	3.49	4.00	3.25	YES	
L0009571	0	0.30030E-07	480741.4	3770376.3	375.1	3.49	4.00	3.25	YES	
L0009572	0	0.30030E-07	480741.4	3770367.7	375.2	3.49	4.00	3.25	YES	
L0009573	0	0.30030E-07	480741.4	3770359.1	375.4	3.49	4.00	3.25	YES	
L0009574	0	0.30030E-07	480741.4	3770350.5	375.4	3.49	4.00	3.25	YES	
L0009575	0	0.30030E-07	480741.4	3770341.9	375.4	3.49	4.00	3.25	YES	
L0009576	0	0.30030E-07	480741.4	3770333.3	375.4	3.49	4.00	3.25	YES	
L0009577	0	0.30030E-07	480741.4	3770324.7	375.4	3.49	4.00	3.25	YES	
L0009578	0	0.30030E-07	480741.4	3770316.1	375.4	3.49	4.00	3.25	YES	
L0009579	0	0.30030E-07	480741.4	3770307.5	375.4	3.49	4.00	3.25	YES	
L0009580	0	0.30030E-07	480741.4	3770298.9	375.4	3.49	4.00	3.25	YES	
L0009581	0	0.30030E-07	480741.4	3770290.4	375.4	3.49	4.00	3.25	YES	
L0009582	0	0.30030E-07	480741.4	3770281.8	375.4	3.49	4.00	3.25	YES	
L0009583	0	0.30030E-07	480741.4	3770273.2	375.4	3.49	4.00	3.25	YES	
L0009584	0	0.30030E-07	480741.4	3770264.6	375.4	3.49	4.00	3.25	YES	
L0009585	0	0.30030E-07	480741.4	3770256.0	375.4	3.49	4.00	3.25	YES	
L0009586	0	0.30030E-07	480741.4	3770247.4	375.4	3.49	4.00	3.25	YES	
L0009587	0	0.30030E-07	480741.4	3770238.8	375.4	3.49	4.00	3.25	YES	
L0009588	0	0.30030E-07	480741.4	3770230.2	375.4	3.49	4.00	3.25	YES	
L0009589	0	0.30030E-07	480741.4	3770221.6	375.4	3.49	4.00	3.25	YES	
L0009590	0	0.30030E-07	480741.4	3770213.0	375.4	3.49	4.00	3.25	YES	
L0009591	0	0.30030E-07	480741.4	3770204.5	375.4	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0009592	0	0.30030E-07	480741.4	3770195.9	375.4	3.49	4.00	3.25	YES	
L0009593	0	0.30030E-07	480741.4	3770187.3	375.4	3.49	4.00	3.25	YES	
L0009594	0	0.30030E-07	480741.4	3770178.7	375.4	3.49	4.00	3.25	YES	
L0009595	0	0.30030E-07	480741.4	3770170.1	375.4	3.49	4.00	3.25	YES	
L0009596	0	0.30030E-07	480741.4	3770161.5	375.4	3.49	4.00	3.25	YES	
L0009597	0	0.30030E-07	480741.4	3770152.9	375.4	3.49	4.00	3.25	YES	
L0009598	0	0.30030E-07	480741.4	3770144.3	375.4	3.49	4.00	3.25	YES	
L0009599	0	0.30030E-07	480741.4	3770135.7	375.4	3.49	4.00	3.25	YES	
L0009600	0	0.30030E-07	480741.4	3770127.1	375.4	3.49	4.00	3.25	YES	
L0009601	0	0.30030E-07	480741.4	3770118.6	375.4	3.49	4.00	3.25	YES	
L0009602	0	0.30030E-07	480741.4	3770110.0	375.4	3.49	4.00	3.25	YES	
L0009603	0	0.30030E-07	480741.4	3770101.4	375.4	3.49	4.00	3.25	YES	
L0009604	0	0.30030E-07	480741.4	3770092.8	375.4	3.49	4.00	3.25	YES	
L0009605	0	0.30030E-07	480741.4	3770084.2	375.4	3.49	4.00	3.25	YES	
L0009606	0	0.30030E-07	480741.4	3770075.6	375.4	3.49	4.00	3.25	YES	
L0009607	0	0.30030E-07	480741.4	3770067.0	375.4	3.49	4.00	3.25	YES	
L0009608	0	0.30030E-07	480741.4	3770058.4	375.4	3.49	4.00	3.25	YES	
L0009609	0	0.30030E-07	480741.4	3770049.8	375.4	3.49	4.00	3.25	YES	
L0009610	0	0.30030E-07	480741.4	3770041.2	375.4	3.49	4.00	3.25	YES	
L0009611	0	0.30030E-07	480741.4	3770032.7	375.4	3.49	4.00	3.25	YES	
L0009612	0	0.30030E-07	480741.4	3770024.1	375.4	3.49	4.00	3.25	YES	
L0009613	0	0.30030E-07	480741.4	3770015.5	375.4	3.49	4.00	3.25	YES	
L0009614	0	0.30030E-07	480741.4	3770006.9	375.4	3.49	4.00	3.25	YES	
L0009615	0	0.30030E-07	480741.4	3769998.3	375.4	3.49	4.00	3.25	YES	
L0009616	0	0.30030E-07	480741.4	3769989.7	375.4	3.49	4.00	3.25	YES	
L0009617	0	0.30030E-07	480741.4	3769981.1	375.4	3.49	4.00	3.25	YES	
L0009618	0	0.30030E-07	480741.4	3769972.5	375.4	3.49	4.00	3.25	YES	
L0009619	0	0.30030E-07	480741.4	3769963.9	375.4	3.49	4.00	3.25	YES	
L0009620	0	0.30030E-07	480741.4	3769955.3	375.4	3.49	4.00	3.25	YES	
L0009621	0	0.30030E-07	480741.4	3769946.8	375.4	3.49	4.00	3.25	YES	
L0009622	0	0.30030E-07	480741.4	3769938.2	375.4	3.49	4.00	3.25	YES	
L0009623	0	0.30030E-07	480741.4	3769929.6	375.4	3.49	4.00	3.25	YES	
L0009624	0	0.30030E-07	480741.4	3769921.0	375.4	3.49	4.00	3.25	YES	
L0009625	0	0.30030E-07	480741.4	3769912.4	375.4	3.49	4.00	3.25	YES	
L0009626	0	0.30030E-07	480741.4	3769903.8	375.4	3.49	4.00	3.25	YES	
L0009627	0	0.30030E-07	480741.4	3769895.2	375.6	3.49	4.00	3.25	YES	
L0009628	0	0.30030E-07	480741.4	3769886.6	375.8	3.49	4.00	3.25	YES	
L0009629	0	0.30030E-07	480741.4	3769878.0	376.0	3.49	4.00	3.25	YES	
L0009630	0	0.30030E-07	480741.4	3769869.4	376.1	3.49	4.00	3.25	YES	
L0009631	0	0.30030E-07	480741.4	3769860.9	376.2	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0009632	0	0.30030E-07	480741.4	3769852.3	376.3	3.49	4.00	3.25	YES	
L0009633	0	0.30030E-07	480741.4	3769843.7	376.5	3.49	4.00	3.25	YES	
L0009634	0	0.30030E-07	480741.4	3769835.1	377.0	3.49	4.00	3.25	YES	
L0009635	0	0.30030E-07	480741.4	3769826.5	377.4	3.49	4.00	3.25	YES	
L0009636	0	0.30030E-07	480741.4	3769817.9	377.9	3.49	4.00	3.25	YES	
L0009637	0	0.30030E-07	480741.4	3769809.3	378.0	3.49	4.00	3.25	YES	
L0009638	0	0.30030E-07	480741.4	3769800.7	378.0	3.49	4.00	3.25	YES	
L0009639	0	0.30030E-07	480741.4	3769792.1	378.0	3.49	4.00	3.25	YES	
L0009640	0	0.30030E-07	480741.4	3769783.5	378.0	3.49	4.00	3.25	YES	
L0009641	0	0.30030E-07	480741.4	3769775.0	378.0	3.49	4.00	3.25	YES	
L0009642	0	0.30030E-07	480741.4	3769766.4	378.0	3.49	4.00	3.25	YES	
L0009643	0	0.30030E-07	480741.4	3769757.8	378.0	3.49	4.00	3.25	YES	
L0009644	0	0.30030E-07	480741.4	3769749.2	378.0	3.49	4.00	3.25	YES	
L0009645	0	0.30030E-07	480741.4	3769740.6	378.0	3.49	4.00	3.25	YES	
L0009646	0	0.30030E-07	480741.4	3769732.0	378.0	3.49	4.00	3.25	YES	
L0009647	0	0.30030E-07	480741.4	3769723.4	378.0	3.49	4.00	3.25	YES	
L0009648	0	0.30030E-07	480741.4	3769714.8	378.0	3.49	4.00	3.25	YES	
L0009649	0	0.30030E-07	480741.4	3769706.2	378.0	3.49	4.00	3.25	YES	
L0009650	0	0.30030E-07	480741.4	3769697.6	378.0	3.49	4.00	3.25	YES	
L0009651	0	0.30030E-07	480741.4	3769689.1	378.0	3.49	4.00	3.25	YES	
L0009652	0	0.30030E-07	480741.4	3769680.5	378.0	3.49	4.00	3.25	YES	
L0009653	0	0.30030E-07	480741.4	3769671.9	378.0	3.49	4.00	3.25	YES	
L0009654	0	0.30030E-07	480741.4	3769663.3	378.0	3.49	4.00	3.25	YES	
L0009655	0	0.30030E-07	480741.4	3769654.7	378.0	3.49	4.00	3.25	YES	
L0009656	0	0.30030E-07	480741.4	3769646.1	378.0	3.49	4.00	3.25	YES	
L0009657	0	0.30030E-07	480741.4	3769637.5	378.0	3.49	4.00	3.25	YES	
L0009658	0	0.34320E-06	480722.6	3771831.4	371.0	3.49	4.00	3.25	YES	
L0009659	0	0.34320E-06	480714.0	3771831.4	371.0	3.49	4.00	3.25	YES	
L0009660	0	0.34320E-06	480705.5	3771831.4	371.0	3.49	4.00	3.25	YES	
L0009661	0	0.34320E-06	480696.9	3771831.4	370.9	3.49	4.00	3.25	YES	
L0009662	0	0.34320E-06	480688.3	3771831.4	370.6	3.49	4.00	3.25	YES	
L0009663	0	0.34320E-06	480679.8	3771830.5	370.3	3.49	4.00	3.25	YES	
L0009664	0	0.34320E-06	480672.2	3771827.7	370.1	3.49	4.00	3.25	YES	
L0009665	0	0.34320E-06	480669.8	3771819.5	370.2	3.49	4.00	3.25	YES	
L0009666	0	0.34320E-06	480669.7	3771810.9	370.5	3.49	4.00	3.25	YES	
L0009667	0	0.34320E-06	480669.6	3771802.3	370.8	3.49	4.00	3.25	YES	
L0009668	0	0.34320E-06	480669.5	3771793.7	371.0	3.49	4.00	3.25	YES	
L0009669	0	0.34320E-06	480669.4	3771785.1	371.0	3.49	4.00	3.25	YES	
L0009670	0	0.34320E-06	480669.3	3771776.5	371.0	3.49	4.00	3.25	YES	
L0009671	0	0.34320E-06	480669.3	3771768.0	371.0	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0009672	0	0.34320E-06	480669.2	3771759.4	371.0	3.49	4.00	3.25	YES	
L0009673	0	0.34320E-06	480669.1	3771750.8	371.0	3.49	4.00	3.25	YES	
L0009674	0	0.34320E-06	480669.0	3771742.2	371.0	3.49	4.00	3.25	YES	
L0009675	0	0.34320E-06	480668.9	3771733.6	371.0	3.49	4.00	3.25	YES	
L0009676	0	0.34320E-06	480668.8	3771725.0	371.0	3.49	4.00	3.25	YES	
L0009677	0	0.34320E-06	480668.7	3771716.4	371.0	3.49	4.00	3.25	YES	
L0009678	0	0.34320E-06	480668.7	3771707.8	371.0	3.49	4.00	3.25	YES	
L0009679	0	0.34320E-06	480668.6	3771699.2	371.0	3.49	4.00	3.25	YES	
L0009680	0	0.34320E-06	480668.5	3771690.7	371.0	3.49	4.00	3.25	YES	
L0009681	0	0.34320E-06	480666.7	3771682.5	371.0	3.49	4.00	3.25	YES	
L0009682	0	0.34320E-06	480659.4	3771679.7	371.0	3.49	4.00	3.25	YES	
L0009683	0	0.34320E-06	480651.2	3771677.5	371.0	3.49	4.00	3.25	YES	
L0009684	0	0.34320E-06	480643.2	3771675.6	371.0	3.49	4.00	3.25	YES	
L0009685	0	0.34320E-06	480634.7	3771677.1	370.8	3.49	4.00	3.25	YES	
L0009686	0	0.34320E-06	480627.7	3771680.2	370.6	3.49	4.00	3.25	YES	
L0009687	0	0.34320E-06	480625.5	3771688.5	370.5	3.49	4.00	3.25	YES	
L0009688	0	0.34320E-06	480623.3	3771696.8	370.4	3.49	4.00	3.25	YES	
L0009689	0	0.34320E-06	480623.4	3771705.4	370.4	3.49	4.00	3.25	YES	
L0009690	0	0.34320E-06	480623.7	3771713.9	370.5	3.49	4.00	3.25	YES	
L0009691	0	0.34320E-06	480624.0	3771722.5	370.5	3.49	4.00	3.25	YES	
L0009692	0	0.34320E-06	480624.3	3771731.1	370.5	3.49	4.00	3.25	YES	
L0009693	0	0.34320E-06	480624.6	3771739.7	370.4	3.49	4.00	3.25	YES	
L0009694	0	0.34320E-06	480624.9	3771748.3	370.3	3.49	4.00	3.25	YES	
L0009695	0	0.34320E-06	480625.1	3771756.9	370.2	3.49	4.00	3.25	YES	
L0009696	0	0.34320E-06	480625.4	3771765.4	370.0	3.49	4.00	3.25	YES	
L0009697	0	0.34320E-06	480625.7	3771774.0	370.0	3.49	4.00	3.25	YES	
L0009698	0	0.34320E-06	480626.0	3771782.6	370.0	3.49	4.00	3.25	YES	
L0009699	0	0.34320E-06	480626.3	3771791.2	370.0	3.49	4.00	3.25	YES	
L0009700	0	0.34320E-06	480626.6	3771799.8	370.0	3.49	4.00	3.25	YES	
L0009701	0	0.34320E-06	480626.9	3771808.4	370.0	3.49	4.00	3.25	YES	
L0009702	0	0.34320E-06	480627.1	3771817.0	370.0	3.49	4.00	3.25	YES	
L0009703	0	0.34320E-06	480627.4	3771825.5	370.0	3.49	4.00	3.25	YES	
L0009704	0	0.34320E-06	480627.7	3771834.1	369.9	3.49	4.00	3.25	YES	
L0009705	0	0.34320E-06	480628.0	3771842.7	369.8	3.49	4.00	3.25	YES	
L0009706	0	0.34320E-06	480628.3	3771851.3	369.7	3.49	4.00	3.25	YES	
L0009707	0	0.34320E-06	480628.6	3771859.9	369.6	3.49	4.00	3.25	YES	
L0009708	0	0.34320E-06	480628.9	3771868.5	369.4	3.49	4.00	3.25	YES	
L0009709	0	0.34320E-06	480629.1	3771877.1	369.2	3.49	4.00	3.25	YES	
L0009710	0	0.34320E-06	480629.4	3771885.6	369.0	3.49	4.00	3.25	YES	
L0009711	0	0.34320E-06	480629.7	3771894.2	369.0	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0009712	0	0.34320E-06	480630.0	3771902.8	369.0	3.49	4.00	3.25	YES	
L0009713	0	0.34320E-06	480630.3	3771911.4	369.0	3.49	4.00	3.25	YES	
L0009714	0	0.34320E-06	480630.6	3771920.0	368.9	3.49	4.00	3.25	YES	
L0009715	0	0.34320E-06	480630.9	3771928.6	368.6	3.49	4.00	3.25	YES	
L0009716	0	0.34320E-06	480631.1	3771937.2	368.3	3.49	4.00	3.25	YES	
L0009717	0	0.34320E-06	480631.4	3771945.7	368.0	3.49	4.00	3.25	YES	
L0009718	0	0.34320E-06	480631.7	3771954.3	368.0	3.49	4.00	3.25	YES	
L0009719	0	0.34320E-06	480632.0	3771962.9	368.0	3.49	4.00	3.25	YES	
L0009720	0	0.34320E-06	480632.3	3771971.5	368.0	3.49	4.00	3.25	YES	
L0009721	0	0.34320E-06	480632.6	3771980.1	367.9	3.49	4.00	3.25	YES	
L0009722	0	0.34320E-06	480632.9	3771988.7	367.6	3.49	4.00	3.25	YES	
L0009723	0	0.34320E-06	480635.1	3771996.2	367.3	3.49	4.00	3.25	YES	
L0009724	0	0.34320E-06	480642.6	3772000.1	367.2	3.49	4.00	3.25	YES	
L0009725	0	0.34320E-06	480650.8	3772002.9	367.1	3.49	4.00	3.25	YES	
L0009726	0	0.34320E-06	480659.4	3772002.7	367.1	3.49	4.00	3.25	YES	
L0009727	0	0.34320E-06	480667.9	3772002.3	367.1	3.49	4.00	3.25	YES	
L0009728	0	0.34320E-06	480675.6	3771998.5	367.4	3.49	4.00	3.25	YES	
L0009729	0	0.34320E-06	480678.6	3771990.6	367.8	3.49	4.00	3.25	YES	
L0009730	0	0.34320E-06	480679.3	3771982.1	368.1	3.49	4.00	3.25	YES	
L0009731	0	0.34320E-06	480679.1	3771973.6	368.4	3.49	4.00	3.25	YES	
L0009732	0	0.34320E-06	480678.9	3771965.0	368.7	3.49	4.00	3.25	YES	
L0009733	0	0.34320E-06	480678.7	3771956.4	369.0	3.49	4.00	3.25	YES	
L0009734	0	0.34320E-06	480678.5	3771947.8	369.2	3.49	4.00	3.25	YES	
L0009735	0	0.34320E-06	480678.3	3771939.2	369.4	3.49	4.00	3.25	YES	
L0009736	0	0.34320E-06	480678.1	3771930.6	369.7	3.49	4.00	3.25	YES	
L0009737	0	0.34320E-06	480677.9	3771922.0	369.9	3.49	4.00	3.25	YES	
L0009738	0	0.34320E-06	480677.7	3771913.4	370.0	3.49	4.00	3.25	YES	
L0009739	0	0.34320E-06	480677.5	3771904.9	370.0	3.49	4.00	3.25	YES	
L0009740	0	0.34320E-06	480677.3	3771896.3	370.0	3.49	4.00	3.25	YES	
L0009741	0	0.34320E-06	480677.1	3771887.7	370.0	3.49	4.00	3.25	YES	
L0009742	0	0.34320E-06	480676.9	3771879.1	370.1	3.49	4.00	3.25	YES	
L0009743	0	0.34320E-06	480676.7	3771870.5	370.1	3.49	4.00	3.25	YES	
L0009744	0	0.34320E-06	480676.1	3771862.2	370.2	3.49	4.00	3.25	YES	
L0009745	0	0.14510E-06	480268.2	3771598.7	366.0	3.49	4.00	3.25	YES	
L0009746	0	0.14510E-06	480268.2	3771607.3	366.0	3.49	4.00	3.25	YES	
L0009747	0	0.14510E-06	480268.2	3771615.8	366.0	3.49	4.00	3.25	YES	
L0009748	0	0.14510E-06	480268.2	3771624.4	365.9	3.49	4.00	3.25	YES	
L0009749	0	0.14510E-06	480268.2	3771633.0	365.8	3.49	4.00	3.25	YES	
L0009750	0	0.14510E-06	480268.2	3771641.6	365.7	3.49	4.00	3.25	YES	
L0009751	0	0.14510E-06	480268.2	3771650.2	365.6	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0009752	0	0.14510E-06	480268.2	3771658.8	365.6	3.49	4.00	3.25	YES	
L0009753	0	0.14510E-06	480268.2	3771667.4	365.6	3.49	4.00	3.25	YES	
L0009754	0	0.14510E-06	480269.6	3771675.7	365.7	3.49	4.00	3.25	YES	
L0009755	0	0.14510E-06	480274.9	3771681.3	365.8	3.49	4.00	3.25	YES	
L0009756	0	0.14510E-06	480283.2	3771682.9	366.0	3.49	4.00	3.25	YES	
L0009757	0	0.14510E-06	480291.8	3771682.9	366.0	3.49	4.00	3.25	YES	
L0009758	0	0.14510E-06	480300.4	3771682.9	366.0	3.49	4.00	3.25	YES	
L0009759	0	0.14510E-06	480309.0	3771682.9	366.0	3.49	4.00	3.25	YES	
L0009760	0	0.14510E-06	480317.6	3771682.9	366.3	3.49	4.00	3.25	YES	
L0009761	0	0.14510E-06	480326.2	3771682.9	366.5	3.49	4.00	3.25	YES	
L0009762	0	0.14510E-06	480334.8	3771682.9	366.8	3.49	4.00	3.25	YES	
L0009763	0	0.14510E-06	480343.4	3771682.9	367.0	3.49	4.00	3.25	YES	
L0009764	0	0.14510E-06	480352.0	3771682.9	367.0	3.49	4.00	3.25	YES	
L0009765	0	0.14510E-06	480358.1	3771687.8	367.0	3.49	4.00	3.25	YES	
L0009766	0	0.14510E-06	480359.5	3771696.3	367.0	3.49	4.00	3.25	YES	
L0009767	0	0.19580E-06	480623.6	3772018.7	366.6	3.49	4.00	3.25	YES	
L0009768	0	0.19580E-06	480616.9	3772024.1	366.4	3.49	4.00	3.25	YES	
L0009769	0	0.19580E-06	480610.2	3772029.5	366.2	3.49	4.00	3.25	YES	
L0009770	0	0.19580E-06	480603.5	3772034.8	366.1	3.49	4.00	3.25	YES	
L0009771	0	0.19580E-06	480596.8	3772040.2	366.0	3.49	4.00	3.25	YES	
L0009772	0	0.19580E-06	480590.1	3772045.6	366.0	3.49	4.00	3.25	YES	
L0009773	0	0.19580E-06	480583.4	3772051.0	366.0	3.49	4.00	3.25	YES	
L0009774	0	0.19580E-06	480576.7	3772056.3	366.0	3.49	4.00	3.25	YES	
L0009775	0	0.19580E-06	480569.9	3772061.7	366.1	3.49	4.00	3.25	YES	
L0009776	0	0.19580E-06	480563.2	3772067.1	366.0	3.49	4.00	3.25	YES	
L0009777	0	0.19580E-06	480556.5	3772072.4	366.0	3.49	4.00	3.25	YES	
L0009778	0	0.19580E-06	480549.5	3772076.8	366.0	3.49	4.00	3.25	YES	
L0009779	0	0.19580E-06	480540.9	3772077.0	366.0	3.49	4.00	3.25	YES	
L0009780	0	0.19580E-06	480532.3	3772077.2	366.0	3.49	4.00	3.25	YES	
L0009781	0	0.19580E-06	480523.7	3772077.4	366.0	3.49	4.00	3.25	YES	
L0009782	0	0.19580E-06	480515.1	3772077.6	365.9	3.49	4.00	3.25	YES	
L0009783	0	0.19580E-06	480506.5	3772077.8	365.8	3.49	4.00	3.25	YES	
L0009784	0	0.19580E-06	480497.9	3772078.0	365.7	3.49	4.00	3.25	YES	
L0009785	0	0.19580E-06	480489.3	3772078.2	365.6	3.49	4.00	3.25	YES	
L0009786	0	0.19580E-06	480480.8	3772078.4	365.7	3.49	4.00	3.25	YES	
L0009787	0	0.19580E-06	480472.2	3772078.6	365.8	3.49	4.00	3.25	YES	
L0009788	0	0.19580E-06	480463.6	3772078.8	365.9	3.49	4.00	3.25	YES	
L0009789	0	0.19580E-06	480455.0	3772079.1	366.0	3.49	4.00	3.25	YES	
L0009790	0	0.19580E-06	480446.4	3772079.3	366.0	3.49	4.00	3.25	YES	
L0009791	0	0.19580E-06	480437.8	3772079.5	366.0	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0009792	0	0.19580E-06	480429.2	3772079.7	366.0	3.49	4.00	3.25	YES	
L0009793	0	0.19580E-06	480420.6	3772079.9	366.0	3.49	4.00	3.25	YES	
L0009794	0	0.19580E-06	480412.1	3772080.1	366.0	3.49	4.00	3.25	YES	
L0009795	0	0.19580E-06	480403.5	3772080.3	366.0	3.49	4.00	3.25	YES	
L0009796	0	0.19580E-06	480394.9	3772080.5	365.9	3.49	4.00	3.25	YES	
L0009797	0	0.19580E-06	480386.3	3772080.7	365.8	3.49	4.00	3.25	YES	
L0009798	0	0.19580E-06	480377.7	3772080.9	365.6	3.49	4.00	3.25	YES	
L0009799	0	0.19580E-06	480369.1	3772081.1	365.5	3.49	4.00	3.25	YES	
L0009800	0	0.19580E-06	480365.9	3772075.7	365.6	3.49	4.00	3.25	YES	
L0009801	0	0.19580E-06	480365.8	3772067.1	365.8	3.49	4.00	3.25	YES	
L0009802	0	0.19580E-06	480365.7	3772058.6	365.9	3.49	4.00	3.25	YES	
L0009803	0	0.19580E-06	480365.6	3772050.0	365.9	3.49	4.00	3.25	YES	
L0009804	0	0.19580E-06	480365.6	3772041.4	365.9	3.49	4.00	3.25	YES	
L0009805	0	0.19580E-06	480365.5	3772032.8	365.9	3.49	4.00	3.25	YES	
L0009806	0	0.19580E-06	480365.4	3772024.2	365.9	3.49	4.00	3.25	YES	
L0009807	0	0.19580E-06	480365.3	3772015.6	365.9	3.49	4.00	3.25	YES	
L0009808	0	0.19580E-06	480365.2	3772007.0	365.8	3.49	4.00	3.25	YES	
L0009809	0	0.19580E-06	480365.1	3771998.4	365.9	3.49	4.00	3.25	YES	
L0009810	0	0.19580E-06	480365.0	3771989.8	365.9	3.49	4.00	3.25	YES	
L0009811	0	0.19580E-06	480364.9	3771981.2	366.0	3.49	4.00	3.25	YES	
L0009812	0	0.19580E-06	480364.8	3771972.7	366.0	3.49	4.00	3.25	YES	
L0009813	0	0.19580E-06	480364.7	3771964.1	366.0	3.49	4.00	3.25	YES	
L0009814	0	0.19580E-06	480364.6	3771955.5	366.0	3.49	4.00	3.25	YES	
L0009815	0	0.19580E-06	480364.5	3771946.9	366.0	3.49	4.00	3.25	YES	
L0009816	0	0.19580E-06	480364.4	3771938.3	366.0	3.49	4.00	3.25	YES	
L0009817	0	0.19580E-06	480364.3	3771929.7	366.0	3.49	4.00	3.25	YES	
L0009818	0	0.19580E-06	480364.2	3771921.1	366.0	3.49	4.00	3.25	YES	
L0009819	0	0.19580E-06	480364.1	3771912.5	366.1	3.49	4.00	3.25	YES	
L0009820	0	0.19580E-06	480364.0	3771903.9	366.3	3.49	4.00	3.25	YES	
L0009821	0	0.19580E-06	480363.9	3771895.4	366.6	3.49	4.00	3.25	YES	
L0009822	0	0.19580E-06	480363.8	3771886.8	366.8	3.49	4.00	3.25	YES	
L0009823	0	0.19580E-06	480363.7	3771878.2	366.8	3.49	4.00	3.25	YES	
L0009824	0	0.19580E-06	480363.6	3771869.6	366.8	3.49	4.00	3.25	YES	
L0009825	0	0.19580E-06	480363.5	3771861.0	366.8	3.49	4.00	3.25	YES	
L0009826	0	0.19580E-06	480363.4	3771852.4	366.8	3.49	4.00	3.25	YES	
L0009827	0	0.19580E-06	480363.3	3771843.8	366.8	3.49	4.00	3.25	YES	
L0009828	0	0.19580E-06	480363.2	3771835.2	366.8	3.49	4.00	3.25	YES	
L0009829	0	0.19580E-06	480363.1	3771826.6	366.8	3.49	4.00	3.25	YES	
L0009830	0	0.19580E-06	480363.0	3771818.1	366.8	3.49	4.00	3.25	YES	
L0009831	0	0.19580E-06	480362.9	3771809.5	366.8	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0009832	0	0.19580E-06	480362.8	3771800.9	366.8	3.49	4.00	3.25	YES	
L0009833	0	0.19580E-06	480362.7	3771792.3	366.8	3.49	4.00	3.25	YES	
L0009834	0	0.19580E-06	480362.6	3771783.7	366.9	3.49	4.00	3.25	YES	
L0009835	0	0.19580E-06	480362.5	3771775.1	366.9	3.49	4.00	3.25	YES	
L0009836	0	0.19580E-06	480362.4	3771766.5	367.0	3.49	4.00	3.25	YES	
L0009837	0	0.19580E-06	480362.3	3771757.9	367.0	3.49	4.00	3.25	YES	
L0009838	0	0.19580E-06	480362.2	3771749.3	367.0	3.49	4.00	3.25	YES	
L0009839	0	0.19580E-06	480362.1	3771740.7	367.0	3.49	4.00	3.25	YES	
L0009840	0	0.19580E-06	480362.0	3771732.2	367.0	3.49	4.00	3.25	YES	
L0009841	0	0.19580E-06	480361.9	3771723.6	367.0	3.49	4.00	3.25	YES	
L0009842	0	0.19580E-06	480361.8	3771715.0	367.0	3.49	4.00	3.25	YES	
L0009843	0	0.14140E-05	480394.9	3772053.7	366.0	3.49	4.00	3.25	YES	
L0009844	0	0.14140E-05	480394.9	3772045.2	366.0	3.49	4.00	3.25	YES	
L0009845	0	0.14140E-05	480394.8	3772036.6	366.0	3.49	4.00	3.25	YES	
L0009846	0	0.14140E-05	480394.8	3772028.0	366.0	3.49	4.00	3.25	YES	
L0009847	0	0.14140E-05	480394.7	3772019.4	366.0	3.49	4.00	3.25	YES	
L0009848	0	0.14140E-05	480394.7	3772010.8	366.0	3.49	4.00	3.25	YES	
L0009849	0	0.14140E-05	480394.6	3772002.2	366.0	3.49	4.00	3.25	YES	
L0009850	0	0.14140E-05	480394.6	3771993.6	366.0	3.49	4.00	3.25	YES	
L0009851	0	0.14140E-05	480394.6	3771985.0	366.0	3.49	4.00	3.25	YES	
L0009852	0	0.14140E-05	480394.5	3771976.4	366.0	3.49	4.00	3.25	YES	
L0009853	0	0.14140E-05	480394.5	3771967.8	366.2	3.49	4.00	3.25	YES	
L0009854	0	0.14140E-05	480394.4	3771959.3	366.5	3.49	4.00	3.25	YES	
L0009855	0	0.14140E-05	480394.4	3771950.7	366.7	3.49	4.00	3.25	YES	
L0009856	0	0.14140E-05	480394.4	3771942.1	366.8	3.49	4.00	3.25	YES	
L0009857	0	0.14140E-05	480394.3	3771933.5	366.8	3.49	4.00	3.25	YES	
L0009858	0	0.14140E-05	480394.3	3771924.9	366.8	3.49	4.00	3.25	YES	
L0009859	0	0.14140E-05	480394.2	3771916.3	366.8	3.49	4.00	3.25	YES	
L0009860	0	0.14140E-05	480394.2	3771907.7	366.9	3.49	4.00	3.25	YES	
L0009861	0	0.14140E-05	480394.2	3771899.1	366.9	3.49	4.00	3.25	YES	
L0009862	0	0.14140E-05	480394.1	3771890.5	367.0	3.49	4.00	3.25	YES	
L0009863	0	0.14140E-05	480394.1	3771881.9	367.0	3.49	4.00	3.25	YES	
L0009864	0	0.14140E-05	480394.0	3771873.4	367.0	3.49	4.00	3.25	YES	
L0009865	0	0.14140E-05	480394.0	3771864.8	367.0	3.49	4.00	3.25	YES	
L0009866	0	0.14140E-05	480394.0	3771856.2	367.0	3.49	4.00	3.25	YES	
L0009867	0	0.14140E-05	480393.9	3771847.6	367.0	3.49	4.00	3.25	YES	
L0009868	0	0.14140E-05	480393.9	3771839.0	367.0	3.49	4.00	3.25	YES	
L0009869	0	0.14140E-05	480393.8	3771830.4	367.0	3.49	4.00	3.25	YES	
L0009870	0	0.14140E-05	480393.8	3771821.8	367.0	3.49	4.00	3.25	YES	
L0009871	0	0.14140E-05	480393.7	3771813.2	367.0	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0009872	0	0.14140E-05	480393.7	3771804.6	367.0	3.49	4.00	3.25	YES	
L0009873	0	0.14140E-05	480393.7	3771796.0	367.0	3.49	4.00	3.25	YES	
L0009874	0	0.14140E-05	480393.6	3771787.5	367.0	3.49	4.00	3.25	YES	
L0009875	0	0.14140E-05	480393.6	3771778.9	367.0	3.49	4.00	3.25	YES	
L0009876	0	0.14140E-05	480393.5	3771770.3	367.0	3.49	4.00	3.25	YES	
L0009877	0	0.14140E-05	480393.5	3771761.7	367.0	3.49	4.00	3.25	YES	
L0009878	0	0.14140E-05	480393.5	3771753.1	367.0	3.49	4.00	3.25	YES	
L0009879	0	0.14140E-05	480393.4	3771744.5	367.0	3.49	4.00	3.25	YES	
L0009880	0	0.14140E-05	480393.4	3771735.9	367.0	3.49	4.00	3.25	YES	
L0009881	0	0.14140E-05	480393.3	3771727.3	367.0	3.49	4.00	3.25	YES	
L0009882	0	0.14140E-05	480393.3	3771718.7	367.0	3.49	4.00	3.25	YES	
L0009883	0	0.14140E-05	480393.3	3771710.1	367.0	3.49	4.00	3.25	YES	
L0009884	0	0.15580E-05	480597.9	3771997.7	367.3	3.49	4.00	3.25	YES	
L0009885	0	0.15580E-05	480597.7	3771989.1	367.6	3.49	4.00	3.25	YES	
L0009886	0	0.15580E-05	480597.5	3771980.6	367.9	3.49	4.00	3.25	YES	
L0009887	0	0.15580E-05	480597.3	3771972.0	368.0	3.49	4.00	3.25	YES	
L0009888	0	0.15580E-05	480597.0	3771963.4	368.0	3.49	4.00	3.25	YES	
L0009889	0	0.15580E-05	480596.8	3771954.8	368.0	3.49	4.00	3.25	YES	
L0009890	0	0.15580E-05	480596.6	3771946.2	368.0	3.49	4.00	3.25	YES	
L0009891	0	0.15580E-05	480596.3	3771937.6	368.2	3.49	4.00	3.25	YES	
L0009892	0	0.15580E-05	480596.1	3771929.0	368.3	3.49	4.00	3.25	YES	
L0009893	0	0.15580E-05	480595.9	3771920.5	368.5	3.49	4.00	3.25	YES	
L0009894	0	0.15580E-05	480595.7	3771911.9	368.6	3.49	4.00	3.25	YES	
L0009895	0	0.15580E-05	480595.4	3771903.3	368.7	3.49	4.00	3.25	YES	
L0009896	0	0.15580E-05	480595.2	3771894.7	368.9	3.49	4.00	3.25	YES	
L0009897	0	0.15580E-05	480595.0	3771886.1	369.0	3.49	4.00	3.25	YES	
L0009898	0	0.15580E-05	480594.7	3771877.5	369.0	3.49	4.00	3.25	YES	
L0009899	0	0.15580E-05	480594.5	3771868.9	369.0	3.49	4.00	3.25	YES	
L0009900	0	0.15580E-05	480594.3	3771860.3	369.0	3.49	4.00	3.25	YES	
L0009901	0	0.15580E-05	480594.1	3771851.8	369.1	3.49	4.00	3.25	YES	
L0009902	0	0.15580E-05	480593.8	3771843.2	369.2	3.49	4.00	3.25	YES	
L0009903	0	0.15580E-05	480593.6	3771834.6	369.3	3.49	4.00	3.25	YES	
L0009904	0	0.15580E-05	480593.4	3771826.0	369.4	3.49	4.00	3.25	YES	
L0009905	0	0.15580E-05	480593.1	3771817.4	369.4	3.49	4.00	3.25	YES	
L0009906	0	0.15580E-05	480592.9	3771808.8	369.4	3.49	4.00	3.25	YES	
L0009907	0	0.15580E-05	480592.7	3771800.2	369.4	3.49	4.00	3.25	YES	
L0009908	0	0.15580E-05	480592.4	3771791.6	369.5	3.49	4.00	3.25	YES	
L0009909	0	0.15580E-05	480592.2	3771783.1	369.7	3.49	4.00	3.25	YES	
L0009910	0	0.15580E-05	480592.0	3771774.5	369.8	3.49	4.00	3.25	YES	
L0009911	0	0.15580E-05	480591.8	3771765.9	370.0	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0009912	0	0.15580E-05	480591.5	3771757.3	370.0	3.49	4.00	3.25	YES	
L0009913	0	0.15580E-05	480591.3	3771748.7	370.0	3.49	4.00	3.25	YES	
L0009914	0	0.15580E-05	480591.1	3771740.1	370.0	3.49	4.00	3.25	YES	
L0009915	0	0.15580E-05	480590.8	3771731.5	370.0	3.49	4.00	3.25	YES	
L0009916	0	0.15580E-05	480590.6	3771723.0	370.0	3.49	4.00	3.25	YES	
L0009917	0	0.15580E-05	480590.4	3771714.4	370.0	3.49	4.00	3.25	YES	
L0009918	0	0.15580E-05	480590.2	3771705.8	370.0	3.49	4.00	3.25	YES	
L0009919	0	0.15580E-05	480589.9	3771697.2	370.0	3.49	4.00	3.25	YES	
L0009920	0	0.15580E-05	480589.7	3771688.6	370.0	3.49	4.00	3.25	YES	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs
ALL	L0008552 , L0008553 , L0008554 , L0008555 , L0008556 , L0008557 , L0008558 , L0008559 ,
	L0008560 , L0008561 , L0008562 , L0008563 , L0008564 , L0008565 , L0008566 , L0008567 ,
	L0008568 , L0008569 , L0008570 , L0008571 , L0008572 , L0008573 , L0008574 , L0008575 ,
	L0008576 , L0008577 , L0008578 , L0008579 , L0008580 , L0008581 , L0008582 , L0008583 ,
	L0008584 , L0008585 , L0008586 , L0008587 , L0008588 , L0008589 , L0008590 , L0008591 ,
	L0008592 , L0008593 , L0008594 , L0008595 , L0008596 , L0008597 , L0008598 , L0008599 ,
	L0008600 , L0008601 , L0008602 , L0008603 , L0008604 , L0008605 , L0008606 , L0008607 ,
	L0008608 , L0008609 , L0008610 , L0008611 , L0008612 , L0008613 , L0008614 , L0008615 ,
	L0008616 , L0008617 , L0008618 , L0008619 , L0008620 , L0008621 , L0008622 , L0008623 ,
	L0008624 , L0008625 , L0008626 , L0008627 , L0008628 , L0008629 , L0008630 , L0008631 ,
	L0008632 , L0008633 , L0008634 , L0008635 , L0008636 , L0008637 , L0008638 , L0008639 ,
	L0008640 , L0008641 , L0008642 , L0008643 , L0008644 , L0008645 , L0008646 , L0008647 ,
	L0008648 , L0008649 , L0008650 , L0008651 , L0008652 , L0008653 , L0008654 , L0008655 ,
	L0008656 , L0008657 , L0008658 , L0008659 , L0008660 , L0008661 , L0008662 , L0008663 ,
	L0008664 , L0008665 , L0008666 , L0008667 , L0008668 , L0008669 , L0008670 , L0008671 ,
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	L0008680 , L0008681 , L0008682 , L0008683 , L0008684 , L0008685 , L0008686 , L0008687 ,
	L0008688 , L0008689 , L0008690 , L0008691 , L0008692 , L0008693 , L0008694 , L0008695 ,
	L0008696 , L0008697 , L0008698 , L0008699 , L0008700 , L0008701 , L0008702 , L0008703 ,
	L0008704 , L0008705 , L0008706 , L0008707 , L0008708 , L0008709 , L0008710 , L0008711 ,

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs
	L0008712 , L0008713 , L0008714 , L0008715 , L0008716 , L0008717 , L0008718 , L0008719 ,
	L0008720 , L0008721 , L0008722 , L0008723 , L0008724 , L0008725 , L0008726 , L0008727 ,
	L0008728 , L0008729 , L0008730 , L0008731 , L0008732 , L0008733 , L0008734 , L0008735 ,
	L0008736 , L0008737 , L0008738 , L0008739 , L0008740 , L0008741 , L0008742 , L0008743 ,
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	L0008856 , L0008857 , L0008858 , L0008859 , L0008860 , L0008861 , L0008862 , L0008863 ,
	L0008864 , L0008865 , L0008866 , L0008867 , L0008868 , L0008869 , L0008870 , L0008871 ,

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs
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	L0008888 , L0008889 , L0008890 , L0008891 , L0008892 , L0008893 , L0008894 , L0008895 ,
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	L0008912 , L0008913 , L0008914 , L0008915 , L0008916 , L0008917 , L0008918 , L0008919 ,
	L0008920 , L0008921 , L0008922 , L0008923 , L0008924 , L0008925 , L0008926 , L0008927 ,
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	L0008992 , L0008993 , L0008994 , L0008995 , L0008996 , L0008997 , L0008998 , L0008999 ,
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	L0009008 , L0009009 , L0009010 , L0009011 , L0009012 , L0009013 , L0009014 , L0009015 ,
	L0009016 , L0009017 , L0009018 , L0009019 , L0009020 , L0009021 , L0009022 , L0009023 ,
	L0009024 , L0009025 , L0009026 , L0009027 , L0009028 , L0009029 , L0009030 , L0009031 ,

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs
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	L0009056 , L0009057 , L0009058 , L0009059 , L0009060 , L0009061 , L0009062 , L0009063 ,
	L0009064 , L0009065 , L0009066 , L0009067 , L0009068 , L0009069 , L0009070 , L0009071 ,
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	L0009104 , L0009105 , L0009106 , L0009107 , L0009108 , L0009109 , L0009110 , L0009111 ,
	L0009112 , L0009113 , L0009114 , L0009115 , L0009116 , L0009117 , L0009118 , L0009119 ,
	L0009120 , L0009121 , L0009122 , L0009123 , L0009124 , L0009125 , L0009126 , L0009127 ,
	L0009128 , L0009129 , L0009130 , L0009131 , L0009132 , L0009133 , L0009134 , L0009135 ,
	L0009136 , L0009137 , L0009138 , L0009139 , L0009140 , L0009141 , L0009142 , L0009143 ,
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	L0009160 , L0009161 , L0009162 , L0009163 , L0009164 , L0009165 , L0009166 , L0009167 ,
	L0009168 , L0009169 , L0009170 , L0009171 , L0009172 , L0009173 , L0009174 , L0009175 ,
	L0009176 , L0009177 , L0009178 , L0009179 , L0009180 , L0009181 , L0009182 , L0009183 ,
	L0009184 , L0009185 , L0009186 , L0009187 , L0009188 , L0009189 , L0009190 , L0009191 ,

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs
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	L0009208 , L0009209 , L0009210 , L0009211 , L0009212 , L0009213 , L0009214 , L0009215 ,
	L0009216 , L0009217 , L0009218 , L0009219 , L0009220 , L0009221 , L0009222 , L0009223 ,
	L0009224 , L0009225 , L0009226 , L0009227 , L0009228 , L0009229 , L0009230 , L0009231 ,
	L0009232 , L0009233 , L0009234 , L0009235 , L0009236 , L0009237 , L0009238 , L0009239 ,
	L0009240 , L0009241 , L0009242 , L0009243 , L0009244 , L0009245 , L0009246 , L0009247 ,
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	L0009264 , L0009265 , L0009266 , L0009267 , L0009268 , L0009269 , L0009270 , L0009271 ,
	L0009272 , L0009273 , L0009274 , L0009275 , L0009276 , L0009277 , L0009278 , L0009279 ,
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	L0009288 , L0009289 , L0009290 , L0009291 , L0009292 , L0009293 , L0009294 , L0009295 ,
	L0009296 , L0009297 , L0009298 , L0009299 , L0009300 , L0009301 , L0009302 , L0009303 ,
	L0009304 , L0009305 , L0009306 , L0009307 , L0009308 , L0009309 , L0009310 , L0009311 ,
	L0009312 , L0009313 , L0009314 , L0009315 , L0009316 , L0009317 , L0009318 , L0009319 ,
	L0009320 , L0009321 , L0009322 , L0009323 , L0009324 , L0009325 , L0009326 , L0009327 ,
	L0009328 , L0009329 , L0009330 , L0009331 , L0009332 , L0009333 , L0009334 , L0009335 ,
	L0009336 , L0009337 , L0009338 , L0009339 , L0009340 , L0009341 , L0009342 , L0009343 ,
	L0009344 , L0009345 , L0009346 , L0009347 , L0009348 , L0009349 , L0009350 , L0009351 ,

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs
	L0009352 , L0009353 , L0009354 , L0009355 , L0009356 , L0009357 , L0009358 , L0009359 ,
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	L0009368 , L0009369 , L0009370 , L0009371 , L0009372 , L0009373 , L0009374 , L0009375 ,
	L0009376 , L0009377 , L0009378 , L0009379 , L0009380 , L0009381 , L0009382 , L0009383 ,
	L0009384 , L0009385 , L0009386 , L0009387 , L0009388 , L0009389 , L0009390 , L0009391 ,
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	L0009400 , L0009401 , L0009402 , L0009403 , L0009404 , L0009405 , L0009406 , L0009407 ,
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	L0009416 , L0009417 , L0009418 , L0009419 , L0009420 , L0009421 , L0009422 , L0009423 ,
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	L0009456 , L0009457 , L0009458 , L0009459 , L0009460 , L0009461 , L0009462 , L0009463 ,
	L0009464 , L0009465 , L0009466 , L0009467 , L0009468 , L0009469 , L0009470 , L0009471 ,
	L0009472 , L0009473 , L0009474 , L0009475 , L0009476 , L0009477 , L0009478 , L0009479 ,
	L0009480 , L0009481 , L0009482 , L0009483 , L0009484 , L0009485 , L0009486 , L0009487 ,
	L0009488 , L0009489 , L0009490 , L0009491 , L0009492 , L0009493 , L0009494 , L0009495 ,
	L0009496 , L0009497 , L0009498 , L0009499 , L0009500 , L0009501 , L0009502 , L0009503 ,
	L0009504 , L0009505 , L0009506 , L0009507 , L0009508 , L0009509 , L0009510 , L0009511 ,

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs
	L0009512 , L0009513 , L0009514 , L0009515 , L0009516 , L0009517 , L0009518 , L0009519 ,
	L0009520 , L0009521 , L0009522 , L0009523 , L0009524 , L0009525 , L0009526 , L0009527 ,
	L0009528 , L0009529 , L0009530 , L0009531 , L0009532 , L0009533 , L0009534 , L0009535 ,
	L0009536 , L0009537 , L0009538 , L0009539 , L0009540 , L0009541 , L0009542 , L0009543 ,
	L0009544 , L0009545 , L0009546 , L0009547 , L0009548 , L0009549 , L0009550 , L0009551 ,
	L0009552 , L0009553 , L0009554 , L0009555 , L0009556 , L0009557 , L0009558 , L0009559 ,
	L0009560 , L0009561 , L0009562 , L0009563 , L0009564 , L0009565 , L0009566 , L0009567 ,
	L0009568 , L0009569 , L0009570 , L0009571 , L0009572 , L0009573 , L0009574 , L0009575 ,
	L0009576 , L0009577 , L0009578 , L0009579 , L0009580 , L0009581 , L0009582 , L0009583 ,
	L0009584 , L0009585 , L0009586 , L0009587 , L0009588 , L0009589 , L0009590 , L0009591 ,
	L0009592 , L0009593 , L0009594 , L0009595 , L0009596 , L0009597 , L0009598 , L0009599 ,
	L0009600 , L0009601 , L0009602 , L0009603 , L0009604 , L0009605 , L0009606 , L0009607 ,
	L0009608 , L0009609 , L0009610 , L0009611 , L0009612 , L0009613 , L0009614 , L0009615 ,
	L0009616 , L0009617 , L0009618 , L0009619 , L0009620 , L0009621 , L0009622 , L0009623 ,
	L0009624 , L0009625 , L0009626 , L0009627 , L0009628 , L0009629 , L0009630 , L0009631 ,
	L0009632 , L0009633 , L0009634 , L0009635 , L0009636 , L0009637 , L0009638 , L0009639 ,
	L0009640 , L0009641 , L0009642 , L0009643 , L0009644 , L0009645 , L0009646 , L0009647 ,
	L0009648 , L0009649 , L0009650 , L0009651 , L0009652 , L0009653 , L0009654 , L0009655 ,
	L0009656 , L0009657 , L0009658 , L0009659 , L0009660 , L0009661 , L0009662 , L0009663 ,
	L0009664 , L0009665 , L0009666 , L0009667 , L0009668 , L0009669 , L0009670 , L0009671 ,

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs
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	L0009680 , L0009681 , L0009682 , L0009683 , L0009684 , L0009685 , L0009686 , L0009687 ,
	L0009688 , L0009689 , L0009690 , L0009691 , L0009692 , L0009693 , L0009694 , L0009695 ,
	L0009696 , L0009697 , L0009698 , L0009699 , L0009700 , L0009701 , L0009702 , L0009703 ,
	L0009704 , L0009705 , L0009706 , L0009707 , L0009708 , L0009709 , L0009710 , L0009711 ,
	L0009712 , L0009713 , L0009714 , L0009715 , L0009716 , L0009717 , L0009718 , L0009719 ,
	L0009720 , L0009721 , L0009722 , L0009723 , L0009724 , L0009725 , L0009726 , L0009727 ,
	L0009728 , L0009729 , L0009730 , L0009731 , L0009732 , L0009733 , L0009734 , L0009735 ,
	L0009736 , L0009737 , L0009738 , L0009739 , L0009740 , L0009741 , L0009742 , L0009743 ,
	L0009744 , L0009745 , L0009746 , L0009747 , L0009748 , L0009749 , L0009750 , L0009751 ,
	L0009752 , L0009753 , L0009754 , L0009755 , L0009756 , L0009757 , L0009758 , L0009759 ,
	L0009760 , L0009761 , L0009762 , L0009763 , L0009764 , L0009765 , L0009766 , L0009767 ,
	L0009768 , L0009769 , L0009770 , L0009771 , L0009772 , L0009773 , L0009774 , L0009775 ,
	L0009776 , L0009777 , L0009778 , L0009779 , L0009780 , L0009781 , L0009782 , L0009783 ,
	L0009784 , L0009785 , L0009786 , L0009787 , L0009788 , L0009789 , L0009790 , L0009791 ,
	L0009792 , L0009793 , L0009794 , L0009795 , L0009796 , L0009797 , L0009798 , L0009799 ,
	L0009800 , L0009801 , L0009802 , L0009803 , L0009804 , L0009805 , L0009806 , L0009807 ,
	L0009808 , L0009809 , L0009810 , L0009811 , L0009812 , L0009813 , L0009814 , L0009815 ,
	L0009816 , L0009817 , L0009818 , L0009819 , L0009820 , L0009821 , L0009822 , L0009823 ,
	L0009824 , L0009825 , L0009826 , L0009827 , L0009828 , L0009829 , L0009830 , L0009831 ,

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs
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	L0009840 , L0009841 , L0009842 , L0009843 , L0009844 , L0009845 , L0009846 , L0009847 ,
	L0009848 , L0009849 , L0009850 , L0009851 , L0009852 , L0009853 , L0009854 , L0009855 ,
	L0009856 , L0009857 , L0009858 , L0009859 , L0009860 , L0009861 , L0009862 , L0009863 ,
	L0009864 , L0009865 , L0009866 , L0009867 , L0009868 , L0009869 , L0009870 , L0009871 ,
	L0009872 , L0009873 , L0009874 , L0009875 , L0009876 , L0009877 , L0009878 , L0009879 ,
	L0009880 , L0009881 , L0009882 , L0009883 , L0009884 , L0009885 , L0009886 , L0009887 ,
	L0009888 , L0009889 , L0009890 , L0009891 , L0009892 , L0009893 , L0009894 , L0009895 ,
	L0009896 , L0009897 , L0009898 , L0009899 , L0009900 , L0009901 , L0009902 , L0009903 ,
	L0009904 , L0009905 , L0009906 , L0009907 , L0009908 , L0009909 , L0009910 , L0009911 ,
	L0009912 , L0009913 , L0009914 , L0009915 , L0009916 , L0009917 , L0009918 , L0009919 ,
	L0009920 ,

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** SOURCE IDs DEFINED AS URBAN SOURCES ***

URBAN ID	URBAN POP	SOURCE IDs
	2035210.	L0008552 , L0008553 , L0008554 , L0008555 , L0008556 , L0008557 , L0008558 , L0008559 ,
		L0008560 , L0008561 , L0008562 , L0008563 , L0008564 , L0008565 , L0008566 , L0008567 ,
		L0008568 , L0008569 , L0008570 , L0008571 , L0008572 , L0008573 , L0008574 , L0008575 ,
		L0008576 , L0008577 , L0008578 , L0008579 , L0008580 , L0008581 , L0008582 , L0008583 ,
		L0008584 , L0008585 , L0008586 , L0008587 , L0008588 , L0008589 , L0008590 , L0008591 ,
		L0008592 , L0008593 , L0008594 , L0008595 , L0008596 , L0008597 , L0008598 , L0008599 ,
		L0008600 , L0008601 , L0008602 , L0008603 , L0008604 , L0008605 , L0008606 , L0008607 ,
		L0008608 , L0008609 , L0008610 , L0008611 , L0008612 , L0008613 , L0008614 , L0008615 ,
		L0008616 , L0008617 , L0008618 , L0008619 , L0008620 , L0008621 , L0008622 , L0008623 ,
		L0008624 , L0008625 , L0008626 , L0008627 , L0008628 , L0008629 , L0008630 , L0008631 ,
		L0008632 , L0008633 , L0008634 , L0008635 , L0008636 , L0008637 , L0008638 , L0008639 ,
		L0008640 , L0008641 , L0008642 , L0008643 , L0008644 , L0008645 , L0008646 , L0008647 ,
		L0008648 , L0008649 , L0008650 , L0008651 , L0008652 , L0008653 , L0008654 , L0008655 ,
		L0008656 , L0008657 , L0008658 , L0008659 , L0008660 , L0008661 , L0008662 , L0008663 ,
		L0008664 , L0008665 , L0008666 , L0008667 , L0008668 , L0008669 , L0008670 , L0008671 ,
		L0008672 , L0008673 , L0008674 , L0008675 , L0008676 , L0008677 , L0008678 , L0008679 ,
		L0008680 , L0008681 , L0008682 , L0008683 , L0008684 , L0008685 , L0008686 , L0008687 ,
		L0008688 , L0008689 , L0008690 , L0008691 , L0008692 , L0008693 , L0008694 , L0008695 ,
		L0008696 , L0008697 , L0008698 , L0008699 , L0008700 , L0008701 , L0008702 , L0008703 ,
		L0008704 , L0008705 , L0008706 , L0008707 , L0008708 , L0008709 , L0008710 , L0008711 ,

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** SOURCE IDs DEFINED AS URBAN SOURCES ***

URBAN ID	URBAN POP	SOURCE IDs
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		L0008720 , L0008721 , L0008722 , L0008723 , L0008724 , L0008725 , L0008726 , L0008727 ,
		L0008728 , L0008729 , L0008730 , L0008731 , L0008732 , L0008733 , L0008734 , L0008735 ,
		L0008736 , L0008737 , L0008738 , L0008739 , L0008740 , L0008741 , L0008742 , L0008743 ,
		L0008744 , L0008745 , L0008746 , L0008747 , L0008748 , L0008749 , L0008750 , L0008751 ,
		L0008752 , L0008753 , L0008754 , L0008755 , L0008756 , L0008757 , L0008758 , L0008759 ,
		L0008760 , L0008761 , L0008762 , L0008763 , L0008764 , L0008765 , L0008766 , L0008767 ,
		L0008768 , L0008769 , L0008770 , L0008771 , L0008772 , L0008773 , L0008774 , L0008775 ,
		L0008776 , L0008777 , L0008778 , L0008779 , L0008780 , L0008781 , L0008782 , L0008783 ,
		L0008784 , L0008785 , L0008786 , L0008787 , L0008788 , L0008789 , L0008790 , L0008791 ,
		L0008792 , L0008793 , L0008794 , L0008795 , L0008796 , L0008797 , L0008798 , L0008799 ,
		L0008800 , L0008801 , L0008802 , L0008803 , L0008804 , L0008805 , L0008806 , L0008807 ,
		L0008808 , L0008809 , L0008810 , L0008811 , L0008812 , L0008813 , L0008814 , L0008815 ,
		L0008816 , L0008817 , L0008818 , L0008819 , L0008820 , L0008821 , L0008822 , L0008823 ,
		L0008824 , L0008825 , L0008826 , L0008827 , L0008828 , L0008829 , L0008830 , L0008831 ,
		L0008832 , L0008833 , L0008834 , L0008835 , L0008836 , L0008837 , L0008838 , L0008839 ,
		L0008840 , L0008841 , L0008842 , L0008843 , L0008844 , L0008845 , L0008846 , L0008847 ,
		L0008848 , L0008849 , L0008850 , L0008851 , L0008852 , L0008853 , L0008854 , L0008855 ,
		L0008856 , L0008857 , L0008858 , L0008859 , L0008860 , L0008861 , L0008862 , L0008863 ,
		L0008864 , L0008865 , L0008866 , L0008867 , L0008868 , L0008869 , L0008870 , L0008871 ,

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** SOURCE IDs DEFINED AS URBAN SOURCES ***

URBAN ID	URBAN POP	SOURCE IDs
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		L0008880 , L0008881 , L0008882 , L0008883 , L0008884 , L0008885 , L0008886 , L0008887 ,
		L0008888 , L0008889 , L0008890 , L0008891 , L0008892 , L0008893 , L0008894 , L0008895 ,
		L0008896 , L0008897 , L0008898 , L0008899 , L0008900 , L0008901 , L0008902 , L0008903 ,
		L0008904 , L0008905 , L0008906 , L0008907 , L0008908 , L0008909 , L0008910 , L0008911 ,
		L0008912 , L0008913 , L0008914 , L0008915 , L0008916 , L0008917 , L0008918 , L0008919 ,
		L0008920 , L0008921 , L0008922 , L0008923 , L0008924 , L0008925 , L0008926 , L0008927 ,
		L0008928 , L0008929 , L0008930 , L0008931 , L0008932 , L0008933 , L0008934 , L0008935 ,
		L0008936 , L0008937 , L0008938 , L0008939 , L0008940 , L0008941 , L0008942 , L0008943 ,
		L0008944 , L0008945 , L0008946 , L0008947 , L0008948 , L0008949 , L0008950 , L0008951 ,
		L0008952 , L0008953 , L0008954 , L0008955 , L0008956 , L0008957 , L0008958 , L0008959 ,
		L0008960 , L0008961 , L0008962 , L0008963 , L0008964 , L0008965 , L0008966 , L0008967 ,
		L0008968 , L0008969 , L0008970 , L0008971 , L0008972 , L0008973 , L0008974 , L0008975 ,
		L0008976 , L0008977 , L0008978 , L0008979 , L0008980 , L0008981 , L0008982 , L0008983 ,
		L0008984 , L0008985 , L0008986 , L0008987 , L0008988 , L0008989 , L0008990 , L0008991 ,
		L0008992 , L0008993 , L0008994 , L0008995 , L0008996 , L0008997 , L0008998 , L0008999 ,
		L0009000 , L0009001 , L0009002 , L0009003 , L0009004 , L0009005 , L0009006 , L0009007 ,
		L0009008 , L0009009 , L0009010 , L0009011 , L0009012 , L0009013 , L0009014 , L0009015 ,
		L0009016 , L0009017 , L0009018 , L0009019 , L0009020 , L0009021 , L0009022 , L0009023 ,
		L0009024 , L0009025 , L0009026 , L0009027 , L0009028 , L0009029 , L0009030 , L0009031 ,

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** SOURCE IDs DEFINED AS URBAN SOURCES ***

URBAN ID	URBAN POP	SOURCE IDs
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		L0009040 , L0009041 , L0009042 , L0009043 , L0009044 , L0009045 , L0009046 , L0009047 ,
		L0009048 , L0009049 , L0009050 , L0009051 , L0009052 , L0009053 , L0009054 , L0009055 ,
		L0009056 , L0009057 , L0009058 , L0009059 , L0009060 , L0009061 , L0009062 , L0009063 ,
		L0009064 , L0009065 , L0009066 , L0009067 , L0009068 , L0009069 , L0009070 , L0009071 ,
		L0009072 , L0009073 , L0009074 , L0009075 , L0009076 , L0009077 , L0009078 , L0009079 ,
		L0009080 , L0009081 , L0009082 , L0009083 , L0009084 , L0009085 , L0009086 , L0009087 ,
		L0009088 , L0009089 , L0009090 , L0009091 , L0009092 , L0009093 , L0009094 , L0009095 ,
		L0009096 , L0009097 , L0009098 , L0009099 , L0009100 , L0009101 , L0009102 , L0009103 ,
		L0009104 , L0009105 , L0009106 , L0009107 , L0009108 , L0009109 , L0009110 , L0009111 ,
		L0009112 , L0009113 , L0009114 , L0009115 , L0009116 , L0009117 , L0009118 , L0009119 ,
		L0009120 , L0009121 , L0009122 , L0009123 , L0009124 , L0009125 , L0009126 , L0009127 ,
		L0009128 , L0009129 , L0009130 , L0009131 , L0009132 , L0009133 , L0009134 , L0009135 ,
		L0009136 , L0009137 , L0009138 , L0009139 , L0009140 , L0009141 , L0009142 , L0009143 ,
		L0009144 , L0009145 , L0009146 , L0009147 , L0009148 , L0009149 , L0009150 , L0009151 ,
		L0009152 , L0009153 , L0009154 , L0009155 , L0009156 , L0009157 , L0009158 , L0009159 ,
		L0009160 , L0009161 , L0009162 , L0009163 , L0009164 , L0009165 , L0009166 , L0009167 ,
		L0009168 , L0009169 , L0009170 , L0009171 , L0009172 , L0009173 , L0009174 , L0009175 ,
		L0009176 , L0009177 , L0009178 , L0009179 , L0009180 , L0009181 , L0009182 , L0009183 ,
		L0009184 , L0009185 , L0009186 , L0009187 , L0009188 , L0009189 , L0009190 , L0009191 ,

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** SOURCE IDs DEFINED AS URBAN SOURCES ***

URBAN ID	URBAN POP	SOURCE IDs
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		L0009208 , L0009209 , L0009210 , L0009211 , L0009212 , L0009213 , L0009214 , L0009215 ,
		L0009216 , L0009217 , L0009218 , L0009219 , L0009220 , L0009221 , L0009222 , L0009223 ,
		L0009224 , L0009225 , L0009226 , L0009227 , L0009228 , L0009229 , L0009230 , L0009231 ,
		L0009232 , L0009233 , L0009234 , L0009235 , L0009236 , L0009237 , L0009238 , L0009239 ,
		L0009240 , L0009241 , L0009242 , L0009243 , L0009244 , L0009245 , L0009246 , L0009247 ,
		L0009248 , L0009249 , L0009250 , L0009251 , L0009252 , L0009253 , L0009254 , L0009255 ,
		L0009256 , L0009257 , L0009258 , L0009259 , L0009260 , L0009261 , L0009262 , L0009263 ,
		L0009264 , L0009265 , L0009266 , L0009267 , L0009268 , L0009269 , L0009270 , L0009271 ,
		L0009272 , L0009273 , L0009274 , L0009275 , L0009276 , L0009277 , L0009278 , L0009279 ,
		L0009280 , L0009281 , L0009282 , L0009283 , L0009284 , L0009285 , L0009286 , L0009287 ,
		L0009288 , L0009289 , L0009290 , L0009291 , L0009292 , L0009293 , L0009294 , L0009295 ,
		L0009296 , L0009297 , L0009298 , L0009299 , L0009300 , L0009301 , L0009302 , L0009303 ,
		L0009304 , L0009305 , L0009306 , L0009307 , L0009308 , L0009309 , L0009310 , L0009311 ,
		L0009312 , L0009313 , L0009314 , L0009315 , L0009316 , L0009317 , L0009318 , L0009319 ,
		L0009320 , L0009321 , L0009322 , L0009323 , L0009324 , L0009325 , L0009326 , L0009327 ,
		L0009328 , L0009329 , L0009330 , L0009331 , L0009332 , L0009333 , L0009334 , L0009335 ,
		L0009336 , L0009337 , L0009338 , L0009339 , L0009340 , L0009341 , L0009342 , L0009343 ,
		L0009344 , L0009345 , L0009346 , L0009347 , L0009348 , L0009349 , L0009350 , L0009351 ,

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** SOURCE IDs DEFINED AS URBAN SOURCES ***

URBAN ID	URBAN POP	SOURCE IDs
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		L0009368 , L0009369 , L0009370 , L0009371 , L0009372 , L0009373 , L0009374 , L0009375 ,
		L0009376 , L0009377 , L0009378 , L0009379 , L0009380 , L0009381 , L0009382 , L0009383 ,
		L0009384 , L0009385 , L0009386 , L0009387 , L0009388 , L0009389 , L0009390 , L0009391 ,
		L0009392 , L0009393 , L0009394 , L0009395 , L0009396 , L0009397 , L0009398 , L0009399 ,
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		L0009424 , L0009425 , L0009426 , L0009427 , L0009428 , L0009429 , L0009430 , L0009431 ,
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		L0009448 , L0009449 , L0009450 , L0009451 , L0009452 , L0009453 , L0009454 , L0009455 ,
		L0009456 , L0009457 , L0009458 , L0009459 , L0009460 , L0009461 , L0009462 , L0009463 ,
		L0009464 , L0009465 , L0009466 , L0009467 , L0009468 , L0009469 , L0009470 , L0009471 ,
		L0009472 , L0009473 , L0009474 , L0009475 , L0009476 , L0009477 , L0009478 , L0009479 ,
		L0009480 , L0009481 , L0009482 , L0009483 , L0009484 , L0009485 , L0009486 , L0009487 ,
		L0009488 , L0009489 , L0009490 , L0009491 , L0009492 , L0009493 , L0009494 , L0009495 ,
		L0009496 , L0009497 , L0009498 , L0009499 , L0009500 , L0009501 , L0009502 , L0009503 ,
		L0009504 , L0009505 , L0009506 , L0009507 , L0009508 , L0009509 , L0009510 , L0009511 ,

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** SOURCE IDs DEFINED AS URBAN SOURCES ***

URBAN ID	URBAN POP	SOURCE IDs
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		L0009520 , L0009521 , L0009522 , L0009523 , L0009524 , L0009525 , L0009526 , L0009527 ,
		L0009528 , L0009529 , L0009530 , L0009531 , L0009532 , L0009533 , L0009534 , L0009535 ,
		L0009536 , L0009537 , L0009538 , L0009539 , L0009540 , L0009541 , L0009542 , L0009543 ,
		L0009544 , L0009545 , L0009546 , L0009547 , L0009548 , L0009549 , L0009550 , L0009551 ,
		L0009552 , L0009553 , L0009554 , L0009555 , L0009556 , L0009557 , L0009558 , L0009559 ,
		L0009560 , L0009561 , L0009562 , L0009563 , L0009564 , L0009565 , L0009566 , L0009567 ,
		L0009568 , L0009569 , L0009570 , L0009571 , L0009572 , L0009573 , L0009574 , L0009575 ,
		L0009576 , L0009577 , L0009578 , L0009579 , L0009580 , L0009581 , L0009582 , L0009583 ,
		L0009584 , L0009585 , L0009586 , L0009587 , L0009588 , L0009589 , L0009590 , L0009591 ,
		L0009592 , L0009593 , L0009594 , L0009595 , L0009596 , L0009597 , L0009598 , L0009599 ,
		L0009600 , L0009601 , L0009602 , L0009603 , L0009604 , L0009605 , L0009606 , L0009607 ,
		L0009608 , L0009609 , L0009610 , L0009611 , L0009612 , L0009613 , L0009614 , L0009615 ,
		L0009616 , L0009617 , L0009618 , L0009619 , L0009620 , L0009621 , L0009622 , L0009623 ,
		L0009624 , L0009625 , L0009626 , L0009627 , L0009628 , L0009629 , L0009630 , L0009631 ,
		L0009632 , L0009633 , L0009634 , L0009635 , L0009636 , L0009637 , L0009638 , L0009639 ,
		L0009640 , L0009641 , L0009642 , L0009643 , L0009644 , L0009645 , L0009646 , L0009647 ,
		L0009648 , L0009649 , L0009650 , L0009651 , L0009652 , L0009653 , L0009654 , L0009655 ,
		L0009656 , L0009657 , L0009658 , L0009659 , L0009660 , L0009661 , L0009662 , L0009663 ,
		L0009664 , L0009665 , L0009666 , L0009667 , L0009668 , L0009669 , L0009670 , L0009671 ,

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** SOURCE IDs DEFINED AS URBAN SOURCES ***

URBAN ID	URBAN POP	SOURCE IDs
		L0009672 , L0009673 , L0009674 , L0009675 , L0009676 , L0009677 , L0009678 , L0009679 ,
		L0009680 , L0009681 , L0009682 , L0009683 , L0009684 , L0009685 , L0009686 , L0009687 ,
		L0009688 , L0009689 , L0009690 , L0009691 , L0009692 , L0009693 , L0009694 , L0009695 ,
		L0009696 , L0009697 , L0009698 , L0009699 , L0009700 , L0009701 , L0009702 , L0009703 ,
		L0009704 , L0009705 , L0009706 , L0009707 , L0009708 , L0009709 , L0009710 , L0009711 ,
		L0009712 , L0009713 , L0009714 , L0009715 , L0009716 , L0009717 , L0009718 , L0009719 ,
		L0009720 , L0009721 , L0009722 , L0009723 , L0009724 , L0009725 , L0009726 , L0009727 ,
		L0009728 , L0009729 , L0009730 , L0009731 , L0009732 , L0009733 , L0009734 , L0009735 ,
		L0009736 , L0009737 , L0009738 , L0009739 , L0009740 , L0009741 , L0009742 , L0009743 ,
		L0009744 , L0009745 , L0009746 , L0009747 , L0009748 , L0009749 , L0009750 , L0009751 ,
		L0009752 , L0009753 , L0009754 , L0009755 , L0009756 , L0009757 , L0009758 , L0009759 ,
		L0009760 , L0009761 , L0009762 , L0009763 , L0009764 , L0009765 , L0009766 , L0009767 ,
		L0009768 , L0009769 , L0009770 , L0009771 , L0009772 , L0009773 , L0009774 , L0009775 ,
		L0009776 , L0009777 , L0009778 , L0009779 , L0009780 , L0009781 , L0009782 , L0009783 ,
		L0009784 , L0009785 , L0009786 , L0009787 , L0009788 , L0009789 , L0009790 , L0009791 ,
		L0009792 , L0009793 , L0009794 , L0009795 , L0009796 , L0009797 , L0009798 , L0009799 ,
		L0009800 , L0009801 , L0009802 , L0009803 , L0009804 , L0009805 , L0009806 , L0009807 ,
		L0009808 , L0009809 , L0009810 , L0009811 , L0009812 , L0009813 , L0009814 , L0009815 ,
		L0009816 , L0009817 , L0009818 , L0009819 , L0009820 , L0009821 , L0009822 , L0009823 ,
		L0009824 , L0009825 , L0009826 , L0009827 , L0009828 , L0009829 , L0009830 , L0009831 ,

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** SOURCE IDs DEFINED AS URBAN SOURCES ***

URBAN ID	URBAN POP	SOURCE IDs
		L0009832 , L0009833 , L0009834 , L0009835 , L0009836 , L0009837 , L0009838 , L0009839 ,
		L0009840 , L0009841 , L0009842 , L0009843 , L0009844 , L0009845 , L0009846 , L0009847 ,
		L0009848 , L0009849 , L0009850 , L0009851 , L0009852 , L0009853 , L0009854 , L0009855 ,
		L0009856 , L0009857 , L0009858 , L0009859 , L0009860 , L0009861 , L0009862 , L0009863 ,
		L0009864 , L0009865 , L0009866 , L0009867 , L0009868 , L0009869 , L0009870 , L0009871 ,
		L0009872 , L0009873 , L0009874 , L0009875 , L0009876 , L0009877 , L0009878 , L0009879 ,
		L0009880 , L0009881 , L0009882 , L0009883 , L0009884 , L0009885 , L0009886 , L0009887 ,
		L0009888 , L0009889 , L0009890 , L0009891 , L0009892 , L0009893 , L0009894 , L0009895 ,
		L0009896 , L0009897 , L0009898 , L0009899 , L0009900 , L0009901 , L0009902 , L0009903 ,
		L0009904 , L0009905 , L0009906 , L0009907 , L0009908 , L0009909 , L0009910 , L0009911 ,
		L0009912 , L0009913 , L0009914 , L0009915 , L0009916 , L0009917 , L0009918 , L0009919 ,
		L0009920 ,

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** GRIDDED RECEPTOR NETWORK SUMMARY ***

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

*** X-COORDINATES OF GRID ***
(METERS)

478868.2, 478968.2, 479068.2, 479168.2, 479268.2, 479368.2, 479468.2, 479568.2, 479668.2, 479768.2,
479868.2, 479968.2, 480068.2, 480168.2, 480268.2, 480368.2, 480468.2, 480568.2, 480668.2, 480768.2,
480868.2, 480968.2, 481068.2, 481168.2, 481268.2, 481368.2, 481468.2, 481568.2, 481668.2, 481768.2,

*** Y-COORDINATES OF GRID ***
(METERS)

3769389.7, 3769489.7, 3769589.7, 3769689.7, 3769789.7, 3769889.7, 3769989.7, 3770089.7, 3770189.7, 3770289.7,
3770389.7, 3770489.7, 3770589.7, 3770689.7, 3770789.7, 3770889.7, 3770989.7, 3771089.7, 3771189.7, 3771289.7,
3771389.7, 3771489.7, 3771589.7, 3771689.7, 3771789.7, 3771889.7, 3771989.7, 3772089.7, 3772189.7, 3772289.7,
3772389.7, 3772489.7, 3772589.7, 3772689.7, 3772789.7, 3772889.7, 3772989.7, 3773089.7, 3773189.7, 3773289.7,
3773389.7, 3773489.7, 3773589.7, 3773689.7, 3773789.7, 3773889.7, 3773989.7, 3774089.7, 3774189.7, 3774289.7,

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

* ELEVATION HEIGHTS IN METERS *

Y-COORD (METERS)	X-COORD (METERS) 478868.21	478968.21	479068.21	479168.21	479268.21	479368.21	479468.21	479568.21	479668.21
3774289.70	346.00	347.30	348.00	349.00	350.00	350.60	351.00	352.00	353.00
3774189.70	346.00	347.00	348.00	348.70	349.30	350.00	351.00	352.00	352.90
3774089.70	346.00	347.00	347.60	348.00	349.00	350.00	351.00	352.00	352.30
3773989.70	345.90	346.30	347.00	347.10	348.30	350.00	350.90	351.40	352.00
3773889.70	345.90	346.30	347.00	348.00	349.00	350.00	350.90	352.00	352.00
3773789.70	345.00	346.30	347.00	348.00	349.00	350.00	350.90	352.00	352.60
3773689.70	345.00	346.30	347.60	348.00	349.00	350.00	350.00	351.40	352.60
3773589.70	345.00	346.00	347.00	348.00	349.00	349.60	350.00	351.30	352.60
3773489.70	345.00	346.00	347.00	347.90	348.30	349.30	350.00	351.00	352.00
3773389.70	344.90	346.00	347.00	347.90	348.30	349.00	350.00	351.00	352.00
3773289.70	344.90	346.00	347.00	347.90	348.00	349.00	350.00	351.00	351.60
3773189.70	344.00	346.00	346.60	347.90	348.00	349.00	349.90	350.10	351.00
3773089.70	344.00	345.30	346.10	347.00	348.00	348.10	349.00	350.00	351.00
3772989.70	344.00	345.00	346.00	346.70	347.00	347.90	348.00	349.30	350.00
3772889.70	343.90	344.60	345.60	346.00	346.60	347.00	347.90	349.00	350.00
3772789.70	343.00	344.00	345.00	346.00	346.00	347.00	347.00	348.00	349.70
3772689.70	342.80	343.80	344.50	345.00	346.00	347.00	347.20	348.00	349.60
3772589.70	342.00	342.10	343.80	345.00	346.00	346.80	347.90	348.30	349.60
3772489.70	341.00	342.00	343.00	344.00	345.30	346.60	347.90	348.00	349.60
3772389.70	340.90	341.30	342.60	344.00	345.00	346.00	347.00	347.80	349.60
3772289.70	340.90	341.30	342.60	344.00	345.30	346.00	346.90	347.30	349.60
3772189.70	340.90	341.30	343.50	345.00	346.00	347.00	347.00	347.90	350.50
3772089.70	340.90	341.50	344.80	347.00	347.20	348.80	351.60	354.00	354.00
3771989.70	342.60	346.50	347.80	348.00	349.80	353.40	354.00	355.00	355.30
3771889.70	348.00	348.00	349.00	350.00	351.30	353.00	354.80	355.90	356.50
3771789.70	348.00	349.10	350.00	351.00	353.00	354.00	354.90	356.00	357.10
3771689.70	348.90	350.00	350.60	352.00	353.20	354.00	355.00	356.20	357.60
3771589.70	348.90	350.00	351.00	352.00	353.30	354.60	355.90	356.90	358.00
3771489.70	348.90	350.00	351.00	352.20	354.00	355.00	356.00	357.00	358.00
3771389.70	349.00	350.00	351.60	352.90	354.00	355.00	356.00	357.30	358.60
3771289.70	349.00	350.00	351.60	352.90	354.00	355.00	356.00	357.30	359.00
3771189.70	349.00	350.30	351.60	352.90	354.00	355.00	356.00	358.00	359.00
3771089.70	349.00	350.30	351.60	352.90	354.00	355.00	356.90	358.00	359.00
3770989.70	349.90	350.30	352.00	352.90	354.00	355.60	356.90	358.00	359.00
3770889.70	350.00	351.00	352.00	353.00	354.10	355.60	357.00	358.00	359.60
3770789.70	350.00	351.00	352.00	353.00	354.30	356.00	357.00	358.20	359.60
3770689.70	350.00	351.00	352.00	353.90	355.00	356.00	357.00	358.30	359.60
3770589.70	350.00	351.30	352.70	354.00	355.00	356.00	357.00	358.30	360.00
3770489.70	350.00	352.00	353.00	354.00	355.20	356.00	357.00	358.30	359.80
3770389.70	350.00	352.00	353.50	354.00	355.30	356.00	357.00	358.30	359.60

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

* ELEVATION HEIGHTS IN METERS *

Y-COORD (METERS)	X-COORD (METERS) 478868.21	478968.21	479068.21	479168.21	479268.21	479368.21	479468.21	479568.21	479668.21
3770289.70	350.00	352.00	353.00	354.00	355.00	356.00	357.00	358.30	359.60
3770189.70	350.90	352.00	352.60	353.90	355.00	356.00	357.00	358.30	359.60
3770089.70	350.90	351.90	352.60	353.90	355.00	356.00	357.90	358.90	360.00
3769989.70	350.90	352.00	352.60	353.90	355.00	356.60	357.90	359.00	360.00
3769889.70	351.00	352.00	353.00	354.00	355.30	356.80	358.00	359.00	360.60
3769789.70	351.00	352.00	353.00	354.90	356.00	357.00	358.00	359.00	360.60
3769689.70	352.20	353.00	353.00	355.90	358.10	358.70	359.00	359.30	361.60
3769589.70	353.60	354.20	357.90	359.50	360.00	360.00	360.00	360.20	365.00
3769489.70	350.20	353.00	354.10	358.00	358.10	359.00	359.00	359.90	363.40
3769389.70	349.90	352.00	353.00	354.90	356.20	357.50	358.00	359.00	360.00

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

* ELEVATION HEIGHTS IN METERS *

Y-COORD (METERS)	X-COORD (METERS)								
	479768.21	479868.21	479968.21	480068.21	480168.21	480268.21	480368.21	480468.21	480568.21
3774289.70	353.80	354.00	355.10	356.10	357.30	358.00	359.80	360.00	361.60
3774189.70	353.00	354.00	354.60	356.00	357.00	358.00	359.00	360.00	361.60
3774089.70	353.00	354.00	355.00	356.00	357.00	358.00	359.00	360.20	361.60
3773989.70	353.00	354.00	355.00	356.00	357.00	358.00	359.00	360.30	362.00
3773889.70	353.00	354.00	355.00	356.00	357.00	358.00	359.00	360.30	362.00
3773789.70	353.00	354.00	355.00	356.00	357.00	358.00	359.00	360.00	362.00
3773689.70	353.90	354.00	355.00	356.00	357.00	358.00	359.00	360.00	362.00
3773589.70	353.70	354.00	355.00	356.00	357.00	358.00	359.00	360.00	360.90
3773489.70	353.00	354.00	355.00	355.90	356.30	357.60	358.40	359.00	360.00
3773389.70	352.90	354.00	354.60	355.10	356.00	357.00	358.00	359.00	359.10
3773289.70	352.00	353.30	354.00	355.00	356.00	356.90	357.90	358.30	359.00
3773189.70	352.00	353.00	354.00	355.00	355.60	356.60	357.40	358.70	359.80
3773089.70	352.00	352.40	353.10	354.00	355.00	356.00	357.00	358.40	359.50
3772989.70	351.00	352.00	353.00	353.00	354.30	355.90	356.90	358.00	359.00
3772889.70	351.00	352.00	352.30	353.00	354.30	356.00	356.90	358.00	359.00
3772789.70	350.90	352.00	352.60	353.80	354.30	356.00	356.90	358.00	359.60
3772689.70	350.90	351.40	352.60	353.90	354.30	356.00	356.90	358.00	359.60
3772589.70	350.40	351.30	352.30	353.40	354.00	355.60	356.90	358.00	359.00
3772489.70	350.00	351.30	352.00	353.00	354.00	355.60	356.90	358.00	358.60
3772389.70	351.00	352.00	352.00	353.00	354.00	355.60	357.00	358.40	359.10
3772289.70	351.90	354.00	353.00	353.00	354.20	356.80	358.00	359.20	360.80
3772189.70	352.00	354.20	353.00	354.80	359.80	359.90	359.90	359.00	361.60
3772089.70	354.20	356.90	359.20	360.20	361.20	362.80	365.20	365.80	366.00
3771989.70	356.50	359.30	359.60	361.00	362.70	364.30	366.00	367.00	367.60
3771889.70	358.00	360.00	360.50	362.00	363.30	365.00	366.80	367.90	368.50
3771789.70	358.90	360.00	361.00	362.20	364.00	365.60	367.00	368.00	369.10
3771689.70	359.00	360.20	361.60	362.90	364.00	365.60	367.00	368.30	369.80
3771589.70	359.00	360.30	362.00	363.00	364.30	366.00	367.00	368.90	370.00
3771489.70	359.90	361.00	362.00	363.00	364.30	366.00	367.00	369.00	370.60
3771389.70	360.00	361.00	362.00	363.50	364.70	366.00	367.90	369.30	370.60
3771289.70	360.00	361.30	362.60	363.90	365.00	366.50	367.90	369.30	371.00
3771189.70	360.00	361.40	362.60	364.00	365.30	366.60	368.00	369.40	371.00
3771089.70	360.00	362.00	363.00	364.00	365.30	367.00	368.00	370.00	371.00
3770989.70	360.90	362.00	363.00	364.00	366.00	367.00	368.00	370.00	371.00
3770889.70	360.90	362.00	363.60	364.90	366.00	367.60	368.90	370.00	371.00
3770789.70	360.90	362.00	363.60	365.00	366.30	367.60	368.90	370.00	371.60
3770689.70	361.00	362.00	363.60	365.00	366.30	367.60	368.90	370.30	372.00
3770589.70	361.00	362.00	363.60	364.90	366.00	367.60	368.90	370.00	371.60
3770489.70	361.00	362.00	363.60	364.90	366.00	367.60	369.00	370.30	372.00
3770389.70	360.90	362.00	363.60	364.90	366.00	367.60	369.00	370.30	372.00

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

* ELEVATION HEIGHTS IN METERS *

Y-COORD (METERS)	X-COORD (METERS) 479768.21	479868.21	479968.21	480068.21	480168.21	480268.21	480368.21	480468.21	480568.21
3770289.70	360.90	362.30	364.00	365.00	366.30	368.00	369.00	371.00	372.00
3770189.70	360.90	362.30	364.00	365.90	367.00	368.00	369.50	371.00	372.60
3770089.70	361.00	363.00	364.60	366.00	367.00	368.00	369.90	371.00	372.60
3769989.70	361.90	363.00	364.60	366.00	367.30	368.10	369.90	371.00	372.00
3769889.70	362.00	363.30	364.60	366.00	367.30	368.60	369.90	371.00	372.00
3769789.70	362.00	363.90	364.60	366.00	367.30	368.60	370.00	371.00	372.50
3769689.70	364.00	364.20	365.00	366.00	367.40	369.00	370.20	371.10	373.50
3769589.70	366.00	365.80	366.00	366.00	368.00	369.60	372.00	372.00	374.30
3769489.70	365.10	365.00	365.00	366.00	368.00	369.60	371.10	373.00	374.60
3769389.70	362.00	363.30	364.60	366.00	367.30	369.00	370.90	372.00	374.50

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

* ELEVATION HEIGHTS IN METERS *

Y-COORD (METERS)	X-COORD (METERS) 480668.21	480768.21	480868.21	480968.21	481068.21	481168.21	481268.21	481368.21	481468.21
3774289.70	362.80	363.30	364.00	365.00	366.00	367.60	368.90	370.00	371.00
3774189.70	362.00	363.30	364.60	365.90	366.30	368.00	368.90	370.00	371.00
3774089.70	362.90	364.00	365.00	366.00	367.00	368.00	369.00	370.20	371.60
3773989.70	363.00	364.90	365.60	366.00	367.20	368.00	369.00	371.00	372.00
3773889.70	363.90	366.00	366.00	366.00	366.80	367.60	368.90	370.20	371.00
3773789.70	363.90	366.00	366.00	365.50	366.00	366.60	368.00	370.00	370.60
3773689.70	363.90	366.00	365.50	365.00	366.00	366.60	368.00	370.00	371.00
3773589.70	362.90	364.80	365.00	366.00	366.40	367.60	368.20	370.00	371.70
3773489.70	361.40	363.10	364.80	366.00	366.60	367.60	368.00	369.70	368.00
3773389.70	360.00	362.30	364.60	366.00	366.30	367.00	368.00	369.00	368.00
3773289.70	360.00	362.30	364.60	366.00	366.00	366.90	368.00	368.00	369.10
3773189.70	360.50	362.30	364.60	366.00	366.00	366.00	367.00	366.40	367.70
3773089.70	360.00	362.00	363.70	366.00	365.00	366.00	367.00	366.00	366.00
3772989.70	360.00	362.00	363.00	364.00	365.40	366.10	367.00	367.20	368.10
3772889.70	360.00	362.00	363.00	364.00	365.30	366.60	367.90	368.20	369.30
3772789.70	360.90	362.00	363.00	364.00	366.00	366.60	367.90	368.30	369.60
3772689.70	360.00	362.00	363.00	364.00	365.30	366.60	367.90	369.00	370.00
3772589.70	360.00	361.30	363.00	364.50	366.00	366.60	368.00	369.00	370.00
3772489.70	359.10	360.60	363.00	364.90	366.00	367.00	368.00	369.30	370.00
3772389.70	360.00	362.00	363.60	364.90	366.00	367.00	368.20	370.00	371.00
3772289.70	361.60	363.20	364.00	365.00	365.60	367.20	369.50	371.00	372.20
3772189.70	363.00	364.00	365.50	365.90	366.00	371.70	371.90	376.80	378.00
3772089.70	365.20	365.20	368.00	370.20	373.10	374.80	377.20	378.20	378.10
3771989.70	367.60	371.00	372.60	373.50	374.70	376.80	378.00	379.20	379.20
3771889.70	369.90	372.00	373.00	374.00	376.00	378.00	379.00	380.00	381.00
3771789.70	370.90	372.00	373.60	375.00	376.30	378.00	379.90	381.00	382.10
3771689.70	371.00	372.70	374.00	375.50	377.00	378.60	380.00	381.30	383.00
3771589.70	371.90	373.20	374.50	376.00	377.00	378.60	380.00	382.00	383.60
3771489.70	372.00	374.00	375.00	376.90	378.00	379.60	381.00	382.30	384.00
3771389.70	372.00	374.00	375.60	377.50	379.00	380.00	381.90	383.20	384.60
3771289.70	372.90	374.30	376.00	378.00	379.30	380.60	382.00	384.00	385.50
3771189.70	372.90	374.30	376.50	378.00	379.30	381.00	382.90	384.30	386.00
3771089.70	372.90	374.30	376.00	377.90	379.30	381.00	382.90	384.30	386.00
3770989.70	372.90	374.30	376.00	377.90	379.30	381.00	382.90	384.30	386.00
3770889.70	372.90	374.30	376.00	377.90	379.30	380.60	382.70	384.00	385.90
3770789.70	372.90	374.30	376.00	377.90	379.30	380.60	382.00	384.00	385.60
3770689.70	372.90	374.30	376.00	377.90	379.30	381.00	382.00	384.00	385.60
3770589.70	373.00	375.00	376.60	378.00	379.40	381.00	382.20	384.00	385.60
3770489.70	373.50	375.20	376.60	378.00	380.00	381.60	382.90	384.20	386.00
3770389.70	373.90	375.30	377.00	378.90	380.00	382.00	383.00	385.00	386.60

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

* ELEVATION HEIGHTS IN METERS *

Y-COORD (METERS)	X-COORD (METERS) 480668.21	480768.21	480868.21	480968.21	481068.21	481168.21	481268.21	481368.21	481468.21
3770289.70	374.00	376.00	377.70	379.00	380.30	382.00	384.00	385.30	387.00
3770189.70	374.00	376.00	378.00	379.00	381.00	382.60	384.00	386.00	387.60
3770089.70	374.00	376.00	377.60	379.00	381.00	382.60	384.00	386.00	387.60
3769989.70	374.00	376.00	377.60	379.00	380.80	382.50	384.00	386.00	387.60
3769889.70	374.00	376.00	377.00	378.90	380.30	382.00	383.90	385.30	387.60
3769789.70	376.80	377.70	377.60	379.00	381.00	382.60	384.00	386.00	387.60
3769689.70	378.00	378.00	378.00	379.90	381.10	382.70	384.00	386.10	388.00
3769589.70	377.00	377.60	378.30	379.90	381.30	383.80	384.90	386.70	388.60
3769489.70	376.90	378.00	378.00	379.90	381.40	383.10	384.90	387.30	389.60
3769389.70	376.90	377.90	378.60	380.00	381.30	383.00	384.90	387.30	389.10

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

* ELEVATION HEIGHTS IN METERS *

Y-COORD (METERS)	X-COORD (METERS) 481568.21	481668.21	481768.21
3774289.70	372.00	373.30	374.60
3774189.70	372.00	374.00	375.00
3774089.70	372.90	374.70	375.80
3773989.70	373.90	376.90	377.00
3773889.70	374.90	377.10	377.80
3773789.70	372.00	372.10	375.30
3773689.70	371.90	373.00	374.00
3773589.70	372.00	373.00	372.80
3773489.70	371.40	368.70	367.40
3773389.70	366.20	366.00	366.00
3773289.70	365.80	366.00	366.00
3773189.70	371.40	372.00	372.00
3773089.70	369.90	371.90	372.00
3772989.70	370.00	372.00	372.10
3772889.70	370.50	372.00	372.80
3772789.70	371.00	372.00	372.60
3772689.70	371.20	372.10	373.10
3772589.70	372.00	372.70	374.00
3772489.70	371.10	372.00	374.50
3772389.70	371.00	372.10	376.70
3772289.70	375.10	378.80	382.30
3772189.70	378.00	381.20	384.00
3772089.70	378.00	382.50	385.00
3771989.70	378.00	384.30	385.60
3771889.70	380.80	384.90	386.00
3771789.70	384.00	385.30	386.70
3771689.70	384.00	386.00	387.60
3771589.70	384.10	386.20	388.00
3771489.70	385.90	387.30	388.70
3771389.70	386.00	388.00	389.80
3771289.70	386.90	388.30	390.00
3771189.70	387.00	389.00	390.60
3771089.70	387.90	389.30	391.00
3770989.70	387.90	389.30	391.00
3770889.70	387.90	389.30	390.90
3770789.70	387.00	389.00	390.60
3770689.70	387.00	389.00	390.60
3770589.70	387.90	389.10	390.60
3770489.70	388.00	389.70	391.30
3770389.70	388.00	390.20	392.00

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

* ELEVATION HEIGHTS IN METERS *

Y-COORD (METERS)	X-COORD (METERS) 481568.21	481668.21	481768.21
3770289.70	388.90	390.40	392.10
3770189.70	389.00	391.00	392.60
3770089.70	389.10	391.00	392.60
3769989.70	389.00	391.00	392.60
3769889.70	389.00	390.30	392.60
3769789.70	389.00	391.00	392.60
3769689.70	389.20	391.10	392.70
3769589.70	394.20	393.80	393.00
3769489.70	390.30	391.00	394.00
3769389.70	390.70	391.40	396.00

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

* HILL HEIGHT SCALES IN METERS *

Y-COORD (METERS)	X-COORD (METERS) 478868.21	478968.21	479068.21	479168.21	479268.21	479368.21	479468.21	479568.21	479668.21
3774289.70	346.00	347.30	348.00	349.00	350.00	350.60	351.00	352.00	353.00
3774189.70	346.00	347.00	348.00	348.70	349.30	350.00	351.00	352.00	352.90
3774089.70	346.00	347.00	347.60	348.00	349.00	350.00	351.00	352.00	352.30
3773989.70	345.90	346.30	347.00	347.10	348.30	350.00	350.90	351.40	352.00
3773889.70	345.90	346.30	347.00	348.00	349.00	350.00	350.90	352.00	352.00
3773789.70	345.00	346.30	347.00	348.00	349.00	350.00	350.90	352.00	352.60
3773689.70	345.00	346.30	347.60	348.00	349.00	350.00	350.00	351.40	352.60
3773589.70	345.00	346.00	347.00	348.00	349.00	349.60	350.00	351.30	352.60
3773489.70	345.00	346.00	347.00	347.90	348.30	349.30	350.00	351.00	352.00
3773389.70	344.90	346.00	347.00	347.90	348.30	349.00	350.00	351.00	352.00
3773289.70	344.90	346.00	347.00	347.90	348.00	349.00	350.00	351.00	351.60
3773189.70	344.00	346.00	346.60	347.90	348.00	349.00	349.90	350.10	351.00
3773089.70	344.00	345.30	346.10	347.00	348.00	348.10	349.00	350.00	351.00
3772989.70	344.00	345.00	346.00	346.70	347.00	347.90	348.00	349.30	350.00
3772889.70	343.90	344.60	345.60	346.00	346.60	347.00	347.90	349.00	350.00
3772789.70	343.00	344.00	345.00	346.00	346.00	347.00	347.00	348.00	349.70
3772689.70	342.80	343.80	344.50	345.00	346.00	347.00	347.20	348.00	349.60
3772589.70	342.00	342.10	343.80	345.00	346.00	346.80	347.90	348.30	349.60
3772489.70	341.00	342.00	343.00	344.00	345.30	346.60	347.90	348.00	349.60
3772389.70	340.90	341.30	342.60	344.00	345.00	346.00	347.00	347.80	349.60
3772289.70	340.90	341.30	342.60	344.00	345.30	346.00	346.90	347.30	349.60
3772189.70	340.90	341.30	343.50	345.00	346.00	347.00	347.00	347.90	350.50
3772089.70	340.90	341.50	344.80	347.00	347.20	354.00	354.00	354.00	354.00
3771989.70	348.00	346.50	347.80	348.00	349.80	353.40	354.00	355.00	355.30
3771889.70	348.00	348.00	349.00	350.00	351.30	353.00	354.80	355.90	356.50
3771789.70	348.00	349.10	350.00	351.00	353.00	354.00	354.90	356.00	357.10
3771689.70	348.90	350.00	350.60	352.00	353.20	354.00	355.00	356.20	357.60
3771589.70	348.90	350.00	351.00	352.00	353.30	354.60	355.90	356.90	358.00
3771489.70	348.90	350.00	351.00	352.20	354.00	355.00	356.00	357.00	358.00
3771389.70	349.00	350.00	351.60	352.90	354.00	355.00	356.00	357.30	358.60
3771289.70	349.00	350.00	351.60	352.90	354.00	355.00	356.00	357.30	359.00
3771189.70	349.00	350.30	351.60	352.90	354.00	355.00	356.00	358.00	359.00
3771089.70	349.00	350.30	351.60	352.90	354.00	355.00	356.90	358.00	359.00
3770989.70	349.90	350.30	352.00	352.90	354.00	355.60	356.90	358.00	359.00
3770889.70	350.00	351.00	352.00	353.00	354.10	355.60	357.00	358.00	359.60
3770789.70	350.00	351.00	352.00	353.00	354.30	356.00	357.00	358.20	359.60
3770689.70	350.00	351.00	352.00	353.90	355.00	356.00	357.00	358.30	359.60
3770589.70	350.00	351.30	352.70	354.00	355.00	356.00	357.00	358.30	360.00
3770489.70	350.00	352.00	353.00	354.00	355.20	356.00	357.00	358.30	359.80
3770389.70	350.00	352.00	353.50	354.00	355.30	356.00	357.00	358.30	359.60

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

* HILL HEIGHT SCALES IN METERS *

Y-COORD (METERS)	X-COORD (METERS) 478868.21	478968.21	479068.21	479168.21	479268.21	479368.21	479468.21	479568.21	479668.21
3770289.70	350.00	352.00	353.00	354.00	355.00	356.00	357.00	358.30	359.60
3770189.70	350.90	352.00	352.60	353.90	355.00	356.00	357.00	358.30	359.60
3770089.70	350.90	351.90	352.60	353.90	355.00	356.00	357.90	358.90	360.00
3769989.70	350.90	352.00	352.60	353.90	355.00	356.60	357.90	359.00	360.00
3769889.70	351.00	352.00	353.00	354.00	355.30	356.80	358.00	359.00	360.60
3769789.70	351.00	352.00	353.00	354.90	356.00	357.00	358.00	359.00	360.60
3769689.70	352.20	353.00	353.00	355.90	358.10	358.70	359.00	359.30	361.60
3769589.70	353.60	354.20	360.00	359.50	360.00	360.00	360.00	360.20	365.00
3769489.70	350.20	353.00	360.00	358.00	358.10	359.00	359.00	359.90	363.40
3769389.70	349.90	352.00	353.00	354.90	356.20	357.50	358.00	359.00	360.00

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

* HILL HEIGHT SCALES IN METERS *

Y-COORD (METERS)	X-COORD (METERS) 479768.21	479868.21	479968.21	480068.21	480168.21	480268.21	480368.21	480468.21	480568.21
3774289.70	353.80	354.00	355.10	356.10	357.30	358.00	359.80	360.00	361.60
3774189.70	353.00	354.00	354.60	356.00	357.00	358.00	359.00	360.00	361.60
3774089.70	353.00	354.00	355.00	356.00	357.00	358.00	359.00	360.20	361.60
3773989.70	353.00	354.00	355.00	356.00	357.00	358.00	359.00	360.30	362.00
3773889.70	353.00	354.00	355.00	356.00	357.00	358.00	359.00	360.30	362.00
3773789.70	353.00	354.00	355.00	356.00	357.00	358.00	359.00	360.00	362.00
3773689.70	353.90	354.00	355.00	356.00	357.00	358.00	359.00	360.00	362.00
3773589.70	353.70	354.00	355.00	356.00	357.00	358.00	359.00	360.00	360.90
3773489.70	353.00	354.00	355.00	355.90	356.30	357.60	358.40	359.00	360.00
3773389.70	352.90	354.00	354.60	355.10	356.00	357.00	358.00	359.00	359.10
3773289.70	352.00	353.30	354.00	355.00	356.00	356.90	357.90	358.30	359.00
3773189.70	352.00	353.00	354.00	355.00	355.60	356.60	357.40	358.70	359.80
3773089.70	352.00	352.40	353.10	354.00	355.00	356.00	357.00	358.40	359.50
3772989.70	351.00	352.00	353.00	353.00	354.30	355.90	356.90	358.00	359.00
3772889.70	351.00	352.00	352.30	353.00	354.30	356.00	356.90	358.00	359.00
3772789.70	350.90	352.00	352.60	353.80	354.30	356.00	356.90	358.00	359.60
3772689.70	350.90	351.40	352.60	353.90	354.30	356.00	356.90	358.00	359.60
3772589.70	350.40	351.30	352.30	353.40	354.00	355.60	356.90	358.00	359.00
3772489.70	350.00	351.30	352.00	353.00	354.00	355.60	356.90	358.00	358.60
3772389.70	351.00	352.00	352.00	353.00	354.00	355.60	357.00	358.40	359.10
3772289.70	351.90	354.00	353.00	353.00	354.20	356.80	358.00	359.20	360.80
3772189.70	352.00	354.20	359.00	360.00	359.80	359.90	359.90	359.00	361.60
3772089.70	354.20	356.90	359.20	360.20	361.20	362.80	365.20	365.80	366.00
3771989.70	356.50	359.30	359.60	361.00	362.70	364.30	366.00	367.00	367.60
3771889.70	358.00	360.00	360.50	362.00	363.30	365.00	366.80	367.90	368.50
3771789.70	358.90	360.00	361.00	362.20	364.00	365.60	367.00	368.00	369.10
3771689.70	359.00	360.20	361.60	362.90	364.00	365.60	367.00	368.30	369.80
3771589.70	359.00	360.30	362.00	363.00	364.30	366.00	367.00	368.90	370.00
3771489.70	359.90	361.00	362.00	363.00	364.30	366.00	367.00	369.00	370.60
3771389.70	360.00	361.00	362.00	363.50	364.70	366.00	367.90	369.30	370.60
3771289.70	360.00	361.30	362.60	363.90	365.00	366.50	367.90	369.30	371.00
3771189.70	360.00	361.40	362.60	364.00	365.30	366.60	368.00	369.40	371.00
3771089.70	360.00	362.00	363.00	364.00	365.30	367.00	368.00	370.00	371.00
3770989.70	360.90	362.00	363.00	364.00	366.00	367.00	368.00	370.00	371.00
3770889.70	360.90	362.00	363.60	364.90	366.00	367.60	368.90	370.00	371.00
3770789.70	360.90	362.00	363.60	365.00	366.30	367.60	368.90	370.00	371.60
3770689.70	361.00	362.00	363.60	365.00	366.30	367.60	368.90	370.30	372.00
3770589.70	361.00	362.00	363.60	364.90	366.00	367.60	368.90	370.00	371.60
3770489.70	361.00	362.00	363.60	364.90	366.00	367.60	369.00	370.30	372.00
3770389.70	360.90	362.00	363.60	364.90	366.00	367.60	369.00	370.30	372.00

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

* HILL HEIGHT SCALES IN METERS *

Y-COORD (METERS)	X-COORD (METERS) 479768.21	479868.21	479968.21	480068.21	480168.21	480268.21	480368.21	480468.21	480568.21
3770289.70	360.90	362.30	364.00	365.00	366.30	368.00	369.00	371.00	372.00
3770189.70	360.90	362.30	364.00	365.90	367.00	368.00	369.50	371.00	372.60
3770089.70	361.00	363.00	364.60	366.00	367.00	368.00	369.90	371.00	372.60
3769989.70	361.90	363.00	364.60	366.00	367.30	368.10	369.90	371.00	372.00
3769889.70	362.00	363.30	364.60	366.00	367.30	368.60	369.90	371.00	372.00
3769789.70	362.00	363.90	364.60	366.00	367.30	368.60	370.00	371.00	372.50
3769689.70	364.00	364.20	365.00	366.00	367.40	369.00	370.20	371.10	373.50
3769589.70	366.00	365.80	366.00	366.00	368.00	369.60	372.00	372.00	374.30
3769489.70	365.10	365.00	365.00	366.00	368.00	369.60	371.10	373.00	374.60
3769389.70	362.00	363.30	364.60	366.00	367.30	369.00	370.90	372.00	374.50

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

* HILL HEIGHT SCALES IN METERS *

Y-COORD (METERS)	X-COORD (METERS) 480668.21	480768.21	480868.21	480968.21	481068.21	481168.21	481268.21	481368.21	481468.21
3774289.70	362.80	363.30	364.00	365.00	366.00	367.60	368.90	370.00	371.00
3774189.70	362.00	363.30	364.60	365.90	366.30	368.00	368.90	370.00	371.00
3774089.70	362.90	364.00	365.00	366.00	367.00	368.00	369.00	370.20	371.60
3773989.70	363.00	364.90	365.60	366.00	367.20	368.00	369.00	371.00	372.00
3773889.70	363.90	366.00	366.00	366.00	366.80	367.60	368.90	370.20	371.00
3773789.70	363.90	366.00	366.00	365.50	366.00	366.60	368.00	370.00	370.60
3773689.70	363.90	366.00	365.50	365.00	366.00	366.60	368.00	370.00	371.00
3773589.70	362.90	364.80	365.00	366.00	366.40	367.60	368.20	370.00	371.70
3773489.70	361.40	363.10	364.80	366.00	366.60	367.60	368.00	369.70	368.00
3773389.70	360.00	362.30	364.60	366.00	366.30	367.00	368.00	369.00	368.00
3773289.70	360.00	362.30	364.60	366.00	366.00	366.90	368.00	368.00	369.10
3773189.70	360.50	362.30	364.60	366.00	366.00	366.00	367.00	366.40	367.70
3773089.70	360.00	362.00	363.70	366.00	365.00	366.00	367.00	366.00	366.00
3772989.70	360.00	362.00	363.00	364.00	365.40	366.10	367.00	367.20	368.10
3772889.70	360.00	362.00	363.00	364.00	365.30	366.60	367.90	368.20	369.30
3772789.70	360.90	362.00	363.00	364.00	366.00	366.60	367.90	368.30	369.60
3772689.70	360.00	362.00	363.00	364.00	365.30	366.60	367.90	369.00	370.00
3772589.70	360.00	361.30	363.00	364.50	366.00	366.60	368.00	369.00	370.00
3772489.70	359.10	360.60	363.00	364.90	366.00	367.00	368.00	369.30	370.00
3772389.70	360.00	362.00	363.60	364.90	366.00	367.00	368.20	370.00	371.00
3772289.70	361.60	363.20	364.00	365.00	365.60	367.20	369.50	371.00	378.00
3772189.70	363.00	364.00	365.50	365.90	372.00	371.70	371.90	376.80	378.00
3772089.70	365.20	365.20	371.00	370.20	373.10	374.80	377.20	378.20	378.10
3771989.70	367.60	371.00	372.60	373.50	374.70	376.80	378.00	379.20	379.20
3771889.70	369.90	372.00	373.00	374.00	376.00	378.00	379.00	380.00	381.00
3771789.70	370.90	372.00	373.60	375.00	376.30	378.00	379.90	381.00	382.10
3771689.70	371.00	372.70	374.00	375.50	377.00	378.60	380.00	381.30	383.00
3771589.70	371.90	373.20	374.50	376.00	377.00	378.60	380.00	382.00	383.60
3771489.70	372.00	374.00	375.00	376.90	378.00	379.60	381.00	382.30	384.00
3771389.70	372.00	374.00	375.60	377.50	379.00	380.00	381.90	383.20	384.60
3771289.70	372.90	374.30	376.00	378.00	379.30	380.60	382.00	384.00	385.50
3771189.70	372.90	374.30	376.50	378.00	379.30	381.00	382.90	384.30	386.00
3771089.70	372.90	374.30	376.00	377.90	379.30	381.00	382.90	384.30	386.00
3770989.70	372.90	374.30	376.00	377.90	379.30	381.00	382.90	384.30	386.00
3770889.70	372.90	374.30	376.00	377.90	379.30	380.60	382.70	384.00	385.90
3770789.70	372.90	374.30	376.00	377.90	379.30	380.60	382.00	384.00	385.60
3770689.70	372.90	374.30	376.00	377.90	379.30	381.00	382.00	384.00	385.60
3770589.70	373.00	375.00	376.60	378.00	379.40	381.00	382.20	384.00	385.60
3770489.70	373.50	375.20	376.60	378.00	380.00	381.60	382.90	384.20	386.00
3770389.70	373.90	375.30	377.00	378.90	380.00	382.00	383.00	385.00	386.60

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

* HILL HEIGHT SCALES IN METERS *

Y-COORD (METERS)	X-COORD (METERS)								
	480668.21	480768.21	480868.21	480968.21	481068.21	481168.21	481268.21	481368.21	481468.21
3770289.70	374.00	376.00	377.70	379.00	380.30	382.00	384.00	385.30	387.00
3770189.70	374.00	376.00	378.00	379.00	381.00	382.60	384.00	386.00	387.60
3770089.70	374.00	376.00	377.60	379.00	381.00	382.60	384.00	386.00	387.60
3769989.70	374.00	376.00	377.60	379.00	380.80	382.50	384.00	386.00	387.60
3769889.70	374.00	376.00	377.00	378.90	380.30	382.00	383.90	385.30	387.60
3769789.70	376.80	377.70	377.60	379.00	381.00	382.60	384.00	386.00	387.60
3769689.70	378.00	378.00	378.00	379.90	381.10	382.70	384.00	386.10	388.00
3769589.70	377.00	377.60	378.30	379.90	381.30	383.80	384.90	386.70	399.00
3769489.70	376.90	378.00	378.00	379.90	381.40	383.10	384.90	387.30	399.00
3769389.70	376.90	377.90	378.60	380.00	381.30	383.00	384.90	387.30	389.10

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

* HILL HEIGHT SCALES IN METERS *

Y-COORD (METERS)	X-COORD (METERS) 481568.21	481668.21	481768.21
3774289.70	372.00	373.30	374.60
3774189.70	372.00	374.00	375.00
3774089.70	372.90	374.70	375.80
3773989.70	373.90	376.90	377.00
3773889.70	376.00	377.10	377.80
3773789.70	372.00	372.10	375.30
3773689.70	371.90	373.00	374.00
3773589.70	372.00	373.00	372.80
3773489.70	371.40	372.00	371.00
3773389.70	366.20	366.00	366.00
3773289.70	373.00	366.00	366.00
3773189.70	371.40	372.00	372.00
3773089.70	369.90	371.90	372.00
3772989.70	370.00	372.00	372.10
3772889.70	370.50	372.00	372.80
3772789.70	371.00	372.00	372.60
3772689.70	371.20	372.10	373.10
3772589.70	372.00	372.70	374.00
3772489.70	371.10	372.00	374.50
3772389.70	371.00	378.00	376.70
3772289.70	375.10	378.80	382.30
3772189.70	378.00	381.20	384.00
3772089.70	378.00	382.50	385.00
3771989.70	378.00	384.30	385.60
3771889.70	380.80	384.90	386.00
3771789.70	384.00	385.30	386.70
3771689.70	384.00	386.00	387.60
3771589.70	384.10	386.20	388.00
3771489.70	385.90	387.30	388.70
3771389.70	386.00	388.00	389.80
3771289.70	386.90	388.30	390.00
3771189.70	387.00	389.00	390.60
3771089.70	387.90	389.30	391.00
3770989.70	387.90	389.30	391.00
3770889.70	387.90	389.30	390.90
3770789.70	387.00	389.00	390.60
3770689.70	387.00	389.00	390.60
3770589.70	387.90	389.10	390.60
3770489.70	388.00	389.70	391.30
3770389.70	388.00	390.20	392.00

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

* HILL HEIGHT SCALES IN METERS *

Y-COORD (METERS)	X-COORD (METERS) 481568.21	481668.21	481768.21
3770289.70	388.90	390.40	392.10
3770189.70	389.00	391.00	392.60
3770089.70	389.10	391.00	392.60
3769989.70	389.00	391.00	392.60
3769889.70	389.00	390.30	392.60
3769789.70	389.00	391.00	392.60
3769689.70	389.20	391.10	392.70
3769589.70	397.00	393.80	393.00
3769489.70	399.00	391.00	394.00
3769389.70	390.70	391.40	396.00

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** DISCRETE CARTESIAN RECEPTORS ***
(X-COORD, Y-COORD, ZELEV, ZHILL, ZFLAG)
(METERS)

```
( 480726.1, 3770758.2,     373.9,     373.9,       0.0);        ( 479114.5, 3769998.8,     353.0,     353.0,       0.0);
( 479109.7, 3769953.9,     353.0,     353.0,       0.0);        ( 480558.0, 3774226.4,     361.3,     361.3,       0.0);
( 480766.0, 3771834.4,     372.0,     372.0,       0.0);        ( 480235.5, 3771590.9,     365.5,     365.5,       0.0);
```

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

* SOURCE-RECEPTOR COMBINATIONS FOR WHICH CALCULATIONS MAY NOT BE PERFORMED *
LESS THAN 1.0 METER; WITHIN OPENPIT; OR BEYOND 80KM FOR FASTAREA/FASTALL

SOURCE ID	- - RECEPTOR LOCATION - - XR (METERS)	YR (METERS)	DISTANCE (METERS)
L0009668	480668.2	3771789.7	-4.37
L0009669	480668.2	3771789.7	-3.88
L0009679	480668.2	3771689.7	0.95
L0009680	480668.2	3771689.7	-7.61
L0009681	480668.2	3771689.7	-1.21
L0009741	480668.2	3771889.7	0.48
L0009745	480268.2	3771589.7	0.36
L0009799	480368.2	3772089.7	0.02
L0009809	480368.2	3771989.7	0.68
L0009810	480368.2	3771989.7	-5.35
L0009811	480368.2	3771989.7	0.49
L0009821	480368.2	3771889.7	-1.48
L0009822	480368.2	3771889.7	-3.30
L0009833	480368.2	3771789.7	-2.53
L0009834	480368.2	3771789.7	-0.40

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** METEOROLOGICAL DAYS SELECTED FOR PROCESSING ***
(1=YES; 0=NO)

1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
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1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1

NOTE: METEOROLOGICAL DATA ACTUALLY PROCESSED WILL ALSO DEPEND ON WHAT IS INCLUDED IN THE DATA FILE.

*** UPPER BOUND OF FIRST THROUGH FIFTH WIND SPEED CATEGORIES ***
(METERS/SEC)

1.54, 3.09, 5.14, 8.23, 10.80,

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: ..\RedlandsADJU\RDLD_V9_ADJU\RDLD_v9.SFC Met Version: 16216
Profile file: ..\RedlandsADJU\RDLD_V9_ADJU\RDLD_v9.PFL
Surface format: FREE
Profile format: FREE
Surface station no.: 3171 Upper air station no.: 3190
Name: UNKNOWN Name: UNKNOWN
Year: 2012 Year: 2012

First 24 hours of scalar data

YR	MO	DY	JDY	HR	H0	U*	W*	DT/DZ	ZICNV	ZIMCH	M-O LEN	Z0	BOWEN	ALBEDO	REF WS	WD	HT	REF TA	HT
12	01	01	1	01	-10.6	0.149	-9.000	-9.000	-999.	138.	26.7	0.32	3.22	1.00	1.30	110.	9.1	285.4	5.5
12	01	01	1	02	-5.0	0.102	-9.000	-9.000	-999.	78.	17.9	0.32	3.22	1.00	0.90	130.	9.1	284.5	5.5
12	01	01	1	03	-5.0	0.102	-9.000	-9.000	-999.	78.	17.9	0.32	3.22	1.00	0.90	100.	9.1	285.0	5.5
12	01	01	1	04	-5.0	0.102	-9.000	-9.000	-999.	78.	17.9	0.32	3.22	1.00	0.90	107.	9.1	284.6	5.5
12	01	01	1	05	-10.7	0.149	-9.000	-9.000	-999.	138.	26.7	0.32	3.22	1.00	1.30	98.	9.1	284.9	5.5
12	01	01	1	06	-5.0	0.102	-9.000	-9.000	-999.	78.	17.9	0.32	3.22	1.00	0.90	86.	9.1	284.5	5.5
12	01	01	1	07	-5.0	0.102	-9.000	-9.000	-999.	78.	17.9	0.32	3.22	1.00	0.90	91.	9.1	284.0	5.5
12	01	01	1	08	-4.0	0.102	-9.000	-9.000	-999.	78.	22.9	0.32	3.22	0.54	0.90	107.	9.1	285.0	5.5
12	01	01	1	09	44.6	0.237	0.382	0.006	43.	276.	-25.6	0.15	3.22	0.33	2.10	81.	10.1	289.1	5.5
12	01	01	1	10	134.3	0.111	0.882	0.008	176.	99.	-1.0	0.32	3.22	0.26	0.40	72.	9.1	295.1	5.5
12	01	01	1	11	199.8	0.409	1.429	0.005	503.	627.	-29.4	0.15	3.22	0.23	3.68	78.	10.1	297.9	5.5
12	01	01	1	12	232.3	0.300	1.889	0.005	999.	402.	-10.0	0.32	3.22	0.22	1.80	333.	9.1	299.4	5.5
12	01	01	1	13	230.0	0.300	2.134	0.005	1453.	394.	-10.1	0.32	3.22	0.22	1.80	72.	9.1	300.4	5.5
12	01	01	1	14	194.0	0.294	2.109	0.005	1663.	382.	-11.2	0.32	3.22	0.24	1.80	277.	9.1	301.0	5.5
12	01	01	1	15	126.3	0.378	1.872	0.005	1784.	557.	-36.5	0.32	3.22	0.27	2.70	243.	9.1	301.0	5.5
12	01	01	1	16	39.5	0.199	1.278	0.005	1817.	240.	-17.2	0.32	3.22	0.36	1.30	274.	9.1	300.1	5.5
12	01	01	1	17	-4.7	0.101	-9.000	-9.000	-999.	85.	19.0	0.32	3.22	0.65	0.90	252.	9.1	298.2	5.5
12	01	01	1	18	-4.9	0.102	-9.000	-9.000	-999.	78.	18.2	0.32	3.22	1.00	0.90	116.	9.1	296.4	5.5
12	01	01	1	19	-18.8	0.204	-9.000	-9.000	-999.	220.	45.6	0.15	3.22	1.00	2.27	79.	10.1	292.2	5.5
12	01	01	1	20	-5.0	0.102	-9.000	-9.000	-999.	83.	18.1	0.32	3.22	1.00	0.90	95.	9.1	290.2	5.5
12	01	01	1	21	-5.0	0.102	-9.000	-9.000	-999.	78.	18.0	0.32	3.22	1.00	0.90	99.	9.1	287.8	5.5
12	01	01	1	22	-5.0	0.102	-9.000	-9.000	-999.	78.	18.0	0.32	3.22	1.00	0.90	110.	9.1	287.6	5.5
12	01	01	1	23	-10.6	0.149	-9.000	-9.000	-999.	138.	26.8	0.32	3.22	1.00	1.30	89.	9.1	287.2	5.5
12	01	01	1	24	-5.0	0.102	-9.000	-9.000	-999.	78.	17.9	0.32	3.22	1.00	0.90	105.	9.1	285.9	5.5

First hour of profile data

YR	MO	DY	HR	HEIGHT	F	WDIR	WSPD	AMB_TMP	sigmaA	sigmaW	sigmaV
12	01	01	01	5.5	0	-999.	-99.00	285.5	99.0	-99.00	-99.00
12	01	01	01	9.1	1	110.	1.30	-999.0	99.0	-99.00	-99.00

F indicates top of profile (=1) or below (=0)

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): L0008552 , L0008553 , L0008554 , L0008555 , L0008556 ,
L0008557 , L0008558 , L0008559 , L0008560 , L0008561 , L0008562 , L0008563 , L0008564 ,
L0008565 , L0008566 , L0008567 , L0008568 , L0008569 , L0008570 , L0008571 , L0008572 ,
L0008573 , L0008574 , L0008575 , L0008576 , L0008577 , L0008578 , L0008579 , . . . ,

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

** CONC OF DPM IN MICROGRAMS/M**3 **

Y-COORD (METERS)	X-COORD (METERS)								
	478868.21	478968.21	479068.21	479168.21	479268.21	479368.21	479468.21	479568.21	479668.21
3774289.70	0.00006	0.00007	0.00007	0.00007	0.00007	0.00008	0.00008	0.00008	0.00009
3774189.70	0.00007	0.00007	0.00007	0.00007	0.00008	0.00008	0.00008	0.00009	0.00009
3774089.70	0.00007	0.00007	0.00008	0.00008	0.00008	0.00008	0.00009	0.00009	0.00010
3773989.70	0.00007	0.00008	0.00008	0.00008	0.00009	0.00009	0.00009	0.00010	0.00010
3773889.70	0.00008	0.00008	0.00008	0.00009	0.00009	0.00009	0.00010	0.00010	0.00011
3773789.70	0.00008	0.00008	0.00009	0.00009	0.00009	0.00010	0.00010	0.00011	0.00011
3773689.70	0.00008	0.00009	0.00009	0.00009	0.00010	0.00010	0.00011	0.00012	0.00012
3773589.70	0.00009	0.00009	0.00009	0.00010	0.00010	0.00011	0.00012	0.00012	0.00013
3773489.70	0.00009	0.00009	0.00010	0.00010	0.00011	0.00012	0.00012	0.00013	0.00014
3773389.70	0.00009	0.00010	0.00010	0.00011	0.00012	0.00012	0.00013	0.00014	0.00015
3773289.70	0.00010	0.00010	0.00011	0.00012	0.00012	0.00013	0.00014	0.00015	0.00016
3773189.70	0.00010	0.00011	0.00011	0.00012	0.00013	0.00014	0.00015	0.00016	0.00017
3773089.70	0.00011	0.00011	0.00012	0.00013	0.00014	0.00015	0.00016	0.00017	0.00018
3772989.70	0.00011	0.00012	0.00013	0.00014	0.00015	0.00016	0.00017	0.00018	0.00019
3772889.70	0.00012	0.00012	0.00013	0.00014	0.00015	0.00017	0.00018	0.00019	0.00021
3772789.70	0.00012	0.00013	0.00014	0.00015	0.00016	0.00018	0.00019	0.00021	0.00023
3772689.70	0.00013	0.00014	0.00015	0.00016	0.00017	0.00019	0.00021	0.00023	0.00025
3772589.70	0.00013	0.00014	0.00015	0.00017	0.00018	0.00020	0.00022	0.00024	0.00027
3772489.70	0.00013	0.00015	0.00016	0.00017	0.00019	0.00021	0.00024	0.00026	0.00029
3772389.70	0.00014	0.00015	0.00017	0.00018	0.00020	0.00022	0.00025	0.00028	0.00032
3772289.70	0.00014	0.00016	0.00017	0.00019	0.00021	0.00024	0.00027	0.00030	0.00035
3772189.70	0.00015	0.00016	0.00018	0.00020	0.00022	0.00025	0.00028	0.00032	0.00037
3772089.70	0.00015	0.00017	0.00019	0.00021	0.00023	0.00026	0.00030	0.00034	0.00040
3771989.70	0.00016	0.00017	0.00019	0.00022	0.00024	0.00027	0.00031	0.00036	0.00042
3771889.70	0.00016	0.00018	0.00020	0.00023	0.00026	0.00029	0.00033	0.00038	0.00044
3771789.70	0.00017	0.00019	0.00022	0.00024	0.00028	0.00031	0.00035	0.00040	0.00046
3771689.70	0.00017	0.00020	0.00024	0.00029	0.00033	0.00036	0.00039	0.00044	0.00050
3771589.70	0.00018	0.00021	0.00029	0.00089	0.00090	0.00091	0.00093	0.00095	0.00099
3771489.70	0.00018	0.00022	0.00033	0.00056	0.00038	0.00039	0.00041	0.00045	0.00050
3771389.70	0.00018	0.00022	0.00033	0.00052	0.00033	0.00032	0.00034	0.00037	0.00041
3771289.70	0.00018	0.00022	0.00033	0.00050	0.00031	0.00029	0.00031	0.00033	0.00036
3771189.70	0.00018	0.00022	0.00033	0.00048	0.00029	0.00028	0.00028	0.00030	0.00033

3771089.70	0.00018	0.00021	0.00032	0.00047	0.00028	0.00026	0.00026	0.00028	0.00030
3770989.70	0.00017	0.00021	0.00032	0.00045	0.00027	0.00025	0.00025	0.00026	0.00027
3770889.70	0.00017	0.00020	0.00031	0.00044	0.00026	0.00023	0.00023	0.00024	0.00025
3770789.70	0.00016	0.00020	0.00031	0.00042	0.00025	0.00022	0.00022	0.00022	0.00023
3770689.70	0.00016	0.00019	0.00030	0.00041	0.00024	0.00021	0.00020	0.00021	0.00021
3770589.70	0.00015	0.00019	0.00030	0.00039	0.00023	0.00020	0.00019	0.00019	0.00020
3770489.70	0.00015	0.00018	0.00030	0.00038	0.00022	0.00019	0.00018	0.00018	0.00018
3770389.70	0.00014	0.00018	0.00029	0.00037	0.00021	0.00018	0.00017	0.00017	0.00017

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): L0008552 , L0008553 , L0008554 , L0008555 , L0008556 ,
L0008557 , L0008558 , L0008559 , L0008560 , L0008561 , L0008562 , L0008563 , L0008564 ,
L0008565 , L0008566 , L0008567 , L0008568 , L0008569 , L0008570 , L0008571 , L0008572 ,
L0008573 , L0008574 , L0008575 , L0008576 , L0008577 , L0008578 , L0008579 , . . . ,

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

** CONC OF DPM IN MICROGRAMS/M**3 **

Y-COORD (METERS)	X-COORD (METERS) 478868.21	478968.21	479068.21	479168.21	479268.21	479368.21	479468.21	479568.21	479668.21
3770289.70	0.00014	0.00017	0.00029	0.00036	0.00020	0.00017	0.00016	0.00016	0.00016
3770189.70	0.00013	0.00017	0.00028	0.00036	0.00020	0.00016	0.00015	0.00015	0.00015
3770089.70	0.00013	0.00016	0.00027	0.00036	0.00019	0.00016	0.00014	0.00014	0.00014
3769989.70	0.00012	0.00015	0.00026	0.00035	0.00018	0.00015	0.00014	0.00013	0.00013
3769889.70	0.00012	0.00015	0.00025	0.00035	0.00017	0.00014	0.00013	0.00012	0.00012
3769789.70	0.00011	0.00014	0.00024	0.00034	0.00016	0.00013	0.00012	0.00012	0.00012
3769689.70	0.00010	0.00012	0.00021	0.00031	0.00014	0.00012	0.00011	0.00011	0.00011
3769589.70	0.00009	0.00011	0.00014	0.00016	0.00012	0.00011	0.00010	0.00010	0.00010
3769489.70	0.00008	0.00009	0.00010	0.00010	0.00010	0.00009	0.00009	0.00009	0.00009
3769389.70	0.00008	0.00008	0.00008	0.00009	0.00009	0.00009	0.00008	0.00008	0.00008

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION   VALUES FOR SOURCE GROUP: ALL   ***
INCLUDING SOURCE(S):   L0008552   , L0008553   , L0008554   , L0008555   , L0008556   ,
L0008557   , L0008558   , L0008559   , L0008560   , L0008561   , L0008562   , L0008563   , L0008564   ,
L0008565   , L0008566   , L0008567   , L0008568   , L0008569   , L0008570   , L0008571   , L0008572   ,
L0008573   , L0008574   , L0008575   , L0008576   , L0008577   , L0008578   , L0008579   , . . .   ,

*** NETWORK ID: UCART1   ; NETWORK TYPE: GRIDCART ***

** CONC OF DPM   IN MICROGRAMS/M**3   **

Y-COORD (METERS)	X-COORD (METERS)								
	479768.21	479868.21	479968.21	480068.21	480168.21	480268.21	480368.21	480468.21	480568.21
3774289.70	0.00009	0.00009	0.00010	0.00010	0.00011	0.00012	0.00013	0.00014	0.00017
3774189.70	0.00010	0.00010	0.00011	0.00011	0.00012	0.00013	0.00014	0.00016	0.00020
3774089.70	0.00010	0.00011	0.00011	0.00012	0.00013	0.00014	0.00015	0.00018	0.00023
3773989.70	0.00011	0.00011	0.00012	0.00013	0.00014	0.00015	0.00017	0.00020	0.00026
3773889.70	0.00011	0.00012	0.00013	0.00013	0.00015	0.00016	0.00018	0.00021	0.00027
3773789.70	0.00012	0.00013	0.00013	0.00014	0.00015	0.00017	0.00019	0.00022	0.00028
3773689.70	0.00013	0.00014	0.00014	0.00015	0.00016	0.00018	0.00020	0.00023	0.00029
3773589.70	0.00014	0.00014	0.00015	0.00016	0.00017	0.00019	0.00021	0.00024	0.00030
3773489.70	0.00015	0.00015	0.00016	0.00017	0.00019	0.00020	0.00022	0.00025	0.00031
3773389.70	0.00016	0.00016	0.00017	0.00019	0.00020	0.00021	0.00023	0.00026	0.00032
3773289.70	0.00017	0.00018	0.00019	0.00020	0.00021	0.00023	0.00025	0.00028	0.00033
3773189.70	0.00018	0.00019	0.00020	0.00022	0.00023	0.00025	0.00027	0.00030	0.00035
3773089.70	0.00019	0.00021	0.00022	0.00024	0.00025	0.00027	0.00029	0.00032	0.00038
3772989.70	0.00021	0.00023	0.00024	0.00026	0.00028	0.00030	0.00032	0.00035	0.00041
3772889.70	0.00023	0.00025	0.00027	0.00029	0.00031	0.00033	0.00036	0.00039	0.00044
3772789.70	0.00025	0.00027	0.00030	0.00032	0.00035	0.00038	0.00040	0.00044	0.00049
3772689.70	0.00027	0.00030	0.00033	0.00037	0.00040	0.00043	0.00047	0.00050	0.00056
3772589.70	0.00030	0.00034	0.00038	0.00042	0.00047	0.00051	0.00055	0.00060	0.00065
3772489.70	0.00033	0.00038	0.00043	0.00049	0.00056	0.00062	0.00068	0.00073	0.00078
3772389.70	0.00037	0.00043	0.00050	0.00058	0.00068	0.00079	0.00088	0.00095	0.00099
3772289.70	0.00041	0.00048	0.00057	0.00069	0.00085	0.00105	0.00123	0.00134	0.00136
3772189.70	0.00044	0.00053	0.00066	0.00084	0.00112	0.00153	0.00202	0.00219	0.00213
3772089.70	0.00048	0.00059	0.00075	0.00101	0.00145	0.00241	0.00672	0.00696	0.00525
3771989.70	0.00051	0.00063	0.00082	0.00114	0.00176	0.00339	0.01470	0.00741	0.01194
3771889.70	0.00053	0.00066	0.00087	0.00122	0.00192	0.00380	0.01640	0.00842	0.01688
3771789.70	0.00055	0.00068	0.00088	0.00122	0.00190	0.00367	0.01603	0.00800	0.01790
3771689.70	0.00059	0.00070	0.00089	0.00118	0.00176	0.00460	0.00849	0.00534	0.01262
3771589.70	0.00105	0.00113	0.00136	0.00160	0.00199	0.00305	0.00310	0.00334	0.00371
3771489.70	0.00056	0.00065	0.00076	0.00091	0.00112	0.00138	0.00159	0.00174	0.00182
3771389.70	0.00046	0.00053	0.00061	0.00071	0.00083	0.00096	0.00108	0.00116	0.00122
3771289.70	0.00040	0.00045	0.00051	0.00058	0.00066	0.00074	0.00081	0.00087	0.00092
3771189.70	0.00036	0.00040	0.00044	0.00049	0.00054	0.00059	0.00064	0.00069	0.00075

3771089.70	0.00032	0.00035	0.00038	0.00042	0.00045	0.00049	0.00053	0.00057	0.00063
3770989.70	0.00029	0.00031	0.00034	0.00036	0.00039	0.00042	0.00045	0.00049	0.00055
3770889.70	0.00026	0.00028	0.00030	0.00032	0.00034	0.00036	0.00039	0.00042	0.00048
3770789.70	0.00024	0.00025	0.00027	0.00028	0.00030	0.00032	0.00034	0.00037	0.00042
3770689.70	0.00022	0.00023	0.00024	0.00026	0.00027	0.00028	0.00030	0.00033	0.00037
3770589.70	0.00020	0.00021	0.00022	0.00023	0.00024	0.00025	0.00027	0.00029	0.00032
3770489.70	0.00019	0.00019	0.00020	0.00021	0.00022	0.00023	0.00024	0.00026	0.00028
3770389.70	0.00017	0.00018	0.00019	0.00019	0.00020	0.00021	0.00022	0.00023	0.00026

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): L0008552 , L0008553 , L0008554 , L0008555 , L0008556 ,
L0008557 , L0008558 , L0008559 , L0008560 , L0008561 , L0008562 , L0008563 , L0008564 ,
L0008565 , L0008566 , L0008567 , L0008568 , L0008569 , L0008570 , L0008571 , L0008572 ,
L0008573 , L0008574 , L0008575 , L0008576 , L0008577 , L0008578 , L0008579 , . . . ,

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

** CONC OF DPM IN MICROGRAMS/M**3 **

Y-COORD (METERS)	X-COORD (METERS) 479768.21	479868.21	479968.21	480068.21	480168.21	480268.21	480368.21	480468.21	480568.21
3770289.70	0.00016	0.00017	0.00017	0.00018	0.00018	0.00019	0.00020	0.00021	0.00023
3770189.70	0.00015	0.00015	0.00016	0.00016	0.00017	0.00017	0.00018	0.00019	0.00021
3770089.70	0.00014	0.00014	0.00015	0.00015	0.00015	0.00016	0.00017	0.00018	0.00020
3769989.70	0.00013	0.00013	0.00014	0.00014	0.00014	0.00015	0.00015	0.00016	0.00018
3769889.70	0.00012	0.00012	0.00013	0.00013	0.00013	0.00014	0.00014	0.00015	0.00017
3769789.70	0.00012	0.00012	0.00012	0.00012	0.00012	0.00013	0.00013	0.00014	0.00015
3769689.70	0.00011	0.00011	0.00011	0.00011	0.00011	0.00012	0.00012	0.00013	0.00014
3769589.70	0.00010	0.00010	0.00010	0.00010	0.00010	0.00011	0.00011	0.00011	0.00012
3769489.70	0.00009	0.00009	0.00009	0.00010	0.00010	0.00010	0.00010	0.00010	0.00010
3769389.70	0.00009	0.00009	0.00009	0.00009	0.00009	0.00009	0.00009	0.00009	0.00009

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): L0008552 , L0008553 , L0008554 , L0008555 , L0008556 ,
L0008557 , L0008558 , L0008559 , L0008560 , L0008561 , L0008562 , L0008563 , L0008564 ,
L0008565 , L0008566 , L0008567 , L0008568 , L0008569 , L0008570 , L0008571 , L0008572 ,
L0008573 , L0008574 , L0008575 , L0008576 , L0008577 , L0008578 , L0008579 , . . . ,

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

** CONC OF DPM IN MICROGRAMS/M**3 **

Y-COORD (METERS)	X-COORD (METERS)								
	480668.21	480768.21	480868.21	480968.21	481068.21	481168.21	481268.21	481368.21	481468.21
3774289.70	0.00020	0.00023	0.00025	0.00025	0.00024	0.00024	0.00023	0.00023	0.00021
3774189.70	0.00028	0.00048	0.00050	0.00047	0.00044	0.00042	0.00043	0.00044	0.00044
3774089.70	0.00041	0.00112	0.00085	0.00099	0.00123	0.00137	0.00107	0.00087	0.00070
3773989.70	0.00045	0.00100	0.00043	0.00038	0.00036	0.00035	0.00033	0.00031	0.00027
3773889.70	0.00045	0.00101	0.00039	0.00031	0.00027	0.00025	0.00024	0.00022	0.00020
3773789.70	0.00045	0.00104	0.00038	0.00028	0.00025	0.00022	0.00021	0.00019	0.00018
3773689.70	0.00046	0.00107	0.00038	0.00028	0.00024	0.00021	0.00020	0.00018	0.00017
3773589.70	0.00046	0.00110	0.00038	0.00028	0.00024	0.00021	0.00019	0.00018	0.00017
3773489.70	0.00047	0.00114	0.00039	0.00029	0.00024	0.00022	0.00020	0.00018	0.00017
3773389.70	0.00048	0.00117	0.00040	0.00030	0.00025	0.00022	0.00020	0.00019	0.00017
3773289.70	0.00049	0.00119	0.00041	0.00031	0.00026	0.00023	0.00021	0.00020	0.00018
3773189.70	0.00051	0.00122	0.00043	0.00032	0.00027	0.00024	0.00022	0.00020	0.00019
3773089.70	0.00053	0.00125	0.00045	0.00034	0.00029	0.00026	0.00023	0.00021	0.00020
3772989.70	0.00056	0.00128	0.00048	0.00036	0.00031	0.00027	0.00025	0.00023	0.00021
3772889.70	0.00060	0.00133	0.00051	0.00039	0.00033	0.00030	0.00027	0.00024	0.00022
3772789.70	0.00064	0.00138	0.00055	0.00043	0.00036	0.00032	0.00029	0.00026	0.00024
3772689.70	0.00070	0.00145	0.00060	0.00047	0.00040	0.00035	0.00031	0.00028	0.00025
3772589.70	0.00079	0.00153	0.00066	0.00052	0.00044	0.00039	0.00034	0.00030	0.00027
3772489.70	0.00091	0.00165	0.00075	0.00059	0.00050	0.00043	0.00037	0.00033	0.00029
3772389.70	0.00109	0.00181	0.00086	0.00067	0.00056	0.00047	0.00041	0.00035	0.00031
3772289.70	0.00140	0.00205	0.00103	0.00079	0.00063	0.00053	0.00045	0.00038	0.00034
3772189.70	0.00199	0.00245	0.00126	0.00093	0.00073	0.00060	0.00050	0.00043	0.00037
3772089.70	0.00348	0.00314	0.00159	0.00111	0.00087	0.00070	0.00057	0.00048	0.00042
3771989.70	0.01345	0.00428	0.00206	0.00138	0.00103	0.00082	0.00066	0.00055	0.00047
3771889.70	0.01339	0.00512	0.00233	0.00153	0.00117	0.00091	0.00073	0.00061	0.00051
3771789.70	0.01269	0.00478	0.00230	0.00156	0.00119	0.00094	0.00076	0.00063	0.00053
3771689.70	0.00900	0.00382	0.00197	0.00142	0.00109	0.00088	0.00072	0.00061	0.00052
3771589.70	0.00353	0.00268	0.00155	0.00116	0.00092	0.00076	0.00064	0.00055	0.00048
3771489.70	0.00185	0.00225	0.00121	0.00093	0.00076	0.00064	0.00055	0.00048	0.00043
3771389.70	0.00134	0.00189	0.00097	0.00075	0.00063	0.00054	0.00047	0.00042	0.00037
3771289.70	0.00106	0.00167	0.00081	0.00063	0.00054	0.00046	0.00041	0.00037	0.00033
3771189.70	0.00090	0.00153	0.00071	0.00055	0.00047	0.00041	0.00036	0.00033	0.00029

3771089.70	0.00080	0.00143	0.00064	0.00050	0.00043	0.00037	0.00033	0.00030	0.00027
3770989.70	0.00072	0.00136	0.00059	0.00046	0.00040	0.00036	0.00032	0.00028	0.00025
3770889.70	0.00066	0.00131	0.00058	0.00047	0.00042	0.00038	0.00034	0.00030	0.00025
3770789.70	0.00059	0.00136	0.00083	0.00075	0.00071	0.00067	0.00062	0.00050	0.00027
3770689.70	0.00047	0.00073	0.00057	0.00053	0.00050	0.00047	0.00044	0.00036	0.00024
3770589.70	0.00040	0.00058	0.00037	0.00033	0.00031	0.00028	0.00026	0.00023	0.00020
3770489.70	0.00035	0.00052	0.00031	0.00027	0.00024	0.00022	0.00020	0.00018	0.00017
3770389.70	0.00032	0.00049	0.00027	0.00023	0.00021	0.00019	0.00017	0.00016	0.00014

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): L0008552 , L0008553 , L0008554 , L0008555 , L0008556 ,
L0008557 , L0008558 , L0008559 , L0008560 , L0008561 , L0008562 , L0008563 , L0008564 ,
L0008565 , L0008566 , L0008567 , L0008568 , L0008569 , L0008570 , L0008571 , L0008572 ,
L0008573 , L0008574 , L0008575 , L0008576 , L0008577 , L0008578 , L0008579 , . . . ,

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

** CONC OF DPM IN MICROGRAMS/M**3 **

Y-COORD (METERS)	X-COORD (METERS) 480668.21	480768.21	480868.21	480968.21	481068.21	481168.21	481268.21	481368.21	481468.21
3770289.70	0.00030	0.00046	0.00024	0.00020	0.00018	0.00016	0.00015	0.00014	0.00013
3770189.70	0.00028	0.00044	0.00022	0.00018	0.00016	0.00015	0.00013	0.00012	0.00011
3770089.70	0.00026	0.00042	0.00021	0.00017	0.00015	0.00013	0.00012	0.00011	0.00011
3769989.70	0.00025	0.00041	0.00019	0.00016	0.00014	0.00012	0.00011	0.00010	0.00010
3769889.70	0.00023	0.00039	0.00018	0.00014	0.00012	0.00011	0.00010	0.00010	0.00009
3769789.70	0.00021	0.00037	0.00017	0.00013	0.00011	0.00010	0.00010	0.00009	0.00008
3769689.70	0.00018	0.00034	0.00015	0.00012	0.00010	0.00009	0.00009	0.00008	0.00008
3769589.70	0.00013	0.00015	0.00012	0.00010	0.00009	0.00008	0.00008	0.00007	0.00007
3769489.70	0.00010	0.00010	0.00010	0.00009	0.00008	0.00008	0.00007	0.00007	0.00006
3769389.70	0.00009	0.00009	0.00009	0.00008	0.00008	0.00007	0.00007	0.00006	0.00006

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION   VALUES FOR SOURCE GROUP: ALL   ***
INCLUDING SOURCE(S):   L0008552   , L0008553   , L0008554   , L0008555   , L0008556   ,
L0008557   , L0008558   , L0008559   , L0008560   , L0008561   , L0008562   , L0008563   , L0008564   ,
L0008565   , L0008566   , L0008567   , L0008568   , L0008569   , L0008570   , L0008571   , L0008572   ,
L0008573   , L0008574   , L0008575   , L0008576   , L0008577   , L0008578   , L0008579   , . . .   ,

*** NETWORK ID: UCART1   ; NETWORK TYPE: GRIDCART ***

** CONC OF DPM   IN MICROGRAMS/M**3   **

Y-COORD (METERS)	X-COORD (METERS)		
	481568.21	481668.21	481768.21
3774289.70	0.00018	0.00014	0.00012
3774189.70	0.00034	0.00018	0.00014
3774089.70	0.00044	0.00020	0.00015
3773989.70	0.00022	0.00017	0.00014
3773889.70	0.00018	0.00015	0.00013
3773789.70	0.00016	0.00015	0.00013
3773689.70	0.00016	0.00014	0.00013
3773589.70	0.00015	0.00014	0.00013
3773489.70	0.00016	0.00015	0.00013
3773389.70	0.00016	0.00015	0.00014
3773289.70	0.00017	0.00015	0.00014
3773189.70	0.00017	0.00016	0.00015
3773089.70	0.00018	0.00017	0.00016
3772989.70	0.00019	0.00018	0.00016
3772889.70	0.00020	0.00019	0.00017
3772789.70	0.00022	0.00020	0.00018
3772689.70	0.00023	0.00021	0.00019
3772589.70	0.00024	0.00022	0.00020
3772489.70	0.00026	0.00023	0.00021
3772389.70	0.00027	0.00025	0.00022
3772289.70	0.00030	0.00026	0.00022
3772189.70	0.00032	0.00028	0.00025
3772089.70	0.00037	0.00031	0.00028
3771989.70	0.00041	0.00035	0.00031
3771889.70	0.00044	0.00038	0.00034
3771789.70	0.00046	0.00040	0.00035
3771689.70	0.00045	0.00040	0.00035
3771589.70	0.00042	0.00038	0.00034
3771489.70	0.00038	0.00034	0.00031
3771389.70	0.00034	0.00031	0.00028
3771289.70	0.00030	0.00027	0.00025
3771189.70	0.00027	0.00024	0.00023

3771089.70	0.00024	0.00022	0.00020
3770989.70	0.00023	0.00021	0.00019
3770889.70	0.00022	0.00019	0.00018
3770789.70	0.00021	0.00019	0.00017
3770689.70	0.00020	0.00017	0.00016
3770589.70	0.00017	0.00016	0.00014
3770489.70	0.00015	0.00014	0.00013
3770389.70	0.00013	0.00012	0.00012

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION   VALUES FOR SOURCE GROUP: ALL   ***
INCLUDING SOURCE(S):   L0008552   , L0008553   , L0008554   , L0008555   , L0008556   ,
L0008557   , L0008558   , L0008559   , L0008560   , L0008561   , L0008562   , L0008563   , L0008564   ,
L0008565   , L0008566   , L0008567   , L0008568   , L0008569   , L0008570   , L0008571   , L0008572   ,
L0008573   , L0008574   , L0008575   , L0008576   , L0008577   , L0008578   , L0008579   , . . .   ,

*** NETWORK ID: UCART1   ; NETWORK TYPE: GRIDCART ***

** CONC OF DPM   IN MICROGRAMS/M**3   **

Y-COORD (METERS)	X-COORD (METERS)		
	481568.21	481668.21	481768.21
3770289.70	0.00012	0.00011	0.00010
3770189.70	0.00011	0.00010	0.00010
3770089.70	0.00010	0.00009	0.00009
3769989.70	0.00009	0.00009	0.00008
3769889.70	0.00008	0.00008	0.00008
3769789.70	0.00008	0.00007	0.00007
3769689.70	0.00007	0.00007	0.00007
3769589.70	0.00006	0.00006	0.00006
3769489.70	0.00006	0.00006	0.00006
3769389.70	0.00006	0.00006	0.00005

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): L0008552 , L0008553 , L0008554 , L0008555 , L0008556 ,
L0008557 , L0008558 , L0008559 , L0008560 , L0008561 , L0008562 , L0008563 , L0008564 ,
L0008565 , L0008566 , L0008567 , L0008568 , L0008569 , L0008570 , L0008571 , L0008572 ,
L0008573 , L0008574 , L0008575 , L0008576 , L0008577 , L0008578 , L0008579 , . . . ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF DPM IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
480726.12	3770758.20	0.00105	479114.46	3769998.76	0.00063
479109.70	3769953.87	0.00053	480558.05	3774226.36	0.00018
480766.03	3771834.40	0.00546	480235.52	3771590.86	0.00259

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** THE SUMMARY OF MAXIMUM PERIOD (43848 HRS) RESULTS ***

** CONC OF DPM IN MICROGRAMS/M**3 **

GROUP ID		AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)					OF TYPE	NETWORK GRID-ID
ALL	1ST HIGHEST VALUE IS	0.01790 AT	(480568.21,	3771789.70,	369.10,	369.10,	0.00)	GC	UCART1
	2ND HIGHEST VALUE IS	0.01688 AT	(480568.21,	3771889.70,	368.50,	368.50,	0.00)	GC	UCART1
	3RD HIGHEST VALUE IS	0.01640 AT	(480368.21,	3771889.70,	366.80,	366.80,	0.00)	GC	UCART1
	4TH HIGHEST VALUE IS	0.01603 AT	(480368.21,	3771789.70,	367.00,	367.00,	0.00)	GC	UCART1
	5TH HIGHEST VALUE IS	0.01470 AT	(480368.21,	3771989.70,	366.00,	366.00,	0.00)	GC	UCART1
	6TH HIGHEST VALUE IS	0.01345 AT	(480668.21,	3771989.70,	367.60,	367.60,	0.00)	GC	UCART1
	7TH HIGHEST VALUE IS	0.01339 AT	(480668.21,	3771889.70,	369.90,	369.90,	0.00)	GC	UCART1
	8TH HIGHEST VALUE IS	0.01269 AT	(480668.21,	3771789.70,	370.90,	370.90,	0.00)	GC	UCART1
	9TH HIGHEST VALUE IS	0.01262 AT	(480568.21,	3771689.70,	369.80,	369.80,	0.00)	GC	UCART1
	10TH HIGHEST VALUE IS	0.01194 AT	(480568.21,	3771989.70,	367.60,	367.60,	0.00)	GC	UCART1

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** Message Summary : AERMOD Model Execution ***

 --------- Summary of Total Messages --------

A Total of   0 Fatal Error Message(s)
A Total of   2 Warning Message(s)
A Total of   388 Informational Message(s)

A Total of   43848 Hours Were Processed

A Total of   191 Calm Hours Identified

A Total of   197 Missing Hours Identified (0.45 Percent)

   ******** FATAL ERROR MESSAGES ********
              *** NONE ***

   ********   WARNING MESSAGES   ********
ME W186   3053   MEOPEN: THRESH_1MIN 1-min ASOS wind speed threshold used   0.50
ME W187   3053   MEOPEN: ADJ_U* Option for Low Winds used in AERMET

   ****
   *** AERMOD Finishes Successfully ***
   ****

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BIOLOGICAL REPORT
FOR THE
PALMETTO PROJECT SITE

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1.0 INTRODUCTION

The Palmetto project site is located in the City of Redlands, San Bernardino County, California (Figure 1). The site is located southeast of the San Bernardino International Airport. The site is northwest of and adjacent to the intersection of Palmetto Avenue and Alabama Street. Redlands Wastewater Treatment Facility bounds the site to the north and west (Figures 2 and 3).

The site is within Section 17 of Township 1 South and Range 3 West of the Redlands, California, United States Geological Survey (USGS) 7.5-minute topographic quadrangle (Figure 1).

A site assessment and biological surveys were conducted at the site at the request of Duke Realty. The surveys conducted in spring 2018 included all of the project site; and consisted of;

- a general biological assessment,
- general plant and wildlife surveys,
- vegetation mapping,
- habitat assessment for assessing potential for special status plant species[1],
- habitat assessment for assessing potential for special status wildlife species[2], and,
- general assessment for Corps Waters/wetlands and CDFW streambeds.

Focused surveys for threatened, endangered and sensitive plant or wildlife species were not conducted as part of this assessment.

The entire Palmetto project site consists of approximately 55 acres of mostly agricultural land, located within the built-up city limits. The project site has historically been used as an orchard and is currently partially in row crops and mostly un-used. Currently the site contains active farming, various sheds and outbuildings, and disked grassland that appears to be un-used. The site is flat with little topographical variation. Site topography varies from an elevation of approximately 1,196 to 1,225 feet above msl (Figure 3).

The Palmetto project site is located approximately 600-800 feet south of the Santa Ana River (Figures 1 and 2). Historically, the Santa Ana River flowed through a broad alluvial plain. There were many braided channels, with the main flows alternating between channels depending on flood conditions and flow regimes. In the project vicinity the southern boundary of the Santa Ana River was approximately along the 1,200 foot contour.

[1] Special status plant species = federal or state listed threatened or endangered species, or proposed endangered, threatened or candidate species, California Native Plant Society Species List (CNPS list 1-4), or otherwise sensitive species.

[2] Special status wildlife species = federal or state listed threatened or endangered species, or proposed endangered, threatened or candidate species, or otherwise sensitive species.

With development in the region the Santa Ana River was partially controlled with berms, banks and rock barriers, to reduce flooding. Currently, there is a rock rip-rap barrier with associated bank and access road running along the southern boundary of the Santa Ana River. The Santa Ana River and its associated habitats are now confined to within this artificial boundary. This barrier is approximately 600-800 feet north of the Palmetto project site.

The land between the southern boundary of the Santa Ana River and the Palmetto project site consists of the Redlands Wastewater Treatment Facility and an undeveloped parcel with ruderal, non-native grassland, eucalyptus trees and sparse scrub habitats (Figure 3).

The site has a Mediterranean type climate, with hot dry summers, relatively cool winters and sparse rains. Annual precipitation for the region averages 13.3 inches, and average annual temperature ranges from 50^0 to 79^0 F. Rainfall during the 2017/2018 season was below normal throughout southern California (Appendix A).

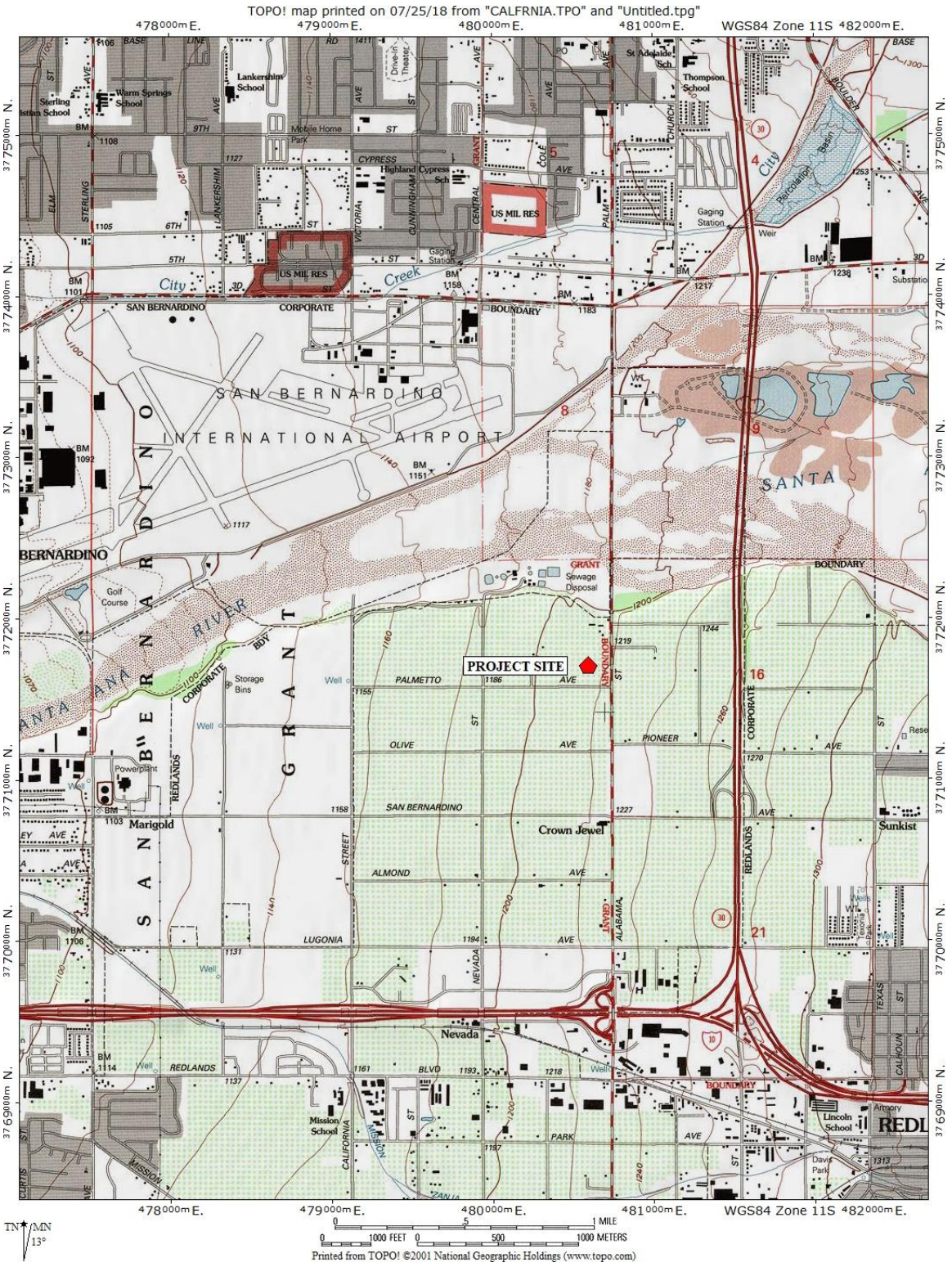

Figure 1: Location of the Palmetto project site in San Bernardino County, southern California. Source: USGS Topographical quadrant: Redlands.

Figure 2: Location of the Palmetto project site (in red).

Figure 3: Palmetto project site (in red). Source: Google Earth, Inc.

2.0 METHODS

2.1 Biological Resources Information sources

In addition to the site visit, field surveys, vegetation mapping, wildlife inventories, and habitat assessments information on the biological resources of the project site was obtained by reviewing existing available data. Databases such as the California Natural Diversity Database (CNDDB 2018) and California Native Plant Society's Inventory of Rare and Endangered Vascular Plants of California (Tibor 2001) were reviewed regarding the potential occurrence of any special status species or sensitive habitat within or in close proximity of the project site.

The resources used in this thorough archival review included the following;

- California Natural Diversity Data Base (CNDDB) for the USGS 7.5' quadrangle which comprised the study area: Redlands and neighboring quads for pertinent data,
- California Native Plant Society Inventory of rare and endangered vascular plants of California (Tibor 2001; CNPS On-line Inventory),
- Special Animals (including California Species of Special Concern), CDFW, Natural Heritage Division, April 2018,
- Special Vascular Plants, Bryophytes, and Lichens List, CDFW, Natural Heritage Division, April 2018,
- State and Federally Listed Endangered, Threatened and Rare Plants of California, CDFW, Natural Heritage Division, April 2018,
- State and Federally Listed Endangered and Threatened Animals of California, CDFW, Natural Heritage Division, May 2018,
- Published literature (Chesser *et. al.* 2013, Sibley 2000, Small 1994, Moyle *et al.* 1995, Jennings and Hayes 1994, Stebbins 1985, Webster *et al.* 1980, Burt and Grossenheider 1976).

2.2 Vegetation mapping, habitat assessment for special status plant species and general botanical surveys

Vegetation mapping, habitat assessments and general botanical surveys were conducted on 5 and 6 July 2018 by Glen Morrison. Vegetation types within the project site were mapped according the state-wide A Manual of California Vegetation, Second Edition (Sawyer *et al.* 2009). This is the mapping system recognized and recommend by regulatory agencies. Vegetation was mapped to the association level by hand on an aerial photographic base map conducted while walking throughout the study area. A general plant species list was compiled concurrently with the vegetation mapping surveys (Appendix B). Scientific and common nomenclature in Hickman (1993) was used as the taxonomic resource. The equivalent vegetation community under the old Holland classification system (Holland 1986) was also noted.

The habitat assessment for special status plant species was conducted concurrently with the vegetation mapping, and concentrated on habitats with the highest potential for yielding special status species, although all areas of the project site were checked. Each habitat within the study area was traversed on foot, examining the areas for particular features such as seeps, unique geologic types, exposures, etc., that would indicate the presence of a preferred habitat for special status plant species.

2.3 Wildlife surveys and habitat assessment for special status wildlife

Field surveys for wildlife and habitat assessment for special status wildlife species were conducted on 13 and 18 July 2018 by Paul Galvin. All portions of the site were traversed on foot to survey each vegetation community, look for evidence of wildlife presence and conduct an assessment of potential habitat for special status species. Wildlife species were detected during the field surveys by sight, vocalizations, burrows, tracks, scat, scrapings and other sign. No specialized techniques, such as trapping, mist nets or taped calls, were used during the surveys.

Latin and common names of wildlife referred to in this report follow Powell and Hogue (1979), Hogue 1993 and NatureServe http://www.natureserve.org/explorer/) for invertebrates; NatureServe for fish; North American Herpetology (http://www.naherpetology.org/nameslist) for amphibians and reptiles; American Ornithologists' Union Checklist of North American Birds - 7th Edition (2017) for birds; Baker at al. 2003 for mammals; and Grenfell et al. 2003, California Department of Fish and Game & California Interagency Wildlife Task Group (http://www.dfg.ca.gov/whdab/pdfs/species_list.pdf) and Perrins et al. 1983 for common names.

2.4 Wetland Delineation

Although a formal wetland delineation was not conducted, the project area was checked in the field for the presence of streambeds, definable channels, wetland and riparian vegetation and hydric soils. All areas of topographic relief suspected of representing historic or current drainage patterns were inspected on-foot.

Field visits were conducted on 13 and 18 July 2018 by Paul Galvin.

3.0 RESULTS

3.1 Soils

The soils on the study area are sandy loams from the Hanford-Tujunga-Greenfield association, which are excessively to poorly drained, loam soils on alluvial fans (NRCS Soil Survey 2018). Hanford sandy loam is the dominant soil onsite, covering more than 96% of the site. A small area along the northern boundary supports Tujunga loamy soil and a very small area (less than 0.2% of the site) on the property boundary supports Psamments, Fluvents and frequently flooded soils (Figure 4). Site soils are as follows;

Hanford sandy loam, 0 to 2 percent slopes (HbA)
This soil consists of well-drained and somewhat excessively drained soils on alluvial fans, and are derived from granitic materials. The upper 18 inches consist of grayish-brown (10YR 5/2) and very dark grayish brown (10YR 3/2) coarse sandy loam. This soil is used for irrigated citrus, truck crops, grapes, dryland grain, pasture and non-farm purposes.

Tujunga loamy sand, channeled, 0 to 5 percent slopes (TvC)
This soil consists of excessively drained soils on alluvial fans and floodplains, derived from alluvium primarily from granitic materials. These soils contain many small braided to large meandering channels. Surface soils are light gray (10YR 6/1) loamy sand, underlain by light gray (10YR 7/1) fine sand. Tujunga soils are used for dryland grain, and if irrigated, truck crops, grapes and grain.

Psamments, Fluvents and frequently flooded soils (Ps)
These soils consists of sandy and gravelly material in intermittent streambeds and rivers. Some areas consist of cobbles, stones and boulders. Surface soils are sand, gravel and cobbles. These soils support scant annual grasses and forbes with a few willows and cottonwoods. The main use is for sand and gravel for construction.

3.2 Vegetation communities

The Palmetto project site has been significantly impacted due to years of agricultural activity, disking and disturbance (Photographs 1 through 8, Appendix E). The entire area consisted of an active orchard in 1990s (Figure 5). Currently the site contains four vegetation communities/land types; California annual grassland, Eucalyptus semi-natural woodland stands, Mixed species windrows and agriculture. Vegetation types within the project site were mapped according the state-wide A Manual of California Vegetation (Sawyer *et al.* 2009) to the extent possible. Since this system focuses on native vegetation communities many disturbed and man-made land covers do not fit cleanly into the system. The best fit possible was made to map and classify the onsite vegetation. The equivalent vegetation community under the old Holland classification system

(Holland 1986) is also noted. Dirt roads were mapped as the vegetation community which they go through.

California annual grassland

This vegetation type describes areas dominated by non-native European annual grasses, with a large component of ruderal forbs. The best fit under the Sawyer *et al*. 2009 system would be Avena semi-natural herbaceous stands or Bromus-Brachypodium distachyon semi-natural herbaceous stands. However neither of these stands contains significant amounts of barley, which is one of the dominants at the project site. So the best fit for this vegetation type is California annual grassland (used in the older version of Sawyer *et al*). The majority of the project site consisted of non-native grassland that is regularly disked. Non-native grasslands are associated with areas of historic grazing, disking and off-road recreational vehicle use. Soils are generally deep, well-drained sand to fine sandy loam. Holland (1986) classified this habitat type as non-native grasslands and wildflower fields.

The dominant species in the California annual grassland included barley (*Hordeum murinum*), oats (*Avena fatua*), brome grasses (*Bromus* spp.) and summer mustard (*Hirschfeldia incana*). Other species present included Russian thistle (*Salsola tragus*), common sunflower (*Helianthus annuus*), common phacelia (*Phacelia distans*) and common fiddlenck (*Amsinckia intermedia*). Approximately 10-15 blue elderberry (*Sambucus nigra*) trees occured in the northwestern end of the site within the California annual grassland.

A total of 47.0 acres of California annual grassland occurred onsite (Table 1; Figure 6).

Agriculture

The agricultural area included irrigated row crops, exotic trees, fields not in current use and recently disked fields. This area also supported weedy vegetation, non-native grasses, landscaping and exotic trees. A number of structures were located in this area including glass-houses, sheds and one temporary dwelling. The glass-houses were uncovered or partially covered in tarps rather than glass. Most of the sheds were in dis-repair with no roof (Photographs 7 and 8).

A total of 7.2 acres of Agriculture occurred onsite (Table 1; Figure 6).

Eucalyptus semi-natural woodland stands

Two Eucalyptus windrows occurred along the northern site boundary, where red gum (*Eucalyptus camaldulentis*) and silver-dollar gum (*Eucalyptus polyanthemos*) were planted in the past. The understory was minimal and consisted of non-native annual grasses.

A total of 0.6 acres of Eucalyptus semi-natural woodland stands occurred onsite (Table 1; Figure 6).

Windrows
A windrow along the southwestern site boundary, adjacent Palmetto Avenue, consisted of a variety of exotic landscaping trees including pines, cypress and palms.

A total of 0.2 acres of windrow occurred onsite (Table 1; Figure 6).

Table 1: Vegetation communities at the Palmetto project site.

Vegetation communities/Land Cover Type	**PROJECT SITE**
California annual grassland	47.0
Agricultural	7.2
Eucalyptus semi-natural woodland stands	0.6
Mixed species windrow	0.2
Site total	**55.0**

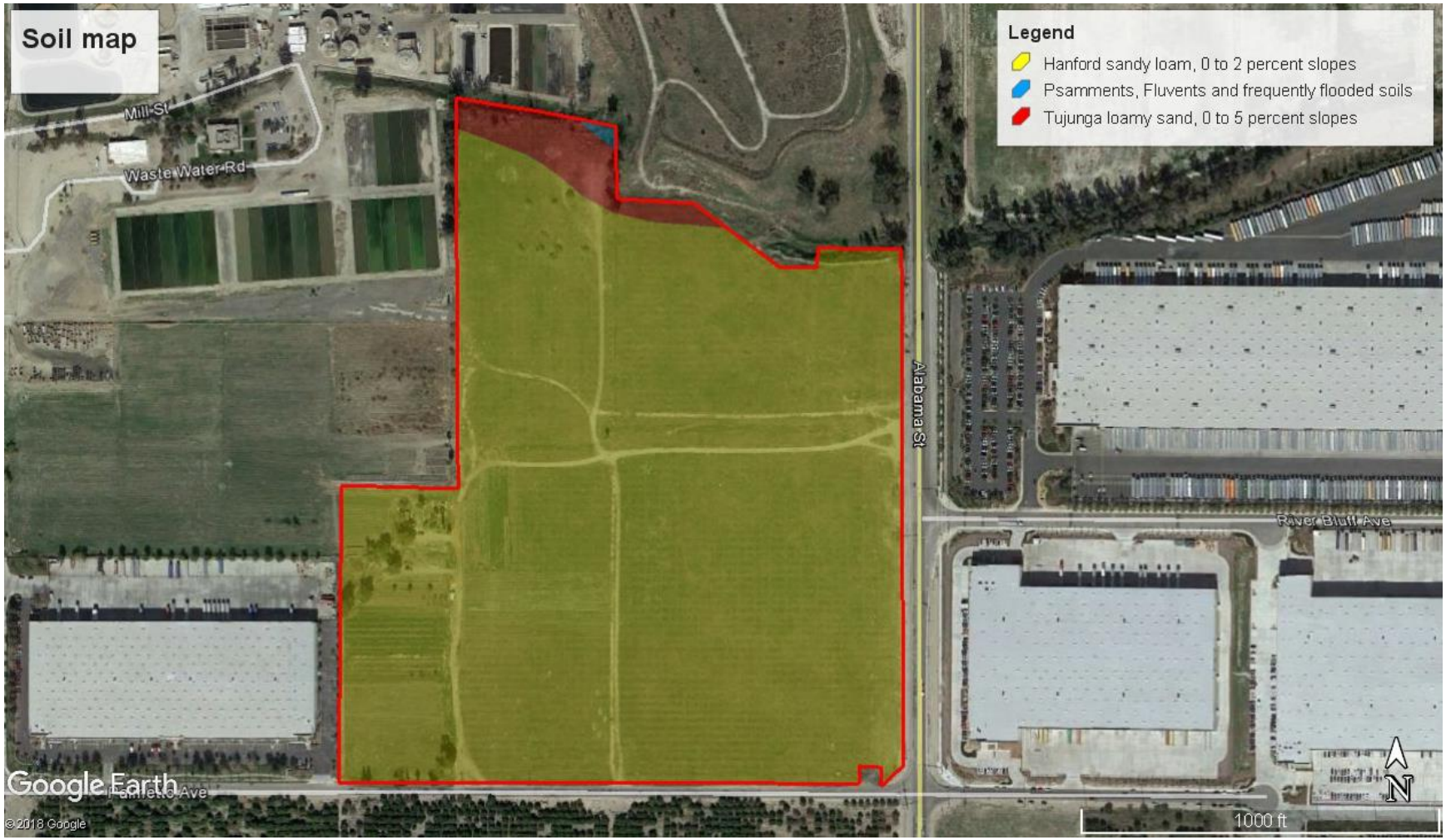

Figure 4: Soils at the Palmetto site. Source: NRCS Soil Survey 2019.

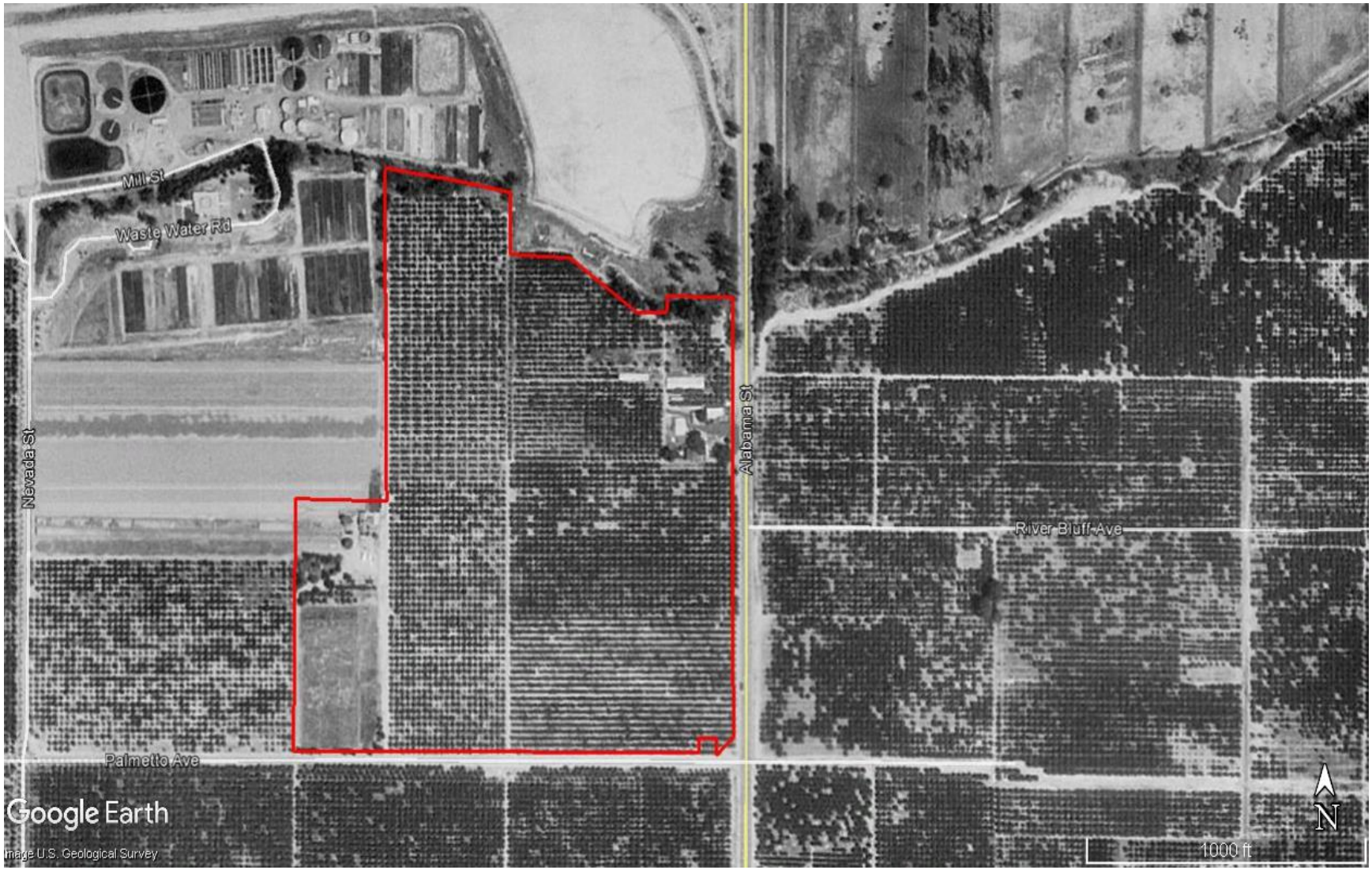

Figure 5: Project site in 1995, showing onsite orchards and buildings. Source: Google Earth, Inc.

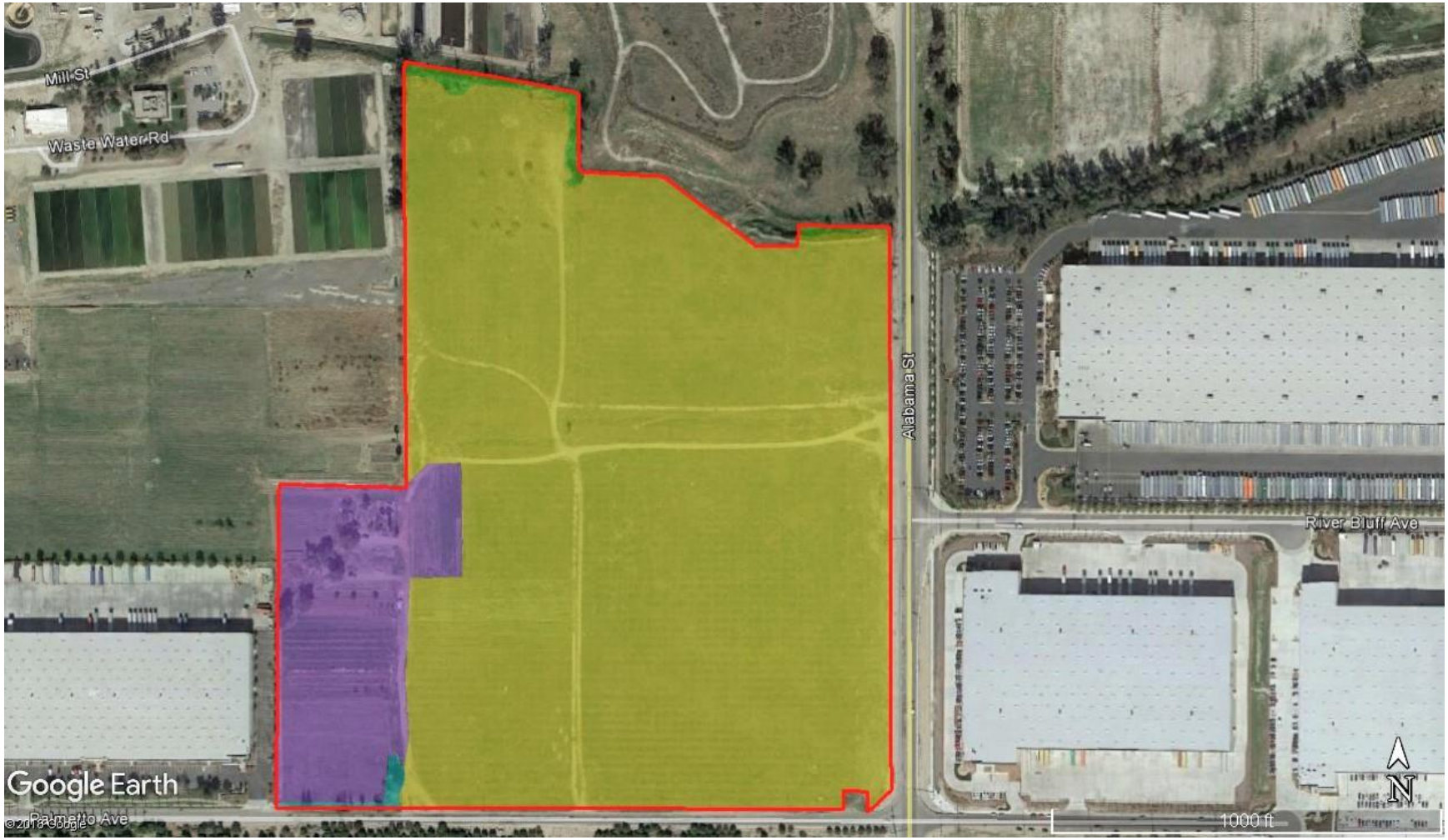

Figure 6: Vegetation map of Palmetto site (in red). Yellow = California annual grassland, Purple =agriculture; Green = Eucalyptus semi-natural woodland stands, Blue = Mixed species windrow. Source: Google Earth, Inc.

3.3 Plant Inventory

Plant species at the Palmetto project site consisted of species associated with open and disturbed habitats. A total of 41 vascular plant species, representing 23 families were detected at the project site during the current surveys (Appendix B). About 32% (13) were native and the remaining 28 species were exotic. The best represented families were Poaceae (7 species) and Asteraceae (4 species).

3.4 Special Status Plant Species

No special-status plants were observed on the Palmetto project site during the July 2018 site surveys, and there are no historic site records for any special status plant species onsite (CNDDB 2018).

Based on a review of CNDDB, the CNPS Inventory of Rare and Endangered Vascular Plants of California (Tibor 2001, CNPS 2018), and field surveys, a few special status species were identified for additional analysis, although none are expected to occur onsite (Table 2).

The entire site was an active orchard during the 1990s and any special status plant species present would likely have been eliminated during that time. Due to the past and current activities onsite, the disturbed nature of the site, the absence of native vegetation communities, the absence of any current or historic site records, no special-status plant species are expected to occur onsite.

In order to confirm the presence or absence of special status plant species at the project site, focused special status plant species surveys will be conducted at the project site in spring (March/April through May) 2019.

3.5 Wildlife overview

Wildlife at the study area consisted of common species and species associated with open, disturbed habitats. The most abundant species detected during the site visit were birds such as American crow (*Corvus brachyrhynchos*), mourning dove (*Zenaida macroura*) and house finch (*Carpodacus mexicanus*). A total of 25 wildlife species were detected during the site visits, including two reptile, 18 bird and three mammalian species (Appendix D).

3.6 Special status wildlife species

No special-status wildlife species were observed on the Palmetto project site during the July 2018 site surveys, and there are no historic site records for any special status wildlife species onsite (CNDDB 2018).

Based on a review of CNDDB, published literature and field surveys and assessments, a number of special status wildlife species were identified as potentially occurring onsite, including some species with historic records from the project vicinity (Table 3). These are species which typically occur in native habitats that historically occurred in the project vicinity, prior to agricultural and development.

The entire site was an active orchard during the 1990s and any special status wildlife species present would likely have been eliminated during that time. Due to the past and current activities onsite, the disturbed nature of the site, the absence of native vegetation communities, the absence of any current or historic site records special status wildlife species are unlikely to occur onsite.

All special status wildlife species with some potential to occur onsite are addressed in Table 3, two species and bats are additionally discussed below.

Burrowing owls (*Athene cunicularia*) occur in shortgrass prairies, grasslands, lowland scrub, agricultural lands (particularly rangelands), prairies, coastal dunes, desert floors, and some artificial, open areas as a yearlong resident. They require large open expanses of sparsely vegetated areas on gently rolling or level terrain with an abundance of active small mammal burrows. As a critical habitat feature, they require the use of rodent or other burrows for roosting and nesting cover. They can also use pipes, culverts, and nest boxes (USFWS 2003, Haug *et al.* 1993, Zeiner *et al.* 1990).

No burrowing owls we detected during the site visit and there was no evidence that burrowing owls were present. Burrowing owls do occur nearby, at the San Bernardino International Airport (CNDDB 2018). Burrowing owl is assumed absent from the project site. In order to confirm the presence or absence of burrowing owl at the project site, a focused a burrowing owl survey will be conducted at the project site in spring (March through July) 2019.

San Bernardino kangaroo rat (*Dipodomys merriami parvus*) is confined to primary and secondary alluvial fan scrub habitats, with sandy soils deposited by fluvial (water) rather than aeolian (wind) processes. Burrows are dug in loose soil, usually near or beneath shrubs.

The project site is located outside and just south of the San Bernardino kangaroo rat critical habitat area, Unit 1: Santa Ana River and Wash (USFWS 2002).

San Bernardino kangaroo rat is likely absent from the project site due to past and current site disturbances. In order to confirm the presence or absence of San Bernardino k-rat at the project site, a focused a k-rat trapping survey will be conducted at the project site in spring (March/April) 2019.

A number of bat species have the potential to occur at the project site, particularly while foraging (Table 4). Some of these species roost in buildings. There are a number of

structures on the project site in the agricultural area. These structures included glass-houses, sheds and one temporary dwelling. The glass-houses were uncovered or partially covered in tarps rather than glass. The sheds were in dis-repair with no roof or had tarp roofs (Photographs 7 and 8). The buildings lacked the appropriate crevices, cracks and shelter that bats like for roosting and most of the structures were un-roofed. Consequently the structures do not provide roosting habitat for bat species.

Table 2: Special status plant species that occurred or have the potential to occur in the Palmetto project site: Definitions - status: Fed = federal, FE = federal endangered, FT = federal threatened, FPE = federally proposed for listing as endangered, FPT = federally proposed for listing as threatened, FC = federal candidate species, FSC = federal special concern species, state = state of California, SE = state endangered, ST = state threatened, SCE = state candidate for listing as endangered, SCT = state candidate for listing as threatened, SC = state species of concern, FP = fully protected species, none = no federal or state listing, see Appendix C for CNPS Status. Occurrence onsite: Occurs = known to occur onsite, Potential = could occur due to presence of suitable habitat onsite but not detected during current survey, Not Expected = does not occur due to limited suitable habitat onsite and not detected.

Scientific Name	Common Name	Status	Occurrence Onsite	Habitat
Calochortus plummerae LILACEAE	Plummer's mariposa lily	Fed: None State: None CNPS 4.2	Not Expected	Chaparral, cismontane woodland, coastal sage scrub, lower montane conifer forest, valley and foothill grassland, granitic and rocky soils/perennial bulbiferous herb/ 100 – 1700m/ May-June
Centromadia pungens ssp. laevis ASTERACEAE	Smooth tarplant	Fed: None State: None CNPS 1B.1	Not Expected	Chenopod scrub, meadows and seeps, playas, riparian woodland, valley and foothill grassland/ annual herb/ 0 – 640m/ April – September
Chorizanthe parryi var. parryi POLYGONACEAE	Parry's spineflower	Fed: None State: None CNPS 1B.1	Not Expected	Chaparral, cismontane woodland, coastal scrub, valley and foothill grassland; sandy or rocky, openings/ annual herb/ 275 – 1220m/ April-June
Dodecahema leptoceras POLYGONACEAE	slender horned spineflower	Fed: FE State: SE CNPS: 1B.1	Not Expected	Chaparral, coastal sage scrub (alluvial fan), cismontane woodland; sandy soils/ annual herb/ 200 – 760m/ April - June
Eriastrum densifolium ssp. Sanctorum POLEMONIACEAE	Santa Ana river woollystar	Fed: FS State: SE CNPS: 1B.1	Not Expected	Chaparral, coastal scrub (alluvial fan)/ perennial herb/ 91 – 610m/ April – September
Imperata brevifolia POACEAE	satintail	Fed: None State: None CNPS: 2B.1	Not Expected	Chaparral, coastal sage scrub, creosote bush scrub, wetland-riparian, meadows and seeps/moist areas/perennial herb/0-500m / September-May
Mucronea californica POLYGONACEAE	California spineflower	Fed: None State: None CNPS: 4.2	Not Expected	Coastal strand, chaparral, foothill woodland, northern coastal scrub, coastal sage scrub, valley grassland/dunes and coastal/annual herb/0-1,000m/March-July

Table 3: Special status wildlife species that occurred or have the potential to occur in the Palmetto project site. Definitions - status: Fed = federal, FE = federal endangered, FT = federal threatened, FPE = federally proposed for listing as endangered, FPT = federally proposed for listing as threatened, FC = federal candidate species, FSC = federal special concern species, state = state of California, SE = state endangered, ST = state threatened, SCE = state candidate for listing as endangered, SCT = state candidate for listing as threatened, CSC = California species of special concern, FP = fully protected species, CNDDB = species listed under the states CNDDB program, none = no federal or state listing. Occurrence onsite: Occurs = known to occur onsite, Potential = could occur due to presence of suitable habitat onsite but not detected during current survey, Not Expected = does not occur due to limited suitable habitat onsite and not detected.

Scientific Name	Common Name	ESA/CESA Status	Other Status	Occurrence onsite	Habitat/comments
Amphibians					
Spea hammondii	Western spadefoot	ESA: None CESA: None	DFG: SSC	Not Expected, no pools present	grassland, open habitats with sandy or gravelly soil; temporary rainpools for breeding
Reptiles					
Phrynosoma blainvillii	coast horned lizard	ESA: None CESA: None	CDFW: SSC	Potential	sandy washes and open sandy areas within coastal sage scrub, grassland, chaparral, oak and riparian woodland
Aspidoscelis hyperytha	orange-throated whiptail	ESA: None CESA: None	CDFW: WL	Potential	open, sparsely covered land, often with well-drained sandy or loose soils in coastal sage scrub, grassland, chaparral, oak woodland and riparian habitats
Aspidoscelis tigris stejnegeri	coastal whiptail	ESA: None CESA: None	CDFW: SSC	Potential	Semiarid habitats with open sparsely vegetated areas, scrub, chaparral, grassland and woodland habitats
Anniella stebbinis	Southern California legless lizard	ESA: None CESA: None	CDFW: SSC	Potential	Sandy, loose loamy soils in chaparral, oak woodland, coastal sage scrub
Salvadora hexalepis virgultea	Coast patch-nosed snake	ESA: None CESA: None	CDFW: SSC	Potential	habitat generalist, associated with brushy or shrubby vegetation
Arizona elegans occidentalis	California glossy snake	ESA: None CESA: None	CDFW: SSC	Potential	arid scrub, rocky washes, grasslands, chaparral. Appears to prefer microhabitats of open areas and areas with soil loose enough for easy burrowing.
Birds					
Accipiter cooperi	Cooper's hawk	ESA: None CESA: None	CDFW: WL	Potential, foraging only	mature forests, open woodlands, wood edges, river groves, riparian woodland
Accipiter striatus	sharp-shinned hawk	ESA: None CESA: None	CDFW: WL	Potential, foraging only	wide variety of habitats used by wintering and migrating birds, but mostly associated with woodland

					and scrubland; breeds in mountains, does not breed in southern California
Aquila chrysaetos	golden eagle	ESA: None CESA: None	CDFW: SSC, FP FW: BCC	Potential, foraging only	Open mountains, foothills, plains, open country
Buteo regalis	ferruginous hawk	ESA: None CESA: None	CDFW: WL FW: BCC	Potential, foraging only	plains, prairies, grasslands, does not breed in southern California
Buteo swainsoni	Swainson's hawk	ESA: None CESA: None	FW: BCC	Potential, foraging only	prairies, grasslands, more widespread in migration
Circus cyaneus	northern harrier	ESA: None CESA: None	CDFW: SSC	Potential, foraging only	grassland, marshes, agricultural land, open areas in scrub and chaparral; ground or shrub nesting
Elanus leucurus	white-tailed kite	ESA: None CESA: None	CDFW: FP	Potential, foraging only	forages in grasslands; nests and roosts in oak and riparian woodland
Falco columbarius	merlin	ESA: None CESA: None	CDFW: WL	Potential, foraging only	nests in open woodlands, savanna, does not breed in southern California, woodlands, open areas in winter, migration
Falco mexicanus	prairie falcon	ESA: None CESA: None	CDFW: WL FW: BCC	Potential, foraging only	open arid country, grasslands, more widespread in winter
Falco peregrinus anatum	American peregrine falcon	ESA: SE CESA: None	CDFW: FP FW: BCC	Potential, foraging only	nest on cliffs or rock outcroppings, usually near water; forages over open country (grassland, scrub, marshes)
Asio flammeus	short-eared owl	ESA: None CESA: None	CDFW: SSC	Potential, foraging only	grasslands, open habitats
Athene cunicularia	burrowing owl	ESA: None CESA: None	CDFW: SSC FW: BCC	Potential	grasslands, farmland and other open habitats
Lanius ludovicianus	loggerhead shrike	ESA: None CESA: None	CDFW: SSC	Potential	grassland, scrub and other open habitats with perching structures; nests in trees and shrubs
Eremophila alpestris actia	California horned lark	ESA: None CESA: None	CDFW: WL	Potential	Open areas with little or no ground cover, such as grassland or ruderal vegetation
Mammals					
Antrozous pallidus	pallid bat	ESA: None CESA: None	CDFW: SSC WBWG: H	Potential, foraging only	Coastal sage scrub, oak woodland and chaparral; roosts in caves, mines, rock crevices, trees and buildings
Macrotus californicus	California leaf-nosed bat	ESA: None CESA: None	CDFW: SSC WBWG: H	Potential, foraging only	roosts in caves or old mines
Corynorhinus townsendii	Western big-eared bat	ESA: None CESA: None	CDFW: SSC WBWG: H	Potential, foraging only	roosts in caves, old mines or buildings

Myotis thysanodes	fringed myotis	ESA: None CESA: None	CDFW: SSC WBWG: H	Potential, foraging only	caves, old buildings
Myotis volans	long-legged myotis	ESA: None CESA: None	CDFW: SSC WBWG: H	Potential, foraging only	buildings, pockets and crevices in rocks
Myotis yumanensis	Yuma myotis	ESA: None CESA: None	CDFW: SSC WBWG: LM	Potential, foraging only	caves, tunnels and buildings in arid areas
Eumops perotis californicus	California mastiff bat	ESA: None CESA: None	CDFW: SSC WBWG: H	Potential, foraging only	widespread forager; roosts in cliffs and buildings
Perognathus longimembris brevinasus	Los Angeles pocket mouse	ESA: None CESA: None	CDFW: SSC	Potential	occurs in lower elevation scrub and grassland with open ground and fine, sandy soil
Chaetodipus fallax fallax	Northwestern San Diego pocket Mouse	ESA: None CESA: None	CDFW: SSC	Potential	occurs in open scrub and grassland areas, in the valleys and foothills
Onychomys torridus ramona	southern grasshopper mouse	ESA: None CESA: None	CDFW: SSC	Potential	annual grassland and coastal sage scrub
Dipodomys merriami parvus	San Bernardino kangaroo rat	ESA: FE CESA: None	CDFW: SSC	Potential	confined to primary and secondary alluvial fan scrub habitats, with sandy soils deposited by fluvial (water) rather than aeolian (wind) processes. Burrows are dug in loose soil, usually near or beneath shrubs
Neotoma lepida intermedia	San Diego desert woodrat	Fed: none State: none	CDFW: SSC	Potential	cactus patches and rock outcroppings in coastal sage scrub
Lepus californicus bennettii	San Diego black-tailed jackrabbit	ESA: None CESA: None	CDFW: SSC	Potential	coastal sage scrub, grassland and chaparral
Taxidea taxus	American badger	ESA: None CESA: None	CDFW: SSC	Potential	widespread in natural habitats

3.7 Wildlife movement corridors and linkages

The terms "wildlife corridors" and "linkages" are based upon fundamental ecological concepts, but can be easily misinterpreted because: 1) universally accepted definitions of these terms have not been established; 2) each term can be interpreted using different time scales (i.e. daily, seasonal, annual and evolutionary) and spatial scales (i.e. microclimate, local, community, and landscape) which changes their meaning; 3) the areas and values change from species to species; and, 4) the understanding of how these processes work is on-going and conclusions are subject to revision. The following definitions are intended to provide a working understanding of corridors and linkages and are summarized from several sources (SCWP 2003, USCA9D 1990, Barrett and Livermore 1983, Beier 1993).

Wildlife corridor - Wildlife corridors are areas which animals can use to move from one patch of suitable habitat to another. These areas would be expected to have the least habitat fragmentation relative to surroundings areas. A wildlife corridor establishes connectivity for animals to move, live, reproduce and respond to functional ecological processes during the course of a year to several years. The quality and functionality of a particular wildlife corridor varies from species to species.

Wildlife crossings are generally small, narrow wildlife corridors that allow wildlife to pass through an obstacle or barrier such as a roadway to reach another patch of habitat. Wildlife crossings are manmade and include culverts, drainage pipes, underpasses, tunnels, and, more recently, crossings created specifically for wildlife movement over or under highways.

Both wildlife crossings and wildlife corridors function to prevent habitat fragmentation that would result in the loss of species that require large contiguous expanses of unbroken habitat and/or that occur in low densities.

Linkages – Linkages are areas that provide for long term movement or interaction of wildlife to maintain natural evolutionary and ecological patterns. Linkages are fundamental for gene flow and large scale ecological processes. These areas are usually defined by the zones of "least resistance" for the genes of a given species to move or "flow" between core reserve populations.

The project site is located adjacent the Santa Ana River and its associated habitats, which is a known wildlife corridor. The project site is connected to the Santa Ana River via an undeveloped parcel located to the northeast of the project site (Figure 3). This parcel consists of ruderal, non-native grassland, eucalyptus trees and sparse scrub habitats. Any wildlife at the project site/the Santa Ana River and its associated habitats could connect via this parcel. However, from the project site there is no suitable habitat further south, east or west for wildlife to utilize.

No wildlife corridors or linkages are known at the Palmetto project site. It is unlikely that the site is of any significance to wildlife movement.

3.8 Wetlands and streambeds

A formal jurisdictional delineation was not conducted onsite; however a general assessment of onsite drainage features was conducted as part of the biological assessment.

No rivers, creeks, ephemeral drainages, channels, washes, wetlands, riparian areas, vernal pools or temporary rain pools occur within the project site.

No Corps or CDFW jurisdictional areas occur onsite.

4.0 BIOLOGICAL CONSTRAINTS

There are a number of potential biological constraints at Palmetto project site. Any significant impacts to these biological constraints that would result from the proposed project would require appropriate mitigation.

Significance of impacts to biological resources are assessed using impact significance threshold criteria, which reflect the policy statement contained in California Environmental Quality Act (CEQA), Section 21001(c) of the California Public Resources Code. Accordingly, the State Legislature has established the following policy of the State of California:

> *Prevent the elimination of fish or wildlife species due to man's activities, ensure that fish and wildlife populations do not drop below self-perpetuating levels, and preserve for future generations representations of all plant and animal communities..*

Determining whether a project may have a significant effect, or impact, plays a critical role in the CEQA process. According to the CEQA Guidelines, (Section 15064.7, Thresholds of Significance), each public agency is encouraged to develop and adopt (by ordinance, resolution, rule, or regulation) thresholds of significance that the agency uses in the determination of the significance of environmental effects. A threshold of significance is an identifiable quantitative, qualitative or performance level of a particular environmental effect, non-compliance with which means the effect will normally be determined to be significant by the agency and compliance with which means the effect normally will be determined to be less than significant. In the development of thresholds of significance for impacts to biological resources CEQA Guidelines provides guidance primarily in Section 15065, Mandatory Findings of Significance, and the CEQA Guidelines, Appendix G, Environmental Checklist Form. Section 15065(a) states that a project may have a significant effect where:

> *The project has the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or wildlife community, reduce the number or restrict the range of an endangered, rare, or threatened species, ..*

Therefore, impacts to biological resources are considered potentially significant (before considering offsetting mitigation measures) if one or more of the following criteria discussed below would result from implementation of the proposed project;

> Appendix G of the State CEQA Guidelines indicate that a project may be deemed to have a significant effect on the biological resources if the project is likely to:

a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

4.1 List of the potential biological constraints at the Palmetto project site

1. Nesting birds.

2. Potential for special status plant species
    a. No special status plant species have been documented onsite and none are expected. Nevertheless, focused surveys for special status plant species will be conducted in spring 2019 to confirm presence/absence of special status plant species.

3. Potential for special status wildlife species
    a. No special status wildlife species have been documented onsite. Focused surveys for burrowing owl and San Bernardino k-rat will be conducted in spring 2019 to confirm presence/absence of these species.
    b. A number of special status wildlife species have potential to occur on the project site (Table 4). However, none of these species have ever been detected or documented onsite and were absent during the project surveys. These species are not expected to occur onsite and don't need to be discussed further.

4.2 Permits and consultations likely required

As a result of these potential biological constraints, any proposed project at the Palmetto project would require the following permits/consultations/co-ordination;

California Environmental Quality Act (CEQA);
CEQA Document

Federal Migratory Bird Treaty Act of 1918 (MBTA);
The MBTA governs the taking and killing of migratory birds, their eggs, parts, and nests and prohibits the take of any migratory bird, their eggs, parts, and nests. No take of migratory birds is allowed under this act. Construction work must comply with the MBTA.

4.3 Recommended mitigation measures

1. *Avoidance of Nesting Migratory Birds**:** If possible, all vegetation removal activities shall be scheduled from August 1 to February 1, which is outside the general avian nesting season. This would ensure that no active nests would be disturbed and that removal could proceed rapidly. If vegetation is to be cleared during the nesting season, all suitable habitat will be thoroughly surveyed within 72 hours prior to clearing for the presence of nesting birds by a qualified biologist (Project Biologist). The Project Biologist shall be approved by the City and retained by the Applicant. The survey results shall be submitted by the Project Applicant to the City Planning Department. If any active nests are detected, the area shall be flagged and mapped on the construction plans along with a minimum 300-foot buffer, with the final buffer distance to be determined by the Project Biologist. The buffer area shall be avoided until, as determined by the Project Biologist, the nesting cycle is complete or it is concluded that the nest has failed. In addition, the Project Biologist shall be present on the site to monitor the vegetation removal to ensure that any nests, which were not detected during the initial survey, are not disturbed.*

2. *Avoidance of Nesting Burrowing Owls**:** No more than 72 hours prior to any site disturbances, focused surveys for the burrowing owl shall be conducted. If absence of this species is confirmed, project work can proceed. If however, burrowing owl is located on site, the appropriate resource agencies (CDFW and USFWS) shall be contacted. The Project Applicant shall consult with the wildlife agencies regarding the most appropriate methods and timing for removal of owls. As necessary, owls will be actively evicted following agency approved protocols*

(i.e., placing a one-way door at the burrow entrance to ensure that owls cannot access the burrow once they leave). Any such active eviction shall occur outside of the breeding/nesting season. That is, active eviction shall be accomplished between September 1 and February 15. If more than 30 days has elapsed between owl eviction and completion of clearing and grubbing activities, a subsequent survey for the burrowing owl shall be conducted to ensure that owls have not re-populated the site. Any reoccupation by owls will require subsequent protocol active eviction.

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6.0 APPENDICES

6.1 Appendix A: Weather data

Public information national weather service San Diego CA; 2017-2018 rainfall season in review, http://www.nws.noaa.gov/climate

A drier than normal rainfall season ended on 30 June 2018. Winter was dry across southern California. Most of coastal southern California had less than 50% typical rainfall in 2017/2018.

Areas	2017-2018 Total	Normal Total	% of Normal
Santa Barbara	8.52	17.73	48
Lancaster	2.74	5.1	54
downtown Los Angeles	4.68	14.77	32
Long Beach Airport	3.6	12.72	28
John Wayne Airport	2.66	12.76	21
Fullerton	3.21	14.72	22
Riverside	4.3	10.12	42
Oceanside Airport	4.68	10.54	44
San Diego	3.26	10.13	32
Palm Springs	2.89	5.49	53

6.2 Appendix B: Plant species detected at the Palmetto project site, 2018.

SCIENTIFIC NAME (SYNONYM)	COMMON NAME
GYMNOSPERMS	**CONE BEARING PLANTS**
CUPRESSACEAE	**CYPRESS FAMILY**
*Cupressus sempervirens**	Italian cypress
PINACEAE	**PINE FAMILY**
*Pinus sp.**	Pine
ANGIOSPERMAE	**FLOWERING PLANTS**
ANGIOSPERMS - DICOTYLEDONES	**DICOTS**
ADOXACEAE	**MUSKROOT FAMILY**
Sambucus nigra spp. caerulea (= S. mexicana)	Blue Elderberry
AMARANTHACEAE	**AMARANTH FAMILY**
Amaranthus palmeri	Palmer's Pigweed
*Salsola tragus**	Russian Thistle
ASTERACEAE	**SUNFLOWER FAMILY**
Erigeron canadensis	Canada horseweed
Helianthus annuus	Western Sunflower
Heterotheca grandiflora	Telegraph Weed
*Lactuca serriola**	Prickly or Wild Lettuce
BORAGINACEAE	**BORAGE FAMILY**
Amsinckia intermedia (= A. menziesii var. e.)	Common Fiddleneck
Phacelia distans	Common Phacelia
BRASSICACEAE	**MUSTARD FAMILY**
*Brassica tournefortii**	Sahara Mustard
*Hirschfeldia incana**	Shortpod or Summer Mustard
CHENOPODIACEAE	**GOOSEFOOT FAMILY**
Chenopodium album (= C. missouriense)*	Lamb's Quarter
*Chenopodium berlandieri**	Pitseed Goosefoot
EUPHORBIACEAE	**SPURGE FAMILY**
Croton californicus	California Croton
FABACEAE	**LEGUME FAMILY**
*Gleditsia triacanthos**	honey locust
*Melilotus albus**	White Sweet-Clover
MALVACEAE	**MALLOW FAMILY**
*Malva parviflora**	Cheeseweed
MYRTACEAE	**MYRTLE FAMILY**
*Eucalyptus camaldulensis**	River Red Gum
*Eucalyptus polyanthemos**	silver-dollar gum
ONAGRACEAE	**EVENING PRIMROSE FAMILY**
*Oenothera lacianata**	cutleaf evening primrose
POLYGONACEAE	**BUCKWHEAT FAMILY**
Eriogonum fasciculatum	California Buckwheat
*Rumex crispus**	Curly Dock
ROSACEAE	**ROSE FAMILY**
*Malus pumila**	paradise apple

RUTACEAE	**RUE FAMILY**
*Citrus x sinensis**	orange tree
SOLANACEAE	**NIGHTSHADE FAMILY**
Datura wrightii (= D. meteloides)	Western Jimsonweed
*Nicotiana glauca**	Tree Tobacco
Solanum americanum	White Nightshade
TAMARICACEAE	**TAMARISK FAMILY**
*Tamarix ramosissima**	Mediterranean Tamarix
ZYGOPHYLLACEAE	**CALTROP FAMILY**
*Tribulus terrestris**	Puncture Vine
ANGIOSPERMS - MONOCOTYLENDONES	**MONOCOTS**
ASPARAGACEAE	**ASPARAGUS FAMILY**
*Agave Americana**	American century plant
ARECACEAE	**PALM FAMILY**
Washingtonia filifera	California fan palm
CYPERACEAE	**SEDGE FAMILY**
Cyperus eragrostis	Tall Umbrella-Sedge
POACEAE	**GRASS FAMILY**
*Avena fatua**	Wild Oat
*Bromus diandrus**	Common Ripgut Grass
*Bromus madritensis ssp. rubens**	Foxtail Chess or Red Brome
*Hordeum murinum ssp. leporinum**	Hare Barley or Foxtail Barley
*Saccharum officinarum**	sugarcane
*Setaria spp.**	foxtail grass
*Sorghum halepense**	Johnson Grass

KEY: Asterisk (*) = non-native species or cultivated; $^{+}$ = sensitive species; Sources: Taxonomy - Hickman (1993), http://ucjeps.berkeley.edu/interchange.html, November 2018; Common names and non-native species designations according to Roberts (1998), then Hickman (1993)

6.3 Appendix C: California Native Plant Society Categories

CNPS Status based on California Native Plant Society's Inventory of Rare and Endangered Vascular Plants of California (Tibor 2001):

List 1A: Plants Presumed Extinct in California
The plants of List 1A are presumed extinct because they have not been seen or collected in the wild for many years. Although most of them are restricted to California, a few are found in other states as well. There is a difference between "extinct" and "extirpated." A plant is extirpated if it has been locally eliminated. It may be doing quite nicely elsewhere in its range. All of the plants constituting List 1A meet the definitions of Sec. 1901, Chapter 10 (Native Plant Protection) of the California Department of Fish and Game Code and are eligible for state listing.

List 1B: Plants Rare, Threatened or Endangered in California and Elsewhere
The plants of List 1B are rare throughout their range. All but a few are endemic to California. All of them are judged to be vulnerable under present circumstances or to have a high potential for becoming so because of their limited or vulnerable habitat, their low numbers of individuals per population (even though they may be wide ranging), or their limited number of populations. All of the plants constituting List 1B meet the definitions of Sec. 1901, Chapter 10 (Native Plant Protection) of the California Department of Fish and Game Code and are eligible for state listing.

List 2: Plants Rare, Threatened or Endangered in California, But More Common Elsewhere
Except for being common beyond the boundaries of California, the plants of List 2 would have appeared on List 1B. Based on the "Native Plant Protection Act," plants are considered without regard to their distribution outside the state. All of the plants constituting List 2 meet the definitions of Sec. 1901, Chapter 10 (Native Plant Protection) of the California Department of Fish and Game Code and are eligible for state listing.

List 3: Plants About Which We Need More Information—A Review List
The plants that comprise List 3 are an assemblage of taxa that have been transferred from other lists or that have been suggested for consideration. The necessary information that would assign most to a sensitivity category is missing.

List 4: Plants of Limited Distribution—A Watch List
The plants in this category are of limited distribution in California and their vulnerability or susceptibility to threat appears low at this time. While these plants cannot be called "rare" from a statewide perspective, they are uncommon enough that their status should be monitored regularly. Many of them may be significant locally. Should the degree of endangerment or rarity of a plant change, they will be transferred to a more appropriate list.

Threat Code Extensions and their meanings:

.1- Seriously endangered in California

.2- Fairly endangered in California

.3- Not very endangered in California

6.4 Appendix D: Wildlife species detected at the Palmetto project site, 2018.

FAMILY/SPECIES NAME	COMMON NAME
REPTILIA	**REPTILES**
PHRYNOSOMATIDAE	**ZEBRA-TAILED, EARLESS, FRING-TOED, SPINY, TREE, SIDE-BLOTCHED AND HORNED LIZARDS**
Sceloporus occidentalis	Western Fence Lizard
Uta stansburiana	Common Side-blotched Lizard
AVES	**BIRDS**
ACCIPITRIDAE	**HAWKS, KITES, EAGLES AND ALLIES**
Accipiter cooperii+	Cooper's Hawk
Buteo jamaicensis	Red-tailed Hawk
COLUMBIDAE	**PIGEONS AND DOVES**
Streptopelia decaocto	Eurasian Collared-Dove
Zenaida macroura	Mourning Dove
TROCHILIDAE	**HUMMINGBIRDS**
Calypte anna	Anna's Hummingbird
PICIDAE	**WOODPECKERS AND ALLIES**
Picoides nuttallii+	Nuttall's Woodpecker
FALCONIDAE	**CARCARAS AND FALCONS**
Falco sparverius	American Kestrel
TYRANNIDAE	**TYRANT FLYCATCHERS**
Sayornis nigricans	Black Phoebe
Sayornis saya	Say's Phoebe
Tyrannus vociferans	Cassin's Kingbird
Tyrannus verticalis	Western Kingbird
CORVIDAE	**JAYS AND CROWS**
Corvus brachyrhynchos	American Crow
Corvus corax	Common Raven
MIMIDAE	**MOCKINGBIRDS AND THRASHERS**
Mimus polyglottos	Northern Mockingbird
STURNIDAE	**STARLINGS**
Sturnus vulgaris	European Starling
ICTERIDAE	**BLACKBIRDS**
Icterus cucullatus	Hooded Oriole
FRINGILLIDAE	**FRINGILLINE AND CARDUELINE FINCHES**
Haemorhous mexicanus	House Finch
PASSERIDAE	**OLD WORLD SPARROWS**
Passer domesticus	House Sparrow
MAMMALIA	**MAMMALS**
LEPORIDAE	**RABBITS & HARES**

Sylvilagus audubonii	Desert Cottontail
SCIURIDAE	**SQUIRRELS, CHIPMUNKS & MARMOTS**
Otospermophilus beecheyi	California Ground Squirrel
CANIDAE	**FOXES, WOLVES & RELATIVES**
Canis latrans	Coyote

Sources:

Invertebrates: Powell and Hogue (1979) and Hogue 1993.

Butterflies: NatureServe, http://www.natureserve.org/explorer/

Fish: NatureServe, http://www.natureserve.org/explorer/

Reptiles and amphibians: North American Herpetology (NAH) nomenclature updates: http://www.naherpetology.org/nameslist

Birds: American Ornithologists' Union Checklist of North American Birds - 7th Edition (2017): http://www.aou.org/checklist/index.php3

Mammals: Baker, R. J., L. C. Bradley, R. D. Bradley, J. W. Dragoo, M. D. Engstrom, R. S. Hoffmann, C. A. Jones, F. Reid, D. W. Rice, and C. Jones. 2003. Revised Checklist of North American Mammals North of Mexico. Museum of Texas Tech University. OP-229. http://www.nsrl.ttu.edu/pubs/opapers.htm

Common names: Grenfell, W. E., M. D. Parisi, and D. McGriff. 2003. Complete List of Amphibians, Reptiles, Birds and Mammals in California. California Department of Fish and Game & California Interagency Wildlife Task Group. http://www.dfg.ca.gov/whdab/pdfs/species_list.pdf; and Perrins, C. M, and A. L. A. Middleton (Eds.). 1983. The Encyclopedia of Birds. Andromeda Oxford Limited. 463pp.

Special Status Designations + : California Department of Fish and Game, California Natural Diversity Database (July 2018): http://www.dfg.ca.gov/whdab/html/cnddb.html

6.5 Appendix E: Palmetto site photographs 2018.

Photograph 1: Northwest corner of site looking east, July 2018.

Photograph 2: Northwest corner of site looking south, July 2018.

Photograph 3: Northeastern area of site looking south, July 2018.

Photograph 4: Southeastern area of site looking north, July 2018.

Photograph 5: Southwest corner of site looking north, July 2018.

Photograph 6: Southwest corner of site looking east, July 2018.

Photograph 7: Western area of site looking south, July 2018.

Photograph 8: Western area of site looking southwest, July 2018.

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Phase I Cultural Resource Assessment for the Alabama and Palmetto Project, near the City of Redlands, San Bernardino County, California

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National Archaeological Database (NADB)
Type of Study: Literature Search, Intensive Pedestrian Survey
USGS 7.5' Quadrangle: Redlands, CA
Acreage: ~55 acres
Level of Investigation: CEQA Phase I
Key Words: Redlands; San Bernardino County; CEQA; ~55 acres surveyed; 2 historic-period components of a gravity-fed irrigation system, a flume (CA-SBR-32488H) and a weir (CA-SBR-32489H)

MANAGEMENT SUMMARY

Duke proposes the development of a warehouse project (Project) near the City of Redlands in San Bernardino County, California. The Project involves the construction of an approximate 1,192,671 square-foot high-cube, non-refrigerated warehouse building on 54.76 acres on the northwest corner of Alabama Street and Palmetto Avenue. Applied EarthWorks, Inc. (Æ) was retained to conduct a Phase I cultural resource investigation of the Project area in accordance with the California Environmental Quality Act (CEQA). The County of San Bernardino (County) is the Lead Agency for the purposes of CEQA.

This report summarizes the methods and results of the cultural resource investigation of the Project area. This assessment included a records search and literature review, communication with Native American tribal representatives, an intensive pedestrian survey, and an evaluation of significance of two cultural resources within the Project area. The purpose of the investigation was to determine the potential for the proposed Project to impact historical resources.

The literature and records search at the South Central Coastal Information Center (SCCIC) of the California Historical Resources Information System (CHRIS) indicated that 24 cultural resources have been documented within a1-mile radius of the Project area. None of these previously identified cultural resources are located within the Project area.

As part of the cultural resource assessment, Æ also requested a search of the Sacred Lands File (SLF) from the Native American Heritage Commission (NAHC), which was completed with negative results. Native American individuals and organizations were contacted to elicit information on Native American resources within the Project area. Of the 14 groups and/or individuals contacted, Æ has received responses thus far from the San Manuel Band of Mission Indians (SMBMI), Cabazon Band of Mission Indians, Agua Caliente Band of Cahuilla Indians (ACBCI), Cahuilla Band of Indians, and the Morongo Band of Mission Indians.

Æ Archaeologist Evan Mills performed an intensive pedestrian survey of the Project area on July 5 and 6, 2018. Two historic-period components of a gravity-fed irrigation system, a flume (CA-SBR-32488H) and a weir (CA-SBR-32489H) were identified within the Project area and documented as a result of the survey. These resources were evaluated against California Register of Historical Resources (CRHR) significance criteria and found to be eligible for listing under Criteria 1 and 3. The resources may also be contributing elements to a possible citrus industry historic district in this portion of Redlands. It appears that weir can be avoided during Project construction and preserved in place if possible. However, the flume will be directly impacted by the proposed Project. Therefore, the following mitigation measures are recommended to reduce Project impacts to a less-than-significant level under CEQA.

- Historic American Buildings Survey (HABS)/Historic American Engineering Record (HAER)-like documentation of segment of the flume (CA-SBR-32488H) within the Project area.

- Additional research on the citrus industry and prepare documentation in the form of a district record to be filed at the SCCIC.

Results of the survey indicate that the surface of most of the Project area has been disturbed by the removal of a previous citrus grove. However, the flume and weir remain in situ. Geological information suggests that the sediments underlying the Project area consist of high-energy stream deposits related to the Santa Ana River. These types of deposits are subject to intermittent periods of erosion and deposition and as such, the likelihood of finding intact buried archaeological resources within the Project area is low to very low. .

Field notes documenting the current investigation are on file at Æ's Hemet office. A copy of the final report will be placed on file at the SCCIC.

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1
INTRODUCTION

Duke Realty Limited Partnership (Duke) proposes to construct a non-refrigerated warehouse near the City of Redlands, San Bernardino County, California. Applied EarthWorks, Inc. (*Æ*) was retained by Albert A. Webb Associates (WEBB) to conduct a Phase I cultural resource assessment of the project (hereafter "Project") in accordance with the California Environmental Quality Act (CEQA). The County of San Bernardino (County) is the Lead Agency for the purposes of CEQA. Colleen Hamilton, M.A., RPA, served as *Æ*'s principal investigator, while *Æ* Associate Archaeologist Joan George, B.S., served as project manager. Fieldwork was conducted by *Æ* Associate Archaeologist Evan Mills. Assessment of the historic-period resources was completed by Annie McCausland, *Æ* Associate Architectural Historian.

1.1 PROJECT LOCATION AND DESCRIPTION

The Project area consists of approximately 54.76 acres of land near the City of Redlands, San Bernardino County, California (Figure 1-1). More specifically, the Project area is on the northwest corner of Alabama Street and Palmetto Avenue. The Project area is within an unsectioned portion of the San Bernardino Landgrant within Township 1 South, Range 3 West, San Bernardino Baseline & Meridian, as shown on the Redlands, California 7.5' U.S. Geological Survey (USGS) topographic quadrangle (Figure 1-2). Elevations within the Project area range from approximately 1,210 to 1,225 feet above mean sea level.

The Project will involve the construction of an approximate 1,192,671 square foot high-cube, non-refrigerated warehouse building. The majority of the lot will be paved with asphalt (831,784 square feet); however, a small portion of the lot will be landscaped (360,887 square feet). In addition, the project will construct off site road improvements consisting of partial width improvements to the ultimate cross-section (an additional 12 feet) of Alabama Street and Palmetto Avenue along the Project frontage. Ground disturbance may reach a maximum depth of 13 feet below the current grade.

1.2 REGULATORY CONTEXT

The Project requires discretionary approval from the County and is therefore subject to the requirements of CEQA. The CEQA Statutes and Guidelines direct lead agencies to determine whether a project will have a significant impact on historical resources. Generally, a cultural resource shall be considered "historically significant" if it meets the requirements for listing on the California Register of Historical Resources (CRHR) under any one of the following criteria (Title 14, California Code of Regulations [CCR], § 15064.5):

1. Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
2. Is associated with the lives of persons important in our past;

Figure 1-1 Project vicinity map

Figure 1-2 Project location map

3. Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or,
4. Has yielded, or may be likely to yield, information important in prehistory or history.

In the context of projects such as the proposed parking lot development, compliance with CEQA's cultural resource provisions typically involves several steps. Briefly, archival research and field surveys are conducted, and identified cultural resources are inventoried and evaluated in prescribed ways. Prehistoric and historical archaeological sites, as well as standing structures, buildings, and objects deemed historically significant must be considered in project planning and development. A project with an effect that may cause a substantial adverse change in the significance of a historical resource is a project that may have a significant effect on the environment (14 CCR § 15064.5[b]).

1.3 REPORT ORGANIZATION

This report documents the results of a cultural resource assessment of the proposed Project. Chapter 1 has described the Project and its location, defined the scope of cultural resource studies, and stated the regulatory context. Chapter 2 summarizes the natural and cultural setting of the Project area and surrounding region. Chapter 3 presents the results of the archaeological literature and records search. Chapter 4 summarizes the Sacred Lands File (SLF) search with the Native American Heritage Commission (NAHC) and Native American communications. The field survey methods and results are discussed in Chapter 5. Resource evaluations are included in Chapter 6. Cultural resource management recommendations are provided in Chapter 7, and bibliographic references are cited in Chapter 8. Results of the SLF search and correspondence with Native American groups are included in Appendix A, the California Department of Parks and Recreation (DPR) 523 recording forms are included in Appendix B, and the archaeological literature and records search map is included in Appendix C.

2
SETTING

This chapter describes the prehistoric, ethnographic, and historical cultural setting of the region to provide a context for understanding the types, nature, and significance of the archaeological resources that could be identified within the Project area. The nature and distribution of prehistoric and historic human activities in the region have been affected by such factors as topography, climate, geology, and the availability of water and biological resources. Therefore, the environmental setting of the Project area is summarized below, followed by a discussion of the cultural setting.

2.1 ENVIRONMENTAL SETTING

The Project area is situated on the flood plain of the upper Santa Ana River within the San Bernardino Basin at the intersection of the Peninsular and Transverse mountain ranges. The basin lies between the San Jacinto and San Andreas Faults and is filled with coarse Quaternary sediments derived from the San Bernardino Mountains (Morton and Miller 2006). The San Andreas Fault separates the San Bernardino Mountains from the San Gabriel Mountains, which were uplifted during the middle Pleistocene. The San Bernardino Valley is associated with erosion in the nearby mountains that occurred prior to their uplift. During the early Pliocene, sedimentary deposits formed in large freshwater lakes in the mountains. Late Pliocene rejuvenation of the mountains caused these lakes to fill in. As a result, streams coming down out of the mountains created a floodplain. During the late Pliocene and early Pleistocene, the sedimentary rocks folded, establishing the San Bernardino Valley by the late middle Pleistocene.

The Santa Ana River, which originates on the northern and eastern slopes of Mt. San Gorgonio, is the largest hydrological feature near the Project area, approximately 0.7 mile to the north. Mill Creek, which begins south of Mt. San Gorgonio, joins the Santa Ana River where it debouches from the mountains. Other major tributaries emerging from the southern slopes of the San Bernardino Mountains include Plunge Creek, City Creek, Waterman Creek, Devil Canyon Creek, and Warm Creek channel. Sediments directly underlying the Project area consist of young axial-channel deposits, which were deposited during the middle Holocene. Sediments are fine- to coarse-grained sand, pebbly sand, and small-cobble gravel capped by weakly developed soils; estimated thickness of the unit is between 2 and 5 meters (Morton and Miller 2006).

The climate of the region is largely determined by topographic features; climate, in turn, largely dictates the character of the biotic environment exploited by native populations. The climate of the Project area is Mediterranean, with hot dry summers and cool moist winters. It has a semi-arid precipitation regime; significant changes in temperature and moisture occur based on elevation and exposure, particularly in the nearby mountains.

Within the general Project area (i.e., San Bernardino Valley), grassland vegetation communities exist. Native species present prior to historical use and disturbance may have included rye grass (*Leymus condensatus*), blue grass (*Poa secunda*), bent grass (*Agrostis* spp.), needlegrass (*Stipa* spp.), three-awn (*Aristida divaricata*), and members of the sunflower family (*Asteraceae*). At present, the grassland communities are dominated by exotic species such as filaree (*Erodium*

cicutarium), tansy mustard (*Descurainia pinnata*), tumble mustard (*Sisymbrium altissimus*), foxtail fescue (*Vulpia myuros*), barleys (*Hordeum* spp.), wild oats (*Avena* spp.), rye grass (*Lolium* spp.), cheat or brome grass (*Bromus* spp.), vinegar weed (*Trichostema lanceolatum*), and dove weed (*Eremocarpus setigerus*).

Belts of vegetation occur within the San Bernardino Mountain areas to the north. Chamise chaparral occurs on the south and west aspects below about 6,000 feet in elevation, desert scrub from about 3,000 to 9,000 feet, and coniferous forests above 6,000 feet.

2.2 PREHISTORIC SETTING

The prehistory of inland southern California was influenced by cultural patterns of both the interior desert and the coastal region (Goldberg and Arnold 1988; Warren 1984). Some researchers (Goldberg et al. 2001; O'Connell et al. 1974) have also viewed the region within its own distinct cultural setting. The local cultural chronology has been built from these studies.

Occupation of western Riverside County began in the Early Archaic Period, as early as 9500 years before present (B.P.). No Paleo-Indian Period (circa 12,000–9500 B.P.) sites are known in the vicinity of the Project.

2.2.1 Early Archaic Period (circa 9500 to 7000 B.P.)

During this period, the environment of the interior deserts was more favorable for human occupation than the cismontane valleys of southern California, where the Project is located. Populations exploiting the interior valleys would have been tethered to the few reliable, drought-resistant water sources such as Lake Elsinore, Mystic Lake, and possibly the Cajalco Basin. In general, small, highly mobile groups traveled widely, utilizing highly portable tool kits to procure and process critical resources, with brief and anticipated intervals of seasonal sedentism near predictable water locations. Due to isolated locations where the conditions for occupation were met, Early Archaic sites are rare compared to later periods of prehistory (Goldberg et al. 2001; Grenda 1997; Horne and McDougall 2008; McDougall 1995).

2.2.2 Middle Archaic Period (circa 7000 to 4000 B.P.)

A gradual transition from wet pluvial conditions to arid desert conditions marks the transition to the Middle Archaic Period. Middle Archaic sites are associated with the margins of pluvial lakes and now-extinct springs. Pinto-series projectile points are a distinctive artifact type of this period (Justice 2002), though other artifacts include leaf-shaped bifacial knives; split cobble choppers and scrapers; scraper-planes; and small milling slabs and manos. Most sites from this interval are small surface deposits of lithic artifacts, suggesting temporary and perhaps seasonal occupation by small groups of people.

2.2.3 Late Archaic Period (circa 4000 to 1500 B.P.)

The Late Archaic Period was one of cultural intensification coinciding with the Little Pluvial, a period when increased moisture allowed for more extensive occupation of the region. Sedentism likely increased during this period, with large occupation sites located adjacent to permanent water sources such as perennial springs and streams. Chronologically diagnostic projectile points

of this period include Humboldt, Gypsum, and Elko-series dart points (Warren 1984), though Rose Spring arrow points appeared late within this period in the deserts. The mortar and pestle, used for processing acorns and hard seeds, also first appeared. A warming and drying trend began around 2100 B.P., leading to intensification of use of certain resources (Goldberg et al. 2001).

2.2.4 Saratoga Springs Period (circa 1500 to 750 B.P.)

Occupants of the region continued to adapt to the arid environment in the deserts (Warren 1984). Lake Cahuilla likely refilled the Coachella Valley around 1450 B.P., and was the focus of exploitation of fish and wetland resources. Occupation around Lake Perris and other large local water sources declined as these dried, however, and people became tethered to springs (Goldberg et al. 2001). Cultural trends continued from the Late Archaic Period, as Saratoga Springs projectile points, also associated with early use of the bow and arrow, appeared. The sparse assemblages found within the region, however, obscure the timing of local adaptation to bow and arrow (Goldberg et al. 2001). Shoshonean language speakers likely moved into southern California at this time. Brown and Buff Ware pottery first appeared on the lower Colorado River at about 1200 B.P. and started to diffuse across the California deserts by about 1100 B.P. (Moratto 1984). The warmer and drier Medieval Warm Period set in throughout the Southwest by about 1060 B.P. (Stine 1994; Warren 1984), and led to the withdrawal of Native American populations from marginal desert areas.

2.2.5 Late Prehistoric Period (circa 750 to 400 B.P.)

A period of lower temperatures and increased precipitation known as the Little Ice Age resulted in increased resource productivity in the region and subsequent population increase. Cottonwood Triangular points appear in inland assemblages and Obsidian Butte obsidian became much more common (Goldberg et al. 2001). Lake Cahuilla began to recede (Waters 1983) and the large Patayan populations occupying its shores moved westward to areas including the San Jacinto Plain (Wilke 1976). The final recession of Lake Cahuilla, which had occurred by approximately 400 B.P., resulted in a population shift away from the lakebed into the Peninsular Ranges to the west and the Colorado River regions to the east.

2.2.6 Protohistoric Period (circa 400 to 150 B.P.)

Sedentism intensified during the Protohistoric Period. Increased hunting with bow and arrow and widespread exploitation of acorns, other hard nuts, and berries (indicated by the abundance of mortars and pestles) provided reliable and storable food resources. Reliable food sources likely prompted the establishment of small, completely sedentary villages with resource catchment areas around them (True 1966, 1970). Ceramic technology first appeared in the region around 350 B.P. Cottonwood Triangular points were supplemented by Desert Side-notched points. This period ended in A.D. 1769, when Spanish settlement began in Upper California.

2.3 ETHNOGRAPHIC SETTING

The Project is within an area where the traditional use territories of the Serrano, Cahuilla, and Gabrielino meet, just southeast of the present-day city of San Bernardino. All of these cultural groups spoke languages belonging to the Takic branch of the Shoshonean family, a part of the

larger Uto-Aztecan language stock (Bean 1978:576; Geiger and Meighan 1976:19). More detailed ethnographic information is supplied by Bean and Saubel (1972), Bean and Smith (1978), Bean and Vane (2001), Harrington (1942), McCawley (1996), and Strong 1929. The reader is referred to these documents for specific information on Native American cultures of the southern San Bernardino County.

2.4 HISTORICAL SETTING

This historic context is largely excerpted from *Historical Resources Evaluation Report for the Interstate 10 Corridor Project* (Chasteen 2015). This chapter describes the cultural setting beginning with the Euro-American settlement of San Bernardino County to provide a context for understanding the types, nature, and significance of the cultural resources identified within the Project study area.

2.4.1 San Bernardino County

Euro-American settlement began in the early 1800s as persons seeking land and fortunes made their way west from the midwest and east coast of the United States or north from Mexico. The Catholic missionaries were a catalyst in the expansion of Euro-American influences in this region. A group of missionaries, Native Americans, and soldiers from the San Gabriel Mission named San Bernardino in honor of the feast day of San Bernardino of Sienna when they entered the valley on May 10, 1810. The Mission San Gabriel initially attempted to expand its influence in the San Bernardino Valley when Father Dumetz was sent to the valley in 1810 to establish the mission station known as Politana. An earthquake in 1812 followed by raids from neighboring Native American tribes caused a lull of interest in Politana, but in the 1830s Mission San Gabriel established the San Bernardino Asistencia in what is now the Mission District in eastern Loma Linda (California Historical Landmark No. 42). From 1822 through 1827, the Mission Fathers traveled the San Bernardino-Sonora Road, also known as the Emigrant or Mormon Trail (California Point of Historical Interest No. 96), which traversed Redlands, Old San Bernardino, Colton, and Agua Mansa, between Mission San Gabriel and the San Bernardino Asistencia. After Mexico achieved independence from Spain in 1821, the Mexican government seized ownership of church properties through the Secularization Act of 1833, and lands were redistributed as ranchos through a tribute system. This land redistribution by the Mexican government fostered the development of ranchos in Alta California.

The Asistencia was largely abandoned by the late 1830s. The Lugo family, under the leadership of Jose del Carmen Lugo, moved into the former Asistencia buildings in order to establish a colony. Slover Mountain, also known as El Cerrito Solo, was the natural landmark used for establishing the boundaries of the Lugos' land grant within the San Bernardino Rancho. What became known as San Bernardino County originally consisted of the following ranchos: Canon de Santa Ana, Jurupa and El Rincon, Cucamonga, Santa Ana del Chino, San Bernardino, and Muscupiabe. The ranchos largely subsisted on cattle ranching and raising crops that were irrigated from the Mill Creek *Zanja* and other irrigation ditches.

In an effort to gain territory, the U.S. seized the territory of Texas from the Mexican government, launching the Mexican-American War. California was annexed by the U.S. in 1848 through the

Treaty of Guadalupe Hidalgo, which ended the Mexican-American War, and entered the Union in 1850. The end of the war further paved the way for Euro-American settlement from the east.

Brothers Amasa Lyman and Charles Rich bought the San Bernardino Rancho from Jose and Maria Armenta Lugo in 1851 to establish a Mormon colony. Two such colonies were established on either side of the Santa Ana River. The Mormons who settled in the San Bernardino area raised livestock, planted crops, and established civic services such as a school and a post office. The Mormon settlers were recalled to Salt Lake City, Utah in 1858 by Brigham Young in an effort to create a Mormon stronghold. The majority of the Mormon settlers in San Bernardino returned to Salt Lake City; however, some remained. San Bernardino County was established on April 26, 1853, and ceded a portion of its territory to the formation of Riverside County in 1892.

Agriculture and livestock continued to be the chief industries in San Bernardino County, but were overshadowed by the citrus industry beginning in the 1870s. The first orange trees in San Bernardino were planted by Anson Van Leuven in 1857. Citrus growing, packing, and shipping quickly became the largest industry in southern California. Other industries included cattle ranching, growing sugar beets, and viticulture and enology. The burgeoning citrus industry led to a population boom and spurred the development of the transcontinental railroads.

Several companies were formed beginning in the mid- to late-1800s in an effort to develop San Bernardino County and southern California in general. Beginning in 1887, Major George H. Bonebrake and F. C. Howes formed the Semi-Tropic Land and Water Company, purchased 28,000 acres and the water rights to Lytle Creek, and laid out the townsites of Rosena (now known as Fontana), Rialto, Bloomington, and San Sevaine. The Semi-Tropic Land and Water Company, though ultimately unsuccessful in its attempts, initiated much of the early residential and commercial development in San Bernardino County. After the Semi-Tropic Land and Water Company failed, largely due to a nationwide economic depression, several other development companies, such as the Fontana Farms Company, were formed to purchase the Semi-Tropic Land and Water Company holdings and also to further development of towns and industries throughout the county. The establishment of interstate and intercontinental rail lines brought an influx of people and money to southern California, which lead to a real estate boom.

2.4.2 Development of the Rail Lines

The first railroad constructed in San Bernardino County was built by the Southern Pacific Railroad (SPRR). Construction of the SPRR began in Los Angeles, headed east, and eventually met with a line coming from the eastern seaboard, creating the first transcontinental railroad through San Bernardino County. The first station in San Bernardino County was built on land donated by the Slover Mountain Colony. The station was named for David D. Colton, a SPRR official. The name of the station lent itself to the town that grew around it. The Colton rail yards, constructed in 1875, were the chief source of economic development as the largest employer in Colton and are still the main rail yards for the SPRR, which later merged with the Union Pacific Railroad (UPRR). The rail yards continue to be a viable source of income for the City of Colton, which is located less than 5 miles east of the Project area.

2.4.3 Early Irrigation Systems in San Bernardino Valley

Irrigation of the San Bernardino Valley began in 1819 with the construction of the Mill Creek Z*anja*. The first sawmills were constructed in Mill Creek Canyon in the early 1850s by the Mormon settlers and were powered by man-made water conveyance systems. They also built a canal bringing water to their settlement from Warm Creek to power a gristmill. The Tenney, Lord and Hale, and Perdue ditches were early irrigation systems that laid the foundation for the San Bernardino Valley-wide irrigation system. Additional canals were built in the 1850s to divert water from the Santa Ana River for irrigation purposes. Later, flood control channels were constructed to minimize flooding in the basin and reduce damage to agricultural lands and residential and commercial properties, and avoid loss of life.

The San Bernardino Valley is fairly arid and substantial rainfall is seasonal. Natural water sources including the Santa River were not able to produce a sustainable source of water for large-scale farming.

2.4.4 Redlands

Redlands was initially established through real estate speculation, much like several other ventures in San Bernardino during the mid- to late-1800s. The townsite was established by Frank E. Brown and Edward G. Judson in 1881 (Schuiling 1984) and was named after the rich red-colored soil found in the region. Brown and Judson organized the Redlands Water Company to provide water to the community (Schuiling 1984). With water guaranteed and the construction of a Santa Fe Railway branch line, Redlands and Lugonia, a neighboring community, merged to form one town (Schuiling 1984). The largest early industry was citrus packing and shipping (Federal Writers' Project 1939). The real estate boom associated with the development of the citrus industry in southern California also contributed to the early growth of Redlands.

The real estate boom drew Albert and Alfred Smiley, prominent early residents, to Redlands in the late 1880s. The Smileys purchased 200 acres in Redlands in 1889 with a view of the valley and the mountains where they constructed their homes and developed the area into Canyon Crest Park, later known as Smiley Heights (Schuiling 1984). They also planted over a thousand varieties of trees and shrubs in Smiley Heights, which quickly became a popular tourist destination. The Kite Route, an early rail line geared toward tourism, brought tourists and their dollars to Redlands to enjoy these gardens, and other services and entertainments provided by the City.

Through the establishment of tourist destinations and agricultural industries, Redlands experienced a population boom in the late 1800s. In 1888, the population was 900, and by 1900, the population had grown to 5,600 (Sanborn Map & Publishing Company Ltd. 1888; Sanborn-Perris Map Company Ltd. 1900). Redlands developed a thriving economy based on the citrus and timber industries and tourism. Other prominent local businesses were the Union Ice Company factory, the Brookside Winery, the Academy of Music, the Redlands Electric Light and Power Company, Redlands University, and hotels such as the Hotel Casa Loma and the Windsor Hotel (Sanborn-Perris Map Company Ltd. 1900). Citrus was the primary agricultural product in Redlands, but Redlands was better known for its fine homes, parks, and the Redlands University. The city had 14 packinghouses in 1919 and was located on the Santa Fe Railway and

SPRR lines. Redlands continues to thrive as a tourist draw for many of the same reasons listed above.

2.4.5 Brown Subdivision of Williams Tract No. 1

Frank Elwood Brown was a key figure in the development of the eastern San Bernardino Valley, the citrus industry in the valley, and the cities of Redlands and Moreno Valley. Brown brought the most crucial resource to the area—water.

Brown came to the San Bernardino valley in 1877, and settled in the small colony of Lugonia. Brown was a graduate of the Sheffield Scientific School at Yale University, and he brought big dreams with him to California (Gonzales 2006).

Upon arrival, Brown met Edward G. Judson in Lugonia and they went into the citrus business together in 1880. With their success as citrus growers and distributors, their vision grew. Together, they decided to develop a new agricultural colony in the area with a sustainable water source and system, the Red Lands Colony (Gonzales 2006).

Brown and Judson bought over 4,000 acres of land and the Red Lands Colony was incorporated in 1881. To provide water temporarily, they bought 50 shares of water from the owners of the South Fork ditch, which provided water to Lugonia drawn from the Santa Ana River. To transport the water to Red Lands, Brown and Judson constructed a 6-mile canal from the South Fork ditch to a new reservoir. Water reservoirs allowed water from the wet months to be harnessed and saved for the dry months (Gonzales 2006). As stated in a Scribner's Magazine article from 1890,

> …the plan of water storage is to impound this water as it runs to waste in the season of flood and use it in the season of drought. Select the proper valleys for water-basins, close their outlets with dams, store great lakes of water when the mountain-snows melt, and then let it out slowly and at will through flumes and ditches to the lands below—this is the essence of the new idea [Gonzales 2006].

Brown embraced this idea and planned for the construction of a new water reservoir and dam in Bear Valley.

Brown and Judson's vision for a new water source and system was achieved in 1883 with the founding of the Bear Valley Land and Water Company, later known as the Bear Valley Irrigation Company. A new state of the art dam and channel was designed by Brown in 1884 and water from the Bear Valley reservoir made its way to the Red Lands Colony in 1885. Plentiful water attracted new settlers to the colony. The phenomenal population growth of the colony would have not been possible without the Bear Valley reservoir (Gonzales 2006).

Brown continued buying and developing agricultural land in the area, including a subdivision of the Williams Tract No. 1 located northwest of Redlands in 1893 shown in Figures 2-1 and 2-2 (Barmann 1893). The Williams Tract was founded by land proprietor Henry L. Williams in 1887 in a small community known then as Gladysta. The small community promoted its "piped water" in an 1887 newspaper advertisement (Figure 2-3).

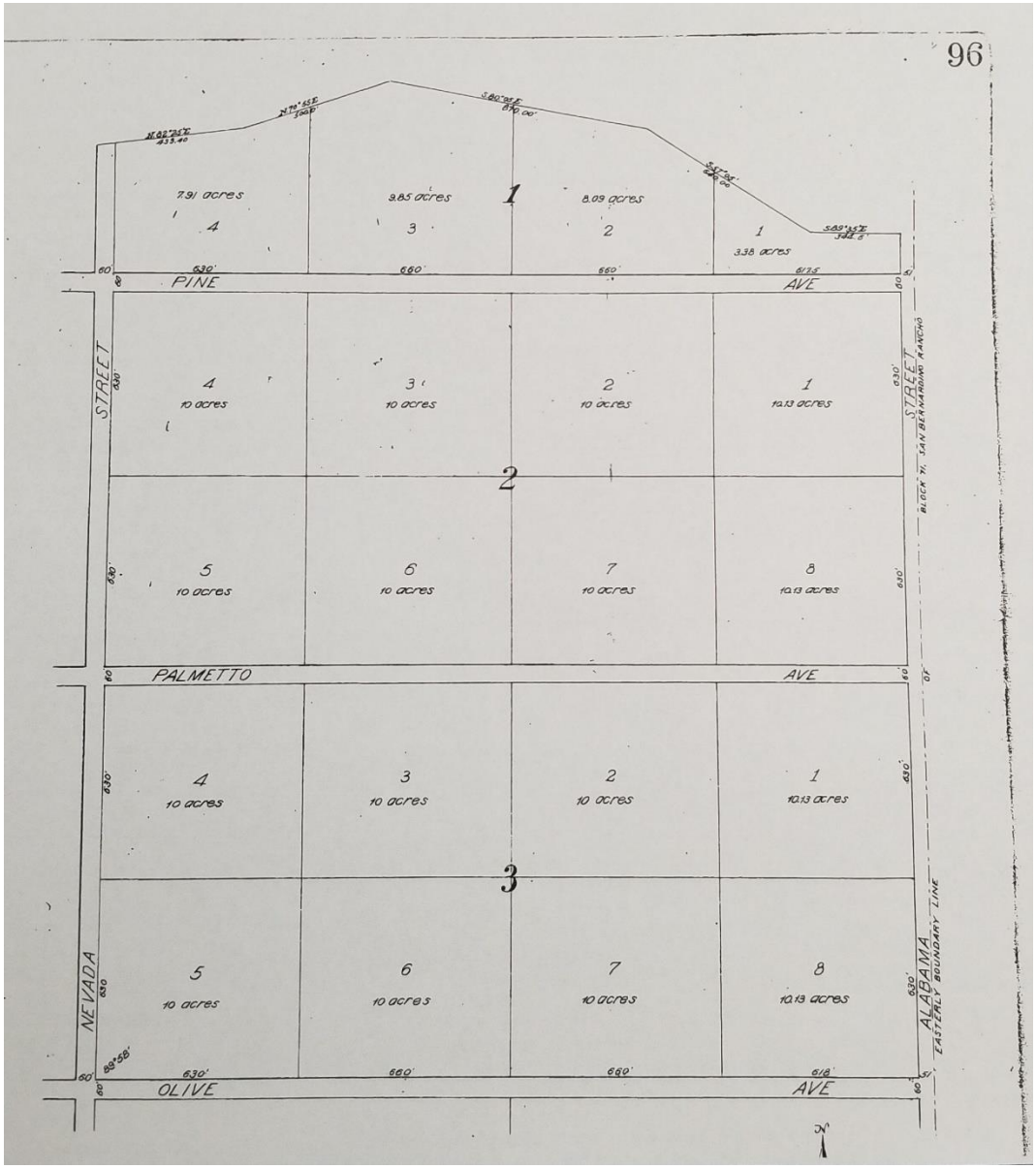
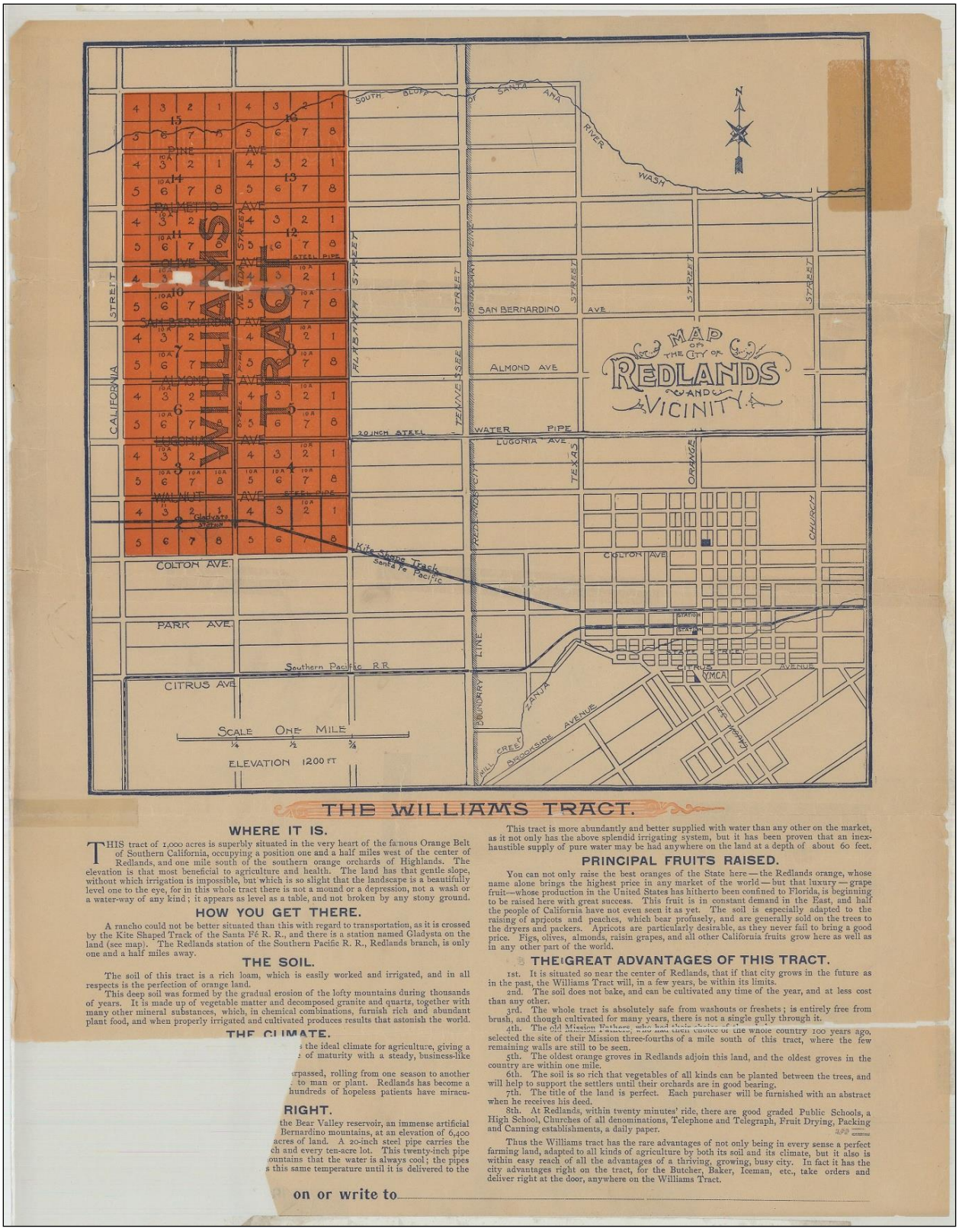


Figure 2-1 Map of Brown Subdivision of Williams Tract No. 1, 1893 (Courtesy of the San Bernardino County Historical Archives)



THE WILLIAMS TRACT.

WHERE IT IS.

THIS tract of 1,000 acres is superbly situated in the very heart of the famous Orange Belt of Southern California, occupying a position one and a half miles west of the center of Redlands, and one mile south of the southern orange orchards of Highlands. The elevation is that most beneficial to agriculture and health. The land has that gentle slope, without which irrigation is impossible, but which is so slight that the landscape is a beautifully level one to the eye, for in this whole tract there is not a mound or a depression, not a wash or a water-way of any kind; it appears as level as a table, and not broken by any stony ground.

HOW YOU GET THERE.

A rancho could not be better situated than this with regard to transportation, as it is crossed by the Kite Shaped Track of the Santa Fé R. R., and there is a station named Gladysta on the land (see map). The Redlands station of the Southern Pacific R. R., Redlands branch, is only one and a half miles away.

THE SOIL.

The soil of this tract is a rich loam, which is easily worked and irrigated, and in all respects is the perfection of orange land.

This deep soil was formed by the gradual erosion of the lofty mountains during thousands of years. It is made up of vegetable matter and decomposed granite and quartz, together with many other mineral substances, which, in chemical combinations, furnish rich and abundant plant food, and when properly irrigated and cultivated produces results that astonish the world.

THE CLIMATE.

[illegible] the ideal climate for agriculture, giving a [illegible] of maturity with a steady, business-like

[illegible]rpassed, rolling from one season to another [illegible] to man or plant. Redlands has become a [illegible]hundreds of hopeless patients have miracu-

RIGHT.

[illegible] the Bear Valley reservoir, an immense artificial [illegible] Bernardino mountains, at an elevation of 6,400 [illegible] acres of land. A 20-inch steel pipe carries the [illegible]ch and every ten-acre lot. This twenty-inch pipe [illegible]ountains that the water is always cool; the pipes [illegible]s this same temperature until it is delivered to the

[illegible] on or write to

This tract is more abundantly and better supplied with water than any other on the market, as it not only has the above splendid irrigating system, but it has been proven that an inexhaustible supply of pure water may be had anywhere on the land at a depth of about 60 feet.

PRINCIPAL FRUITS RAISED.

You can not only raise the best oranges of the State here — the Redlands orange, whose name alone brings the highest price in any market of the world — but that luxury — grape fruit—whose production in the United States has hitherto been confined to Florida, is beginning to be raised here with great success. This fruit is in constant demand in the East, and half the people of California have not even seen it as yet. The soil is especially adapted to the raising of apricots and peaches, which bear profusely, and are generally sold on the trees to the dryers and packers. Apricots are particularly desirable, as they never fail to bring a good price. Figs, olives, almonds, raisin grapes, and all other California fruits grow here as well as in any other part of the world.

THE GREAT ADVANTAGES OF THIS TRACT.

1st. It is situated so near the center of Redlands, that if that city grows in the future as in the past, the Williams Tract will, in a few years, be within its limits.

2nd. The soil does not bake, and can be cultivated any time of the year, and at less cost than any other.

3rd. The whole tract is absolutely safe from washouts or freshets; is entirely free from brush, and though cultivated for many years, there is not a single gully through it.

4th. The old Mission Fathers, who had their choice of the whole country 100 years ago, selected the site of their Mission three-fourths of a mile south of this tract, where the few remaining walls are still to be seen.

5th. The oldest orange groves in Redlands adjoin this land, and the oldest groves in the country are within one mile.

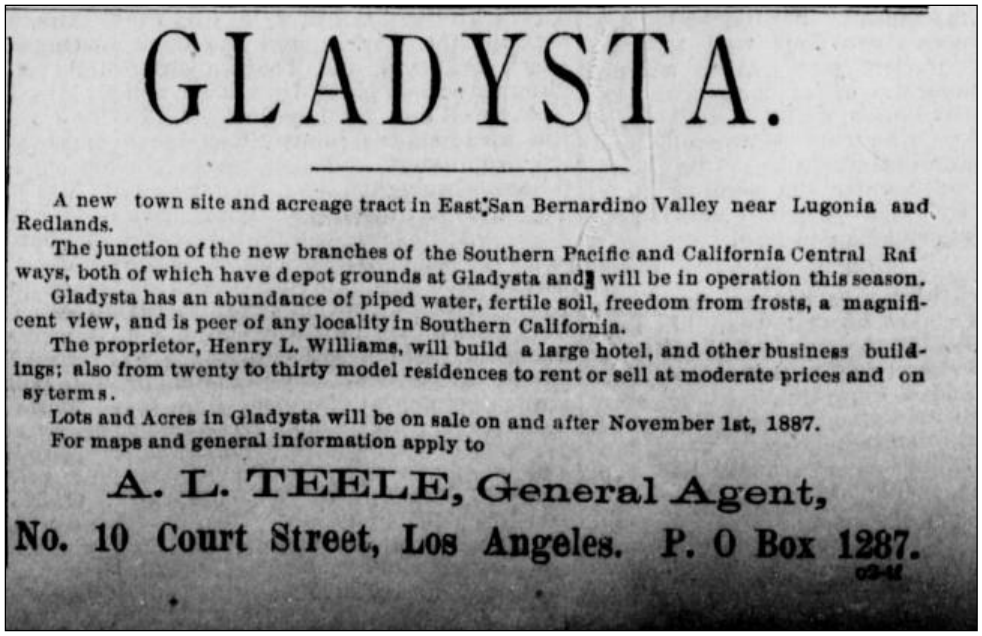
6th. The soil is so rich that vegetables of all kinds can be planted between the trees, and will help to support the settlers until their orchards are in good bearing.

7th. The title of the land is perfect. Each purchaser will be furnished with an abstract when he receives his deed.

8th. At Redlands, within twenty minutes' ride, there are good graded Public Schools, a High School, Churches of all denominations, Telephone and Telegraph, Fruit Drying, Packing and Canning establishments, a daily paper.

Thus the Williams tract has the rare advantages of not only being in every sense a perfect farming land, adapted to all kinds of agriculture by both its soil and its climate, but it also is within easy reach of all the advantages of a thriving, growing, busy city. In fact it has the city advantages right on the tract, for the Butcher, Baker, Iceman, etc., take orders and deliver right at the door, anywhere on the Williams Tract.

Figure 2-2 Williams Tract Map, circa 1890 (Courtesy of the A.K Smiley Public Library Heritage Room).



GLADYSTA.

A new town site and acreage tract in East San Bernardino Valley near Lugonia and Redlands.

The junction of the new branches of the Southern Pacific and California Central Rai ways, both of which have depot grounds at Gladysta and will be in operation this season.

Gladysta has an abundance of piped water, fertile soil, freedom from frosts, a magnificent view, and is peer of any locality in Southern California.

The proprietor, Henry L. Williams, will build a large hotel, and other business buildings; also from twenty to thirty model residences to rent or sell at moderate prices and on sy terms.

Lots and Acres in Gladysta will be on sale on and after November 1st, 1887.

For maps and general information apply to

A. L. TEELE, General Agent,

No. 10 Court Street, Los Angeles. P. O Box 1287.

Figure 2-3 Gladysta Advertisement from the *Los Angeles Herald*, 1887 (Courtesy of the California Digital Newspaper Collection).

Citrus farming began in the Redlands area in the late nineteenth century and remained prominent until the late 1950s (California Department of Transportation 2007). A Southern Pacific electric railroad spur, south of San Bernardino Avenue, was developed in 1903 to service the citrus packing houses in the area including Sunkist and Crown Jewel. Smudge pot oil was also distributed via the train (Lancaster 2013). Gravity-fed irrigation was the standard practice in southern California citrus farming from the 1880s until the drip system was introduced in the 1970s (Sanka 2006).

Beginning in the 1880s, gravity-fed irrigation systems were constructed within citrus groves across San Bernardino Valley, similar to the system illustrated in Figure 2-4. The long and subtle slope of the valley from both north and south to the center made gravity- fed irrigation systems similar to the system illustrated in Figure 2-4 ideal for irrigation (California Department of Transportation et al. 2000). These systems distributed water using networks of underground cast-iron pipes, flow-control boxes, and gravity-fed irrigation flumes made of local rocks with cement mortar (California Department of Transportation et al. 2000). This state of the art water system for the area was highlighted on the Williams Tract promotional map shown in Figure 2-2 as well as the 1893 San Bernardino Irrigation Map shown in Figure 2-5. The Williams Tract Map declared that property owners could raise the best oranges in the state on the land and the oldest orange groves in Redlands were within one mile (William c. 1890). With an abundance of water, Brown's subdivision was perfect for the largest and fastest growing industry in the region, citrus farming.

Figure 2-4 Irrigating Oranges, 1902 (Courtesy of the Los Angeles Public Library Photo Collection).

The Project area includes three parcels within Block 1 Lots 1 and 2 and Block 2 Lots 1,2,3,6, and 7 of the Brown Subdivision of Williams Tract No. 1 (see Figures 2-1 and 2-2). Between 1895 and 1951, the following individuals, listed in no particular order, owned portions of the subject lots: Melvin R. Gay, Geo. W. Mead, B.W Cave, Belle Michaeltree, Frank E. Brown, 1st National Bank of Redlands, Hannah E. Irvin, W.K. Lee, C.H Park, Florence C. & Lester W. Finlay, J.D. Langford & Co., Will W. De Hart, Ruth McNair, Maude Armstrong, Gladys L. Pate, Charles S. Lombard, W.M. & Clara Henderson, Ellis G. Grace, B. Kennedy, Savings Bank, J. Richard Lane, Harry N. & Bertha F. Morse, Ino. W. Thayer, and J.H. Maggie Wilkes. All owners likely maintained citrus groves on their properties.

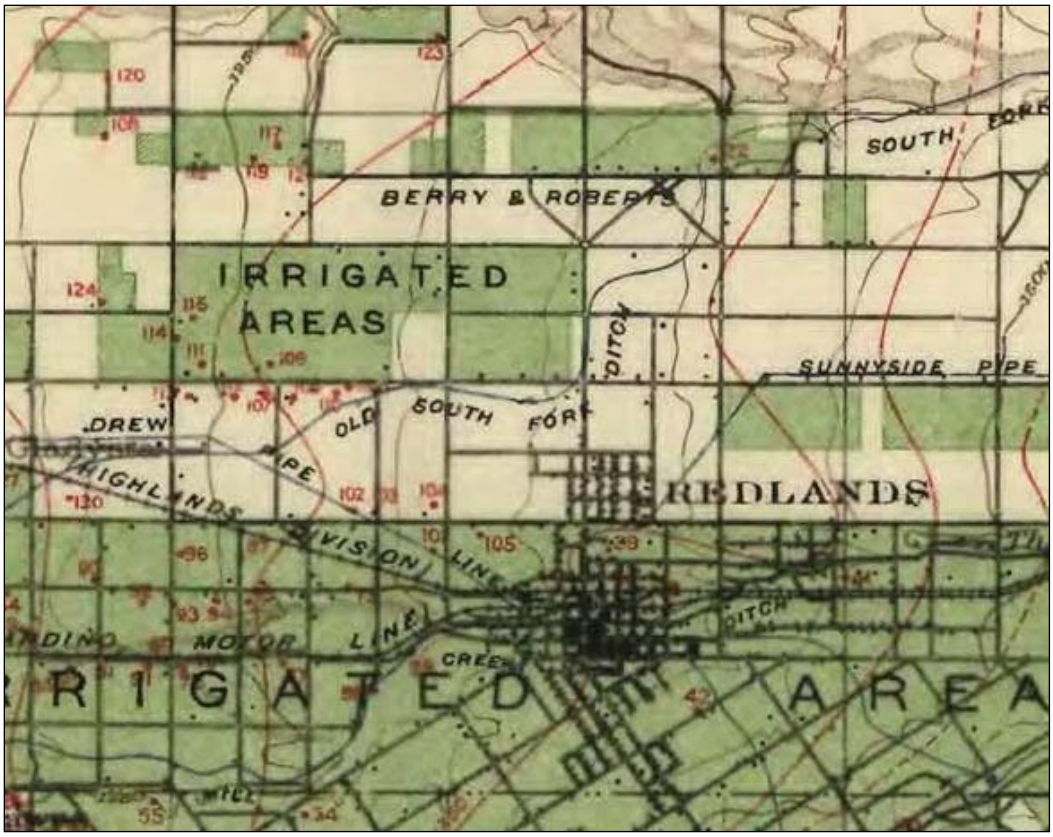


Figure 2-5 Map of San Bernardino, Redlands, and Vicinity Showing Location of Irrigated Lands, 1893 (Courtesy of the Los Angeles Public Library Photo Collection).

Ownership of these lots changed throughout the twentieth century; however, the land use did not change. Historical aerial images show that the Project area contained an orchard from at least 1930 (Figure 2-6) and property tree values were documented beginning in 1923 (San Bernardino County Assessor Books; UCSB 2018). The 1954 edition of the USGS Redlands quad map shows the existence of citrus groves and farms within the Project area as well as on the surrounding properties. The citrus groves and farms were demolished around 2007 (NETR online 2018).

Figure 2-6 Aerial photograph of the Project area, 1930 (Courtesy the UCSB Digital Aerial Photograph Library).

3
CULTURAL RESOURCE LITERATURE AND RECORDS SEARCH

On June 28, 2018, prior to the field survey of the Project area, an archaeological literature and records search was conducted at the South Central Coastal Information Center (SCCIC) of the California Historical Resource Information System (CHRIS), housed at the California State University, Fullerton. The objective of this records search was to determine whether any prehistoric or historical cultural resources had been recorded previously within a Study Area encompassing a 1-mile radius of the Project area. The records search indicated that no less than 43 cultural resource studies have been conducted between 1977 and 2015 within the Study Area (Table 3–1). Five of these studies specifically involved a portion of the Project area (Table 3-1). Approximately 15 percent of the Project area had been surveyed previously as a result of this study.

Table 3-1
Previous Cultural Resource Studies in the Study Area

SCCIC Document #	Date	Author(s)	Title
SB-00574	1977	Hammond, Stephen R. and Lois M. Webb	Cultural Resources Survey: Route 30 between Interstate Route 10 and Arden Avenue, San Bernardino County, California
SB-00931	1980	Smith, Gerald A.	Cultural Resources Assessment of the West Portion of Assessor's Parcel Number 292-061-11, Redlands Area
SB-01055	1980	Hammond, Stephen	Archaeological Survey Report: Route 30 between Third Street and Route 10 at Tennessee Street
SB-01783	1988	Hornbeck, David and Howard Botts	Seven Oaks Dam Project: Water Systems
SB-01808	1988	Hampson, R. Paul, Jerrel Sorensen, Susan K. Goldberg, Mark T. Swanson, and Jeanne E. Arnold	Cultural Resources Survey, Upper Santa Ana River, California
SB-02062	1990	Foster, John M.	Archival Research for Cultural Resources: Old Webster Quarry, SEIR, San Bernardino County
SB-02260	1991	Carmichael, David	Documentary Research and Field Reconnaissance Relating to Cultural Resources at Norton Air Force Base, California
SB-02486	1991	Hatheway, Roger G., John Romani, and Joanne Sanfilippo	An Architectural Determination Of Eligibility/Significance Report and an Archaeological Survey for the Marigold Business Park
SB-02587	1991	Schmuecker, Brian L.	Final Report: Inventory and Evaluation of World War II Structures at Norton Air Force Base in San Bernardino County, California
SB-02625	1992	Swope, Karen K and Michael K. Lerch	Cultural Resources Assessment of the Barton Center Of Redlands, Marigold Farms, City of Redlands, San Bernardino County, California
SB-02792	1993	Mason, Roger D. and Jeanette A. McKenna	Cultural Resources Survey for the Cities Pavilion Project, Redlands, CA

Table 3-1
Previous Cultural Resource Studies in the Study Area

SCCIC Document #	Date	Author(s)	Title
SB-02853	1991	Foster, John M., James J. Schmidt, Carmen A. Weber, Gwendolyn R. Romani, and Roberta S. Greenwood	Cultural Resource Investigation: Inland Feeder Project, MWD of Southern CA
SB-03064	1995	White, Laurie and Robert S. White	An Archaeological Assessment of the 124+/- Acre Concept Plan 5 Citrus Plaza Project, Redlands, CA
SB-03141	1995	Love, Bruce	Alabama Street All-Weather Crossing
SB-03742	2001	Budinger, Fred	An Archaeological Assessment of the Proposed Verizon Buckeye Unmanned Cellular Telecommunication Site to be Located at 27630 W. Pioneer Ave, Redlands, CA
SB-03750	2000	Love, Bruce	Westside Landfill Expansion Project
SB-04047	2003	Dice, Michael	Phase I Cultural Resources Survey Results for Cingular Telecommunications Facility SB-230-02 (AT&T COLO) 27630 N. Pioneer Ave, Redlands, San Bernardino County, CA
SB-04048	2001	Love, Bruce	Identification and Evaluation of Historic Properties: City of Redlands Recycled Water Project in the City of Redlands, San Bernardino County, CA
SB-04058	2002	Dice, Michael	Revised Records Search Results for Sprint PCS Telecommunications Facility SB38Xc926B (Stow-Away Storage), 1519 W. Lugonia, Redlands, San Bernardino County, CA.
SB-04104	2004	McKenna, Jeanette A.	An Architectural Review of Standing Structures Located within the Proposed Redlands Unified School District's Proposed New School Site, Redlands, San Bernardino County, CA
SB-04592	2005	Tang, Bai "Tom", Michael Hogan, Casey Tibbet, and John J. Eddy	Historical/Archaeological Resources Survey Report: ABT-Haskell Company Composting Plan Site near the City of Redlands, San Bernardino County, California
SB-04594	2005	Billat, Lorna	Hwy 30/CA-8817A.
SB-04596	2004	McKenna, Jeanette	A Phase I Cultural Resources Investigation of the Oakmont Industrial Group Project Area, approximately 14.3 Acres in the Redlands Area of San Bernardino County, California
SB-04600	2004	Dice, Michael	Phase I Cultural Resources Survey of a 73.45 Acre Property in Unincorporated San Bernardino County, APN: 0292-052-01, -03, -04, -06, -08, -10, -11, -12, -16 near Nevada Street/Almond Avenue, Section 13 of Township 1 North Range 6 West, County of San Bernardino, California.
SB-04809	2006	W & S Consultants	Phase 1 Archaeological Survey of the Kaiser Redlands Mob Study Area, Redlands, San Bernardino County, California
SB-04811	2006	McKenna, Jeanette A.	Supplemental Research and Documentation of 1042 Pioneer Ave. and 1074 Pioneer Ave., Redlands, San Bernardino Co., California

Table 3-1
Previous Cultural Resource Studies in the Study Area

SCCIC Document #	Date	Author(s)	Title
SB-04831	2005	Brunzell, David and Curt Duke	Cultural Resource Assessment: Upper Santa Ana River Wash Land Management and Habitat Conservation Plan, San Bernardino County, California
SB-05164[a]	2005	White, Robert and Laura White	A Cultural Resources Assessment of a 17.86 Acre Parcel Located Northeast of the Intersection of Pioneer Avenue and Nevada Street, Near Redlands, San Bernardino County
SB-05165	2005	Tang, Bai, Michael Hogan, Mariam Dahdul, Casey Tibbet, Daniel Ballester, and Terri Jacqueman	Historical/Archaeological Resources Survey Report ABT-Haskell Project 2130 Nevada Street, near the City of Redlands, San Bernardino County, California
SB-05166	2006	Tang, Bai and Michael Hogan	Historical/Archaeological Resources Survey Report Redlands Commons Project Assessor's Parcel Nos. 0167-091-02, -04, -04, and -08 City of Redlands, San Bernardino County, California
SB-05167	2006	Hogan, Michael	Historical/Archaeological Resources Survey: Trojan Groves, Assessor's Parcel Nos. 0167-091-09 through -12, City of Redlands, San Bernardino County, California.
SB-05788	2006	Sanka, Jennifer M.	Phase I Cultural Resource Assessment and Paleontological Records Review, Redlands Commerce Center Project, Redlands, San Bernardino County, California.
SB-05856	2008	Sanka, Jennifer	Phase I Cultural Resources Assessment and Paleontological Records Review: Almond Plaza Project, Redlands, San Bernardino County, California.
SB-05857	2008	Sanka, Jennifer M.	Phase I Cultural Resource Assessment and Paleontological Records Review, Holy Name of Jesus Catholic Church Project, Redlands, San Bernardino County, California.
SB-07044	2004	Goodwin, Riordan and Judith Marvin	Cultural Resources Assessment: House Land Development Parcels APNs: 0292-055-01 and 0292-055-05 through -10, Vicinity of Redlands, San Bernardino County, California.
SB-07463	2009	Tang, Bai "Tom"	Cultural Resources Records Search, San Bernardino International Airport, City of San Bernardino, California
SB-07827	2014	McKenna, Jeanette A.	A Phase I Cultural Resources Investigation for the Crossings at Redlands Project Area, Approximately 10 Acres of Land in the Redlands Area of San Bernardino County, California.
SB-07955	2013	McLean, Roderic, Natalie Brodie, Jacqueline Hall, Shannon Carmack, Phil Fulton, Ingri Quon, Erin Martinelli, Richard Erickson, and Jay Michalsky	Cultural Resources Assessment and Class III Inventory Volume I. West of Devers Project, San Bernardino and Riverside Counties, California

Table 3-1
Previous Cultural Resource Studies in the Study Area

SCCIC Document #	Date	Author(s)	Title
SB-07959	1998	Hatheway, Roger G.	Determination of Eligibility for 50 Buildings in the City of San Bernardino
SB-07963	2015	DeCarlo, Matthew M. and Diane L. Winslow	Engineering Refinements Survey and Recommendations of Eligibility for Cultural Resources with Southern California Edison Company's West of Devers Upgrade Project, Riverside and San Bernardino Counties, California
SB-07964	2015	DeCarlo, Matthew M. and Diane L. Winslow	Cultural Resources Impact Assessment and Evaluation Status Report for Southern California Edison Company's West of Devers Upgrade Project, Riverside and San Bernardino Counties, California
SB-08038	2013	Brunzell, David	Cultural Resources Assessment Hillwood Commerce Center Project, City of Redlands, San Bernardino County, California
SB-08097	2014	Long, Shelly	Archaeological Survey Report State Route 210 Mixed Flow Lane Addition from Highland Avenue to San Bernardino Avenue, Cities of Highland, San Bernardino, Redlands and Portions of San Bernardino County, California

a- Studies that involved portions of the Project area

These studies resulted in the identification and documentation of 24 cultural resources within the Study Area: 16 historical archaeological sites (primarily farm and agricultural system remnants and a refuse scatter), 1 isolated artifact (historical curb fragments), and 7 built-environment resources (4 residences, 1 landscape, 1 road alignment [California Street], and the San Bernardino County Museum) (Table 3–2). The San Bernardino County Museum has been designated California Point of Historical Interest (No. 1). None of the 24 previously documented cultural resources are located within the current Project area.

Table 3-2
Cultural Resources in the Study Area

Primary	Trinomial	Age	Description
36-006095	CA-SBR-6095H	Historic period	Refuse Scatter
36-007139	CA-SBR-7139H	Historic period	Marigold Farms Dairy. Destroyed.
36-007765	CA-SBR-7765H	Historic period	Agricultural site
36-007766	CA-SBR-7766H	Historic period	Agricultural and residential site
36-007767	CA-SBR-7767H	Historic period	Agricultural and residential site
36-008135	CA-SBR-8135H	Historic period	Series of masonry irrigaiton flumes
36-008136	CA-SBR-8136H	Historic period	Early 20th-century farm complex
36-008137	CA-SBR-8137H	Historic period	Early 20th-century farm complex
36-009990	CA-SBR-9990H	Historic period	Structural pad and well head

Table 3-2
Cultural Resources in the Study Area

Primary	Trinomial	Age	Description
36-009991	CA-SBR-9991H	Built environment	Landscaping; Mexican Fan Palms lining various segment of streets
36-009992	CA-SBR-9992H	Historic period	Four large metal smudge oil tanks
36-012468	CA-SBR-12260H	Historic period	Concrete and stone irrigation system
36-012531	—	Built environment	Victorian/Craftsman-style residence built in 1915
36-012532	—	Built environment	Victorian/Craftsman-style residence built between 1905 and 1915
36-012852	CA-SBR-12386H	Historic period	Series of masonry irrigaiton flumes and stand-pipe irrigation system
36-013514	—	Built environment	Craftsman-style residence built in 1901
36-013622	—	Historic period	Isolated curb fragments
36-013775	CA-SBR-12663H	Historic period	Remnants of a stand-pipe water control system, including a concrete irrigation flume, standpipes, a well, and a sparse refuse scatter.
36-013776	—	Historic period	Concrete and brick weir box
36-013783	CA-SBR-12669H	Historic period	Remnants of a stand-pipe water control system, including a concrete irrigation flume, standpipes, a well, and a sparse refuse scatter.
36-015135	—	Built environment	San Bernardino County Museum; educational building
36-024295	—	Built environment	Craftsman-style farmhouse built in 1922. Destroyed.
36-024296	—	Historic period	Remnant of a linear gravity-flow concrete standpipe irrigation system, possibly part of a much larger system
36-027670	CA-SBR-17211H	Built environment	California Street alignment

Other sources consulted during the archaeological literature and records search include the *Office of Historic Preservation Archaeological Determinations of Eligibility (ADOE)* and the *Office of Historic Preservation Directory of Properties in the Historic Property Data File*. These sources identified one property (P-36-013514) within the Study Area that is listed on the *Office of Historic Preservation Directory of Properties in the Historic Property Data File*. The resource, a Craftsman-style residence built in 1901, was identified during a reconnaissance survey and was recommended ineligible for inclusion on the National Register of Historic Places.

Æ consulted a series of archival maps to assess historical land use and development in the Study Area. These USGS maps include the Redlands (1899, 1901, and 1954) 15' USGS Quadrangle maps and Redlands (1954, 1967, 1973, and 1975) 7.5' USGS Quadrangle maps. In addition, aerial photographs from 1930, 1938, 1959, 1966, and 1968 were examined for extant structures or features within the Project area that may be 45 years of age or older (UCSB 2018; Aerial NETR online 2018). No current extant structures or features appear within the Project area on any of the historical maps or photographs; however, historical aerial images show that the Project area contained an orchard and two residential properties between 1930 and 2009 (NETR online 2018; UCSB 2018).

4
NATIVE AMERICAN COMMUNICATION

Æ contacted the NAHC on June 14, 2017, for a review of the SLF, to determine if any known properties of importance to Native Americans (e.g., traditional use or gathering areas, places of religious or sacred activity) are present within or adjacent to the Project area. The NAHC responded on June 15, 2018, stating that the SLF search was completed with negative results. The NAHC requested that local Native American individuals and organizations be contacted to elicit information and/or concerns regarding cultural resource issues related to the proposed Project. A letter describing the Project and asking these individuals and organizations for their input was sent via United States Postal Service (USPS) and electronic mail on July 10, 2018. An example of the letter sent, the list of contacts, and responses received are included in Appendix A. A second attempt at correspondence was made on July 30, 2018.

Individuals/organizations contacted at the request of the NAHC include:

- Patricia Garcia-Plotkin, Director for the Agua Caliente Band of Cahuilla Indians (ACBCI) Tribal Historic Preservation Office
- Amanda Vance, Chairperson of the Augustine Band of Cahuilla Indians
- Judy Stapp, Director of Cultural Affairs for the Cabazon Band of Mission Indians
- Daniel Salgado, Chairperson of the Cahuilla Band of Indians
- John Perada, Environmental Director for the Los Coyotes Band of Mission Indians
- Denisa Torres, Cultural Resources Manager for the Morongo Band of Mission Indians
- Temet Aguilar, Chairperson of the Pauma Band of Luiseño Indians – Pauma & Yuima Reservation
- John Gomez, Environmental Coordinator for the Ramona Band of Cahuilla Mission Indians
- Jessica Mauck, Cultural Resources Analyst for the San Manuel Band of Mission Indians (SMBMI)
- Steven Estrada, Chairperson of the Santa Rosa Band of Mission Indians
- Goldie Walker, Chairperson of the Serrano Nation of Mission Indians
- Donna Yocum, Chairperson of the San Fernando Band of Mission Indians
- Joseph Ontiveros, Cultural Resource Department of the Soboba Band of Luiseño Indians
- Michael Mirelez, Cultural Resource Coordinator for the Torres-Martinez Desert Cahuilla Indians

As of July 30, 2018, five responses have been received. The San Manuel Band of Mission Indians noted that the Project is located in close proximity to the Santa Ana River, which is a Tribal Cultural Resource (TRC). SMBMI recommended Phase I presence/absence testing within the Project area, assuming there are in situ Holocene layers beneath the existing disturbance that resulted from agriculture. Additionally, SMBMI will request a copy of the completed cultural resource report from the County and provide Project recommendations directly to the County. The Cabazon Band of Mission Indians stated that the Project is located outside of the Tribe's current reservation boundaries. The Tribe has no specific archival information indicating that the Project may be a sacred/religious site or other site of Native American traditional cultural value.

The ACBCI noted that the Project area is within the Tribe's Traditional Use Area; however, the Tribe defers all further consultation efforts to the SMBMI. Cahuilla Band of Indians noted that the Project area is located within the Tribe's Traditional Use Area; therefore the Tribe requested to be notified of all updates and or changes with the Project moving forward. The Morongo Band of Mission Indians noted the Project area is located within the Tribe's Traditional Use Area and requested a thorough records search be conducted by contacting one of the CHRIS Archaeological Information Centers and a copy of the search results be provided to the tribe. Morongo also requested that a copy of the Phase I study be provided to the tribe as soon as it can be made available. A table of responses summarizing consultation with Native American groups and/or individuals is in Appendix A.

5
PHASE I CULTURAL RESOURCE SURVEY

5.1 SURVEY METHODS

Æ Staff Archaeologist Evan Mills performed an intensive pedestrian archaeological survey of the Project area on July 5 and 6, 2018. The area was inspected by walking a set of survey transects across the Project area spaced 10 to 15 meters (33–50 feet) apart.

The Project area is relatively level and covered in sparse vegetation (Figure 5-1). Sediments consist of a silty-sand alluvium with a low (10 percent) gravel content and few cobbles. The central western portion of the Project area is currently an active farm field and was not surveyed during the current effort (Figure 5-2).

Figure 5-1 Overview of the Project area, view to the southwest.

Figure 5-2 Cultural resources within the Project area

5.2 SURVEY RESULTS

The Project is within a former citrus grove that was cleared of trees around 2007. Soils within the Project area are completely disturbed from plowing associated with previous and current agricultural activity and operation of heavy equipment during tree removal. Other disturbances noted during the survey include scattered modern refuse and debris from homeless encampments present at the northern Project boundary. Vegetation consisted of seasonal grasses and eucalyptus trees. Ground surface visibility was generally excellent (90 percent). A few modern irrigation features are extant on the subject properties including PVC pipes, concrete standpipes, and a concrete pad with protruding steel pipe. These features were not documented as they were not over 50 years of age. Two cultural resources, both remnants of a historic-period water conveyance system, were identified during the survey. These two resources are depicted on Figure 5-2, summarized below, and discussed in detail in the site records included in Appendix B.

5.2.1 Irrigation flume (CA-SBR-32488H)

CA-SBR-32488H is an irrigation flume located between two parcels, Assessor's Parcel Numbers (APNs) 029204143 and 029204148, on a north south line, west of Alabama Street. The flume is approximately 2,106 feet long and is composed of split local cobbles set in concrete mortar. The flume is overgrown with natural grasses and has been inactive for a long period of time. Portions of the flume have been damaged in several locations but overall its alignment is intact (see Figure 5-2; Figure 5-3).

Figure 5-3 Overview of water flume (CA-SBR-32488H), view to the north.

5.2.2 Concrete Weir (CA-SBR-32489H)

CA-SBR-32489H is a weir located on APN 029204147 in the southwestern portion of the Project area near Palmetto Avenue. The weir is built of concrete and mortared concrete blocks and brick, and features a hand crank metal release gate (see Figure 5-2; Figure 5-4). Portions of the weir have been damaged, but overall it is intact. On the north end of the weir, portions of the cast-iron pipe feeding into the weir have been patched with rubber and steel clamps, revealing that a portion of the system may still be active.

Figure 5-4 Overview of weir (CA-SBR-32489H) view looking south.

6
SIGNIFICANCE EVALUATION

As part of this study, Æ evaluated the significance of sites CA-SBR-32488H and CA-SBR-32489H, both remnants of a historic-period water conveyance system, to determine its significance and eligibility for inclusion in the CRHR. The remaining features of the system consist of a local stone and concrete mortar flume (CA-SBR-32488H) and a concrete block, concrete, and brick weir with a hand crank metal release gate (CA-SBR-32489H). Æ conducted archival research on the associated parcels (APNs 029204143, 029204148, 029204147) and local irrigation systems to define ownership and development history and determine if the water conveyance system could be associated with a particular event, person of importance, or building style. The standpipes, PVC pipe fragments, and concrete pad with steel pipe within the Project area are from a more recent drip system introduced in the 1970s. These elements were not evaluated in this study because they are less than 50 years old.

The flume and weir are directly associated with the Redlands citrus industry. This site is similar to several other sites recorded nearby, as many irrigation flumes, standpipes, and weirs have been reported in the vicinity. These resources were components of a larger gravity-fed irrigation system for the citrus groves that were previously extant within the subject parcels and within the general vicinity.

Citrus production began in the Redlands area in the late nineteenth century and remained prominent until the late 1950s (City of Redlands 2018). While ownership of the subject property changed throughout the twentieth century, the land use did not change. This property was developed as an agricultural lot in the late 1880s as a part of Williams Tract No.1. In 1893, Frank Brown subdivided the Williams Tract No. 1, and these properties became Lots within Block 1 and 2 of the Brown Subdivision.

Frank Brown was the founder and head engineer of the Bear Valley Land and Water Company. He installed gravity-fed irrigation systems on his lots to service the growing citrus industry. The water for this system came from the Bear Valley Land and Water Company's new state of the art reservoir in Bear Valley, now known as Big Bear Lake. This sustainable water source brought growth and prosperity to the Redlands region, resulting in a prosperous citrus industry, and gravity-fed irrigation became the standard practice in southern California orchard production until the drip system was introduced in the 1970s (Gustafson 1980; Taylor 2006).

Several land tracts in the area were developed in the 1890s due to this sustainable water source. These land tracts, including the Williams Tract, became extensive citrus groves owned by local families and entrepreneurs. Historical aerial images confirmed that the Project area contained an orchard by 1930 (UCSB 2018). The 1954 edition of the USGS Redlands topographic quadrangle map shows a citrus grove on the property as well as on the surrounding properties. Thus, it appears this property was a citrus grove from the 1890s until circa 2007, when the trees were removed, explaining why the historic gravity-fed irrigation system is still extant on the property.

CA-SBR-32488H (flume) and CA-SBR-32489H (weir) were constructed circa 1893, within the Frank Brown subdivision of Williams Tract No. 1. These components of a gravity-fed irrigation

system have a direct association with irrigation practices in San Bernardino Valley and development of the citrus industry in Redlands, events that were important in local and regional history. The flume and weir are significant under CRHR Criterion 1, with the period of significance from 1893, when the Brown Subdivision was created, until 1950, the end of the citrus industry boom.

Ownership of the properties changed throughout the late nineteenth and twentieth centuries (see timeline in Section 2.4.5). Past owners include local families, entrepreneurs, and banks who wanted to make a profit in the lucrative citrus industry. The most historically significant property owner was Frank Brown; however, other historic resources in the region, including the old Bear Valley Dam, listed as a California Historical Landmark, better convey Brown's historical contribution to the region. With no direct association with any other important historical persons, the site is not considered significant under CRHR Criterion 2.

The flume and weir embody the distinctive design and construction characteristics of a gravity-fed irrigation flume and weir from the turn of the twentieth century, and are significant under CRHR Criterion 3.

This gravity-flow irrigation flume and weir does not appear to meet CRHR Criterion 4 individually for their potential to provide information important in history or prehistory. However, the larger Bear Valley Land and Water Company system, the Williams Tract irrigation system, and adjoining orchards, with which this flume is associated, could potentially be eligible under Criterion 4. The extent of these systems is not fully known and little documentation on the layout of the systems was found during current historic research. Therefore, further investigation and study of the remaining physical elements of these systems have the potential to yield new information about the systems and their contribution to the historic Redlands Citrus industry.

The flume and weir may be a contributing element of a larger historic citrus district in Redlands. Several gravity-fed irrigation systems, oil tanks, citrus packing houses, and electrical railways have been documented within a 1-mile radius of the Project (Appendix C). Additional research and studies are needed to investigate the extent, significance, and integrity of this potential historic district.

7
MANAGEMENT RECOMMENDATIONS

The cultural resource assessment identified two historical resources (CA-SBR-32488H and CA-SBR-32489H) within the Project area.

Geologic data indicate that the surface of the Project area has been stable for the last several thousand years and that any extant archaeological deposits post-dating the middle Holocene would likely be found near the modern ground surface. Late Holocene flood events, which have inundated much of the Redlands and San Bernardino areas (Springer 2007), may have deposited thin layers of mud across the Project area. However, these deposits have likely been altered by development of the citrus grove in the twentieth century. As such, any significant archaeological remains within the Project area dating to the latter half of the Holocene would likely be within the plow zone and would be observed during the Phase I survey.

The sensitivity for older archaeological deposits within deeper subsurface contexts is low. While the sediments underlying the Project area were deposited during the first half of the Holocene, they consist of stream deposits related to the Santa Ana River. These types of deposits are part of a high-energy system subject to intermittent periods of erosion and deposition. Archaeological remains in these settings, if present, are often entrained into the flow and reworked into secondary contexts. As such, the likelihood of finding intact buried resources within the Project area is very low.

In addition to the above buried site sensitivity analysis, the terrain throughout the entire Project area has been extensively disturbed by mechanical tree removal. It is unlikely that buried archaeological remains are present; therefore, no further archaeological management of the Project area is recommended.

It should be noted, however, that the San Manuel Band of Mission Indians recommended Phase I presence/absence testing within the Project area, assuming there are in situ Holocene layers beneath the existing disturbance that resulted from agriculture. The Cahuilla Band of Indians noted that the Project area is located within the Tribe's Traditional Use Area; therefore the Tribe requested to be notified of all updates and or changes with the Project moving forward.

An evaluation of the two historical resources suggests that they are eligible for listing on the CRHR under Criteria 1 and 3. These resources may also be a contributing element to a larger citrus historic district. Whenever feasible, avoidance of resources is preferred and recommended. It appears that CA-SBR-32489H (weir) can be avoided during Project construction and preserved in place. However, CA-SBR-32488H (flume) will be directly impacted by the proposed Project. Therefore, the following mitigation measures are recommended to reduce Project impacts to a less-than-significant level under CEQA.

- Historic American Buildings Survey (HABS)/Historic American Engineering Record (HAER)-like documentation of segment of the flume (CA-SBR-32488H) within the Project area.

- Additional research on the citrus industry and prepare documentation in the form of a district record to be filed at the SCCIC.

In the event potentially significant archaeological materials are encountered during construction, all work must be halted in the vicinity of the discovery until a qualified archaeologist can visit the site of discovery and assess the significance of the find. If significant archaeological remains are encountered, the impacts of the Project must be mitigated appropriately. Any such discoveries, and subsequent evaluation and treatment, should be documented in a cultural resource monitoring and treatment report, which should be submitted to the SCCIC for archival purposes. Additionally, Health and Safety Code Section 7050.5, CEQA Guidelines Section 15064.5(e), and Public Resources Code Section 5097.98 mandate the process to be followed in the unlikely event of an accidental discovery of human remains in a location other than a dedicated cemetery.

Finally, if the Project is expanded to include areas not covered by this survey or other recent cultural resource studies, additional cultural resource studies may be required.

8
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APPENDIX A

Native American Communication

LIST OF NATIVE AMERICAN CONTACTS AND RECORD OF RESPONSES

Name	Date & Time of Calls	Responses
Patricia Garcia-Plotkin Director Tribal Historic Preservation Office Agua Caliente Band of Cahuilla Indians	July 10, 2018 Letter dated July 10, 2018	Scoping letter sent via email. Received letter from Ms. Katie Croft, Cultural Resource Manager for the ACBCI. The Tribe noted that the Project area is within the Tribe's Traditional Use Area; however, the Tribe defers all further consultation efforts to the SMBMI.
Amanda Vance Chairperson Augustine Band of Cahuilla Indians	July 10, 2018 July 30, 2018	Scoping letter sent via email. E-mailed follow-up effort for correspondence. No response received.
Judy Stapp Director of Cultural Affairs Cabazon Band of Mission Indians	July 10, 2018 Letter dated July 10 , 2018	Scoping letter sent via email. Received e-mail response from Ms. Stapp. Ms. Stapp stated that the Project is located outside of the Tribe's Traditional Use area.
Daniel Salgado Chairperson Cahuilla Band of Indians	July 10, 2018 Letter dated July 17, 2018	Scoping letter sent via email. Received letter from Mr. Bobby Ray Esparaza, Cultural Coordinator for the Cahuilla Band of Indians. The Tribe noted that the Project area is within the Tribe's Traditional Use Area, therefore the tribe requested to be notified of all updates and or changes with the Project moving forward as they have interest in this project.
John Perada Environmental Director Los Coyotes Band of Mission Indians	July 10, 2018 July 30, 2018	Scoping letter sent via USPS. Follow-up call effort for correspondence. No response received.

Name	Date & Time of Calls	Responses
Denisa Torres Cultural Resource Manager Morongo Band of Mission Indians	July 10, 2018 Letter dated July 19 , 2018	Scoping letter sent via email. Received email response from the Tribal Historic Preservation Office. The Tribe noted that the proposed Project is located within Tribe's aboriginal territory or in an area considered to be a traditional use area or one in which the Tribe has cultural ties. In order to further evaluate the project for potential impacts to tribal cultural resources. The Tribe requested a thorough records search be conducted by contacting one of the California Historical Resources Information System (CHRIS) Archaeological Information Centers and a copy of the search results be provided to the tribe. The Tribe also requested that a Tribal monitor participation during the initial pedestrian field survey of the Phase I Study of the project and a copy of the results of that study. In the event the pedestrian survey has already been conducted, MBMI requests a copy of the Phase I study be provided to the tribe as soon as it can be made available.
Temet Aguilar Chairperson Pauma Band of Luiseño Indians – Pauma & Yuima Reservation	July 10, 2018 July 30, 2018	Scoping letter sent via e-mail E-mailed follow-up effort for correspondence. No response received.
John Gomez Environmental Coordinator Ramona Band of Cahuilla Indians	July 10, 2018 July 30, 2018	Scoping letter sent via email. E-mailed follow-up effort for correspondence. No response received.
Donna Yocum Chairperson San Fernando Band of Mission Indians	July 11, 2018 July 30, 2018	Scoping letter sent via email. E-mailed follow-up effort for correspondence. No response received.

Name	Date & Time of Calls	Responses
Jessica Mauck Cultural Resources Analyst San Manuel Band of Mission Indians (SMBMI)	July 10, 2018 E-mail dated July 30, 2018	Scoping letter sent via email. Received email response from Ms. Mauck. The Tribe noted that the proposed Project location is in proximity to the Santa Ana River, which is a TCR for SMBMI, and the potential for subsurface deposits. The recommendation from SMBMI for this project is the conduct Phase I presence/absence testing for this project area, assuming there are in situ Holocene layers beneath the existing disturbance that resulted from agriculture. SMBMI recommended reaching back out to the NAHC and clarifying whether or not, per their records, this project falls within an existing SLF for SMBMI, and simply making a note that Tribe may have concerns and will consult with the Lead Agency. After they review the cultural report, SMBMI will consult with the County regarding tribal recommendations.
Steven Estrada Chairperson Santa Rosa Band of Mission Indians	July 10, 2018 July 30, 2018	Scoping letter sent via email. E-mailed follow-up effort for correspondence. No response received.
Goldie Walker Chairperson Serrano Nation of Mission Indians	July 10, 2018 July 30, 2018	Scoping letter sent via USPS. Follow-up call effort for correspondence. The Phone number provided on NAHC list has been disconnected. Unable to leave a message.
Joseph Ontiveros Cultural Resource Department Soboba Band of Luiseño Indians	July 10, 2018 July 30, 2018	Scoping letter sent via email. E-mailed follow-up effort for correspondence. No response received.
Michael Mirelez Cultural Resource Coordinator Torres-Martinez Desert Cahuilla Indians	July 10, 2018 July 30, 2018	Scoping letter sent via email. E-mailed follow-up effort for correspondence. No response received.

Sacred Lands File & Native American Contacts List Request

Native American Heritage Commission
1550 Harbor Boulevard, Suite 100
West Sacramento, CA 95691
916-373-3710
916-657-5390 – Fax
nahc@nahc.ca.gov

Information Below is Required for a Sacred Lands File Search

Date: June 14, 2018

Project: Duke- Alabama Street and Palmetto Avenue Project AE# 3895

County: San Bernardino

USGS Quadrangle Name: Redlands

Township: 1S **Range:** 3W **Section(s):** 8

Company/Firm/Agency: Applied EarthWorks, Inc.

Contact Person: Kholood Abdo Hintzman

Street Address: 3550 East Florida Avenue, Suite H

City: Hemet **Zip:** 92544

Phone: (951) 766-2000

Fax: (951) 766-0020

Email: kahintzman@appliedearthworks.com

Project Description:

Phase I archaeological assessment of approximately 55 acres for proposed development on the northwest corner of Alabama Street and Palmetto Ave, San Bernardino County for California Environmental Quality Act compliance

NATIVE AMERICAN HERITAGE COMMISSION
Cultural and Environmental Department
1550 Harbor Blvd., Suite 100
West Sacramento, CA 95691
(916) 373-3710

June 15, 2018

Kholood Abdo Hintzman
Applied EarthWorks, Inc.

Sent by E-mail: kahintzman@appliedearthworks.com

RE: Proposed Duke- Alabama Street and Palmetto Avenue (AE# 3895) Project, near the City of Redlands; Redlands USGS Quadrangle, San Bernardino County, California

Dear Mr. Hintzman:

A record search of the Native American Heritage Commission (NAHC) *Sacred Lands File* was completed for the area of potential project effect (APE) referenced above with negative results however the area within the APE provided is sensitive for cultural resources. Please note that the absence of specific site information in the *Sacred Lands File* does not indicate the absence of Native American cultural resources in any APE.

Attached is a list of tribes culturally affiliated to the project area. I suggest you contact all of the listed Tribes. If they cannot supply information, they might recommend others with specific knowledge. The list should provide a starting place to locate areas of potential adverse impact within the APE. By contacting all those on the list, your organization will be better able to respond to claims of failure to consult. If a response has not been received within two weeks of notification, the NAHC requests that you follow-up with a telephone call to ensure that the project information has been received.

If you receive notification of change of addresses and phone numbers from any of these individuals or groups, please notify me. With your assistance we are able to assure that our lists contain current information. If you have any questions or need additional information, please contact via email: gayle.totton@nahc.ca.gov.

Sincerely,

Gayle Totton

Gayle Totton, M.A., PhD.
Associate Governmental Program Analyst
(916) 373-3714

CONFIDENTIALITY NOTICE: This communication with its contents may contain confidential and/or legally privileged information. It is solely for the use of the intended recipient(s). Unauthorized interception, review, use or disclosure is prohibited and may violate applicable laws including the Electronic Communications Privacy Act. If you are not the intended recipient, please contact the sender and destroy all copies of the communication.

Native American Heritage Commission
Native American Contact List
San Bernardino County
6/15/2018

Agua Caliente Band of Cahuilla Indians
Jeff Grubbe, Chairperson
5401 Dinah Shore Drive — Cahuilla
Palm Springs, CA, 92264 — Luiseno
Phone: (760) 699 - 6800
Fax: (760) 699-6919

Agua Caliente Band of Cahuilla Indians
Patricia Garcia-Plotkin, Director
5401 Dinah Shore Drive — Cahuilla
Palm Springs, CA, 92264 — Luiseno
Phone: (760) 699 - 6907
Fax: (760) 699-6924
ACBCI-THPO@aguacaliente.net

Augustine Band of Cahuilla Mission Indians
Amanda Vance, Chairperson
P.O. Box 846 — Cahuilla
Coachella, CA, 92236
Phone: (760) 398 - 4722
Fax: (760) 369-7161
hhaines@augustinetribe.com

Cabazon Band of Mission Indians
Doug Welmas, Chairperson
84-245 Indio Springs Parkway — Cahuilla
Indio, CA, 92203
Phone: (760) 342 - 2593
Fax: (760) 347-7880
jstapp@cabazonindians-nsn.gov

Cahuilla Band of Indians
Daniel Salgado, Chairperson
52701 U.S. Highway 371 — Cahuilla
Anza, CA, 92539
Phone: (951) 763 - 5549
Fax: (951) 763-2808
Chairman@cahuilla.net

Los Coyotes Band of Mission Indians
Shane Chapparosa, Chairperson
P.O. Box 189 — Cahuilla
Warner Springs, CA, 92086-0189
Phone: (760) 782 - 0711
Fax: (760) 782-0712
Chapparosa@msn.com

Los Coyotes Band of Mission Indians
John Perada, Environmental Director
P. O. Box 189 — Cahuilla
Warner Springs, CA, 92086
Phone: (760) 782 - 0712
Fax: (760) 782-2730

Morongo Band of Mission Indians
Robert Martin, Chairperson
12700 Pumarra Rroad — Cahuilla
Banning, CA, 92220 — Serrano
Phone: (951) 849 - 8807
Fax: (951) 922-8146
dtorres@morongo-nsn.gov

Morongo Band of Mission Indians
Denisa Torres, Cultural Resources Manager
12700 Pumarra Rroad — Cahuilla
Banning, CA, 92220 — Serrano
Phone: (951) 849 - 8807
Fax: (951) 922-8146
dtorres@morongo-nsn.gov

Pauma Band of Luiseno Indians - Pauma & Yuima Reservation
Temet Aguilar, Chairperson
P.O. Box 369 — Luiseno
Pauma Valley, CA, 92061
Phone: (760) 742 - 1289
Fax: (760) 742-3422
bennaecalac@aol.com

This list is current only as of the date of this document. Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resource Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources assessment for the proposed Duke- Alabama Street and Palmetto Avenue Project, San Bernardino County.

Native American Heritage Commission
Native American Contact List
San Bernardino County
6/15/2018

Ramona Band of Cahuilla Mission Indians
John Gomez, Environmental Coordinator
P. O. Box 391670 — Cahuilla
Anza, CA, 92539
Phone: (951) 763 - 4105
Fax: (951) 763-4325
jgomez@ramonatribe.com

Ramona Band of Cahuilla Mission Indians
Joseph Hamilton, Chairperson
P.O. Box 391670 — Cahuilla
Anza, CA, 92539
Phone: (951) 763 - 4105
Fax: (951) 763-4325
admin@ramonatribe.com

San Fernando Band of Mission Indians
Donna Yocum, Chairperson
P.O. Box 221838 — Kitanemuk
Newhall, CA, 91322 — Serrano
Phone: (503) 539 - 0933 — Tataviam
Fax: (503) 574-3308
ddyocum@comcast.net

San Manuel Band of Mission Indians
Lee Clauss, Director of Cultural Resources
26569 Community Center Drive — Serrano
Highland, CA, 92346
Phone: (909) 864 - 8933
Fax: (909) 864-3370
lclauss@sanmanuel-nsn.gov

Santa Rosa Band of Mission Indians
Steven Estrada, Chairperson
P.O. Box 391820 — Cahuilla
Anza, CA, 92539
Phone: (951) 659 - 2700
Fax: (951) 659-2228
mflaxbeard@santarosacahuilla-nsn.gov

Serrano Nation of Mission Indians
Goldie Walker, Chairperson
P.O. Box 343 — Serrano
Patton, CA, 92369
Phone: (909) 528 - 9027

Soboba Band of Luiseno Indians
Joseph Ontiveros, Cultural Resource Department
P.O. BOX 487 — Cahuilla
San Jacinto, CA, 92581 — Luiseno
Phone: (951) 663 - 5279
Fax: (951) 654-4198
jontiveros@soboba-nsn.gov

Soboba Band of Luiseno Indians
Scott Cozart, Chairperson
P. O. Box 487 — Cahuilla
San Jacinto, CA, 92583 — Luiseno
Phone: (951) 654 - 2765
Fax: (951) 654-4198
jontiveros@soboba-nsn.gov

Torres-Martinez Desert Cahuilla Indians
Michael Mirelez, Cultural Resource Coordinator
P.O. Box 1160 — Cahuilla
Thermal, CA, 92274
Phone: (760) 399 - 0022
Fax: (760) 397-8146
mmirelez@tmdci.org

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Applied EARTHWORKS Inc.

3550 E. Florida Ave., Suite H
Hemet, CA 92544-4937
O: (951) 766-2000 | F: (951) 766-0020

July 10, 2018

Temet Aguilar
Chairperson
Pauma Band of Luiseno Indians - Pauma & Yuima Reservation
P.O. Box 369
Pauma Valley, CA 92061

Re: Phase I Cultural Resource Assessment for the Alabama Street and Palmetto Avenue Project near the City of Redlands, San Bernardino County, California.

Dear Mr. Aguilar:

Applied EarthWorks, Inc. (Æ) is conducting a cultural resource study for the Alabama Street and Palmetto Avenue Project (Project). The Project proposes the future development of approximately 55 acres on the northwest corner of Alabama Street and Palmetto Avenue, near the City of Redlands, San Bernardino County, California. As indicated on the attached map, the Project is located on the Redlands, CA 7.5' USGS map within the San Bernardino Landgrant, Township 1 South, Range 3 West, San Bernardino Baseline and Meridian (S.B.B.M.).

The archaeological literature and records search conducted at the South Central Coastal Information Center housed at California State University, Fullerton, indicates that 43 cultural resources studies have been conducted within a one-mile radius of the Project area. Five of these studies involved a portion of the Project area. Twenty-four cultural resource sites have been recorded within a one-mile radius of the Project area. None of these resources are located within the Project area.

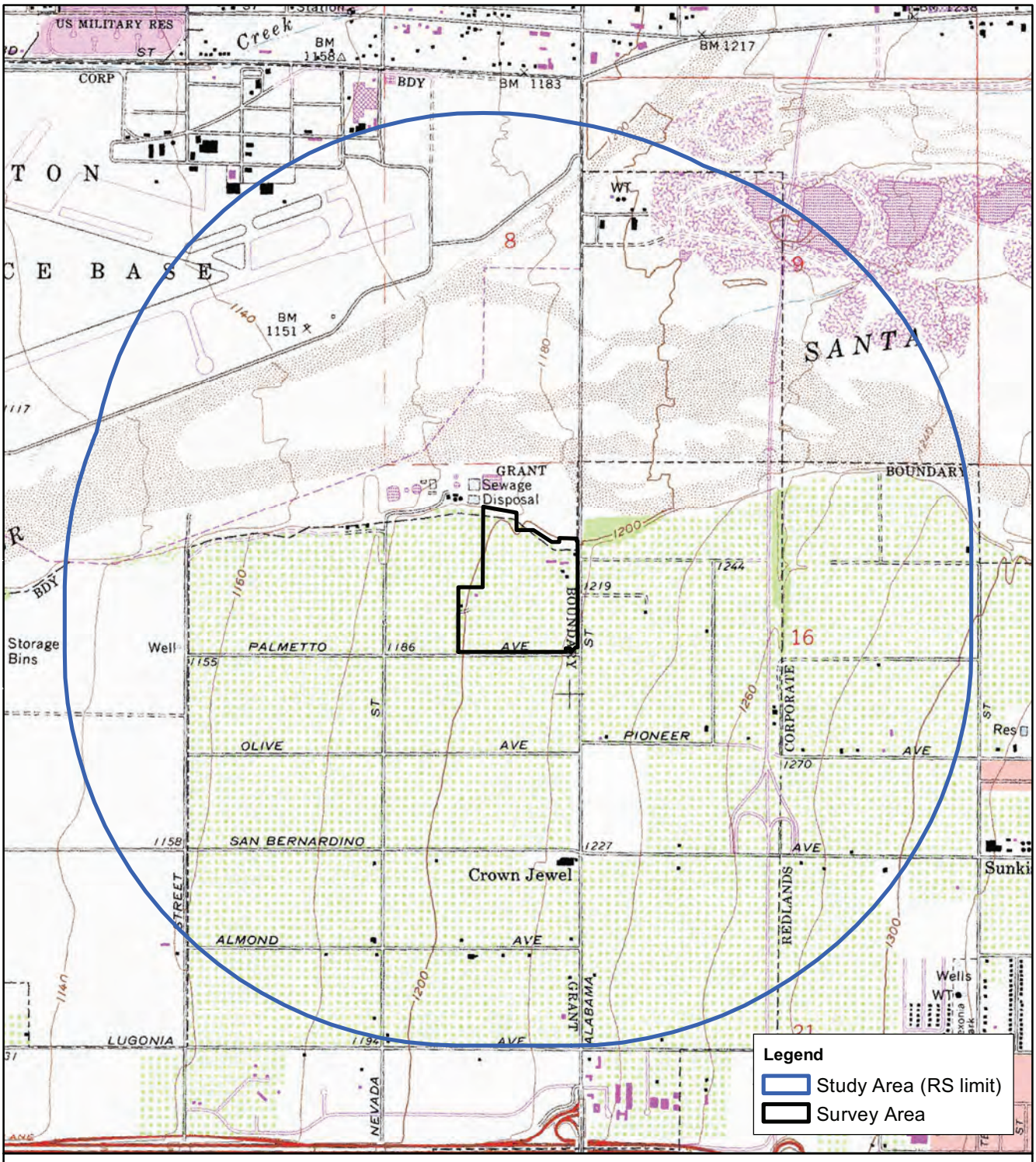
Æ was contracted to perform an archaeological survey of the Project area. The survey was completed on July 5 and July 6, 2018 and transects spacing ranged from 10 to 15 meters. Agricultural features within the Project area were documented during the survey. No prehistoric archaeological sites or isolated finds were identified during the survey.

As part of the cultural resource assessment of the Project area, Æ requested a search of the *Sacred Lands File* by the Native American Heritage Commission (NAHC) on June 14, 2018. The NAHC responded on June 15, 2018 noting that the *Sacred Lands File* search was completed with negative results. Should your records show that cultural properties exist within or near the Project area shown on the enclosed map, or if you have any concerns regarding Native American issues related to the overall Project, please contact me at (951) 766-2000 or via letter expressing your concerns. You may also e-mail me at kahintzman@appliedearthworks.com. If I do not hear from you within in the next two weeks, I will contact you with a follow-up phone call or email.

Please be aware that your comments and concerns are very important to us, as well as to the successful completion of this Project. I look forward to hearing from you in the near future. Thank you, in advance, for taking the time to review this request.

Respectfully yours,

Kholood Abdo Hintzman
Associate Archaeologist
Applied EarthWorks, Inc.



Records Search location map for the *Webb-Duke-Alabama Street and Palmetto Avenue Project-AE 3895*.

Applied EARTHWORKS Inc.

3550 E. Florida Ave., Suite H
Hemet, CA 92544-4937
O: (951) 766-2000 | F: (951) 766-0020

July 10, 2018

Patricia Garcia-Plotkin
Director/Tribal Historic Preservation Officer
Agua Caliente Band of Cahuilla Indians
5401 Dinah Shore Drive
Palm Springs, CA 92264

Re: Phase I Cultural Resource Assessment for the Alabama Street and Palmetto Avenue Project near the City of Redlands, San Bernardino County, California.

Dear Ms. Garcia-Plotkin:

Applied EarthWorks, Inc. (Æ) is conducting a cultural resource study for the Alabama Street and Palmetto Avenue Project (Project). The Project proposes the future development of approximately 55 acres on the northwest corner of Alabama Street and Palmetto Avenue, near the City of Redlands, San Bernardino County, California. As indicated on the attached map, the Project is located on the Redlands, CA 7.5' USGS map within the San Bernardino Landgrant, Township 1 South, Range 3 West, San Bernardino Baseline and Meridian (S.B.B.M.).

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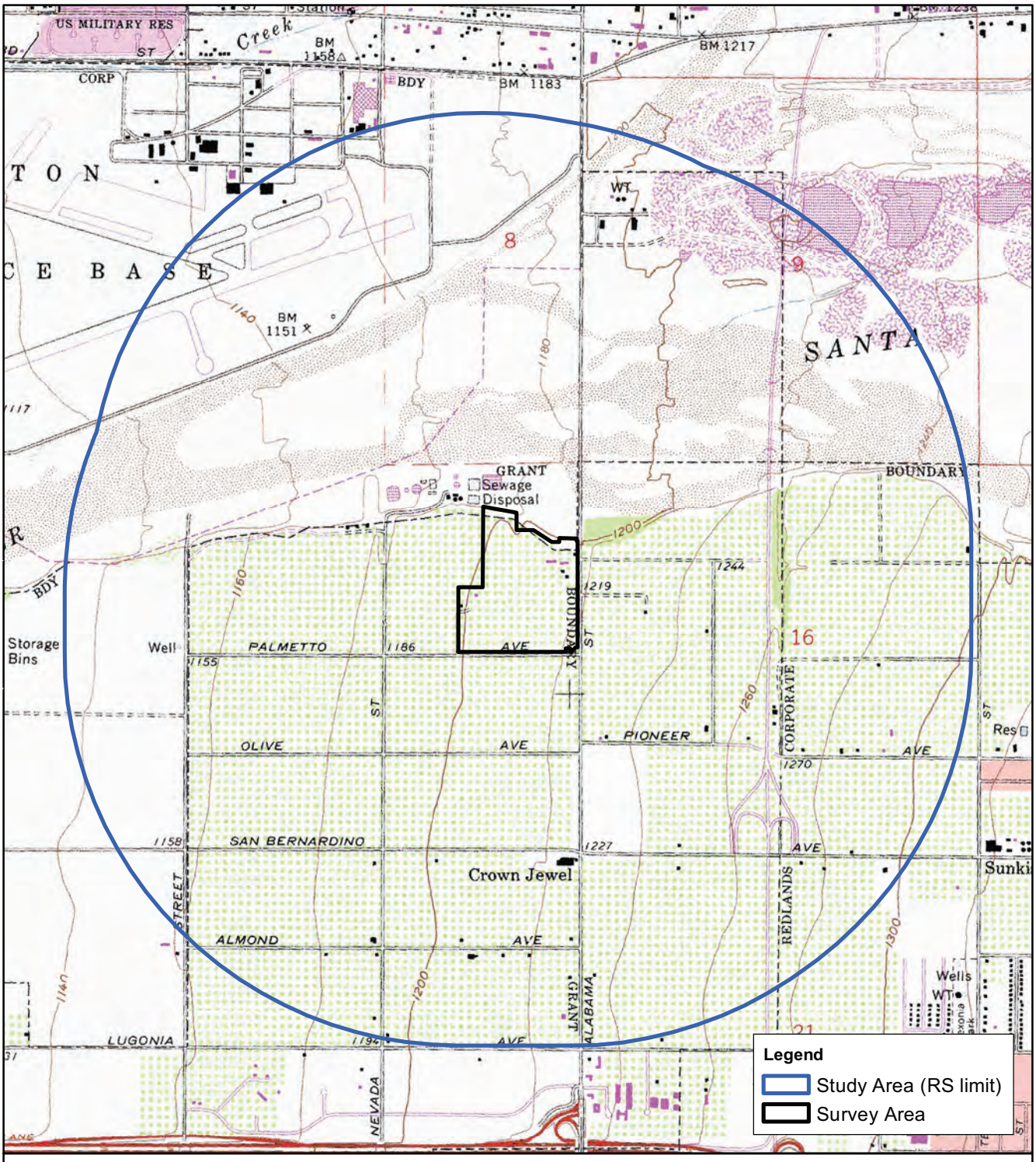

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O: (951) 766-2000 | F: (951) 766-0020

July 10, 2018

John Gomez
Environmental Coordinator
Ramona Band of Mission Indians
P. O. Box 391670
Anza, CA, 92539

Re: Phase I Cultural Resource Assessment for the Alabama Street and Palmetto Avenue Project near the City of Redlands, San Bernardino County, California.

Dear Mr. Gomez:

Applied EarthWorks, Inc. (Æ) is conducting a cultural resource study for the Alabama Street and Palmetto Avenue Project (Project). The Project proposes the future development of approximately 55 acres on the northwest corner of Alabama Street and Palmetto Avenue, near the City of Redlands, San Bernardino County, California. As indicated on the attached map, the Project is located on the Redlands, CA 7.5' USGS map within the San Bernardino Landgrant, Township 1 South, Range 3 West, San Bernardino Baseline and Meridian (S.B.B.M.).

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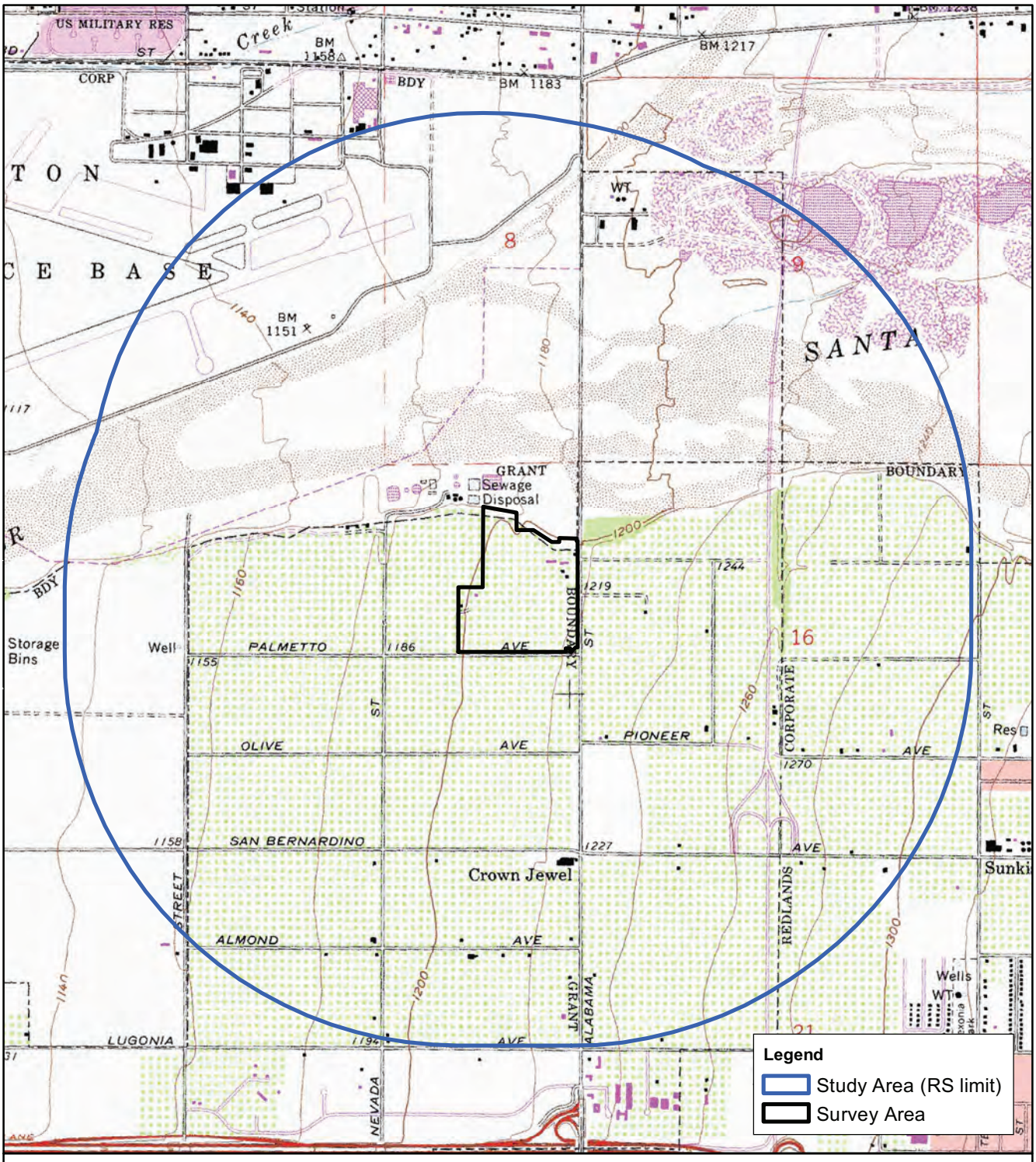

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Applied EARTHWORKS Inc.

3550 E. Florida Ave., Suite H
Hemet, CA 92544-4937
O: (951) 766-2000 | F: (951) 766-0020

July 10, 2018

Steven Estrada
Chairman
Santa Rosa Band of Cahuilla Indians
P. O. Box 391820
Anza, CA 92539

Re: Phase I Cultural Resource Assessment for the Alabama Street and Palmetto Avenue Project near the City of Redlands, San Bernardino County, California.

Dear Mr. Estrada:

Applied EarthWorks, Inc. (Æ) is conducting a cultural resource study for the Alabama Street and Palmetto Avenue Project (Project). The Project proposes the future development of approximately 55 acres on the northwest corner of Alabama Street and Palmetto Avenue, near the City of Redlands, San Bernardino County, California. As indicated on the attached map, the Project is located on the Redlands, CA 7.5' USGS map within the San Bernardino Landgrant, Township 1 South, Range 3 West, San Bernardino Baseline and Meridian (S.B.B.M.).

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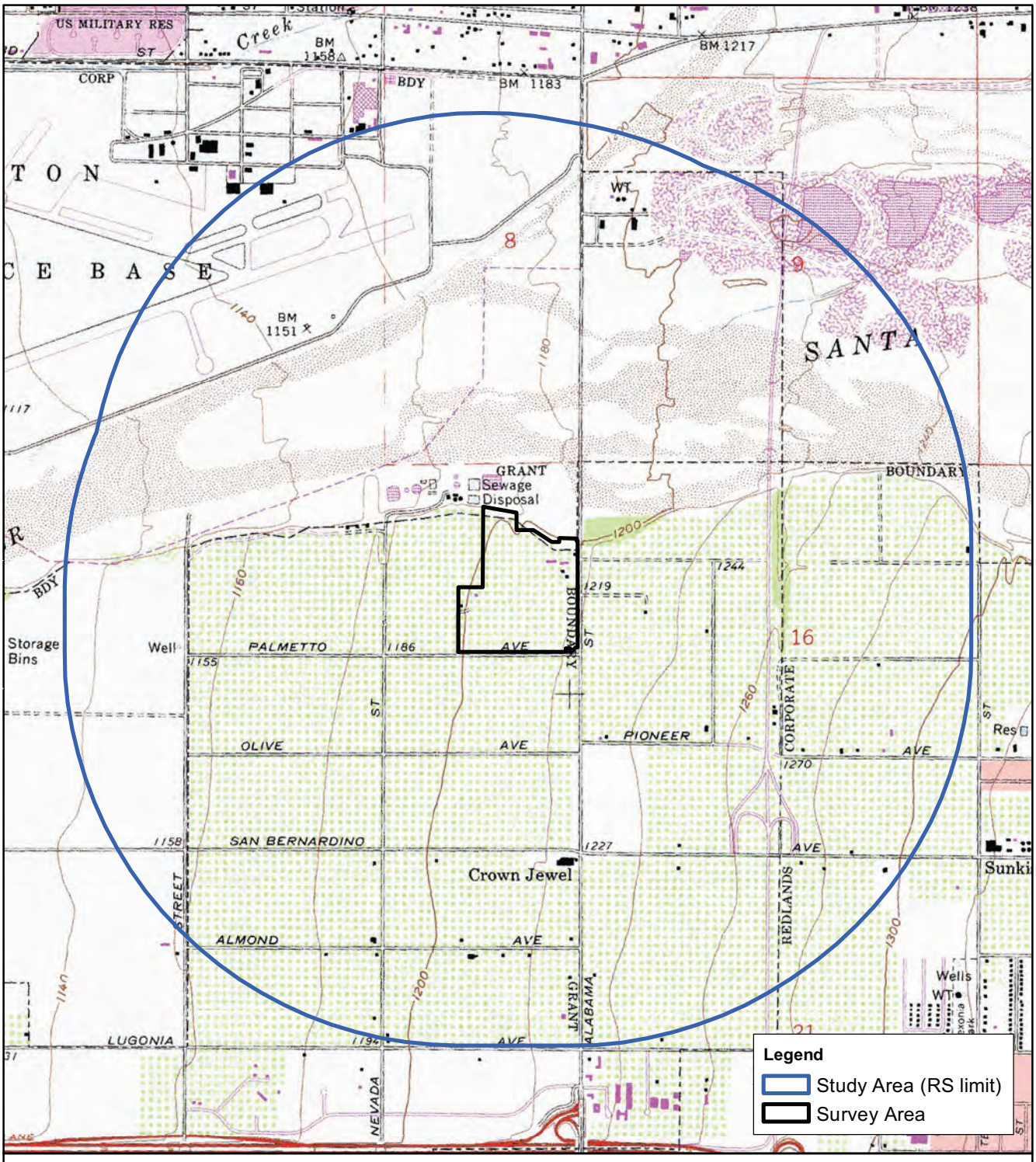
Applied EarthWorks, Inc.



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Applied EARTHWORKS Inc.

3550 E. Florida Ave., Suite H
Hemet, CA 92544-4937
O: (951) 766-2000 | F: (951) 766-0020

July 10, 2018

Jessica Mauck
Cultural Resources Analyst
San Manuel Band of Mission Indians
26569 Community Center Drive
Highland, CA 92346

Re: Phase I Cultural Resource Assessment for the Alabama Street and Palmetto Avenue Project near the City of Redlands, San Bernardino County, California.

Dear Ms. Mauck:

Applied EarthWorks, Inc. (Æ) is conducting a cultural resource study for the Alabama Street and Palmetto Avenue Project (Project). The Project proposes the future development of approximately 55 acres on the northwest corner of Alabama Street and Palmetto Avenue, near the City of Redlands, San Bernardino County, California. As indicated on the attached map, the Project is located on the Redlands, CA 7.5' USGS map within the San Bernardino Landgrant, Township 1 South, Range 3 West, San Bernardino Baseline and Meridian (S.B.B.M.).

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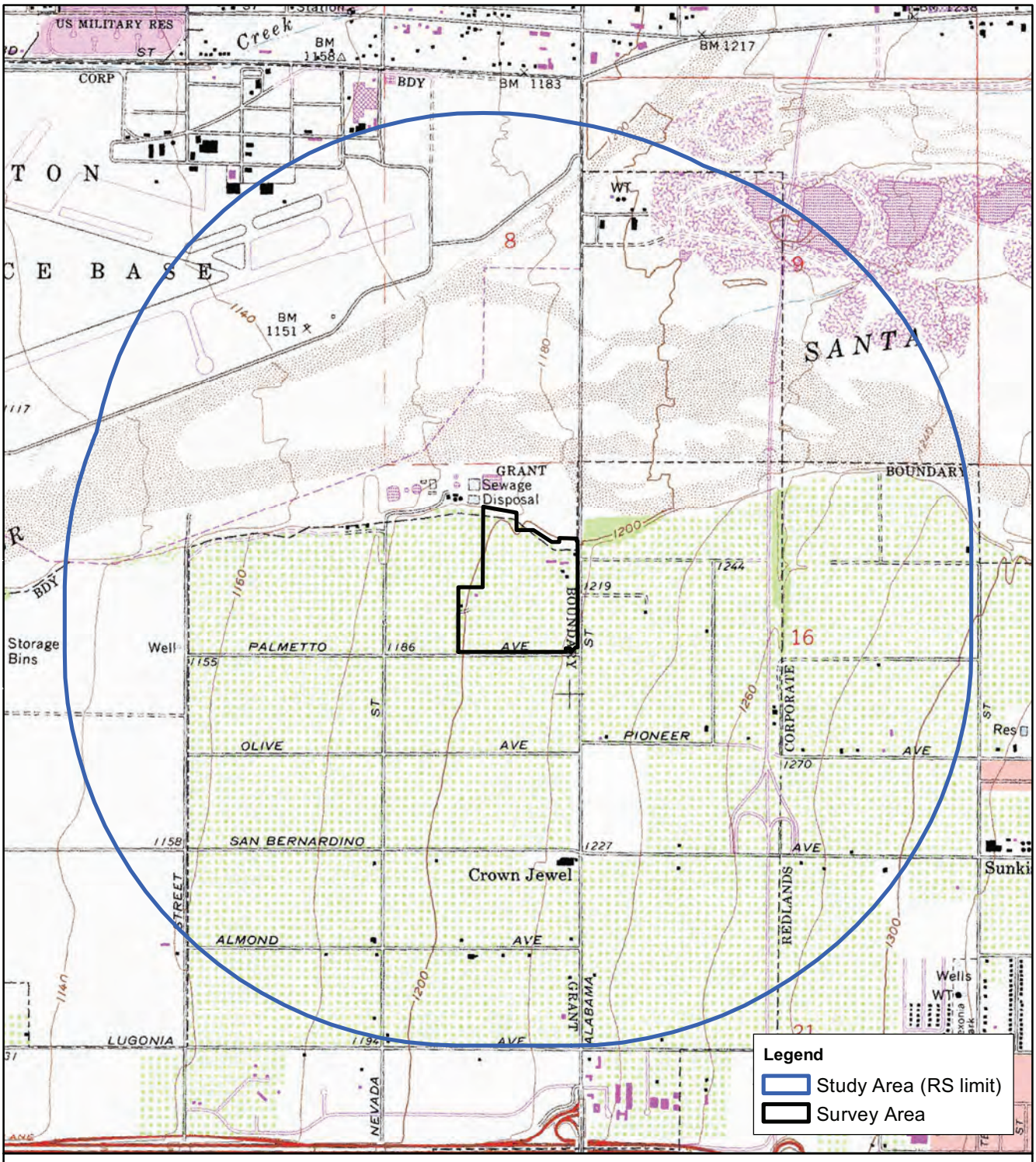
Kholood Abdo Hintzman
Associate Archaeologist
Applied EarthWorks, Inc.



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Applied EARTHWORKS Inc.

3550 E. Florida Ave., Suite H
Hemet, CA 92544-4937
O: (951) 766-2000 | F: (951) 766-0020

July 10, 2018

Michael Mirelez
Cultural Resource Coordinator
Torres-Martinez Desert Cahuilla Indians
P. O. Box 1160
Thermal, CA 92274

Re: Phase I Cultural Resource Assessment for the Alabama Street and Palmetto Avenue Project near the City of Redlands, San Bernardino County, California.

Dear Mr. Mirelez:

Applied EarthWorks, Inc. (Æ) is conducting a cultural resource study for the Alabama Street and Palmetto Avenue Project (Project). The Project proposes the future development of approximately 55 acres on the northwest corner of Alabama Street and Palmetto Avenue, near the City of Redlands, San Bernardino County, California. As indicated on the attached map, the Project is located on the Redlands, CA 7.5' USGS map within the San Bernardino Landgrant, Township 1 South, Range 3 West, San Bernardino Baseline and Meridian (S.B.B.M.).

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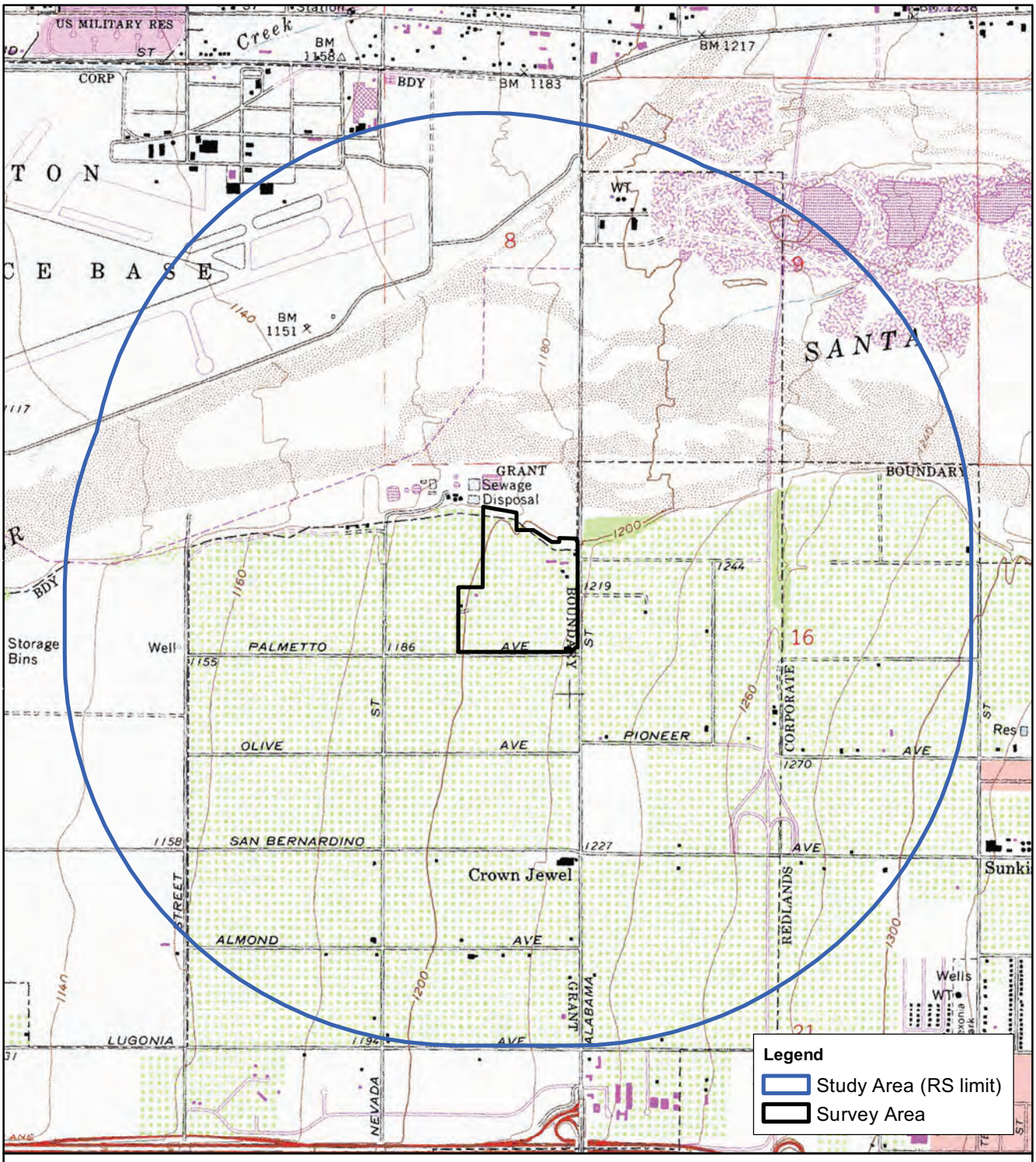
Please be aware that your comments and concerns are very important to us, as well as to the successful completion of this Project. I look forward to hearing from you in the near future. Thank you, in advance, for taking the time to review this request.

Respectfully yours,

Kholood Abdo Hintzman
Associate Archaeologist
Applied EarthWorks, Inc.



Records Search location map for the *Webb-Duke-Alabama Street and Palmetto Avenue Project-AE 3895*.

Applied EARTHWORKS Inc.

3550 E. Florida Ave., Suite H
Hemet, CA 92544-4937
O: (951) 766-2000 | F: (951) 766-0020

July 10, 2018

Joseph Ontiveros
Cultural Resource Department
Soboba Band of Luiseño Indians
P.O. Box 487
San Jacinto, CA 92581

Re: Phase I Cultural Resource Assessment for the Alabama Street and Palmetto Avenue Project near the City of Redlands, San Bernardino County, California.

Dear Mr. Ontiveros:

Applied EarthWorks, Inc. (Æ) is conducting a cultural resource study for the Alabama Street and Palmetto Avenue Project (Project). The Project proposes the future development of approximately 55 acres on the northwest corner of Alabama Street and Palmetto Avenue, near the City of Redlands, San Bernardino County, California. As indicated on the attached map, the Project is located on the Redlands, CA 7.5' USGS map within the San Bernardino Landgrant, Township 1 South, Range 3 West, San Bernardino Baseline and Meridian (S.B.B.M.).

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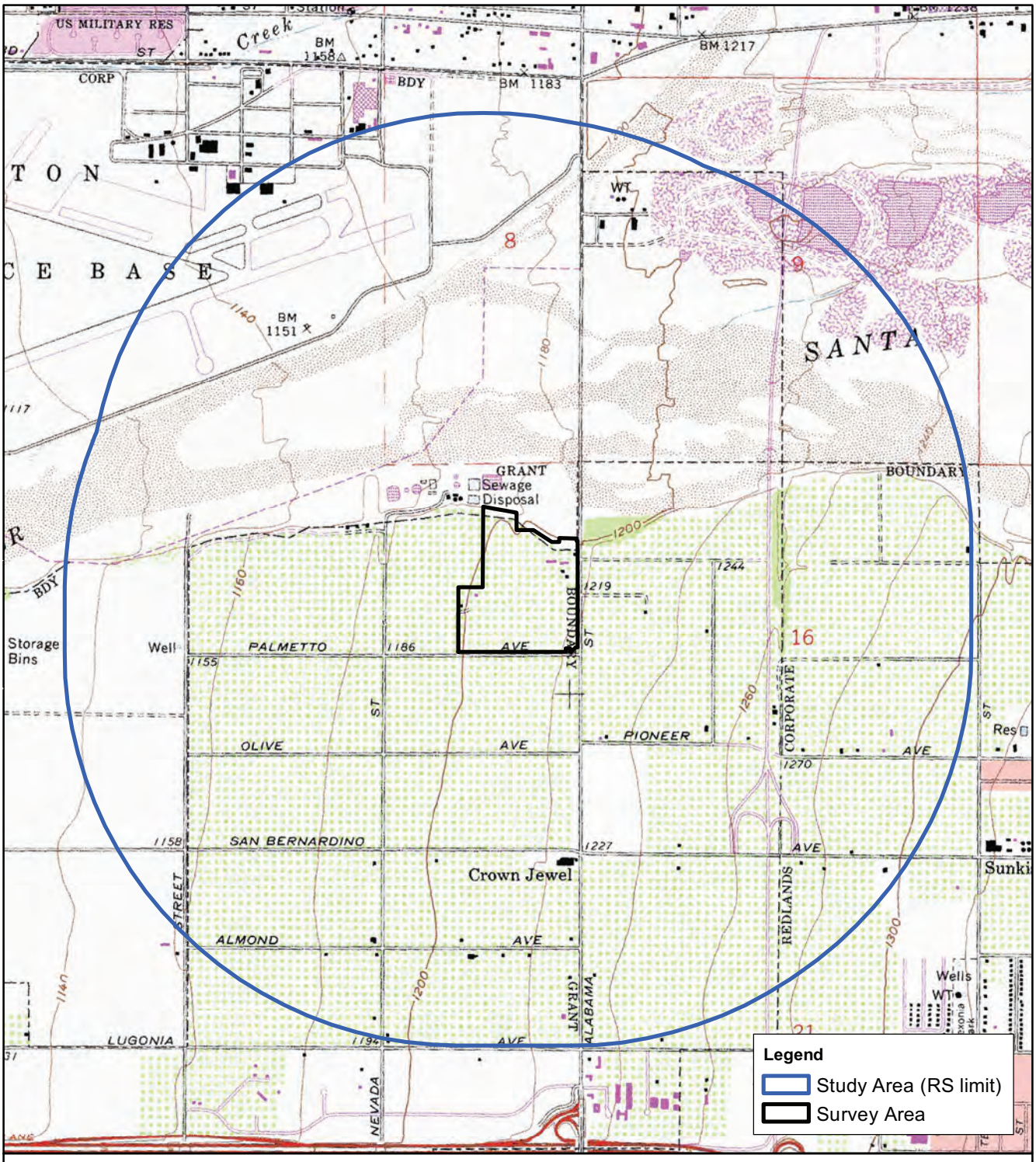

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O: (951) 766-2000 | F: (951) 766-0020

July 10, 2018

John Perada
Environmental Director
Los Coyotes Band of Mission Indians
P.O. Box 189
Warner Springs, CA, 92086

Re: Phase I Cultural Resource Assessment for the Alabama Street and Palmetto Avenue Project near the City of Redlands, San Bernardino County, California.

Dear Mr. Perada:

Applied EarthWorks, Inc. (Æ) is conducting a cultural resource study for the Alabama Street and Palmetto Avenue Project (Project). The Project proposes the future development of approximately 55 acres on the northwest corner of Alabama Street and Palmetto Avenue, near the City of Redlands, San Bernardino County, California. As indicated on the attached map, the Project is located on the Redlands, CA 7.5' USGS map within the San Bernardino Landgrant, Township 1 South, Range 3 West, San Bernardino Baseline and Meridian (S.B.B.M.).

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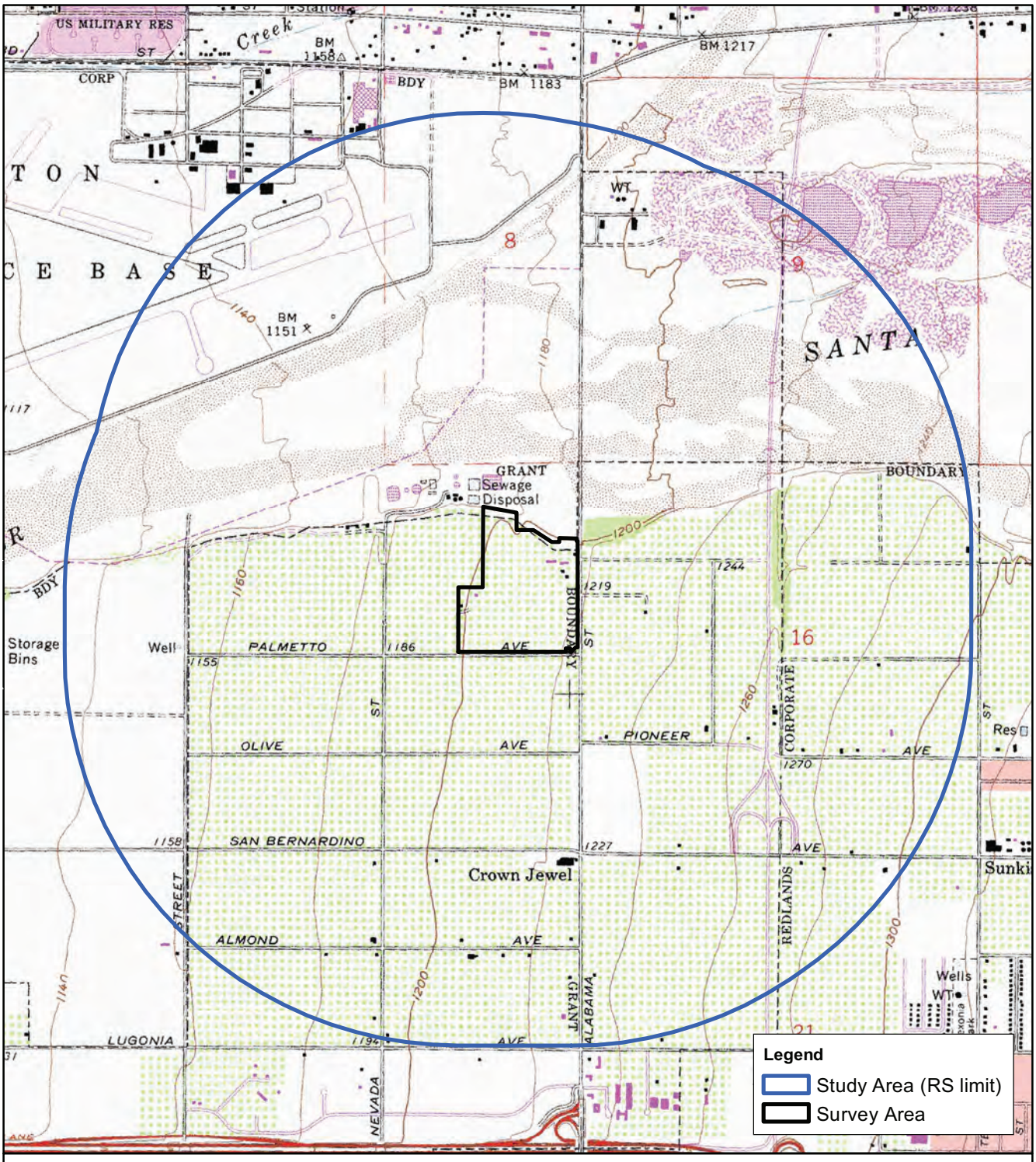

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3550 E. Florida Ave., Suite H
Hemet, CA 92544-4937
O: (951) 766-2000 | F: (951) 766-0020

July 10, 2018

Daniel Salgado
Chairperson
Cahuilla Band of Indians
52701 U.S. Highway 371
Anza, CA 92539

Re: Phase I Cultural Resource Assessment for the Alabama Street and Palmetto Avenue Project near the City of Redlands, San Bernardino County, California.

Dear Mr. Salgado:

Applied EarthWorks, Inc. (Æ) is conducting a cultural resource study for the Alabama Street and Palmetto Avenue Project (Project). The Project proposes the future development of approximately 55 acres on the northwest corner of Alabama Street and Palmetto Avenue, near the City of Redlands, San Bernardino County, California. As indicated on the attached map, the Project is located on the Redlands, CA 7.5' USGS map within the San Bernardino Landgrant, Township 1 South, Range 3 West, San Bernardino Baseline and Meridian (S.B.B.M.).

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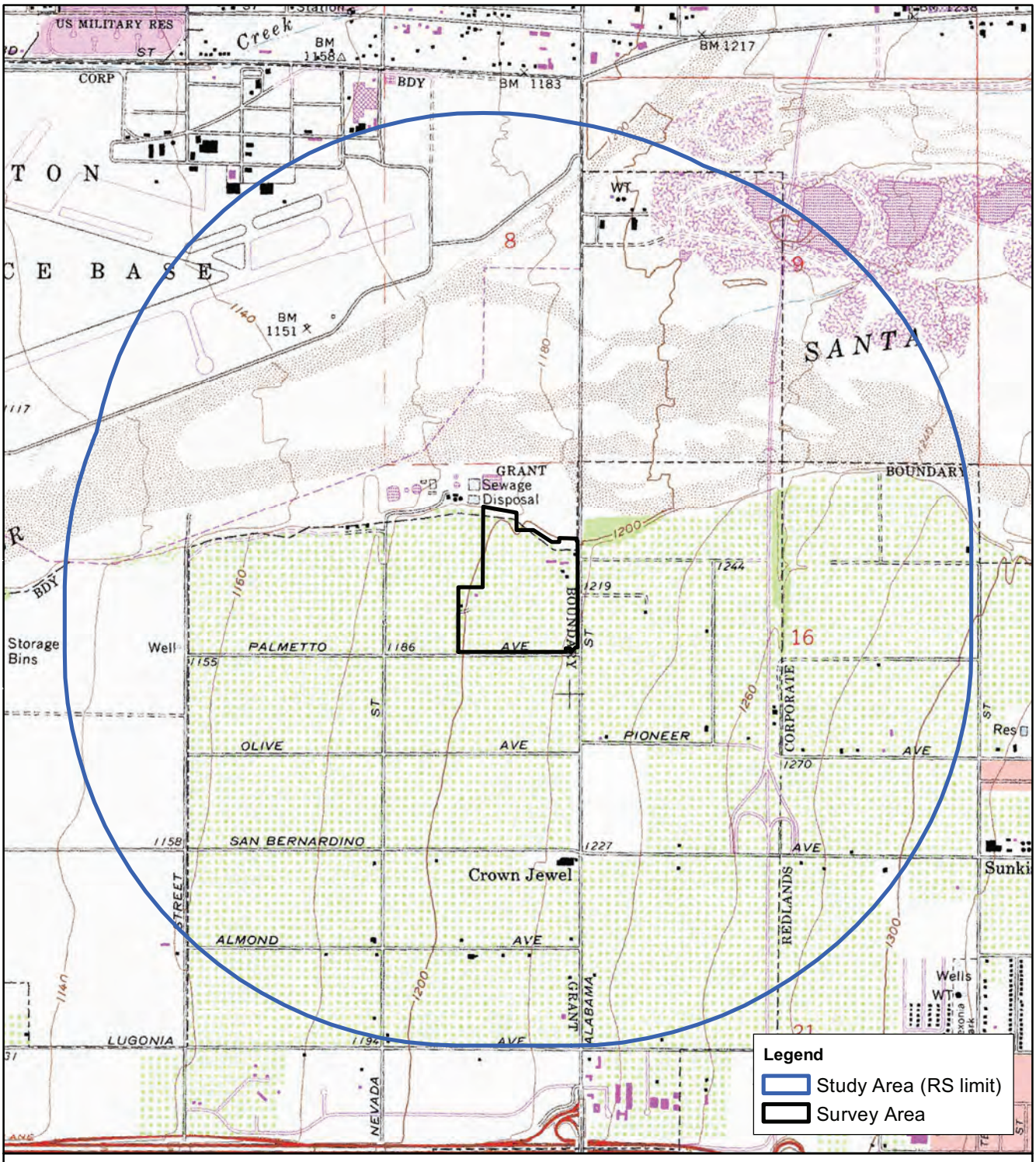

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3550 E. Florida Ave., Suite H
Hemet, CA 92544-4937
O: (951) 766-2000 | F: (951) 766-0020

July 10, 2018

Judy Stapp
Director of Cultural Affairs
Cabazon Band of Mission Indians
84-245 Indio Springs
Indio, CA 92203

Re: Phase I Cultural Resource Assessment for the Alabama Street and Palmetto Avenue Project near the City of Redlands, San Bernardino County, California.

Dear Ms. Stapp:

Applied EarthWorks, Inc. (Æ) is conducting a cultural resource study for the Alabama Street and Palmetto Avenue Project (Project). The Project proposes the future development of approximately 55 acres on the northwest corner of Alabama Street and Palmetto Avenue, near the City of Redlands, San Bernardino County, California. As indicated on the attached map, the Project is located on the Redlands, CA 7.5' USGS map within the San Bernardino Landgrant, Township 1 South, Range 3 West, San Bernardino Baseline and Meridian (S.B.B.M.).

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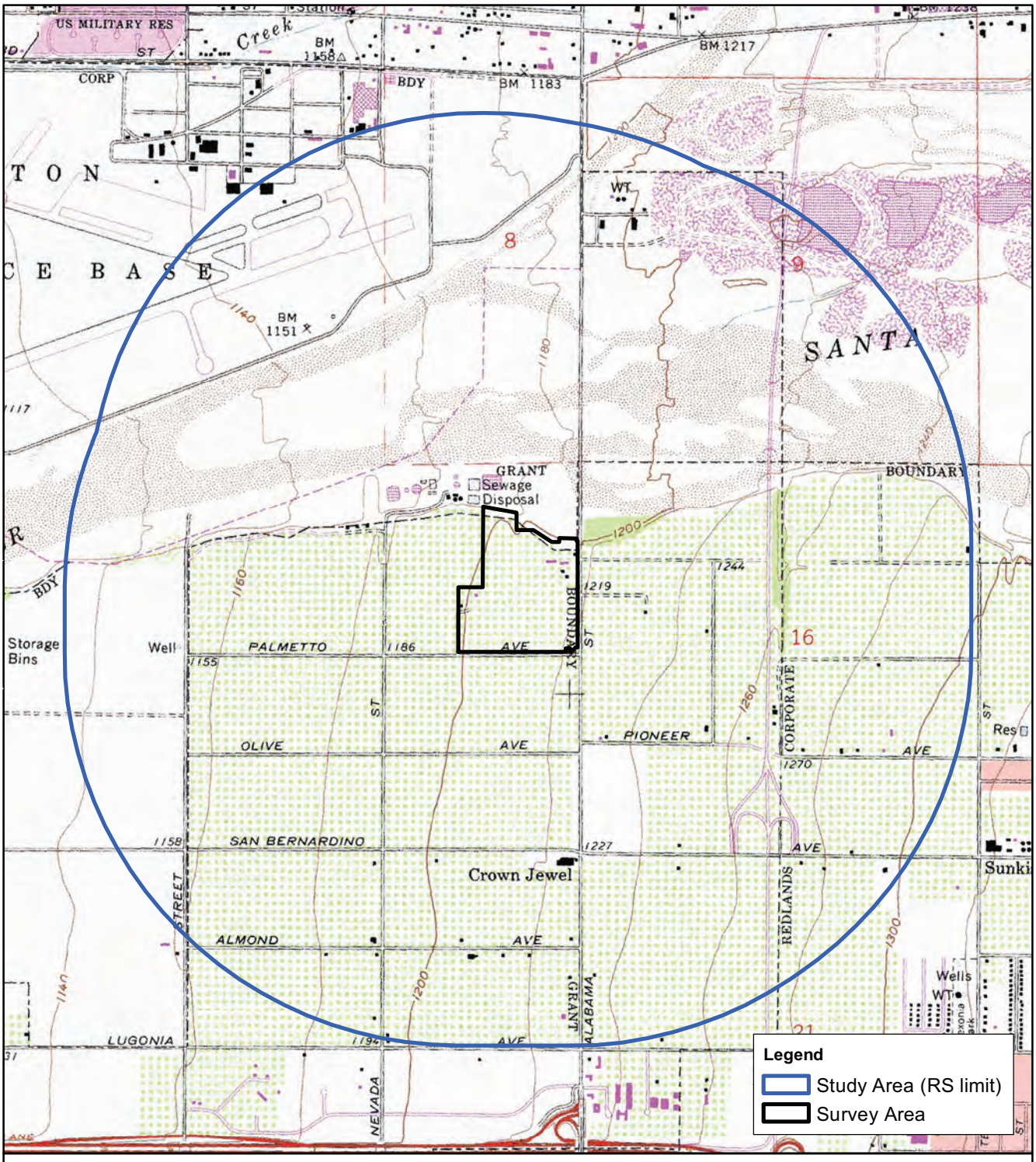

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Applied EARTHWORKS Inc.

3550 E. Florida Ave., Suite H
Hemet, CA 92544-4937
O: (951) 766-2000 | F: (951) 766-0020

July 10, 2018

Denisa Torres
Cultural Resources Manager
Morongo Band of Mission Indians
12700 Pumarra Road
Banning, CA 92220

Re: Phase I Cultural Resource Assessment for the Alabama Street and Palmetto Avenue Project near the City of Redlands, San Bernardino County, California.

Dear Ms. Torres:

Applied EarthWorks, Inc. (Æ) is conducting a cultural resource study for the Alabama Street and Palmetto Avenue Project (Project). The Project proposes the future development of approximately 55 acres on the northwest corner of Alabama Street and Palmetto Avenue, near the City of Redlands, San Bernardino County, California. As indicated on the attached map, the Project is located on the Redlands, CA 7.5' USGS map within the San Bernardino Landgrant, Township 1 South, Range 3 West, San Bernardino Baseline and Meridian (S.B.B.M.).

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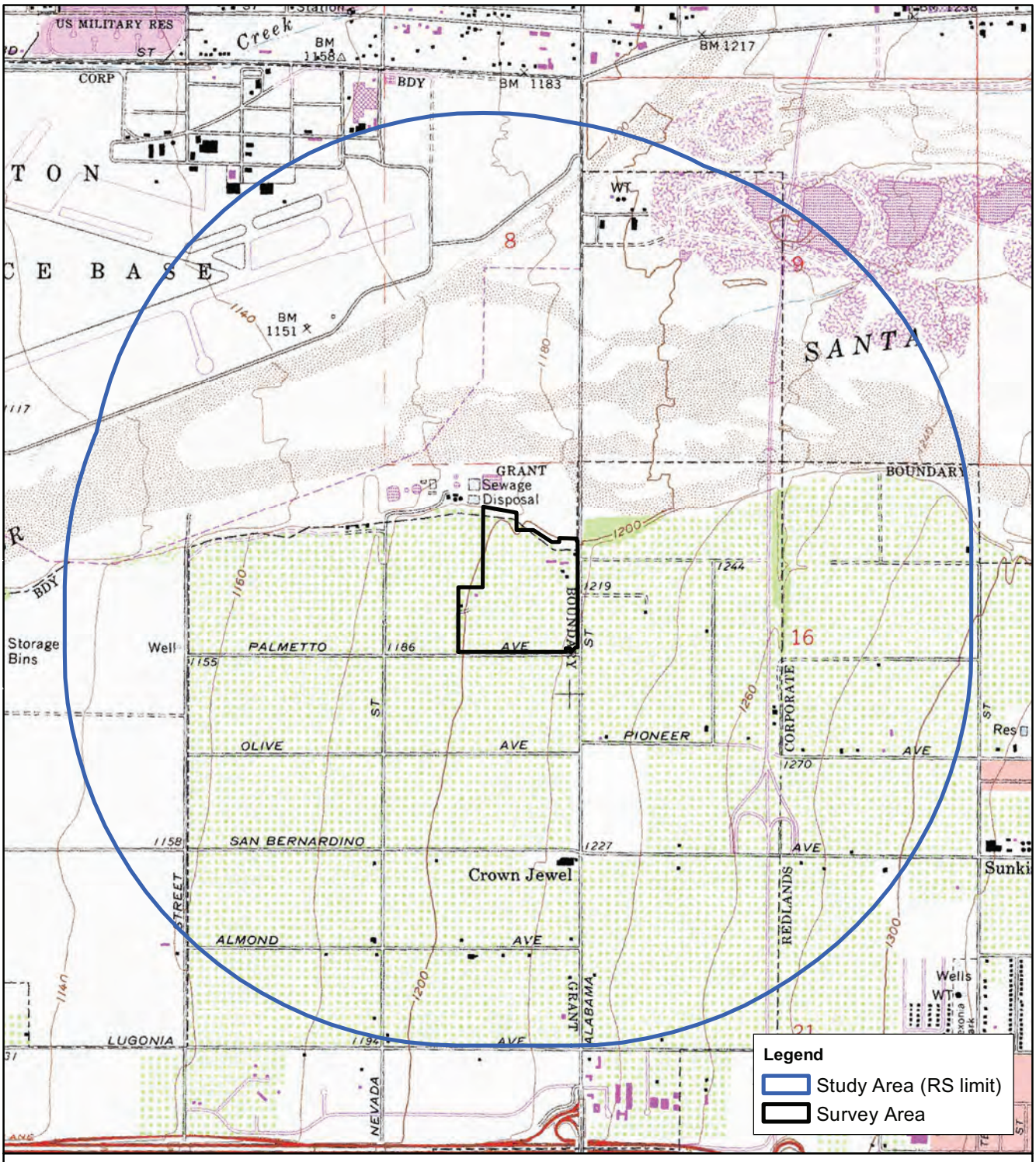
Associate Archaeologist
Applied EarthWorks, Inc.



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Applied EARTHWORKS Inc.

3550 E. Florida Ave., Suite H
Hemet, CA 92544-4937
O: (951) 766-2000 | F: (951) 766-0020

July 10, 2018

Amanda Vance
Chairperson
Augustine Band of Cahuilla Indians
P.O. Box 846
Coachella, CA 92236

Re: Phase I Cultural Resource Assessment for the Alabama Street and Palmetto Avenue Project near the City of Redlands, San Bernardino County, California.

Dear Ms. Vance:

Applied EarthWorks, Inc. (Æ) is conducting a cultural resource study for the Alabama Street and Palmetto Avenue Project (Project). The Project proposes the future development of approximately 55 acres on the northwest corner of Alabama Street and Palmetto Avenue, near the City of Redlands, San Bernardino County, California. As indicated on the attached map, the Project is located on the Redlands, CA 7.5' USGS map within the San Bernardino Landgrant, Township 1 South, Range 3 West, San Bernardino Baseline and Meridian (S.B.B.M.).

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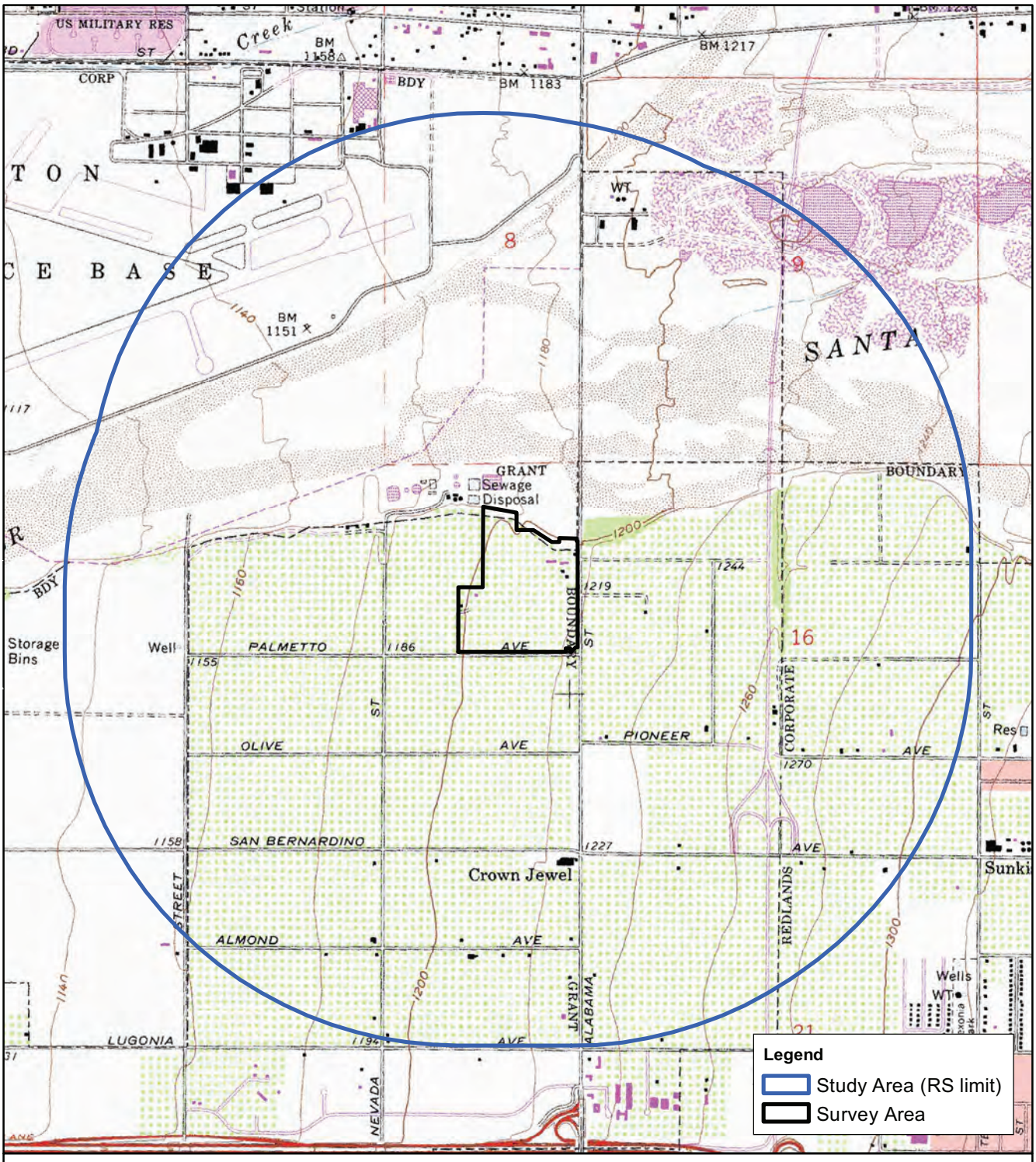

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Applied EARTHWORKS Inc.

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Hemet, CA 92544-4937
O: (951) 766-2000 | F: (951) 766-0020

July 10, 2018

Goldie Walker
Chairwoman
Serrano Nation of Mission Indians
P.O. Box 343
Patton, CA 92369

Re: Phase I Cultural Resource Assessment for the Alabama Street and Palmetto Avenue Project near the City of Redlands, San Bernardino County, California.

Dear Ms. Walker:

Applied EarthWorks, Inc. (Æ) is conducting a cultural resource study for the Alabama Street and Palmetto Avenue Project (Project). The Project proposes the future development of approximately 55 acres on the northwest corner of Alabama Street and Palmetto Avenue, near the City of Redlands, San Bernardino County, California. As indicated on the attached map, the Project is located on the Redlands, CA 7.5' USGS map within the San Bernardino Landgrant, Township 1 South, Range 3 West, San Bernardino Baseline and Meridian (S.B.B.M.).

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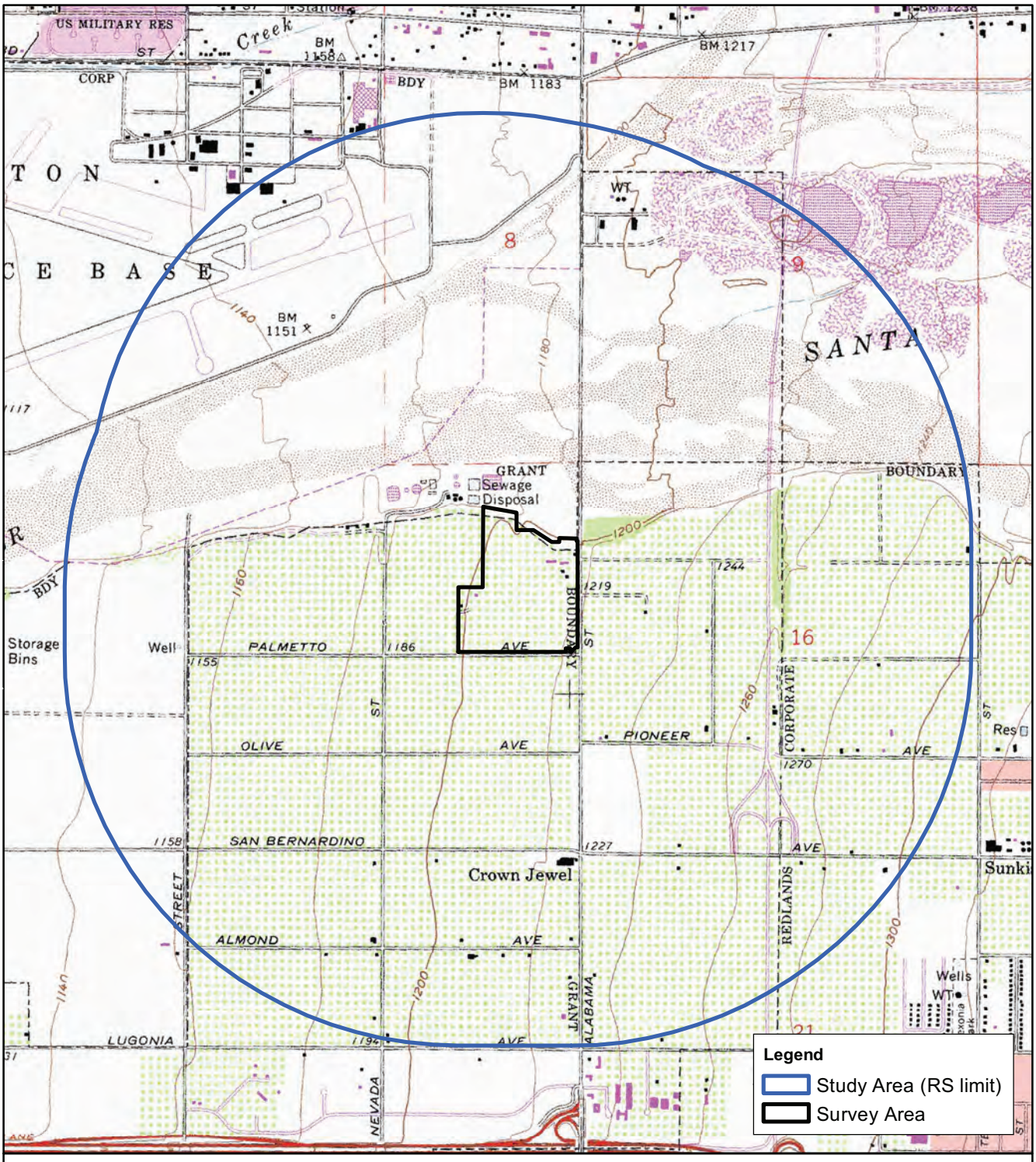
Applied EarthWorks, Inc.



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Applied EARTHWORKS Inc.

3550 E. Florida Ave., Suite H
Hemet, CA 92544-4937
O: (951) 766-2000 | F: (951) 766-0020

July 11, 2018

Donna Yocum
Chairperson
San Fernando Band of Mission Indians
P.O. Box 221838
Newhall, CA 91322

Re: Phase I Cultural Resource Assessment for the Alabama Street and Palmetto Avenue Project near the City of Redlands, San Bernardino County, California.

Dear Ms. Yocum:

Applied EarthWorks, Inc. (Æ) is conducting a cultural resource study for the Alabama Street and Palmetto Avenue Project (Project). The Project proposes the future development of approximately 55 acres on the northwest corner of Alabama Street and Palmetto Avenue, near the City of Redlands, San Bernardino County, California. As indicated on the attached map, the Project is located on the Redlands, CA 7.5' USGS map within the San Bernardino Landgrant, Township 1 South, Range 3 West, San Bernardino Baseline and Meridian (S.B.B.M.).

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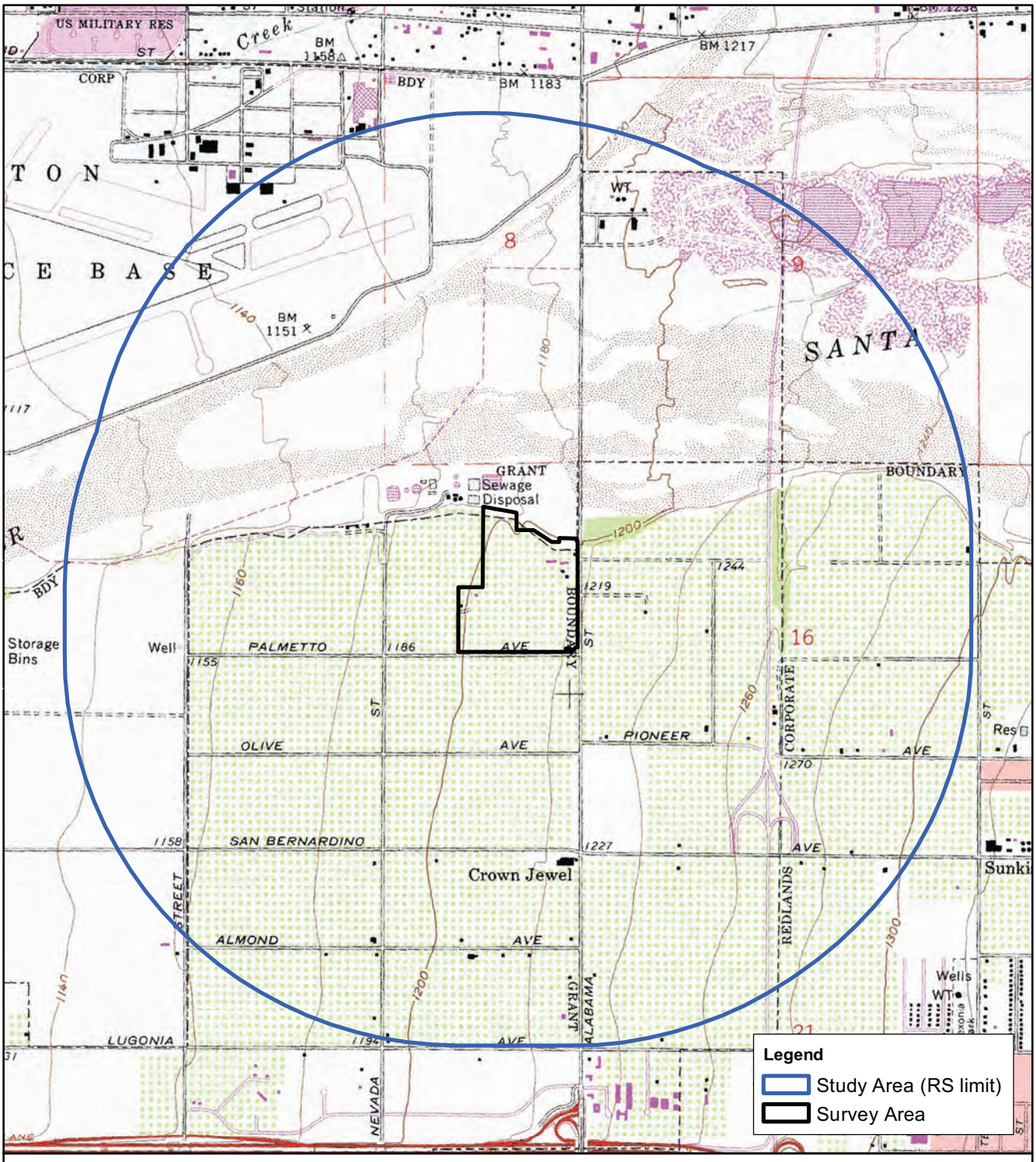


Records Search location map for the *Webb-Duke-Alabama Street and Palmetto Avenue Project-AE 3895*.

Gmail by Google

Kholood Abdo-Hintzman <kahintzman@appliedearthworks.com>

Phase I Cultural Resource Investigation in San Bernardino County

Stapp, Judy <jstapp@cabazonindians-nsn.gov> Tue, Jul 10, 2018 at 2:16 PM
To: Kholood Abdo-Hintzman <kahintzman@appliedearthworks.com>

Dear Kholood,

The Cabazon Band of Mission Indians does not comment on projects located outside of their traditional use area.

Best regards,

Judy Stapp
Director of Cultural Affairs
Cabazon Band of Mission Indians
84-245 Indio Springs Parkway
Indio, CA 92203
Phone (760) 238-5770
Fax: (760) 347-7880

This message contains information which may be confidential and privileged. Unless you are the intended addressee (or authorized to receive for the intended addressee), you may not use, copy or disclose to anyone the message or any information contained in the message. If you have received the message in error, please advise the sender at Cabazon Band of Mission Indians jstapp@cabazonindians-nsn.gov and delete the message. Thank you.

From: Kholood Abdo-Hintzman <kahintzman@appliedearthworks.com<mailto:kahintzman@appliedearthworks.com>>
Date: Tuesday, July 10, 2018 at 1:50 PM
To: Judy <jstapp@cabazonindians-nsn.gov<mailto:jstapp@cabazonindians-nsn.gov>>
Subject: Phase I Cultural Resource Investigation in San Bernardino County
[Quoted text hidden]

AGUA CALIENTE BAND OF CAHUILLA INDIANS

TRIBAL HISTORIC PRESERVATION

03-027-2018-002

July 10, 2018

[VIA EMAIL TO:kahintzman@appliedearthworks.com]
Applied Earthworks
Mr. Kholood Abdo Hintzman
3550 E. Florida Ave., Suite H
Hemet, CA 92544-4937

Re: Phase I- Alabama Street & Palmetto Ave

Dear Mr. Kholood Abdo Hintzman,

The Agua Caliente Band of Cahuilla Indians (ACBCI) appreciates your efforts to include the Tribal Historic Preservation Office (THPO) in the Alabama & Palmetto Ave Development project. The project area is not located within the boundaries of the ACBCI Reservation. However, it is within the Tribe's Traditional Use Area. For this reason, the ACBCI THPO requests the following:

*At this time ACBCI defers to the San Manuel Band of Mission Indians. This letter shall conclude our consultation efforts.

Again, the Agua Caliente appreciates your interest in our cultural heritage. If you have questions or require additional information, please call me at (760)699-6829. You may also email me at ACBCI-THPO@aguacaliente.net.

Cordially,

Katie Croft

Katie Croft
Cultural Resources Manager
Tribal Historic Preservation Office
AGUA CALIENTE BAND
OF CAHUILLA INDIANS

Gmail by Google

Kholood Abdo-Hintzman <kahintzman@appliedearthworks.com>

Phase I Cultural resource Investigation in San Bernardino County

Jessica Mauck <JMauck@sanmanuel-nsn.gov> Wed, Jul 18, 2018 at 4:41 PM
To: Kholood Abdo-Hintzman <kahintzman@appliedearthworks.com>

Hi Kholood,

Thank you for reaching out to SMBMI for information regarding the proposed project. For your knowledge, the NAHC seems to have made a mistake with the SLF result for this project, as it does fall within the boundary of a rather large SLF we have in the region. However, that being said, we created the SLF with a very large buffer, so the resources of concern are very unlikely to be impacted by the proposed project. The bigger concern Tribe has with this location is the proximity to the Santa Ana River, which is a TCR for SMBMI, and the potential for subsurface deposits. The recommendation from SMBMI for this project is the conduct Phase I presence/absence testing for this project area, assuming there are in situ Holocene layers beneath the existing disturbance that resulted from agriculture. This is a recommendation we make to the Lead Agency during consultation after review the cultural, paleo, and geotech reports, as well as the proposed horizontal and vertical extent of disturbance. For your report, I do recommend reaching back out to the NAHC and clarifying whether or not, per their records, this project falls within an existing SLF for SMBMI, and simply making a note that Tribe may have concerns and will consult with the Lead Agency.

Please let me know if you have any questions.

Regards,

Jessica Mauck
CULTURAL RESOURCES ANALYST
O: (909) 864-8933 x3249
M: (909) 725-9054
26569 Community Center Drive, Highland California 92346
SAN MANUEL
BAND OF MISSION INDIANS

From: Kholood Abdo-Hintzman [mailto:kahintzman@appliedearthworks.com]
Sent: Tuesday, July 10, 2018 2:24 PM
To: Jessica Mauck
Subject: Phase I Cultural resource Investigation in San Bernardino County

MORONGO BAND OF MISSION INDIANS
TRIBAL HISTORIC PRESERVATION OFFICE
12700 PUMARRA RD BANNING, CA 92220
OFFICE 951-755-5059 FAX 951-572-6004

Date: 7/19/2018

Re:
Alabama Street and Palmetto Avenue Project, near Redlands

Dear,
Kholood Abdo Hintzman
Associate Archaeologist
Applied Earthworks

Thank you for contacting the Morongo Band of Mission Indians (MBMI) Cultural Heritage Department regarding the above referenced project(s). After conducting a preliminary review of the project, the tribe would like to respectfully issue the following comments and/or requests:

☐ The project is located outside of the Tribe's aboriginal territory and is not within an area considered to be a traditional use area or one in which the Tribe has cultural ties. We recommend contacting the appropriate tribe(s) who may have cultural affiliations to the project area. We have no further comments at this time.

☒ The project is located within the Tribe's aboriginal territory or in an area considered to be a traditional use area or one in which the Tribe has cultural ties. In order to further evaluate the project for potential impacts to tribal cultural resources, we would like to formally request the following:

- ☒ A thorough records search be conducted by contacting one of the California Historical Resources Information System (CHRIS) Archaeological Information Centers and a copy of the search results be provided to the tribe.
- ☒ Tribal monitor participation during the initial pedestrian field survey of the Phase I Study of the project and a copy of the results of that study. In the event the pedestrian survey has already been conducted, MBMI requests a copy of the Phase I study be provided to the tribe as soon as it can be made available.
- ☐ MBMI Tribal Cultural Resource Monitor(s) be present during all required ground disturbing activities pertaining to the project.

☐ The project is located with the current boundaries of the Morongo Indian Reservation. Please contact the Morongo Cultural Heritage Department for further details.

Please be aware that this letter is merely intended to notify your office that the tribe has received your letter requesting tribal consultation for the above mentioned project and is requesting to engage in consultation. Specific details regarding the tribe's involvement in the project must be discussed on a project by project basis during the tribal consultation process with the lead agency. This letter does not constitute "meaningful" tribal consultation nor does it conclude the consultation process. Under federal and state law, "meaningful" consultation is understood to be an ongoing government-to-government process and may involve requests for additional information, phone conferences and/or face-to-face meetings. If you have any further questions or concerns regarding this letter, please contact the Morongo Cultural Heritage office at (951) 755-5259.

Please include this response in your report to your client.

Sincerely,

Tribal Historic Preservation Office
Morongo Band of Mission Indians
Email: thpo@morongo-nsn.gov
Phone: (951) 755-5059

Cahuilla Band of Indians
Cultural Department
52701 Highway 371 Anza, California 92539
Phone (951) 763-5549 Fax (951) 763-2808
Email: Culturaldirector@cahuilla.net

July 17, 2018

Kholood Abdo Hintzman
Applied Earthworks Inc.
3550 E. Florida Ave., Suite H
Hemet, Ca 92544-4937

Re: Phase I Cultural Resources Assessment for the Alabama Street and Palmetto Avenue Project

Dear Mr. Hintzman,

The Cahuilla Band of Indians received your letter on July 10, 2018 regarding the Phase I Cultural Resource Assessment for the Alabama Street and Palmetto Avenue Project near the City of Redlands, San Bernardino County, Ca. The Cahuilla band does not have knowledge of any cultural resources within or near the project area. Although this project is outside the Cahuilla reservation boundary it is within the Cahuilla traditional land use area. We respectfully request to be notified of all updates and/or changes with the project moving forward as we have an interest in this project. The Cahuilla band appreciates your help in preserving Tribal Cultural Resources in your project.

Respectfully,

BobbyRay Esparza
Cultural Coordinator
Cahuilla Band of Indians
Cell: (760) 423-2773
Office: (951) 763-5549
Fax: (951) 763-2808

APPENDIX B

DPR Forms

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary # 36-032488
HRI #
Trinomial CA-SBR-32488H
NRHP Status Code 3S

Other Listings
Review Code | Reviewer | Date

 Resource Name or # AE-3895-01H

P1. Other Identifier: Flume

*__P2. Location: a. County:__ San Bernardino ☒ **Not for Publication** ☐ **Unrestricted**

b. USGS 7.5′ Quad: Redlands **Date:** 1978 (Photo revised 1980) **T** 1S, **R** 3W; **¼ of ¼ of** Section San Bernardino Land Grant SB **B.M.**

c. Address:

d. UTM: NAD 83, Zone 11; 480479 **mE /** 3772000 **mN**

e. Other Locational Data: From Interstate 10 take exit Alabama Street north 1.4 miles. The irrigation flume is located in two parcels west of Alabama Street. APN #s: 029204143; 02920418

***P3a. Description:** This historic site consists of a single, 2,016 foot long, rectangular (cross-section) gravity-fed irrigation flume composed of split local cobbles set in concrete mortar that extends on a north/south bearing. The flume is constructed of granite and quartzite boulders collected from the Santa Ana River flood plain directly to the north of the property and concrete mortar. The boulders range in size from 10 to 14 inches and are cemented into the walls of the flume with coarse grain concrete. See Linear Feature record for more detail.

***P3b. Resource Attributes:** AH6. Water conveyance system

***P4. Resources Present:** ☐ Building ☒ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other:

***P5a. Photograph or Drawing:**

P5b. Description of Photo: Photo Roll 3895-1-dm (frame 42). West Wall of feature facing South-Southeast

***P6. Date Constructed/Age and Sources:** Circa 1893 (Barmann 1893)
☐ Prehistoric ☒ Historic ☐ Both

***P7. Owner and Address:** Duke Realty Limited Partnership, 600 East 96th Street, Suite 100 Indianapolis, IN 46240

***P8. Recorded By:** E. Mills & A. McCausland
Applied EarthWorks, Inc.
133 N. San Gabriel Blvd., Suite 201
Hemet, CA 92544

***P9. Date Recorded:** 7/6/2018

***P10. Survey Type:** ☒ Intensive ☐ Reconnaissance ☐ Other
Describe: Intensive pedestrian survey (20 meter transect intervals

***P11. Report Citation:** Kholood Abdo Hintzman, Annie McCausland, and Evan Mills August 2018. *Phase I Cultural Resources Assessment for the Alabama and Palmetto Project near the City of Redlands, San Bernardino County, California*. Applied EarthWorks, Inc., Hemet,

***Attachments:** ☐ NONE ☒ Location Map ☒ Sketch Map ☐ Continuation Sheet
☒ Building, Structure, and Object Record ☒ Archaeological Record ☐ District Record ☒ Linear Feature Record
☒ Photograph Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record
☐ Other (list):

*A1. **Dimensions: a. Length** 168 meters (610 feet) north/south **x** **b. Width** .9 meters (3 feet) (east/west)

Method of Measurement: ☐ Paced ☐ Taped ☐ Visual estimate ☒ Other: Trimble GPS

Method of Determination (check any that apply): ☐ Artifacts ☒ Features ☐ Soil ☐ Vegetation ☐ Topography ☐ Cut bank ☐ Animal burrow ☐ Excavation ☐ Property boundary ☐ Other (explain):

Reliability of Determination ☒ High ☐ Medium ☐ Low Explain: Area was surveyed extensively

Limitations (check any that apply): ☐ Restricted access ☐ Paved/built over ☐ Site limits incompletely defined ☒ Disturbances ☐ Vegetation ☐ Other (explain): Feature slightly damaged in section (see linear feature record)

A2. **Depth:** ☐ None ☒ Unknown
Method of determination: East wall of the flume is buried.

*A3. **Human Remains:** ☐ Present ☐ Absent ☐ Possible ☒ Unknown (explain): None observed

*A4. **Features**: This feature consists of a rectangular (cross-section) gravity-fed irrigation flume comprised of small boulders and concrete that extends on a north/south bearing. The flume is constructed of granite and quartzite boulders collected from the Santa Ana River flood plain directly to the north of the property and concrete mortar. The boulders range in size from 10 to 14 inches and are cemented into the walls of the ditch with coarse grain concrete.

*A5. **Cultural Constituents (not associated with features):** No other constituents observed

*A6. **Were Specimens Collected?** ☒ No ☐ Yes (If yes, attached Artifact Record or catalog.)

*A7. **Site Condition:** ☐ Good ☒Fair ☐ Poor ☐ Disturbances: The flume is damaged by heavy equipment on the north and south ends and a section in the center. The elevation of the ground surface is higher on the east side of the feature. The feature top is level with the ground surface on the east side.

*A8. **Nearest Water (type, distance, and direction):** The Santa Ana River is located .35 miles to the north.

*A9. **Elevation:** 1207 feet above mean sea level

A10. **Environmental Setting (vegetation, fauna, soils, geology, landform, slope, aspect, exposure, etc.):** The feature is located in the interior of an old citrus grove that was active as recently as 2007. The area is flat former agricultural land and the surface is extensively disturbed by plowing and other agricultural activities. The vegetation in the area is seasonal grasses and eucalyptus trees. The soils are silty alluvial sands deposited from the Santa Ana River in prehistory. The flume has full open exposure and no slope.

A11. **Historical Information** (full citations in A15 below):

*A12. **Age:** ☐ Prehistoric ☐ Protohistoric ☐ 1542–1769 ☐ 1769–1848 ☐ 1848–1880 ☒1880–1914 ☐ 1914–1945 ☐Post 1945 ☐ Undetermined **Describe position in regional prehistoric chronology or factual historic dates if known:**

A13. **Interpretations:**

A14. **Remarks:**

A15. **References:**

A16. **Photographs:** See attached Photograph Record. Photo Roll 3895-1-dm (frames 35-43)
Original media/negatives kept at: Applied EarthWorks, Inc., Hemet, California

*A17. **Form Prepared By:** E. Mills & A. McCausland **Date:** 7/24/2018
Affiliation and Address: Applied EarthWorks, Inc., 3550 E. Florida Ave, Suite H, Hemet CA, 92544

B1. Historic Name: Flume

B2. Common Name: Flume

B3. Original Use: irrigation water conveyance **B4. Present Use:** no longer in use

***B5. Architectural Style:** N/A

***B6. Construction History (construction date, alterations, and dates of alterations):** This gravity-fed irrigation flume was constructed circa 1893 as a feature of the Brown Subdivision of the Williams Tract near Redlands, CA. The flume most likely extended the entire length of the property to Palmetto Avenue.

***B7. Moved?:** ☒ No ☐ Yes ☐ Unknown Date: Original Location:

***B8. Related Features:** Irrigation weir (AE-3895-02H)

B9. a. Architect: unknown **b. Builder:** unknown

***B10. Significance:** Theme: Citrus Industry Area: San Bernardino Valley; Redlands
Period of Significance: 1893-1950 Property Type: Agricultural Applicable Criteria: A/1; C/3
(Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope. Also address integrity.)

Frank Elwood Brown was a key figure in the development of the eastern San Bernardino Valley, the citrus industry in the valley, and the cities of Redlands and Moreno Valley. Brown brought the most crucial resource to the area—water.

Brown came to the San Bernardino valley in 1877, and settled in the small colony of Lugonia. Brown was a graduate of the Sheffield Scientific School at Yale University, and he brought big dreams with him to California (Gonzales 2006).

Upon arrival, Brown met Edward G. Judson in Lugonia and they went into the citrus business together in 1880. With their success as citrus growers and distributors, their vision grew. Together, they decided to develop a new agricultural colony in the area with a sustainable water source and system, the Red Lands Colony (Gonzales 2006).

Brown and Judson bought over 4,000 acres of land and the Red Lands Colony was incorporated in 1881. To provide water temporarily, they bought 50 shares of water from the owners of the South Fork ditch, which provided water to Lugonia drawn from the Santa Ana River. To transport the water to Red Lands, Brown and Judson constructed a 6-mile canal from the South Fork ditch to a new reservoir. Water reservoirs allowed water from the wet months to be harnessed and saved for the dry months (Gonzales 2006). As stated in a Scribner's Magazine article from 1890,

> …the plan of water storage is to impound this water as it runs to waste in the season of flood and use it in the season of drought. Select the proper valleys for water-basins, close their outlets with dams, store great lakes of water when the mountain-snows melt, and then let it out slowly and at will through flumes and ditches to the lands below—this is the essence of the new idea [Gonzales 2006].

Brown embraced this idea and planned for the construction of a new water reservoir and dam in Bear Valley.

Brown and Judson's vision for a new water source and system was achieved in 1883 with the founding of the Bear Valley Land and Water Company, later known as the Bear Valley Irrigation Company. A new state of the art dam and channel was designed by Brown in 1884 and water from the Bear Valley reservoir made its way to the Red Lands Colony in 1885. Plentiful water attracted new settlers to the colony. The phenomenal population growth of the colony would have not been possible without the Bear Valley reservoir (Gonzales 2006).

Brown continued buying and developing agricultural land in the area, including a subdivision of the Williams Tract No. 1 located northwest of Redlands in 1893 (Barmann 1893). The Williams Tract was founded by land proprietor Henry L. Williams in 1887 in a small community known then as Gladysta.

Citrus farming began in the Redlands area in the late nineteenth century and remained prominent until the late 1950s (California Department of Transportation 2007). A Southern Pacific electric railroad spur, south of San Bernardino Avenue, was developed in 1903 to service the citrus packing houses in the area including Sunkist and Crown Jewel. Smudge pot oil was also distributed via the train (Lancaster 2013). Gravity-fed irrigation was the standard practice in southern California citrus farming from the 1880s until the drip system was introduced in the 1970s (Sanka 2006).

***B10. Significance Continued:**

Beginning in the 1880s, gravity-fed irrigation systems were constructed within citrus groves across San Bernardino Valley,. The long and subtle slope of the valley from both north and south to the center made gravity-fed irrigation systems ideal for irrigation (California Department of Transportation et al. 2000). These systems distributed water using networks of underground cast-iron pipes, flow-control boxes, and gravity-fed irrigation flumes made of local rocks with cement mortar (California Department of Transportation et al. 2000). This state of the art water system for the area was highlighted on the Williams Tract promotional map as well as the 1893 San Bernardino Irrigation Map. The Williams Tract Map declared that property owners could raise the best oranges in the state on the land and the oldest orange groves in Redlands were within one mile (William c. 1890). With an abundance of water, Brown's subdivision was perfect for the largest and fastest growing industry in the region, citrus farming.

The Project area includes three parcels within Block 1 Lots 1 and 2 and Block 2 Lots 1,2,3,6, and 7 of the Brown Subdivision of Williams Tract No. 1. Between 1895 and 1951, the following individuals, listed in no particular order, owned portions of the subject lots: Melvin R. Gay, Geo. W. Mead, B.W Cave, Belle Michaeltree, Frank E. Brown, 1st National Bank of Redlands, Hannah E. Irvin, W.K. Lee, C.H Park, Florence C. & Lester W. Finlay, J.D. Langford & Co., Will W. De Hart, Ruth McNair, Maude Armstrong, Gladys L. Pate, Charles S. Lombard, W.M. & Clara Henderson, Ellis G. Grace, B. Kennedy, Savings Bank, J. Richard Lane, Harry N. & Bertha F. Morse, Ino. W. Thayer, and J.H. Maggie Wilkes. All owners likely maintained citrus groves on their properties. Ownership of these lots changed throughout the twentieth century; however, the land use did not change. Historical aerial images show that the Project area contained an orchard from at least 1930 and property tree values were documented beginning in 1923 (San Bernardino County Assessor Books; UCSB 2018). The 1954 edition of the USGS Redlands quad map shows the existence of citrus groves and farms within the Project area as well as on the surrounding properties. The citrus groves and farms were demolished around 2007 (NETR online 2018).

Citrus production began in the Redlands area in the late nineteenth century and remained prominent until the late 1950s (City of Redlands 2018). While ownership of the subject property changed throughout the twentieth century, the land use did not change. This property was developed as an agricultural lot in the late 1880s as a part of Williams Tract No.1. In 1893 Frank Brown subdivided the Williams Tract No. 1, and these properties became Lots within Block 1 and 2 of the Brown Subdivision. Frank Brown was the founder and head engineer of the Bear Valley Land and Water Company. He installed gravity-fed irrigation systems on his Lots to service the growing citrus industry. The water for this system came from the Bear Valley Land and Water Company's new state of the art reservoir in Bear Valley, now known as Big Bear Lake. This sustainable water source brought growth and prosperity to the Redlands region, resulting in a prosperous citrus industry, and gravity-fed irrigation became the standard practice in southern California orchard production until the drip system was introduced in the 1970s (Gustafson 1980; Taylor 2006).Several land tracts in the area were developed in the 1890s due to this sustainable water source. These land tracts, including the Williams Tract, became extensive citrus groves which were owned by local families and entrepreneurs. Historical aerial images confirmed that the Project area contained an orchard by 1930 (UCSB 2018). The 1954 edition of the USGS Redlands topographic quadrangle map shows a citrus grove on the property as well as on the surrounding properties. Thus, it appears this property was a citrus grove from the 1890s until circa 2007, when the trees were removed, explaining why the historic gravity-fed irrigation system is still extant on the property.

The flume was constructed circa 1893, within the Frank Brown subdivision of Williams Tract No. 1. The flume has a direct association with irrigation practices in San Bernardino Valley and development of the citrus industry in Redlands, events that were important in local and regional history. The flume is significant under CRHR Criterion 1, with the period of significance from 1893, when the Brown Subdivision was created until 1950, the end of the citrus industry boom. Ownership of the properties changed throughout the late nineteenth and twentieth centuries. Past owners include local families, entrepreneurs, and banks who wanted to make a profit in the lucrative citrus industry. The most historically significant property owner was Frank Brown; however, other historic resources in the region, including the old Bear Valley Dam, listed as a California Historical Landmark, better convey Brown's historical contribution to the region. With no direct association with any other important historical persons, the site is not considered significant under CRHR Criterion 2. The flume embodies the distinctive design and construction characteristics of a gravity-fed irrigation flume from the turn of the 20th century, and is significant under CRHR Criterion 3. This gravity-flow irrigation flume does not appear to meet CRHR Criterion 4 individually for their potential to provide information important in history or prehistory. However, the larger Bear Valley Land and Water Company water system, the Williams Tract irrigation system, and adjoining orchards, with which this flume is associated, could potentially be eligible under Criterion 4. The extent of these systems is not fully known and little

documentation on the layout of the systems was found during current historic research. Therefore, further investigation and study of the remaining physical elements of these systems have the potential to yield new information about the systems and their contribution to the historic Redlands Citrus industry. Finally, the flume may be a contributing element of a larger historic citrus district in Redlands. Several gravity-fed irrigation systems, oil tanks, citrus packing houses, and electrical railways have been documented within a 1-mile of the subject property. Additional research and studies are needed to investigate the extent, significance, and integrity of this potential historic district.

B11. Additional Resource Attributes (list attributes and codes):

***B12. References:**

Barmann, A.
1893 Browns Subdivision Map. For reference at the San Bernardino County Recorder's Office.

California Department of Transportation
2007 *A Historical Context and Archaeological Research Design for Agricultural Properties in California*. Sacramento, California.

City of Redlands
2018 Citrus Preservation. Website. Accessed January 8, 2018. http://www.cityofredlands.org/city-hall/departments/quality_of_life/citrus_preservation/

Gonzales, Nathan
2006 *Bear Valley Irrigation Company.* Bacchus Press, USA.

Gustafson, Don
1981 *Drip Irrigation of Citrus-Panel Drip Irrigation of Citrus in California*. Accessed online on January 29, http://irrec.ifas.ufl.edu/flcitrus/pdfs/short_course_and_workshop/secondinternationalcitrus/Gustafson-Drip_Irrigation.pdf

Lancaster, James E. and Bill Messecar
2013 *Historic Packing Houses and Other Industrial Structures in Southern California*. Website, accessed January 25, 2018. http://coastdaylight.com/ljames1/scph_sb_redlands.html

Lippincott, J.B.
1893 *Map of San Bernardino, Redlands, and Vicinity Showing Location of Irrigated Lands*.

Los Angeles Herald
1887 *Gladysta*. *Los Angeles Herald*, October 10, 1887. Available online through the California Digital Newspaper Collection.

Los Angeles Public Library Photo Collection
1902 Irrigating oranges. Source: Calisphere Date of access: January 25 2018 20:32 Permalink: https://calisphere.org/item/234202ffc0ba1dacb0333f855f3ed89a/

Mission Brown Subdivision of H.L. Williams Tract 1 Lot Books
1895-1903, 1904-1907, 1908-1912, 1913-1917, 1923-1928, 1929-1934, 1945-1939, 1940-1944, 1946-1951. On reference at the San Bernardino County Archives.

NETR online
2018 http://www.historicaerials.com/viewer. Accessed January 2, 2018.

San Bernardino County Office of the Assessor
2018 Ownership History Report for Parcel 0292-043-07-0000

Sanka, J.

2006 DPR 523 Site form 36-012852, dated August 8 and 9, 2006. On file, South Central Coastal Information Center, California State University, Fullerton.

Tang, Bai "Tom"
2000 DPR Site Record for CA-SBR-9991 H. Dated July 13, 2000. On File at the San Bernardino Archaeological Information Center.

Taylor, Laurie
2006 DPR 523 Site form 36-012468, dated June 26, 2006. On file, South Central Coastal Information Center, California State University, Fullerton.

United States Geological Survey
1899, 1901, 1954, 1967, 1975, 1980, 1988, 1996 *Redlands, California, Quadrangle Map, 7-minute series*. U.S. Geological Survey.

William, Henry L.
1890s c. *Williams Tract Map*. On file at the Smiley Library Heritage Room.

B13. Remarks:

***B14. Evaluator:** Annie McCausland
Date of Evaluation: 08/02/18

This space reserved for official comments.

L1. Historic and/or Common Name: Gravity-fed irrigation flume

L2a. Portion Described: ☐ Entire Resource ☒ Segment ☐ Point Observation **Designation:**

b. Location of point or segment: Southern terminus at UTM 480478mE / 3771901mN
Northern terminus at UTM 480479mE / 3772087mN
Datum Location at UTM 480479mE / 3772000mN

L3. Description: This feature consists of a rectangular (cross-section) gravity-fed irrigation flume composed of small boulders and concrete that extends on a north/south bearing. The flume is constructed of granite and quartzite boulders collected from the Santa Ana River flood plain directly to the north of the property and concrete mortar. The boulders range in size from 10 to 14 inches and are cemented into the walls of the flume with coarse grain concrete.

L4. Dimensions:
a. Top Width: 3 feet
b. Bottom Width: 25 inches
c. Height or Depth: maximum of 14 inches
d. Length of Segment: 186 meters (610 feet)

L4e. Sketch or Cross Section ☐ attached ☒ none **Facing:**

L5. Associated Resources: AE-3895-02H, irrigation weir in the southwest corner of the property.

L6. Setting: The feature is located in the interior of an old citrus grove that was active as recently as 2007. The area is flat former agricultural land and the surface is extensively disturbed by plowing and other agricultural activities. The vegetation in the area is seasonal grasses and eucalyptus trees. The soils are silty alluvial sands deposited from the Santa Ana River in prehistory. The flume has full open exposure and no slope.

L7. Integrity Considerations: The flume was damaged by heavy equipment on the north and south ends and a section in the center. The elevation of the ground surface is higher on the east side of the feature. The feature top is level with the ground surface on the east side.

L8a. Photo, Map, or Drawing:

L8b. Description of Photo, Map, or Drawing: view of feature from south end looking north. Photo Roll 3895-1-dm, frame 36.

L9. Remarks: Fair condition

L10. Form Prepared By: E. Mills & A. McCausland

L11. Date: 7/24/2018

Year: 2018 **Camera Type:** Panasonic Lumix **Roll Number:** 3895-1-dm

Image Type: ☒ Digital ☐ 35mm B&W film ☐ 35mm Color Print film ☐ 35mm Color Slide film

Photographer: E. Mills **Media Stored at:** Applied EarthWorks, Inc., Hemet, CA

Mo.	Day	Time	Exp.	Subject	Facing
7	6	0827	035	3895-01H; Feature 1 profile (south end).	E
7	6	0828	036	3895-01H; overview from south end.	N
7	6	0828	037	3895-01H; wall detail.	NE
7	6	0833	038	3895-01H; north end overview.	S
7	6	0834	039	3895-01H; trees at north end.	NNE
7	6	0834	040	3895-01H; overview from north end.	S
7	6	0835	041	3895-01H; Feature 1 rock wall, detail.	ESE
7	6	0835	042	3895-01H; Feature 1, west wall of feature.	SSE
7	6	0835	043	3895-01H; Feature 1, wall detail.	E

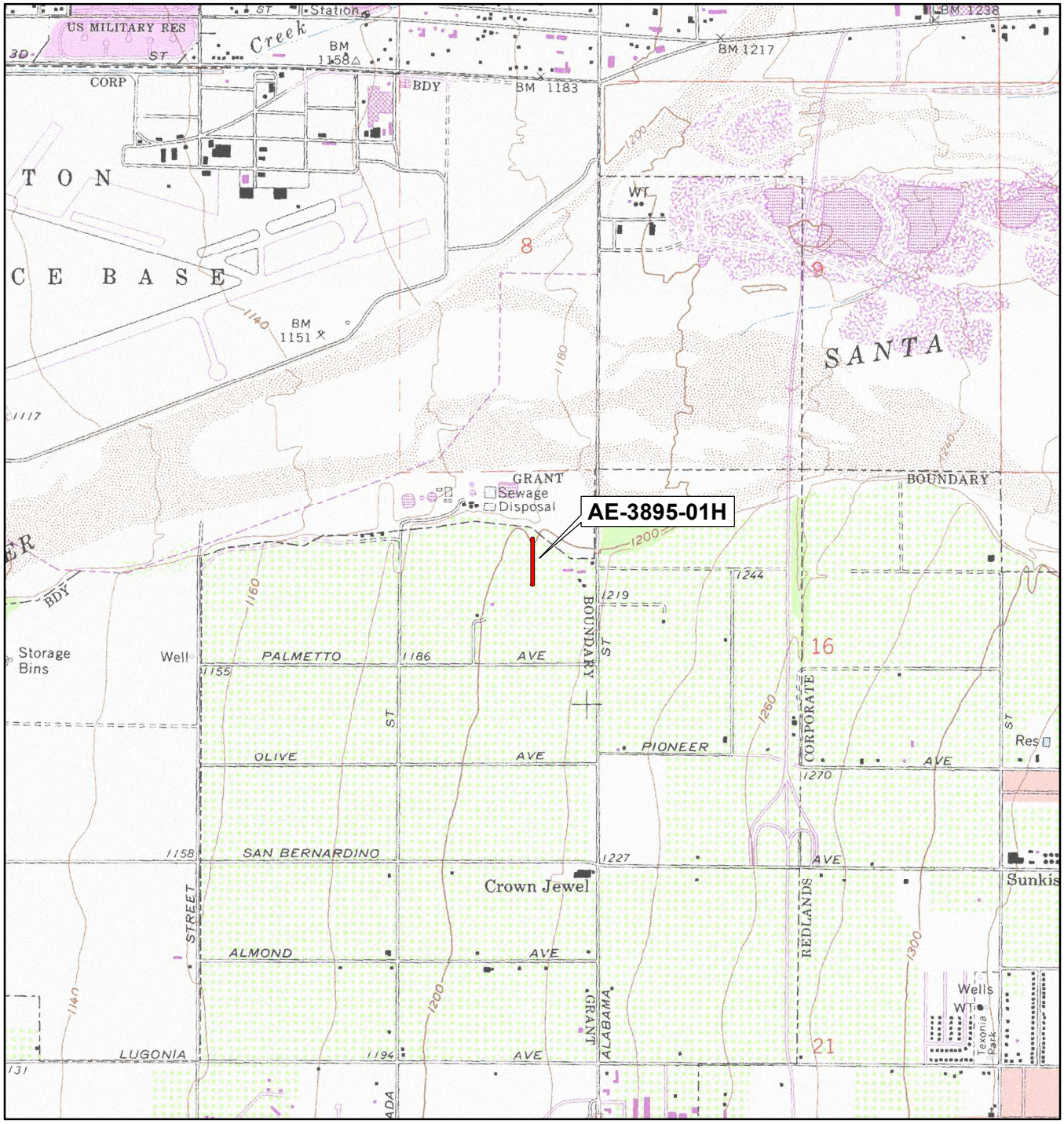
State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

LOCATION MAP

Primary # 36-032488
HRI#
Trinomial CA-SBR-32488H

Page 9 **of** 10 **Resource Name or #:** AE-3895-01H **Scale:** 1:24,000

Map Name: Redlands (1967, photorevised 1980), CA, USGS 7.5' quadrangle **Date:** 2018



SCALE 1:24,000

1 0.5 0 1 Miles

1,000 0 1,000 2,000 3,000 4,000 5,000 6,000 7,000 Feet

1 0.5 0 1 Kilometers

TRUE NORTH

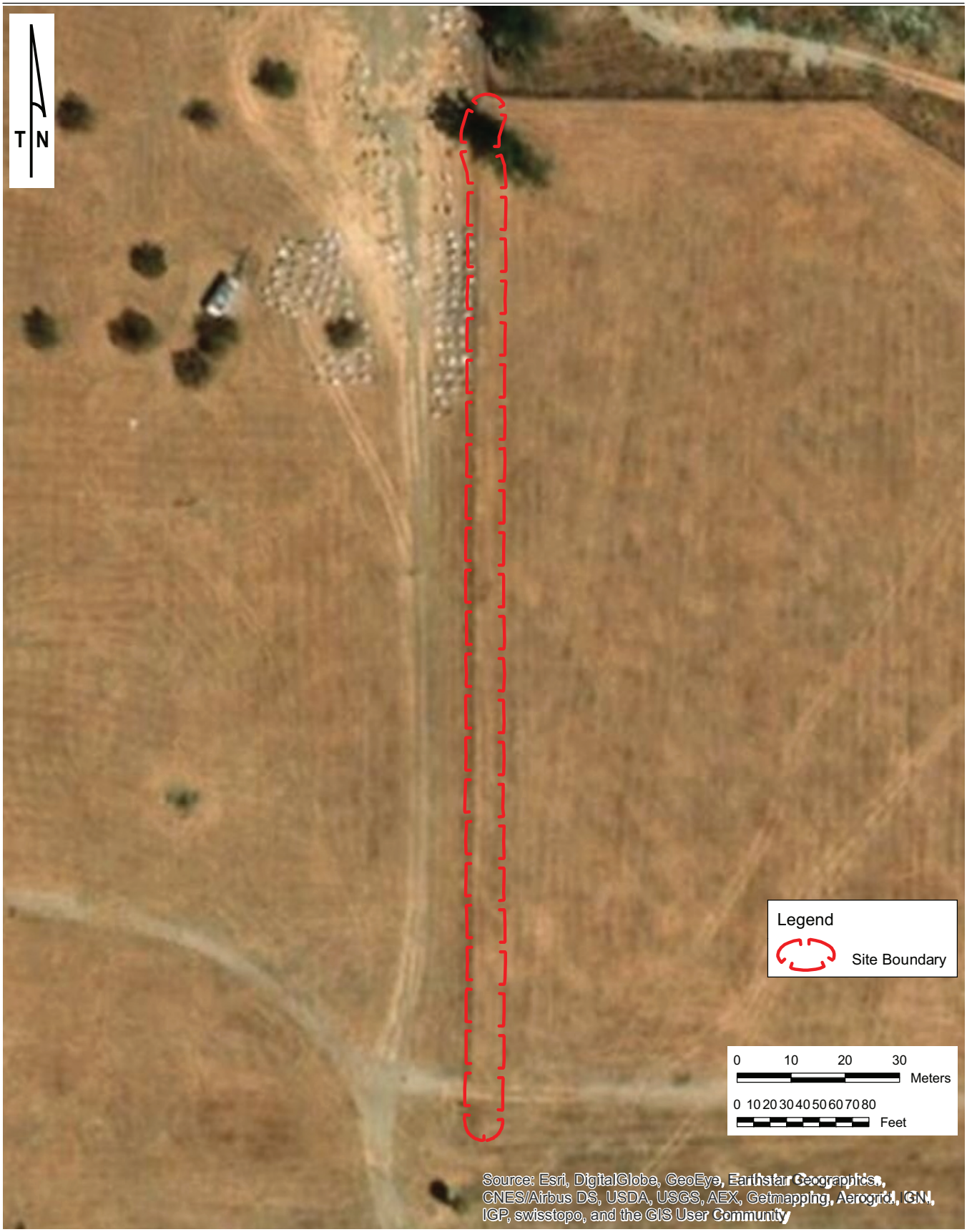
State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

SKETCH MAP

Primary # 36-032488
HRI#
Trinomial CA-SBR-32488H

Page 10 **of** 10 ***Resource Name or #:** (Assigned by recorder) Æ-3895-01H

***Drawn by:** E.Mills ***Scale:** 1 inch equals 83 feet ***Date of map:** August 2018



State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary # 36-032489
HRI #
Trinomial CA-SBR-32489H
NRHP Status Code 3S

Other Listings
Review Code | Reviewer | Date

P1. Other Identifier: Weir

*P2. **Location: a. County:** San Bernardino ☒ **Not for Publication** ☐ **Unrestricted**
b. USGS 7.5′ Quad: Redlands **Date:** 1978 (Photo Revised 1980) **T** 1S, **R** 3W; ¼ **of** ¼ **of** Section San Bernardino Land Grant SB **B.M.**
c. Address:
d. UTM: NAD 83, Zone 11; 480338 **mE /** 3771629 **mN**
e. Other Locational Data: From Interstate 10 take exit Alabama Street north 1.4 miles. The pump station is located in the southwest portion of the large parcel on the left of Alabama Street. APN #: 029204147

***P3a. Description:** This historic site consists of an irrigation weir. The feature is built of concrete, brick, and various pipes, crank valves, and fittings. The feature is located in the southwest corner of an old citrus grove that was in use as recently as 2007. This weir, along with an irrigation flume (AE-3895-01H), are the only remnants of the historic irrigation system on the property. See Archaeological record for more detail on the feature.

***P3b. Resource Attributes:** AH6. Water conveyance system

***P4. Resources Present:** ☐ Building ☒ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other:

***P5a. Photograph or Drawing:**

P5b. Description of Photo: Photo Roll 3895-1-dm, frame 44. Overview of feature facing south

***P6. Date Constructed/Age and Sources:** Circa 1893 (Barmann 1893)
☐ Prehistoric ☒ Historic ☐ Both

***P7. Owner and Address:** Duke Realty Limited Partnership, 600 East 96th Street, Suite 100 Indianapolis, IN 46240

***P8. Recorded By:** E. Mills & A. McCausland
Applied EarthWorks, Inc.
Hemet, CA 92544

***P9. Date Recorded:** 7/6/2018

***P10. Survey Type:** ☒ Intensive ☐ Reconnaissance ☐ Other
Describe: Intensive pedestrian survey (20 meter transect intervals

***P11. Report Citation:** Joan George, Kholood Abdo Hintzman, Annie McCausland and Evan Mills August 2018. *Phase I Cultural Resources Assessment for the Alabama and Palmetto Project near the City of Redlands, San Bernardino County, California.* Applied EarthWorks, Inc., Hemet,

***Attachments:**
☐ NONE
☒ Building, Structure, and Object Record
☒Photograph Record
☒Location Map
☒Archaeological Record
☐ Milling Station Record
☐ Other (list):
☒Sketch Map
☐ District Record
☐ Rock Art Record
☐ Continuation Sheet
☐ Linear Feature Record
☐ Artifact Record

*A1. **Dimensions: a. Length** 8 feet (east/west) **x** 6 feet (north/south) **b. Width**

Method of Measurement: ☐ Paced ☐ Taped ☐ Visual estimate ☒ Other: Trimble GPS

Method of Determination (check any that apply): ☐ Artifacts ☒ Features ☐ Soil ☐ Vegetation ☐ Topography ☐ Cut bank ☐ Animal burrow ☐ Excavation ☐ Property boundary ☐ Other (explain):

Reliability of Determination: ☒ High ☐ Medium ☐ Low Explain: Area was extensively surveyed.

Limitations (check any that apply): ☐ Restricted access ☐ Paved/built over ☐ Site limits incompletely defined ☒ Disturbances ☒ Vegetation ☐ Other (explain): The area is overgrown and littered with modern refuse.

A2. **Depth:** ☐ None ☒ Unknown
Method of determination: Likely due to the feature's function of underground irrigation

*A3. **Human Remains:** ☐ Present ☐ Absent ☐ Possible ☒Unknown (explain): None observed

*A4. **Features**: The feature consists of a historic gravity-fed irrigation weir that is built of concrete, bricks, cinder blocks, galvanized steel pipe, crank valve and associated pipe remnants. The exterior dimensions are 109 inches (east/west) by 49 inches (north/south) on the west side by 67 inches (north/south) on the east side. The northeast side of the feature has a half moon shaped, round wall that is 36 inches in diameter on the exterior and 30 inches in diameter on the interior with a height of 11 inches off the current ground surface. The east wall is 14 inches tall from the current ground surface. The west wall is 8 inches tall from the current ground surface. The northern wall is 12 inches tall from the current ground surface. The southern wall is 32 inches tall from the current ground surface. The interior dimensions are 34 inches (north/south) by 91 inches (east/west) with a maximum depth of 21 inches. There is a ramp or flume off the north wall that is sloped into the ground in a northerly direction. There is a 41 inch tall crank valve located on the west side of the feature, presumably for controlling flow volume. The piping system extends south of the feature and is incorporated into modern irrigation systems. The feature is in a state of disrepair and no longer functional.

*A5. **Cultural Constituents (not associated with features):** A gravity-fed irrigation flume is also extant on the adjacent parcel to the north (AE-3895-01H)

*A6. **Were Specimens Collected?** ☒ No ☐ Yes (If yes, attached Artifact Record or catalog.)

*A7. **Site Condition:** ☐ Good ☒Fair ☐ Poor ☐ Disturbances: Feature is degrading

*A8. **Nearest Water (type, distance, and direction):** The Santa Ana River is located .4 miles to the north.

*A9. **Elevation:** 1205 feet above mean sea level

A10. **Environmental Setting (vegetation, fauna, soils, geology, landform, slope, aspect, exposure, etc.):** The feature is located in the southwest corner of an old citrus grove that was active as recently as 2007. The area is flat former agricultural land and the surface is extensively disturbed by plowing and other agricultural activities. The vegetation in the area is seasonal grasses, eucalyptus trees, and extensive overgrown weeds. The soils are silty alluvial sands deposited from the Santa Ana River in prehistory. The feature has full open exposure and no slope.

A11. **Historical Information** (full citations in A15 below):

*A12. **Age:** ☐ Prehistoric ☐ Protohistoric ☐ 1542–1769 ☐ 1769–1848 ☐ 1848–1880 ☐ 1880–1914 ☒ 1914–1945 ☒ Post 1945 ☐ Undetermined **Describe position in regional prehistoric chronology or factual historic dates if known:**

A13. **Interpretations:** This feature is likely the original weir for the historic gravity-flow irrigation system. See the attached BSO for the full historic context and evaluation.

A14. **Remarks:**

A15. **References:**

A16. **Photographs:** See attached Photograph Record. Photo Roll 3895-1-dm, frames 44-56.
Original media/negatives kept at: Applied EarthWorks, Inc., Hemet, California

***A17. Form Prepared By:** E. Mills & A. McCausland **Date:** 7/24/2018
Affiliation and Address: Applied EarthWorks, Inc., 133 N. 3550 E. Florida Ave, Suite H, Hemet CA, 92544

Photo Roll 3895-1-dm Frame 52. Shot of the crank valve facing south.

B1. Historic Name: Weir

B2. Common Name: Weir

B3. Original Use: irrigation water conveyance **B4. Present Use:** no longer in use

***B5. Architectural Style:** N/A

***B6. Construction History (construction date, alterations, and dates of alterations):** This gravity-fed irrigation weir was constructed circa 1893 as a feature of the Brown Subdivision of the Williams Tract near Redlands, CA.

***B7. Moved?:** ☐ No ☐ Yes ☒ Unknown Date: Original Location:

***B8. Related Features:** Irrigation weir (AE-3895-02H)

B9. a. Architect: unknown **b. Builder:** unknown

***B10. Significance:** Theme: Citrus Industry Area: San Bernardino Valley; Redlands
Period of Significance: 1893-1950 Property Type: Agricultural Applicable Criteria: A/1; C/3
(Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope. Also address integrity.)

Frank Elwood Brown was a key figure in the development of the eastern San Bernardino Valley, the citrus industry in the valley, and the cities of Redlands and Moreno Valley. Brown brought the most crucial resource to the area—water.

Brown came to the San Bernardino valley in 1877, and settled in the small colony of Lugonia. Brown was a graduate of the Sheffield Scientific School at Yale University, and he brought big dreams with him to California (Gonzales 2006).

Upon arrival, Brown met Edward G. Judson in Lugonia and they went into the citrus business together in 1880. With their success as citrus growers and distributors, their vision grew. Together, they decided to develop a new agricultural colony in the area with a sustainable water source and system, the Red Lands Colony (Gonzales 2006).

Brown and Judson bought over 4,000 acres of land and the Red Lands Colony was incorporated in 1881. To provide water temporarily, they bought 50 shares of water from the owners of the South Fork ditch, which provided water to Lugonia drawn from the Santa Ana River. To transport the water to Red Lands, Brown and Judson constructed a 6-mile canal from the South Fork ditch to a new reservoir. Water reservoirs allowed water from the wet months to be harnessed and saved for the dry months (Gonzales 2006). As stated in a Scribner's Magazine article from 1890,

> …the plan of water storage is to impound this water as it runs to waste in the season of flood and use it in the season of drought. Select the proper valleys for water-basins, close their outlets with dams, store great lakes of water when the mountain-snows melt, and then let it out slowly and at will through flumes and ditches to the lands below—this is the essence of the new idea [Gonzales 2006].

Brown embraced this idea and planned for the construction of a new water reservoir and dam in Bear Valley.

Brown and Judson's vision for a new water source and system was achieved in 1883 with the founding of the Bear Valley Land and Water Company, later known as the Bear Valley Irrigation Company. A new state of the art dam and channel was designed by Brown in 1884 and water from the Bear Valley reservoir made its way to the Red Lands Colony in 1885. Plentiful water attracted new settlers to the colony. The phenomenal population growth of the colony would have not been possible without the Bear Valley reservoir (Gonzales 2006).

Brown continued buying and developing agricultural land in the area, including a subdivision of the Williams Tract No. 1 located northwest of Redlands in 1893 (Barmann 1893). The Williams Tract was founded by land proprietor Henry L. Williams in 1887 in a small community known then as Gladysta.

Citrus farming began in the Redlands area in the late nineteenth century and remained prominent until the late 1950s (California Department of Transportation 2007). A Southern Pacific electric railroad spur, south of San Bernardino Avenue, was developed in 1903 to service the citrus packing houses in the area including Sunkist and Crown Jewel. Smudge pot oil was also distributed via the train (Lancaster 2013). Gravity-fed irrigation was the standard practice in southern California citrus farming from the 1880s until the drip system was introduced in the 1970s (Sanka 2006).

Beginning in the 1880s, gravity-fed irrigation systems were constructed within citrus groves across San Bernardino Valley. The long and subtle slope of the valley from both north and south to the center made gravity-fed irrigation systems ideal for irrigation (California Department of Transportation et al. 2000). These systems distributed water

*B10. Significance Continued:

using networks of underground cast-iron pipes, flow-control boxes, and gravity-fed irrigation flumes made of local rocks with cement mortar (California Department of Transportation et al. 2000). This state of the art water system for the area was highlighted on the Williams Tract promotional map as well as the 1893 San Bernardino Irrigation Map. The Williams Tract Map declared that property owners could raise the best oranges in the state on the land and the oldest orange groves in Redlands were within one mile (William c. 1890). With an abundance of water, Brown's subdivision was perfect for the largest and fastest growing industry in the region, citrus farming.

The Project area includes three parcels within Block 1 Lots 1 and 2 and Block 2 Lots 1,2,3,6, and 7 of the Brown Subdivision of Williams Tract No. 1. Between 1895 and 1951, the following individuals, listed in no particular order, owned portions of the subject lots: Melvin R. Gay, Geo. W. Mead, B.W Cave, Belle Michaeltree, Frank E. Brown, 1st National Bank of Redlands, Hannah E. Irvin, W.K. Lee, C.H Park, Florence C. & Lester W. Finlay, J.D. Langford & Co., Will W. De Hart, Ruth McNair, Maude Armstrong, Gladys L. Pate, Charles S. Lombard, W.M. & Clara Henderson, Ellis G. Grace, B. Kennedy, Savings Bank, J. Richard Lane, Harry N. & Bertha F. Morse, Ino. W. Thayer, and J.H. Maggie Wilkes. All owners likely maintained citrus groves on their properties. Ownership of these lots changed throughout the twentieth century; however, the land use did not change. Historical aerial images show that the Project area contained an orchard from at least 1930 and property tree values were documented beginning in 1923 (San Bernardino County Assessor Books; UCSB 2018). The 1954 edition of the USGS Redlands quad map shows the existence of citrus groves and farms within the Project area as well as on the surrounding properties. The citrus groves and farms were demolished around 2007 (NETR online 2018).

Citrus production began in the Redlands area in the late nineteenth century and remained prominent until the late 1950s (City of Redlands 2018). While ownership of the subject property changed throughout the twentieth century, the land use did not change. This property was developed as an agricultural lot in the late 1880s as a part of Williams Tract No.1. In 1893 Frank Brown subdivided the Williams Tract No. 1, and these properties became Lots within Block 1 and 2 of the Brown Subdivision. Frank Brown was the founder and head engineer of the Bear Valley Land and Water Company. He installed gravity-fed irrigation systems on his Lots to service the growing citrus industry. The water for this system came from the Bear Valley Land and Water Company's new state of the art reservoir in Bear Valley, now known as Big Bear Lake. This sustainable water source brought growth and prosperity to the Redlands region, resulting in a prosperous citrus industry, and gravity-fed irrigation became the standard practice in southern California orchard production until the drip system was introduced in the 1970s (Gustafson 1980; Taylor 2006).Several land tracts in the area were developed in the 1890s due to this sustainable water source. These land tracts, including the Williams Tract, became extensive citrus groves which were owned by local families and entrepreneurs. Historical aerial images confirmed that the Project area contained an orchard by 1930 (UCSB 2018). The 1954 edition of the USGS Redlands topographic quadrangle map shows a citrus grove on the property as well as on the surrounding properties. Thus, it appears this property was a citrus grove from the 1890s until circa 2007, when the trees were removed, explaining why the historic gravity-fed irrigation system is still extant on the property.

The weir was constructed circa 1893, within the Frank Brown subdivision of Williams Tract No. 1. The weir has a direct association with irrigation practices in San Bernardino Valley and development of the citrus industry in Redlands, events that were important in local and regional history. The weir is significant under CRHR Criterion 1, with the period of significance from 1893, when the Brown Subdivision was created until 1950, the end of the citrus industry boom. Ownership of the properties changed throughout the late nineteenth and twentieth centuries. Past owners include local families, entrepreneurs, and banks who wanted to make a profit in the lucrative citrus industry. The most historically significant property owner was Frank Brown; however, other historic resources in the region, including the old Bear Valley Dam, listed as a California Historical Landmark, better convey Brown's historical contribution to the region. With no direct association with any other important historical persons, the property is not considered significant under CRHR Criterion 2. The weir embodies the distinctive design and construction characteristics of a gravity-fed irrigation weir from the turn of the 20th century, and is significant under CRHR Criterion 3. This gravity-flow irrigation weir does not appear to meet CRHR Criterion 4 individually for its potential to provide information important in history or prehistory. However, the larger Bear Valley Land and Water Company water system, the Williams Tract irrigation system, and adjoining orchards, with which this flume is associated, could potentially be eligible under Criterion 4. The extent of these systems is not fully known and little documentation on the layout of the systems was found during current historic research. Therefore, further investigation and study of the remaining physical elements of these systems have the potential to yield new information about the systems and their contribution to the historic Redlands Citrus industry. Finally, the weir may

be a contributing element of a larger historic citrus district in Redlands. Several gravity-fed irrigation systems, oil tanks, citrus packing houses, and electrical railways have been documented within a 1-mile of the subject property. Additional research and studies are needed to investigate the extent, significance, and integrity of this potential historic district.

B11. Additional Resource Attributes (list attributes and codes):

***B12. References:**

Barmann, A.
1893 Browns Subdivision Map. For reference at the San Bernardino County Recorder's Office.

California Department of Transportation
2007 *A Historical Context and Archaeological Research Design for Agricultural Properties in California*. Sacramento, California.

California Department of Transportation and JRP Historical Consulting Services
2000 *Water Conveyance Systems in California*. Sacramento, California

City of Redlands
2018 Citrus Preservation. Website. Accessed January 8, 2018. http://www.cityofredlands.org/city-hall/departments/quality_of_life/citrus_preservation/

Gonzales, Nathan
2006 *Bear Valley Irrigation Company.* Bacchus Press, USA.

Gustafson, Don
1981 *Drip Irrigation of Citrus-Panel Drip Irrigation of Citrus in California*. Accessed online on January 29, http://irrec.ifas.ufl.edu/flcitrus/pdfs/short_course_and_workshop/secondinternationalcitrus/Gustafson-Drip_Irrigation.pdf

Lancaster, James E. and Bill Messecar
2013 *Historic Packing Houses and Other Industrial Structures in Southern California*. Website, accessed January 25, 2018. http://coastdaylight.com/ljames1/scph_sb_redlands.html

Lippincott, J. B.
1893 *Map of San Bernardino, Redlands, and Vicinity Showing Location of Irrigated Lands.*

Los Angeles Herald
1887 *Gladysta*. *Los Angeles Herald*, October 10, 1887. Available online through the California Digital Newspaper Collection.

Los Angeles Public Library Photo Collection
1902 Irrigating oranges. Source: Calisphere Date of access: January 25 2018 20:32 Permalink: https://calisphere.org/item/234202ffc0ba1dacb0333f855f3ed89a/

Mission Brown Subdivision of H.L. Williams Tract 1 Lot Books
1895-1903, 1904-1907, 1908-1912, 1913-1917, 1923-1928, 1929-1934, 1945-1939, 1940-1944, 1946-1951. On reference at the San Bernardino County Archives.

NETR online
2018 http://www.historicaerials.com/viewer. Accessed January 2, 2018.

San Bernardino County Office of the Assessor
2018 Ownership History Report for Parcel 0292-043-07-0000

Sanka, J.
2006 DPR 523 Site form 36-012852, dated August 8 and 9, 2006. On file, South Central Coastal Information Center, California State University, Fullerton.

Tang, Bai "Tom"
2000 DPR Site Record for CA-SBR-9991 H. Dated July 13, 2000. On File at the San Bernardino Archaeological Information Center.

Taylor, Laurie
2006 DPR 523 Site form 36-012468, dated June 26, 2006. On file, South Central Coastal Information Center, California State University, Fullerton.

UCSB
2018 Digital Aerial Photograph Collection. https://www.library.ucsb.edu/src/airphotos.

United States Geological Survey
1899, 1901, 1954, 1967, 1975, 1980, 1988, 1996 *Redlands, California, Quadrangle Map, 7-minute series*. U.S. Geological Survey.

William, Henry L.
1890s c. *Williams Tract Map*. On file at the Smiley Library Heritage Room.

B13. Remarks:

***B14. Evaluator:** Annie McCausland
Date of Evaluation: 08/02/18

This space reserved for official comments.

Year: 2018 **Camera Type:** Panasonic Lumix **Roll Number:** 3895-1-dm

Image Type: ☒ Digital ☐ 35mm B&W film ☐ 35mm Color Print film ☐ 35mm Color Slide film

Photographer: E. Mills **Media Stored at:** Applied EarthWorks, Inc., Hemet, CA

Mo.	Day	Time	Exp.	Subject	Facing
7	6	0920	044	3895-02H; Feature 1 overview.	S
7	6	0920	045	3895-02H; Feature 1, overview of crank valve.	S
7	6	0920	046	3895-02H; Feature 1, overview of round pipe housing.	S
7	6	0921	047 & 048	3895-02H; Feature 1, overviews from east side.	W, WNW
7	6	0921	049	3895-02H; Feature 1, overview from south.	N
7	6	0921	050	3895-02H; Feature 1, overview from southwest.	NE
7	6	0921	051	3895-02H; Feature 1, overview from west side.	ESE
7	6	0922	052	3895-02H; Feature 1, crank valve.	S
7	6	0922	053 & 054	3895-02H; Feature 1, crank valve.	Detail
7	6	0922	055	3895-02H; Feature 1, crank valve.	S
7	6	0922	056	3895-02H; Feature 1 overview.	SW

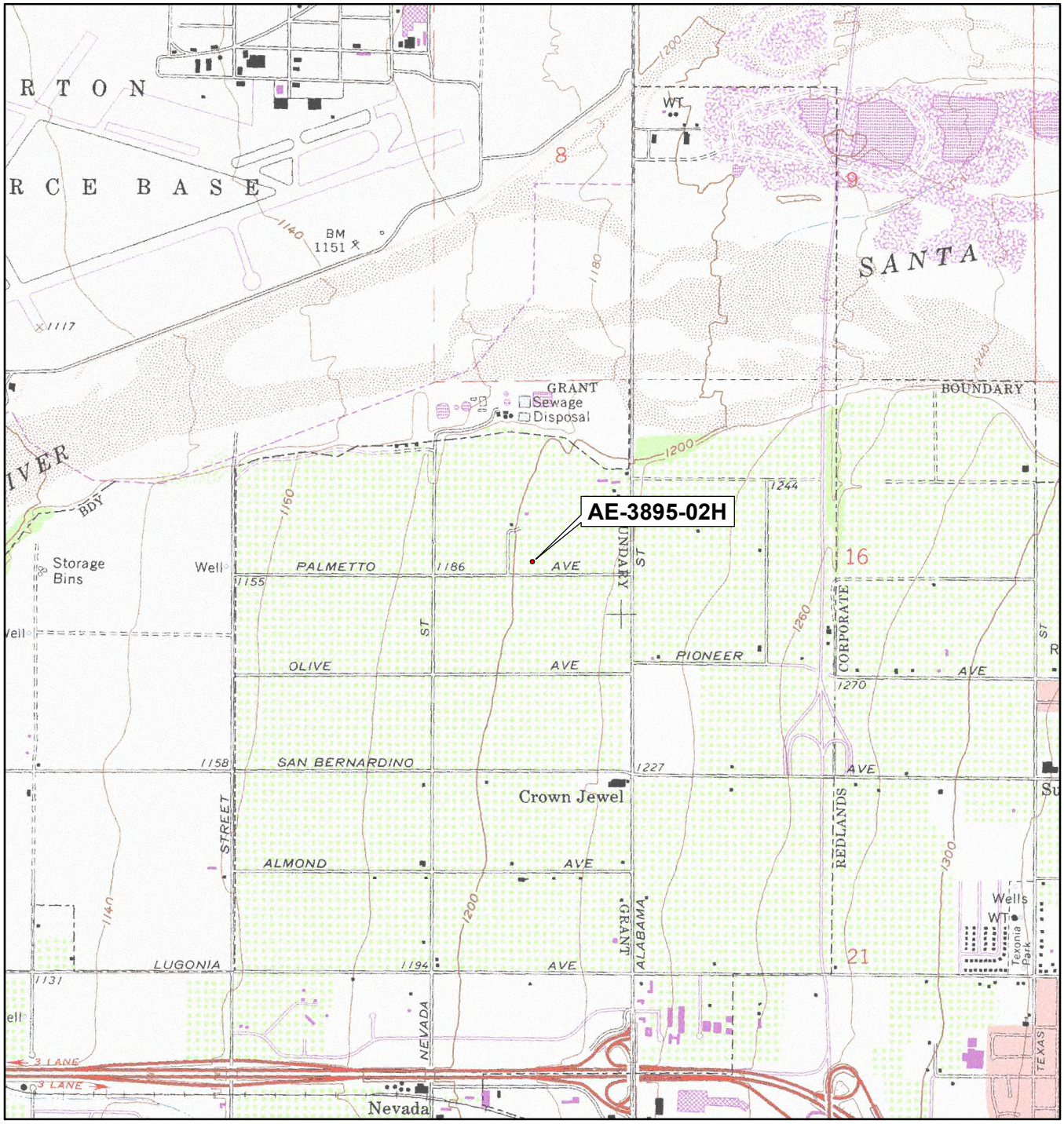
State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

LOCATION MAP

Primary # 36-032489
HRI#
Trinomial CA-SBR-32489H

Page 9 **of** 10 **Resource Name or #:** AE-3895-02H **Scale:** 1:24,000

Map Name: Redlands (1967, photorevised 1980), CA, USGS 7.5' quadrangle **Date:** 2018



SCALE 1:24,000

1 0.5 0 1 Miles

1,000 0 1,000 2,000 3,000 4,000 5,000 6,000 7,000 Feet

1 0.5 0 1 Kilometers

TRUE NORTH

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
SKETCH MAP

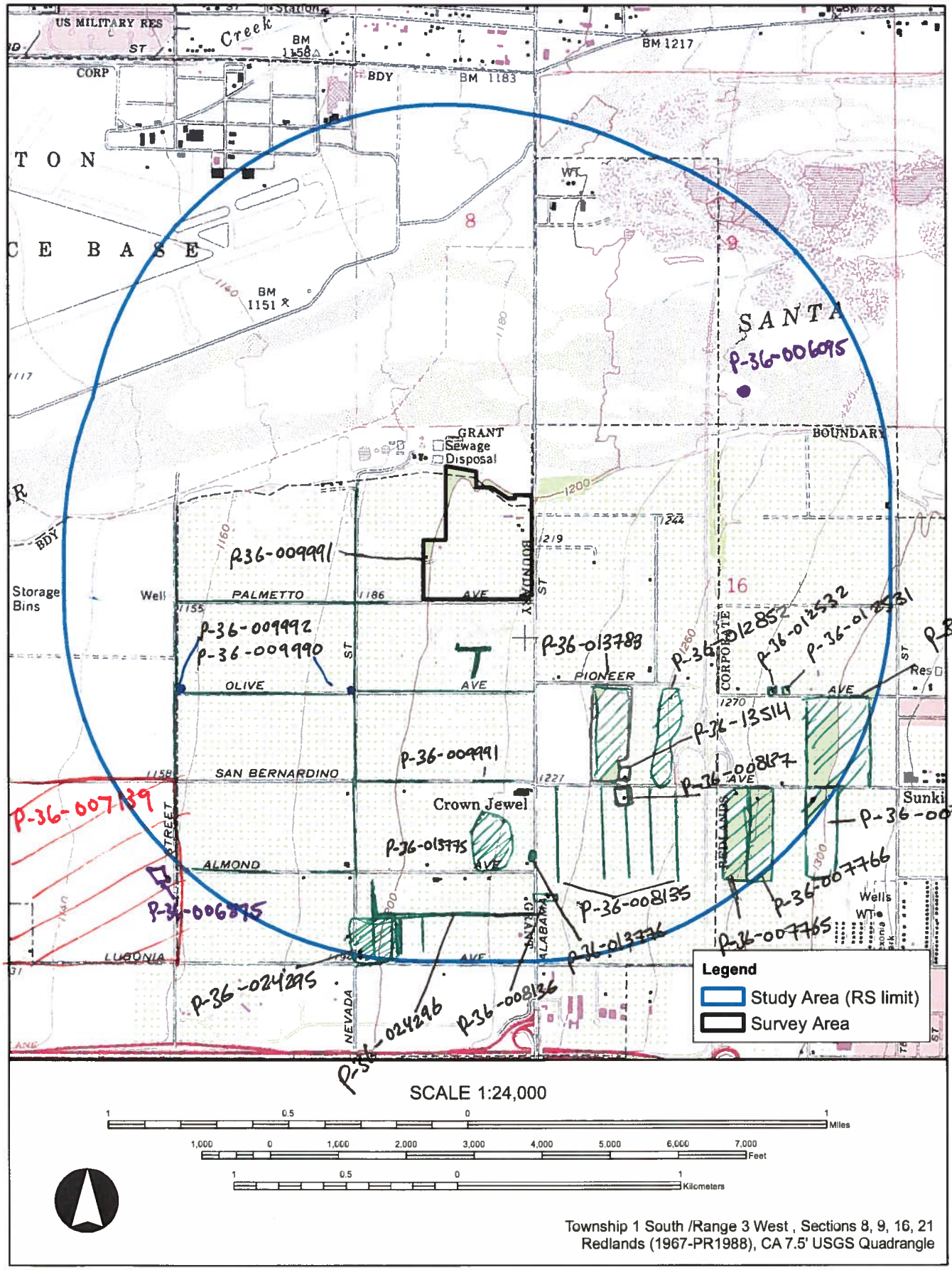
Primary # 36-032489
HRI#
Trinomial CA-SBR-32489H

Page 10 **of** 10 ***Resource Name or #:** (Assigned by recorder) Æ-3895-02H

***Drawn by:** E.Mills ***Scale:** 1 inch equals 30 feet ***Date of map:** August 2018

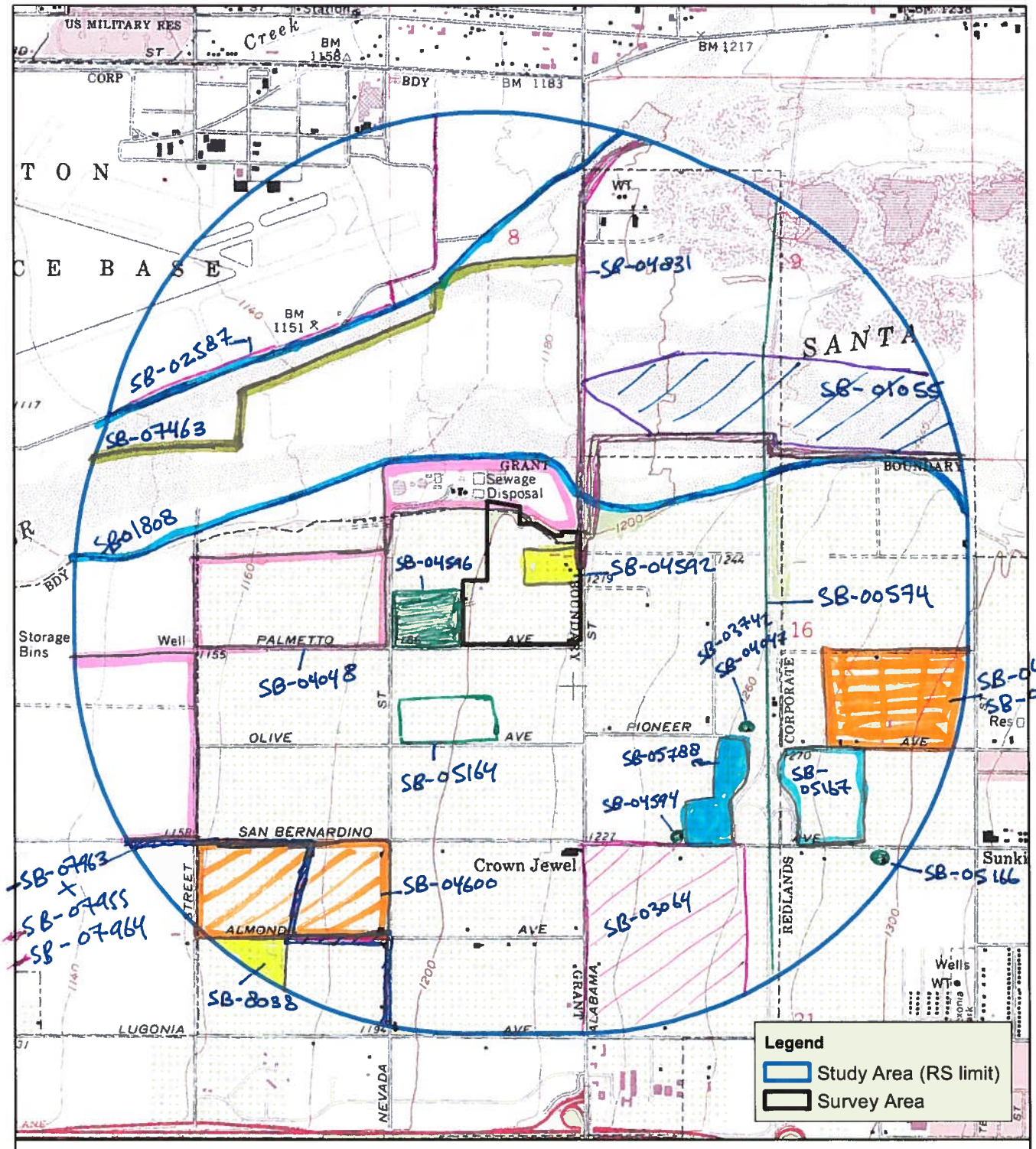
APPENDIX C

Confidential Records Search Maps



Records Search location map for the *Webb-Duke-Alabama Street and Palmetto Avenue Project-AE 3895*.

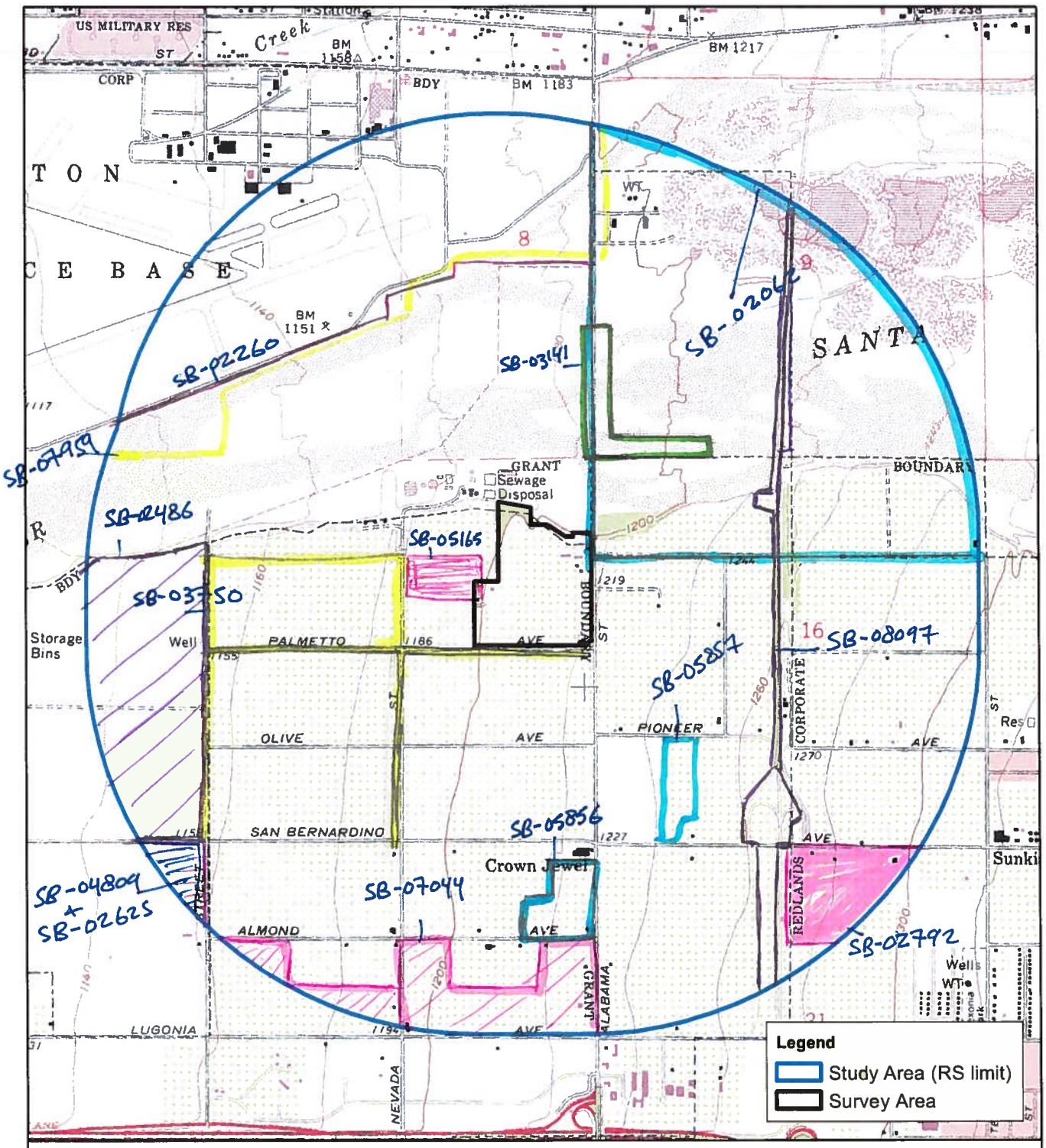
Resources



Records Search location map for the *Webb-Duke-Alabama Street and Palmetto Avenue Project-AE 3895*.

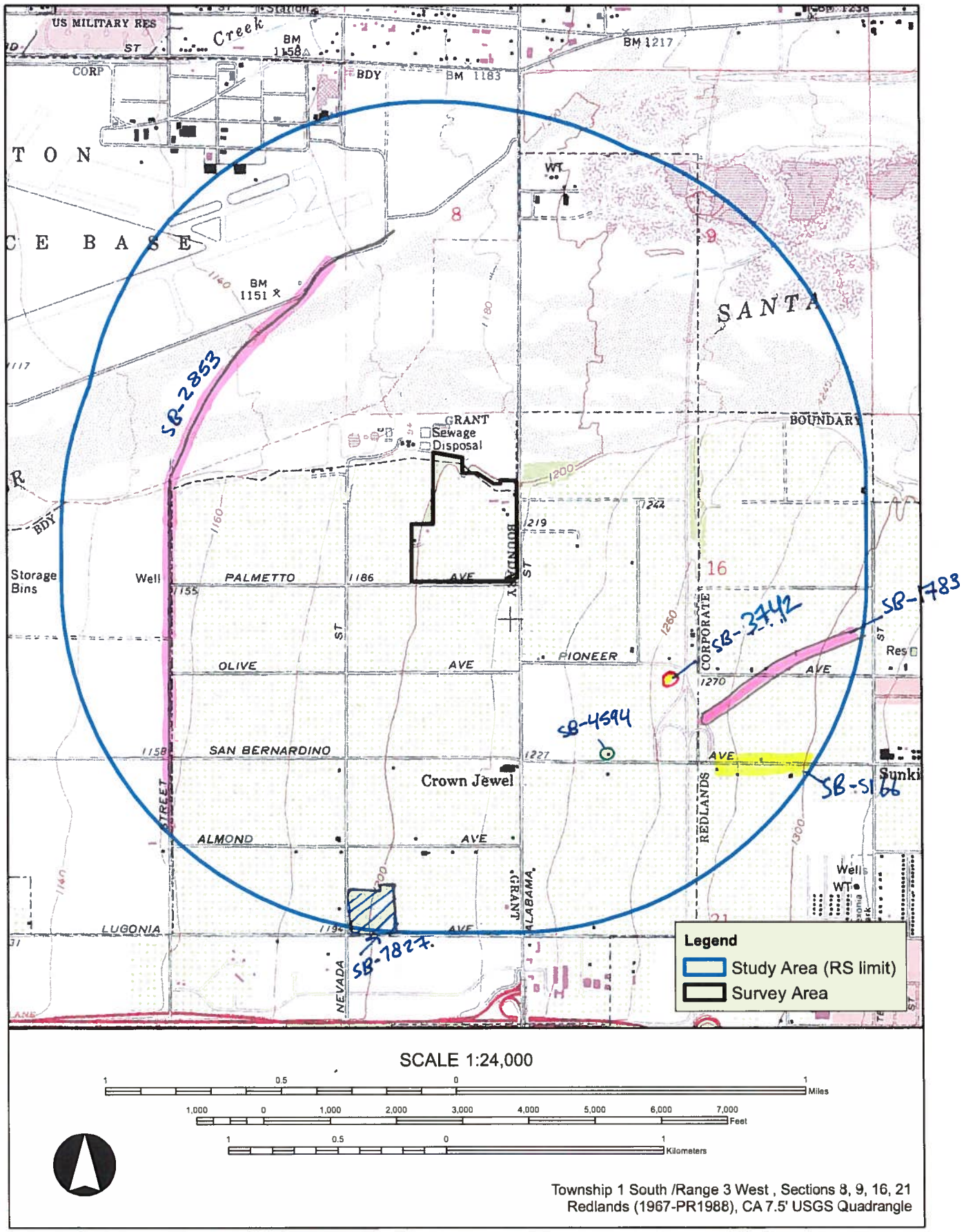
21 xReports/2 Reports within the project area: SB-04592, SB-04048

within 1-mile



Records Search location map for the *Webb-Duke-Alabama Street and Palmetto Avenue Project-AE 3895*.

14 Reports within project area: SB-02062, SB-05165 SB-03750



Records Search location map for the *Webb-Duke-Alabama Street and Palmetto Avenue Project-AE 3895*.

6 Reports within a 1-mile radius
SB-2863, SB-4594, SB-5166
SB-7827, SB-3742, SB-1783

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Table 1 – Total Construction-Related Fuel Consumption

Duke Warehouse at Alabama And Palmetto

Fuel	Consumption	
Diesel		
On-Road Construction Trips[1]	91,017	Gallons
Off-Road Construction Equipment[2]	52,918	Gallons
Diesel Total	**143,935**	**Gallons**
Gasoline		
On-Road Construction Trips[1]	149,534	Gallons
Off-Road Construction Equipment[3]	-	Gallons
Gasoline Total	**149,534**	**Gallons**

Notes:

1. On-road mobile source fuel use based on vehicle miles traveled (VMT) from CalEEMod for construction in 2019 and fleet-average fuel consumption in gallons per mile from EMFAC2014 web based data for San Bernardino County. See Table 2 for calculation details.
2. Off-road mobile source fuel usage based on a fuel usage rate of 0.05 gallons of diesel per horsepower (HP)-hour, based on SCAQMD CEQA Air Quality Handbook, Table A9-3E.
3. All emissions from off-road construction equipment were assumed to be diesel.

Table 2 – On-Road Construction Trip Estimates

Duke Warehouse at Alabama And Palmetto

Trip Type	Trips	Trip length	Vehicle Miles Traveled (VMT)	Fuel Efficiency	Annual Fuel Usage[1]	
	(trips)	(miles)	(miles)	(mpg)	(Fuel)	(gallon)
Worker[2,3]	254,420	14.7	3,739,974	24.4	Gasoline	149,534
Vendor[4]	96,420	6.9	665,298	7.6	Diesel	91,017
Hauling[5]	0	20	0	6.2	Diesel	0

Notes:

1. On-road mobile source fuel use based on vehicle miles traveled (VMT) from CalEEMod output (See Air Quality/GHG Memo) for all years of construction and fleet-average fuel consumption in gallons per mile from EMFAC2014 web based data for 2019 in San Bernardino County to ensure a conservative analysis.
2. Worker trips were assumed to be 100% gasoline powered vehicles.
3. Per CalEEMod, worker Trips were assumed to be 50% LDA, 25% LDT1, and 25% LDT2.
4. Vendor trips were assumed to be 50% MHDT and 50% HHDT, split evenly between the MHDT and HHDT construction categories.
5. Per CalEEMod, hauling trips were assumed to be 100% HHDT.

Table 3 – Annual Energy Consumption from Operation

Duke Warehouse at Alabama And Palmetto

Fuel Type	Energy Consumption	Units	Natural Gas	Units
Electricity				
Building[1]	2,814,700	kWh/year	**2,421,120**	kBTU/yr
Water[2]	79,682	kWh/year		
Total Electricity	**2,894,382**	kWh/year		
Mobile[3]				
Gasoline	**517,472**	gallons/year		
Diesel	**470,558**	gallons/year		

Notes:

1. Building electricity use from CalEEMod output (See Air Quality/GHG Memo).
2. Calculated based on the Project's annual water consumption using CalEEMod SCAQMD energy intensity of 0.0111 kWhr per gallon for supply, distribution, and treatment of water and .013021 kWhr per gallon for supply, distribution, and treatment of water and wastewater treatment.
3. Mobile source fuel use based on annual vehicle miles traveled (VMT) from CalEEMod output for operational year 2020 and fleet-average fuel consumption in gallons per mile from EMFAC2014 web based data in San Bernardino County.

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GEOTECHNICAL INVESTIGATION
PROPOSED COMMERCIAL/INDUSTRIAL BUILDING

NWC Alabama Street and Palmetto Avenue
San Bernardino, California
for
Duke Realty

SoCalGeo
SOUTHERN CALIFORNIA GEOTECHNICAL
A California Corporation

December 15, 2017

SOUTHERN CALIFORNIA GEOTECHNICAL
A California Corporation

Duke Realty
200 Spectrum Center Drive, Suite 1600
Irvine, California 92618

Attention: Mr. Adam Schmid
Development Services Manager

Project No.: **17G218-1**

Subject: **Geotechnical Investigation**
Proposed Commercial/Industrial Building
NWC Alabama Street and Palmetto Avenue
San Bernardino, California

Gentlemen:

In accordance with your request, we have conducted a geotechnical investigation at the subject site. We are pleased to present this report summarizing the conclusions and recommendations developed from our investigation.

We sincerely appreciate the opportunity to be of service on this project. We look forward to providing additional consulting services during the course of the project. If we may be of further assistance in any manner, please contact our office.

Respectfully Submitted,

SOUTHERN CALIFORNIA GEOTECHNICAL, INC.

Pablo Montes Jr.
Staff Engineer

Robert G. Trazo, M.Sc., GE 2655
Principal Engineer

REGISTERED PROFESSIONAL ENGINEER
ROBERT TRAZO
No. 2655
GEOTECHNICAL
STATE OF CALIFORNIA

Distribution: (1) Addressee

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APPENDICES

A Plate 1: Site Location Map
Plate 2: Boring Location Plan
B Boring Logs
C Laboratory Test Results
D Grading Guide Specifications
E Seismic Design Parameters

1.0 EXECUTIVE SUMMARY

Presented below is a brief summary of the conclusions and recommendations of this investigation. Since this summary is not all inclusive, it should be read in complete context with the entire report.

Site Preparation Recommendations

- Initial site preparation should include stripping of any topsoil or vegetation. At the time of the site investigation, ground surface cover consisted of moderate to dense native grass and weed growth. However, the site was previously utilized as a citrus grove. Any organic materials, including root-masses should be removed in their entirety. These materials should be disposed of off-site.
- Initial site preparation should also include demolition of any remnants from the previous development. Demolition procedures should include all foundations, floor slabs, utilities, septic systems and any other subsurface improvements that will not remain in place for use with the new development. Debris resultant from demolition activities should be disposed of off-site.
- The near-surface soils generally consist of native alluvium and alluvial soils disturbed during farming operations. These soils generally consist of very loose to loose silty fine sands and fine sandy silts. One of the borings in the southeastern region of the property encountered artificial fill soils, extending to a depth of 4½± feet below existing site grades.
- Based on the low relative densities and the severe potential for consolidation/collapse of the near-surface soils, remedial grading is recommended to be performed within the proposed building pad area. The existing soils within the proposed building area should be overexcavated to a depth of 5 feet below existing grade and to a depth of 5 feet below proposed pad grade. Within the building area, the proposed foundation influence zones should be overexcavated to a depth of 4 feet below proposed foundation bearing grade. The overexcavation should also extend to a sufficient depth to remove any artificial fill soils.
- After the overexcavation has been completed, the resulting subgrade soils should be evaluated by the geotechnical engineer to identify any additional soils that should be overexcavated. The resulting soils should be scarified and moisture conditioned to achieve a moisture content of 0 to 4 percent above optimum moisture, to a depth of at least 12 inches. The overexcavation subgrade soils should then be recompacted under the observation of the geotechnical engineer. The previously excavated soils may then be replaced as compacted structural fill.
- The new pavement and flatwork subgrade soils are recommended to be scarified to a depth of 12± inches, thoroughly moisture conditioned and recompacted to at least 90 percent of the ASTM D-1557 maximum dry density.

Building Foundation Recommendations

- Conventional shallow foundations, supported in newly placed structural fill soils.
- Maximum, net allowable soil bearing pressure: 2,500 lbs/ft^2.
- Reinforcement consisting of at least two (2) No. 5 rebars (1 top and 1 bottom) in strip footings. Additional reinforcement may be necessary for structural considerations.

Building Floor Slab Recommendations

- Conventional Slab on Grade, at least 5½ inches thick
- Modulus of Subgrade Reaction: k = 150 psi/in
- Reinforcement is not considered to be necessary for geotechnical considerations.
- The actual thickness and reinforcement of the floor slab should be determined by the structural engineer, based on the imposed slab loading.

Pavements

ASPHALT PAVEMENTS (R = 50)					
Materials	**Thickness (inches)**				
	Auto Parking and Auto Drive Lanes (TI = 4.0 to 5.0)	Truck Traffic			
		TI = 6.0	TI = 7.0	TI = 8.0	TI = 9.0
Asphalt Concrete	3	3½	4	5	5½
Aggregate Base	3	4	5	5	7
Compacted Subgrade	12	12	12	12	12

PORTLAND CEMENT CONCRETE PAVEMENTS (R = 50)				
Materials	**Thickness (inches)**			
	Autos and Light Truck Traffic (TI = 6.0)	Truck Traffic		
		TI = 7.0	TI = 8.0	TI = 9.0
PCC	5	6	7	8
Compacted Subgrade (95% minimum compaction)	12	12	12	12

2.0 SCOPE OF SERVICES

The scope of services performed for this project was in accordance with our Proposal No. 17P430, dated November 22, 2017. The scope of services included a visual site reconnaissance, subsurface exploration, field and laboratory testing, and geotechnical engineering analysis to provide criteria for preparing the design of the building foundations, building floor slab, and parking lot pavements along with site preparation recommendations and construction considerations for the proposed development. The evaluation of the environmental aspects of this site was beyond the scope of services for this geotechnical investigation.

3.0 SITE AND PROJECT DESCRIPTION

3.1 Site Conditions

The subject site is located at the northwest corner of Palmetto Avenue and Alabama Street in an unincorporated portion of San Bernardino County near Redlands, California. The site is bounded to the north by a vacant lot, to the west by vacant land and a commercial/industrial building, to the south by Palmetto Avenue, and to the east by Alabama Street. The general location of the site is illustrated on the Site Location Map, included as Plate 1 of this report.

The site consists of several parcels which total 56± acres in size. The majority of the site is vacant and undeveloped. Historical aerial photographs obtained from the internet indicate that there was a single-family residence located in the northeast area of the site until being removed sometime after 2007. The majority of the property was previously utilized as a citrus orchard up until approximately 1994, when all of the trees were removed from the northern half. All of the citrus trees appear to have been removed from the remaining areas of the site by 2007. The western parcel was previously developed with a farm house within the northern region. This structure was removed by February 2016. However, the majority of this parcel is currently being utilized for agricultural purposes. The ground surface cover in this area consists of exposed soil with moderate to dense native grass and weed growth with several large trees located throughout the site. The northeast corner of the overall site is a natural drainage coarse, approximately 20± feet lower in elevation than the adjacent site grades.

Detailed topographic information was not available at the time of this report. However, based on topographic information obtained from Google Earth, the site topography ranges from 1199± feet mean sea level (msl) in the northern area of the site to 1224± feet msl in the southeastern area of the site. However, the bottom of the existing drainage coarse, located at the northeast corner of the site is at an elevation of 1181± feet msl. With the exception of the drainage coarse, the site topography slopes gently downward to the northwest at a gradient of 1± percent. In the northeast corner of the site, the site grades slope downward into the drainage coarse at an approximate inclination of ½h:1v (horizontal to vertical).

3.2 Proposed Development

Based on a site plan provided by the client, we understand that the site will be developed with one (1) commercial/industrial building. The building will be approximately 1,108,904 ft² in size and will be located in the central area of the site. Loading docks will be located on the west and east sides of the building. The building will be surrounded by asphaltic concrete pavements for automobile parking and drive lanes and Portland cement concrete pavements for the loading dock areas. Several landscape planters and concrete flatwork are expected to be included throughout the site. The site plan does not indicate any proposed development within the existing drainage coarse located at the northeast corner of the site.

Detailed structural information has not been provided. It is assumed that the new building will be

a single-story structure of tilt-up concrete construction, typically supported on conventional shallow foundations with a concrete slab-on-grade floor. Based on the assumed construction, maximum column and wall loads are expected to be on the order of 100 kips and 4 to 7 kips per linear foot, respectively.

No significant amounts of below grade construction, such as basements or crawl spaces, are expected to be included in the proposed development. Based on the assumed topography, cuts and fills of 4 to 7± feet are expected to be necessary to achieve the proposed site grades.

4.0 SUBSURFACE EXPLORATION

4.1 Scope of Exploration/Sampling Methods

The subsurface exploration conducted for this project consisted of ten (10) borings advanced to depths of 5 to 30± feet below currently existing site grades. All of the borings were logged during drilling by a member of our staff.

The borings were advanced with hollow-stem augers, by a conventional truck-mounted drilling rig. Representative bulk and relatively undisturbed soil samples were taken during drilling. Relatively undisturbed soil samples were taken with a split barrel "California Sampler" containing a series of one inch long, 2.416± inch diameter brass rings. This sampling method is described in ASTM Test Method D-3550. In-situ samples were also taken using a 1.4± inch inside diameter split spoon sampler, in general accordance with ASTM D-1586. Both of these samplers are driven into the ground with successive blows of a 140-pound weight falling 30 inches. The blow counts obtained during driving are recorded for further analysis. Bulk samples were collected in plastic bags to retain their original moisture content. The relatively undisturbed ring samples were placed in molded plastic sleeves that were then sealed and transported to our laboratory.

The approximate locations of the borings are indicated on the Boring Location Plan, included as Plate 2 in Appendix A of this report. The Boring Logs, which illustrate the conditions encountered at the boring locations, as well as the results of some of the laboratory testing, are included in Appendix B.

4.2 Geotechnical Conditions

Artificial Fill

Artificial fill soils were encountered at the ground surface at Boring No. B-7. The fill soils extend to a depth of 4½± feet below the existing site grades. The fill soils generally consist of very loose to loose fine to medium sands with trace fine gravel content. The fill soils possess a disturbed and mottled appearance resulting in their classification as artificial fill.

Additional soils classified as possible fill were encountered beneath the fill soils at Boring No. B-7 extending to depths of 4½ to 6½± feet below the existing site grades. The possible fill soils consist of loose fine to medium sands with varying amounts of coarse sand, silt, and fine gravel content. These materials resemble the fill soils encountered at the site, but do not possess a disturbed or mottled appearance, resulting in their classification as possible fill.

Alluvium

Native alluvial soils were encountered at the ground surface at all of the boring locations, with the exception of Boring No. B-7. The near-surface alluvium possesses a disturbed appearance,

and is identified as disturbed alluvium. These soils generally consist of very loose to loose silty fine sands to fine sandy silts with trace amounts of fine root fibers. These soils resemble the composition and color of the native alluvium encountered at similar depths, but also possess a disturbed appearance.

Undisturbed native alluvial soils were encountered at all of the boring locations, beneath the disturbed alluvium or beneath the fill soils, extending to the maximum depth explored of 30± feet below existing site grades. The native alluvium generally consists of very loose to medium dense silty fine sands, fine sandy silts and fine to medium sands.

Groundwater

Free water was not encountered during the drilling of any of the borings. Based on the lack of any water within the borings, and the moisture contents of the recovered soil samples, the static groundwater is considered to have existed at a depth in excess of 30± feet at the time of the subsurface exploration.

As part of our research, we reviewed available groundwater data in order to determine the historic high groundwater level for the site. USGS Bulletin 1898 (Matti and Carson, 1991) indicates that the minimum historic depth to groundwater at the site is in excess of 50± feet.

5.0 LABORATORY TESTING

The soil samples recovered from the subsurface exploration were returned to our laboratory for further testing to determine selected physical and engineering properties of the soils. The tests are briefly discussed below. It should be noted that the test results are specific to the actual samples tested, and variations could be expected at other locations and depths.

Classification

All recovered soil samples were classified using the Unified Soil Classification System (USCS), in accordance with ASTM D-2488. Field identifications were then supplemented with additional visual classifications and/or by laboratory testing. The USCS classifications are shown on the Boring Logs and are periodically referenced throughout this report.

Density and Moisture Content

The density has been determined for selected relatively undisturbed ring samples. These densities were determined in general accordance with the method presented in ASTM D-2937. The results are recorded as dry unit weight in pounds per cubic foot. The moisture contents are determined in accordance with ASTM D-2216, and are expressed as a percentage of the dry weight. These test results are presented on the Boring Logs.

Consolidation

Selected soil samples have been tested to determine their consolidation potential, in accordance with ASTM D-2435. The testing apparatus is designed to accept either natural or remolded samples in a one-inch high ring, approximately 2.416 inches in diameter. Each sample is then loaded incrementally in a geometric progression and the resulting deflection is recorded at selected time intervals. Porous stones are in contact with the top and bottom of the sample to permit the addition or release of pore water. The samples are typically inundated with water at an intermediate load to determine their potential for collapse or heave. The results of the consolidation testing are plotted on Plates C-1 through C-12 in Appendix C of this report.

Maximum Dry Density and Optimum Moisture Content

Two (2) representative bulk samples have been tested for their maximum dry densities and optimum moisture contents. The results have been obtained using the Modified Proctor procedure, per ASTM D-1557 and are presented on Plates C-13 and C-14 in Appendix C of this report. This test is generally used to compare the in-situ densities of undisturbed field samples, and for later compaction testing. Additional testing of other soil types or soil mixes may be necessary at a later date.

Soluble Sulfates

Representative samples of the near-surface soils were submitted to a subcontracted analytical laboratory for determination of soluble sulfate content. Soluble sulfates are naturally present in soils, and if the concentration is high enough, can result in degradation of concrete which comes

into contact with these soils. The results of the soluble sulfate testing are presented below, and are discussed further in a subsequent section of this report.

Sample Identification	Soluble Sulfates (%)	Sulfate Classification
B-1 @ 0 to 5 feet	0.001	Negligible
B-3 @ 0 to 5 feet	<0.001	Negligible
B-5 @ 0 to 5 feet	<0.001	Negligible

6.0 CONCLUSIONS AND RECOMMENDATIONS

Based on the results of our review, field exploration, laboratory testing and geotechnical analysis, the proposed development is considered feasible from a geotechnical standpoint. The recommendations contained in this report should be taken into the design, construction, and grading considerations.

The recommendations are contingent upon all grading and foundation construction activities being monitored by the geotechnical engineer of record. The recommendations are provided with the assumption that an adequate program of client consultation, construction monitoring, and testing will be performed during the final design and construction phases to verify compliance with these recommendations. Maintaining Southern California Geotechnical, Inc., (SCG) as the geotechnical consultant from the beginning to the end of the project will provide continuity of services. The geotechnical engineering firm providing testing and observation services shall assume the responsibility of Geotechnical Engineer of Record.

The Grading Guide Specifications, included as Appendix D, should be considered part of this report, and should be incorporated into the project specifications. The contractor and/or owner of the development should bring to the attention of the geotechnical engineer any conditions that differ from those stated in this report, or which may be detrimental for the development.

6.1 Seismic Design Considerations

The subject site is located in an area which is subject to strong ground motions due to earthquakes. The performance of a site specific seismic hazards analysis was beyond the scope of this investigation. However, numerous faults capable of producing significant ground motions are located near the subject site. Due to economic considerations, it is not generally considered reasonable to design a structure that is not susceptible to earthquake damage. Therefore, significant damage to structures may be unavoidable during large earthquakes. The proposed structures should, however, be designed to resist structural collapse and thereby provide reasonable protection from serious injury, catastrophic property damage and loss of life.

Faulting and Seismicity

Research of available maps indicates that the subject site is not located within an Alquist-Priolo Earthquake Fault Zone. Furthermore, SCG did not identify any evidence of faulting during the geotechnical investigation. Therefore, the possibility of significant fault rupture on the site is considered to be low.

Seismic Design Parameters

Based on standards in place at the time of this report, the proposed development is expected to be designed in accordance with the requirements of the 2016 edition of the California Building Code (CBC). The CBC provides procedures for earthquake resistant structural design that include considerations for on-site soil conditions, occupancy, and the configuration of the structure

including the structural system and height. The seismic design parameters presented below are based on the soil profile and the proximity of known faults with respect to the subject site.

The 2016 CBC Seismic Design Parameters have been generated using U.S. Seismic Design Maps, a web-based software application developed by the United States Geological Survey. This software application, available at the USGS web site, calculates seismic design parameters in accordance with the 2016 CBC, utilizing a database of deterministic site accelerations at 0.01 degree intervals. The table below is a compilation of the data provided by the USGS application. A copy of the output generated from this program is included in Appendix E of this report. A copy of the Design Response Spectrum, as generated by the USGS application is also included in Appendix E. Based on this output, the following parameters may be utilized for the subject site:

2016 CBC SEISMIC DESIGN PARAMETERS

Parameter		Value
Mapped Spectral Acceleration at 0.2 sec Period	S_S	1.838
Mapped Spectral Acceleration at 1.0 sec Period	S_1	0.879
Site Class	---	D
Site Modified Spectral Acceleration at 0.2 sec Period	S_{MS}	1.838
Site Modified Spectral Acceleration at 1.0 sec Period	S_{M1}	1.318
Design Spectral Acceleration at 0.2 sec Period	S_{DS}	1.225
Design Spectral Acceleration at 1.0 sec Period	S_{D1}	0.879

Liquefaction

Liquefaction is the loss of strength in generally cohesionless, saturated soils when the pore-water pressure induced in the soil by a seismic event becomes equal to or exceeds the overburden pressure. The primary factors which influence the potential for liquefaction include groundwater table elevation, soil type and plasticity characteristics, relative density of the soil, initial confining pressure, and intensity and duration of ground shaking. The depth within which the occurrence of liquefaction may impact surface improvements is generally identified as the upper 50 feet below the existing ground surface. Liquefaction potential is greater in saturated, loose, poorly graded fine sands with a mean (d_{50}) grain size in the range of 0.075 to 0.2 mm (Seed and Idriss, 1971). Non-sensitive clayey (cohesive) soils which possess a plasticity index of at least 18 (Bray and Sancio, 2006) are generally not considered to be susceptible to liquefaction, nor are those soils which are above the historic static groundwater table.

The California Geological Survey (CGS) has not yet conducted detailed seismic hazards mapping in the area of the subject site. The general liquefaction susceptibility of the site was determined by research of the San Bernardino County Official Land Use Plan, General Plan, Geologic Hazard Overlay. Map FH31 C for the Redlands Quadrangle indicates that the subject site is not located within an area of liquefaction susceptibility. Based on the mapping performed by the county of San Bernardino and the subsurface conditions encountered at the boring locations, liquefaction is not considered to be a design concern for this project.

6.2 Geotechnical Design Considerations

General

The site is generally underlain by loose to very loose native alluvial soils. The soils present within the upper 2½ to 4½± feet possess a disturbed appearance, presumably due to removal of citrus trees. Results of laboratory testing indicate that the near-surface alluvium, located within the upper 5 to 6± feet, possess a moderate potential for consolidation when subjected to load increases similar to those of the proposed structure, and are highly susceptible to collapse when inundated with water. Additionally, artificial fill soils were encountered within the upper 4½± feet within the southeastern portion of the site. No documentation of the placement and compaction of these soils was provided to our office. Therefore, the near-surface soils at this site, in their present condition, are not considered suitable to support the foundation loads of the new building, and could result in excessive post-construction settlements. Based on these considerations, remedial grading is warranted within the proposed building area in order to remove and replace the near surface soils as compacted structural fill.

The site was formerly planted with citrus trees, prior to 2007. Although not encountered within any of the exploratory borings, any significant tree root masses encountered during grading should be removed in their entirety. The resulting excavations should be backfilled with compacted structural fill. It should be noted that the volume loss from any tree root removals would be in addition to any volume loss due to shrinkage from soil compaction.

Settlement

Laboratory testing indicates that the near surface soils possess a high potential for collapse when inundated by water. These soils also possess a moderate potential for consolidation when exposed to load increases in the range of those that will be exerted by the foundations of the new structure. The recommended remedial grading will remove most of these soils from within the zone of influence of the new foundations. The native alluvium that will remain in place below the recommended depth of overexcavation will not be significantly influenced by the foundation loads of the new structure. Provided that the recommended remedial grading is completed, the post construction settlements of the proposed structure are expected to be within tolerable limits.

Soluble Sulfates

The results of the soluble sulfate testing indicate that the selected samples of the on-site soils contain negligible concentrations of soluble sulfates, in accordance with American Concrete Institute (ACI) guidelines. Therefore, specialized concrete mix designs are not considered to be necessary, with regard to sulfate protection purposes. It is, however, recommended that additional soluble sulfate testing be conducted at the completion of rough grading to verify the soluble sulfate concentrations of the soils which are present at pad grade within the building area.

Expansion

The near-surface soils generally consist of silty sands and sandy silts with no appreciable clay content. These materials have been visually classified as non-expansive. Therefore, no design considerations related to expansive soils are considered warranted for this site.

Shrinkage/Subsidence

Removal and recompaction of the near-surface native soils is estimated to result in an average shrinkage of 17 to 24 percent. Removal and recompaction of the existing artificial fill soils encountered within Boring No. B-7 is estimated to result in an average shrinkage of 7 to 11 percent. It should be noted that these shrinkage estimates are based on the results of dry density testing performed on small-diameter samples of the existing soils taken at the boring locations. If a more accurate and precise shrinkage estimate is desired, SCG can perform a shrinkage study involving several excavated test-pits where in-place densities are determined using in-situ testing methods instead of laboratory density testing on small-diameter samples. Please contact SCG for details and a cost estimate regarding a shrinkage study, if desired.

Minor ground subsidence is expected to occur in the soils below the zone of removal, due to settlement and machinery working. The subsidence is estimated to be 0.1 to 0.2± feet. This estimate may be used for grading in areas that are underlain by native alluvial soils.

These estimates are based on previous experience and the subsurface conditions encountered at the boring locations. The actual amount of subsidence is expected to be variable and will be dependent on the type of machinery used, repetitions of use, and dynamic effects, all of which are difficult to assess precisely.

Grading and Foundation Plan Review

No grading or foundation plans were available at the time of this report. It is therefore recommended that we be provided with copies of the preliminary plans, when they become available, for review with regard to the conclusions, recommendations, and assumptions contained within this report.

6.3 Site Grading Recommendations

The grading recommendations presented below are based on the subsurface conditions encountered at the boring locations and our understanding of the proposed development. We recommend that all grading activities be completed in accordance with the Grading Guide Specifications included as Appendix D of this report, unless superseded by site-specific recommendations presented below.

Site Stripping and Demolition

The moderate to dense grass and weeds present throughout the majority of the site should be stripped and disposed of off-site. Stripping should include any organic soils and any root masses from trees previously removed from the site. The actual extent of site stripping should be determined in the field by the geotechnical engineer, based on the organic content and stability of the materials encountered.

Any remnants of previous residences should be removed from the site. Demolition should include any foundations, floor slabs, septic systems, utilities and any other subsurface improvements that will not remain in place with the new development. Demolition debris should be disposed of off-site in accordance with local regulations.

Treatment of Existing Soils: Building Pads

Remedial grading should be performed within the proposed building area in order to remove the artificial fill soils in their entirety, and a portion of the near surface native alluvial soils. Based on conditions encountered at the boring locations, the existing soils within the proposed building area are recommended to be overexcavated to a depth of at least 5 feet below existing grade and to a depth of at least 5 feet below proposed building pad subgrade elevation, whichever is greater. The depth of overexcavation should also be sufficient to remove any artificial fill soils.

Where not encompassed within the general building pad overexcavations, additional overexcavation should be performed within the influence zones of the new foundations to provide for a new layer of compacted structural fill extending to a depth of 4 feet below proposed bearing grade.

The overexcavation areas should extend at least 5 feet beyond the building foundations and perimeters. If the proposed structures incorporate any exterior columns (such as for a canopy or overhang) the area of overexcavation should also encompass these areas.

As discussed in Section 6.2 of this report, it is unknown whether or not the root masses of the former citrus trees were removed at the time the trees were stripped from the site. If any significant tree root masses are encountered during grading, they should be removed in their entirety, prior to the replacement of any soils as compacted structural fill.

Following completion of the overexcavation, the subgrade soils within the building area should be evaluated by the geotechnical engineer to verify their suitability to serve as the structural fill subgrade, as well as to support the foundation loads of the new structure. This evaluation should include proofrolling and probing to identify any soft, loose or otherwise unstable soils that must be removed. Some localized areas of deeper excavation may be required if additional fill materials or loose, porous, or low density native soils are encountered at the base of the overexcavation.

After a suitable overexcavation subgrade has been achieved, the exposed soils should be scarified to a depth of at least 12 inches and moisture conditioned to achieve a moisture content of 0 to 4 percent above optimum moisture content. The subgrade soils should then be recompacted to at least 90 percent of the ASTM D-1557 maximum dry density. The building pad areas may then be raised to grade with previously excavated soils or imported structural fill.

Treatment of Existing Soils: Retaining Walls and Site Walls

The existing soils within the areas of proposed retaining and non-retaining site walls should be overexcavated to a depth of at least 3 feet below foundation bearing grade and replaced as compacted structural fill as discussed above for the proposed building pad. Any undocumented fill soils within any of these foundation areas should be removed in their entirety. The overexcavation areas should extend horizontally beyond the foundation perimeters to a distance equal to the depth of fill below the new foundations. These overexcavation recommendations also apply to any erection pads for tilt-up concrete walls, since these pads are part of the foundation system. The overexcavation subgrade soils should be evaluated by the geotechnical engineer prior to scarifying, moisture conditioning, and recompacting the upper 12 inches of exposed subgrade soils, as discussed for the building pad area. The previously excavated soils may then be replaced as compacted structural fill.

Treatment of Existing Soils: Parking and Drive Areas

Based on economic considerations, overexcavation of the existing low strength alluvium and undocumented fill soils in the new parking and drive areas is not considered warranted, with the exception of areas where lower strength or unstable soils are identified by the geotechnical engineer during grading.

Subgrade preparation in the new parking and drive areas should initially consist of removal of all soils disturbed during stripping and demolition operations. The geotechnical engineer should then evaluate the subgrade to identify any areas of additional unsuitable soils. The subgrade soils should then be scarified to a depth of 12± inches, moisture conditioned to 0 to 4 percent above optimum, and recompacted to at least 90 percent of the ASTM D-1557 maximum dry density. Based on the presence of variable strength alluvial soils throughout the site, it is expected that some isolated areas of additional overexcavation may be required to remove zones of lower strength, unsuitable soils.

The grading recommendations presented above for the proposed parking and drive areas assume that the owner and/or developer can tolerate minor amounts of settlement within the proposed parking areas. The grading recommendations presented above do not completely mitigate the extent of existing undocumented fill soils and very loose to loose native soils in the parking areas. As such, settlement and associated pavement distress could occur. Typically, repair of such distressed areas involves significantly lower costs than completely mitigating these soils at the time of construction. If the owner cannot tolerate the risk of such settlements, the parking and drive areas should be overexcavated to a depth of 2 feet below proposed pavement subgrade elevation, with the resulting soils replaced as compacted structural fill.

Fill Placement

- Fill soils should be placed in thin (6± inches), near-horizontal lifts, moisture conditioned to within 0 to 4 percent above the optimum moisture content, and compacted.
- On-site soils may be used for fill provided they are cleaned of any debris to the satisfaction of the geotechnical engineer.
- All grading and fill placement activities should be completed in accordance with the requirements of the 2016 CBC and the grading code for the San Bernardino County.
- All fill soils should be compacted to at least 90 percent of the ASTM D-1557 maximum dry density.
- Compaction tests should be performed periodically by the geotechnical engineer as random verification of compaction and moisture content. These tests are intended to aid the contractor. Since the tests are taken at discrete locations and depths, they may not be indicative of the entire fill and therefore should not relieve the contractor of his responsibility to meet the job specifications.

Imported Structural Fill

All imported structural fill should consist of very low expansive (EI < 20), well graded soils possessing at least 10 percent fines (that portion of the sample passing the No. 200 sieve). Additional specifications for structural fill are presented in the Grading Guide Specifications, included as Appendix D.

Utility Trench Backfill

In general, all utility trench backfill soils should be compacted to at least 90 percent of the ASTM D-1557 maximum dry density. It is recommended that materials in excess of 3 inches in size not be used for utility trench backfill. Compacted trench backfill should conform to the requirements of the local grading code, and more restrictive requirements may be indicated by San Bernardino County. All utility trench backfills should be witnessed by the geotechnical engineer. The trench backfill soils should be compaction tested where possible; probed and visually evaluated elsewhere.

Utility trenches which parallel a footing, and extending below a 1h:1v plane projected from the outside edge of the footing should be backfilled with structural fill soils, compacted to at least 90 percent of the ASTM D-1557 standard. Pea gravel backfill should not be used for these trenches.

6.4 Construction Considerations

Excavation Considerations

The near surface soils generally consist of very loose to loose silty fine sands to fine sandy silts. These materials will likely be subject to caving within shallow excavations. Where caving occurs within shallow excavations, flattened excavation slopes may be sufficient to provide excavation stability. On a preliminary basis, the inclination of temporary slopes should not exceed 2h:1v. Maintaining adequate moisture content within the near-surface soils will improve excavation stability. All excavation activities on this site should be conducted in accordance with Cal-OSHA regulations.

Groundwater

The static groundwater table at this site is considered to exist at a depth greater than 30± feet. Therefore, groundwater is not expected to impact the grading or foundation construction activities.

6.5 Foundation Design and Construction

Based on the preceding grading recommendations, it is assumed that the new building pad will be underlain by structural fill soils used to replace existing artificial fill soils and the upper portion of the compressible/collapsible alluvial soils. These new structural fill soils are expected to extend to depths of at least 4 feet below proposed foundation bearing grade. Based on this subsurface profile, the proposed structures may be supported on conventional shallow foundations.

Foundation Design Parameters

New square and rectangular footings may be designed as follows:

- Maximum, net allowable soil bearing pressure: 2,500 lbs/ft^2.
- Minimum wall/column footing width: 14 inches/24 inches.

- Minimum longitudinal steel reinforcement within strip footings: Two (2) No. 5 rebars (1 top and 1 bottom).

- Minimum foundation embedment: 12 inches into suitable structural fill soils, and at least 18 inches below adjacent exterior grade. Interior column footings may be placed immediately beneath the floor slab.

- It is recommended that the perimeter building foundations be continuous across all exterior doorways. Any flatwork adjacent to the exterior doors should be doweled into the perimeter foundations in a manner determined by the structural engineer.

The allowable bearing pressure presented above may be increased by one-third when considering short duration wind or seismic loads. The minimum steel reinforcement recommended above is based on geotechnical considerations; additional reinforcement may be necessary for structural considerations. The actual design of the foundations should be determined by the structural engineer.

Foundation Construction

The foundation subgrade soils should be evaluated at the time of overexcavation, as discussed in Section 6.3 of this report. It is further recommended that the foundation subgrade soils be evaluated by the geotechnical engineer immediately prior to steel or concrete placement. Soils suitable for direct foundation support should consist of newly placed structural fill, compacted to at least 90 percent of the ASTM D-1557 maximum dry density. Any unsuitable materials should be removed to a depth of suitable bearing compacted structural fill, with the resulting excavations backfilled with compacted fill soils. As an alternative, lean concrete slurry (500 to 1,500 psi) may be used to backfill such isolated overexcavations.

The foundation subgrade soils should also be properly moisture conditioned to 0 to 4 percent above the Modified Proctor optimum, to a depth of at least 12 inches below bearing grade. Since it is typically not feasible to increase the moisture content of the floor slab and foundation subgrade soils once rough grading has been completed, care should be taken to maintain the moisture content of the building pad subgrade soils throughout the construction process.

Estimated Foundation Settlements

Post-construction total and differential settlements of shallow foundations designed and constructed in accordance with the previously presented recommendations are estimated to be less than 1.0 and 0.5 inches, respectively. Differential movements are expected to occur over a 30-foot span, thereby resulting in an angular distortion of less than 0.002 inches per inch.

Lateral Load Resistance

Lateral load resistance will be developed by a combination of friction acting at the base of foundations and slabs and the passive earth pressure developed by footings below grade. The following friction and passive pressure may be used to resist lateral forces:

- Passive Earth Pressure: 300 lbs/ft^3

- Friction Coefficient: 0.30

These are allowable values, and include a factor of safety. When combining friction and passive resistance, the passive pressure component should be reduced by one-third. These values assume that footings will be poured directly against compacted structural fill. The maximum allowable passive pressure is 2500 lbs/ft^2.

6.6 Floor Slab Design and Construction

Subgrades which will support new floor slab should be prepared in accordance with the recommendations contained in the ***Site Grading Recommendations*** section of this report. Based on the anticipated grading which will occur at this site, the floor of the new structure may be constructed as a conventional slab-on-grade supported on newly placed structural fill soils. These fill soils are expected to extend to a depth of at least 5 feet below finished pad grade. Based on geotechnical considerations, the floor slab may be designed as follows:

- Minimum slab thickness: 5½ inches.

- Modulus of Subgrade Reaction: k = 150 psi/in

- Minimum slab reinforcement: Reinforcement is not required for geotechnical conditions. The actual floor slab reinforcement should be determined by the structural engineer, based upon the imposed loading.

- Slab underlayment: If moisture sensitive floor coverings will be used the minimum slab underlayment should consist of a moisture vapor barrier constructed below the entire area where such moisture sensitive floor coverings are anticipated. The moisture vapor barrier should meet or exceed the Class A rating as defined by ASTM E 1745-97 and have a permeance rating less than 0.01 perms as described in ASTM E 96-95 and ASTM E 154-88. A polyolefin material such as Stego® Wrap Vapor Barrier or equivalent will meet these specifications. The moisture vapor barrier should be properly constructed in accordance with all applicable manufacturer specifications. The need for sand and/or the amount of sand above the moisture vapor barrier should be specified by the structural engineer or concrete contractor. The selection of sand above the barrier is not a geotechnical engineering issue and hence outside our purview.

- Moisture condition the floor slab subgrade soils to 0 to 4 percent above the Modified Proctor optimum moisture content, to a depth of 12 inches. The moisture content of the floor slab subgrade soils should be verified by the geotechnical engineer within 24 hours prior to concrete placement.

- Proper concrete curing techniques should be utilized to reduce the potential for slab curling or the formation of excessive shrinkage cracks.

The actual design of the floor slabs should be completed by the structural engineer to verify adequate thickness and reinforcement.

6.7 Retaining Wall Design and Construction

Small retaining walls are expected to be necessary in the area of the new truck loading docks and may also be required to facilitate the new site grades. The parameters recommended for use in the design of these walls are presented below.

Retaining Wall Design Parameters

Based on the soil conditions encountered at the boring locations, the following parameters may be used in the design of new retaining walls for this site. We have provided parameters assuming the use of on-site soils for retaining wall backfill. The on-site soils generally consist of silty sands, sandy silts and sands. Based on their classification, these materials are expected to possess a friction angle of at least 30 degrees when compacted to at least 90 percent of the ASTM D-1557 maximum dry density.

If desired, SCG could provide design parameters for an alternative select backfill material behind the retaining walls. The use of select backfill material could result in lower lateral earth pressures. In order to use the design parameters for the imported select fill, this material must be placed within the entire active failure wedge. This wedge is defined as extending from the heel of the retaining wall upwards at an angle of approximately 60° from horizontal. If select backfill material behind the retaining wall is desired, SCG should be contacted for supplementary recommendations.

RETAINING WALL DESIGN PARAMETERS

Design Parameter		Soil Type
		On-Site Soils
Internal Friction Angle (ϕ)		30°
Unit Weight		125 lbs/ft^3
Equivalent Fluid Pressure:	Active Condition (level backfill)	42 lbs/ft^3
	Active Condition (2h:1v backfill)	67 lbs/ft^3
	At-Rest Condition (level backfill)	63 lbs/ft^3

The walls should be designed using a soil-footing coefficient of friction of 0.30 and an equivalent passive pressure of 300 lbs/ft^3. The structural engineer should incorporate appropriate factors of safety in the design of the retaining walls.

The active earth pressure may be used for the design of retaining walls that do not directly support structures or support soils that in turn support structures and which will be allowed to deflect. The at-rest earth pressure should be used for walls that will not be allowed to deflect such as those which will support foundation bearing soils, or which will support foundation loads directly.

Where the soils on the toe side of the retaining wall are not covered by a "hard" surface such as a structure or pavement, the upper 1 foot of soil should be neglected when calculating passive resistance due to the potential for the material to become disturbed or degraded during the life of the structure.

Retaining Wall Foundation Design

The retaining wall foundations should be supported within newly placed structural fill. Foundations to support new retaining walls should be designed in accordance with the general Foundation Design Parameters presented in a previous section of this report.

Seismic Lateral Earth Pressures

In accordance with the 2016 CBC, any retaining walls more than 6 feet in height must be designed for seismic lateral earth pressures. If walls 6 feet or more are required for this site, the geotechnical engineer should be contacted for supplementary seismic lateral earth pressure recommendations.

Backfill Material

On-site soils may be used to backfill the retaining walls. However, all backfill material placed within 3 feet of the back wall face should have a particle size no greater than 3 inches. The retaining wall backfill materials should be well graded.

It is recommended that a properly installed prefabricated drainage composite such as the MiraDRAIN 6000XL (or approved equivalent), which is specifically designed for use behind retaining walls, be placed against the face on the back side of the retaining walls. This material should extend from the top of the retaining wall footing to within 1 foot of the ground surface on the back side of the retaining wall. A 12-inch thick layer of a low permeability soil should be placed over the backfill to reduce surface water migration to the underlying soils.

All retaining wall backfill should be placed and compacted under engineering controlled conditions in the necessary layer thicknesses to ensure an in-place density between 90 and 93 percent of the maximum dry density as determined by the Modified Proctor test (ASTM D1557-91). Care should be taken to avoid over-compaction of the soils behind the retaining walls, and the use of heavy compaction equipment should be avoided.

Subsurface Drainage

As previously indicated, the retaining wall design parameters are based upon drained backfill conditions. Consequently, some form of permanent drainage system will be necessary in conjunction with the appropriate backfill material. Subsurface drainage may consist of either:

- A weep hole drainage system typically consisting of a series of 4-inch diameter holes in the wall situated slightly above the ground surface elevation on the exposed side of the wall and at an approximate 8-foot on-center spacing. The weep holes should include a 2 cubic foot pocket of open graded gravel, surrounded by an approved geotextile fabric, at each weep hole location.

- A 4-inch diameter perforated pipe surrounded by 2 cubic feet of gravel per linear foot of drain placed behind the wall, above the retaining wall footing. The gravel layer should be wrapped in a suitable geotextile fabric to reduce the potential for migration of fines. The footing drain should be extended to daylight or tied into a storm drainage system.

6.8 Pavement Design Parameters

Site preparation in the pavement area should be completed as previously recommended in the ***Site Grading Recommendations*** section of this report. The subsequent pavement recommendations assume proper drainage and construction monitoring, and are based on either PCA or CALTRANS design parameters for a twenty (20) year design period. However, these designs also assume a routine pavement maintenance program to obtain the anticipated 20-year pavement service life.

Pavement Subgrades

It is anticipated that the new pavements will be primarily supported on a layer of compacted structural fill, consisting of scarified, thoroughly moisture conditioned and recompacted existing soils. The on-site soils generally consist of silty sands, sandy silts and sands. Based on their classification, these materials are expected to possess good to excellent pavement support characteristics, with R-values in the range of 50 to 60. Since R-value testing was not included in the scope of services for this project, the subsequent pavement design is based upon an assumed R-value of 50. Any fill material imported to the site should have support characteristics equal to or greater than that of the on-site soils and be placed and compacted under engineering controlled conditions. It is recommended that R-value testing be performed after completion of rough grading. Depending upon the results of the R-value testing, it may be feasible to use thinner pavement sections in some areas of the site.

Asphaltic Concrete

Presented below are the recommended thicknesses for new flexible pavement structures consisting of asphaltic concrete over a granular base. The pavement designs are based on the traffic indices (TI's) indicated. The client and/or civil engineer should verify that these TI's are representative of the anticipated traffic volumes. If the client and/or civil engineer determine that the expected traffic volume will exceed the applicable traffic index, we should be contacted for supplementary recommendations. The design traffic indices equate to the following approximate daily traffic volumes over a 20 year design life, assuming six operational traffic days per week.

Traffic Index	No. of Heavy Trucks per Day
4.0	0
5.0	1
6.0	3
7.0	11
8.0	35
9.0	93

For the purpose of the traffic volumes indicated above, a truck is defined as a 5-axle tractor trailer unit with one 8-kip axle and two 32-kip tandem axles. All of the traffic indices allow for 1,000 automobiles per day.

ASPHALT PAVEMENTS (R = 50)					
Materials	**Thickness (inches)**				
	Auto Parking and Auto Drive Lanes (TI = 4.0 to 5.0)	Truck Traffic			
		TI = 6.0	TI = 7.0	TI = 8.0	TI = 9.0
Asphalt Concrete	3	3½	4	5	5½
Aggregate Base	3	4	5	5	7
Compacted Subgrade	12	12	12	12	12

The aggregate base course should be compacted to at least 95 percent of the ASTM D-1557 maximum dry density. The asphaltic concrete should be compacted to at least 95 percent of the Marshall maximum density, as determined by ASTM D-2726. The aggregate base course may consist of crushed aggregate base (CAB) or crushed miscellaneous base (CMB), which is a recycled gravel, asphalt and concrete material. The gradation, R-Value, Sand Equivalent, and Percentage Wear of the CAB or CMB should comply with appropriate specifications contained in the current edition of the "Greenbook" Standard Specifications for Public Works Construction.

Portland Cement Concrete

The preparation of the subgrade soils within concrete pavement areas should be performed as previously described for proposed asphalt pavement areas. The minimum recommended thicknesses for the Portland Cement Concrete pavement sections are as follows:

PORTLAND CEMENT CONCRETE PAVEMENTS (R = 50)				
Materials	**Thickness (inches)**			
	Autos and Light Truck Traffic (TI = 6.0)	Truck Traffic		
		TI = 7.0	TI = 8.0	TI = 9.0
PCC	5	6	7	8
Compacted Subgrade (95% minimum compaction)	12	12	12	12

The concrete should have a 28-day compressive strength of at least 3,000 psi. Any reinforcement within the PCC pavements should be determined by the project structural engineer. The maximum joint spacing within all of the PCC pavements is recommended to be equal to or less than 30 times the pavement thickness.

7.0 GENERAL COMMENTS

This report has been prepared as an instrument of service for use by the client, in order to aid in the evaluation of this property and to assist the architects and engineers in the design and preparation of the project plans and specifications. This report may be provided to the contractor(s) and other design consultants to disclose information relative to the project. However, this report is not intended to be utilized as a specification in and of itself, without appropriate interpretation by the project architect, civil engineer, and/or structural engineer. The reproduction and distribution of this report must be authorized by the client and Southern California Geotechnical, Inc. Furthermore, any reliance on this report by an unauthorized third party is at such party's sole risk, and we accept no responsibility for damage or loss which may occur. The client(s)' reliance upon this report is subject to the Engineering Services Agreement, incorporated into our proposal for this project.

The analysis of this site was based on a subsurface profile interpolated from limited discrete soil samples. While the materials encountered in the project area are considered to be representative of the total area, some variations should be expected between boring locations and sample depths. If the conditions encountered during construction vary significantly from those detailed herein, we should be contacted immediately to determine if the conditions alter the recommendations contained herein.

This report has been based on assumed or provided characteristics of the proposed development. It is recommended that the owner, client, architect, structural engineer, and civil engineer carefully review these assumptions to ensure that they are consistent with the characteristics of the proposed development. If discrepancies exist, they should be brought to our attention to verify that they do not affect the conclusions and recommendations contained herein. We also recommend that the project plans and specifications be submitted to our office for review to verify that our recommendations have been correctly interpreted.

The analysis, conclusions, and recommendations contained within this report have been promulgated in accordance with generally accepted professional geotechnical engineering practice. No other warranty is implied or expressed.

APPENDIX A

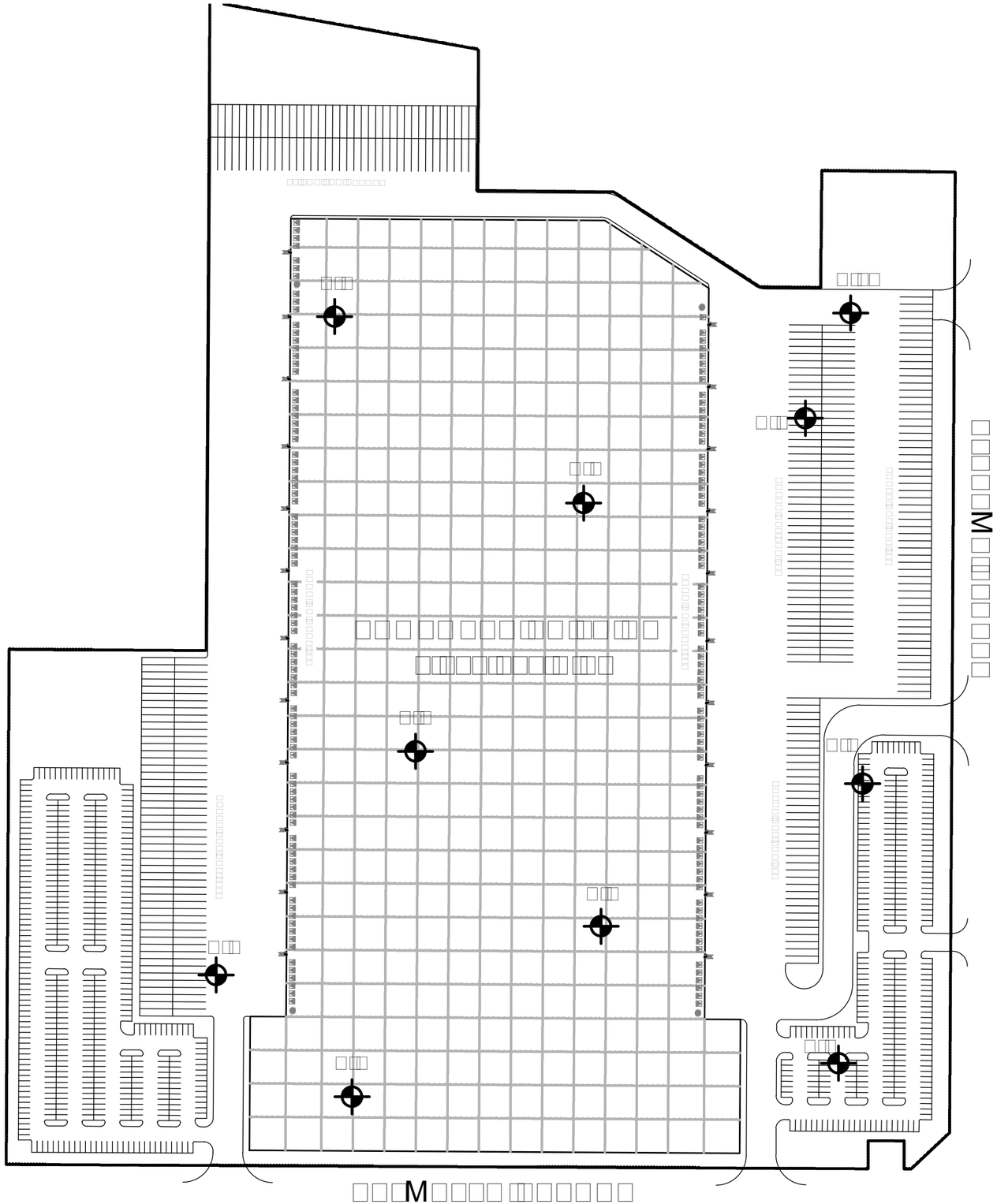
SITE LOCATION MAP

MM

PLATE 1

SoCalGeo

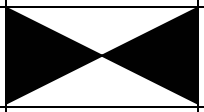
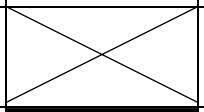
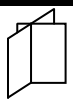
SOUTHERN CALIFORNIA GEOTECHNICAL


NORTH
SoCalGeo

□□□

APPENDIX B

BORING LOG LEGEND

SAMPLE TYPE	GRAPHICAL SYMBOL	SAMPLE DESCRIPTION
AUGER		SAMPLE COLLECTED FROM AUGER CUTTINGS, NO FIELD MEASUREMENT OF SOIL STRENGTH. (DISTURBED)
CORE		ROCK CORE SAMPLE: TYPICALLY TAKEN WITH A DIAMOND-TIPPED CORE BARREL. TYPICALLY USED ONLY IN HIGHLY CONSOLIDATED BEDROCK.
GRAB		SOIL SAMPLE TAKEN WITH NO SPECIALIZED EQUIPMENT, SUCH AS FROM A STOCKPILE OR THE GROUND SURFACE. (DISTURBED)
CS		CALIFORNIA SAMPLER: 2-1/2 INCH I.D. SPLIT BARREL SAMPLER, LINED WITH 1-INCH HIGH BRASS RINGS. DRIVEN WITH SPT HAMMER. (RELATIVELY UNDISTURBED)
NSR		NO RECOVERY: THE SAMPLING ATTEMPT DID NOT RESULT IN RECOVERY OF ANY SIGNIFICANT SOIL OR ROCK MATERIAL.
SPT		STANDARD PENETRATION TEST: SAMPLER IS A 1.4 INCH INSIDE DIAMETER SPLIT BARREL, DRIVEN 18 INCHES WITH THE SPT HAMMER. (DISTURBED)
SH		SHELBY TUBE: TAKEN WITH A THIN WALL SAMPLE TUBE, PUSHED INTO THE SOIL AND THEN EXTRACTED. (UNDISTURBED)
VANE		VANE SHEAR TEST: SOIL STRENGTH OBTAINED USING A 4 BLADED SHEAR DEVICE. TYPICALLY USED IN SOFT CLAYS-NO SAMPLE RECOVERED.

COLUMN DESCRIPTIONS

DEPTH: Distance in feet below the ground surface.

SAMPLE: Sample Type as depicted above.

BLOW COUNT: Number of blows required to advance the sampler 12 inches using a 140 lb hammer with a 30-inch drop. 50/3" indicates penetration refusal (>50 blows) at 3 inches. WH indicates that the weight of the hammer was sufficient to push the sampler 6 inches or more.

POCKET PEN.: Approximate shear strength of a cohesive soil sample as measured by pocket penetrometer.

GRAPHIC LOG: Graphic Soil Symbol as depicted on the following page.

DRY DENSITY: Dry density of an undisturbed or relatively undisturbed sample in lbs/ft^3.

MOISTURE CONTENT: Moisture content of a soil sample, expressed as a percentage of the dry weight.

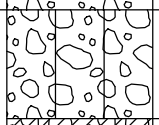
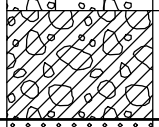
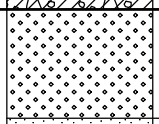
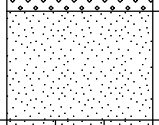
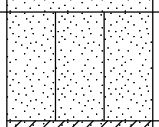
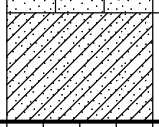
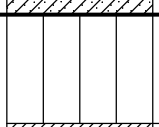
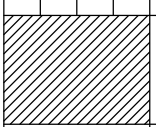
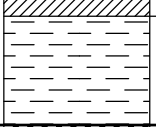
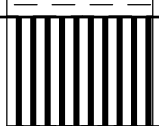
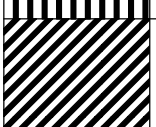
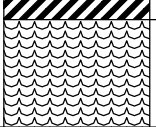
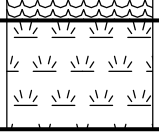
LIQUID LIMIT: The moisture content above which a soil behaves as a liquid.

PLASTIC LIMIT: The moisture content above which a soil behaves as a plastic.

PASSING #200 SIEVE: The percentage of the sample finer than the #200 standard sieve.

UNCONFINED SHEAR: The shear strength of a cohesive soil sample, as measured in the unconfined state.

SOIL CLASSIFICATION CHART

MAJOR DIVISIONS			SYMBOLS		TYPICAL DESCRIPTIONS
			GRAPH	LETTER	
COARSE GRAINED SOILS MORE THAN 50% OF MATERIAL IS LARGER THAN NO. 200 SIEVE SIZE	GRAVEL AND GRAVELLY SOILS MORE THAN 50% OF COARSE FRACTION RETAINED ON NO. 4 SIEVE	CLEAN GRAVELS (LITTLE OR NO FINES)		GW	WELL-GRADED GRAVELS, GRAVEL - SAND MIXTURES, LITTLE OR NO FINES
				GP	POORLY-GRADED GRAVELS, GRAVEL - SAND MIXTURES, LITTLE OR NO FINES
		GRAVELS WITH FINES (APPRECIABLE AMOUNT OF FINES)		GM	SILTY GRAVELS, GRAVEL - SAND - SILT MIXTURES
				GC	CLAYEY GRAVELS, GRAVEL - SAND - CLAY MIXTURES
	SAND AND SANDY SOILS MORE THAN 50% OF COARSE FRACTION PASSING ON NO. 4 SIEVE	CLEAN SANDS (LITTLE OR NO FINES)		SW	WELL-GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES
				SP	POORLY-GRADED SANDS, GRAVELLY SAND, LITTLE OR NO FINES
		SANDS WITH FINES (APPRECIABLE AMOUNT OF FINES)		SM	SILTY SANDS, SAND - SILT MIXTURES
				SC	CLAYEY SANDS, SAND - CLAY MIXTURES
FINE GRAINED SOILS MORE THAN 50% OF MATERIAL IS SMALLER THAN NO. 200 SIEVE SIZE	SILTS AND CLAYS	LIQUID LIMIT LESS THAN 50		ML	INORGANIC SILTS AND VERY FINE SANDS, ROCK FLOUR, SILTY OR CLAYEY FINE SANDS OR CLAYEY SILTS WITH SLIGHT PLASTICITY
				CL	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS
				OL	ORGANIC SILTS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY
	SILTS AND CLAYS	LIQUID LIMIT GREATER THAN 50		MH	INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS FINE SAND OR SILTY SOILS
				CH	INORGANIC CLAYS OF HIGH PLASTICITY
				OH	ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY, ORGANIC SILTS
HIGHLY ORGANIC SOILS				PT	PEAT, HUMUS, SWAMP SOILS WITH HIGH ORGANIC CONTENTS

NOTE: DUAL SYMBOLS ARE USED TO INDICATE BORDERLINE SOIL CLASSIFICATIONS

SOUTHERN CALIFORNIA GEOTECHNICAL
A California Corporation

BORING NO. B-1

JOB NO.: 17G218 | DRILLING DATE: 11/28/17 | WATER DEPTH: Dry
PROJECT: Proposed Comm/Ind Building | DRILLING METHOD: Hollow Stem Auger | CAVE DEPTH: 10 feet
LOCATION: San Bernardino County, California | LOGGED BY: Anthony Luna | READING TAKEN: At Completion

FIELD RESULTS						LABORATORY RESULTS						
DEPTH (FEET)	SAMPLE	BLOW COUNT	POCKET PEN. (TSF)	GRAPHIC LOG	DESCRIPTION SURFACE ELEVATION: --- MSL	DRY DENSITY (PCF)	MOISTURE CONTENT (%)	LIQUID LIMIT	PLASTIC LIMIT	PASSING #200 SIEVE (%)	UNCONFINED SHEAR (TSF)	COMMENTS
		5			DISTURBED ALLUVIUM: Light Gray Brown Silty fine Sand to fine Sandy Silt, very loose-dry to damp	90	3					
		4				85	4					
5		4			ALLUVIUM: Light Gray Brown fine Sandy Silt, very loose-damp	83	5					
		5			Light Gray Silty fine Sand, very loose-damp	93	4					
		5			Light Gray fine Sand, little Silt, very loose-dry to damp	94	2					
10												
		8			Light Gray fine to medium Sand, loose-dry to damp	104	2					
15												
		10	2.0		Gray Brown Silt, little fine Sand, loose-moist	90	10					
20												
		18			Light Gray Brown fine Sand, little Silt, medium dense-damp	99	5					
25												
		19			Gray Brown fine Sandy Silt, medium dense-very moist	92	3					
30					Boring Terminated at 30'							

TBL 17G218.GPJ SOCALGEO.GDT 12/15/17

TEST BORING LOG **PLATE B-1**

SOUTHERN CALIFORNIA GEOTECHNICAL
A California Corporation

BORING NO. B-2

JOB NO.: 17G218 | DRILLING DATE: 11/28/17 | WATER DEPTH: Dry
PROJECT: Proposed Comm/Ind Building | DRILLING METHOD: Hollow Stem Auger | CAVE DEPTH: 15 feet
LOCATION: San Bernardino County, California | LOGGED BY: Anthony Luna | READING TAKEN: At Completion

FIELD RESULTS						LABORATORY RESULTS						
DEPTH (FEET)	SAMPLE	BLOW COUNT	POCKET PEN. (TSF)	GRAPHIC LOG	DESCRIPTION SURFACE ELEVATION: --- MSL	DRY DENSITY (PCF)	MOISTURE CONTENT (%)	LIQUID LIMIT	PLASTIC LIMIT	PASSING #200 SIEVE (%)	UNCONFINED SHEAR (TSF)	COMMENTS
		6			DISTURBED ALLUVIUM: Light Brown Silty fine Sand to fine Sandy Silt, slightly porous, trace fine root fibers, very loose to loose-dry to damp	86	3					
		7			ALLUVIUM: Light Brown fine Sandy Silt, loose-dry to damp	87	3					
5		8				89	3					
		7			Light Gray Silty fine Sand, loose-dry	91	1					
		9			Light Gray to Light Gray Brown fine Sand, trace to little Silt, loose-dry	95	1					
10												
		10				93	3					
15												
					Gray Brown fine Sandy Silt to Silty fine Sand, loose-moist							
		11				85	14					
20												
					Gray Brown fine Sandy Silt, loose-moist to very moist							
		12				88	9					
25												
		27				90	19					
30					Gray fine Sand, medium dense-damp							
					Boring Terminated at 30'							

TBL 17G218.GPJ SOCALGEO.GDT 12/15/17

TEST BORING LOG

PLATE B-2

SOUTHERN CALIFORNIA GEOTECHNICAL
A California Corporation

BORING NO. B-3

JOB NO.: 17G218 | DRILLING DATE: 11/28/17 | WATER DEPTH: Dry
PROJECT: Proposed Comm/Ind Building | DRILLING METHOD: Hollow Stem Auger | CAVE DEPTH: 8 feet
LOCATION: San Bernardino County, California | LOGGED BY: Anthony Luna | READING TAKEN: At Completion

FIELD RESULTS						LABORATORY RESULTS						
DEPTH (FEET)	SAMPLE	BLOW COUNT	POCKET PEN. (TSF)	GRAPHIC LOG	DESCRIPTION SURFACE ELEVATION: --- MSL	DRY DENSITY (PCF)	MOISTURE CONTENT (%)	LIQUID LIMIT	PLASTIC LIMIT	PASSING #200 SIEVE (%)	UNCONFINED SHEAR (TSF)	COMMENTS
		4			DISTURBED ALLUVIUM: Light Gray Brown fine Sandy Silt to Silty fine Sand, trace fine root fibers, very loose-dry to damp	93	2					
		5				92	2					
5		6			ALLUVIUM: Light Gray fine Sandy Silt, trace fine root fibers, slightly porous, very loose to loose-dry to damp	90	3					
		6				81	3					
		10			Light Gray fine Sand, little Silt, loose-dry to damp	99	2					
10												
					Light Gray Silty fine Sand, loose-damp							
		14				95	4					
15					Boring Terminated at 15'							

TBL 17G218.GPJ SOCALGEO.GDT 12/15/17

TEST BORING LOG **PLATE B-3**

SOUTHERN CALIFORNIA GEOTECHNICAL
A California Corporation

BORING NO. B-4

JOB NO.: 17G218 | DRILLING DATE: 11/28/17 | WATER DEPTH: Dry
PROJECT: Proposed Comm/Ind Building | DRILLING METHOD: Hollow Stem Auger | CAVE DEPTH: 12 feet
LOCATION: San Bernardino County, California | LOGGED BY: Anthony Luna | READING TAKEN: At Completion

FIELD RESULTS						LABORATORY RESULTS						
DEPTH (FEET)	SAMPLE	BLOW COUNT	POCKET PEN. (TSF)	GRAPHIC LOG	DESCRIPTION SURFACE ELEVATION: --- MSL	DRY DENSITY (PCF)	MOISTURE CONTENT (%)	LIQUID LIMIT	PLASTIC LIMIT	PASSING #200 SIEVE (%)	UNCONFINED SHEAR (TSF)	COMMENTS
					DISTURBED ALLUVIUM: Light Brown Silty fine Sand, slightly porous, trace fine root fibers, loose-dry to damp							
		8				98	3					
					ALLUVIUM: Light Gray Brown fine Sandy Silt to Silty fine Sand, very loose to loose-damp							
		6				89	4					
5					Gray Brown fine Sandy Silt, very loose to loose-damp							
		6				89	5					
					Light Gray Silty fine Sand to fine Sandy Silt, very loose to loose-dry to damp							
		6				88	2					
		7				84	3					
10					Light Gray fine Sand, loose-dry to damp							
					Gray fine Sandy Silt, loose-damp to moist							
		10				89	11					
15					Gray Brown fine to medium Sand, little Silt, loose-damp							
					Gray Brown fine Sandy Silt, loose-moist							
		12				85	12					
20					Boring Terminated at 20'							

TBL 17G218.GPJ SOCALGEO.GDT 12/15/17

TEST BORING LOG **PLATE B-4**

SOUTHERN CALIFORNIA GEOTECHNICAL
A California Corporation

BORING NO. B-5

JOB NO.: 17G218 | DRILLING DATE: 11/28/17 | WATER DEPTH: Dry
PROJECT: Proposed Comm/Ind Building | DRILLING METHOD: Hollow Stem Auger | CAVE DEPTH: 12 feet
LOCATION: San Bernardino County, California | LOGGED BY: Anthony Luna | READING TAKEN: At Completion

FIELD RESULTS						LABORATORY RESULTS						
DEPTH (FEET)	SAMPLE	BLOW COUNT	POCKET PEN. (TSF)	GRAPHIC LOG	DESCRIPTION SURFACE ELEVATION: --- MSL	DRY DENSITY (PCF)	MOISTURE CONTENT (%)	LIQUID LIMIT	PLASTIC LIMIT	PASSING #200 SIEVE (%)	UNCONFINED SHEAR (TSF)	COMMENTS
		4			DISTURBED ALLUVIUM: Light Gray Brown Silty fine Sand, very loose to loose-dry to damp		2					
		6			ALLUVIUM: Light Gray Brown fine Sand, little Silt, loose-damp		3					
5		4			Gray to Gray Brown fine Sand, trace Silt, trace medium Sand, trace fine Gravel, very loose to loose-dry to damp		2					
		8					1					
10												
		8			Gray Brown Silty fine Sand, trace meduim Sand, loose-damp		5					
15												
		8			Gray to Gray Brown fine Sandy Silt, loose-very moist		17					
20					Boring Terminated at 20'							

TBL 17G218.GPJ SOCALGEO.GDT 12/15/17

TEST BORING LOG **PLATE B-5**

SOUTHERN CALIFORNIA GEOTECHNICAL
A California Corporation

BORING NO. B-6

JOB NO.: 17G218 | DRILLING DATE: 11/28/17 | WATER DEPTH: Dry
PROJECT: Proposed Comm/Ind Building | DRILLING METHOD: Hollow Stem Auger | CAVE DEPTH: 15 feet
LOCATION: San Bernardino County, California | LOGGED BY: Anthony Luna | READING TAKEN: At Completion

FIELD RESULTS						LABORATORY RESULTS						
DEPTH (FEET)	SAMPLE	BLOW COUNT	POCKET PEN. (TSF)	GRAPHIC LOG	DESCRIPTION SURFACE ELEVATION: --- MSL	DRY DENSITY (PCF)	MOISTURE CONTENT (%)	LIQUID LIMIT	PLASTIC LIMIT	PASSING #200 SIEVE (%)	UNCONFINED SHEAR (TSF)	COMMENTS
					DISTURBED ALLUVIUM: Light Gray Brown Silty fine Sand, trace fine root fibers, loose-dry to damp							
		9				91	2					
		5			ALLUVIUM: Light Brown Silty fine Sand, slightly porous, very loose to loose-damp	97	3					
5		6				95	4					
		7			Light Gray fine Sandy Silt, loose-damp	83	4					
		10			Gray fine to medium Sand, trace coarse Sand, little Silt, loose-dry to damp	97	2					
10												
					Light Gray fine Sand, trace Silt, trace medium Sand, loose-dry							
		11				94	1					
15												
					Dark Gray Brown fine Sandy Silt, trace calcareous veining, loose-damp							
		12				88	6					
20												
		13			@ 24 feet, moist	88	12					
25												
					Light Gray fine Sand, little Silt, medium dense-damp							
		20				90	4					
30												
					Boring Terminated at 30'							

TBL 17G218.GPJ SOCALGEO.GDT 12/15/17

TEST BORING LOG **PLATE B-6**

SOUTHERN CALIFORNIA GEOTECHNICAL
A California Corporation

BORING NO. B-7

JOB NO.: 17G218 | DRILLING DATE: 11/28/17 | WATER DEPTH: Dry
PROJECT: Proposed Comm/Ind Building | DRILLING METHOD: Hollow Stem Auger | CAVE DEPTH: 16 feet
LOCATION: San Bernardino County, California | LOGGED BY: Anthony Luna | READING TAKEN: At Completion

FIELD RESULTS						LABORATORY RESULTS						
DEPTH (FEET)	SAMPLE	BLOW COUNT	POCKET PEN. (TSF)	GRAPHIC LOG	DESCRIPTION SURFACE ELEVATION: --- MSL	DRY DENSITY (PCF)	MOISTURE CONTENT (%)	LIQUID LIMIT	PLASTIC LIMIT	PASSING #200 SIEVE (%)	UNCONFINED SHEAR (TSF)	COMMENTS
		5			FILL: Light Brown Silty fine to medium Sand, trace fine Gravel, very loose to loose-dry to damp	102	2					
		7				106	3					
5		9			POSSIBLE FILL: Light Gray Brown fine to medium Sand, trace coarse Sand, trace Silt, trace fine Gravel, loose-dry to damp	104	2					
		6			ALLUVIUM: Light Gray Silty fine Sand, trace medium Sand, very loose to loose-moist	89	9					
10		6			Light Gray Brown fine Sandy Silt, very loose to loose-damp to moist	90	8					
					Light Gray fine to medium Sand, trace Silt, loose-damp							
		11				93	2					
15					Light Gray Silt, trace fine Sand, loose-moist							
		12				84	15					
20					Gray Brown fine Sand, little Silt, loose-damp							
					Gray Brown Silty fine to medium Sand with interbedded Silt layers, loose-damp							
		14				96	7					
25												
					Light Gray Silty fine Sand, medium dense-damp							
		20				92	5					
30					Boring Terminated at 30'							

TBL 17G218.GPJ SOCALGEO.GDT 12/15/17

TEST BORING LOG

PLATE B-7

SOUTHERN CALIFORNIA GEOTECHNICAL
A California Corporation

BORING NO. B-8

JOB NO.: 17G218 | DRILLING DATE: 11/28/17 | WATER DEPTH: Dry
PROJECT: Proposed Comm/Ind Building | DRILLING METHOD: Hollow Stem Auger | CAVE DEPTH: 13 feet
LOCATION: San Bernardino County, California | LOGGED BY: Anthony Luna | READING TAKEN: At Completion

FIELD RESULTS						LABORATORY RESULTS						
DEPTH (FEET)	SAMPLE	BLOW COUNT	POCKET PEN. (TSF)	GRAPHIC LOG	DESCRIPTION SURFACE ELEVATION: --- MSL	DRY DENSITY (PCF)	MOISTURE CONTENT (%)	LIQUID LIMIT	PLASTIC LIMIT	PASSING #200 SIEVE (%)	UNCONFINED SHEAR (TSF)	COMMENTS
		8			DISTURBED ALLUVIUM: Light Gray Brown Silty fine Sand to fine Sandy Silt, trace fine root fibers, loose-damp	90	3					
		6			ALLUVIUM: Light Gray Brown Silty fine Sand to fine Sandy Silt, trace fine root fibers, very loose to loose-damp	92	3					
5		6				90	3					
		6			Light Gray fine Sand, trace Silt, very loose to loose-dry	90	1					
		11			Gray fine Sandy Silt, loose-dry to damp	92	2					
10					Gray Silty fine Sand, little medium Sand, loose to medium dense-dry to damp							
		10				91	2					
15												
		12				94	6					
20												
		16				100	4					
25					Boring Terminated at 25'							

TBL 17G218.GPJ SOCALGEO.GDT 12/15/17

TEST BORING LOG **PLATE B-8**

SOUTHERN CALIFORNIA GEOTECHNICAL
A California Corporation

BORING NO. B-9

JOB NO.: 17G218 | DRILLING DATE: 11/28/17 | WATER DEPTH: Dry
PROJECT: Proposed Comm/Ind Building | DRILLING METHOD: Hollow Stem Auger | CAVE DEPTH: 9 feet
LOCATION: San Bernardino County, California | LOGGED BY: Anthony Luna | READING TAKEN: At Completion

FIELD RESULTS						LABORATORY RESULTS						
DEPTH (FEET)	SAMPLE	BLOW COUNT	POCKET PEN. (TSF)	GRAPHIC LOG	DESCRIPTION SURFACE ELEVATION: --- MSL	DRY DENSITY (PCF)	MOISTURE CONTENT (%)	LIQUID LIMIT	PLASTIC LIMIT	PASSING #200 SIEVE (%)	UNCONFINED SHEAR (TSF)	COMMENTS
		4			DISTURBED ALLUVIUM: Light Brown Silty fine Sand to fine Sandy Silt, very loose to loose-damp		4					
		4			ALLUVIUM: Light Brown Silty fine Sand to fine Sandy Silt, very loose to loose-damp		4					
5		4					4					
		4			Light Gray to Light Gray Brown Silty fine Sand, very loose to loose-damp		3					
10					Gray Brown Silty fine Sand, little medium Sand, loose-damp							
		6					4					
15					Boring Terminated at 15'							

TBL 17G218.GPJ SOCALGEO.GDT 12/15/17

TEST BORING LOG **PLATE B-9**

SOUTHERN CALIFORNIA GEOTECHNICAL
A California Corporation

BORING NO. B-10

JOB NO.: 17G218 | DRILLING DATE: 11/28/17 | WATER DEPTH: Dry
PROJECT: Proposed Comm/Ind Building | DRILLING METHOD: Hollow Stem Auger | CAVE DEPTH: 2 feet
LOCATION: San Bernardino County, California | LOGGED BY: Anthony Luna | READING TAKEN: At Completion

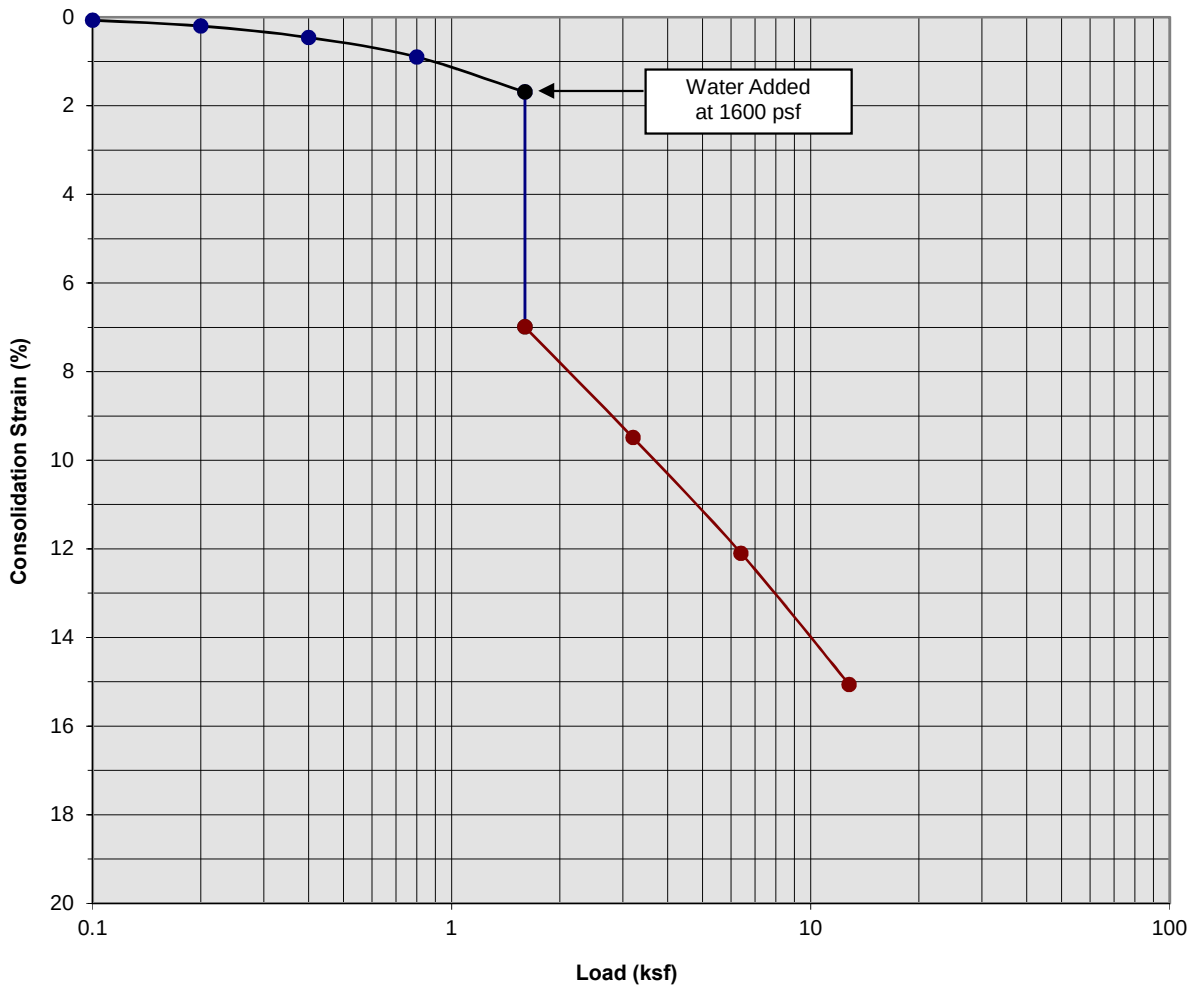
FIELD RESULTS						LABORATORY RESULTS						
DEPTH (FEET)	SAMPLE	BLOW COUNT	POCKET PEN. (TSF)	GRAPHIC LOG	DESCRIPTION SURFACE ELEVATION: --- MSL	DRY DENSITY (PCF)	MOISTURE CONTENT (%)	LIQUID LIMIT	PLASTIC LIMIT	PASSING #200 SIEVE (%)	UNCONFINED SHEAR (TSF)	COMMENTS
		4			DISTURBED ALLUVIUM: Light Brown Silty fine Sand to fine Sandy Silt, very loose to loose-damp		4					
		4			ALLUVIUM: Light Gray Brown Silty fine Sand to fine Sandy Silt, very loose to loose-damp		5					
5					Boring Terminated at 5'							

TBL 17G218.GPJ SOCALGEO.GDT 12/15/17

TEST BORING LOG **PLATE B-10**

APPENDIX C

Consolidation/Collapse Test Results



Classification: Light Gray Brown Silty fine Sand to fine Sandy Silt

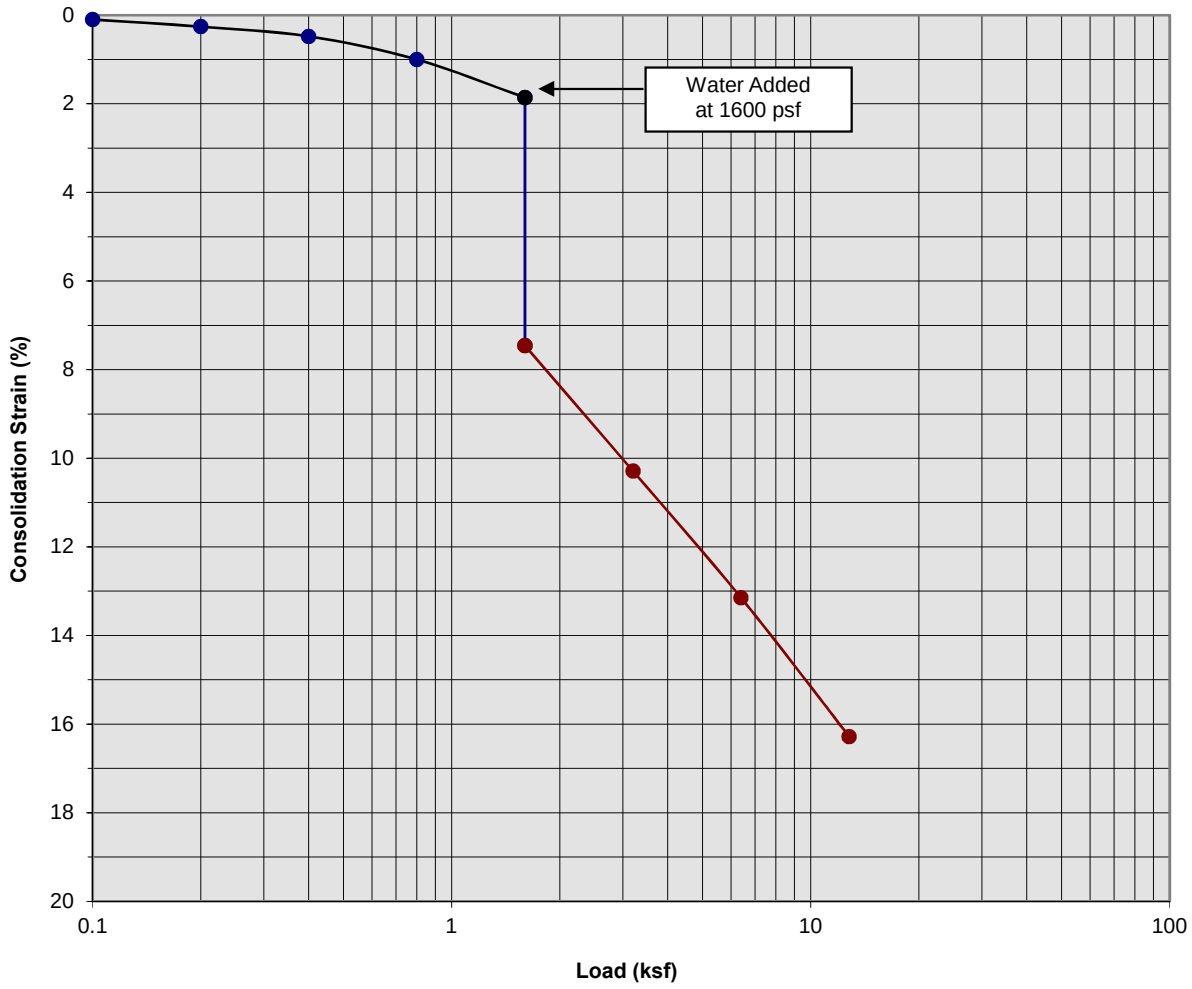
Boring Number:	B-1	Initial Moisture Content (%)	3
Sample Number:	---	Final Moisture Content (%)	21
Depth (ft)	1 to 2	Initial Dry Density (pcf)	88.9
Specimen Diameter (in)	2.4	Final Dry Density (pcf)	104.0
Specimen Thickness (in)	1.0	Percent Collapse (%)	5.30

Proposed Comm/Ind Building
San Bernardino County, California
Project No. 17G218

PLATE C- 1

SoCalGeo
SOUTHERN CALIFORNIA GEOTECHNICAL
A California Corporation

Consolidation/Collapse Test Results



Classification: Light Gray Brown Silty fine Sand to fine Sandy Silt

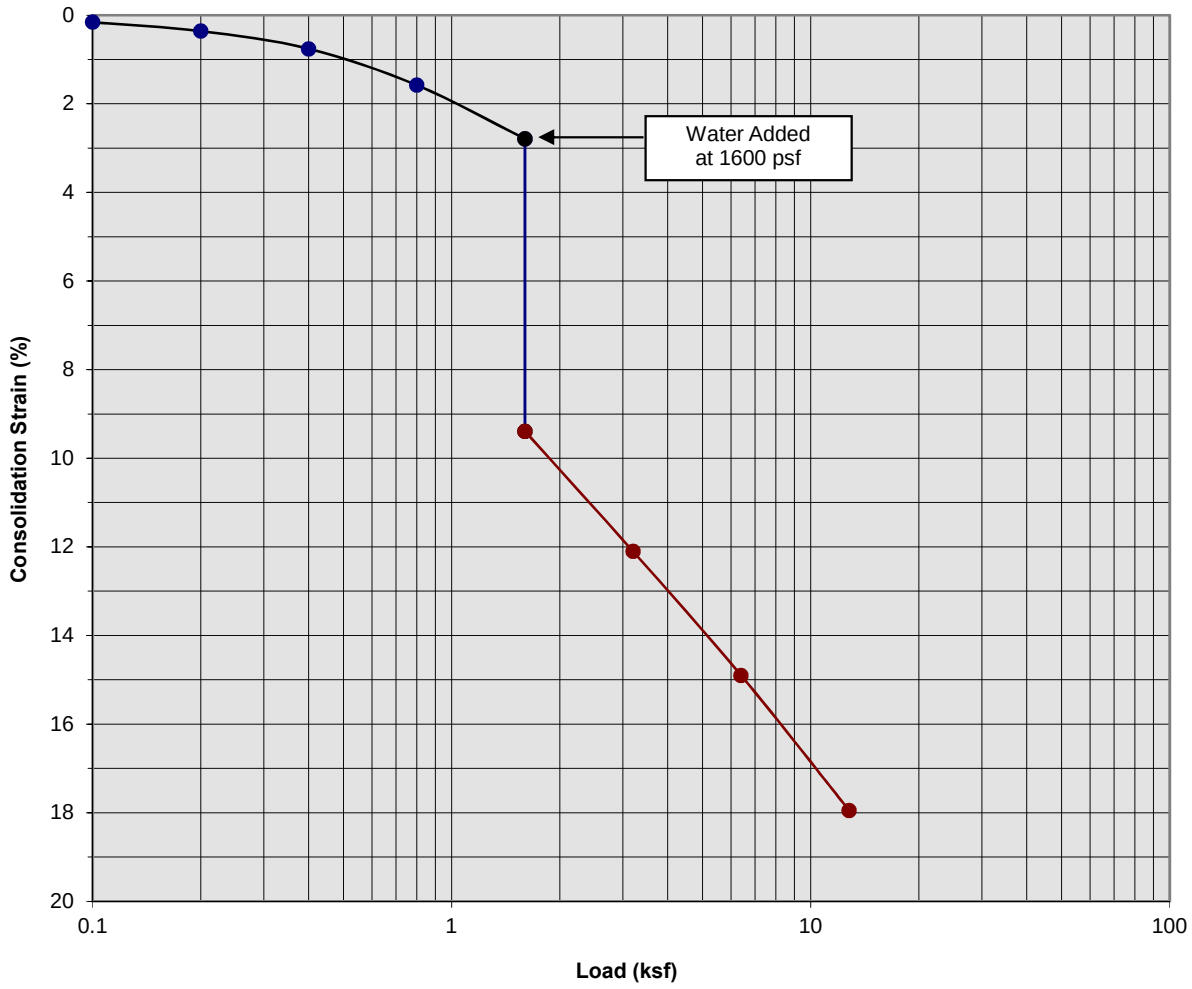
Boring Number:	B-1	Initial Moisture Content (%)	5
Sample Number:	---	Final Moisture Content (%)	24
Depth (ft)	3 to 4	Initial Dry Density (pcf)	85.0
Specimen Diameter (in)	2.4	Final Dry Density (pcf)	100.7
Specimen Thickness (in)	1.0	Percent Collapse (%)	5.60

Proposed Comm/Ind Building
San Bernardino County, California
Project No. 17G218

PLATE C- 2

SoCalGeo
SOUTHERN CALIFORNIA GEOTECHNICAL
A California Corporation

Consolidation/Collapse Test Results



Classification: Light Gray Brown fine Sandy Silt

Boring Number:	B-1	Initial Moisture Content (%)	6
Sample Number:	---	Final Moisture Content (%)	23
Depth (ft)	5 to 6	Initial Dry Density (pcf)	83.9
Specimen Diameter (in)	2.4	Final Dry Density (pcf)	102.6
Specimen Thickness (in)	1.0	Percent Collapse (%)	6.60

Proposed Comm/Ind Building
San Bernardino County, California
Project No. 17G218

PLATE C- 3

SoCalGeo
SOUTHERN CALIFORNIA GEOTECHNICAL
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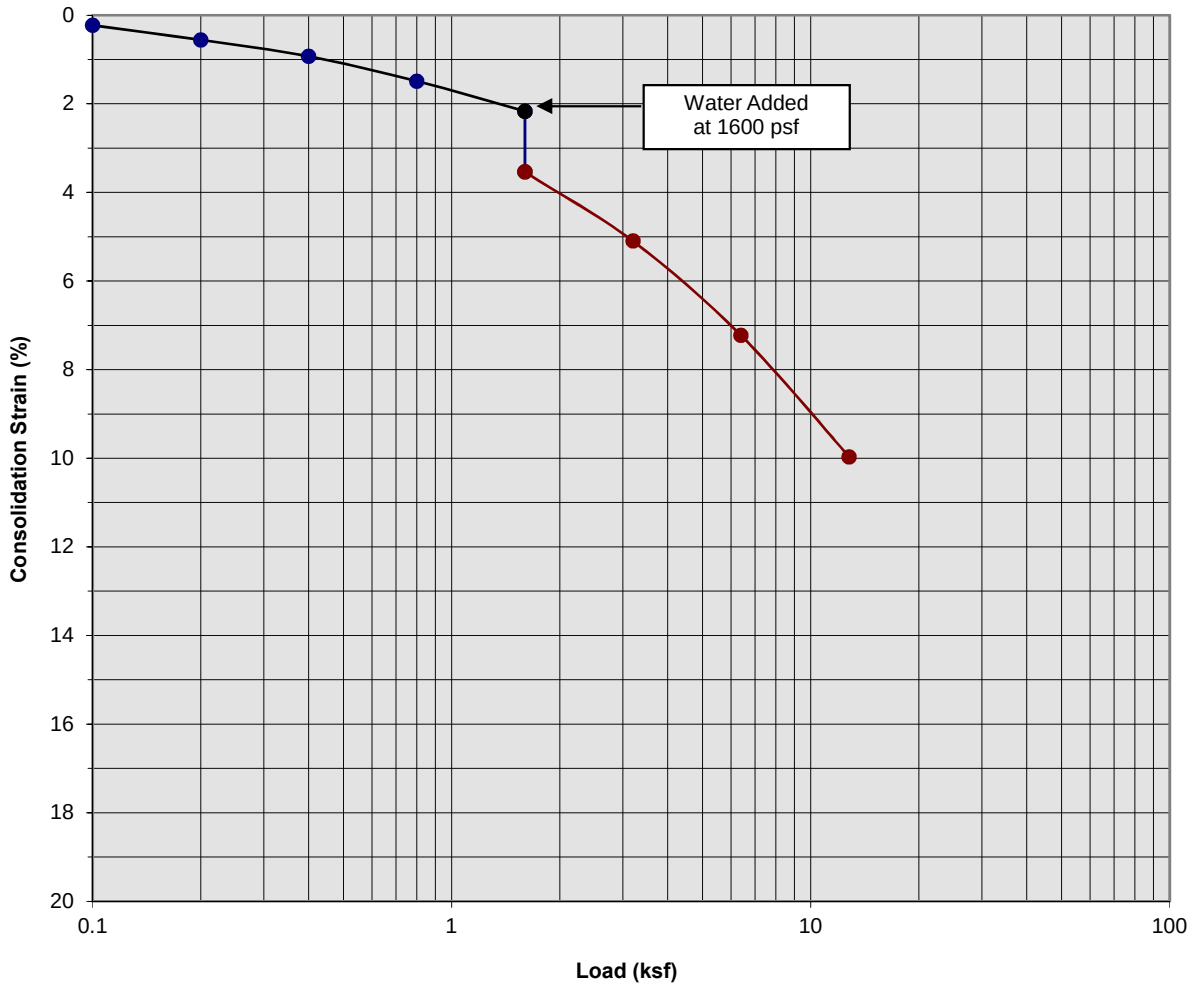
Consolidation/Collapse Test Results



Classification: LIght Gray Silty fine Sand

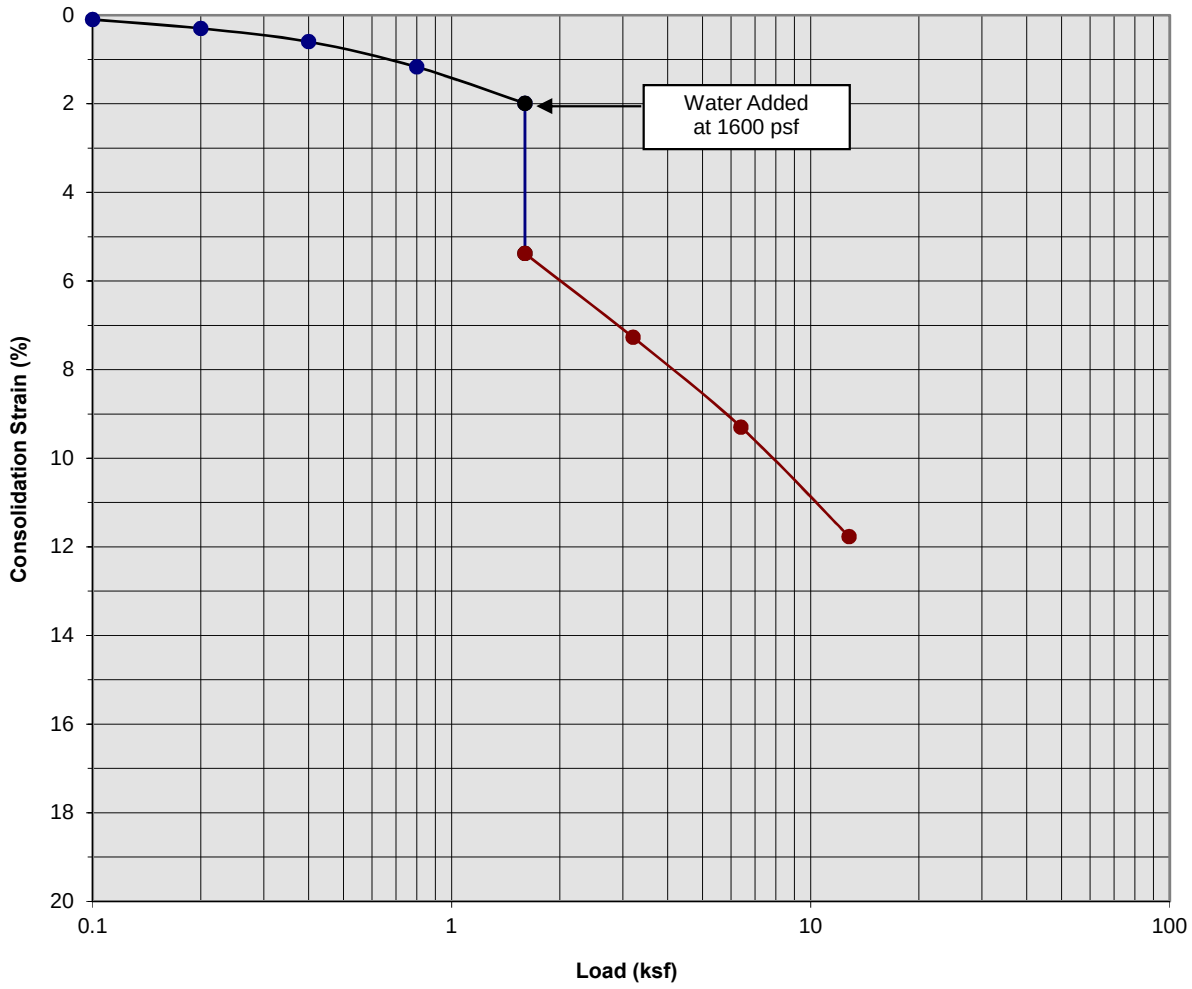
Boring Number:	B-1	Initial Moisture Content (%)	4
Sample Number:	---	Final Moisture Content (%)	24
Depth (ft)	7 to 8	Initial Dry Density (pcf)	91.6
Specimen Diameter (in)	2.4	Final Dry Density (pcf)	101.3
Specimen Thickness (in)	1.0	Percent Collapse (%)	1.37

Proposed Comm/Ind Building
San Bernardino County, California
Project No. 17G218

PLATE C- 4

SoCalGeo
SOUTHERN CALIFORNIA GEOTECHNICAL
A California Corporation

Consolidation/Collapse Test Results



Classification: Light Gray Brown fine Sandy Silt to Silty fine Sand

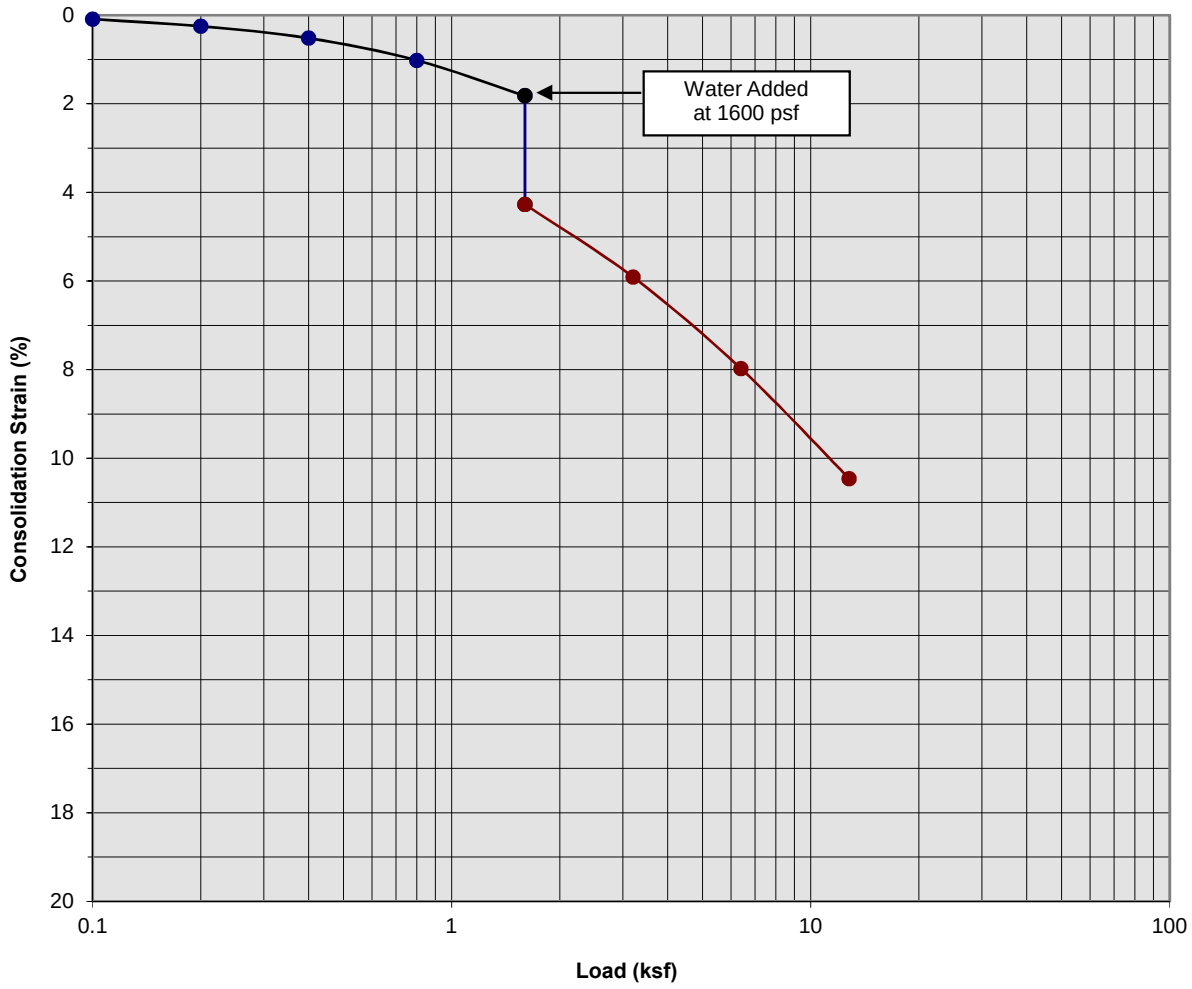
Boring Number:	B-3	Initial Moisture Content (%)	3
Sample Number:	---	Final Moisture Content (%)	21
Depth (ft)	3 to 4	Initial Dry Density (pcf)	91.9
Specimen Diameter (in)	2.4	Final Dry Density (pcf)	103.1
Specimen Thickness (in)	1.0	Percent Collapse (%)	3.39

Proposed Comm/Ind Building
San Bernardino County, California
Project No. 17G218

PLATE C- 5

SoCalGeo
SOUTHERN CALIFORNIA GEOTECHNICAL
A California Corporation

Consolidation/Collapse Test Results



Classification: Light Gray fine Sandy Silt

Boring Number:	B-3	Initial Moisture Content (%)	3
Sample Number:	---	Final Moisture Content (%)	25
Depth (ft)	5 to 6	Initial Dry Density (pcf)	89.8
Specimen Diameter (in)	2.4	Final Dry Density (pcf)	98.8
Specimen Thickness (in)	1.0	Percent Collapse (%)	2.45

Proposed Comm/Ind Building
San Bernardino County, California
Project No. 17G218

PLATE C- 6

SoCalGeo
SOUTHERN CALIFORNIA GEOTECHNICAL
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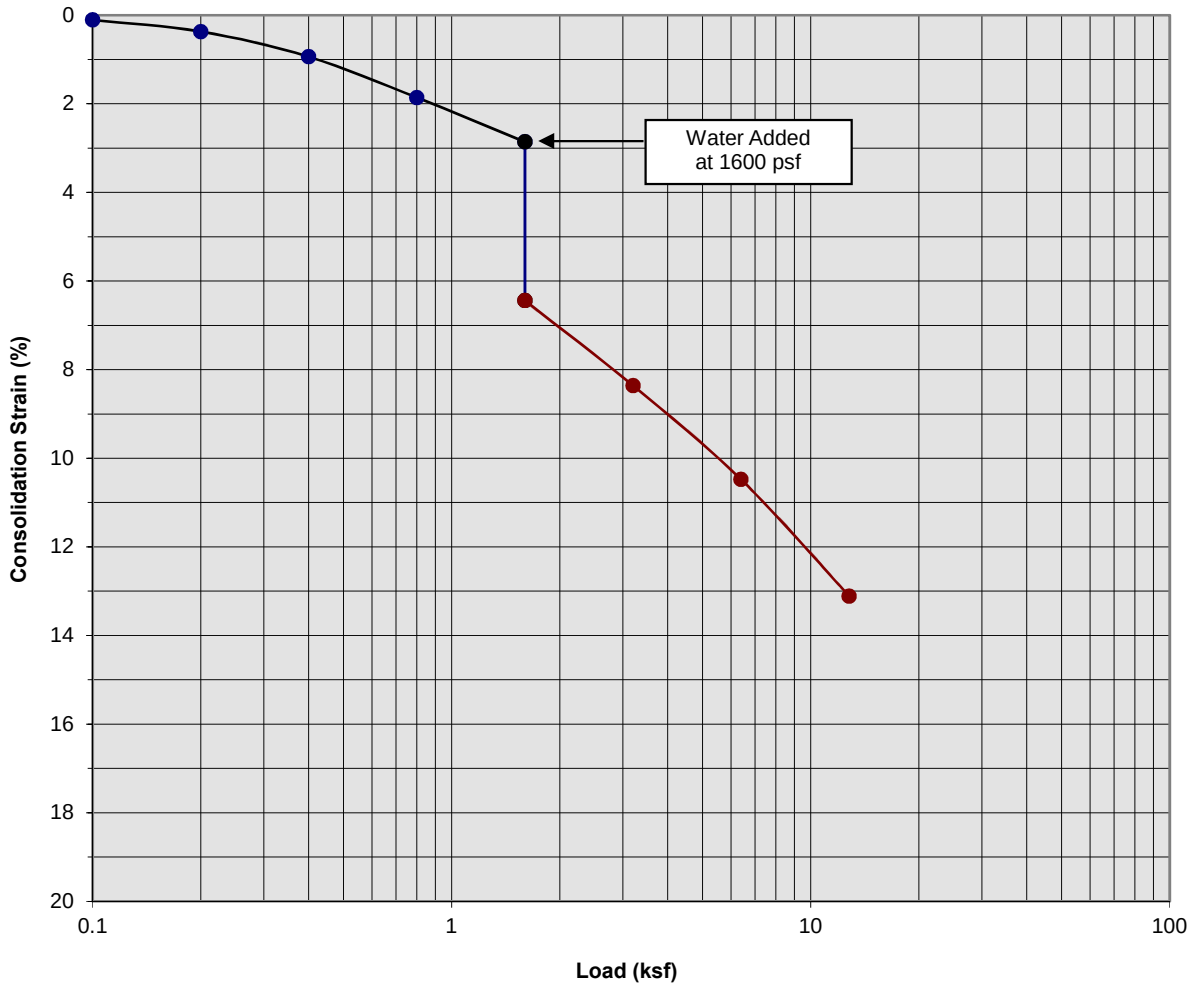
Consolidation/Collapse Test Results



Classification: Light Gray fine Sandy Silt

Boring Number:	B-3	Initial Moisture Content (%)	3
Sample Number:	---	Final Moisture Content (%)	26
Depth (ft)	7 to 8	Initial Dry Density (pcf)	81.3
Specimen Diameter (in)	2.4	Final Dry Density (pcf)	93.1
Specimen Thickness (in)	1.0	Percent Collapse (%)	3.58

Proposed Comm/Ind Building
San Bernardino County, California
Project No. 17G218

PLATE C- 7

SoCalGeo
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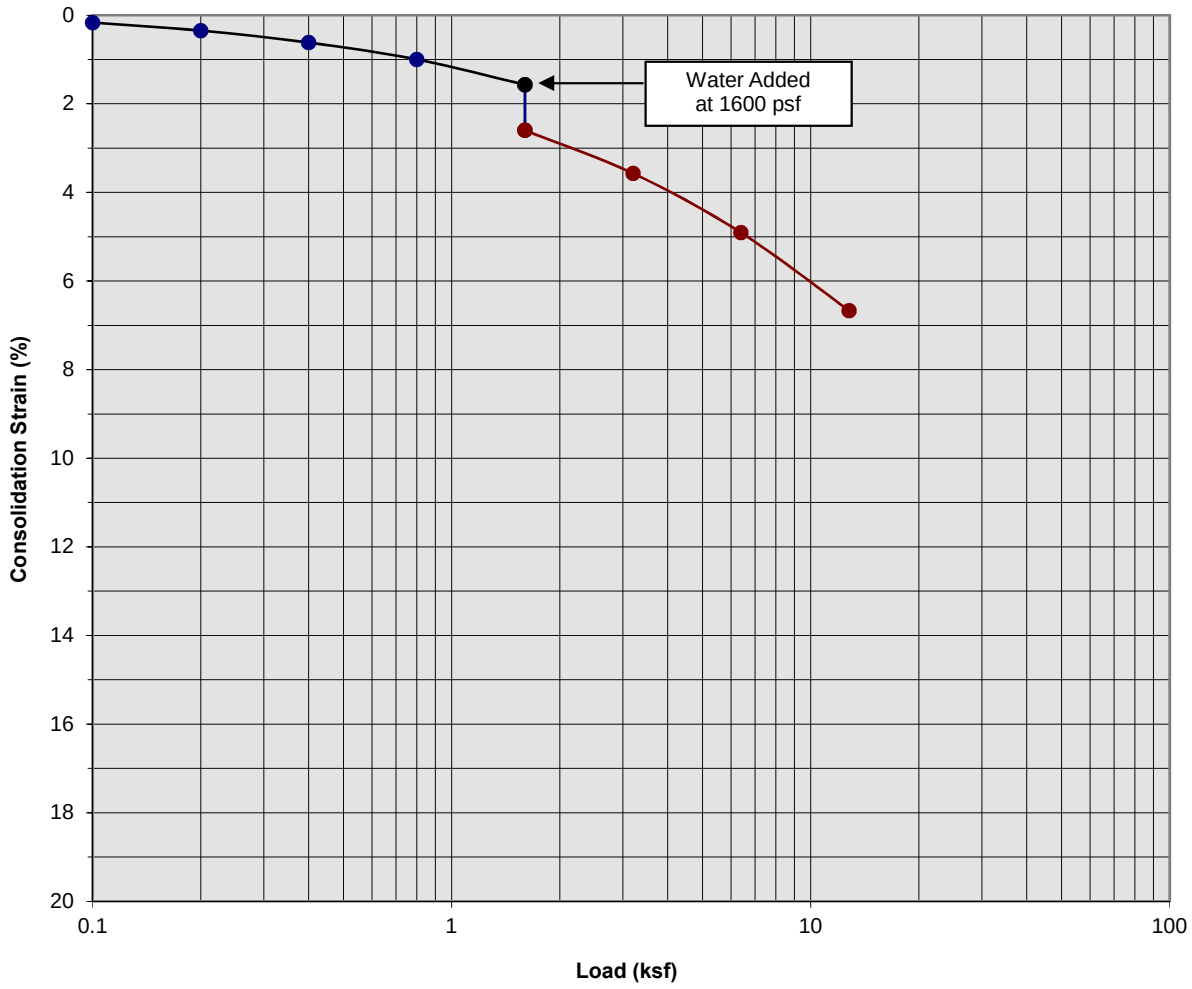
Consolidation/Collapse Test Results



Classification: Light Gray fine Sand, little Silt

Boring Number:	B-3	Initial Moisture Content (%)	2
Sample Number:	---	Final Moisture Content (%)	21
Depth (ft)	9 to 10	Initial Dry Density (pcf)	97.2
Specimen Diameter (in)	2.4	Final Dry Density (pcf)	103.4
Specimen Thickness (in)	1.0	Percent Collapse (%)	1.03

Proposed Comm/Ind Building
San Bernardino County, California
Project No. 17G218

PLATE C- 8

SoCalGeo
SOUTHERN CALIFORNIA GEOTECHNICAL
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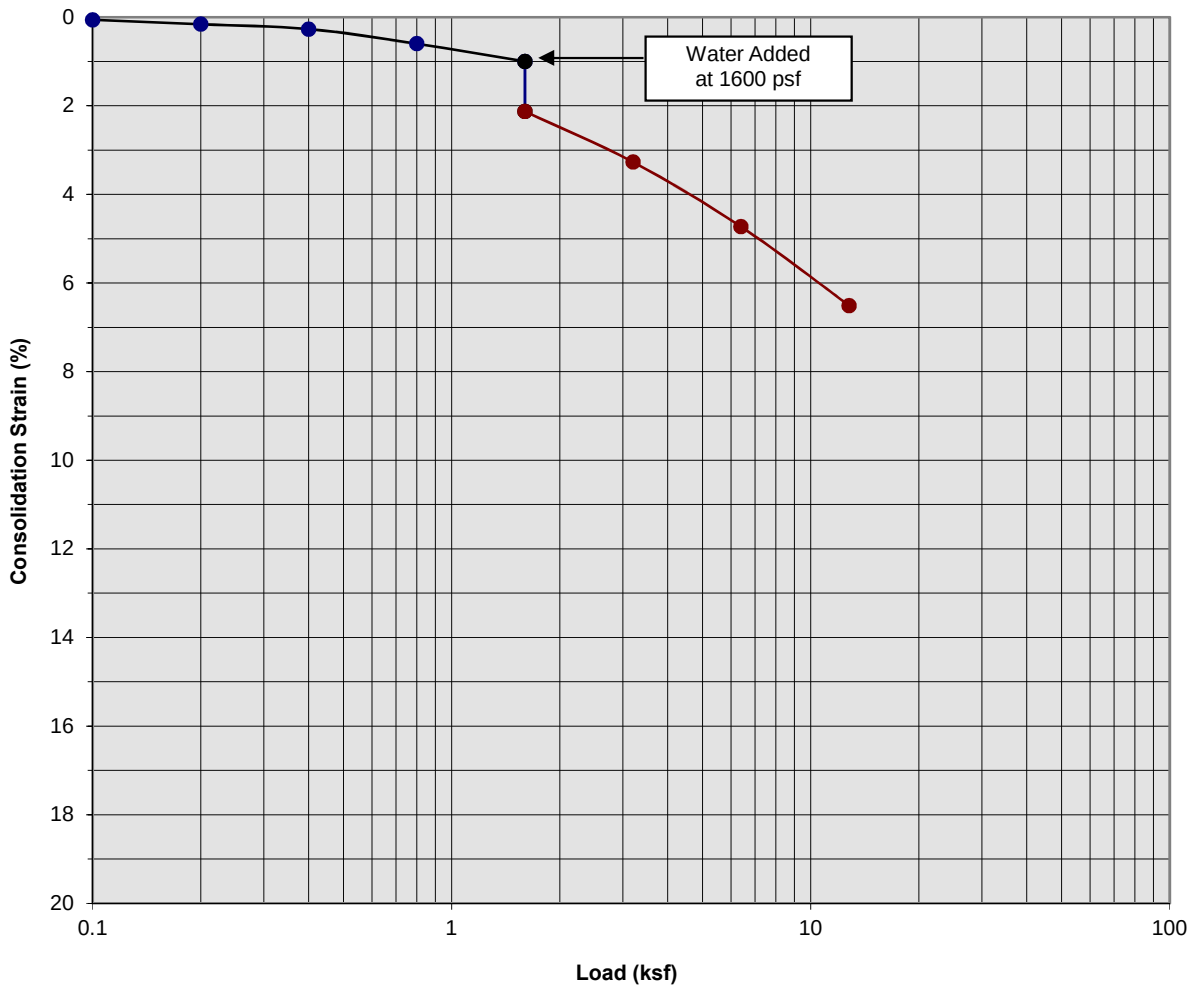
Consolidation/Collapse Test Results



Classification: FILL: Light Brown fine to medium Sand, trace fine Gravel

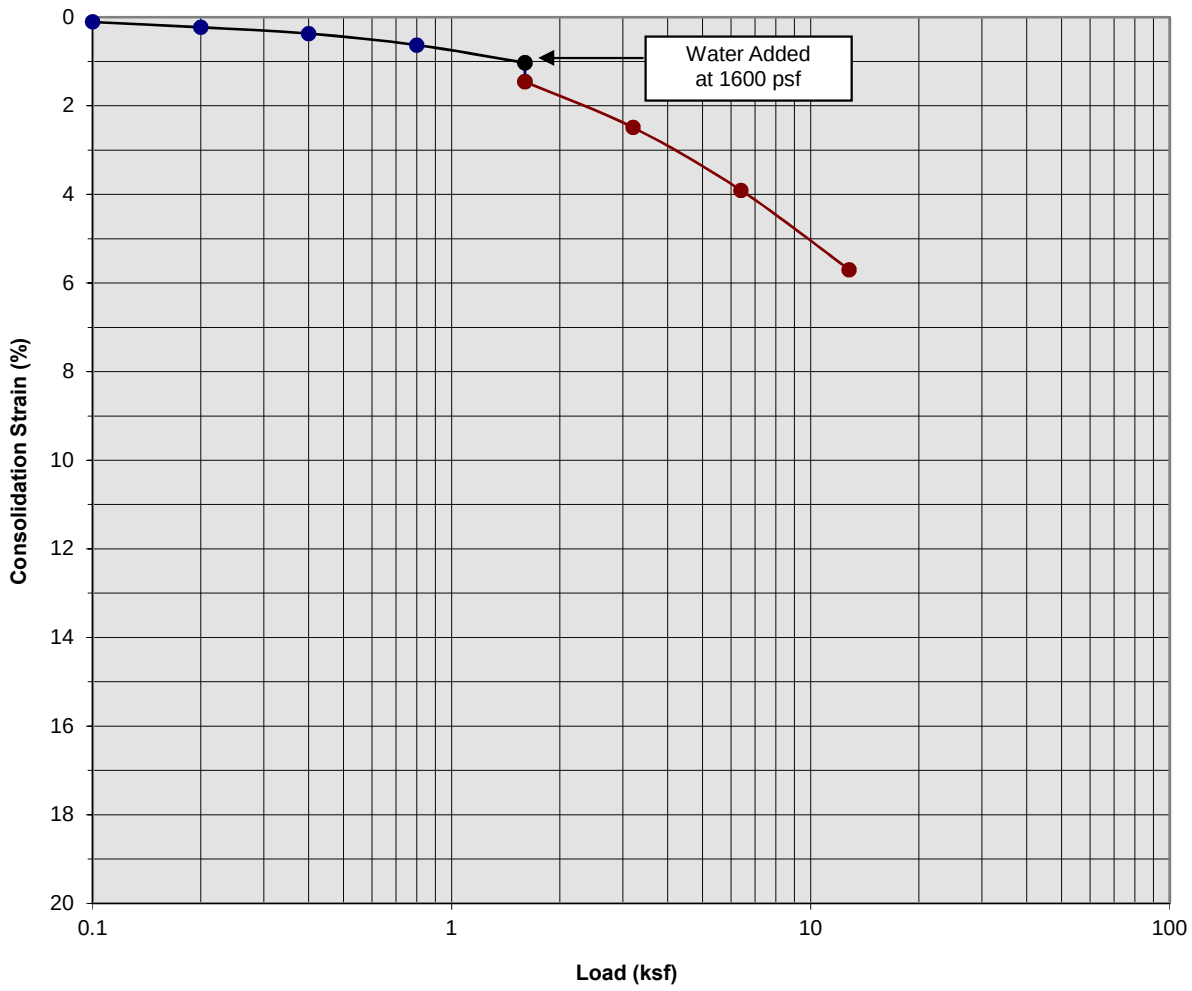
Boring Number:	B-7	Initial Moisture Content (%)	2
Sample Number:	---	Final Moisture Content (%)	18
Depth (ft)	1 to 2	Initial Dry Density (pcf)	100.7
Specimen Diameter (in)	2.4	Final Dry Density (pcf)	107.1
Specimen Thickness (in)	1.0	Percent Collapse (%)	1.13

Proposed Comm/Ind Building
San Bernardino County, California
Project No. 17G218

PLATE C- 9

SoCalGeo
SOUTHERN CALIFORNIA GEOTECHNICAL
A California Corporation

Consolidation/Collapse Test Results



Classification: FILL: Light Brown fine to medium Sand, trace fine Gravel

Boring Number:	B-7	Initial Moisture Content (%)	3
Sample Number:	---	Final Moisture Content (%)	17
Depth (ft)	3 to 4	Initial Dry Density (pcf)	105.9
Specimen Diameter (in)	2.4	Final Dry Density (pcf)	112.3
Specimen Thickness (in)	1.0	Percent Collapse (%)	0.43

Proposed Comm/Ind Building
San Bernardino County, California
Project No. 17G218

PLATE C- 10

SoCalGeo
SOUTHERN CALIFORNIA GEOTECHNICAL
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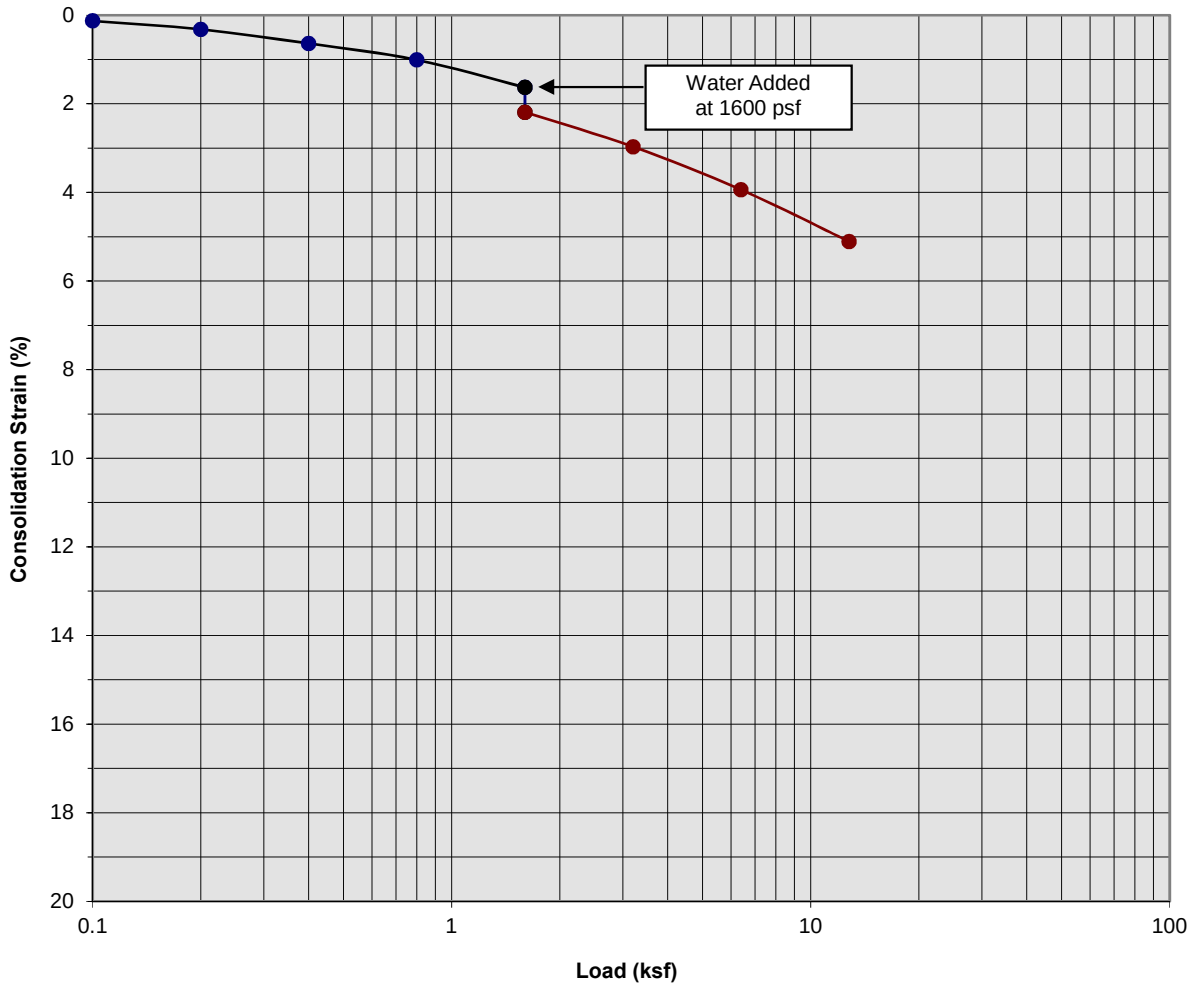
Consolidation/Collapse Test Results



Classification: POSSIBLE FILL: Light Gray Brown fine to medium Sand, trace coarse Sand

Boring Number:	B-7	Initial Moisture Content (%)	2
Sample Number:	---	Final Moisture Content (%)	17
Depth (ft)	5 to 6	Initial Dry Density (pcf)	104.2
Specimen Diameter (in)	2.4	Final Dry Density (pcf)	109.2
Specimen Thickness (in)	1.0	Percent Collapse (%)	0.56

Proposed Comm/Ind Building
San Bernardino County, California
Project No. 17G218

PLATE C- 11

SoCalGeo
SOUTHERN CALIFORNIA GEOTECHNICAL
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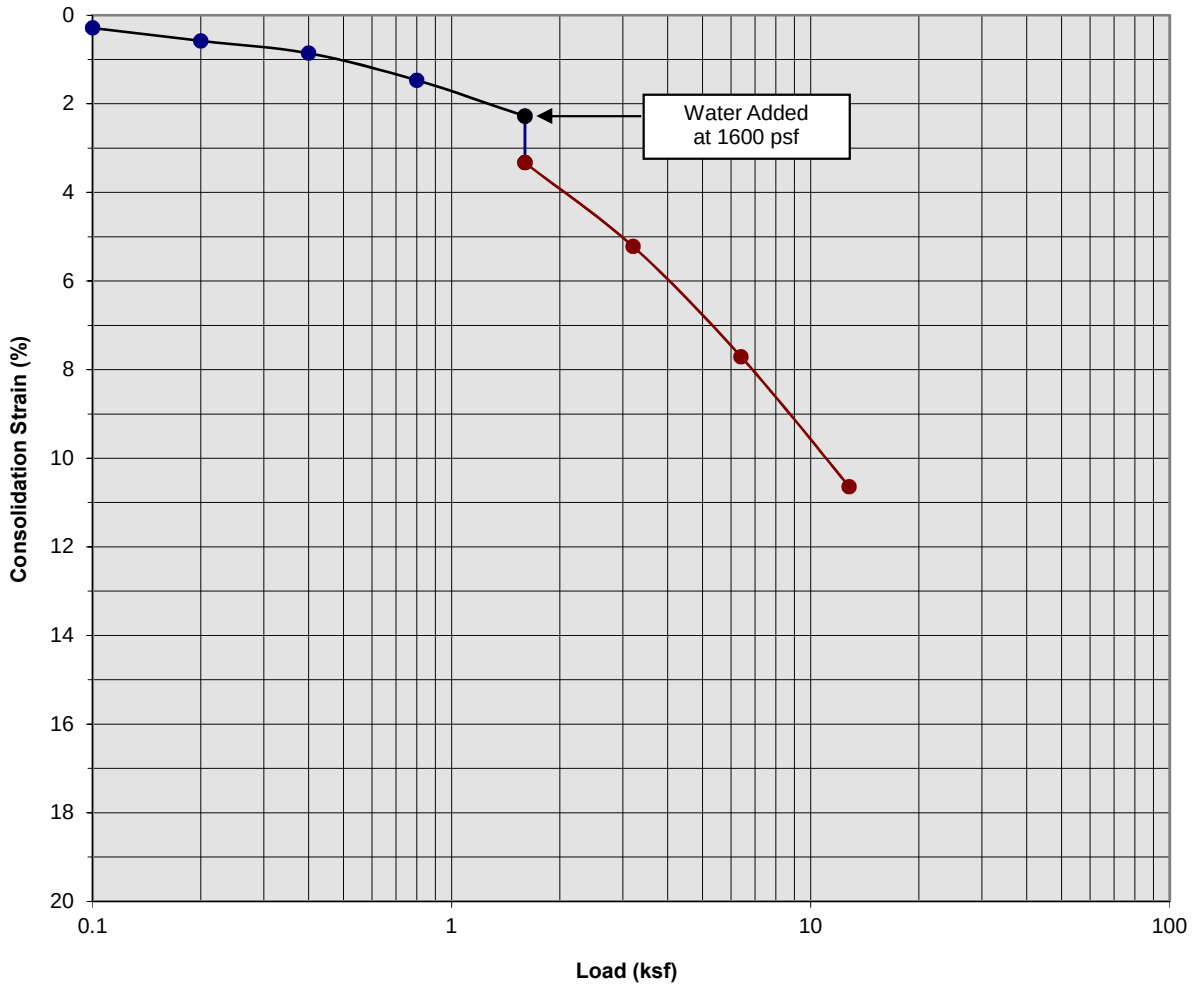
Consolidation/Collapse Test Results



Classification: Light Gray Silty fine Sand, trace medium Sand

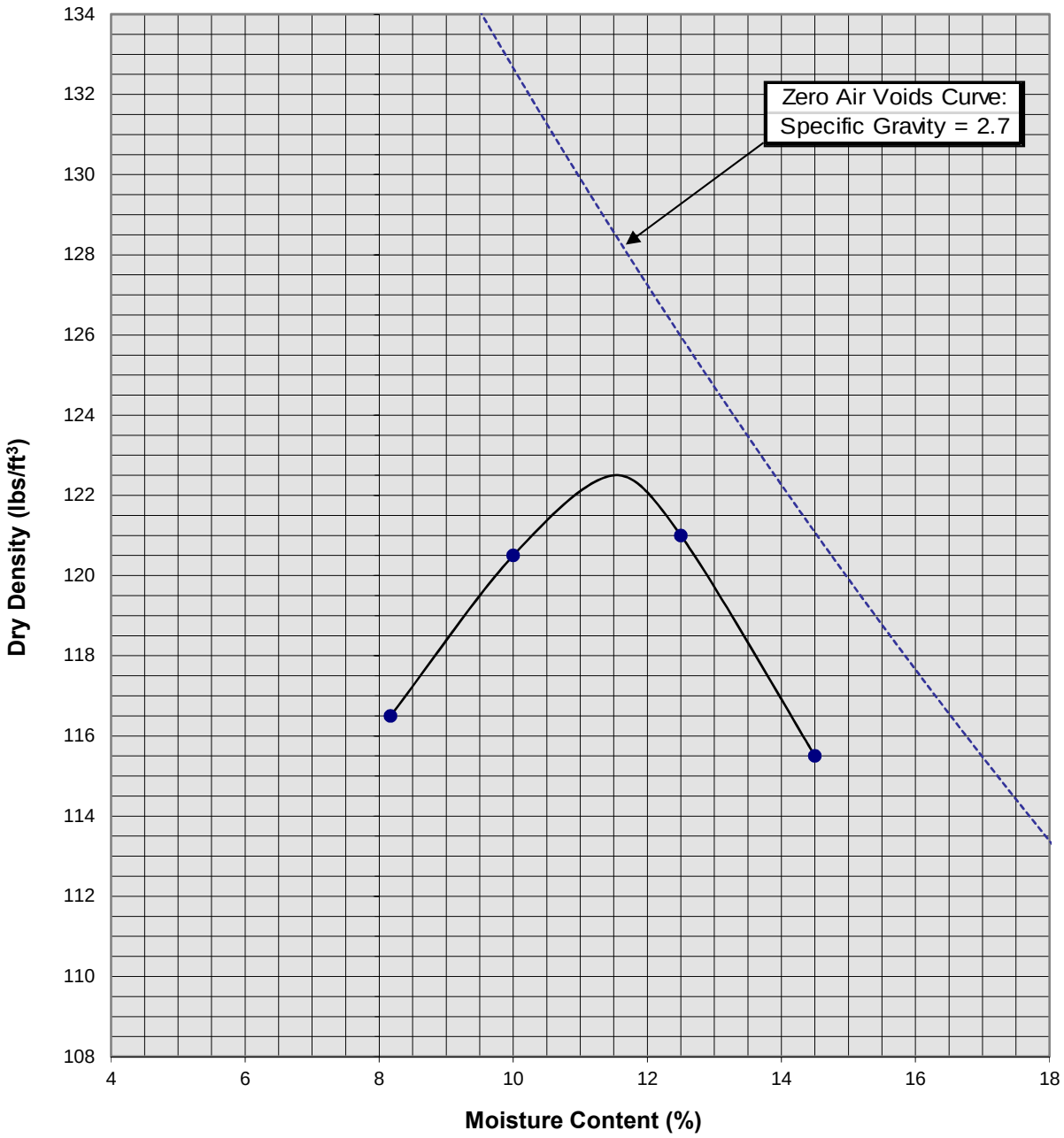
Boring Number:	B-7	Initial Moisture Content (%)	9
Sample Number:	---	Final Moisture Content (%)	29
Depth (ft)	7 to 8	Initial Dry Density (pcf)	89.4
Specimen Diameter (in)	2.4	Final Dry Density (pcf)	99.9
Specimen Thickness (in)	1.0	Percent Collapse (%)	1.05

Proposed Comm/Ind Building
San Bernardino County, California
Project No. 17G218

PLATE C- 12

SoCalGeo
SOUTHERN CALIFORNIA GEOTECHNICAL
A California Corporation

Moisture/Density Relationship
ASTM D-1557



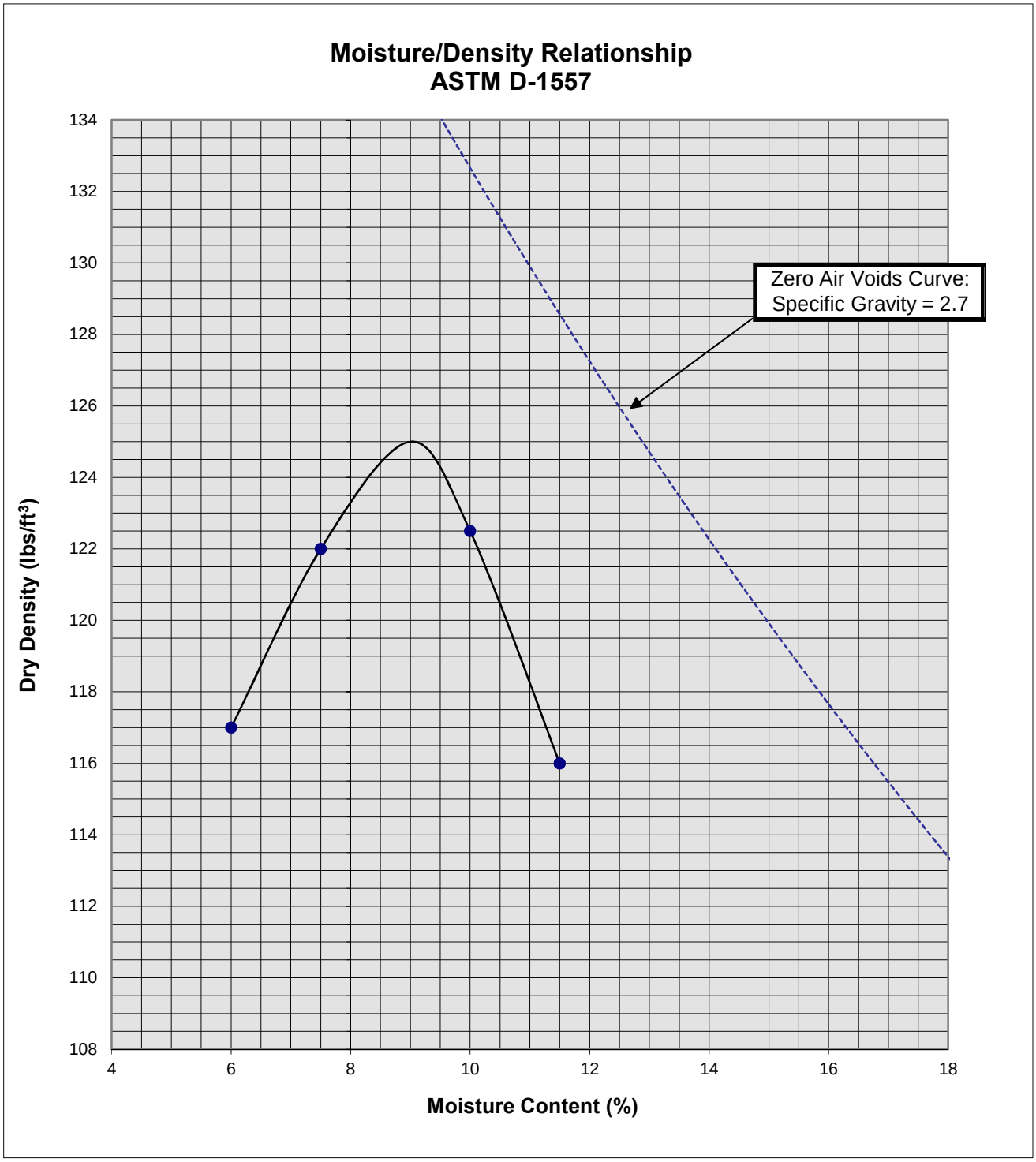
Soil ID Number	B-1 @ 0 to 5'
Optimum Moisture (%)	11.5
Maximum Dry Density (pcf)	122.5
Soil Classification	Gray Brown Silty fine Sand to fine Sandy Silt

Proposed Comm/Ind Building
San Bernardino County, California
Project No. 17G218

PLATE C-13

SoCalGeo
SOUTHERN CALIFORNIA GEOTECHNICAL
A California Corporation

Moisture/Density Relationship
ASTM D-1557



Soil ID Number	B-7 @ 0 to 5'
Optimum Moisture (%)	9
Maximum Dry Density (pcf)	125
Soil Classification	Brown Silty fine to medium Sand trace fine Gravel

Proposed Comm/Ind Building
San Bernardino County, California
Project No. 17G218

PLATE C-14

SoCalGeo
SOUTHERN CALIFORNIA GEOTECHNICAL
A California Corporation

APPENDIX D

GRADING GUIDE SPECIFICATIONS

These grading guide specifications are intended to provide typical procedures for grading operations. They are intended to supplement the recommendations contained in the geotechnical investigation report for this project. Should the recommendations in the geotechnical investigation report conflict with the grading guide specifications, the more site specific recommendations in the geotechnical investigation report will govern.

General

- The Earthwork Contractor is responsible for the satisfactory completion of all earthwork in accordance with the plans and geotechnical reports, and in accordance with city, county, and applicable building codes.

- The Geotechnical Engineer is the representative of the Owner/Builder for the purpose of implementing the report recommendations and guidelines. These duties are not intended to relieve the Earthwork Contractor of any responsibility to perform in a workman-like manner, nor is the Geotechnical Engineer to direct the grading equipment or personnel employed by the Contractor.

- The Earthwork Contractor is required to notify the Geotechnical Engineer of the anticipated work and schedule so that testing and inspections can be provided. If necessary, work may be stopped and redone if personnel have not been scheduled in advance.

- The Earthwork Contractor is required to have suitable and sufficient equipment on the job-site to process, moisture condition, mix and compact the amount of fill being placed to the approved compaction. In addition, suitable support equipment should be available to conform with recommendations and guidelines in this report.

- Canyon cleanouts, overexcavation areas, processed ground to receive fill, key excavations, subdrains and benches should be observed by the Geotechnical Engineer prior to placement of any fill. It is the Earthwork Contractor's responsibility to notify the Geotechnical Engineer of areas that are ready for inspection.

- Excavation, filling, and subgrade preparation should be performed in a manner and sequence that will provide drainage at all times and proper control of erosion. Precipitation, springs, and seepage water encountered shall be pumped or drained to provide a suitable working surface. The Geotechnical Engineer must be informed of springs or water seepage encountered during grading or foundation construction for possible revision to the recommended construction procedures and/or installation of subdrains.

Site Preparation

- The Earthwork Contractor is responsible for all clearing, grubbing, stripping and site preparation for the project in accordance with the recommendations of the Geotechnical Engineer.

- If any materials or areas are encountered by the Earthwork Contractor which are suspected of having toxic or environmentally sensitive contamination, the Geotechnical Engineer and Owner/Builder should be notified immediately.

- Major vegetation should be stripped and disposed of off-site. This includes trees, brush, heavy grasses and any materials considered unsuitable by the Geotechnical Engineer.

- Underground structures such as basements, cesspools or septic disposal systems, mining shafts, tunnels, wells and pipelines should be removed under the inspection of the Geotechnical Engineer and recommendations provided by the Geotechnical Engineer and/or city, county or state agencies. If such structures are known or found, the Geotechnical Engineer should be notified as soon as possible so that recommendations can be formulated.

- Any topsoil, slopewash, colluvium, alluvium and rock materials which are considered unsuitable by the Geotechnical Engineer should be removed prior to fill placement.

- Remaining voids created during site clearing caused by removal of trees, foundations basements, irrigation facilities, etc., should be excavated and filled with compacted fill.

- Subsequent to clearing and removals, areas to receive fill should be scarified to a depth of 10 to 12 inches, moisture conditioned and compacted

- The moisture condition of the processed ground should be at or slightly above the optimum moisture content as determined by the Geotechnical Engineer. Depending upon field conditions, this may require air drying or watering together with mixing and/or discing.

Compacted Fills

- Soil materials imported to or excavated on the property may be utilized in the fill, provided each material has been determined to be suitable in the opinion of the Geotechnical Engineer. Unless otherwise approved by the Geotechnical Engineer, all fill materials shall be free of deleterious, organic, or frozen matter, shall contain no chemicals that may result in the material being classified as “contaminated,” and shall be very low to non-expansive with a maximum expansion index (EI) of 50. The top 12 inches of the compacted fill should have a maximum particle size of 3 inches, and all underlying compacted fill material a maximum 6-inch particle size, except as noted below.

- All soils should be evaluated and tested by the Geotechnical Engineer. Materials with high expansion potential, low strength, poor gradation or containing organic materials may require removal from the site or selective placement and/or mixing to the satisfaction of the Geotechnical Engineer.

- Rock fragments or rocks less than 6 inches in their largest dimensions, or as otherwise determined by the Geotechnical Engineer, may be used in compacted fill, provided the distribution and placement is satisfactory in the opinion of the Geotechnical Engineer.

- Rock fragments or rocks greater than 12 inches should be taken off-site or placed in accordance with recommendations and in areas designated as suitable by the Geotechnical Engineer. These materials should be placed in accordance with Plate D-8 of these Grading Guide Specifications and in accordance with the following recommendations:

    - Rocks 12 inches or more in diameter should be placed in rows at least 15 feet apart, 15 feet from the edge of the fill, and 10 feet or more below subgrade. Spaces should be left between each rock fragment to provide for placement and compaction of soil around the fragments.

    - Fill materials consisting of soil meeting the minimum moisture content requirements and free of oversize material should be placed between and over the rows of rock or

concrete. Ample water and compactive effort should be applied to the fill materials as they are placed in order that all of the voids between each of the fragments are filled and compacted to the specified density.

- Subsequent rows of rocks should be placed such that they are not directly above a row placed in the previous lift of fill. A minimum 5-foot offset between rows is recommended.

- To facilitate future trenching, oversized material should not be placed within the range of foundation excavations, future utilities or other underground construction unless specifically approved by the soil engineer and the developer/owner representative.

- Fill materials approved by the Geotechnical Engineer should be placed in areas previously prepared to receive fill and in evenly placed, near horizontal layers at about 6 to 8 inches in loose thickness, or as otherwise determined by the Geotechnical Engineer for the project.

- Each layer should be moisture conditioned to optimum moisture content, or slightly above, as directed by the Geotechnical Engineer. After proper mixing and/or drying, to evenly distribute the moisture, the layers should be compacted to at least 90 percent of the maximum dry density in compliance with ASTM D-1557-78 unless otherwise indicated.

- Density and moisture content testing should be performed by the Geotechnical Engineer at random intervals and locations as determined by the Geotechnical Engineer. These tests are intended as an aid to the Earthwork Contractor, so he can evaluate his workmanship, equipment effectiveness and site conditions. The Earthwork Contractor is responsible for compaction as required by the Geotechnical Report(s) and governmental agencies.

- Fill areas unused for a period of time may require moisture conditioning, processing and recompaction prior to the start of additional filling. The Earthwork Contractor should notify the Geotechnical Engineer of his intent so that an evaluation can be made.

- Fill placed on ground sloping at a 5-to-1 inclination (horizontal-to-vertical) or steeper should be benched into bedrock or other suitable materials, as directed by the Geotechnical Engineer. Typical details of benching are illustrated on Plates D-2, D-4, and D-5.

- Cut/fill transition lots should have the cut portion overexcavated to a depth of at least 3 feet and rebuilt with fill (see Plate D-1), as determined by the Geotechnical Engineer.

- All cut lots should be inspected by the Geotechnical Engineer for fracturing and other bedrock conditions. If necessary, the pads should be overexcavated to a depth of 3 feet and rebuilt with a uniform, more cohesive soil type to impede moisture penetration.

- Cut portions of pad areas above buttresses or stabilizations should be overexcavated to a depth of 3 feet and rebuilt with uniform, more cohesive compacted fill to impede moisture penetration.

- Non-structural fill adjacent to structural fill should typically be placed in unison to provide lateral support. Backfill along walls must be placed and compacted with care to ensure that excessive unbalanced lateral pressures do not develop. The type of fill material placed adjacent to below grade walls must be properly tested and approved by the Geotechnical Engineer with consideration of the lateral earth pressure used in the design.

Foundations

- The foundation influence zone is defined as extending one foot horizontally from the outside edge of a footing, and proceeding downward at a ½ horizontal to 1 vertical (0.5:1) inclination.

- Where overexcavation beneath a footing subgrade is necessary, it should be conducted so as to encompass the entire foundation influence zone, as described above.

- Compacted fill adjacent to exterior footings should extend at least 12 inches above foundation bearing grade. Compacted fill within the interior of structures should extend to the floor subgrade elevation.

Fill Slopes

- The placement and compaction of fill described above applies to all fill slopes. Slope compaction should be accomplished by overfilling the slope, adequately compacting the fill in even layers, including the overfilled zone and cutting the slope back to expose the compacted core

- Slope compaction may also be achieved by backrolling the slope adequately every 2 to 4 vertical feet during the filling process as well as requiring the earth moving and compaction equipment to work close to the top of the slope. Upon completion of slope construction, the slope face should be compacted with a sheepsfoot connected to a sideboom and then grid rolled. This method of slope compaction should only be used if approved by the Geotechnical Engineer.

- Sandy soils lacking in adequate cohesion may be unstable for a finished slope condition and therefore should not be placed within 15 horizontal feet of the slope face.

- All fill slopes should be keyed into bedrock or other suitable material. Fill keys should be at least 15 feet wide and inclined at 2 percent into the slope. For slopes higher than 30 feet, the fill key width should be equal to one-half the height of the slope (see Plate D-5).

- All fill keys should be cleared of loose slough material prior to geotechnical inspection and should be approved by the Geotechnical Engineer and governmental agencies prior to filling.

- The cut portion of fill over cut slopes should be made first and inspected by the Geotechnical Engineer for possible stabilization requirements. The fill portion should be adequately keyed through all surficial soils and into bedrock or suitable material. Soils should be removed from the transition zone between the cut and fill portions (see Plate D-2).

Cut Slopes

- All cut slopes should be inspected by the Geotechnical Engineer to determine the need for stabilization. The Earthwork Contractor should notify the Geotechnical Engineer when slope cutting is in progress at intervals of 10 vertical feet. Failure to notify may result in a delay in recommendations.

- Cut slopes exposing loose, cohesionless sands should be reported to the Geotechnical Engineer for possible stabilization recommendations.

- All stabilization excavations should be cleared of loose slough material prior to geotechnical inspection. Stakes should be provided by the Civil Engineer to verify the location and dimensions of the key. A typical stabilization fill detail is shown on Plate D-5.

- Stabilization key excavations should be provided with subdrains. Typical subdrain details are shown on Plates D-6.

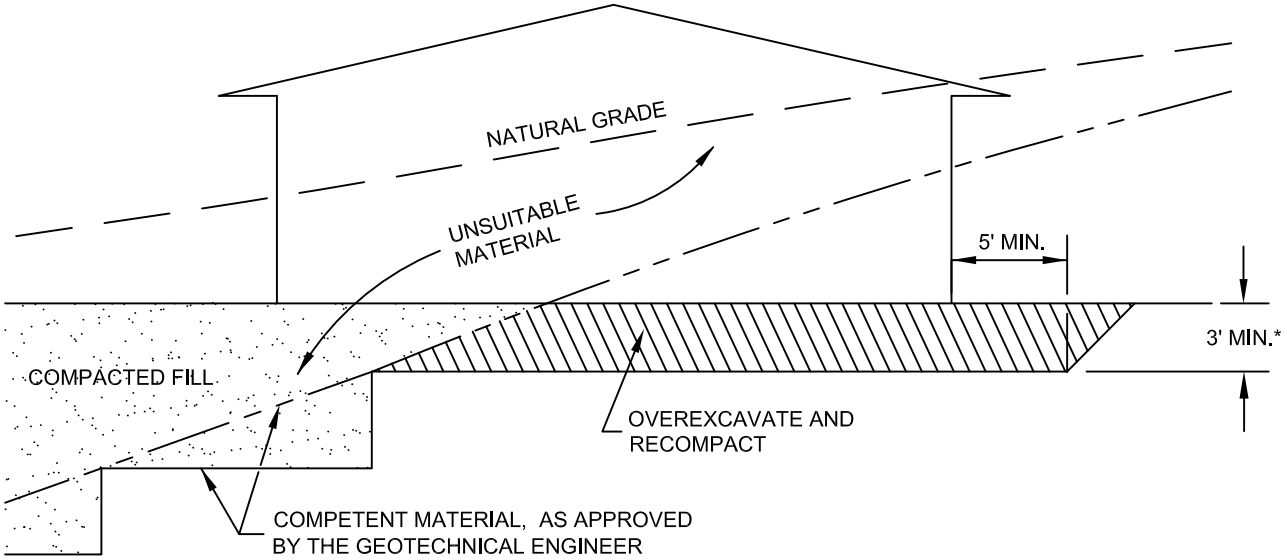
Subdrains

- Subdrains may be required in canyons and swales where fill placement is proposed. Typical subdrain details for canyons are shown on Plate D-3. Subdrains should be installed after approval of removals and before filling, as determined by the Soils Engineer.

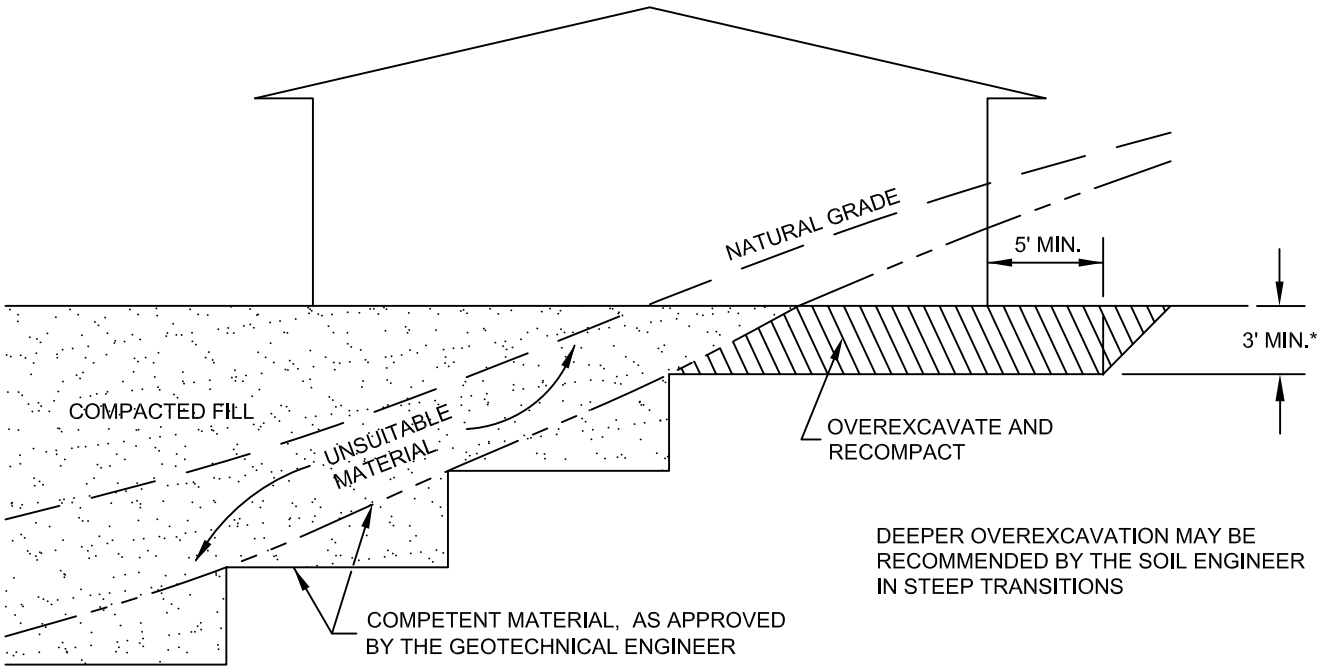
- Plastic pipe may be used for subdrains provided it is Schedule 40 or SDR 35 or equivalent. Pipe should be protected against breakage, typically by placement in a square-cut (backhoe) trench or as recommended by the manufacturer.

- Filter material for subdrains should conform to CALTRANS Specification 68-1.025 or as approved by the Geotechnical Engineer for the specific site conditions. Clean ¾-inch crushed rock may be used provided it is wrapped in an acceptable filter cloth and approved by the Geotechnical Engineer. Pipe diameters should be 6 inches for runs up to 500 feet and 8 inches for the downstream continuations of longer runs. Four-inch diameter pipe may be used in buttress and stabilization fills.

CUT LOT



CUT/FILL LOT (TRANSITION)

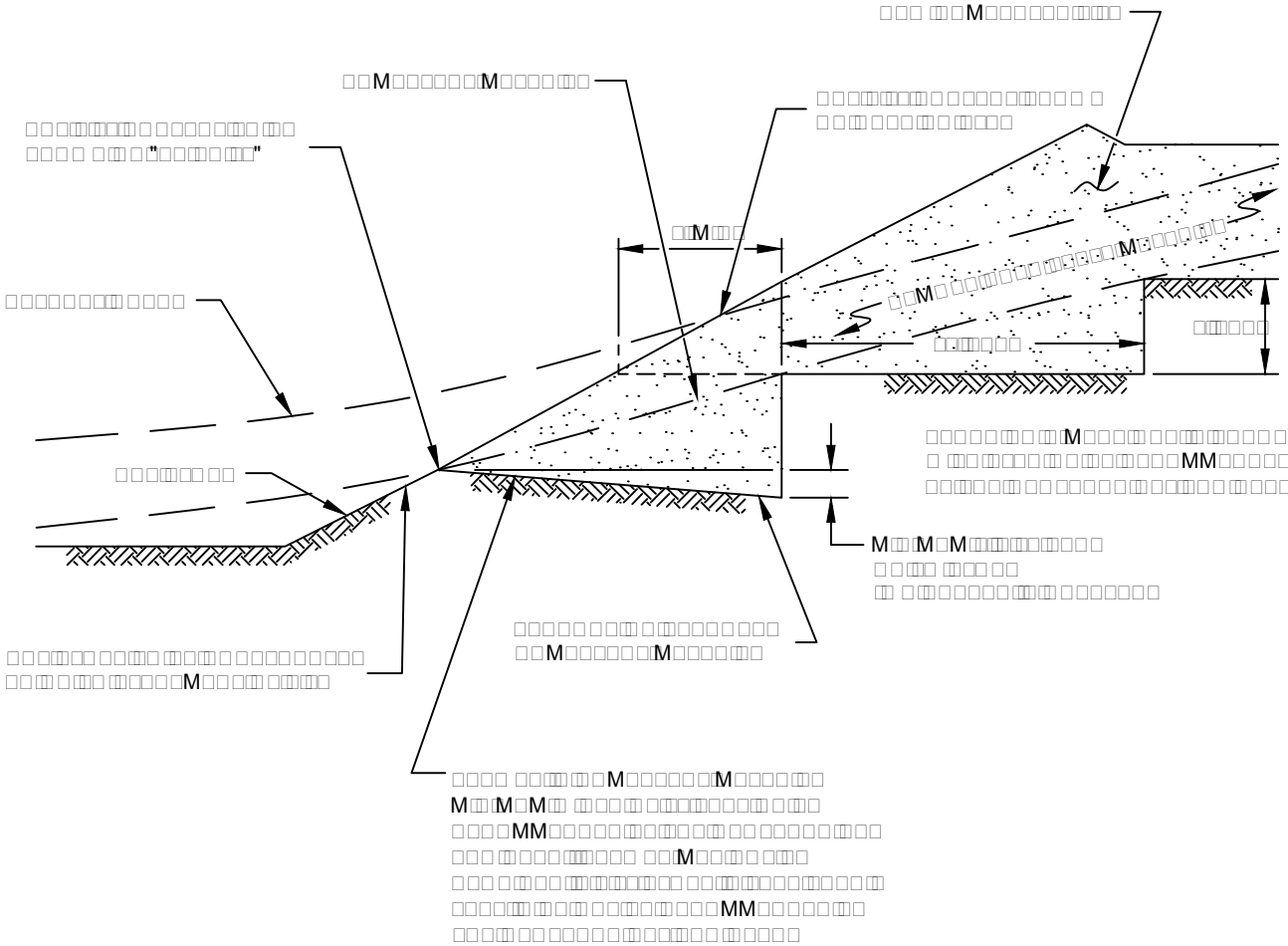


*SEE TEXT OF REPORT FOR SPECIFIC RECOMMENDATION. ACTUAL DEPTH OF OVEREXCAVATION MAY BE GREATER.

TRANSITION LOT DETAIL

GRADING GUIDE SPECIFICATIONS

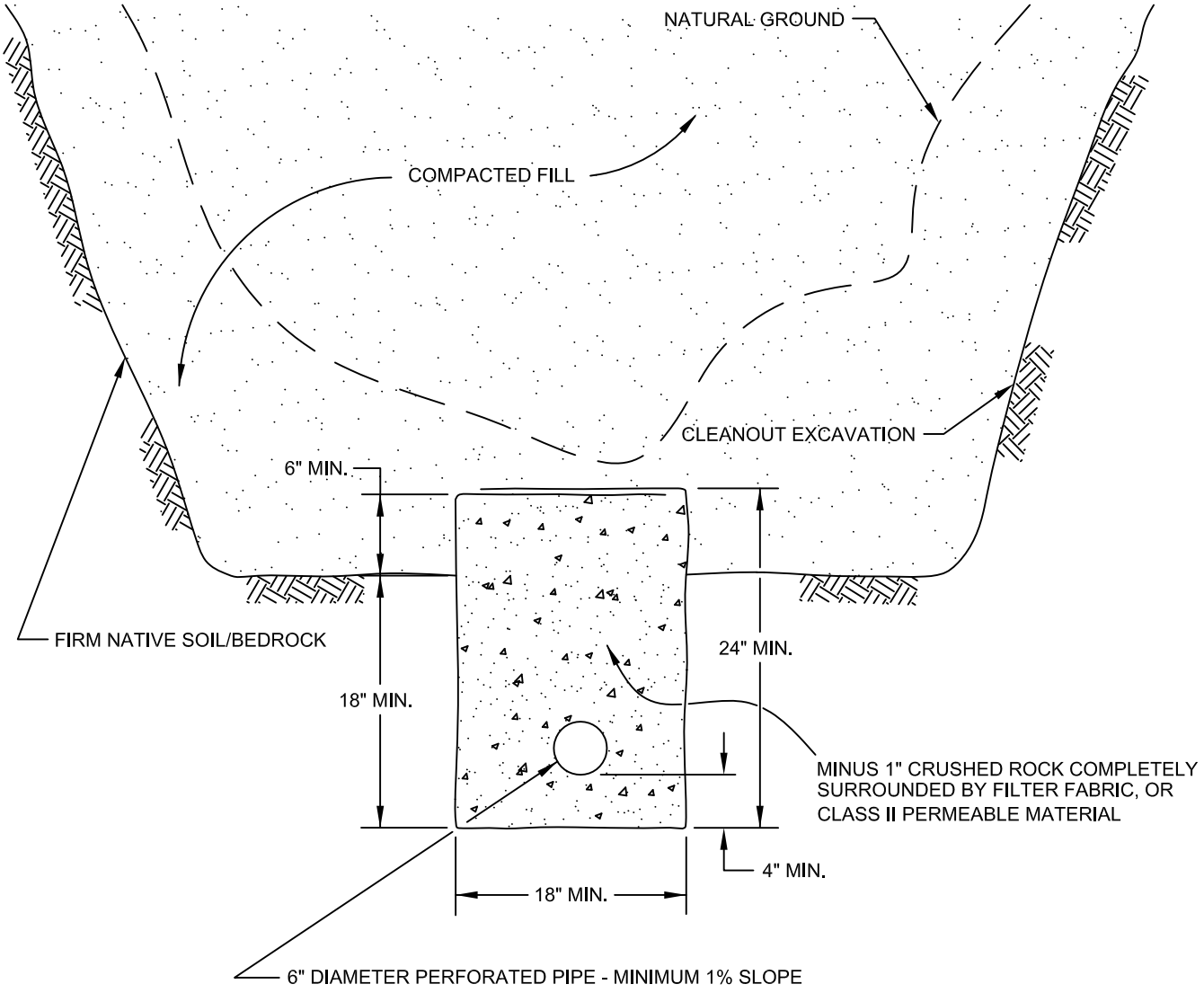
NOT TO SCALE	SoCalGeo SOUTHERN CALIFORNIA GEOTECHNICAL
DRAWN: JAS CHKD: GKM	
PLATE D-1	



FILL ABOVE CUT SLOPE DETAIL

PLATE D-2

SOUTHERN CALIFORNIA GEOTECHNICAL



PIPE MATERIAL	DEPTH OF FILL OVER SUBDRAIN
ADS (CORRUGATED POLETHYLENE)	8
TRANSITE UNDERDRAIN	20
PVC OR ABS: SDR 35	35
SDR 21	100

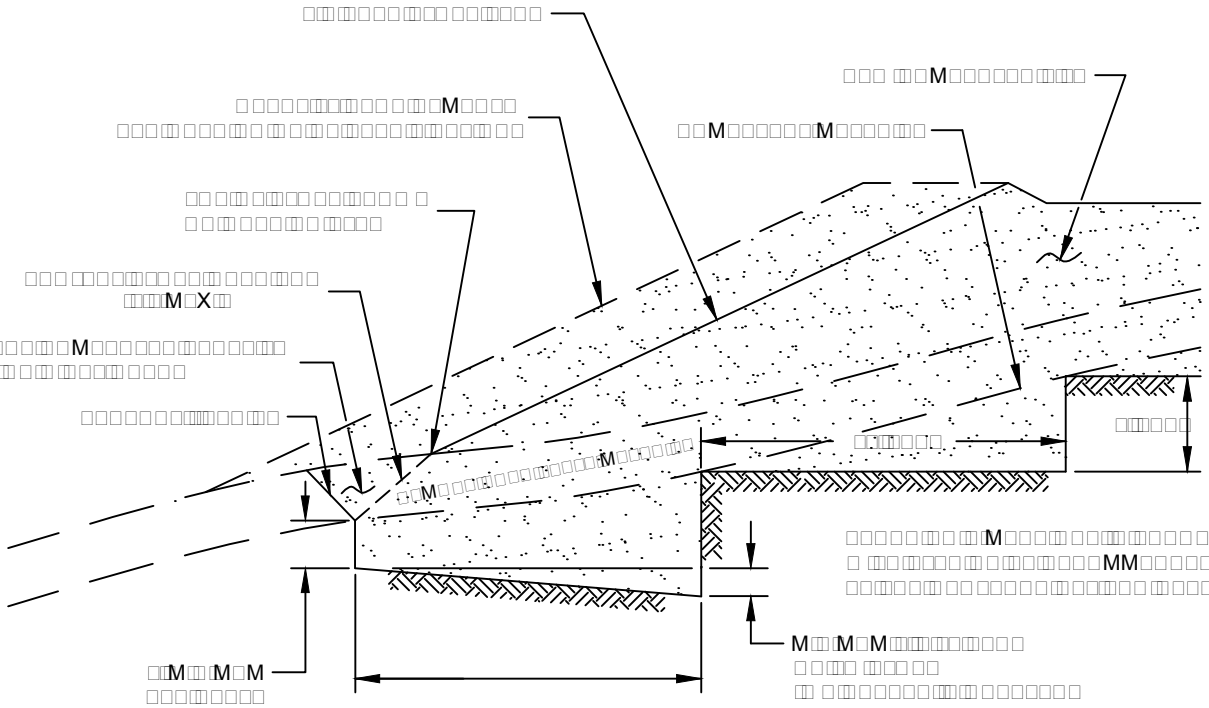
SCHEMATIC ONLY
NOT TO SCALE

CANYON SUBDRAIN DETAIL
GRADING GUIDE SPECIFICATIONS

NOT TO SCALE
DRAWN: JAS
CHKD: GKM

PLATE D-3

SoCalGeo
SOUTHERN CALIFORNIA GEOTECHNICAL

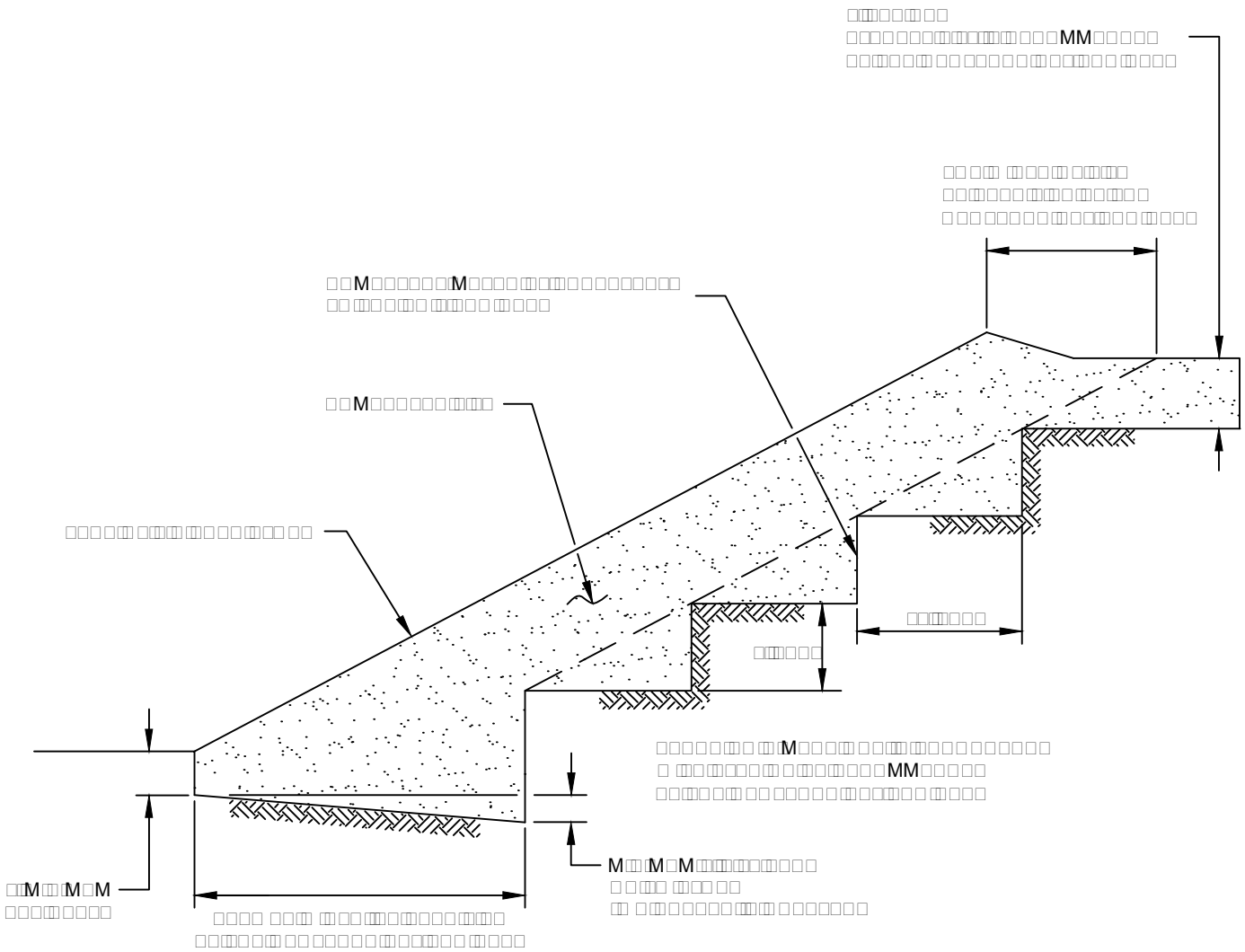


FILL ABOVE NATURAL SLOPE DETAIL

PLATE D-4

SoCalGeo

SOUTHERN CALIFORNIA GEOTECHNICAL

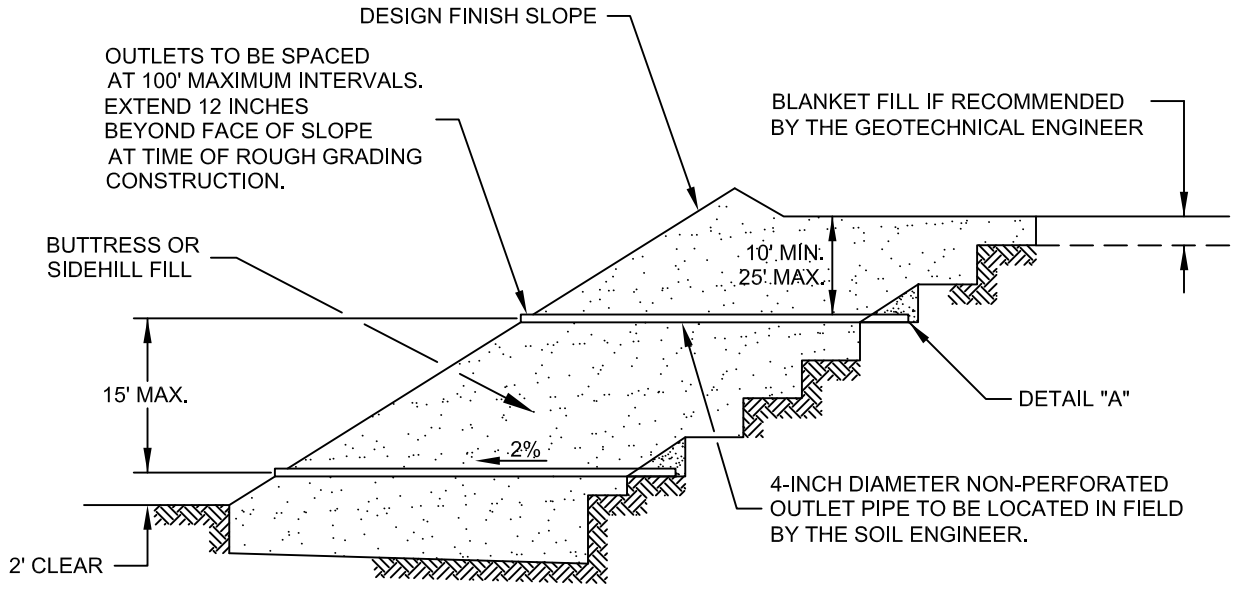


STABILIZATION FILL DETAIL

PLATE D-5

SoCalGeo

SOUTHERN CALIFORNIA GEOTECHNICAL



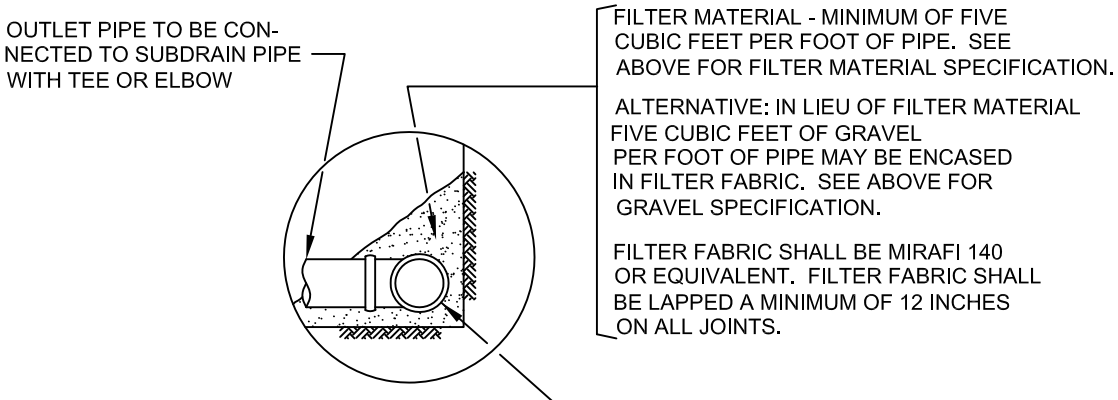
"FILTER MATERIAL" TO MEET FOLLOWING SPECIFICATION OR APPROVED EQUIVALENT: (CONFORMS TO EMA STD. PLAN 323)

SIEVE SIZE	PERCENTAGE PASSING
1"	100
3/4"	90-100
3/8"	40-100
NO. 4	25-40
NO. 8	18-33
NO. 30	5-15
NO. 50	0-7
NO. 200	0-3

"GRAVEL" TO MEET FOLLOWING SPECIFICATION OR APPROVED EQUIVALENT:

SIEVE SIZE	MAXIMUM PERCENTAGE PASSING
1 1/2"	100
NO. 4	50
NO. 200	8

SAND EQUIVALENT = MINIMUM OF 50



DETAIL "A"

NOTES:
1. TRENCH FOR OUTLET PIPES TO BE BACKFILLED WITH ON-SITE SOIL.

SLOPE FILL SUBDRAINS

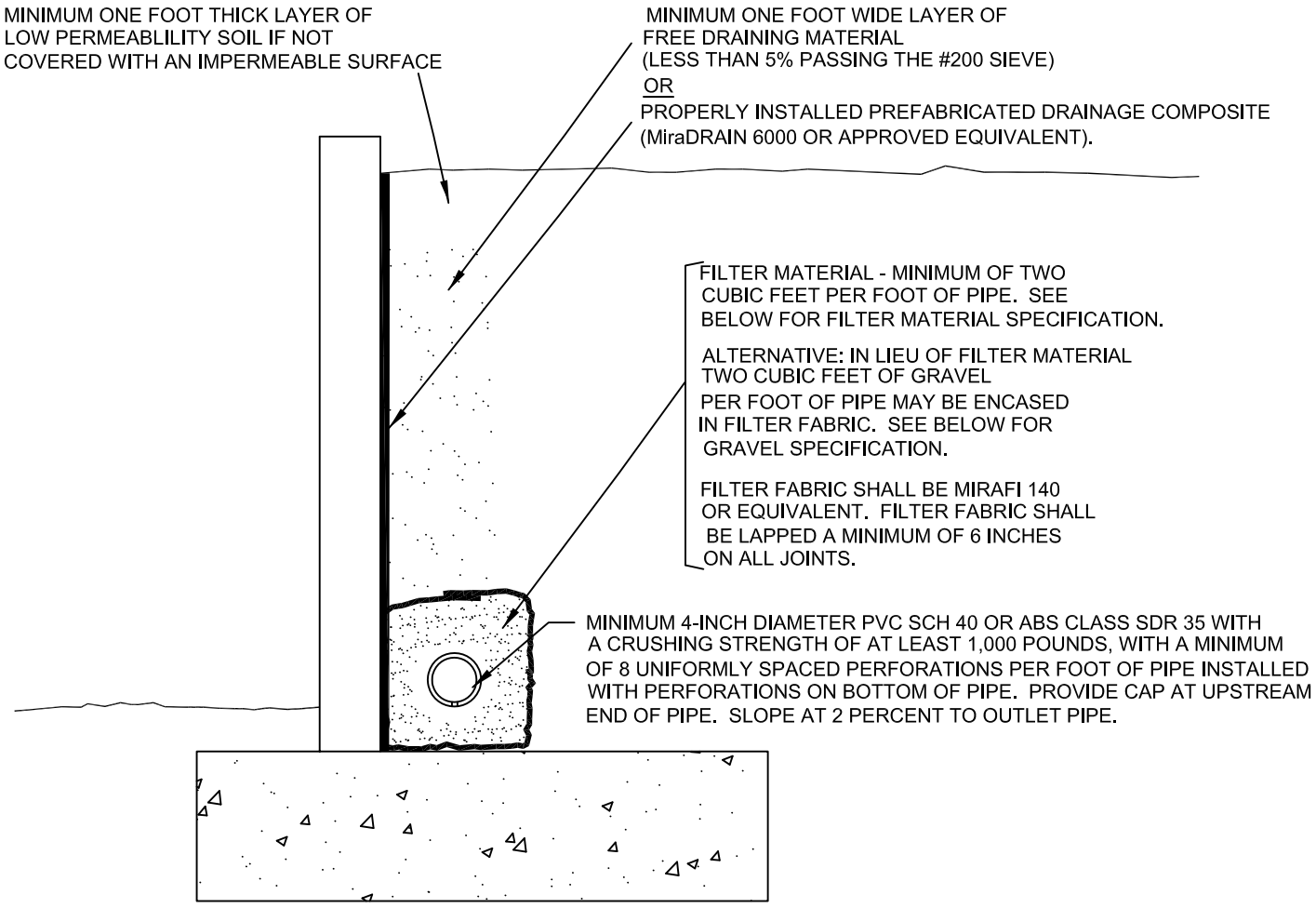
GRADING GUIDE SPECIFICATIONS

NOT TO SCALE

DRAWN: JAS
CHKD: GKM

PLATE D-6

SoCalGeo
SOUTHERN CALIFORNIA GEOTECHNICAL



"FILTER MATERIAL" TO MEET FOLLOWING SPECIFICATION OR APPROVED EQUIVALENT: (CONFORMS TO EMA STD. PLAN 323)

SIEVE SIZE	PERCENTAGE PASSING
1"	100
3/4"	90-100
3/8"	40-100
NO. 4	25-40
NO. 8	18-33
NO. 30	5-15
NO. 50	0-7
NO. 200	0-3

"GRAVEL" TO MEET FOLLOWING SPECIFICATION OR APPROVED EQUIVALENT:

SIEVE SIZE	MAXIMUM PERCENTAGE PASSING
1 1/2"	100
NO. 4	50
NO. 200	8

SAND EQUIVALENT = MINIMUM OF 50

RETAINING WALL BACKDRAINS

GRADING GUIDE SPECIFICATIONS

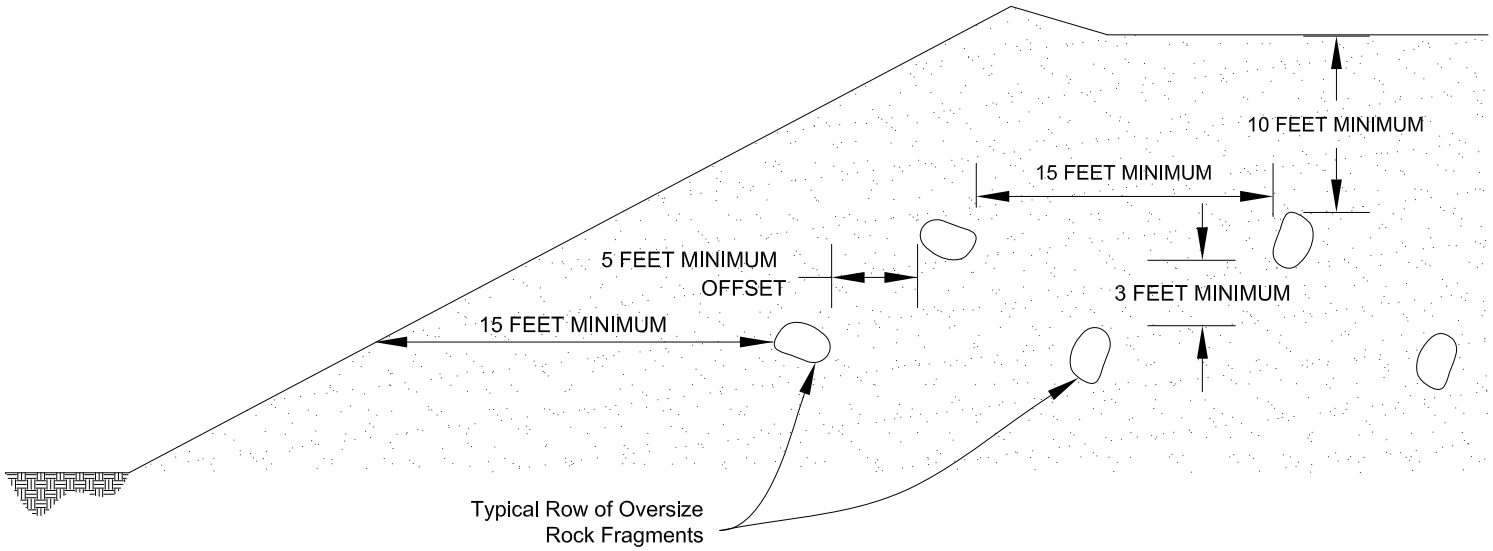
NOT TO SCALE

DRAWN: JAS
CHKD: GKM

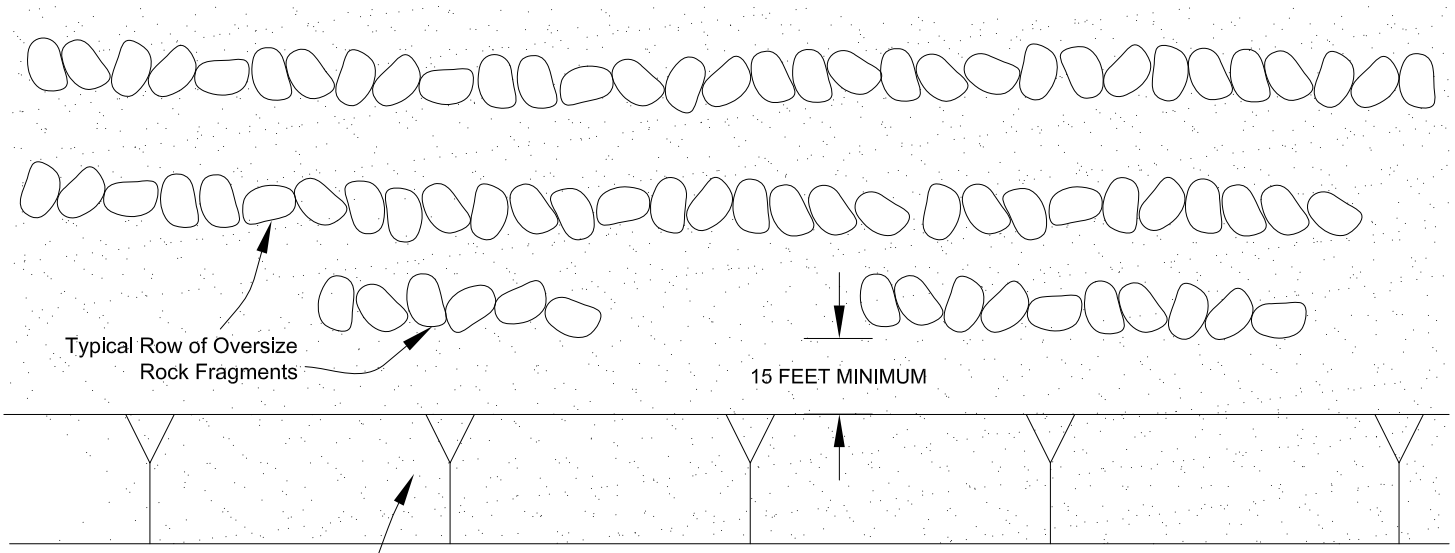
PLATE D-7

SoCalGeo

SOUTHERN CALIFORNIA GEOTECHNICAL



Section View



Plan View

PLACEMENT OF OVERSIZED MATERIAL

GRADING GUIDE SPECIFICATIONS

NOT TO SCALE

DRAWN: PM
CHKD: GKM

PLATE D-8

SoCalGeo

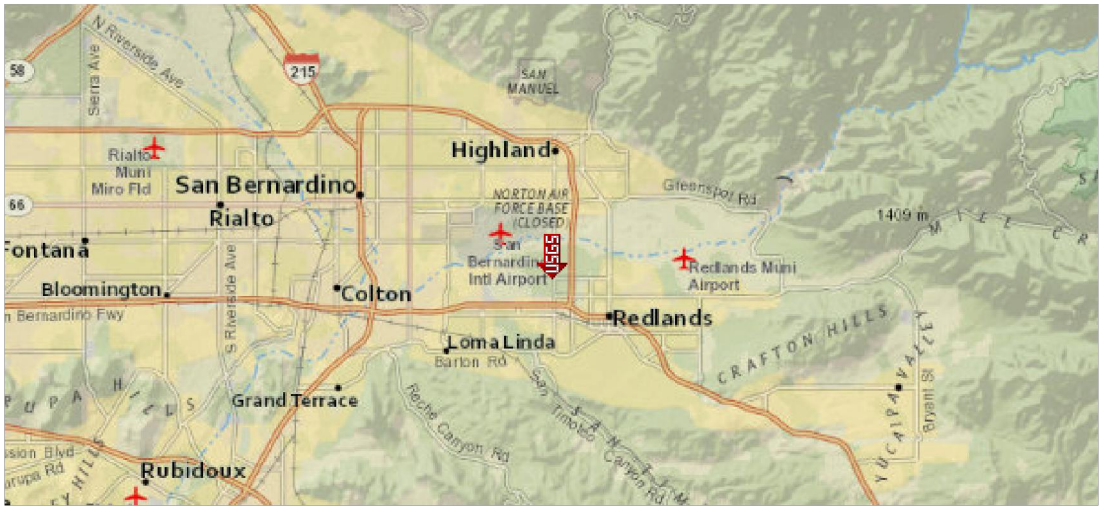
SOUTHERN CALIFORNIA GEOTECHNICAL

APPENDIX E

USGS Design Maps Summary Report

User–Specified Input

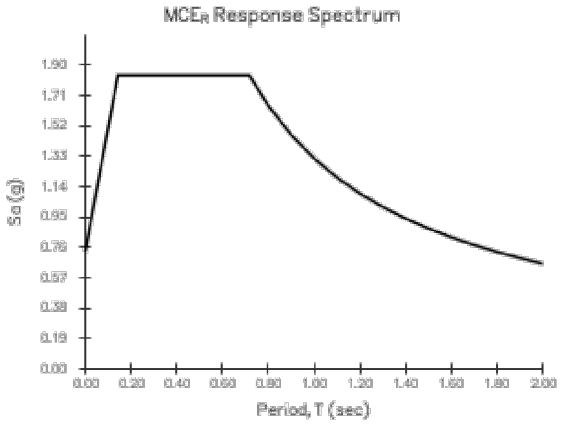
Building Code Reference Document	ASCE 7-10 Standard (which utilizes USGS hazard data available in 2008)
Site Coordinates	34.08676°N, 117.21033°W
Site Soil Classification	Site Class D – "Stiff Soil"
Risk Category	I/II/III

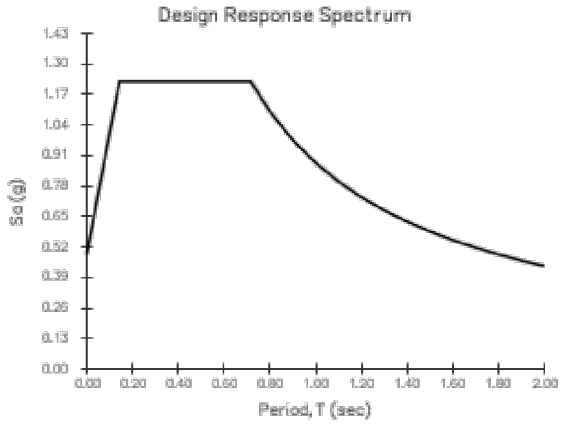


USGS–Provided Output

S_S =	1.838 g	S_{MS} =	1.838 g	S_{DS} =	1.225 g
S_1 =	0.879 g	S_{M1} =	1.318 g	S_{D1} =	0.879 g

For information on how the SS and S1 values above have been calculated from probabilistic (risk-targeted) and deterministic ground motions in the direction of maximum horizontal response, please return to the application and select the "2009 NEHRP" building code reference document.





SEISMIC DESIGN PARAMETERS

SoCalGeo SOUTHERN CALIFORNIA GEOTECHNICAL

PLATE E-1

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April 10, 2018

Duke Realty
200 Spectrum Center Drive, Suite 1600
Irvine, California 92618

SOUTHERN CALIFORNIA GEOTECHNICAL
A California Corporation

Attention: Mr. Adam Schmid
Development Services Manager

Project No.: **17G218-2**

Subject: **Results of Infiltration Testing**
Proposed Commercial/Industrial Building
NWC Alabama Street and Palmetto Avenue
San Bernardino County, California

Reference: Geotechnical Investigation, Proposed Commercial/Industrial Building, NWC Alabama Street and Palmetto Avenue, San Bernardino, California, prepared by Southern California Geotechnical, Inc. (SCG) for Duke Realty, SCG Project No. 17G218-1, dated December 15, 2017.

Dear Mr. Schmid:

In accordance with your request, we have conducted infiltration testing at the subject site. We are pleased to present this report summarizing the results of the infiltration testing and our design recommendations.

Scope of Services

The scope of services performed for this project was in general accordance with our Change Order 17G218-CO, dated March 9, 2018. The scope of services included site reconnaissance, subsurface exploration, field testing, and engineering analysis to determine the infiltration rates of the onsite soils. The infiltration testing was performed in general accordance with ASTM Test Method D-3385-03, Standard Test Method for Infiltration Rate of Soils in Field Using Double Ring Infiltrometer.

Site and Project Description

The subject site is located at the northwest corner of Palmetto Avenue and Alabama Street in an unincorporated portion of San Bernardino County near Redlands, California. The site is bounded to the north by a vacant lot, to the west by vacant land and a commercial/industrial building, to the south by Palmetto Avenue, and to the east by Alabama Street. The general location of the site is illustrated on the Site Location Map, included as Plate 1 of this report.

The site consists of several parcels, which total 56± acres in size. The majority of the site is vacant and undeveloped. The ground surface cover generally consists of exposed soil with moderate to dense native grass and weed growth, with several large trees located throughout the site. The northern region of the western parcel is developed with a small farm house. The majority of this parcel is currently being utilized for agricultural purposes. Ground surface cover

in this area and surrounding the farm house consists of exposed soil with moderate to dense native grass, weed growth, and planted crops. Multiple small to large trees are located throughout this parcel. A natural drainage course is present in the northeast corner of the overall site that is 20± feet lower in elevation than the adjacent site grades.

Detailed topographic information was provided by Albert A. Webb Associates (Webb). The site topography generally ranges from 1199± feet mean sea level (msl) in northwestern corner of the site to 1226± feet msl in the southeastern corner of the site. However, the bottom of the existing drainage course, located at the northeast corner of the site is at an elevation of 1186± feet msl. With the exception of the drainage course, the site topography slopes gently downward to the northwest at a gradient of 1± percent. In the northeast corner of the site, the site grades slope downward into the drainage course at an approximate inclination of ½h:1v (horizontal to vertical).

Proposed Development

A conceptual site plan, prepared by Albert A. Webb Associates (Webb), was provided to our office by the client. The plan indicates that the subject site will be developed with one (1) new commercial/industrial building. The proposed building will be 1,192,671± ft^2 in size, located in the central area of the site. The building will be constructed in a cross-dock configuration with loading docks along both the east and west sides of the building. The building will be surrounded by asphaltic concrete pavements for automobile parking and drive lanes and Portland cement concrete pavements for the loading dock areas. Several landscape planters and concrete flatwork are expected to be included throughout the site. The site plan does not indicate any proposed development within the existing drainage course located at the northeast corner of the site.

We understand that the proposed development will include on-site infiltration to dispose of storm water. Based on an Infiltration Test Exhibit, prepared by Webb, the project civil engineer, the proposed infiltration system will consist of two (2) detention/infiltration basins. The basins will be located in the northwest corner and in the southwest region of the site. The bottoms of the basins will extend to depths ranging from 4 to 7± feet below the existing site grades.

Previous Study

Southern California Geotechnical, Inc. (SCG) previously performed a geotechnical investigation at the subject site, referenced above. As a part of this study, ten (10) borings were advanced to depths of 5 to 30± feet below existing site grades. Artificial fill soils were encountered at the ground surface at one of the boring locations, extending to a depth of 6½± feet below the existing site grades. The fill soils generally consisted of very loose to loose fine to medium sands with varying amounts of coarse sand, silt, and fine gravel content. Native alluvial soils were encountered beneath the fill soils and at the ground surface at the remaining boring locations. The near-surface alluvium possessed a disturbed appearance and was identified as disturbed alluvium. These soils generally consisted of very loose to loose silty fine sands to fine sandy silts with trace amounts of fine root fibers. Undisturbed native alluvial soils were encountered at all of the boring locations, beneath the disturbed alluvium or fill soils, extending to the maximum depth explored of 30± feet below existing site grades. The native alluvium generally consisted of very loose to medium dense silty fine sands, fine sandy silts, and fine to medium sands. Free

water was not encountered during the drilling of any of the borings. Based on the lack of any water within the borings and the moisture contents of the recovered soil samples, the static groundwater is considered to have existed at a depth in excess of 30± feet at the time of the subsurface exploration. The approximate locations of the ten (10) borings from the previous study are indicated on the Infiltration Test Location Plan, included as Plate 2 of this report.

Subsurface Exploration

Scope of Exploration

The subsurface exploration consisted of five (5) backhoe excavated trenches, extending to depths of 4 to 7± feet below existing site grades. The trenches were logged during excavation by a member of our staff. The approximate locations of the infiltration trenches (identified as I-1 through I-5) are indicated on the Infiltration Test Location Plan, enclosed as Plate 2 of this report.

Geotechnical Conditions

Native alluvium was encountered at the ground surface at all of the infiltration trench locations, extending to at least the maximum depth explored of 7± feet below existing site grades. The alluvial soils generally consist of very loose to medium dense silty fine sands and fine sandy silts with varying amounts of medium to coarse sands. The Trench Logs, which illustrate the conditions encountered at the infiltration trench locations, are included with this report.

Groundwater

As part of our research, we reviewed available groundwater data in order to determine the historic high groundwater level for the site. Recent water level data was obtained from the California Department of Water Resources website, http://www.water.ca.gov/waterdatalibrary/. The nearest monitoring well is located in the southeastern region of the subject site. Water level readings within this monitoring well indicates high groundwater levels of 130± feet (April 2005) below the ground surface.

Infiltration Testing

We understand that the results of the testing will be used to prepare a preliminary design for the storm water infiltration system that will be used at the subject site. As previously mentioned, the infiltration testing was performed in general accordance with ASTM Test Method D-3385-03, Standard Test Method for Infiltration Rate of Soils in Field Using Double Ring Infiltrometer.

Two stainless steel infiltration rings were used for the infiltration testing. The outer infiltration ring is 2 feet in diameter and 20 inches in height. The inner infiltration ring is 1 foot in diameter and 20 inches in height. At the test locations, the outer ring was driven 3± inches into the soil at the base of each trench. The inner ring was centered inside the outer ring and subsequently driven 3± inches into the soil at the base of the trench. The rings were driven into the soil using a ten-pound sledge hammer. The soil surrounding the wall of the infiltration rings was only slightly disturbed during the driving process.

Infiltration Testing Procedure

Infiltration testing was performed at all five (5) of the test locations. The infiltration testing consisted of filling the inner ring and the annular space (the space between the inner and outer rings) with water, approximately 3 to 4 inches above the soil. To prevent the flow of water from one ring to the other, the water level in both the inner ring and the annular space between the rings was maintained using constant-head float valves. The volume of water that was added to maintain a constant head in the inner ring and the annular space during each time interval was determined and recorded. A cap was placed over the rings to minimize the evaporation of water during the tests.

The schedule for readings was determined based on the observed soil type at the base of each backhoe-excavated trench. Based on the existing soils at each infiltration test location, the volumetric measurements were made at increments of 10 minutes. The water volume measurements are presented on the spreadsheets enclosed with this report. The infiltration rates for each of the timed intervals are also tabulated on these spreadsheets.

The infiltration rates for the infiltration tests are calculated in centimeters per hour and then converted to inches per hour. The rates are summarized below:

Infiltration Test No.	Test Elevation (msl)	Soil Description	Infiltration Rate (inches/hour)
I-1	1198.5	Silty fine Sand	3.6
I-2	1198	Silty fine Sand, trace medium Sand	3.1
I-3	1198.5	Silty fine Sand	3.2
I-4	1195	Silty fine Sand	3.7
I-5	1197	Silty fine Sand, little medium Sand	2.5

Laboratory Testing

In-situ Moisture Content

The moisture contents for selected soil samples collected from the trenches were determined in accordance with ASTM D-2216 and are expressed as a percentage of the dry weight. These test results are presented on the Trench Logs.

Grain Size Analysis

The grain size distribution of selected soils collected from the base of each infiltration test trench has been determined using a range of wire mesh screens. These tests were performed in general accordance with ASTM D-422 and/or ASTM D-1140. The weight of the portion of the

sample retained on each screen is recorded and the percentage finer or coarser of the total weight is calculated. The results of these tests are presented at the end of this report.

Design Recommendations

A total of five (5) infiltration tests were performed at the subject site. As noted above, the calculated infiltration rates at the infiltration test locations range from 2.5 to 3.7 inches per hour. The primary factors affecting the infiltration rates are the varying relative densities and silt content of the encountered soils, which vary at different depths and locations at the subject site.

Based on the infiltration test results, we recommend a design infiltration rate of 3 inches per hour be used for the proposed detention/infiltration basin located in the northwest corner of the site and a design rate of 2.5 inches per hour for the basin located in the southwest region of the subject site.

The design of the proposed storm water infiltration systems should be performed by the project civil engineer, in accordance with the County of San Bernardino guidelines. However, it is recommended that the system be constructed so as to facilitate removal of silt and clay, or other deleterious materials from any water that may enter the system. The presence of such materials would decrease the effective infiltration rate. **It is recommended that the project civil engineer apply an appropriate factor of safety. The infiltration rates recommended above is based on the assumption that only clean water will be introduced to the subsurface profile. Any fines, debris, or organic materials could significantly impact the infiltration rates.** It should be noted that the recommended infiltration rates are based on infiltration testing at five (5) discrete locations and the overall infiltration rates of the storm water infiltration systems could vary considerably.

Infiltration versus Permeability

Infiltration rates are based on unsaturated flow. As water is introduced into soils by infiltration, the soils become saturated and the wetting front advances from the unsaturated zone to the saturated zone. Once the soils become saturated, infiltration rates become zero, and water can only move through soils by hydraulic conductivity at a rate determined by pressure head and soil permeability. The infiltration rates presented herein were determined in accordance with the ASTM Test Method D-3385-03 standard and are considered valid for the time and place of the actual test. Changes in soil moisture content will affect these infiltration rates. Infiltration rates should be expected to decrease until the soils become saturated. Soil permeability values will then govern groundwater movement. Permeability values may be on the order of 10 to 20 times less than infiltration rates. The system designer should incorporate adequate factors of safety and allow for overflow design into appropriate traditional storm drain systems, which would transport storm water off-site.

Location of Infiltration Systems

The use of on-site storm water infiltration systems carries a risk of creating adverse geotechnical conditions. Increasing the moisture content of the soil can cause the soil to lose internal shear strength and increase its compressibility, resulting in a change in the designed engineering properties. Overlying structures and pavements in the infiltration areas could potentially be

damaged due to saturation of subgrade soils. **The proposed infiltration systems for this site should be located at least 25 feet away from any structures, including retaining walls.** Even with this provision of locating the infiltration system at least 25 feet from the building, it is possible that infiltrating water into the subsurface soils could have an adverse effect on the proposed or existing structures. It should also be noted that utility trenches which happen to collect storm water can also serve as conduits to transmit storm water toward the structure, depending on the slope of the utility trench. Therefore, consideration should also be given to the proposed locations of underground utilities which may pass near the proposed infiltration system.

General Comments

This report has been prepared as an instrument of service for use by the client in order to aid in the evaluation of this property and to assist the architects and engineers in the design and preparation of the project plans and specifications. This report may be provided to the contractor(s) and other design consultants to disclose information relative to the project. However, this report is not intended to be utilized as a specification in and of itself, without appropriate interpretation by the project architect, structural engineer, and/or civil engineer. The design of the infiltration system is the responsibility of the civil engineer. The role of the geotechnical engineer is limited to determination of infiltration rate only. By using the design infiltration rates contained herein, the civil engineer agrees to indemnify, defend, and hold harmless the geotechnical engineer for all aspects of the design and performance of the infiltration system. The reproduction and distribution of this report must be authorized by the client and Southern California Geotechnical, Inc. Furthermore, any reliance on this report by an unauthorized third party is at such party's sole risk, and we accept no responsibility for damage or loss which may occur.

The analysis of this site was based on a subsurface profile interpolated from limited discrete soil samples. While the materials encountered in the project area are considered to be representative of the total area, some variations should be expected between trench locations and testing depths. If the conditions encountered during construction vary significantly from those detailed herein, we should be contacted immediately to determine if the conditions alter the recommendations contained herein.

This report has been based on assumed or provided characteristics of the proposed development. It is recommended that the owner, client, architect, structural engineer, and civil engineer carefully review these assumptions to ensure that they are consistent with the characteristics of the proposed development. If discrepancies exist, they should be brought to our attention to verify that they do not affect the conclusions and recommendations contained herein. We also recommend that the project plans and specifications be submitted to our office for review to verify that our recommendations have been correctly interpreted. The analysis, conclusions, and recommendations contained within this report have been promulgated in accordance with generally accepted professional geotechnical engineering practice. No other warranty is implied or expressed.

Closure

We sincerely appreciate the opportunity to be of service on this project. We look forward to providing additional consulting services during the course of the project. If we may be of further assistance in any manner, please contact our office.

Respectfully Submitted,

SOUTHERN CALIFORNIA GEOTECHNICAL, INC.

Scott McCann
Staff Scientist

Gregory K. Mitchell, GE 2364
Principal Engineer

Distribution: (1) Addressee

Enclosures: Plate 1 - Site Location Map
Plate 2 - Infiltration Test Location Plan
Trench Logs (5 pages)
Infiltration Test Results Spreadsheets (5 pages)
Grain Size Distribution Graphs (5 pages)

SITE LOCATION MAP

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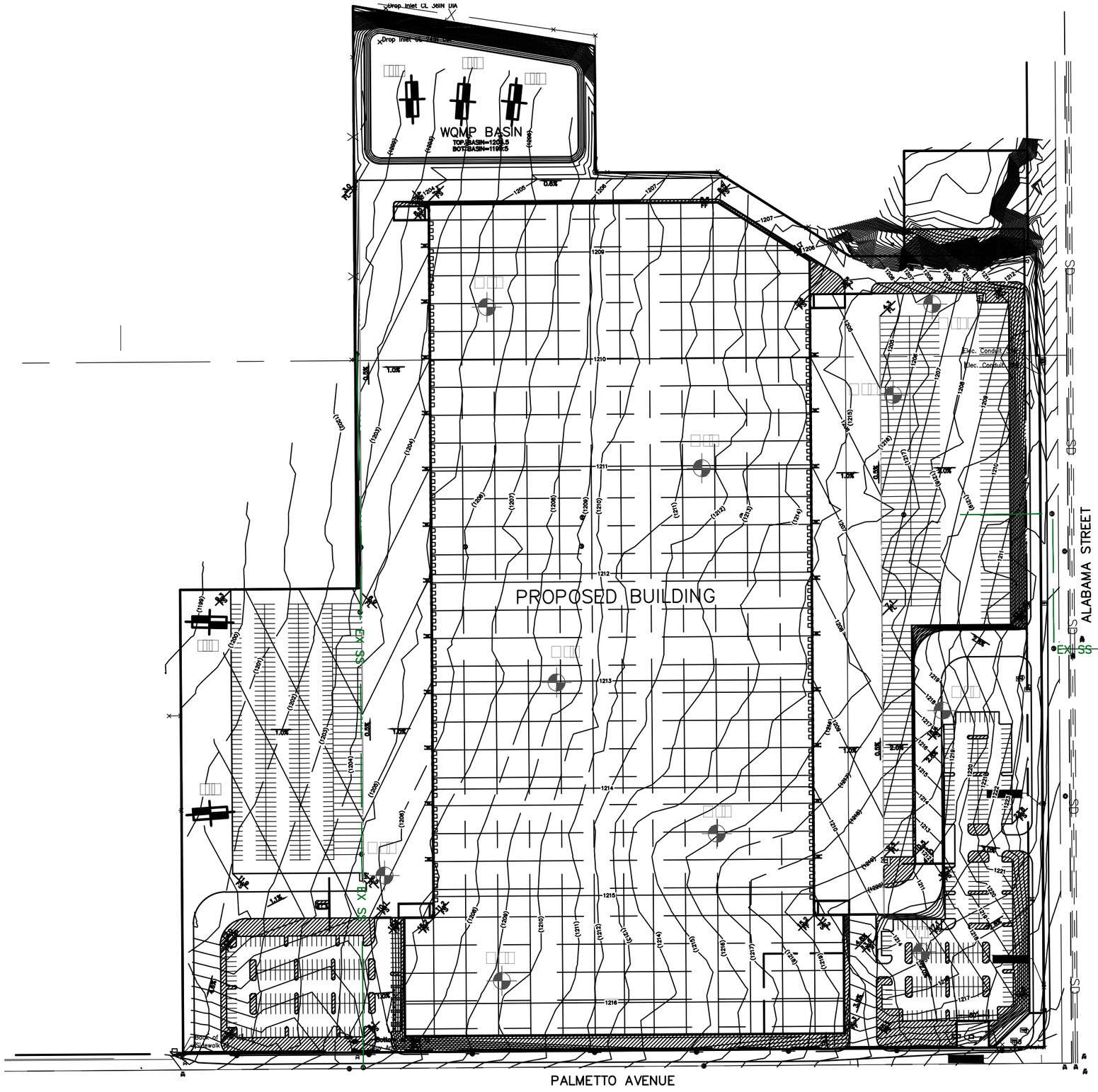


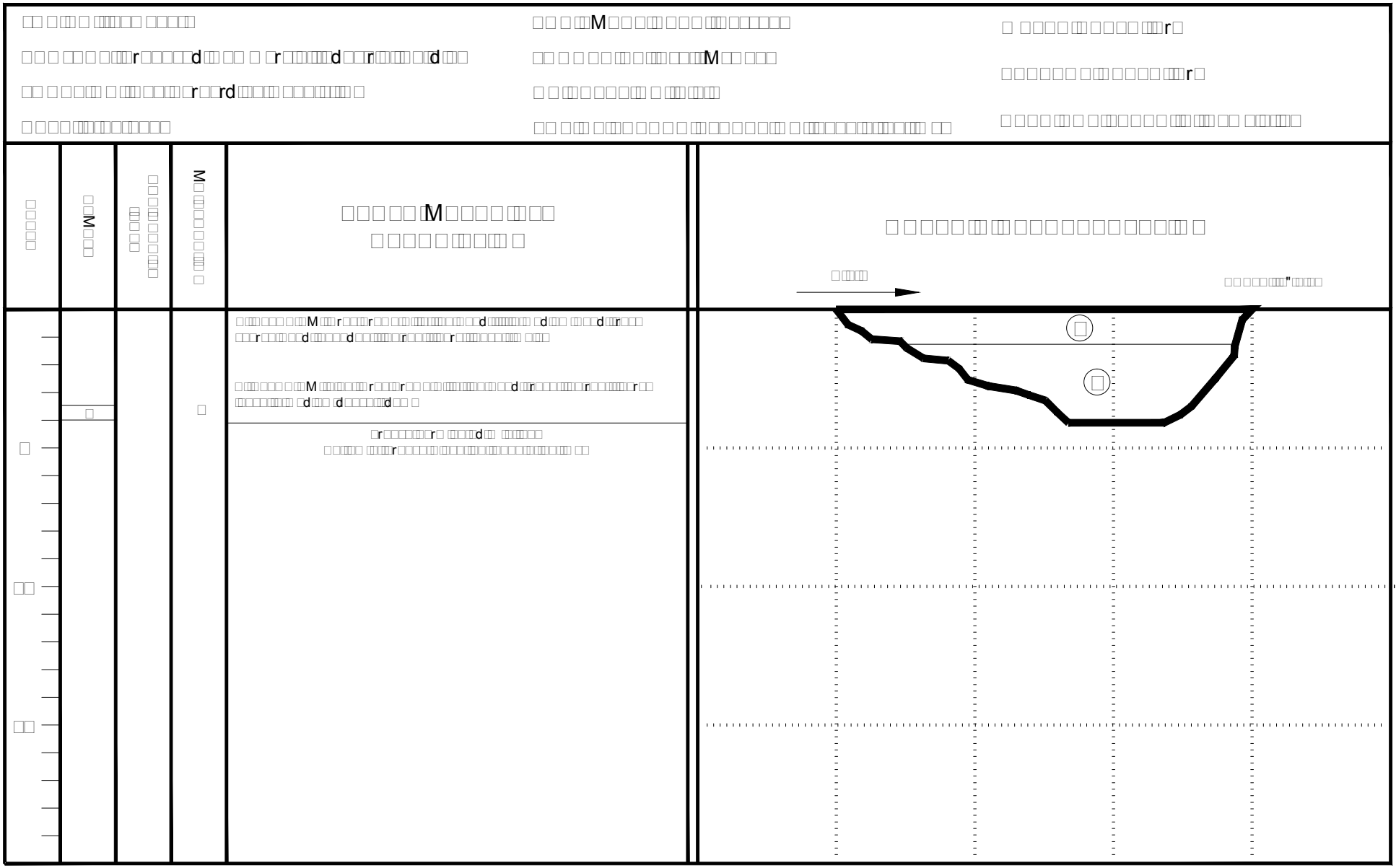
NORTH
SoCalGeo

□□□□□□□□□□□□□□□□

□□□□□XM□□□□□□□□□□□□□□□□

SOUTHERN CALIFORNIA GEOTECHNICAL

TRENCH NO.
I-1



TRENCH LOG

PLATE B-1

SOUTHERN CALIFORNIA GEOTECHNICAL

TRENCH NO.
I-2

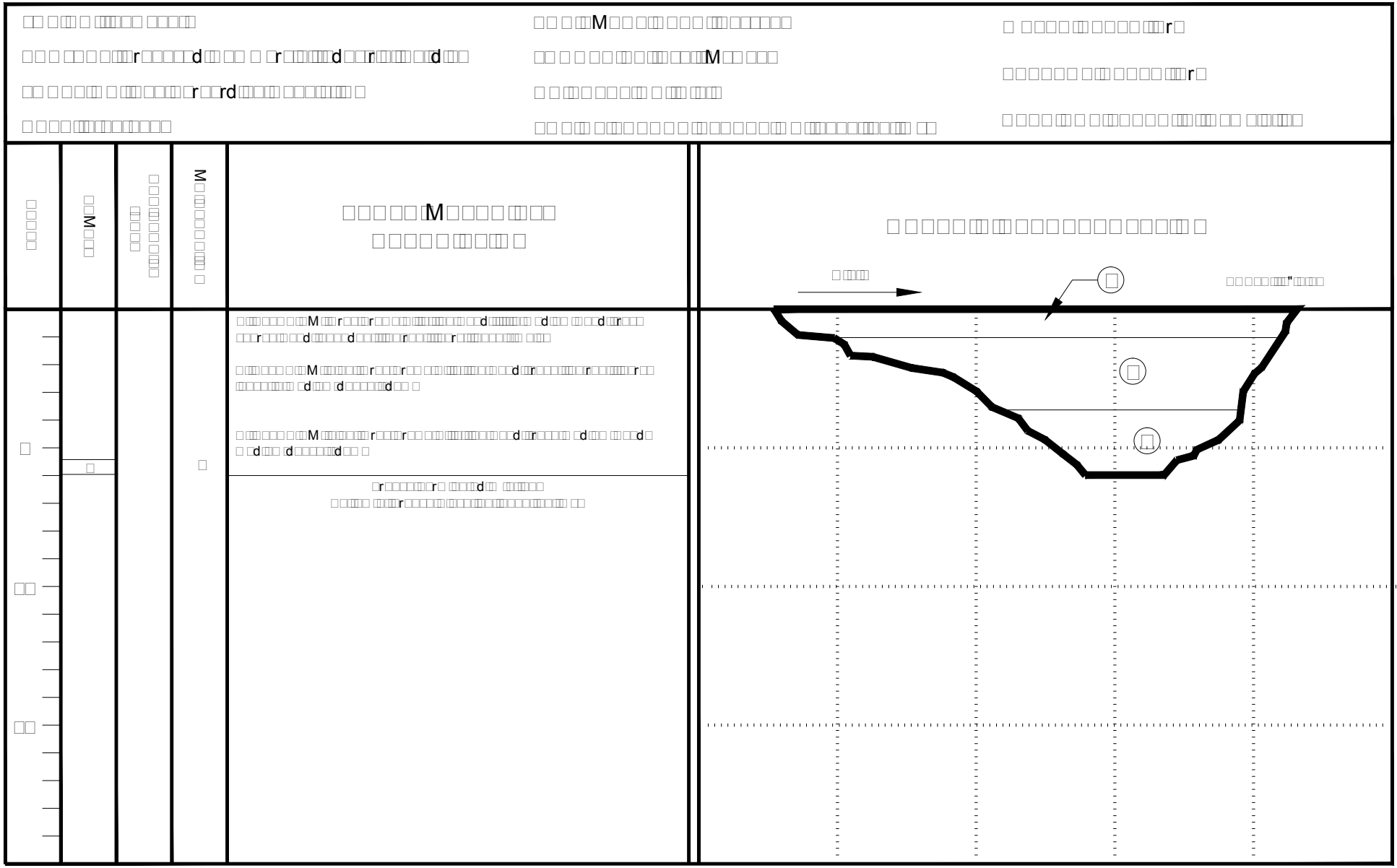
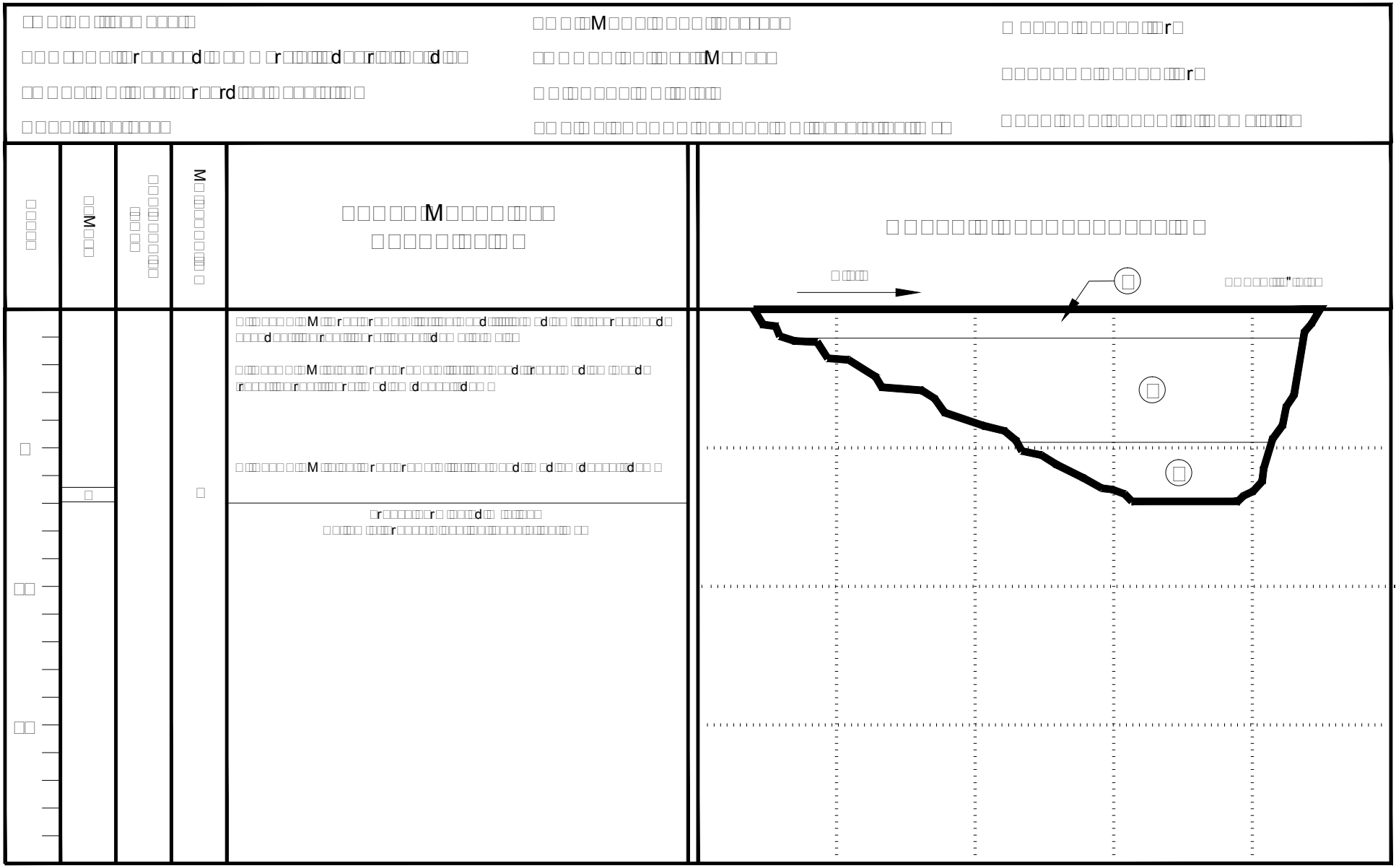


PLATE B-2

SOUTHERN CALIFORNIA GEOTECHNICAL

TRENCH NO.
I-3

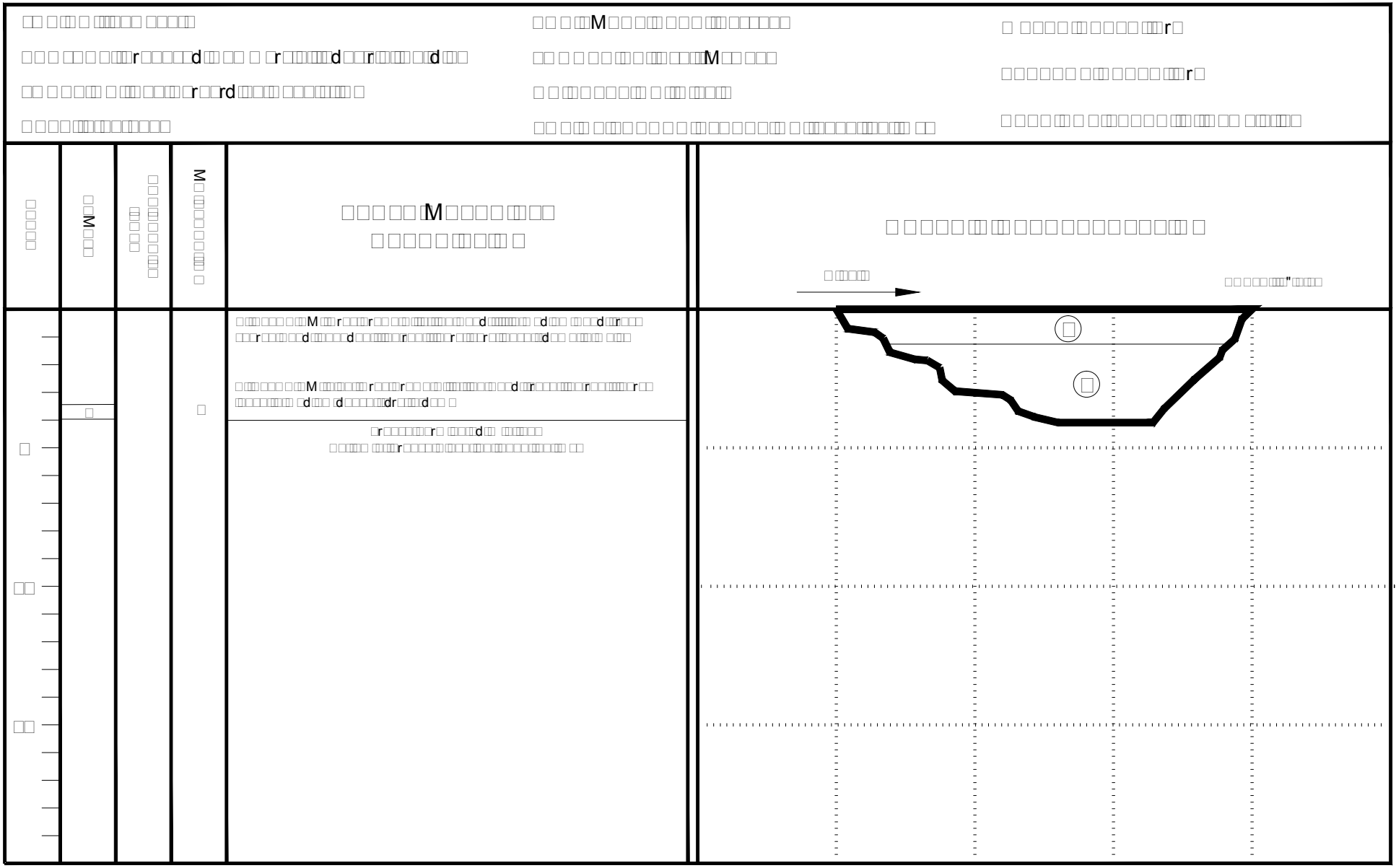


TRENCH LOG

PLATE B-3

SOUTHERN CALIFORNIA GEOTECHNICAL

TRENCH NO.
I-4

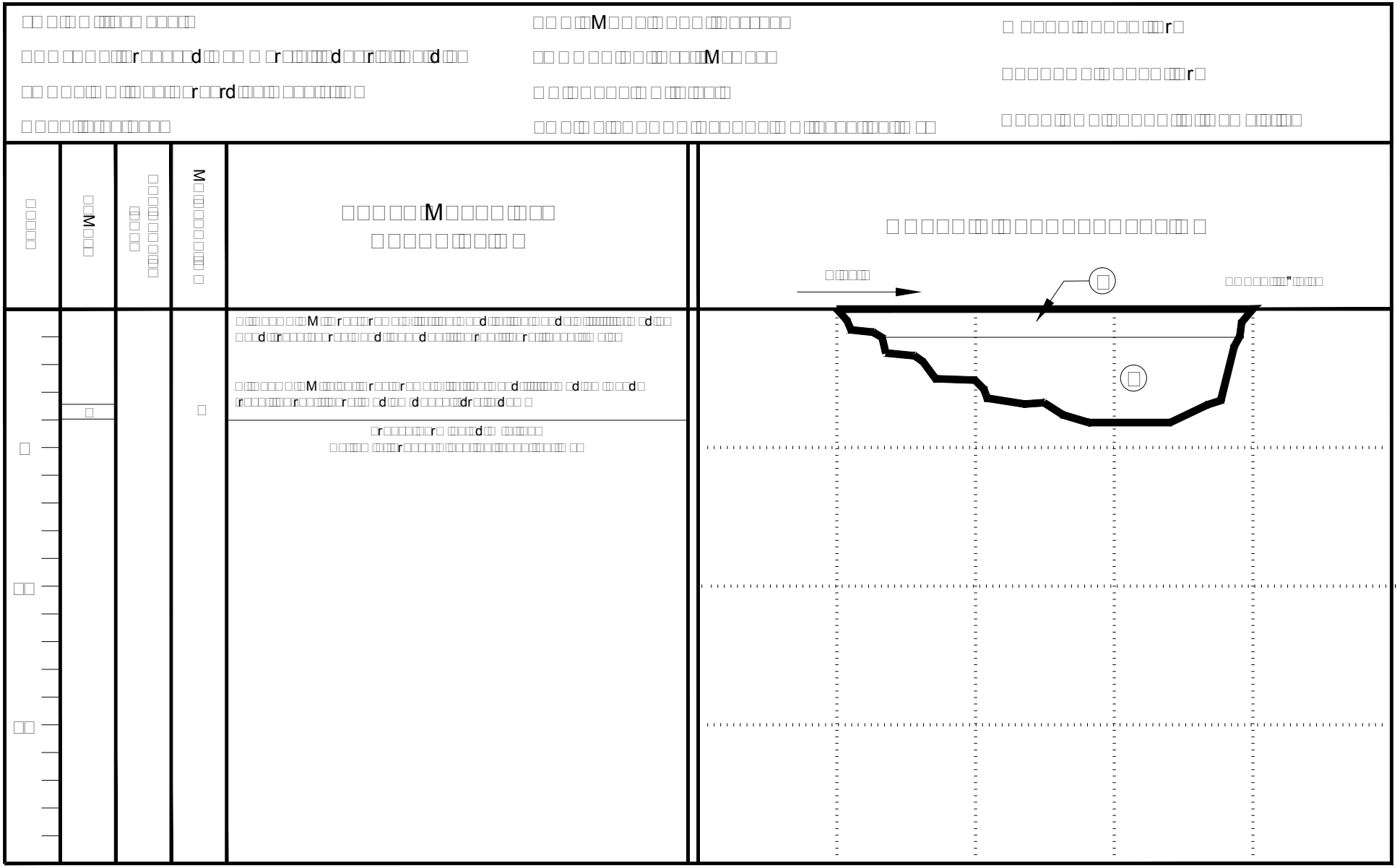


TRENCH LOG

PLATE B-4

SOUTHERN CALIFORNIA GEOTECHNICAL

TRENCH NO.
I-5



TRENCH LOG

PLATE B-5

INFILTRATION CALCULATIONS

Project Name	Proposed Commercial/Industrial Building
Project Location	San Bernardino County, CA
Project Number	17G218-2
Engineer	Scott McCann

Infiltration Test No: I-1

Constants

	Diameter (ft)	Area (ft^2)	Area (cm^2)
Inner	1	0.79	730
Anlr. Spac	2	2.36	2189

*Note: The infiltration rate was calculated based on current time interval

Test Interval		Time (hr)	Interval **Elapsed** (min)	Flow Readings: Inner Ring (ml)	Flow Readings: Ring Flow (cm^3)	Flow Readings: Annular Ring (ml)	Flow Readings: Space Flow (cm^3)	Infiltration Rates: Inner Ring* (cm/hr)	Infiltration Rates: Annular Space* (cm/hr)	Infiltration Rates: Inner Ring* (in/hr)	Infiltration Rates: Annular Space* (in/hr)
1	Initial	10:45 AM	10	250	1750	1000	5450	14.39	14.94	5.67	5.88
	Final	10:55 AM	**10**	2000		6450					
2	Initial	10:56 AM	10	300	1400	200	4500	11.51	12.33	4.53	4.86
	Final	11:06 AM	**21**	1700		4700					
3	Initial	11:07 AM	10	50	1250	0	4150	10.28	11.38	4.05	4.48
	Final	11:17 AM	**32**	1300		4150					
4	Initial	11:18 AM	10	50	1175	600	3900	9.66	10.69	3.80	4.21
	Final	11:28 AM	**43**	1225		4500					
5	Initial	11:29 AM	10	150	1125	500	3900	9.25	10.69	3.64	4.21
	Final	11:39 AM	**54**	1275		4400					
6	Initial	11:40 AM	10	200	1150	350	3850	9.46	10.55	3.72	4.15
	Final	11:50 AM	**65**	1350		4200					
7	Initial	11:51 AM	10	0	1125	200	3850	9.25	10.55	3.64	4.15
	Final	12:01 PM	**75**	1125		4050					

INFILTRATION CALCULATIONS

Project Name	Proposed Commercial/Industrial Building
Project Location	San Bernardino County, CA
Project Number	17G218-2
Engineer	Scott McCann

Infiltration Test No: I-2

Constants

	Diameter (ft)	Area (ft^2)	Area (cm^2)
Inner	1	0.79	730
Anlr. Spac	2	2.36	2189

*Note: The infiltration rate was calculated based on current time interval

Test Interval		Time (hr)	Interval **Elapsed** (min)	Flow Readings: Inner Ring (ml)	Flow Readings: Ring Flow (cm^3)	Flow Readings: Annular Ring (ml)	Flow Readings: Space Flow (cm^3)	Infiltration Rates: Inner Ring* (cm/hr)	Infiltration Rates: Annular Space* (cm/hr)	Infiltration Rates: Inner Ring* (in/hr)	Infiltration Rates: Annular Space* (in/hr)
1	Initial	9:15 AM	10	300	1500	900	4600	12.33	12.61	4.86	4.96
	Final	9:25 AM	**10**	1800		5500					
2	Initial	9:26 AM	10	200	1175	600	4250	9.66	11.65	3.80	4.59
	Final	9:36 AM	**21**	1375		4850					
3	Initial	9:37 AM	10	0	1075	250	4100	8.84	11.24	3.48	4.42
	Final	9:47 AM	**32**	1075		4350					
4	Initial	9:48 AM	10	50	1000	100	3950	8.22	10.83	3.24	4.26
	Final	9:58 AM	**43**	1050		4050					
5	Initial	9:59 AM	10	350	950	50	3850	7.81	10.55	3.08	4.15
	Final	10:09 AM	**54**	1300		3900					
6	Initial	10:10 AM	10	250	925	500	3850	7.61	10.55	2.99	4.15
	Final	10:20 AM	**65**	1175		4350					
7	Initial	10:21 AM	10	200	950	350	3850	7.81	10.55	3.08	4.15
	Final	10:31 AM	**75**	1150		4200					

INFILTRATION CALCULATIONS

Project Name	Proposed Commercial/Industrial Building
Project Location	San Bernardino County, CA
Project Number	17G218-2
Engineer	Scott McCann

Infiltration Test No: I-3

Constants

	Diameter (ft)	Area (ft^2)	Area (cm^2)
Inner	1	0.79	730
Anlr. Spac	2	2.36	2189

*Note: The infiltration rate was calculated based on current time interval

Test Interval		Time (hr)	Interval **Elapsed** (min)	Flow Readings: Inner Ring (ml)	Flow Readings: Ring Flow (cm^3)	Flow Readings: Annular Ring (ml)	Flow Readings: Space Flow (cm^3)	Infiltration Rates: Inner Ring* (cm/hr)	Infiltration Rates: Annular Space* (cm/hr)	Infiltration Rates: Inner Ring* (in/hr)	Infiltration Rates: Annular Space* (in/hr)
1	Initial	7:45 AM	10	450	1450	600	5400	11.92	14.80	4.69	5.83
	Final	7:55 AM	**10**	1900		6000					
2	Initial	7:56 AM	10	0	1225	200	4950	10.07	13.57	3.97	5.34
	Final	8:06 AM	**21**	1225		5150					
3	Initial	8:07 AM	10	200	1175	250	4700	9.66	12.88	3.80	5.07
	Final	8:17 AM	**32**	1375		4950					
4	Initial	8:18 AM	10	100	1050	350	4550	8.63	12.47	3.40	4.91
	Final	8:28 AM	**43**	1150		4900					
5	Initial	8:29 AM	10	150	1025	900	4450	8.43	12.20	3.32	4.80
	Final	8:39 AM	**54**	1175		5350					
6	Initial	8:40 AM	10	150	1025	1100	4400	8.43	12.06	3.32	4.75
	Final	8:50 AM	**65**	1175		5500					
7	Initial	8:51 AM	10	300	1000	400	4300	8.22	11.79	3.24	4.64
	Final	9:01 AM	**75**	1300		4700					

INFILTRATION CALCULATIONS

Project Name	Proposed Commercial/Industrial Building
Project Location	San Bernardino County, CA
Project Number	17G218-2
Engineer	Scott McCann

Infiltration Test No: I-4

Constants

	Diameter (ft)	Area (ft^2)	Area (cm^2)
Inner	1	0.79	730
Anlr. Spac	2	2.36	2189

*Note: The infiltration rate was calculated based on current time interval

Test Interval		Time (hr)	Interval **Elapsed** (min)	Flow Readings: Inner Ring (ml)	Flow Readings: Ring Flow (cm^3)	Flow Readings: Annular Ring (ml)	Flow Readings: Space Flow (cm^3)	Infiltration Rates: Inner Ring* (cm/hr)	Infiltration Rates: Annular Space* (cm/hr)	Infiltration Rates: Inner Ring* (in/hr)	Infiltration Rates: Annular Space* (in/hr)
1	Initial	12:30 PM	10	250	1600	700	4850	13.16	13.29	5.18	5.23
	Final	12:40 PM	**10**	1850		5550					
2	Initial	12:41 PM	10	0	1325	800	3900	10.90	10.69	4.29	4.21
	Final	12:51 PM	**21**	1325		4700					
3	Initial	12:52 PM	10	0	1225	450	3850	10.07	10.55	3.97	4.15
	Final	1:02 PM	**32**	1225		4300					
4	Initial	1:03 PM	10	0	1175	300	3900	9.66	10.69	3.80	4.21
	Final	1:13 PM	**43**	1175		4200					
5	Initial	1:14 PM	10	125	1175	650	3750	9.66	10.28	3.80	4.05
	Final	1:24 PM	**54**	1300		4400					
6	Initial	1:25 PM	10	1350	1150	4300	3650	9.46	10.01	3.72	3.94
	Final	1:35 PM	**65**	2500		7950					
7	Initial	1:36 PM	10	2550	1150	8150	3600	9.46	9.87	3.72	3.89
	Final	1:46 PM	**75**	3700		11750					

INFILTRATION CALCULATIONS

Project Name	Proposed Commercial/Industrial Building
Project Location	San Bernardino County, CA
Project Number	17G218-2
Engineer	Scott McCann

Infiltration Test No: I-5

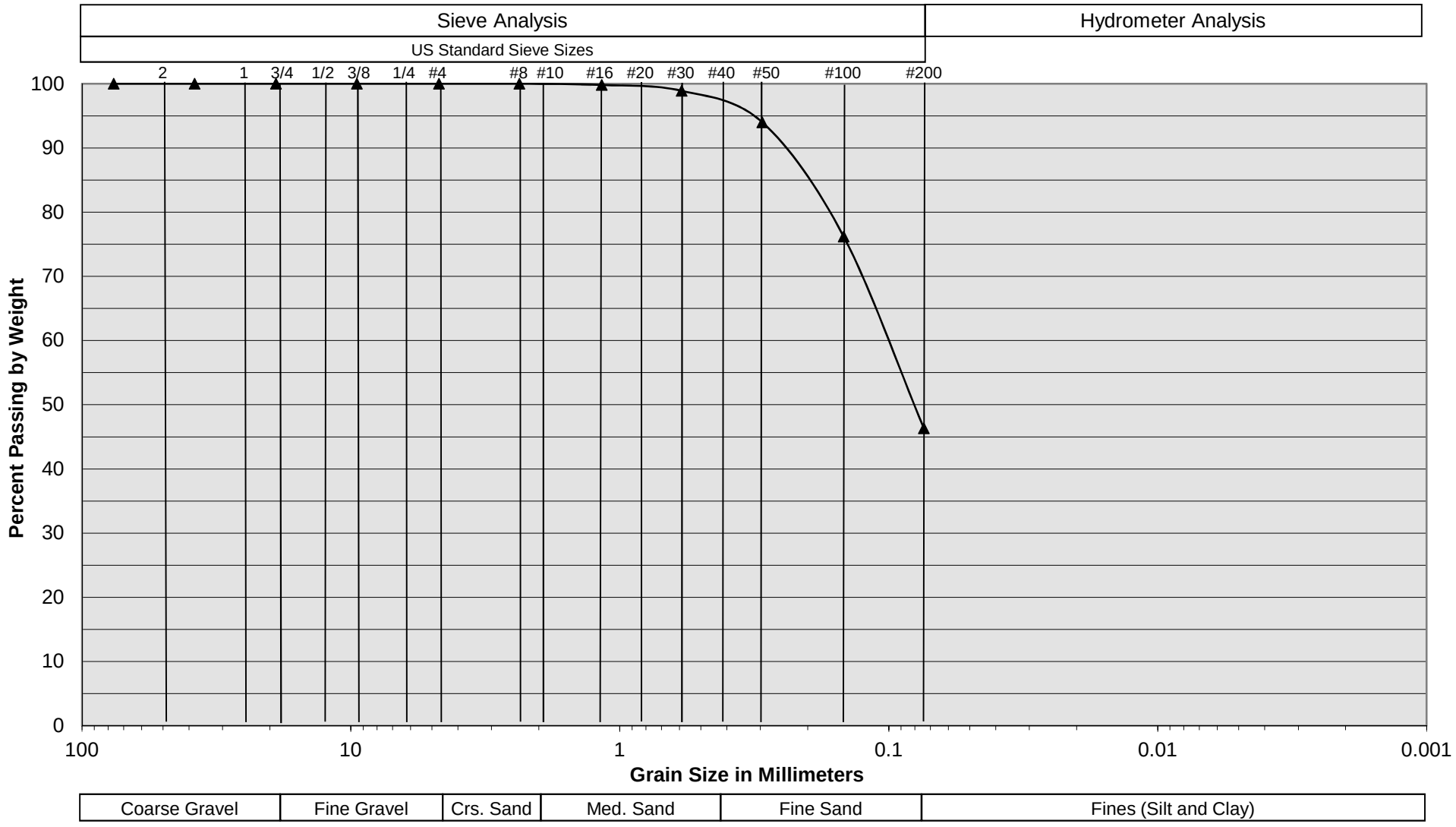
Constants

	Diameter (ft)	Area (ft^2)	Area (cm^2)
Inner	1	0.79	730
Anlr. Spac	2	2.36	2189

*Note: The infiltration rate was calculated based on current time interval

Test Interval		Time (hr)	Interval **Elapsed** (min)	Flow Readings: Inner Ring (ml)	Flow Readings: Ring Flow (cm^3)	Flow Readings: Annular Ring (ml)	Flow Readings: Space Flow (cm^3)	Infiltration Rates: Inner Ring* (cm/hr)	Infiltration Rates: Annular Space* (cm/hr)	Infiltration Rates: Inner Ring* (in/hr)	Infiltration Rates: Annular Space* (in/hr)
1	Initial	2:10 PM	10	250	1400	900	4400	11.51	12.06	4.53	4.75
	Final	2:20 PM	**10**	1650		5300					
2	Initial	2:21 PM	10	50	950	100	3850	7.81	10.55	3.08	4.15
	Final	2:31 PM	**21**	1000		3950					
3	Initial	2:32 PM	10	50	825	300	3700	6.78	10.14	2.67	3.99
	Final	2:42 PM	**32**	875		4000					
4	Initial	2:43 PM	10	900	825	4100	3350	6.78	9.18	2.67	3.62
	Final	2:53 PM	**43**	1725		7450					
5	Initial	2:54 PM	10	50	800	300	3350	6.58	9.18	2.59	3.62
	Final	3:04 PM	**54**	850		3650					
6	Initial	3:05 PM	10	900	800	3900	3400	6.58	9.32	2.59	3.67
	Final	3:15 PM	**65**	1700		7300					
7	Initial	3:16 PM	10	1725	775	7450	3350	6.37	9.18	2.51	3.62
	Final	3:26 PM	**75**	2500		10800					

Grain Size Distribution

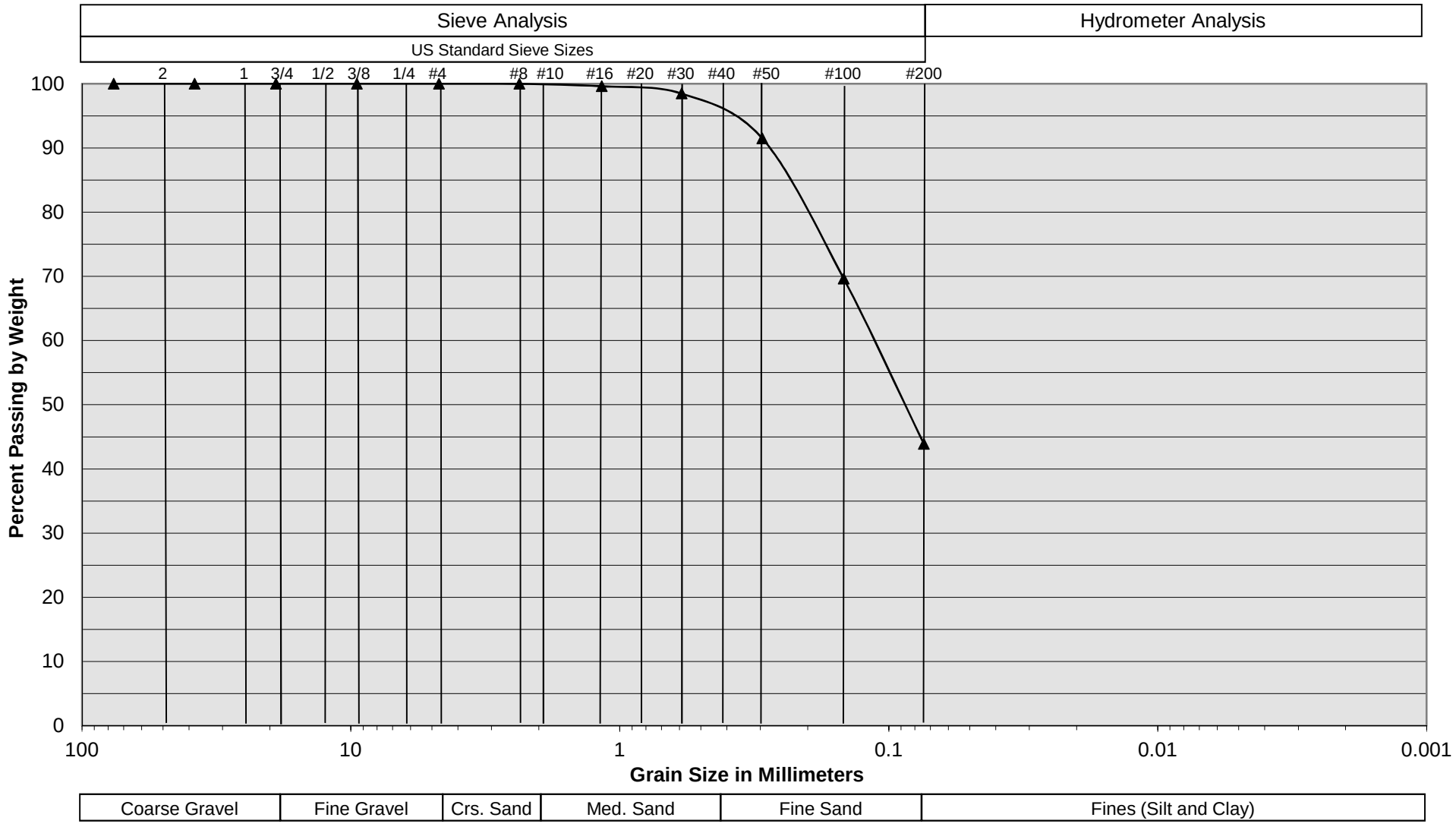


Sample Description	I-1 @ 4 feet
Soil Classification	Light Gray Brown Silty fine Sand

Proposed Commercial/Industrial Building
San Bernardino County, CA
Project No. 17G218-2
PLATE C-1

SoCalGeo
SOUTHERN CALIFORNIA GEOTECHNICAL
A California Corporation

Grain Size Distribution

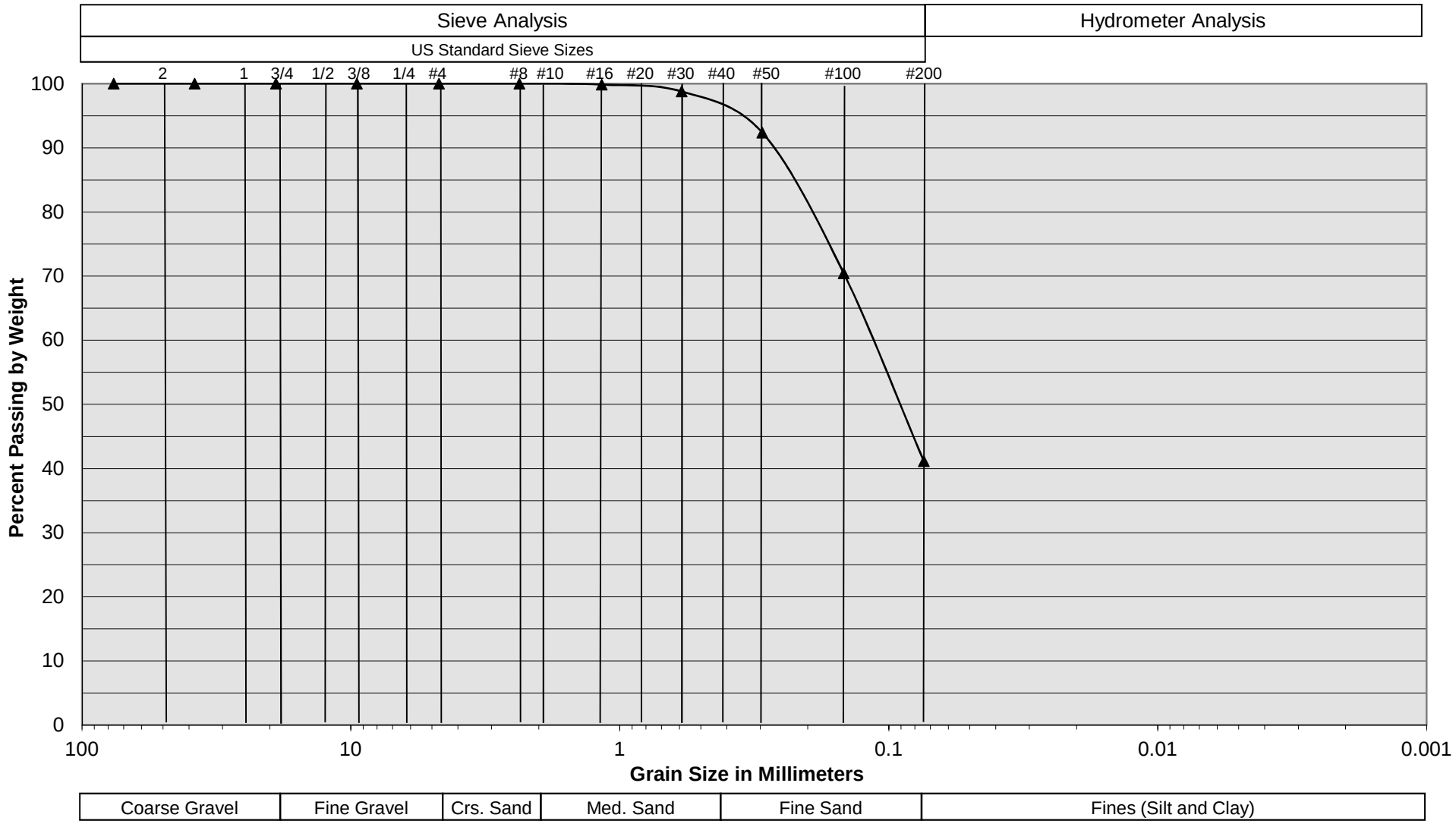


Sample Description	I-2 @ 6 feet
Soil Classification	Light Gray Brown Silty fine Sand, trace medium Sand

Proposed Commercial/Industrial Building
San Bernardino County, CA
Project No. 17G218-2
PLATE C-2

SoCalGeo
SOUTHERN CALIFORNIA GEOTECHNICAL
A California Corporation

Grain Size Distribution

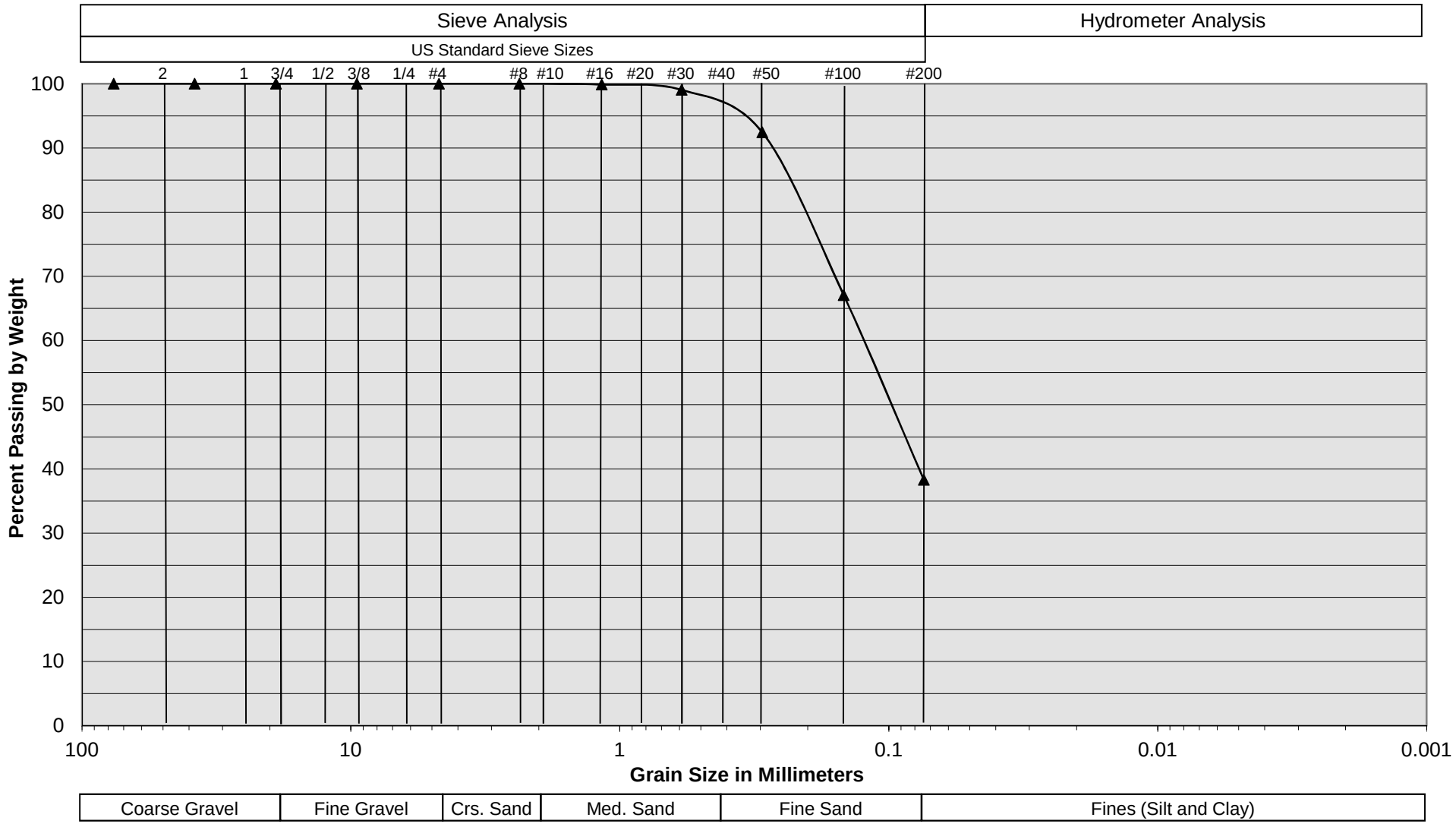


Sample Description	I-3 @ 7 feet
Soil Classification	Light Gray Brown Silty fine Sand

Proposed Commercial/Industrial Building
San Bernardino County, CA
Project No. 17G218-2
PLATE C-3

SoCalGeo
SOUTHERN CALIFORNIA GEOTECHNICAL
A California Corporation

Grain Size Distribution

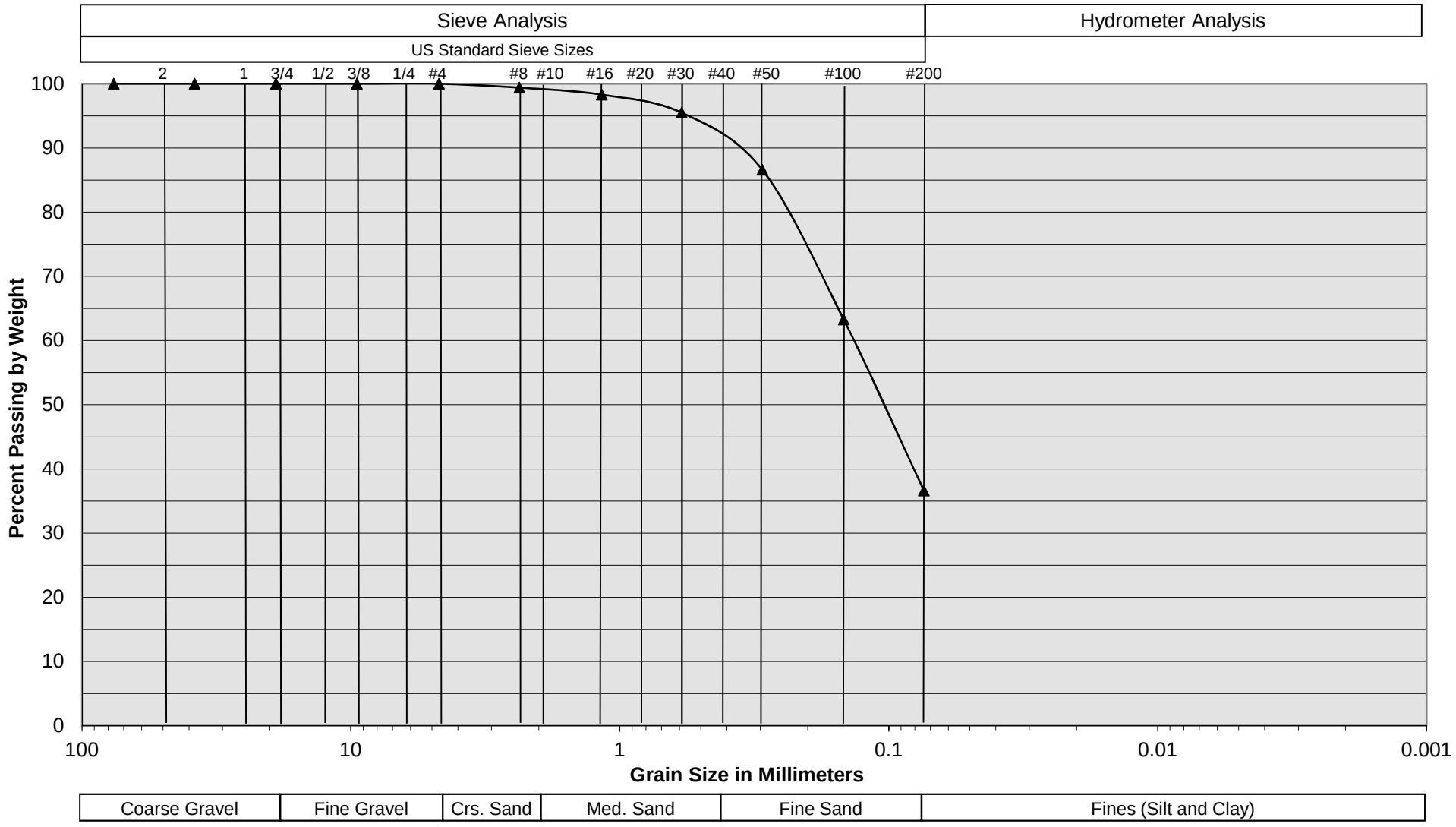


Sample Description	I-4 @ 4 feet
Soil Classification	Light Gray Brown Silty fine Sand

Proposed Commercial/Industrial Building
San Bernardino County, CA
Project No. 17G218-2
PLATE C-4

SoCalGeo
SOUTHERN CALIFORNIA GEOTECHNICAL
A California Corporation

Grain Size Distribution



Sample Description	I-5 @ 4 feet
Soil Classification	Light Gray Brown Silty fine Sand, little medium Sand

Proposed Commercial/Industrial Building
San Bernardino County, CA
Project No. 17G218-2
PLATE C-5

SoCalGeo
SOUTHERN CALIFORNIA GEOTECHNICAL
A California Corporation

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Applied EARTHWORKS Inc.

133 N. San Gabriel Blvd., Suite 201
Pasadena, CA 91107-3414
(626) 578-0119

August 2, 2018

Ms. Cynthia Gibbs
Senior Environmental Analyst
Albert A. Webb Associates
3788 McCray Street
Riverside, CA 92506
Transmitted via email to cynthia.gibbs@webbassociates.com

RE: Paleontological Resource Assessment for the Duke - Alabama & Palmetto Project, Northwest Redlands, San Bernardino County, California.

Dear Ms. Gibbs,

Albert A. Webb Associates (WEBB) retained Applied EarthWorks, Inc. (Æ) to complete a paleontological resource assessment for the proposed Duke - Alabama and Palmetto Project (Project) in Northwest Redlands, an unincorporated area surrounded by the City of Redlands in San Bernardino County, California.

Æ's scope of work included a museum records search, a literature and geologic map review, and preparation of this technical memorandum (memo). This memo, which serves as a summary of our findings, was written in accordance with the guidelines set forth by the Society of Vertebrate Paleontology (SVP, 2010) and satisfies the requirements of the California Environmental Quality Act (CEQA). The lead agency for CEQA compliance is San Bernardino County (County).

Project Description and Background

The Project Area is west of Highway 210, between Interstate 10 (I-10) and the Santa Ana River, in the "Donut Hole" area of San Bernardino County. Specifically, the Project Area is on the northwest corner of the Palmetto Avenue and Alabama Street intersection, with Palmetto Avenue the south boundary and Alabama Street the east boundary. The present channel of the Santa Ana River is less than 0.13 miles north of the Project Area.

The Project proposes development of an approximate 1,192,671 square-foot high-cube, warehouse building on approximately 54.76 acres with a maximum depth of ground disturbance of 13 feet. The Project will include approximately 831,784 square feet of asphalt paving in the parking area and 360,887 square feet of landscaping. The Project's sewer, water, and storm water drainage lines will connect to existing lines along the frontages of the Project within Alabama Street and Palmetto Avenue. The Project also will construct off-site road improvements consisting of partial-width improvements to the ultimate cross-section (an additional 12 feet) of Alabama Street and Palmetto Avenue along the Project frontage.

Regulatory Context

Paleontological resources cannot be replaced once they are destroyed and are considered nonrenewable scientific resources protected under the CEQA. Specifically, in Section V(c) of Appendix G of the CEQA Guidelines, the "Environmental Checklist Form," the question is posed: "Will the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?"

In order to determine the uniqueness of a given paleontological resource, it must first be identified or recovered (i.e., salvaged). Therefore, mitigation of adverse impacts to paleontological resources is mandated by CEQA. Consequently, the County addresses paleontological resources in Policy CO 3.4 of the County's General Plan (County of San Bernardino, 2007):

> 4. In areas of potential but unknown sensitivity, field surveys prior to grading will be required to establish the need for paleontological monitoring.
>
> 5. Projects requiring grading plans that are located in areas of known fossil occurrences or demonstrated in a field survey to have fossils present, will have all rough grading (cuts greater than 3 feet) monitored by trained paleontological crews working under the direction of a qualified professional, so that fossils exposed during grading can be recovered and preserved. Fossils include large and small vertebrate fossils, the latter recovered by screen washing of bulk samples.
>
> 6. A report of findings with an itemized accession inventory will be prepared as evidence that monitoring has been successfully completed. A preliminary report will be submitted and approved prior to granting of building permits, and a final report will be submitted and approved prior to granting of occupancy permits. The adequacy of paleontological reports will be determined in consultation with the Curator of Earth Science, San Bernardino County Museum [V-18–V-19].

Paleontological Resource Potential

Most professional paleontologists in California adhere to the guidelines set forth by the SVP (2010) to determine the course of paleontological mitigation for a given project on private lands. These guidelines establish protocols for the assessment of the paleontological resource potential of underlying geologic units and outline measures to mitigate adverse impacts that could result from project development. Using baseline information gathered during a paleontological resource assessment, the paleontological resource potential of the geologic unit(s) (or members thereof) on the ground surface and beneath a Project Area can be assigned to one of four categories. These categories include high, undetermined, low, and no paleontological resource potential. Geologic units are considered to be "sensitive" for paleontological resources and have a high paleontological resource potential if they are known to contain significant fossils anywhere in their extent, even if outside the Project Area.

Methodology

To assess the paleontological sensitivity of geologic units exposed at the ground surface and thought to underlie the Project Area, Æ reviewed published geologic maps and retained the Natural History Museum of Los Angeles County (NHMLAC) to conduct a records search of fossil localities recorded in

its collection (McLeod, 2018) . Æ supplemented the NHMLAC records search by reviewing the online database of the University of California Museum of Paleontology (UCMP), one of the largest paleontological collections of any university museum in the world.

Resource Context

The Project Area is in the Peninsular Ranges, a major physiographic province distinguished from others nearby by its geologic structures, geomorphic features, and lithologic assemblage (Morton and Miller, 2006). The Peninsular Ranges are oriented northwest-southeast and consist of fault-bounded blocks that extend 125 miles from the Transverse Ranges and Los Angeles Basin to the tip of Baja California. The Peninsular Ranges are bounded to the east by the Colorado Desert and range in width from 30 to 100 miles (Norris and Webb, 1976).

The Project Area is within the Perris Block. This geologic structure is a relatively stable, rectangular unit positioned between the Santa Ana Mountains to the west and the San Jacinto Mountains to the east. The Perris Block can be separated into distinct northern and southern geographic sections. The Project Area is in the northern section of the Perris Block, which is dominated by alluvial valley deposits of the Santa Ana River over earlier Holocene and Late Pleistocene alluvial fan deposits emanating from the San Gabriel Mountains. These alluvial fans consist of boulder deposits that grade to sandy deposits distally from the mountains. The geology in the vicinity of the Project Area is dominated by Cretaceous plutonic rocks of the Peninsular Ranges Batholith, local Mesozoic metasedimentary rocks, and the aforementioned widespread Pleistocene-age alluvial fan and valley deposits (Morton and Miller, 2006). In contrast, the southern geographic section of the Perris block consists of widespread exposures of basement rock and a series of interconnected alluviated valley areas. Several erosional surfaces developed on bedrock in the southern Perris Block expose the deeply and intensely weathered Paleocene or older Santa Rosa Plateau surface, the Paleocene Silverado Formation, and the Miocene Lake Mathews Formation (Morton and Miller, 2006).

According to Morton and Miller (2006), surficial geologic units in the Project Area are mapped as Young Axial-Channel deposits (Qya_3), Very Young Axial-Channel deposits (Qa), and Very Young Wash deposits (Qw). Deposited during the Middle Holocene, the Young Axial-Channel deposits are found in fluvial terrace risers and consist of pale brown and very pale brown fine- to coarse-grained sand and pebbly sand that coarsen upstream to poorly sorted fine- to coarse-grained sand and sandy pebble to small-cobble gravel (Morton and Miller, 2006). The thickness of the Young Axial-Channel deposits likely varies from local differences in fluvial aggradation versus erosion; however, the deposits are probably less than 20 feet thick (Morton and Miller, 2006).

Very Young Axial-Channel deposits are unconsolidated Late Holocene silty, sandy, and cobbly alluvium deposited by streams in through-going valleys (Morton and Miller, 2006). According to Dibblee (2004), these deposits are covered with gray clay soils. Also Late Holocene in age, Very Young Wash deposits are unconsolidated sands and gravels in active washes, ephemeral river channels of axial-valley streams, and in channels on active surfaces of alluvial fans (Morton and Miller, 2006). As a result of active flood-scouring, these deposits essentially have no soil development and are subject to localized reworking.

According to McLeod (2018), the alluvial deposits derived predominantly from the Crafton Hills and San Bernardino Mountains to the east via the Santa Ana River. Beneath the surficial Young and Very Young alluvium lie Older Quaternary alluvial deposits dating to the Early Holocene and Pleistocene. Recent investigations in the western San Bernardino Basin have confirmed that Pleistocene vertebrates are common from subsurface Pleistocene sediments throughout this region (Springer et al., 2009).

Records Search Results

The UCMP online paleontological database revealed thousands of fossil localities in San Bernardino County, but the majority of them were found in either Mescal Cave or Silver Creek Canyon (UCMP, 2018). The rest of the fossil localities derived from the Manix Formation, which is not mapped in or close to the Project Area. The results of the museum records search are presented in Table 1.

McLeod (2018) reports no known fossil localities in the Project Area. However, there are several known vertebrate localities north and south of the Santa Ana River in the vicinity of the Project Area. The closest vertebrate fossil locality, LACM 4540, is southeast of the Project Area on the northeastern side of the San Jacinto Valley just west of Jack Rabbit Trail. This locality yielded a specimen of *Equus* sp. (extinct horse) from older Quaternary deposits. The depth of the recovery was not reported. Another locality, LACM 7811, is west-southwest of the Project Area in the Jurupa Valley north of Norco and west of Mira Loma. This second locality produced a specimen of *Masticophis flagellum* (whip snake) from older Quaternary deposits at a depth of 9 to 11 feet below the surface. Also, according to McLeod (2018), older Quaternary alluvial deposits presumed to underlie the Project Area have the potential to yield scientifically significant fossils.

As reported by Springer et al. (2009), a diverse Terminal Pleistocene assemblage was recovered from depths as shallow as 15 feet at a locality south of the Project Area, near the town of Lakeview. The assemblage includes *Mammuthus* sp. (mammoth), *Smilodon* sp. (sabre-toothed cat), extinct horse, *Bison* sp. cf. *B. antiquus* (bison), and numerous small mammals, reptiles, invertebrates, and plant remains. Almost due-west of the Lakeview locality and farther to the southwest of the Project Area, specimens of *Ustatochoerus* cf. *californicus* (ground dwelling herbivore) and fossilized camel remains were recovered within Pliocene fluvial and alluvial deposits at Lake Matthews near the city of Corona (Woodford et al., 1971).

Table 1
Vertebrate Localities Reported from within Older Quaternary Alluvial Deposits in the Vicinity of the Project Area

Locality No.	Geologic Unit	Age	Taxa
LACM 7811	Older Quaternary sedimentary deposits (9-11 feet below the ground surface)	Pleistocene	*Masticophis* (whipsnake)
LACM 4540	Older Quaternary sedimentary deposits (likely present at unknown depth beneath the Project Area's ground surface)	Pleistocene	*Equus* (horse)

Source: McLeod (2018)

Findings and Recommendations

Æ used SVP's (2010) sensitivity scale to determine the paleontological potential of the Project Area. The Very Young and Young alluvial deposits in the Project Area have a Low paleontological resource potential, because they are generally too young to preserve fossilized remains. McLeod (2018) reports that significant vertebrate fossils probably will not be encountered in shallow excavations in the younger Quaternary alluvial deposits. Fossils in these younger Quaternary deposits, if any, may be the result of redeposition from elsewhere. However, these younger deposits may overlie intact older Quaternary fossiliferous alluvial deposits at depths as shallow as 9–11 feet. For instance, Very Old Axial-Channel deposits ($Qvoa_3$) dating to the Late to Middle Pleistocene would have a High potential for significant paleontological resources and they may underlie the younger Quaternary deposits in the Project Area since they crop out of the north slope of the foothills of the Box Springs Mountains to the south.

The thickness of the younger Quaternary deposits with Low sensitivity for paleontological resources is unknown at this time within the Project Area. Therefore, a field survey prior to grading to establish the need for paleontological monitoring (see above, County of San Bernardino Policy 3.4.4) is not recommended. Project-related ground disturbance to a maximum depth of 13 feet may impact buried older Quaternary deposits with potentially significant paleontological resources. Therefore, Æ recommends paleontological monitoring under the direction of a Qualified Professional Paleontologist, as defined in SVP (2010), during any grading or other excavation activities at depths of 3 feet and below in accordance with County of San Bernardino Policy 3.4.5 (see above).

The several specific management recommendations described below are intended to mitigate potential adverse impacts to significant paleontological resources, if present. These measures have been used by professional paleontologists for many years and have proven to be effective in reducing or eliminating adverse impacts to paleontological resources as a result of private and public development projects throughout California:

- **Worker's Environmental Awareness Training.** Prior to the start of construction within a given development site within the Project Area, all field personnel should be briefed regarding the types of fossils that could be found and the procedures to follow should paleontological resources be encountered. Specifically, the training should provide a description of the fossil resources that may be encountered, outline steps to follow in the event that a fossil discovery is made, and provide contact information for the Qualified Professional Paleontologist and on-site monitor(s). The training should be developed by the Qualified Professional Paleontologist and provided as hand-outs or a Power Point Presentation that can be presented concurrently with other environmental training (e.g., cultural and natural resources awareness training, safety training, etc.).

- **Construction Monitoring**. In areas where construction grading may reach depths of 3 feet or more, a Qualified Paleontological Resource Monitor will be retained to monitor in accordance with qualifications standards and procedures set forth by SVP (2010). Monitoring is not required in areas of previous disturbance or in surface or near-surface younger alluvial deposits as determined in consultation with the Qualified Professional Paleontologist.

Monitoring should include the visual inspection of excavated or graded areas, trench sidewalls, spoils, and any other disturbed sediment. In the event that a paleontological resource is discovered, the approved paleontological monitor will have the authority to divert temporarily the construction equipment around the find until it is assessed for scientific significance and collected. In areas of high sensitivity, monitoring efforts can be reduced or eliminated at the discretion of the Qualified Professional Paleontologist if no fossil resources are encountered after 50 percent of the excavations are completed.

- **Fossil Preparation and Curation.** Upon completion of fieldwork, all significant fossils collected, if any, will be prepared in a properly equipped paleontology laboratory to a point ready for curation. Preparation will include the careful removal of excess matrix from fossil materials and stabilizing and repairing specimens, as necessary. Following laboratory work, all fossils specimens will be identified to the lowest taxonomic level, cataloged, analyzed, and delivered to a regionally-accredited museum repository, such as the SBCM in Redlands or the NHMLAC in Los Angeles, for permanent curation and storage. The cost of curation is assessed by the repository and is the responsibility of the landowner (County of San Bernardino).

- **Reporting.** A final report should be prepared to describe the results of the paleontological mitigation monitoring efforts. The report will include a summary of the field methods, laboratory methods (if any), an overview of the geology and paleontology of the construction site, a list of taxa recovered (if any), an analysis of fossils recovered (if any) and their scientific significance, and recommendations. If the monitoring efforts produce fossils, then a copy of the report also will be submitted to the curation facility.

It has been a pleasure assisting you with this Project. If you have any questions, please do not hesitate to contact us.

Sincerely,

Christopher Shea
Staff Paleontologist
Applied EarthWorks, Inc.

Reviewed By: _____
Scott Rohlf, MS, Qualified Professional Paleontologist

Edited and Approved By: _____
Amy Ollendorf, PhD, RPA (#12588), Paleontology Program Manager

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ALBERT A. WEBB ASSOCIATES

Technical Memorandum

To: Adam Schmid, Duke Realty

From: Eliza Laws, Senior Environmental Analyst

Date: November 15, 2018

Re: Greenhouse Gas Analysis for the Duke Warehouse at Palmetto Avenue and Alabama Street Project, County of San Bernardino

The following greenhouse gas (GHG) assessment was prepared to evaluate Project consistency with the San Bernardino County GHG Emissions Reduction Plan (2011) [1] and GHG Development Review Processes (DRP), updated in 2015.[2] This assessment was conducted within the context of the California Environmental Quality Act (CEQA, California Public Resources Code Sections 21000 et seq.).

The Project proposes development of an approximate 1,192,671 square-foot high-cube, non-refrigerated warehouse building on approximately 54.76 net acres on the northwestern corner of Alabama Street and Palmetto Avenue, in unincorporated San Bernardino County, California.

▪ San Bernardino County GHG Emissions Reduction Plan

The County of San Bernardino adopted the Greenhouse Gas Reduction Plan (GHG Plan) in 2011, which provides guidance on how to analyze GHG emissions and determine significance during the CEQA review of proposed development projects within the County of San Bernardino. The reduction strategies in the GHG Plan correspond to reduction measures. Measureable reductions in GHG emissions are achieved through adherence to the County's DRP procedures.

The County's GHG DRP procedures, updated in 2015, are streamlined by 1) applying a uniform set of performance standards to all development project, and 2) utilizing Screening Tables to mitigate project GHG emissions. Projects will have the option of preparing a project-specific technical analysis to quantify and mitigate GHG emissions in lieu of the utilizing the Screening Tables. A review standard of 3,000 MT (metric tons) CO_2e (carbon dioxide equivalents) per year is used to identify projects that require the use of Screening Tables or a project-specific technical analysis to quantify and mitigate project emissions.

Projects that exceed the 3,000 $MTCO_2e$ per year are required to either achieve a minimum 100 points per the Screening Tables or a 31 percent reduction over 2007 emissions levels. Consistent with CEQA guidelines, such projects would be determined to have a less than significant individual and cumulative impact for GHG emissions.

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[1] County of San Bernardino Greenhouse Gas Emissions Reduction Plan, September 2011. (Available at http://www.sbcounty.gov/Uploads/lus/GreenhouseGas/FinalGHGFull.pdf, accessed November 8, 2018.)

[2] County of San Bernardino Greenhouse Gas Emissions, Development Review Processes, Updated March 2015. (Available at http://www.sbcounty.gov/Uploads/lus/GreenhouseGas/FinalGHGUpdate.pdf, accessed November 8, 2018.)

Due to the Project's size, its GHG emissions are presumed to exceed to the 3,000 $MTCO_2e$ per year threshold and as such the Screening Table approach has been utilized to demonstrate consistency with the County GHG Plan. Mitigation measure **MM GHG 1**, provided below, requires that the Project implement measures totaling a minimum of 100 points from the Screening Tables. Because the Project will implement at last 100 points from the Screening Tables, the Project's GHG impacts are less than significant. Please see the Project's Screening Tables, attached herewith.

▪ Consistency with Other Applicable Plans

As shown above, the Project would be consistent with the County of San Bernardino GHG Plan. Additionally, the Project's consistency with AB 32 and SB 32 are discussed below.

AB 32 Consistency

Assembly Bill 32 (AB 32) was adopted in 2006 and requires California to reduce its GHG emissions to 1990 levels by 2020.[3] The California Air Resources Board (CARB) identified reduction measures to achieve this goal as set forth in the CARB Scoping Plan.[4] Thus, projects that are consistent with the CARB Scoping Plan are also consistent with AB 32 goal.

The Project would generate GHG emissions, directly and indirectly, from a variety of sources which would all emit GHG emissions. The CARB Scoping Plan includes strategies for implementation at the statewide level to meet the goals of AB 32. These strategies serve as statewide measures to reduce GHG emissions levels. The Project would be subject to the applicable measures established in the Scoping Plan because these measures are implemented at the state level. Therefore, the Project would not conflict or otherwise interfere with implementation of AB 32.

SB 32 Consistency

Senate Bill 32 (SB 32) was adopted in 2016 and requires the state to reduce statewide GHG emissions 40 percent below 1990 levels by 2030.[5] SB 32 codifies the reduction target issued in Executive Order B-30-15. SB 32 builds upon the AB 32 goal of 1990 levels by 2020 and provides an interim goal to achieving Executive Order S-3-05's 2050 reduction goal of 80 percent below 1990 levels.[6]

The CARB 2017 Scoping Plan identified reduction measures to achieve the SB 32 GHG reduction goal.[7] Like the previously adopted Scoping Plans, the 2017 Scoping Plan includes statewide reduction measures that are implemented at the state level. The Project would be subject to the applicable measures established in the 2017 Scoping Plan because these measures are implemented at the state level.

Additionally, the 2014 Scoping Plan Update indicates "California is on track to meet the near-term 2020 greenhouse gas limit and is well positioned to maintain and continue reductions beyond 2020 as required by AB 32"; and it recognizes the potential for California to "reduce emissions by 2030 to levels squarely in line with those needed in the developed world and to stay on track to reduce emissions to 80 percent below 1990 levels by 2050."

Moreover, the Project does not propose facilities or operations that would substantively interfere with any future County-mandated, state-mandated, or federally-mandated regulations enacted or promulgated to legally require development to assist in meeting state-adopted GHG emissions reduction

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[3] https://www.arb.ca.gov/cc/ab32/ab32.htm
[4] https://www.arb.ca.gov/cc/scopingplan/document/updatedscopingplan2013.htm
[5] https://www.arb.ca.gov/cc/scopingplan/scopingplan.htm
[6] https://www.climatechange.ca.gov/state/executive_orders.html
[7] https://www.arb.ca.gov/cc/scopingplan/scoping_plan_2017.pdf

targets, including those established under Executive Order S-3-05, Executive Order B-30-15, SB 32, or the 2017 Scoping Plan.

Therefore, the Project would not conflict with implementation of SB 32 or otherwise interfere with implementation of this or future goals.

▪ Recommended Mitigation Measures

MM GHG 1: Prior to issuance of building permit, the Project applicant shall provide documentation to the County of San Bernardino Building and Safety Division demonstrating that the following measures or any other combination thereof are incorporated from the County's 2015 Development Review Processes Greenhouse Gas Emissions Screening Tables, shown in Attachment A, as needed to achieve the required 100 points. Documentation may include measures incorporated into construction plans and specifications, development agreements, and/or other mechanisms.

ATTACHMENT A

Table 2: Screening Table for Implementation of GHG Reduction Measures for Commercial Development

Feature	Description	Assigned Point Values	Project Points
Reduction Measure R2E7: Commercial/Industrial Energy Efficiency Development			
Building Envelope			
Insulation	2008 baseline (walls R-13; roof/attic R-30)	0 points	15
	Modestly Enhanced Insulation (walls R-13, roof/attic R-38))	15 points	
	Enhanced Insulation (rigid wall insulation R-13, roof/attic R-38)	18 points	
	Greatly Enhanced Insulation (spray foam insulated walls R-15 or higher, roof/attic R-38 or higher)	20 points	
Windows	2008 Baseline Windows (0.57 U-factor, 0.4 solar heat gain coefficient [SHGC})	0 points	8
	Modestly Enhanced Window Insulation (0.4 U-factor, 0.32 SHGC)	7 points	
	Enhanced Window Insulation (0.32 U-factor, 0.25 SHGC)	8 points	
	Greatly Enhanced Window Insulation (0.28 or less U-factor, 0.22 or less SHGC)	12 points	
Cool Roof	Modest Cool Roof (CRRC Rated 0.15 aged solar reflectance, 0.75 thermal emittance)	12 points	0
	Enhanced Cool Roof (CRRC Rated 0.2 aged solar reflectance, 0.75 thermal emittance)	14 points	
	Greatly Enhanced Cool Roof (CRRC Rated 0.35 aged solar reflectance, 0.75 thermal emittance)	16 points	
Air Infiltration	Minimizing leaks in the building envelope is as important as the insulation properties of the building. Insulation does not work effectively if there is excess air leakage.		0
	Air barrier applied to exterior walls, calking, and visual inspection such as the HERS Verified Quality Insulation Installation (QII or equivalent)	12 points	
	Blower Door HERS Verified Envelope Leakage or equivalent	10 points	
Thermal Storage of Building	Thermal storage is a design characteristic that helps keep a constant temperature in the building. Common thermal storage devices include strategically placed water filled columns, water storage tanks, and thick masonry walls.		0
	Modest Thermal Mass (10% of floor or 10% of walls 12" or more thick exposed concrete or masonry with no permanently installed floor covering such as carpet, linoleum, wood or other insulating materials)	4 points	
	Enhanced Thermal Mass (20% of floor or 20% of walls 12" or more thick exposed concrete or masonry with no permanently installed floor covering such as carpet, linoleum, wood or other insulating materials)	6 points	

Feature	Description	Assigned Point Values	Project Points
	Enhanced Thermal Mass (80% of floor or 80% of walls 12" or more thick exposed concrete or masonry with no permanently installed floor covering such as carpet, linoleum, wood or other insulating materials)	24 points	
Indoor Space Efficiencies			
Heating/ Cooling Distribution System	Minimum Duct Insulation (R-4.2 required) Modest Duct insulation (R-6) Enhanced Duct Insulation (R-8) Distribution loss reduction with inspection (HERS Verified Duct Leakage or equivalent)	0 points 8 points 10 points 14 points	0
Space Heating/ Cooling Equipment	2008 Minimum HVAC Efficiency (EER 13/60% AFUE or 7.7 HSPF) Improved Efficiency HVAC (EER 14/65% AFUE or 8 HSPF) High Efficiency HVAC (EER 15/72% AFUE or 8.5 HSPF) Very High Efficiency HVAC (EER 16/80% AFUE or 9 HSPF)	0 points 7 points 8 points 12 points	7
Commercial Heat Recovery Systems	Heat recovery strategies employed with commercial laundry, cooking equipment, and other commercial heat sources for reuse in HVAC air intake or other appropriate heat recovery technology. Point values for these types of systems will be determined based upon design and engineering data documenting the energy savings.	TBD	
Water Heaters	2008 Minimum Efficiency (0.57 Energy Factor) Improved Efficiency Water Heater (0.675 Energy Factor) High Efficiency Water Heater (0.72 Energy Factor) Very High Efficiency Water Heater (0.92 Energy Factor) Solar Pre-heat System (0.2 Net Solar Fraction) Enhanced Solar Pre-heat System (0.35 Net Solar Fraction)	0 points 14 points 16 points 19 points 4 points 8 points	16
Daylighting	Daylighting is the ability of each room within the building to provide outside light during the day reducing the need for artificial lighting during daylight hours. All peripheral rooms within building have at least one window or skylight All rooms within building have daylight (through use of windows, solar tubes, skylights, etc.) All rooms daylighted	 1 points 5 points 7 points	1
Artificial Lighting	2008 Minimum (required) Efficient Lights (25% of in-unit fixtures considered high efficacy. High efficacy is defined as 40 lumens/watt for 15 watt or less fixtures; 50 lumens/watt for 15-40 watt fixtures, 60 lumens/watt for fixtures >40watt)	0 points 9 points	12

Feature	Description	Assigned Point Values	Project Points
	High Efficiency Lights (50% of in-unit fixtures are high efficacy) Very High Efficiency Lights (100% of in-unit fixtures are high efficacy)	12 points 14 points	
Appliances	Star Commercial Refrigerator (new) Energy Star Commercial Dish Washer (new) Energy Star Commercial Cloths Washing	4 points 4 points 4 points	4 (Refrigerator)
Miscellaneous Commercial/Industrial Building Efficiencies			
Building Placement	North/South alignment of building or other building placement such that the orientation of the buildings optimizes conditions for natural heating, cooling, and lighting.	6 point	6
Shading	At least 90% of south-facing glazing will be shaded by vegetation or overhangs at noon on Jun 21st.	6 Points	0
Other	This allows innovation by the applicant to provide design features that increases the energy efficiency of the project not provided in the table. Note that engineering data will be required documenting the energy efficiency of innovative designs and point values given based upon the proven efficiency beyond Title 24 Energy Efficiency Standards.	TBD	
Existing Commercial building Retrofits	The applicant may wish to provide energy efficiency retrofit projects to existing commercial buildings to further the point value of their project. Retrofitting existing commercial buildings within the City is a key reduction measure that is needed to reach the reduction goal. The potential for an applicant to take advantage of this program will be decided on a case by case basis and must have the approval of the City Planning Department. The decision to allow applicants to ability to participate in this program will be evaluated based upon, but not limited to the following: Will the energy efficiency retrofit project benefit low income or disadvantaged communities? Does the energy efficiency retrofit project fit within the overall assumptions in the reduction measure associated with commercial building energy efficiency retrofits? Does the energy efficiency retrofit project provide co-benefits important to the City? Point value will be determined based upon engineering and design criteria of the energy efficiency retrofit project.	TBD	
Reduction Measure R2E9 and R2E10: New Commercial/Industrial Renewable Energy			
Photovoltaic	Solar Photovoltaic panels installed on commercial buildings or in collective		

Feature	Description	Assigned Point Values	Project Points
	arrangements within a commercial development such that the total power provided augments:		
	Solar Ready Roofs (sturdy roof and electric hookups)	2 points	
	10 percent of the power needs of the project	8 points	
	20 percent of the power needs of the project	14 points	
	30 percent of the power needs of the project	20 points	
	40 percent of the power needs of the project	26 points	NA
	50 percent of the power needs of the project	32 points	
	60 percent of the power needs of the project	38 points	
	70 percent of the power needs of the project	44 points	
	80 percent of the power needs of the project	50 points	
	90 percent of the power needs of the project	56 points	
	100 percent of the power needs of the project	60 points	
Wind turbines	Some areas of the City lend themselves to wind turbine applications. Analysis of the areas capability to support wind turbines should be evaluated prior to choosing this feature.		
	Wind turbines as part of the commercial development such that the total power provided augments:		
	10 percent of the power needs of the project	8 points	
	20 percent of the power needs of the project	14 points	0
	30 percent of the power needs of the project	20 points	
	40 percent of the power needs of the project	26 points	
	50 percent of the power needs of the project	32 points	
	60 percent of the power needs of the project	38 points	
	70 percent of the power needs of the project	44 points	
	80 percent of the power needs of the project	50 points	
	90 percent of the power needs of the project	56 points	
	100 percent of the power needs of the project	60 points	
Off-site renewable energy project	The applicant may submit a proposal to supply an off-site renewable energy project such as renewable energy retrofits of existing commercial/industrial that will help implement reduction measures associated with existing buildings. These off-site renewable energy retrofit project proposals will be determined on a case by case basis accompanied by a detailed plan documenting the quantity of renewable energy the proposal will generate. Point values will be based upon the energy generated by the proposal.	TBD	
Other Renewable Energy Generation	The applicant may have innovative designs or unique site circumstances (such as geothermal) that allow the project to generate electricity from renewable energy not provided in the table. The ability to supply other renewable energy and the point values allowed will be decided based upon	TBD	

Feature	Description	Assigned Point Values	Project Points
	engineering data documenting the ability to generate electricity.		
Reduction Measure R2E7: Warehouse Renewable Energy Incentive Program			
Warehouse Photovoltaic	This measure is for warehouse projects and involves partnership with Sothern California Edison and California Public Utilities Commissions to develop an incentive program for solar installation on new and retrofit existing warehouses. A mandatory minimum solar requirement for new warehouse space. Solar Photovoltaic panels installed on warehouses or in collective arrangements within a logistics/warehouse complex such that the total power provided augments:		
	Solar Ready Roof (sturdy roof and electric hookups)	2 points	
	10 percent of the power needs of the project	4 points	2
	20 percent of the power needs of the project	5 points	
	30 percent of the power needs of the project	7 points	
	40 percent of the power needs of the project	9 points	
	50 percent of the power needs of the project	11 points	
	60 percent of the power needs of the project	13 points	
	70 percent of the power needs of the project	15 points	
	80 percent of the power needs of the project	17 points	
	90 percent of the power needs of the project	19 points	
	100 percent of the power needs of the project	21 points	
Reduction Measure R2WC1: R2WC-1: Per Capita Water Use Reduction Commercial/Industrial			
Irrigation and Landscaping			
Water Efficient Landscaping	Eliminate conventional turf from landscaping	0 points	
	Only moderate water using plants	3 points	
	Only low water using plants	4 points	3
	Only California Native landscape that requires no or only supplemental irrigation	8 points	
Trees	Increase tree planting in parking areas 50% beyond City Code requirements	TBD	
Water Efficient irrigation systems	Low precipitation spray heads< .75”/hr or drip irrigation	1 point	
	Weather based irrigation control systems combined with drip irrigation (demonstrate 20 reduced water use)	5 points	5
Recycled Water	Recycled water connection (purple pipe)to irrigation system on site	5 points	5
Storm water Reuse Systems	Innovative on-site stormwater collection, filtration and reuse systems are being developed that provide supplemental irrigation water and provide vector control. These systems can greatly reduce the irrigation needs of a project. Point values for these types of systems will be determined based	TBD	

Feature	Description	Assigned Point Values	Project Points
	upon design and engineering data documenting the water savings.		
Potable Water			
Showers	Water Efficient Showerheads (2.0 gpm)	3 points	0
Toilets	Water Efficient Toilets/Urinals (1.5gpm) Waterless Urinals (note that commercial buildings having both waterless urinals and high efficiency toilets will have a combined point value of 6 points)	3 points 4 points	3
Faucets	Water Efficient faucets (1.28gpm)	3 points	3
Commercial Dishwashers	Water Efficient dishwashers (20% water savings)	4 points	0
Commercial Laundry Washers	Water Efficient laundry (15% water savings) High Efficiency laundry Equipment that captures and reuses rinse water (30% water savings)	3 points 6 points	0
Commercial Water Operations Program	Establish an operational program to reduce water loss from pools, water features, etc., by covering pools, adjusting fountain operational hours, and using water treatment to reduce draw down and replacement of water. Point values for these types of plans will be determined based upon design and engineering data documenting the water savings.	TBD	
Reduction Measure R2T2: Employment Based Trip and VMT Reduction Policy			
Compressed Work Week	Reduce the number of days per week that employees need to be on site will reduce the number of vehicle trips associated with commercial/industrial development. Compressed work week such that full time employees are on site: days per week 5 days per week 4 days per week on site 3 days per week on site	 0 points 4 points 8 points	0
Car/Vanpools	Car/vanpool program Car/vanpool program with preferred parking Car/vanpool with guaranteed ride home program Subsidized employee incentive car/vanpool program Combination of all the above	1 point 2 points 3 points 5 points 6 points	2
Employee Bicycle/ Pedestrian Programs	Complete sidewalk to residential within ½ mile Complete bike path to residential within 3 miles Bike lockers and secure racks	1 point 1 point 1 point	0

Feature	Description	Assigned Point Values	Project Points
	Showers and changing facilities Subsidized employee walk/bike program Note combine all applicable points for total value	2 points 3 points	
Shuttle/Transit Programs	Local transit within ¼ mile Light rail transit within ½ mile Shuttle service to light rail transit station Guaranteed ride home program Subsidized Transit passes Note combine all applicable points for total value	1 point 3 points 5 points 1 points 2 points	0
CRT	Employer based Commute Trip Reduction (CRT). CRTs apply to commercial, offices, or industrial projects that include a reduction of vehicle trip or VMT goal using a variety of employee commutes trip reduction methods. The point value will be determined based upon a TIA that demonstrates the trip/VMT reductions. Suggested point ranges: Incentive based CRT Programs (1-8 points) Mandatory CRT programs (5-20 points)	TBD	
Other Trip Reductions	Other trip or VMT reduction measures not listed above with TIA and/or other traffic data supporting the trip and/or VMT for the project.	TBD	
Reduction Measure R2T4: Signal Synchronization and Intelligent Traffic Systems			
Signal improvements	Signal synchronization-1 point per signal Traffic signals connected to ITS	1 point/signal 3 points/ signal	1
Reduction Measure R2T5: Renewable Fuel/Low Emissions Vehicles (EV Charging Stations)			
Electric Vehicles	Provide public charging station for use by an electric vehicle (ten points for each charging station within the facility).	10 points	0
Reduction Measure R2T6: Vehicle Trip Reduction Measures			
Mixed Use	Mixes of land uses that complement one another in a way that reduces the need for vehicle trips can greatly reduce GHG emissions. The point value of mixed use projects will be determined based upon traffic studies that demonstrate trip reductions and/or reductions in vehicle miles traveled	TBD	
Local Retail Near Residential (Commercial only Projects)	Having residential developments within walking and biking distance of local retail helps to reduce vehicle trips and/or vehicle miles traveled. The point value of residential projects in close proximity to local retail will be determined based upon traffic studies that demonstrate trip reductions	TBD	

Feature	Description	Assigned Point Values	Project Points
	and/or reductions in vehicle miles traveled		
Reduction Measure R2W5: Construction and Demolition Debris Diversion Program			
Recycling of Construction/ Demolition Debris	Recycle 2% of debris (required) Recycle 5% of debris Recycle 8 % of debris Recycle 10% of debris Recycle 12% of debris Recycle 15% of debris Recycle 20% of debris	0 points 1 point 2 points 3 points 4 points 5 points 6 points	6
Reduction Measure R2W6: 75 Percent Solid Waste Diversion Program			
Recycling	County initiated recycling program diverting 75% of waste requires coordination with commercial development to realize this goal. The following recycling features will help the County fulfill this goal: Provide separated recycling bins within each commercial building/floor and provide large external recycling collection bins at central location for collection truck pick-up Provide commercial/industrial recycling programs that fulfills an on-site goal of 75% diversion of solid waste	 2 points 5 points	2
Total Points from Commercial/Industrial Project:			101

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PARTNER
Engineering and Science, Inc.®

PHASE I ENVIRONMENTAL SITE ASSESSMENT REPORT

Palmetto & Alabama - Land
NWC Palmetto Avenue & Alabama Street
Redlands, California 92374

Report Date: January 8, 2018
Partner Project No. 17-203002.1
Client Reference No. DUKEAJ-501

Prepared for:

Duke Realty Limited Partnership
200 Spectrum Center Drive, Suite 1600
Irvine, California 92618

PARTNER
Engineering and Science, Inc.

January 8, 2018

Mr. Adam Schmid
Duke Realty Limited Partnership
200 Spectrum Center Drive, Suite 1600
Irvine, California 92618

Subject: Phase I Environmental Site Assessment
Palmetto & Alabama - Land
NWC Palmetto Avenue & Alabama Street
Redlands, California 92374
Partner Project No. 17-203002.1
Client Reference No. DUKEAJ-501

Dear Mr. Schmid:

Partner Engineering and Science, Inc. (Partner) is pleased to provide the results of the *Phase I Environmental Site Assessment* (Phase I ESA) report of the abovementioned address (the "subject property"). This assessment was performed in conformance with the scope and limitations as detailed in the ASTM Practice E1527-13 Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process.

This assessment included a site reconnaissance as well as research and interviews with representatives of the public, property ownership, site manager, and regulatory agencies. An assessment was made, conclusions stated, and recommendations outlined.

We appreciate the opportunity to provide environmental services to you. If you have any questions concerning this report, or if we can assist you in any other matter, please contact me at (773) 840-5070.

Sincerely,

Bob Geiger
Principal, Relationship Manager

EXECUTIVE SUMMARY

Partner Engineering and Science, Inc. (Partner) has performed a Phase I Environmental Site Assessment (ESA) in general accordance with the scope of work and limitations of ASTM Standard Practice E1527-13, the United States Environmental Protection Agency (U.S. EPA) Standards and Practices for All Appropriate Inquiries (AAI) (40 CFR Part 312) and set forth by Duke Realty Limited Partnership for the property located at NWC Palmetto Avenue & Alabama Street in the City of Redlands, San Bernardino County, California (the "subject property"). The Phase I Environmental Site Assessment is designed to provide Duke Realty Limited Partnership with an assessment concerning environmental conditions (limited to those issues identified in the report) as they exist at the subject property.

Property Description

The subject property is located on the northern side of Palmetto Avenue and the western side of Alabama Street within a mixed-use commercial, agricultural, and industrial area of San Bernardino County. Please refer to the table below for further description of the subject property:

Subject Property Data	
Address:	NWC Palmetto Avenue & Alabama Street, Redlands, California
Additional Addresses:	9092 and 9180 Alabama Street, Redlands, California (per the San Bernardino County Assessor)
Historical Addresses:	Same as above
Property Use:	Mixed: Agricultural/Residential/Vacant
Land Acreage (Ac):	55.94 Ac
Number of Buildings:	None
Assessor's Parcel Number (APN):	0292-041-42-0000 (Parcel A); 0292-041-47-0000 (Parcel B); 0292-041-48-0000 (Parcel C); 0292-041-43-0000 (Parcel D); 0167-391-06-0000 (Parcel E)
Current Tenants:	Primarily vacant/fallow agricultural land; as well as a small portion of active agricultural fields and temporary residence
Site Assessment Performed By:	Burke Walker of Partner
Site Assessment Conducted On:	December 6, 2017

The subject property is primarily vacant/fallow agricultural land. However, a small western portion of the subject property maintains an active agricultural field, and a temporary residence (trailer), and beehive fixtures are present in the northern portion of the subject property. Onsite operations consist of a small area of active agricultural land, apiaristry (beekeeping), and vacant/fallow agricultural land. Onsite improvements, materials and chemicals include former concrete building foundations, fencing, limited amounts of small consumer sized (one-quart) empty containers motor oil, used automobile tires, and other miscellaneous debris such as former irrigation features and fixtures including aboveground and belowground suspect asbestos-containing Tansite irrigation pipping. The subject property is also improved with unpaved roads, and sewer/drainage access manholes.

According to available historical sources, the subject property was formerly developed for residential and agricultural uses as early as 1899; occupied for use as residential property and an agricultural citrus

orchard from the late 1920s through 2003, and residential and agricultural fields from 2003 to 2016. All permanent structures including past residential homes are no longer present at the property.

The immediately surrounding properties consist of a fallow agricultural field, The Redlands Wastewater Treatment Facility (1950 Nevada Street) and undeveloped, undulating, woodland and grassland to the north; Palmetto Avenue to the south, followed by citrus orchards, agricultural land; Alabama Street to the east followed by a vacant field/fallow agricultural land, an industrial warehouse building occupied by Prologis, Home Depot, and (27352 River Bluff Avenue); and a fallow agricultural field and an industrial warehouse building occupied by Performance Team Freight (26940 Palmetto Avenue) to the west.

According to Cal/EPA Regional Water Quality Control Board (RWQCB) *Geotracker* online database, a previous subsurface investigation conducted on a nearby property (2151 Nevada Street/RWQCB Case #8360303001) indicates that the depth to groundwater in the vicinity of the subject property is approximately 149 feet below ground surface (bgs) with the direction of groundwater flow identified to be towards the west-southwest.

Findings

A *recognized environmental condition* (*REC*) refers to the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property: due to release to the environment; under conditions indicative of a release to the environment; or under conditions that pose a material threat of a future release to the environment. The following was identified during the course of this assessment:

- Partner did not identify any controlled recognized environmental conditions during the course of this assessment.

A *controlled recognized environmental condition* (*CREC*) refers to a REC resulting from a past release of hazardous substances or petroleum products that has been addressed to the satisfaction of the applicable regulatory authority, with hazardous substances or petroleum products allowed to remain in place subject to the implementation of required controls. The following was identified during the course of this assessment:

- Partner did not identify any controlled recognized environmental conditions during the course of this assessment.

A *historical recognized environmental condition* (*HREC*) refers to a past release of any hazardous substances or petroleum products that has occurred in connection with the property and has been addressed to the satisfaction of the applicable regulatory authority or meeting unrestricted use criteria established by a regulatory authority, without subjecting the property to any required controls. The following was identified during the course of this assessment:

- Partner did not identify any historical recognized environmental conditions during the course of this assessment.

An *environmental issue* refers to environmental concerns identified by Partner, which do not qualify as RECs; however, warrant further discussion. The following was identified during the course of this assessment:

- According to Partner's review of regulatory database records and online environmental regulatory agency records, the subject property, known as AG-Tuenissen Farming at 9092 Alabama Street, is identified as a state-registered and county permitted underground storage tank (UST) facility (Facility Number 88015440). No information regarding the number, size, construction, contents, location, and operational history of any USTs at the subject property in the database records. However, according to information included in a previous 2010 environmental site assessment that referenced an older 2006 assessment report, the northeastern side of the property included a residence/agricultural building that operated one diesel fuel UST that was reportedly closed and removed from the ground in 2001 with the San Bernardino County Fire Department Hazardous Materials Division issuing a letter of No Further Action (NFA) on March 16, 2001. The issuance of a NFA letter indicates that no further subsurface investigations, remedial cleanup or other actions are required. No spills or releases from the UST are identified. Copies of the UST closure documentation and the NFA letter were not included in the appendices of the 2010 report. In addition, Partner has submitted requests using the Freedom of Information Act (FOIA) to the county for fire and building permit records; however, to date, no response has been provided with no records received for review. Nonetheless, it appears that the tank was closed and removed with regulatory oversight with no releases reported. As such, the former UST is not considered to represent a significant environmental concern and no further actions appear to be warranted.
- The former subject property buildings were demolished prior to 2006. However, Partner conducted a limited, visual evaluation of accessible areas for the presence of suspect ACMs at the subject property. The objective of this visual survey was to note the presence and condition of suspect ACM observed. Partner observed several areas of the property that include aboveground and below ground irrigation piping that was used during the former citrus orchard operations. Orchard operations ceased in 2003 and the irrigation system is no longer in use and inactive. Where observed, the piping appears to be constructed of a hard, cementitious material that is similar to the known asbestos-containing material "transite", which can contain variable amounts of the asbestos mineral and be a "regulated" ACM. Between the 1930s and 1970s, transite was commonly used for water distribution piping, duct flues, corrugated roof/siding panels, cement board, house siding shingles, etc. Partner observed piping that was both damaged and in good condition. Transite material in good condition is considered to be a nonfriable ACM; however, when damaged, there is a potential for an airborne fiber release when handled. Removal of these materials would subject to the applicable federal, state and local asbestos abatement regulations and procedures. No other suspect ACM was observed.
- During the site reconnaissance, Partner observed various trash and debris including construction materials (concrete, brick, stucco, plaster, wood, etc.), discarded furniture, automobile tires, household trash and an abandoned recreational trailer in several areas of the subject property. No

evidence of landfilling was observed. Where observable, no evidence of chemical or oil staining or impacts were identified. The waste materials observed are not considered to represent a significant environmental concern at this time; however, these materials should be removed and properly disposed prior and/or during the proposed redevelopment activities.

- Partner conducted a Phase II Subsurface Investigation at the subject property to investigate the potential impact of volatile organic compounds (VOCs), Organochlorine Pesticides (OCPs), and/or arsenic to soil as a consequence of a release or releases from the former on-site agricultural and service/repair activities. The scope of the Phase II Subsurface Investigation included 11 soil borings and 26 shallow soil samples. Eleven (11) soil samples were analyzed for VOCs, 18 composite soil samples were analyzed for OCPs, and 18 discrete soil samples were analyzed for arsenic. Subsurface lithology encountered in the upper 5-feet bgs consisted of silty sand. Groundwater was not encountered during this investigation. Soil samples did not contain detectable concentrations of OCPs in excess of applicable RSLs. Arsenic and VOCs were not detected in the analyzed soil samples at concentrations exceeding laboratory PQLs and the PQLs were below applicable regulatory guidelines. Based on the Subsurface Investigation, there is evidence of a *de minimis* release of hazardous materials from the subject property which does not represent a concern to human health or the environment at this time. Partner recommends no further investigation with respect to the former on-site agricultural and service/repair activities.

Conclusions, Opinions and Recommendations

Partner has performed a Phase I Environmental Site Assessment in conformance with the scope and limitations of ASTM Practice E1527-13 of NWC Palmetto Avenue & Alabama Street in the City of Redlands, San Bernardino County, California (the "subject property"). Any exceptions to, or deletions from, this practice are described in Section 1.5 of this report.

This assessment has revealed no evidence of recognized environmental conditions in connection with the subject property; however, environmental issues were identified. Based on the conclusions of this assessment, Partner recommends the following:

- Nuisance discarded debris (trash, construction materials, etc.) present on the property should be removed and properly discarded.
- The orchard's former irrigation system which appears to include a measurable amount of suspect asbestos-containing hardened cementitious piping, should be properly removed in accordance with applicable federal, state and local regulations. Additionally, any remaining groundwater wells (if any) associated with the irrigation system should be properly abandoned in accordance with the applicable regulations.

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1.0 INTRODUCTION

Partner Engineering and Science, Inc. (Partner) has performed a Phase I Environmental Site Assessment (ESA) in conformance with the scope and limitations of ASTM Standard Practice E1527-13 and the United States Environmental Protection Agency (U.S. EPA) Standards and Practices for All Appropriate Inquiries (AAI) (40 CFR Part 312) for the property located at NWC Palmetto Avenue & Alabama Street in the City of Redlands, San Bernardino County, California (the "subject property"). Any exceptions to, or deletions from, this scope of work are described in the report.

1.1 Purpose

The purpose of this ESA is to identify existing or potential Recognized Environmental Conditions (as defined by ASTM Standard E1527-13) affecting the subject property that: 1) constitute or result in a material violation or a potential material violation of any applicable environmental law; 2) impose any material constraints on the operation of the subject property or require a material change in the use thereof; 3) require clean-up, remedial action or other response with respect to Hazardous Substances or Petroleum Products on or affecting the subject property under any applicable environmental law; 4) may affect the value of the subject property; and 5) may require specific actions to be performed with regard to such conditions and circumstances. The information contained in the ESA Report will be used by Client to: 1) evaluate its legal and financial liabilities for transactions related to foreclosure, purchase, sale, loan origination, loan workout or seller financing; 2) evaluate the subject property's overall development potential, the associated market value and the impact of applicable laws that restrict financial and other types of assistance for the future development of the subject property; and/or 3) determine whether specific actions are required to be performed prior to the foreclosure, purchase, sale, loan origination, loan workout or seller financing of the subject property.

This ESA was performed to permit the *User* to satisfy one of the requirements to qualify for the innocent landowner, contiguous property owner, or bona fide prospective purchaser limitations on scope of Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) (42 U.S.C. §9601) liability (hereinafter, the "*landowner liability protections*," or "*LLPs*"). ASTM Standard E1527-13 constitutes "*all appropriate inquiry* into the previous ownership and uses of the *property* consistent with good commercial or customary practice" as defined at 42 U.S.C. §9601(35)(B).

1.2 Scope of Work

The scope of work for this ESA is in general accordance with the requirements of ASTM Standard E1527-13. This assessment included: 1) a property and adjacent site reconnaissance; 2) interviews with key personnel; 3) a review of historical sources; 4) a review of regulatory agency records; and 5) a review of a regulatory database report provided by a third-party vendor. Partner contacted local agencies, such as environmental health departments, fire departments and building departments in order to determine any current and/or former hazardous substances usage, storage and/or releases of hazardous substances on the subject property. Additionally, Partner researched information on the presence of activity and use limitations (AULs) at these agencies. As defined by ASTM E1527-13, AULs are the legal or physical

restrictions or limitations on the use of, or access to, a site or facility: 1) to reduce or eliminate potential exposure to hazardous substances or petroleum products in the soil or groundwater on the subject property; or 2) to prevent activities that could interfere with the effectiveness of a response action, in order to ensure maintenance of a condition of no significant risk to public health or the environment. These legal or physical restrictions, which may include institutional and/or engineering controls (IC/ECs), are intended to prevent adverse impacts to individuals or populations that may be exposed to hazardous substances and petroleum products in the soil or groundwater on the property.

If requested by Client, this report may also include the identification, discussion of, and/or limited sampling of asbestos-containing materials (ACMs), lead-based paint (LBP), mold, and/or radon.

1.3 Limitations

Partner warrants that the findings and conclusions contained herein were accomplished in accordance with the methodologies set forth in the Scope of Work. These methodologies are described as representing good commercial and customary practice for conducting an ESA of a property for the purpose of identifying recognized environmental conditions. There is a possibility that even with the proper application of these methodologies there may exist on the subject property conditions that could not be identified within the scope of the assessment or which were not reasonably identifiable from the available information. Partner believes that the information obtained from the record review and the interviews concerning the subject property is reliable. However, Partner cannot and does not warrant or guarantee that the information provided by these other sources is accurate or complete. The conclusions and findings set forth in this report are strictly limited in time and scope to the date of the evaluations. The conclusions presented in the report are based solely on the services described therein, and not on scientific tasks or procedures beyond the scope of agreed-upon services or the time and budgeting restraints imposed by the Client. No other warranties are implied or expressed.

Some of the information provided in this report is based upon personal interviews, and research of available documents, records, and maps held by the appropriate government and private agencies. This report is subject to the limitations of historical documentation, availability, and accuracy of pertinent records, and the personal recollections of those persons contacted.

This practice does not address requirements of any state or local laws or of any federal laws other than the all appropriate inquiry provisions of the LLPs. Further, this report does not intend to address all of the safety concerns, if any, associated with the subject property.

Environmental concerns, which are beyond the scope of a Phase I ESA as defined by ASTM include the following: ACMs, LBP, radon, and lead in drinking water. These issues may affect environmental risk at the subject property and may warrant discussion and/or assessment; however, are considered non-scope issues. If specifically requested by the Client, these non-scope issues are discussed in Section 6.3.

1.4 User Reliance

Duke Realty Limited Partnership engaged Partner to perform this assessment in accordance with an agreement governing the nature, scope and purpose of the work as well as other matters critical to the

engagement. All reports, both verbal and written, are for the sole use and benefit of Duke Realty Limited Partnership. Either verbally or in writing, third parties may come into possession of this report or all or part of the information generated as a result of this work. In the absence of a written agreement with Partner granting such rights, no third parties shall have rights of recourse or recovery whatsoever under any course of action against Partner, its officers, employees, vendors, successors or assigns. Any such unauthorized user shall be responsible to protect, indemnify and hold Partner, Client and their respective officers, employees, vendors, successors and assigns harmless from any and all claims, damages, losses, liabilities, expenses (including reasonable attorneys' fees) and costs attributable to such Use. Unauthorized use of this report shall constitute acceptance of and commitment to these responsibilities, which shall be irrevocable and shall apply regardless of the cause of action or legal theory pled or asserted. Additional legal penalties may apply.

This report has been completed under specific Terms and Conditions relating to scope, relying parties, limitations of liability, indemnification, dispute resolution, and other factors relevant to any reliance on this report. Any parties relying on this report do so having accepted the Terms and Conditions for which this report was completed. A copy of Partner's standard Terms and Conditions can be found at http://www.partneresi.com/terms-and-conditions.php.

1.5 Limiting Conditions

The findings and conclusions contain all of the limitations inherent in these methodologies that are referred to in ASTM E1527-13.

Specific limitations and exceptions to this ESA are more specifically set forth below:

- Interviews with past and current owners, operators and occupants were not reasonably ascertainable and thus constitute a data gap. Based on information obtained from other historical sources (as discussed in Section 3.0), this data gap is not expected to alter the findings of this assessment.
- Partner submitted Freedom of Information Act (FOIA) requests to the San Bernardino County Fire Department (SBCFD), and San Bernardino County Building & Safety Division (SBCBSD) for information pertaining to hazardous substances, underground storage tanks, releases, inspection records, etc. for the subject property and/or adjacent properties. As of this writing, the aforementioned FOIA request are pending/outstanding.
- Partner's view of the ground during the site assessment was obstructed due to beekeeping boxes/hives in the northern portion of the subject property, and in the western portion of the subject property due to aggressive unleashed domestic dogs. Based on information obtained from other historical sources, this limitation is not expected to alter the overall findings of this assessment.

2.0 SITE DESCRIPTION

2.1 Site Location and Legal Description

The subject property at NWC Palmetto Avenue & Alabama Street in Redlands, California is located on the northern side of Palmetto Avenue and the western side of Palmetto Street. According to the San Bernardino County Assessor, the subject property is identified as Assessor Parcel Numbers (APNs) 0292-041-42-0000, 0292-041-47-0000, 0292-041-48-0000, 0292-041-43-0000, and 0167-391-06-0000 with the parcels legally described as follows:

- *BROWN SUB H L W1LL1AMS TR NO 1 PTNS LOTS 1 2 7 AND 8 BLK 2 COM ON W LI ALABAMA ST 450 FT N OF SE COR SD LOT 8 TH W 828.9 FT TO PT 450 FT E OF W LI LOT 7 TH N 510.11 FT TH E 828.9 FT TH S 510.11 FTTO POB TOGETHER WITH THAT PTN LOTS 7 & 8 BEG AT SE CORNER LOT 8 TH W ALG S LI OF LOTS 8 & 7 828.9 FT TO PT 450 E OF SW CORNER SD LOT 7 TH N PARALLEL TO W LI LOT 7 SD BLK 450 FT TH E 828.9 TO W LI ALABAMA ST TH S 450 TO POB EX THAT PTN DESC AS COM AT SE CORNER OF SD LOT 8 SD SE CORNER BEING 25.5 FT W OF CTR LI ALABAMA ST & 30 FT N OF CTR LI OF PALMETTO AVE TH W ALG S LI SD LOT 8 103 FT TOTRUE POB TH N AT R ANGELS 50 FT TH W AT R ANGELS PARALLEL WITH N LI OF PALMETTO AVE 50 FT TH S AT RANGELS 50 FT TO AFORESAID S LI LOT 8 TH E ALG S LI LOT 8 60 FT TO POB EX ST;*
- *THOSE PORTIONS OF LOTS 2, 3, 6 AND 7, BLOCK 2 OF MAP SHOWING BROWNS SUBDIWSION OF LOTS 1, 2, 3 AND 4 IN BLOCK 2 AND LOTS 1, 2, 3, 4, 13, 14, 15 AND 16 IN BLOCK 1 OF MAP NO. 1 OF THE HENRY L. WILLIAMS TRACT, IN THE UNINCORPORATED TERRITORY OF THE COUNTY OF SAN BERNARDINO, STATE OF CALIFORNIA, AS PER MAP RECORDED IN BOOK 8 PAGE 96 OF MAPS, IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY, DESCRIBED AS FOLLOWS BEGINNING AT THE NORTHEAST CORNER OF THE SOUTH 235 FEET OF SAID LOT 3 BLOCK 2 THENCE ALONG THE NORTH LINE OF THE SOUTH 235 FEET OF SAID LOT 2 BLOCK 2 SOUTH 89 DEG 27' 48" EAST 280.86 FEET THENCE AT RIGHT ANGLES NORTH 00 DEG 32' 12" EAST 20.42 FEET THENCE AT RIGHT ANGLES SOUTH 89 DEG 27' 48" EAST, 169.17 FEET TO THE EAST LINE OF NOTICE OF MERGER EVL00848-08, AS PER DOCUMENT RECORDED AUGUST 19, 2008 AS DOCUMENT NO. 2008-0379971 OF OFFICIAL RECORDS IN THE OFFICE OF SAID COUNTY RECORDER THENCE ALONG SAID EAST LINE, SOUTH 00 DEG 34' 54" WEST 885.36 FEET TO THE SOUTH LINE OF SAID LOT 7 BLOCK 2 SAID SOUTH LINE ALSO BEING THE NORTH LINE OF PALMETTO AVENUE (60 FEET WIDE) AS SHOWN ON SAID MAP THENCE ALONG THE SOUTH LINES OF SAID LOTS 6 AND 7 BLOCK 2 NORTH 89 DEG 27' 46" WEST 779.54 FEET TO THE WEST LINE OF THE EAST HALF OF LOTS 3 AND6 BLOCK 2 THENCE ALONG SAID WEST LINE NORTH 00 DEG 34' 56" EAST, 864.93 FEET TO THE NORTH LINE OF THE SOUTH 235 FEET OF LOT 3 BLOCK 2 THENCE ALONG SAID NORTH LINE OF THE SOUTH 235 FEET OF LOT 3 BLOCK 2 SOUTH 89 DEG 27' 48" EAST 329.52 FEET TO POINT OF BEGINNING;*
- *"THOSE PORTIONS OF LOT 2 BLOCK 1 LOT 2 BLOCK 2 OF MAP SHOWING BROWNS SUBDIVISION OF LOTS 1, 2, 3 AND4 IN BLOCK 2 AND LOTS 1, 2, 3, 4, 13, 14, 15 AND 16 IN BLOCK 1 OF MAP NO. 1 OF THE HENRY L. WILLIAMS TRACTIN THE UNINCORPORATED TERRITORY OF THE COUNTY OF SAN BERNARDINO STATE OF CALIFORNIA AS PER MAP RECORDED IN BOOK 8 PAGE 96 OF MAPS IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY TOGETHER WITH THAT PORTION OF PINE AVE (VACATED) SHOWN ON SAID MAP DESCRIBED AS FOLLOWS BEGINNING AT THE NORTHWEST CORNER OF THE SOUTH 235 FEET OF SAID LOT 2 BLOCK 2 THENCE ALONG THE NORTH LINE OF THE SOUTH 235 FEET OF SAID LOT 2 BLOCK 2 SOUTH 89 DEG 27' 48" EAST 280.86 FEET THENCE AT RIGHT ANGLES NORTH 00DEG 32' 12" EAST 20.42 FEET THENCE AT RIGHT ANGLES SOUTH 89 DEG 27' 48" EAST 169.17 FEET TO THE EAST LINE OF NOTICE OF MERGER EVLOO84B-08, AS PER DOCUMENT RECORDED AUGUST 19, 2008 AS DOCUMENT NO. 2008-0379971 OF OFFICIAL RECORDS IN THE OFFICE OF SAID COUNTY RECORDER THENCE ALONG SAID EAST LINE, THE NORTHERLY AND WEST LINES OF SAID NOTICE OF MERGER NORTH 00 DEG 34' 54" EAST 986.43 FEET NORTH 56 DEG 40' 21" WEST 4.02 FEET NORTH 79 40' 25" WEST 453.12 FEET AND SOUTH 00 DEG 35' 04" WEST 1086.07 FEET TO POINT OF BEGINNING;"*
- *ALL THAT PORTION OF LOTS 1 AND 2 BLOCK 1 OF BROWN'S SUBDIVISION OF LOTS 1,2,3 AND 4 BLOCK 2 AND LOTS 1,2,3,4,13,14,15, AND 16, BLOCK 1 OF MAP NO. 1 OF THE HENRY L. WILLIAMS TRACT IN THE CITY OF REDLANDS COUNTY OF SAN BERNARDINO STATE OF CALIFORNIA AS PER PLAT RECORDED IN BOOK 8 OF MAPS PAGE 96 OFFICIAL RECORDS*

OF SAID COUNTY DESCRIBED AS FOLLOWS COMMENCING AT A POINT IN THE CENTERLINE OF ALABAMA STREET DISTANT SOUTH 1,085.98 FEET FROM THE NORTHEAST CORNER OF BLOCK 71 RANCHO SAN BERNARDINO AS SHOWN ON RECORD OF SURVEY RECORDED IN BOOK 60 PAGE 53 OF RECORDS OF SURVEY OFFICIAL RECORDS OF SAID COUNTY THENCE NORTH 89 DEG 10 '16" WEST 71.00 FEET TO THE WEST RIGHT-OF-WAY LINE OF ALABAMA STREET BEING THE TRUE P0INT OF BEGINNING THENCE ALONG SAID WEST RIGHT OF WAY LINE SOUTH 00DEG 34 '57" WEST 36.07 FEET THENCE SOUTH 89 DEG 25'O3" EAST 15.00 FEET THENCE SOUTH OO DEG 34'57" WEST 200.00 FEET TO THE SOUTH LINE OF SAID LOT 1 BLOCK 1 THENCE NORTH 89 DEG 27'45" WEST 820.62 FEET MORE OR LESS TO A POINT 450.00 FEET EAST OF THE WEST LINE OF SAID LOT 2 BLOCK 1 THENCE PARALLEL WITH THE WEST LINE OF LOT 2 BLOCK 1 NORTH DEG OO'35'17" EAST 581.93 FEET TO THE NORTH LINE OF LOT 2 BLOCK 1 THENCE ALONG THE NORTH LINE OF LOT 2 AND LOT 1 BLOCK 1 SOUTH 56 DEG 40'16" EAST 636.04 FEET THENCE SOUTH 89 DEG 1O'16" EAST 270.61 FEET TO THE POINT OF BEGINNING EXCEPTING THEREFROM THAT PORTION OF SAID LOTS 1 AND 2, BLOCK 1 DESCRIBED AS FOLLOWS COMMENCING AT A POINT IN THE CENTERLINE OF ALABAMA STREET DISTANT SOUTH 1,085.98 FEET FROM THE NORTHEAST CORNER OF BLOCK 71 RANCHO SAN BERNARDINO AS SHOWN ON RECORD OF SURVEY RECORDED IN B00K 60 PAGE 53 OF RECORDS OF SURVEY THENCE NORTH 89 DEG 10'16" WEST 71.00 FEET TO THE WEST RIGHT OF WAY LINE OF ALABAMA STREET THENCE ALONG THE NORTH LINE OF SAID LOT 1 BLOCK 1 NORTH 89 DEG 1O'16" WEST 230.63 FEET TO THE TRUE P0INT OF BEGINNING THENCE SOUTH 00 DEG '49 '44" WEST 50.00 FEET THENCE NORTH 89 DEG 10 '16" WEST 101.54 FEET THENCE NORTH 56 DEG'40'16" WEST 292.48 FEET THENCE NORTH 89 DEG1O'16" WEST 227.21 FEET MORE OR LESS TO A POINT 450.00 FEET EAST OF THE WEST LINE OF SAID LOT 2 BLOCK 1 THENCE PARALLEL WITH THE WEST LINE OF SAID LOT 2, BLOCK 1 NORTH O0 DEG 35 '17" EAST 234.60 FEET TO THE NORTH LINE OF SAID LOT 2, BLOCK 1; THENCE ALONG THE NORTH LINE OF LOT 2 AND LOT 1 BLOCK 1 SOUTH 56 DEG 40 '16" EAST 636.04 FEET THENCE SOUTH 89 DEG 1O '16" EAST 39.98 FEET TO THE P0INT OF BEGINNING TOGETHER WITH LOT1 AND A PORTION OF LOT 2 IN BLOCK 1 AND A PART OF LOTS 1 AND 2 IN BLOCK 2 OF BROWN'S SUBDIVSION OF LOTS 7,2,3 AND 4 BLOCK 2 AND LOTS 1,2,3 AND 4, BLOCK 2 AND LOTS 1,2,3,4,13, 14,15 AND 16, BLOCK 1 MAP NO. 1 HENRY L. WILLIAMS' TRACT AS PER PLAT RECORDED IN BOOK 8 OF MAPS PAGE 96 RECORDS OF SAID COUNTY ALSO A PORTION OF PINE AVENUE (NOW VACATED) AS SHOWN ON SAID MAP DESCRIBED AS WHOLE AS FOLLOWS BEGINNING AT A POINT IN THE WEST LINE OF ALABAMA STREET DISTANT NORTH 960.11 FEET FROM THE SOUTHEAST CORNER OF LOT 8, B;"

- *"R S B PTN LOT 8 BLK 71 COM AT NE COR SD BLK 71 TH S 00 DEG 34 MIN 57 SECONDS W 1085.98 FT TH N 89 DEG 10 MIN 16 SECONDS W 71 FT TO TRUE POB TH N 89 DEG 10 MIN 16 SECONDS W 230.63 FT TH N 00 DEG 49 MIN 44 SECONDS E 146 FT TH S 89 DEG 10 MIN 16 SECONDS E 230 FT TH S 00 DEG 34 MIN 57 SECONDS W 146 FT TO POB 1-3-96 #96-001113 CC/LLADJ"*

Ownership of the subject property is currently vested in McLane Suneast, LLC since February 25, 2011.

Please refer to Figure 1: Site Location Map, Figure 2: Site Plan, Figure 3: Topographic Map, and Appendix A: Site Photographs for the location and site characteristics of the subject property.

2.2 Current Property Use

The subject property is primarily vacant/fallow agricultural land. However, a small western portion of the subject property maintains an active agricultural field, and a temporary residence (trailer), and beehive fixtures are present in the northern portion of the subject property. Onsite operations consist of a small area of active agricultural land, apiaristry (beekeeping), and vacant/fallow agricultural land. Onsite improvements, materials and chemicals include former concrete building foundations, fencing, limited amounts of small consumer sized (one-quart) empty containers motor oil, used automobile tires, and other miscellaneous debris such as former irrigation features and fixtures including aboveground and belowground suspect asbestos-containing transite irrigation pipping. The subject property is also improved with unpaved roads, and sewer/drainage access manholes.

The subject property is designated "EV/IR" for East Valley/Regional Industrial development by the City of Redlands.

The subject property was identified as "AG-Teunissen Farming," 9092 Alabama Street, a UST site in the regulatory database report, as further discussed in Section 4.2.

2.3 Current Use of Adjacent Properties

The subject property is located within a mixed commercial, industrial and agricultural area of San Bernardino County. During the vicinity reconnaissance, Partner observed the following land use on properties in the immediate vicinity of the subject property:

Immediately Surrounding Properties

North: A fallow agricultural field, The Redlands Wastewater Treatment Facility (1950 Nevada Street) and undeveloped, undulating, woodland and grassland to the north.

South: Palmetto Avenue to the south, followed by citrus orchards, agricultural land.

East: Alabama Street to the east followed by a vacant field/fallow agricultural land, an industrial warehouse building occupied by Prologis, Home Depot, and (27352 River Bluff Avenue).

West: A fallow agricultural field and an industrial warehouse building occupied by Performance Team Freight (26940 Palmetto Avenue) to the west.

See Section 4.2 for further discussion regarding adjacent properties identified with regulatory database listings in the regulatory database report reviewed by Partner.

2.4 Physical Setting Sources

2.4.1 Topography

The United States Geological Survey (USGS) *Redlands, California* Quadrangle 7.5-minute series topographic map was reviewed for this ESA. According to the contour lines on the topographic map, the subject property is located at approximately 1,217 feet above mean sea level (MSL). The contour lines in the area of the subject property indicate the area is sloping gently toward the west-northwest. The subject property is depicted on the 1988 map as developed with two small building structures (two residences), and otherwise developed as an agriculture field on the western half of the property; and is developed with two rectangular building structures (storage and greenhouse), three small building structures (residence and storage), and otherwise developed as an agriculture field on the eastern half of the property.

A copy of the most recent topographic map is included as Figure 3 of this report.

2.4.2 Hydrology

According to topographic map interpretation, the direction of groundwater in the vicinity of the subject property is inferred to flow toward the west-southwest. The nearest surface water in the vicinity of the subject property is the Santa Ana River located approximately 1,000 feet to the north-northwest of the subject property. No settling ponds, lagoons, surface impoundments, wetlands or natural catch basins were observed at the subject property during this assessment.

According to available information, a public water system operated by Division V the San Bernardino Valley Municipal Water District (SBVMWD) serves the subject property vicinity. According to a representative of the SBVMWD, shallow groundwater beneath the subject property is not utilized for domestic purposes. The San Bernardino Valley Municipal Water District's primary source of water is from the California State Water Project (SWP) through the East Branch of the State Aqueduct via Lake Silverwood. The SBVMWD and Western Municipal Water District have filed water right applications with the State Water Resources Control Board to obtain authorization to divert water from the Santa Ana River.

According to the California Department of Water Resources (DWR) Bulletin 118 2003, the subject property belongs to the Upper Santa Ana Valley Groundwater Basin, and the Bunker Hill Subbasin (Groundwater Basin Number: 8-2.06). The water-bearing material in the subbasin consists of Holocene and Pleistocene age alluvial deposits of sand, gravel, and boulders interspersed with deposits of silt and clay. Recharge to the Bunker Hill Subbasin historically has resulted from infiltration of runoff from the San Gabriel and San Bernardino Mountains. The San Jacinto fault forms a strong barrier to groundwater that raises the water table nearly to the surface below the course of the Santa Ana River.

According to Cal/EPA Regional Water Quality Control Board (RWQCB) *Geotracker* online database, a previous subsurface investigation conducted on a nearby property (2151 Nevada Street/RWQCB Case #8360303001) indicates that the depth to groundwater in the vicinity of the subject property is approximately 149 feet below ground surface (bgs) with the direction of groundwater flow identified to be towards the west-southwest.

2.4.3 Geology/Soils

The subject property is situated within the Pacific Border physiographic province of the State of California. Information concerning the geology of the subject property was obtained from the USGS Ground Water Atlas of the United States, California region (1995). The subject property is located within the Pacific Border physiographic province, which is characterized by steep rolling hills and mountains and consists of severely folded, faulted, and commonly metamorphosed marine and continental sediments.

Based on information obtained from the USDA Natural Resources Conservation Service Web Soil Survey online database, and the San Bernardino County Southwestern Part, California, select portions of the subject property are delineated as maintaining *Tujunga* gravelly loamy sand, *Hanford* sandy loam, and *Psamments*, Fluvents and Frequently flooded soils. The descriptions of which are as follows:

- The *Tujunga* series consists of deep, somewhat excessively drained soils that came from alluvium derived from granite, and is loamy sand from 0 to 60 inches below ground surface (bgs). Slopes range from 0 to 5 percent. In addition, the subject property is mapped as *Tujunga* gravelly sand, and *Hanford* soils consists of deep, comprising each about 5 percent.
- The *Hanford* series consists of alluvium derived from granite, over 80 inches deep, well drained, and that formed from sandy loam from 0 to 12 inches below ground surface (bgs), and from fine sandy loam from 12 to 60 inches bgs.

- The *Psamments* series consists of sandy alluvium, over 80 inches deep, somewhat excessively drained, and that formed from sand from 0 to 12 inches below ground surface (bgs), fine sand from 12 to 48 inches bgs, and from stratified gravelly sand to gravelly loamy sand from 48 to 60 inches bgs.

2.4.4 Flood Zone Information

Partner performed a review of the Flood Insurance Rate Map, published by the Federal Emergency Management Agency. According to Community Panel Number 06071C8704H, dated August 28, 2008, the subject property appears to be located in Zone X (unshaded), an area located outside of the 100-year and 500-year flood plains.

3.0 HISTORICAL INFORMATION

Partner obtained historical use information about the subject property from a variety of sources. A chronological listing of the historical data found is summarized in the table below:

Historical Use Information		
Period/Date	**Source**	**Description/Use**
1899-1920	Aerial Photographs, Interviews, Topographic Maps	Agricultural Farmstead
1930 to 2003	Aerial Photographs, Building Records, City Directories, Interviews, Previous Report, Topographic Maps	Residential/Citrus Orchard
2004-2016	Aerial Photographs, Building Records, City Directories, Interviews, Topographic Maps	Residential/Agricultural
2016-Present	Aerial Photographs, Building Records, City Directories, Interviews, Topographic Maps	Unoccupied Land

According to available historical sources, the subject property was formerly developed for residential and agricultural uses as early as 1899; occupied for use as residential property and an agricultural citrus orchard from the late 1920s through 2003, and residential and agricultural fields from 2003 to 2016. All permanent structures including past residential homes are no longer present at the property. See Sections 4.1, 4.2, 5.2.6, 6.2 and 6.3 for discussions regarding past and present uses of the subject property.

3.1 Aerial Photograph Review

Partner obtained available aerial photographs of the subject property and surrounding area from Environmental Data Resources, Inc. (EDR). The following observations were noted to be visible on the subject property and adjacent properties during the aerial photograph review:

Date: 1930, 1938	***Scale: 1"=500'***
Subject Property:	Depicted as developed with two single-family residences, an unpaved access road, and agricultural fields on the western half of the subject property, and depicted as developed with one single-family residence, an unpaved access road, and agricultural fields on the eastern half of the subject property.
North:	Depicted as undeveloped, undulating land (grassland, woodland, dirt), followed by the Santa Ana Riverbed and watershed.
South:	Developed with Palmetto Avenue, followed by agricultural fields (citrus orchards).
East:	Developed with Alabama Street, followed by a single-family residence and agricultural fields (citrus orchards).
West:	Developed with agricultural fields (citrus orchards) and unpaved access roads.

Dates: 1949 and 1953	***Scale: 1"=500'***
Subject Property:	Depicted as developed with two single-family residences, a storage building, an unpaved access road, and agricultural fields on the western half of the subject property, and depicted as developed with one single-family residence, two farm storage buildings, an unpaved access road, and agricultural fields on the eastern half of

Dates: 1949 and 1953	***Scale: 1"=500'***
	the subject property.
North:	Depicted as undeveloped, undulating land (grassland, woodland, dirt), followed by the Santa Ana Riverbed and watershed.
South:	Developed with Palmetto Avenue, followed by agricultural fields (citrus orchards).
East:	Developed with Alabama Street, followed by a single-family residence and agricultural fields (citrus orchards).
West:	Developed with agricultural fields (citrus orchards) and unpaved access roads.

Date: 1959	***Scale: 1"=500'***
Subject Property:	Depicted as developed with two single-family residences, a storage building, an unpaved access road, and agricultural fields on the western half of the subject property, and depicted as developed with one single-family residence, two farm storage buildings, rectangular buildings, an unpaved access road, and agricultural fields on the eastern half of the subject property.
North:	Depicted as undeveloped, undulating land (grassland, woodland, dirt) a small building, followed by the Santa Ana Riverbed and watershed.
South:	Developed with Palmetto Avenue, followed by agricultural fields (citrus orchards).
East:	Developed with Alabama Street, followed by a single-family residence and agricultural fields (citrus orchards).
West:	Developed with agricultural fields (citrus orchards) and unpaved access roads.

Dates: 1966 and 1968	***Scale: 1"=500'***
Subject Property:	Depicted as developed with two single-family residences, a storage building, an unpaved access road, and agricultural fields on the western half of the subject property, and depicted as developed with one single-family residence, two farm storage buildings, four rectangular buildings, an unpaved access road, and agricultural fields on the eastern half of the subject property.
North:	Depicted as undeveloped, undulating land (grassland, woodland, dirt) to the north, and developed with a wastewater treatment facility to the northwest, followed by the Santa Ana Riverbed and watershed.
South:	Developed with Palmetto Avenue, followed by agricultural fields (citrus orchards).
East:	Developed with Alabama Street, followed by a single-family residence and agricultural fields (citrus orchards).
West:	Developed with agricultural fields (citrus orchards) and unpaved access roads.

Dates: 1975 and 1985	***Scale: 1"=500'***
Subject Property:	Depicted as developed with two single-family residences, a storage building, an unpaved access road, and agricultural fields on the western half of the subject property, and depicted as developed with one single-family residence, two farm storage buildings, four rectangular buildings, an unpaved access road, and agricultural fields on the eastern half of the subject property.
North:	Depicted as undeveloped, undulating land (grassland, woodland, dirt), and developed with a wastewater treatment facility to the north and northwest, followed by the Santa Ana Riverbed and watershed.

Dates: 1975 and 1985	***Scale: 1"=500'***
South:	Developed with Palmetto Avenue, followed by agricultural fields (citrus orchards).
East:	Developed with Alabama Street, followed by a single-family residence and agricultural fields (citrus orchards).
West:	Developed with agricultural fields (citrus orchards) and unpaved access roads.

Dates: 1989 and 1994	***Scale: 1"=500'***
Subject Property:	Depicted as developed with two single-family residences, a storage building, an unpaved access road, and agricultural fields on the western half of the subject property, and depicted as developed with one single-family residence, two farm storage buildings, four rectangular buildings, an unpaved access road, and agricultural fields on the eastern half of the subject property.
North:	Depicted as undeveloped, undulating land (grassland, woodland, dirt), and developed with a wastewater treatment facility to the north and northwest, followed by the Santa Ana Riverbed and watershed.
South:	Developed with Palmetto Avenue, followed by agricultural fields (citrus orchards).
East:	Developed with Alabama Street, followed by a single-family residence and agricultural fields (citrus orchards).
West:	Developed with agricultural fields (citrus orchards), a wastewater treatment facility, and unpaved access roads.

Date: 2005	***Scale: 1"=500'***
Subject Property:	Depicted as developed with two single-family residences, a storage building, an unpaved access road, fallow agricultural fields, and agricultural fields on the western half of the subject property, and depicted as developed with one single-family residence, two farm storage buildings, two rectangular buildings, an unpaved access road, fallow agricultural fields, and agricultural fields on the eastern half of the subject property.
North:	Depicted as undeveloped, undulating land (grassland, woodland, dirt), and developed with a wastewater treatment facility to the north and northwest, followed by the Santa Ana Riverbed and watershed.
South:	Developed with Palmetto Avenue, followed by agricultural fields (citrus orchards).
East:	Developed with Alabama Street, followed by a single-family residence and agricultural fields (citrus orchards).
West:	Developed with agricultural fields (citrus orchards), a wastewater treatment facility, and unpaved access roads.

Date: 2006	***Scale: 1"=500'***
Subject Property:	Depicted as developed with two single-family residences, a storage building, an unpaved access road, fallow agricultural fields, and agricultural fields on the western half of the subject property, and depicted as developed with one single-family residence, two farm storage buildings, two rectangular buildings, an unpaved access road, fallow agricultural fields, and agricultural fields on the eastern half of the subject property.
North:	Depicted as undeveloped, undulating land (grassland, woodland, dirt), and

Date: 2006	*Scale: 1"=500'*
	developed with a wastewater treatment facility to the north and northwest, followed by the Santa Ana Riverbed and watershed.
South:	Developed with Palmetto Avenue, followed by agricultural fields (citrus orchards).
East:	Developed with Alabama Street, followed by a single-family residence and agricultural fields (citrus orchards).
West:	Developed with an industrial building, agricultural fields (citrus orchards), a wastewater treatment facility, and unpaved access roads.

Dates: 2009, 2010, and 2012	*Scale: 1"=500'*
Subject Property:	Depicted as developed with a single-family residence, an unpaved access road, vacant fields, and agricultural fields on the western half of the subject property, and depicted as developed with unpaved access roads, and vacant/fallow agricultural fields on the eastern half of the subject property.
North:	Depicted as undeveloped, undulating land (grassland, woodland, dirt), and developed with a wastewater treatment facility to the north and northwest, followed by the Santa Ana Riverbed and watershed.
South:	Developed with Palmetto Avenue, followed by agricultural fields (citrus orchards).
East:	Developed with Alabama Street, followed by an industrial warehouse building, and vacant fields.
West:	Developed with an industrial building, agricultural fields (citrus orchards), a wastewater treatment facility, and unpaved access roads.

Copies of the reviewed aerial photographs are included in Appendix B of this report.

3.2 Fire Insurance Maps

Partner reviewed a Certified Sanborn Map Report that was prepared by EDR. According to the report, the subject Property and the nearby area are "unmapped" with no fire insurance maps available. A copy of the Sanborn Map Report is included in Appendix B of this report.

3.3 City Directories

Partner reviewed historical city directories obtained from EDR for past names and businesses that were listed for the subject property and adjacent properties. The findings are presented in the following table:

City Directory Search for NWC Palmetto Avenue & Alabama Street (Subject Property)	
Year(s)	**Occupant Listed**
1975	Address Not Listed (9092 Alabama Street); Address Not Listed (9180 Alabama Street); Elzinga T General Contractor (27050 Palmetto Avenue)
1980	Address Not Listed (9092 Alabama Street); Address Not Listed (9180 Alabama Street); Address Not Listed (27050 Palmetto Avenue)
1985	Lynn Teunissen (9092 Alabama Street); Address Not Listed (9180 Alabama Street); Marshburn SL (27050 Palmetto Avenue)
1992	Don Teunissen, Mario Aguilar (9086-9092 Alabama Street); Address Not Listed (9180 Alabama Street); Kwons Landscaping (27050 Palmetto Avenue)
1995	Don Teunissen, Mario Aguilar (9086-9092 Alabama Street); Address Not Listed (9180

City Directory Search for NWC Palmetto Avenue & Alabama Street (Subject Property)	
Year(s)	**Occupant Listed**
	Alabama Street); Kim, L (27050 Palmetto Avenue)
2000	Don Teunissen, Capital Pool & Spa Maintenance (9086-9092 Alabama Street); Address Not Listed (9180 Alabama Street); Address Not Listed (27050 Palmetto Avenue)
2005	Unknown Occupant, Capital Pool & Spa Maintenance (9086-9092 Alabama Street); Address Not Listed (9180 Alabama Street); Kwon Farm, Unknown Occupant (27050 Palmetto Avenue)
2010	Unknown Occupant, Capital Pool & Spa Maintenance (9086-9092 Alabama Street); Address Not Listed (9180 Alabama Street); Address Not Listed (27050 Palmetto Avenue)
2014	Address Not Listed (9086-9092 Alabama Street); Address Not Listed (9180 Alabama Street); Address Not Listed (27050 Palmetto Avenue)

According to the city directory review, the subject property has been occupied by Don and Lynn Teunissen, between at least 1985 and 2000. The Don Teunissen tenancy is related to an underground storage tank record discussed below in the Section 4.2.2.

City Directory Search for Adjacent Properties	
Year(s)	**Occupant Listed**
1975	Address Not Listed (1950 Nevada Street); Address Not Listed (27352 Red Bluff Avenue); Address Not Listed (26940 Palmetto Avenue); Address Not Listed (9377 Alabama Avenue)
1980	Address Not Listed (1950 Nevada Street); Address Not Listed (27352 Red Bluff Avenue); Address Not Listed (26940 Palmetto Avenue); Address Not Listed (9377 Alabama Avenue)
1985	Address Not Listed (1950 Nevada Street); Address Not Listed (27352 Red Bluff Avenue); Address Not Listed (26940 Palmetto Avenue); Address Not Listed (9377 Alabama Avenue)
1992	Address Not Listed (1950 Nevada Street); Address Not Listed (27352 Red Bluff Avenue); Address Not Listed (26940 Palmetto Avenue); Address Not Listed (9377 Alabama Avenue)
1995	Address Not Listed (1950 Nevada Street); Address Not Listed (27352 Red Bluff Avenue); Address Not Listed (26940 Palmetto Avenue); Address Not Listed (9377 Alabama Avenue)
2000	Address Not Listed (1950 Nevada Street); Address Not Listed (27352 Red Bluff Avenue); Address Not Listed (26940 Palmetto Avenue); Address Not Listed (9377 Alabama Avenue)
2005	Address Not Listed (1950 Nevada Street); Address Not Listed (27352 Red Bluff Avenue); Address Not Listed (26940 Palmetto Avenue); Address Not Listed (9377 Alabama Avenue)
2010	Address Not Listed (1950 Nevada Street); Address Not Listed (27352 Red Bluff Avenue); Information Process Systems (26940 Palmetto Avenue); Address Not Listed (9377 Alabama Avenue)
2014	Address Not Listed (1950 Nevada Street); Address Not Listed (27352 Red Bluff Avenue); Kenneth Cole Productions/Pacific Connections, Inc. (26940 Palmetto Avenue); Address Not Listed (9377 Alabama Avenue)

According to the city directory review, the adjacent properties (26940 Palmetto Avenue) has been occupied by small quantity wastes generators, which are discussed in Section 4.2.3.

A copy of the city directory image report is included in Appendix B of this report.

3.4 Historical Topographic Maps

Partner reviewed historical topographic maps obtained from EDR. The following observations were noted to be depicted on the subject property and adjacent properties during the topographic map review:

Dates: 1899 and 1901

Subject Property: Depicted as developed with a rural single-family residence and access road on the western side of the subject property, and otherwise undeveloped land (grassland, agriculture, dirt).

North: Undeveloped, undulating land (grassland, woodland, dirt) followed by the Santa Ana River channel and watershed.

South: Developed with an early, unpaved version of Palmetto Avenue, followed by otherwise undeveloped land (grassland, agriculture, dirt).

East: Developed with an early, unpaved version of Alabama Street, followed by otherwise undeveloped land (grassland, agriculture, dirt) and an unpaved access road.

West: Undeveloped land (grassland, agriculture, dirt).

Date: 1954

Subject Property: Depicted as developed with a rural single-family residence, access road, and agricultural fields on the western side of the subject property, developed with a rural single-family residence and agricultural fields on the eastern side of the subject property.

North: Undeveloped, undulating land (grassland, woodland, dirt) followed by the Santa Ana River channel and watershed.

South: Developed with Palmetto Avenue, followed by agricultural fields.

East: Developed with Alabama Street, followed by agricultural fields, a rural residence, and an unpaved access road.

West: Developed with an agricultural field.

Dates: 1967 and 1973

Subject Property: Depicted as developed with one small rural single-family residence, access road, and agricultural fields on the western side of the subject property, developed with three small rural buildings (residence, barn, storage) and agricultural fields on the eastern side of the subject property.

North: Undeveloped, undulating land (grassland, woodland, dirt), and a Sewage Disposal treatment facility, followed by the Santa Ana River channel and watershed.

South: Developed with Palmetto Avenue, followed by agricultural fields.

East: Developed with Alabama Street, followed by agricultural fields, a rural residence, and an unpaved access road.

West: Developed with an agricultural field.

Dates: 1980, 1988, and 1996

Subject Property: Depicted as developed with two small rural buildings (residence, storage), an access road, and agricultural fields on the western side of the subject property, developed with three small rural buildings (residence, barn, storage), two rectangular buildings, and agricultural fields on the eastern side of the subject property.

North: Undeveloped, undulating land (grassland, woodland, dirt), and a Sewage Disposal treatment facility, followed by the Santa Ana River channel and watershed.

South: Developed with Palmetto Avenue, followed by agricultural fields.

East: Developed with Alabama Street, followed by agricultural fields, a rural residence, and

Dates: 1980, 1988, and 1996	
	an unpaved access road.
West:	Developed with an agricultural field.

Date: 2012	
Subject Property:	Depicted as land without structures and agricultural fields on the western side of the subject property, developed with agricultural fields on the eastern side of the subject property.
North:	Depicted as undulating land without structures, followed by the Santa Ana River channel and watershed.
South:	Developed with Palmetto Avenue, followed by land without structures and agricultural fields.
East:	Developed with Alabama Street, followed by land without structures and agricultural fields.
West:	Developed with an agricultural field.

Copies of reviewed topographic maps are included in Appendix B of this report.

4.0 REGULATORY RECORDS REVIEW

4.1 Regulatory Agencies

4.1.1 State Environmental Regulatory Agency

Regulatory Agency Data	
Name of Agency:	California Environmental Protection Agency (Cal/EPA)
Agency Address:	1001 I Street, Sacramento, California 95814
Agency Phone Number:	(916) 323-2514
Date of Contact:	December 2, 2017
Method of Communication:	Online
Summary of Communication:	Partner reviewed online records from the CalEPA Department of Toxic Substances Control Site (DTSC) Mitigation and Brownfields Reuse Program (EnviroStor) (http://www.envirostor.dtsc.ca.gov/public/) database, the DTSC Hazardous Waste Tracking System (HWTS) (http://hwts.dtsc.ca.gov/report_list.cfm) database, and the CalEPA State Water Resources Control Board (SWRCB) GeoTracker Internet website (http://geotracker.waterboards.ca.gov/) database. According to Partner's review, no records of spills, releases or AULs for the subject property are on file with the CalEPA. According to the DTSC records, the subject property is identified as Don Teunissen at 9092 Alabama Street listed as having two Inactive hazardous waste generator program numbers (U.S. EPA Identification Numbers CAC002314969 and CAC002614440) as of 2001 and 2007. No violations are reported.

A copy of pertinent documents is included in Appendix B of this report.

4.1.2 Health Department

Regulatory Agency Data	
Name of Agency:	County of San Bernardino Department of Public Health, Division of Environmental Health Services (SBCEHS)
Point of Contact:	Raúl Robles, Office Assistant III
Agency Address:	172 East 3rd Street, 1st Floor, San Bernardino, California
Agency Phone Number:	(800) 442-2283
Date of Contact:	December 2, 2017
Method of Communication:	FOIA (Faxed Request/email Response)
Summary of Communication:	According to a December 13, 2017 response, no records regarding hazardous substance use, storage or releases, or the presence of USTs and AULs on the subject property were on file with the SBCEHS.

A copy of pertinent documents is included in Appendix B of this report.

4.1.3 Fire Department

Regulatory Agency Data	
Name of Agency:	San Bernardino County Fire Department (SBCFD) – File Review Request
Point of Contact:	Maria Molina
Agency Address:	620 'E' Street, San Bernardino, California
Agency Phone Number:	(909) 386-8468
Date of Contact:	December 6, 2017
Method of Communication:	FOIA (Email/Faxed Request)
Summary of Communication:	Certified Unified Program Agency (CUPA) for the USTs in the subject property area is the SBCFD. According to database report records (see Section 4.2), the subject property is a state-registered UST facility. Partner has submitted a FOIA request for UST records including closure and NFA documentation. However, to date. Partner has not received a response from the SBCFD for inclusion in this report.

A copy of pertinent documents is included in Appendix B of this report.

4.1.4 Air Pollution Control Agency

Regulatory Agency Data	
Name of Agency:	South Coast Air Quality Management District (AQMD)
Point of Contact:	N/A; Facility Information Detail (FIND) Online Database
Agency Address:	21865 Copley Drive, Diamond Bar, California 91765
Agency Phone Number:	(909) 396-2000
Date of Contact:	December 6, 2017
Method of Communication:	Online Database
Summary of Communication:	No Permits to Operate (PTO), Notices of Violation (NOV), or Notices to Comply (NTC) or the presence of AULs, dry cleaning machines, or USTs were on file for the subject property with the AQMD.

A copy of pertinent documents is included in Appendix B of this report.

4.1.5 Building Department

Regulatory Agency Data	
Name of Agency:	San Bernardino County Building & Safety Division (SBCBSD)
Agency Address:	385 North Arrowhead Avenue, San Bernardino, California
Agency Phone Number:	(909) 387-8311
Date of Contact:	December 6, 2017
Method of Communication:	FOIA (Email/Online)
Summary of Communication:	As of the date of this report, Partner has not received a response from the SBCBSD for inclusion in this report.

A copy of pertinent documents is included in Appendix B of this report.

4.1.6 Planning Department

Regulatory Agency Data	
Name of Agency:	San Bernardino County Building & Safety Division (SBCBSD)
Agency Address:	385 North Arrowhead Avenue, San Bernardino, California
Agency Phone Number:	(909) 387-8311
Date of Contact:	December 7, 2017
Method of Communication:	Online
Summary of Communication:	According to records reviewed, the subject property is zoned "EV/IR" *East Valley/Regional Industrial development* by the County of San Bernardino. The subject property is a former citrus farm, agricultural field and rural single-family residential property

A copy of pertinent documents is included in Appendix B of this report.

4.1.7 Oil & Gas Exploration

Regulatory Agency Data	
Name of Agency:	California Department of Conservation, Division of Oil, Gas and Geothermal Resources (DOGGR)
Agency Address:	5816 Corporate Avenue, Suite 200, Cypress, California 90630-4731
Agency Phone Number:	(714) 816-6847
Date of Contact:	December 8, 2017
Method of Communication:	Email/Online
Summary of Communication:	According to DOGGR, no oil or gas wells are located on or adjacent to the subject property.

A copy of pertinent documents is included in Appendix B of this report.

4.1.8 Assessor's Office

Regulatory Agency Data	
Name of Agency:	San Bernardino County Assessor (SBCAO)
Point of Contact:	Bob Dutton; Property Information Management System Internet Site
Agency Address:	172 West 3rd Street, San Bernardino, California
Agency Phone Number:	(909) 387-8307
Date of Contact:	December 2, 2017
Method of Communication:	Email/Telephone/Online
Summary of Communication:	According to the San Bernardino County Assessor, the subject property is identified as Assessor Parcel Numbers (APNs) 0292-041-42-0000, 0292-041-47-0000, 0292-041-48-0000, 0292-041-43-0000, and 0167-391-06-0000. The current Owner is reported as McLane Suneast, LLC since February 25, 2011. The subject property is currently undeveloped, no buildings were erected on the subject property during the time of the site reconnaissance. The subject property is comprised five parcels, totaling 55.94 acres.

A copy of pertinent documents is included in Appendix B of this report.

4.2 Mapped Database Records Search

Information from standard federal, state, county, and city environmental record sources was provided by EDR. Data from governmental agency lists are updated and integrated into one database, which is updated as these data are released. The information contained in this report was compiled from publicly available sources and the locations of the sites are plotted utilizing a geographic information system, which geocodes the site addresses. The accuracy of the geocoded locations is approximately +/-300 feet.

Using the ASTM definition of migration, Partner considers the migration of hazardous substances or petroleum products in any form onto the subject property during the evaluation of each site listed on the radius report, which includes solid, liquid, and vapor.

4.2.1 Regulatory Database Summary

Database Report Records

Database	Search Radius (mile)	Subject Property	Adjacent Properties	Sites of Concern
Federal National Priority List (NPL, "Superfund")/Delisted NPL	1.00	N	N	**Y**
Federal Superfund Enterprise Management System (SEMS) [former CERCLIS]	0.50	N	N	**Y**
Federal SEMS-Archive [former CERCLIS-NFRAP]	0.50	N	N	N
Federal Facility Index System (FINDS)/ECHO (U.S. EPA's Enforcement and Compliance History Online database)	Subject Property	N	N/A	N/A
Federal RCRA CORRACTS	1.00	N	N	N
Federal RCRA TSDF	0.50	N	N	N
Federal RCRA Generators (LQG, SQG, CESQG, NonGen)	0.25	N	**Y**	N
Federal IC/EC Registries	0.50	N	N	**Y**
Federal ERNS	Subject Property	N	N/A	N/A
Federal Brownfield	0.50	N	N	N
Other Federal Databases	Varies	N	N	**Y**
State/Tribal Equivalent NPL	1.00	N	N	N
State/Tribal Equivalent CERCLIS (SHWS)	1.00	N	N	**Y**
State/Tribal Landfill/Solid Waste Disposal (SWF/LS)	0.50	N	**Y**	**Y**
State/Tribal Leaking Storage Tank (LUST, LTANKS)	0.50	N	N	N
State/Tribal Registered Storage Tank (UST/AST)	0.25	**Y**	N	N
State/Tribal Voluntary Cleanup (VCP)	0.50	N	N	N
State/Tribal Spills	0.50	N	N	**Y**
State Brownfield	0.50	N	N	N
Other State/Tribal/Local Databases	Varies	N	**Y**	**Y**
EDR MGP	1.0	N	N	N
EDR Historical Auto	0.125	N	N	N/A

EDR Historical Cleaners	0.125	N	N	N/A
Other EDR Databases	Varies	N	N	N

4.2.2 Subject Property Listings

The subject property is identified in the regulatory database report, as discussed below:

- AG-Tuenissen Farming, 9092 Alabama Street: **UST**

  According to Partner's review of regulatory database records and online environmental regulatory agency records, the subject property, known as AG-Tuenissen Farming at 9092 Alabama Street, is identified as a state-registered and county permitted underground storage tank (UST) facility (Facility Number 88015440). No information regarding the number, size, construction, contents, location, and operational history of any USTs at the subject property in the database records. No spills or releases are identified for the subject property. See Sections 4.1 and 5.2.6 for further discussion regarding this finding.

4.2.3 Adjacent Property Listings

The adjacent properties identified in the regulatory database report are discussed below:

- The property, identified as Redlands Distribution Center Building 13 at Northeast corner of Alabama Street & Palmetto Avenue, is located adjacent to the east-northeast of the subject property. This site is reported as a National Pollutant Discharge Elimination System (NPDES) site in the EDR regulatory database. The site is not included within any notice of violations or uncontrolled release-based registries. This facility is reported as a NPDES site, which is a construction permit issued by the State Water Resources Control Board to monitor sedimentation and other debris from entering the state waterways. Based on the regulatory oversight and completion of the building constriction, this listing is not considered a significant environmental concern. Furthermore, it is unlikely that a regulatory file review for this site would alter the findings of this assessment.
- The property, identified as Performance Team Redlands, CA – B21 at 26940 Palmetto Avenue, is located adjacent to the west-southwest of the subject property. This site is reported as a HAZNET and San Bernardino County Fire Department Hazardous Materials Division - Hazardous Material Permits (San Bernardino Co. Permit) site. This facility generated small quantities of unnamed hazardous wastes during 2012, which were disposed of off-site via fuels blending techniques. This facility is an actively permitted Hazardous Materials site, storing 1-3 types of chemicals onsite, permitted on September 30, 2017. The site is not included within any notice of violations or uncontrolled release-based registries. Based on the regulatory oversight and permitting process, this listing is not considered a significant environmental concern. Furthermore, it is unlikely that a regulatory file review for this site would alter the findings of this assessment.
- The property, identified as The Redlands, Logistics Center at 26940 Palmetto Avenue, is located adjacent to the west-southwest of the subject property. This site is reported as a San Bernardino

County Fire Department Hazardous Materials Division - Hazardous Material Permits (San Bernardino Co. Permit) site. This facility generated small quantities of unnamed hazardous wastes during 2012, which were disposed of off-site via fuels blending techniques. This facility is an actively permitted Hazardous Materials site, storing various types of chemicals onsite, permitted on November 30, 2017. Thrifty Oil Co is reported as the disposal/recycler. The site is not included within any notice of violations or uncontrolled release-based registries. Based on the regulatory oversight and permitting process, this listing is not considered a significant environmental concern. Furthermore, it is unlikely that a regulatory file review for this site would alter the findings of this assessment.

- The property, identified as Home Depot USA HD5087 at 9377 Alabama Street, is located adjacent to the east of the subject property. This site is reported as a Resource Conservation and Recovery Act - Small Quantity Generators (RCRA-SQG) site, for the generation of ignitable, corrosive, mercury, acid, benzene, and methyl ethyl ketone. This facility was last reported as active during April 30, 2009. The site is not included within any notice of violations or uncontrolled release-based registries. Based on the regulatory oversight and permitting process, this listing is not considered a significant environmental concern. Furthermore, it is unlikely that a regulatory file review for this site would alter the findings of this assessment.

- The property, identified as Haskell Co. Industrial Composting Fac. at 2130 Nevada Avenue, is located adjacent to the west of the subject property. This site is reported as a Solid Waste Information System SWF/LF (SWIS) Active, Closed and Inactive Landfills. No release of hazardous wastes is reported of this facility. This facility is reported as storing composting wastes: Food Wastes, Green Materials, Sludge (BioSolids), and Wood waste that are non-hazardous. The responsible party is identified as the City of Redlands. Based on the regulatory oversight, this listing is not expected to represent a significant environmental concern and it is unlikely that a regulatory file review for this site would alter the findings of this assessment.

- The property, identified as The Home Depot Distribution Center #5087 at 27352 Red Bluff Avenue, is located adjacent to the northeast of the subject property. This site is reported as a RCRA-Large Quantity Generator (LQG), a San Bernardino County Fire Department Hazardous Materials Division - Hazardous Material Permits (San Bernardino Co. Permit) site. This facility generated small quantities of numerous types of hazardous wastes during 2014 and 2018. This facility is an actively permitted Hazardous Materials, storing up to 30 types of chemicals onsite, permitted on February 28, 2018. The Home Depot USA is reported as the owner/operator and responsible party. This facility generated large quantities of alkaline solution without metals (pH > 12.5), off-specification, aged, or surplus inorganics, other inorganic solid waste, hydrocarbon solvents (benzene, hexane, Stoddard, etc.), unspecified solvent mixture, liquids with an acid pH, ignitable and corrosive wastes, and barium, chromium, mercury, and lead wastes. Methyl ethyl ketone, tetrachloroethylene, and benzene wastes were also generated at this facility between 2009 and 2017. Hazardous wastes during 2016, which were disposed of off-site via fuels blending techniques. The site is not included within any notice of violations or uncontrolled release-based

registries. Based on the regulatory oversight and permitting process, this listing is not considered a significant environmental concern. Furthermore, it is unlikely that a regulatory file review for this site would alter the findings of this assessment.

Based on the findings, vapor migration is not expected to represent a significant environmental concern at this time.

4.2.4 Sites of Concern Listings

Offsite properties of concern that are identified as National Priority List ("Superfund") (NPL), Superfund Enterprise Management System (SEMS) (formerly Comprehensive Environmental Compensation and Liability Act Information System (CERCLIS)), RCRA- Corrective Actions (CORRACTS), Enforcement, Record of Decision (ROD), U.S. Engineering Controls/Institutional Controls, Department of Defense Site (DOD), RCRA-SQG, RCRA-Transporter Storage Disposal Facility (TSDF), SWF/LF, California Land Disposal Sites Listing (LDS), Waste Management Unit Database System (WMUDS)/Solid Waste Analysis Testing (SWAT), PADS (PCB Activity Database), UST, California Emission Inventory Data (EMI), and California Waste Discharge System (WDS) sites in the regulatory database report, are discussed below:

- The property, identified as Norton Air Force Base (closed) at Norton Air Force Base, is located approximately 0.25-mile to the north-northwest of the subject property, and situated hydrologically down-gradient. This site is reported as a DOD site (U.S. EPA #: CA4570024345). The 2,165-acre Norton Air Force Base (AFB) site began operations in 1942 and served as a major overhaul center for jet engines and the general repair of aircraft. Past hazardous material management practices included burial of drums and other unspecified materials; disposal of waste oils, solvents, and paint residues into landfills, unlined pits, ponds, and drying beds; storage of contaminants in leaking underground tanks and; spills of gas, oils, solvents, polychlorinated biphenyls (PCBs), and acids. Norton AFB was closed in 1994 according to the Base Realignment and Closure (BRAC) Act of 1990. The aviation facilities of the base were converted into San Bernardino International Airport. Private development on the former base includes several distribution centers and reuse of industrial buildings. Norton's past trichloroethylene (TCE) usage as a common degreasing solvent impacted the soil and upper water bearing zone of a drinking water aquifer. Norton AFB achieved construction completion in 2006. All remedial actions have been completed for the OU1 and OU2 Record of Decision (ROD). The only ongoing operation and maintenance (O&M) activities are for the groundwater monitoring program and the Site 2 landfill. On base groundwater monitoring continues while monitoring of off base municipal drinking water wells was no longer required as of 2009. Based on the removal of impacted soil, distance of the impacted-soil to the subject property boundary, and the regulatory oversight/status, this listing is not considered a significant environmental concern. Furthermore, it is unlikely that a regulatory file review for this site would alter the findings of this assessment.
- The property, identified as USAF Norton AFB at 305 South Tippecanoe Avenue, is located approximately 0.20-mile to the northwest of the subject property, and situated hydrologically down-gradient. This site is reported as an NPL, SEMS, CORRACTS, RCRA-TSDF, RCRA-SQG, U.S.

ENG CONTROLS, U.S. INST CONTROL, ROD, and PADS site. The former Norton Air Force Base is located in the City of San Bernardino. This 2,221-acre base had an air field, hangars, runways, and ancillary facilities. The base opened in 1942 to support C-141 airlift operations and provide aircraft maintenance and repair support. In 1989, the base was designated for closure and formally closed in 1994. Norton Air Force Base was placed on the Federal Superfund National Priorities List in July 1987 due to groundwater contamination. The cleanup of hazardous substance releases and groundwater contamination is covered under a Federal Facilities Agreement signed in 1989 by the Air Force, the U.S. EPA, and the State of California as represented by the Santa Ana Regional Water Quality Control Board and the Department of Toxic Substances Control. The base's operations resulted in two groundwater plumes and numerous hazardous substances releases into the soil. Among the contaminants found were metals, paints, refrigerants, chromium, waste oils, fuel, spent solvents, metals, and radium 226 (paint). The Air Force constructed, and successfully implemented, two major groundwater treatment systems. The central base area treatment system treated 1,247 million gallons of groundwater and removed 396 pounds of trichloroethylene (TCE) from the groundwater. It also pumped 180 million cubic meters of soil vapor, and extracted approximately 7,500 pounds of TCE from the vapors. The base boundary treatment system treated 5.65 billion gallons of groundwater and removed 293 pounds of TCE. Other site cleanup actions included: the removal of 2,000 cubic yards of soil and concrete contaminated with TCE and chromium at a former electroplating shop; stabilization, solidification, and consolidation of 11,000 cubic yards of metal contaminated soil at Landfill Site 2; and bioremediation of 10,000 cubic yards of fuel contaminated soil at 29 underground storage tank locations. After the base's closure, the Inland Valley Development Agency and the San Bernardino International Airport Authority became the local reuse authorities responsible for redeveloping the base into commercial and industrial uses and as a civilian airport. Based on the removal of impacted soil, distance of the impacted-soil to the subject property boundary, and the regulatory oversight/status, this listing is not considered a significant environmental concern. Furthermore, it is unlikely that a regulatory file review for this site would alter the findings of this assessment.

- The property, identified as Landfill, California Street at 2151 Nevada Avenue, is located approximately 0.192-mile to the west of the subject property, and situated hydrologically down-gradient. This site is reported as a Solid Waste Information System SWF/LF (SWIS), WMUDS/SWAT, LDS, EMI, ENF, and Financial Assurance, and WDS site. No release of hazardous wastes is reported of this facility. This facility is reported as storing construction/demolition, mixed municipal, other designated, sludge (BioSolids) waste that are non-hazardous. The responsible party is identified as the City of Redlands. From 1963 until present, the CSL has accepted municipal solid wastes generated within the City of Redlands consisting primarily of residential, commercial, and industrial waste, with a minor fraction of dried sewage sludge from the City's wastewater treatment plant located adjacent to the CSL. No designated or hazardous wastes were knowingly accepted for on-site disposal. Groundwater beneath the CSL is impacted by perchlorate, tetrachloroethene (PCE), trichloroethene. (TCE), and 1,2-dibromo-3-chloropropane (DBCP). On March 8, 2004, the City submitted a report, as required under Contingency Response

D.6.a.ii of Order No. 98-99, which demonstrated that all groundwater impacts originated from sources other than the landfill (3D GeoServices, 2004). Based on the regulatory oversight, this listing is not considered a significant environmental concern. Furthermore, it is unlikely that a regulatory file review for this site would alter the findings of this assessment.

4.2.5 Orphan Listings

No orphan listings of significant environmental concern are identified in the regulatory database report.

A copy of the regulatory database report is included in Appendix C of this report.

5.0 USER PROVIDED INFORMATION AND INTERVIEWS

In order to qualify for one of the *Landowner Liability Protections (LLPs)* offered by the Small Business Liability Relief and Brownfields Revitalization Act of 2001 (the *Brownfields Amendments*), the *User* must conduct the following inquiries required by 40 CFR 312.25, 312.28, 312.29, 312.30, and 312.31. The *User* should provide the following information to the *environmental professional*. Failure to provide this information could result in a determination that *all appropriate inquiries* is not complete. The *User* is asked to provide information or knowledge of the following:

- Review Title and Judicial Records for Environmental Liens and AULs
- Specialized Knowledge or Experience of the User
- Actual Knowledge of the User
- Reason for Significantly Lower Purchase Price
- Commonly Known or *Reasonably Ascertainable* information
- Degree of Obviousness
- Reason for Preparation of this Phase I ESA

Fulfillment of these user responsibilities is key to qualification for the identified defenses to CERCLA liability. Partner requested our Client to provide information to satisfy User Responsibilities as identified in Section 6 of the ASTM guidance.

Pursuant to ASTM E1527-13, Partner requested the following site information from Duke Realty Limited Partnership (User of this report).

User Responsibilities				
Item	**Provided By User**	**Not Provided By User**	**Discussed Below**	**Does Not Apply**
Environmental Pre-Survey Questionnaire			**X**	
Title Records, Environmental Liens, and AULs			**X**	
Specialized Knowledge			**X**	
Actual Knowledge			**X**	
Valuation Reduction for Environmental Issues			**X**	
Identification of Key Site Manager	**Section 5.1.3**			
Reason for Performing Phase I ESA	**Section 1.1**			
Prior Environmental Reports	**X**			
Other				**X**

5.1 Interviews

5.1.1 Interview with Owner

The owner of the subject property since February 25, 2011, identified as McLane Suneast, LLC was not available to be interviewed at the time of the assessment.

5.1.2 Interview with Report User

Please refer to Section 5.2 below for information requested from the Report User.

5.1.3 Interview with Key Site Manager

A key site manager was not provided.

5.1.4 Interviews with Past Owners, Operators and Occupants

Interviews with past owners, operators and occupants were not reasonably ascertainable and thus constitute a data gap.

5.1.5 Interview with Others

As the subject property is not an abandoned property as defined in ASTM 1527-13, interview with others were not performed.

5.2 User Provided Information

5.2.1 Title Records, Environmental Liens, and AULs

Partner was not provided with title records or environmental lien and AUL information for review as part of this assessment.

5.2.2 Specialized Knowledge

No specialized knowledge of environmental conditions associated with the subject property was provided by the User at the time of the assessment.

5.2.3 Actual Knowledge of the User

No actual knowledge of any environmental lien or AULs encumbering the subject property or in connection with the subject property was provided by the User at the time of the assessment.

5.2.4 Valuation Reduction for Environmental Issues

No knowledge of valuation reductions associated with the subject property was provided by the User at the time of the assessment.

5.2.5 Commonly Known or Reasonably Ascertainable Information

The User did not provide information that is commonly known or *reasonably ascertainable* within the local community about the subject property at the time of the assessment.

5.2.6 Previous Reports and Other Provided Documentation

The following information was provided to Partner for review during the course of this assessment:

Phase I Environmental Site Assessment Report – Approximately 55-Acre Vacant Tract, Northwestern Corner of Palmetto Avenue and Alabama Street, The EI Group, Inc. (December 13, 2010)

The EI Group, Inc. (EIG) prepared this report on behalf of McLane Company, Inc. The assessment was performed in general accordance with ASTM Standard E1527-05. The assessment consisted of a site reconnaissance, interviews with knowledgeable personnel, review of historical information, and a review of federal, state and local regulatory databases. The scope did not include a limited visual asbestos survey, radon survey, mold survey, and/or a limited visual lead paint survey. The assessment was performed on a larger parcel of land that included the subject property. Pertinent information contained in this report is summarized below:

- At the time of the 2010 assessment, the subject property was unoccupied.
- According to the EIG report, the subject property formerly occupied by citrus farmers, and Don Teunissen for agricultural uses.
- EIG identified a former UST on the subject property, but did not observe USTs during the site reconnaissance. According to EIG, the former UST was removed from the ground in 2001 under the regulatory oversight of the San Bernardino County Fire Department (SBCFD). As a result, the SBCFD issued a No Further Action (NFA) letter to Don Teunissen (responsible party) on March 16, 2001.
- Pesticides and hazardous substances were assumed to have been used at the subject property between approximately 1935 and 2000. Staining leaks, associated with a water well pump located on the southwestern portion of the subject property were observed by EIG. Manhole covers observed on the northwestern portion of the subject property, emitted strong sewage odors. Pole-mounted transformers were observed at the subject property. Solid wastes including used tires, trash (paper, clothing, plastics, miscellaneous debris, etc.) was noted throughout the subject property.
- Septic tanks/systems were not identified during the site reconnaissance, but were noted to possibly remain in-ground.
- EIG reported an interview with the former owner representative Tim Howard observed no USTs onsite during the citrus tree removal during 2003.
- EIG reviewed a previous Phase I Environmental Site Assessment report for the Teunissen Property (subject property) prepared by LFR, Inc. (LFR) and dated 2006. According to this previous report, numerous 55-gallon drums and additional, smaller sized drums were observed on the subject property. LFR reported at least two septic systems. LFR reported an abandoned UST. LFR observed suspect asbestos-containing materials in association with the former houses. LFR noted subsurface irrigation pipes and lines on the western half of the subject property. LFR recommended that the former UST and 55-gallon drums be removed from the subject property.
- EIG reviewed a previous Phase I Environmental Site Assessment report for the Fainbarg and Perricone Parcels (subject property) prepared by Nova Consultants (NOVA) and dated 2006.

According to this previous report, NOVA noted the possibility of septic systems on the eastern parcel. NOVA noted that historic operations at the Norton Airforce Base located one mile to the northwest may impact groundwater. NOVA noted that two 150-gallon ASTs were observed near the southeastern corner of the parcel 34. NOVA noted historic pesticide use onsite. NOVA noted possible USTs associate with diesel-powered wind generators remaining onsite. NOVA reported smudge pots onsite, and recommend they be disposed of properly. NOVA noted subsurface irrigation pipes and lines on the western half of the subject property. NOVA recommended that the former USTs be removed from the subject property.

- EIG identified no HRECs or RECs and recommended no further investigation.

Phase I Environmental Site Assessment Report – 0.77 Acre Vacant Tract, 0.25 Miles North of Redbluff Avenue and Alabama Street, The EI Group, Inc. (November 11, 2011)

The EI Group, Inc. (EIG) prepared this report on behalf of McLane Company, Inc. The assessment was performed in general accordance with ASTM Standard E1527-05. The assessment consisted of a site reconnaissance, interviews with knowledgeable personnel, review of historical information, and a review of federal, state and local regulatory databases. The scope did not include a limited visual asbestos survey, radon survey, mold survey, and/or a limited visual lead paint survey. The assessment was performed on a smaller parcel of land that included the subject property. Pertinent information contained in this report is summarized below:

- At the time of the 2011 assessment, the subject property was unoccupied.
- According to the EIG report, the subject property formerly occupied by agriculture, citrus farmers.
- EIG noted that the California Street Landfill, owned by the City of Redlands, and address 1950 Nevada Street, is located adjacent and west, down gradient from the subject property.
- No current or former ASTs or USTs were identified on the subject property.
- EIG observed waste debris/trash including old tires, used lumber, agricultural debris, and miscellaneous trash scattered throughout the property. EIG observed a small wood shed with dilapidated furniture onsite. EIG observed a concrete valve box, which Mr. Teunissen stated was a groundwater monitoring well installed by the City of Redlands on the property, in order to monitor the groundwater for the region. EIG interviewed the former owner Mr. Don Teunissen. Mr. Teunissen stated that no structure was present when he acquired that property in 1995-1996.
- EIG interviewed the City of Redlands Engineering Department personnel, Mr. John Morales, who stated that the City of Redlands owns water transmission piping which traverses that northwestern parcel, subsurface. According to Mr. Morales, only treated water is used in this piping, which transmits water to retention ponds located to the east-northeast across Alabama Street.
- EIG reviewed a previous Phase I Environmental Site Assessment report for the Teunissen Property (subject property) prepared by LFR, Inc. (LFR) and dated 2006. According to this previous report,

numerous 55-gallon drums and additional, smaller sized drums were observed on the subject property. LFR reported at least two septic systems. LFR reported an abandoned UST. LFR observed suspect asbestos-containing materials in association with the former houses. LFR noted subsurface irrigation pipes and lines on the western half of the subject property. LFR recommended that the former UST and 55-gallon drums be removed from the subject property.

- EIG reviewed a previous Phase I Environmental Site Assessment report for the Fainbarg and Perricone Parcels (subject property) prepared by Nova Consultants (NOVA) and dated 2006. According to this previous report, NOVA noted the possibility of septic systems on the eastern parcel. NOVA noted that historic operations at the Norton Airforce Base located one mile to the northwest may impact groundwater. NOVA noted that two 150-gallon ASTs were observed near the southeastern corner of the parcel 34. NOVA noted historic pesticide use onsite. NOVA noted possible USTs associate with diesel-powered wind generators remaining onsite. NOVA reported smudge pots onsite, and recommend they be disposed of properly. NOVA noted subsurface irrigation pipes and lines on the western half of the subject property. NOVA recommended that the former USTs be removed from the subject property.
- EIG identified no RECs and noted that the historic operations at the Norton Airforce Base located one mile to the northwest may impact groundwater beneath the subject property with potential VOCs.

Copies of pertinent pages reviewed are included in Appendix B of this report.

Phase I Subsurface Investigation Report – NWC Palmetto Avenue and Alabama Street, Redlands, California, Partner Engineering and Science, Inc. (January 3, 2018)

Concurrent to the Phase I ESA prepared by Partner, Partner performed a limited Phase II Subsurface Investigation Report at the subject property, dated January 3, 2018, that is presented in Appendix D of this Phase I ESA Report. Partner's initial findings prior to the completion of the Phase II assessment included the following:

> *"According to the reviewed historical sources, the subject property was formerly developed with a rural single-family residence and agricultural fields (citrus orchards)/farms as early as 1899; developed with three rural single-family residential structures, farm storage buildings and agricultural fields (citrus orchards)/farms between 1930 and circa 1994; developed with three rural single-family residential structures, farm storage buildings, fallow/unused agricultural fields and active agricultural fields (citrus orchards)/farms between 2002 and circa 2006; developed with one rural single-family residential structure, farm storage buildings, fallow/unused agricultural fields and active agricultural fields between 2009 and circa 2015; and developed with fallow/unused agricultural fields and active agricultural fields the current access roads in 2016.*
>
> *Preliminary information acquired during the Phase I indicated the following suspect environmental conditions:*

The subject property was historically used for agricultural purposes. There is a potential that agricultural related chemicals such as pesticides, herbicides, and fertilizers, may have been used, stored, mixed, and applied on-site. The subject property is either unpaved dirt, grass-covered or currently used as an agricultural field and is proposed for development – change in land-use from agricultural to commercial."

The scope of the Phase II Subsurface Investigation included the advancement of 11 borings (B1 through B1) for the collection of 26 shallow representative soil samples soil samples (S1 through S26), and laboratory analyses.

In addition, a geophysical survey was performed at the subject property on December 11, 2017 to clear boring locations of utilities. The survey included the use of electromagnetic induction (EM) and ground penetrating radar (GPR). The results of the GPR survey found no evidence of subsurface anomalies or subsurface utilities in the areas of the proposed boring locations. The soil borings were advanced using a truck-mounted hydraulic push probe.

Borings B1 through B11 were advanced to a terminal depth of 5-feet bgs. Shallow soil samples were collected at S1 through S26 from approximately six inches bgs. Partner collected 22 soil samples and 26 surficial soil samples.

Based on field-screening results, visual observations, and/or olfactory observations, one soil sample per five-foot boring (11 soil samples total) was analyzed for volatile Organic Compounds (VOCs) in accordance with U.S. EPA Method 8260B. Samples from S1 through S26 and from two feet bgs from borings B1 through B11 were composited into 18 composite samples (C1 through C18) with each composite consisting of two or three discrete samples collected from proximal borings at the same depths. The 18 composite samples were analyzed for Organochlorine Pesticides (OCP) in accordance with U.S. EPA Method 8081A. Eighteen (18) discrete soil samples (one from each composite sample) were analyzed for arsenic in accordance with U.S. EPA Method 6010B.

The results of the laboratory analysis found that One of the analyzed soil samples (B3-5) contained a detectable concentration of toluene exceeding the laboratory Practical Quantitation Limits (PQLs). The remaining VOCs were not detected in any of the analyzed soil samples at concentrations exceeding the laboratory PQLs. Fourteen of the analyzed composite soil samples (C1, C3, C5, C7 through C16, and C18) contained 4,4-dichlorodiphenyldichloroethylene (DDE) above the laboratory PQL. Ten of the analyzed composite soil samples (C1, C3, C5 C9, C11, C12, C13, C15, C16, and C18) contained 4,4-dichlorodiphenyltrichloroethane (DDT) above the laboratory PQL. Five of the analyzed composite soil samples (C11, C12, C13, C15, and C18) contained 4,4-dichlorodiphenyldichloroethane (DDD) above the laboratory PQL. One of the analyzed composite soil samples (C9) contained dieldrin and endrin aldehyde above the laboratory PQLs. Two of the analyzed composite soil samples (C12 and C18) contained endrin above the laboratory PQL. No other OCPs were detected in the analyzed composite soil samples. None of the analyzed discrete soil samples contained detectable concentrations of arsenic above the laboratory PQL.

None of the detected concentrations of OCPs exceeded residential and commercial/industrial RSLs. Arsenic and VOCs were not detected in the analyzed soil samples at concentrations exceeding laboratory PQLs and the PQLs were below applicable regulatory guidelines.

Phase II Subsurface Investigation Summary - Partner conducted a Phase II Subsurface Investigation at the subject property to investigate the potential impact of VOCs, OCPs, and/or arsenic to soil as a consequence of a release or releases from the former on-site agricultural and service/repair activities. The scope of the Phase II Subsurface Investigation included 11 soil borings and 26 shallow soil samples. Eleven soil samples were analyzed for VOCs, 18 composite soil samples were analyzed for OCPs, and 18 discrete soil samples were analyzed for arsenic. Subsurface lithology encountered in the upper 5-feet bgs consisted of silty sand. Groundwater was not encountered during this investigation.

Soil samples did not contain detectable concentrations of OCPs in excess of applicable RSLs. Arsenic and VOCs were not detected in the analyzed soil samples at concentrations exceeding laboratory PQLs and the PQLs were below applicable regulatory guidelines. Based on the Subsurface Investigation, there is evidence of a *de minimis* release of hazardous materials from the subject property which does not represent a concern to human health or the environment at this time. Partner recommends no further investigation with respect to the former on-site agricultural and service/repair activities.

6.0 SITE RECONNAISSANCE

The weather at the time of the site visit was sunny and clear. Refer to Section 1.5 for limitations encountered during the field reconnaissance and Sections 2.1 and 2.2 for subject property operations. The table below provides the site assessment details:

Site Assessment Data	
Site Assessment Performed By:	Burke Walker of Partner
Site Assessment Conducted On:	December 6, 2017

The table below provides the subject property personnel interviewed during the field reconnaissance:

Site Visit Personnel for NWC Palmetto Avenue & Alabama Street (Subject Property)			
Name	**Title/Role**	**Contact Number**	**Site Walk* Yes/No**
McClane Suneast, Inc.	Key Site Manager/Owner	(407) 931-5200	No

* Accompanied Partner during the field reconnaissance activities and provided information pertaining to the current operations and maintenance of the subject property

Environmental concerns were identified during the onsite reconnaissance related to former storage, use, and generation of hazardous substances, current signs of a release, and indications of illegal dumping as further discussed in Sections 6.1 and 6.2.

6.1 General Site Characteristics

6.1.1 Solid Waste Disposal

Solid waste generated at the subject property appears to be disposed by on-site dispersal and/or off-site transfer. Commercial trash containers, dumpsters or receptacles are not present on the subject property.

Partner observed the following waste-like materials on the subject property: construction materials (concrete, brick, stucco, plaster, wood, etc.), furniture, used automobile tires, paper, plastics, cardboard, green wastes (tree and shrub trimmings), an abandoned RV trailer, concrete irrigation piping, and other miscellaneous solid wastes. No indications of a hazardous substance or petroleum product type release was observed in the vicinity of the waste-like materials.

6.1.2 Sewage Discharge and Disposal

Regional sanitary discharges on the subject property are directed into the municipal sanitary sewer system. The County of San Bernardino/Redlands services the surrounding vicinity. No wastewater treatment facilities or septic systems are observed or reported on the subject property. However, due to the historic development of single-family residences and farming storage buildings on-site between 1900 and 2005, abandoned septic systems and cesspools may be present in the subsurface of the subject property. The former residences were developed prior to the development of a municipal sewer system in the region, and residences would have likely been equipped with septic systems. On-site sewer/drainage

man-hole covers were observed in the north, central-northeastern portion of the subject property, and are assumed to be associated with a municipal sewer system.

6.1.3 Surface Water Drainage

Storm water is removed from the subject property primarily by sheet flow action across the base soils and impervious surfaces towards storm water drains located onsite and within the public right of way.

The subject property does not appear to be a designated wetland area, based on information obtained from the United States Fish & Wildlife Service; however, a comprehensive wetlands survey would be required in order to formally determine actual wetlands on the subject property. No surface impoundments, natural catch basins, settling ponds, or lagoons are located on the subject property. No drywells were identified on the subject property.

6.1.4 Source of Heating and Cooling

No heating and cooling systems or domestic hot water equipment were located onsite. Regional power sources/utility providers include electricity and natural gas provided by Southern California Edison (SCE) and Southern California Gas Company (SCGC).

6.1.5 Wells and Cisterns

Aboveground evidence of groundwater wells was observed during the site reconnaissance. An agricultural water supply piping system, on a concrete pad was observed on-site during the site reconnaissance, in the southwestern portion of the property. These water supply pipes appeared to be connected to a water main-line system. This wellhead appeared to be used to irrigate the small farming operation located on the southwestern portion of the subject property.

An additional groundwater monitoring well may be located on-site, in the northeastern most portion of the subject property. A steel well-head like structure was noted during the site reconnaissance in this undulating area, and was surrounded by steel bollards. All steel was painted safety yellow, for visibility in this vegetated area. The City of Redlands was unaware of a groundwater monitoring well in this area, however, a Cal/EPA RWQCB record of a monitoring well is depicted in the region. The RWQCB well may be associated with a subsurface investigation of the California Street Landfill. The California Street Landfill is discussed above in Section 4.2.3, and is not considered to represent a significant environmental concern.

6.1.6 Wastewater

Domestic wastewater is not generated at the subject property. No industrial process is currently performed at the subject property.

6.1.7 Septic Systems

No septic systems were observed or reported on the subject property. The subject property was formerly developed with older residential structures which were demolished during 2005-2006. No reasonably

ascertainable records relative to the disposition of the likely septic systems – beyond that the former structures were razed – was available during the course of this assessment.

6.1.8 Additional Site Observations

No additional general site characteristics were observed during the site reconnaissance.

6.2 Potential Environmental Hazards

6.2.1 Hazardous Substances and Petroleum Products Used or Stored at the Site

No evidence of the use of reportable quantities of hazardous substances or the use of petroleum products was observed on the subject property.

6.2.2 Aboveground & Underground Hazardous Substance or Petroleum Product Storage Tanks (ASTs/USTs)

No evidence of current or former ASTs or USTs was observed during the site reconnaissance.

6.2.3 Evidence of Releases

No spills, stains or other indications that a surficial release has occurred at the subject property were observed.

6.2.4 Polychlorinated Biphenyls (PCBs)

Older transformers and other electrical equipment could contain PCBs at a level that subjects them to regulation by the U.S. EPA. PCBs in electrical equipment are controlled by federal regulations 40 CFR, Part 761. Under the regulations, there are three categories into which electrical equipment can be classified: 1) Less than 50 parts per million (ppm) of PCBs – "*Non-PCB;*" 2) 50 ppm-500 ppm – "*PCB-Contaminated;*" and, 3) Greater than 500 ppm – "*PCB-Containing.*" The manufacture, process, or distribution in commerce or use of any PCB in any manner other than in a totally enclosed manner was prohibited after January 1, 1977.

The on-site reconnaissance addressed indoor and outdoor transformers that may contain PCBs. Three pole-mounted utility-owned electrical transformers were observed on the subject property. The transformers are not labeled indicating PCB content. No staining or leakage was observed in the vicinity of the transformers. Partner contacted a customer service representative of Southern California Edison (SCE), who confirmed that Southern California Edison (SCE) maintains ownership and operational responsibility for the transformers and that the units do not contain PCBs. Based on the good condition of the equipment, the transformers are not expected to represent a significant environmental concern.

Additionally, no other potential PCB-containing equipment (interior transformers, oil-filled switches, hoists, lifts, dock levelers, hydraulic elevators, balers, etc.) was observed on the subject property during Partner's reconnaissance.

6.2.5 Strong, Pungent or Noxious Odors

No strong, pungent or noxious odors were evident during the site reconnaissance.

6.2.6 Pools of Liquid

No pools of liquid were observed on the subject property during the site reconnaissance.

6.2.7 Drains, Sumps and Clarifiers

No drains, sumps, or clarifiers, other than those associated with storm water removal, were observed on the subject property during the site reconnaissance.

6.2.8 Pits, Ponds and Lagoons

No pits, ponds or lagoons were observed on the subject property.

6.2.9 Stressed Vegetation

No stressed vegetation was observed on the subject property.

6.2.10 Additional Potential Environmental Hazards

No additional environmental hazards, including landfill activities or radiological hazards, were observed.

6.3 Non-ASTM Services

6.3.1 Asbestos-Containing Materials (ACMs)

Asbestos is the name given to a number of naturally occurring, fibrous silicate minerals mined for their useful properties such as thermal insulation, chemical and thermal stability, and high tensile strength. The Occupational Safety and Health Administration (OSHA) regulation 29 CFR 1926.1101 requires certain construction materials to be *presumed* to contain asbestos, for purposes of this regulation. All thermal system insulation (TSI), surfacing material, and asphalt/vinyl flooring that are present in a building constructed prior to 1981 and have not been appropriately tested are "presumed asbestos-containing material" (PACM).

The former subject property buildings were demolished prior to 2006. However, Partner conducted a limited, visual evaluation of accessible areas for the presence of suspect ACMs at the subject property. The objective of this visual survey was to note the presence and condition of suspect ACM observed. Partner observed several areas of the property that include aboveground and below ground irrigation piping that was used during the former citrus orchard operations. Orchard operations ceased in 2003 and the irrigation system is no longer in use and inactive. Where observed, the piping appears to be constructed of a hardened cementitious material that is similar to the known asbestos-containing material Transite, which contains variable amounts of the asbestos mineral Chrysotile typically between 10 to 50 percent. Between the 1930s and 1970s, Transite was commonly used for water distribution piping, duct flues, corrugated roof/siding panels, cement board, house siding shingles, etc. Partner observed piping that was

both damaged and undamaged. In undamaged condition Transite is considered to be a nonfriable ACM; however, when damaged, there is a significant potential for an airborne fiber release when handled. Removal of these materials would subject to the applicable federal, state and local asbestos abatement regulations and procedures. No other suspect ACM was observed.

The limited visual survey consisted of noting observable materials (materials which were readily accessible and visible during the course of the site reconnaissance) that are commonly known to potentially contain asbestos. This activity was not designed to discover all sources of suspect ACM, PACM, or asbestos at the site; or to comply with any regulations and/or laws relative to planned disturbance of building materials such as renovation or demolition, or any other regulatory purpose. Rather, it is intended to give the User an indication if significant (significant due to quantity, accessibility, or condition) potential sources of ACM or PACM are present at the subject property. Additional sampling, assessment, and evaluation will be warranted for any other use.

Partner was not provided building plans or specifications for review, which may have been useful in determining areas likely to have used ACM.

6.3.2 Lead-Based Paint (LBP)

Lead is a highly toxic metal that affects virtually every system of the body. LBP is defined as any paint, varnish, stain, or other applied coating that has 1 micrograms per cubic centimeter (mg/cm^2), 5,000 micrograms per gram (µg/g), or 0.5% by weight or more of lead. Congress passed the Residential Lead-Based Paint Hazard Reduction Act of 1992, also known as "Title X," to protect families from exposure to lead from paint, dust, and soil. Under Section 1017 of Title X, intact LBP on most walls and ceilings is not considered a "hazard," although the condition of the paint should be monitored and maintained to ensure that it does not become deteriorated. Further, Section 1018 of this law directed the Housing and Urban Development (HUD) and the U.S. EPA to require the disclosure of known information on LBP and LBP hazards before the sale or lease of most housing built before 1978.

There are no permanent residential structures on the subject property. As such, a lead-based paint evaluation is beyond the scope and purpose of this Phase I ESA.

6.3.3 Radon

Radon is a colorless, odorless, naturally occurring, radioactive, inert, gaseous element formed by radioactive decay of radium (Ra) atoms. The U.S. EPA has prepared a map to assist National, State, and local organizations to target their resources and to implement radon-resistant building codes. The map divides the country into three Radon Zones, according to the table below:

EPA Radon Zones		
EPA Zones	**Average Predicted Radon Levels**	**Potential**
Zone 1	Exceed 4.0 pCi/L	Highest
Zone 2	Between 2.0 and 4.0 pCi/L	Moderate
Zone 3	Less than 2.0 pCi/L	Low

It is important to note that the U.S. EPA has found homes with elevated levels of radon in all three zones, and the U.S. EPA recommends site-specific testing in order to determine radon levels at a specific location. However, the map does give a valuable indication of the propensity of radon gas accumulation in structures.

Radon sampling was not conducted as part of this assessment. Review of the "EPA Map of Radon Zones" places the subject property in Zone 2. Based upon the non-residential use and radon zone classification, radon is not considered to be a significant environmental concern.

6.3.4 Lead in Drinking Water

According to available information, a public water system operated by Division V the San Bernardino Valley Municipal Water District (SBVMWD) serves the subject property vicinity. According to a representative of the SBVMWD, shallow groundwater beneath the subject property is not utilized for domestic purposes. The San Bernardino Valley Municipal Water District's primary source of water is from the California State Water Project (SWP) through the East Branch of the State Aqueduct via Lake Silverwood. The SBVMWD and Western Municipal Water District have filed water right applications with the State Water Resources Control Board to obtain authorization to divert water from the Santa Ana River. According to the SBVMWD and the 2016 Annual Water Quality Report, water supplied to the subject property is in compliance with all State and Federal regulations pertaining to drinking water standards, including lead and copper. Water sampling was not conducted to verify water quality.

6.3.5 Mold

Molds are microscopic organisms found virtually everywhere, indoors and outdoors. Mold will grow and multiply under the right conditions, needing only sufficient moisture (e.g. in the form of very high humidity, condensation, or water from a leaking pipe, etc.) and organic material (e.g., ceiling tile, drywall, paper, or natural fiber carpet padding).

There are no permanent structures on the subject property. As such, a water intrusion and mold evaluation is beyond the scope and purpose of this Phase I ESA.

6.4 Adjacent Property Reconnaissance

The adjacent property reconnaissance consisted of observing the adjacent properties from the subject property premises. No items of environmental concern were identified on the adjacent properties during the site assessment, including hazardous substances, petroleum products, ASTs, USTs, evidence of releases, PCBs, strong or noxious odors, pools of liquids, sumps or clarifiers, pits or lagoons, stressed vegetation, or any other potential environmental hazards with the exception of the following:

- The adjacent property to the north and northwest, is occupied by the Redland's Wastewater Treatment Facility (1950 Nevada Street). Partner observed several settling ponds located on the adjacent Wastewater Treatment Facility.

7.0 FINDINGS AND CONCLUSIONS

Findings

A *recognized environmental condition* (*REC*) refers to the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property: due to release to the environment; under conditions indicative of a release to the environment; or under conditions that pose a material threat of a future release to the environment. The following was identified during the course of this assessment:

- Partner did not identify any controlled recognized environmental conditions during the course of this assessment.

A *controlled recognized environmental condition* (*CREC*) refers to a REC resulting from a past release of hazardous substances or petroleum products that has been addressed to the satisfaction of the applicable regulatory authority, with hazardous substances or petroleum products allowed to remain in place subject to the implementation of required controls. The following was identified during the course of this assessment:

- Partner did not identify any controlled recognized environmental conditions during the course of this assessment.

A *historical recognized environmental condition* (*HREC*) refers to a past release of any hazardous substances or petroleum products that has occurred in connection with the property and has been addressed to the satisfaction of the applicable regulatory authority or meeting unrestricted use criteria established by a regulatory authority, without subjecting the property to any required controls. The following was identified during the course of this assessment:

- Partner did not identify any historical recognized environmental conditions during the course of this assessment.

An *environmental issue* refers to environmental concerns identified by Partner, which do not qualify as RECs; however, warrant further discussion. The following was identified during the course of this assessment:

- According to Partner's review of regulatory database records and online environmental regulatory agency records, the subject property, known as AG-Tuenissen Farming at 9092 Alabama Street, is identified as a state-registered and county permitted underground storage tank (UST) facility (Facility Number 88015440). No information regarding the number, size, construction, contents, location, and operational history of any USTs at the subject property in the database records. However, according to information included in a previous 2010 environmental site assessment that referenced an older 2006 assessment report, the northeastern side of the property included a residence/agricultural building that operated one diesel fuel UST that was reportedly closed and removed from the ground in 2001 with the San Bernardino County Fire Department Hazardous Materials Division issuing a letter of No Further Action (NFA) on March 16, 2001. The issuance of a NFA letter indicates that no further subsurface investigations, remedial cleanup or other actions

are required. No spills or releases from the UST are identified. Copies of the UST closure documentation and the NFA letter were not included in the appendices of the 2010 report. In addition, Partner has submitted requests using the Freedom of Information Act (FOIA) to the county for fire and building permit records; however, to date, no response has been provided with no records received for review. Nonetheless, it appears that the tank was closed and removed with regulatory oversight with no releases reported. As such, the former UST is not considered to represent a significant environmental concern and no further actions appear to be warranted.

- The former subject property buildings were demolished prior to 2006. However, Partner conducted a limited, visual evaluation of accessible areas for the presence of suspect ACMs at the subject property. The objective of this visual survey was to note the presence and condition of suspect ACM observed. Partner observed several areas of the property that include aboveground and below ground irrigation piping that was used during the former citrus orchard operations. Orchard operations ceased in 2003 and the irrigation system is no longer in use and inactive. Where observed, the piping appears to be constructed of a hard, cementitious material that is similar to the known asbestos-containing material "transite", which can contain variable amounts of the asbestos mineral and be a "regulated" ACM. Between the 1930s and 1970s, transite was commonly used for water distribution piping, duct flues, corrugated roof/siding panels, cement board, house siding shingles, etc. Partner observed piping that was both damaged and in good condition. Transite material in good condition is considered to be a nonfriable ACM; however, when damaged, there is a potential for an airborne fiber release when handled. Removal of these materials would subject to the applicable federal, state and local asbestos abatement regulations and procedures. No other suspect ACM was observed.

- During the site reconnaissance, Partner observed various trash and debris including construction materials (concrete, brick, stucco, plaster, wood, etc.), discarded furniture, automobile tires, household trash and an abandoned recreational trailer in several areas of the subject property. No evidence of landfilling was observed. Where observable, no evidence of chemical or oil staining or impacts were identified. The waste materials observed are not considered to represent a significant environmental concern at this time; however, these materials should be removed and properly disposed prior and/or during the proposed redevelopment activities.

- Partner conducted a Phase II Subsurface Investigation at the subject property to investigate the potential impact of volatile organic compounds (VOCs), Organochlorine Pesticides (OCPs), and/or arsenic to soil as a consequence of a release or releases from the former on-site agricultural and service/repair activities. The scope of the Phase II Subsurface Investigation included 11 soil borings and 26 shallow soil samples. Eleven (11) soil samples were analyzed for VOCs, 18 composite soil samples were analyzed for OCPs, and 18 discrete soil samples were analyzed for arsenic. Subsurface lithology encountered in the upper 5-feet bgs consisted of silty sand. Groundwater was not encountered during this investigation. Soil samples did not contain detectable concentrations of OCPs in excess of applicable RSLs. Arsenic and VOCs were not detected in the analyzed soil samples at concentrations exceeding laboratory PQLs and the PQLs

were below applicable regulatory guidelines. Based on the Subsurface Investigation, there is evidence of a *de minimis* release of hazardous materials from the subject property which does not represent a concern to human health or the environment at this time. Partner recommends no further investigation with respect to the former on-site agricultural and service/repair activities.

Conclusions, Opinions and Recommendations

Partner has performed a Phase I Environmental Site Assessment in conformance with the scope and limitations of ASTM Practice E1527-13 of NWC Palmetto Avenue & Alabama Street in the City of Redlands, San Bernardino County, California (the "subject property"). Any exceptions to, or deletions from, this practice are described in Section 1.5 of this report.

This assessment has revealed no evidence of recognized environmental conditions in connection with the subject property; however, environmental issues were identified. Based on the conclusions of this assessment, Partner recommends the following:

- Nuisance discarded debris (trash, construction materials, etc.) present on the property should be removed and properly discarded.
- The orchard's former irrigation system which appears to include a measurable amount of suspect asbestos-containing hardened cementitious piping, should be properly removed in accordance with applicable federal, state and local regulations. Additionally, any remaining groundwater wells (if any) associated with the irrigation system should be properly abandoned in accordance with the applicable regulations.

8.0 SIGNATURES OF ENVIRONMENTAL PROFESSIONALS

Partner has performed a Phase I Environmental Site Assessment of the property located at NWC Palmetto Avenue & Alabama Street in the City of Redlands, San Bernardino County, California in conformance with the scope and limitations of the protocol and the limitations stated earlier in this report. Exceptions to or deletions from this protocol are discussed earlier in this report.

By signing below, Partner declares that, to the best of our professional knowledge and belief, we meet the definition of *Environmental Professional* as defined in §312.10 of 40 CFR §312. Partner has the specific qualifications based on education, training, and experience to assess a *property* of the nature, history, and setting of the subject *property*. Partner has developed and performed the all appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312.

Prepared By:

Burke Walker
Environmental Professional

Reviewed By:

Brandon L. Kidd
Senior Reviewer

9.0 REFERENCES

Reference Documents

American Society for Testing and Materials (ASTM), Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process, ASTM Designation: E1527-13

Environmental Data Resources, Inc. (EDR): Certified Sanborn Map Report; The EDR Aerial Photo Decade Package; The EDR-City Directory Image Report; The EDR Historical Topographic Map Report with QuadMatch; The EDR Radius Map Report with GeoCheck (December 2017)

Federal Emergency Management Agency (FEMA), Federal Insurance Administration, National Flood Insurance Program, Flood Insurance Map, accessed via the internet, December 2017

United States Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS), Web Soil Survey, accessed via the internet, December 2017

United States Department of the Interior, United States Fish and Wildlife Service (USFS), National Wetlands Inventory Wetlands Mapper, accessed via the internet, December 2017

United States (U.S.) Environmental Protection Agency (EPA), "EPA Map of Radon Zones" (Document EPA-402-R-93-071), December 2017

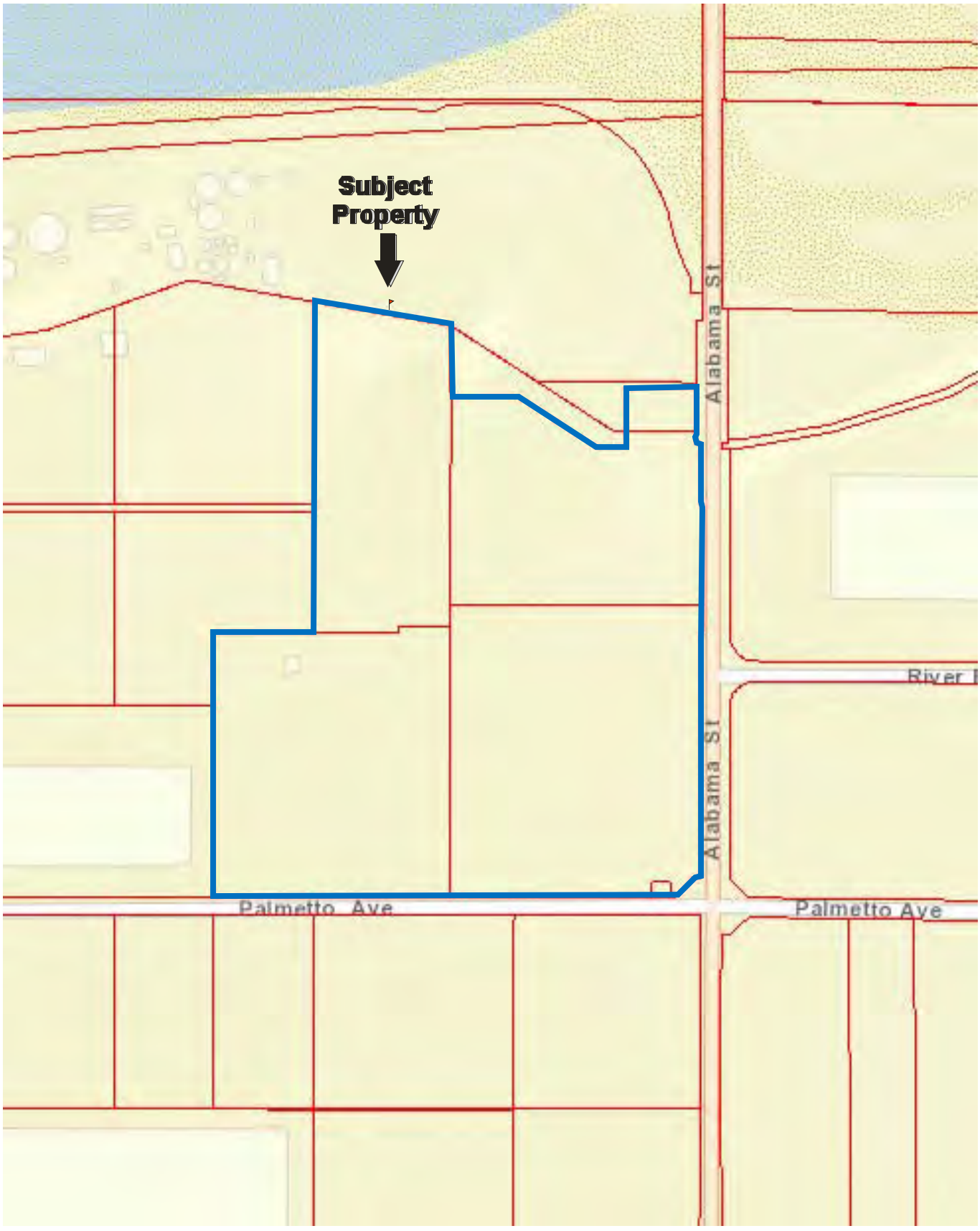
FIGURES

1 SITE LOCATION MAP

2 SITE PLAN

3 TOPOGRAPHIC MAP

PARTNER



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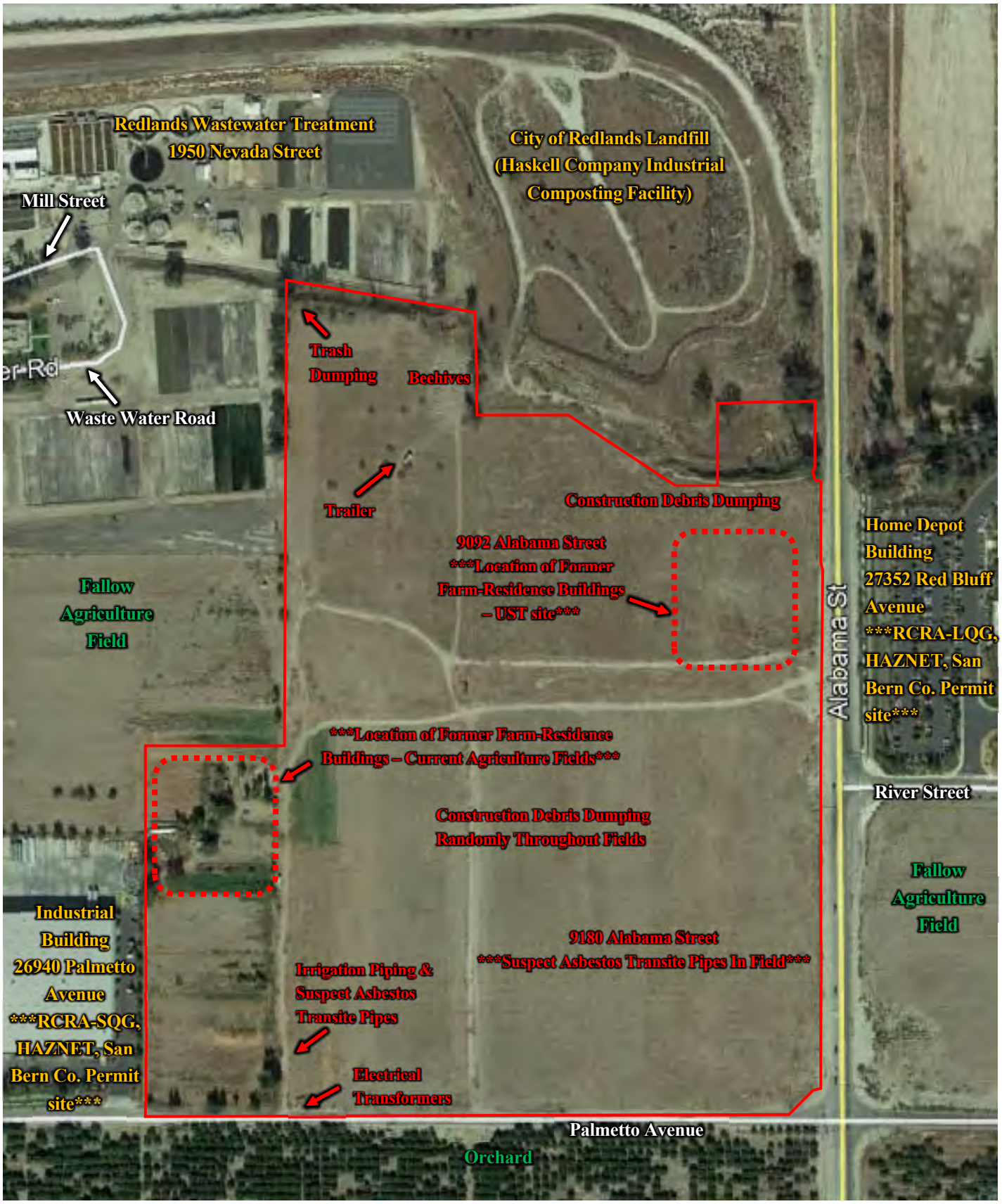
Drawing Not To Scale

KEY:
Subject Property

FIGURE 1: SITE LOCATION MAP
Project No. 17-203002.1

PARTNER



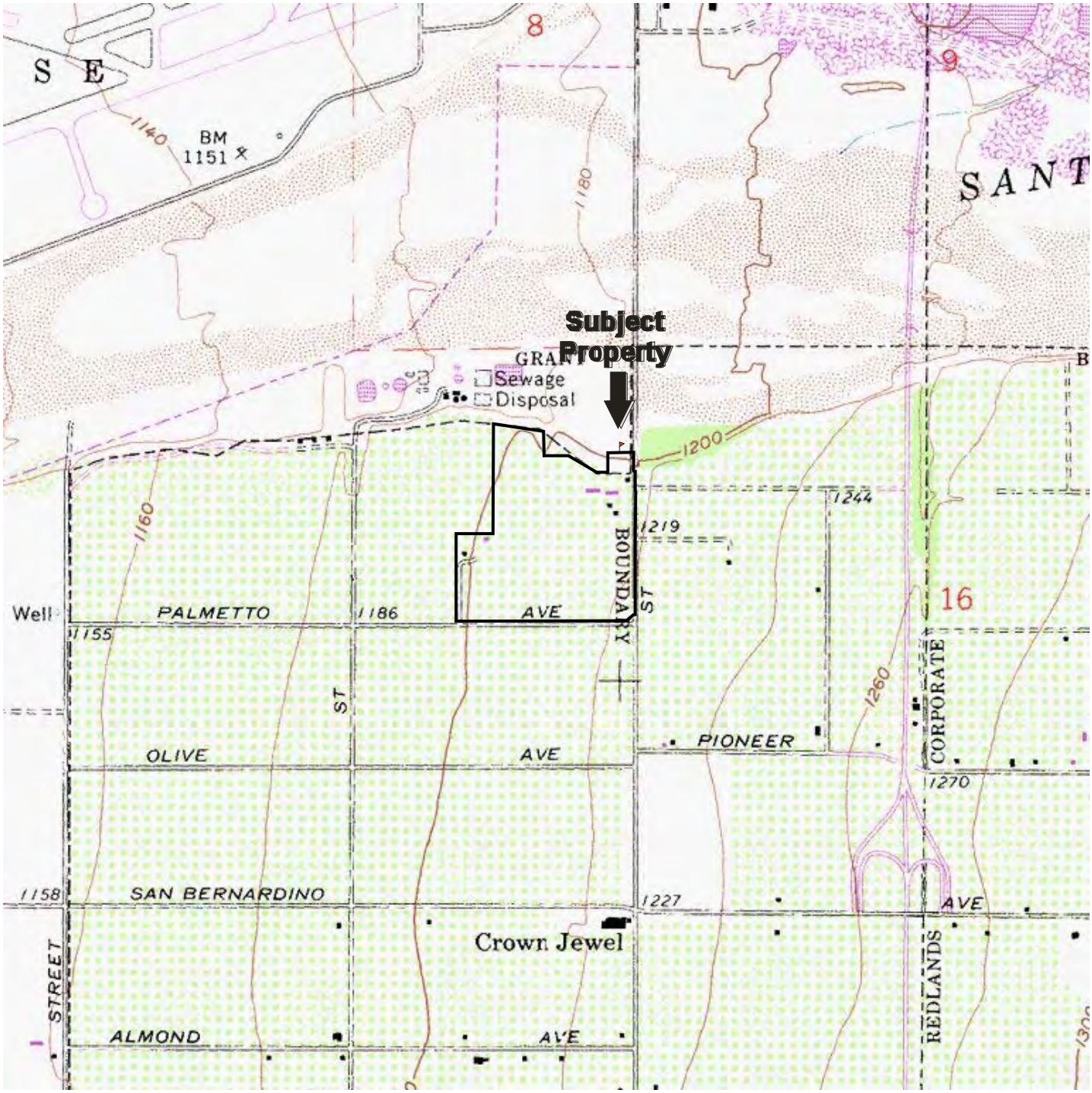
N

GROUNDWATER FLOW

KEY:
Subject Property

FIGURE 2: SITE PLAN
Project No. 17-203002.1

PARTNER



N

USGS 7.5 Minute *Redlands, California* Quadrangle
Created: 1967/Revised: 1996

KEY:
Subject Property

FIGURE 3: TOPOGRAPHIC MAP
Project No. 17-203002.1

PARTNER

APPENDIX A: SITE PHOTOGRAPHS

PARTNER

1. Facing northeast toward the southern side of the subject property.

2. Facing north toward the southern side of the subject property.

3. Facing northwest toward the south-southwestern side of the subject property.

4. Facing east toward the southern half of the subject property.

5. Facing east toward the northern half of the subject property.

6. Facing south toward the southwestern half of the subject property.

7. Facing south toward the southeastern half of the subject property.

8. Facing west toward the northeastern half of the subject property.

9. Facing northwest toward the southeastern half of the subject property.

10. Suspect asbestos transite irrigation pipe.

11. Remnant irrigation pipes on southeastern side of the subject property.

12. Remnant irrigation pipes on southeastern side of the subject property.

13. Facing the northeastern side of the subject property.

14. Trash dumping on the northeastern side of the subject property.

15. Trash/suspect asbestos transite pipe debris dumping on the northeastern side of the subject

16. The northeastern most side of the subject property.

17. Manhole access on the northeastern side of the subject property.

18. Facing the beehives on the northwestern side of the subject property.

19. Abandoned trailer on the northwestern side of the property.

20. Trash on the northwestern side of the property.

21. Looking east along the northwestern boundary of the property.

22. Facing the agriculture farm on the southwestern side of the property.

23. Trash on the southwestern side of the property.

24. Facing the agriculture farm on the southwestern side of the property.

25. Facing the transformers on the southwestern side of the property.

26. Facing the dumped tires and suspect asbestos transite piping on the southwestern side of the property.

27. Facing the adjacent orchard property to the south.

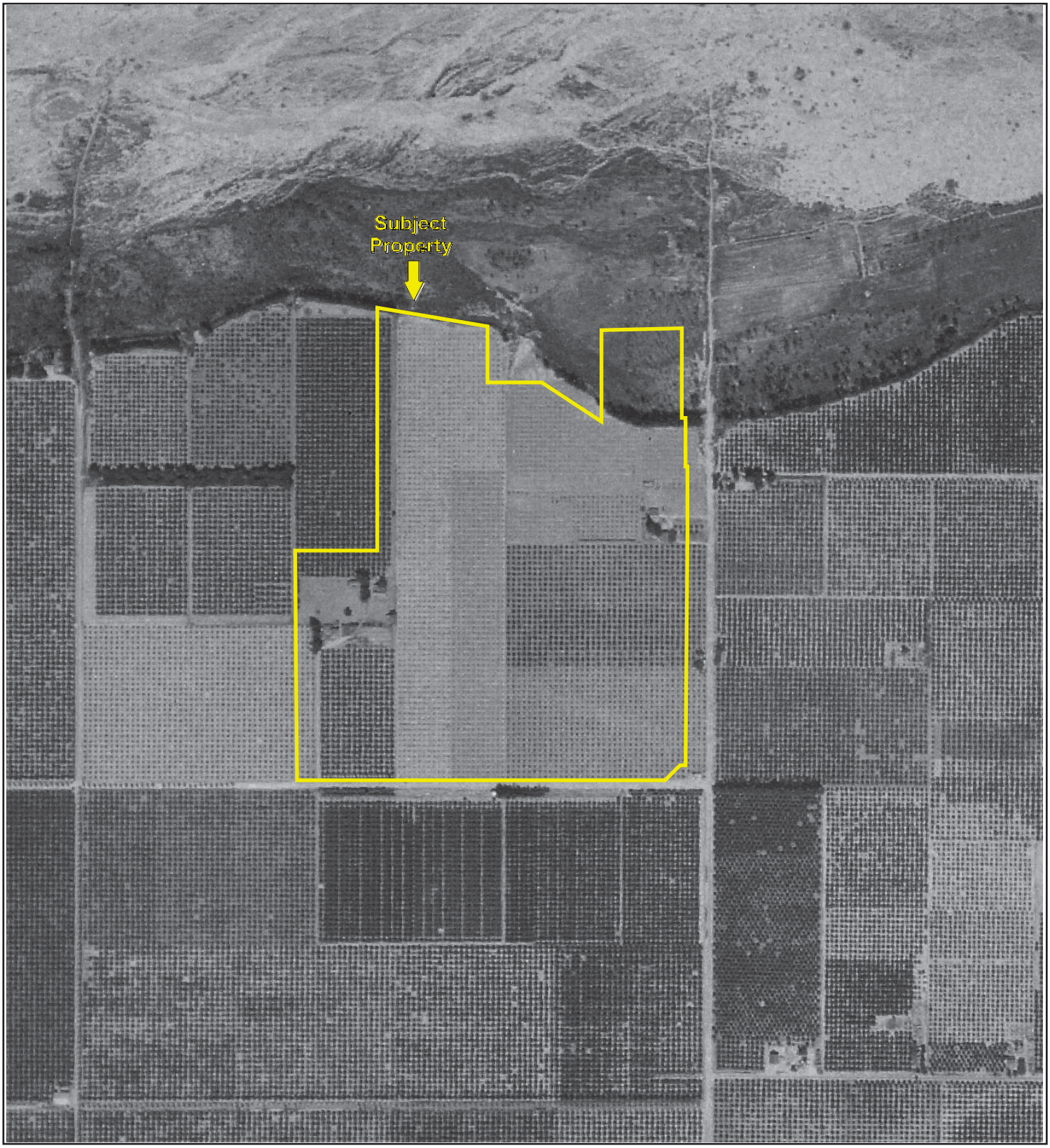
28. Facing the adjacent warehouse property to the east.

29. Facing the adjacent wastewater treatment property to the west-northwest.

30. Facing the adjacent industrial property to the southwest.

APPENDIX B: HISTORICAL/REGULATORY DOCUMENTATION

PARTNER



500 1000 2000

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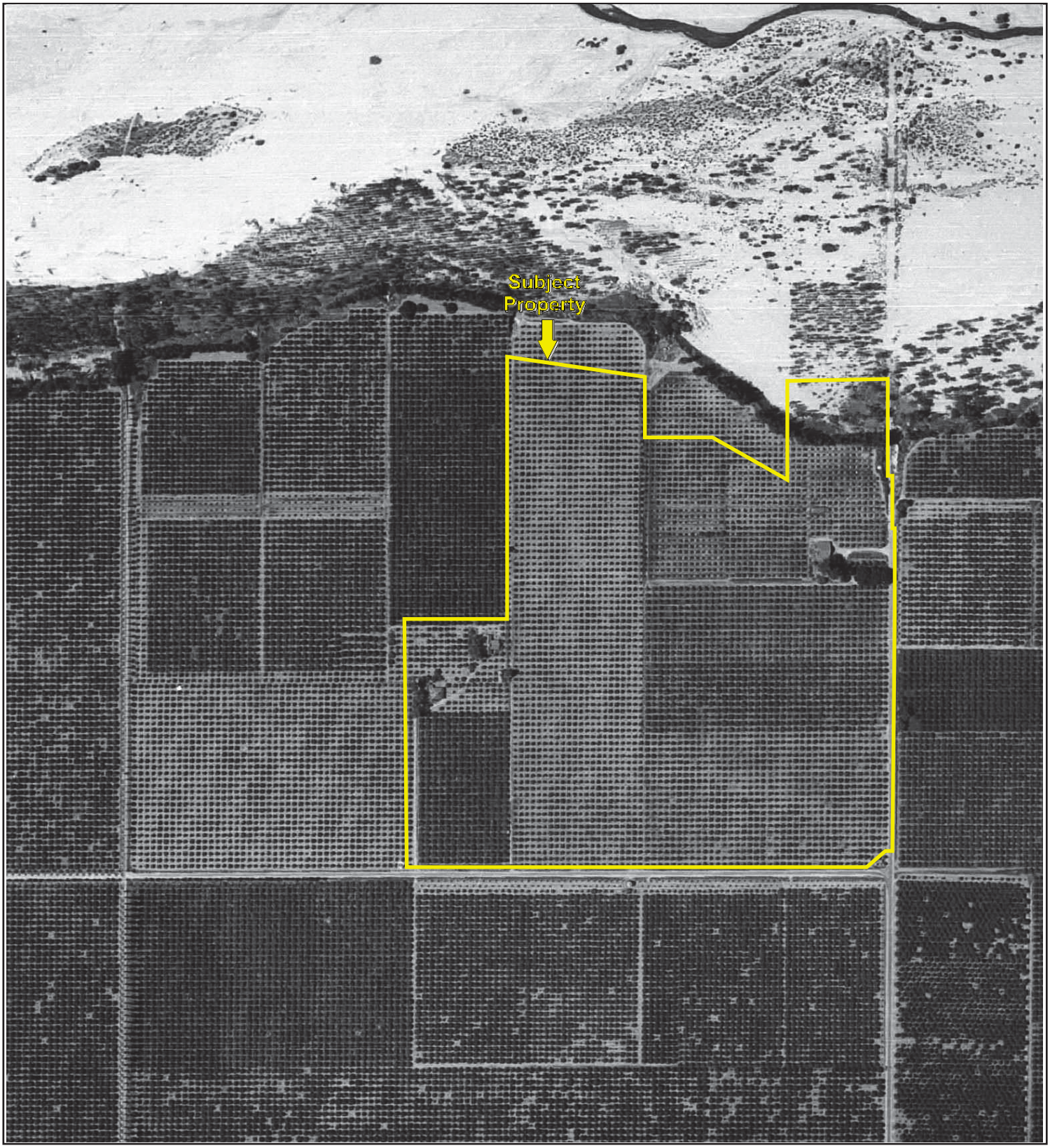
Key: Subject Property



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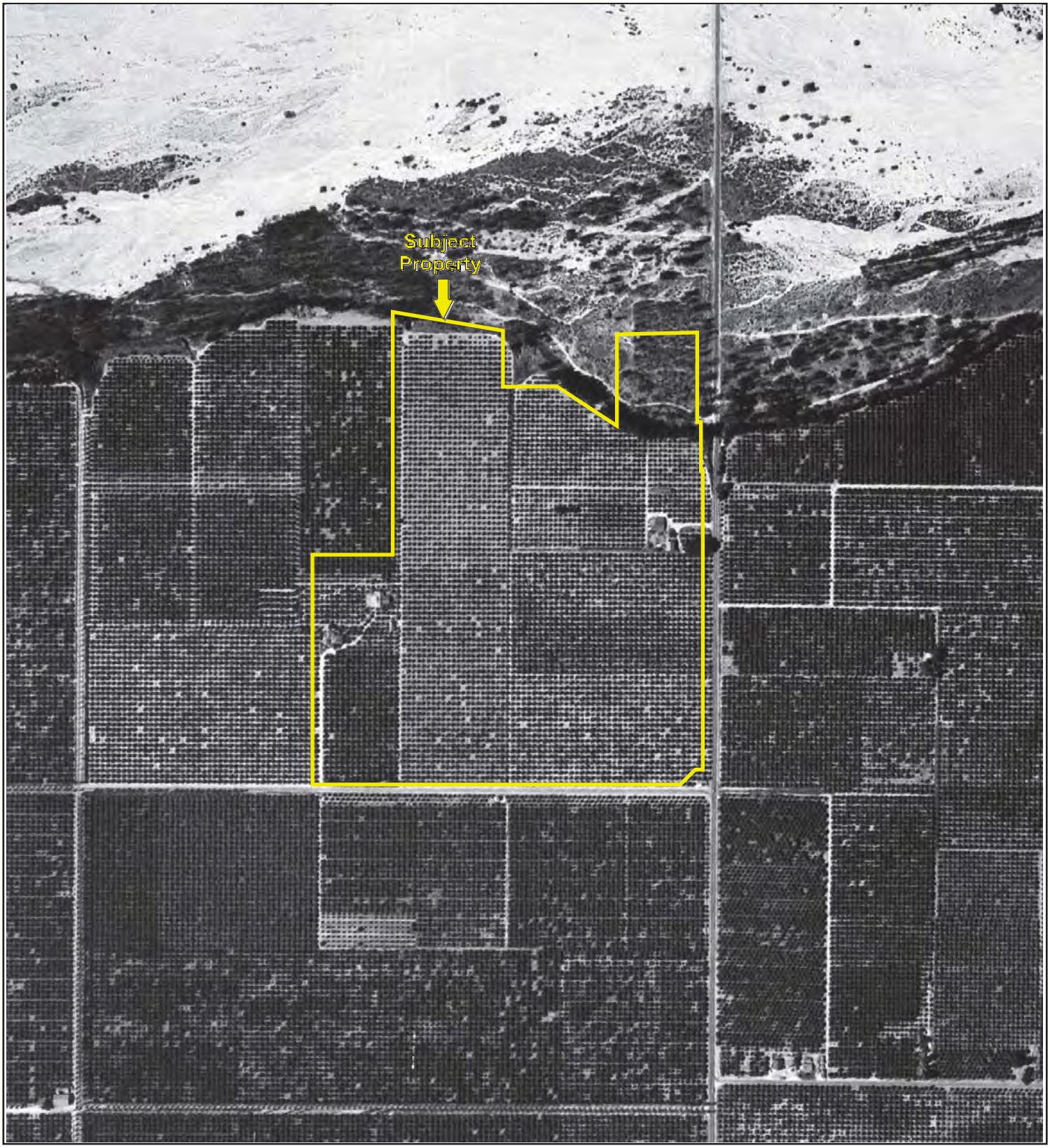

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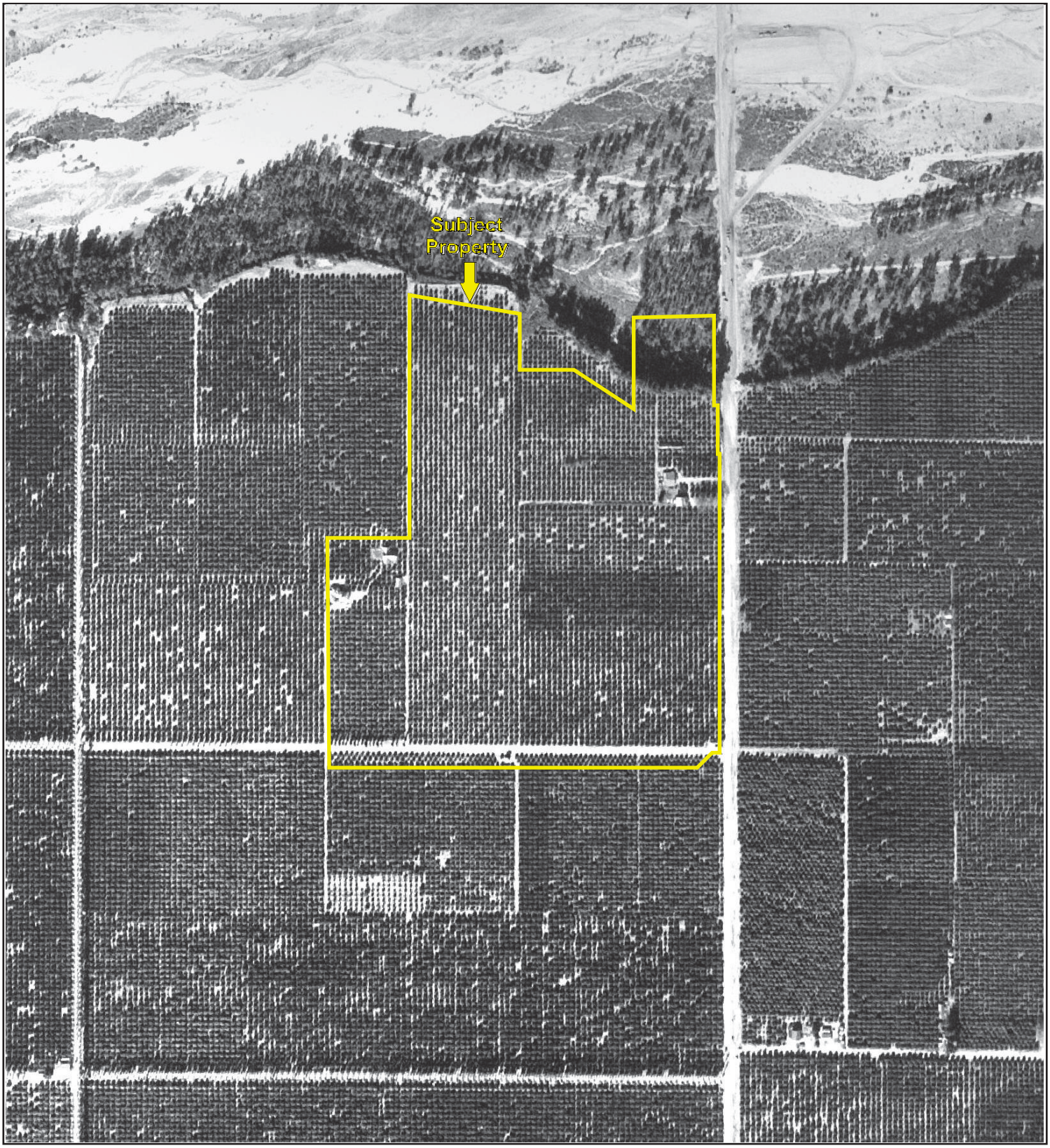

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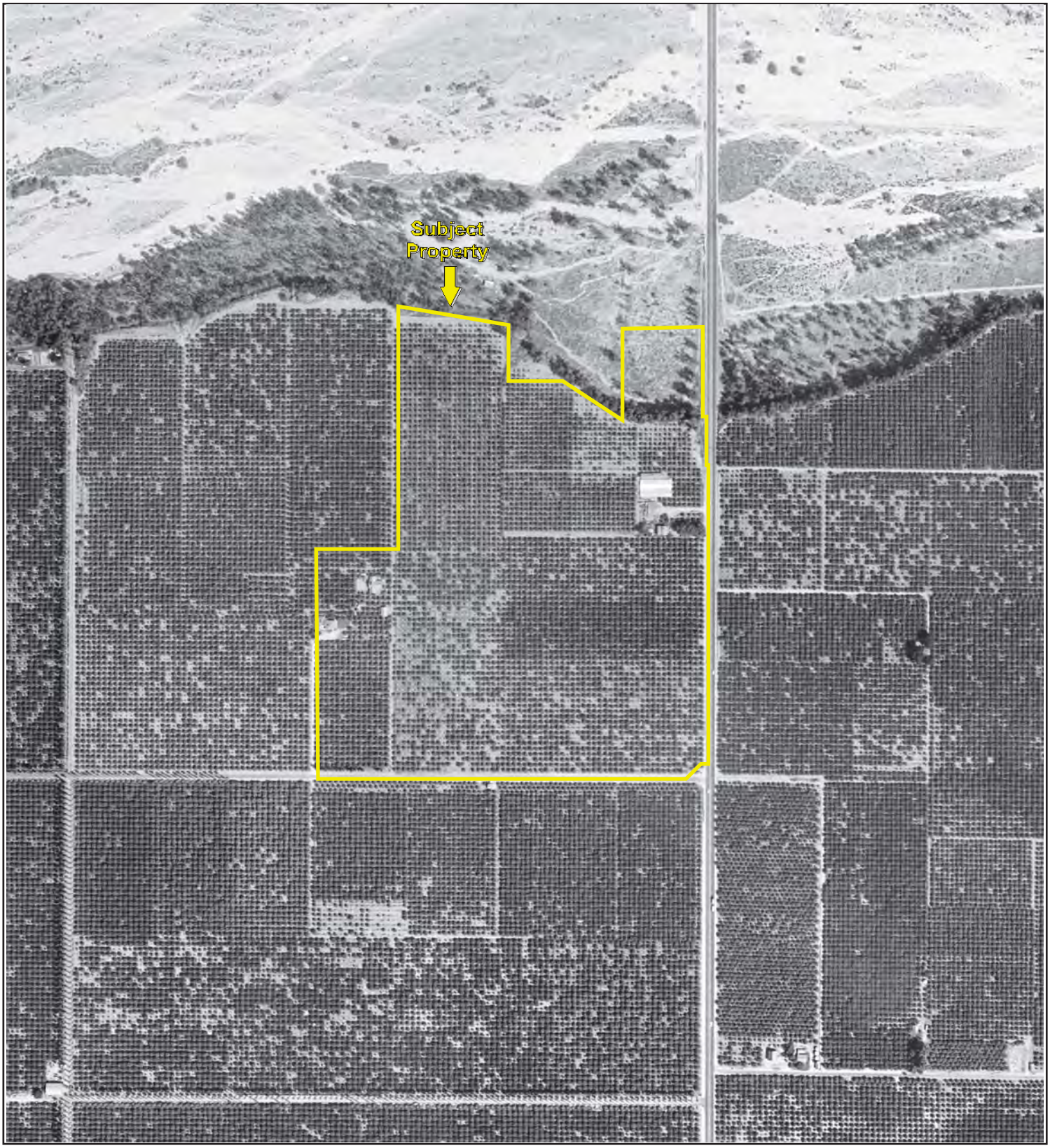

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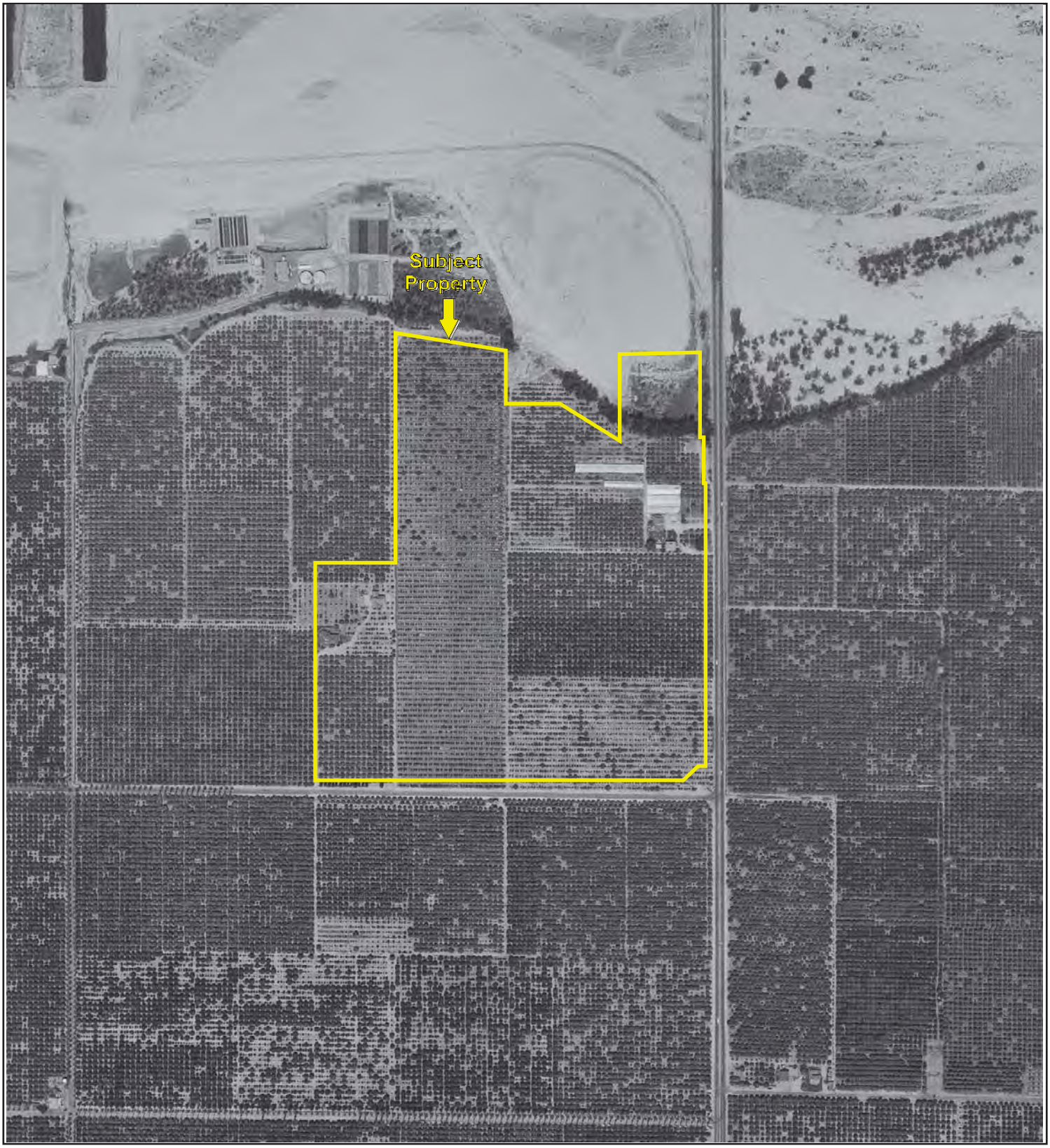
Key: Subject Property



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Key: Subject Property

500 1000 2000

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Key: Subject Property

500 1000 2000

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Key: Subject Property

500 1000 2000

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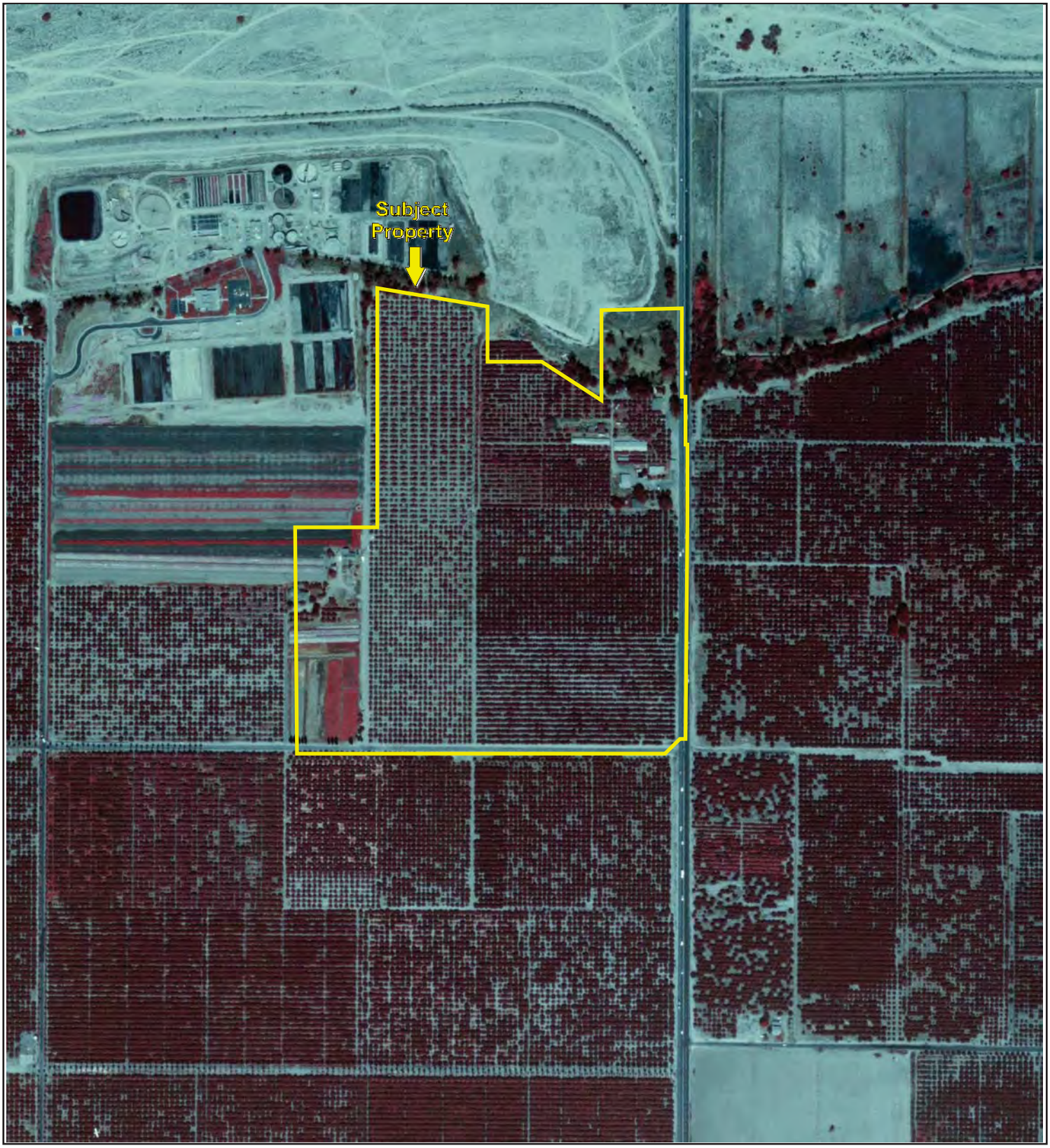
Key: Subject Property



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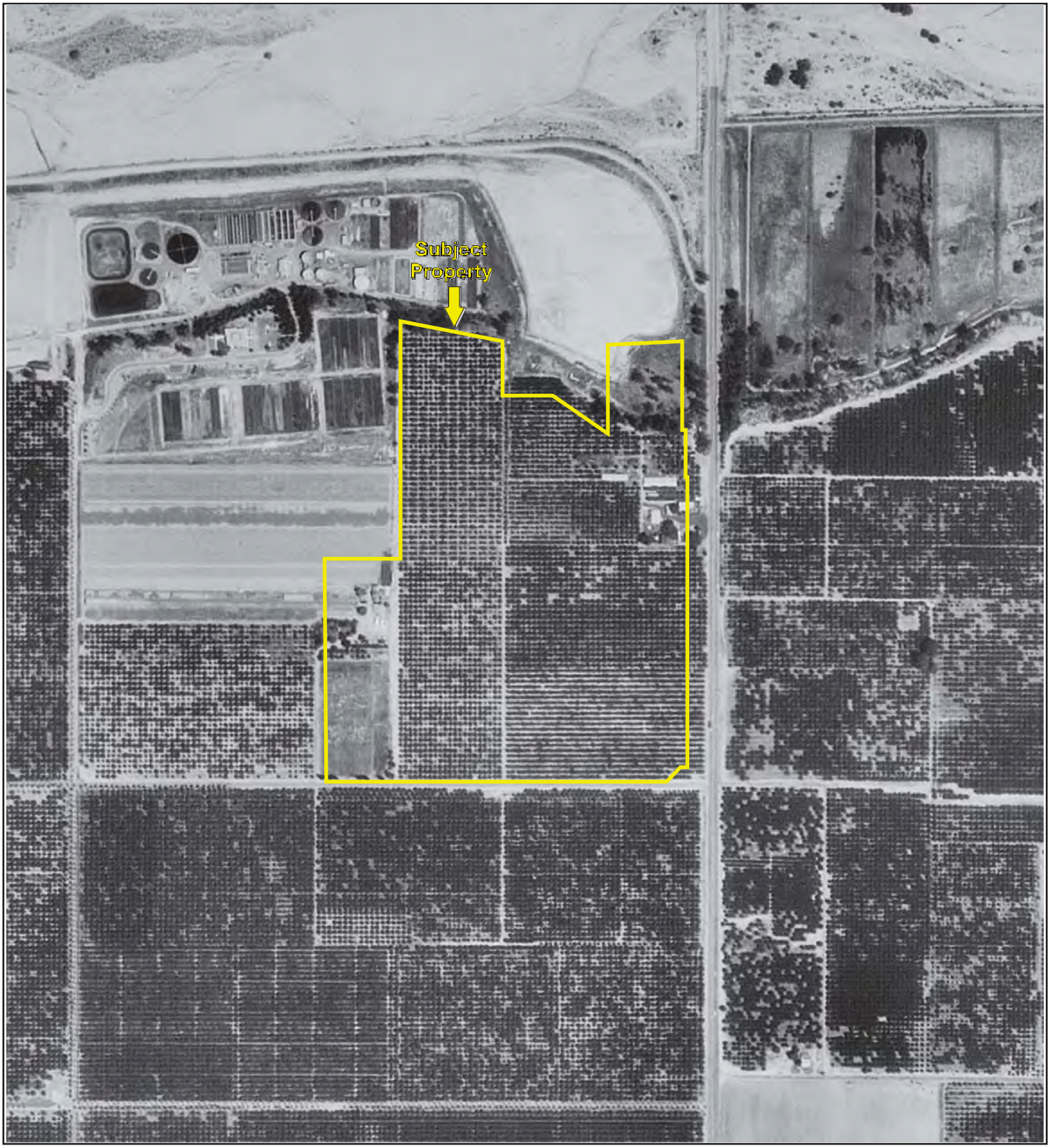

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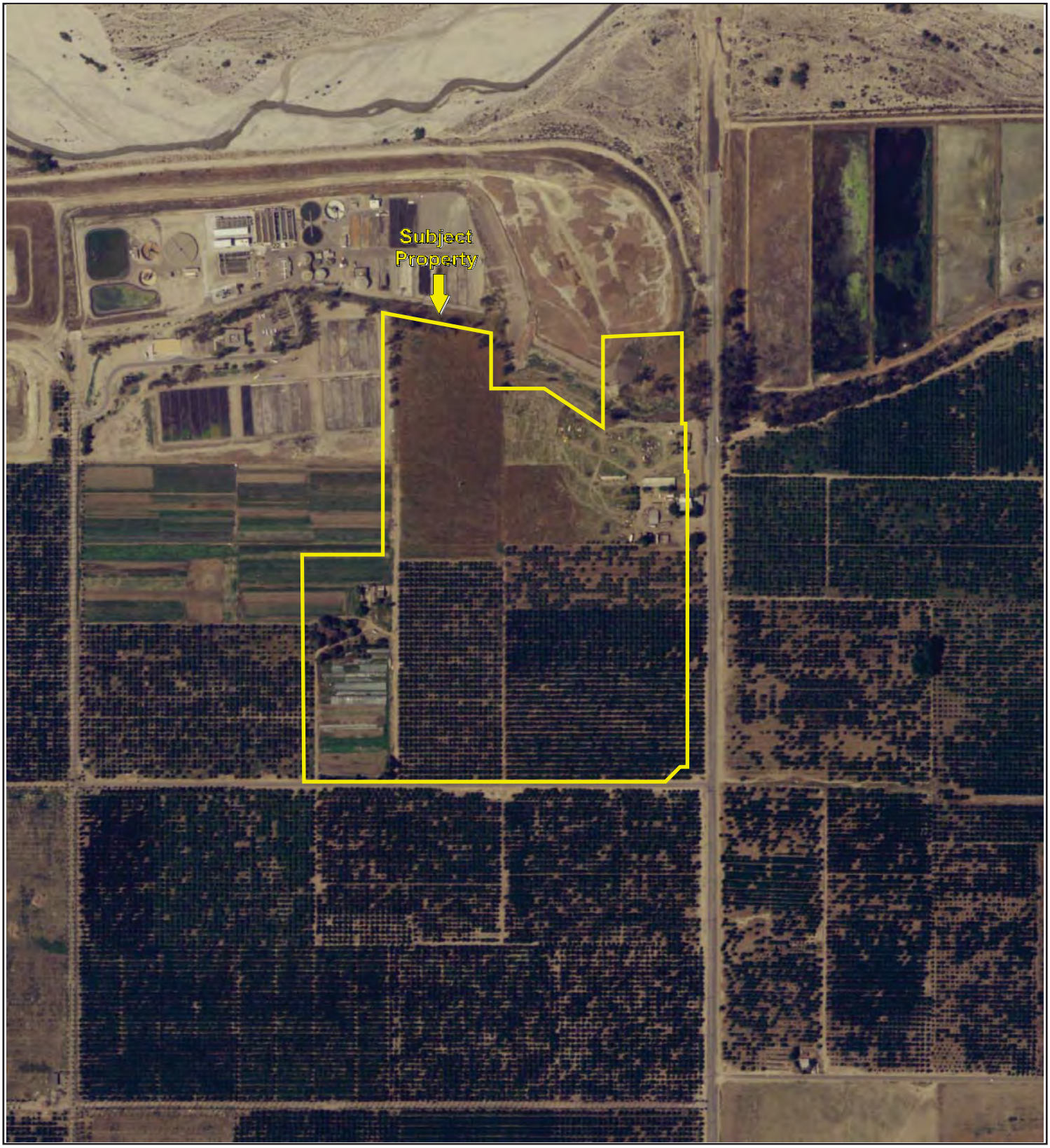
Key: Subject Property



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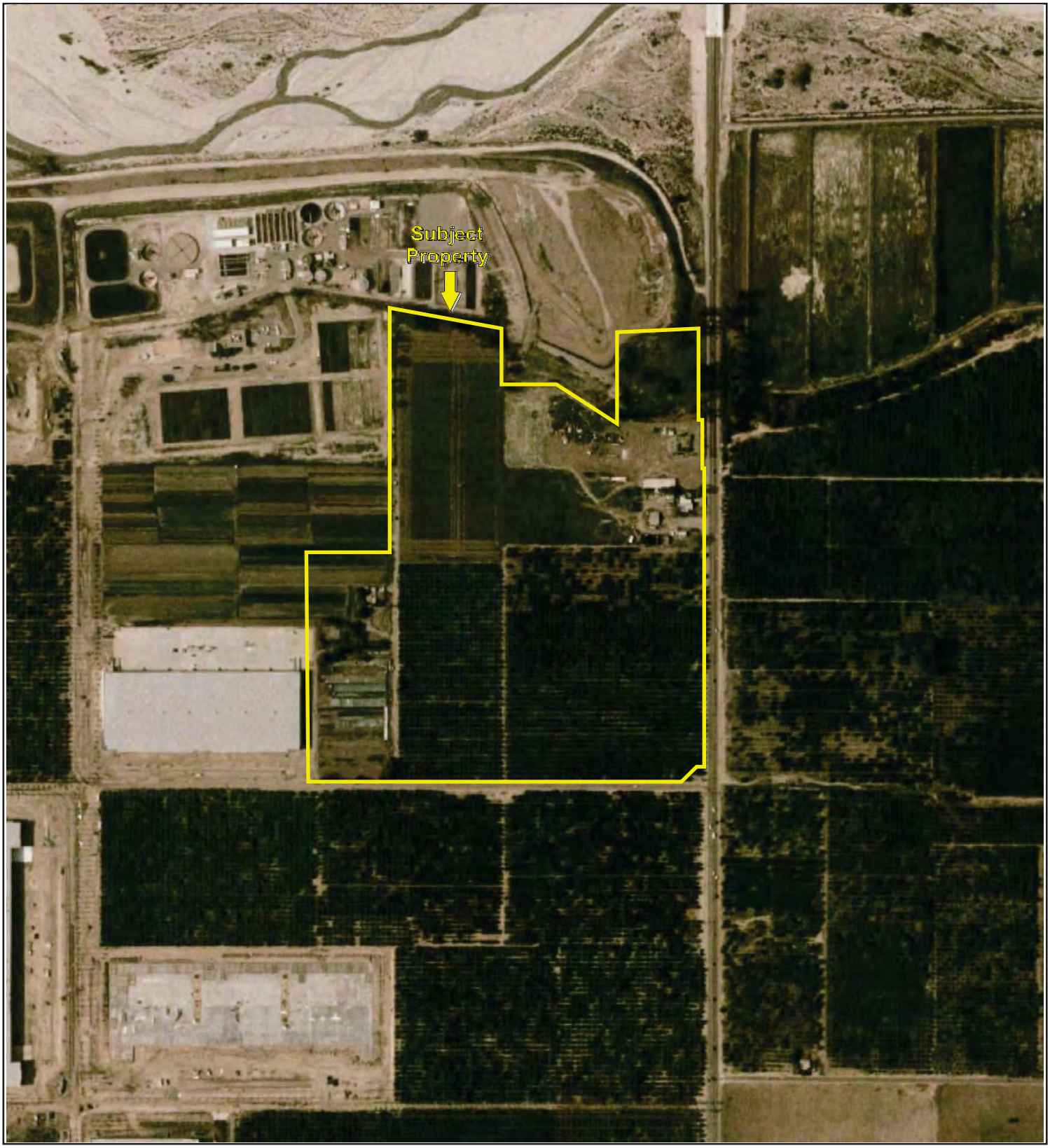

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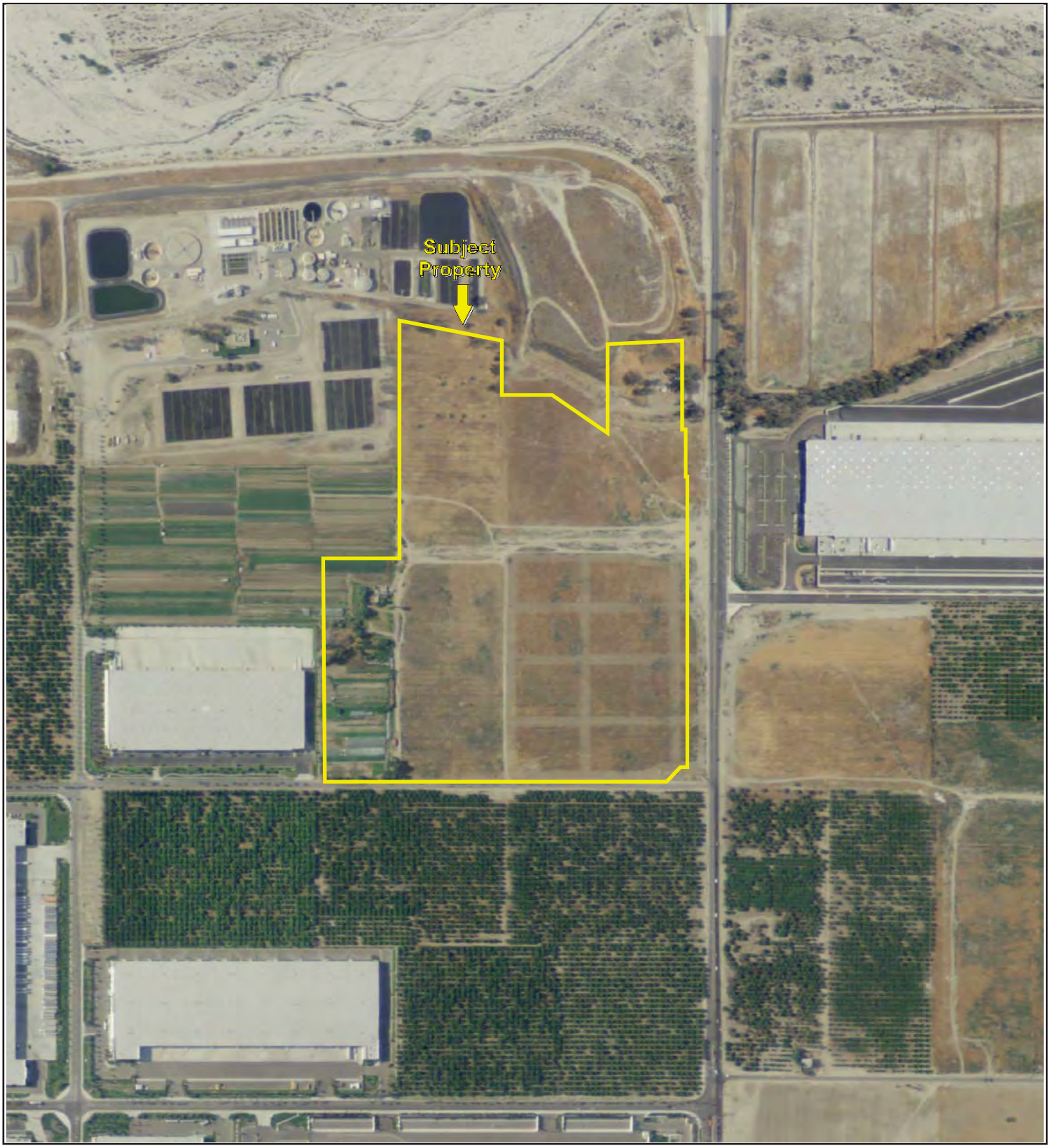

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Key: Subject Property

500 1000 2000

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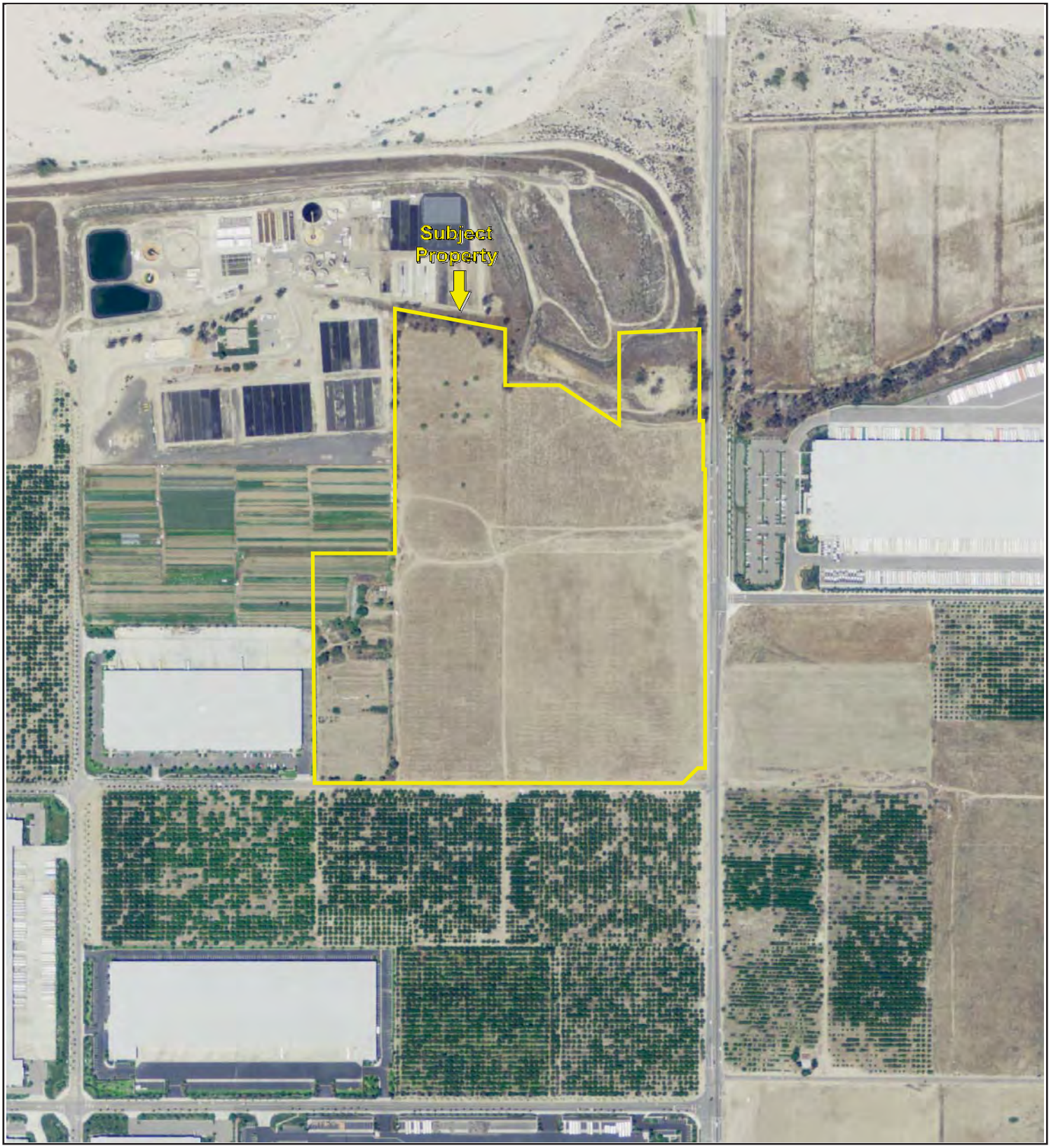
Key: Subject Property



500 1000 2000

N

Key: Subject Property

NWC Palmetto Avenue and Alabama Street

NWC Palmetto Avenue and Alabama Street

Redlands, CA 92374

Inquiry Number: 5122089.3

November 30, 2017

Certified Sanborn® Map Report

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

Certified Sanborn® Map Report

11/30/17

Site Name:

NWC Palmetto Avenue and Ala
NWC Palmetto Avenue and Ala
Redlands, CA 92374
EDR Inquiry # 5122089.3

Client Name:

Partner Engineering and Science, Inc.
2154 Torrance Blvd, Suite 200
Torrance, CA 90501-0000
Contact: Karli Mcmurray

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The Sanborn Library is continually enhanced with newly identified map archives. This report accesses all maps in the collection as of the day this report was generated.

Certified Sanborn Results:

Certification # 60E7-4AA2-B5CB

PO # NA

Project 17-203002.1

UNMAPPED PROPERTY

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Sanborn® Library search results

Certification #: 60E7-4AA2-B5CB

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- ☑ Library of Congress
- ☑ University Publications of America
- ☑ EDR Private Collection

The Sanborn Library LLC Since 1866™

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NWC Palmetto Avenue and Alabama Street
NWC Palmetto Avenue and Alabama Street
Redlands, CA 92374

Inquiry Number: 5122089.5
December 04, 2017

The EDR-City Directory Image Report

Environmental Data Resources Inc

6 Armstrong Road
Shelton, CT 06484
800.352.0050
www.edrnet.com

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Findings

City Directory Images

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with any questions or comments.

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EXECUTIVE SUMMARY

DESCRIPTION

Environmental Data Resources, Inc.'s (EDR) City Directory Report is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's City Directory Report includes a search of available city directory data at 5 year intervals.

RECORD SOURCES

EDR's Digital Archive combines historical directory listings from sources such as Cole Information and Dun & Bradstreet. These standard sources of property information complement and enhance each other to provide a more comprehensive report.

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RESEARCH SUMMARY

The following research sources were consulted in the preparation of this report. A check mark indicates where information was identified in the source and provided in this report.

Year	Target Street	Cross Street	Source
2014	☑	☑	EDR Digital Archive
2010	☑	☑	EDR Digital Archive
2005	☑	☑	EDR Digital Archive
2000	☐	☑	EDR Digital Archive
1995	☑	☑	EDR Digital Archive
1992	☑	☑	EDR Digital Archive
1985	☑	☑	Haines Criss-Cross Directory
1980	☑	☑	Haines Criss-Cross Directory
1975	☑	☑	Haines Criss-Cross Directory

FINDINGS

TARGET PROPERTY STREET

NWC Palmetto Avenue and Alabama Street
Redlands, CA 92374

Year	*CD Image*	*Source*	
PALMETTO AVE			
2014	pg A2	EDR Digital Archive	
2010	pg A4	EDR Digital Archive	
2005	pg A6	EDR Digital Archive	
2000	-	EDR Digital Archive	Target and Adjoining not listed in Source
1992	pg A11	EDR Digital Archive	
1985	pg A13	Haines Criss-Cross Directory	
1980	pg A16	Haines Criss-Cross Directory	
1975	pg A19	Haines Criss-Cross Directory	
PALMETTO ST			
1995	pg A9	EDR Digital Archive	

FINDINGS

CROSS STREETS

Year	*CD Image*	*Source*

ALABAMA ST

2014	pg. A1	EDR Digital Archive
2010	pg. A3	EDR Digital Archive
2005	pg. A5	EDR Digital Archive
2000	pg. A7	EDR Digital Archive
1995	pg. A8	EDR Digital Archive
1992	pg. A10	EDR Digital Archive
1985	pg. A12	Haines Criss-Cross Directory
1980	pg. A14	Haines Criss-Cross Directory
1980	pg. A15	Haines Criss-Cross Directory
1975	pg. A17	Haines Criss-Cross Directory
1975	pg. A18	Haines Criss-Cross Directory

RIVER BLUFF AVE

2014	-	EDR Digital Archive	Street not listed in Source
2010	-	EDR Digital Archive	Street not listed in Source
2005	-	EDR Digital Archive	Street not listed in Source
2000	-	EDR Digital Archive	Street not listed in Source
1995	-	EDR Digital Archive	Street not listed in Source
1992	-	EDR Digital Archive	Street not listed in Source
1985	-	Haines Criss-Cross Directory	Street not listed in Source
1980	-	Haines Criss-Cross Directory	Street not listed in Source
1975	-	Haines Criss-Cross Directory	Street not listed in Source

City Directory Images

Target Street	Cross Street	Source
-	✓	EDR Digital Archive

ALABAMA ST 2014

1255	AT THE BEACH
	REDLANDS VISTA CORP
1260	HEMET HSPTLITY INVESTMENTS LLC
	MAKAN ROBERT
1265	STARBUCKS CORPORATION
1271	SELECT COMFORT CORPORATION
1275	GREAT CLIPS
1280	CITRUS FAMILY LTD PARTNERSHIP
	NO 1 TOMS
	TOMS 1 WORLD FAMOUS CHLIBURG
	TOMS BURGERS
1285	FRATT DENTAL CORPORATION
	SMILE BRANDS GROUP INC
8203	BREWER COTE WEST
	SURECAST WEST LLC
9700	CALVARY CHAPEL OF REDLANDS
	INTENSIVE CARE MINISTRIES
9900	SLEEP TRAIN INC
9930	BABIES R US
	TOYS R US INC
9940	BEREAN CHRISTIAN STORES LLC
9946	AFFORDABLE DENTURES
	MAI AN THI PHAM DDS A PROF
	ONEILL MEGAN DDS
9950	AARON BROTHERS INC
	INTERFACE SECURITY
9980	BUFFET STAR ZHANG INC
	LEROYS BOARD SHOP
	LUGONIA VISION CTR OPTOMETRY
	RUBYS BANGLES
	TEKIN BROTHERS JEWELERS INC
9990	COLOR ME MINE
	MASSAGE ENVY SPA REDLANDS
	MENS WEARHOUSE INC
	QDOBA MEX GRILL
	QDOBA RESTAURANT CORPORATION
	WESCOM CREDIT UNION
10000	JC PENNEY CORPORATION INC
10010	EURO GRILL
	FANTASTIC SAMS
	HAPPINESS NAILS & SPA
	PAYLESS SHOESOURCE INC
10020	CHILIS GRILL & BAR

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

PALMETTO AVE 2014

2250 GITI TIRE REDLANDS DTC CR
2290 KIMCO STAFFING
PERFORMANCE TEAM BLDG 24
26509 PRECISION PET PRODUCTS INC
PRECISION PETS INC
26717 HARALAMBOS BEVERAGE COMPANY
26881 PAYLESS SHOESOURCE INC
26940 KENNETH COLE PRODUCTIONS
PACIFIC CONNECTIONS INC

Target Street	Cross Street	Source
-	✓	EDR Digital Archive

ALABAMA ST 2010

490	RASMUSSEN, GARY
1255	HOLLYWOOD TANS
	REDLANDS VISTA CORP
1260	COUNTRY INN SUITE SAN BER
	HEMET HSPTLITY INVESTMENTS LLC
	MAKAN ROBERT
1265	STARBUCKS CORPORATION
1280	NO 1 TOMS
1285	BRIGHT NOW DENTAL
	FRATT DENTAL CORPORATION
	SMILE BRANDS GROUP INC
8203	MATICH CORPORATION
9092	CAPITAL POOL & SPA MAINTENANCE
	OCCUPANT UNKNOWN,
9700	CALVARY CHAPEL OF REDLANDS
	INTENSIVE CARE MINISTRIES
9900	MATTRESS DISCOUNTERS
9930	BABIES R US
	KIDDLE KANDID PORTRAIT STUDIO
	TOYS R US INC
9940	BEREAN CHRISTIAN STORES LLC
9946	AFFORDABLE DENTURES
9950	AARON BROTHERS INC
	INTERFACE SECURITY
9980	CANTON BISTRO
	DR STPAL S MULTANI A PROF INC
	LEROYS BOARD SHOP
	LUGONIA VISION CTR OPTOMETRY
	TEKIN BROTHERS JEWELERS INC
9990	COLOR ME MINE
	MENS WEARHOUSE INC
	QDOBA RESTAURANT CORPORATION
	WESCOM CREDIT UNION WESCO
10000	JC PENNEY CORPORATION INC
10010	DAOUD ALFONS
	EURO GRILL
	FANTASTIC SAMS
	HAPPINESS NAILS & SPA
	PAYLESS SHOESOURCE INC
	RIZIK SHEFIK
10020	CHILIS GRILL & BAR

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

PALMETTO AVE 2010

2200	TREADWAY
2250	EXCEL DISCOUNT TIRES
	EXEL LOGISTICS
2290	EXEL MICHELLIN TIRE
26509	PRECISION PETS INC
26717	HARALAMBOS BEVERAGE CO
26881	PAYLESS SHOESOURCE INC
26940	INFORMATION PROCESS SYSTEMS

Target Street	Cross Street	Source
-	✓	EDR Digital Archive

ALABAMA ST 2005

1260	JAY SANTOSHI MA LLC
1280	NO 1 TOMS
8203	MATICH CORPORATION
8353	ROBERTSONS READY MIX LTD
9086	OCCUPANT UNKNOWN,
9092	CAPITAL POOL & SPA MAINTENANCE
	OCCUPANT UNKNOWN,
9700	CALVARY CHAPEL OF REDLANDS
9950	KIMURA, SHARI

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

PALMETTO AVE 2005

27050 KWON FARM
OCCUPANT UNKNOWN,

Target Street	Cross Street	Source
-	✓	EDR Digital Archive

ALABAMA ST 2000

1260	MAKAN ROBERT
1280	NO 1 TOMS
8203	MATICH CORPORATION
	NEWMAN BROTHERS OF CALIFORNIA
9092	CAPITAL POOL & SPA MAINTENANCE
	TEUNISSEN, DON
9700	C C H S BOOSTERS
	CALVARY CHAPEL OF REDLANDS
	OCCUPANT UNKNOWN,
9712	OCCUPANT UNKNOWN,
9940	OCCUPANT UNKNOWN,
9950	KIMURA, SHARI

Target Street	Cross Street	Source
-	✓	EDR Digital Archive

ALABAMA ST 1995

1220	CHEVRON SERVICE JIM SELLER
1260	MOTEL 7 WEST
8203	MATICH CORPORATION
	NEWMAN BROTHERS OF CALIFORNIA
9086	AGUILAR, MARIO
9092	TEUNISSEN, DON
9700	CALVARY CHAPEL OF REDLANDS

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

PALMETTO ST 1995

27050 KIM, ZL

Target Street	Cross Street	Source
-	✓	EDR Digital Archive

ALABAMA ST 1992

620	HUMPHRIES, BRUCE A
	VEST, STEPHEN L
1220	CHEVRON SERVICE JIM SELLER
1260	MOTEL 7 WEST
8203	MATICH CORPORATION
	NEWMAN BROS OF CALIFORNIA INC
8353	ROBERTSONS READY MIX INC
9086	AGUILAR, MARIO
9092	TEUNISSEN, DON
9700	CALVARY CHAPEL OF REDLANDS

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

PALMETTO AVE 1992

27050 KWONS LANDSCAPING

Target Street	Cross Street	Source
-	✓	Haines Criss-Cross Directory

ALABAMA ST 1985

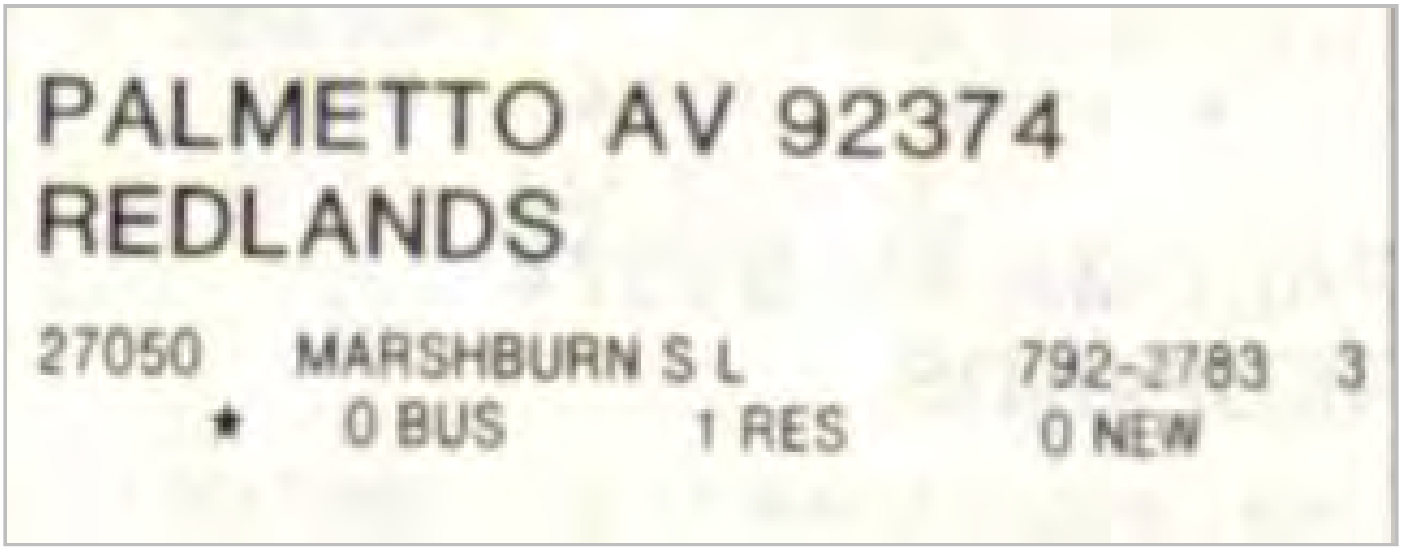
ALABAMA 92373
REDLANDS

302	BIMMERHAUS	792-7191	+5
	HERRIN AND	793-8510	+5
	MILL CREEK WELDING	793-5799	3
	PRECISION MARINE	793-7855	2
	Q A PROCESSOR SV	793-1881	2
	R&R MACHINE PRODCTS	793-7479	2
	REDLANDS BUSINESS	792-3306	+5
614	H & E DO IT YOURSEL	793-0075	9
620	LIPSKEY LEONARD	793-1212	8
800	BELL TOM CHEVROLET	793-2681	3
	BELL TOM CHEVROLET	824-7145	3
	TOM BELL CHEVROLET	793-2681	3
	TOM BELL CHEVROLET	824-7145	3
855	JOLLY BURGER	793-7007	9
875	CIRCLE SERVICE	792-9974	0
1180	DENNYS RESTAURANT	798-2475	4
1200	U HAUL CO	793-8448	
	U HAUL MVG CT RDLS	793-8448	1
1220	MCCLELLANS CHEVRON	793-6679	+5
1260	MOTEL 7 WEST	793-2414	
1280	EMPIRE EXXON	793-5202	+5
2000	MATICH BROS PAVING	792-3560	+5
8203	A 1 GRIT CO	792-5681	
	E L YEAGER	798-5059	+5
	L T TRANSPORT	885-5842	7
	LIVINGSTON GRAHAM	884-1251	4
	LIVINGSTON GRAHAM	793-3271	4
	NOTTINGHAM M C CO	889-7007	+5
	SOCAL WST CNSTRCTRS	824-6252	3
8397	MATICH BROS PAVING	798-1146	2
9092	TEUNISSEN LYNN	798-1714	+5
9700	CALVARY CHAPEL	793-8744	2
9950	FITZ MARTIN	798-5027	+5
10050	KIMURA NURSERIES	793-3141	1
10917	RAMIREZ J J	792-5934	+5
11000	KENNEDY WALTER	798-2263	4
11029	ROZEMA GERALD	793-6265	
11032	NOORDMAN N	793-1907	
11040	NOORDMAN MARVIN J	793-1974	
11052	MEELKER B J	793-0954	0
11119	ANDERSEN CASPER F	792-4861	0
11133	XXXX	00	
11139	XXXX	00	
11151	XXXX	00	
11158	XXXX	00	
11168	DARLENE JULIA	793-4010	0
11176	WALKER WM	793-7735	0
11186	HEBERT MARK	792-7043	
11195	XXXX	00	
11200	XXXX	00	
11207	VINCENT THERESA L	793-9671	3
11210	XXXX	00	
11223	XXXX	00	
11239	XXXX	00	
11241	STURDAVANT KAREN S	793-4426	4
11243	XXXX	00	
11245	DOWNS RICK D	792-0271	2
11269	XXXX	00	

* 31 BUS 27 RES 11 NEW

Target Street	Cross Street	Source
✓	-	Haines Criss-Cross Directory

PALMETTO AVE 1985


PALMETTO AV 92374
REDLANDS

27050 MARSHBURN S L 792-2783 3
* 0 BUS 1 RES 0 NEW

Target Street	Cross Street	Source
-	✓	Haines Criss-Cross Directory

ALABAMA ST 1980

ALABAMA 92373
REDLANDS

614★	H&E HOME BUILDERS	793-0075	9
620	LIPSKEY LEONARD	793-1212	8
800★	LANGE&RUNKEL INC	793-2681	
★	LANGE&RUNKEL INC	824-7145	+0
855★	JOLLY BURGER	793-7007	9
875★	CIRCLE SERVICE	792-9974	+0
950	XXXX	00	
1180	XXXX	00	
1200	XXXX	00	
1220★	STERNS DICK CHEVRON	793-6679	9
1260★	MOTEL 7 WEST	793-2414	4
1280★	SPATA SERVICE STA	792-2020	+0
2000★	MATICH BROS PAVING	792-3650	8
2001	XXXX	00	
8203★	A 1 GRIT CO	792-5681	
★	CONCRETE PRECASTING	792-1511	
★	L T TRANSPORT	885-5842	7
★	LIVINGSTON GRAHAM	884-1251	+0
★	LIVINGSTON GRAHAM	793-3271	+0

Target Street	Cross Street	Source
-	✓	Haines Criss-Cross Directory

ALABAMA ST 1980

..ALABAMA 92373 CONT..

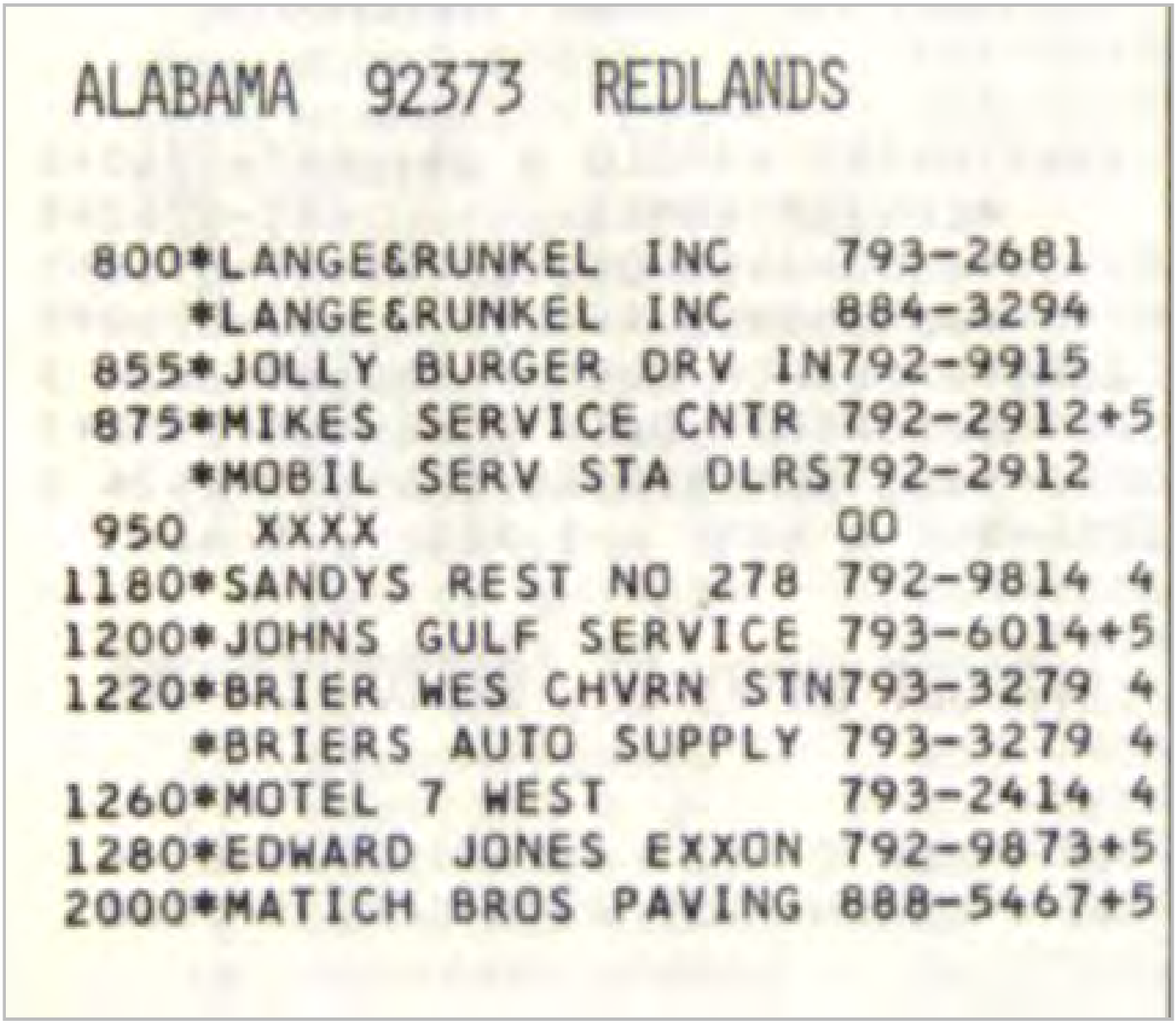
	★	NOTTINGHAM M C CO	792-4430+0
	★	R G L INC	824-6281+0
	★	SOCAL W CONSTRCTRS	793-3048+0
9712	★	UNITD STHRN CITRUS	793-2446
9886		VALDEPENA BEN	792-8144
9949		YOST WALTER	792-0058 +0
9950		LINDSEY RONALD D	793-9115 9
10050		XXXX	00
10133		XXXX	00
10199	★	REDLANDS MOVING&STR	793-8448+0
	★	U HAUL CO MOVING CT	793-8448+0
10225		XXXX	00
10285		SANDYS RESTAURANT	825-5366 +0
10557		XXXX	00
10804		DOWNS BILL H	792-5208
10917		RAMIREZ J J	792-4538 9
		RAMIREZ J J	792-5934 +0
11000		PIEKSMA CHAS	792-1123
11029		ROZEMA GERALD	793-6265 5
11032		NOORDMAN N	793-1907
11040		NOORDMAN MARVIN J	793-1974
11052		MEELKER B J	793-0954 +0
11119		ANDERSEN CASPER F	792-4861 +0
11133		NEYSES STEPHEN	793-7921 +0
11139		XXXX	00
11151		MCCUSKER RALPH A	792-4544
11158		XXXX	00
11168		DARLENE JULIA	793-4010 +0
11176		WALKER WM	793-7735 +0
11186		HEBERT MARK	792-7043 5
11195		CARDOZA AUGUSTINE	792-5796 8
11200		XXXX	00
11207		VANGROUW LARRY	792-2292 +0
11210		XXXX	00
11223		DEBOER RICK	792-9494 3
11239		XXXX	00
11241		XXXX	00
11243		XXXX	00
11245		BENDER GEROLD	792-2345 +0
11269		SHUFRAN WM	792-6251
11283		TWADDELL M	793-0692 +0
	★	20 BUS 40 RES 21 NEW	

Target Street	Cross Street	Source
✓	-	Haines Criss-Cross Directory

PALMETTO AVE 1980

Target Street	Cross Street	Source
-	✓	Haines Criss-Cross Directory

ALABAMA ST 1975



ALABAMA 92373 REDLANDS

800	*LANGE&RUNKEL INC	793-2681	
	*LANGE&RUNKEL INC	884-3294	
855	*JOLLY BURGER DRV IN	792-9915	
875	*MIKES SERVICE CNTR	792-2912	+5
	*MOBIL SERV STA DLRS	792-2912	
950	XXXX	00	
1180	*SANDYS REST NO 278	792-9814	4
1200	*JOHNS GULF SERVICE	793-6014	+5
1220	*BRIER WES CHVRN STN	793-3279	4
	*BRIERS AUTO SUPPLY	793-3279	4
1260	*MOTEL 7 WEST	793-2414	4
1280	*EDWARD JONES EXXON	792-9873	+5
2000	*MATICH BROS PAVING	888-5467	+5

Target Street	Cross Street	Source
-	✓	Haines Criss-Cross Directory

ALABAMA ST 1975

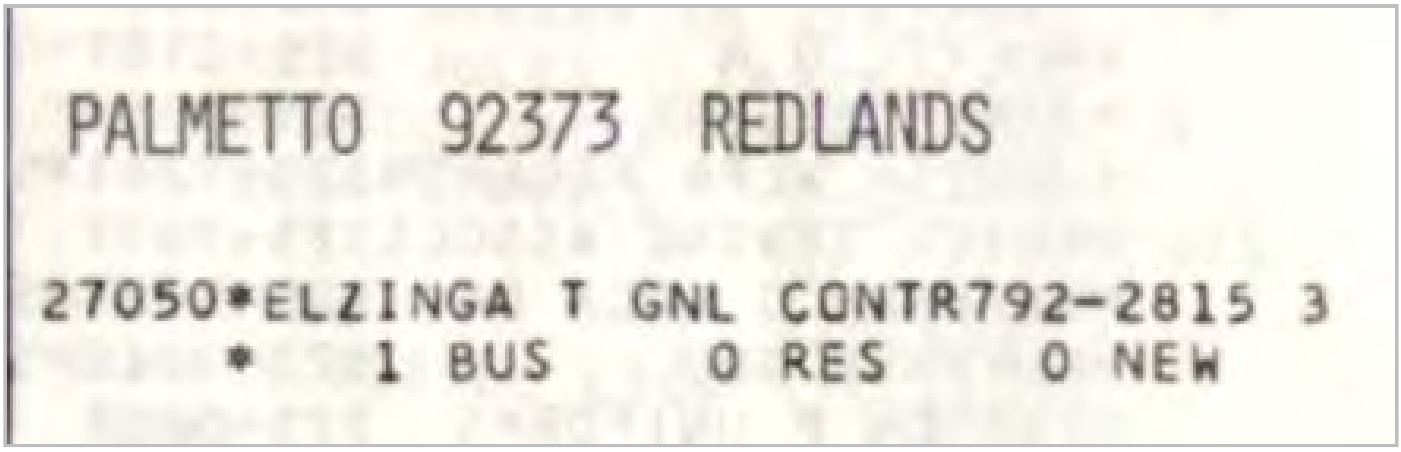
..ALABAMA 92373 CONT..

	*MATICH BROS PAVNG	888-5467
2001	XXXX	00
8203	*A 1 GRIT CO	792-5681
	*CONCRETE PRECASTING	792-1511
	*NOTTINGHAM M C CO	792-4430+5
	*TRI CITY CONCRETE	884-1251+5
9712	*UNITED CITRUS GRWRS	793-2446
9886	VALDEPENA BEN	792-8144
9950	XXXX	00
10133	XXXX	00
10199	XXXX	00
10225	XXXX	00
10557	LIPSKEY LEONARD	793-1212
10804	DOWNS BILL H	792-5208
10917	RAMIREZ J J	792-5934
11000	PIEKSMA CHAS	792-1123
11029	ROZEMA GERALD	793-6265+5
11032	NOORDMAN JOHN	793-1907
11040	NOORDMAN MARVIN J	793-1974
11052	DEJONG DAVID	792-6547+5
11119	ANDERSEN CASPER F	792-4861
11133	CRAWFORD WILLIS T	793-6114 3
11139	XXXX	00
11151	MCCUSKER RALPH A	792-4544
11158	XXXX	00
11168	PRINS KEN	792-4694+5
	VANDERWEIT MARK	792-4694+5
11186	HEBERT MARK	792-7043+5
11195	CARDOZA AUGUSTINE	792-5249
11200	XXXX	00
11207	VANDERWEIT JOHN	792-1695
11210	DEATHERAGE RENDEL	793-3972+5
11223	DEBOER RICK	792-9494 3
11239	XXXX	00
11241	XXXX	00
11242	CLAY CLIFFORD C	792-0731+5
11243	XXXX	00
11269	SHUFRAN WM	792-6251

* 18 BUS 33 RES 13 NEW

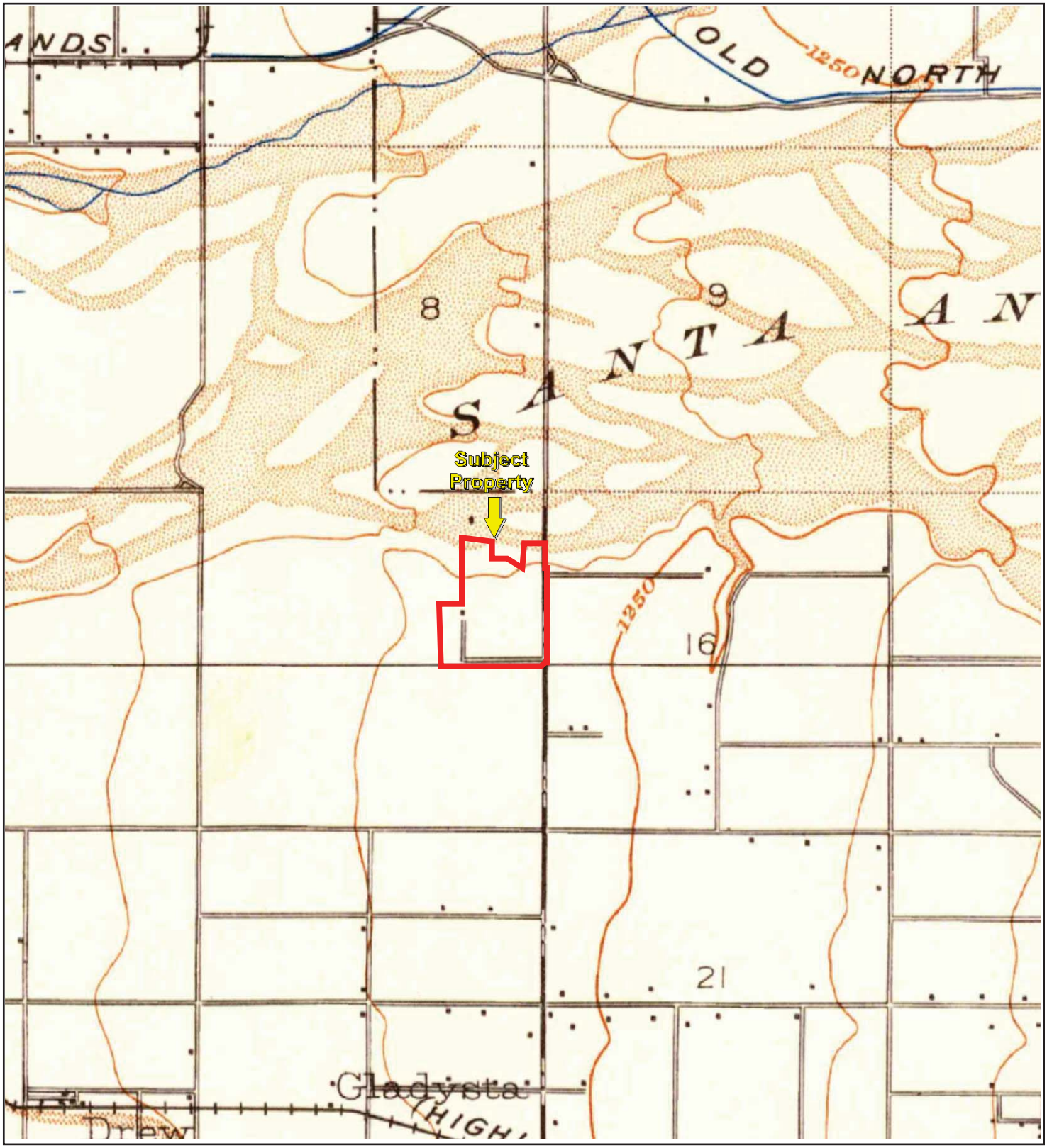
Target Street	Cross Street	Source
✓	-	Haines Criss-Cross Directory

PALMETTO AVE 1975



PALMETTO 92373 REDLANDS

27050*ELZINGA T GNL CONTR792-2815 3
* 1 BUS 0 RES 0 NEW



TP, Redlands, 1899, 15-minute

0 Miles 0.25 0.5 1 1.5

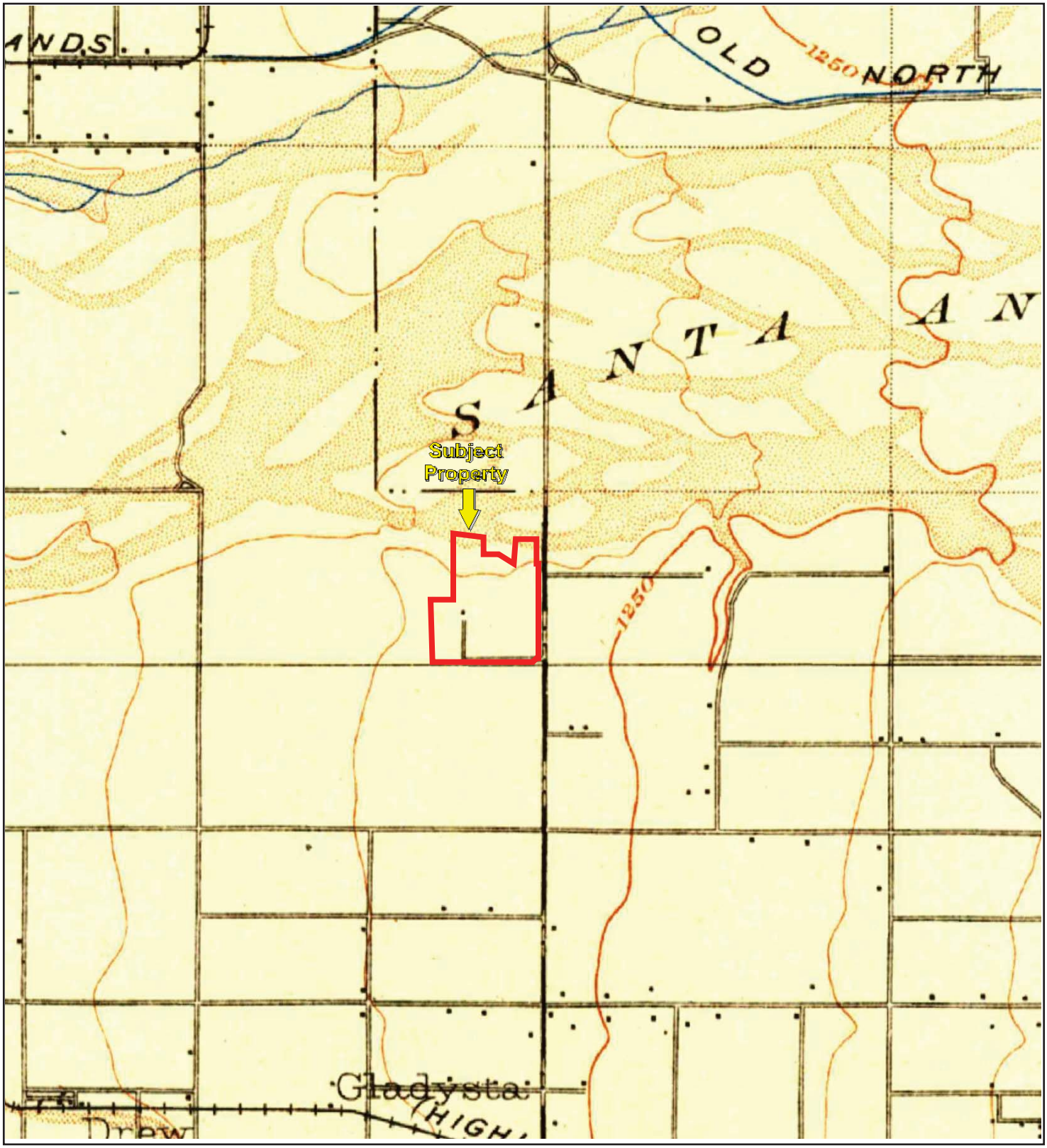
N

Key: Subject Property

APPENDIX B: Topographic Maps

Project No. 17-203002.1

PARTNER

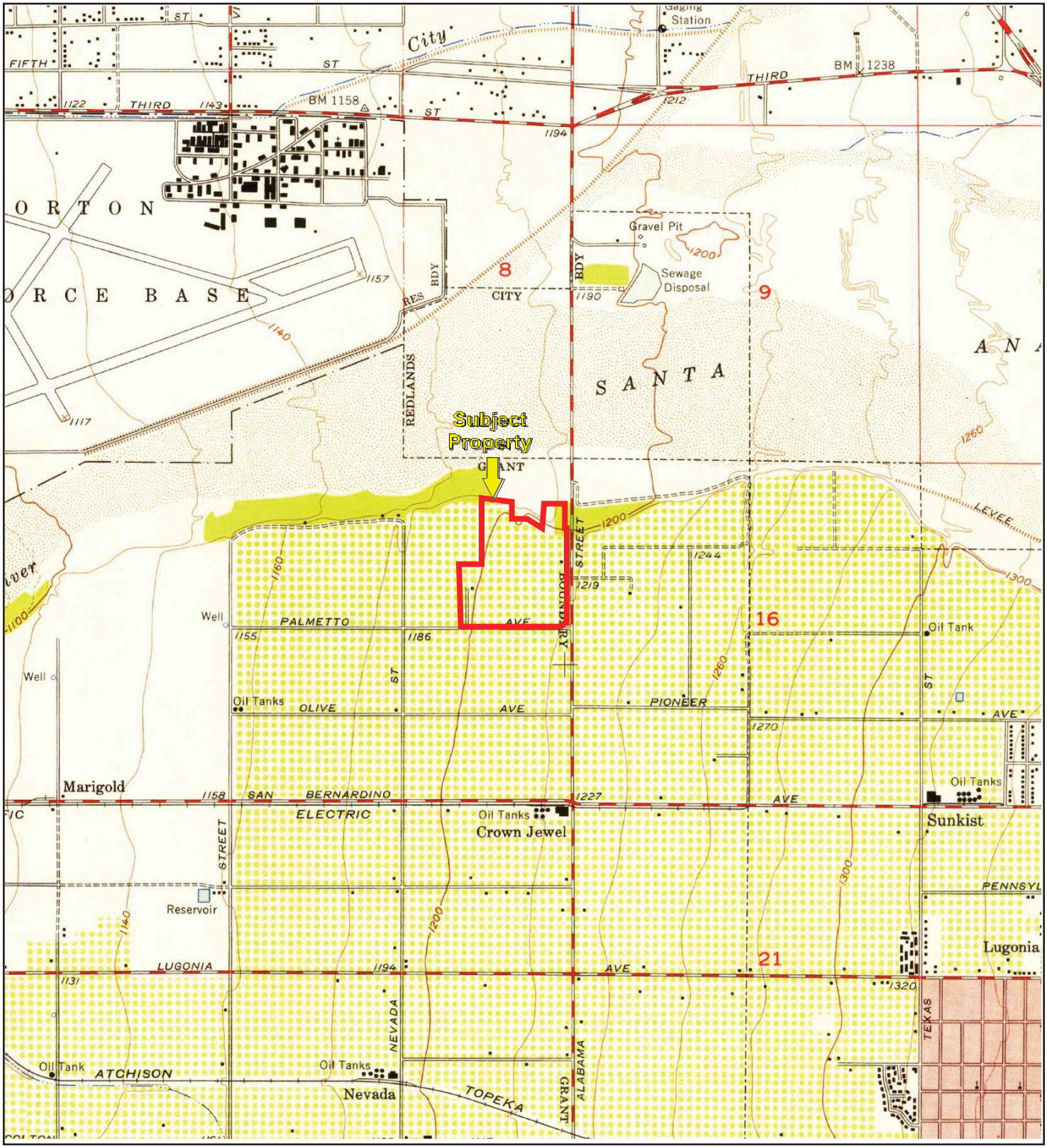


TP, Redlands, 1901, 15-minute

0 Miles 0.25 0.5 1 1.5

N

Key: Subject Property



TP, Redlands, 1954, 7.5-minute

0 Miles 0.25 0.5 1 1.5

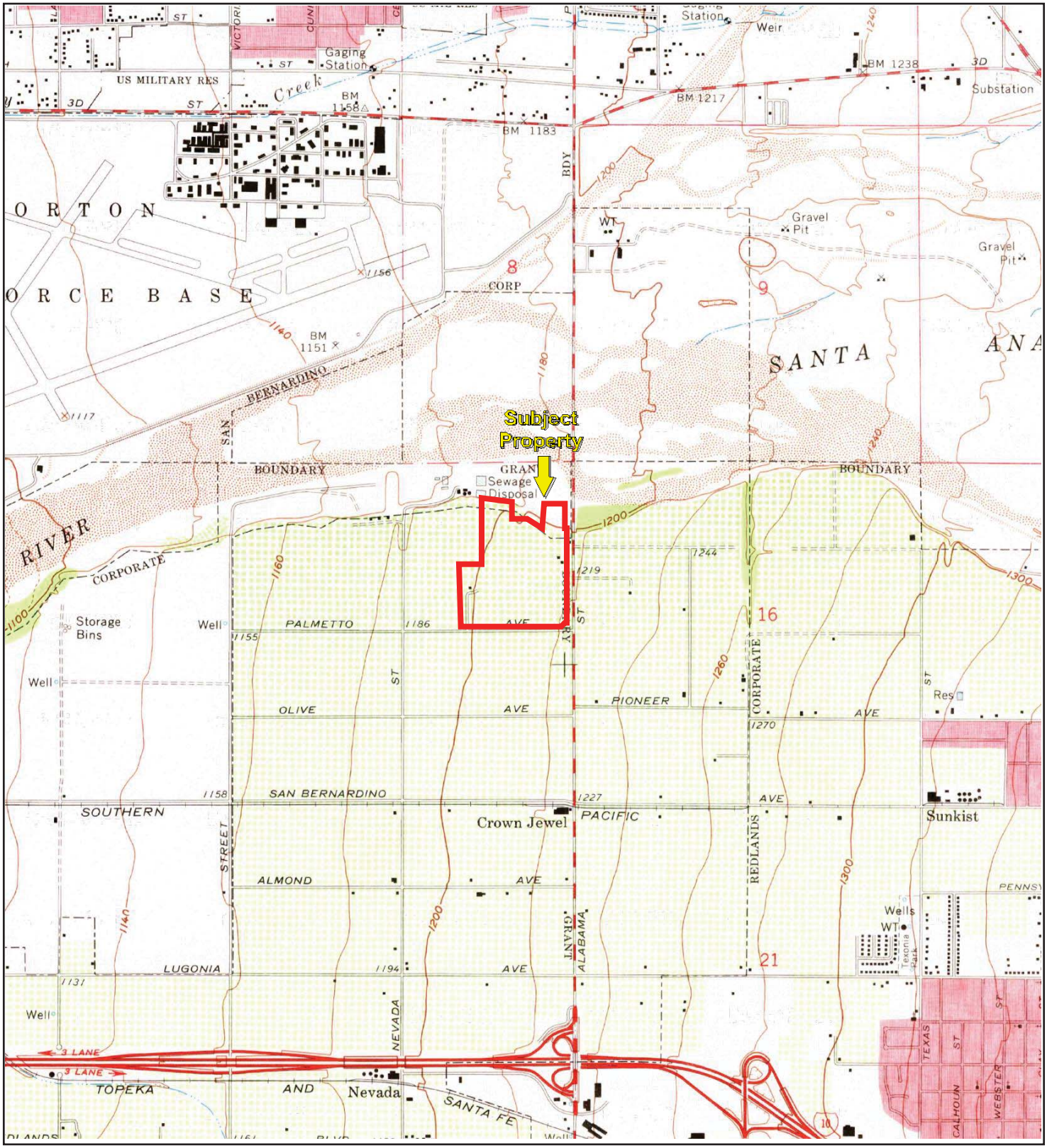
N

Key: Subject Property

APPENDIX B: Topographic Maps

Project No. 17-203002.1

PARTNER



TP, Redlands, 1967, 7.5-minute

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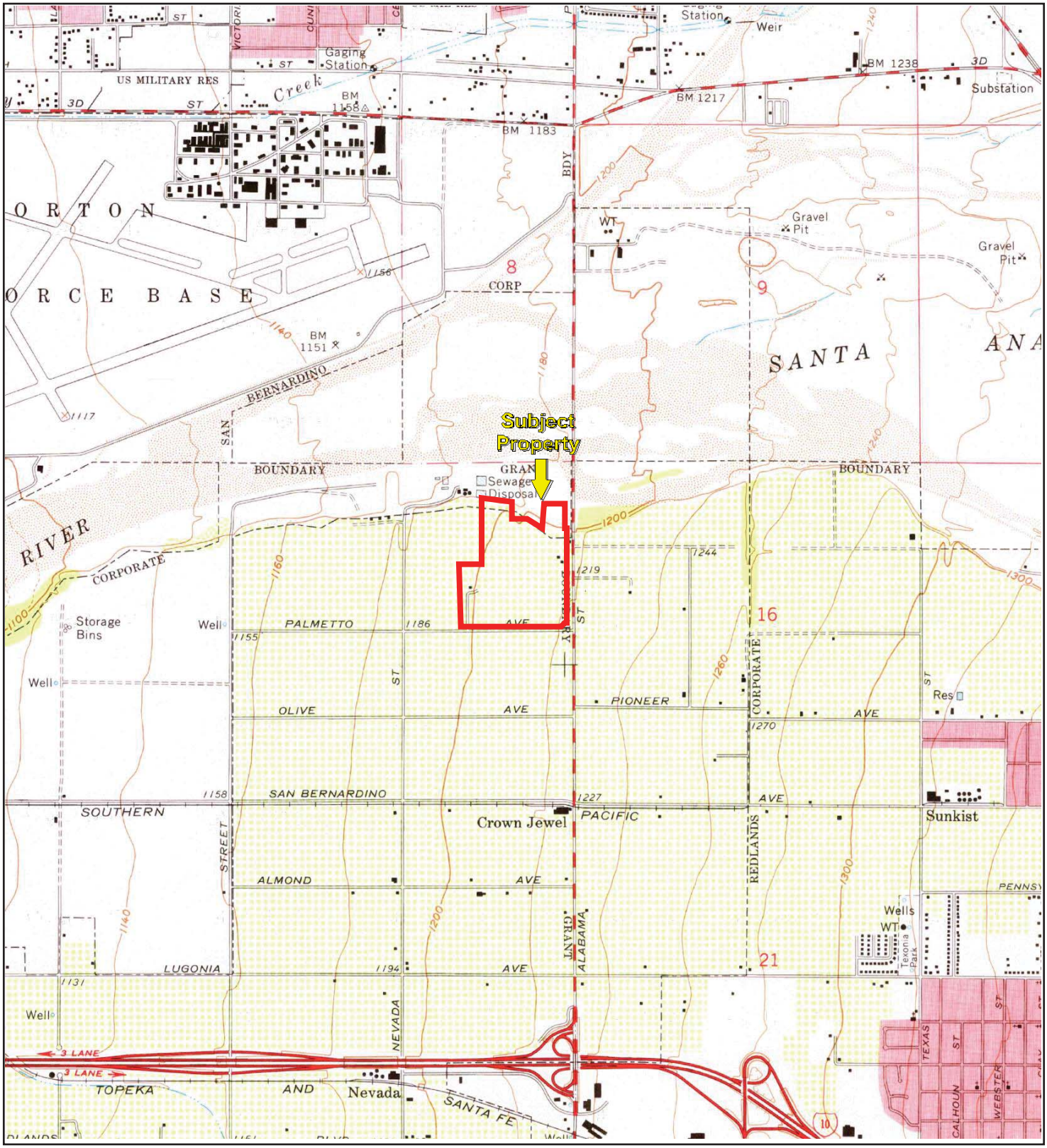
N

Key: Subject Property



TP, Redlands, 1973, 7.5-minute

0 Miles 0.25 0.5 1 1.5

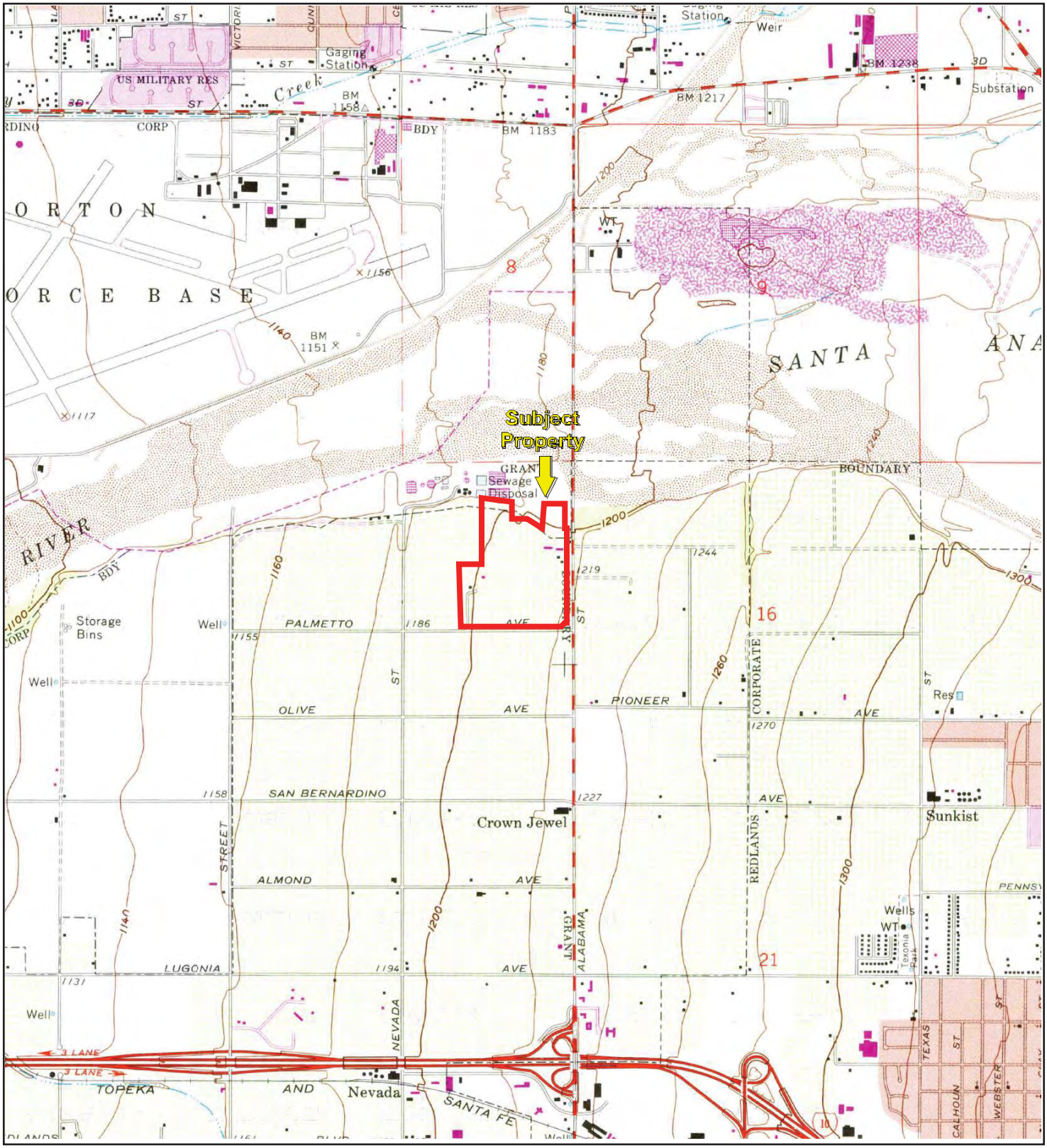
N

Key: Subject Property

APPENDIX B: Topographic Maps

Project No. 17-203002.1

PARTNER



TP, Redlands, 1980, 7.5-minute

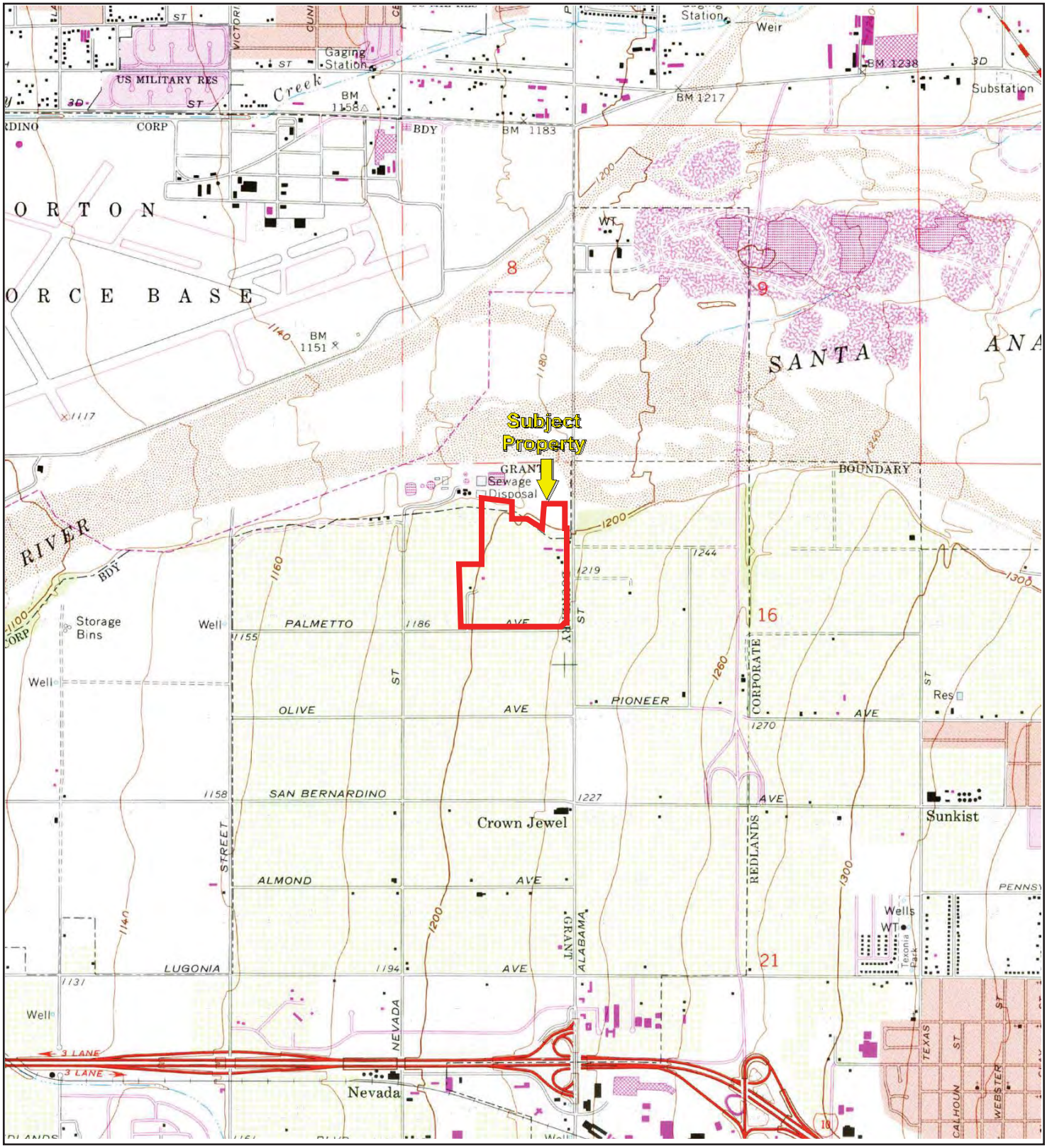
0 Miles 0.25 0.5 1 1.5

N

Key: Subject Property

APPENDIX B: Topographic Maps

Project No. 17-203002.1



TP, Redlands, 1988, 7.5-minute

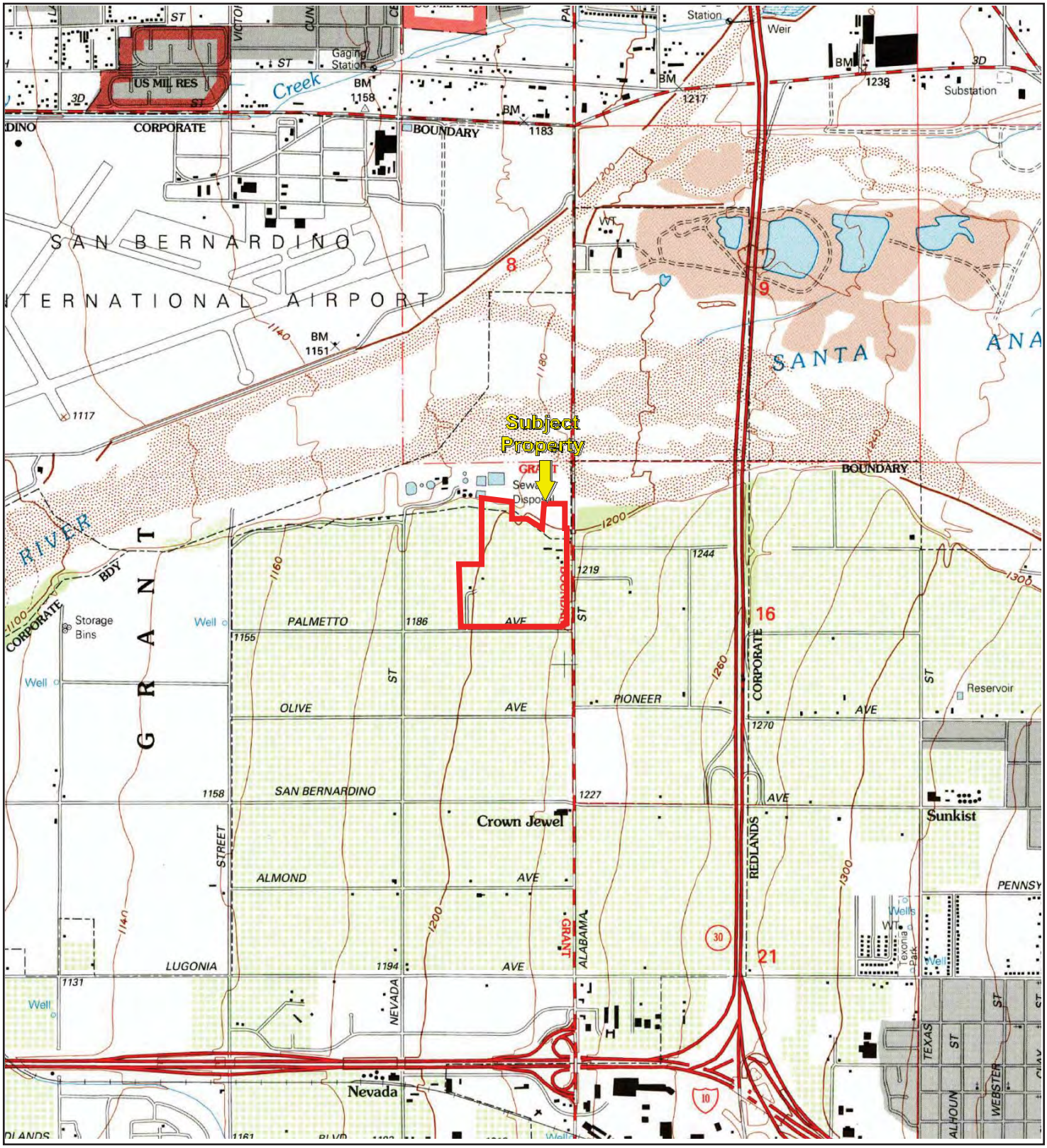
0 Miles 0.25 0.5 1 1.5

N

Key: Subject Property

APPENDIX B: Topographic Maps

Project No. 17-203002.1



TP, Redlands, 1996, 7.5-minute

0 Miles 0.25 0.5 1 1.5

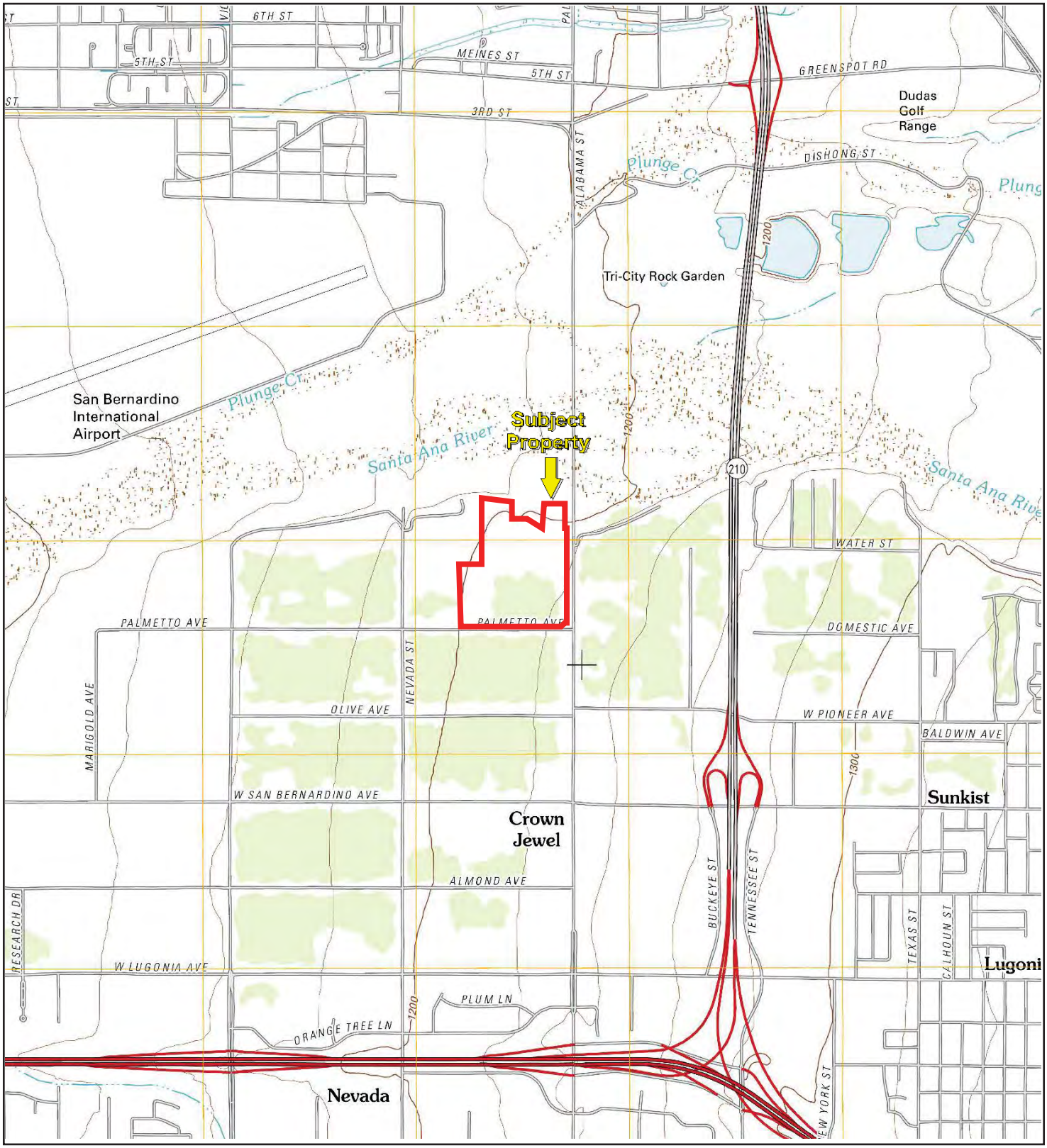
N

Key: Subject Property

APPENDIX B: Topographic Maps

Project No. 17-203002.1

PARTNER



TP, Redlands, 2012, 7.5-minute

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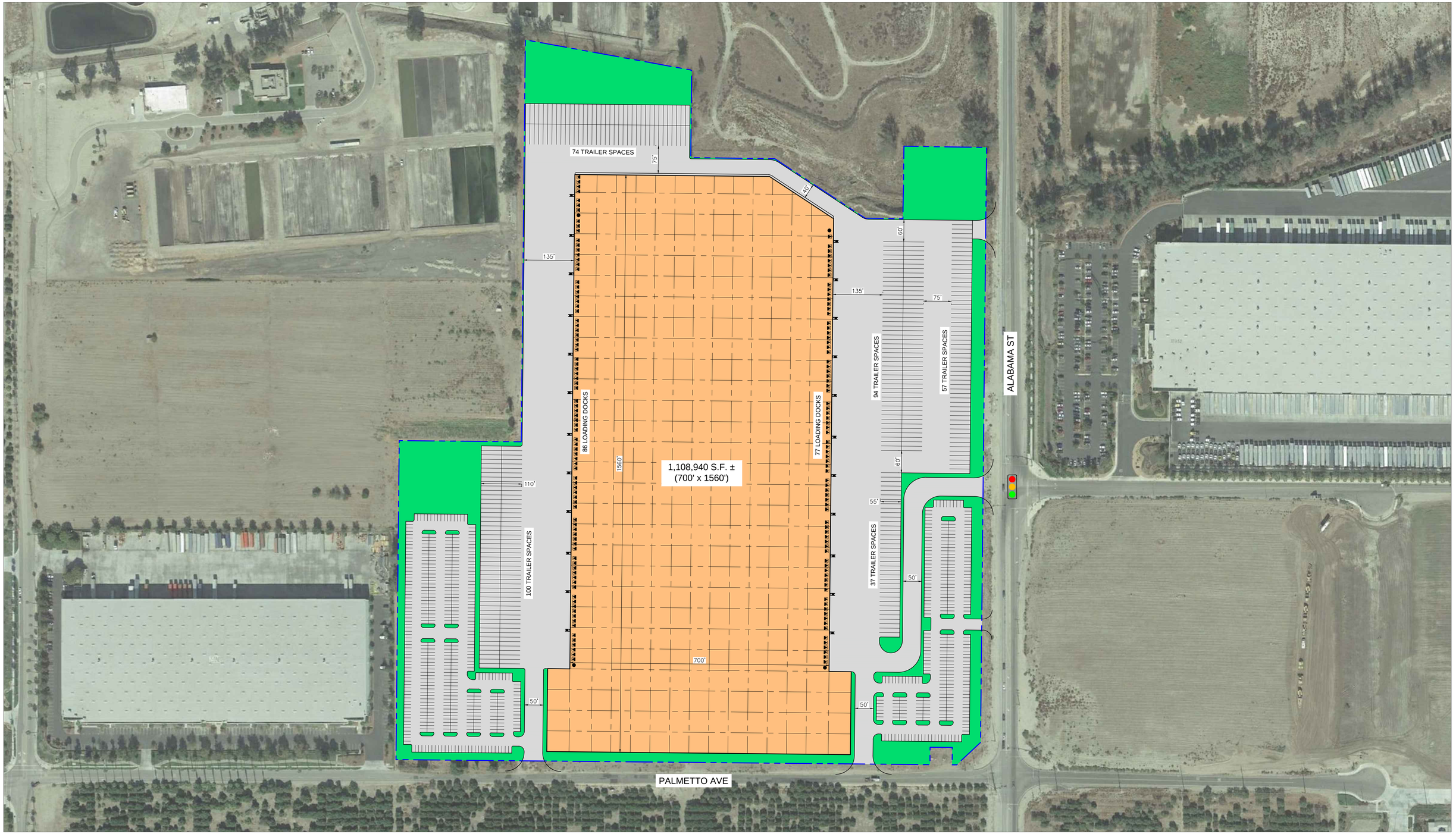
N

Key: Subject Property



Scale: NOT TO SCALE
Date: 27 NOV 2017

GROSS SITE AREA:	55.44 AC. ±
NET SITE AREA:	55.44 AC. ±
TOTAL BUILDING AREA:	1,108,940 S.F.
COVERAGE:	45.9%
TOTAL PARKING SPACES:	680
TOTAL TRAILER SPACES:	362
TOTAL DOCK HIGH DOORS:	163

NORTH

Conceptual Site Plan
NWC Alabama St & Palmetto Ave
Redlands, CA

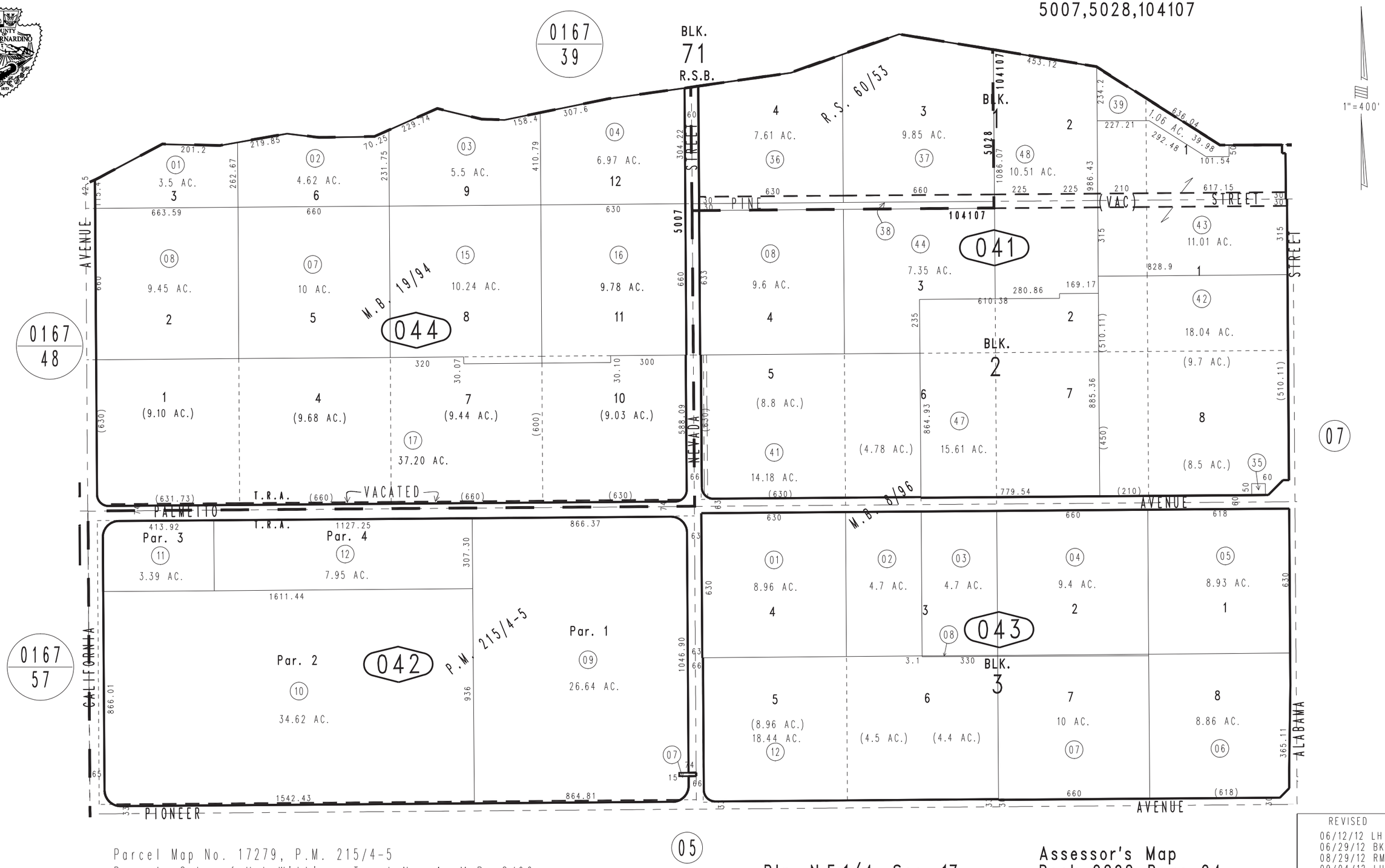
Duke REALTY

THIS MAP IS FOR THE PURPOSE OF AD VALOREM TAXATION ONLY.

Gregory Tract No. 1
M.B. 19/94

City of Redlands
Redlands Unified
Tax Rate Area
5007,5028,104107

0292-04



Parcel Map No. 17279, P.M. 215/4-5
Brown's Sub. of H.L.Williams Tract No. 1, M.B. 8/96
Ptn. H.L.Williams Tract No. 1, M.B. 2/19

Ptn. N.E.1/4, Sec. 17
T.1S., R.3W.

Assessor's Map
Book 0292 Page 04
San Bernardino County

REVISED
06/12/12 LH
06/29/12 BK-MC
08/29/12 RM
09/04/12 LH
07/16/14 RU
07/17/14 RU

February 2004

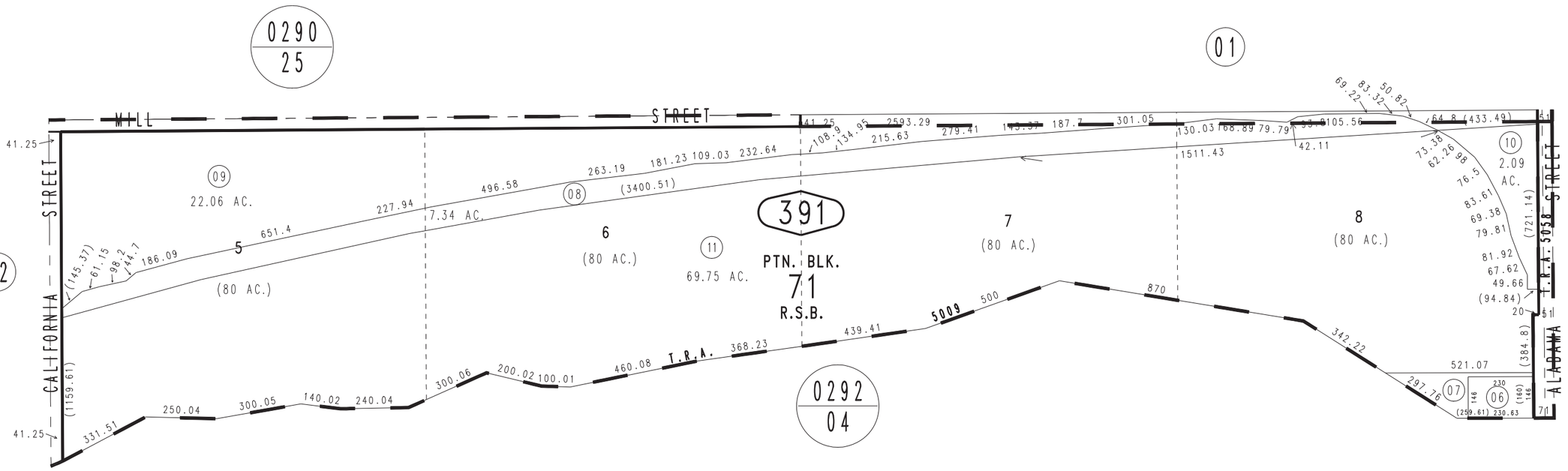
THIS MAP IS FOR THE PURPOSE OF AD VALOREM TAXATION ONLY.

Ptn. Rancho San Bernardino, M.B. 7/2

City of Redlands
Tax Rate Area
5009 5058

0167 - 39

1"=400'



February 2005

Ptn. N.1/2, Sec. 17
T.1S., R.3W.

Assessor's Map
Book 0167 Page 39
San Bernardino County

REVISED
01/15/08 RM

Property Information Management System

San Bernardino County

Office of the Assessor

PIMS PACKAGE REPORT FOR PARCEL 0167-391-06-0000

Property Information

Property Address (Main Situs) Protected per CA. Govt. Code Sect. 6254.21
Protected per CA. Govt. Code Sect. 6254.21

Owner and Mailing Address MCLANE SUNEAST INC
Protected per CA. Govt. Code Sect. 6254.21
Protected per CA. Govt. Code Sect. 6254.21

Effective Date 12/28/2011

Parcel 0167391060000
Parcel Status ACTIVE
Parcel Type REAL PROPERTY
Property ID
Tax Status ASSESSED BY COUNTY
Use Code VACANT
Land Access PUBLIC PAVED
Size 20,000 SQ. FEET TO 1.500 [illegible]
Land Type RESTRICTED
District SAN BERNARDINO
Resp Group REAL PROPERTY
Resp Unit COMMERCIAL ZONE OR USE

Current Owners

Name MCLANE SUNEAST INC

R/I CORPORATION
% Int 100.0000000
Type BILLED OWNER
Acquisition Date 12/16/2011
Document Date 12/16/2011
Inactive Date NONE

Document Numbers
20110533740

Legal Parcel Map

Parcel Map	Parcel Nbr	Unit	Book	Page
	0167391060000			

Legal Description

R S B PTN LOT 8 BLK 71 COM AT NE COR SD BLK 71 TH S 00 DEG 34 MIN 57 SECONDS W 1085.98 FT TH N 89 DEG 10 MIN 16 SECONDS W 71 FT TO TRUE POB TH N 89 DEG 10 MIN 16 SECONDS W 230.63 FT TH N 00 DEG 49 MIN 44 SECONDS E 146 FT TH S 89 DEG 10 MIN 16 SECONDS E 230 FT TH S 00 DEG 34 MIN 57 SECONDS W 146 FT TO POB ***** 1-3-96 #96-001113 CC/LLADJ *****

No Legal Reason for Change Found

No Active Homeowner's Exemptions Found

Prior Roll History

Year: 2017

TRA	5009	**Land Value**	34,632
Supplement	NO	**Improvement Value**	0
Correction Date		**Improvement Penalty**	0
Correction Code		**Pers Prop Value**	0
Original Parcel	0167391060000	**Pers Prop Penalty**	0
Billed Owner	MCLANE SUNEAST INC	**Total Penalties**	0
Joint Owner		**Total Value**	34,632
		HOX Exemptions	0
		Special Exemptions	0
		Net Value	**34,632**

Year: 2016

TRA	5009	**Land Value**	33,953
Supplement	NO	**Improvement Value**	0
Correction Date		**Improvement Penalty**	0
Correction Code		**Pers Prop Value**	0
Original Parcel	0167391060000	**Pers Prop Penalty**	0
Billed Owner	MCLANE SUNEAST INC	**Total Penalties**	0
Joint Owner		**Total Value**	33,953
		HOX Exemptions	0
		Special Exemptions	0
		Net Value	**33,953**

Year: 2015

TRA	5009	**Land Value**	33,443
Supplement	NO	**Improvement Value**	0
Correction Date		**Improvement Penalty**	0
Correction Code		**Pers Prop Value**	0
Original Parcel	0167391060000	**Pers Prop Penalty**	0
Billed Owner	MCLANE SUNEAST INC	**Total Penalties**	0
Joint Owner		**Total Value**	33,443
		HOX Exemptions	0
		Special Exemptions	0
		Net Value	**33,443**

Year: 2014

TRA	5009	**Land Value**	32,788
Supplement	NO	**Improvement Value**	0
Correction Date		**Improvement Penalty**	0
Correction Code		**Pers Prop Value**	0
Original Parcel	0167391060000	**Pers Prop Penalty**	0
Billed Owner	MCLANE SUNEAST INC	**Total Penalties**	0
Joint Owner		**Total Value**	32,788
		HOX Exemptions	0
		Special Exemptions	0
		Net Value	**32,788**

Year: 2013

TRA	5009	**Land Value**	32,640
Supplement	NO	**Improvement Value**	0
Correction Date		**Improvement Penalty**	0
Correction Code		**Pers Prop Value**	0
Original Parcel	0167391060000	**Pers Prop Penalty**	0
Billed Owner	MCLANE SUNEAST INC	**Total Penalties**	0
Joint Owner		**Total Value**	32,640
		HOX Exemptions	0
		Special Exemptions	0
		Net Value	**32,640**

Year: 2012

TRA	5009	**Land Value**	32,000
Supplement	NO	**Improvement Value**	0
Correction Date		**Improvement Penalty**	0
Correction Code		**Pers Prop Value**	0
Original Parcel	0167391060000	**Pers Prop Penalty**	0
Billed Owner	MCLANE SUNEAST INC	**Total Penalties**	0
Joint Owner		**Total Value**	32,000
		HOX Exemptions	0
		Special Exemptions	0
		Net Value	**32,000**

Year: 2011

TRA	5009	**Land Value**	10,700
Supplement	YES	**Improvement Value**	0
Correction Date		**Improvement Penalty**	0
Correction Code		**Pers Prop Value**	0
Original Parcel	0167391060000	**Pers Prop Penalty**	0
Billed Owner	TEUNISSEN, DONALD H TR	**Total Penalties**	0
Joint Owner	TEUNISSEN, LAURA G TR	**Total Value**	10,700
		HOX Exemptions	0
		Special Exemptions	0
		Net Value	**10,700**

Year: 2010

TRA	5009	**Land Value**	10,620
Supplement	NO	**Improvement Value**	0
Correction Date		**Improvement Penalty**	0
Correction Code		**Pers Prop Value**	0
Original Parcel	0167391060000	**Pers Prop Penalty**	0
Billed Owner	TEUNISSEN, DONALD H TR	**Total Penalties**	0
Joint Owner	TEUNISSEN, LAURA G TR	**Total Value**	10,620
		HOX Exemptions	0
		Special Exemptions	0
		Net Value	**10,620**

Year: 2009

TRA	5009	**Land Value**	10,645
Supplement	NO	**Improvement Value**	0
Correction Date		**Improvement Penalty**	0
Correction Code		**Pers Prop Value**	0
Original Parcel	0167391060000	**Pers Prop Penalty**	0
Billed Owner	TEUNISSEN, DONALD H TR	**Total Penalties**	0
Joint Owner	TEUNISSEN, LAURA G TR	**Total Value**	10,645
		HOX Exemptions	0
		Special Exemptions	0
		Net Value	**10,645**

Year: 2008

TRA	5009	**Land Value**	10,436
Supplement	NO	**Improvement Value**	0
Correction Date		**Improvement Penalty**	0
Correction Code		**Pers Prop Value**	0
Original Parcel	0167391060000	**Pers Prop Penalty**	0
Billed Owner	TEUNISSEN, DONALD H TR	**Total Penalties**	0
Joint Owner	TEUNISSEN, LAURA G TR	**Total Value**	10,436
		HOX Exemptions	0
		Special Exemptions	0
		Net Value	**10,436**

Year: 2007

TRA	5009	**Land Value**	10,231
Supplement	NO	**Improvement Value**	0
Correction Date		**Improvement Penalty**	0
Correction Code		**Pers Prop Value**	0
Original Parcel	0167391060000	**Pers Prop Penalty**	0
Billed Owner	TEUNISSEN, DONALD H TR	**Total Penalties**	0
Joint Owner	TEUNISSEN, LAURA G TR	**Total Value**	10,231
		HOX Exemptions	0
		Special Exemptions	0
		Net Value	**10,231**

Year: 2006

TRA	5009	**Land Value**	10,030
Supplement	NO	**Improvement Value**	0
Correction Date		**Improvement Penalty**	0
Correction Code		**Pers Prop Value**	0
Original Parcel	0167391060000	**Pers Prop Penalty**	0
Billed Owner	TEUNISSEN, DONALD H TR	**Total Penalties**	0
Joint Owner	TEUNISSEN, LAURA G TR	**Total Value**	10,030
		HOX Exemptions	0
		Special Exemptions	0
		Net Value	**10,030**

Year: 2005

TRA	5009	**Land Value**	9,833
Supplement	NO	**Improvement Value**	0
Correction Date		**Improvement Penalty**	0
Correction Code		**Pers Prop Value**	0
Original Parcel	0167391060000	**Pers Prop Penalty**	0
Billed Owner	TEUNISSEN, DONALD H TR	**Total Penalties**	0
Joint Owner	TEUNISSEN, LAURA G TR	**Total Value**	9,833
		HOX Exemptions	0
		Special Exemptions	0
		Net Value	**9,833**

Year: 2004

TRA	5009	**Land Value**	9,640
Supplement	NO	**Improvement Value**	0
Correction Date		**Improvement Penalty**	0
Correction Code		**Pers Prop Value**	0
Original Parcel	0167391060000	**Pers Prop Penalty**	0
Billed Owner	TEUNISSEN, DONALD H TR	**Total Penalties**	0
Joint Owner	TEUNISSEN, LAURA G TR	**Total Value**	9,640
		HOX Exemptions	0
		Special Exemptions	0
		Net Value	**9,640**

Year: 2003

TRA	5009	**Land Value**	9,463
Supplement	NO	**Improvement Value**	0
Correction Date		**Improvement Penalty**	0
Correction Code		**Pers Prop Value**	0
Original Parcel	0167391060000	**Pers Prop Penalty**	0
Billed Owner	TEUNISSEN, DONALD H TR	**Total Penalties**	0
Joint Owner	TEUNISSEN, LAURA G TR	**Total Value**	9,463
		HOX Exemptions	0
		Special Exemptions	0
		Net Value	**9,463**

Year: 2002

TRA	5009	**Land Value**	9,277
Supplement	NO	**Improvement Value**	0
Correction Date		**Improvement Penalty**	0
Correction Code		**Pers Prop Value**	0
Original Parcel	0167391060000	**Pers Prop Penalty**	0
Billed Owner	TEUNISSEN, DONALD H TR	**Total Penalties**	0
Joint Owner	TEUNISSEN, LAURA G TR	**Total Value**	9,277
		HOX Exemptions	0
		Special Exemptions	0
		Net Value	**9,277**

Year: 2001

TRA	5009	**Land Value**	9,095
Supplement	NO	**Improvement Value**	0
Correction Date		**Improvement Penalty**	0
Correction Code		**Pers Prop Value**	0
Original Parcel	0167391060000	**Pers Prop Penalty**	0
Billed Owner	TEUNISSEN, DONALD H TR	**Total Penalties**	0
Joint Owner	TEUNISSEN, LAURA G TR	**Total Value**	9,095
		HOX Exemptions	0
		Special Exemptions	0
		Net Value	**9,095**

Year: 2000

TRA	5009	**Land Value**	8,917
Supplement	NO	**Improvement Value**	0
Correction Date		**Improvement Penalty**	0
Correction Code		**Pers Prop Value**	0
Original Parcel	0167391060000	**Pers Prop Penalty**	0
Billed Owner	TEUNISSEN, DONALD H TR	**Total Penalties**	0
Joint Owner	TEUNISSEN, LAURA G TR	**Total Value**	8,917
		HOX Exemptions	0
		Special Exemptions	0
		Net Value	**8,917**

Year: 1999

TRA	5009	**Land Value**	8,742
Supplement	NO	**Improvement Value**	0
Correction Date		**Improvement Penalty**	0
Correction Code		**Pers Prop Value**	0
Original Parcel	0167391060000	**Pers Prop Penalty**	0
Billed Owner	TEUNISSEN, DONALD H TR	**Total Penalties**	0
Joint Owner	TEUNISSEN, LAURA G TR	**Total Value**	8,742
		HOX Exemptions	0
		Special Exemptions	0
		Net Value	**8,742**

Year: 1998

TRA	5009	**Land Value**	8,583
Supplement	NO	**Improvement Value**	0
Correction Date		**Improvement Penalty**	0
Correction Code		**Pers Prop Value**	0
Original Parcel	0167391060000	**Pers Prop Penalty**	0
Billed Owner	TEUNISSEN, DONALD H TR	**Total Penalties**	0
Joint Owner	TEUNISSEN, LAURA G TR	**Total Value**	8,583
		HOX Exemptions	0
		Special Exemptions	0
		Net Value	**8,583**

Year: 1997

TRA	5009	**Land Value**	8,415
Supplement	NO	**Improvement Value**	0
Correction Date		**Improvement Penalty**	0
Correction Code		**Pers Prop Value**	0
Original Parcel	0167391060000	**Pers Prop Penalty**	0
Billed Owner	TEUNISSEN, DONALD H TR	**Total Penalties**	0
Joint Owner	TEUNISSEN, LAURA G TR	**Total Value**	8,415
		HOX Exemptions	0
		Special Exemptions	0
		Net Value	**8,415**

Year: 1996

TRA	5009	**Land Value**	8,250
Supplement	NO	**Improvement Value**	0
Correction Date		**Improvement Penalty**	0
Correction Code		**Pers Prop Value**	0
Original Parcel	0167391060000	**Pers Prop Penalty**	0
Billed Owner	TEUNISSEN, DONALD H TR	**Total Penalties**	0
Joint Owner	TEUNISSEN, LAURA G TR	**Total Value**	8,250
		HOX Exemptions	0
		Special Exemptions	0
		Net Value	**8,250**

Parcel History

Event Date	12/16/2011	**Multi Parcel List**
Event Group/Type	TRANSFER - 100% PER RECORDED DOCUMENT	
Multi Parcel	No	

Event Date	01/08/2000	**Multi Parcel List**
Event Group/Type	TRA EVENT - ADDED FROM PREVIOUS PARCEL	
Multi Parcel	No	

Event Date	01/03/1996	**Multi Parcel List**
Event Group/Type	TRANSFER - WORKED IN OLD SYSTEM (100% OR PARTIAL)	
Multi Parcel	No	

Event Date	01/03/1996	**Multi Parcel List**
Event Group/Type	CREATE - SPLIT	0167391060000 NEW-SPL
Multi Parcel	Yes	0167391070000 NEW-SPL
		0167391030000 OLD-SPL

Ownership History

Owner Name: MCLANE SUNEAST INC

R/I	CORPORATION
% Int	100.0000000
Type	BILLED OWNER
Acquisition Date	12/16/2011
Document Date	12/16/2011
Inactive Date	NONE

Document Numbers

20110533740

Owner Name: TEUNISSEN, DONALD H TR

R/I	TRUST REVOCABLE
% Int	50.0000000
Type	BILLED OWNER
Acquisition Date	01/03/1996
Document Date	01/03/1996
Inactive Date	12/15/2011

Document Numbers

9600111900000

Owner Name: TEUNISSEN, LAURA G TR

R/I	TRUST REVOCABLE
% Int	50.0000000
Type	JOINT MAIL OWNER
Acquisition Date	01/03/1996
Document Date	01/03/1996
Inactive Date	12/15/2011

Document Numbers

9600111900000

Supplement History

Supplement Date: 12/16/2011

Roll Type	REGULAR SUPPLEMENT	**Supp Type**	OWNERSHIP TRANSFER
Supp Year	2011	**New Land**	32,000
Revised IND		**New Imprv**	0
Corrected Date		**Old Land**	10,700
Correction Code		**Old Imprv**	0
Legal Status	SECURED	**New HOX**	0
TRA	5009	**Old HOX**	0
NOPIC Date	06/02/2012	**Supp HOX**	0
Extract Date	08/03/2012	**Special Exem**	0
Months Prorated	6	**Impr Penalty**	0
Corr Status		**Prior Supps**	0
Original Parcel	0167391060000	**Construction in Progress**	0
		Net Value	**21,300**
Billed Owner	MCLANE SUNEAST INC		
Joint Owner			

Supplement Date: 01/03/1996

Roll Type	REGULAR SUPPLEMENT	**Supp Type**	OWNERSHIP TRANSFER
Supp Year	1995	**New Land**	8,250
Revised IND		**New Imprv**	0
Corrected Date	04/12/1999	**Old Land**	0
Correction Code	540E	**Old Imprv**	0
Legal Status	SECURED	**New HOX**	0
TRA	5009	**Old HOX**	0
NOPIC Date	04/12/1999	**Supp HOX**	0
Extract Date	04/12/1999	**Special Exem**	0
Months Prorated	5	**Impr Penalty**	0
Corr Status	COR	**Prior Supps**	0
Original Parcel	0167391060000	**Construction in Progress**	0
		Net Value	**8,250**
Billed Owner	TEUNISSEN, DONALD H TR		
Joint Owner	TEUNISSEN, LAURA G TR		

Property Information Management System

San Bernardino County

Office of the Assessor

PIMS PACKAGE REPORT FOR PARCEL 0292-041-42-0000

Property Information

Property Address (Main Situs) Protected per CA. Govt. Code Sect. 6254.21
Protected per CA. Govt. Code Sect. 6254.21

Owner and Mailing Address MC LANE SUNEAST INC
C/O LEN MEWHINNEY
Protected per CA. Govt. Code Sect. 6254.21
Protected per CA. Govt. Code Sect. 6254.21

Effective Date 03/08/2011

Parcel 0292041420000
Parcel Status ACTIVE
Parcel Type REAL PROPERTY
Property ID
Tax Status ASSESSED BY COUNTY
Use Code VACANT
Land Access PUBLIC PAVED
Size 14.001 TO 25.000 ACRES
Land Type INDUSTRIAL
District SAN BERNARDINO
Resp Group REAL PROPERTY
Resp Unit INDUSTRIAL ZONE OR USE

Current Owners

Name MC LANE SUNEAST INC

R/I CORPORATION
% Int 100.0000000
Type BILLED OWNER
Acquisition Date 02/25/2011
Document Date 02/25/2011
Inactive Date NONE

Document Numbers
20110079103

Legal Parcel Map

Parcel Map	Parcel Nbr	Unit	Book	Page
	0292041420000			

Legal Description

BROWN SUB H L W1LL1AMS TR NO 1 PTNS LOTS 1 2 7 AND 8 BLK 2 COM ON W LI ALABAMA ST 450 FT N OF SE COR SD LOT 8 TH W 828.9 FT TO PT 450 FT E OF W LI LOT 7 TH N 510.11 FT TH E 828.9 FT TH S 510.11 FTTO POB TOGETHER WITH THAT PTN LOTS 7 & 8 BEG AT SE CORNER LOT 8 TH W ALG S LI OF LOTS 8 & 7 828.9 FT TO PT 450 E OF SW CORNER SD LOT 7 TH N PARALLEL TO W LI LOT 7 SD BLK 450 FT TH E 828.9 TO TO W LI ALABAMA ST TH S 450 TO POB EX THAT PTN DESC AS COM AT SE CORNER OF SD LOT 8 SD SE CORNER BEING 25.5 FT W OF CTR LI ALABAMA ST & 30 FT N OF CTR LI OF PALMETTO AVE TH W ALG S LI SD LOT 8 103 FT TOTRUE POB TH N AT R ANGELS 50 FT TH W AT R ANGELS PARALLEL WITH N LI OF PALMETTO AVE 50 FT TH S AT RANGELS 50 FT TO AFORESAID S LI LOT 8 TH E ALG S LI LOT 8 60 FT TO POB EX ST

Legal Reason for Change

Legal Reason for Change	Document Number	Date
STREET DEED	20120203033	05/24/2012
NOTICE OF MERGER	20070259430	04/27/2007

No Active Homeowner's Exemptions Found

Prior Roll History

Year: 2017

TRA	104100	**Land Value**	5,032,219
Supplement	NO	**Improvement Value**	0
Correction Date		**Improvement Penalty**	0
Correction Code		**Pers Prop Value**	0
Original Parcel	0292041420000	**Pers Prop Penalty**	0
Billed Owner	MC LANE SUNEAST INC	**Total Penalties**	0
Joint Owner		**Total Value**	5,032,219
		HOX Exemptions	0
		Special Exemptions	0
		Net Value	**5,032,219**

Year: 2016

TRA	104100	**Land Value**	4,933,548
Supplement	NO	**Improvement Value**	0
Correction Date		**Improvement Penalty**	0
Correction Code		**Pers Prop Value**	0
Original Parcel	0292041420000	**Pers Prop Penalty**	0
Billed Owner	MC LANE SUNEAST INC	**Total Penalties**	0
Joint Owner		**Total Value**	4,933,548
		HOX Exemptions	0
		Special Exemptions	0
		Net Value	**4,933,548**

Year: 2015

TRA	104100	**Land Value**	4,859,442
Supplement	NO	**Improvement Value**	0
Correction Date		**Improvement Penalty**	0
Correction Code		**Pers Prop Value**	0
Original Parcel	0292041420000	**Pers Prop Penalty**	0
Billed Owner	MC LANE SUNEAST INC	**Total Penalties**	0
Joint Owner		**Total Value**	4,859,442
		HOX Exemptions	0
		Special Exemptions	0
		Net Value	**4,859,442**

Year: 2014

TRA	104100	**Land Value**	4,764,252
Supplement	NO	**Improvement Value**	0
Correction Date		**Improvement Penalty**	0
Correction Code		**Pers Prop Value**	0
Original Parcel	0292041420000	**Pers Prop Penalty**	0
Billed Owner	MC LANE SUNEAST INC	**Total Penalties**	0
Joint Owner		**Total Value**	4,764,252
		HOX Exemptions	0
		Special Exemptions	0
		Net Value	**4,764,252**

Year: 2013

TRA	104100	**Land Value**	4,742,720
Supplement	NO	**Improvement Value**	0
Correction Date		**Improvement Penalty**	0
Correction Code		**Pers Prop Value**	0
Original Parcel	0292041420000	**Pers Prop Penalty**	0
Billed Owner	MC LANE SUNEAST INC	**Total Penalties**	0
Joint Owner		**Total Value**	4,742,720
		HOX Exemptions	0
		Special Exemptions	0
		Net Value	**4,742,720**

Year: 2012

TRA	104100	**Land Value**	4,649,725
Supplement	NO	**Improvement Value**	0
Correction Date		**Improvement Penalty**	0
Correction Code		**Pers Prop Value**	0
Original Parcel	0292041420000	**Pers Prop Penalty**	0
Billed Owner	MC LANE SUNEAST INC	**Total Penalties**	0
Joint Owner		**Total Value**	4,649,725
		HOX Exemptions	0
		Special Exemptions	0
		Net Value	**4,649,725**

Year: 2011

TRA	104100	**Land Value**	7,105,054
Supplement	YES	**Improvement Value**	0
Correction Date		**Improvement Penalty**	0
Correction Code		**Pers Prop Value**	0
Original Parcel	0292041420000	**Pers Prop Penalty**	0
Billed Owner	ALABAMA INDUSTRIAL PARK LLC	**Total Penalties**	0
Joint Owner		**Total Value**	7,105,054
		HOX Exemptions	0
		Special Exemptions	0
		Net Value	**7,105,054**

Year: 2010

TRA	104100	**Land Value**	4,558,554
Supplement	NO	**Improvement Value**	0
Correction Date	08/31/2012	**Improvement Penalty**	0
Correction Code	530D	**Pers Prop Value**	0
Original Parcel	0292041420000	**Pers Prop Penalty**	0
Billed Owner	ALABAMA INDUSTRIAL PARK LLC	**Total Penalties**	0
Joint Owner		**Total Value**	4,558,554
		HOX Exemptions	0
		Special Exemptions	0
		Net Value	**4,558,554**

Year: 2009

TRA	104100	**Land Value**	4,835,000
Supplement	NO	**Improvement Value**	0
Correction Date	08/24/2011	**Improvement Penalty**	0
Correction Code	530D	**Pers Prop Value**	0
Original Parcel	0292041420000	**Pers Prop Penalty**	0
Billed Owner	ALABAMA INDUSTRIAL PARK LLC	**Total Penalties**	0
Joint Owner		**Total Value**	4,835,000
		HOX Exemptions	0
		Special Exemptions	0
		Net Value	**4,835,000**

Year: 2008

TRA	104100	**Land Value**	6,930,104
Supplement	NO	**Improvement Value**	0
Correction Date		**Improvement Penalty**	0
Correction Code		**Pers Prop Value**	0
Original Parcel	0292041420000	**Pers Prop Penalty**	0
Billed Owner	ALABAMA INDUSTRIAL PARK LLC	**Total Penalties**	0
Joint Owner		**Total Value**	6,930,104
		HOX Exemptions	0
		Special Exemptions	0
		Net Value	**6,930,104**

Parcel History

		Multi Parcel List
Event Date	05/21/2012	
Event Group/Type	ADJUST VALUE - STREET DEDICATION OR VACATION	
Multi Parcel	No	

		Multi Parcel List
Event Date	12/31/2011	
Event Group/Type	REVIEW - PROP 8 INITIATED BY ASSESSOR	
Multi Parcel	No	

		Multi Parcel List
Event Date	02/25/2011	
Event Group/Type	TRANSFER - 100% PER RECORDED DOCUMENT	0292041350000 PRT-TRF
Multi Parcel	Yes	0292041420000 TOT-TRF

		Multi Parcel List
Event Date	12/31/2009	
Event Group/Type	REVIEW - PROP 8 INITIATED BY TAXPAYER	
Multi Parcel	No	

		Multi Parcel List
Event Date	12/31/2008	
Event Group/Type	REVIEW - PROP 8 INITIATED BY TAXPAYER	
Multi Parcel	No	

		Multi Parcel List
Event Date	10/09/2007	
Event Group/Type	TRANSFER - 100% PER RECORDED DOCUMENT	
Multi Parcel	No	

		Multi Parcel List
Event Date	04/27/2007	
Event Group/Type	CREATE - COMBINATION	0292041420000 NEW-COM
Multi Parcel	Yes	0292041120000 OLD-COM
		0292041340000 OLD-COM

		Multi Parcel List
Event Date	01/01/2003	
Event Group/Type	TRA EVENT - CHANGE TRA ON SINGLE OR MULTIPLE PARCE	0292041080000 TRA-RNG
		0292041090000 TRA-RNG
Multi Parcel	Yes	0292041100000 TRA-RNG
		0292041110000 TRA-RNG

0292041150000 TRA-RNG
0292041160000 TRA-RNG
0292041170000 TRA-RNG
0292041350000 TRA-RNG
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0292042070000 TRA-RNG
029204209P000 TRA-RNG
029204209P001 TRA-RNG
0292042090000 TRA-RNG
029204210P000 TRA-RNG
0292042100000 TRA-RNG
0292042110000 TRA-RNG
029204212P000 TRA-RNG
029204212P001 TRA-RNG
0292042120000 TRA-RNG
0292043010000 TRA-RNG
0292043020000 TRA-RNG
0292043030000 TRA-RNG
0292043040000 TRA-RNG
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0292043070000 TRA-RNG
0292043080000 TRA-RNG
0292043120000 TRA-RNG
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0292051150000 TRA-RNG
0292051200000 TRA-RNG
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029205516P000 TRA-RNG
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0292055170000 TRA-RNG
0292055190000 TRA-RNG
0292055200000 TRA-RNG
0292055210000 TRA-RNG
0292055220000 TRA-RNG
0292055230000 TRA-RNG

Ownership History

Owner Name: MC LANE SUNEAST INC

R/I	CORPORATION
% Int	100.0000000
Type	BILLED OWNER
Acquisition Date	02/25/2011
Document Date	02/25/2011
Inactive Date	NONE

Document Numbers

20110079103

Owner Name: ALABAMA INDUSTRIAL PARK LLC

R/I	SOLE OWNER
% Int	100.0000000
Type	BILLED OWNER
Acquisition Date	10/09/2007
Document Date	10/09/2007
Inactive Date	02/24/2011

Document Numbers

20070569674

Owner Name: ALABAMA INDUSTRIAL PARK LLC

R/I	SOLE OWNER
% Int	100.0000000
Type	BILLED OWNER
Acquisition Date	05/19/2006
Document Date	04/27/2007
Inactive Date	10/08/2007

Document Numbers

20070259430

Supplement History

Supplement Date: 02/25/2011

Roll Type	REGULAR SUPPLEMENT	**Supp Type**	OWNERSHIP TRANSFER
Supp Year	2011	**New Land**	4,558,554
Revised IND		**New Imprv**	0
Corrected Date	08/31/2012	**Old Land**	7,105,054
Correction Code	570I	**Old Imprv**	0
Legal Status	SECURED	**New HOX**	0
TRA	104100	**Old HOX**	0
NOPIC Date	06/04/2012	**Supp HOX**	0
Extract Date	08/03/2012	**Special Exem**	0
Months Prorated	12	**Impr Penalty**	0
Corr Status	COR	**Prior Supps**	0
Original Parcel	0292041420000	**Construction in Progress**	0
		Net Value	**(2,546,500)**
Billed Owner	MC LANE SUNEAST INC		
Joint Owner			

Supplement Date: 02/25/2011

Roll Type	INTERIM SUPPLEMENT	**Supp Type**	OWNERSHIP TRANSFER
Supp Year	2011	**New Land**	4,558,554
Revised IND		**New Imprv**	0
Corrected Date	08/31/2012	**Old Land**	4,558,554
Correction Code	570I	**Old Imprv**	0
Legal Status	SECURED	**New HOX**	0
TRA	104100	**Old HOX**	0
NOPIC Date	06/04/2012	**Supp HOX**	0
Extract Date	08/03/2012	**Special Exem**	0
Months Prorated	4	**Impr Penalty**	0
Corr Status	COR	**Prior Supps**	0
Original Parcel	0292041420000	**Construction in Progress**	0
		Net Value	**0**
Billed Owner	MC LANE SUNEAST INC		
Joint Owner			

Supplement Date: 02/25/2011

Roll Type	REGULAR SUPPLEMENT	**Supp Type**	OWNERSHIP TRANSFER
Supp Year	2011	**New Land**	4,558,554
Revised IND	Y	**New Imprv**	0
Corrected Date		**Old Land**	7,105,054
Correction Code		**Old Imprv**	0
Legal Status	SECURED	**New HOX**	0
TRA	104100	**Old HOX**	0
NOPIC Date	06/04/2012	**Supp HOX**	0
Extract Date	08/03/2012	**Special Exem**	0
Months Prorated	12	**Impr Penalty**	0
Corr Status		**Prior Supps**	0
Original Parcel	0292041420000	**Construction in Progress**	0
		Net Value	**(2,546,500)**
Billed Owner	MC LANE SUNEAST INC		
Joint Owner			

Supplement Date: 02/25/2011

Roll Type	INTERIM SUPPLEMENT	**Supp Type**	OWNERSHIP TRANSFER
Supp Year	2011	**New Land**	4,558,554
Revised IND	Y	**New Imprv**	0
Corrected Date		**Old Land**	7,051,953
Correction Code		**Old Imprv**	0
Legal Status	SECURED	**New HOX**	0
TRA	104100	**Old HOX**	0
NOPIC Date	06/04/2012	**Supp HOX**	0
Extract Date	08/03/2012	**Special Exem**	0
Months Prorated	4	**Impr Penalty**	0
Corr Status		**Prior Supps**	0
Original Parcel	0292041420000	**Construction in Progress**	0
		Net Value	**(2,493,399)**
Billed Owner	MC LANE SUNEAST INC		
Joint Owner			

Property Information Management System

San Bernardino County

Office of the Assessor

PIMS PACKAGE REPORT FOR PARCEL 0292-041-43-0000

Property Information

Property Address (Main Situs) Protected per CA. Govt. Code Sect. 6254.21
Protected per CA. Govt. Code Sect. 6254.21

Owner and Mailing Address MCLANE SUNEAST INC
C/O LEN MEWHINNEY
Protected per CA. Govt. Code Sect. 6254.21
Protected per CA. Govt. Code Sect. 6254.21

Effective Date 03/08/2011

Parcel 0292041430000
Parcel Status ACTIVE
Parcel Type REAL PROPERTY
Property ID
Tax Status ASSESSED BY COUNTY
Use Code VACANT
Land Access PUBLIC PAVED
Size 7.001 TO 14.000 ACRES
Land Type INDUSTRIAL
District SAN BERNARDINO
Resp Group REAL PROPERTY
Resp Unit INDUSTRIAL ZONE OR USE

Current Owners

Name MCLANE SUNEAST INC
R/I CORPORATION
% Int 100.0000000
Type BILLED OWNER
Acquisition Date 02/25/2011
Document Date 02/25/2011
Inactive Date NONE

Document Numbers
20110079104

Legal Parcel Map

Parcel Map	Parcel Nbr	Unit	Book	Page
	0292041430000			

Legal Description

ALL THAT PORTION OF LOTS 1 AND 2 BLOCK 1 OF BROWN'S SUBDIVISION OF LOTS 1,2,3 AND 4 BLOCK 2 AND LOTS 1,2,3,4,13,14,15, AND 16, BLOCK 1 OF MAP NO. 1 OF THE HENRY L.WILLIAMS TRACT IN THE CITY OF REDLANDS COUNTY OF SAN BERNARDINO STATE OF CALIFORNIA AS PER PLAT RECORDED IN BOOK 8 OF MAPS PAGE 96 OFFICIAL RECORDS OF SAID COUNTY DESCRIBED AS FOLLOWS COMMENCING AT A POINT IN THE CENTERLINE OF ALABAMA STREET DISTANT SOUTH 1,085.98 FEET FROM THE NORTHEAST CORNER OF BLOCK 71 RANCHO SAN BERNARDINO AS SHOWN ON RECORD OF SURVEY RECORDED IN BOOK 60 PAGE 53 OF RECORDS OF SURVEY OFFICIAL RECORDS OF SAID COUNTY THENCE NORTH 89 DEG 10 '16" WEST 71.00 FEET TO THE WEST RIGHT-OF-WAY LINE OFALABAMA STREET BEING THE TRUE P0INT OF BEGINNING THENCE ALONG SAID WEST RIGHT OF WAY LINE SOUTH 00DEG 34 '57" WEST 36.07 FEET THENCE SOUTH 89 DEG 25'O3" EAST 15.00 FEET THENCE SOUTH OO DEG 34'57" WEST 200.00 FEET TO THE SOUTH LINE OF SAID LOT 1 BLOCK 1 THENCE NORTH 89 DEG 27'45" WEST 820.62 FEET MORE OR LESS TO A POINT 450.00 FEET EAST OF THE WEST LINE OF SAID LOT 2 BLOCK 1 THENCE PARALLEL WITH THE WEST LINE OF LOT 2 BLOCK 1 NORTH DEG OO'35'17" EAST 581.93 FEET TO THE NORTH LINEOF LOT 2 BLOCK 1 THENCE ALONG THE NORTH LINE OF LOT 2 AND LOT 1 BLOCK 1 SOUTH 56 DEG 40'16" EAST 636.04 FEET THENCE SOUTH 89 DEG 1O'16" EAST 270.61 FEET TO THE POINT OF BEGINNING EXCEPTING THEREFROM THAT PORTION OF SAID LOTS 1 AND 2, BLOCK 1 DESCRIBED AS FOLLOWS COMMENCING AT A POINT IN THE CENTERLINE OF ALABAMA STREET DISTANT SOUTH 1,085.98 FEET FROM THE NORTHEAST CORNER OF BLOCK 71 RANCHO SAN BERNARDINO AS SHOWN ON RECORD OF SURVEY RECORDED IN B00K 60 PAGE 53 OF RECORDS OF SURVEYTHENCE NORTH 89 DEG 10'16" WEST 71.00 FEET TO THE WEST RIGHT OF WAY LINE OF ALABAMA STREET THENCE ALONG THE NORTH LINE OF SAID LOT 1 BLOCK 1 NORTH 89 DEG 1O'16" WEST 230.63 FEET TO THE TRUE P0INT OF BEGINNING THENCE SOUTH 00 DEG '49 '44" WEST 50.00 FEET THENCE NORTH 89 DEG 10 '16" WEST 101.54 FEET THENCE NORTH 56 DEG'40'16" WEST 292.48 FEET THENCE NORTH 89 DEG1O'16" WEST 227.21 FEET MORE ORLESS TO A POINT 450.00 FEET EAST OF THE WEST LINE OF SAID LOT 2 BLOCK 1 THENCE PARALLEL WITH THE WEST LINE OF SAID LOT 2, BLOCK 1 NORTH O0 DEG 35 '17" EAST 234.60 FEET TO THE NORTH LINE OF SAID LOT 2, BLOCK 1; THENCE ALONG THE NORTH LINE OF LOT 2 AND LOT 1 BLOCK 1 SOUTH 56 DEG 40 '16" EAST 636.04 FEET THENCE SOUTH 89 DEG 1O '16" EAST 39.98 FEET TO THE P0INT OF BEGINNING TOGETHER WITH LOT1 AND A PORTION OF LOT 2 IN BLOCK 1 AND A PART OF LOTS 1 AND 2 IN BLOCK 2 OF BROWN'S SUBDIVSION OF LOTS 7,2,3 AND 4 BLOCK 2 AND LOTS 1,2,3 AND 4, BLOCK 2 AND LOTS 1,2,3,4,13, 14,15 AND 16, BLOCK 1 MAP NO. 1 HENRY L. WILLIAMS' TRACT AS PER PLAT RECORDED IN BOOK 8 OF MAPS PAGE 96 RECORDS OF SAID COUNTY ALSO A PORTION OF PINE AVENUE (NOW VACATED) AS SHOWN ON SAID MAP DESCRIBED AS WHOLE AS FOLLOWS BEGINNING AT A POINT IN THE WEST LINE OF ALABAMA STREET DISTANT NORTH 960.11 FEET FROM THE SOUTHEAST CORNER OF LOT 8, B

Legal Reason for Change

Legal Reason for Change	Document Number	Date
NOTICE OF MERGER	20080073352	02/19/2008

No Active Homeowner's Exemptions Found

Prior Roll History

Year: 2017

TRA	104107	**Land Value**	3,441,429
Supplement	NO	**Improvement Value**	0
Correction Date		**Improvement Penalty**	0
Correction Code		**Pers Prop Value**	0
Original Parcel	0292041430000	**Pers Prop Penalty**	0
Billed Owner	MCLANE SUNEAST INC	**Total Penalties**	0
Joint Owner		**Total Value**	3,441,429
		HOX Exemptions	0
		Special Exemptions	0
		Net Value	**3,441,429**

Year: 2016

TRA	104107	**Land Value**	3,373,950
Supplement	NO	**Improvement Value**	0
Correction Date		**Improvement Penalty**	0
Correction Code		**Pers Prop Value**	0
Original Parcel	0292041430000	**Pers Prop Penalty**	0
Billed Owner	MCLANE SUNEAST INC	**Total Penalties**	0
Joint Owner		**Total Value**	3,373,950
		HOX Exemptions	0
		Special Exemptions	0
		Net Value	**3,373,950**

Year: 2015

TRA	104107	**Land Value**	3,323,270
Supplement	NO	**Improvement Value**	0
Correction Date		**Improvement Penalty**	0
Correction Code		**Pers Prop Value**	0
Original Parcel	0292041430000	**Pers Prop Penalty**	0
Billed Owner	MCLANE SUNEAST INC	**Total Penalties**	0
Joint Owner		**Total Value**	3,323,270
		HOX Exemptions	0
		Special Exemptions	0
		Net Value	**3,323,270**

Year: 2014

TRA	104107	**Land Value**	3,258,172
Supplement	NO	**Improvement Value**	0
Correction Date		**Improvement Penalty**	0
Correction Code		**Pers Prop Value**	0
Original Parcel	0292041430000	**Pers Prop Penalty**	0
Billed Owner	MCLANE SUNEAST INC	**Total Penalties**	0
Joint Owner		**Total Value**	3,258,172
		HOX Exemptions	0
		Special Exemptions	0
		Net Value	**3,258,172**

Year: 2013

TRA	104107	**Land Value**	3,243,447
Supplement	NO	**Improvement Value**	0
Correction Date		**Improvement Penalty**	0
Correction Code		**Pers Prop Value**	0
Original Parcel	0292041430000	**Pers Prop Penalty**	0
Billed Owner	MCLANE SUNEAST INC	**Total Penalties**	0
Joint Owner		**Total Value**	3,243,447
		HOX Exemptions	0
		Special Exemptions	0
		Net Value	**3,243,447**

Year: 2012

TRA	104107	**Land Value**	3,179,850
Supplement	NO	**Improvement Value**	0
Correction Date		**Improvement Penalty**	0
Correction Code		**Pers Prop Value**	0
Original Parcel	0292041430000	**Pers Prop Penalty**	0
Billed Owner	MCLANE SUNEAST INC	**Total Penalties**	0
Joint Owner		**Total Value**	3,179,850
		HOX Exemptions	0
		Special Exemptions	0
		Net Value	**3,179,850**

Year: 2011

TRA	104107	**Land Value**	3,117,500
Supplement	YES	**Improvement Value**	0
Correction Date	10/29/2012	**Improvement Penalty**	0
Correction Code	570D	**Pers Prop Value**	0
Original Parcel	0292041430000	**Pers Prop Penalty**	0
Billed Owner	OAKMONT REDLANDS ALABAMA STREET LLC	**Total Penalties**	0
Joint Owner		**Total Value**	3,117,500
		HOX Exemptions	0
		Special Exemptions	0
		Net Value	**3,117,500**

Year: 2010

TRA	104107	**Land Value**	3,360,000
Supplement	NO	**Improvement Value**	0
Correction Date	10/11/2012	**Improvement Penalty**	0
Correction Code	530D	**Pers Prop Value**	0
Original Parcel	0292041430000	**Pers Prop Penalty**	0
Billed Owner	OAKMONT REDLANDS ALABAMA STREET LLC	**Total Penalties**	0
Joint Owner		**Total Value**	3,360,000
		HOX Exemptions	0
		Special Exemptions	0
		Net Value	**3,360,000**

Year: 2009

TRA	104107	**Land Value**	4,080,000
Supplement	NO	**Improvement Value**	0
Correction Date	03/23/2011	**Improvement Penalty**	0
Correction Code	530D	**Pers Prop Value**	0
Original Parcel	0292041430000	**Pers Prop Penalty**	0
Billed Owner	OAKMONT REDLANDS ALABAMA STREET LLC	**Total Penalties**	0
Joint Owner		**Total Value**	4,080,000
		HOX Exemptions	0
		Special Exemptions	0
		Net Value	**4,080,000**

Parcel History

Event Date	02/25/2011	**Multi Parcel List**
Event Group/Type	TRANSFER - 100% PER RECORDED DOCUMENT	
Multi Parcel	No	

Event Date	12/31/2010	**Multi Parcel List**
Event Group/Type	REVIEW - PROP 8 INITIATED BY TAXPAYER	
Multi Parcel	No	

Event Date	12/31/2010	**Multi Parcel List**
Event Group/Type	REVIEW - PROP 8 INITIATED BY ASSESSOR	
Multi Parcel	No	

Event Date	12/31/2009	**Multi Parcel List**
Event Group/Type	REVIEW - PROP 8 INITIATED BY TAXPAYER	
Multi Parcel	No	

Event Date	12/31/2008	**Multi Parcel List**
Event Group/Type	REVIEW - PROP 8 INITIATED BY TAXPAYER	
Multi Parcel	No	

Event Date	02/19/2008	**Multi Parcel List**
Event Group/Type	CREATE - COMBINATION	0292041430000 NEW-COM
Multi Parcel	Yes	0292041110000 OLD-COM
		0292041400000 OLD-COM

Ownership History

Owner Name: MCLANE SUNEAST INC

R/I	CORPORATION
% Int	100.0000000
Type	BILLED OWNER
Acquisition Date	02/25/2011
Document Date	02/25/2011
Inactive Date	NONE

Document Numbers

20110079104

Owner Name: OAKMONT REDLANDS ALABAMA STREET LLC

R/I	SOLE OWNER
% Int	100.0000000
Type	BILLED OWNER
Acquisition Date	11/13/2006
Document Date	02/19/2008
Inactive Date	02/24/2011

Document Numbers

20080073352

Supplement History

Supplement Date: 02/25/2011

Roll Type	REGULAR SUPPLEMENT	**Supp Type**	OWNERSHIP TRANSFER
Supp Year	2011	**New Land**	3,117,500
Revised IND		**New Imprv**	0
Corrected Date	10/29/2012	**Old Land**	3,117,500
Correction Code	570I	**Old Imprv**	0
Legal Status	SECURED	**New HOX**	0
TRA	104107	**Old HOX**	0
NOPIC Date	06/03/2012	**Supp HOX**	0
Extract Date	08/03/2012	**Special Exem**	0
Months Prorated	12	**Impr Penalty**	0
Corr Status	COR	**Prior Supps**	0
Original Parcel	0292041430000	**Construction in Progress**	0
		Net Value	**0**
Billed Owner	MCLANE SUNEAST INC		
Joint Owner			

Supplement Date: 02/25/2011

Roll Type	INTERIM SUPPLEMENT	**Supp Type**	OWNERSHIP TRANSFER
Supp Year	2011	**New Land**	3,117,500
Revised IND		**New Imprv**	0
Corrected Date	10/29/2012	**Old Land**	3,360,000
Correction Code	570I	**Old Imprv**	0
Legal Status	SECURED	**New HOX**	0
TRA	104107	**Old HOX**	0
NOPIC Date	06/03/2012	**Supp HOX**	0
Extract Date	08/03/2012	**Special Exem**	0
Months Prorated	4	**Impr Penalty**	0
Corr Status	COR	**Prior Supps**	0
Original Parcel	0292041430000	**Construction in Progress**	0
		Net Value	**(242,500)**
Billed Owner	MCLANE SUNEAST INC		
Joint Owner			

Supplement Date: 02/25/2011

Roll Type	REGULAR SUPPLEMENT	**Supp Type**	OWNERSHIP TRANSFER
Supp Year	2011	**New Land**	3,117,500
Revised IND	Y	**New Imprv**	0
Corrected Date	10/11/2012	**Old Land**	4,427,009
Correction Code	570I	**Old Imprv**	0
Legal Status	SECURED	**New HOX**	0
TRA	104107	**Old HOX**	0
NOPIC Date	06/03/2012	**Supp HOX**	0
Extract Date	08/03/2012	**Special Exem**	0
Months Prorated	12	**Impr Penalty**	0
Corr Status	COR	**Prior Supps**	0
Original Parcel	0292041430000	**Construction in Progress**	0
		Net Value	**(1,309,509)**

Billed Owner MCLANE SUNEAST INC

Joint Owner

Supplement Date: 02/25/2011

Roll Type	INTERIM SUPPLEMENT	**Supp Type**	OWNERSHIP TRANSFER
Supp Year	2011	**New Land**	3,117,500
Revised IND	Y	**New Imprv**	0
Corrected Date	10/11/2012	**Old Land**	3,360,000
Correction Code	570I	**Old Imprv**	0
Legal Status	SECURED	**New HOX**	0
TRA	104107	**Old HOX**	0
NOPIC Date	06/03/2012	**Supp HOX**	0
Extract Date	08/03/2012	**Special Exem**	0
Months Prorated	4	**Impr Penalty**	0
Corr Status	COR	**Prior Supps**	0
Original Parcel	0292041430000	**Construction in Progress**	0
		Net Value	**(242,500)**

Billed Owner MCLANE SUNEAST INC

Joint Owner

Supplement Date: 02/25/2011

Roll Type	REGULAR SUPPLEMENT	**Supp Type**	OWNERSHIP TRANSFER
Supp Year	2011	**New Land**	3,117,500
Revised IND	Y	**New Imprv**	0
Corrected Date		**Old Land**	4,427,009
Correction Code		**Old Imprv**	0
Legal Status	SECURED	**New HOX**	0
TRA	104107	**Old HOX**	0
NOPIC Date	06/03/2012	**Supp HOX**	0
Extract Date	08/03/2012	**Special Exem**	0
Months Prorated	12	**Impr Penalty**	0
Corr Status		**Prior Supps**	0
Original Parcel	0292041430000	**Construction in Progress**	0
		Net Value	**(1,309,509)**
Billed Owner	MCLANE SUNEAST INC		
Joint Owner			

Supplement Date: 02/25/2011

Roll Type	INTERIM SUPPLEMENT	**Supp Type**	OWNERSHIP TRANSFER
Supp Year	2011	**New Land**	3,117,500
Revised IND	Y	**New Imprv**	0
Corrected Date		**Old Land**	4,393,922
Correction Code		**Old Imprv**	0
Legal Status	SECURED	**New HOX**	0
TRA	104107	**Old HOX**	0
NOPIC Date	06/03/2012	**Supp HOX**	0
Extract Date	08/03/2012	**Special Exem**	0
Months Prorated	4	**Impr Penalty**	0
Corr Status		**Prior Supps**	0
Original Parcel	0292041430000	**Construction in Progress**	0
		Net Value	**(1,276,422)**
Billed Owner	MCLANE SUNEAST INC		
Joint Owner			

Property Information Management System

San Bernardino County

Office of the Assessor

PIMS PACKAGE REPORT FOR PARCEL 0292-041-47-0000

Property Information

Property Address (Main Situs) Protected per CA. Govt. Code Sect. 6254.21
Protected per CA. Govt. Code Sect. 6254.21

Owner and Mailing Address MCLANE SUNEAST INC
C/O LEN MEWHINNEY
Protected per CA. Govt. Code Sect. 6254.21
Protected per CA. Govt. Code Sect. 6254.21

Effective Date 06/30/2011

Parcel 0292041470000
Parcel Status ACTIVE
Parcel Type REAL PROPERTY
Property ID
Tax Status ASSESSED BY COUNTY
Use Code VACANT
Land Access PUBLIC PAVED
Size 14.001 TO 25.000 ACRES
Land Type INDUSTRIAL
District SAN BERNARDINO
Resp Group REAL PROPERTY
Resp Unit INDUSTRIAL ZONE OR USE

Current Owners

Name MCLANE SUNEAST INC

R/I CORPORATION
% Int 100.0000000
Type BILLED OWNER
Acquisition Date 02/25/2011
Document Date 02/25/2011
Inactive Date NONE

Document Numbers
20110079105

Legal Parcel Map

Parcel Map	Parcel Nbr	Unit	Book	Page
	0292041470000			

Legal Description

THOSE PORTIONS OF LOTS 2, 3, 6 AND 7, BLOCK 2 OF MAP SHOWING BROWNS SUBDIWSION OF LOTS 1, 2, 3 AND 4 IN BLOCK 2 AND LOTS 1, 2, 3, 4, 13, 14, 15 AND 16 IN BLOCK 1 OF MAP NO. 1 OF THE HENRY L. WILLIAMS TRACT, IN THE UNINCORPORATED TERRITORY OF THE COUNTY OF SAN BERNARDINO, STATE OF CALIFORNIA, AS PER MAP RECORDED IN BOOK 8 PAGE 96 OF MAPS, IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY, DESCRIBED AS FOLLOWS BEGINNING AT THE NORTHEAST CORNER OF THE SOUTH 235 FEET OF SAID LOT 3 BLOCK 2 THENCE ALONG THE NORTH LINE OF THE SOUTH 235 FEET OF SAID LOT 2 BLOCK 2 SOUTH 89 DEG 27' 48" EAST 280.86 FEET THENCE AT RIGHT ANGLES NORTH 00 DEG 32' 12" EAST 20.42 FEET THENCE AT RIGHT ANGLES SOUTH 89 DEG 27' 48" EAST, 169.17 FEET TO THE EAST LINE OF NOTICE OF MERGER EVL00848-08, AS PER DOCUMENT RECORDED AUGUST 19, 2008 AS DOCUMENT NO. 2008-0379971 OF OFFICIAL RECORDS IN THE OFFICE OF SAID COUNTY RECORDER THENCE ALONG SAID EAST LINE, SOUTH 00 DEG 34' 54" WEST 885.36 FEET TO THE SOUTH LINE OF SAID LOT 7 BLOCK 2 SAID SOUTH LINE ALSO BEING THE NORTH LINE OF PALMETTO AVENUE (60 FEET WIDE) AS SHOWN ON SAID MAP THENCE ALONG THE SOUTH LINES OF SAID LOTS 6 AND 7 BLOCK 2 NORTH 89 DEG 27' 46" WEST 779.54 FEET TO THE WEST LINE OF THE EAST HALF OF LOTS 3 AND6 BLOCK 2 THENCE ALONG SAID WEST LINE NORTH 00 DEG 34' 56" EAST, 864.93 FEET TO THE NORTH LINE OF THE SOUTH 235 FEET OF LOT 3 BLOCK 2 THENCE ALONG SAID NORTH LINE OF THE SOUTH 235 FEET OF LOT 3 BLOCK 2 SOUTH 89 DEG 27' 48" EAST 329.52 FEET TO POINT OF BEGINNING

Legal Reason for Change

Legal Reason for Change	Document Number	Date
CERTIFICATE OF	20090480604	11/04/2009

No Active Homeowner's Exemptions Found

Prior Roll History

Year: 2017

TRA	104107	**Land Value**	4,901,346
Supplement	NO	**Improvement Value**	0
Correction Date		**Improvement Penalty**	0
Correction Code		**Pers Prop Value**	0
Original Parcel	0292041470000	**Pers Prop Penalty**	0
Billed Owner	MCLANE SUNEAST INC	**Total Penalties**	0
Joint Owner		**Total Value**	4,901,346
		HOX Exemptions	0
		Special Exemptions	0
		Net Value	**4,901,346**

Year: 2016

TRA	104107	**Land Value**	4,805,241
Supplement	NO	**Improvement Value**	0
Correction Date		**Improvement Penalty**	0
Correction Code		**Pers Prop Value**	0
Original Parcel	0292041470000	**Pers Prop Penalty**	0
Billed Owner	MCLANE SUNEAST INC	**Total Penalties**	0
Joint Owner		**Total Value**	4,805,241
		HOX Exemptions	0
		Special Exemptions	0
		Net Value	**4,805,241**

Year: 2015

TRA	104107	**Land Value**	4,733,062
Supplement	NO	**Improvement Value**	0
Correction Date		**Improvement Penalty**	0
Correction Code		**Pers Prop Value**	0
Original Parcel	0292041470000	**Pers Prop Penalty**	0
Billed Owner	MCLANE SUNEAST INC	**Total Penalties**	0
Joint Owner		**Total Value**	4,733,062
		HOX Exemptions	0
		Special Exemptions	0
		Net Value	**4,733,062**

Year: 2014

TRA	104107	**Land Value**	4,640,348
Supplement	NO	**Improvement Value**	0
Correction Date		**Improvement Penalty**	0
Correction Code		**Pers Prop Value**	0
Original Parcel	0292041470000	**Pers Prop Penalty**	0
Billed Owner	MCLANE SUNEAST INC	**Total Penalties**	0
Joint Owner		**Total Value**	4,640,348
		HOX Exemptions	0
		Special Exemptions	0
		Net Value	**4,640,348**

Year: 2013

TRA	104107	**Land Value**	4,619,376
Supplement	NO	**Improvement Value**	0
Correction Date		**Improvement Penalty**	0
Correction Code		**Pers Prop Value**	0
Original Parcel	0292041470000	**Pers Prop Penalty**	0
Billed Owner	MCLANE SUNEAST INC	**Total Penalties**	0
Joint Owner		**Total Value**	4,619,376
		HOX Exemptions	0
		Special Exemptions	0
		Net Value	**4,619,376**

Year: 2012

TRA	104107	**Land Value**	4,528,800
Supplement	NO	**Improvement Value**	0
Correction Date		**Improvement Penalty**	0
Correction Code		**Pers Prop Value**	0
Original Parcel	0292041470000	**Pers Prop Penalty**	0
Billed Owner	MCLANE SUNEAST INC	**Total Penalties**	0
Joint Owner		**Total Value**	4,528,800
		HOX Exemptions	0
		Special Exemptions	0
		Net Value	**4,528,800**

Year: 2011

TRA	104107	**Land Value**	4,440,000
Supplement	YES	**Improvement Value**	0
Correction Date	10/29/2012	**Improvement Penalty**	0
Correction Code	570D	**Pers Prop Value**	0
Original Parcel	0292041470000	**Pers Prop Penalty**	0
Billed Owner	OAKMONT REDLANDS PALMETTO II LLC	**Total Penalties**	0
Joint Owner		**Total Value**	4,440,000
		HOX Exemptions	0
		Special Exemptions	0
		Net Value	**4,440,000**

Parcel History

		Multi Parcel List
Event Date	02/25/2011	
Event Group/Type	TRANSFER - 100% PER RECORDED DOCUMENT	0292041350000 PRT-TRF
Multi Parcel	Yes	0292041470000 TOT-TRF
		0292041480000 TOT-TRF

		Multi Parcel List
Event Date	12/31/2010	
Event Group/Type	REVIEW - PROP 8 INITIATED BY ASSESSOR	
Multi Parcel	No	

		Multi Parcel List
Event Date	05/26/2010	
Event Group/Type	CREATE - SPLIT	0292041470000 NEW-SPL
Multi Parcel	Yes	0292041480000 NEW-SPL
		0292041450000 OLD-SPL
		0292041460000 OLD-SPL

Ownership History

Owner Name: MCLANE SUNEAST INC

R/I	CORPORATION
% Int	100.0000000
Type	BILLED OWNER
Acquisition Date	02/25/2011
Document Date	02/25/2011
Inactive Date	NONE

Document Numbers

20110079105

Owner Name: OAKMONT REDLANDS PALMETTO II LLC

R/I	SOLE OWNER
% Int	100.0000000
Type	BILLED OWNER
Acquisition Date	05/26/2010
Document Date	05/26/2010
Inactive Date	02/24/2011

Document Numbers

20100209953

Supplement History

Supplement Date: 02/25/2011

Roll Type	REGULAR SUPPLEMENT	**Supp Type**	OWNERSHIP TRANSFER
Supp Year	2011	**New Land**	4,440,000
Revised IND		**New Imprv**	0
Corrected Date	10/29/2012	**Old Land**	4,440,000
Correction Code	570I	**Old Imprv**	0
Legal Status	SECURED	**New HOX**	0
TRA	104107	**Old HOX**	0
NOPIC Date	06/03/2012	**Supp HOX**	0
Extract Date	08/03/2012	**Special Exem**	0
Months Prorated	12	**Impr Penalty**	0
Corr Status	COR	**Prior Supps**	0
Original Parcel	0292041470000	**Construction in Progress**	0
		Net Value	**0**
Billed Owner	MCLANE SUNEAST INC		
Joint Owner			

Supplement Date: 02/25/2011

Roll Type	INTERIM SUPPLEMENT	**Supp Type**	OWNERSHIP TRANSFER
Supp Year	2011	**New Land**	4,440,000
Revised IND		**New Imprv**	0
Corrected Date	10/29/2012	**Old Land**	4,757,754
Correction Code	570I	**Old Imprv**	0
Legal Status	SECURED	**New HOX**	0
TRA	104107	**Old HOX**	0
NOPIC Date	06/03/2012	**Supp HOX**	0
Extract Date	08/03/2012	**Special Exem**	0
Months Prorated	4	**Impr Penalty**	0
Corr Status	COR	**Prior Supps**	0
Original Parcel	0292041470000	**Construction in Progress**	0
		Net Value	**(317,754)**
Billed Owner	MCLANE SUNEAST INC		
Joint Owner			

Supplement Date: 02/25/2011

Roll Type	REGULAR SUPPLEMENT	**Supp Type**	OWNERSHIP TRANSFER
Supp Year	2011	**New Land**	4,440,000
Revised IND	Y	**New Imprv**	0
Corrected Date		**Old Land**	7,010,479
Correction Code		**Old Imprv**	0
Legal Status	SECURED	**New HOX**	0
TRA	104107	**Old HOX**	0
NOPIC Date	06/03/2012	**Supp HOX**	0
Extract Date	08/03/2012	**Special Exem**	0
Months Prorated	12	**Impr Penalty**	0
Corr Status		**Prior Supps**	0
Original Parcel	0292041470000	**Construction in Progress**	0
		Net Value	**(2,570,479)**
Billed Owner	MCLANE SUNEAST INC		
Joint Owner			

Supplement Date: 02/25/2011

Roll Type	INTERIM SUPPLEMENT	**Supp Type**	OWNERSHIP TRANSFER
Supp Year	2011	**New Land**	4,440,000
Revised IND	Y	**New Imprv**	0
Corrected Date		**Old Land**	6,958,085
Correction Code		**Old Imprv**	0
Legal Status	SECURED	**New HOX**	0
TRA	104107	**Old HOX**	0
NOPIC Date	06/03/2012	**Supp HOX**	0
Extract Date	08/03/2012	**Special Exem**	0
Months Prorated	4	**Impr Penalty**	0
Corr Status		**Prior Supps**	0
Original Parcel	0292041470000	**Construction in Progress**	0
		Net Value	**(2,518,085)**
Billed Owner	MCLANE SUNEAST INC		
Joint Owner			

Property Information Management System

San Bernardino County

Office of the Assessor

PIMS PACKAGE REPORT FOR PARCEL 0292-041-48-0000

Property Information

Property Address (Main Situs) Protected per CA. Govt. Code Sect. 6254.21
Protected per CA. Govt. Code Sect. 6254.21

Owner and Mailing Address MCLANE SUNEAST INC
C/O LEN MEWHINNEY
Protected per CA. Govt. Code Sect. 6254.21
Protected per CA. Govt. Code Sect. 6254.21

Effective Date 06/30/2011

Parcel 0292041480000
Parcel Status ACTIVE
Parcel Type REAL PROPERTY
Property ID
Tax Status ASSESSED BY COUNTY
Use Code VACANT
Land Access PRIVATE UNPAVED
Size 7.001 TO 14.000 ACRES
Land Type INDUSTRIAL
District SAN BERNARDINO
Resp Group REAL PROPERTY
Resp Unit INDUSTRIAL ZONE OR USE

Current Owners

Name MCLANE SUNEAST INC

R/I CORPORATION
% Int 100.0000000
Type BILLED OWNER
Acquisition Date 02/25/2011
Document Date 02/25/2011
Inactive Date NONE

Document Numbers
20110079105

Legal Parcel Map

Parcel Map	Parcel Nbr	Unit	Book	Page
	0292041480000			

Legal Description

THOSE PORTIONS OF LOT 2 BLOCK 1 LOT 2 BLOCK 2 OF MAP SHOWING BROWNS SUBDIVISION OF LOTS 1, 2, 3 AND4 IN BLOCK 2 AND LOTS 1, 2, 3, 4, 13, 14, 15 AND 16 IN BLOCK 1 OF MAP NO. 1 OF THE HENRY L. WILLIAMS TRACTIN THE UNINCORPORATED TERRITORY OF THE COUNTY OF SAN BERNARDINO STATE OF CALIFORNIA AS PER MAP RECORDED IN BOOK 8 PAGE 96 OF MAPS IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY TOGETHER WITH THAT PORTION OF PINE AVE (VACATED) SHOWN ON SAID MAP DESCRIBED AS FOLLOWS BEGINNING AT THE NORTHWEST CORNER OF THE SOUTH 235 FEET OF SAID LOT 2 BLOCK 2 THENCE ALONG THE NORTH LINE OF THE SOUTH 235 FEET OF SAID LOT 2 BLOCK 2 SOUTH 89 DEG 27' 48" EAST 280.86 FEET THENCE AT RIGHT ANGLES NORTH 00DEG 32' 12" EAST 20.42 FEET THENCE AT RIGHT ANGLES SOUTH 89 DEG 27' 48" EAST 169.17 FEET TO THE EAST LINE OF NOTICE OF MERGER EVLOO84B-08, AS PER DOCUMENT RECORDED AUGUST 19, 2008 AS DOCUMENT NO. 2008-0379971 OF OFFICIAL RECORDS IN THE OFFICE OF SAID COUNTY RECORDER THENCE ALONG SAID EAST LINE, THE NORTHERLY AND WEST LINES OF SAID NOTICE OF MERGER NORTH 00 DEG 34' 54" EAST 986.43 FEET NORTH 56 DEG 40' 21" WEST 4.02 FEET NORTH 79 40' 25" WEST 453.12 FEET AND SOUTH 00 DEG 35' 04" WEST 1086.07 FEET TO POINT OF BEGINNING

Legal Reason for Change

Legal Reason for Change	Document Number	Date
CERTIFICATE OF	20090480605	11/04/2009

No Active Homeowner's Exemptions Found

Prior Roll History

Year: 2017

TRA	104107	**Land Value**	3,300,681
Supplement	NO	**Improvement Value**	0
Correction Date		**Improvement Penalty**	0
Correction Code		**Pers Prop Value**	0
Original Parcel	0292041480000	**Pers Prop Penalty**	0
Billed Owner	MCLANE SUNEAST INC	**Total Penalties**	0
Joint Owner		**Total Value**	3,300,681
		HOX Exemptions	0
		Special Exemptions	0
		Net Value	**3,300,681**

Year: 2016

TRA	104107	**Land Value**	3,235,962
Supplement	NO	**Improvement Value**	0
Correction Date		**Improvement Penalty**	0
Correction Code		**Pers Prop Value**	0
Original Parcel	0292041480000	**Pers Prop Penalty**	0
Billed Owner	MCLANE SUNEAST INC	**Total Penalties**	0
Joint Owner		**Total Value**	3,235,962
		HOX Exemptions	0
		Special Exemptions	0
		Net Value	**3,235,962**

Year: 2015

TRA	104107	**Land Value**	3,187,355
Supplement	NO	**Improvement Value**	0
Correction Date		**Improvement Penalty**	0
Correction Code		**Pers Prop Value**	0
Original Parcel	0292041480000	**Pers Prop Penalty**	0
Billed Owner	MCLANE SUNEAST INC	**Total Penalties**	0
Joint Owner		**Total Value**	3,187,355
		HOX Exemptions	0
		Special Exemptions	0
		Net Value	**3,187,355**

Year: 2014

TRA	104107	**Land Value**	3,124,919
Supplement	NO	**Improvement Value**	0
Correction Date		**Improvement Penalty**	0
Correction Code		**Pers Prop Value**	0
Original Parcel	0292041480000	**Pers Prop Penalty**	0
Billed Owner	MCLANE SUNEAST INC	**Total Penalties**	0
Joint Owner		**Total Value**	3,124,919
		HOX Exemptions	0
		Special Exemptions	0
		Net Value	**3,124,919**

Year: 2013

TRA	104107	**Land Value**	3,110,796
Supplement	NO	**Improvement Value**	0
Correction Date		**Improvement Penalty**	0
Correction Code		**Pers Prop Value**	0
Original Parcel	0292041480000	**Pers Prop Penalty**	0
Billed Owner	MCLANE SUNEAST INC	**Total Penalties**	0
Joint Owner		**Total Value**	3,110,796
		HOX Exemptions	0
		Special Exemptions	0
		Net Value	**3,110,796**

Year: 2012

TRA	104107	**Land Value**	3,049,800
Supplement	NO	**Improvement Value**	0
Correction Date		**Improvement Penalty**	0
Correction Code		**Pers Prop Value**	0
Original Parcel	0292041480000	**Pers Prop Penalty**	0
Billed Owner	MCLANE SUNEAST INC	**Total Penalties**	0
Joint Owner		**Total Value**	3,049,800
		HOX Exemptions	0
		Special Exemptions	0
		Net Value	**3,049,800**

Year: 2011

TRA	104107	**Land Value**	2,990,000
Supplement	YES	**Improvement Value**	0
Correction Date	10/29/2012	**Improvement Penalty**	0
Correction Code	570D	**Pers Prop Value**	0
Original Parcel	0292041480000	**Pers Prop Penalty**	0
Billed Owner	OAKMONT REDLANDS PALMETTO II LLC	**Total Penalties**	0
Joint Owner		**Total Value**	2,990,000
		HOX Exemptions	0
		Special Exemptions	0
		Net Value	**2,990,000**

Parcel History

		Multi Parcel List
Event Date	02/25/2011	
Event Group/Type	TRANSFER - 100% PER RECORDED DOCUMENT	0292041350000 PRT-TRF
Multi Parcel	Yes	0292041470000 TOT-TRF
		0292041480000 TOT-TRF

		Multi Parcel List
Event Date	12/31/2010	
Event Group/Type	REVIEW - PROP 8 INITIATED BY ASSESSOR	
Multi Parcel	No	

		Multi Parcel List
Event Date	05/26/2010	
Event Group/Type	CREATE - SPLIT	0292041470000 NEW-SPL
Multi Parcel	Yes	0292041480000 NEW-SPL
		0292041450000 OLD-SPL
		0292041460000 OLD-SPL

Ownership History

Owner Name: MCLANE SUNEAST INC

R/I	CORPORATION
% Int	100.0000000
Type	BILLED OWNER
Acquisition Date	02/25/2011
Document Date	02/25/2011
Inactive Date	NONE

Document Numbers

20110079105

Owner Name: OAKMONT REDLANDS PALMETTO II LLC

R/I	SOLE OWNER
% Int	100.0000000
Type	BILLED OWNER
Acquisition Date	05/26/2010
Document Date	05/26/2010
Inactive Date	02/24/2011

Document Numbers

20100209953

Supplement History

Supplement Date: 02/25/2011

Roll Type	REGULAR SUPPLEMENT	**Supp Type**	OWNERSHIP TRANSFER
Supp Year	2011	**New Land**	2,990,000
Revised IND		**New Imprv**	0
Corrected Date	10/29/2012	**Old Land**	2,990,000
Correction Code	570I	**Old Imprv**	0
Legal Status	SECURED	**New HOX**	0
TRA	104107	**Old HOX**	0
NOPIC Date	06/03/2012	**Supp HOX**	0
Extract Date	08/03/2012	**Special Exem**	0
Months Prorated	12	**Impr Penalty**	0
Corr Status	COR	**Prior Supps**	0
Original Parcel	0292041480000	**Construction in Progress**	0
		Net Value	**0**
Billed Owner	MCLANE SUNEAST INC		
Joint Owner			

Supplement Date: 02/25/2011

Roll Type	INTERIM SUPPLEMENT	**Supp Type**	OWNERSHIP TRANSFER
Supp Year	2011	**New Land**	2,990,000
Revised IND		**New Imprv**	0
Corrected Date	10/29/2012	**Old Land**	3,204,246
Correction Code	570I	**Old Imprv**	0
Legal Status	SECURED	**New HOX**	0
TRA	104107	**Old HOX**	0
NOPIC Date	06/03/2012	**Supp HOX**	0
Extract Date	08/03/2012	**Special Exem**	0
Months Prorated	4	**Impr Penalty**	0
Corr Status	COR	**Prior Supps**	0
Original Parcel	0292041480000	**Construction in Progress**	0
		Net Value	**(214,246)**
Billed Owner	MCLANE SUNEAST INC		
Joint Owner			

Supplement Date: 02/25/2011

Roll Type	REGULAR SUPPLEMENT	**Supp Type**	OWNERSHIP TRANSFER
Supp Year	2011	**New Land**	2,990,000
Revised IND	Y	**New Imprv**	0
Corrected Date		**Old Land**	4,721,410
Correction Code		**Old Imprv**	0
Legal Status	SECURED	**New HOX**	0
TRA	104107	**Old HOX**	0
NOPIC Date	06/03/2012	**Supp HOX**	0
Extract Date	08/03/2012	**Special Exem**	0
Months Prorated	12	**Impr Penalty**	0
Corr Status		**Prior Supps**	0
Original Parcel	0292041480000	**Construction in Progress**	0
		Net Value	**(1,731,410)**
Billed Owner	MCLANE SUNEAST INC		
Joint Owner			

Supplement Date: 02/25/2011

Roll Type	INTERIM SUPPLEMENT	**Supp Type**	OWNERSHIP TRANSFER
Supp Year	2011	**New Land**	2,990,000
Revised IND	Y	**New Imprv**	0
Corrected Date		**Old Land**	4,686,123
Correction Code		**Old Imprv**	0
Legal Status	SECURED	**New HOX**	0
TRA	104107	**Old HOX**	0
NOPIC Date	06/03/2012	**Supp HOX**	0
Extract Date	08/03/2012	**Special Exem**	0
Months Prorated	4	**Impr Penalty**	0
Corr Status		**Prior Supps**	0
Original Parcel	0292041480000	**Construction in Progress**	0
		Net Value	**(1,696,123)**
Billed Owner	MCLANE SUNEAST INC		
Joint Owner			

CUPA
San Bernardino County Fire Department • Hazardous Materials Division
620 S. E St., San Bernardino, CA 92415-0153 • (909) 386-8468 FAX (909) 386-8460

REQUEST FOR A CERTIFIED HAZARDOUS MATERIALS RECORDS SEARCH FINDING REPORT

The main focus of a REQUEST FOR A CERTIFIED HAZARDOUS MATERIALS RECORDS SEARCH FINDING REPORT is to determine whether there exists in San Bernardino County Fire Department (County Fire) files any record relating to contamination or reports of spills at a particular site. A Certified Hazardous Materials Records Search Finding Report should reveal whether there are any facilities at the site that are subject to current or past regulatory activity by County Fire, such as underground storage tanks, hazardous material handlers, hazardous waste generators, and EPCRA or CalARP facilities, as well as any reports of spills, incidents, complaints, or cleanup activity, that can be a useful tool in providing a history of compliance or non-compliance.

Once County Fire has completed its records search, a Certified Hazardous Materials Records Search Finding Report will be prepared and issued, which will detail all County Fire records associated with a particular site by type, date, location, and status where applicable. (Any files identified in a Certified Hazardous Materials Records Search Finding Report can be made available for copies and/or review upon request.)

If the completed records search reveals no County Fire record of hazardous material activity at the site, a Certified Hazardous Materials Records Search Finding Report will be issued, noting that "no records" were identified.

Please provide a specific site address or location description. If a situs address does not exist or cannot be found, list another type of location identifier such as Assessor Parcel Number (preferable), cross streets or intersections (e.g., NWC 5th Ave. & Main St.), and/or legal description, and if possible attach a map to this request form.

SITE INFORMATION		
Property Owner or Business Name	Location (Site Address and/or Assessor Parcel No.) 9092 Alabama Street APN: 0292-041-43-0000	City/Community Redlands, CA 92374

Please provide your name, the company you represent, and contact information below.

REQUESTOR INFORMATION				
NAME Burke Walker	TITLE (*If individual, leave blank*) PA	COMPANY (*If individual, leave blank*) Partner Engineering & Science, Inc.		
MAILING ADDRESS 520 North 1st Avenue, Apt 'B'	CITY Upland		STATE CA	ZIP CODE 91786
TELEPHONE 626-827-0816	FAX 714-451-2052	EMAIL ADDRESS burkewalker@ymail.com		

So that we may provide better service, please check one or more of the boxes below which best describe how the findings of the Certified Hazardous Materials Records Search will be used and/or your relationship to the property in question.

PURPOSE OR RELATIONSHIP TO PROPERTY

- [X] 1. Phase I site assessment or due diligence **AT THE SITE**
- [ ] 2. Environmental professional involved with remediation **AT THE SITE**
- [ ] 3. Phase I site assessment or due diligence **NEARBY**
- [ ] 4. Environmental professional involved with remediation **NEARBY**
- [ ] 5. Proposed School Site (1/4 mi. search for AHM)
- [ ] 6. Proposed Drinking Water Well
- [ ] 7. Owner or operator of the facility or property
- [ ] 8. Potential buyer
- [ ] 9. Real Estate Agent, Lender, Appraiser
- [ ] 10. Pending escrow
- [ ] 11. Proposed redevelopment
- [ ] 12. Legal or other reason: _____

AGENCY USE	
Certified Record Search Finding Report issued: ___/___/___	Reference No:
Certified No Record Finding Report issued: ___/___/___	Amount Paid:
	Receipt No.:
	Date:

** IMPORTANT –THIS PAGE MUST BE SIGNED PRIOR TO SUBMITTAL **

DISCLAIMER: While all attempts are made to provide accurate, current, and reliable information, County Fire recognizes the possibility of human error. Therefore, County Fire, its officers, employees, agents and volunteers, make no representations as to the accuracy, completeness or suitability of a Certified Hazardous Materials Records Search Finding Report and provides a Certified Hazardous Materials Records Search Finding Report "as is", with no warranties, express or implied, including the implied warranty of fitness for a particular purpose. In no event shall County Fire be liable for any damages of any nature whatsoever, arising out of the issuance of a Certified Hazardous Materials Records Search Finding Report. County Fire therefore assumes no liability for damages incurred directly or indirectly as a result of any errors, omissions or discrepancies in a Certified Hazardous Materials Records Search Finding Report.

RELEASE AND INDEMNIFICATION: In consideration for the issuance of a Certified Hazardous Materials Records Search Finding Report, I hereby release and forever discharge County Fire, its officers, employees, agents and volunteers from any and all claims, actions, losses, damages and/or liability in connection with County Fire's issuance of a Certified Hazardous Materials Records Search Finding Report, including, but not limited to, claims that may arise due to the active or passive negligence of County Fire, its officers, employees, agents and volunteers.

I am familiar with the provisions of California Civil Code Section 1542, which provides as follows:

"A general release does not extend to claims which the creditor does not know or suspect to exist in his or her favor at the time of executing the release, which if known by him or her must have materially affected his or her settlement with the debtor."

I hereby expressly waive any and all rights that I may have there under. I understand and acknowledge the significance and consequence of this specific waiver of California Civil Code Section 1542 and assume full responsibility for any injuries, damages, losses or liabilities that I may hereafter discover as possibly resulting from County Fire's issuance of a Certified Hazardous Materials Records Search Finding Report.

In further consideration for County Fire's issuance of a Certified Hazardous Materials Records Search Finding Report, I hereby agree, for myself, my heirs, administrators, executors and assigns, that I shall indemnify, defend (with counsel approved by County) and hold harmless County Fire, its officers, employees, agents and volunteers from any and all claims, demands, actions or suits arising out of or in connection with County Fire's issuance of a Certified Hazardous Materials Records Search Finding Report brought by any third party.

*** * ***

I have read the above terms and conditions, including the paragraphs entitled "DISCLAIMER" and "RELEASE AND INDEMNIFICATION", and by my signature below, I affirm that I understand these terms and conditions and accept them as part of my REQUEST FOR A CERTIFIED HAZARDOUS MATERIALS RECORDS SEARCH FINDING REPORT.

I hereby request a Certified Hazardous Materials Records Search Finding Report for the location described on Page 1 of this application.

- ☒ **I am including payment of the initial fee of $130.00, for the first hour of research, by check or money order, payable to San Bernardino County Fire Dept. I understand that research exceeding one hour will be billed at the rate of $130.00 for each additional hour spent by County Fire in completing this request.**
- ☐ **I have faxed or emailed this request and will forward payment along with the original request form within 48 hours.**

REQUESTOR'S SIGNATURE	
SIGNATURE OF REQUESTOR	DATE
Burke Walker Digitally signed by Burke Walker DN: cn=Burke Walker, c=US, o=Burke Walker Consulting, ou=Manager, email=burkewalker@ymail.com Reason: I have reviewed this document Date: 2016.08.15 16:13:51 -07'00'	December, 2017

Rev. 2/13/2014

Subject:	RE: Request Building Records for 9092 and 9180 Alabama Street, Redlands (San Bernardino County), CA 92374
From:	Claborn, Amy (Amy.Claborn@lus.sbcounty.gov)
To:	burkewalker@ymail.com;
Date:	Tuesday, December 12, 2017 9:22 AM

Hello Burke,

Yes, if you are wishing to obtain building permit history only for the below mentioned parcels, I can assist with that.

There is a $10 fee for one parcel and $5 for each additional parcel, if the requestor is not the property owner; and we are still currently at a minimum of 30 business day time frame for permit research.

Please take a moment to complete our 1 Minute Satisfaction Survey **https://www.surveymonkey.com/r/LUS_Email**

Amy C. Claborn

Land Use Technician
Land Use Services Department
Phone: 909-387-8311
Fax: 909-387-3223
385 N. Arrowhead Ave. 1st Floor

San Bernardino CA 92415-0187

Our job is to create a county in which those who reside and invest can prosper and achieve well-being.

www.SBCounty.gov

385 N. Arrowhead Avenue, 2nd Floor, San Bernardino, CA 92415 | Phone: 800.442.2283 Fax: 909.387.4323
www.SBCounty.gov

SAN BERNARDINO COUNTY

Public Health
Environmental Health Services

Trudy Raymundo
Director
Corwin Porter, MPH, REHS
Assistant Director
Maxwell Ohikhuare, MD
Health Officer
Josh Dugas, REHS
Division Chief

December 13, 2017

Burke Walker
Burke Walker Consulting

EHS has completed the research on your records request received on December 12, 2017.
No records were found for 9092 Alabama Street, Redlands, CA 92374.

If you have any questions or concerns, please contact me at (800) 442-2283.

Sincerely,

Raúl Robles, Office Assistant III
385 North Arrowhead Avenue, 2nd Floor
San Bernardino, CA 92415-0160

RR:rr

BOARD OF SUPERVISORS
Robert A. Lovingood, Chairman, First District
Janice Rutherford, Second District
James Ramos, Third District
Curt Hagman, Vice Chairman, Fourth District
Josie Gonzales, Fifth District
Dena M. Smith, Interim Chief Executive Officer

EHS 2017-526

Robles, Raul

From: Burke Walker <burkewalker@ymail.com>
Sent: Tuesday, December 12, 2017 8:24 AM
To: Robles, Raul
Subject: Request for Public Records: Redlands (San Bernardino County), Rancho Cucamonga, Upland

Good morning Raul,

Happy Holidays to you and the San Bernardino County Department of Environmental Health!
I have five requests for you before we start the new year:
Please let me know if you have any records for the following addresses:

- 9092 & 9180 Alabama Street, Redlands (San Bernardino County), CA 92374
- 555 North Eureka Street, Redlands, CA 92374
- 11015 6th Street, Rancho Cucamonga, CA 91730
- 555 West Foothill Boulevard, Upland, CA 91786

12/12/17
No Records Found
Raul R

Thank you Raul!

Sincerely,
Burke Walker, CAC
Environmental - Biologist - Professional
Phone: 626-827-0816
FAX: 714-451-2052

385 N. Arrowhead Avenue, 2nd Floor, San Bernardino, CA 92415 | Phone: 800.442.2283 Fax: 909.387.4323
www.SBCounty.gov

SAN BERNARDINO COUNTY

Public Health
Environmental Health Services

Trudy Raymundo
Director
Corwin Porter, MPH, REHS
Assistant Director
Maxwell Ohikhuare, MD
Health Officer
Josh Dugas, REHS
Division Chief

December 13, 2017

Burke Walker
Burke Walker Consulting

EHS has completed the research on your records request received on December 12, 2017.
No records were found for 9180 Alabama Street, Redlands, CA 92374.

If you have any questions or concerns, please contact me at (800) 442-2283.

Sincerely,

Raúl Robles, Office Assistant III
385 North Arrowhead Avenue, 2nd Floor
San Bernardino, CA 92415-0160

RR:rr

BOARD OF SUPERVISORS
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Janice Rutherford, Second District
James Ramos, Third District
Curt Hagman, Vice Chairman, Fourth District
Josie Gonzales, Fifth District
Dena M. Smith, Interim Chief Executive Officer

EHS 2017-527

Robles, Raul

From: Burke Walker <burkewalker@ymail.com>
Sent: Tuesday, December 12, 2017 8:24 AM
To: Robles, Raul
Subject: Request for Public Records: Redlands (San Bernardino County), Rancho Cucamonga, Upland

Good morning Raul,

Happy Holidays to you and the San Bernardino County Department of Environmental Health!
I have five requests for you before we start the new year:
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- 9092 & 9180 Alabama Street, Redlands (San Bernardino County), CA 92374
- 555 North Eureka Street, Redlands, CA 92374
- 11015 6th Street, Rancho Cucamonga, CA 91730
- 555 West Foothill Boulevard, Upland, CA 91786

12/12/17
No Records Found

Thank you Raul!

Sincerely,
Burke Walker, CAC
Environmental - Biologist - Professional
Phone: 626-827-0816
FAX: 714-451-2052

Public Records Request

Date: December 14, 2017

Regarding: Public Records Request regarding, 2130 Nevada Street

To: City of Redlands City Clerk
35 Cajon St, Suite 4,
Redlands, California
E-mail: recordsrequest@cityofredlands.org

Phone: (909) 798-7531
FAX:

From: Burke Walker Consulting
520 North 1st Avenue, Apt 'B',
Upland, California 91786

Phone: (626) 827-0816
FAX: (714) 451-2052

To Whom It May Concern,

I am conducting a Phase I Environmental Site Investigation for the address(es) listed below in San Bernardino County. Pursuant to the California Public Records Act ("PRA," Government Code Sec. 6250 et seq.), please let me know if there are any records related to the City of Redlands Landfill (HASKELL CO. INDUSTRIAL COMPOSTING FAC).

During the process of due diligence for our subject property (9092 Alabama Street) that is located to the south of the Redlands Wastewater Treatment facility, a review of local and state regulatory records indicated that the City of Redlands Landfill (HASKELL CO. INDUSTRIAL COMPOSTING FAC) is located nearby. I have provided a selected copy of the regulatory records for the Haskell Co Industrial Composting Facility (see attached document **"City of Redlands Quality of Life Dept.-Utilities, 2130 Nevada Street Landfill.pdf"**).

I would like to know the following please:

1. Is this landfill located on or adjacent to the Assessor Parcel Number: 0167-391-06-0000? Please see the attached "**Map of Area around Redlands Wastewater Facility-Subject property.pdf.**"
2. What types of wastes were dumped at the City of Redlands Landfill (HASKELL CO. INDUSTRIAL COMPOSTING FAC)?

Thank you for your time and assistance!

Sincerely,

Burke Walker, CAC
Environmental – Biologist – Professional

City of Redlands
APN 0167-391-11-0000
Is this are part of the
landfill?
Alabama St
Subject Property
APN 0167-391-06-0000
Was this used by the City of
Redlands as a landfill?

B6
West
1/8-1/4
0.184 mi.
974 ft.

HASKELL CO. INDUSTRIAL COMPOSTING FAC.
2130 NEVADA AVENUE
REDLANDS, CA

Site 1 of 2 in cluster B

SWF/LF **S107863487**
N/A

Relative:
Lower

Actual:
1187 ft.

SWF/LF (SWIS):

Region:	STATE
Facility ID:	36-AA-0443
Lat/Long:	34.08667 / -117.21668
Owner Name:	City Of Redlands
Owner Telephone:	9097987698
Owner Address:	Quality of Life Dept.-Utilities
Owner Address2:	35 Cajon Street , Suite 222/ POBox3005
Owner City,St,Zip:	Redlands, CA 92373
Operational Status:	Planned
Operator:	ABT-Haskell, LLC
Operator Phone:	Not reported
Operator Address:	Not reported
Operator Address2:	280 Business Park Circle, Suite 411
Operator City,St,Zip:	St. Augustine, FL 32095
Permit Date:	Not reported
Permit Status:	Not reported
Permitted Acreage:	Not reported
Activity:	Composting Facility (Sludge)
Regulation Status:	Proposed
Landuse Name:	Wetlands,Industrial,Commercial,Agricultural
GIS Source:	Map
Category:	Composting
Unit Number:	01
Inspection Frequency:	None
Accepted Waste:	Food Wastes,Green Materials,Sludge (BioSolids),Wood waste
Closure Date:	Not reported
Closure Type:	Not reported
Disposal Acreage:	Not reported
SWIS Num:	36-AA-0443
Waste Discharge Requirement Num:	Not reported
Program Type:	Not reported
Permitted Throughput with Units:	Not reported
Actual Throughput with Units:	Not reported
Permitted Capacity with Units:	Not reported
Remaining Capacity:	Not reported
Remaining Capacity with Units:	Not reported
Lat/Long:	34.08667 / -117.21668

Matthew Rodriquez
Secretary for
Environmental Protection

Department of Toxic Substances Control

Barbara A. Lee , Director
1001 I Street
P.O. Box 806
Sacramento , CA 958120806

Edmund G. Brown Jr.
Governor

Facility Search Results

Selection Criteria:

Facility:
Search on: Physical Address
Street: Alabama
City: Redlands
Status: Active and Inactive
Sort Direction: asc
Sorted By: EPA ID
Records Found: 74

EPA ID Number	Name	Address	City	Zip
CAC000226313	1X BIMMERHAUS	302 SOUTH ALABAMA STREET	REDLANDS	923730000
CAC000566480	1X TOM BELL CHEVROLET	800 ALABAMA AVENUE	REDLANDS	923730000
CAC000568544	1X CHEVRON USA #92514	1220 ALABAMA STREET	REDLANDS	923730000
CAC000592032	1X LOMBARD ASSOCIATES #1	NE CORNER OF PIONEER & ALABAMA	REDLANDS	923730000
CAC001011784	CO. SAN BERNARDION/FLOOD CONTROL DIST.	8201 ALABAMA	REDLANDS	923730000
CAC001069832	MAJESTIC REALTY COMPANY	9949 ALABAMA STREET	REDLANDS	923730000
CAC002131497	JACK BURK	875 ALABAMA ST	REDLANDS	923740000
CAC002187792	LUTZ BAG CO	ALABAMA & INDUSTRIAL PARK AVE	REDLANDS	92379
CAC002188143	OLD DOMINION FREIGHT CORP	I 10 E/B NEAR ALABAMA EXIT	REDLANDS	92374
CAC002311913	SEMEX	8203 ALABAMA	REDLANDS	923460000
CAC002314969	DON TEUNISSEN	9092 ALABAMA ST	REDLANDS	923740000
CAC002351471	U-HAUL	1200 ALABAMA ST	REDLANDS	924100000
CAC002354791	MAJESTIC REALTY	SE CORNER OF ALABAMA ST & SAN	REDLANDS	923740000
CAC002529935	R&R ANDERSON TRUCKING	8203 ALABAMA ST	REDLANDS	923740000
CAC002562059	SHANK BALSOUR BEATTY	8553 ALABAMA ST	REDLANDS	92374
CAC002576420	PRESCO BUILDING MATERIALS	9950 ALABAMA ST	REDLANDS	923742036
CAC002576421	PRESCO BUILDING MATERIALS	10050 ALABAMA ST	REDLANDS	92373
CAC002587706	JJ RAMIREZ	10917 ALABAMA ST	REDLANDS	92373
CAC002606272	RIVERSIDE COMMERICAL INVESTORS	PIONEER EW& ALABAMA ST NS	REDLANDS	92374
CAC002614440	DON TEUNISSEN	9092 ALABAMA ST	REDLANDS	923741507
CAC002618986	ZIGROSSI COMPANY INC	150 ALABAMA ST	REDLANDS	92373
CAC002624981	URBAN DEVELOPMENT INC	875 ALABAMA ST	REDLANDS	923742805
CAC002645839	DAVID WU	WEST SIDE OF ALABAMA,	REDLANDS	92373
CAC002652857	DAVID WU	WEST SIDE OF ALABAMA,	REDLANDS	92374
CAC002657167	RUEVAC PROPERTIES SERVICES INC	410 ALABAMA ST	REDLANDS	923738088
CAC002658137	TOBIN COMPANY	370 ALABAMA ST STE L	REDLANDS	923738086
CAC002674534	JIM PAVLAKOS	302 ALABAMA ST	REDLANDS	923738033
CAC002714728	THOMAS O BELL	800 ALABAMA ST.	REDLANDS	92374
CAC002863579	SUPERIOR SOURCES, INC	302 ALABAMA ST STE 4	REDLANDS	923738033
CAC002889701	NEWCASTLE REDLANDS NO. 2	W. SAN BERNARDINO AVE & ALABAMA ST.	REDLANDS	92374
CAC002895186	PACKINGHOUSE CHRISTIAN FELLOWSHIP	9700 ALABAMA STREET	REDLANDS	92374
CAD000329466	1X U-HAUL	1200 ALABAMA ST	REDLANDS	924100000
CAD028956324	DICK DEWESE CHEVROLET INC DBA TOM BELL CHEVROLET INC	800 ALABAMA ST	REDLANDS	923742806
CAD981375223	MATICH CORP	2000 ALABAMA ST	REDLANDS	923730000

CAD981406549	1X ROBERTSON READY MIX	8353 ALABAMA ST	REDLANDS	923740000
CAD981662349	U-HAUL CO OF CA	1200 ALABAMA	REDLANDS	923740000
CAD982317414	MATICH CORP	8203 ALABAMA	REDLANDS	923730000
CAD983600875	CHEVRON PRODUCTS SS# 92514	1220 ALABAMA ST	REDLANDS	923742814
CAD983604000	QA PROCESSOR SERVICE	302 ALABAMA ST, STE8	REDLANDS	923730000
CAL000000798	MATICH CORP	8203 ALABAMA	REDLANDS	923730000
CAL000002702	EXXON CO USA #73102	1280 ALABAMA STREET	REDLANDS	923739482
CAL000006484	BIMMERHANS	302 ALABAMA SUITE 6	REDLANDS	923730000
CAL000033241	BIMMERHAUS	302 SO ALABAMA ST	REDLANDS	923730000
CAL000036232	JIM SELLERS CHEVRON SERVICE #2	1220 ALABAMA	REDLANDS	923740000
CAL000038626	TOM BELL CHEVROLET	800 ALABAMA ST	REDLANDS	923740000
CAL000047482	TEXACO REFINING AND MARKETING INC	1280 ALABAMA	REDLANDS	923740000
CAL000070906	JIM SELLERS CHEVRON SERVICE INC	1220 ALABAMA ST	REDLANDS	923740000
CAL000126271	PHILLIPS WHITE CHIROPRACTIC CORP	620 ALABAMA_ST	REDLANDS	923730000
CAL000191018	EMPIRE KARTS	302 ALABAMA ST UNIT 9	REDLANDS	923730000
CAL000208978	DIGNOSTIC IMAGING INC	302 ALABAMA ST STE 8	REDLANDS	923730000
CAL000262913	A-1 GRIT INC	8203 ALABAMA ST	REDLANDS	92374
CAL000270382	PALM CANYON CONTRACTORS INC/C&H EQUIPMENT INC	8203 ALABAMA ST	REDLANDS	92374
CAL000283686	MATICH CORPORATION	8397 ALABAMA STREET	REDLANDS	92373
CAL000322583	JC PENNEY STORE #2849	10000 ALABAMA ST	REDLANDS	923742062
CAL000327347	KIDDIE KANDIDS #640	9930 ALABAMA ST	REDLANDS	923742036
CAL000333594	REDLANDS DENTAL	1285 ALABAMA ST	REDLANDS	923742813
CAL000336484	MICRO TECHNICAL LABORATORY	325 ALABAMA ST STE 6	REDLANDS	92373
CAL000350882	SURECAST WEST LLC	8203 ALABAMA ST	REDLANDS	92373
CAL000360918	BRIGHT NOW DENTAL A DENTAL OFFICE OF SAHAWNEH DENTAL CORP	1285 ALABAMA ST	REDLANDS	92374
CAL000397882	BREWER COTE WEST	8203 ALABAMA ST	REDLANDS	92374
CAL000405011	UNITED THRIFT STORE LLC DBA REDLANDS THRIFT	614 ALABAMA ST	REDLANDS	92373
CAL000407541	AARON BROTHERS #0311	9950 ALABAMA ST	REDLANDS	92374
CAL000411183	TOYS R US #6583	9930 ALABAMA ST	REDLANDS	92374
CAL000419057	Competitive Asphalt Coatings, inc, dba Viking Materials	8203 Alabama St	REDLANDS	92374
CAL920343145	QA PROCESSOR SERVICE	302 ALABAMA STREET	REDLANDS	923738033
CAR000016386	CITY OF REDLANDS	8203 ALABAMA ST	REDLANDS	923460000
CAR000083584	J AND M SILKSCREEN	325 ALABAMA ST STE 1	REDLANDS	923730000
CAR000089581	EMPIRE KARTS	302 ALABAMA ST NO 9	REDLANDS	923730000
CAR000200139	HOME DEPOT USA HD5087	9377 ALABAMA ST	REDLANDS	923740000
CAR000257592	OUTDATE RX LLC	390 ALABAMA ST STE A	REDLANDS	92373
CAX000050021	FONTANA INDUSTRIAL ENTERPRISES INC	PARK & ALABAMA	REDLANDS	923350000
CAX000072967	C P L INC.	302 ALABAMA ST. #3	REDLANDS	923740000
CAX000229286	Q A PROCESSORS	302 ALABAMA ST STE 8	REDLANDS	923730000
CAX000247098	TOM BELL CHEVROLET	800 ALABAMA	REDLANDS	923730000

The Department of Toxics Substances Control (DTSC) takes every precaution to ensure the accuracy of data in the Hazardous Waste Tracking System (HWTS). However, because of the large number of manifests handled, inaccuracies in the submitted data, limitations of the manifest system and the technical limitations of the database, DTSC cannot guarantee that the data accurately reflect what was actually transported or produced.

Report Generation Date: 12/12/2017

Matthew Rodriquez
Secretary for
Environmental Protection

Department of Toxic Substances Control

Barbara A. Lee , Director
1001 I Street
P.O. Box 806
Sacramento , CA 958120806

Edmund G. Brown Jr.
Governor

EPA ID PROFILE

Map

ID Number:	CAC002314969	**Status:**	INACTIVE
Name:	DON TEUNISSEN	**Inactive Date:**	9/11/2001 12:00:00 AM
County:	SAN BERNARDINO	**Record Entered:**	2/21/2001 12:00:00 AM
NAICS:	N/A	**Last Updated:**	9/11/2001 12:00:00 AM

	Name	Address	City	State	Zip Code	Phone
Location	DON TEUNISSEN	9092 ALABAMA ST	REDLANDS	CA	923740000	
Mailing		4075 MIRADA ST	HIGHLAND	CA	923460000	
Owner	DON TEUNISSEN	4075 MIRADA ST	HIGHLAND	CA	923460000	0000000000
Operator/Contact	DON TEUNISSEN - OWNER	4075 MIRADA ST	HIGHLAND	CA	923460000	9098629733

Based Only Upon ID Number: **CAC002314969**

Calif. Manifests?	Non Calif. Manifests?	Transporter Registration?
Yes	N/A	INACTIVE

California and Non California Manifest Tonnage Total and Waste Code by Year Matrix by Entity Type (if available) are on the next page

Calif. Manifest Counts and Total Tonnage

Top line represents Manifest Count and Bottom line represents Total Tonnage

Year	Generator	Trans. 1	Trans. 2	TSDF	ALT. TSDF

2001	1 0.11400	0 0.00000	0 0.00000	0 0.00000	0 0.00000

Non California Manifest Total Tonnage

No Records Found

Waste Code Matrix					
California	Generator	Trans. 1	Trans. 2	TSDF	Alt. TSDF
RCRA	Generator	Trans. 1	Trans. 2	TSDF	Alt. TSDF

Waste Code Matrix as a spreadsheet

The Department of Toxics Substances Control (DTSC) takes every precaution to ensure the accuracy of data in the Hazardous Waste Tracking System (HWTS). However, because of the large number of manifests handled, inaccuracies in the submitted data, limitations of the manifest system and the technical limitations of the database, DTSC cannot guarantee that the data accurately reflect what was actually transported or produced.

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Department of Toxic Substances Control

Barbara A. Lee , Director
1001 I Street
P.O. Box 806
Sacramento , CA 958120806

Edmund G. Brown Jr.
Governor

EPA ID PROFILE

Map

ID Number:	CAC002614440	**Status:**	INACTIVE
Name:	DON TEUNISSEN	**Inactive Date:**	9/12/2007 4:29:48 PM
County:	SAN BERNARDINO	**Record Entered:**	3/15/2007 4:29:48 PM
NAICS:	N/A	**Last Updated:**	3/15/2007 4:29:48 PM

	Name	Address	City	State	Zip Code	Phone
Location	DON TEUNISSEN	9092 ALABAMA ST	REDLANDS	CA	923741507	
Mailing		4075 MIRADA ST	HIGHLAND	CA	92346	
Owner	DON TEUNISSEN	4075 MIRADA ST	HIGHLAND	CA	92346	9097096214
Operator/Contact	DON TEUNISSEN	4075 MIRADA ST	HIGHLAND	CA	92346	9097096214

Based Only Upon ID Number: **CAC002614440**

Calif. Manifests?	Non Calif. Manifests?	Transporter Registration?
Yes	N/A	INACTIVE

California and Non California Manifest Tonnage Total and Waste Code by Year Matrix by Entity Type (if available) are on the next page

Calif. Manifest Counts and Total Tonnage

Top line represents Manifest Count and Bottom line represents Total Tonnage

Year	Generator	Trans. 1	Trans. 2	TSDF	ALT. TSDF

2007	1 3.42000	0 0.00000	0 0.00000	0 0.00000	0 0.00000

Non California Manifest Total Tonnage

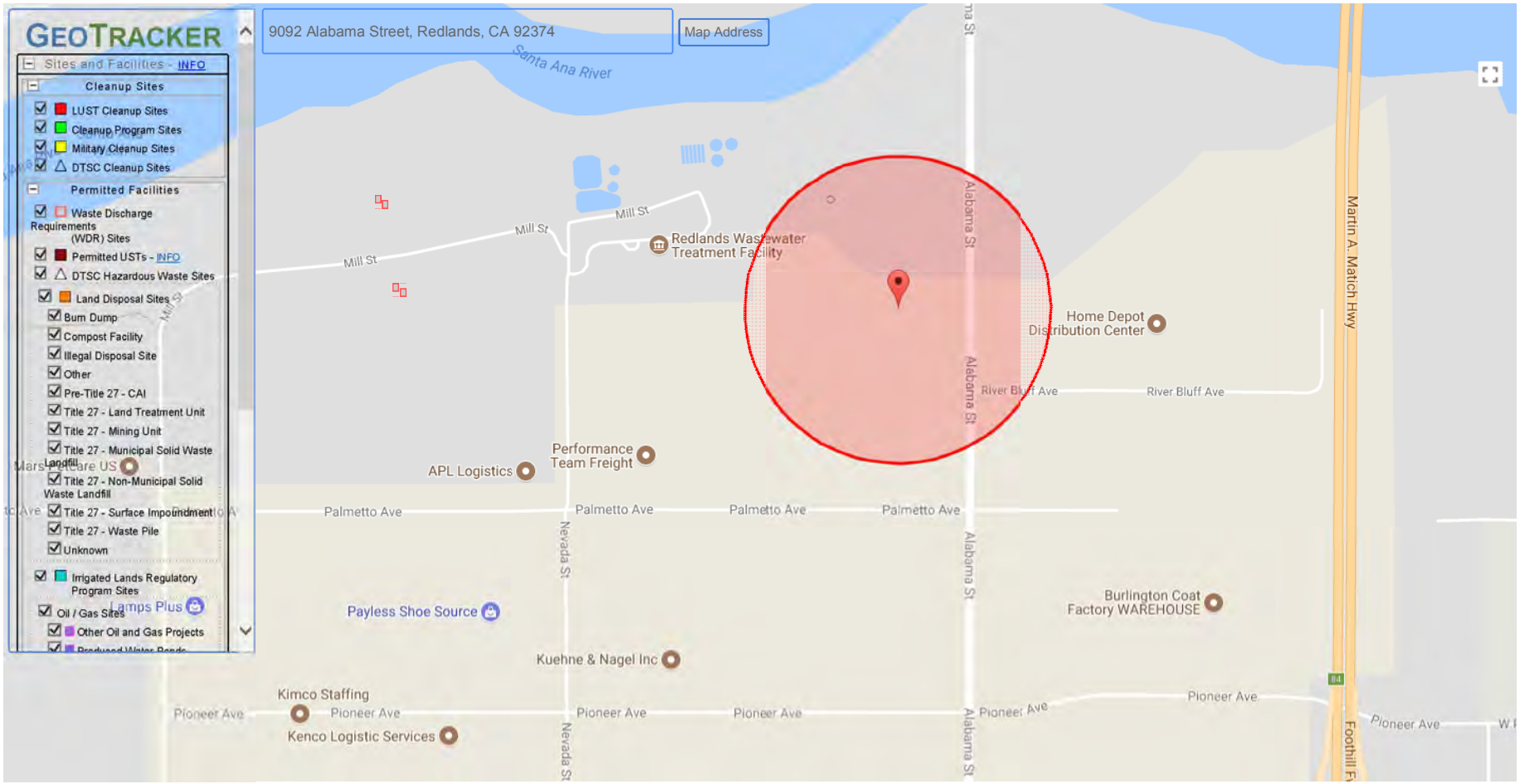
No Records Found

Waste Code Matrix					
California	Generator	Trans. 1	Trans. 2	TSDF	Alt. TSDF
RCRA	Generator	Trans. 1	Trans. 2	TSDF	Alt. TSDF

Waste Code Matrix as a spreadsheet

The Department of Toxics Substances Control (DTSC) takes every precaution to ensure the accuracy of data in the Hazardous Waste Tracking System (HWTS). However, because of the large number of manifests handled, inaccuracies in the submitted data, limitations of the manifest system and the technical limitations of the database, DTSC cannot guarantee that the data accurately reflect what was actually transported or produced.

Report Generation Date: 12/12/2017



SITES FOUND IN SEARCH RADIUS

ENVIROSTOR

9092 Alabama Street

Map Address

Sites and Facilities

Cleanup Sites

- [x] Federal Superfund
- [x] State Response
- [x] Voluntary Cleanup
- [x] School Cleanup
- [x] Evaluation
- [x] School Investigation
- [x] Military Evaluation
- [x] Tiered Permit
- [x] Corrective Action

STATUS

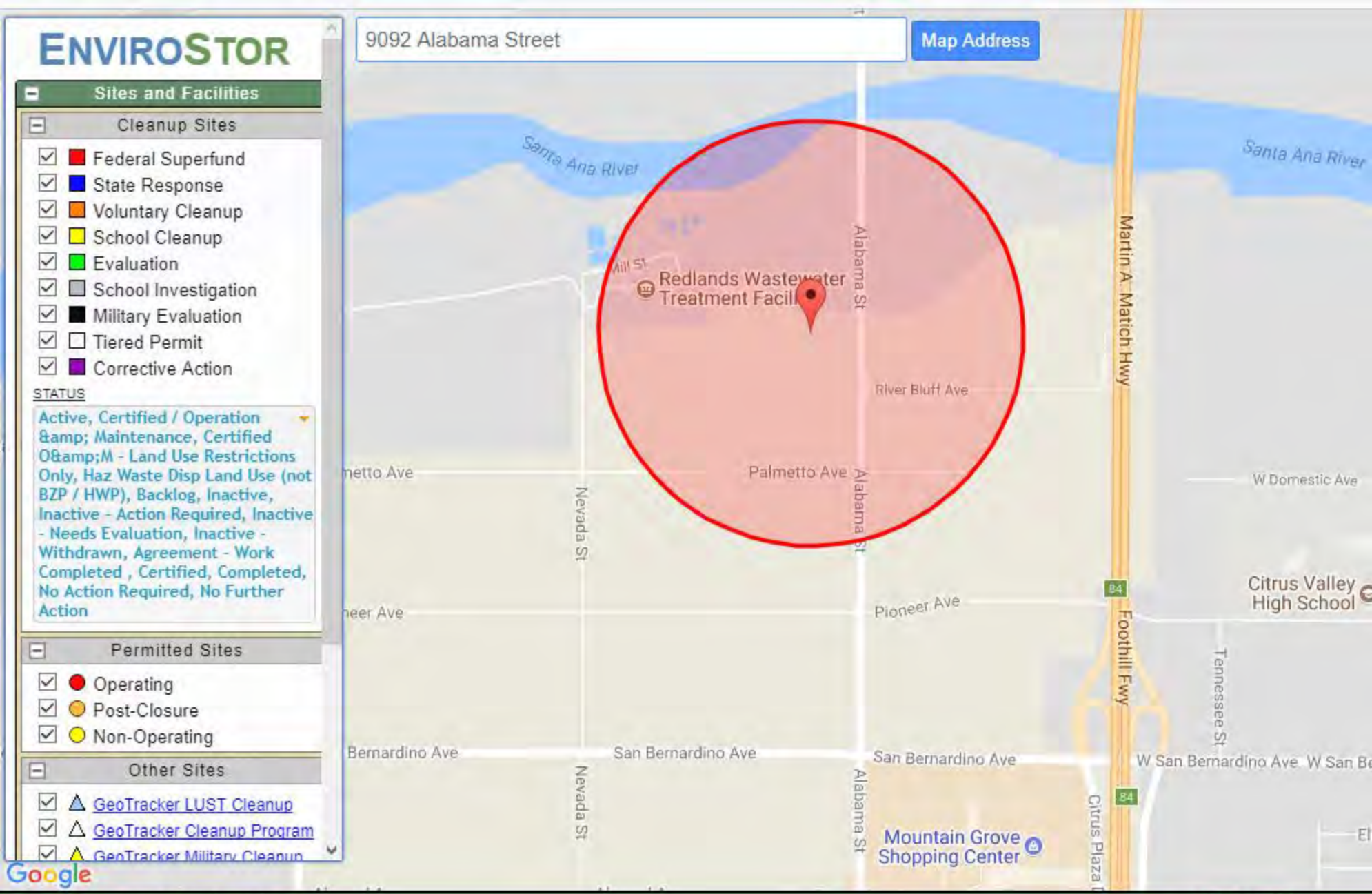
Active, Certified / Operation & Maintenance, Certified O&M - Land Use Restrictions Only, Haz Waste Disp Land Use (not BZP / HWP), Backlog, Inactive, Inactive - Action Required, Inactive - Needs Evaluation, Inactive - Withdrawn, Agreement - Work Completed , Certified, Completed, No Action Required, No Further Action

Permitted Sites

- [x] Operating
- [x] Post-Closure
- [x] Non-Operating

Other Sites

- [x] GeoTracker LUST Cleanup
- [x] GeoTracker Cleanup Program
- [x] GeoTracker Military Cleanup



SITES FOUND IN SEARCH RADIUS

0 SITES LISTED

PROJECT NAME	STATUS	PROJECT TYPE

SOUTH COAST AQMD

Facility INformation Detail (FIND)

Search Again

Facility ID	Facility Name	Facility Address	RECLAIM	Title V	Facility Status
53389	CHEVRON DLR, JIM SELLERS	1220 ALABAMA ST , REDLANDS, CA 92374			
63443	CHEVRON USA INC	1220 ALABAMA , REDLANDS, CA 92374			ACTIVE
184887	FULLMER CONSTRUCTION	ALABAMA/SAN BERNARDINO , REDLANDS, CA 92374			ACTIVE
147876	JC PENNEY CORPORATION, INC.	10000 ALABAMA ST , REDLANDS, CA 92374			ACTIVE
15041	MATICH CORP	8203 ALABAMA ST , REDLANDS, CA 92374			ACTIVE
185340	METRA CONSTRUCTION, INC	ALABAMA/SAN BERNARDINO , REDLANDS, CA 92374			ACTIVE
185037	PROLOGIS REDLANDS DISTRIBUTION CENTER #1	9375 ALABAMA ST , REDLANDS, CA 92374			ACTIVE
181605	REDLANDS GATEWAY LOGISTIC CENTER	9712 ALABAMA , REDLANDS, CA 92374			
185802	REDLANDS LIBERTY DISTRIBUTION CENTER	9724 W ALABAMA ST , REDLANDS, CA 92374			ACTIVE
42623	ROBERTSON'S READY MIX	8353 N ALABAMA ST , REDLANDS, CA 92374			ACTIVE
42385	U-HAUL OF SAN BERNARDINO	1200 ALABAMA , REDLANDS, CA 92374			

First Prev Page 1 of 1 (11 records) Next Last Page 1 Export To Excel

SOUTH COAST AQMD

Facility INformation Detail (FIND)

Search Again

Facility ID	Facility Name	Facility Address	RECLAIM	Title V	Facility Status
153938	ALTA MARKETING COMPANY	26717 PALMETTO AVE , REDLANDS, CA 92374			ACTIVE
147425	OAKMONT REDLANDS PALMETTO AVENUE, LLC	26940 PALMETTO AVE , REDLANDS, CA 92374			
146315	PROLOGIS	2200 PALMETTO AVE , REDLANDS, CA 92374			ACTIVE
146314	PROLOGIS	2290 PALMETTO AVE , REDLANDS, CA 92374			ACTIVE
178243	PROLOGIS L.P.	1950 PALMETTO AVE , REDLANDS, CA 92374			ACTIVE
148434	TC LIT PALMS, LLC.	26717 PALMETTO AVE , REDLANDS, CA 92374			
157407	THRIFTY OIL COMPANY - REDLANDS 585	26940 PALMETTO AVE , REDLANDS, CA 92374			ACTIVE

First Prev Page 1 of 1 (7 records) Next Last Page 1 Export To Excel

Department of Conservation

Accessibility | Disclaimer | About

Lat: 34.08687, Long: -117.18772

Division of Oil, Gas & Geothermal Resources - Well Finder

Find By Location

Find My Current Location

or

Street: 9092 Alabama Street

City: Redlands

Zip: 92374 Find

Display a 1500 foot buffer

Buffer radius is limited to 10 mi (52800ft).

Find By API

Find By Lat, Long

Find By PLSS

Find By Oil/Gas Field

Data (Layers):

Notices & Permits

DOGGR Wells

Label: API# Well# Detailed

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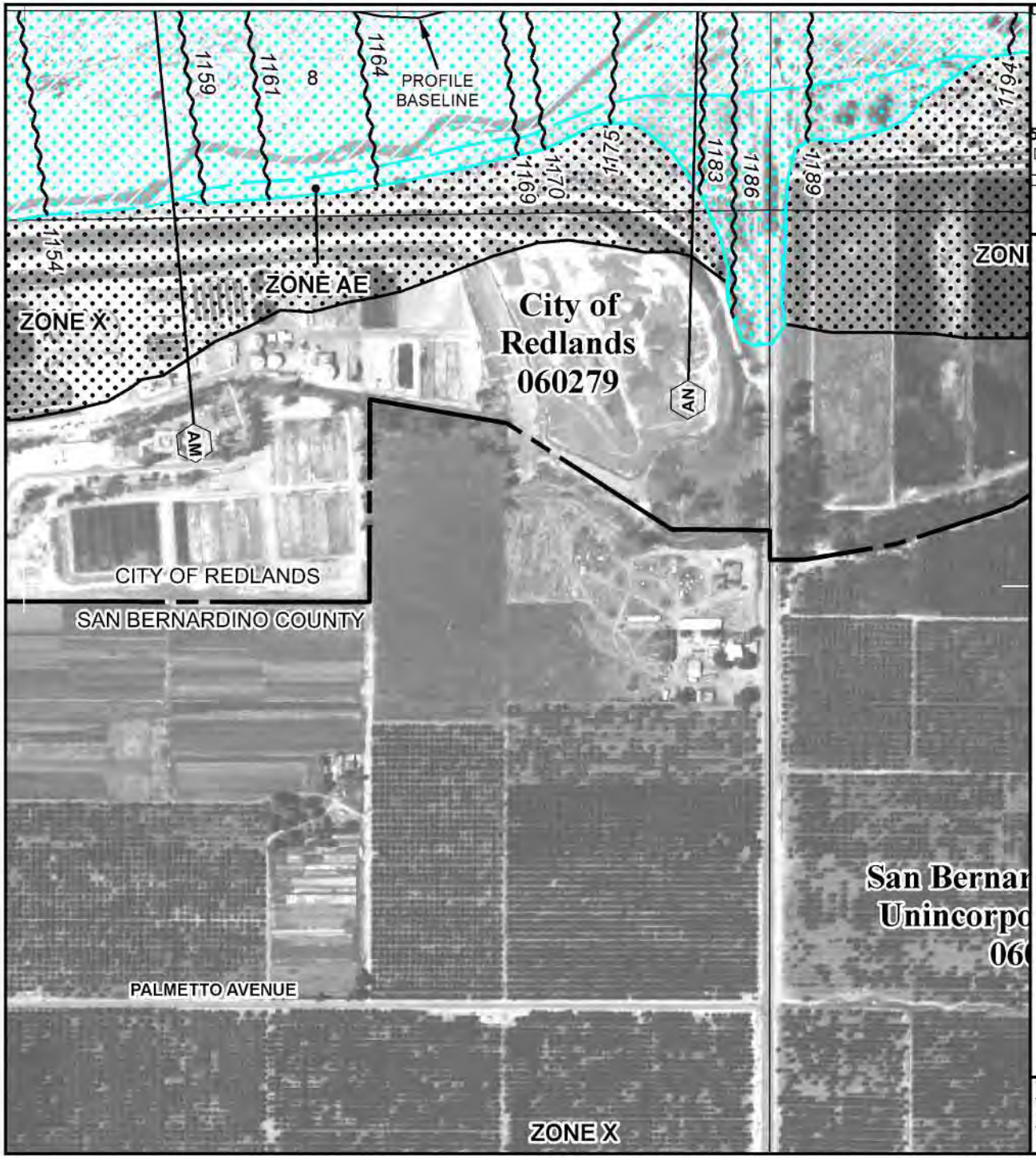


...donal Flood Insurance Program at 1-800-638-6620.

MAP SCALE 1" = 500'

50 0 500 1000

FEET

METERS

NFIP

NATIONAL FLOOD INSURANCE PROGRAM

PANEL 8704H

FIRM

FLOOD INSURANCE RATE MAP

SAN BERNARDINO COUNTY, CALIFORNIA
AND INCORPORATED AREAS
PANEL 8704 OF 9400

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
REDLANDS, CITY OF	060279	8704	H
SAN BERNARDINO COUNTY	060270	8704	H

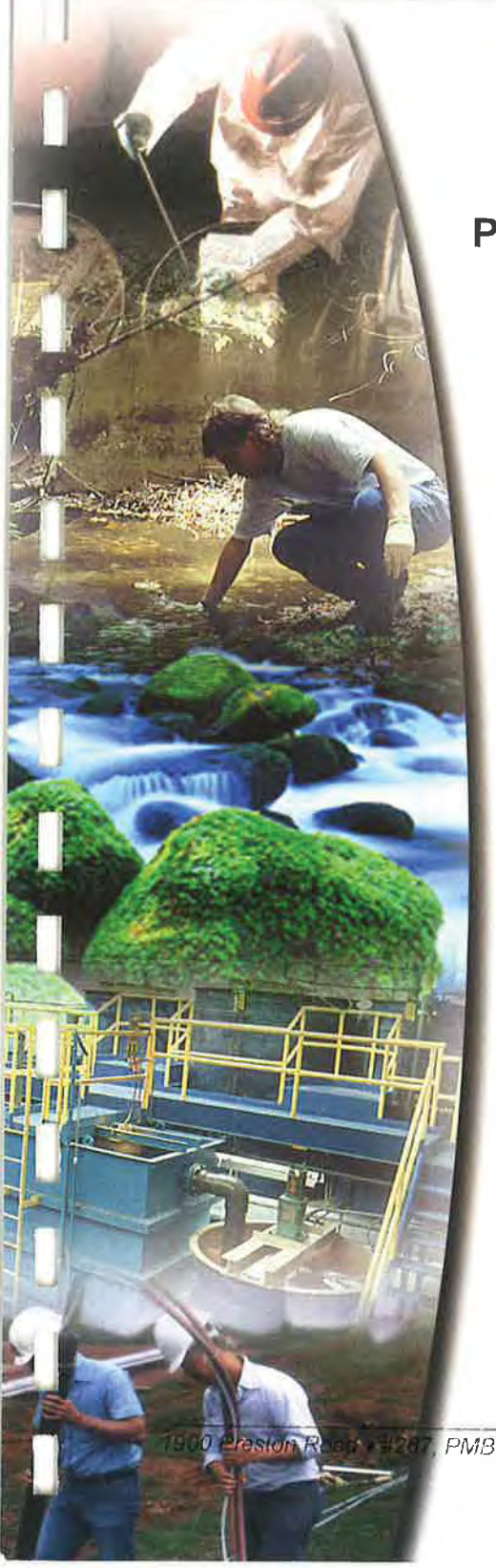
Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
06071C8704H

MAP REVISED
AUGUST 28, 2008

Federal Emergency Management Agency

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.gov



PREPARED AT THE REQUEST OF LEGAL COUNSEL
PRIVILEGED AND CONFIDENTIAL

PHASE I ENVIRONMENTAL SITE ASSESSMENT REPORT

APPROXIMATELY 55-ACRE VACANT TRACT
NW CORNER OF PALMETTO AVENUE AND ALABAMA STREET
REDLANDS, SAN BERNARDINO COUNTY, CALIFORNIA

PREPARED FOR

MCLANE COMPANY, INC.
4747 MCLANE PARKWAY
TEMPLE, TEXAS 76504

BY

THE EI GROUP, INC.
1900 PRESTON ROAD
#267, PMB 275
PLANO, TEXAS 75093
(972) 612-6900
(972) 758-1902 FAX

DECEMBER 13, 2010
EI PROJECT NO. ENTX100026.00

PREPARED AT THE REQUEST OF LEGAL COUNSEL – PRIVILEGED AND CONFIDENTIAL

December 13, 2010

McLane Company, Inc.
4747 McLane Parkway
Temple, Texas 76504

Attn: Len Mewhinney, Esq.
Vice President-Legal

RE: Phase I Environmental Site Assessment Report
Approximately 55-Acre Vacant Tract
Northwest corner of Palmetto Avenue and Alabama Street
Redlands, San Bernardino County, California
EI Project No. ENTX100026.00

Dear Mr. Mewhinney:

Please find enclosed three bound and one electronic copies of our Phase I Environmental Site Assessment (ESA) Report for the approximately 55-acre vacant tract located at the northwest corner of Palmetto Avenue and Alabama Street in Redlands, San Bernardino County, California.

It has been our pleasure to work with you and McLane Company, Inc. on this important project. Should you have questions regarding the enclosed report, or require additional information, please contact us at (972) 612-6900.

Very truly yours,
THE EI GROUP, INC.

Larry G. Michel
Director, Texas Operations

Susan Mazzarella, LEED AP
Principal Consultant

Enclosures: Phase I ESA Report (3 bound copies, 1 CD)

PREPARED AT THE REQUEST OF LEGAL COUNSEL – PRIVILEGED AND CONFIDENTIAL

PHASE I ENVIRONMENTAL SITE ASSESSMENT REPORT

APPROXIMATELY 55-ACRE VACANT TRACT
NORTHWEST CORNER OF PALMETTO AVENUE AND ALABAMA STREET
REDLANDS, SAN BERNARDINO COUNTY, CALIFORNIA

PREPARED FOR

MCLANE COMPANY, INC.
4747 MCLANE PARKWAY
TEMPLE, TEXAS 76504

BY

THE EI GROUP, INC.
1900 PRESTON ROAD
#267, PMB 275
PLANO, TEXAS 75093

DECEMBER 13, 2010

EI PROJECT NO. ENTX100026.00

WE DECLARE THAT, TO THE BEST OF OUR PROFESSIONAL KNOWLEDGE AND BELIEF, WE MEET THE DEFINITION OF *ENVIRONMENTAL PROFESSIONAL* AS DEFINED IN §312.10 OF 40 CFR 312. WE HAVE THE SPECIFIC QUALIFICATIONS BASED ON EDUCATION, TRAINING, AND EXPERIENCE TO ASSESS A PROPERTY OF THE NATURE, HISTORY, AND SETTING OF THE SITE. WE HAVE DEVELOPED AND PERFORMED THE ALL APPROPRIATE INQUIRIES IN CONFORMANCE WITH THE STANDARDS AND PRACTICES SET FORTH IN 40 CFR PART 312.

RESUMES OF ENVIRONMENTAL PROFESSIONALS DIRECTLY RESPONSIBLE FOR THIS ASSESSMENT ARE PRESENTED IN APPENDIX A OF THIS REPORT.

Susan L. Mazzarella, LEED AP
Principal Consultant

Susan L. Mazzarella
Signature

Larry G. Michel
Director, Texas Operations

L G Michel
Signature

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PREPARED AT THE REQUEST OF LEGAL COUNSEL – PRIVILEGED AND CONFIDENTIAL

PHASE I ENVIRONMENTAL SITE ASSESSMENT REPORT

APPROXIMATELY 55-ACRE VACANT TRACT
NORTHWEST CORNER OF PALMETTO AVENUE AND ALABAMA STREET
REDLANDS, SAN BERNARDINO COUNTY, CALIFORNIA
EI PROJECT NO. ENTX100026.00

EXECUTIVE SUMMARY

The EI Group, Inc. has performed a Phase I Environmental Site Assessment in conformance with the scope and limitations of ASTM Practice E 1527-05 of the approximately 55-acre vacant tract located at the northwest corner of the intersection of Palmetto Avenue and Alabama Street in Redlands, San Bernardino County, California. Any exceptions to, or deletions from, this practice are described in **Section 7.0** of this report.

This assessment has revealed no evidence of current or *historical recognized environmental conditions* on the Site.

The Site is not included on any of the Federal regulatory databases reviewed. However, a portion of the Site previously owned by Teunissen appears on the State underground storage tank (UST) list. A review of prior Phase I ESA reports completed for the Site in 2006 indicate that the UST was removed in 2001 and a "no further action" letter was issued by the San Bernardino County Fire Department, Hazardous Materials Division (HMD) on March 16, 2001.

The City of Redlands historically operated the California Street Landfill at 1950 Nevada Avenue, southwest adjacent to and downgradient of the Site. This facility is listed on the State leaking underground storage tank (LUST) database with a case status of "closed". This listing is a *historical recognized environmental condition* in connection with the Site.

Norton Air Force Base, located approximately 0.25 miles north and west of the Site, appears on the Federal National Priorities List (NPL) and is now closed. The listing is due to regional groundwater contamination by volatile organic compounds associated with historical operations at the base. This listing is a *historical recognized environmental condition* in connection with the Site.

1.0 INTRODUCTION

The EI Group, Inc. (EI) was retained by the Legal Department of McLane Company, Inc. (Client or User) to complete a Phase I Environmental Site Assessment (ESA) of the approximately 55-acre vacant tract of land located at the northwest corner of the intersection of Palmetto Avenue and Alabama Street in Redlands, San Bernardino County, California (the Site). The Phase I ESA was performed in general accordance with the scope and limitations of the American Society for Testing and Materials (ASTM) E 1527-05 *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process*. The scope of services for this Phase I ESA is contained in our November 24, 2010, proposal as authorized by Client on November 29, 2010.

1.1 PURPOSE

The purpose of a Phase I ESA is to identify *recognized environmental conditions*[1] (REC) in connection with a property, and to permit the user to satisfy one of the requirements to qualify for the *innocent landowner, contiguous property owner or bona fide prospective purchaser* limitations on *Comprehensive Environmental Response, Compensation and Liability Act* (CERCLA) liability (collectively referred to as *landowner liability protections* or *LLPs*).

The Phase I ESA may also be used to qualitatively assess the business environmental risk associated with acquisition of a property; however, such an assessment may necessitate investigation beyond the scope of the ASTM E 1527-05 Standard Practice.

1.2 SCOPE OF SERVICES

The scope of services authorized by Client for this Phase I ESA included:

- A visual and physical reconnaissance of the Site;
- Observation of adjoining properties from publicly accessible areas;
- Interviews with the user, past and present owners, operators and occupants of the Site as available;
- A review of publicly available, practically reviewable ASTM standard environmental record sources;
- A review of available and applicable building inspection, permitting, and other environmental records maintained by county and/or local agencies, and interviews with local agency representatives;

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[1] **ASTM defines a *recognized environmental condition* as "...the presence or likely presence of any *hazardous substances* or *petroleum products* on a *property* under conditions that indicate an existing release, a past release or a *material threat* of a release of any *hazardous substances* or *petroleum products* into structures on the *property* or into the ground, ground water, or surface water of the *property*. The term includes *hazardous substances* or *petroleum products* even under conditions in compliance with laws. The term is not intended to include *de minimis* conditions that generally do not present a threat to human health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies.**

- A review of available previous environmental reports if provided by Client, aerial photographs, city directories, fire insurance maps, geologic maps, hydrogeologic maps, and United States Geological Survey (USGS) topographic maps; and

- An evaluation of the information obtained and preparation of this report to document our findings and the resulting conclusions and recommendations.

1.3 Significant Assumptions

For purposes of this assessment, EI assumes that information provided by others, including but not necessarily limited to, the User, past or present Owners, Key Site Manager, occupants, local and/or State government officials and environmental regulatory database providers is true and correct.

1.4 Limitations and Exceptions

The limitations of this Phase I ESA included:

- Preparation and review of a chain-of-title were not included in the scope of services for this project;

- ASTM "Non-Scope Considerations" such as asbestos containing materials, radon, lead-based paint, lead in drinking water, wetlands, regulatory compliance, cultural and historic resources, industrial hygiene, health and safety, ecological resources, endangered species, indoor air quality, and high-voltage power lines were not included as part of this assessment.

1.5 Special Terms and Conditions

The services described in this report were performed in a manner consistent with generally accepted professional consulting principles and practices and in accordance with the practices and scope of service elements recommended by ASTM for a Phase I ESA. Our services were performed in accordance with our agreement with our Client. No other warranty, expressed or implied, is made.

1.6 User Reliance

This report has been prepared for, on behalf, and in the name of McLane Company, Inc. and cannot be relied upon by any other party without the prior written consent of EI. This report is an instrument of service prepared for the exclusive use of McLane Company, Inc., and may not be reproduced or distributed without the prior written authorization from The EI Group, Inc. and McLane Company, Inc. This report is solely for the use and information of our Client or as otherwise noted. Any unauthorized use of this report is strictly prohibited and we assume no liability for any such use.

2.0 SITE DESCRIPTION

2.1 LOCATION AND LEGAL DESCRIPTION

The Site is located northwest of the intersection of Alabama Street and Palmetto Avenue in Redlands, San Bernardino County, California, at latitude 34.087600 north, longitude 117.211200 west (see **Figure 1**). According to our interview with Mr. Tim Howard, Owner's representative, the Site consists of the following five parcels:

Parcel 0292-041-35;
Parcel 0292-041-42;
Parcel 0292-041-43;
Parcel 0292-041-45; and
Parcel 0292-041-46.

Parcels Maps, and a legal description for the Site provided by Client, are contained in **Appendix B**.

2.2 SITE AND VICINITY CHARACTERISTICS

The Site is located in an area of Redlands generally characterized by agricultural, commercial and municipal uses.

2.3 CURRENT SITE USE AND IMPROVEMENTS

The Site is currently vacant, and is littered with old tires, cardboard boxes, used clothing, agricultural debris and other general trash located mostly at the west side of the Site (see **Figure 2**). In the southwest area of the Site, EI observed a small pump associated with a nearby water well. The concrete slab beneath the pump was stained with oil. Also observed in this area was a small shed containing trash and clothing.

EI observed sewer main manholes across the Site. The manholes provide access to sewer mains associated with the northwest adjacent sewage treatment facility. EI also observed remnants of several wind generators associated with the historic use of the Site as a citrus orchard. The generator towers are approximately 20 feet high and are primarily located on the southwest portion of the Site.

Remnants of cement valve boxes associated with historic orchard irrigation are located at the center of the Site, and an approximately 1-foot high cement wall divides the Site through its center from north to south.

Northeast of the Site, EI observed approximately 50 active bee hives.

2.4 ADJOINING PROPERTY USE

EI observed the following adjacent property uses from the Site and/or publicly accessible rights-of-way.

North
City of Redlands California Street landfill. According to the City of Redlands Public Works

Department's Solid Waste Manager Mr. Gary Van Dorst, the landfill has been capped and covered with vegetation since 1970.

East
Prologis distribution facility and a large vacant field.

South/Southeast
Intersection of Palmetto Avenue and Alabama Street, beyond which is an orange grove.

Southwest
Large distribution building that is currently for lease.

West
Partially collapsed farmhouse and agricultural operation. In the immediate vicinity of the derelict farmhouse are stacks of boxes as well as functioning and abandoned vehicles. The agricultural operations include several greenhouses.

Northwest
City of Redlands Water Reclamation facility as well as the City's Class III Landfill for non hazardous solid wastes.

3.0 USER PROVIDED INFORMATION

A Phase I Environmental Site Assessment User Questionnaire (ESA Questionnaire) was submitted to the Client (User), and was completed by Client and returned to EI (**Appendix C**). The following is a summary of information provided.

3.1 TITLE RECORDS

Review of a chain-of-title for the Site was not requested by Client.

3.2 ENVIRONMENTAL LIENS / ACTIVITY AND USE LIMITATIONS

Review of environmental liens for the Site was not requested by Client. The Client was not aware of any liens or activity and use limitations (AUL) for the Site.

3.3 SPECIALIZED KNOWLEDGE

The Client did not report any specialized knowledge of the Site.

3.4 COMMONLY KNOWN OR REASONABLY ASCERTAINABLE INFORMATION

The Client did not report any commonly known or reasonably ascertainable information regarding the Site that would help the Environmental Professional identify conditions indicative of releases or threatened releases of petroleum products or hazardous materials at the Site.

3.5 VALUATION REDUCTION FOR ENVIRONMENTAL ISSUES

The User of the report indicated that the purchase price for the Site is consistent with the fair market value.

3.6 OWNER, PROPERTY MANAGER AND OCCUPANT INFORMATION

The Client identified Messrs. Tim Howard Mark Zorn as the Site contacts.

3.7 REASON FOR PERFORMING PHASE I ESA

The Client indicated that the Phase I ESA was requested in support of its environmental due diligence in association with a contemplated real estate transaction.

3.8 PREVIOUS REPORTS

The user provided the following previous environmental reports for EI's review.

Phase I Environmental Site Assessment Report, Teunissen Property; LFR, Inc., 2006

The LFR report did not identify evidence of *recognized environmental conditions* at the Site. Observations and recommendations presented in the report include the following.

- Numerous 55 gallon and smaller drums were located on the Site at the time of LFR's Site reconnaissance, as were several pieces farm equipment and old

vehicles. LFR recommended that these items be removed from the Site and properly disposed.

- At least two septic systems were located on the Site.
- LFR reported the possible presence of an abandoned fuel UST on Site and recommended proper removal of it in accordance with applicable regulations.
- LFR reported the potential presence of asbestos-containing materials (ACMs) and lead-based paint (LBP) in remaining structures on the Site should be removed in accordance with applicable regulations.
- LFR recommended that development activities on the western half of the Site account for the potential presence of subsurface features such as irrigation lines.

Phase I Environmental Site Assessment Report, Fainbarg and Perricone Parcels; Nova Consultants, Inc.; 2006

Nova Consultants (Nova) did not identify evidence of *recognized environmental conditions* at the Site. Observations and recommendations presented in the report include the following.

- Site grading operations may encounter septic tanks associated with a small farmhouse located along the eastern boundary of parcel 24.
- Historic operations at Norton Air Force Base, located approximately one mile northwest of the Site, has contaminated groundwater beneath the Site with chlorinated solvents. The groundwater contaminant plume extends southwesterly from the Site.
- Regional groundwater contamination is present from agricultural drainage, urban runoff, septic systems, sewer collection systems, etc.
- The Grant Sewage Disposal ponds are located approximately 0.25 miles north of the Site. The presence of the facility could represent a concern for future development of the Site if sensitive receptors are part of the planned development.
- Two 150-gallon above ground storage tanks were observed near the southeastern corner of Parcel 34.
- Pole-mounted transformers located along Palmetto Avenue may contain polychlorinated bi-phenyls (PCBs) due to the age of property.
- Pesticides, fertilizers, and herbicides were probably historically used at the Site.

- Nova recommend proper removal and disposal of demolition debris and household trash located on the Site.

- Nova noted the possibility of small USTs on Site due to diesel powered wind generators, and that the USTs may require removal. Similarly, smudge pots observed at the Site will also require proper removal.

- Nova also noted that Site grading operations may encounter irrigation piping and associated appurtenances.

- Nova recommended that two groundwater wells located near the southeastern corner of Parcel 34 will require proper plugging and abandonment.

4.0 RECORDS REVIEW

4.1 STANDARD ENVIRONMENTAL RECORD SOURCES

EI obtained information for the Site from the following local, State and Federal sources.

4.1.1 Local Sources

EI contacted the following local agencies for information about the Site. Records of Communication are presented in **Appendix D**.

Municipal Water/Sewer Department

According to the City of Redlands Municipal Water and Sewer Department, records indicate that the portion of the Site located at 9092 Alabama Street, Redlands, California contains 2-inch non-potable water lines most likely used for fire department and irrigation use. No records of municipal water or sewer connections were listed for the address. The remainder of the Site consists of areas identified by parcel numbers which the City's Municipal Water and Sewer Department was not able to search. Based on visual observation and odors, it is likely that the manholes observed during the Site visit are associated with sewer lines.

4.1.2 State and Tribal Sources

A review of State and Tribal regulatory files for facilities of environmental concern in the vicinity of the Site was performed by EDR, a private regulatory database research firm. A copy of the EDR report summarizing the results of the database review is presented as **Appendix E**.

SUMMARY OF STATE AND TRIBAL AGENCY DATABASE FINDINGS			
REGULATORY DATABASE	MINIMUM SEARCH DISTANCE	SITE LISTED	TOTAL LISTED
State Hazardous Waste Sites (STATE)	1 mile	No	
Solid Waste Disposal/Landfill Sites (SWL)	½ mile	No	2
Leaking Underground Storage Tank Sites (LUST)	½ mile	No	1
Registered Underground/Aboveground Storage Tank Sites (UST/AST)	Property & Adjoining	Yes	1
Spills Cases (OCP)	Property & Adjoining	No	
Activity or Use Limitations (AUL)	½ mile	No	
Voluntary Cleanup Sites (VCP)	½ mile	No	

SUMMARY OF STATE AND TRIBAL AGENCY DATABASE FINDINGS			
REGULATORY DATABASE	MINIMUM SEARCH DISTANCE	SITE LISTED	TOTAL LISTED
Brownfield Sites	½ mile	No	
San Bernardino County Permits	¼-mile	No	5

Site

The State UST database lists one UST registered for the Site as AG-TEUNISSEN AGRICULTURAL 9092 ALABAMA ST. A review of prior Phase I ESA reports completed for the Site in 2006 indicate that the UST was removed in 2001 and a "no further action" letter was issued by the San Bernardino County Fire Department, Hazardous Materials Division (HMD) on March 16, 2001. Site owner representative Mr. Tim Howard reported that during the excavation of citrus trees and their associated root systems on the property, no additional USTs were discovered at the Site.

Adjoining Properties

The Redlands Logistics Center, west adjacent to the Site, is listed on the San Bernardino County Permits database. The listing indicates that Thrifty Oil had a HazMat Handler permit at this location, which expired on November 30, 2009. The listing does not indicate any violations or other related information. This building is current empty, and is for lease. The issuance of a HazMat Handler permit indicates that hazardous materials were used at the facility; however, it is uncertain whether these materials were stored and used properly.

Surrounding Properties

A review of the State LUST database revealed one LUST registered to the California Street Landfill. The release was remediated and the case "closed" in 1995. The release was gasoline that penetrated the soil only with no groundwater contact. This location is topographically downgradient from the Site. This location was an "orphan" site on the EDR report, and was therefore not plotted on the radius map. A supplemental report from EDR for this facility is included in **Appendix E**.

A review of the Solid Waste Facility/Landfill Sites (SWF/LF) list indicates that there are two SWF/LF facilities within approximately 0.5 miles of the target Site.

One, HASKELL CO. INDUSTRIAL COMPOST 2130 NEVADA AVENUE W [*sic*], is approximately 0.188 miles from the Site in a topographically downgradient position. This facility appears to be a proposed location for composting of food waste, green materials, biosolids and wood waste. The listing does not provide any other relevant information.

The second, CALIFORNIA STREET LANDFILL 2151 NEVADA STREET [*sic*], is also located approximately 0.188 miles from the Site in a topographically downgradient position. This facility is listed as an active solid waste landfill that accepts construction/demolition debris, mixed municipal waste, biosolids and other designated wastes. The property comprises approximately 115 acres. Financial assurance status is listed as "Adequate", with closure planned for the year 2042. The listing does not provide any information that indicates environmental violations associated with this property.

A review of the Waste Management Unit Database System (WMUDS/SWAT) list, revealed one WMUDS/SWAT facility within approximately 0.5 miles of the Site. LANDFILL, CALIFORNIA STREET 2151 NEVADA ST [*sic*] is the same facility mentioned above. This property is listed as an active Solid Waste Class III landfill that accepts non-hazardous solid wastes. Other than a general statement that this class of landfill can cause a major threat to groundwater if violations occur, there is no information indicating any environmental issues related to the property.

4.1.3 Federal Sources

A review of Federal regulatory files for facilities of environmental concern in the vicinity of the Site was performed by EDR, a private regulatory database research firm. A copy of the EDR report summarizing the results of the review is presented as **Appendix F**.

SUMMARY OF FEDERAL AGENCY DATABASE FINDINGS			
REGULATORY DATABASE	MINIMUM SEARCH DISTANCE	SITE LISTED	TOTAL LISTED
National Priorities List (NPL)	1 mile	No	1
Delisted NPL	½ mile	No	
Comprehensive Environmental Response, Cleanup, and Liability Information System (CERCLIS) list	½ mile	No	
No Further Remedial Action Planned sites removed from CERCLIS (CERCLIS NFRAP) list	½ mile	No	
Resource Conservation and Recovery Act (RCRA) Corrective Action (CORRACTS) list	1 mile	No	
RCRA Treatment, Storage and Disposal (TSD) Facility list	½ mile	No	
RCRA Generators List	Property and Adjoining	No	1

SUMMARY OF FEDERAL AGENCY DATABASE FINDINGS			
REGULATORY DATABASE	MINIMUM SEARCH DISTANCE	SITE LISTED	TOTAL LISTED
Institutional Control (IC) and Engineering Control (EC) list	Property	No	
Emergency Response Notification System (ERNS)	Property	No	
Department of Defense (DOD)	1 miles	No	1
Record of Decision (ROD)	1 mile	No	1

Site

The Site is not included in any of the Federal regulatory databases reviewed.

Adjoining Properties

No adjoining properties are included in any of the Federal regulatory databases reviewed.

Surrounding Properties

A review of the NPL list has revealed one NPL facility within 0.25 miles of the Site. USAF Norton Air Force Base located at I-10/US HWY 395 is approximately 0.236 miles from the Site in a topographically cross to upgradient position.

The EDR report includes extensive data regarding this site. A summary of information for the facility includes the following.

"Norton Air Force Base (Norton) covers approximately 2,036 acres 58 miles east of Los Angeles near the City of San Bernardino, San Bernardino County, California. It is in a low-lying alluvial plain surrounded on the north and east by the San Bernardino Mountain Range. The base began operations in 1942 and has served as a major overhaul center for jet engines and the general repair of aircraft. Since 1962, the facility has served as a Military Airlift Command Base. In addition, Norton formerly had the responsibility for providing maintenance and logistics for liquid-fuel intercontinental ballistic missiles. Past hazardous waste management practices may have contributed to existing contamination problems throughout the base. The practices include burial of drums and other unspecified materials; disposal of waste oils, solvents and paint residues into landfills, unlined pits, ponds, and drying beds; storage in leaking underground tanks, and spills of AVGAS, oils, solvents, PCBs, and acidic plating solutions. Industrial solvents have been used extensively on the base."

The EPA website was consulted for a summary of the current status of this property, as follows.

"The third 5-Year Review completed in September 2010 revealed no protectiveness issues. As of 2009, primary contaminants trichloroethene and cis-1,2-dichloroethene no longer exceed their maximum contaminant levels (MCLs) in groundwater. Although, due to the long term decline in regional groundwater levels, some monitoring wells within the central base area went dry while monitoring results indicated levels above MCLs. EPA identified a concern about possible residual vadose zone contamination and the potential for groundwater contamination if groundwater levels return to historical levels. As a result, EPA, the Air Force and the State will work collaboratively to confirm that the performance of the remedy addresses the potential risk associated with this pathway. In late 2009 and early 2010, the Site 2 landfill cap was modified from a vegetative cap to an asphalt cap for use as a vehicle parking and storage area."

Norton Air Force Base is listed on various other databases; a summary of them all is included in the NPL information above. The Department of Defense (i.e., United States Air Force) is well established as the Potentially Responsible Party for the soil and groundwater contamination. As a result of the regional groundwater issues, there may be increased administrative and/or engineering considerations for grading, trenching, or other subsurface work at the Site.

A review of the RCRA-SQG database indicates one RCRA-SQG listing within approximately 0.25 miles of the Site. HOME DEPOT USA HD5087 9377 ALABAMA ST [*sic*] is located 0.100 miles from the Site. No violations are listed for this property.

4.2 PHYSICAL SETTING SOURCES

EI reviewed the following physical setting sources for information related to the Site and surrounding area.

4.2.1 United State Geologic Survey Topographic Map

TOPOGRAPHIC INFORMATION FOR SITE AND SURROUNDING AREA		SOURCE(S)
Site Elevation	1211 ft. above sea level	*USGS 7.5-minute Redlands, California, Quadrangle, 1967, photorevised 1988*
Surface Runoff/Topographic Gradient	General NW	
Nearest Surface Water	Santa Ana River, <0.25 miles north	

4.2.2 Soils

SOIL CHARACTERISTICS FOR SITE		SOURCE(S)
Soil Type	HANFORD	The EDR Radius Map Report with GeoCheck
Description	Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.	
SOIL CHARACTERISTICS FOR SITE		**SOURCE(S)**
Soil Type	TUJUNGA	The EDR Radius Map Report with GeoCheck
Description	Class A - High infiltration rates. Soils are deep, well drained to excessively drained sands and gravels.	
SOIL CHARACTERISTICS FOR SITE		**SOURCE(S)**
Soil Type	FLUVENTS	The EDR Radius Map Report with GeoCheck
Description	Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.	

4.2.3 Geology

According to the information provided in the Phase I Environmental Site Assessments conducted in 2006, the Site is underlain by Holocene Age alluvial deposits from the Santa Ana River.

The general topography of the Site slopes gently to the west.

4.2.4 Hydrogeology

There is no naturally occurring surface water located on the Site. The Bunker Hill Hydrologic Basin aquifer system is located beneath the Site. According to the U.S.

Geological Survey, one 286 foot deep groundwater monitoring well is located in the southwest portion of the Site. Groundwater located in the shallow aquifer is degraded from agricultural use in the area. According to the City of Redlands Department of Public Works, Solid Waste Management Division, water supplied by the City of Redlands is pumped from deep aquifers that are not contaminated.

4.3 Site and Adjoining Property Historical Use

4.3.1 Historic Aerial Photographs

EI obtained aerial photography of the Site area dated 1930, 1938, 1953, 1966, 1977, 1989, 1994, 2002, and 2005 from EDR. The results of our review of these photographs are presented below. Copies of the 1930 and 2005 aerial photographs are provided in **Appendix F**.

Summary of Aerial Photograph Review
1930 **Scale 1" = 666'**
Site: Citrus groves cover the Site. A residence is located on the eastern portion of the Site.
Surrounding Area: To the north are trees beyond which is the Santa Ana River. The surrounding area to the south, east, and west contains citrus groves. A barn is located at the western Site boundary.
1938 **Scale 1" = 555'**
Site: The Site appears unchanged from the 1930 aerial photograph.
Surrounding Area: The surrounding area appears unchanged from the 1930 aerial photograph.
1953 **Scale 1" = 555'**
Site: The Site appears unchanged from the 1930 aerial photograph.
Surrounding Area: The surrounding area appears unchanged from the 1930 aerial photograph.
1966 **Scale 1" = 555'**
Site: The Site appears unchanged from the 1930 aerial photograph.

SUMMARY OF AERIAL PHOTOGRAPH REVIEW
Surrounding Area: North of the Site is a landfill, beyond which is the Santa Ana River. To the northwest is a sewage treatment plant. The surrounding areas to the south, east, and west contain citrus groves. To the very west of the property line is a barn associated with the citrus groves.
1977 **Scale 1" = 555'**
Site: The Site appears unchanged from the 1930 aerial photograph.
Surrounding Area: North of the property is a landfill (capped in 1970) followed by the Santa Ana River wash. To the northwest is a sewage treatment plant. The south and east are portions of the surrounding area contain citrus groves. A barn is located at the western Site boundary.
1989 **Scale 1" = 666'**
Site: The Site appears unchanged from the 1930 aerial photograph.
Surrounding Area: The surrounding areas appear unchanged from the 1977 aerial photograph.
1994 **Scale 1" = 666'**
Site: The Site appears unchanged from the 1930 aerial photograph.
Surrounding Area: The surrounding areas appear unchanged from the 1977 aerial photograph.
2002 **Scale 1" = 666'**
Site: Citrus groves fill the site except for the northwest section which had been graded. House located on the eastern portion of the site.
Surrounding Area: The surrounding areas appear unchanged from the 1977 aerial photograph.
2005 **Scale 1" = 666'**
Site: Citrus groves cover the southern portion of the site. The entire northern half is partially graded to the west with the eastern portion consisting of dirt trails and brush. A residence and two small outbuildings are located on the eastern portion of the Site.

SUMMARY OF AERIAL PHOTOGRAPH REVIEW
Surrounding Area: The surrounding areas appear unchanged from the 1977 aerial photograph.

4.3.2 Historic Topographic Maps

An historic topographic map was obtained from the U.S. Geological Survey website (see **Figure 1**). The following is a summary of the historical topographic map review.

1988	SUMMARY OF HISTORICAL TOPOGRAPHIC MAPS
USGS 7.5-minute Redlands, California, Quadrangle, 1967, photorevised 1988	**Site:** Citrus groves are observed throughout the Site with two locations listed as urban extensions at the northeast corner.
	Surrounding Area: Surrounding areas to the east, west, and south show extensive citrus groves. Directly to the north is the Grant sewage treatment facility and the Santa Ana River. Further north is Norton Air Force Base.

4.3.3 City Directories

City directories were reviewed at approximately 5-year intervals from 1931 to 1967 at the AK Smiley Redlands Public Library. The known addresses as well as names associated with the Site were not identified in the city directory search. The Library Historian confirmed that the Site area was incorporated into the City of Redlands in approximately 1960; therefore, city directory information for the Site before 1960 was not available. Records researched for the years 1965 and 1967 also did not provide historical information for the addresses associated with the Site and the surrounding areas. The Library Historian confirmed that this was most likely due to the Site and surrounding areas being used for agricultural purposes.

4.3.4 Fire Insurance Maps

Sanborn Fire Insurance Maps were requested from EDR. According to EDR, no Sanborn maps were available for the Site area (see **Appendix G**).

Aerial photographs and interviews confirm the use of the Site for agriculture (i.e., citrus orchards) from at least 1930.

5.0 SITE RECONNAISSANCE

The purpose of EI's Site Reconnaissance was to visually and physically observe uses and conditions that could result in the presence of hazardous materials or petroleum products on or beneath the Site. Ms. Susan Mazzarella, Principal Consultant, and Mr. Ryan Schalkle, Environmental Specialist, visited the Site on November 29, 2010. EI was unaccompanied during the Site visit. Our observations were documented and pertinent features or areas of environmental concern were photographed and are referenced in the text. Selected Site photographs are included in **Appendix H** and Site features are depicted in **Figure 2**. A description of each area assessed is presented below.

5.1 Methodology and Limiting Conditions

The Site reconnaissance was performed by walking and observing accessible portions of the Site.

5.2 General Site Setting

The Site is vacant land located in the northwest part of Redlands in an area characterized by agricultural, commercial and municipal uses.

5.3 Petroleum Products/Hazardous Substances in Connection with Identified Uses

The Site is currently vacant. However, it has been used as a citrus orchard for at least 75 years. It is safe to assume that pesticides, herbicides and fertilizers have seen extensive use across the Site. In addition, gasoline and/or diesel have likely been stored/used at the Site to power farm equipment.

5.4 Drainage Discharges

Storm water is discharged from the Site via sheet flow to the west.

5.5 Exterior Observations

The Site is currently vacant, and is littered with old tires, cardboard boxes, used clothing, agricultural debris and other general trash located mostly at the west side of the Site. In the southwest area of the Site, EI observed a small pump associated with a nearby water well. The concrete slab beneath the pump was stained with oil. Also observed in this area was a small shed containing trash and clothing.

EI observed sewer main manholes across the Site. The manholes provide access to sewer mains associated with the northwest adjacent sewage treatment facility. EI also observed remnants of several wind generators associated with the historic use of the Site as a citrus orchard. The generator towers are approximately 20 feet high and are primarily located on the southwest portion of the Site.

Remnants of cement valve boxes associated with historic orchard irrigation are located at the center of the Site, and an approximately 1-foot high cement wall divides the Site through its center from north to south.

Northeast of the Site, EI observed approximately 50 active bee hives.

Item or Feature		Observed
Storage Tanks	Aboveground (AST)	No
	Underground (UST)	No (?)
Oil/Water Separators		No
Odors		Yes
Pools of Liquid		No
Drums/ Hazardous Substance and Petroleum Products Containers		No
Unidentified Substance Containers		Yes
PCB Equipment		Yes
Pits, Ponds or Lagoons		No
Stained Soil or Pavement		Yes
Stressed Vegetation		No
Solid Waste		Yes
Waste Water		No
Wells		Yes
Septic Systems		No (?)
Other		Yes

USTs

According to Phase I ESA reports prepared for the Site in 2006, there may be USTs that were used to store diesel fuel to operate farm equipment and the diesel-powered wind generators that were previously used on the Site. However, EI did not observe any visible surface evidence of USTs at the Site. The Owner's representative, Mr. Tim Howard, reported that during excavation of the orange trees and their roots, no USTs were encountered, and that the only UST known to be on Site had been removed in 2001.

Odors

The Site has various unmarked manholes that are associated with sewer mains associated with the northwest adjacent wastewater treatment facility. Strong sewage odors were detected in the immediate vicinity of these manholes. No records of municipal water/sewer connections were listed for the Site address. The remainder of the Site consists of areas identified by parcel numbers which the City's Municipal Water/Sewer Department was not able to search.

Unidentified Substance Containers

Various old, small, empty containers that may have contained petroleum products, such as motor oil, were observed in trash piles located at the western portion of the property line.

PCB Equipment

Pole-mounted transformers were located around the perimeter of the Site. The transformers were not labeled regarding their PCB content. No staining on the transformers or the ground around the poles was observed.

Stained Soil or Pavement

The pump located in the southwestern portion of the Site is mounted on a cement slab that is stained with oil.

Solid Waste

Solid waste was observed throughout the Site, primarily in the southwest portion of the property. This waste includes agricultural wastes, old tires, used clothing, empty containers, and agricultural waste, including the remnants of old greenhouses.

Wells

The EDR report confirmed the location of a water well on Site located on the southwest portion of the Site in the same location of the well and pump observed during the Site visit..

Septic Systems

According to Phase I ESA reports prepared in 2006, it is possible that two septic tanks associated with the former residence located at the eastern Site boundary may remain. These tanks may be discovered during Site grading and should be removed in accordance with applicable regulations.

Other

According to the City of Redlands Municipal Water and Sewer Department, records indicate that the portion of the Site located at 9092 Alabama Street, Redlands, California contains 2-inch non-potable water lines most likely used for fire department and irrigation use. No records of municipal water or sewer connections were listed for the address.

5.6 INTERIOR OBSERVATIONS

The property is an approximately 55-acre vacant tract with no structures. Therefore, no interior observations were made.

6.0 INTERVIEWS

EI interviewed the following people as part of this assessment.

6.1 INTERVIEW WITH OWNER'S Representative

EI conducted an interview with Mr. Tim Howard, the owner's representative, to obtain information regarding current Site use and history. Mr. Howard confirmed that the owners of the parcels comprising the Site are:

- Parcels 0242-041035, 0292-041-42, 0292-041-46 are owned by Newcastle Associates;
- Parcel 0292-041-45 is owned by Oakmont Palmetto,LLC; and
- Parcel 0292-041043 is owned by Oakmont Alabama, LLC.

He also identified past owners of the parcels as the City of Redlands (Parcel 0242-041-35), Teunissen (Parcels 0292-041-43 and 0292-042-42) and Ramirez (Parcels 0292-041-46 and 0292-041-45).

Mr. Howard said he believed that the Site had always been used for citrus orchards, which were planted in the 1920s, and removed in 2003.

During the tree removal in 2003, Mr. Howard reported that no USTs were found on Site. Mr. Howard mentioned that a significant number of trees were removed with the roots, and opined that these activities would have shown any remaining USTs. He also reported that one UST was removed from the Alabama Teunissen property.

Mr. Howard confirmed that the concrete structures EI observed on Site are remnants of valve boxes used to control the irrigation systems historically used on Site.

Mr. Howard was unaware of bee hivees on the Site. He suspected that they may be operated by the small agricultural operation to the west.

According to Mr. Howard, there is one well located on Palmetto Avenue that may have been associated with testing activities for the adjacent sewage treatment plant. Manholes on the Site are used for servicing the sewer lines.

Mr. Howard was not aware of any releases on the Site or in its vicinity. Historically, pesticides for used in the citrus orchard were stored and mixed on the west side of the Site previously owned by Tuenissen. Mr. Howard reported that soil testing for pesticides was completed on the west side of the Site and findings were negative for all test samples.

6.2 INTERVIEW WITH KEY SITE MANAGER

A Key Site Manager was not identified; therefore, no interview was conducted.

6.3 INTERVIEW WITH OCCUPANTS

The Site is currently vacant; therefore, no occupants were interviewed.

6.4 INTERVIEWS WITH LOCAL AGENCIES

Information from interviews with local agency officials is presented in Section 4.1.1.

6.5 INTERVIEWS WITH OTHERS

At the Client's request, EI did not interview any other persons as part of this assessment.

7.0 FINDINGS AND OPINION

The findings of this assessment, and EI's opinion regarding their potential impact on the Site, are summarized below.

7.1 HISTORICAL OR CURRENT *RECOGNIZED ENVIRONMENTAL CONDITIONS*

No visible or physical evidence of a current or historical release of hazardous substances or petroleum products at the Site was observed during EI's reconnaissance of the Site. The Site is not included on any of the Federal regulatory databases reviewed. However, a portion of the Site previously owned by Teunissen appears on the State underground storage tank (UST) list. A review of prior Phase I ESA reports completed for the Site in 2006 indicate that the UST was removed in 2001 and a "no further action" letter was issued by the San Bernardino County Fire Department, Hazardous Materials Division (HMD) on March 16, 2001. No historic or current *recognized environmental conditions* are associated with the current or former use of the Site.

The City of Redlands historically operated the California Street Landfill at 1950 Nevada Avenue, southwest adjacent and downgradient of the Site. This facility is listed on the State leaking underground storage tank (LUST) database with a case status of "closed". This listing is a *historical recognized environmental condition* in connection with the Site.

Norton Air Force Base, located approximately 0.25 miles north and west of the Site, appears on the Federal National Priorities List (NPL) and is now closed. The listing is due to regional groundwater contamination by volatile organic compounds associated with historical operations at the base. This listing is a *historical recognized environmental condition* in connection with the Site.

7.2 *DE MINIMIS* CONDITIONS

EI observed concrete staining beneath the well pump located on the southwest side of the Site. This staining is a *de minimis* condition and is not expected to affect the environmental integrity of the Site.

7.3 OPINION

Based on the findings of this assessment, it is EI's opinion that no historic or current *recognized environmental conditions* exist on Site. However, the presence of a regional volatile organic compound groundwater plume from Norton Air Force Base has the potential to affect groundwater beneath the Site.

7.4 DATA GAPS

No data gaps were identified during this assessment which would affect the Environmental Professional's ability to identify recognized environmental conditions in connection with the Site.

7.5 DEVIATIONS

There were no deviations from the ASTM standard during this assessment.

7.6 ADDITIONAL SERVICES

No additional services were authorized for this assessment.

8.0 CONCLUSIONS

The EI Group, Inc. has performed a Phase I Environmental Site Assessment in conformance with the scope and limitations of ASTM Practice E 1527-05, of the approximately 55-acre vacant tract of land Site at the northwest corner of the intersection of Palmetto Avenue and Alabama Street in Redlands, San Bernardino County, California. Any exceptions to, or deletions from, this practice are described in **Section 7.0** of this report.

This assessment has revealed no readily visible or physical evidence of current *recognized environmental conditions* in connection with the Site.

This assessment has identified two *historical recognized environmental conditions* in connection with the Site, as follows.

- The City of Redlands historically operated the California Street Landfill at 1950 Nevada Avenue, southwest adjacent and downgradient of the Site. This facility is listed on the State leaking underground storage tank (LUST) database with a case status of "closed". This listing is a *historical recognized environmental condition* in connection with the Site.

- Norton Air Force Base, located approximately 0.25 miles north and west of the Site, appears on the Federal National Priorities List (NPL) and is now closed. The listing is due to regional groundwater contamination by volatile organic compounds associated with historical operations at the base. This listing is a *historical recognized environmental condition* in connection with the Site.

In addition, EI identified the following *de minimis* condition in connection with the Site.

- EI observed concrete staining beneath the well pump located on the southwest side of the Site. This staining is a *de minimis* condition and is not expected to affect the environmental integrity of the Site.

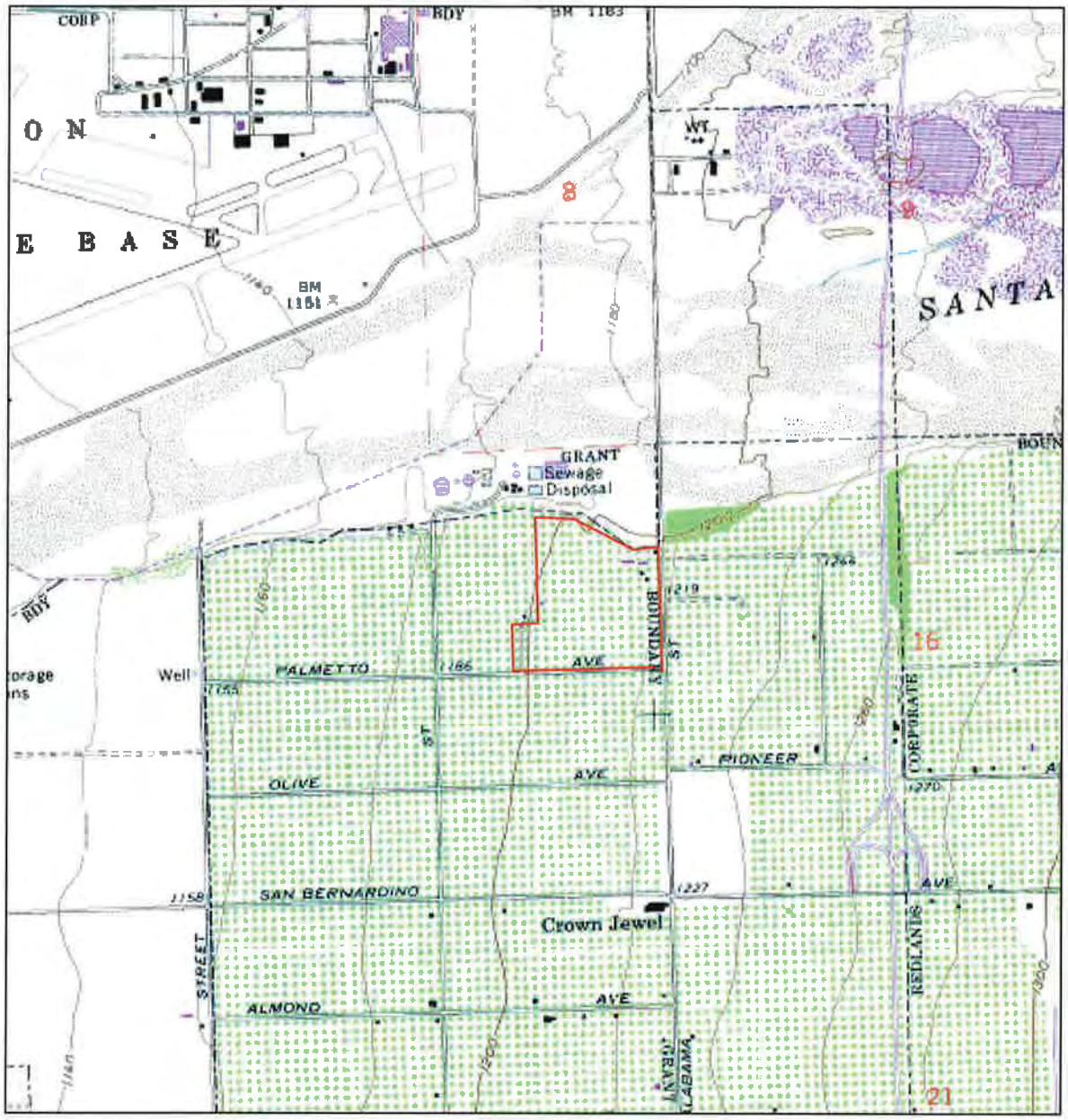
9.0 REFERENCES

References used in preparation of this report are cited throughout the text.

FIGURES

FIGURE 1

SITE LOCATION MAP



Source: USGS *Redlands, California* 7.5-minute series topographic quadrangle map, 1967, photorevised 1988

Scale: 1" = 2,000'

N
W E
S

FIGURE 1

SITE LOCATION MAP

Approximately 55-acre Vacant Tract
Redlands, California
EI Project No. ENTX100026.00

FIGURE 2

SITE DETAIL PLAN

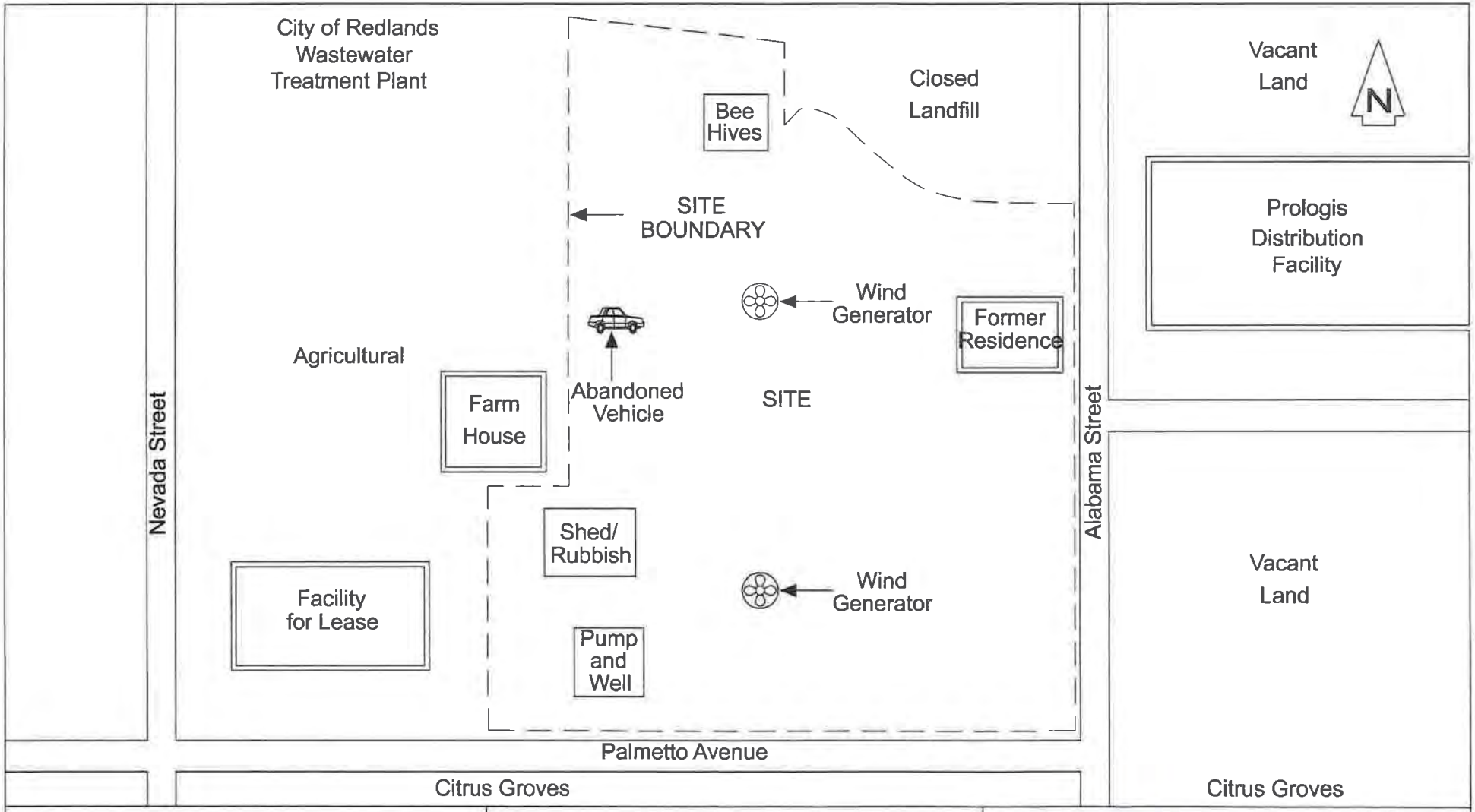


FIGURE NUMBER:	2
DATE: 12-08-2010	DRAWN BY: MSW
PROJECT NUMBER:	ENTX100026.00
SCALE:	NTS

SITE DETAIL PLAN

REDLANDS
VACANT PROPERTY

THE EI GROUP, INC.
1900 PRESTON ROAD #267
PMB 275
PLANO, TEXAS 75093
(972) 612-6900

APPENDICES

APPENDIX A

RESUMES

Larry G. Michel

SENIOR ENVIRONMENTAL SCIENTIST
DIRECTOR, TEXAS OPERATIONS

Professional Summary

Education & Training
B.S., Biology, Southwest Texas State University
M.S., Evolutionary Ecology, Angelo State University

Mr. Michel is EI's Director of Texas Operations and Senior Environmental Scientist for the Dallas, Texas, Branch of The EI Group. His career accomplishments include successful client development of and Senior Consultant to Fortune 100 and 500 Companies with experience on projects driven by CERCLA, RCRA, CWAA and TCEQ regulations. He is a seasoned Environmental Professional with over 30 years professional experience in Texas and the United States on projects related to: ASTM E 1527 Phase I ESAs; Phase II subsurface assessments; Environmental Impact Statements; wetland assessment and permitting; asbestos assessment and abatement; mold assessment and abatement; ASTM E 2018 Property Condition Assessments; underground/aboveground storage tank assessment/remediation; Spill Prevention Control and Countermeasure (SPCC) Plans; and, Third Party project review.

SPECIFIC PROJECT EXPERIENCE

AMERICAN AIRLINES

National Project Manager – Comprehensive Regulatory Compliance

Sole author of the successful proposal and National Program Manager for a comprehensive program of regulatory compliance for American Airlines. This national project involved assessment and remediation of above and underground storage tanks, large fuel depots/systems, SARA Title III reporting and asbestos surveys and abatement oversight at 22 of the nation's largest airports.

AUTONATION, INC., LEGAL DEPARTMENT

National Project Manager – Environmental Assessment, Remediation and Regulatory Compliance

Primary Client Liaison and Senior Project Manager for outside counsel to AutoNation, Inc., and Republic Services, Inc. Phase I Due Diligence Assessments, Phase II Site Investigations, UST removals, hydraulic lift assessments/removals, SPCC Plans, and wetlands assessments at automobile dealerships, waste transfer stations and municipal solid waste landfills.

J.C. PENNEY CORPORATION, INC.

National Project Manager– Underground Storage Tank Compliance

National Coordinator of a program for J.C. Penney Company which involved investigation and remediation of former tire, battery and accessory (TBA) facilities. Areas of environmental concern included USTs, used battery storage, waste oil tanks and hydraulic lifts.

J.C. PENNEY CORPORATION, INC.

National Program Manager – Asbestos Assessment and Abatement

National Program Manager for JC Penney Corporation, Inc.'s national program of asbestos assessment and abatement at over 400 retail stores in 9 States.

HOME DEPOT USA, INC.

National Project Manager – Wetlands Assessment and Permitting

Provided oversight and regulatory agency liaison for Home Depot USA's development of wetlands in Texas.

CARDINAL CAPITAL PARTNERS, INC.

National Program Coordinator – Comprehensive Environmental Due Diligence

Program Coordinator of independent, third party reviews of Phase I and II Environmental Site Assessments for Cardinal Capital Partners' sale-lease back transactions at over 400 sites nationally and internationally. Value of these transactions ranged from less than 1 million to 1.1 billion dollars.

VANGUARD CAR RENTAL USA, INC.

National Client Liaison – Environmental Assessment and Remediation

National Client Liaison for outside counsel to Vanguard Car Rental USA, Inc. (formerly Alamo and National Rent-A-Car) for projects involving: underground storage tank assessment, remediation, removal and closure; mold assessment and remediation; and Phase I Environmental Site Assessments.

STAUBACH RETAIL SERVICES

Client Manager – Environmental Due Diligence

Client Manager for Staubach Retail Services for projects including Phase I Environmental Site Assessments, asbestos surveys and underground storage tank assessment/remediation.

AEROSPACE VEHICLE PARTS MANUFACTURER

Project Manager – Site Assessment and Comprehensive Regulatory Compliance

Coordinated comprehensive program of surface and subsurface site investigation, regulatory agency negotiation, air quality monitoring and permitting and environmental regulatory compliance for an aerospace vehicle parts manufacturing facility in northwest Texas. Primary facility operations were chemical milling with strong acids or bases, chrome plating, anodizing and laser etching. Contaminants of concern included strong acids, metals in solution (e.g., chrome, nickel, etc) and phosgene gas (nerve agent).

CERAMIC TILE PLANT

Project Manager – Site Assessment, Remediation and Closure

Directed the site investigation, remediation and partial on-site closure of a ceramic tile facility in northeast Texas. Primary focus was lead (Pb) contaminated tile glazes in waste tile piles, their impact on a nearby intermittent steam, shallow groundwater and adjacent landowners/properties.

ROCKWELL INTERNATIONAL CORPORATION

National Program Manager – Environmental Assessment and Remediation

Program Manager and Lead Consultant for assessment and/or remediation of Rockwell International Corporation facilities in the United States, Puerto Rico and Mexico.

USEPA REGION VI

Team Leader – Field Investigation Team (FIT)

Team Leader for investigation and reporting of hazardous waste sites in Texas, New Mexico, Oklahoma, and Louisiana under RCRA and CERCLA as contractor to USEPA, Region VI.

PHILLIPS URANIUM CORPORATION

Environmental Analyst – Environmental Assessment and Monitoring

Conducted baseline assessment and monitoring programs for air, surface water, groundwater and radiological parameters in support of applications for State and Federal permits required to operate a deep subsurface uranium mine for the Energy and Minerals Division of Phillips Petroleum Company near Grants,
New Mexico. Authored reclamation plans for surface biota disturbed or destroyed by exploration activities. Prepared SPCC plans for entire mining support facilities.

Project Manager – Environmental Due Diligence
Coordinated the preliminary site assessment of commercial/industrial real estate properties at over 300 sites in Texas and the United States.

Program Manager – Asbestos Assessment
Program Manager for asbestos surveys of 100 Bank of America sites on behalf of a national property management firm.

Susan L. Mazzarella, LEED AP

Regional Sales Manager / Principal Consultant

Summary of Experience

Ms. Mazzarella has over 15 years of experience in the environmental, health, safety and sustainability (EHS&S) field, including sustainable building assessments and planning, compliance auditing and management, EHS management systems implementation, sustainability, on-site support services, regulatory program review, preparation, and implementation, and environmental site assessments. While working at EORM, she has focused on developing and implementing proactive EHS&S programs, analyzing regulatory requirements to achieve compliance in an efficient and cost-effective manner, and utilizing creative methods to promote and institute EHS&S policies and programs.

Professional Certifications and Memberships

Certificate in Environmental Auditing — University of California, Irvine

Paralegal Certificate in Environmental, Real Estate and Corporate Law — University of San Diego

Certificate 44843 — ISO 14001 Lead Auditor Certified (ANSI/RAB)

LEED Accredited Professional

Education

BA Business Administrative Studies — University of California, Riverside

Professional Experience

Environmental and Occupational Risk Management, Inc.

Regional Sales Manager — **October 2008 to Present**

Regional Manager — **January 2007 to December 2008**

Principal Consultant — **April 2005 to January 2007**

Senior EHS Consultant — **December 2000 to April 2005**

Ms. Mazzarella manages and provides outsource and project support to a variety of clients. Selected project experience includes:

- Conducting gap assessments, leading internal audits and developing environmental management systems programs (e.g., aspects identification and ranking procedure), as well as related procedures development (e.g. chemical and waste management) for customers striving for ISO 14001, OHSAS 18001, and RC 14001 certification.
- Leading multi-site, multi-disciplinary EHS compliance assessments and facility inspections to successfully assist clients in prioritization and management of compliance activities.
- Supporting sustainable building initiatives, including Leadership in Energy and Environmental Design (LEED) and High Performance Sustainable Buildings (HPSB).
- Developing strategies for achieving sustainability goals.
- Preparing and reviewing various environmental regulatory documents such as Hazardous Materials Management Plans, Biennial Reports, Hazardous Waste

Source Reduction Programs, DTSC Tiered Permitting Programs, SCAQMD Annual Update Forms and permits, TRI Form R reports, wastewater self-monitoring reports and permits, Storm Water Pollution Prevention Plans, Storm Water Management Plans, Emergency Response/Contingency Plans and Spill Prevention Control and Countermeasures (SPCC) Plans.

- Supporting air quality issues throughout California including:
  - Permitting – preparing new permits and permit modifications
  - Title V – auditing and successfully filing for Title V exemption
  - RECLAIM – preparing quarterly and annual submissions; purchasing/selling offset credits
  - Agency Inspections – supporting clients through SCAQMD inspections
  - Green House Gas Inventories – preparing GHG inventories for submission to The Climate Registry
  - Auditing – evaluating compliance with applicable rules, regulations and permit conditions
- Participating in development and implementation of health and safety programs such as hazard communication, injury and illness prevention, respiratory protection, lockout/tagout, and electrical safety.
- Facilitating strategic EHS planning sessions in which clients evaluate their short- and long-term EHS goals and objectives while establishing a roadmap to achieve desired targets.

Independent Consultant

January 2000 to December 2000

- Conducted a variety of EHS compliance audits for industrial clients including semi-conductor device manufacturers, pharmaceutical research and development facilities, brewing and related packaging operations, food processing plants, and other industrial entities.
- Provided on-site EHS support services for a pharmaceutical research and development company which included establishing and implementing procedures related to hazardous waste management, MSDS management, Chemical Hygiene Plan, Injury and Illness Prevention Plan, respiratory protection, and chemical inventory tracking.
- Authored and reviewed compliance guides describing step-by-step regulatory requirements for various EHS topics.
- Prepared written evaluations of fundamental differences between state and federal regulations for a variety of environmental topics.
- Assessed written programs, procedures, and overall implementation of various OSHA-required programs for a complex semi-conductor manufacturer.
- Researched applicability and potential operational impacts of several proposed SCAQMD rules to industries throughout the South Coast Air Basin.
- Assisted in several SCAQMD permitting projects for new and existing facilities.

Environmental Resources Management, Irvine, CA

Staff - Senior II Scientist **April 1993 to December 1999**

- Managed and conducted EHS due diligence audits for various national and international firms (including semi-conductor, real estate development, property

management, legal, food and beverage, aerospace, electronics, pharmaceutical, and oil and gas industries) throughout the United States and Mexico.

- Managed and conducted numerous ASTM Standard Phase I Environmental Site Assessments throughout the United States and other countries ranging in complexity from vacant lots to large multi-site industrial facilities.
- Oversaw numerous remedial site investigation projects involving staff personnel and various subcontractors.
- Managed team efforts to develop and maintain federal- and state-level environmental and OSHA compliance guides designed for client Internet access.
- Conducted ISO 14001 environmental management systems assessments for several manufacturing plants and provided recommendations for improving environmental management systems integration with standard business practices.
- Interacted extensively on clients' behalf with local, state, and federal agencies regarding permitting and regulatory issues and provided interpretive guidance to clients.
- Assessed current property conditions for major environmental insurance carrier through extensive review of existing reports and other documentation.

Ryan Schalkle

EHS Specialist

Summary of Experience

Mr. Schalkle's experience includes a background in Environmental, Health and Safety compliance as it pertains to federal and state regulations. His experience includes conducting hazardous waste audits and developing Spill Prevention Control and Countermeasure (SPCC) plans for various clients in the industrial and manufacturing industries. Mr. Schalkle's experience and attention to detail make him an ideal candidate for performing GAP assessments on various EH&S programs including fall protection, confined space, LOTO, hazard communication, and health and safety training program requirements. Mr. Schalkle's experience has gained him keen knowledge of standards pertaining to OSHA, EPA, NIOSH and DOSH. He has provided clients with several industrial hygiene projects including but not limited to noise surveys, VOC monitoring, and ventilation surveys. Mr. Schalke has completed a Master's Degree in Public Health with an emphasis in Environmental Health and Occupational Safety from California State University, Fullerton.

Education

MPH Environmental Health & Occupational Safety	California State University, Fullerton
B.A. Human Services	California State University, Fullerton

Professional Experience

Environmental and Occupational Risk Management, Inc., Santa Ana, CA

EHS Technician **November 2008 to Present**

- Researches federal, state, and local regulations for various clients in a broad range of industries in order to develop detailed reports and regulatory recommendations
- Supports and conducts personal and area industrial hygiene monitoring, respiratory fit testing, and Indoor Air Quality Assessments (IAQ)
- Prepares hazardous materials chemical inventories
- Assists with Phase I assessments, Hazardous Material Business Plans, and environmental compliance assessments
- Supports Environmental, Health and Safety programs including, IIPP, ergonomics, hazard communication, job safety analysis, fall protection, confined space, etc.
- Develops control of hazardous energy (lockout/tagout) procedures

Southern California Edison, Volt Contract Employee, Chino, CA

Business Analyst II **August 2007 to October 2008**

- Responsible for two company-wide state regulated inspection and safety rotation programs for rubber good PPE's and safe grounding practices
- Participated in the development of the secondary safety climbing device program regulated by the state for climbing equipment that meet ANSI work load limits and quality standards

- Assisted in auditing vendor locations to inspect the recertification process used on SCE owned rubber good PPE's and grounding equipment
- Assured randomized inspections of linemen grounds and PPE items were conducted per SCE policies an procedures
- Participated in the purchase and distribution of rescue gantry and safety davit systems for confined space underground vault rescues

Southern California Edison, Chino, CA

Environmental Safety Intern **December 2007 to May 2008**

- Assisted in auditing SCE owned properties for hazardous waste storage, labeling, disposal, secondary containment conditions and in organizing subsequent paperwork
- Researched and assisted in updating SPCC plans and relevant Environmental Business Plans

Southern California Edison, Volt Contract Employee, Chino, CA

Construction Coordinator **September 2006 to August 2007**

- Coordinated heavy equipment rentals for substation construction and maintenance projects
- Interfaced with internal and external clients in order to meet rental needs

APPENDIX B

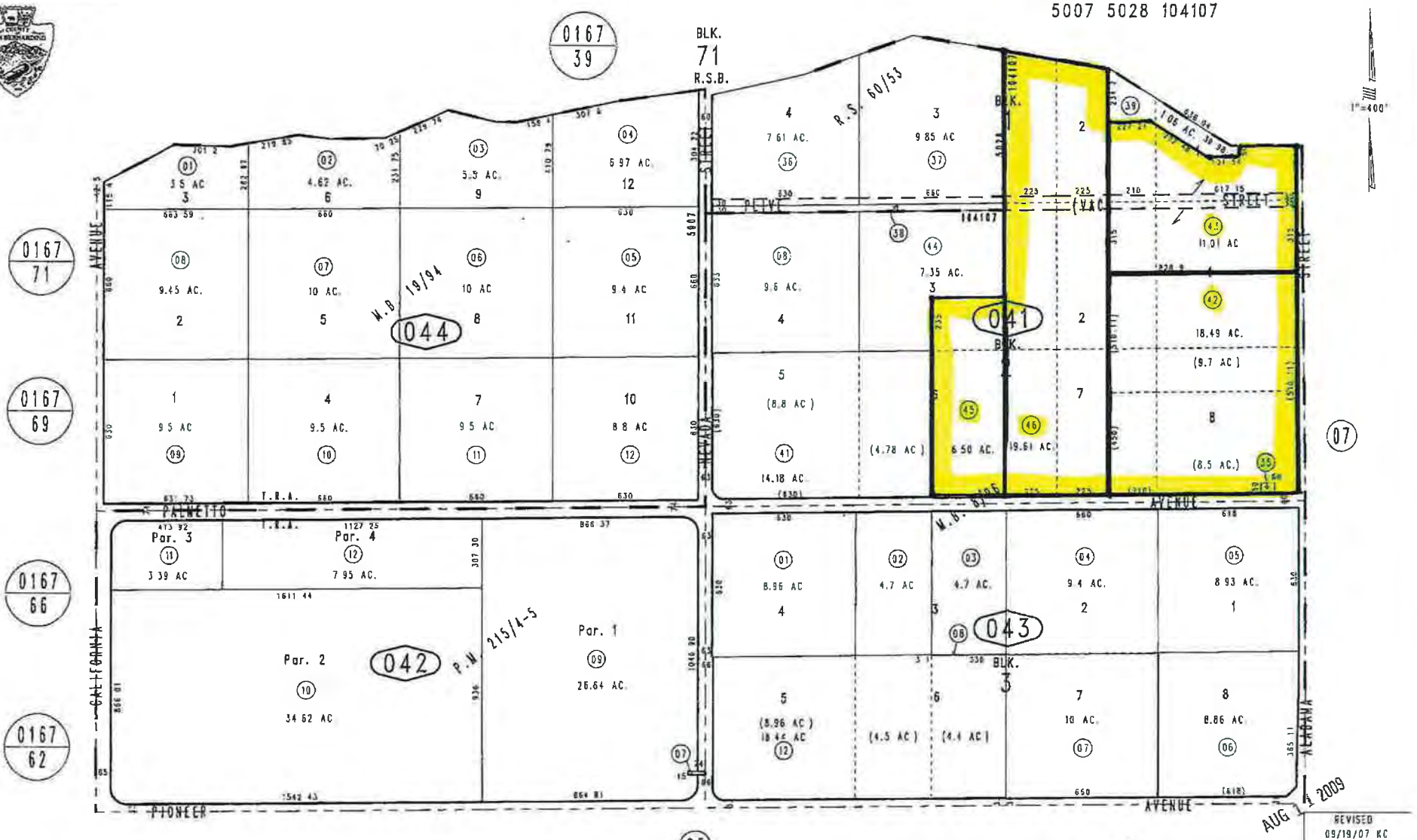
PARCEL MAPS
and
LEGAL DESCRIPTION

THIS MAP IS FOR THE PURPOSE OF AD VALOREM TAXATION ONLY

Gregory Tract No. 1
M.B. 19/94

City of Redlands
Redlands Unified
Tax Rate Area
5007 5028 104107

0292 - 04



Parcel Map No. 17279, P.M. 215/4-5
Ptn. H.L Williams Tract No. 1, M.B. 2/19
Brown's Sub of H.L.Williams Tract No. 1, M.B. 8/96

February 2004

Ptn. N.W.1/4, Sec. 16
T.1S., R.3W.

Assessor's Map
Book 0292 Page 04
San Bernardino County

REVISED
09/19/07 KC
02/27/08 RW
02/29/08 TY
03/06/08 KA
11/12/08 LH
06/29/09 RU

0292-041-46
0292-041-43
0292-041-42
0292-041-45
0242-041-35
Alabama Street
Palmetto Avenue
Google

EXHIBIT A

PROPERTY LEGAL DESCRIPTION

PARCEL NO. 1

THAT PORTION OF LOTS 7 AND 8, BLOCK 2, BROWN'S SUBDIVISION, IN THE COUNTY OF SAN BERNARDINO, STATE OF CALIFORNIA, AS PER MAP RECORDED IN BOOK 8, PAGE 96 OF MAPS, IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY, DESCRIBED AS FOLLOWS:

BEGINNING AT THE SOUTHEAST CORNER OF SAID LOT 8; THENCE WEST ALONG THE SOUTH LINE OF LOTS 8 AND 7, 828.90 FEET TO A POINT 450.00 FEET EAST OF THE SOUTHWEST CORNER OF SAID LOT 7; THENCE NORTH PARALLEL TO THE WEST LINE OF LOT 7 OF SAID BLOCK, 450.00 FEET; THENCE EAST 828.90 FEET, TO THE WEST LINE OF ALABAMA STREET; THENCE SOUTH 450.00 FEET; TO THE POINT OF BEGINNING.

EXCEPT THAT PORTION THEREOF DESCRIBED AS FOLLOWS:

COMMENCING AT THE SOUTHEAST CORNER OF SAID LOT 8, SAID SOUTHEAST CORNER BEING 25.50 FEET WEST OF THE CENTER LINE OF ALABAMA STREET AND 30.00 FEET NORTH OF THE CENTER LINE OF PALMETTO AVENUE; THENCE WEST, ALONG THE SOUTH LINE OF SAID LOT 8, 103.00 FEET TO THE TRUE POINT OF BEGINNING; THENCE NORTH AT RIGHT ANGLES 50.00 FEET; THENCE WEST; AT RIGHT ANGLES PARALLEL WITH THE NORTH LINE OF PALMETTO AVENUE, 60.00 FEET; THENCE SOUTH AT RIGHT ANGLES 50.00 FEET TO AFORESAID SOUTH LINE OF LOT 8; THENCE EAST ALONG THE SOUTH LINE or LOT 8, 60.00 FEET TO THE TRUE POINT OF BEGINNING.

PARCEL NO. 2

AN UNDIVIDED 5/30THS INTEREST IN AND TO THAT PORTION OF LOT 8, BLOCK 2, BROWN'S SUBDIVISION, IN THE COUNTY OF SAN BERNARDINO, STATE OF CALIFORNIA, AS PER MAP RECORDED IN B00K 8, PAGE 96 OF MAPS, IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY.

COMMENCING AT THE SOUTHEAST CORNER OF SAID LOT 8, SAID SOUTHEAST CORNER BEING 25.50 FEET WEST OF THE CENTER LINE OF ALABAMA STREET AND 30.00 FEET NORTH OF THE CENTER LINE OF PALMETTO AVENUE; THENCE WEST, ALONG THE SOUTH LINE OF SAID LOT 8, 103.00 FEET TO THE: TRUE POINT OF BEGINNING; THENCE NORTH AT RIGHT ANGLES 50.00 FEET; THENCE: WEST, AT RIGHT ANGLES PARALLEL WITH THE NORTH LINE OF PALMETTO AVENUE, 60.00 FEET; THENCE SOUTH AT RIGHT ANGLES 50.00 FEET TO AFORESAID SOUTH LINE OF LOT 8; THENCE EAST ALONG THE SOUTH LINE OF LOT 8, 60.00 FEET TO THE TRUE POINT OF BEGINNING.

EXHIBIT A

LEGAL DESCRIPTION

PARCEL I

ALL THAT PORTION OF LOTS 1 AND 2, BLOCK 1, OF BROWN'S SUBDIVISION OF LOTS 1, 2, 3 AND 4, BLOCK 2, AND LOTS 1, 2, 3, 4, 13, 14, 15, AND 16, BLOCK I OF MAP NO. 1 OF THE HENRY L. WILLIAMS TRACT, IN THE CITY OF REDLANDS, COUNTY OF SAN BERNARDINO, STATE OF CALIFORNIA, AS PER PLAT RECORDED IN BOOK 8 OF MAPS, PAGE 96, OFFICIAL RECORDS OF SAID COUNTY, DESCRIBED AS FOLLOWS:

COMMENCING AT A POINT IN THE CENTERLINE OF ALABAMA STREET, DISTANT SOUTH 1085.98 FEET FROM THE NORTHEAST CORNER OF BLOCK 71, RANCHO SAN BERNARDINO, AS SHOWN AN RECORD OF SURVEY RECORDED IN BOOK 60, PAGE 53 OF RECORDS OF SURVEY, OFFICIAL RECORDS OF SAID COUNTY; THENCE NORTH 89° 10' 16" WEST, 71.00 FEET TO THE WEST RIGHT-OF-WAY LINE OF ALABAMA STREET, BEING THE TRUE POINT OF BEGINNING; THENCE ALONG SAID WEST RIGHT-OF WAY- LINE SOUTH 00° 34' 57" WEST, 36.07 FEET; THENCE SOUTH 89° 25' 03" EAST, 15.00 FEET; THENCE SOUTH 00° 34' 57" WEST, 200.00 FEET TO THE SOUTH LINE OF SAID LOT 1, BLOCK 1; THENCE NORTH 89° 27' 45" WEST, 820.62 FEET, MORE OR LESS, TO A POINT 450.00 FEET EAST OF THE WEST LINE OF SAID LOT 2, BLOCK 1; THENCE PARALLEL WITH THE WEST LINE OF LOT 2, BLOCK 1, NORTH 00° 35' 17" EAST, 581.93 FEET TO THE NORTH LINE OF LOT 2, BLOCK 1; THENCE ALONG THE NORTH LINE OF LOT 2 AND LOT 1, BLOCK 1, SOUTH 56° 40' 16" EAST, 636.04 FEET; THENCE SOUTH 89° 10' 16" EAST, 270.61 FEET TO THE POINT OF BEGINNING.

EXCEPTING THEREFROM THAT PORTION OF SAID LOTS 1 AND 2, BLOCK 1, DESCRIBED AS FOLLOWS:

COMMENCING AT A POINT IN THE CENTERLINE OF ALABAMA STREET, DISTANT SOUTH 1085.98 FEET FROM THE NORTHEAST CORNER OF BLOCK 71, RANCHO SAN BERNARDINO, AS SHOWN ON SAID RECORD OF SURVEY RECORDED IN BOOK 60, PAGE 53 OF RECORDS OF SURVEY, THENCE NORTH 89° 10' 16" WEST, 71.00 FEET TO THE WEST RIGHT-OF-WAY LINE OF ALABAMA STREET; THENCE ALONG THE NORTH LINE OF SAID LOT 1, BLOCK 1, NORTH 89° 10' 16" WEST, 230.63 FEET TO THE TRUE POINT OF BEGINNING; THENCE SOUTH 00° 49' 44" WEST, 50.00 FEET; THENCE NORTH 89° 10' 16" WEST, 101.54 FEET; THENCE NORTH 56° 40' 16" WEST, 292.48 FEET; THENCE NORTH 89° 10' 16" WEST, 227.21 FEET, MORE OR LESS, TO A POINT 450.00 FEET EAST OF THE WEST LINE OF SAID LOT 2, BLOCK 1; THENCE PARALLEL WITH THE WEST LINE OF SAID LOT 2, BLOCK 1, NORTH 00° 35' 17" EAST, 234.60 FEET TO THE NORTH LINE OF LOT 2, BLOCK I; THENCE ALONG THE NORTH LINE OF LOT 2 AND LOT 1, BLOCK 1, SOUTH 56° 40' 16" EAST, 636.04 FEET; THENCE SOUTH 89° 10' 16" EAST, 39.98 FEET TO THE POINT OF BEGINNING.

PARCEL IA

A NON EXCLUSIVE EASEMENT FOR THE PURPOSE OF STORING CERTAIN PERSONAL PROPERTY AND FARMING CERTAIN CITRUS TREES TOGETHER WITH THE RIGHT OF INGRESS AND EGRESS OVER AND ACROSS THE FOLLOWING DESCRIBED PROPERTY

ALL THAT PORTION OF LOTS I AND 2, BLOCK 1, OF BROWN'S SUBDIVISION OF LOTS 1, 2,3 AND 4, BLOCK 2, AND LOTS 1, 2, 3, 4, 13, 14, 15 AND 16, BLOCK 1 OF MAP NO. 1 OF THE HENRY L. WILLIAMS TRACT, IN THE CITY. OF REDLANDS, COUNTY OF SAN BERNARDINO, STATE OF CALIFORNIA, AS PER PLAT RECORDED IN BOOK 8 OF MAPS, PAGE 96, OFFICIAL RECORDS OF SAID COUNTY, DESCRIBED AS FOLLOWS:

COMMENCING AT A POINT IN THE CENTERLINE OF ALABAMA STREET, DISTANT SOUTH 1085.98 FEET FROM THE NORTHEAST CORNER OF BLOCK 71, RANCHO SAN

BERNARDINO, AS SHOWN ON RECORDS OF SURVEY RECORDED IN BOOK 60, PAGE 53 OF RECORDS OF SURVEY, OFFICIAL RECORDS OF SAID COUNTY; THENCE NORTH 89° 10' 16" WEST, 71.00 FEET TO THE WEST RIGHT-OF-WAY LINE OF ALABAMA STREET; THENCE ALONG THE NORTH LINE OF SAID LOT 1, BLOCK 1, NORTH 89° 10' 16" WEST, 230.63 FEET TO THE TRUE POINT OF BEGINNING; THENCE SOUTH 00° 49' 44' WEST, 50.00 FEET; THENCE NORTH 89° 10' 16" WEST, 101.54 FEET; THENCE NORTH 56° 40' 16" WEST 292.48 FEET; THENCE NORTH 89° 10' 16" WEST, 227.21 FEET, MORE OR LESS TO A POINT 450.00 FEET EAST OF THE WEST LINE OF SAID LOT 2, BLOCK 1; THENCE PARALLEL WITH THE WEST LINE OF SAID LOT 2, BLOCK 1; NORTH 00° 35' 17" EAST, 234.60 FEET TO THE NORTH LINE OF LOT 2, BLOCK 1; THENCE ALONG THE NORTH LINE OF LOT 2 AND LOT 1, BLOCK 1, SOUTH 56" 40' 16" EAST 636.04 FEET, THENCE SOUTH 89° 10-15- EAST 39.98 FEET TO THE POINT OF BEGINNING.

PARCEL 2

LOT 1 AND A PORTION OF LOT 2 IN BLOCK 1 AND A PART OF LOTS 1 AND 2, IN BLOCK 2 OF BROWN'S SUBDIVISION OF LOTS 1, 2, 3, AND 4, BLOCK 2 AND LOTS 1, 2, 3, AND 4, BLOCK 2 AND LOTS 1, 2, 3, 4, 13, 14, 15 AND 16, BLOCK 1, MAP NO. 1, HENRY T. WILLIAMS TRACT AS PER PLAT RECORDED IN BOOK 8 OF MAPS, PAGE 96, RECORDS OF SAID COUNTY; ALSO A PORTION OF PINE AVENUE (NOW VACATED) AS SHOWN ON SAID MAP, DESCRIBED AS WHOLE AS FOLLOWS:

BEGINNING AT A POINT IN THE WEST LINE OF ALABAMA STREET, DISTANT NORTH 960.11 FEET FROM THE SOUTHEAST CORNER OF LOT 8, BLOCK 2 SAID SUBDIVISION; THENCE WEST 838.9 FEET, MORE OR LESS TO A POINT 450 FEET EAST OF THE WEST LINE OF SAID LOT 2, BLOCK 2; THENCE NORTH PARALLEL WITH THE WEST LINES OF SAID LOT 2, BLOCK 2 AND LOT 2, BLOCK 1, SAID SUBDIVISION, TO A POINT IN THE NORTH LINE OF SAID LOT 2, BLOCK 1; THENCE FOLLOWING THE NORTH LINE OF LOTS 2 AND 1, BLOCK 1, IN A SOUTHEASTERLY AND EASTERLY DIRECTION TO A POINT ON THE WEST LINE OF ALABAMA STREET, SAID POINT BEING THE NORTHEAST CORNER OF SAID LOT 1, BLOCK 1; THENCE SOUTH ALONG THE WEST LINE OF ALABAMA STREET TO THE POINT OF BEGINNING.

EXCEPTING THEREFROM THAT PORTION DESCRIBED IN THE "CERTIFICATE OF COMPLIANCE" RECORDED JANUARY 3, 2006 AS INSTRUMENT NO. 19960001114.

ALSO EXCEPTING THEREFROM THAT PORTION OF SAID LOTS 1 AND 2, BLOCK 1, DESCRIBED AS FOLLOWS:

COMMENCING AT A POINT IN THE CENTERLINE OF ALABAMA STREET, DISTANT SOUTH 1085.98 FEET FROM THE NORTHEAST CORNER OF BLOCK 71, RANCHO SAN BERNARDINO, AS SHOWN ON SAID RECORD OF SURVEY RECORDED IN BOOK 60, PAGE 53 OF RECORDS OF SURVEY, THENCE NORTH 89° 10' 16" WEST, 71.00 FEET TO THE WEST RIGHT-OF-WAY LINE OF ALABAMA STREET; THENCE ALONG THE NORTH LINE OF SAID LOT 1, BLOCK 1, NORTH 89° 10' 16" WEST, 230.63 FEET TO THE TRUE POINT OF BEGINNING; THENCE SOUTH 00° 49' 44" WEST, 50.00 FEET; THENCE NORTH 89° 10' 16" WEST, 101.54 FEET; THENCE NORTH 56° 40' 16" WEST, 292.48 FEET; THENCE NORTH 89° 10' 16" WEST, 227.21 FEET, MORE OR LESS, TO A POINT 450,00 FEET EAST OF THE WEST LINE OF SAID LOT 2, BLOCK 1; THENCE PARALLEL WITH THE WEST LINE OF SAID LOT 2, BLOCK 1, NORTH 00° 35' 17" EAST, 234.60 FEET TO THE NORTH LINE OF LOT 2, BLOCK 1; THENCE ALONG THE NORTH LINE OF LOT 2 AND LOT 1, BLOCK 1, SOUTH 56° 40' 16" EAST, 636.04 FEET; THENCE SOUTH 89° 10' 16" EAST, 39.98 FEET TO THE POINT OF BEGINNING.

PARCEL 3

ALL THAT PORTION OF LOT 2, BLOCK 1, AND LOTS 2 AND 7, BLOCK 2, BROWN'S SUBDIVISION, IN THE COUNTY OF SAN BERNARDINO, STATE OF CALIFORNIA, AS PER PLAT RECORDED IN BOOK 8 OF MAPS, PAGE 96, RECORDS OF SAID COUNTY.

TOGETHER WITH A PORTION OF PINE AVENUE (NOW VACATED) AS SHOWN ON SAID MAP, DESCRIBED AS A WHOLE AS FOLLOWS.:

BEGINNING AT THE SOUTHWEST CORNER OF SAID LOT 7; BLOCK 2; THENCE FROM SAID POINT BEGINNING ALONG THE WEST LINE OF SAID LOTS 7 AND 2, OF BLOCK 2, AND THE WEST LINE OF LOT 2, BLOCK 1, OF SAID BROWN'S SUBDIVISION, NORTH OF 0 DEG. 25' WEST (MAGNETIC VARIATION 15 DEG. EAST) 1916;10 FEET TO THE NORTHWESTERLY CORNER OF SAID LOT 2, BLOCK 1, SOUTH 80 DEG. 05' EAST TO AN ANGLE IN SAID NORTHERLY LINE; THENCE SOUTH 57 DEG. 05' EAST 21 FEET TO AN IRON ROD; SAID ROD BEING 450 FEET EAST OF THE WEST LINE OF SAID LOT 2, BLOCK 1, MEASURED AT RIGHT ANGLES THERETO; THENCE SOUTH 0 DEG. 25' EAST, 1825.4 FEET TO A POINT ON THE SOUTH LINE OF SAID LOT 7, BLOCK 2; THENCE ALONG THE SOUTH LINE OF SAID LOT 7, BLOCK 2, SOUTH 89 DEG. 33' WEST TO THE POINT OF BEGINNING.

PARCEL 4

AN UNDIVIDED 7/30THS INTEREST IN AND TO THE FOLLOWING DESCRIBED. PROPERTY;

THAT PORTION OF LOT 8, BLOCK 2, BROWN'S SUBDIVISION, AS PER PLAT RECORDED IN BOOK 8 OF MAPS, PAGE 96; RECORDS OF SAID COUNTY, DESCRIBED AS FOLLOWS:

COMMENCING AT THE SOUTHEAST CORNER OF SAID LOT 8, SAID SOUTHEAST CORNER BEING 25.50 FEET WEST OF THE CENTER LINE OF ALABAMA STREET AND 30.00 FEET NORTH OF THE CENTER LINE OF ALABAMA STREET AND 30.00 FEET NORTH OF THE CENTER LINE OF PALMETTO AVENUE; THENCE WEST ALONG THE SOUTH LINE OF SAID LOT 8, 103.00 FEET TO THE TRUE POINT OF BEGINNING; THENCE NORTH AT RIGHT ANGLES 50 FEET; THENCE WEST AT RIGHT ANGLES PARALLEL WITH THE NORTH LINE OF PALMETTO AVENUE, 60 FEET; THENCE SOUTH AT RIGHT ANGLES 50 FEET TO AFORESAID SOUTH LINE OF LOT 8; THENCE EAST ALONG THE SOUTH LINE OF LOT 8, 60 FEET TO THE POINT OF BEGINNING.

PARCEL 5

THE EAST HALF OF LOT 6 AND THE SOUTH 235 FEET OF THE EAST HALF OF LOT 3, BLOCK 2, BROWN'S SUBDIVISION, AS SHOWN BY MAP RECORDED IN BOOK 8, PAGE 96 OF MAPS, RECORDS OF THE COUNTY OF SAN BERNARDINO, STATE OF CALIFORNIA, AND AS SHOWN ON RECORD OF SURVEY RECORDED IN BOOK 60, PAGE 53 OF RECORDS OF SURVEY, RECORDS OF SAID COUNTY.

APPENDIX C

USER QUESTIONNAIRE

PHASE I ENVIRONMENTAL SITE ASSESSMENT (ESA) USER QUESTIONNAIRE

Facility Name and Address:	
~55-Acre Vacant Tract Redlands, California	
Reason for the Phase I ESA:	Contemplated Acquisition
Type of property:	Former citrus orchard, currently vacant
Type of transaction (sale, purchase, etc.):	Contemplated purchase
Site Owner and Contact Information:	See Below
Site Contact Name Telephone Number	Mark Zorn Principal DAUM Commercial Real Estate 909-652-9040
Property Legal Description (if available)	see attached
Parcel Identification Number (PIN)	
All parties who will rely on the Phase I ESA:	McLane Suncast, Inc. & its affiliates

In order to qualify for one of the *Landowner Liability Protections (LLPs)* offered by the Small Business Liability Relief and Brownfields Revitalization Act of 2001 (the "*Brownfields Amendments*"), the *user of this Phase I ESA* must provide the following information (if available) to the *environmental professional*. Failure to provide this information could result in a determination that "*all appropriate inquiry*" is not complete.

	Yes	No
1. Are you aware of any environmental cleanup liens against the subject property that are filed or recorded under federal, state, or local law?		X
2. Are you aware of any activity use limitations, such as engineering controls (engineered caps, liners, treatment methods, etc.), land use restrictions, or institutional controls (administrative measures restricting groundwater use, construction, or property use, etc.) that are in place at the site and/or have been filed or recorded in a registry under federal, tribal, state, or local law?		X
3. Do you have any specialized knowledge or experience related to the subject property or nearby properties? For example, are you involved in the same line of business as the current or former occupants of the subject property so that you would have specialized knowledge of the chemicals or processes used by this type of business?		X
4a. Does the purchase price being paid for the subject property reasonably reflects the fair market value of the subject property?	X	
4b. If you conclude that there is a difference in fair market price, have you considered whether the lower purchase price is because contamination is known or believed to be present at the *property*?		
5. Are you aware of any commonly known or reasonably ascertainable information about the subject property that would help the environmental professional to identify conditions indicative of releases or threatened releases? For example, as a user,		X
5 (a) Do you know of the past uses of the property? see above citrus Orchard	X	
5 (b) Do you know of any specific chemicals that are present or were once present on the subject property?		X
5 (c) Do you know of spills or other chemical releases that have taken place at the subject property?		X
5 (d) Do you know of any environmental cleanups that have taken place at the subject property?		X
6. As the user of this ESA, based on your knowledge and experience related to the subject property, are there any obvious indicators that point to the presence or likely presence of contamination at the subject property?		X

If you answered "yes" to any of the questions (except 4a) above, please provide more detail below, or attach additional information to this document:

Alabama Industrial Park, LLC – Thomas A. Neumainville

Oakmont Redlands Alabama Street, LLC – Tim Howard
Oakmont Redlands Palmetto II, LLC – Tim Howard

Name and Title of person completing questionnaire: (Please Print)	
LEN E. MEWHINNEY, V.P. – Legal, McLane Company, Inc.	
Signature of person completing questionnaire:	Date:
L E Mey	12/8/10

APPENDIX D

RECORDS OF COMMUNICATION

THE EI GROUP, INC.
1900 Preston Road
#267, PMB 275
Plano, Texas 75093
(972) 612-6900
(972) 758-1902 fax

TELEPHONE CONVERSATION RECORD

Date: 12/2/10

Time: 10:35am

Contact Name: Kathy Inis of the City of Redlands Municipal Water/Sewer Department

Number Called: 909-798-7698

Recorded By: Ryan Schalkle

Client/Prospect::

Project Number:

Message: Kathy Inis confirmed that records indicate that the site located at address 9092 Alabama St. Redlands, CA site contains 2" non-potable inside and outside lines most likely for fire department and irrigation use. No records of municipal water/sewer connections were listed.

THE EI GROUP, INC.
1900 Preston Road
#267, PMB 275
Plano, Texas 75093
(972) 612-6900
(972) 758-1902 fax

TELEPHONE CONVERSATION RECORD

Date: 12/6/10

Time: 2:20pm

Contact Name: Tim Howard, Owner Representative

Number Called: 714-272-5318

Recorded By: Ryan Schalkle

Client/Prospect:

Project Number:

Q) Who is/are the current owner(s) of the property?
A) All parcels are owned by the current seller

Q) Who are the past owners of the property?
A) The parcels are owned by the following:
0242-041035, 0292-041-42, 0292-041-46 owned by Newcastle Associates
0292-041-45 owned by Oakmont Palmetto LLC.
0292-041043 owned by Oakmont Alabama LLC.

Q) Past uses of the property, other than orange groves?
A) Property has always been used for agricultural purposes.

Q) When were the orange groves first planted? When were they removed?
A) 1920's and removed around 2003.

Q) How many underground storage tanks are still located on the property? Where are they? What were they used for?
A) None. During the tree excavation on the property, Mr. Howard confirmed that no additional USTs were found on site. Mr. Howard mentioned that a significant amount of trees were removed with the roots and these activities would have shown any other remaining USTs.

Q) How many underground storage tanks have been removed from the property? Where were they? What were they used for? Is any "closure" documentation available?

A) One removed from the Alabama Teunissen property. This was the only known UST. Documentation provided through the HMD of the San Bernardino Fire Department.

Q) What are the concrete structures on the property? Are there any fuel storage tanks associated with these structures?
A) These structures are cement remnants of valve boxes used to control the irrigation systems used onsite. There are no USTs associated with them.

Q) Confirm the presence of the bee boxes. Who is maintaining them, and how are they being used?
A) Mr. Howard was unaware of bee boxes on the Site. He mentioned that they may be operated by the small agricultural operation to the west.

Q) How many wells are present on the property? What are they used for?
A) There is one known well located on Palmetto Avenue that may have been used for the testing activities for the treatment plant. Manholes that were observed on the property are used for servicing the sewer lines.

Q) Any past environmental releases on the property? In the neighborhood?
A) Mr. Howard was not aware of any releases on the property or the neighborhood.

Q) Any known locations where pesticides were mixed/stored in the past?
A) Pesticide use was mixed and stored on the west side of the property, previously owned by Tuenissen. Mr. Howard confirmed that soil testing was completed on the western side of the Site for pesticides and findings were negative for all test samples.

APPENDIX E

ENVIRONMENTAL REGULATORY DATABASE REPORT

Vacant Land
Palmetto Avenue/Alabama Street
Redlands, CA 92374

Inquiry Number: 2932598.2s
November 30, 2010

The EDR Radius Map™ Report with GeoCheck®

EDR® Environmental Data Resources Inc

440 Wheelers Farms Road
Milford, CT 06461
Toll Free: 800.352.0050
www.edrnet.com

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Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

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EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc (EDR). The report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E 1527-05) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

TARGET PROPERTY INFORMATION

ADDRESS

PALMETTO AVENUE/ALABAMA STREET
REDLANDS, CA 92374

COORDINATES

Latitude (North):	34.087600 - 34° 5' 15.4"
Longitude (West):	117.211200 - 117° 12' 40.3"
Universal Tranverse Mercator:	Zone 11
UTM X (Meters):	480515.7
UTM Y (Meters):	3771694.2
Elevation:	1211 ft. above sea level

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property Map:	34117-A2 REDLANDS, CA
Most Recent Revision:	1988

AERIAL PHOTOGRAPHY IN THIS REPORT

Portions of Photo from:	2006, 2005
Source:	USDA

TARGET PROPERTY SEARCH RESULTS

The target property was not listed in any of the databases searched by EDR.

DATABASES WITH NO MAPPED SITES

No mapped sites were found in EDR's search of available ("reasonably ascertainable ") government records either on the target property or within the search radius around the target property for the following databases:

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

Proposed NPL..... Proposed National Priority List Sites

NPL LIENS..... Federal Superfund Liens

Federal Delisted NPL site list

Delisted NPL..... National Priority List Deletions

Federal CERCLIS list

FEDERAL FACILITY..... Federal Facility Site Information listing

Federal CERCLIS NFRAP site List

CERC-NFRAP..... CERCLIS No Further Remedial Action Planned

Federal RCRA generators list

RCRA-LQG..... RCRA - Large Quantity Generators
RCRA-CESQG..... RCRA - Conditionally Exempt Small Quantity Generator

Federal ERNS list

ERNS..... Emergency Response Notification System

State- and tribal - equivalent NPL

RESPONSE..... State Response Sites

State- and tribal - equivalent CERCLIS

ENVIROSTOR..... EnviroStor Database

State and tribal leaking storage tank lists

LUST..... Geotracker's Leaking Underground Fuel Tank Report
SLIC..... Statewide SLIC Cases
INDIAN LUST..... Leaking Underground Storage Tanks on Indian Land

State and tribal registered storage tank lists

AST..... Aboveground Petroleum Storage Tank Facilities
INDIAN UST..... Underground Storage Tanks on Indian Land
FEMA UST..... Underground Storage Tank Listing

State and tribal voluntary cleanup sites

INDIAN VCP..... Voluntary Cleanup Priority Listing
VCP..... Voluntary Cleanup Program Properties

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS..... A Listing of Brownfields Sites

Local Lists of Landfill / Solid Waste Disposal Sites

DEBRIS REGION 9..... Torres Martinez Reservation Illegal Dump Site Locations

ODI	Open Dump Inventory
SWRCY	Recycler Database
HAULERS	Registered Waste Tire Haulers Listing
INDIAN ODI	Report on the Status of Open Dumps on Indian Lands

Local Lists of Hazardous waste / Contaminated Sites

US CDL	Clandestine Drug Labs
HIST Cal-Sites	Historical Calsites Database
SCH	School Property Evaluation Program
Toxic Pits	Toxic Pits Cleanup Act Sites
CDL	Clandestine Drug Labs
US HIST CDL	National Clandestine Laboratory Register

Local Lists of Registered Storage Tanks

CA FID UST	Facility Inventory Database
HIST UST	Hazardous Substance Storage Container Database
SWEEPS UST	SWEEPS UST Listing

Local Land Records

LIENS 2	CERCLA Lien Information
LUCIS	Land Use Control Information System
LIENS	Environmental Liens Listing
DEED	Deed Restriction Listing

Records of Emergency Release Reports

HMIRS	Hazardous Materials Information Reporting System
CHMIRS	California Hazardous Material Incident Report System
LDS	Land Disposal Sites Listing
MCS	Military Cleanup Sites Listing

Other Ascertainable Records

RCRA-NonGen	RCRA - Non Generators
DOT OPS	Incident and Accident Data
FUDS	Formerly Used Defense Sites
CONSENT	Superfund (CERCLA) Consent Decrees
UMTRA	Uranium Mill Tailings Sites
MINES	Mines Master Index File
TRIS	Toxic Chemical Release Inventory System
TSCA	Toxic Substances Control Act
FTTS	FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
HIST FTTS	FIFRA/TSCA Tracking System Administrative Case Listing
SSTS	Section 7 Tracking Systems
ICIS	Integrated Compliance Information System
PADS	PCB Activity Database System
MLTS	Material Licensing Tracking System
RADINFO	Radiation Information Database
FINDS	Facility Index System/Facility Registry System
RAATS	RCRA Administrative Action Tracking System
CA BOND EXP. PLAN	Bond Expenditure Plan

NPDES	NPDES Permits Listing
WDS	Waste Discharge System
Cortese	"Cortese" Hazardous Waste & Substances Sites List
HIST CORTESE	Hazardous Waste & Substance Site List
Notify 65	Proposition 65 Records
DRYCLEANERS	Cleaner Facilities
WIP	Well Investigation Program Case List
HAZNET	Facility and Manifest Data
EMI	Emissions Inventory Data
INDIAN RESERV	Indian Reservations
SCRD DRYCLEANERS	State Coalition for Remediation of Drycleaners Listing
PCB TRANSFORMER	PCB Transformer Registration Database
PROC	Certified Processors Database
MWMP	Medical Waste Management Program Listing
COAL ASH DOE	Sleam-Electric Plan Operation Data
COAL ASH EPA	Coal Combustion Residues Surface Impoundments List
HWT	Registered Hazardous Waste Transporter Database
FINANCIAL ASSURANCE	Financial Assurance Information Listing
HWP	EnviroStor Permitted Facilities Listing

EDR PROPRIETARY RECORDS

EDR Proprietary Records

Manufactured Gas Plants	EDR Proprietary Manufactured Gas Plants
EDR Historical Auto Stations	EDR Proprietary Historic Gas Stations
EDR Historical Cleaners	EDR Proprietary Historic Dry Cleaners

SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified in the following databases.

Elevations have been determined from the USGS Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified. Sites with an elevation equal to or higher than the target property have been differentiated below from sites with an elevation lower than the target property.
Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in ***bold italics*** are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

NPL: Also known as Superfund, the National Priority List database is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund program. The source of this database is the U.S. EPA.

A review of the NPL list, as provided by EDR, and dated 07/02/2010 has revealed that there is 1 NPL

site within approximately 1 mile of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
USAF NORTON AFB	*I-10 US HWY 395*	*NW 1/8 - 1/4 (0.236 mi.)*	*0*	*8*

Federal CERCLIS list

CERCLIS: The Comprehensive Environmental Response, Compensation and Liability Information System contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA). CERCLIS contains sites which are either proposed to or on the National Priorities List (NPL) and sites which are in the screening and assessment phase for possible inclusion on the NPL.

A review of the CERCLIS list, as provided by EDR, and dated 01/29/2010 has revealed that there is 1 CERCLIS site within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
USAF NORTON AFB	*I-10 US HWY 395*	*NW 1/8 - 1/4 (0.236 mi.)*	*0*	*8*

Federal RCRA CORRACTS facilities list

CORRACTS: CORRACTS is a list of handlers with RCRA Corrective Action Activity. This report shows which nationally-defined corrective action core events have occurred for every handler that has had corrective action activity.

A review of the CORRACTS list, as provided by EDR, and dated 05/25/2010 has revealed that there is 1 CORRACTS site within approximately 1 mile of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
USAF NORTON AFB	*I-10 US HWY 395*	*NW 1/8 - 1/4 (0.236 mi.)*	*0*	*8*

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Transporters are individuals or entities that move hazardous waste from the generator offsite to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

A review of the RCRA-TSDF list, as provided by EDR, and dated 02/17/2010 has revealed that there is 1 RCRA-TSDF site within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
USAF NORTON AFB	*I-10 US HWY 395*	*NW 1/8 - 1/4 (0.236 mi.)*	*0*	*8*

Federal RCRA generators list

RCRA-SQG: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

A review of the RCRA-SQG list, as provided by EDR, and dated 02/17/2010 has revealed that there are 2 RCRA-SQG sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
USAF NORTON AFB	***I-10 US HWY 395***	***NW 1/8 - 1/4 (0.236 mi.)***	***0***	***8***
HOME DEPOT USA HD5087	9377 ALABAMA ST	S 0 - 1/8 (0.100 mi.)	2	43

Federal institutional controls / engineering controls registries

US ENG CONTROLS: A listing of sites with engineering controls in place.

A review of the US ENG CONTROLS list, as provided by EDR, and dated 12/20/2009 has revealed that there is 1 US ENG CONTROLS site within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
USAF NORTON AFB	***I-10 US HWY 395***	***NW 1/8 - 1/4 (0.236 mi.)***	***0***	***8***

US INST CONTROL: A listing of sites with institutional controls in place. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions are generally required as part of the institutional controls.

A review of the US INST CONTROL list, as provided by EDR, and dated 12/20/2009 has revealed that there is 1 US INST CONTROL site within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
USAF NORTON AFB	***I-10 US HWY 395***	***NW 1/8 - 1/4 (0.236 mi.)***	***0***	***8***

State and tribal landfill and/or solid waste disposal site lists

SWF/LF: The Solid Waste Facilities/Landfill Sites records typically contain an inventory of solid waste disposal facilities or landfills in a particular state. The data come from the Integrated Waste Management Board's Solid Waste Information System (SWIS) database.

A review of the SWF/LF list, as provided by EDR, and dated 08/23/2010 has revealed that there are 2 SWF/LF sites within approximately 0.5 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
HASKELL CO. INDUSTRIAL COMPOST	2130 NEVADA AVENUE	W 1/8 - 1/4 (0.188 mi.)	A5	49
CALIFORNIA STREET LANDFILL	***2151 NEVADA STREET***	***W 1/8 - 1/4 (0.188 mi.)***	***A6***	***50***

State and tribal registered storage tank lists

UST: The Underground Storage Tank database contains registered USTs. USTs are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA). The data come from the State Water Resources Control Board's Hazardous Substance Storage Container Database.

A review of the UST list, as provided by EDR, and dated 10/28/2010 has revealed that there is 1 UST site within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
AG-TEUNISSEN FARMING	9092 ALABAMA ST	E 0 - 1/8 (0.004 mi.)	1	43

ADDITIONAL ENVIRONMENTAL RECORDS

Local Lists of Landfill / Solid Waste Disposal Sites

WMUDS/SWAT: The Waste Management Unit Database System is used for program tracking and inventory of waste management units. The source is the State Water Resources Control Board.

A review of the WMUDS/SWAT list, as provided by EDR, and dated 04/01/2000 has revealed that there is 1 WMUDS/SWAT site within approximately 0.5 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
LANDFILL,CALIFORNIA STREET	***2151 NEVADA ST***	***W 1/8 - 1/4 (0.188 mi.)***	***A4***	***46***

Other Ascertainable Records

DOD: Consists of federally owned or administered lands, administered by the Department of Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.

A review of the DOD list, as provided by EDR, and dated 12/31/2005 has revealed that there is 1 DOD site within approximately 1 mile of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
NORTON AIR FORCE BASE (CLOSED)		NNW 1/4 - 1/2 (0.292 mi.)	0	8

ROD: Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid the cleanup.

A review of the ROD list, as provided by EDR, and dated 06/01/2010 has revealed that there is 1 ROD site within approximately 1 mile of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
USAF NORTON AFB	***I-10 US HWY 395***	***NW 1/8 - 1/4 (0.236 mi.)***	***0***	***8***

EXECUTIVE SUMMARY

San Bern. Co. Permit: San Bernardino County Fire Department Hazardous Materials Division.

A review of the San Bern. Co. Permit list, as provided by EDR, and dated 09/07/2010 has revealed that there are 5 San Bern. Co. Permit sites within approximately 0.25 miles of the target property.

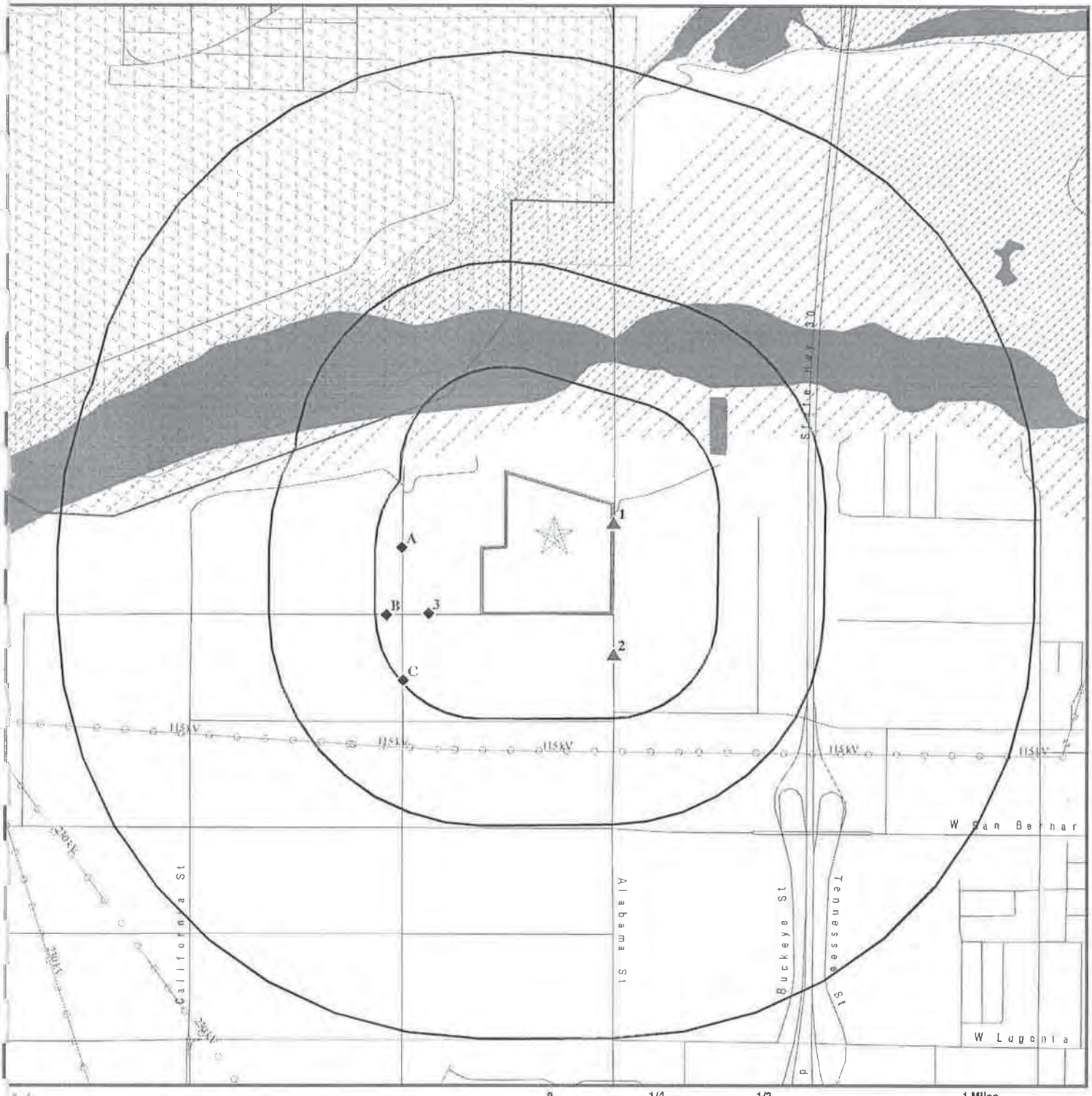
Lower Elevation	Address	Direction / Distance	Map ID	Page
REDLANDS LOGISTICS CENTER	26940 PALMETTO AVE	W 1/8 - 1/4 (0.126 mi.)	3	45
PAYLESS SHOE SOURCE INC. WDC	26881 PALMETTO AVE	W 1/8 - 1/4 (0.224 mi.)	B7	51
CALIFORNIA PALMS BUSINESS CTR	26881 PALMETTO AVE	W 1/8 - 1/4 (0.224 mi.)	B8	52
PIONEER INDUSTRIAL CENTER	9425 NEVADA ST STE A	SW 1/8 - 1/4 (0.244 mi.)	C9	52
ADVANCED INNOVATIONS WEST LLC	***9425 NEVADA ST STE B***	***SW 1/8 - 1/4 (0.244 mi.)***	***C10***	***52***

EXECUTIVE SUMMARY

Due to poor or inadequate address information, the following sites were not mapped:

Site Name	Database(s)
CITY OF REDLANDS CALIFORNIA STREET	HIST CORTESE, LUST, EMI
FORT IRWIN LUCKY FUSE DISPOSAL	WMUDS/SWAT, HIST CORTESE, CHMIRS
BIXBY LAND REDLANDS	NPDES
DIETRICH TRUCK SALES	RCRA-SQG, FINDS, HAZNET
DR. JAMES CARTER	San Bern. Co. Permit
BEST GROVE	San Bern. Co. Permit
PROLOGIS PARK RIVERBLUFF	San Bern. Co. Permit

OVERVIEW MAP - 2932598.2s



0 1/4 1/2 1 Miles

- Target Property
- Sites at elevations higher than or equal to the target property
- Sites at elevations lower than the target property
- Manufactured Gas Plants
- National Priority List Sites
- Dept. Defense Sites
- Indian Reservations BIA
- Power transmission lines
- Oil & Gas pipelines
- 100-year flood zone
- 500-year flood zone
- Areas of Concern

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: Vacant Land ADDRESS: Palmetto Avenue/Alabama Street Redlands CA 92374 LAT/LONG: 34.0876 / 117.2112	CLIENT: EI Group CONTACT: Susan Mazzarella INQUIRY #: 2932598.2s DATE: November 30, 2010 9:28 am

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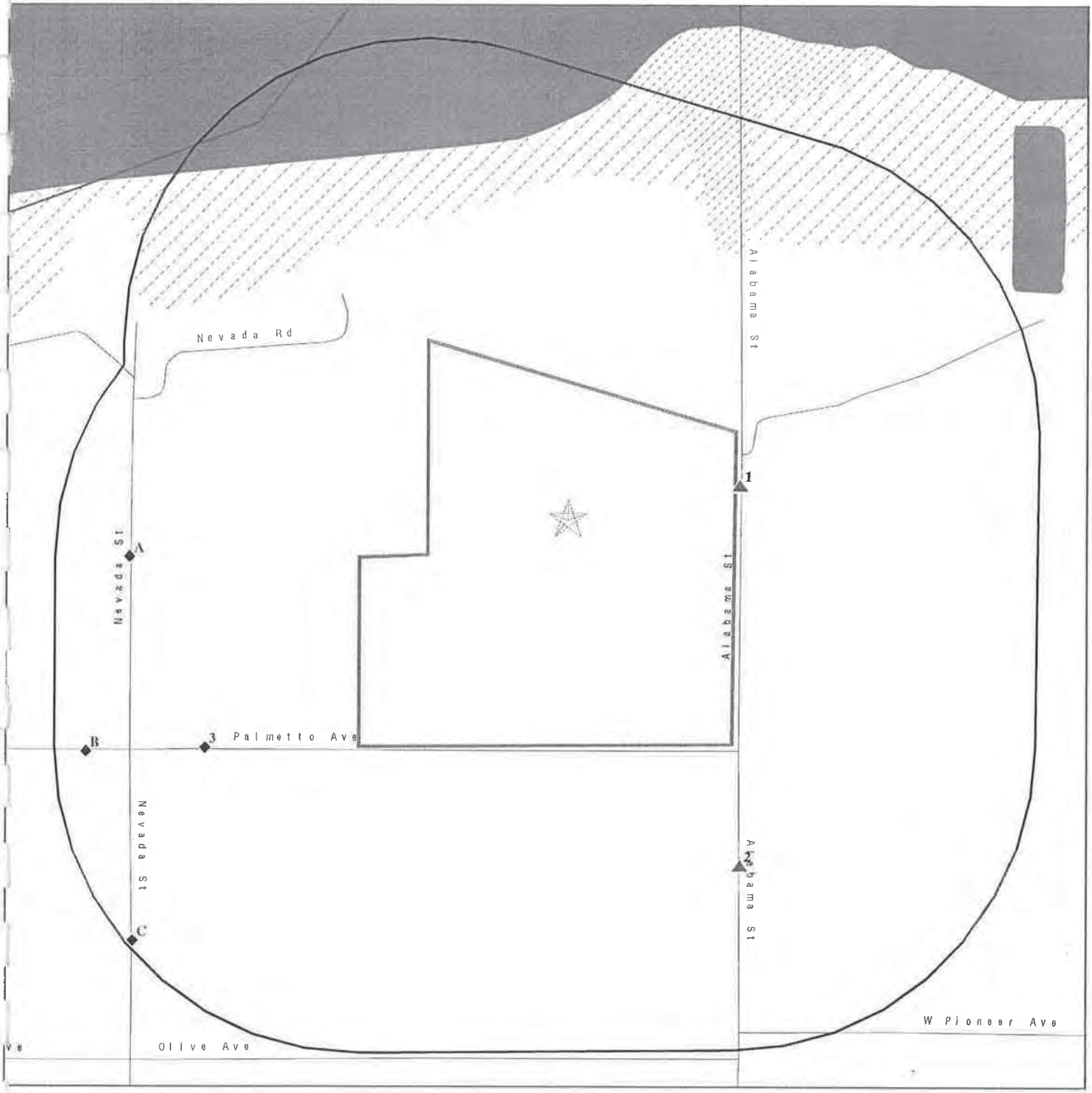
DETAIL MAP - 2932598.2s



- Target Property
- Sites at elevations higher than or equal to the target property
- Sites at elevations lower than the target property
- Manufactured Gas Plants
- Sensitive Receptors
- National Priority List Sites
- Dept. Defense Sites
- Indian Reservations BIA
- Oil & Gas pipelines
- 100-year flood zone
- 500-year flood zone
- Areas of Concern

0 1/16 1/8 1/4 Miles

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: Vacant Land	CLIENT: EI Group
ADDRESS: Palmetto Avenue/Alabama Street Redlands CA 92374	CONTACT: Susan Mazzarella INQUIRY #: 2932598.2s
LAT/LONG: 34.0876 / 117.2112	DATE: November 30, 2010 9:29 am

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MAP FINDINGS SUMMARY

Database	Target Property	Search Distance (Miles)	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
STANDARD ENVIRONMENTAL RECORDS								
Federal NPL site list								
NPL		1.000	0	1	0	0	NR	1
Proposed NPL		1.000	0	0	0	0	NR	0
NPL LIENS		TP	NR	NR	NR	NR	NR	0
Federal Delisted NPL site list								
Delisted NPL		1.000	0	0	0	0	NR	0
Federal CERCLIS list								
CERCLIS		0.500	0	1	0	NR	NR	1
FEDERAL FACILITY		1.000	0	0	0	0	NR	0
Federal CERCLIS NFRAP site List								
CERC-NFRAP		0.500	0	0	0	NR	NR	0
Federal RCRA CORRACTS facilities list								
CORRACTS		1.000	0	1	0	0	NR	1
Federal RCRA non-CORRACTS TSD facilities list								
RCRA-TSDF		0.500	0	1	0	NR	NR	1
Federal RCRA generators list								
RCRA-LQG		0.250	0	0	NR	NR	NR	0
RCRA-SQG		0.250	1	1	NR	NR	NR	2
RCRA-CESQG		0.250	0	0	NR	NR	NR	0
Federal institutional controls / engineering controls registries								
US ENG CONTROLS		0.500	0	1	0	NR	NR	1
US INST CONTROL		0.500	0	1	0	NR	NR	1
Federal ERNS list								
ERNS		TP	NR	NR	NR	NR	NR	0
State- and tribal - equivalent NPL								
RESPONSE		1.000	0	0	0	0	NR	0
State- and tribal - equivalent CERCLIS								
ENVIROSTOR		1.000	0	0	0	0	NR	0
State and tribal landfill and/or solid waste disposal site lists								
SWF/LF		0.500	0	2	0	NR	NR	2
State and tribal leaking storage tank lists								
LUST		0.500	0	0	0	NR	NR	0
SLIC		0.500	0	0	0	NR	NR	0

MAP FINDINGS SUMMARY

Database	Target Property	Search Distance (Miles)	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
INDIAN LUST		0.500	0	0	0	NR	NR	0
State and tribal registered storage tank lists								
UST		0.250	1	0	NR	NR	NR	1
AST		0.250	0	0	NR	NR	NR	0
INDIAN UST		0.250	0	0	NR	NR	NR	0
FEMA UST		0.250	0	0	NR	NR	NR	0
State and tribal voluntary cleanup sites								
INDIAN VCP		0.500	0	0	0	NR	NR	0
VCP		0.500	0	0	0	NR	NR	0
ADDITIONAL ENVIRONMENTAL RECORDS								
Local Brownfield lists								
US BROWNFIELDS		0.500	0	0	0	NR	NR	0
Local Lists of Landfill / Solid Waste Disposal Sites								
DEBRIS REGION 9		0.500	0	0	0	NR	NR	0
ODI		0.500	0	0	0	NR	NR	0
WMUDS/SWAT		0.500	0	1	0	NR	NR	1
SWRCY		0.500	0	0	0	NR	NR	0
HAULERS		TP	NR	NR	NR	NR	NR	0
INDIAN ODI		0.500	0	0	0	NR	NR	0
Local Lists of Hazardous waste / Contaminated Sites								
US CDL		TP	NR	NR	NR	NR	NR	0
HIST Cal-Sites		1.000	0	0	0	0	NR	0
SCH		0.250	0	0	NR	NR	NR	0
Toxic Pits		1.000	0	0	0	0	NR	0
CDL		TP	NR	NR	NR	NR	NR	0
US HIST CDL		TP	NR	NR	NR	NR	NR	0
Local Lists of Registered Storage Tanks								
CA FID UST		0.250	0	0	NR	NR	NR	0
HIST UST		0.250	0	0	NR	NR	NR	0
SWEEPS UST		0.250	0	0	NR	NR	NR	0
Local Land Records								
LIENS 2		TP	NR	NR	NR	NR	NR	0
LUCIS		0.500	0	0	0	NR	NR	0
LIENS		TP	NR	NR	NR	NR	NR	0
DEED		0.500	0	0	0	NR	NR	0
Records of Emergency Release Reports								
HMIRS		TP	NR	NR	NR	NR	NR	0
CHMIRS		TP	NR	NR	NR	NR	NR	0
LDS		TP	NR	NR	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Target Property	Search Distance (Miles)	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
MCS		TP	NR	NR	NR	NR	NR	0
Other Ascertainable Records								
RCRA-NonGen		0.250	0	0	NR	NR	NR	0
DOT OPS		TP	NR	NR	NR	NR	NR	0
DOD		1.000	0	0	1	0	NR	1
FUDS		1.000	0	0	0	0	NR	0
CONSENT		1.000	0	0	0	0	NR	0
ROD		1.000	0	1	0	0	NR	1
UMTRA		0.500	0	0	0	NR	NR	0
MINES		0.250	0	0	NR	NR	NR	0
TRIS		TP	NR	NR	NR	NR	NR	0
TSCA		TP	NR	NR	NR	NR	NR	0
FTTS		TP	NR	NR	NR	NR	NR	0
HIST FTTS		TP	NR	NR	NR	NR	NR	0
SSTS		TP	NR	NR	NR	NR	NR	0
ICIS		TP	NR	NR	NR	NR	NR	0
PADS		TP	NR	NR	NR	NR	NR	0
MLTS		TP	NR	NR	NR	NR	NR	0
RADINFO		TP	NR	NR	NR	NR	NR	0
FINDS		TP	NR	NR	NR	NR	NR	0
RAATS		TP	NR	NR	NR	NR	NR	0
CA BOND EXP. PLAN		1.000	0	0	0	0	NR	0
NPDES		TP	NR	NR	NR	NR	NR	0
WDS		TP	NR	NR	NR	NR	NR	0
Cortese		0.500	0	0	0	NR	NR	0
HIST CORTESE		0.500	0	0	0	NR	NR	0
Notify 65		1.000	0	0	0	0	NR	0
DRYCLEANERS		0.250	0	0	NR	NR	NR	0
WIP		0.250	0	0	NR	NR	NR	0
San Bern. Co. Permit		0.250	0	5	NR	NR	NR	5
HAZNET		TP	NR	NR	NR	NR	NR	0
EMI		TP	NR	NR	NR	NR	NR	0
INDIAN RESERV		1.000	0	0	0	0	NR	0
SCRD DRYCLEANERS		0.500	0	0	0	NR	NR	0
PCB TRANSFORMER		TP	NR	NR	NR	NR	NR	0
PROC		0.500	0	0	0	NR	NR	0
MWMP		0.250	0	0	NR	NR	NR	0
COAL ASH DOE		TP	NR	NR	NR	NR	NR	0
COAL ASH EPA		0.500	0	0	0	NR	NR	0
HWT		0.250	0	0	NR	NR	NR	0
FINANCIAL ASSURANCE		TP	NR	NR	NR	NR	NR	0
HWP		1.000	0	0	0	0	NR	0
EDR PROPRIETARY RECORDS								
EDR Proprietary Records								
Manufactured Gas Plants		1.000	0	0	0	0	NR	0
EDR Historical Auto Stations		0.250	0	0	NR	NR	NR	0
EDR Historical Cleaners		0.250	0	0	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Target Property	Search Distance (Miles)	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted

NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

DOD
Region
NNW
1/4-1/2
1540 ft.

NORTON AIR FORCE BASE (CLOSED)

NORTON AIR FORCE BASE (CL (County), CA

DOD **CUSA143166**
N/A

DOD:

Feature 1:	Air Force DOD
Feature 2:	Not reported
Feature 3:	Not reported
URL:	Not reported
Name 1:	Norton Air Force Base (Closed)
Name 2:	Not reported
Name 3:	Not reported
State:	CA
DOD Site:	Yes
Tile name:	CASAN_BERNARDINO

NPL
Region
NW
1/8-1/4
1244 ft.

USAF NORTON AFB
I-10 US HWY 395
NORTON AFB, CA 92409

RCRA-TSDF **1000417274**
NPL **CA4570024345**
CERCLIS
CORRACTS
RCRA-SQG
US ENG CONTROLS
US INST CONTROL
ROD
PADS
FINDS
MANIFEST

RCRA-TSDF:

Date form received by agency:	09/01/1996
Facility name:	USAF NORTON AFB
Facility address:	305 S TIPPECANOE AVE SAN BERNARDINO, CA 92408
EPA ID:	CA4570024345
Mailing address:	63RD CIV ENG SQU/DEEV NORTON AFB, CA 92409
Contact:	Not reported
Contact address:	Not reported Not reported
Contact country:	Not reported
Contact telephone:	Not reported
Contact email:	Not reported
EPA Region:	09
Land type:	Federal
Classification:	TSDF
Description:	Handler is engaged in the treatment, storage or disposal of hazardous waste
TSD commencement date:	Not reported

Owner/Operator Summary:

Owner/operator name:	MULTIPLE OPS - USAF & DPDO
Owner/operator address:	US DEPT OF AIR FORCE NORTON CITY NOT REPORTED, CA 99999
Owner/operator country:	Not reported
Owner/operator telephone:	(714) 382-3909
Legal status:	Federal
Owner/Operator Type:	Operator

USAF NORTON AFB (Continued) **1000417274**

Owner/Op start date: Not reported
Owner/Op end date: Not reported

Owner/operator name: US AIR FORCE
Owner/operator address: NORTON AFB
SAN BERNARDINO, CA 92409
Owner/operator country: Not reported
Owner/operator telephone: (714) 382-3909
Legal status: Federal
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: Unknown
Mixed waste (haz. and radioactive): Unknown
Recycler of hazardous waste: No
Transporter of hazardous waste: Yes
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: Unknown
Furnace exemption: Unknown
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No
Off-site waste receiver: Verified to be non-commercial

Historical Generators:
Date form received by agency: 09/01/1996
Facility name: USAF NORTON AFB
Classification: Small Quantity Generator

Date form received by agency: 03/11/1996
Facility name: USAF NORTON AFB
Site name: NORTON AIR FORCE BASE
Classification: Large Quantity Generator

Date form received by agency: 03/28/1994
Facility name: USAF NORTON AFB
Classification: Large Quantity Generator

Date form received by agency: 02/28/1992
Facility name: USAF NORTON AFB
Site name: NORTON AIR FORCE BASE
Classification: Large Quantity Generator

Date form received by agency: 04/17/1990
Facility name: USAF NORTON AFB
Site name: NORTON AIR FORCE BASE
Classification: Large Quantity Generator

Date form received by agency: 08/18/1980

USAF NORTON AFB (Continued) **1000417274**

Facility name: USAF NORTON AFB
Classification: Large Quantity Generator

Corrective Action Summary:

Event date: 04/01/1984
Event: CA049SI

Event date: 06/01/1984
Event: CA029SF

Event date: 06/01/1984
Event: CA049PA

Event date: 06/01/1984
Event: RFA Completed

Event date: 07/13/1989
Event: CMS Imposition

Event date: 07/13/1989
Event: RFI Imposition

Event date: 07/13/1989
Event: Stabilization Measures Implemented, Groundwater extraction and treatment (e.g., to achieve groundwater containment, to achieve MCL).

Event date: 05/01/1992
Event: Stabilization Construction Completed

Event date: 02/05/1993
Event: RFI Approved

Event date: 02/05/1993
Event: CMS Workplan Approved

Event date: 02/05/1993
Event: CMS Approved

Event date: 02/05/1993
Event: RFI Workplan Approved

Event date: 11/24/1993
Event: Date For Remedy Selection (CM Imposed)

Event date: 10/07/1994
Event: CMI Workplan Approved

Event date: 10/07/1994
Event: Corrective Measures Design Approved

Event date: 06/01/1995
Event: Certification Of Remedy Completion Or Construction Completion

Event date: 01/01/1996
Event: CA Responsibility Referred To A Non-RCRA Federal Authority, Corrective Action at the facility or area referred to CERCLA.

USAF NORTON AFB (Continued) **1000417274**

Event date: 06/18/1998
Event: CA Responsibility Referred To A Non-RCRA Federal Authority

Event date: 06/18/1998
Event: CA Prioritization, Facility or area was assigned a medium corrective action priority.

Event date: 06/18/1998
Event: Igration of Contaminated Groundwater under Control, Yes, Migration of Contaminated Groundwater Under Control has been verified. Based on a review of information contained in the EI determination, it has been determined that migration of contaminated groundwater is under control at the facility. Specifically, this determination indicates that the migration of contaminated groundwater is under control, and that monitoring will be conducted to confirm that contaminated groundwater remains within the existing area of contaminated groundwater. This determination will be re-evaluated when the Agency becomes aware of significant changes at the facility.

Event date: 06/18/1998
Event: Stabilization Measures Evaluation,This facility is not amenable to stabilization activity at the present time for reasons other than 1- it appears to be technically infeasible or inappropriate (NF) or 2- there is a lack of technical information (IN). Reasons for this conclusion may be the status of closure at the facility, the degree of risk, timing considerations, the status of corrective action work at the facility, or other administrative considerations.

Event date: 06/18/1998
Event: Current Human Exposures under Control, Yes, Current Human Exposures Under Control has been verified. Based on a review of information contained in the EI determination, current human exposures are expected to be under control at the facility under current and reasonably expected conditions. This determination will be re-evaluated when the Agency/State becomes aware of significant changes at the facility.

Event date: 05/22/2000
Event: Current Human Exposures under Control, Yes, Current Human Exposures Under Control has been verified. Based on a review of information contained in the EI determination, current human exposures are expected to be under control at the facility under current and reasonably expected conditions. This determination will be re-evaluated when the Agency/State becomes aware of significant changes at the facility.

Event date: 05/22/2000
Event: Igration of Contaminated Groundwater under Control, Unacceptable migration of contaminated groundwater is observed or expected.

Facility Has Received Notices of Violations:
Regulation violated: Not reported
Area of violation: TSD IS-Ground-Water Monitoring
Date violation determined: 04/22/2003
Date achieved compliance: 07/27/2005
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL

USAF NORTON AFB (Continued) **1000417274**

Enforcement action date: 03/16/2005
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: F - 262.30-34.C
Area of violation: Generators - General
Date violation determined: 04/22/1993
Date achieved compliance: 01/28/1994
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 04/22/1993
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: F - 264.190-201.J
Area of violation: TSD - General
Date violation determined: 04/22/1993
Date achieved compliance: 01/28/1994
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 04/22/1993
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: F - 262.40-43.D
Area of violation: Generators - General
Date violation determined: 04/22/1993
Date achieved compliance: 01/28/1994
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 04/22/1993
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: F - 264.170-177.I
Area of violation: TSD - General
Date violation determined: 04/22/1993
Date achieved compliance: 01/28/1994
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 04/22/1993

USAF NORTON AFB (Continued) **1000417274**

Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: F - 264.30-37.C
Area of violation: TSD - General
Date violation determined: 05/15/1992
Date achieved compliance: 06/19/1992
Violation lead agency: State
Enforcement action: Not reported
Enforcement action date: Not reported
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: Not reported
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: F - 262.10-12.A
Area of violation: Generators - General
Date violation determined: 05/15/1992
Date achieved compliance: 06/19/1992
Violation lead agency: State
Enforcement action: Not reported
Enforcement action date: Not reported
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: Not reported
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: F - 264.70-77.E
Area of violation: TSD - General
Date violation determined: 05/15/1992
Date achieved compliance: 06/19/1992
Violation lead agency: State
Enforcement action: Not reported
Enforcement action date: Not reported
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: Not reported
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: F - 270
Area of violation: TSD - General
Date violation determined: 05/15/1992
Date achieved compliance: 06/19/1992
Violation lead agency: State
Enforcement action: Not reported
Enforcement action date: Not reported
Enf. disposition status: Not reported

USAF NORTON AFB (Continued) **1000417274**

Enf. disp. status date: Not reported
Enforcement lead agency: Not reported
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: F - 270
Area of violation: TSD - General
Date violation determined: 02/27/1991
Date achieved compliance: 05/16/1991
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 04/12/1991
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: FR - 270
Area of violation: TSD - General
Date violation determined: 10/30/1989
Date achieved compliance: 03/14/1990
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 12/11/1989
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: FR - 270
Area of violation: TSD - General
Date violation determined: 07/26/1988
Date achieved compliance: 10/30/1989
Violation lead agency: EPA
Enforcement action: EPA TO STATE ADMINISTRATIVE REFERRAL
Enforcement action date: 11/07/1988
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: EPA
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: FR - 264.110-120.G
Area of violation: TSD - Closure/Post-Closure
Date violation determined: 08/20/1987
Date achieved compliance: 07/26/1988
Violation lead agency: EPA
Enforcement action: EPA TO STATE ADMINISTRATIVE REFERRAL
Enforcement action date: 02/06/1988
Enf. disposition status: Not reported
Enf. disp. status date: Not reported

USAF NORTON AFB (Continued) **1000417274**

Enforcement lead agency: EPA
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: FR - 264.90-94.F
Area of violation: TSD IS-Ground-Water Monitoring
Date violation determined: 08/20/1987
Date achieved compliance: 07/26/1988
Violation lead agency: EPA
Enforcement action: EPA TO STATE ADMINISTRATIVE REFERRAL
Enforcement action date: 02/06/1988
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: EPA
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: FR - 270
Area of violation: TSD - General
Date violation determined: 08/20/1987
Date achieved compliance: 07/26/1988
Violation lead agency: EPA
Enforcement action: STATE TO EPA ADMINISTRATIVE REFERRAL
Enforcement action date: 05/12/1988
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: FR - 270
Area of violation: TSD - General
Date violation determined: 08/20/1987
Date achieved compliance: 07/26/1988
Violation lead agency: EPA
Enforcement action: EPA TO STATE ADMINISTRATIVE REFERRAL
Enforcement action date: 02/06/1988
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: EPA
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: F - 270
Area of violation: TSD - General
Date violation determined: 06/23/1987
Date achieved compliance: 08/06/1987
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 08/06/1987
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State

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Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: F - 270
Area of violation: TSD - General
Date violation determined: 06/23/1987
Date achieved compliance: 08/06/1987
Violation lead agency: State
Enforcement action: STATE TO EPA ADMINISTRATIVE REFERRAL
Enforcement action date: 08/06/1987
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Evaluation Action Summary:
Evaluation date: 06/19/2008
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 04/11/2007
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 04/25/2006
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 06/22/2005
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 04/22/2003
Evaluation: GROUNDWATER MONITORING EVALUATION
Area of violation: TSD IS-Ground-Water Monitoring
Date achieved compliance: 07/27/2005
Evaluation lead agency: State

Evaluation date: 01/26/1994
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 03/08/1993
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE

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Area of violation: TSD - General
Date achieved compliance: 01/28/1994
Evaluation lead agency: State

Evaluation date: 03/08/1993
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Generators - General
Date achieved compliance: 01/28/1994
Evaluation lead agency: State

Evaluation date: 03/30/1992
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Generators - General
Date achieved compliance: 06/19/1992
Evaluation lead agency: State

Evaluation date: 03/30/1992
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: TSD - General
Date achieved compliance: 06/19/1992
Evaluation lead agency: State

Evaluation date: 02/27/1991
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: TSD - General
Date achieved compliance: 05/16/1991
Evaluation lead agency: State

Evaluation date: 10/30/1989
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: TSD - General
Date achieved compliance: 03/14/1990
Evaluation lead agency: State

Evaluation date: 07/26/1988
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: TSD - General
Date achieved compliance: 10/30/1989
Evaluation lead agency: EPA

Evaluation date: 08/20/1987
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: TSD - Closure/Post-Closure
Date achieved compliance: 07/26/1988
Evaluation lead agency: EPA

Evaluation date: 08/20/1987
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: TSD - General
Date achieved compliance: 07/26/1988
Evaluation lead agency: EPA

Evaluation date: 08/20/1987
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: TSD IS-Ground-Water Monitoring
Date achieved compliance: 07/26/1988
Evaluation lead agency: EPA

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Evaluation date: 07/30/1987
Evaluation: FINANCIAL RECORD REVIEW
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 07/30/1987
Evaluation: FINANCIAL RECORD REVIEW
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: EPA

Evaluation date: 06/23/1987
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 06/23/1987
Evaluation: NON-FINANCIAL RECORD REVIEW
Area of violation: TSD - General
Date achieved compliance: 08/06/1987
Evaluation lead agency: State

NPL:
EPA ID: CA4570024345
EPA Region: 09
Federal: Y
Final Date: 1987-07-22 00:00:00

Category Details:
NPL Status: Currently on the Final NPL
Category Description: Depth To Aquifer-> 50 And <= 100 Feet
Category Value: 80

NPL Status: Currently on the Final NPL
Category Description: Distance To Nearest Population-> 0 And <= 1/4 Mile
Category Value: 10

Site Details:
Site Name: NORTON AIR FORCE BASE (LNDFLL #2)
Site Status: Final
Site Zip: 92408
Site City: SAN BERNARDINO
Site State: CA
Federal Site: Yes
Site County: SAN BERNARDINO
EPA Region: 09
Date Proposed: 10/15/84
Date Deleted: Not reported
Date Finalized: 07/22/87

Substance Details:
NPL Status: Currently on the Final NPL
Substance ID: Not reported
Substance: Not reported

USAF NORTON AFB (Continued) **1000417274**

CAS #: Not reported
Pathway: Not reported
Scoring: Not reported

NPL Status: Currently on the Final NPL
Substance ID: U211
Substance: CARBON TETRACHLORIDE
CAS #: 56-23-5
Pathway: GROUND WATER PATHWAY
Scoring: 3

NPL Status: Currently on the Final NPL
Substance ID: U228
Substance: TRICHLOROETHYLENE (TCE)
CAS #: 79-01-6
Pathway: GROUND WATER PATHWAY
Scoring: 2

Summary Details:

Conditions at proposal October 15, 1984): Norton Air Force Base covers approximately 2,036 acres 58 miles east of Los Angeles near the City of San Bernardino, San Bernardino County, California. It is in a low-lying alluvial plain surroundedon the north and east by the San Bernardino Mountain Range. The base began operations in 1942 and has served as a major overhaul center for jet engines and the general repair of aircraft. Since 1962, the facility has served as a Military Airlift Command Base. In addition, Norton formerly had the responsibility for providing maintenance and logistics for liquid-fuel intercontinental ballistic missiles. Past ha ardous waste management practices may have contributed to existingcontamination problems throughout the base. The practices include burial of drums and other unspecified materials; disposal of waste oils, solvents, and paint residues into landfills, unlined pits, ponds, and drying beds; storage in leaking underground tanks; and spills of AVGAS, oils, solvents, PCBs, and acidic plating solutions. Industrial solvents have been used extensively on the base. Unknown quantities of spent solvents were disposed of in several base landfills.A well on the base has been contaminated with trichloroethylene TCE). The well water is currently being used in a blended system and is sampled quarterly to ensure that TCE is below the California State action level. The water is used by approximately ll,000 people who live and/or work on the base. Norton Air Force Base is participating in the Installation Restoration Program IRP), established in l978. Under this program, the Department of Defense seeks to identify, investigate, and clean up contamination from ha ardous materials. The Air Force has completed Phase I records search). Phase II remedial investigation) is underway. Status July 22, 1987): In November 1986, the California Regional Water Quality Control Board issued a Cleanup and Abatement Order requiring Norton to clean up one on-base area, the Industrial Waste Water Treatment Plant Sludge Drying Beds. Phase II-Stage 2 of the IRP was completed in December 1986. It focusedon characteri ation of the contamination at 18 on-base areas. More than 22 areas have been identified to date. Additional areas will be studied in Stage 3, scheduled to begin in the fall of 1987. Within the boundaries of this Federal facility, there are areas subject to the Subtitle C corrective action authorities of the Resource Conservation and Recovery Act RCRA). However, no such areas were included in scoring this specific site. Therefore, this Federal facility site isbeing placed on the Federal section of the NPL under the NPL/RCRA policy announced on September 8, 1983 48 FR 40662).

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Site Status Details:
NPL Status: Final
Proposed Date: 10/15/1984
Final Date: 07/22/1987
Deleted Date: Not reported

Narratives Details:
NPL Name: NORTON AIR FORCE BASE (LNDFLL #2)
City: SAN BERNARDINO
State: CA

CERCLIS:
Site ID: 0902760
Federal Facility: Federal Facility
NPL Status: Currently on the Final NPL
Non NPL Status: Not reported

CERCLIS Site Contact Name(s):
Contact Name: Karen Jurist
Contact Tel: (415) 972-3219
Contact Title: Site Assessment Manager (SAM)

Contact Name: Jeff Inglis
Contact Tel: (415) 972-3095
Contact Title: Site Assessment Manager (SAM)

Contact Name: Carl Brickner
Contact Tel: (415) 972-3814
Contact Title: Site Assessment Manager (SAM)

Contact Name: James Chang
Contact Tel: (415) 972-3193
Contact Title: Remedial Project Manager (RPM)

CERCLIS Site Alias Name(s):
Alias Name: AREA II LANDFILL
Alias Address: GOLF COURSE
NORTON AFB, CA 92409
Alias Name: NORTON AIR FORCE BASE (LANDFILL #2)
Alias Address: Not reported
CA
Alias Name: NORTON AIR FORCE BASE
Alias Address: I-10-US 395
SAN BERNARDINO, CA 92408
Alias Name: NORTON AIR FORCE BASE (LNDFLL #2)
Alias Address: I-10-US 395
SAN BERNARDINO, CA 92409
Alias Name: NORTON USAF BASE
Alias Address: 63ABG/CC
NORTON AFB, CA 86023
Site Description: The Base Closure team has worked closely with the City of Riverside to ensure that controls are in place to protect the public from exposure to contamination. The Air Force constructed a groundwater extraction and treatment remedy in 1994 and is currently operating two pump and treat systems which have

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treated over 90 million gallons of contaminated groundwater to date. Approximately 325 lbs. of TCE have been removed from the groundwater. Additionally, a soil vapor extraction system is currently operating and 6,247 lbs. of TCE have been removed from the contamination source area. Since 1994, the Air Force has excavated approximately 40,000 cubic yards of contaminated soils from various locations on the base which were then treated and disposed of on-site, or transported to an off site disposal facility. The Air Force also closed numerous underground storage tanks and excavate and treated contaminated soil using bioremediation technology in 1996. An investigation of alleged radiological contamination was conducted and results showed that elevated levels of radionuclides in groundwater were caused by naturally occurring uranium. In 1996, the Air Force removed a waste line contaminated with radium paint residue and another industrial waste line. A JP-4 aircraft fuel system which was not contaminated will be salvaged for future use by the airport.In 1980, DOD issued a policy requiring identification of hazardous waste sites. In 1982, Norton issued the Phase I Records Search. In 1985, the site issued the Phase II Problem Confirmation Study. In June 1989, after various investigations, the Air Force signed the Norton AFB Federal Facility Agreement. In November 1990, Norton AFB began the Central Base Area (CBA) OU Groundwater Investigation to define the extent of the plume. In 1991, through a removal action, TCE-contaminated soil was treated onsite. In early 1993, the Air Force issued a draft RI, FS and proposed plan. In June 1992, the Air Force began a treatability test of the ground water pump and treat system. In 1993, Norton AFB issued the Final FS and Plan.The 2,003-acre Norton AFB is located in San Bernardino County, California (40th Congressional District), approximately 65 miles east of Los Angeles. The site is bounded by the Santa Ana River to the south, and other adjacent areas are used for residential, industrial, and agricultural purposes. Operations at the site began in 1942, and the facility served as a major overhaul center for jet engines and the general repair of aircraft. The site formerly had the responsibility of providing maintenance and logistics for liquid-fuel intercontinental ballistic missiles. There are more than 20 areas of contamination on the base including two landfills, six discharge areas, four chemical pits, a fire training area, a fuel spill area, a polychlorinated biphenyl (PCB) spill area, a chemical spill area, two waste storage areas, an underground storage area, and a low-level radioactive waste burial site. Soil contaminants included PCBs, trichloroethylene (TCE), petroleum hydrocarbons, metals such as lead and polycyclic aromatic hydrocarbons. An off-site groundwater plume (TCE) has impacted several municipal drinking water wells. Norton AFB was closed by the Department of Defense in March 1994, based on the legislative requirements in the Base Realignment and Closure Act of 1990. Consistent with the reuse alternatives identified in the Final Environmental Impact Statement, the Base is being redeveloped as an airport with mixed non-aviation, light industrial land use. Norton Air Force Base is located in the city of San Bernardino, San Bernardino County, California, 55 miles east of Los Angeles and 60 miles west of Palm Springs. The main surface water features near the site are City Creek, Warm Creek, the Twin Creek flood control channel, and the Santa Ana River, which flows southwest along the southern base boundary. The aquifer system beneath the site is part of the Bunker Hill hydrologic basin. Drinking water is derived from the middle and lower water-bearing zones. The site is classified as residential and light industrial. Adjacent properties includes area of residences, light and heavy industry, and agriculture. The population of the county is 1,418,380. The site was activated in March 1942 as an engine repair center for Air Force, U. S. Navy, and private industry aircraft. The site became a Military Airlift Command base in 1966. In 1968, the Aerospace Audiovisual Services established its headquarters at the base. The site also provided airlift and sustenance capabilities for air and combat units

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world-wide. Solvents, specifically TCE, were used in servicing aircraft from 1940s to the early 1980s. Former waste disposal, handling, and discharge practices have resulted in the contamination of soil and the upper water-bearing zone of a drinking water aquifer. The base was officially added to the U.S. EPA National Priorities List (NPL) on July 22, 1987. The U.S. EPA, California Department of Toxic Substances Control (DTSC), and the U.S. Air Force signed an interagency agreement, known as the Norton AFB Federal Facility Agreement (FFA) on June 29, 1989, which governs the conduct of environmental investigation and cleanup activities. The Air Force, U.S. EPA, DTSC, and the Regional Water Quality Control Board (RWQCB) Santa Ana Region comprise the Base Realignment and Closure (BRAC) Cleanup Team (BCT), with the Air Force serving as lead agency. The base has been subdivided into six separate areas for purposes of investigation and description of base activities. Since closure and redevelopment of portions of the base, many streets have been renamed. -The Central Base Area (CBA), which reflects the western one-third of the former base, was the most developed portion of the base and included the majority of offices, warehouses, on-base housing, engineering yards, and aircraft repair facilities. -The former Ballistic Missile Organization (BMO) complex is located south of the CBA and across Mill Street. The former BMO complex has been deeded to the Inland Valley Development Agency and a portion is occupied by the Defense Finance and Accounting Service. -The airfield includes the runways, ramps, aircraft parking, and hangars used for aircraft repair. The airfield covers the eastern two-thirds of the former base. -The Northeast Base Area (NBA) is located north of the airfield and represents the portion of the base with the oldest buildings. The original aircraft hangars and repair facilities are located within the NBA, as well as the former base Landfill No. 2. -The Golf Course Area (GCA) is located south of the airfield and is the current site of the Palm Meadows Golf Course. Prior to construction of the golf course, the GCA was used as a landfill (IRP Site 10), liquid waste disposal (IRP Site 1), a quartermaster's salvage yard, and chemical warfare training area, among other activities. -The former industrial waste treatment plant (IWTP) facility is located south of the GCA and was used for the treatment of liquid wastes generated as part of aircraft maintenance and repainting. Several investigations were conducted from 1982 to date. The 1982 to 1988 investigations resulted in identification of 22 Installation Restoration Program (IRP) sites. During closure of the base, additional records investigations resulted in identification of 73 AOCs. Contamination at the Small Arms Range (SAR) and the pipeline excavation at Building 752 was identified during cleanup actions performed at these sites. OU2: Site Specific Information IRP Site 1 - IRP Site 1 is in the GCA and was the location of former unlined lagoons used from 1950 to 1960 for the disposal of liquid waste generated during aircraft repair. During the 1960s, a portion of the golf course was constructed over the site without removing all industrial waste. The Remedial Investigation (RI) identified soils contaminated with paints, solvents, oil, fuels, and solids that had been washed into the industrial waste system. Chlorobenzene, 1,2-dichlorobenzene (DCB), and 1,4-DCB exceeded industrial PRGs. An Engineering Evaluation/Cost Analysis (EE/CA) identified removal of contaminated soil to a depth of approximately 30 feet below ground surface (bgs), backfilling with clean soil, and restoring the site as a portion of a fairway and green. A total of 20,325 tons of contaminated soil was excavated from an area of approximately 25,000 square feet, to the top of the perched-zone groundwater at a depth of approximately 29 feet bgs. The excavation was located next to a berm that supports the airfield perimeter road. Based on confirmation sampling results the contamination extended beneath the perimeter road. For technical and implementability reasons, the deep and lateral contamination was not removed. The area of affected soil left in place covers approximately 3,800 square feet. IRP Site 1 is part of the active

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golf course, and the property is currently zoned industrial/commercial by the city of San Bernardino. The projected long-term use of the site is expected to be commercial/industrial-related options for the property. IRP Site 2 - IRP Site 2 is located in the northeast corner of former Norton AFB and is the location of a former base landfill used between 1958 and 1980. Originally, it covered approximately 31 acres and was used for the disposal of general refuse, office waste, industrial waste, and industrial waste treatment plant (IWTP) sludge. Under CERCLA, the presumptive remedy for landfills is to leave waste in place and to provide an appropriate containment system. Under the presumptive remedy guidelines, various cover systems and associated gas control systems were evaluated in an EE/CA for IRP Site 2, and a natural soil cover was selected with an appropriate surface water control system. Because landfill gas (e.g., methane, PCE, trichloroethene [TCE], and vinyl chloride) was present, a landfill gas control system was also required. The cover, surface water control, and gas control systems were described in an Action Memorandum (AM). The design for the landfill has been implemented with consolidation into a smaller footprint and construction of the landfill cover and gas collection/control systems completed in December 1998 and accepted by the BRAC Cleanup Team (BCT) in February 1999. Site 2 is a closed landfill, and the property is currently zoned industrial/commercial by the city of San Bernardino. The projected long-term use of the site is expected to be passive open space. IRP Site 5 - IRP Site 5 served as the training area for fire control and abatement exercises from the late 1950s through the 1970s. Site 5 is in the southern portion of the former base, east of the golf course. Fire training exercises involved floating a layer of oil, fuel, or other combustible material on a layer of water and repeatedly igniting and extinguishing the material. RI results showed the site to contain metals (cadmium, copper, lead, and zinc) and dioxins in near-surface soils (to 10 feet bgs) and fuels (benzene, toluene, ethylbenzene, xylenes [BTEX]), solvents, and PAHs in deeper soils up to 40 feet bgs. The EE/CA and subsequent AM for IRP Site 5 selected soil vapor extraction (SVE) for remediation of fuel contamination, excavation followed by stabilization of the metals/dioxin-contaminated soil, and excavation and disposal of the PAH-contaminated soil. This removal action was completed during 1998 and involved an area of approximately 100,000 square feet. Excavation was performed to a maximum depth of 13 feet bgs, and confirmation samples were taken on the sidewalls and bottom of the excavation. The SAR impact berm adjacent to IRP Site 5 was also removed during the Site 5 removal action. The SVE component of the remedy removed 22,600 pounds of hydrocarbons. The SVE system was operated from January 10, 1996, until July 10, 1997. The effectiveness of the SVE system was assessed through confirmation soil boring samples and vadose zone leaching modeling. The model simulations indicated that the SVE removal adequately addressed the hydrocarbon contamination and was protective of groundwater. The soil excavation was performed in two phases. The first phase consisted of the removal of 21,104 tons of contaminated soil and 4,589 tons of rock and debris. This material was transported to the IRP Site 2 landfill. The lead in the contaminated soil was stabilized using 15 percent (by weight) Portland cement to meet State of California nonhazardous waste criteria. The soil that met nonhazardous criteria was used as foundation material for the landfill cap. The material not meeting the California nonhazardous waste criteria (1,443 tons) met federal nonhazardous waste criteria and was shipped to Browning Ferris Industries (BFI) landfill in La Paz, Arizona, for disposal. The second phase involved excavation of 3,496 tons of contaminated soil, stabilized with 15 percent (by weight) Portland cement, which was shipped to the BFI landfill in Arizona for disposal as an RCRA nonhazardous waste. The excavation area was backfilled with clean soil to the level of the former topographic grade. No groundwater contamination is associated with IRP Site 5. The site is being used for storage of golf

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course landscape waste prior to off-site disposal, and the property is currently zoned industrial/commercial by the city of San Bernardino. The projected long-term use of the site is expected to be industrial/commercial-related. Small Arms Range - The SAR was located immediately adjacent to IRP Site 5 and historically included an impact berm. The berm was contaminated by lead projectiles as a result of small arms practice, and a removal action was addressed in a work plan. Because the berm was contiguous with Site 5, portions of the berm were removed during the Site 5 removal action. A total of 11,478 tons of material was removed from the SAR, including 210 tons of bullet fragments and rock, classified as RCRA hazardous waste, and disposed at the Laidlaw Environmental Services landfill in Westmoreland, California. Nonhazardous waste, including 128 tons of rock and debris and 9,124 tons of soil, was placed at the IRP Site 2 landfill. The remaining 2,106 tons of soil were stabilized with 15 percent (by weight) Portland cement. This material did not meet California nonhazardous waste criteria and was shipped to the BFI landfill in Arizona for disposal. Confirmation samples were collected, and lead was detected above the residential PRG at one location. Following completion of the soil removal action, much of the remaining portion of the SAR impact berm was pushed into the Site 5 excavation as fill. The soil from the berm was then covered with soil imported from the adjacent riverbed to bring the Site 5 area back to its original grade. The firing line area of the SAR remains as a ground depression and is not being used. Projected long-term plans for the area are industrial/commercial-related use. The firing line area remains as a ground depression and is not being used. Projected long-term use of the site is expected to be commercial/industrial-related options for the property. IRP Site 7 - IRP Site 7 is located in the southeast corner of the former IWTP compound. Although Site 7 is part of this CERCLA ROD, as part of the former IWTP, Site 7 also must be closed as part of the RCRA corrective action termination of the interim status facility (two separate closure processes). The site included 12 concrete-walled, unlined sludge-drying beds, covering approximately 17,280 square feet. The beds were used to dry sludge generated at the IWTP until 1987. During removal of the sludge, it was temporarily stored at the northeast corner of the site. The former waste pile appears to have been located on what is now highly weathered asphalt pavement. Physical removal and disposal of the concrete-walled sludge-drying beds and surface soils were completed in March 2004, and the CERCLA closure report is in review. The site is currently not being used. The property is zoned industrial/commercial by the city of San Bernardino. Projected long-term use of the site is expected to be commercial/industrial-related options for the property. IRP Site 10 - Site 10 is located along the southern base boundary in the eastern portion of the golf course. Landfill No. 1 was used by the Air Force from 1943 to 1958, primarily for disposal of general refuse, which was apparently burned at the site. The 1984 to 1995 investigations, which included sampling for metals, pesticides, PAHs, and PCBs, indicated the presence of metals in ash (primarily chromium and lead) above the residential soil PRGs in shallow soil (0 to 2 feet bgs). Based on the RI data for metals, an RA for Site 10 was evaluated in an EE/CA. Because contamination was not significantly above industrial soil cleanup goals, the Air Force elected to establish a deed restriction for the site. However, the ecological risk assessment (ERA) determined that the contamination was localized, and concentrations of chromium and lead at the hot spots posed a significant risk to plants and animals. The Air Force responded by developing a hot-spot removal plan for Site 10. A removal action was performed at four hot spot locations that resulted in excavation of 340 cubic yards of contaminated soil. Approximately 224 cubic yards of contaminated soil were disposed at the Site 2 landfill, and 116 cubic yards were disposed off site. Physical removal and disposal of dioxin-contaminated soil were completed

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in 2004, and the closure report is in preparation. The northern portion of the site is used as a golf course fairway, and the property is currently zoned industrial/commercial by the city of San Bernardino. Projected long-term use of the site north of the base boundary is expected to be industrial-related. The southern portion of the site includes habitat for two endangered species, and is bounded by a man-made flood protection levee. The southern portion is off base and is zoned open space with unrestricted public access. IRP Site 17 - IRP Site 17 is located in the southwestern corner of the former IWTP compound. Although Site 17 is part of the CERCLA ROD, as part of the former IWTP, Site 17 is undergoing RCRA closure as part of the corrective action termination of the RCRA interim status facility (two separate processes). The former IWTP treated industrial wastewater from the repair of military aircraft from 1960 to 1993. Most of the IWTP facility was removed in 1995. IRP Site 17 is comprised of two connected brick-lined sumps that the Air Force constructed during the early 1960s for the purpose of burning waste fuels and solvents. The Air Force initiated burning, but in 1961 permission for continued burning was denied by local air quality authorities. Therefore, the sumps were used for waste destruction for a limited time but were used primarily as holding tanks for the IWTP and as an oil/water separator until 1985. The area immediately south of the sumps was also used for storage of solvent and plating wastes contained in 55-gallon drums. Site 17 was subject to a series of site investigations initiated in 1984. Site investigations have identified a zone of fine-grained soils, 25 to 55 feet bgs, that underlie and overlie two zones of coarser-grained soils. An EE/CA prepared for Site 17 presented a detailed analysis of the subsurface conditions at the site. In summary, there are two water-bearing zones below the Site 17 area. The first zone is a perched groundwater layer that is supported by a layer of finer-grained silts and clays extending from approximately 25 to 55 feet bgs. Collectively, the zone of finer-grained soils starting at 25 feet bgs and the perched groundwater supported by the finergrained soils is termed the "perched zone." Below the zone of finer-grained soil material is the second zone, termed the "upper aquifer." The upper aquifer comprises sands and gravels that extend to at least 500 feet below the site. During the early 1980s, the top of the upper aquifer was in contact with the zone of finer-grained soil material at 50 feet bgs. Between 1984 and 1988, the elevation of the upper aquifer dropped 7 to 10 feet, below the soil layer of the perched zone. Between 1988 and 1993, the water elevation decreased another 15 to 25 feet, resulting in several dry monitoring wells. The depth to groundwater in the upper aquifer now ranges from approximately 75 to 90 feet bgs (depending on seasonal fluctuations) in the area of IRP Site 17. The perched-zone groundwater contamination is assumed to have resulted from the former chemical waste storage at Site 17. The source may have been from the drums of waste solvents once stored at Site 17 or leakage from the Site 17 sumps. Due to the sandy nature of the surface soils, the solvent migrated downward to the perched zone, where further downward migration was retarded by the finer-grained soils. The two sumps, which were part of the IWTP, were removed in 2003, and the CERCLA closure report is in preparation. The site is currently not being used. The property is zoned industrial/commercial by the city of San Bernardino. Projected long-term use of the site is expected to be as industrial/commercial-related options for the property. IRP Site 19 - Site 19, located in the CBA to the south of Building 763, was formerly used as a drum storage area and aircraft washing facility. Drums of fuels, oils, electroplating solutions, TCE and trichloroethane (TCA) sludge, and cyanide waste solutions were stored on an unpaved fenced lot. The area south of Building 763 was the general location of the original aircraft washing facility. This facility was removed in 1966, and the area was resurfaced with 20 inches of concrete to become part of the flight line. Site 19 was investigated during the 1984 to 1986 IRP and the 1991 to 1993 RIs. PCBs

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were detected in excess of residential PRGs, primarily in the upper 6 inches of soil beneath the concrete runway apron. An interim ROD was developed for IRP Site 19 to identify a use restriction documenting the presence of the contamination. This ROD and its decision for IRP Site 19 will supersede the interim ROD. No groundwater contamination is associated with this site. The long-term future land use for Site 19 is to retain the runway apron for use by the San Bernardino International Airport Authority (SBIAA) airfield. AOC 4 - Building 301, located in the NBA near U and 102nd streets, was an equipment and vehicle washing facility. During the 1950s, the building was part of a spray painting facility. At the time of base closure (1994), it was used by civilian auto hobby personnel. AOC 4 consists of the foundation of former Building 301, an adjacent washing slab, and adjacent soil areas. A separator/dosing chamber was removed and its location evaluated as part of the basewide underground storage tank (UST) program. A solids collection pit and two trench drains were identified during the site investigation. The concrete washing slab was heavily stained, particularly near the trench drains. Drums of oil and other materials were stored in sheds along the southern drain line. A 4-foot-by 4-foot-wide area surrounded by a 6-foot-tall chain-link fence is located to the north of the washing slab and may represent the location of a former waste receptacle. The area is capped with a wooden cover, and the material under the cover may be fill. The area of affected soil is approximately 40 feet by 120 feet. No groundwater contamination is associated with this AOC. AOC 4 is on a parcel that was transferred by SBIAA to the San Bernardino County Fire Department under a Federal Aviation Administration (FAA) covenant that allows only industrial, commercial, or aircraft support usage. The Fire Department has refurbished Building 302 for office use and vehicle repair and is using the area west of the building (north of AOC 4) as a household hazardous waste collection point. Remedial alternatives were evaluated in an EE/CA. The Air Force identified ICs as the preferred alternative in the AM. Paved areas south of Building 302 are being used for vehicle and equipment storage. The western half of AOC 4 is covered by grassy weeds, while the eastern half is paved and includes a covered storage area. The Fire Department plans to use the paved area for equipment storage, while there are no plans for use of the grassy area of AOC 4 outside of the fenced storage yard. The property is currently zoned industrial/commercial by the city of San Bernardino. Projected long-term use of the site is expected to be industrial/commercial-related options for the property. AOC 18 - Former Buildings 451 and 452 were located in the CBA, east of Tippecanoe Avenue and north of Harry Sheppard Boulevard. Building 451 was a former garage and gas station in operation from 1942 to the late 1960s or early 1970s; Building 452 was the site of USTs. A 1942 site drawing indicates five 12,000-gallon gasoline USTs, a fueling station, and an oil storage house (Buildings 452, 451, and 450, respectively), although a 1967 site drawing indicates only two 12,000-gallon USTs were present. All structures and USTs have been removed. AOC 18 was investigated during the confirmation study (CS) and expanded source investigation (ESI). The soil contamination covers an area of approximately 600 feet. Prior to the initial redevelopment activities, AOC 18 was covered by an asphalt-paved parking lot that served the adjacent base post office. From January 2000 to 2004, the surface of the AOC was bare earth facilitating aeration (volatilization) of the fuel-related chemicals. The site is now paved with asphalt as part of the Mattel warehouse and distribution center. Remedial alternatives were previously evaluated in an EE/CA. The Air Force identified ICs in the AM as the preferred RA. AOC 18 is on property that was transferred to Inland Valley Development Agency (IVDA). IVDA has demolished all structures in the vicinity of AOC 18 and removed all pavement in preparation for redevelopment. The property is currently zoned industrial/commercial by the city of San Bernardino. Projected long-term use of

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the site is expected to be industrial/commercial-related options for the property. AOC 33 - Building 747, located in the southeastern corner of the CBA, was one of the primary industrial facilities at Norton AFB. Although AOC 33 is part of this CERCLA ROD, as part of the former Industrial Waste Line (IWL), it is also part of the RCRA corrective action termination of the interim status facility (two separate closure processes). The building was constructed in 1942 and renovated in 1944, 1953, and 1955. From 1942 to 1966, the building supported operations for the repair and overhaul of engines and other aircraft parts. Building 747 was converted into a freight terminal facility in 1966, and the building served as offices and storage facilities. Subsurface soil contamination at AOC 33 is associated with sumps (some recently removed) buried beneath an asphalt access road immediately south of Building 747. The sump portion of AOC 33 is part of the IWL that is undergoing RCRA corrective action termination as an interim status facility. AOC 33 was investigated during the CBA OU RI, CS, and the ESI. No groundwater contamination is associated with AOC 33. Remedial alternatives were evaluated in an EE/CA. The Air Force identified a deed restriction in the AM as the preferred RA. The sump and surrounding soil were removed in 2003. The CERCLA closure report is in preparation. AOC 33 is on property that has been leased by the Air Force to SBIAA. Building 747 has been subleased by SBIAA to several entities for commercial use. The property is currently zoned industrial/commercial by the city of San Bernardino. Projected long-term use of the site is expected to be industrial/commercial-related options for the property, including aviation support. AOC 39 - AOC 39 is located west of Club House Drive and south of the southern perimeter road, where an underground storm drainpipe empties into a grass-covered fairway drainage ditch. The discharge serves storm drain lines that originate along the southern flight line area. An oil/water separator removes oil prior to discharge into the ditch. The discharge point possibly received waste from the flight line and Buildings 695, 763, and 795. Aerial photographs from the 1950s and later indicate that fluids from aircraft repair and fueling emptied into the storm drain system. A 1982 interview record indicated that flight line oils were occasionally observed in the golf course drain. No groundwater contamination is associated with AOC 39. Remedial alternatives of AOC 39 were previously evaluated in an EE/CA. The Air Force selected deed restrictions in the AM as the preferred RA. AOC 39 was evaluated further in the BWFS. AOC 70 - AOC 70 was a percolation pond used for treated IWTP effluent during the mid-1980s to 1993. Although AOC 70 is part of this CERCLA ROD, as part of the former IWTP, AOC 70 also must be closed as part of the RCRA corrective action termination of the interim status facility (two separate closure processes). On December 31, 2004, DTSC-RCRA acknowledged that AOC 70 was clean closed. The 0.25-acre pond site was constructed upon sandy soils that readily facilitated infiltration of the treated effluent into the subsurface. There was no outflow from the pond. The pond dried out when the IWTP ceased functioning in mid-1993. AOC 70 was investigated under the CS Addendum No. 2. RAs were evaluated in an EE/CA. The Air Force selected a soil removal action in the AM as the preferred remedy. The Air Force completed the removal action in 1997 and backfilled the site with certified clean fill. No groundwater contamination is associated with the AOC. AOC 70 is within a parcel of the base that has been leased to IVDA. The property is currently zoned industrial/commercial by the city of San Bernardino. Projected long-term use of the site is expected to be as industrial/commercial-related options for the property consistent with city of San Bernardino zoning. Building 752 - Building 752 is located in the eastern portion of the CBA adjacent to the airfield. The building was used during the 1940s and 1950s for the repair of aircraft instruments, including painting instrument dials with radio-luminescent paint containing radium-226. The room used for painting dials was sealed in 1955 when painting operations ceased. During the period that painting occurred, paint waste was flushed into

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a sink connected to the sanitary sewer. Investigations of the sink and piping system showed that they were contaminated by radium-226. This included the piping system outside of the building to where it connected with the sanitary sewer. Cleanup of the interior piping system and interior surfaces of Building 752 were handled under separate programs. Cleanup of soils affected by radium-226 waste outside of Building 752 are being addressed in this ROD. To determine whether soils outside of the building had been affected by the discharge of paint waste into the sanitary sewer pipe, the pipe was excavated for visual characterization and soil sampling. The pipe was constructed of 6-inch vitreous clay in 3-foot sections. Two soil samples collected as part of the initial site characterization were found to contain radium-226 at 169 ?10 picoCuries per gram (pCi/g) and 1,940 ?20 pCi/g (background is 1.41 pCi/g). The entire waste line piping was surveyed with a field instrument and found to exhibit gamma radiation above background levels. Excavation of the piping system was conducted July 23 through August 1, 1996. The excavation was approximately 3 feet deep where the waste line exited the southwest corner of the building, and extended to a depth of 9 feet where the waste line entered the sanitary sewer. All excavated soil and piping was disposed off site. Before backfilling the trench, a new waste line was installed between the building and the sanitary sewer. After backfilling the trench, asphalt pavement was placed over the excavation. As part of the overall radium-226 investigation of the Building 752 area, additional radium-226 contamination was discovered in an area immediately west of the building. Building drawings from the 1950s indicate a wooden loading dock attached to the building over the affected area. In February 2001, the loading dock area was sampled for radium-226. The investigators determined that the area of concern is 11 by 55 feet, with depth of contamination between 1 and 4 feet bgs. The estimated volume of affected soil is 1,400 cubic feet. Radium-226 contaminated soil was removed in 2004. The closure report is in preparation. All contaminated soil will be properly disposed. Currently the site is not in use. The property is currently zoned industrial/commercial by the city of San Bernardino. Projected long-term use of the building and surrounding area is expected to be industrial/commercial-related options for the property (airfield support). Northeast Base Area PCE Plume - The NBA has two PCE plumes, one in the eastern portion (east PCE plume) where the former Site 2 landfill is situated, and a smaller plume in the central portion (west PCE plume). Only the west PCE plume has been above the maximum contaminant level (MCL) for PCE since April 2003. The average gradient in the NBA has been observed to fluctuate between a low of 0.004 foot per foot (October 2003) and a high of 0.039 foot per foot (April 1996). Seasonal variation remains relatively constant. The source of the contamination contributing to the NBA west PCE plume is not believed to be associated with IRP Site 2. PCE concentrations are higher in the west plume than those in the east plume, whereas they would be expected to be less due to contaminant dispersal. The groundwater flow direction in the NBA is to the west to west-northwest. Groundwater quality data for the NBA plume wells do not indicate significant movement of the plumes, either horizontally or vertically. The property overlying the NBA plume is zoned industrial/commercial by the city of San Bernardino. The projected long-term use for Site 2, which overlies the east plume, is expected to be passive open space or potentially a long-term, open storage area. The projected long-term use for the property over the west plume is industrial/commercial, possibly warehousing. A Record of Decision (ROD) addressing Operable Unit 2 (OU2) was completed in September of 2005.

CERCLIS Assessment History:

Action:	DISCOVERY
Date Started:	Not reported
Date Completed:	08/01/80

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Priority Level: Not reported

Action: PRELIMINARY ASSESSMENT
Date Started: Not reported
Date Completed: 04/01/84
Priority Level: Low priority for further assessment

Action: SITE INSPECTION
Date Started: Not reported
Date Completed: 04/01/84
Priority Level: Higher priority for further assessment

Action: PROPOSAL TO NATIONAL PRIORITIES LIST
Date Started: Not reported
Date Completed: 10/15/84
Priority Level: Not reported

Action: FINAL LISTING ON NATIONAL PRIORITIES LIST
Date Started: Not reported
Date Completed: 07/22/87
Priority Level: Not reported

Action: HAZARD RANKING SYSTEM PACKAGE
Date Started: Not reported
Date Completed: 06/01/88
Priority Level: Not reported

Action: INTERAGENCY AGREEMENT NEGOTIATIONS
Date Started: 05/05/87
Date Completed: 06/29/89
Priority Level: Not reported

Action: FEDERAL INTERAGENCY AGREEMENT
Date Started: 05/05/87
Date Completed: 06/29/89
Priority Level: Not reported

Action: FEDERAL FACILITY REMOVAL
Date Started: 01/04/91
Date Completed: 04/08/92
Priority Level: Cleaned up

Action: FEDERAL FACILITY REMEDIAL INVESTIGATION/FEASIBILITY STUDY
Date Started: 06/29/89
Date Completed: 11/24/93
Priority Level: Not reported

Action: RECORD OF DECISION
Date Started: Not reported
Date Completed: 11/24/93
Priority Level: Not reported

Action: FEDERAL FACILITY REMEDIAL DESIGN
Date Started: 11/24/93
Date Completed: 09/16/94
Priority Level: Not reported

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Action: ENGINEERING EVALUATION/COST ANALYSIS
Date Started: Not reported
Date Completed: 03/29/96
Priority Level: Not reported

Action: FEDERAL FACILITY REMEDIAL ACTION
Date Started: 09/16/94
Date Completed: 07/26/96
Priority Level: Not reported

Action: FEDERAL FACILITY REMOVAL
Date Started: 09/20/96
Date Completed: 11/15/96
Priority Level: Not reported

Action: FEDERAL FACILITY REMOVAL
Date Started: 03/25/96
Date Completed: 04/22/97
Priority Level: Partially Cleaned up

Action: RECORD OF DECISION
Date Started: Not reported
Date Completed: 06/25/97
Priority Level: Not reported

Action: FEDERAL FACILITY REMOVAL
Date Started: 04/15/96
Date Completed: 07/22/97
Priority Level: Not reported

Action: FEDERAL FACILITY REMOVAL
Date Started: 04/18/96
Date Completed: 12/19/97
Priority Level: Partially Cleaned up

Action: FEDERAL FACILITY REMOVAL
Date Started: 06/25/97
Date Completed: 12/08/98
Priority Level: Not reported

Action: FEDERAL FACILITY REMOVAL
Date Started: 06/30/97
Date Completed: 12/08/98
Priority Level: Not reported

Action: FEDERAL FACILITY REMOVAL
Date Started: 12/21/95
Date Completed: 07/28/99
Priority Level: Not reported

Action: FEDERAL FACILITY REMOVAL
Date Started: 04/25/96
Date Completed: 09/30/99
Priority Level: Stabilized

Action: FEDERAL FACILITY FIVE YEAR REVIEW
Date Started: 03/05/99

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Date Completed: 10/27/99
Priority Level: Not reported

Action: FEDERAL FACILITY REMEDIAL INVESTIGATION/FEASIBILITY STUDY
Date Started: 10/01/98
Date Completed: 06/10/03
Priority Level: Not reported

Action: FEDERAL FACILITY REMOVAL
Date Started: 12/11/03
Date Completed: 12/03/04
Priority Level: Not reported

Action: FEDERAL FACILITY FIVE YEAR REVIEW
Date Started: 02/28/05
Date Completed: 09/20/05
Priority Level: Not reported

Action: FEDERAL FACILITY REMOVAL
Date Started: 11/24/03
Date Completed: 09/29/05
Priority Level: Not reported

Action: FEDERAL FACILITY REMOVAL
Date Started: 12/17/03
Date Completed: 09/29/05
Priority Level: Not reported

Action: FEDERAL FACILITY REMOVAL
Date Started: 02/02/04
Date Completed: 09/29/05
Priority Level: Not reported

Action: RECORD OF DECISION
Date Started: Not reported
Date Completed: 09/29/05
Priority Level: Final Remedy Selected at Site

Action: OPERATIONS AND MAINTENANCE
Date Started: 07/26/96
Date Completed: 12/21/05
Priority Level: Not reported

Action: PRELIMINARY CLOSE-OUT REPORT PREPARED
Date Started: Not reported
Date Completed: 05/16/06
Priority Level: Not reported

Action: Restoration Advisory Board
Date Started: 12/01/94
Date Completed: Not reported
Priority Level: Not reported

Action: OPERATIONS AND MAINTENANCE
Date Started: 11/28/99
Date Completed: Not reported
Priority Level: Not reported

USAF NORTON AFB (Continued) **1000417274**

CORRACTS:

EPA ID:	CA4570024345
EPA Region:	9
Area Name:	ENTIRE FACILITY
Actual Date:	1/1/1996
Action:	CA210SF - CA Responsibility Referred To A Non-RCRA Federal Authority, Corrective Action at the facility or area referred to CERCLA
NAICS Code(s):	332813 92811 92811 Electroplating, Plating, Polishing, Anodizing, and Coloring National Security National Security
Original schedule date:	Not reported
Schedule end date:	Not reported

EPA ID:	CA4570024345
EPA Region:	9
Area Name:	CENTRAL BASE AREA OU
Actual Date:	2/5/1993
Action:	CA150 - RFI Workplan Approved
NAICS Code(s):	332813 92811 92811 Electroplating, Plating, Polishing, Anodizing, and Coloring National Security National Security
Original schedule date:	Not reported
Schedule end date:	Not reported

EPA ID:	CA4570024345
EPA Region:	9
Area Name:	CENTRAL BASE AREA OU
Actual Date:	2/5/1993
Action:	CA200 - RFI Approved
NAICS Code(s):	332813 92811 92811 Electroplating, Plating, Polishing, Anodizing, and Coloring National Security National Security
Original schedule date:	Not reported
Schedule end date:	Not reported

EPA ID:	CA4570024345
EPA Region:	9
Area Name:	CENTRAL BASE AREA OU
Actual Date:	2/5/1993
Action:	CA300 - CMS Workplan Approved
NAICS Code(s):	332813 92811 92811 Electroplating, Plating, Polishing, Anodizing, and Coloring National Security National Security
Original schedule date:	Not reported
Schedule end date:	Not reported

EPA ID:	CA4570024345
EPA Region:	9
Area Name:	CENTRAL BASE AREA OU
Actual Date:	2/5/1993
Action:	CA350 - CMS Approved

USAF NORTON AFB (Continued) **1000417274**

NAICS Code(s): 332813 92811 92811
Electroplating, Plating, Polishing, Anodizing, and Coloring
National Security
National Security
Original schedule date: Not reported
Schedule end date: Not reported

EPA ID: CA4570024345
EPA Region: 9
Area Name: ENTIRE FACILITY
Actual Date: 4/1/1984
Action: CA049SI
NAICS Code(s): 332813 92811 92811
Electroplating, Plating, Polishing, Anodizing, and Coloring
National Security
National Security
Original schedule date: Not reported
Schedule end date: Not reported

EPA ID: CA4570024345
EPA Region: 9
Area Name: CENTRAL BASE AREA OU
Actual Date: 5/1/1992
Action: CA650 - Stabilization Construction Completed
NAICS Code(s): 332813 92811 92811
Electroplating, Plating, Polishing, Anodizing, and Coloring
National Security
National Security
Original schedule date: Not reported
Schedule end date: Not reported

EPA ID: CA4570024345
EPA Region: 9
Area Name: ENTIRE FACILITY
Actual Date: 5/22/2000
Action: CA750NO - Migration of Contaminated Groundwater under Control, Unacceptable migration of contaminated groundwater is observed or expected
NAICS Code(s): 332813 92811 92811
Electroplating, Plating, Polishing, Anodizing, and Coloring
National Security
National Security
Original schedule date: Not reported
Schedule end date: Not reported

EPA ID: CA4570024345
EPA Region: 9
Area Name: ENTIRE FACILITY
Actual Date: 5/22/2000
Action: CA725YE - Current Human Exposures Under Control, Yes, Current Human Exposures Under Control has been verified
NAICS Code(s): 332813 92811 92811
Electroplating, Plating, Polishing, Anodizing, and Coloring
National Security
National Security
Original schedule date: Not reported
Schedule end date: Not reported

USAF NORTON AFB (Continued) **1000417274**

EPA ID: CA4570024345
EPA Region: 9
Area Name: ENTIRE FACILITY
Actual Date: 6/1/1984
Action: CA029SF
NAICS Code(s): 332813 92811 92811
Electroplating, Plating, Polishing, Anodizing, and Coloring
National Security
National Security
Original schedule date: Not reported
Schedule end date: Not reported

EPA ID: CA4570024345
EPA Region: 9
Area Name: ENTIRE FACILITY
Actual Date: 6/1/1984
Action: CA049PA
NAICS Code(s): 332813 92811 92811
Electroplating, Plating, Polishing, Anodizing, and Coloring
National Security
National Security
Original schedule date: Not reported
Schedule end date: Not reported

EPA ID: CA4570024345
EPA Region: 9
Area Name: ENTIRE FACILITY
Actual Date: 6/1/1984
Action: CA050 - RFA Completed
NAICS Code(s): 332813 92811 92811
Electroplating, Plating, Polishing, Anodizing, and Coloring
National Security
National Security
Original schedule date: Not reported
Schedule end date: Not reported

EPA ID: CA4570024345
EPA Region: 9
Area Name: CENTRAL BASE AREA OU
Actual Date: 6/1/1995
Action: CA550 - Certification Of Remedy Completion Or Construction Completion
NAICS Code(s): 332813 92811 92811
Electroplating, Plating, Polishing, Anodizing, and Coloring
National Security
National Security
Original schedule date: Not reported
Schedule end date: Not reported

EPA ID: CA4570024345
EPA Region: 9
Area Name: ENTIRE FACILITY
Actual Date: 6/18/1998
Action: CA210 - CA Responsibility Referred To A Non-RCRA Federal Authority
NAICS Code(s): 332813 92811 92811
Electroplating, Plating, Polishing, Anodizing, and Coloring
National Security
National Security

USAF NORTON AFB (Continued) **1000417274**

Original schedule date: Not reported
Schedule end date: Not reported

EPA ID: CA4570024345
EPA Region: 9
Area Name: ENTIRE FACILITY
Actual Date: 6/18/1998
Action: CA725YE - Current Human Exposures Under Control, Yes, Current Human Exposures Under Control has been verified
NAICS Code(s): 332813 92811 92811
Electroplating, Plating, Polishing, Anodizing, and Coloring
National Security
National Security
Original schedule date: Not reported
Schedule end date: Not reported

EPA ID: CA4570024345
EPA Region: 9
Area Name: ENTIRE FACILITY
Actual Date: 6/18/1998
Action: CA750YE - Migration of Contaminated Groundwater under Control, Yes, Migration of Contaminated Groundwater Under Control has been verified
NAICS Code(s): 332813 92811 92811
Electroplating, Plating, Polishing, Anodizing, and Coloring
National Security
National Security
Original schedule date: Not reported
Schedule end date: Not reported

EPA ID: CA4570024345
EPA Region: 9
Area Name: ENTIRE FACILITY
Actual Date: 6/18/1998
Action: CA225NR - Stabilization Measures Evaluation, This facility is, not amenable to stabilization activity at the, present time for reasons other than (1) it appears to be technically, infeasible or inappropriate (NF) or (2) there is a lack of technical, information (IN). Reasons for this conclusion may be the status of, closure at the facility, the degree of risk, timing considerations, the status of corrective action work at the facility, or other, administrative considerations
NAICS Code(s): 332813 92811 92811
Electroplating, Plating, Polishing, Anodizing, and Coloring
National Security
National Security
Original schedule date: Not reported
Schedule end date: Not reported

EPA ID: CA4570024345
EPA Region: 9
Area Name: ENTIRE FACILITY
Actual Date: 6/18/1998
Action: CA075ME - CA Prioritization, Facility or area was assigned a medium corrective action priority
NAICS Code(s): 332813 92811 92811
Electroplating, Plating, Polishing, Anodizing, and Coloring
National Security

USAF NORTON AFB (Continued) **1000417274**

National Security
Original schedule date: Not reported
Schedule end date: Not reported

EPA ID: CA4570024345
EPA Region: 9
Area Name: CENTRAL BASE AREA OU
Actual Date: 7/13/1989
Action: CA600GW - Stabilization Measures Implemented, Groundwater extraction and treatment
NAICS Code(s): 332813 92811 92811
Electroplating, Plating, Polishing, Anodizing, and Coloring
National Security
National Security
Original schedule date: Not reported
Schedule end date: Not reported

EPA ID: CA4570024345
EPA Region: 9
Area Name: ENTIRE FACILITY
Actual Date: 7/13/1989
Action: CA100 - RFI Imposition
NAICS Code(s): 332813 92811 92811
Electroplating, Plating, Polishing, Anodizing, and Coloring
National Security
National Security
Original schedule date: Not reported
Schedule end date: Not reported

EPA ID: CA4570024345
EPA Region: 9
Area Name: ENTIRE FACILITY
Actual Date: 7/13/1989
Action: CA250 - CMS Imposition
NAICS Code(s): 332813 92811 92811
Electroplating, Plating, Polishing, Anodizing, and Coloring
National Security
National Security
Original schedule date: Not reported
Schedule end date: Not reported

EPA ID: CA4570024345
EPA Region: 9
Area Name: CENTRAL BASE AREA OU
Actual Date: 10/7/1994
Action: CA500 - CMI Workplan Approved
NAICS Code(s): 332813 92811 92811
Electroplating, Plating, Polishing, Anodizing, and Coloring
National Security
National Security
Original schedule date: Not reported
Schedule end date: Not reported

EPA ID: CA4570024345
EPA Region: 9
Area Name: CENTRAL BASE AREA OU
Actual Date: 10/7/1994

USAF NORTON AFB (Continued) **1000417274**

Action: CA450 - Corrective Measures Design Approved
NAICS Code(s): 332813 92811 92811
Electroplating, Plating, Polishing, Anodizing, and Coloring
National Security
National Security
Original schedule date: Not reported
Schedule end date: Not reported

EPA ID: CA4570024345
EPA Region: 9
Area Name: CENTRAL BASE AREA OU
Actual Date: 11/24/1993
Action: CA400 - Date For Remedy Selection (CM Imposed)
NAICS Code(s): 332813 92811 92811
Electroplating, Plating, Polishing, Anodizing, and Coloring
National Security
National Security
Original schedule date: Not reported
Schedule end date: Not reported

US ENG CONTROLS:
EPA ID: CA4570024345
Site ID: 0902760
Name: NORTON AIR FORCE BASE (LNDFLL #2)
Address: I-10/US 395 FORMER NORTON AFB
SAN BERNARDINO, CA 92408
EPA Region: 09
County: SAN BERNARDINO
Event Code: Not reported
Actual Date: Not reported

Action ID: 001
Action Name: RECORD OF DECISION
Action Completion date: 11/24/1993
Planned Complet. date: 12/31/1993
Operable Unit: 01
Contaminated Media : Groundwater
Engineering Control: Air Stripping

Action ID: 001
Action Name: RECORD OF DECISION
Action Completion date: 11/24/1993
Planned Complet. date: 12/31/1993
Operable Unit: 01
Contaminated Media : Groundwater
Engineering Control: Alternate Drinking Water, (N.O.S.)

Action ID: 001
Action Name: RECORD OF DECISION
Action Completion date: 11/24/1993
Planned Complet. date: 12/31/1993
Operable Unit: 01
Contaminated Media : Groundwater
Engineering Control: Carbon Adsorption

Action ID: 001
Action Name: RECORD OF DECISION

USAF NORTON AFB (Continued) **1000417274**

Action Completion date: 11/24/1993
Planned Complet. date: 12/31/1993
Operable Unit: 01
Contaminated Media : Groundwater
Engineering Control: Discharge

Action ID: 001
Action Name: RECORD OF DECISION
Action Completion date: 11/24/1993
Planned Complet. date: 12/31/1993
Operable Unit: 01
Contaminated Media : Groundwater
Engineering Control: Extraction

Action ID: 001
Action Name: RECORD OF DECISION
Action Completion date: 11/24/1993
Planned Complet. date: 12/31/1993
Operable Unit: 01
Contaminated Media : Groundwater
Engineering Control: Monitoring

Action ID: 001
Action Name: RECORD OF DECISION
Action Completion date: 11/24/1993
Planned Complet. date: 12/31/1993
Operable Unit: 01
Contaminated Media : Groundwater
Engineering Control: Pump And Treat

Action ID: 001
Action Name: RECORD OF DECISION
Action Completion date: 11/24/1993
Planned Complet. date: 12/31/1993
Operable Unit: 01
Contaminated Media : Groundwater
Engineering Control: Reinjection

Action ID: 001
Action Name: RECORD OF DECISION
Action Completion date: 11/24/1993
Planned Complet. date: 12/31/1993
Operable Unit: 01
Contaminated Media : Soil
Engineering Control: Carbon Adsorption

Action ID: 001
Action Name: RECORD OF DECISION
Action Completion date: 11/24/1993
Planned Complet. date: 12/31/1993
Operable Unit: 01
Contaminated Media : Soil
Engineering Control: Disposal

Action ID: 001
Action Name: RECORD OF DECISION
Action Completion date: 11/24/1993

USAF NORTON AFB (Continued) **1000417274**

Planned Complet. date: 12/31/1993
Operable Unit: 01
Contaminated Media : Soil
Engineering Control: Excavation

Action ID: 001
Action Name: RECORD OF DECISION
Action Completion date: 11/24/1993
Planned Complet. date: 12/31/1993
Operable Unit: 01
Contaminated Media : Soil
Engineering Control: Monitoring

Action ID: 001
Action Name: RECORD OF DECISION
Action Completion date: 11/24/1993
Planned Complet. date: 12/31/1993
Operable Unit: 01
Contaminated Media : Soil
Engineering Control: Soil Vapor Extraction (ex-situ)

Action ID: 001
Action Name: RECORD OF DECISION
Action Completion date: 11/24/1993
Planned Complet. date: 12/31/1993
Operable Unit: 01
Contaminated Media : Soil
Engineering Control: Soil Vapor Extraction (in-situ)

Action ID: 002
Action Name: RECORD OF DECISION
Action Completion date: 9/29/2005
Planned Complet. date: 9/30/2005
Operable Unit: 02
Contaminated Media : Soil
Engineering Control: Disposal

Action ID: 002
Action Name: RECORD OF DECISION
Action Completion date: 9/29/2005
Planned Complet. date: 9/30/2005
Operable Unit: 02
Contaminated Media : Soil
Engineering Control: Excavation

Action ID: 002
Action Name: RECORD OF DECISION
Action Completion date: 9/29/2005
Planned Complet. date: 9/30/2005
Operable Unit: 02
Contaminated Media : Soil
Engineering Control: No Further Action

Action ID: 003
Action Name: RECORD OF DECISION
Action Completion date: 6/25/1997
Planned Complet. date: 6/30/1997

USAF NORTON AFB (Continued) **1000417274**

Operable Unit: 02
Contaminated Media : Groundwater
Engineering Control: No Further Action

Action ID: 003
Action Name: RECORD OF DECISION
Action Completion date: 6/25/1997
Planned Complet. date: 6/30/1997
Operable Unit: 02
Contaminated Media : Soil
Engineering Control: No Further Action

US INST CONTROL:
EPA ID: CA4570024345
Site ID: 0902760
Name: NORTON AIR FORCE BASE (LNDFLL #2)
Action Name: RECORD OF DECISION
Address: I-10/US 395 FORMER NORTON AFB
SAN BERNARDINO, CA 92408
EPA Region: 09
County: SAN BERNARDINO
Event Code: Not reported
Inst. Control: Deed Restriction
Actual Date: Not reported
Complet. Date: 11/24/1993
Operable Unit: 01
Contaminated Media : Groundwater

EPA ID: CA4570024345
Site ID: 0902760
Name: NORTON AIR FORCE BASE (LNDFLL #2)
Action Name: RECORD OF DECISION
Address: I-10/US 395 FORMER NORTON AFB
SAN BERNARDINO, CA 92408
EPA Region: 09
County: SAN BERNARDINO
Event Code: Not reported
Inst. Control: Deed Restriction
Actual Date: Not reported
Complet. Date: 11/24/1993
Operable Unit: 01
Contaminated Media : Soil

EPA ID: CA4570024345
Site ID: 0902760
Name: NORTON AIR FORCE BASE (LNDFLL #2)
Action Name: RECORD OF DECISION
Address: I-10/US 395 FORMER NORTON AFB
SAN BERNARDINO, CA 92408
EPA Region: 09
County: SAN BERNARDINO
Event Code: Not reported
Inst. Control: Covenant
Actual Date: Not reported
Complet. Date: 9/29/2005
Operable Unit: 02

USAF NORTON AFB (Continued) **1000417274**

Contaminated Media : Soil

EPA ID: CA4570024345
Site ID: 0902760
Name: NORTON AIR FORCE BASE (LNDFLL #2)
Action Name: RECORD OF DECISION
Address: I-10/US 395 FORMER NORTON AFB
SAN BERNARDINO, CA 92408
EPA Region: 09
County: SAN BERNARDINO
Event Code: Not reported
Inst. Control: Deed Restriction
Actual Date: Not reported
Complet. Date: 6/25/1997
Operable Unit: 02
Contaminated Media : Soil

ROD:

Full-text of USEPA Record of Decision(s) is available from EDR.

PADS:
EPAID: CA4570024345
Facility name: USAF NORTON AFB
Facility Address: 63 CES DEV
NORTON AFB, CA 92409
Facility country: US
Generator: Yes
Storer: No
Transporter: No
Disposer: No
Research facility: No
Smelter: No
Facility owner name: US DOD
Contact title: Not reported
Contact name: DIENZO EDMUND M
Contact tel: (714)382-2444
Contact extension: Not reported
Mailing address: 63 CES DEV
NORTON AFB, CA 92409
Mailing country: US
Cert. title: Not reported
Cert. name: Not reported
Cert. date: 6/22/1990
Date received: 7/11/1990

FINDS:

Registry ID: 110000830815

Environmental Interest/Information System
NCDB (National Compliance Data Base) supports implementation of the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) and the Toxic Substances Control Act (TSCA). The system tracks inspections in regions and states with cooperative agreements, enforcement actions, and settlements.

USAF NORTON AFB (Continued) **1000417274**

The NEI (National Emissions Inventory) database contains information on stationary and mobile sources that emit criteria air pollutants and their precursors, as well as hazardous air pollutants (HAPs).

California Hazardous Waste Tracking System - Datamart (HWTS-DATAMART) provides California with information on hazardous waste shipments for generators, transporters, and treatment, storage, and disposal facilities.

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

CERCLIS (Comprehensive Environmental Response, Compensation, and Liability Information System) is the Superfund database that is used to support management in all phases of the Superfund program. The system contains information on all aspects of hazardous waste sites, including an inventory of sites, planned and actual site activities, and financial information.

NY MANIFEST:

EPA ID:	CA4570024345
Country:	USA
Mailing Name:	UNITED STATES MILITARY - D.P.D.O.
Mailing Contact:	UNITED STATES MILITARY - D.P.D.O.
Mailing Address:	BUILDING 948
Mailing Address 2:	Not reported
Mailing City:	NORTON AIR FORCE BASE
Mailing State:	CA
Mailing Zip:	92405
Mailing Zip4:	Not reported
Mailing Country:	USA
Mailing Phone:	714-382-6501

Document ID:	NYA2651931
Manifest Status:	Completed after the designated time period for a TSDF to get a copy to the DEC
Trans1 State ID:	54068
Trans2 State ID:	AMOX23602
Generator Ship Date:	850425
Trans1 Recv Date:	850425
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	850606
Part A Recv Date:	850515
Part B Recv Date:	850703
Generator EPA ID:	CA4570024345
Trans1 EPA ID:	CAD006913206
Trans2 EPA ID:	CAD006913206
TSDF ID:	NY7890008975
Waste Code:	D001 - NON-LISTED IGNITABLE WASTES
Quantity:	06880
Units:	G - Gallons (liquids only)* (8.3 pounds)
Number of Containers:	001

USAF NORTON AFB (Continued) **1000417274**

Container Type:	TT - Cargo tank, tank trucks
Handling Method:	B Incineration, heat recovery, burning.
Specific Gravity:	085
Year:	85

Document ID:	NYA2704788
Manifest Status:	Completed after the designated time period for a TSDF to get a copy to the DEC
Trans1 State ID:	54068
Trans2 State ID:	ACFX88990
Generator Ship Date:	850306
Trans1 Recv Date:	850306
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	850425
Part A Recv Date:	850515
Part B Recv Date:	850524
Generator EPA ID:	CA4570024345
Trans1 EPA ID:	CAD006913206
Trans2 EPA ID:	CAD006913206
TSDF ID:	NY7890008975
Waste Code:	D001 - NON-LISTED IGNITABLE WASTES
Quantity:	46300
Units:	P - Pounds
Number of Containers:	001
Container Type:	TT - Cargo tank, tank trucks
Handling Method:	B Incineration, heat recovery, burning.
Specific Gravity:	089
Year:	85

1
East
< 1/8
0.004 mi.
21 ft.

AG-TEUNISSEN FARMING **UST** **U003785068**
9092 ALABAMA ST **N/A**
REDLANDS, CA 92374

Relative:
Higher

Actual:
1220 ft.

UST:

Global ID:	15049
Latitude:	34.08778
Longitude:	-117.20873

2
South
< 1/8
0.100 mi.
527 ft.

HOME DEPOT USA HD5087 **RCRA-SQG** **1012176154**
9377 ALABAMA ST **CAR000200139**
REDLANDS, CA 92374

Relative:
Higher

Actual:
1228 ft.

RCRA-SQG:

Date form received by agency:	04/30/2009
Facility name:	HOME DEPOT USA HD5087
Facility address:	9377 ALABAMA ST REDLANDS, CA 92374
EPA ID:	CAR000200139
Mailing address:	1905 ASTON AVE NO 100 CARLSBAD, CA 92008
Contact:	ROSA L WHIPPLE

HOME DEPOT USA HD5087 (Continued) **1012176154**

Contact address:	1905 ASTON AVE NO 100 CARLSBAD, CA 92008
Contact country:	US
Contact telephone:	800-451-8346
Telephone ext.:	8842
Contact email:	RWHIPPLE@3ECOMPANY.COM
EPA Region:	09
Classification:	Small Small Quantity Generator
Description:	Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:

Owner/operator name:	HOME DEPOT USA
Owner/operator address:	2455 PACES FERRY RD D 17 ATLANTA, GA 30339
Owner/operator country:	US
Owner/operator telephone:	Not reported
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	05/18/2009
Owner/Op end date:	Not reported

Owner/operator name:	HOME DEPOT USA
Owner/operator address:	Not reported Not reported
Owner/operator country:	Not reported
Owner/operator telephone:	Not reported
Legal status:	Private
Owner/Operator Type:	Operator
Owner/Op start date:	05/18/2009
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No
Off-site waste receiver:	Commercial status unknown

Universal Waste Summary:

Waste type:	Batteries
Accumulated waste on-site:	No

HOME DEPOT USA HD5087 (Continued) **1012176154**

Generated waste on-site: Not reported

Waste type: Lamps
Accumulated waste on-site: No
Generated waste on-site: Not reported

Waste type: Pesticides
Accumulated waste on-site: No
Generated waste on-site: Not reported

Waste type: Thermostats
Accumulated waste on-site: No
Generated waste on-site: Not reported

Hazardous Waste Summary:
Waste code: D001
Waste name: IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.

Waste code: D002
Waste name: A WASTE WHICH HAS A PH OF LESS THAN 2 OR GREATER THAN 12.5 IS CONSIDERED TO BE A CORROSIVE HAZARDOUS WASTE. SODIUM HYDROXIDE, A CAUSTIC SOLUTION WITH A HIGH PH, IS OFTEN USED BY INDUSTRIES TO CLEAN OR DEGREASE PARTS. HYDROCHLORIC ACID, A SOLUTION WITH A LOW PH, IS USED BY MANY INDUSTRIES TO CLEAN METAL PARTS PRIOR TO PAINTING. WHEN THESE CAUSTIC OR ACID SOLUTIONS BECOME CONTAMINATED AND MUST BE DISPOSED, THE WASTE WOULD BE A CORROSIVE HAZARDOUS WASTE.

Waste code: D009
Waste name: MERCURY

Waste code: D016
Waste name: 2,4-D

Waste code: D018
Waste name: BENZENE

Waste code: D035
Waste name: METHYL ETHYL KETONE

Violation Status: No violations found

3
West
1/8-1/4
0.126 mi.
664 ft.

REDLANDS LOGISTICS CENTER
26940 PALMETTO AVE
REDLANDS, CA 92374

San Bern. Co. Permit **S107863396**
N/A

Relative:
Lower

Actual:
1193 ft.

San Bern. Co. Permit:
Region: SAN BERNARDINO
Facility ID: FA0010032
Owner: THRIFTY OIL CO
Permit Number: PT0017799

REDLANDS LOGISTICS CENTER (Continued) **S107863396**

Permit Category: HAZMAT HANDLER 0-10 EMPLOYEES
Facility Status: ACTIVE
Expiration Date: 11/30/2009 12:00:00AM

A4 **LANDFILL,CALIFORNIA STREET** **WDS S103442703**
West **2151 NEVADA ST** **WMUDS/SWAT N/A**
1/8-1/4 **REDLANDS CA, CA 92373** **NPDES**
0.188 mi. **EMI**
992 ft. **Site 1 of 3 in cluster A**

Relative:
Lower

Actual:
1187 ft.

CA WDS:

Facility ID:	Santa Ana River 360303001
Facility Type:	Solid Waste Site-Class III - Landfills for non hazardous solid wastes.
Facility Status:	Active - Any facility with a continuous or seasonal discharge that is under Waste Discharge Requirements.
NPDES Number:	Not reported
Subregion:	8
Facility Telephone:	9097987698
Facility Contact:	Gary Phelps
Agency Name:	REDLANDS CITY OF
Agency Address:	PO BOX 3005
Agency City,St,Zip:	REDLANDS 92373
Agency Contact:	DOUGLAS HEDRICK
Agency Telephone:	9097987698
Agency Type:	City
SIC Code:	4953
SIC Code 2:	Not reported
Primary Waste:	Solid Wastes
Primary Waste Type:	Nonhazardous Solid Wastes/Influent or Solid Wastes that contain nonhazardous putrescible and non putrescible solid, semisolid, and liquid wastes (E.G., garbage, trash, refuse, paper, demolition and construction wastes, manure, vegetable or animal solid and semisolid waste).
Secondary Waste:	Not reported
Secondary Waste Type:	Not reported
Design Flow:	0
Baseline Flow:	0
Reclamation:	No reclamation requirements associated with this facility.
POTW:	The facility is not a POTW.
Treat To Water:	Major Threat to Water Quality. A violation could render unusable a ground water or surface water resource used as a significant drink water supply, require closure of an area used for contact recreation, result in long-term deleterious effects on shell fish spawning or growth areas of aquatic resources, or directly expose the public to toxic substances.
Complexity:	Category B - Any facility having a physical, chemical, or biological waste treatment system (except for septic systems with subsurface disposal), or any Class II or III disposal site, or facilities without treatment systems that are complex, such as marinas with petroleum products, solid wastes, and sewage pump out facilities.

WMUDS/SWAT:

Edit Date:	19931007
Complexity:	Category B - Any facility having a physical, chemical, or biological waste treatment system (except for septic systems with subsurface disposal), or any Class II or III disposal site, or facilities without treatment systems that are complex, such as marinas with petroleum

LANDFILL,CALIFORNIA STREET (Continued) **S103442703**

products, solid wastes, and sewage pump out facilities.

Primary Waste:	Solid Wastes
Primary Waste Type:	Nonhazardous Solid Wastes/Influent or Solid Wastes that contain nonhazardous putrescible and non putrescible solid, semisolid, and liquid wastes (E.G., garbage, trash, refuse, paper, demolition and construction wastes, manure, vegetable or animal solid and semisolid waste).
Secondary Waste:	Not reported
Secondary Waste Type:	Not reported
Base Meridian:	SB
NPID:	Not reported
Tonnage:	380
Regional Board ID:	Not reported
Municipal Solid Waste:	True
Superorder:	True
Open To Public:	True
Waste List:	True
Agency Type:	City
Agency Name:	REDLANDS, CITY OF
Agency Department:	MUNICIPAL UTILITIES DEPT
Agency Address:	PO BOX 3005
Agency City,St,Zip:	REDLANDS CA 92373
Agency Contact:	GARY PHELPS
Agency Telephone:	9097987698
Land Owner Name:	CITY OF REDLANDS
Land Owner Address:	P.O. BOX 3005
Land Owner City,St,Zip:	REDLANDS, CA 92373
Land Owner Contact:	GARY PHELPS
Land Owner Phone:	7147932641
Region:	8
Facility Type:	Solid Waste Site-Class III - Landfills for non hazardous solid wastes.
Facility Description:	Not reported
Facility Telephone:	9097987698
SWAT Facility Name:	CALIFORNIA STREET LANDFILL
Primary SIC:	4953
Secondary SIC:	Not reported
Comments:	Not reported
Last Facility Editors:	BDNBDNBDN
Waste Discharge System:	True
Solid Waste Assessment Test Program:	True
Toxic Pits Cleanup Act Program:	False
Resource Conservation Recovery Act:	False
Department of Defence:	False
Solid Waste Assessment Test Program:	CITY OF REDLANDS
Threat to Water Quality:	Major Threat to Water Quality. A violation could render unusable a ground water or surface water resource used as a significant drink water supply, require closure of an area used for contact recreation, result in long-term deleterious effects on shell fish spawning or growth areas of aquatic resources, or directly expose the public to toxic substances.
Sub Chapter 15:	True
Regional Board Project Officer:	Not reported
Number of WMUDS at Facility:	1
Section Range:	01S03W08
RCRA Facility:	No
Waste Discharge Requirements:	Active - Any facility with a continuous or seasonal discharge that is under Waste Discharge Requirements.

LANDFILL,CALIFORNIA STREET (Continued) **S103442703**

Self-Monitoring Rept. Frequency: Quarterly Submittal
Waste Discharge System ID: 8 360303001
Solid Waste Information ID: 36-AA-0017

NPDES:
Npdes Number: Not reported
Facility Status: Terminated
Agency Id: 483483
Region: 8
Regulatory Measure Id: 350485
Order No: 99-08DWQ
Regulatory Measure Type: Storm water construction
Place Id: 724596
WDID: 8 36C353108
Program Type: CONSTW
Adoption Date Of Regulatory Measure: Not reported
Effective Date Of Regulatory Measure: 2008-08-21 14:55:14
Expiration Date Of Regulatory Measure: Not reported
Termination Date Of Regulatory Measure: 2009-06-02 00:00:00
Discharge Name: Redlands City Municipal Utilities & Engineering Department
Discharge Address: Not reported
Discharge City: Not reported
Discharge State: Not reported
Discharge Zip: Not reported

EMI:
Year: 2002
County Code: 36
Air Basin: SC
Facility ID: 74413
Air District Name: SC
SIC Code: 9199
Air District Name: SOUTH COAST AQMD
Community Health Air Pollution Info System: Not reported
Consolidated Emission Reporting Rule: Not reported
Total Organic Hydrocarbon Gases Tons/Yr: 210
Reactive Organic Gases Tons/Yr: 4
Carbon Monoxide Emissions Tons/Yr: 21
NOX - Oxides of Nitrogen Tons/Yr: 10
SOX - Oxides of Sulphur Tons/Yr: 0
Particulate Matter Tons/Yr: 1
Part. Matter 10 Micrometers & Smllr Tons/Yr: 0

Year: 2003
County Code: 36
Air Basin: SC
Facility ID: 74413
Air District Name: SC
SIC Code: 9199
Air District Name: SOUTH COAST AQMD
Community Health Air Pollution Info System: Not reported
Consolidated Emission P[illegible] Rule: Not reported
Total Organic Hydrocarbon [illegible]ns/Yr: 210
Reactive Organic Gases Tons/Yr: 4
Carbon Monoxide Emissions Tons/Yr: 21
NOX - Oxides of Nitrogen Tons/Yr: 10

LANDFILL,CALIFORNIA STREET (Continued) **S103442703**

SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	1
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0
Year:	2004
County Code:	36
Air Basin:	SC
Facility ID:	74413
Air District Name:	SC
SIC Code:	9199
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	209.65
Reactive Organic Gases Tons/Yr:	2.45
Carbon Monoxide Emissions Tons/Yr:	21.0131
NOX - Oxides of Nitrogen Tons/Yr:	10.227
SOX - Oxides of Sulphur Tons/Yr:	0.395
Particulate Matter Tons/Yr:	1.383
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0.42
Year:	2005
County Code:	36
Air Basin:	SC
Facility ID:	74413
Air District Name:	SC
SIC Code:	9199
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	2.7908
Reactive Organic Gases Tons/Yr:	.12865928
Carbon Monoxide Emissions Tons/Yr:	26.125
NOX - Oxides of Nitrogen Tons/Yr:	8.535
SOX - Oxides of Sulphur Tons/Yr:	.439
Particulate Matter Tons/Yr:	.674
Part. Matter 10 Micrometers & Smllr Tons/Yr:	.282428

A5
West
1/8-1/4
0.188 mi.
992 ft.

HASKELL CO. INDUSTRIAL COMPOSTING FAC. **SWF/LF** **S107863487**
2130 NEVADA AVENUE **N/A**
REDLANDS, CA

Site 2 of 3 in cluster A

Relative:
Lower

Actual:
1187 ft.

SWF/LF (SWIS):

Region:	STATE
Facility ID:	36-AA-0443
Lat/Long:	34.08667 / -117.21668
Owner Name:	City Of Redlands
Owner Telephone:	9097987698
Owner Address:	Municipal Utilities Dept. - POBox 3005
Owner Address2:	35 Cajon Street , Suite 15 A
Owner City,St,Zip:	Redlands, CA 92373
Operator:	ABT-Haskell, LLC
Operator Phone:	Not reported
Operator Address:	Not reported
Operator Address2:	280 Business Park Circle, Suite 411
Operator City,St,Zip:	St. Augustine, FL 32095

HASKELL CO. INDUSTRIAL COMPOSTING FAC. (Continued) **S107863487**

Operator's Status:	Planned
Permit Date:	Not reported
Permit Status:	Not reported
Permitted Acreage:	Not reported
Activity:	Composting Facility (Sludge)
Regulation Status:	Proposed
Landuse Name:	Wetlands,Industrial,Commercial,Agricultural
GIS Source:	Map
Category:	Composting
Unit Number:	01
Inspection Frequency:	None
Accepted Waste:	Food Wastes,Green Materials,Sludge (BioSolids),Wood waste
Closure Date:	Not reported
Closure Type:	Not reported
Disposal Acreage:	Not reported
SWIS Num:	36-AA-0443
Waste Discharge Requirement Num:	Not reported
Program Type:	Not reported
Permitted Throughput with Units:	Not reported
Actual Throughput with Units:	Not reported
Permitted Capacity with Units:	Not reported
Remaining Capacity:	Not reported
Remaining Capacity with Units:	Not reported

A6 **CALIFORNIA STREET LANDFILL** **SWF/LF S107030110**
West **2151 NEVADA STREET** **FINANCIAL ASSURANCE N/A**
1/8-1/4 **REDLANDS, CA**
0.188 mi.
995 ft. **Site 3 of 3 in cluster A**

Relative:
Lower

Actual:
1186 ft.

SWF/LF (SWIS):

Region:	STATE
Facility ID:	36-AA-0017
Lat/Long:	34.08861 / -117.221
Owner Name:	City Of Redlands
Owner Telephone:	9097987698
Owner Address:	Municipal Utilities Dept. - POBox 3005
Owner Address2:	35 Cajon Street , Suite 15 A
Owner City,St,Zip:	Redlands, CA 92373
Operator:	City Of Redlands
Operator Phone:	9097987698
Operator Address:	Municipal Utilities Dept. - POBox 3005
Operator Address2:	35 Cajon Street , Suite 15 A
Operator City,St,Zip:	Redlands, CA 92373
Operator's Status:	Active
Permit Date:	1/14/2009
Permit Status:	Permitted
Permitted Acreage:	Cubic Yard
Activity:	Solid Waste Landfill
Regulation Status:	Permitted
Landuse Name:	Rural,Open Space - Nonirrigated,Industrial,Agricultural
GIS Source:	Map
Category:	Disposal
Unit Number:	01
Inspection Frequency:	Monthly
Accepted Waste:	Construction/demolition,Mixed municipal,Other designated,Sludge (BioSolids)
Closure Date:	BOE Reporting Dispos

CALIFORNIA STREET LANDFILL (Continued) **S107030110**

Closure Type:	1/1/2042
Disposal Acreage:	115
SWIS Num:	36-AA-0017
Waste Discharge Requirement Num:	III
Program Type:	6800000
Permitted Throughput with Units:	Estimated
Actual Throughput with Units:	829
Permitted Capacity with Units:	Tons/day
Remaining Capacity:	106
Remaining Capacity with Units:	10000000

FINASS2:

Region:	2
Id Number:	36-AA-0017
Type Of Closure Plan:	Partial Final Plans
Date Of Closure Plan:	10/2004
Lea Approval Date:	11/2004
Rwqcb Approval Date:	3/2005
Ciwmb Approval Date:	4/2005
Closure Plan Next Review Date:	11/2009
Total Area To Cover:	16 Acres
Estimated Closure Date:	1/2042
Closure Certification Date:	4/2005
Type Post Closure Maint Plan:	Partial Final Plans
Date Of Post Closure Maint Plan:	Not reported
Post Closure Maint Period:	2042 - 2072
Lea Approval Date:	11/2004
Rwqcb Approval Date:	3/2005
Ciwmb Approval Date:	4/2005
Post Closure Maint Plan Next Rev Date:	11/2009
Proposed Post Closure Land Use:	N/R
Ciwmb Operating Liability Req:	Not reported
Rwqcb Corrective Action Req:	N/A
Closure Plan-Fin Assur Closure Date:	1/2042
Closure Plan - Fin Assur Est:	$1,010,398
Closure Plan-Fin Assur Cost/Acre:	$63,150
Closure Plan-Fin Assur Mechanism:	ENTERPRISE FUND
Closure Plan-Fin Assur Funding Status:	Adequate
Closure Plan-Fin Assur Last Review:	2/25/2002

B7 **PAYLESS SHOE SOURCE INC. WDC** **San Bern. Co. Permit** **S108937520**
West **26881 PALMETTO AVE** **N/A**
1/8-1/4 **REDLANDS, CA 92374**
0.224 mi.
1182 ft. **Site 1 of 2 in cluster B**

Relative:
Lower

Actual:
1186 ft.

San Bern. Co. Permit:

Region:	SAN BERNARDINO
Facility ID:	FA0011285
Owner:	PAYLESS SHOE SOURCE, INC. WDC
Permit Number:	PT0019483
Permit Category:	HAZMAT HANDLER- 51-99 EMPLOYEES
Facility Status:	ACTIVE
Expiration Date:	11/30/2010 12:00:00AM

B8
West
1/8-1/4
0.224 mi.
1182 ft.

CALIFORNIA PALMS BUSINESS CTR BDG 1
26881 PALMETTO AVE
REDLANDS, CA 92374

Site 2 of 2 in cluster B

Relative:
Lower

Actual:
1186 ft.

San Bern. Co. Permit **S110071583**
N/A

San Bern. Co. Permit:
Region: SAN BERNARDINO
Facility ID: FA0010025
Owner: TC LIT PALMS, LLC
Permit Number: PT0018171
Permit Category: HAZMAT HANDLER 0-10 EMPLOYEES
Facility Status: ACTIVE
Expiration Date: 10/31/2010 12:00:00AM

C9
SW
1/8-1/4
0.244 mi.
1289 ft.

PIONEER INDUSTRIAL CENTER
9425 NEVADA ST STE A
REDLANDS, CA 92335

Site 1 of 2 in cluster C

Relative:
Lower

Actual:
1191 ft.

San Bern. Co. Permit **S109849236**
N/A

San Bern. Co. Permit:
Region: SAN BERNARDINO
Facility ID: FA0010649
Owner: DAVIS PARTNERS LLC
Permit Number: PT0018351
Permit Category: HAZMAT HANDLER 0-10 EMPLOYEES
Facility Status: ACTIVE
Expiration Date: 11/30/2009 12:00:00AM

C10
SW
1/8-1/4
0.244 mi.
1289 ft.

ADVANCED INNOVATIONS WEST LLC
9425 NEVADA ST STE B
REDLANDS, CA 92374

Site 2 of 2 in cluster C

Relative:
Lower

Actual:
1191 ft.

San Bern. Co. Permit **S109598383**
HAZNET **N/A**

San Bern. Co. Permit:
Region: SAN BERNARDINO
Facility ID: FA0012284
Owner: ADVANCED INNOVATIONS WEST, LLC
Permit Number: PT0021584
Permit Category: HAZMAT HANDLER 26-50 EMPLOYEES
Facility Status: ACTIVE
Expiration Date: 5/31/2011 12:00:00AM

HAZNET:
Gepaid: CAC002643067
Contact: SAM VILLANUEVA
Telephone: 9093073737
Facility Addr2: Not reported
Mailing Name: Not reported
Mailing Address: 9425 NEVADA ST STE B
Mailing City,St,Zip: REDLANDS, CA 923745108
Gen County: San Bernardino
TSD EPA ID: CAD008252405
TSD County: Los Angeles
Waste Category: Off-specification, aged, or surplus organics
Disposal Method: H141

ADVANCED INNOVATIONS WEST LLC (Continued) **S109598383**

Tons:	0.0175
Facility County:	San Bernardino
Gepaid:	CAC002643067
Contact:	SAM VILLANUEVA
Telephone:	9093073737
Facility Addr2:	Not reported
Mailing Name:	Not reported
Mailing Address:	9425 NEVADA ST STE B
Mailing City,St,Zip:	REDLANDS, CA 923745108
Gen County:	San Bernardino
TSD EPA ID:	CAD982444481
TSD County:	San Bernardino
Waste Category:	Latex waste
Disposal Method:	H141
Tons:	0.0834
Facility County:	San Bernardino
Gepaid:	CAC002643067
Contact:	SAM VILLANUEVA
Telephone:	9093073737
Facility Addr2:	Not reported
Mailing Name:	Not reported
Mailing Address:	9425 NEVADA ST STE B
Mailing City,St,Zip:	REDLANDS, CA 923745108
Gen County:	San Bernardino
TSD EPA ID:	CAD008252405
TSD County:	Los Angeles
Waste Category:	Off-specification, aged, or surplus organics
Disposal Method:	H061
Tons:	0.033
Facility County:	San Bernardino

ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
REDLANDS	S108087264	DR. JAMES CARTER	ALMOND STBETWEEN NEVADA / CA	92374	San Bern. Co. Permit
REDLANDS	S109849351	BEST GROVE	NEC ALABAMA / PALMETO	92374	San Bern. Co. Permit
REDLANDS	S101301246	CITY OF REDLANDS CALIFORNIA STREET	1950 NEVADA ST	92374	HIST CORTESE, LUST, EMI
REDLANDS	S110071676	PROLOGIS PARK RIVERBLUFF	27352 RIVER BLUFF/ALABAMA	92374	San Bern. Co. Permit
REDLANDS	S109437543	BIXBY LAND REDLANDS	N W CORNER LUGONIA AVE / RES		NPDES
SAN BERNARDINO	1000419812	DIETRICH TRUCK SALES	HWY 10 INTERCHANGE	92408	RCRA-SQG, FINDS, HAZNET
SAN BERNARDINO COUN	S103442535	FORT IRWIN LUCKY FUSE DISPOSAL	FORT IRWIN		WMUDS/SWAT, HIST CORTESE, CHI

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

Number of Days to Update: Provides confirmation that EDR is reporting records that have been updated within 90 days from the date the government agency made the information available to the public.

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

NPL: National Priority List

National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC) and regional EPA offices.

Date of Government Version: 07/02/2010
Date Data Arrived at EDR: 07/14/2010
Date Made Active in Reports: 10/04/2010
Number of Days to Update: 82

Source: EPA
Telephone: N/A
Last EDR Contact: 10/13/2010
Next Scheduled EDR Contact: 01/24/2011
Data Release Frequency: Quarterly

NPL Site Boundaries

Sources:

EPA's Environmental Photographic Interpretation Center (EPIC)
Telephone: 202-564-7333

EPA Region 1
Telephone 617-918-1143

EPA Region 3
Telephone 215-814-5418

EPA Region 4
Telephone 404-562-8033

EPA Region 5
Telephone 312-886-6686

EPA Region 10
Telephone 206-553-8665

EPA Region 6
Telephone: 214-655-6659

EPA Region 7
Telephone: 913-551-7247

EPA Region 8
Telephone: 303-312-6774

EPA Region 9
Telephone: 415-947-4246

Proposed NPL: Proposed National Priority List Sites

A site that has been proposed for listing on the National Priorities List through the issuance of a proposed rule in the Federal Register. EPA then accepts public comments on the site, responds to the comments, and places on the NPL those sites that continue to meet the requirements for listing.

Date of Government Version: 07/02/2010
Date Data Arrived at EDR: 07/14/2010
Date Made Active in Reports: 10/04/2010
Number of Days to Update: 82

Source: EPA
Telephone: N/A
Last EDR Contact: 10/13/2010
Next Scheduled EDR Contact: 01/24/2011
Data Release Frequency: Quarterly

NPL LIENS: Federal Superfund Liens

Federal Superfund Liens. Under the authority granted the USEPA by CERCLA of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner received notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

Date of Government Version: 10/15/1991
Date Data Arrived at EDR: 02/02/1994
Date Made Active in Reports: 03/30/1994
Number of Days to Update: 56

Source: EPA
Telephone: 202-564-4267
Last EDR Contact: 11/22/2010
Next Scheduled EDR Contact: 02/28/2011
Data Release Frequency: No Update Planned

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Federal Delisted NPL site list

DELISTED NPL: National Priority List Deletions

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

Date of Government Version: 07/02/2010
Date Data Arrived at EDR: 07/14/2010
Date Made Active in Reports: 10/04/2010
Number of Days to Update: 82

Source: EPA
Telephone: N/A
Last EDR Contact: 10/13/2010
Next Scheduled EDR Contact: 01/24/2011
Data Release Frequency: Quarterly

Federal CERCLIS list

CERCLIS: Comprehensive Environmental Response, Compensation, and Liability Information System

CERCLIS contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). CERCLIS contains sites which are either proposed to or on the National Priorities List (NPL) and sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 01/29/2010
Date Data Arrived at EDR: 02/09/2010
Date Made Active in Reports: 04/12/2010
Number of Days to Update: 62

Source: EPA
Telephone: 703-412-9810
Last EDR Contact: 10/01/2010
Next Scheduled EDR Contact: 01/10/2011
Data Release Frequency: Quarterly

FEDERAL FACILITY: Federal Facility Site Information listing

A listing of National Priority List (NPL) and Base Realignment and Closure (BRAC) sites found in the Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) Database where EPAa??s Federal Facilities Restoration and Reuse Office is involved in cleanup activities.

Date of Government Version: 06/23/2009
Date Data Arrived at EDR: 01/15/2010
Date Made Active in Reports: 02/10/2010
Number of Days to Update: 26

Source: Environmental Protection Agency
Telephone: 703-603-8704
Last EDR Contact: 10/13/2010
Next Scheduled EDR Contact: 01/24/2011
Data Release Frequency: Varies

Federal CERCLIS NFRAP site List

CERCLIS-NFRAP: CERCLIS No Further Remedial Action Planned

Archived sites are sites that have been removed and archived from the inventory of CERCLIS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list this site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. This decision does not necessarily mean that there is no hazard associated with a given site; it only means that, based upon available information, the location is not judged to be a potential NPL site.

Date of Government Version: 06/23/2009
Date Data Arrived at EDR: 09/02/2009
Date Made Active in Reports: 09/21/2009
Number of Days to Update: 19

Source: EPA
Telephone: 703-412-9810
Last EDR Contact: 10/01/2010
Next Scheduled EDR Contact: 12/13/2010
Data Release Frequency: Quarterly

Federal RCRA CORRACTS facilities list

CORRACTS: Corrective Action Report

CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 05/25/2010
Date Data Arrived at EDR: 06/02/2010
Date Made Active in Reports: 10/04/2010
Number of Days to Update: 124

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 11/22/2010
Next Scheduled EDR Contact: 02/28/2011
Data Release Frequency: Quarterly

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF: RCRA - Treatment, Storage and Disposal

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Transporters are individuals or entities that move hazardous waste from the generator offsite to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

Date of Government Version: 02/17/2010
Date Data Arrived at EDR: 02/19/2010
Date Made Active in Reports: 05/17/2010
Number of Days to Update: 87

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 10/07/2010
Next Scheduled EDR Contact: 01/17/2011
Data Release Frequency: Quarterly

Federal RCRA generators list

RCRA-LQG: RCRA - Large Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

Date of Government Version: 02/17/2010
Date Data Arrived at EDR: 02/19/2010
Date Made Active in Reports: 05/17/2010
Number of Days to Update: 87

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 10/07/2010
Next Scheduled EDR Contact: 01/17/2011
Data Release Frequency: Quarterly

RCRA-SQG: RCRA - Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

Date of Government Version: 02/17/2010
Date Data Arrived at EDR: 02/19/2010
Date Made Active in Reports: 05/17/2010
Number of Days to Update: 87

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 10/07/2010
Next Scheduled EDR Contact: 01/17/2011
Data Release Frequency: Quarterly

RCRA-CESQG: RCRA - Conditionally Exempt Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Conditionally exempt small quantity generators (CESQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

Date of Government Version: 02/17/2010
Date Data Arrived at EDR: 02/19/2010
Date Made Active in Reports: 05/17/2010
Number of Days to Update: 87

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 10/07/2010
Next Scheduled EDR Contact: 01/17/2011
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Federal institutional controls / engineering controls registries

US ENG CONTROLS: Engineering Controls Sites List

A listing of sites with engineering controls in place. Engineering controls include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health.

Date of Government Version: 12/20/2009
Date Data Arrived at EDR: 01/20/2010
Date Made Active in Reports: 04/12/2010
Number of Days to Update: 82

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 09/13/2010
Next Scheduled EDR Contact: 12/27/2010
Data Release Frequency: Varies

US INST CONTROL: Sites with Institutional Controls

A listing of sites with institutional controls in place. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions are generally required as part of the institutional controls.

Date of Government Version: 12/20/2009
Date Data Arrived at EDR: 01/20/2010
Date Made Active in Reports: 04/12/2010
Number of Days to Update: 82

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 09/13/2010
Next Scheduled EDR Contact: 12/27/2010
Data Release Frequency: Varies

Federal ERNS list

ERNS: Emergency Response Notification System

Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 07/09/2010
Date Data Arrived at EDR: 07/09/2010
Date Made Active in Reports: 08/17/2010
Number of Days to Update: 39

Source: National Response Center, United States Coast Guard
Telephone: 202-267-2180
Last EDR Contact: 10/06/2010
Next Scheduled EDR Contact: 01/17/2011
Data Release Frequency: Annually

State- and tribal - equivalent NPL

RESPONSE: State Response Sites

Identifies confirmed release sites where DTSC is involved in remediation, either in a lead or oversight capacity. These confirmed release sites are generally high-priority and high potential risk.

Date of Government Version: 08/18/2010
Date Data Arrived at EDR: 09/16/2010
Date Made Active in Reports: 09/29/2010
Number of Days to Update: 13

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 11/09/2010
Next Scheduled EDR Contact: 02/21/2011
Data Release Frequency: Quarterly

State- and tribal - equivalent CERCLIS

ENVIROSTOR: EnviroStor Database

The Department of Toxic Substances Control's (DTSC's) Site Mitigation and Brownfields Reuse Program's (SMBRP's) EnviroStor database identifes sites that have known contamination or sites for which there may be reasons to investigate further. The database includes the following site types: Federal Superfund sites (National Priorities List (NPL)); State Response, including Military Facilities and State Superfund; Voluntary Cleanup; and School sites. EnviroStor provides similar information to the information that was available in CalSites, and provides additional site information, including, but not limited to, identification of formerly-contaminated properties that have been released for reuse, properties where environmental deed restrictions have been recorded to prevent inappropriate land uses, and risk characterization information that is used to assess potential impacts to public health and the environment at contaminated sites.

Date of Government Version: 08/18/2010
Date Data Arrived at EDR: 09/16/2010
Date Made Active in Reports: 09/29/2010
Number of Days to Update: 13

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 11/09/2010
Next Scheduled EDR Contact: 02/21/2011
Data Release Frequency: Quarterly

State and tribal landfill and/or solid waste disposal site lists

SWF/LF (SWIS): Solid Waste Information System
Active, Closed and Inactive Landfills. SWF/LF records typically contain an inve ntory of solid waste disposal facilities or landfills. These may be active or i nactive facilities or open dumps that failed to meet RCRA Section 4004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 08/23/2010
Date Data Arrived at EDR: 08/24/2010
Date Made Active in Reports: 09/29/2010
Number of Days to Update: 36

Source: Department of Resources Recycling and Recovery
Telephone: 916-341-6320
Last EDR Contact: 11/23/2010
Next Scheduled EDR Contact: 03/07/2011
Data Release Frequency: Quarterly

State and tribal leaking storage tank lists

LUST REG 9: Leaking Underground Storage Tank Report
Orange, Riverside, San Diego counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 03/01/2001
Date Data Arrived at EDR: 04/23/2001
Date Made Active in Reports: 05/21/2001
Number of Days to Update: 28

Source: California Regional Water Quality Control Board San Diego Region (9)
Telephone: 858-637-5595
Last EDR Contact: 09/27/2010
Next Scheduled EDR Contact: 01/10/2011
Data Release Frequency: No Update Planned

LUST REG 7: Leaking Underground Storage Tank Case Listing
Leaking Underground Storage Tank locations. Imperial, Riverside, San Diego, Santa Barbara counties.

Date of Government Version: 02/26/2004
Date Data Arrived at EDR: 02/26/2004
Date Made Active in Reports: 03/24/2004
Number of Days to Update: 27

Source: California Regional Water Quality Control Board Colorado River Basin Region (7)
Telephone: 760-776-8943
Last EDR Contact: 11/01/2011
Next Scheduled EDR Contact: 02/14/2011
Data Release Frequency: No Update Planned

LUST REG 6V: Leaking Underground Storage Tank Case Listing
Leaking Underground Storage Tank locations. Inyo, Kern, Los Angeles, Mono, San Bernardino counties.

Date of Government Version: 06/07/2005
Date Data Arrived at EDR: 06/07/2005
Date Made Active in Reports: 06/29/2005
Number of Days to Update: 22

Source: California Regional Water Quality Control Board Victorville Branch Office (6)
Telephone: 760-241-7365
Last EDR Contact: 09/13/2010
Next Scheduled EDR Contact: 09/27/2010
Data Release Frequency: No Update Planned

LUST REG 6L: Leaking Underground Storage Tank Case Listing
For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 09/09/2003
Date Data Arrived at EDR: 09/10/2003
Date Made Active in Reports: 10/07/2003
Number of Days to Update: 27

Source: California Regional Water Quality Control Board Lahontan Region (6)
Telephone: 530-542-5572
Last EDR Contact: 09/13/2010
Next Scheduled EDR Contact: 12/27/2010
Data Release Frequency: No Update Planned

LUST REG 5: Leaking Underground Storage Tank Database
Leaking Underground Storage Tank locations. Alameda, Alpine, Amador, Butte, Colusa, Contra Costa, Calveras, El Dorado, Fresno, Glenn, Kern, Kings, Lake, Lassen, Madera, Mariposa, Merced, Modoc, Napa, Nevada, Placer, Plumas, Sacramento, San Joaquin, Shasta, Solano, Stanislaus, Sutter, Tehama, Tulare, Tuolumne, Yolo, Yuba counties.

Date of Government Version: 07/01/2008
Date Data Arrived at EDR: 07/22/2008
Date Made Active in Reports: 07/31/2008
Number of Days to Update: 9

Source: California Regional Water Quality Control Board Central Valley Region (5)
Telephone: 916-464-4834
Last EDR Contact: 10/04/2010
Next Scheduled EDR Contact: 01/17/2011
Data Release Frequency: Quarterly

LUST REG 4: Underground Storage Tank Leak List

Los Angeles, Ventura counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 09/07/2004
Date Data Arrived at EDR: 09/07/2004
Date Made Active in Reports: 10/12/2004
Number of Days to Update: 35

Source: California Regional Water Quality Control Board Los Angeles Region (4)
Telephone: 213-576-6710
Last EDR Contact: 09/07/2010
Next Scheduled EDR Contact: 12/20/2010
Data Release Frequency: No Update Planned

LUST REG 3: Leaking Underground Storage Tank Database

Leaking Underground Storage Tank locations. Monterey, San Benito, San Luis Obispo, Santa Barbara, Santa Cruz counties.

Date of Government Version: 05/19/2003
Date Data Arrived at EDR: 05/19/2003
Date Made Active in Reports: 06/02/2003
Number of Days to Update: 14

Source: California Regional Water Quality Control Board Central Coast Region (3)
Telephone: 805-542-4786
Last EDR Contact: 10/18/2010
Next Scheduled EDR Contact: 01/31/2011
Data Release Frequency: No Update Planned

LUST REG 2: Fuel Leak List

Leaking Underground Storage Tank locations. Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano, Sonoma counties.

Date of Government Version: 09/30/2004
Date Data Arrived at EDR: 10/20/2004
Date Made Active in Reports: 11/19/2004
Number of Days to Update: 30

Source: California Regional Water Quality Control Board San Francisco Bay Region (2)
Telephone: 510-622-2433
Last EDR Contact: 09/20/2010
Next Scheduled EDR Contact: 01/03/2011
Data Release Frequency: Quarterly

LUST REG 1: Active Toxic Site Investigation

Del Norte, Humboldt, Lake, Mendocino, Modoc, Siskiyou, Sonoma, Trinity counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 02/01/2001
Date Data Arrived at EDR: 02/28/2001
Date Made Active in Reports: 03/29/2001
Number of Days to Update: 29

Source: California Regional Water Quality Control Board North Coast (1)
Telephone: 707-570-3769
Last EDR Contact: 11/01/2010
Next Scheduled EDR Contact: 02/14/2011
Data Release Frequency: No Update Planned

LUST: Geotracker's Leaking Underground Fuel Tank Report

Leaking Underground Storage Tank Incident Reports. LUST records contain an inventory of reported leaking underground storage tank incidents. Not all states maintain these records, and the information stored varies by state. For more information on a particular leaking underground storage tank sites, please contact the appropriate regulatory agency.

Date of Government Version: 10/28/2010
Date Data Arrived at EDR: 10/28/2010
Date Made Active in Reports: 11/17/2010
Number of Days to Update: 20

Source: State Water Resources Control Board
Telephone: see region list
Last EDR Contact: 10/28/2010
Next Scheduled EDR Contact: 01/03/2011
Data Release Frequency: Quarterly

LUST REG 8: Leaking Underground Storage Tanks

California Regional Water Quality Control Board Santa Ana Region (8). For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 02/14/2005
Date Data Arrived at EDR: 02/15/2005
Date Made Active in Reports: 03/28/2005
Number of Days to Update: 41

Source: California Regional Water Quality Control Board Santa Ana Region (8)
Telephone: 909-782-4496
Last EDR Contact: 10/18/2010
Next Scheduled EDR Contact: 01/31/2011
Data Release Frequency: Varies

SLIC: Statewide SLIC Cases

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 10/28/2010
Date Data Arrived at EDR: 10/28/2010
Date Made Active in Reports: 11/17/2010
Number of Days to Update: 20

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 10/28/2010
Next Scheduled EDR Contact: 01/03/2011
Data Release Frequency: Varies

SLIC REG 1: Active Toxic Site Investigations

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/03/2003
Date Data Arrived at EDR: 04/07/2003
Date Made Active in Reports: 04/25/2003
Number of Days to Update: 18

Source: California Regional Water Quality Control Board, North Coast Region (1)
Telephone: 707-576-2220
Last EDR Contact: 11/01/2010
Next Scheduled EDR Contact: 02/14/2011
Data Release Frequency: No Update Planned

SLIC REG 2: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/30/2004
Date Data Arrived at EDR: 10/20/2004
Date Made Active in Reports: 11/19/2004
Number of Days to Update: 30

Source: Regional Water Quality Control Board San Francisco Bay Region (2)
Telephone: 510-286-0457
Last EDR Contact: 09/20/2010
Next Scheduled EDR Contact: 01/03/2011
Data Release Frequency: Quarterly

SLIC REG 3: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 05/18/2006
Date Data Arrived at EDR: 05/18/2006
Date Made Active in Reports: 06/15/2006
Number of Days to Update: 28

Source: California Regional Water Quality Control Board Central Coast Region (3)
Telephone: 805-549-3147
Last EDR Contact: 10/18/2010
Next Scheduled EDR Contact: 01/31/2011
Data Release Frequency: Semi-Annually

SLIC REG 4: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 11/17/2004
Date Data Arrived at EDR: 11/18/2004
Date Made Active in Reports: 01/04/2005
Number of Days to Update: 47

Source: Region Water Quality Control Board Los Angeles Region (4)
Telephone: 213-576-6600
Last EDR Contact: 10/04/2010
Next Scheduled EDR Contact: 01/17/2011
Data Release Frequency: Varies

SLIC REG 5: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/01/2005
Date Data Arrived at EDR: 04/05/2005
Date Made Active in Reports: 04/21/2005
Number of Days to Update: 16

Source: Regional Water Quality Control Board Central Valley Region (5)
Telephone: 916-464-3291
Last EDR Contact: 09/13/2010
Next Scheduled EDR Contact: 12/27/2010
Data Release Frequency: Semi-Annually

SLIC REG 6V: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 05/24/2005
Date Data Arrived at EDR: 05/25/2005
Date Made Active in Reports: 06/16/2005
Number of Days to Update: 22

Source: Regional Water Quality Control Board, Victorville Branch
Telephone: 619-241-6583
Last EDR Contact: 11/22/2010
Next Scheduled EDR Contact: 02/28/2011
Data Release Frequency: Semi-Annually

SLIC REG 6L: SLIC Sites
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/07/2004
Date Data Arrived at EDR: 09/07/2004
Date Made Active in Reports: 10/12/2004
Number of Days to Update: 35

Source: California Regional Water Quality Control Board, Lahontan Region
Telephone: 530-542-5574
Last EDR Contact: 11/22/2010
Next Scheduled EDR Contact: 02/28/2011
Data Release Frequency: No Update Planned

SLIC REG 7: SLIC List
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 11/24/2004
Date Data Arrived at EDR: 11/29/2004
Date Made Active in Reports: 01/04/2005
Number of Days to Update: 36

Source: California Regional Quality Control Board, Colorado River Basin Region
Telephone: 760-346-7491
Last EDR Contact: 11/01/2010
Next Scheduled EDR Contact: 02/14/2011
Data Release Frequency: No Update Planned

SLIC REG 8: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/03/2008
Date Data Arrived at EDR: 04/03/2008
Date Made Active in Reports: 04/14/2008
Number of Days to Update: 11

Source: California Region Water Quality Control Board Santa Ana Region (8)
Telephone: 951-782-3298
Last EDR Contact: 09/13/2010
Next Scheduled EDR Contact: 12/27/2010
Data Release Frequency: Semi-Annually

SLIC REG 9: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/10/2007
Date Data Arrived at EDR: 09/11/2007
Date Made Active in Reports: 09/28/2007
Number of Days to Update: 17

Source: California Regional Water Quality Control Board San Diego Region (9)
Telephone: 858-467-2980
Last EDR Contact: 11/08/2010
Next Scheduled EDR Contact: 02/21/2011
Data Release Frequency: Annually

INDIAN LUST R10: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Alaska, Idaho, Oregon and Washington.

Date of Government Version: 08/05/2010
Date Data Arrived at EDR: 08/06/2010
Date Made Active in Reports: 10/04/2010
Number of Days to Update: 59

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 11/01/2010
Next Scheduled EDR Contact: 02/14/2011
Data Release Frequency: Quarterly

INDIAN LUST R1: Leaking Underground Storage Tanks on Indian Land
A listing of leaking underground storage tank locations on Indian Land.

Date of Government Version: 02/19/2009
Date Data Arrived at EDR: 02/19/2009
Date Made Active in Reports: 03/16/2009
Number of Days to Update: 25

Source: EPA Region 1
Telephone: 617-918-1313
Last EDR Contact: 11/02/2010
Next Scheduled EDR Contact: 02/14/2011
Data Release Frequency: Varies

INDIAN LUST R8: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Colorado, Montana, North Dakota, South Dakota, Utah and Wyoming.

Date of Government Version: 05/24/2010
Date Data Arrived at EDR: 05/27/2010
Date Made Active in Reports: 08/09/2010
Number of Days to Update: 74

Source: EPA Region 8
Telephone: 303-312-6271
Last EDR Contact: 11/01/2010
Next Scheduled EDR Contact: 02/14/2011
Data Release Frequency: Quarterly

INDIAN LUST R6: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in New Mexico and Oklahoma.

Date of Government Version: 08/05/2010
Date Data Arrived at EDR: 08/06/2010
Date Made Active in Reports: 10/04/2010
Number of Days to Update: 59

Source: EPA Region 6
Telephone: 214-665-6597
Last EDR Contact: 11/01/2010
Next Scheduled EDR Contact: 02/14/2011
Data Release Frequency: Varies

INDIAN LUST R4: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Florida, Mississippi and North Carolina.

Date of Government Version: 08/27/2010
Date Data Arrived at EDR: 08/30/2010
Date Made Active in Reports: 10/04/2010
Number of Days to Update: 35

Source: EPA Region 4
Telephone: 404-562-8677
Last EDR Contact: 11/01/2010
Next Scheduled EDR Contact: 02/14/2011
Data Release Frequency: Semi-Annually

INDIAN LUST R9: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Arizona, California, New Mexico and Nevada

Date of Government Version: 08/30/2010
Date Data Arrived at EDR: 08/30/2010
Date Made Active in Reports: 10/04/2010
Number of Days to Update: 35

Source: Environmental Protection Agency
Telephone: 415-972-3372
Last EDR Contact: 11/01/2010
Next Scheduled EDR Contact: 02/14/2011
Data Release Frequency: Quarterly

INDIAN LUST R7: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Iowa, Kansas, and Nebraska

Date of Government Version: 11/04/2009
Date Data Arrived at EDR: 05/04/2010
Date Made Active in Reports: 07/07/2010
Number of Days to Update: 64

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 11/09/2010
Next Scheduled EDR Contact: 02/14/2011
Data Release Frequency: Varies

State and tribal registered storage tank lists

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

UST: Active UST Facilities
Active UST facilities gathered from the local regulatory agencies

Date of Government Version: 10/28/2010
Date Data Arrived at EDR: 10/28/2010
Date Made Active in Reports: 11/18/2010
Number of Days to Update: 21

Source: SWRCB
Telephone: 916-480-1028
Last EDR Contact: 10/28/2010
Next Scheduled EDR Contact: 01/03/2011
Data Release Frequency: Semi-Annually

AST: Aboveground Petroleum Storage Tank Facilities
Registered Aboveground Storage Tanks.

Date of Government Version: 08/01/2009
Date Data Arrived at EDR: 09/10/2009
Date Made Active in Reports: 10/01/2009
Number of Days to Update: 21

Source: State Water Resources Control Board
Telephone: 916-341-5712
Last EDR Contact: 10/12/2010
Next Scheduled EDR Contact: 01/24/2011
Data Release Frequency: Quarterly

INDIAN UST R10: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 10 (Alaska, Idaho, Oregon, Washington, and Tribal Nations).

Date of Government Version: 08/05/2010
Date Data Arrived at EDR: 08/06/2010
Date Made Active in Reports: 10/04/2010
Number of Days to Update: 59

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 11/01/2010
Next Scheduled EDR Contact: 02/14/2011
Data Release Frequency: Quarterly

INDIAN UST R9: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 9 (Arizona, California, Hawaii, Nevada, the Pacific Islands, and Tribal Nations).

Date of Government Version: 08/30/2010
Date Data Arrived at EDR: 08/30/2010
Date Made Active in Reports: 10/04/2010
Number of Days to Update: 35

Source: EPA Region 9
Telephone: 415-972-3368
Last EDR Contact: 11/01/2010
Next Scheduled EDR Contact: 02/14/2011
Data Release Frequency: Quarterly

INDIAN UST R8: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 8 (Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming and 27 Tribal Nations).

Date of Government Version: 05/24/2010
Date Data Arrived at EDR: 05/27/2010
Date Made Active in Reports: 08/09/2010
Number of Days to Update: 74

Source: EPA Region 8
Telephone: 303-312-6137
Last EDR Contact: 11/01/2010
Next Scheduled EDR Contact: 02/14/2011
Data Release Frequency: Quarterly

INDIAN UST R7: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 7 (Iowa, Kansas, Missouri, Nebraska, and 9 Tribal Nations).

Date of Government Version: 04/01/2008
Date Data Arrived at EDR: 12/30/2008
Date Made Active in Reports: 03/16/2009
Number of Days to Update: 76

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 11/09/2010
Next Scheduled EDR Contact: 02/14/2011
Data Release Frequency: Varies

INDIAN UST R6: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 6 (Louisiana, Arkansas, Oklahoma, New Mexico, Texas and 65 Tribes).

Date of Government Version: 08/03/2010
Date Data Arrived at EDR: 08/04/2010
Date Made Active in Reports: 10/04/2010
Number of Days to Update: 61

Source: EPA Region 6
Telephone: 214-665-7591
Last EDR Contact: 11/01/2010
Next Scheduled EDR Contact: 02/14/2011
Data Release Frequency: Semi-Annually

INDIAN UST R5: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 5 (Michigan, Minnesota and Wisconsin and Tribal Nations).

Date of Government Version: 02/11/2010
Date Data Arrived at EDR: 02/11/2010
Date Made Active in Reports: 04/12/2010
Number of Days to Update: 60

Source: EPA Region 5
Telephone: 312-886-6136
Last EDR Contact: 11/01/2010
Next Scheduled EDR Contact: 02/14/2011
Data Release Frequency: Varies

INDIAN UST R4: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 4 (Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee and Tribal Nations)

Date of Government Version: 08/27/2010
Date Data Arrived at EDR: 08/30/2010
Date Made Active in Reports: 10/04/2010
Number of Days to Update: 35

Source: EPA Region 4
Telephone: 404-562-9424
Last EDR Contact: 11/01/2010
Next Scheduled EDR Contact: 02/14/2011
Data Release Frequency: Semi-Annually

INDIAN UST R1: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 1 (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont and ten Tribal Nations).

Date of Government Version: 02/19/2009
Date Data Arrived at EDR: 02/19/2009
Date Made Active in Reports: 03/16/2009
Number of Days to Update: 25

Source: EPA, Region 1
Telephone: 617-918-1313
Last EDR Contact: 11/02/2010
Next Scheduled EDR Contact: 02/14/2011
Data Release Frequency: Varies

FEMA UST: Underground Storage Tank Listing

A listing of all FEMA owned underground storage tanks.

Date of Government Version: 01/01/2010
Date Data Arrived at EDR: 02/16/2010
Date Made Active in Reports: 04/12/2010
Number of Days to Update: 55

Source: FEMA
Telephone: 202-646-5797
Last EDR Contact: 10/29/2010
Next Scheduled EDR Contact: 01/31/2011
Data Release Frequency: Varies

State and tribal voluntary cleanup sites

INDIAN VCP R7: Voluntary Cleanup Priority Lisitng

A listing of voluntary cleanup priority sites located on Indian Land located in Region 7.

Date of Government Version: 03/20/2008
Date Data Arrived at EDR: 04/22/2008
Date Made Active in Reports: 05/19/2008
Number of Days to Update: 27

Source: EPA, Region 7
Telephone: 913-551-7365
Last EDR Contact: 04/20/2009
Next Scheduled EDR Contact: 07/20/2009
Data Release Frequency: Varies

VCP: Voluntary Cleanup Program Properties

Contains low threat level properties with either confirmed or unconfirmed releases and the project proponents have request that DTSC oversee investigation and/or cleanup activities and have agreed to provide coverage for DTSC's costs.

Date of Government Version: 08/18/2010
Date Data Arrived at EDR: 09/16/2010
Date Made Active in Reports: 09/29/2010
Number of Days to Update: 13

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 11/09/2010
Next Scheduled EDR Contact: 02/21/2011
Data Release Frequency: Quarterly

INDIAN VCP R1: Voluntary Cleanup Priority Listing
A listing of voluntary cleanup priority sites located on Indian Land located in Region 1.

Date of Government Version: 04/02/2008
Date Data Arrived at EDR: 04/22/2008
Date Made Active in Reports: 05/19/2008
Number of Days to Update: 27

Source: EPA, Region 1
Telephone: 617-918-1102
Last EDR Contact: 10/04/2010
Next Scheduled EDR Contact: 01/17/2011
Data Release Frequency: Varies

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS: A Listing of Brownfields Sites
Included in the listing are brownfields properties addresses by Cooperative Agreement Recipients and brownfields properties addressed by Targeted Brownfields Assessments. Targeted Brownfields Assessments-EPA's Targeted Brownfields Assessments (TBA) program is designed to help states, tribes, and municipalities--especially those without EPA Brownfields Assessment Demonstration Pilots--minimize the uncertainties of contamination often associated with brownfields. Under the TBA program, EPA provides funding and/or technical assistance for environmental assessments at brownfields sites throughout the country. Targeted Brownfields Assessments supplement and work with other efforts under EPA's Brownfields Initiative to promote cleanup and redevelopment of brownfields. Cooperative Agreement Recipients-States, political subdivisions, territories, and Indian tribes become Brownfields Cleanup Revolving Loan Fund (BCRLF) cooperative agreement recipients when they enter into BCRLF cooperative agreements with the U.S. EPA. EPA selects BCRLF cooperative agreement recipients based on a proposal and application process. BCRLF cooperative agreement recipients must use EPA funds provided through BCRLF cooperative agreement for specified brownfields-related cleanup activities.

Date of Government Version: 06/24/2010
Date Data Arrived at EDR: 06/25/2010
Date Made Active in Reports: 08/17/2010
Number of Days to Update: 53

Source: Environmental Protection Agency
Telephone: 202-566-2777
Last EDR Contact: 09/29/2010
Next Scheduled EDR Contact: 01/10/2011
Data Release Frequency: Semi-Annually

Local Lists of Landfill / Solid Waste Disposal Sites

ODI: Open Dump Inventory
An open dump is defined as a disposal facility that does not comply with one or more of the Part 257 or Part 258 Subtitle D Criteria.

Date of Government Version: 06/30/1985
Date Data Arrived at EDR: 08/09/2004
Date Made Active in Reports: 09/17/2004
Number of Days to Update: 39

Source: Environmental Protection Agency
Telephone: 800-424-9346
Last EDR Contact: 06/09/2004
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

DEBRIS REGION 9: Torres Martinez Reservation Illegal Dump Site Locations
A listing of illegal dump sites location on the Torres Martinez Indian Reservation located in eastern Riverside County and northern Imperial County, California.

Date of Government Version: 01/12/2009
Date Data Arrived at EDR: 05/07/2009
Date Made Active in Reports: 09/21/2009
Number of Days to Update: 137

Source: EPA, Region 9
Telephone: 415-947-4219
Last EDR Contact: 11/09/2010
Next Scheduled EDR Contact: 01/10/2011
Data Release Frequency: Varies

WMUDS/SWAT: Waste Management Unit Database

Waste Management Unit Database System. WMUDS is used by the State Water Resources Control Board staff and the Regional Water Quality Control Boards for program tracking and inventory of waste management units. WMUDS is composed of the following databases: Facility Information, Scheduled Inspections Information, Waste Management Unit Information, SWAT Program Information, SWAT Report Summary Information, SWAT Report Summary Data, Chapter 15 (formerly Subchapter 15) Information, Chapter 15 Monitoring Parameters, TPCA Program Information, RCRA Program Information, Closure Information, and Interested Parties Information.

Date of Government Version: 04/01/2000
Date Data Arrived at EDR: 04/10/2000
Date Made Active in Reports: 05/10/2000
Number of Days to Update: 30

Source: State Water Resources Control Board
Telephone: 916-227-4448
Last EDR Contact: 11/22/2010
Next Scheduled EDR Contact: 02/28/2011
Data Release Frequency: Quarterly

SWRCY: Recycler Database

A listing of recycling facilities in California.

Date of Government Version: 07/23/2010
Date Data Arrived at EDR: 09/21/2010
Date Made Active in Reports: 09/29/2010
Number of Days to Update: 8

Source: Department of Conservation
Telephone: 916-323-3836
Last EDR Contact: 09/21/2010
Next Scheduled EDR Contact: 01/03/2011
Data Release Frequency: Quarterly

HAULERS: Registered Waste Tire Haulers Listing

A listing of registered waste tire haulers.

Date of Government Version: 09/27/2010
Date Data Arrived at EDR: 09/28/2010
Date Made Active in Reports: 10/18/2010
Number of Days to Update: 20

Source: Integrated Waste Management Board
Telephone: 916-341-6422
Last EDR Contact: 11/23/2010
Next Scheduled EDR Contact: 03/07/2011
Data Release Frequency: Varies

INDIAN ODI: Report on the Status of Open Dumps on Indian Lands

Location of open dumps on Indian land.

Date of Government Version: 12/31/1998
Date Data Arrived at EDR: 12/03/2007
Date Made Active in Reports: 01/24/2008
Number of Days to Update: 52

Source: Environmental Protection Agency
Telephone: 703-308-8245
Last EDR Contact: 11/09/2010
Next Scheduled EDR Contact: 02/21/2011
Data Release Frequency: Varies

Local Lists of Hazardous waste / Contaminated Sites

US CDL: Clandestine Drug Labs

A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

Date of Government Version: 05/07/2010
Date Data Arrived at EDR: 06/18/2010
Date Made Active in Reports: 08/17/2010
Number of Days to Update: 60

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 10/29/2010
Next Scheduled EDR Contact: 12/20/2010
Data Release Frequency: Quarterly

HIST CAL-SITES: Calsites Database

The Calsites database contains potential or confirmed hazardous substance release properties. In 1996, California EPA reevaluated and significantly reduced the number of sites in the Calsites database. No longer updated by the state agency. It has been replaced by ENVIROSTOR.

Date of Government Version: 08/08/2005
Date Data Arrived at EDR: 08/03/2006
Date Made Active in Reports: 08/24/2006
Number of Days to Update: 21

Source: Department of Toxic Substance Control
Telephone: 916-323-3400
Last EDR Contact: 02/23/2009
Next Scheduled EDR Contact: 05/25/2009
Data Release Frequency: No Update Planned

SCH: School Property Evaluation Program

This category contains proposed and existing school sites that are being evaluated by DTSC for possible hazardous materials contamination. In some cases, these properties may be listed in the CalSites category depending on the level of threat to public health and safety or the environment they pose.

Date of Government Version: 08/18/2010
Date Data Arrived at EDR: 09/16/2010
Date Made Active in Reports: 09/29/2010
Number of Days to Update: 13

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 11/09/2010
Next Scheduled EDR Contact: 02/21/2011
Data Release Frequency: Quarterly

TOXIC PITS: Toxic Pits Cleanup Act Sites

Toxic PITS Cleanup Act Sites. TOXIC PITS identifies sites suspected of containing hazardous substances where cleanup has not yet been completed.

Date of Government Version: 07/01/1995
Date Data Arrived at EDR: 08/30/1995
Date Made Active in Reports: 09/26/1995
Number of Days to Update: 27

Source: State Water Resources Control Board
Telephone: 916-227-4364
Last EDR Contact: 01/26/2009
Next Scheduled EDR Contact: 04/27/2009
Data Release Frequency: No Update Planned

CDL: Clandestine Drug Labs

A listing of drug lab locations. Listing of a location in this database does not indicate that any illegal drug lab materials were or were not present there, and does not constitute a determination that the location either requires or does not require additional cleanup work.

Date of Government Version: 08/19/2010
Date Data Arrived at EDR: 08/23/2010
Date Made Active in Reports: 09/29/2010
Number of Days to Update: 37

Source: Department of Toxic Substances Control
Telephone: 916-255-6504
Last EDR Contact: 10/04/2010
Next Scheduled EDR Contact: 01/17/2011
Data Release Frequency: Varies

US HIST CDL: National Clandestine Laboratory Register

A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

Date of Government Version: 09/01/2007
Date Data Arrived at EDR: 11/19/2008
Date Made Active in Reports: 03/30/2009
Number of Days to Update: 131

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 03/23/2009
Next Scheduled EDR Contact: 06/22/2009
Data Release Frequency: No Update Planned

Local Lists of Registered Storage Tanks

CA FID UST: Facility Inventory Database

The Facility Inventory Database (FID) contains a historical listing of active and inactive underground storage tank locations from the State Water Resource Control Board. Refer to local/county source for current data.

Date of Government Version: 10/31/1994
Date Data Arrived at EDR: 09/05/1995
Date Made Active in Reports: 09/29/1995
Number of Days to Update: 24

Source: California Environmental Protection Agency
Telephone: 916-341-5851
Last EDR Contact: 12/28/1998
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

UST MENDOCINO: Mendocino County UST Database
A listing of underground storage tank locations in Mendocino County.

Date of Government Version: 09/23/2009
Date Data Arrived at EDR: 09/23/2009
Date Made Active in Reports: 10/01/2009
Number of Days to Update: 8

Source: Department of Public Health
Telephone: 707-463-4466
Last EDR Contact: 09/07/2010
Next Scheduled EDR Contact: 12/20/2010
Data Release Frequency: Annually

HIST UST: Hazardous Substance Storage Container Database
The Hazardous Substance Storage Container Database is a historical listing of UST sites. Refer to local/county source for current data.

Date of Government Version: 10/15/1990
Date Data Arrived at EDR: 01/25/1991
Date Made Active in Reports: 02/12/1991
Number of Days to Update: 18

Source: State Water Resources Control Board
Telephone: 916-341-5851
Last EDR Contact: 07/26/2001
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

SWEEPS UST: SWEEPS UST Listing
Statewide Environmental Evaluation and Planning System. This underground storage tank listing was updated and maintained by a company contacted by the SWRCB in the early 1990's. The listing is no longer updated or maintained. The local agency is the contact for more information on a site on the SWEEPS list.

Date of Government Version: 06/01/1994
Date Data Arrived at EDR: 07/07/2005
Date Made Active in Reports: 08/11/2005
Number of Days to Update: 35

Source: State Water Resources Control Board
Telephone: N/A
Last EDR Contact: 06/03/2005
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

Local Land Records

LIENS 2: CERCLA Lien Information
A Federal CERCLA ('Superfund') lien can exist by operation of law at any site or property at which EPA has spent Superfund monies. These monies are spent to investigate and address releases and threatened releases of contamination. CERCLIS provides information as to the identity of these sites and properties.

Date of Government Version: 05/06/2010
Date Data Arrived at EDR: 05/11/2010
Date Made Active in Reports: 08/09/2010
Number of Days to Update: 90

Source: Environmental Protection Agency
Telephone: 202-564-6023
Last EDR Contact: 11/01/2010
Next Scheduled EDR Contact: 02/14/2011
Data Release Frequency: Varies

LUCIS: Land Use Control Information System
LUCIS contains records of land use control information pertaining to the former Navy Base Realignment and Closure properties.

Date of Government Version: 12/09/2005
Date Data Arrived at EDR: 12/11/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 31

Source: Department of the Navy
Telephone: 843-820-7326
Last EDR Contact: 11/22/2010
Next Scheduled EDR Contact: 03/07/2011
Data Release Frequency: Varies

LIENS: Environmental Liens Listing
A listing of property locations with environmental liens for California where DTSC is a lien holder.

Date of Government Version: 10/26/2010
Date Data Arrived at EDR: 10/27/2010
Date Made Active in Reports: 11/17/2010
Number of Days to Update: 21

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 10/18/2010
Next Scheduled EDR Contact: 01/31/2011
Data Release Frequency: Varies

DEED: Deed Restriction Listing

Site Mitigation and Brownfields Reuse Program Facility Sites with Deed Restrictions & Hazardous Waste Management Program Facility Sites with Deed / Land Use Restriction. The DTSC Site Mitigation and Brownfields Reuse Program (SMBRP) list includes sites cleaned up under the program's oversight and generally does not include current or former hazardous waste facilities that required a hazardous waste facility permit. The list represents deed restrictions that are active. Some sites have multiple deed restrictions. The DTSC Hazardous Waste Management Program (HWMP) has developed a list of current or former hazardous waste facilities that have a recorded land use restriction at the local county recorder's office. The land use restrictions on this list were required by the DTSC HWMP as a result of the presence of hazardous substances that remain on site after the facility (or part of the facility) has been closed or cleaned up. The types of land use restriction include deed notice, deed restriction, or a land use restriction that binds current and future owners.

Date of Government Version: 09/14/2010
Date Data Arrived at EDR: 09/15/2010
Date Made Active in Reports: 09/29/2010
Number of Days to Update: 14

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 09/15/2010
Next Scheduled EDR Contact: 12/27/2010
Data Release Frequency: Semi-Annually

Records of Emergency Release Reports

HMIRS: Hazardous Materials Information Reporting System

Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 04/06/2010
Date Data Arrived at EDR: 04/07/2010
Date Made Active in Reports: 05/27/2010
Number of Days to Update: 50

Source: U.S. Department of Transportation
Telephone: 202-366-4555
Last EDR Contact: 10/07/2010
Next Scheduled EDR Contact: 01/17/2011
Data Release Frequency: Annually

CHMIRS: California Hazardous Material Incident Report System

California Hazardous Material Incident Reporting System. CHMIRS contains information on reported hazardous material incidents (accidental releases or spills).

Date of Government Version: 12/31/2009
Date Data Arrived at EDR: 07/21/2010
Date Made Active in Reports: 08/20/2010
Number of Days to Update: 30

Source: Office of Emergency Services
Telephone: 916-845-8400
Last EDR Contact: 11/01/2010
Next Scheduled EDR Contact: 02/14/2011
Data Release Frequency: Varies

LDS: Land Disposal Sites Listing

The Land Disposal program regulates of waste discharge to land for treatment, storage and disposal in waste management units.

Date of Government Version: 10/28/2010
Date Data Arrived at EDR: 10/28/2010
Date Made Active in Reports: 11/17/2010
Number of Days to Update: 20

Source: State Water Qualilty Control Board
Telephone: 866-480-1028
Last EDR Contact: 10/28/2010
Next Scheduled EDR Contact: 01/03/2011
Data Release Frequency: Quarterly

MCS: Military Cleanup Sites Listing

The State Water Resources Control Board and nine Regional Water Quality Control Boards partner with the Department of Defense (DoD) through the Defense and State Memorandum of Agreement (DSMOA) to oversee the investigation and remediation of water quality issues at military facilities.

Date of Government Version: 10/28/2010
Date Data Arrived at EDR: 10/28/2010
Date Made Active in Reports: 11/17/2010
Number of Days to Update: 20

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 10/28/2010
Next Scheduled EDR Contact: 01/03/2011
Data Release Frequency: Quarterly

Other Ascertainable Records

RCRA-NonGen: RCRA - Non Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

Date of Government Version: 02/17/2010
Date Data Arrived at EDR: 02/19/2010
Date Made Active in Reports: 05/17/2010
Number of Days to Update: 87

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 10/07/2010
Next Scheduled EDR Contact: 01/17/2011
Data Release Frequency: Varies

DOT OPS: Incident and Accident Data

Department of Transporation, Office of Pipeline Safety Incident and Accident data.

Date of Government Version: 01/12/2010
Date Data Arrived at EDR: 02/09/2010
Date Made Active in Reports: 04/12/2010
Number of Days to Update: 62

Source: Department of Transporation, Office of Pipeline Safety
Telephone: 202-366-4595
Last EDR Contact: 11/09/2010
Next Scheduled EDR Contact: 02/21/2011
Data Release Frequency: Varies

DOD: Department of Defense Sites

This data set consists of federally owned or administered lands, administered by the Department of Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 11/10/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 62

Source: USGS
Telephone: 703-692-8801
Last EDR Contact: 10/28/2010
Next Scheduled EDR Contact: 01/31/2011
Data Release Frequency: Semi-Annually

FUDS: Formerly Used Defense Sites

The listing includes locations of Formerly Used Defense Sites properties where the US Army Corps of Engineers is actively working or will take necessary cleanup actions.

Date of Government Version: 12/31/2008
Date Data Arrived at EDR: 09/30/2009
Date Made Active in Reports: 12/01/2009
Number of Days to Update: 62

Source: U.S. Army Corps of Engineers
Telephone: 202-528-4285
Last EDR Contact: 09/14/2010
Next Scheduled EDR Contact: 12/27/2010
Data Release Frequency: Varies

CONSENT: Superfund (CERCLA) Consent Decrees

Major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund) sites. Released periodically by United States District Courts after settlement by parties to litigation matters.

Date of Government Version: 04/11/2010
Date Data Arrived at EDR: 04/19/2010
Date Made Active in Reports: 05/17/2010
Number of Days to Update: 28

Source: Department of Justice, Consent Decree Library
Telephone: Varies
Last EDR Contact: 10/04/2010
Next Scheduled EDR Contact: 01/17/2011
Data Release Frequency: Varies

ROD: Records Of Decision

Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid in the cleanup.

Date of Government Version: 06/01/2010
Date Data Arrived at EDR: 06/16/2010
Date Made Active in Reports: 08/17/2010
Number of Days to Update: 62

Source: EPA
Telephone: 703-416-0223
Last EDR Contact: 09/15/2010
Next Scheduled EDR Contact: 12/27/2010
Data Release Frequency: Annually

UMTRA: Uranium Mill Tailings Sites

Uranium ore was mined by private companies for federal government use in national defense programs. When the mills shut down, large piles of the sand-like material (mill tailings) remain after uranium has been extracted from the ore. Levels of human exposure to radioactive materials from the piles are low; however, in some cases tailings were used as construction materials before the potential health hazards of the tailings were recognized.

Date of Government Version: 12/14/2009
Date Data Arrived at EDR: 09/29/2010
Date Made Active in Reports: 10/04/2010
Number of Days to Update: 5

Source: Department of Energy
Telephone: 505-845-0011
Last EDR Contact: 11/29/2010
Next Scheduled EDR Contact: 03/14/2011
Data Release Frequency: Varies

MINES: Mines Master Index File

Contains all mine identification numbers issued for mines active or opened since 1971. The data also includes violation information.

Date of Government Version: 05/07/2010
Date Data Arrived at EDR: 06/09/2010
Date Made Active in Reports: 08/30/2010
Number of Days to Update: 82

Source: Department of Labor, Mine Safety and Health Administration
Telephone: 303-231-5959
Last EDR Contact: 09/09/2010
Next Scheduled EDR Contact: 12/20/2010
Data Release Frequency: Semi-Annually

TRIS: Toxic Chemical Release Inventory System

Toxic Release Inventory System. TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313.

Date of Government Version: 12/31/2008
Date Data Arrived at EDR: 01/13/2010
Date Made Active in Reports: 02/18/2010
Number of Days to Update: 36

Source: EPA
Telephone: 202-566-0250
Last EDR Contact: 09/01/2010
Next Scheduled EDR Contact: 12/13/2010
Data Release Frequency: Annually

TSCA: Toxic Substances Control Act

Toxic Substances Control Act. TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list. It includes data on the production volume of these substances by plant site.

Date of Government Version: 12/31/2002
Date Data Arrived at EDR: 04/14/2006
Date Made Active in Reports: 05/30/2006
Number of Days to Update: 46

Source: EPA
Telephone: 202-260-5521
Last EDR Contact: 10/01/2010
Next Scheduled EDR Contact: 01/10/2011
Data Release Frequency: Every 4 Years

FTTS: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)

FTTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA and EPCRA (Emergency Planning and Community Right-to-Know Act). To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25

Source: EPA/Office of Prevention, Pesticides and Toxic Substances
Telephone: 202-566-1667
Last EDR Contact: 11/29/2010
Next Scheduled EDR Contact: 03/14/2011
Data Release Frequency: Quarterly

FTTS INSP: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)

A listing of FIFRA/TSCA Tracking System (FTTS) inspections and enforcements.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25

Source: EPA
Telephone: 202-566-1667
Last EDR Contact: 11/29/2010
Next Scheduled EDR Contact: 03/14/2011
Data Release Frequency: Quarterly

HIST FTTS: FIFRA/TSCA Tracking System Administrative Case Listing

A complete administrative case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2007
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

HIST FTTS INSP: FIFRA/TSCA Tracking System Inspection & Enforcement Case Listing

A complete inspection and enforcement case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2008
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

SSTS: Section 7 Tracking Systems

Section 7 of the Federal Insecticide, Fungicide and Rodenticide Act, as amended (92 Stat. 829) requires all registered pesticide-producing establishments to submit a report to the Environmental Protection Agency by March 1st each year. Each establishment must report the types and amounts of pesticides, active ingredients and devices being produced, and those having been produced and sold or distributed in the past year.

Date of Government Version: 12/31/2008
Date Data Arrived at EDR: 01/06/2010
Date Made Active in Reports: 02/10/2010
Number of Days to Update: 35

Source: EPA
Telephone: 202-564-4203
Last EDR Contact: 11/01/2010
Next Scheduled EDR Contact: 02/14/2011
Data Release Frequency: Annually

ICIS: Integrated Compliance Information System

The Integrated Compliance Information System (ICIS) supports the information needs of the national enforcement and compliance program as well as the unique needs of the National Pollutant Discharge Elimination System (NPDES) program.

Date of Government Version: 04/24/2010
Date Data Arrived at EDR: 04/29/2010
Date Made Active in Reports: 05/17/2010
Number of Days to Update: 18

Source: Environmental Protection Agency
Telephone: 202-564-5088
Last EDR Contact: 09/27/2010
Next Scheduled EDR Contact: 01/10/2011
Data Release Frequency: Quarterly

PADS: PCB Activity Database System

PCB Activity Database. PADS Identifies generators, transporters, commercial storers and/or brokers and disposers of PCB's who are required to notify the EPA of such activities.

Date of Government Version: 02/01/2010
Date Data Arrived at EDR: 04/22/2010
Date Made Active in Reports: 08/09/2010
Number of Days to Update: 109

Source: EPA
Telephone: 202-566-0500
Last EDR Contact: 11/10/2010
Next Scheduled EDR Contact: 01/31/2011
Data Release Frequency: Annually

MLTS: Material Licensing Tracking System

MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites which possess or use radioactive materials and which are subject to NRC licensing requirements. To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 03/18/2010
Date Data Arrived at EDR: 04/06/2010
Date Made Active in Reports: 05/27/2010
Number of Days to Update: 51

Source: Nuclear Regulatory Commission
Telephone: 301-415-7169
Last EDR Contact: 09/13/2010
Next Scheduled EDR Contact: 12/27/2010
Data Release Frequency: Quarterly

RADINFO: Radiation Information Database

The Radiation Information Database (RADINFO) contains information about facilities that are regulated by U.S. Environmental Protection Agency (EPA) regulations for radiation and radioactivity.

Date of Government Version: 07/13/2010
Date Data Arrived at EDR: 07/14/2010
Date Made Active in Reports: 08/09/2010
Number of Days to Update: 26

Source: Environmental Protection Agency
Telephone: 202-343-9775
Last EDR Contact: 10/14/2010
Next Scheduled EDR Contact: 01/24/2011
Data Release Frequency: Quarterly

FINDS: Facility Index System/Facility Registry System

Facility Index System. FINDS contains both facility information and 'pointers' to other sources that contain more detail. EDR includes the following FINDS databases in this report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System).

Date of Government Version: 04/14/2010
Date Data Arrived at EDR: 04/16/2010
Date Made Active in Reports: 05/27/2010
Number of Days to Update: 41

Source: EPA
Telephone: (415) 947-8000
Last EDR Contact: 09/15/2010
Next Scheduled EDR Contact: 12/27/2010
Data Release Frequency: Quarterly

RAATS: RCRA Administrative Action Tracking System

RCRA Administration Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA. For administration actions after September 30, 1995, data entry in the RAATS database was discontinued. EPA will retain a copy of the database for historical records. It was necessary to terminate RAATS because a decrease in agency resources made it impossible to continue to update the information contained in the database.

Date of Government Version: 04/17/1995
Date Data Arrived at EDR: 07/03/1995
Date Made Active in Reports: 08/07/1995
Number of Days to Update: 35

Source: EPA
Telephone: 202-564-4104
Last EDR Contact: 06/02/2008
Next Scheduled EDR Contact: 09/01/2008
Data Release Frequency: No Update Planned

BRS: Biennial Reporting System

The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BRS captures detailed data from two groups: Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities.

Date of Government Version: 12/31/2007
Date Data Arrived at EDR: 02/25/2010
Date Made Active in Reports: 05/12/2010
Number of Days to Update: 76

Source: EPA/NTIS
Telephone: 800-424-9346
Last EDR Contact: 08/24/2010
Next Scheduled EDR Contact: 12/06/2010
Data Release Frequency: Biennially

CA BOND EXP. PLAN: Bond Expenditure Plan

Department of Health Services developed a site-specific expenditure plan as the basis for an appropriation of Hazardous Substance Cleanup Bond Act funds. It is not updated.

Date of Government Version: 01/01/1989
Date Data Arrived at EDR: 07/27/1994
Date Made Active in Reports: 08/02/1994
Number of Days to Update: 6

Source: Department of Health Services
Telephone: 916-255-2118
Last EDR Contact: 05/31/1994
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

WDS: Waste Discharge System

Sites which have been issued waste discharge requirements.

Date of Government Version: 06/19/2007
Date Data Arrived at EDR: 06/20/2007
Date Made Active in Reports: 06/29/2007
Number of Days to Update: 9

Source: State Water Resources Control Board
Telephone: 916-341-5227
Last EDR Contact: 11/29/2010
Next Scheduled EDR Contact: 03/14/2011
Data Release Frequency: Quarterly

NPDES: NPDES Permits Listing

A listing of NPDES permits, including stormwater.

Date of Government Version: 08/24/2010
Date Data Arrived at EDR: 08/24/2010
Date Made Active in Reports: 09/29/2010
Number of Days to Update: 36

Source: State Water Resources Control Board
Telephone: 916-445-9379
Last EDR Contact: 11/23/2010
Next Scheduled EDR Contact: 03/07/2011
Data Release Frequency: Quarterly

CORTESE: "Cortese" Hazardous Waste & Substances Sites List

The sites for the list are designated by the State Water Resource Control Board (LUST), the Integrated Waste Board (SWF/LS), and the Department of Toxic Substances Control (Cal-Sites). This listing is no longer updated by the state agency.

Date of Government Version: 10/05/2010
Date Data Arrived at EDR: 10/06/2010
Date Made Active in Reports: 11/17/2010
Number of Days to Update: 42

Source: CAL EPA/Office of Emergency Information
Telephone: 916-323-3400
Last EDR Contact: 10/06/2010
Next Scheduled EDR Contact: 01/17/2011
Data Release Frequency: Quarterly

HIST CORTESE: Hazardous Waste & Substance Site List

The sites for the list are designated by the State Water Resource Control Board [LUST], the Integrated Waste Board [SWF/LS], and the Department of Toxic Substances Control [CALSITES].

Date of Government Version: 04/01/2001
Date Data Arrived at EDR: 01/22/2009
Date Made Active in Reports: 04/08/2009
Number of Days to Update: 76

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 01/22/2009
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

NOTIFY 65: Proposition 65 Records

Proposition 65 Notification Records. NOTIFY 65 contains facility notifications about any release which could impact drinking water and thereby expose the public to a potential health risk.

Date of Government Version: 10/21/1993
Date Data Arrived at EDR: 11/01/1993
Date Made Active in Reports: 11/19/1993
Number of Days to Update: 18

Source: State Water Resources Control Board
Telephone: 916-445-3846
Last EDR Contact: 09/27/2010
Next Scheduled EDR Contact: 01/10/2011
Data Release Frequency: No Update Planned

DRYCLEANERS: Cleaner Facilities

A list of drycleaner related facilities that have EPA ID numbers. These are facilities with certain SIC codes: power laundries, family and commercial; garment pressing and cleaner's agents; linen supply; coin-operated laundries and cleaning; drycleaning plants, except rugs; carpet and upholster cleaning; industrial launderers; laundry and garment services.

Date of Government Version: 09/15/2010
Date Data Arrived at EDR: 09/16/2010
Date Made Active in Reports: 09/29/2010
Number of Days to Update: 13

Source: Department of Toxic Substance Control
Telephone: 916-327-4498
Last EDR Contact: 09/13/2010
Next Scheduled EDR Contact: 12/27/2010
Data Release Frequency: Annually

WIP: Well Investigation Program Case List

Well Investigation Program case in the San Gabriel and San Fernando Valley area.

Date of Government Version: 07/03/2009
Date Data Arrived at EDR: 07/21/2009
Date Made Active in Reports: 08/03/2009
Number of Days to Update: 13

Source: Los Angeles Water Quality Control Board
Telephone: 213-576-6726
Last EDR Contact: 10/05/2010
Next Scheduled EDR Contact: 01/17/2011
Data Release Frequency: Varies

HAZNET: Facility and Manifest Data

Facility and Manifest Data. The data is extracted from the copies of hazardous waste manifests received each year by the DTSC. The annual volume of manifests is typically 700,000 - 1,000,000 annually, representing approximately 350,000 - 500,000 shipments. Data are from the manifests submitted without correction, and therefore many contain some invalid values for data elements such as generator ID, TSD ID, waste category, and disposal method.

Date of Government Version: 12/31/2009
Date Data Arrived at EDR: 07/07/2010
Date Made Active in Reports: 08/12/2010
Number of Days to Update: 36

Source: California Environmental Protection Agency
Telephone: 916-255-1136
Last EDR Contact: 10/19/2010
Next Scheduled EDR Contact: 01/31/2011
Data Release Frequency: Annually

EMI: Emissions Inventory Data

Toxics and criteria pollutant emissions data collected by the ARB and local air pollution agencies.

Date of Government Version: 12/31/2008
Date Data Arrived at EDR: 09/29/2010
Date Made Active in Reports: 10/18/2010
Number of Days to Update: 19

Source: California Air Resources Board
Telephone: 916-322-2990
Last EDR Contact: 09/29/2010
Next Scheduled EDR Contact: 01/10/2011
Data Release Frequency: Varies

INDIAN RESERV: Indian Reservations

This map layer portrays Indian administered lands of the United States that have any area equal to or greater than 640 acres.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 12/08/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 34

Source: USGS
Telephone: 202-208-3710
Last EDR Contact: 10/28/2010
Next Scheduled EDR Contact: 01/31/2011
Data Release Frequency: Semi-Annually

SCRD DRYCLEANERS: State Coalition for Remediation of Drycleaners Listing

The State Coalition for Remediation of Drycleaners was established in 1998, with support from the U.S. EPA Office of Superfund Remediation and Technology Innovation. It is comprised of representatives of states with established drycleaner remediation programs. Currently the member states are Alabama, Connecticut, Florida, Illinois, Kansas, Minnesota, Missouri, North Carolina, Oregon, South Carolina, Tennessee, Texas, and Wisconsin.

Date of Government Version: 05/12/2010
Date Data Arrived at EDR: 05/13/2010
Date Made Active in Reports: 08/17/2010
Number of Days to Update: 96

Source: Environmental Protection Agency
Telephone: 615-532-8599
Last EDR Contact: 11/29/2010
Next Scheduled EDR Contact: 02/07/2011
Data Release Frequency: Varies

PROC: Certified Processors Database
A listing of certified processors.

Date of Government Version: 07/23/2010
Date Data Arrived at EDR: 09/21/2010
Date Made Active in Reports: 09/29/2010
Number of Days to Update: 8

Source: Department of Conservation
Telephone: 916-323-3836
Last EDR Contact: 09/21/2010
Next Scheduled EDR Contact: 01/03/2011
Data Release Frequency: Quarterly

MWMP: Medical Waste Management Program Listing
The Medical Waste Management Program (MWMP) ensures the proper handling and disposal of medical waste by permitting and inspecting medical waste Offsite Treatment Facilities (PDF) and Transfer Stations (PDF) throughout the state. MWMP also oversees all Medical Waste Transporters.

Date of Government Version: 09/03/2010
Date Data Arrived at EDR: 09/16/2010
Date Made Active in Reports: 09/29/2010
Number of Days to Update: 13

Source: Department of Public Health
Telephone: 916-558-1784
Last EDR Contact: 09/14/2010
Next Scheduled EDR Contact: 12/27/2010
Data Release Frequency: Varies

COAL ASH DOE: Sleam-Electric Plan Operation Data
A listing of power plants that store ash in surface ponds.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 08/07/2009
Date Made Active in Reports: 10/22/2009
Number of Days to Update: 76

Source: Department of Energy
Telephone: 202-586-8719
Last EDR Contact: 10/28/2010
Next Scheduled EDR Contact: 01/31/2011
Data Release Frequency: Varies

COAL ASH EPA: Coal Combustion Residues Surface Impoundments List
A listing of coal combustion residues surface impoundments with high hazard potential ratings.

Date of Government Version: 11/09/2009
Date Data Arrived at EDR: 12/18/2009
Date Made Active in Reports: 02/10/2010
Number of Days to Update: 54

Source: Environmental Protection Agency
Telephone: N/A
Last EDR Contact: 09/15/2010
Next Scheduled EDR Contact: 12/27/2010
Data Release Frequency: Varies

HWT: Registered Hazardous Waste Transporter Database
A listing of hazardous waste transporters. In California, unless specifically exempted, it is unlawful for any person to transport hazardous wastes unless the person holds a valid registration issued by DTSC. A hazardous waste transporter registration is valid for one year and is assigned a unique registration number.

Date of Government Version: 10/19/2010
Date Data Arrived at EDR: 10/20/2010
Date Made Active in Reports: 11/17/2010
Number of Days to Update: 28

Source: Department of Toxic Substances Control
Telephone: 916-440-7145
Last EDR Contact: 10/20/2010
Next Scheduled EDR Contact: 01/31/2011
Data Release Frequency: Quarterly

HWP: EnviroStor Permitted Facilities Listing
Detailed information on permitted hazardous waste facilities and corrective action ("cleanups") tracked in EnviroStor.

Date of Government Version: 08/09/2010
Date Data Arrived at EDR: 08/11/2010
Date Made Active in Reports: 08/20/2010
Number of Days to Update: 9

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 11/19/2010
Next Scheduled EDR Contact: 02/21/2011
Data Release Frequency: Quarterly

FINANCIAL ASSURANCE 2: Financial Assurance Information Listing
A listing of financial assurance information for solid waste facilities. Financial assurance is intended to ensure that resources are available to pay for the cost of closure, post-closure care, and corrective measures if the owner or operator of a regulated facility is unable or unwilling to pay.

Date of Government Version: 09/27/2010
Date Data Arrived at EDR: 09/28/2010
Date Made Active in Reports: 10/18/2010
Number of Days to Update: 20

Source: California Integrated Waste Management Board
Telephone: 916-341-6066
Last EDR Contact: 11/22/2010
Next Scheduled EDR Contact: 03/07/2011
Data Release Frequency: Varies

FINANCIAL ASSURANCE: Financial Assurance Information Listing
Financial Assurance information

Date of Government Version: 03/01/2007
Date Data Arrived at EDR: 06/01/2007
Date Made Active in Reports: 06/29/2007
Number of Days to Update: 28

Source: Department of Toxic Substances Control
Telephone: 916-255-3628
Last EDR Contact: 11/10/2010
Next Scheduled EDR Contact: 02/14/2011
Data Release Frequency: Varies

FEDLAND: Federal and Indian Lands
Federally and Indian administrated lands of the United States. Lands included are administrated by: Army Corps of Engineers, Bureau of Reclamation, National Wild and Scenic River, National Wildlife Refuge, Public Domain Land, Wilderness, Wilderness Study Area, Wildlife Management Area, Bureau of Indian Affairs, Bureau of Land Management, Department of Justice, Forest Service, Fish and Wildlife Service, National Park Service.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 02/06/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 339

Source: U.S. Geological Survey
Telephone: 888-275-8747
Last EDR Contact: 10/28/2010
Next Scheduled EDR Contact: 01/31/2011
Data Release Frequency: N/A

PCB TRANSFORMER: PCB Transformer Registration Database
The database of PCB transformer registrations that includes all PCB registration submittals.

Date of Government Version: 01/01/2008
Date Data Arrived at EDR: 02/18/2009
Date Made Active in Reports: 05/29/2009
Number of Days to Update: 100

Source: Environmental Protection Agency
Telephone: 202-566-0517
Last EDR Contact: 11/10/2010
Next Scheduled EDR Contact: 02/14/2011
Data Release Frequency: Varies

EDR PROPRIETARY RECORDS

EDR Proprietary Records

Manufactured Gas Plants: EDR Proprietary Manufactured Gas Plants
The EDR Proprietary Manufactured Gas Plant Database includes records of coal gas plants (manufactured gas plants) compiled by EDR's researchers. Manufactured gas sites were used in the United States from the 1800's to 1950's to produce a gas that could be distributed and used as fuel. These plants used whale oil, rosin, coal, or a mixture of coal, oil, and water that also produced a significant amount of waste. Many of the byproducts of the gas production, such as coal tar (oily waste containing volatile and non-volatile chemicals), sludges, oils and other compounds are potentially hazardous to human health and the environment. The byproduct from this process was frequently disposed of directly at the plant site and can remain or spread slowly, serving as a continuous source of soil and groundwater contamination.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

EDR Historical Auto Stations: EDR Proprietary Historic Gas Stations
EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR Historical Cleaners: EDR Proprietary Historic Dry Cleaners

EDR has searched selected national collections of business directories and has collected listings of potential dry cleaner sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include dry cleaning establishments. The categories reviewed included, but were not limited to dry cleaners, cleaners, laundry, laundromat, cleaning/laundry, wash & dry etc.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

COUNTY RECORDS

ALAMEDA COUNTY:

Contaminated Sites

A listing of contaminated sites overseen by the Toxic Release Program (oil and groundwater contamination from chemical releases and spills) and the Leaking Underground Storage Tank Program (soil and ground water contamination from leaking petroleum USTs).

Date of Government Version: 10/13/2010
Date Data Arrived at EDR: 10/14/2010
Date Made Active in Reports: 11/17/2010
Number of Days to Update: 34

Source: Alameda County Environmental Health Services
Telephone: 510-567-6700
Last EDR Contact: 10/04/2010
Next Scheduled EDR Contact: 01/17/2011
Data Release Frequency: Semi-Annually

Underground Tanks

Underground storage tank sites located in Alameda county.

Date of Government Version: 10/13/2010
Date Data Arrived at EDR: 10/14/2010
Date Made Active in Reports: 11/18/2010
Number of Days to Update: 35

Source: Alameda County Environmental Health Services
Telephone: 510-567-6700
Last EDR Contact: 10/04/2010
Next Scheduled EDR Contact: 01/17/2011
Data Release Frequency: Semi-Annually

CONTRA COSTA COUNTY:

Site List

List includes sites from the underground tank, hazardous waste generator and business plan/2185 programs.

Date of Government Version: 08/16/2010
Date Data Arrived at EDR: 08/17/2010
Date Made Active in Reports: 08/20/2010
Number of Days to Update: 3

Source: Contra Costa Health Services Department
Telephone: 925-646-2286
Last EDR Contact: 11/22/2010
Next Scheduled EDR Contact: 02/21/2011
Data Release Frequency: Semi-Annually

FRESNO COUNTY:

CUPA Resources List

Certified Unified Program Agency. CUPA's are responsible for implementing a unified hazardous materials and hazardous waste management regulatory program. The agency provides oversight of businesses that deal with hazardous materials, operate underground storage tanks or aboveground storage tanks.

Date of Government Version: 10/15/2010
Date Data Arrived at EDR: 10/15/2010
Date Made Active in Reports: 11/17/2010
Number of Days to Update: 33

Source: Dept. of Community Health
Telephone: 559-445-3271
Last EDR Contact: 10/18/2010
Next Scheduled EDR Contact: 01/31/2011
Data Release Frequency: Semi-Annually

KERN COUNTY:

Underground Storage Tank Sites & Tank Listing
Kern County Sites and Tanks Listing.

Date of Government Version: 08/31/2010
Date Data Arrived at EDR: 09/01/2010
Date Made Active in Reports: 09/30/2010
Number of Days to Update: 29

Source: Kern County Environment Health Services Department
Telephone: 661-862-8700
Last EDR Contact: 11/22/2010
Next Scheduled EDR Contact: 02/28/2011
Data Release Frequency: Quarterly

LOS ANGELES COUNTY:

San Gabriel Valley Areas of Concern
San Gabriel Valley areas where VOC contamination is at or above the MCL as designated by region 9 EPA office.

Date of Government Version: 03/30/2009
Date Data Arrived at EDR: 03/31/2009
Date Made Active in Reports: 10/23/2009
Number of Days to Update: 206

Source: EPA Region 9
Telephone: 415-972-3178
Last EDR Contact: 09/27/2010
Next Scheduled EDR Contact: 01/10/2011
Data Release Frequency: No Update Planned

HMS: Street Number List
Industrial Waste and Underground Storage Tank Sites.

Date of Government Version: 07/29/2010
Date Data Arrived at EDR: 10/29/2010
Date Made Active in Reports: 11/17/2010
Number of Days to Update: 19

Source: Department of Public Works
Telephone: 626-458-3517
Last EDR Contact: 10/18/2010
Next Scheduled EDR Contact: 01/31/2011
Data Release Frequency: Semi-Annually

List of Solid Waste Facilities
Solid Waste Facilities in Los Angeles County.

Date of Government Version: 10/25/2010
Date Data Arrived at EDR: 10/27/2010
Date Made Active in Reports: 11/17/2010
Number of Days to Update: 21

Source: La County Department of Public Works
Telephone: 818-458-5185
Last EDR Contact: 10/25/2010
Next Scheduled EDR Contact: 02/07/2011
Data Release Frequency: Varies

City of Los Angeles Landfills
Landfills owned and maintained by the City of Los Angeles.

Date of Government Version: 03/05/2009
Date Data Arrived at EDR: 03/10/2009
Date Made Active in Reports: 04/08/2009
Number of Days to Update: 29

Source: Engineering & Construction Division
Telephone: 213-473-7869
Last EDR Contact: 11/22/2010
Next Scheduled EDR Contact: 03/07/2011
Data Release Frequency: Varies

Site Mitigation List
Industrial sites that have had some sort of spill or complaint.

Date of Government Version: 02/09/2010
Date Data Arrived at EDR: 02/12/2010
Date Made Active in Reports: 03/04/2010
Number of Days to Update: 20

Source: Community Health Services
Telephone: 323-890-7806
Last EDR Contact: 10/25/2010
Next Scheduled EDR Contact: 02/07/2011
Data Release Frequency: Annually

City of El Segundo Underground Storage Tank

Underground storage tank sites located in El Segundo city.

Date of Government Version: 10/26/2010
Date Data Arrived at EDR: 11/01/2010
Date Made Active in Reports: 11/18/2010
Number of Days to Update: 17

Source: City of El Segundo Fire Department
Telephone: 310-524-2236
Last EDR Contact: 10/25/2010
Next Scheduled EDR Contact: 02/07/2011
Data Release Frequency: Semi-Annually

City of Long Beach Underground Storage Tank

Underground storage tank sites located in the city of Long Beach.

Date of Government Version: 03/28/2003
Date Data Arrived at EDR: 10/23/2003
Date Made Active in Reports: 11/26/2003
Number of Days to Update: 34

Source: City of Long Beach Fire Department
Telephone: 562-570-2563
Last EDR Contact: 11/01/2010
Next Scheduled EDR Contact: 02/14/2011
Data Release Frequency: Annually

City of Torrance Underground Storage Tank

Underground storage tank sites located in the city of Torrance.

Date of Government Version: 10/22/2010
Date Data Arrived at EDR: 10/27/2010
Date Made Active in Reports: 11/18/2010
Number of Days to Update: 22

Source: City of Torrance Fire Department
Telephone: 310-618-2973
Last EDR Contact: 10/18/2010
Next Scheduled EDR Contact: 01/31/2011
Data Release Frequency: Semi-Annually

MARIN COUNTY:

Underground Storage Tank Sites

Currently permitted USTs in Marin County.

Date of Government Version: 10/28/2010
Date Data Arrived at EDR: 11/16/2010
Date Made Active in Reports: 11/18/2010
Number of Days to Update: 2

Source: Public Works Department Waste Management
Telephone: 415-499-6647
Last EDR Contact: 10/12/2010
Next Scheduled EDR Contact: 01/24/2011
Data Release Frequency: Semi-Annually

NAPA COUNTY:

Sites With Reported Contamination

A listing of leaking underground storage tank sites located in Napa county.

Date of Government Version: 07/09/2008
Date Data Arrived at EDR: 07/09/2008
Date Made Active in Reports: 07/31/2008
Number of Days to Update: 22

Source: Napa County Department of Environmental Management
Telephone: 707-253-4269
Last EDR Contact: 09/07/2010
Next Scheduled EDR Contact: 12/20/2010
Data Release Frequency: No Update Planned

Closed and Operating Underground Storage Tank Sites

Underground storage tank sites located in Napa county.

Date of Government Version: 01/15/2008
Date Data Arrived at EDR: 01/16/2008
Date Made Active in Reports: 02/08/2008
Number of Days to Update: 23

Source: Napa County Department of Environmental Management
Telephone: 707-253-4269
Last EDR Contact: 09/07/2010
Next Scheduled EDR Contact: 12/20/2010
Data Release Frequency: No Update Planned

ORANGE COUNTY:

List of Industrial Site Cleanups
Petroleum and non-petroleum spills.

Date of Government Version: 08/05/2010
Date Data Arrived at EDR: 08/23/2010
Date Made Active in Reports: 09/29/2010
Number of Days to Update: 37

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 11/16/2010
Next Scheduled EDR Contact: 02/28/2011
Data Release Frequency: Annually

List of Underground Storage Tank Cleanups
Orange County Underground Storage Tank Cleanups (LUST).

Date of Government Version: 08/05/2010
Date Data Arrived at EDR: 08/23/2010
Date Made Active in Reports: 09/29/2010
Number of Days to Update: 37

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 11/16/2010
Next Scheduled EDR Contact: 02/28/2011
Data Release Frequency: Quarterly

List of Underground Storage Tank Facilities
Orange County Underground Storage Tank Facilities (UST).

Date of Government Version: 08/05/2010
Date Data Arrived at EDR: 08/23/2010
Date Made Active in Reports: 09/30/2010
Number of Days to Update: 38

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 11/16/2010
Next Scheduled EDR Contact: 02/28/2011
Data Release Frequency: Quarterly

PLACER COUNTY:

Master List of Facilities
List includes aboveground tanks, underground tanks and cleanup sites.

Date of Government Version: 09/13/2010
Date Data Arrived at EDR: 09/14/2010
Date Made Active in Reports: 09/29/2010
Number of Days to Update: 15

Source: Placer County Health and Human Services
Telephone: 530-889-7312
Last EDR Contact: 09/13/2010
Next Scheduled EDR Contact: 12/27/2010
Data Release Frequency: Semi-Annually

RIVERSIDE COUNTY:

Listing of Underground Tank Cleanup Sites
Riverside County Underground Storage Tank Cleanup Sites (LUST).

Date of Government Version: 10/25/2010
Date Data Arrived at EDR: 10/28/2010
Date Made Active in Reports: 11/17/2010
Number of Days to Update: 20

Source: Department of Environmental Health
Telephone: 951-358-5055
Last EDR Contact: 09/27/2010
Next Scheduled EDR Contact: 01/10/2011
Data Release Frequency: Quarterly

Underground Storage Tank Tank List

Underground storage tank sites located in Riverside county.

Date of Government Version: 10/25/2010
Date Data Arrived at EDR: 10/28/2010
Date Made Active in Reports: 11/18/2010
Number of Days to Update: 21

Source: Department of Environmental Health
Telephone: 951-358-5055
Last EDR Contact: 09/27/2010
Next Scheduled EDR Contact: 01/10/2011
Data Release Frequency: Quarterly

SACRAMENTO COUNTY:

Toxic Site Clean-Up List

List of sites where unauthorized releases of potentially hazardous materials have occurred.

Date of Government Version: 08/02/2010
Date Data Arrived at EDR: 10/19/2010
Date Made Active in Reports: 11/17/2010
Number of Days to Update: 29

Source: Sacramento County Environmental Management
Telephone: 916-875-8406
Last EDR Contact: 10/12/2010
Next Scheduled EDR Contact: 01/24/2011
Data Release Frequency: Quarterly

Master Hazardous Materials Facility List

Any business that has hazardous materials on site - hazardous material storage sites, underground storage tanks, waste generators.

Date of Government Version: 08/09/2010
Date Data Arrived at EDR: 10/21/2010
Date Made Active in Reports: 11/17/2010
Number of Days to Update: 27

Source: Sacramento County Environmental Management
Telephone: 916-875-8406
Last EDR Contact: 10/12/2010
Next Scheduled EDR Contact: 01/24/2011
Data Release Frequency: Quarterly

SAN BERNARDINO COUNTY:

Hazardous Material Permits

This listing includes underground storage tanks, medical waste handlers/generators, hazardous materials handlers, hazardous waste generators, and waste oil generators/handlers.

Date of Government Version: 09/07/2010
Date Data Arrived at EDR: 09/08/2010
Date Made Active in Reports: 09/29/2010
Number of Days to Update: 21

Source: San Bernardino County Fire Department Hazardous Materials Division
Telephone: 909-387-3041
Last EDR Contact: 11/22/2010
Next Scheduled EDR Contact: 02/28/2011
Data Release Frequency: Quarterly

SAN DIEGO COUNTY:

Hazardous Materials Management Division Database

The database includes: HE58 - This report contains the business name, site address, business phone number, establishment 'H' permit number, type of permit, and the business status. HE17 - In addition to providing the same information provided in the HE58 listing, HE17 provides inspection dates, violations received by the establishment, hazardous waste generated, the quantity, method of storage, treatment/disposal of waste and the hauler, and information on underground storage tanks. Unauthorized Release List - Includes a summary of environmental contamination cases in San Diego County (underground tank cases, non-tank cases, groundwater contamination, and soil contamination are included.)

Date of Government Version: 09/09/2010
Date Data Arrived at EDR: 09/15/2010
Date Made Active in Reports: 09/29/2010
Number of Days to Update: 14

Source: Hazardous Materials Management Division
Telephone: 619-338-2268
Last EDR Contact: 09/15/2010
Next Scheduled EDR Contact: 12/27/2010
Data Release Frequency: Quarterly

Solid Waste Facilities
San Diego County Solid Waste Facilities.

Date of Government Version: 10/01/2009
Date Data Arrived at EDR: 12/04/2009
Date Made Active in Reports: 01/18/2010
Number of Days to Update: 45

Source: Department of Health Services
Telephone: 619-338-2209
Last EDR Contact: 11/01/2010
Next Scheduled EDR Contact: 02/14/2011
Data Release Frequency: Varies

Environmental Case Listing
The listing contains all underground tank release cases and projects pertaining to properties contaminated with hazardous substances that are actively under review by the Site Assessment and Mitigation Program.

Date of Government Version: 03/23/2010
Date Data Arrived at EDR: 06/15/2010
Date Made Active in Reports: 07/09/2010
Number of Days to Update: 24

Source: San Diego County Department of Environmental Health
Telephone: 619-338-2371
Last EDR Contact: 09/23/2010
Next Scheduled EDR Contact: 12/27/2010
Data Release Frequency: Varies

SAN FRANCISCO COUNTY:

Local Oversite Facilities
A listing of leaking underground storage tank sites located in San Francisco county.

Date of Government Version: 09/19/2008
Date Data Arrived at EDR: 09/19/2008
Date Made Active in Reports: 09/29/2008
Number of Days to Update: 10

Source: Department Of Public Health San Francisco County
Telephone: 415-252-3920
Last EDR Contact: 11/22/2010
Next Scheduled EDR Contact: 02/28/2011
Data Release Frequency: Quarterly

Underground Storage Tank Information
Underground storage tank sites located in San Francisco county.

Date of Government Version: 09/08/2010
Date Data Arrived at EDR: 09/10/2010
Date Made Active in Reports: 09/30/2010
Number of Days to Update: 20

Source: Department of Public Health
Telephone: 415-252-3920
Last EDR Contact: 11/29/2010
Next Scheduled EDR Contact: 02/28/2011
Data Release Frequency: Quarterly

SAN JOAQUIN COUNTY:

San Joaquin Co. UST
A listing of underground storage tank locations in San Joaquin county.

Date of Government Version: 10/12/2010
Date Data Arrived at EDR: 10/13/2010
Date Made Active in Reports: 11/18/2010
Number of Days to Update: 36

Source: Environmental Health Department
Telephone: N/A
Last EDR Contact: 09/27/2010
Next Scheduled EDR Contact: 01/10/2011
Data Release Frequency: Semi-Annually

SAN MATEO COUNTY:

Business Inventory
List includes Hazardous Materials Business Plan, hazardous waste generators, and underground storage tanks.

Date of Government Version: 07/15/2010
Date Data Arrived at EDR: 07/16/2010
Date Made Active in Reports: 08/12/2010
Number of Days to Update: 27

Source: San Mateo County Environmental Health Services Division
Telephone: 650-363-1921
Last EDR Contact: 06/21/2010
Next Scheduled EDR Contact: 01/03/2011
Data Release Frequency: Annually

Fuel Leak List
A listing of leaking underground storage tank sites located in San Mateo county.

Date of Government Version: 09/20/2010
Date Data Arrived at EDR: 09/21/2010
Date Made Active in Reports: 09/29/2010
Number of Days to Update: 8

Source: San Mateo County Environmental Health Services Division
Telephone: 650-363-1921
Last EDR Contact: 09/20/2010
Next Scheduled EDR Contact: 10/04/2010
Data Release Frequency: Semi-Annually

SANTA CLARA COUNTY:

HIST LUST - Fuel Leak Site Activity Report
A listing of open and closed leaking underground storage tanks. This listing is no longer updated by the county. Leaking underground storage tanks are now handled by the Department of Environmental Health.

Date of Government Version: 03/29/2005
Date Data Arrived at EDR: 03/30/2005
Date Made Active in Reports: 04/21/2005
Number of Days to Update: 22

Source: Santa Clara Valley Water District
Telephone: 408-265-2600
Last EDR Contact: 03/23/2009
Next Scheduled EDR Contact: 06/22/2009
Data Release Frequency: No Update Planned

LOP Listing
A listing of leaking underground storage tanks located in Santa Clara county.

Date of Government Version: 05/29/2009
Date Data Arrived at EDR: 06/01/2009
Date Made Active in Reports: 06/15/2009
Number of Days to Update: 14

Source: Department of Environmental Health
Telephone: 408-918-3417
Last EDR Contact: 09/07/2010
Next Scheduled EDR Contact: 12/20/2010
Data Release Frequency: Annually

Hazardous Material Facilities
Hazardous material facilities, including underground storage tank sites.

Date of Government Version: 08/31/2009
Date Data Arrived at EDR: 08/31/2009
Date Made Active in Reports: 09/18/2009
Number of Days to Update: 18

Source: City of San Jose Fire Department
Telephone: 408-535-7694
Last EDR Contact: 11/29/2010
Next Scheduled EDR Contact: 02/28/2011
Data Release Frequency: Annually

SOLANO COUNTY:

Leaking Underground Storage Tanks
A listing of leaking underground storage tank sites located in Solano county.

Date of Government Version: 09/07/2010
Date Data Arrived at EDR: 09/10/2010
Date Made Active in Reports: 09/29/2010
Number of Days to Update: 19

Source: Solano County Department of Environmental Management
Telephone: 707-784-6770
Last EDR Contact: 09/07/2010
Next Scheduled EDR Contact: 12/20/2010
Data Release Frequency: Quarterly

Underground Storage Tanks
Underground storage tank sites located in Solano county.

Date of Government Version: 09/07/2010
Date Data Arrived at EDR: 09/14/2010
Date Made Active in Reports: 09/30/2010
Number of Days to Update: 16

Source: Solano County Department of Environmental Management
Telephone: 707-784-6770
Last EDR Contact: 09/07/2010
Next Scheduled EDR Contact: 12/20/2010
Data Release Frequency: Quarterly

SONOMA COUNTY:

Leaking Underground Storage Tank Sites
A listing of leaking underground storage tank sites located in Sonoma county.

Date of Government Version: 10/04/2010
Date Data Arrived at EDR: 10/05/2010
Date Made Active in Reports: 11/17/2010
Number of Days to Update: 43

Source: Department of Health Services
Telephone: 707-565-6565
Last EDR Contact: 10/04/2010
Next Scheduled EDR Contact: 01/17/2011
Data Release Frequency: Quarterly

SUTTER COUNTY:

Underground Storage Tanks
Underground storage tank sites located in Sutter county.

Date of Government Version: 09/13/2010
Date Data Arrived at EDR: 09/14/2010
Date Made Active in Reports: 09/30/2010
Number of Days to Update: 16

Source: Sutter County Department of Agriculture
Telephone: 530-822-7500
Last EDR Contact: 09/13/2010
Next Scheduled EDR Contact: 12/27/2010
Data Release Frequency: Semi-Annually

VENTURA COUNTY:

Business Plan, Hazardous Waste Producers, and Operating Underground Tanks
The BWT list indicates by site address whether the Environmental Health Division has Business Plan (B), Waste Producer (W), and/or Underground Tank (T) information.

Date of Government Version: 07/26/2010
Date Data Arrived at EDR: 09/01/2010
Date Made Active in Reports: 09/29/2010
Number of Days to Update: 28

Source: Ventura County Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 11/22/2010
Next Scheduled EDR Contact: 03/07/2011
Data Release Frequency: Quarterly

Inventory of Illegal Abandoned and Inactive Sites
Ventura County Inventory of Closed, Illegal Abandoned, and Inactive Sites.

Date of Government Version: 08/01/2009
Date Data Arrived at EDR: 10/05/2009
Date Made Active in Reports: 10/13/2009
Number of Days to Update: 8

Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 09/27/2010
Next Scheduled EDR Contact: 11/15/2010
Data Release Frequency: Annually

Listing of Underground Tank Cleanup Sites
Ventura County Underground Storage Tank Cleanup Sites (LUST).

Date of Government Version: 05/29/2008
Date Data Arrived at EDR: 06/24/2008
Date Made Active in Reports: 07/31/2008
Number of Days to Update: 37

Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 11/22/2010
Next Scheduled EDR Contact: 03/07/2011
Data Release Frequency: Quarterly

Underground Tank Closed Sites List
Ventura County Operating Underground Storage Tank Sites (UST)/Underground Tank Closed Sites List.

Date of Government Version: 08/31/2010
Date Data Arrived at EDR: 09/21/2010
Date Made Active in Reports: 09/30/2010
Number of Days to Update: 9

Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 09/21/2010
Next Scheduled EDR Contact: 01/03/2011
Data Release Frequency: Quarterly

YOLO COUNTY:

Underground Storage Tank Comprehensive Facility Report
Underground storage tank sites located in Yolo county.

Date of Government Version: 10/05/2010
Date Data Arrived at EDR: 10/15/2010
Date Made Active in Reports: 11/18/2010
Number of Days to Update: 34

Source: Yolo County Department of Health
Telephone: 530-666-8646
Last EDR Contact: 09/27/2010
Next Scheduled EDR Contact: 01/10/2011
Data Release Frequency: Annually

OTHER DATABASE(S)

Depending on the geographic area covered by this report, the data provided in these specialty databases may or may not be complete. For example, the existence of wetlands information data in a specific report does not mean that all wetlands in the area covered by the report are included. Moreover, the absence of any reported wetlands information does not necessarily mean that wetlands do not exist in the area covered by the report.

CT MANIFEST: Hazardous Waste Manifest Data
Facility and manifest data. Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a tsd facility.

Date of Government Version: 12/31/2007
Date Data Arrived at EDR: 08/26/2009
Date Made Active in Reports: 09/11/2009
Number of Days to Update: 16

Source: Department of Environmental Protection
Telephone: 860-424-3375
Last EDR Contact: 08/25/2010
Next Scheduled EDR Contact: 12/06/2010
Data Release Frequency: Annually

NJ MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2009
Date Data Arrived at EDR: 07/22/2010
Date Made Active in Reports: 08/26/2010
Number of Days to Update: 35

Source: Department of Environmental Protection
Telephone: N/A
Last EDR Contact: 10/19/2010
Next Scheduled EDR Contact: 01/31/2011
Data Release Frequency: Annually

NY MANIFEST: Facility and Manifest Data
Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a TSD facility.

Date of Government Version: 07/28/2010
Date Data Arrived at EDR: 08/11/2010
Date Made Active in Reports: 09/24/2010
Number of Days to Update: 44

Source: Department of Environmental Conservation
Telephone: 518-402-8651
Last EDR Contact: 11/09/2010
Next Scheduled EDR Contact: 02/21/2011
Data Release Frequency: Annually

PA MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2008
Date Data Arrived at EDR: 12/01/2009
Date Made Active in Reports: 12/14/2009
Number of Days to Update: 13

Source: Department of Environmental Protection
Telephone: 717-783-8990
Last EDR Contact: 11/22/2010
Next Scheduled EDR Contact: 03/07/2011
Data Release Frequency: Annually

RI MANIFEST: Manifest information
Hazardous waste manifest information

Date of Government Version: 12/31/2009
Date Data Arrived at EDR: 07/19/2010
Date Made Active in Reports: 08/26/2010
Number of Days to Update: 38

Source: Department of Environmental Management
Telephone: 401-222-2797
Last EDR Contact: 11/29/2010
Next Scheduled EDR Contact: 03/14/2011
Data Release Frequency: Annually

WI MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2009
Date Data Arrived at EDR: 07/06/2010
Date Made Active in Reports: 07/26/2010
Number of Days to Update: 20

Source: Department of Natural Resources
Telephone: N/A
Last EDR Contact: 09/20/2010
Next Scheduled EDR Contact: 01/03/2011
Data Release Frequency: Annually

Oil/Gas Pipelines: This data was obtained by EDR from the USGS in 1994. It is referred to by USGS as GeoData Digital Line Graphs from 1:100,000-Scale Maps. It was extracted from the transportation category including some oil, but primarily gas pipelines.

Electric Power Transmission Line Data
Source: Rextag Strategies Corp.
Telephone: (281) 769-2247
U.S. Electric Transmission and Power Plants Systems Digital GIS Data

Sensitive Receptors: There are individuals deemed sensitive receptors due to their fragile immune systems and special sensitivity to environmental discharges. These sensitive receptors typically include the elderly, the sick, and children. While the location of all sensitive receptors cannot be determined, EDR indicates those buildings and facilities - schools, daycares, hospitals, medical centers, and nursing homes - where individuals who are sensitive receptors are likely to be located.

AHA Hospitals:
Source: American Hospital Association, Inc.
Telephone: 312-280-5991
The database includes a listing of hospitals based on the American Hospital Association's annual survey of hospitals.

Medical Centers: Provider of Services Listing
Source: Centers for Medicare & Medicaid Services
Telephone: 410-786-3000
A listing of hospitals with Medicare provider number, produced by Centers of Medicare & Medicaid Services, a federal agency within the U.S. Department of Health and Human Services.

Nursing Homes
Source: National Institutes of Health
Telephone: 301-594-6248
Information on Medicare and Medicaid certified nursing homes in the United States.

Public Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on elementary and secondary public education in the United States. It is a comprehensive, annual, national statistical database of all public elementary and secondary schools and school districts, which contains data that are comparable across all states.

Private Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on private school locations in the United States.

Daycare Centers: Licensed Facilities
Source: Department of Social Services
Telephone: 916-657-4041

Flood Zone Data: This data, available in select counties across the country, was obtained by EDR in 2003 & 2009 from the Federal Emergency Management Agency (FEMA). Data depicts 100-year and 500-year flood zones as defined by FEMA.

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002 and 2005 from the U.S. Fish and Wildlife Service.

Scanned Digital USGS 7.5' Topographic Map (DRG)
Source: United States Geologic Survey
A digital raster graphic (DRG) is a scanned image of a U.S. Geological Survey topographic map. The map images are made by scanning published paper maps on high-resolution scanners. The raster image is georeferenced and fit to the Universal Transverse Mercator (UTM) projection.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

STREET AND ADDRESS INFORMATION

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GEOCHECK® - PHYSICAL SETTING SOURCE ADDENDUM

TARGET PROPERTY ADDRESS

VACANT LAND
PALMETTO AVENUE/ALABAMA STREET
REDLANDS, CA 92374

TARGET PROPERTY COORDINATES

Latitude (North):	34.08760 - 34° 5' 15.4"
Longitude (West):	117.2112 - 117° 12' 40.3"
Universal Tranverse Mercator:	Zone 11
UTM X (Meters):	480515.7
UTM Y (Meters):	3771694.2
Elevation:	1211 ft. above sea level

USGS TOPOGRAPHIC MAP

Target Property Map:	34117-A2 REDLANDS, CA
Most Recent Revision:	1988

EDR's GeoCheck Physical Setting Source Addendum is provided to assist the environmental professional in forming an opinion about the impact of potential contaminant migration.

Assessment of the impact of contaminant migration generally has two principle investigative components:

1. Groundwater flow direction, and
2. Groundwater flow velocity.

Groundwater flow direction may be impacted by surface topography, hydrology, hydrogeology, characteristics of the soil, and nearby wells. Groundwater flow velocity is generally impacted by the nature of the geologic strata.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW DIRECTION INFORMATION

Groundwater flow direction for a particular site is best determined by a qualified environmental professional using site-specific well data. If such data is not reasonably ascertainable, it may be necessary to rely on other sources of information, such as surface topographic information, hydrologic information, hydrogeologic data collected on nearby properties, and regional groundwater flow information (from deep aquifers).

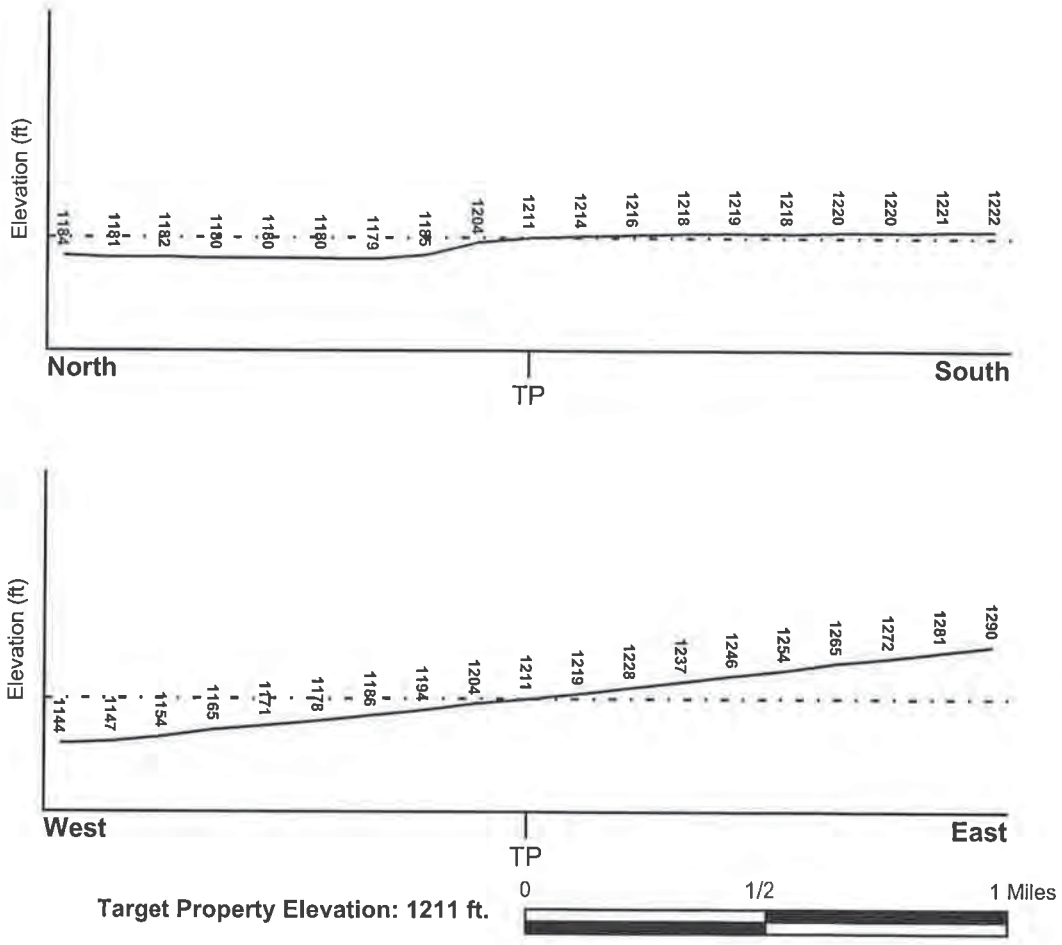
TOPOGRAPHIC INFORMATION

Surface topography may be indicative of the direction of surficial groundwater flow. This information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

TARGET PROPERTY TOPOGRAPHY

General Topographic Gradient: General NW

SURROUNDING TOPOGRAPHY: ELEVATION PROFILES



Source: Topography has been determined from the USGS 7.5' Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

HYDROLOGIC INFORMATION

Surface water can act as a hydrologic barrier to groundwater flow. Such hydrologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Refer to the Physical Setting Source Map following this summary for hydrologic information (major waterways and bodies of water).

FEMA FLOOD ZONE

Target Property County	FEMA Flood Electronic Data
SAN BERNARDINO, CA	YES - refer to the Overview Map and Detail Map

Flood Plain Panel at Target Property: 06071C - FEMA DFIRM Flood data

Additional Panels in search area: Not Reported

NATIONAL WETLAND INVENTORY

NWI Quad at Target Property	NWI Electronic Data Coverage
NOT AVAILABLE	YES - refer to the Overview Map and Detail Map

HYDROGEOLOGIC INFORMATION

Hydrogeologic information obtained by installation of wells on a specific site can often be an indicator of groundwater flow direction in the immediate area. Such hydrogeologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Site-Specific Hydrogeological Data*:

Search Radius:	1.25 miles
Status:	Not found

AQUIFLOW®

Search Radius: 1.000 Mile.

EDR has developed the AQUIFLOW Information System to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted by environmental professionals to regulatory authorities at select sites and has extracted the date of the report, groundwater flow direction as determined hydrogeologically, and the depth to water table.

MAP ID	LOCATION FROM TP	GENERAL DIRECTION GROUNDWATER FLOW
Not Reported		

* ©1996 Site-specific hydrogeological data gathered by CERCLIS Alerts, Inc., Bainbridge Island, WA. All rights reserved. All of the information and opinions presented are those of the cited EPA report(s), which were completed under a Comprehensive Environmental Response Compensation and Liability Information System (CERCLIS) investigation.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW VELOCITY INFORMATION

Groundwater flow velocity information for a particular site is best determined by a qualified environmental professional using site specific geologic and soil strata data. If such data are not reasonably ascertainable, it may be necessary to rely on other sources of information, including geologic age identification, rock stratigraphic unit and soil characteristics data collected on nearby properties and regional soil information. In general, contaminant plumes move more quickly through sandy-gravelly types of soils than silty-clayey types of soils.

GEOLOGIC INFORMATION IN GENERAL AREA OF TARGET PROPERTY

Geologic information can be used by the environmental professional in forming an opinion about the relative speed at which contaminant migration may be occurring.

ROCK STRATIGRAPHIC UNIT

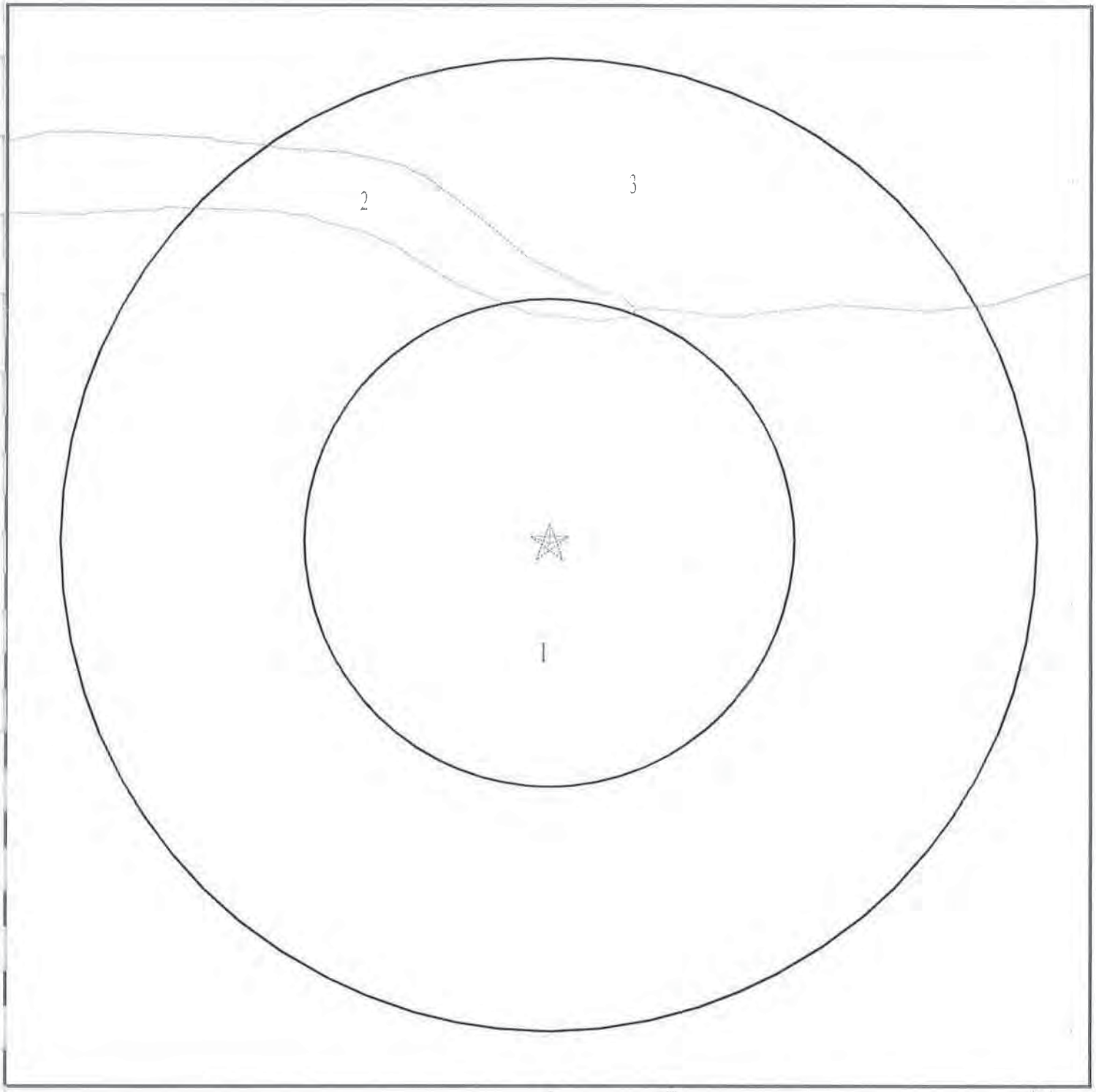
Era:	Cenozoic
System:	Quaternary
Series:	Quaternary
Code:	Q *(decoded above as Era, System & Series)*

GEOLOGIC AGE IDENTIFICATION

Category: Stratifed Sequence

Geologic Age and Rock Stratigraphic Unit Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - a digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

SSURGO SOIL MAP - 2932598.2s



☆ Target Property

SSURGO Soil

Water

SITE NAME:	Vacant Land	CLIENT:	EI Group
ADDRESS:	Palmetto Avenue/Alabama Street Redlands CA 92374	CONTACT:	Susan Mazzarella
LAT/LONG:	34.0876 / 117.2112	INQUIRY #:	2932598.2s
		DATE:	November 30, 2010 9:29 am

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GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

DOMINANT SOIL COMPOSITION IN GENERAL AREA OF TARGET PROPERTY

The U.S. Department of Agriculture's (USDA) Soil Conservation Service (SCS) leads the National Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. The following information is based on Soil Conservation Service SSURGO data.

Soil Map ID: 1

Soil Component Name: HANFORD

Soil Surface Texture: sandy loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Moderate

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	11 inches	sandy loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 42 Min: 14	Max: 7.8 Min: 5.6
2	11 inches	59 inches	fine sandy loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 42 Min: 14	Max: 7.8 Min: 5.6

Soil Map ID: 2

Soil Component Name: TUJUNGA

Soil Surface Texture: gravelly loamy sand

Hydrologic Group: Class A - High infiltration rates. Soils are deep, well drained to excessively drained sands and gravels.

Soil Drainage Class: Somewhat excessively drained

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Moderate

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	18 inches	gravelly loamy sand	Granular materials (35 pct. or less passing No. 200), Stone Fragments, Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 141 Min: 42	Max: 7.8 Min: 6.1
2	18 inches	59 inches	loamy sand	Granular materials (35 pct. or less passing No. 200), Stone Fragments, Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 141 Min: 42	Max: 7.8 Min: 6.1

Soil Map ID: 3

Soil Component Name: FLUVENTS

Soil Surface Texture: gravelly sand

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Somewhat excessively drained

Hydric Status: Partially hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	9 inches	gravelly sand	Granular materials (35 pct. or less passing No. 200), Stone Fragments, Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 42 Min: 14	Max: 8.4 Min: 6.6
2	9 inches	29 inches	stratified gravelly sand to gravelly loam	Granular materials (35 pct. or less passing No. 200), Stone Fragments, Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 42 Min: 14	Max: 8.4 Min: 6.6
3	29 inches	59 inches	stratified gravelly sand to gravelly loam	Granular materials (35 pct. or less passing No. 200), Stone Fragments, Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 42 Min: 14	Max: 8.4 Min: 6.6

LOCAL / REGIONAL WATER AGENCY RECORDS

EDR Local/Regional Water Agency records provide water well information to assist the environmental professional in assessing sources that may impact ground water flow direction, and in forming an opinion about the impact of contaminant migration on nearby drinking water wells.

WELL SEARCH DISTANCE INFORMATION

DATABASE	SEARCH DISTANCE (miles)
Federal USGS	1.000
Federal FRDS PWS	Nearest PWS within 1 mile
State Database	1.000

FEDERAL USGS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

FEDERAL USGS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
A1	USGS3135118	1/8 - 1/4 Mile SW
A3	USGS3135119	1/8 - 1/4 Mile SW
B4	USGS3135112	1/8 - 1/4 Mile SSE
B5	USGS3135111	1/8 - 1/4 Mile SE
C7	USGS3135163	1/4 - 1/2 Mile West
9	USGS3135188	1/2 - 1 Mile WNW
10	USGS3135278	1/2 - 1 Mile SW
11	USGS3135282	1/2 - 1 Mile SE
12	USGS3135246	1/2 - 1 Mile South
13	USGS3135149	1/2 - 1 Mile East
14	USGS3135191	1/2 - 1 Mile WNW
15	USGS3135219	1/2 - 1 Mile ESE
16	USGS3135414	1/2 - 1 Mile SSE
17	USGS3135277	1/2 - 1 Mile ESE
D18	USGS3135377	1/2 - 1 Mile South
E19	USGS3135394	1/2 - 1 Mile SSW
E20	USGS3135393	1/2 - 1 Mile SSW
E21	USGS3135395	1/2 - 1 Mile SSW
22	USGS3135099	1/2 - 1 Mile NNE
D23	USGS3135365	1/2 - 1 Mile South
E24	USGS3135379	1/2 - 1 Mile SSW
F26	USGS3134885	1/2 - 1 Mile NNE

FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
No PWS System Found		

Note: PWS System location is not always the same as well location.

STATE DATABASE WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
B2	CADW40000006560	1/8 - 1/4 Mile SSE
C6	CADW40000006577	1/4 - 1/2 Mile West
8	18784	1/4 - 1/2 Mile ESE
F25	CADW40000006680	1/2 - 1 Mile North

PHYSICAL SETTING SOURCE MAP - 2932598.2s

- County Boundary
- Major Roads
- Contour Lines
- Earthquake Fault Lines
- Airports
- Earthquake epicenter, Richter 5 or greater
- Water Wells
- Public Water Supply Wells
- Cluster of Multiple Icons

- Groundwater Flow Direction
- (GI) Indeterminate Groundwater Flow at Location
- (GV) Groundwater Flow Varies at Location
- (HD) Closest Hydrogeological Data
- Oil, gas or related wells

SITE NAME: Vacant Land	CLIENT: EI Group
ADDRESS: Palmetto Avenue/Alabama Street Redlands CA 92374	CONTACT: Susan Mazzarella INQUIRY #: 2932598.2s
LAT/LONG: 34.0876 / 117.2112	DATE: November 30, 2010 9:29 am

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GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

	Database	EDR ID Number
A1		
SW	**FED USGS**	**USGS3135118**
1/8 - 1/4 Mile		
Lower		

Agency cd:	USGS	Site no:	340507117124401
Site name:	001S003W17H003S		
Latitude:	340507	EDR Site id:	USGS3135118
Longitude:	1171244	Dec lat:	34.08529038
Dec lon:	-117.21309539	Coor meth:	M
Coor accr:	S	Latlong datum:	NAD27
Dec latlong datum:	NAD83	District:	06
State:	06	County:	071
Country:	US	Land net:	Not Reported
Location map:	Not Reported	Map scale:	Not Reported
Altitude:	1205.00		
Altitude method:	Level or other surveying method		
Altitude accuracy:	.1		
Altitude datum:	National Geodetic Vertical Datum of 1929		
Hydrologic:	Santa Ana. California. Area = 1680 sq.mi.		
Topographic:	Not Reported		
Site type:	Ground-water other than Spring	Date construction:	19340101
Date inventoried:	Not Reported	Mean greenwich time offset:	PST
Local standard time flag:	Y		
Type of ground water site:	Single well, other than collector or Ranney type		
Aquifer Type:	Not Reported		
Aquifer:	Not Reported		
Well depth:	286	Hole depth:	300
Source of depth data:	Not Reported		
Project number:	Not Reported		
Real time data flag:	Not Reported	Daily flow data begin date:	Not Reported
Daily flow data end date:	Not Reported	Daily flow data count:	Not Reported
Peak flow data begin date:	Not Reported	Peak flow data end date:	Not Reported
Peak flow data count:	Not Reported	Water quality data begin date:	Not Reported
Water quality data end date:	Not Reported	Water quality data count:	Not Reported
Ground water data begin date:	Not Reported	Ground water data end date:	Not Reported
Ground water data count:	Not Reported		

Ground-water levels, Number of Measurements: 0

	Database	EDR ID Number
B2		
SSE	**CA WELLS**	**CADW40000006560**
1/8 - 1/4 Mile		
Higher		

Longitude:	-117.2089
Latiude:	34.085
Stwellno:	01S03W17H001S
Districtco:	3
Welluseco:	Z
Countyco:	36
Gwcode:	800206
Site id:	CADW40000006560

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

A3
SW
1/8 - 1/4 Mile
Lower | **FED USGS** | **USGS3135119**

Agency cd:	USGS	Site no:	340507117124501
Site name:	001S003W17H005S		
Latitude:	340507	EDR Site id:	USGS3135119
Longitude:	1171245	Dec lat:	34.08529038
Dec lon:	-117.21337318	Coor meth:	M
Coor accr:	S	Latlong datum:	NAD27
Dec latlong datum:	NAD83	District:	06
State:	06	County:	071
Country:	US	Land net:	Not Reported
Location map:	Not Reported	Map scale:	Not Reported
Altitude:	1205.00		
Altitude method:	Interpolated from topographic map		
Altitude accuracy:	10		
Altitude datum:	National Geodetic Vertical Datum of 1929		
Hydrologic:	Santa Ana. California. Area = 1680 sq.mi.		
Topographic:	Not Reported		
Site type:	Ground-water other than Spring	Date construction:	19630101
Date inventoried:	Not Reported	Mean greenwich time offset:	PST
Local standard time flag:	Y		
Type of ground water site:	Single well, other than collector or Ranney type		
Aquifer Type:	Not Reported		
Aquifer:	Not Reported		
Well depth:	590	Hole depth:	600
Source of depth data:	Not Reported		
Project number:	Not Reported		
Real time data flag:	0	Daily flow data begin date:	0000-00-00
Daily flow data end date:	0000-00-00	Daily flow data count:	0
Peak flow data begin date:	0000-00-00	Peak flow data end date:	0000-00-00
Peak flow data count:	0	Water quality data begin date:	1975-06-12
Water quality data end date:	1975-06-12	Water quality data count:	1
Ground water data begin date:	0000-00-00	Ground water data end date:	0000-00-00
Ground water data count:	0		

Ground-water levels, Number of Measurements: 0

B4
SSE
1/8 - 1/4 Mile
Higher | **FED USGS** | **USGS3135112**

Agency cd:	USGS	Site no:	340506117123001
Site name:	001S003W17H008S		
Latitude:	340506	EDR Site id:	USGS3135112
Longitude:	1171230	Dec lat:	34.08501261
Dec lon:	-117.20920633	Coor meth:	M
Coor accr:	S	Latlong datum:	NAD27
Dec latlong datum:	NAD83	District:	06
State:	06	County:	071
Country:	US	Land net:	Not Reported
Location map:	REDLANDS	Map scale:	24000

Altitude:	1215		
Altitude method:	Interpolated from topographic map		
Altitude accuracy:	20		
Altitude datum:	National Geodetic Vertical Datum of 1929		
Hydrologic:	Santa Ana. California. Area = 1680 sq.mi.		
Topographic:	Flat surface		
Site type:	Ground-water other than Spring	Date construction:	Not Reported
Date inventoried:	19860130	Mean greenwich time offset:	PST
Local standard time flag:	Y		
Type of ground water site:	Single well, other than collector or Ranney type		
Aquifer Type:	Not Reported		
Aquifer:	Not Reported		
Well depth:	Not Reported	Hole depth:	Not Reported
Source of depth data:	Not Reported		
Project number:	470600300		
Real time data flag:	0	Daily flow data begin date:	0000-00-00
Daily flow data end date:	0000-00-00	Daily flow data count:	0
Peak flow data begin date:	0000-00-00	Peak flow data end date:	0000-00-00
Peak flow data count:	0	Water quality data begin date:	1986-04-29
Water quality data end date:	1986-08-05	Water quality data count:	3
Ground water data begin date:	0000-00-00	Ground water data end date:	0000-00-00
Ground water data count:	0		

Ground-water levels, Number of Measurements: 0

B5
SE
1/8 - 1/4 Mile
Higher

FED USGS **USGS3135111**

Agency cd:	USGS	Site no:	340506117122901
Site name:	001S003W17H001S		
Latitude:	340506	EDR Site id:	USGS3135111
Longitude:	1171229	Dec lat:	34.08501261
Dec lon:	-117.20892854	Coor meth:	M
Coor accr:	S	Latlong datum:	NAD27
Dec latlong datum:	NAD83	District:	06
State:	06	County:	071
Country:	US	Land net:	Not Reported
Location map:	REDLANDS	Map scale:	24000
Altitude:	1222.65		
Altitude method:	Level or other surveying method		
Altitude accuracy:	.1		
Altitude datum:	National Geodetic Vertical Datum of 1929		
Hydrologic:	Santa Ana. California. Area = 1680 sq.mi.		
Topographic:	Not Reported		
Site type:	Ground-water other than Spring	Date construction:	19260908
Date inventoried:	19860115	Mean greenwich time offset:	PST
Local standard time flag:	Y		
Type of ground water site:	Single well, other than collector or Ranney type		
Aquifer Type:	Not Reported		
Aquifer:	Not Reported		
Well depth:	182.50	Hole depth:	220
Source of depth data:	reporting agency (generally USGS)		
Project number:	Not Reported		
Real time data flag:	0	Daily flow data begin date:	0000-00-00
Daily flow data end date:	0000-00-00	Daily flow data count:	0
Peak flow data begin date:	0000-00-00	Peak flow data end date:	0000-00-00

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Peak flow data count: 0
Water quality data end date:0000-00-00
Ground water data begin date: 1931-12-10
Ground water data count: 166

Water quality data begin date: 0000-00-00
Water quality data count: 0
Ground water data end date: 2004-10-25

Ground-water levels, Number of Measurements: 166

Date	Feet below Surface	Feet to Sealevel	Date	Feet below Surface	Feet to Sealevel
2004-10-25					
Note: The site was dry (no water level recorded).					
2004-04-20					
Note: The site was dry (no water level recorded).					
2003-10-23					
Note: The site was dry (no water level recorded).					
2003-04-22					
Note: The site was dry (no water level recorded).					
2002-10-30					
Note: The site was dry (no water level recorded).					
2002-04-08	161.42				
2001-10-23	159.13				
Note: A nearby site that taps the same aquifer had been pumped recently.					
2001-04-16	142.00		2000-10-24	145.56	
2000-04-12	130.68		1999-10-18	130.62	
1999-04-14	117.94		1998-10-19	123.18	
1998-04-14	124.66		1997-10-27	141.16	
1997-04-14	129.56				
Note: A nearby site that taps the same aquifer was being pumped.					
1996-10-07	138.29		1996-04-22	125.56	
1995-10-24	135.33		1995-04-18	126.31	
1994-10-25	154.50		1994-04-20	142.20	
1993-10-19	153.14				
Note: A nearby site that taps the same aquifer was being pumped.					
1993-04-12	144.65				
1992-10-29	175.07				
Note: A nearby site that taps the same aquifer was being pumped.					
1992-06-12	164.81		1991-11-27	167.24	
1991-06-17	156.18		1990-12-03	154.00	
1990-06-25	144.20				
1989-11-28	140.71				
Note: A nearby site that taps the same aquifer was being pumped.					
1989-09-21	138.46		1988-11-22	125.79	
1988-07-06	117.07		1987-12-08	106.07	
1987-06-17	100.84		1986-11-20	98.03	
1986-06-19	88.35		1986-01-15	84.33	
1963-05-29	198.7		1963-04-26	198.1	
1963-03-20	200.6		1963-02-28	204.5	
1962-10-25	199.3				
Note: A nearby site that taps the same aquifer was flowing.					
1962-09-18	196.2				
Note: A nearby site that taps the same aquifer was flowing.					
1962-07-25	184.3		1962-06-28	184.4	
1962-05-28	183.0		1962-04-16	180.5	
1962-03-26	180.5		1962-03-01	186.1	
1962-01-16	186.5		1961-12-21	178.4	
1961-09-28	193.3				
Note: The site was being pumped.					
1961-08-10	192.9				
Note: The site was being pumped.					

Ground-water levels, continued.

Date	Feet below Surface	Feet to Sealevel
1961-07-13	192.1	
Note: The site was being pumped.		
1961-06-15	188.3	
Note: The site was being pumped.		
1961-05-25	188.1	
Note: The site was being pumped.		
1961-04-16	184.6	
Note: The site was being pumped.		
1961-03-13	187.8	
Note: The site was being pumped.		
1961-02-20	173.7	
1961-01-25	184.5	
Note: The site was being pumped.		
1960-12-27	182.7	
Note: The site was being pumped.		
1960-11-25	183.0	
Note: The site was being pumped.		
1960-10-05	188.1	
Note: The site was being pumped.		
1960-07-05	168.5	
Note: The site was being pumped.		
1960-03-24	152.9	
1959-08-06	161.1	
Note: The site was being pumped.		
1959-06-10	154.6	
1959-03-13	143.8	
1958-11-13	149.4	
1958-07-19	128.0	
1958-05-09	131.5	
1958-03-10	152.2	
1958-01-11	158.2	
1957-03-21	147.4	
1956-09-18	161.2	
1955-12-06	148.3	
1955-08-05	185.8	
1955-07-08	197.2	
Note: The site was being pumped.		
1955-06-09	175.5	
Note: The site was being pumped.		
1955-05-04	157.8	
Note: The site was being pumped.		
1954-04-17	119.2	
1953-12-31	140.5	
1952-05-09	97.6	
1952-01-23	118.1	
1951-05-10	111.0	
1950-03-07	90.6	
1949-11-01	99.9	
1949-06-03	89.1	
1948-12-18	88.6	
1948-05-27	82.7	
Note: The site had been pumped recently.		
1948-04-20	78.7	
1948-01-24	76.6	
1947-08-30	87.2	
Note: The site was being pumped.		

Date	Feet below Surface	Feet to Sealevel
1960-02-03	155.4	
1959-04-14	147.9	
1958-12-20	157.7	
1958-09-10	144.2	
1958-06-12	128.4	
1958-04-10	144.3	
1958-02-10	155.9	
1957-11-07	163.1	
1957-02-20	150.5	
1956-01-17	150.2	
1955-09-08	167.7	
1954-02-09	128.7	
1953-10-26	135.0	
1952-03-12	111.0	
1951-08-06	121.3	
1951-03-06	106.5	
1950-01-09	95.2	
1949-09-08	97.8	
1949-03-28	80.4	
1948-07-09	82.4	
1948-03-15	75.5	
1947-10-24	78.6	

Ground-water levels, continued.

Date	Feet below Surface	Feet to Sealevel
1947-07-17	85.1	
Note: The site was being pumped.		
1947-04-12	65.0	
1946-10-10	83.1	
Note: The site was being pumped.		
1946-07-05	67.0	
1945-03-29	51.0	
1945-01-04	58.5	
1944-01-04	60.2	
1943-01-06	65.0	
1942-07-04	63.9	
1941-12-29	55.7	
1941-07-30	58.7	
1941-04-04	51.2	
1940-09-30	85.4	
Note: The site was being pumped.		
1940-07-03	66.4	
1940-02-27	59.6	
1939-11-29	68.1	
1939-09-28	69.7	
1939-03-30	59.0	
1939-01-03	64.2	
1935-07-19	97.2	
1935-02-26	94.4	
1934-10-24	104.5	
1932-11-15	99.0	
Note: The site was being pumped.		
1932-09-12	87.1	
1932-07-12	87.4	
Note: The site was being pumped.		
1932-05-11	76.9	
1932-02-15	86.0	
1931-12-10	92.7	
1947-01-24	59.3	
1946-04-16	57.8	
1945-01-09	57.0	
1944-03-31	52.8	
1943-04-03	51.0	
1942-09-30	69.6	
1942-04-06	54.7	
1941-09-29	62.5	
1941-04-28	49.3	
1941-01-04	65.6	
1940-03-22	57.8	
1940-01-02	66.4	
1939-10-31	68.4	
1939-07-31	67.4	
1939-02-25	60.2	
1938-07-16	76.5	
1935-04-16	90.3	
1935-01-12	99.0	
1932-12-16	87.5	
1932-03-11	80.9	
1932-01-14	88.9	

C6
West
1/4 - 1/2 Mile
Lower

CA WELLS **CADW40000006577**

Longitude:	-117.2166
Latiude:	34.0886
Stwellno:	01S03W17C005S
Districtco:	3
Welluseco:	Z
Countyco:	36
Gwcode:	800206
Site id:	CADW40000006577

C7
West
1/4 - 1/2 Mile
Lower

FED USGS **USGS3135163**

Agency cd:	USGS	Site no:	340519117130301
Site name:	001S003W017C005S		
Latitude:	340519	EDR Site id:	USGS3135163
Longitude:	1171303	Dec lat:	34.08861111
Dec lon:	-117.2175	Coor meth:	G
Coor accr:	S	Latlong datum:	NAD83
Dec latlong datum:	NAD83	District:	06
State:	06	County:	071
Country:	US	Land net:	Not Reported
Location map:	REDLANDS	Map scale:	24000
Altitude:	1180.70		
Altitude method:	Reported		
Altitude accuracy:	Not Reported		
Altitude datum:	National Geodetic Vertical Datum of 1929		
Hydrologic:	Not Reported		
Topographic:	Flat surface		
Site type:	Ground-water other than Spring	Date construction:	20030310
Date inventoried:	20030806	Mean greenwich time offset:	PST
Local standard time flag:	Y		
Type of ground water site:	Single well, other than collector or Ranney type		
Aquifer Type:	Not Reported		
Aquifer:	Not Reported		
Well depth:	320	Hole depth:	320
Source of depth data:	driller		
Project number:	Not Reported		
Real time data flag:	0	Daily flow data begin date:	0000-00-00
Daily flow data end date:	0000-00-00	Daily flow data count:	0
Peak flow data begin date:	0000-00-00	Peak flow data end date:	0000-00-00
Peak flow data count:	0	Water quality data begin date:	0000-00-00
Water quality data end date:	0000-00-00	Water quality data count:	0
Ground water data begin date:	2003-08-06	Ground water data end date:	2004-10-25
Ground water data count:	4		

Ground-water levels, Number of Measurements: 4

Date	Feet below Surface	Feet to Sealevel	Date	Feet below Surface	Feet to Sealevel
2004-10-25	192.64		2004-04-21	180.05	
2003-10-23	183.36		2003-08-06	177.43	

8
ESE
1/4 - 1/2 Mile
Higher

CA WELLS **18784**

Water System Information:

Prime Station Code:	3610037-054	User ID:	TAN
FRDS Number:	3610037054	County:	San Beernardino
District Number:	13	Station Type:	WELL/AMBNT/MUN/INTAKE/SUPPLY
Water Type:	Well/Groundwater	Well Status:	Active Raw
Source Lat/Long:	340505.0 1171210.0	Precision:	1,000 Feet (10 Seconds)
Source Name:	CHURCH STREET WELL		
System Number:	3610037		
System Name:	REDLANDS CITY MUD-WATER DIV		
Organization That Operates System:	PO BOX 3005 REDLANDS, CA 92373		
Pop Served:	69300	Connections:	18447
Area Served:	REDLANDS		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Sample Collected:	03/22/2006	Findings:	7.44 PCI/L
Chemical:	GROSS ALPHA		
Sample Collected:	03/22/2006	Findings:	1.55 PCI/L
Chemical:	GROSS ALPHA COUNTING ERROR		
Sample Collected:	03/22/2006	Findings:	4.51 PCI/L
Chemical:	GROSS BETA		
Sample Collected:	03/22/2006	Findings:	2.42 PCI/L
Chemical:	GROSS BETA COUNTING ERROR		
Sample Collected:	03/22/2006	Findings:	228. PCI/L
Chemical:	TRITIUM COUNTING ERROR		
Sample Collected:	03/22/2006	Findings:	6.87 PCI/L
Chemical:	URANIUM (PCI/L)		
Sample Collected:	03/22/2006	Findings:	36. PCI/L
Chemical:	RADON 222 COUNTING ERROR		
Sample Collected:	03/22/2006	Findings:	853. PCI/L
Chemical:	RADON 222		
Sample Collected:	03/22/2006	Findings:	1.81 PCI/L
Chemical:	URANIUM COUNTING ERROR		
Sample Collected:	04/18/2006	Findings:	7.e-002 PCI/L
Chemical:	RADIUM 226 COUNTING ERROR		
Sample Collected:	04/18/2006	Findings:	0.23 PCI/L
Chemical:	RADIUM 228 COUNTING ERROR		
Sample Collected:	04/18/2006	Findings:	- 0.82 PCI/L
Chemical:	COMBINED RA 226 + RA 228		
Sample Collected:	04/18/2006	Findings:	0.3 PCI/L
Chemical:	COMBINED RA 226 + RA 228 COUNTING ERROR		
Sample Collected:	04/18/2006	Findings:	0.49 PCI/L
Chemical:	STRONTIUM-90 COUNTING ERROR		
Sample Collected:	04/18/2006	Findings:	5.46 PCI/L
Chemical:	GROSS ALPHA		
Sample Collected:	04/18/2006	Findings:	1.34 PCI/L
Chemical:	GROSS ALPHA COUNTING ERROR		
Sample Collected:	04/18/2006	Findings:	2.62 PCI/L
Chemical:	GROSS BETA		
Sample Collected:	04/18/2006	Findings:	2.01 PCI/L
Chemical:	GROSS BETA COUNTING ERROR		
Sample Collected:	04/18/2006	Findings:	222. PCI/L
Chemical:	TRITIUM COUNTING ERROR		
Sample Collected:	04/18/2006	Findings:	5.23 PCI/L
Chemical:	URANIUM (PCI/L)		
Sample Collected:	04/18/2006	Findings:	29. PCI/L
Chemical:	RADON 222 COUNTING ERROR		
Sample Collected:	04/18/2006	Findings:	542. PCI/L
Chemical:	RADON 222		

Sample Collected:	04/18/2006	Findings:	1.45 PCI/L
Chemical:	URANIUM COUNTING ERROR		
Sample Collected:	08/29/2006	Findings:	112. PCI/L
Chemical:	TRITIUM COUNTING ERROR		
Sample Collected:	08/29/2006	Findings:	0.187 PCI/L
Chemical:	RADIUM 226 COUNTING ERROR		
Sample Collected:	08/29/2006	Findings:	0.485 PCI/L
Chemical:	RADIUM 228 COUNTING ERROR		
Sample Collected:	08/29/2006	Findings:	0.569 PCI/L
Chemical:	COMBINED RA 226 + RA 228 COUNTING ERROR		
Sample Collected:	08/29/2006	Findings:	0.308 PCI/L
Chemical:	STRONTIUM-90 COUNTING ERROR		
Sample Collected:	08/29/2006	Findings:	3.4 PCI/L
Chemical:	GROSS ALPHA		
Sample Collected:	08/29/2006	Findings:	2.1 PCI/L
Chemical:	GROSS ALPHA COUNTING ERROR		
Sample Collected:	08/29/2006	Findings:	1.3 PCI/L
Chemical:	GROSS BETA COUNTING ERROR		
Sample Collected:	08/29/2006	Findings:	7.7 UG/L
Chemical:	URANIUM (UG/L)		
Sample Collected:	08/29/2006	Findings:	5.2 PCI/L
Chemical:	URANIUM (PCI/L)		
Sample Collected:	08/29/2006	Findings:	14. PCI/L
Chemical:	RADON 222 COUNTING ERROR		
Sample Collected:	08/29/2006	Findings:	274. PCI/L
Chemical:	RADON 222		
Sample Collected:	09/05/2006	Findings:	0.2 NTU
Chemical:	TURBIDITY, LABORATORY		
Sample Collected:	10/30/2006	Findings:	112. PCI/L
Chemical:	TRITIUM COUNTING ERROR		
Sample Collected:	10/30/2006	Findings:	0.274 PCI/L
Chemical:	RADIUM 226 COUNTING ERROR		
Sample Collected:	10/30/2006	Findings:	0.349 PCI/L
Chemical:	RADIUM 228 COUNTING ERROR		
Sample Collected:	10/30/2006	Findings:	0.568 PCI/L
Chemical:	COMBINED RA 226 + RA 228 COUNTING ERROR		
Sample Collected:	10/30/2006	Findings:	0.306 PCI/L
Chemical:	STRONTIUM-90 COUNTING ERROR		
Sample Collected:	10/30/2006	Findings:	4.2 PCI/L
Chemical:	GROSS ALPHA		
Sample Collected:	10/30/2006	Findings:	2.4 PCI/L
Chemical:	GROSS ALPHA COUNTING ERROR		
Sample Collected:	10/30/2006	Findings:	1.5 PCI/L
Chemical:	GROSS BETA COUNTING ERROR		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Sample Collected:	10/30/2006	Findings:	8.6 UG/L
Chemical:	URANIUM (UG/L)		
Sample Collected:	10/30/2006	Findings:	5.8 PCI/L
Chemical:	URANIUM (PCI/L)		
Sample Collected:	10/30/2006	Findings:	19. PCI/L
Chemical:	RADON 222 COUNTING ERROR		
Sample Collected:	10/30/2006	Findings:	541. PCI/L
Chemical:	RADON 222		
Sample Collected:	07/03/2007	Findings:	25. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	08/27/2007	Findings:	24. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	09/07/2007	Findings:	23. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	09/07/2007	Findings:	4.3 UG/L
Chemical:	PERCHLORATE		
Sample Collected:	06/18/2008	Findings:	27. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	06/18/2008	Findings:	4.2 UG/L
Chemical:	PERCHLORATE		
Sample Collected:	06/26/2008	Findings:	27. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	06/26/2008	Findings:	4.2 UG/L
Chemical:	PERCHLORATE		
Sample Collected:	08/14/2008	Findings:	26. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	08/14/2008	Findings:	4.3 UG/L
Chemical:	PERCHLORATE		
Sample Collected:	08/26/2008	Findings:	26. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	08/26/2008	Findings:	4.1 UG/L
Chemical:	PERCHLORATE		
Sample Collected:	09/04/2008	Findings:	30. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	09/04/2008	Findings:	4.3 UG/L
Chemical:	PERCHLORATE		
Sample Collected:	09/16/2008	Findings:	25. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	09/16/2008	Findings:	4.7 UG/L
Chemical:	PERCHLORATE		
Sample Collected:	10/22/2008	Findings:	422. US
Chemical:	SPECIFIC CONDUCTANCE		
Sample Collected:	10/22/2008	Findings:	7.9
Chemical:	PH, LABORATORY		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Sample Collected:	10/22/2008	Findings:	146. MG/L
Chemical:	ALKALINITY (TOTAL) AS CACO3		
Sample Collected:	10/22/2008	Findings:	54. MG/L
Chemical:	CALCIUM		
Sample Collected:	10/22/2008	Findings:	26. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	10/22/2008	Findings:	4.2 UG/L
Chemical:	PERCHLORATE		
Sample Collected:	11/19/2008	Findings:	0.334 PCI/L
Chemical:	RADIUM 228 COUNTING ERROR		
Sample Collected:	11/19/2008	Findings:	354. US
Chemical:	SPECIFIC CONDUCTANCE		
Sample Collected:	11/19/2008	Findings:	8.
Chemical:	PH, LABORATORY		
Sample Collected:	11/19/2008	Findings:	123. MG/L
Chemical:	ALKALINITY (TOTAL) AS CACO3		
Sample Collected:	11/19/2008	Findings:	150. MG/L
Chemical:	BICARBONATE ALKALINITY		
Sample Collected:	11/19/2008	Findings:	174. MG/L
Chemical:	HARDNESS (TOTAL) AS CACO3		
Sample Collected:	11/19/2008	Findings:	50. MG/L
Chemical:	CALCIUM		
Sample Collected:	11/19/2008	Findings:	12. MG/L
Chemical:	MAGNESIUM		
Sample Collected:	11/19/2008	Findings:	13. MG/L
Chemical:	SODIUM		
Sample Collected:	11/19/2008	Findings:	1.9 MG/L
Chemical:	POTASSIUM		
Sample Collected:	11/19/2008	Findings:	6.3 MG/L
Chemical:	CHLORIDE		
Sample Collected:	11/19/2008	Findings:	0.74 MG/L
Chemical:	FLUORIDE (F) (NATURAL-SOURCE)		
Sample Collected:	11/19/2008	Findings:	6.1 PCI/L
Chemical:	GROSS ALPHA		
Sample Collected:	11/19/2008	Findings:	2.4 PCI/L
Chemical:	GROSS ALPHA COUNTING ERROR		
Sample Collected:	11/19/2008	Findings:	8.3 UG/L
Chemical:	URANIUM (UG/L)		
Sample Collected:	11/19/2008	Findings:	5.6 PCI/L
Chemical:	URANIUM (PCI/L)		
Sample Collected:	11/19/2008	Findings:	4.e-002 UG/L
Chemical:	DIBROMOCHLOROPROPANE (DBCP)		
Sample Collected:	11/19/2008	Findings:	242. MG/L
Chemical:	TOTAL DISSOLVED SOLIDS		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Sample Collected: Chemical:	11/19/2008 LANGELIER INDEX @ 60 C	Findings:	0.4
Sample Collected: Chemical:	11/19/2008 NITRATE (AS NO3)	Findings:	9.7 MG/L
Sample Collected: Chemical:	11/19/2008 CARBON DIOXIDE	Findings:	2500. UG/L
Sample Collected: Chemical:	11/19/2008 TURBIDITY, LABORATORY	Findings:	0.4 NTU
Sample Collected: Chemical:	11/19/2008 AGGRSSIVE INDEX (CORROSIVITY)	Findings:	12.
Sample Collected: Chemical:	11/19/2008 NITRATE + NITRITE (AS N)	Findings:	2200. UG/L
Sample Collected: Chemical:	11/19/2008 GROSS ALPHA MDA95	Findings:	2. PCI/L
Sample Collected: Chemical:	01/26/2009 NITRATE (AS NO3)	Findings:	27. MG/L
Sample Collected: Chemical:	02/09/2009 NITRATE (AS NO3)	Findings:	28. MG/L
Sample Collected: Chemical:	02/09/2009 PERCHLORATE	Findings:	4.7 UG/L
Sample Collected: Chemical:	04/27/2009 NITRATE (AS NO3)	Findings:	28. MG/L
Sample Collected: Chemical:	04/27/2009 PERCHLORATE	Findings:	4.4 UG/L
Sample Collected: Chemical:	05/05/2009 NITRATE (AS NO3)	Findings:	27. MG/L
Sample Collected: Chemical:	05/05/2009 PERCHLORATE	Findings:	4.6 UG/L
Sample Collected: Chemical:	05/26/2009 NITRATE (AS NO3)	Findings:	24. MG/L
Sample Collected: Chemical:	07/09/2009 NITRATE (AS NO3)	Findings:	27. MG/L
Sample Collected: Chemical:	07/09/2009 PERCHLORATE	Findings:	4.4 UG/L
Sample Collected: Chemical:	07/15/2009 NITRATE (AS NO3)	Findings:	27. MG/L
Sample Collected: Chemical:	07/15/2009 PERCHLORATE	Findings:	4.7 UG/L
Sample Collected: Chemical:	07/21/2009 NITRATE (AS NO3)	Findings:	25. MG/L
Sample Collected: Chemical:	07/21/2009 PERCHLORATE	Findings:	4.6 UG/L
Sample Collected: Chemical:	07/28/2009 NITRATE (AS NO3)	Findings:	25. MG/L

Sample Collected:	07/28/2009	Findings:	4.7 UG/L
Chemical:	PERCHLORATE		
Sample Collected:	08/27/2009	Findings:	26. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	09/29/2009	Findings:	27. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	09/29/2009	Findings:	4.5 UG/L
Chemical:	PERCHLORATE		
Sample Collected:	10/28/2009	Findings:	24. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	05/07/2010	Findings:	4.342 UG/L
Chemical:	PERCHLORATE		
Sample Collected:	05/11/2010	Findings:	28.69 MG/L
Chemical:	NITRATE (AS NO3)		

9
WNW
1/2 - 1 Mile
Lower

FED USGS **USGS3135188**

Agency cd:	USGS	Site no:	340527117130601
Site name:	001S003W17C003S		
Latitude:	340527	EDR Site id:	USGS3135188
Longitude:	1171306	Dec lat:	34.09084573
Dec lon:	-117.21920682	Coor meth:	M
Coor accr:	S	Latlong datum:	NAD27
Dec latlong datum:	NAD83	District:	06
State:	06	County:	071
Country:	US	Land net:	Not Reported
Location map:	REDLANDS	Map scale:	24000
Altitude:	1176.00		
Altitude method:	Level or other surveying method		
Altitude accuracy:	.1		
Altitude datum:	National Geodetic Vertical Datum of 1929		
Hydrologic:	Santa Ana. California. Area = 1680 sq.mi.		
Topographic:	Not Reported		
Site type:	Ground-water other than Spring	Date construction:	19560101
Date inventoried:	Not Reported	Mean greenwich time offset:	PST
Local standard time flag:	Y		
Type of ground water site:	Single well, other than collector or Ranney type		
Aquifer Type:	Not Reported		
Aquifer:	Not Reported		
Well depth:	296	Hole depth:	296
Source of depth data:	Not Reported		
Project number:	Not Reported		
Real time data flag:	0	Daily flow data begin date:	0000-00-00
Daily flow data end date:	0000-00-00	Daily flow data count:	0
Peak flow data begin date:	0000-00-00	Peak flow data end date:	0000-00-00
Peak flow data count:	0	Water quality data begin date:	1974-10-03
Water quality data end date:	1992-06-30	Water quality data count:	13
Ground water data begin date:	2003-06-11	Ground water data end date:	2003-06-11
Ground water data count:	1		

Ground-water levels, Number of Measurements: 1

Date	Feet below Surface	Feet to Sealevel
2003-06-11	167.83	

10
SW
1/2 - 1 Mile
Lower

FED USGS **USGS3135278**

Agency cd:	USGS	Site no:	340453117130101
Site name:	001S003W17L001S		
Latitude:	340453	EDR Site id:	USGS3135278
Longitude:	1171301	Dec lat:	34.08140166
Dec lon:	-117.21781777	Coor meth:	M
Coor accr:	S	Latlong datum:	NAD27
Dec latlong datum:	NAD83	District:	06
State:	06	County:	071
Country:	US	Land net:	Not Reported
Location map:	Not Reported	Map scale:	Not Reported
Altitude:	1189.00		
Altitude method:	Level or other surveying method		
Altitude accuracy:	.1		
Altitude datum:	National Geodetic Vertical Datum of 1929		
Hydrologic:	Santa Ana. California. Area = 1680 sq.mi.		
Topographic:	Not Reported		
Site type:	Ground-water other than Spring	Date construction:	19220101
Date inventoried:	Not Reported	Mean greenwich time offset:	PST
Local standard time flag:	Y		
Type of ground water site:	Single well, other than collector or Ranney type		
Aquifer Type:	Not Reported		
Aquifer:	Not Reported		
Well depth:	188	Hole depth:	188
Source of depth data:	Not Reported		
Project number:	Not Reported		
Real time data flag:	0	Daily flow data begin date:	0000-00-00
Daily flow data end date:	0000-00-00	Daily flow data count:	0
Peak flow data begin date:	0000-00-00	Peak flow data end date:	0000-00-00
Peak flow data count:	0	Water quality data begin date:	1974-10-03
Water quality data end date:	1986-08-07	Water quality data count:	2
Ground water data begin date:	0000-00-00	Ground water data end date:	0000-00-00
Ground water data count:	0		

Ground-water levels, Number of Measurements: 0

11
SE
1/2 - 1 Mile
Higher

FED USGS **USGS3135282**

Agency cd:	USGS	Site no:	340454117120902
Site name:	001S003W16L004S		
Latitude:	340454	EDR Site id:	USGS3135282
Longitude:	1171209	Dec lat:	34.08167939
Dec lon:	-117.20337271	Coor meth:	M
Coor accr:	U	Latlong datum:	NAD27
Dec latlong datum:	NAD83	District:	06
State:	06	County:	071
Country:	US	Land net:	Not Reported
Location map:	Not Reported	Map scale:	Not Reported
Altitude:	Not Reported		
Altitude method:	Not Reported		
Altitude accuracy:	10		
Altitude datum:	Not Reported		
Hydrologic:	Santa Ana. California. Area = 1680 sq.mi.		
Topographic:	Not Reported		
Site type:	Ground-water other than Spring	Date construction:	Not Reported
Date inventoried:	Not Reported	Mean greenwich time offset:	PST
Local standard time flag:	Y		
Type of ground water site:	Single well, other than collector or Ranney type		
Aquifer Type:	Not Reported		
Aquifer:	Not Reported		
Well depth:	Not Reported	Hole depth:	Not Reported
Source of depth data:	Not Reported		
Project number:	Not Reported		
Real time data flag:	0	Daily flow data begin date:	0000-00-00
Daily flow data end date:	0000-00-00	Daily flow data count:	0
Peak flow data begin date:	0000-00-00	Peak flow data end date:	0000-00-00
Peak flow data count:	0	Water quality data begin date:	1974-10-01
Water quality data end date:	1974-10-01	Water quality data count:	1
Ground water data begin date:	0000-00-00	Ground water data end date:	0000-00-00
Ground water data count:	0		

Ground-water levels, Number of Measurements: 0

12
South
1/2 - 1 Mile
Higher

FED USGS **USGS3135246**

Agency cd:	USGS	Site no:	340442117123601
Site name:	001S003W17R001S		
Latitude:	340442	EDR Site id:	USGS3135246
Longitude:	1171236	Dec lat:	34.0783462
Dec lon:	-117.21087299	Coor meth:	M
Coor accr:	S	Latlong datum:	NAD27
Dec latlong datum:	NAD83	District:	06
State:	06	County:	071
Country:	US	Land net:	Not Reported
Location map:	Not Reported	Map scale:	Not Reported
Altitude:	1216.00		
Altitude method:	Interpolated from topographic map		
Altitude accuracy:	Not Reported		
Altitude datum:	National Geodetic Vertical Datum of 1929		
Hydrologic:	Santa Ana. California. Area = 1680 sq.mi.		
Topographic:	Not Reported		
Site type:	Ground-water other than Spring	Date construction:	19130101
Date inventoried:	Not Reported	Mean greenwich time offset:	PST

Local standard time flag:	Y		
Type of ground water site:	Single well, other than collector or Ranney type		
Aquifer Type:	Not Reported		
Aquifer:	Not Reported		
Well depth:	360	Hole depth:	360
Source of depth data:	Not Reported		
Project number:	Not Reported		
Real time data flag:	0	Daily flow data begin date:	0000-00-00
Daily flow data end date:	0000-00-00	Daily flow data count:	0
Peak flow data begin date:	0000-00-00	Peak flow data end date:	0000-00-00
Peak flow data count:	0	Water quality data begin date:	1986-08-07
Water quality data end date:	1986-08-07	Water quality data count:	1
Ground water data begin date:	0000-00-00	Ground water data end date:	0000-00-00
Ground water data count:	0		

Ground-water levels, Number of Measurements: 0

13
East
1/2 - 1 Mile
Higher

FED USGS **USGS3135149**

Agency cd:	USGS	Site no:	340513117115701
Site name:	001S003W16F001S		
Latitude:	340513	EDR Site id:	USGS3135149
Longitude:	1171157	Dec lat:	34.08695696
Dec lon:	-117.2000393	Coor meth:	M
Coor accr:	S	Latlong datum:	NAD27
Dec latlong datum:	NAD83	District:	06
State:	06	County:	071
Country:	US	Land net:	Not Reported
Location map:	Not Reported	Map scale:	Not Reported
Altitude:	1257.00		
Altitude method:	Interpolated from topographic map		
Altitude accuracy:	Not Reported		
Altitude datum:	National Geodetic Vertical Datum of 1929		
Hydrologic:	Santa Ana. California. Area = 1680 sq.mi.		
Topographic:	Not Reported		
Site type:	Ground-water other than Spring	Date construction:	19310101
Date inventoried:	Not Reported	Mean greenwich time offset:	PST
Local standard time flag:	Y		
Type of ground water site:	Single well, other than collector or Ranney type		
Aquifer Type:	Not Reported		
Aquifer:	Not Reported		
Well depth:	Not Reported	Hole depth:	400
Source of depth data:	Not Reported		
Project number:	Not Reported		
Real time data flag:	0	Daily flow data begin date:	0000-00-00
Daily flow data end date:	0000-00-00	Daily flow data count:	0
Peak flow data begin date:	0000-00-00	Peak flow data end date:	0000-00-00
Peak flow data count:	0	Water quality data begin date:	1975-05-28
Water quality data end date:	1975-05-28	Water quality data count:	1
Ground water data begin date:	0000-00-00	Ground water data end date:	0000-00-00
Ground water data count:	0		

Ground-water levels, Number of Measurements: 0

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

	Database	EDR ID Number
14 **WNW** **1/2 - 1 Mile** **Lower**	**FED USGS**	**USGS3135191**

Agency cd:	USGS	Site no:	340528117132101
Site name:	HOLE-11 LYSIMETER AT 90		
Latitude:	340528	EDR Site id:	USGS3135191
Longitude:	1171321	Dec lat:	34.09112351
Dec lon:	-117.22337367	Coor meth:	M
Coor accr:	U	Latlong datum:	NAD27
Dec latlong datum:	NAD83	District:	06
State:	06	County:	071
Country:	US	Land net:	Not Reported
Location map:	Not Reported	Map scale:	Not Reported
Altitude:	Not Reported		
Altitude method:	Not Reported		
Altitude accuracy:	10		
Altitude datum:	Not Reported		
Hydrologic:	Santa Ana. California. Area = 1680 sq.mi.		
Topographic:	Not Reported		
Site type:	Ground-water other than Spring	Date construction:	Not Reported
Date inventoried:	Not Reported	Mean greenwich time offset:	PST
Local standard time flag:	Y		
Type of ground water site:	Test hole, not completed as a well		
Aquifer Type:	Not Reported		
Aquifer:	Not Reported		
Well depth:	Not Reported	Hole depth:	Not Reported
Source of depth data:	Not Reported		
Project number:	Not Reported		
Real time data flag:	0	Daily flow data begin date:	0000-00-00
Daily flow data end date:	0000-00-00	Daily flow data count:	0
Peak flow data begin date:	0000-00-00	Peak flow data end date:	0000-00-00
Peak flow data count:	0	Water quality data begin date:	1977-06-22
Water quality data end date:	1977-06-22	Water quality data count:	1
Ground water data begin date:	0000-00-00	Ground water data end date:	0000-00-00
Ground water data count:	0		

Ground-water levels, Number of Measurements: 0

15 **ESE** **1/2 - 1 Mile** **Higher**	**FED USGS**	**USGS3135219**

Agency cd:	USGS	Site no:	340455117115701
Site name:	001S003W16L002S		
Latitude:	340455	EDR Site id:	USGS3135219
Longitude:	1171157	Dec lat:	34.08195715
Dec lon:	-117.20003923	Coor meth:	M
Coor accr:	S	Latlong datum:	NAD27
Dec latlong datum:	NAD83	District:	06
State:	06	County:	071
Country:	US	Land net:	Not Reported
Location map:	Not Reported	Map scale:	Not Reported

Altitude:	1268.00		
Altitude method:	Level or other surveying method		
Altitude accuracy:	.1		
Altitude datum:	National Geodetic Vertical Datum of 1929		
Hydrologic:	Santa Ana. California. Area = 1680 sq.mi.		
Topographic:	Not Reported		
Site type:	Ground-water other than Spring	Date construction:	19290101
Date inventoried:	Not Reported	Mean greenwich time offset:	PST
Local standard time flag:	Y		
Type of ground water site:	Single well, other than collector or Ranney type		
Aquifer Type:	Not Reported		
Aquifer:	Not Reported		
Well depth:	430	Hole depth:	430
Source of depth data:	Not Reported		
Project number:	Not Reported		
Real time data flag:	Not Reported	Daily flow data begin date:	Not Reported
Daily flow data end date:	Not Reported	Daily flow data count:	Not Reported
Peak flow data begin date:	Not Reported	Peak flow data end date:	Not Reported
Peak flow data count:	Not Reported	Water quality data begin date:	Not Reported
Water quality data end date:	Not Reported	Water quality data count:	Not Reported
Ground water data begin date:	Not Reported	Ground water data end date:	Not Reported
Ground water data count:	Not Reported		

Ground-water levels, Number of Measurements: 0

16
SSE
1/2 - 1 Mile
Higher

FED USGS **USGS3135414**

Agency cd:	USGS	Site no:	340436117121301
Site name:	001S003W21C001S		
Latitude:	340436	EDR Site id:	USGS3135414
Longitude:	1171213	Dec lat:	34.07667959
Dec lon:	-117.2044838	Coor meth:	M
Coor accr:	S	Latlong datum:	NAD27
Dec latlong datum:	NAD83	District:	06
State:	06	County:	071
Country:	US	Land net:	Not Reported
Location map:	Not Reported	Map scale:	Not Reported
Altitude:	1249.00		
Altitude method:	Interpolated from topographic map		
Altitude accuracy:	Not Reported		
Altitude datum:	National Geodetic Vertical Datum of 1929		
Hydrologic:	Santa Ana. California. Area = 1680 sq.mi.		
Topographic:	Not Reported		
Site type:	Ground-water other than Spring	Date construction:	Not Reported
Date inventoried:	Not Reported	Mean greenwich time offset:	PST
Local standard time flag:	Y		
Type of ground water site:	Single well, other than collector or Ranney type		
Aquifer Type:	Not Reported		
Aquifer:	Not Reported		
Well depth:	167	Hole depth:	167
Source of depth data:	Not Reported		
Project number:	Not Reported		
Real time data flag:	Not Reported	Daily flow data begin date:	Not Reported
Daily flow data end date:	Not Reported	Daily flow data count:	Not Reported
Peak flow data begin date:	Not Reported	Peak flow data end date:	Not Reported

Peak flow data count:	Not Reported	Water quality data begin date:	Not Reported
Water quality data end date:	Not Reported	Water quality data count:	Not Reported
Ground water data begin date:	Not Reported	Ground water data end date:	Not Reported
Ground water data count:	Not Reported		

Ground-water levels, Number of Measurements: 0

17
ESE
1/2 - 1 Mile
Higher

FED USGS **USGS3135277**

Agency cd:	USGS	Site no:	340453117114801
Site name:	001S003W16K001S		
Latitude:	340453	EDR Site id:	USGS3135277
Longitude:	1171148	Dec lat:	34.08140161
Dec lon:	-117.19753912	Coor meth:	M
Coor accr:	S	Latlong datum:	NAD27
Dec latlong datum:	NAD83	District:	06
State:	06	County:	071
Country:	US	Land net:	Not Reported
Location map:	Not Reported	Map scale:	Not Reported
Altitude:	1292.00		
Altitude method:	Level or other surveying method		
Altitude accuracy:	.1		
Altitude datum:	National Geodetic Vertical Datum of 1929		
Hydrologic:	Santa Ana. California. Area = 1680 sq.mi.		
Topographic:	Not Reported		
Site type:	Ground-water other than Spring	Date construction:	19360101
Date inventoried:	Not Reported	Mean greenwich time offset:	PST
Local standard time flag:	Y		
Type of ground water site:	Single well, other than collector or Ranney type		
Aquifer Type:	Not Reported		
Aquifer:	Not Reported		
Well depth:	351	Hole depth:	351
Source of depth data:	Not Reported		
Project number:	Not Reported		
Real time data flag:	0	Daily flow data begin date:	0000-00-00
Daily flow data end date:	0000-00-00	Daily flow data count:	0
Peak flow data begin date:	0000-00-00	Peak flow data end date:	0000-00-00
Peak flow data count:	0	Water quality data begin date:	1975-06-12
Water quality data end date:	1975-06-12	Water quality data count:	1
Ground water data begin date:	0000-00-00	Ground water data end date:	0000-00-00
Ground water data count:	0		

Ground-water levels, Number of Measurements: 0

D18
South
1/2 - 1 Mile
Higher

FED USGS **USGS3135377**

Agency cd:	USGS	Site no:	340428117122901
Site name:	001S003W20A001S		
Latitude:	340428	EDR Site id:	USGS3135377
Longitude:	1171229	Dec lat:	34.07445746
Dec lon:	-117.20892842	Coor meth:	M
Coor accr:	S	Latlong datum:	NAD27
Dec latlong datum:	NAD83	District:	06
State:	06	County:	071
Country:	US	Land net:	Not Reported
Location map:	Not Reported	Map scale:	Not Reported
Altitude:	1228.00		
Altitude method:	Level or other surveying method		
Altitude accuracy:	.1		
Altitude datum:	National Geodetic Vertical Datum of 1929		
Hydrologic:	Santa Ana. California. Area = 1680 sq.mi.		
Topographic:	Not Reported		
Site type:	Ground-water other than Spring	Date construction:	19030101
Date inventoried:	Not Reported	Mean greenwich time offset:	PST
Local standard time flag:	Y		
Type of ground water site:	Single well, other than collector or Ranney type		
Aquifer Type:	Not Reported		
Aquifer:	Not Reported		
Well depth:	Not Reported	Hole depth:	195
Source of depth data:	Not Reported		
Project number:	Not Reported		
Real time data flag:	Not Reported	Daily flow data begin date:	Not Reported
Daily flow data end date:	Not Reported	Daily flow data count:	Not Reported
Peak flow data begin date:	Not Reported	Peak flow data end date:	Not Reported
Peak flow data count:	Not Reported	Water quality data begin date:	Not Reported
Water quality data end date:	Not Reported	Water quality data count:	Not Reported
Ground water data begin date:	Not Reported	Ground water data end date:	Not Reported
Ground water data count:	Not Reported		

Ground-water levels, Number of Measurements: 0

E19
SSW
1/2 - 1 Mile
Lower

FED USGS **USGS3135394**

Agency cd:	USGS	Site no:	340432117130202
Site name:	HOLE-02 LYSIMETER AT 50		
Latitude:	340432	EDR Site id:	USGS3135394
Longitude:	1171302	Dec lat:	34.07556855
Dec lon:	-117.2180955	Coor meth:	M
Coor accr:	U	Latlong datum:	NAD27
Dec latlong datum:	NAD83	District:	06
State:	06	County:	071
Country:	US	Land net:	Not Reported
Location map:	Not Reported	Map scale:	Not Reported
Altitude:	Not Reported		
Altitude method:	Not Reported		
Altitude accuracy:	10		
Altitude datum:	Not Reported		
Hydrologic:	Santa Ana. California. Area = 1680 sq.mi.		
Topographic:	Not Reported		
Site type:	Ground-water other than Spring	Date construction:	Not Reported
Date inventoried:	Not Reported	Mean greenwich time offset:	PST

Local standard time flag:	Y		
Type of ground water site:	Test hole, not completed as a well		
Aquifer Type:	Not Reported		
Aquifer:	Not Reported		
Well depth:	Not Reported	Hole depth:	Not Reported
Source of depth data:	Not Reported		
Project number:	Not Reported		
Real time data flag:	0	Daily flow data begin date:	0000-00-00
Daily flow data end date:	0000-00-00	Daily flow data count:	0
Peak flow data begin date:	0000-00-00	Peak flow data end date:	0000-00-00
Peak flow data count:	0	Water quality data begin date:	1977-06-22
Water quality data end date:	1979-05-16	Water quality data count:	5
Ground water data begin date:	0000-00-00	Ground water data end date:	0000-00-00
Ground water data count:	0		

Ground-water levels, Number of Measurements: 0

E20
SSW
1/2 - 1 Mile
Lower

FED USGS **USGS3135393**

Agency cd:	USGS	Site no:	340432117130201
Site name:	HOLE-02 LYSIMETER AT 30		
Latitude:	340432	EDR Site id:	USGS3135393
Longitude:	1171302	Dec lat:	34.07556855
Dec lon:	-117.2180955	Coor meth:	M
Coor accr:	U	Latlong datum:	NAD27
Dec latlong datum:	NAD83	District:	06
State:	06	County:	071
Country:	US	Land net:	Not Reported
Location map:	Not Reported	Map scale:	Not Reported
Altitude:	Not Reported		
Altitude method:	Not Reported		
Altitude accuracy:	10		
Altitude datum:	Not Reported		
Hydrologic:	Santa Ana. California. Area = 1680 sq.mi.		
Topographic:	Not Reported		
Site type:	Ground-water other than Spring	Date construction:	Not Reported
Date inventoried:	Not Reported	Mean greenwich time offset:	PST
Local standard time flag:	Y		
Type of ground water site:	Test hole, not completed as a well		
Aquifer Type:	Not Reported		
Aquifer:	Not Reported		
Well depth:	Not Reported	Hole depth:	Not Reported
Source of depth data:	Not Reported		
Project number:	Not Reported		
Real time data flag:	0	Daily flow data begin date:	0000-00-00
Daily flow data end date:	0000-00-00	Daily flow data count:	0
Peak flow data begin date:	0000-00-00	Peak flow data end date:	0000-00-00
Peak flow data count:	0	Water quality data begin date:	1979-05-16
Water quality data end date:	1979-05-16	Water quality data count:	1
Ground water data begin date:	0000-00-00	Ground water data end date:	0000-00-00
Ground water data count:	0		

Ground-water levels, Number of Measurements: 0

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

	Database	EDR ID Number
E21 **SSW** **1/2 - 1 Mile** **Lower**	**FED USGS**	**USGS3135395**

Agency cd:	USGS	Site no:	340432117130203
Site name:	HOLE-02 LYSIMETER AT 113		
Latitude:	340432	EDR Site id:	USGS3135395
Longitude:	1171302	Dec lat:	34.07556855
Dec lon:	-117.2180955	Coor meth:	M
Coor accr:	U	Latlong datum:	NAD27
Dec latlong datum:	NAD83	District:	06
State:	06	County:	071
Country:	US	Land net:	Not Reported
Location map:	Not Reported	Map scale:	Not Reported
Altitude:	Not Reported		
Altitude method:	Not Reported		
Altitude accuracy:	10		
Altitude datum:	Not Reported		
Hydrologic:	Santa Ana. California. Area = 1680 sq.mi.		
Topographic:	Not Reported		
Site type:	Ground-water other than Spring	Date construction:	Not Reported
Date inventoried:	Not Reported	Mean greenwich time offset:	PST
Local standard time flag:	Y		
Type of ground water site:	Test hole, not completed as a well		
Aquifer Type:	Not Reported		
Aquifer:	Not Reported		
Well depth:	Not Reported	Hole depth:	Not Reported
Source of depth data:	Not Reported		
Project number:	Not Reported		
Real time data flag:	0	Daily flow data begin date:	0000-00-00
Daily flow data end date:	0000-00-00	Daily flow data count:	0
Peak flow data begin date:	0000-00-00	Peak flow data end date:	0000-00-00
Peak flow data count:	0	Water quality data begin date:	1977-06-22
Water quality data end date:	1980-10-09	Water quality data count:	11
Ground water data begin date:	0000-00-00	Ground water data end date:	0000-00-00
Ground water data count:	0		

Ground-water levels, Number of Measurements: 0

	Database	EDR ID Number
22 **NNE** **1/2 - 1 Mile** **Lower**	**FED USGS**	**USGS3135099**

Agency cd:	USGS	Site no:	340600117121501
Site name:	001S003W09E001S		
Latitude:	340600	EDR Site id:	USGS3135099
Longitude:	1171215	Dec lat:	34.10001202
Dec lon:	-117.20503967	Coor meth:	M
Coor accr:	S	Latlong datum:	NAD27
Dec latlong datum:	NAD83	District:	06
State:	06	County:	071
Country:	US	Land net:	Not Reported
Location map:	Not Reported	Map scale:	Not Reported

Altitude:	1204.00		
Altitude method:	Interpolated from topographic map		
Altitude accuracy:	Not Reported		
Altitude datum:	National Geodetic Vertical Datum of 1929		
Hydrologic:	Santa Ana. California. Area = 1680 sq.mi.		
Topographic:	Not Reported		
Site type:	Ground-water other than Spring	Date construction:	19420101
Date inventoried:	Not Reported	Mean greenwich time offset:	PST
Local standard time flag:	Y		
Type of ground water site:	Single well, other than collector or Ranney type		
Aquifer Type:	Not Reported		
Aquifer:	Not Reported		
Well depth:	Not Reported	Hole depth:	100
Source of depth data:	Not Reported		
Project number:	Not Reported		
Real time data flag:	Not Reported	Daily flow data begin date:	Not Reported
Daily flow data end date:	Not Reported	Daily flow data count:	Not Reported
Peak flow data begin date:	Not Reported	Peak flow data end date:	Not Reported
Peak flow data count:	Not Reported	Water quality data begin date:	Not Reported
Water quality data end date:	Not Reported	Water quality data count:	Not Reported
Ground water data begin date:	Not Reported	Ground water data end date:	Not Reported
Ground water data count:	Not Reported		

Ground-water levels, Number of Measurements: 0

D23
South
1/2 - 1 Mile
Higher

FED USGS **USGS3135365**

Agency cd:	USGS	Site no:	340426117122701
Site name:	001S003W21E005S		
Latitude:	340426	EDR Site id:	USGS3135365
Longitude:	1171227	Dec lat:	34.07390193
Dec lon:	-117.20837283	Coor meth:	M
Coor accr:	U	Latlong datum:	NAD27
Dec latlong datum:	NAD83	District:	06
State:	06	County:	071
Country:	US	Land net:	Not Reported
Location map:	Not Reported	Map scale:	Not Reported
Altitude:	Not Reported		
Altitude method:	Not Reported		
Altitude accuracy:	10		
Altitude datum:	Not Reported		
Hydrologic:	Santa Ana. California. Area = 1680 sq.mi.		
Topographic:	Not Reported		
Site type:	Ground-water other than Spring	Date construction:	Not Reported
Date inventoried:	Not Reported	Mean greenwich time offset:	PST
Local standard time flag:	Y		
Type of ground water site:	Single well, other than collector or Ranney type		
Aquifer Type:	Not Reported		
Aquifer:	Not Reported		
Well depth:	Not Reported	Hole depth:	Not Reported
Source of depth data:	Not Reported		
Project number:	Not Reported		
Real time data flag:	0	Daily flow data begin date:	0000-00-00
Daily flow data end date:	0000-00-00	Daily flow data count:	0
Peak flow data begin date:	0000-00-00	Peak flow data end date:	0000-00-00

Peak flow data count:	0	Water quality data begin date:	1974-10-03
Water quality data end date:	1974-10-03	Water quality data count:	1
Ground water data begin date:	0000-00-00	Ground water data end date:	0000-00-00
Ground water data count:	0		

Ground-water levels, Number of Measurements: 0

E24
SSW
1/2 - 1 Mile
Lower

FED USGS **USGS3135379**

Agency cd:	USGS	Site no:	340429117130001
Site name:	001S003W20C001S		
Latitude:	340429	EDR Site id:	USGS3135379
Longitude:	1171300	Dec lat:	34.07473525
Dec lon:	-117.21753991	Coor meth:	M
Coor accr:	S	Latlong datum:	NAD27
Dec latlong datum:	NAD83	District:	06
State:	06	County:	071
Country:	US	Land net:	Not Reported
Location map:	Not Reported	Map scale:	Not Reported
Altitude:	1192.00		
Altitude method:	Interpolated from topographic map		
Altitude accuracy:	Not Reported		
Altitude datum:	National Geodetic Vertical Datum of 1929		
Hydrologic:	Santa Ana. California. Area = 1680 sq.mi.		
Topographic:	Not Reported		
Site type:	Ground-water other than Spring	Date construction:	19040101
Date inventoried:	Not Reported	Mean greenwich time offset:	PST
Local standard time flag:	Y		
Type of ground water site:	Single well, other than collector or Ranney type		
Aquifer Type:	Not Reported		
Aquifer:	Not Reported		
Well depth:	Not Reported	Hole depth:	642
Source of depth data:	Not Reported		
Project number:	Not Reported		
Real time data flag:	Not Reported	Daily flow data begin date:	Not Reported
Daily flow data end date:	Not Reported	Daily flow data count:	Not Reported
Peak flow data begin date:	Not Reported	Peak flow data end date:	Not Reported
Peak flow data count:	Not Reported	Water quality data begin date:	Not Reported
Water quality data end date:	Not Reported	Water quality data count:	Not Reported
Ground water data begin date:	Not Reported	Ground water data end date:	Not Reported
Ground water data count:	Not Reported		

Ground-water levels, Number of Measurements: 0

F25
North
1/2 - 1 Mile
Lower

CA WELLS **CADW40000006680**

Longitude:	-117.2075
Latiude:	34.1014
Stwellno:	01S03W09E002S
Districtco:	3
Welluseco:	Z
Countyco:	36
Gwcode:	800206
Site id:	CADW40000006680

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

Database	EDR ID Number
FED USGS	**USGS3134885**

F26
NNE
1/2 - 1 Mile
Lower

Agency cd:	USGS	Site no:	340605117122401
Site name:	001S003W09E002S		
Latitude:	340605	EDR Site id:	USGS3134885
Longitude:	1171224	Dec lat:	34.10140086
Dec lon:	-117.20753979	Coor meth:	M
Coor accr:	S	Latlong datum:	NAD27
Dec latlong datum:	NAD83	District:	06
State:	06	County:	071
Country:	US	Land net:	Not Reported
Location map:	REDLANDS	Map scale:	24000
Altitude:	1190.00		
Altitude method:	Interpolated from topographic map		
Altitude accuracy:	5		
Altitude datum:	National Geodetic Vertical Datum of 1929		
Hydrologic:	Santa Ana. California. Area = 1680 sq.mi.		
Topographic:	Not Reported		
Site type:	Ground-water other than Spring	Date construction:	19540908
Date inventoried:	19860114	Mean greenwich time offset:	PST
Local standard time flag:	Y		
Type of ground water site:	Single well, other than collector or Ranney type		
Aquifer Type:	Not Reported		
Aquifer:	Not Reported		
Well depth:	401	Hole depth:	401
Source of depth data:	logs		
Project number:	Not Reported		
Real time data flag:	0	Daily flow data begin date:	0000-00-00
Daily flow data end date:	0000-00-00	Daily flow data count:	0
Peak flow data begin date:	0000-00-00	Peak flow data end date:	0000-00-00
Peak flow data count:	0	Water quality data begin date:	1974-10-03
Water quality data end date:	2001-05-15	Water quality data count:	32
Ground water data begin date:	1955-03-28	Ground water data end date:	2004-10-22
Ground water data count:	249		

Ground-water levels, Number of Measurements: 249

Date	Feet below Surface	Feet to Sealevel	Date	Feet below Surface	Feet to Sealevel
2004-10-22	199.28				
Note: The site had been pumped recently.					
2004-04-20	187.41				
Note: The site had been pumped recently.					
2004-04-20					
Note: The site was being pumped.					
2003-10-22	187.28				
Note: The site had been pumped recently.					
2003-04-23	176.05		2002-10-29	176.13	
2002-10-28					
Note: The site was being pumped.					
2002-04-08	161.73				
Note: The site had been pumped recently.					
2001-10-23	158.00				
Note: The site had been pumped recently.					

Ground-water levels, continued.

Date	Feet below Surface	Feet to Sealevel
2001-04-18		
Note: The site was being pumped.		
2000-10-23	145.34	
Note: The site had been pumped recently.		
1999-10-18	127.29	
Note: The site had been pumped recently.		
1999-04-14	114.38	
Note: The site had been pumped recently.		
1998-10-19	116.09	
1997-10-27	138.05	
1997-04-14	127.03	
Note: The site had been pumped recently.		
1996-10-07	136.82	
1996-04-22	122.14	
Note: The site had been pumped recently.		
1995-10-24	131.68	
Note: The site had been pumped recently.		
1995-04-19	123.63	
Note: A nearby site that taps the same aquifer was being pumped.		
1994-10-26	151.77	
Note: The site had been pumped recently.		
1994-04-20		
Note: The site was being pumped.		
1993-10-19	143.81	
Note: A nearby site that taps the same aquifer was being pumped.		
1993-04-12	135.92	
Note: A nearby site that taps the same aquifer was being pumped.		
1992-10-31	164.14	
Note: A nearby site that taps the same aquifer was being pumped.		
1992-10-29		
Note: The site was being pumped.		
1992-06-12	154.34	
Note: A nearby site that taps the same aquifer was being pumped.		
1991-11-27	159.95	
Note: The site had been pumped recently.		
1991-06-17		
Note: The site was being pumped.		
1991-04-24		
Note: The site was being pumped.		
1990-12-03		
Note: The site was being pumped.		
1990-10-30		
Note: The site was being pumped.		
1990-06-25		
Note: The site was being pumped.		
1989-11-28	130.21	
Note: A nearby site that taps the same aquifer was being pumped.		
1989-10-26		
Note: The site was being pumped.		
1989-09-21	127.20	
Note: A nearby site that taps the same aquifer was being pumped.		
1989-04-26		
Note: The site was being pumped.		
1988-11-23		
Note: The site was being pumped.		
1998-04-14	119.04	

Ground-water levels, continued.

Date	Feet below Surface	Feet to Sealevel	Date	Feet below Surface	Feet to Sealevel
1988-10-13					
Note: The site was being pumped.					
1988-06-30	104.75				
Note: A nearby site that taps the same aquifer was being pumped.					
1987-12-08					
Note: The site was being pumped.					
1987-06-16	88.77				
Note: A nearby site that taps the same aquifer was being pumped.					
1987-04-01	106.0		1987-01-02	105.6	
1986-10-01	98.2		1986-09-01	103.9	
1986-08-01	106.4		1986-07-01	103.0	
1986-06-19	76.86				
Note: The site had been pumped recently.					
1986-06-01	98.0		1986-05-01	74.0	
1986-04-01	72.4		1986-03-01	95.1	
1986-02-01	70.7				
1986-01-14	71.74				
Note: A nearby site that taps the same aquifer was being pumped.					
1986-01-02	96.0		1985-12-06	73.7	
1985-12-01	73.7				
1985-10-25	87.9				
Note: The site was being pumped.					
1985-10-01	87.9				
1985-09-30	87.0				
Note: The site was being pumped.					
1985-09-01	87.0				
1985-08-30	91.0				
Note: The site was being pumped.					
1985-08-01	91.0				
1985-07-30	89.2				
Note: The site was being pumped.					
1985-07-01	89.2				
1985-06-25	83.9				
Note: The site was being pumped.					
1985-06-01	83.9		1985-05-30	84.7	
1985-05-01	84.7				
1985-04-22	82.0				
Note: The site was being pumped.					
1985-03-22	71.0				
1985-02-26	79.0				
Note: The site was being pumped.					
1984-12-20	67.5				
Note: The site was being pumped.					
1984-11-27	70.4				
Note: The site was being pumped.					
1984-10-23	72.0				
1984-09-13	83.5				
Note: The site was being pumped.					
1984-08-27	70.2				
1984-07-11	71.0				
Note: The site was being pumped.					
1984-06-14	59.0		1984-04-19	56.7	
1984-03-22	56.0		1984-02-21	56.2	
1984-01-23	55.0				
1983-12-27	79.0				
Note: The site was being pumped.					

Ground-water levels, continued.

Date	Feet below Surface	Feet to Sealevel
1983-11-30	79.0	
Note: The site was being pumped.		
1983-10-31	51.9	
1981-10-16	97.1	
1981-08-13	93.3	
1981-06-11	89.1	
1980-08-14	117.1	
Note: The site was being pumped.		
1980-07-23	118.9	
Note: The site was being pumped.		
1980-06-13	115.3	
Note: The site was being pumped.		
1980-05-15	88.4	
1980-04-16	89.1	
Note: The site was being pumped.		
1980-03-14	89.6	
Note: The site was being pumped.		
1980-01-18	128.4	
Note: The site was being pumped.		
1979-12-15	135.1	
Note: The site was being pumped.		
1979-11-19	139.9	
Note: The site was being pumped.		
1979-10-11	139.0	
Note: The site was being pumped.		
1979-09-13	137.6	
Note: The site was being pumped.		
1979-08-09	135.1	
Note: The site was being pumped.		
1979-07-13	140.3	
Note: The site was being pumped.		
1979-06-13	151.1	
Note: The site was being pumped.		
1979-05-18	149.9	
Note: The site was being pumped.		
1979-04-12	145.8	
Note: The site was being pumped.		
1979-03-15	148.0	
Note: The site was being pumped.		
1979-02-20	149.7	
Note: The site was being pumped.		
1979-01-18	152.8	
Note: The site was being pumped.		
1978-12-14	151.2	
Note: The site was being pumped.		
1978-11-16	157.1	
Note: The site was being pumped.		
1978-10-12	155.9	
Note: The site was being pumped.		
1978-09-14	154.4	
Note: The site was being pumped.		
1978-08-11	152.6	
Note: The site was being pumped.		
1977-07-07	182.6	
Note: The site was being pumped.		
1981-11-18	92.0	
1981-09-18	91.2	
1981-07-23	91.6	
1980-09-18	91.2	

Ground-water levels, continued.

Date	Feet below Surface	Feet to Sealevel
1977-06-08	189.2	
Note: The site was being pumped.		
1977-05-11	183.2	
Note: The site was being pumped.		
1977-04-14	165.5	
Note: The site was being pumped.		
1977-03-10	182.5	
Note: The site was being pumped.		
1977-02-10	182.0	
Note: The site was being pumped.		
1977-01-19	155.9	
1976-12-17	187.5	
Note: The site was being pumped.		
1976-11-19	185.0	
1976-08-14	164.4	
1976-05-20	163.7	
1976-05-05	162.9	
1976-04-23	162.4	
1976-04-10	162.5	
1976-03-20	162.6	
1976-02-14	169.0	
1975-12-20	165.7	
1971-01-23	144.3	
1970-10-11	148.8	
1970-06-17	141.6	
1970-04-25	137.1	
1970-03-24	159.5	
Note: The site was being pumped.		
1970-02-14	139.1	
Note: Other conditions existed that would affect the measured water level.		
1969-08-12	129.2	
1969-06-16	146.7	
Note: The site was being pumped.		
1969-04-26	124.7	
1969-04-11	155.8	
Note: The site was being pumped.		
1969-04-01	146.7	
1969-01-29	196.3	
1968-08-21	192.5	
Note: The site was being pumped.		
1968-07-26	190.5	
1968-06-19	202.7	
Note: The site was being pumped.		
1967-07-27	199.4	
1967-05-01	217.9	
1966-08-03	213.0	
1966-05-14	208.5	
1965-12-27	231.1	
1965-10-27	231.2	
1965-07-19	219.9	
1965-05-02	209.3	
1965-02-24	225.2	
1964-11-20	212.9	
1964-09-24	208.6	
1964-06-27	192.5	

Date	Feet below Surface	Feet to Sealevel
1976-10-16	165.9	
1976-05-28	163.8	
1976-05-15	163.3	
1976-04-29	163.1	
1976-04-16	162.3	
1976-03-27	162.4	
1976-03-13	162.7	
1976-01-17	164.7	
1972-01-09	155.9	
1970-11-27	152.0	
1970-07-30	145.8	
1970-05-16	139.1	
1969-07-02	121.9	
1969-03-06	190.8	
1967-06-02	207.3	
1966-09-29	216.7	
1966-06-28	211.0	
1966-02-24	228.9	
1965-11-29	214.4	
1965-08-24	220.0	
1965-06-01	219.2	
1965-03-22	209.7	
1965-01-27	209.1	
1964-10-28	210.7	
1964-08-17	206.1	
1964-05-27	200.8	

Ground-water levels, continued.

Date	Feet below Surface	Feet to Sealevel
1964-04-06	199.2	
1963-09-25	194.8	
1963-07-30	189.3	
1963-05-29	188.5	
1963-03-19	192.2	
1963-01-28	183.9	
1962-09-08	179.8	
1962-06-28	178.9	
1961-10-28	169.9	
1961-07-13	160.8	
1961-05-23	159.3	
1961-03-09	154.6	
1961-01-27	153.7	
1960-07-05	154.6	
1960-01-13	141.7	
1959-09-17	147.6	
1959-06-11	135.8	
1959-04-16	130.0	
1959-01-28	125.6	
1958-10-08	121.1	
1958-08-07	107.2	
1956-10-30	131.6	
1956-08-28	131.0	
1956-06-06	129.8	
1956-03-27	127.6	
1956-01-16	130.3	
1955-11-07	133.1	
1955-09-06	129.7	
1955-07-05	138.4	
1955-05-02	113.0	
1964-03-27	199.1	
1963-08-26	195.0	
1963-06-26	188.0	
1963-04-29	185.3	
1963-02-28	189.4	
1962-10-26	183.7	
1962-07-25	177.8	
1961-11-02	171.7	
1961-08-10	172.5	
1961-06-16	160.3	
1961-04-17	157.5	
1961-02-17	153.7	
1960-11-30	155.3	
1960-02-24	129.1	
1959-12-07	155.1	
1959-08-05	137.1	
1959-05-14	130.2	
1959-03-13	129.2	
1958-11-14	135.8	
1958-09-10	110.6	
1956-12-27	131.1	
1956-09-28	131.2	
1956-07-18	130.4	
1956-05-03	128.2	
1956-02-24	128.1	
1955-12-03	126.1	
1955-10-03	131.9	
1955-08-02	126.3	
1955-06-06	128.5	
1955-03-28	116.9	

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS
RADON

AREA RADON INFORMATION

State Database: CA Radon

Radon Test Results

Zipcode	Num Tests	> 4 pCi/L
92374	85	0

Federal EPA Radon Zone for SAN BERNARDINO County: 2

Note: Zone 1 indoor average level > 4 pCi/L.
: Zone 2 indoor average level >= 2 pCi/L and <= 4 pCi/L.
: Zone 3 indoor average level < 2 pCi/L.

Federal Area Radon Information for Zip Code: 92374

Number of sites tested: 2

Area	Average Activity	% <4 pCi/L	% 4-20 pCi/L	% >20 pCi/L
Living Area - 1st Floor	0.500 pCi/L	100%	0%	0%
Living Area - 2nd Floor	Not Reported	Not Reported	Not Reported	Not Reported
Basement	Not Reported	Not Reported	Not Reported	Not Reported

PHYSICAL SETTING SOURCE RECORDS SEARCHED

TOPOGRAPHIC INFORMATION

USGS 7.5' Digital Elevation Model (DEM)
Source: United States Geologic Survey
EDR acquired the USGS 7.5' Digital Elevation Model in 2002 and updated it in 2006. The 7.5 minute DEM corresponds to the USGS 1:24,000- and 1:25,000-scale topographic quadrangle maps. The DEM provides elevation data with consistent elevation units and projection.

Scanned Digital USGS 7.5' Topographic Map (DRG)
Source: United States Geologic Survey
A digital raster graphic (DRG) is a scanned image of a U.S. Geological Survey topographic map. The map images are made by scanning published paper maps on high-resolution scanners. The raster image is georeferenced and fit to the Universal Transverse Mercator (UTM) projection.

HYDROLOGIC INFORMATION

Flood Zone Data: This data, available in select counties across the country, was obtained by EDR in 2003 & 2009 from the Federal Emergency Management Agency (FEMA). Data depicts 100-year and 500-year flood zones as defined by FEMA.

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002 and 2005 from the U.S. Fish and Wildlife Service.

HYDROGEOLOGIC INFORMATION

AQUIFLOW^{R} Information System
Source: EDR proprietary database of groundwater flow information
EDR has developed the AQUIFLOW Information System (AIS) to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted to regulatory authorities at select sites and has extracted the date of the report, hydrogeologically determined groundwater flow direction and depth to water table information.

GEOLOGIC INFORMATION

Geologic Age and Rock Stratigraphic Unit
Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - A digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

STATSGO: State Soil Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Services
The U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) leads the national Conservation Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps.

SSURGO: Soil Survey Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Services (NRCS)
Telephone: 800-672-5559
SSURGO is the most detailed level of mapping done by the Natural Resources Conservation Services, mapping scales generally range from 1:12,000 to 1:63,360. Field mapping methods using national standards are used to construct the soil maps in the Soil Survey Geographic (SSURGO) database. SSURGO digitizing duplicates the original soil survey maps. This level of mapping is designed for use by landowners, townships and county natural resource planning and management.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

LOCAL / REGIONAL WATER AGENCY RECORDS

FEDERAL WATER WELLS

PWS: Public Water Systems
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Public Water System data from the Federal Reporting Data System. A PWS is any water system which provides water to at least 25 people for at least 60 days annually. PWSs provide water from wells, rivers and other sources.

PWS ENF: Public Water Systems Violation and Enforcement Data
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Violation and Enforcement data for Public Water Systems from the Safe Drinking Water Information System (SDWIS) after August 1995. Prior to August 1995, the data came from the Federal Reporting Data System (FRDS).

USGS Water Wells: USGS National Water Inventory System (NWIS)
This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on wells, springs, and other sources of groundwater.

STATE RECORDS

Water Well Database
Source: Department of Water Resources
Telephone: 916-651-9648

California Drinking Water Quality Database
Source: Department of Health Services
Telephone: 916-324-2319
The database includes all drinking water compliance and special studies monitoring for the state of California since 1984. It consists of over 3,200,000 individual analyses along with well and water system information.

OTHER STATE DATABASE INFORMATION

California Oil and Gas Well Locations
Source: Department of Conservation
Telephone: 916-323-1779
Oil and Gas well locations in the state.

RADON

State Database: CA Radon
Source: Department of Health Services
Telephone: 916-324-2208
Radon Database for California

Area Radon Information
Source: USGS
Telephone: 703-356-4020
The National Radon Database has been developed by the U.S. Environmental Protection Agency (USEPA) and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey. The study covers the years 1986 - 1992. Where necessary data has been supplemented by information collected at private sources such as universities and research institutions.

EPA Radon Zones
Source: EPA
Telephone: 703-356-4020
Sections 307 & 309 of IRAA directed EPA to list and identify areas of U.S. with the potential for elevated indoor radon levels.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

OTHER

Airport Landing Facilities: Private and public use landing facilities
Source: Federal Aviation Administration, 800-457-6656

Epicenters: World earthquake epicenters, Richter 5 or greater
Source: Department of Commerce, National Oceanic and Atmospheric Administration

California Earthquake Fault Lines: The fault lines displayed on EDR's Topographic map are digitized quaternary fault lines, prepared in 1975 by the United State Geological Survey. Additional information (also from 1975) regarding activity at specific fault lines comes from California's Preliminary Fault Activity Map prepared by the California Division of Mines and Geology.

STREET AND ADDRESS INFORMATION

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CITY OF REDLANDS CALIFORNIA STRE
1950 NEVADA ST
REDLANDS, CA 92374

Inquiry Number:
December 6, 2010

EDR Site Report™

EDR® Environmental Data Resources Inc

440 Wheelers Farms Road
Milford, CT 06461
Toll Free: 800.352.0050
www.edrnet.com

TABLE OF CONTENTS

The EDR-Site Report™ is a comprehensive presentation of government filings on a facility identified in a search of federal, state and local environmental databases. The report is divided into three sections:

Section 1: Facility Summary . . . . . **Page 3**

Summary of facility filings including a review of the following areas: waste management, waste disposal, multi-media issues, and Superfund liability.

Section 2: Facility Detail Reports . . . . . **Page 4**

All available detailed information from databases where sites are identified.

Section 3: Databases and Update Information. . . . . . **Page 7**

Name, source, update dates, contact phone number and description of each of the databases for this report.

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

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SECTION 1: FACILITY SUMMARY

FACILITY AREA	FACILITY 1 CITY OF REDLANDS CALIFORNIA STREET LANDFILI 1950 NEVADA ST REDLANDS, CA 92374 EDR ID #S101301246
WASTE MANAGEMENT Facility generates hazardous waste (RCRA)	NO
Facility treats, stores, or disposes of hazardous waste on-site (RCRA/TSDF)	NO
Facility has received Notices of Violations (RCRA/VIOL)	NO
Facility has been subject to RCRA administrative actions (RAATS)	NO
Facility has been subject to corrective actions (CORRACTS)	NO
Facility handles PCBs (PADS)	NO
Facility uses radioactive materials (MLTS)	NO
Facility manages registered aboveground storage tanks (AST)	NO
Facility manages registered underground storage tanks (UST)	NO
Facility has reported leaking underground storage tank incidents (LUST)	**YES - p4**
Facility has reported emergency releases to the soil (ERNS)	NO
Facility has reported hazardous material incidents to DOT (HMIRS)	NO
WASTE DISPOSAL Facility is a Superfund Site (NPL)	NO
Facility has a known or suspect abandoned, inactive or uncontrolled hazardous waste site (CERCLIS)	NO
Facility has a reported Superfund Lien on it (LIENS)	NO
Facility is listed as a state hazardous waste site (SHWS)	NO
Facility has disposed of solid waste on-site (SWF/LF)	NO
MULTIMEDIA Facility uses toxic chemicals and has notified EPA under SARA Title III, Section 313 (TRIS)	NO
Facility produces pesticides and has notified EPA under Section 7 of FIFRA (SSTS)	NO
Facility manufactures or imports toxic chemicals on the TSCA list (TSCA)	NO
Facility has inspections under FIFRA, TSCA or EPCRA (FTTS)	NO
Facility is listed in EPA's index system (FINDS)	NO
Facility is listed in a county/local unique database (LOCAL)	**YES - p6**
POTENTIAL SUPERFUND LIABILITY Facility has a list of potentially responsible parties PRP	NO
TOTAL (YES)	2

SECTION 2: FACILITY DETAIL REPORTS

WASTE MANAGEMENT

Facility has reported leaking underground storage tank incidents

DATABASE: Leaking Petroleum Storage Tank Database (LUST)

CITY OF REDLANDS CALIFORNIA STREET LANDFILL
1950 NEVADA ST
REDLANDS, CA 92374
EDR ID #S101301246

LUST:

Region:	STATE
Global Id:	T0607100280
Latitude:	34.0615432
Longitude:	-117.217488
Case Type:	LUST Cleanup Site
Status:	Completed - Case Closed
Status Date:	1995-04-19 00:00:00
Lead Agency:	SAN BERNARDINO COUNTY LOP
Case Worker:	BM7
Local Agency:	SAN BERNARDINO COUNTY LOP
RB Case Number:	083602258T
LOC Case Number:	93014
File Location:	Local Agency
Potential Media Affect:	Soil
Potential Contaminants of Concern:	Diesel, Gasoline
Site History:	Not reported

Click here to access the California GeoTracker records for this facility:

LUST REG 8:

Region:	8
County:	San Bernardino
Regional Board:	Santa Ana Region
Facility Status:	Case Closed
Case Number:	083602258T
Local Case Num:	93014
Case Type:	Soil only
Substance:	12034, 80066
Qty Leaked:	Not reported
Abate Method:	Not reported
Cross Street:	PALMETTO
Enf Type:	CLOS
Funding:	Not reported
How Discovered:	Tank Closure
How Stopped:	Not reported
Leak Cause:	UNK
Leak Source:	UNK
Global ID:	T0607100280
How Stopped Date:	Not reported
Enter Date:	6/21/1993
Review Date:	Not reported
Prelim Assess:	Not reported
Discover Date:	4/8/1993
Enforcement Date:	Not reported
Close Date:	4/19/1995
Workplan:	Not reported
Pollution Char:	Not reported
Remed Plan:	Not reported
Remed Action:	12/6/1994
Monitoring:	Not reported
Enter Date:	6/21/1993
GW Qualifies:	Not reported
Soil Qualifies:	Not reported
Operator:	Not reported
Facility Contact:	Not reported
Interim:	Not reported
Oversite Program:	LUST
Latitude:	34.2621026
Longitude:	-117.2289432
MTBE Date:	Not reported
Max MTBE GW:	Not reported
MTBE Concentration:	1
Max MTBE Soil:	Not reported
MTBE Fuel:	0
MTBE Tested:	MTBE Detected. Site tested for MTBE & MTBE detected
MTBE Class:	*
Staff:	VJJ
Staff Initials:	BM7

Lead Agency:	Local Agency
Local Agency:	36000L
Hydr Basin #:	UPPER MOJAVE RIVER V
Beneficial:	Not reported
Priority:	Not reported
Cleanup Fund Id:	Not reported
Work Suspended:	Not reported
Summary:	Not reported

MULTIMEDIA

Facility is listed in a county/local unique database

DATABASE: State/County (LOCAL)

CITY OF REDLANDS CALIFORNIA STREET LANDFILL
1950 NEVADA ST
REDLANDS, CA 92374
EDR ID #S101301246

CORTESE:

Region:	CORTESE
Facility County Code:	36
Reg By:	LTNKA
Reg Id:	083602258T

EMI:

Year:	1987
County Code:	36
Air Basin:	SC
Facility ID:	5756
Air District Name:	SC
SIC Code:	4953
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	0
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0

Year:	1990
County Code:	36
Air Basin:	SC
Facility ID:	5756
Air District Name:	SC
SIC Code:	4953
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	0
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0

SECTION 3: DATABASES AND UPDATE DATES

To maintain currency of the following federal, state and local databases, EDR contacts the appropriate government agency on a monthly or quarterly basis as required.

Elapsed ASTM days: Provides confirmation that this report meets or exceeds the 90-day updating requirement of the ASTM standard.

DATABASES FOUND IN THIS REPORT

CA LUST: Geotracker's Leaking Underground Fuel Tank Report
Source: State Water Resources Control Board
Telephone: Not reported
Leaking Underground Storage Tank Incident Reports. LUST records contain an inventory of reported leaking underground storage tank incidents. Not all states maintain these records, and the information stored varies by state. For more information on a particular leaking underground storage tank sites, please contact the appropriate regulatory agency.

Date of Government Version: 10/28/2010
Database Release Frequency: Quarterly
Date of Last EDR Contact: 10/28/2010
Date of Next Scheduled Update: 01/03/2011

CA LUST REG 6L: Leaking Underground Storage Tank Case Listing
Source: California Regional Water Quality Control Board Lahontan Region (6)
Telephone: 530-542-5572
For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 09/09/2003
Database Release Frequency: No Update Planned
Date of Last EDR Contact: 09/13/2010
Date of Next Scheduled Update: 12/27/2010

CA LUST REG 6V: Leaking Underground Storage Tank Case Listing
Source: California Regional Water Quality Control Board Victorville Branch Office (6)
Telephone: 760-241-7365
Leaking Underground Storage Tank locations. Inyo, Kern, Los Angeles, Mono, San Bernardino counties.

Date of Government Version: 06/07/2005
Database Release Frequency: No Update Planned
Date of Last EDR Contact: 09/13/2010
Date of Next Scheduled Update: 09/27/2010

CA NAPA CO. LUST: Sites With Reported Contamination
Source: Napa County Department of Environmental Management
Telephone: 707-253-4269
A listing of leaking underground storage tank sites located in Napa county.

Date of Government Version: 07/09/2008
Database Release Frequency: No Update Planned
Date of Last EDR Contact: 12/06/2010
Date of Next Scheduled Update: 03/21/2011

CA ORANGE CO. LUST: List of Underground Storage Tank Cleanups
Source: Health Care Agency
Telephone: 714-834-3446
Orange County Underground Storage Tank Cleanups (LUST).

Date of Government Version: 08/05/2010
Database Release Frequency: Quarterly
Date of Last EDR Contact: 11/16/2010
Date of Next Scheduled Update: 02/28/2011

CA LUST REG 1: Active Toxic Site Investigation
Source: California Regional Water Quality Control Board North Coast (1)
Telephone: 707-570-3769
Del Norte, Humboldt, Lake, Mendocino, Modoc, Siskiyou, Sonoma, Trinity counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 02/01/2001
Database Release Frequency: No Update Planned
Date of Last EDR Contact: 11/01/2010
Date of Next Scheduled Update: 02/14/2011

SECTION 3: DATABASES AND UPDATE DATES

...Continued...

CA LUST REG 2: Fuel Leak List
Source: California Regional Water Quality Control Board San Francisco Bay Region (2)
Telephone: 510-622-2433
Leaking Underground Storage Tank locations. Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano, Sonoma counties.

Date of Government Version: 09/30/2004
Database Release Frequency: Quarterly
Date of Last EDR Contact: 09/20/2010
Date of Next Scheduled Update: 01/03/2011

CA LUST REG 3: Leaking Underground Storage Tank Database
Source: California Regional Water Quality Control Board Central Coast Region (3)
Telephone: 805-542-4786
Leaking Underground Storage Tank locations. Monterey, San Benito, San Luis Obispo, Santa Barbara, Santa Cruz counties.

Date of Government Version: 05/19/2003
Database Release Frequency: No Update Planned
Date of Last EDR Contact: 10/18/2010
Date of Next Scheduled Update: 01/31/2011

CA LUST REG 4: Underground Storage Tank Leak List
Source: California Regional Water Quality Control Board Los Angeles Region (4)
Telephone: 213-576-6710
Los Angeles, Ventura counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 09/07/2004
Database Release Frequency: No Update Planned
Date of Last EDR Contact: 12/06/2010
Date of Next Scheduled Update: 03/21/2011

CA LUST REG 5: Leaking Underground Storage Tank Database
Source: California Regional Water Quality Control Board Central Valley Region (5)
Telephone: 916-464-4834
Leaking Underground Storage Tank locations. Alameda, Alpine, Amador, Butte, Colusa, Contra Costa, Calveras, El Dorado, Fresno, Glenn, Kern, Kings, Lake, Lassen, Madera, Mariposa, Merced, Modoc, Napa, Nevada, Placer, Plumas, Sacramento, San Joaquin, Shasta, Solano, Stanislaus, Sutter, Tehama, Tulare, Tuolumne, Yolo, Yuba counties.

Date of Government Version: 07/01/2008
Database Release Frequency: Quarterly
Date of Last EDR Contact: 10/04/2010
Date of Next Scheduled Update: 01/17/2011

CA LUST REG 7: Leaking Underground Storage Tank Case Listing
Source: California Regional Water Quality Control Board Colorado River Basin Region (7)
Telephone: 760-776-8943
Leaking Underground Storage Tank locations.

Date of Government Version: 02/26/2004
Database Release Frequency: No Update Planned
Date of Last EDR Contact: 11/01/2011
Date of Next Scheduled Update: 02/14/2011

CA LUST REG 8: Leaking Underground Storage Tanks
Source: California Regional Water Quality Control Board Santa Ana Region (8)
Telephone: 909-782-4496
California Regional Water Quality Control Board Santa Ana Region (8). For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 02/14/2005
Database Release Frequency: Varies
Date of Last EDR Contact: 10/18/2010
Date of Next Scheduled Update: 01/31/2011

CA LUST REG 9: Leaking Underground Storage Tank Report
Source: California Regional Water Quality Control Board San Diego Region (9)
Telephone: 858-637-5595
Orange, Riverside, San Diego counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 03/01/2001
Database Release Frequency: No Update Planned
Date of Last EDR Contact: 09/27/2010
Date of Next Scheduled Update: 01/10/2011

CA RIVERSIDE CO. LUST: Listing of Underground Tank Cleanup Sites
Source: Department of Public Health
Telephone: 951-358-5055
Riverside County Underground Storage Tank Cleanup Sites (LUST).

Date of Government Version: 10/25/2010
Database Release Frequency: Quarterly

Date of Last EDR Contact: 09/27/2010
Date of Next Scheduled Update: 01/10/2011

CA SAN MATEO CO. LUST: Fuel Leak List
Source: San Mateo County Environmental Health Services Division
Telephone: 650-363-1921
A listing of leaking underground storage tank sites located in San Mateo county.

Date of Government Version: 09/20/2010
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 09/20/2010
Date of Next Scheduled Update: 10/04/2010

CA LUST SANTA CLARA: LOP Listing
Source: Department of Environmental Health
Telephone: 408-918-3417
A listing of leaking underground storage tanks located in Santa Clara county.

Date of Government Version: 05/29/2009
Database Release Frequency: Annually

Date of Last EDR Contact: 12/06/2010
Date of Next Scheduled Update: 03/21/2011

CA SAN FRANCISCO CO. LUST: Local Oversite Facilities
Source: Department Of Public Health San Francisco County
Telephone: 415-252-3920
A listing of leaking underground storage tank sites located in San Francisco county.

Date of Government Version: 09/19/2008
Database Release Frequency: Quarterly

Date of Last EDR Contact: 11/22/2010
Date of Next Scheduled Update: 02/28/2011

CA SOLANO CO. LUST: Leaking Underground Storage Tanks
Source: Solano County Department of Environmental Management
Telephone: 707-784-6770
A listing of leaking underground storage tank sites located in Solano county.

Date of Government Version: 09/07/2010
Database Release Frequency: Quarterly

Date of Last EDR Contact: 12/06/2010
Date of Next Scheduled Update: 03/21/2011

CA SONOMA CO. LUST: Leaking Underground Storage Tank Sites
Source: Department of Health Services
Telephone: 707-565-6565
A listing of leaking underground storage tank sites located in Sonoma county.

Date of Government Version: 10/04/2010
Database Release Frequency: Quarterly

Date of Last EDR Contact: 10/04/2010
Date of Next Scheduled Update: 01/17/2011

CA VENTURA CO. LUST: Listing of Underground Tank Cleanup Sites
Source: Environmental Health Division
Telephone: 805-654-2813
Ventura County Underground Storage Tank Cleanup Sites (LUST).

Date of Government Version: 05/29/2008
Database Release Frequency: Quarterly

Date of Last EDR Contact: 11/22/2010
Date of Next Scheduled Update: 03/07/2011

CA HIST CORTESE: Hazardous Waste & Substance Site List
Source: Department of Toxic Substances Control
Telephone: 916-323-3400
The sites for the list are designated by the State Water Resource Control Board [LUST], the Integrated Waste Board [SWF/LS], and the Department of Toxic Substances Control [CALSITES].

Date of Government Version: 04/01/2001
Database Release Frequency: No Update Planned

Date of Last EDR Contact: 01/22/2009
Date of Next Scheduled Update: Not reported

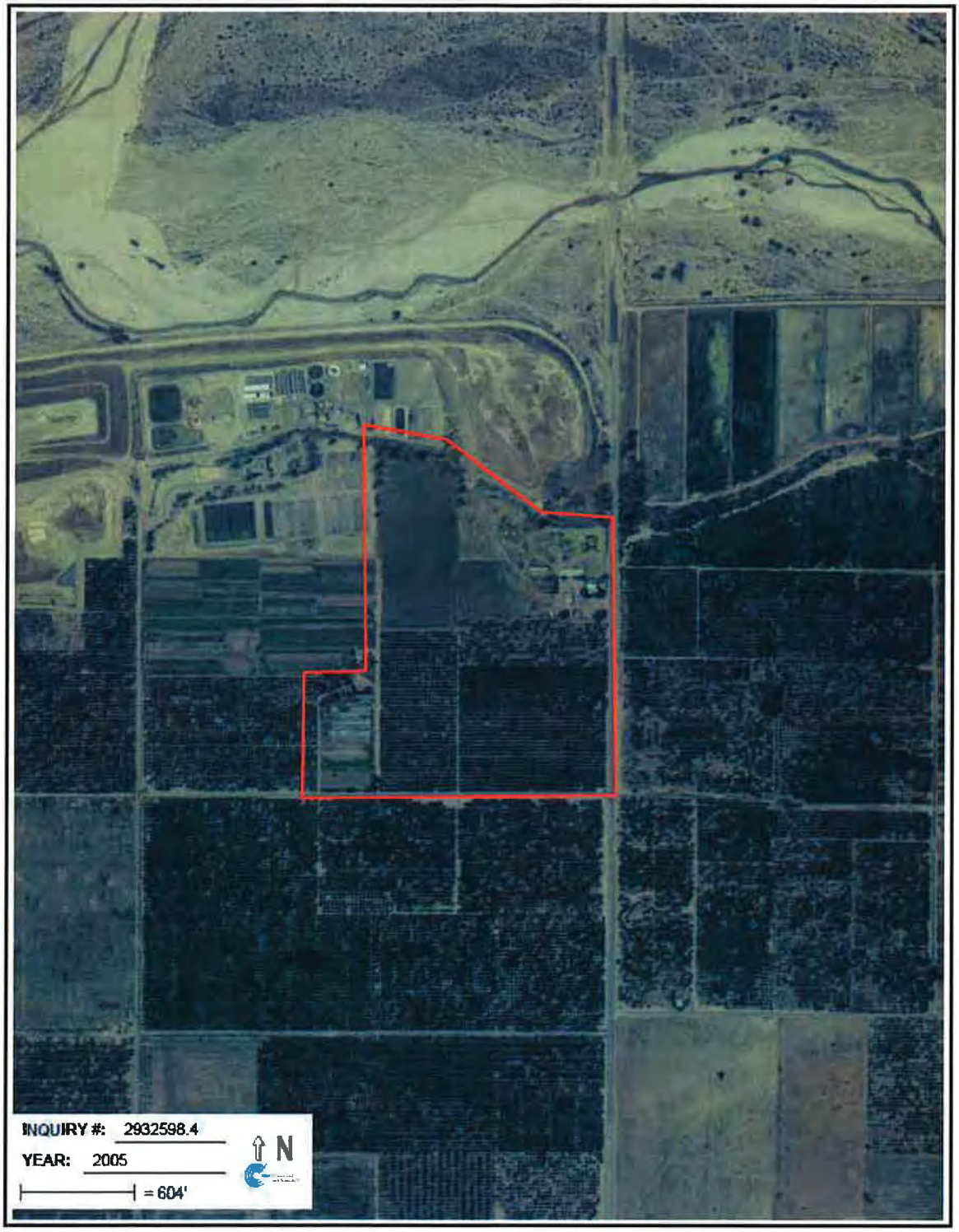
CA EMI: Emissions Inventory Data
Source: California Air Resources Board
Telephone: 916-322-2990
Toxics and criteria pollutant emissions data collected by the ARB and local air pollution agencies.

Date of Government Version: 12/31/2008
Database Release Frequency: Varies

Date of Last EDR Contact: 09/29/2010
Date of Next Scheduled Update: 01/10/2011

1930 Aerial Photograph
Source: EDR
Scale: 1" = 666'

Approximately 55-acre Vacant Tract
Redlands, California
EI Project No. ENTX10006.00



2005 Aerial Photograph
Source: EDR
Scale: 1" = 666'

Approximately 55-acre Vacant Tract
Redlands, California
EI Project No. ENTX100026.00

APPENDIX G

SANBORN MAPS

Vacant Land
Palmetto Avenue/Alabama Street
Redlands, CA 92374

Inquiry Number: 2932598.3
November 30, 2010

Certified Sanborn® Map Report

EDR® Environmental Data Resources Inc

440 Wheelers Farms Road
Milford, CT 06461
800.352.0050
www.edrnet.com

Certified Sanborn® Map Report

11/30/10

Site Name:
Vacant Land
Palmetto Avenue/Alabama
Redlands, CA 92374

Client Name:
EI Group
1900 Preston Road
Plano, TX 75093

EDR Inquiry # 2932598.3

Contact: Susan Mazzarella

EDR® Environmental Data Resources Inc

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Certified Sanborn Results:

Site Name: Vacant Land
Address: Palmetto Avenue/Alabama Street
City, State, Zip: Redlands, CA 92374
Cross Street:
P.O. # NA
Project: NA
Certification # 7838-4D10-991A

Sanborn® Library search results
Certification # 7838-4D10-991A

UNMAPPED PROPERTY

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- ✔ Library of Congress
- ✔ University Publications of America
- ✔ EDR Private Collection

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APPENDIX H

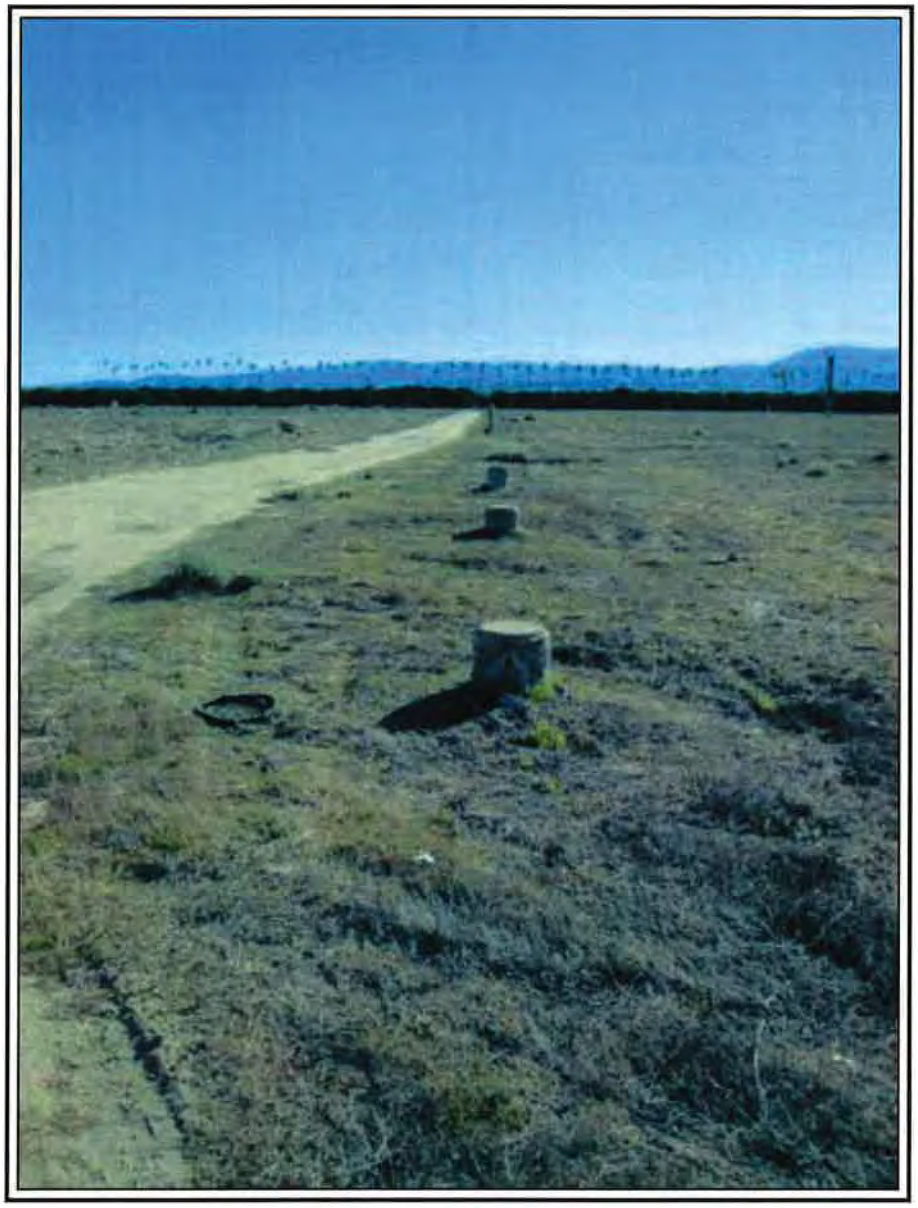
SITE PHOTOGRAPHS

Photograph 1: View of Site from west

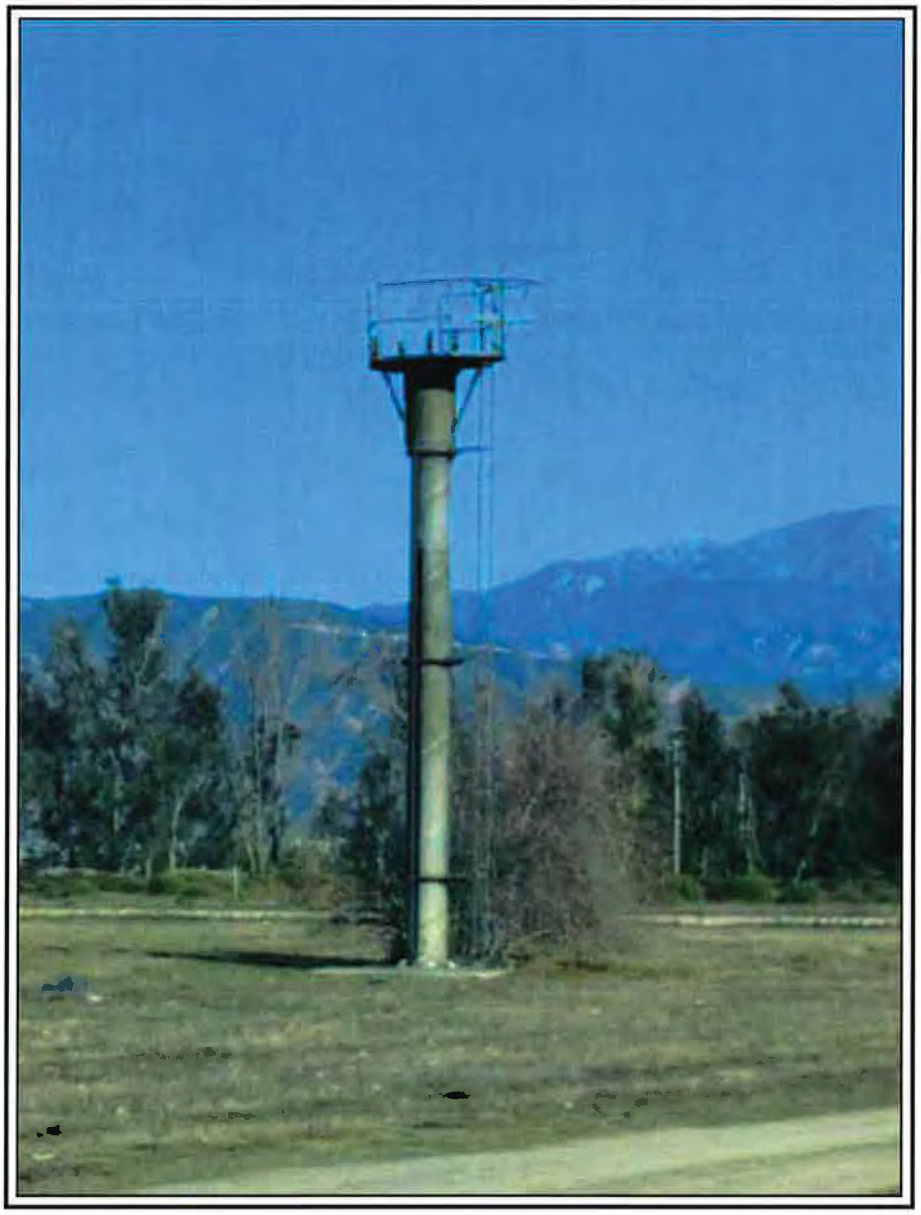
Photograph 2: Northwest adjacent property

Photograph 3: West adjacent property

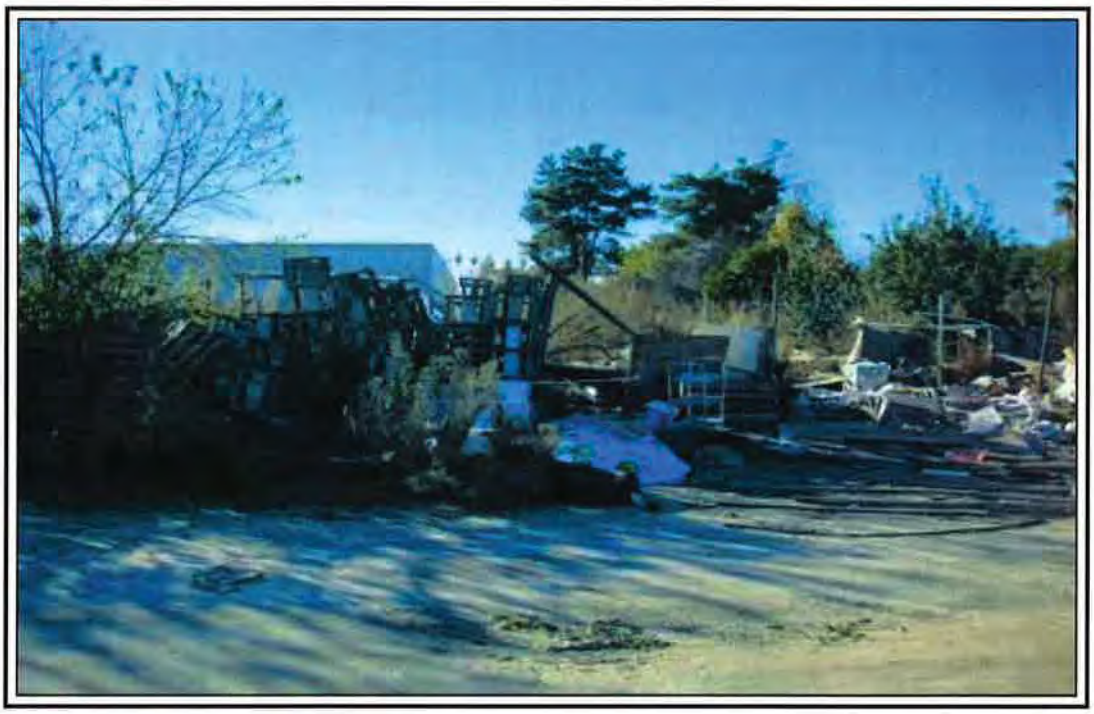
Photograph 4: Southwest adjacent property (Redlands Logistic Center)



Photograph 5: Remnants of valve boxes for the irrigation system



Photograph 6: Wind generator tower



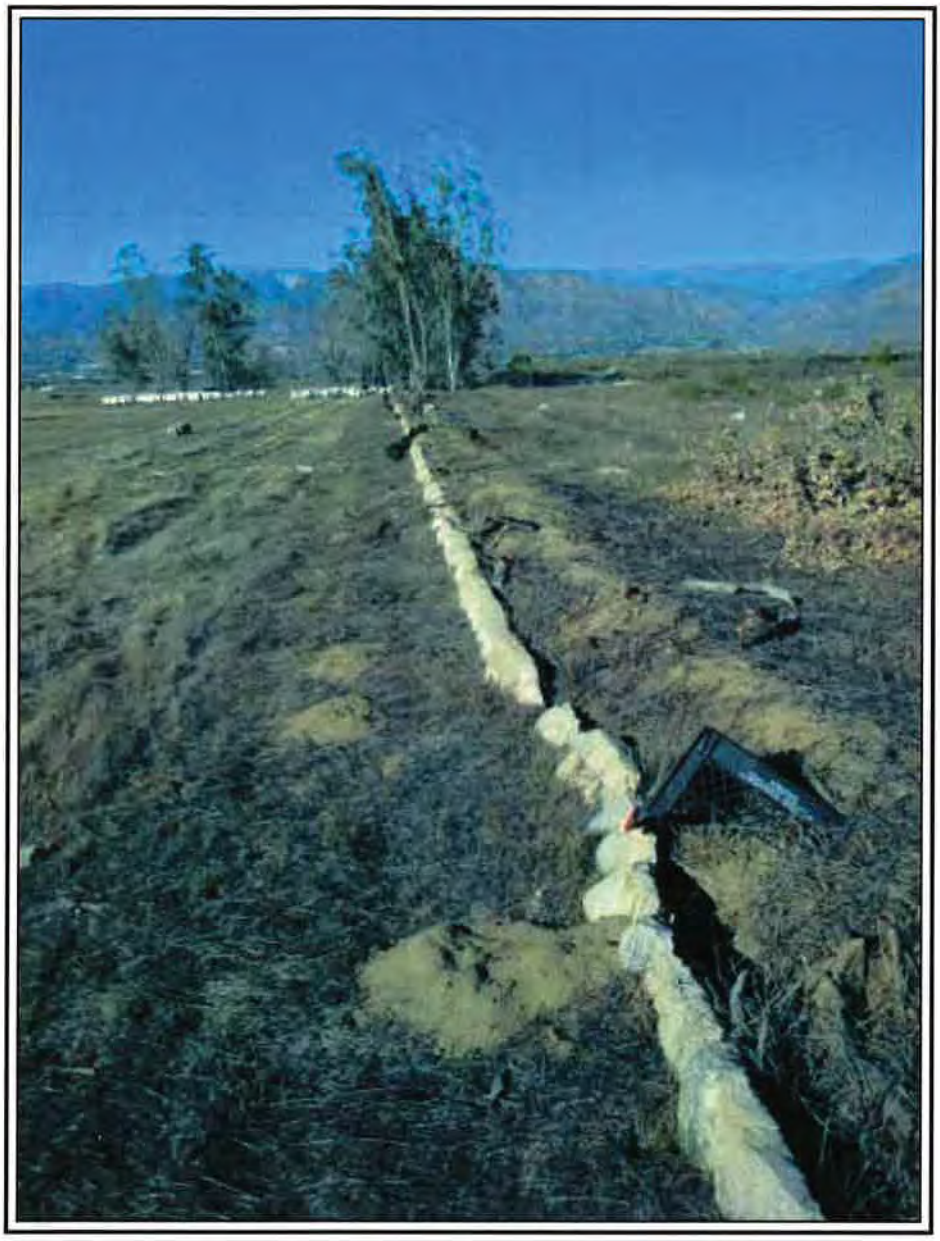
Photograph 7: Debris located on west side of Site

Photograph 8: Example of sewer manholes located throughout Site

Photograph 9: Pump with stained concrete at southwest area of Site

Photograph 10: Pump connected to water well (concrete staining shown on left side of photo)

Photograph 11: Bee boxes located on northern area of Site



Photograph 12: Portion of wall that runs north to south through approximately half the Site

Photograph 13: Abandoned vehicle (may be property of agricultural operation adjacent to the west)

Environmental

PREPARED AT THE REQUEST OF LEGAL COUNSEL
PRIVILEGED AND CONFIDENTIAL

PHASE I ENVIRONMENTAL SITE ASSESSMENT REPORT

0.77 ACRE VACANT TRACT
0.25 MILES NORTH
INTERSECTION OF RIVERBLUFF AVENUE AND ALABAMA STREET
REDLANDS, SAN BERNARDINO COUNTY, CALIFORNIA

PREPARED FOR

MCLANE COMPANY, INC.
4747 MCLANE PARKWAY
TEMPLE, TEXAS 76504

BY

THE EI GROUP, INC.
1900 PRESTON ROAD
#267, PMB 275
PLANO, TEXAS 75093
(972) 612-6900
(972) 758-1902 FAX

NOVEMBER 11, 2011
EI PROJECT NO. ENTX110008.00

PREPARED AT THE REQUEST OF LEGAL COUNSEL – PRIVILEGED AND CONFIDENTIAL

PHASE I ENVIRONMENTAL SITE ASSESSMENT REPORT

0.77 ACRE VACANT TRACT
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THE EI GROUP, INC.
1900 PRESTON ROAD
#267, PMB 275
PLANO, TEXAS 75093

NOVEMBER 11, 2011

EI PROJECT NO. ENTX110008.00

WE DECLARE THAT, TO THE BEST OF OUR PROFESSIONAL KNOWLEDGE AND BELIEF, WE MEET THE DEFINITION OF *ENVIRONMENTAL PROFESSIONAL* AS DEFINED IN §312.10 OF 40 CFR 312. WE HAVE THE SPECIFIC QUALIFICATIONS BASED ON EDUCATION, TRAINING, AND EXPERIENCE TO ASSESS A PROPERTY OF THE NATURE, HISTORY, AND SETTING OF THE SITE. WE HAVE DEVELOPED AND PERFORMED THE ALL APPROPRIATE INQUIRIES IN CONFORMANCE WITH THE STANDARDS AND PRACTICES SET FORTH IN 40 CFR PART 312.

RESUMES OF ENVIRONMENTAL PROFESSIONALS DIRECTLY RESPONSIBLE FOR THIS ASSESSMENT ARE PRESENTED IN APPENDIX A OF THIS REPORT.

Susan L. Mazzarella
Susan L. Mazzarella, LEED AP
Principal Consultant

Signature

L G Michel
Larry G. Michel
Director, Texas Operations

Signature

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PREPARED AT THE REQUEST OF LEGAL COUNSEL – PRIVILEGED AND CONFIDENTIAL

PHASE I ENVIRONMENTAL SITE ASSESSMENT REPORT
0.77 ACRE VACANT TRACT
0.25 MILES NORTH OF RIVERBLUFF AVENUE AND ALABAMA STREET
REDLANDS, SAN BERNARDINO COUNTY, CALIFORNIA

EXECUTIVE SUMMARY

The EI Group, Inc. has performed a Phase I Environmental Site Assessment in conformance with the scope and limitations of ASTM Practice E 1527-05 of the 0.77 acre vacant tract of land located about 0.25 miles north of the intersection of Riverbluff Avenue and Alabama Street in Redlands, San Bernardino County, California (the Site). Any exceptions to, or deletions from, this practice are described in **Section 7.0** of this report.

This assessment has revealed no evidence of *current or historical recognized environmental conditions* on the Site.

The Site is not included on any of the Federal regulatory databases reviewed.

The City of Redlands historically operated the California Street Landfill at 1950 Nevada Avenue, west and cross/downgradient of the Site. That facility is listed on the State leaking underground storage tank (LUST) database with a case status of "closed". This listing is a *historical recognized environmental condition* in connection with the Site; however, due to its distance and cross-gradient location, it is not considered a current environmental impairment for the Site.

Norton Air Force Base, now San Bernardino International Airport, located approximately 0.5 miles north and west of the Site, appears on the Federal National Priorities List (NPL) and is now closed. The listing is due to regional groundwater contamination by volatile organic compounds associated with historical operations at the Air Force Base. This listing is a *historical recognized environmental condition* in connection with the Site; however, but to its distance and environmental regulatory status, it is not considered a current environmental impairment for the Site.

1.0 INTRODUCTION

The EI Group, Inc. (EI) was retained by the Legal Department of McLane Company, Inc. (Client or User) to complete a Phase I Environmental Site Assessment (ESA) of the 0.77 acre vacant tract of land located about 0.25 miles north of the intersection of Riverbluff Avenue and Alabama Street in Redlands, San Bernardino County, California (the Site). The Phase I ESA was performed in general accordance with the scope and limitations of the American Society for Testing and Materials (ASTM) E 1527-05 *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process.* The scope of services for this Phase I ESA is contained in our September 14, 2011, proposal as authorized by Client on September 16, 2011.

1.1 PURPOSE

The purpose of a Phase I ESA is to identify *recognized environmental conditions*[1] (REC) in connection with a property, and to permit the user to satisfy one of the requirements to qualify for the *innocent landowner, contiguous property owner or bona fide prospective purchaser* limitations on *Comprehensive Environmental Response, Compensation and Liability Act* (CERCLA) liability (collectively referred to as *landowner liability protections* or *LLPs*).

The Phase I ESA may also be used to qualitatively assess the business environmental risk associated with acquisition of a property; however, such an assessment may necessitate investigation beyond the scope of the ASTM E 1527-05 Standard Practice.

1.2 SCOPE OF SERVICES

The scope of services authorized by Client for this Phase I ESA included:

- A visual and physical reconnaissance of the Site;
- Observation of adjoining properties from publicly accessible areas;
- Interviews with the user, past and present owners, operators and occupants of the Site as available;
- A review of publicly available, practically reviewable ASTM standard environmental record sources;
- A review of available and applicable building inspection, permitting, and other environmental records maintained by county and/or local agencies, and interviews with local agency representatives;

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[1] **ASTM defines a *recognized environmental condition* as "...the presence or likely presence of any *hazardous substances* or *petroleum products* on a *property* under conditions that indicate an existing release, a past release or a *material threat* of a release of any *hazardous substances* or *petroleum products* into structures on the *property* or into the ground, ground water, or surface water of the *property*. The term includes *hazardous substances* or *petroleum products* even under conditions in compliance with laws. The term is not intended to include *de minimis* conditions that generally do not present a threat to human health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies.**

- A review of available previous environmental reports if provided by Client, aerial photographs, city directories, fire insurance maps, geologic maps, hydrogeologic maps, and United States Geological Survey (USGS) topographic maps; and

- An evaluation of the information obtained and preparation of this report to document our findings and the resulting conclusions and recommendations.

1.3 Significant Assumptions

For purposes of this assessment, EI assumes that information provided by others, including but not necessarily limited to, the User, past or present Owners, Key Site Manager, occupants, local and/or State government officials and environmental regulatory database providers is true and correct.

1.4 Limitations and Exceptions

The limitations of this Phase I ESA included:

- Preparation and review of a chain-of-title were not included in the scope of services for this project;

- ASTM "Non-Scope Considerations" such as asbestos-containing materials, radon, lead-based paint, lead in drinking water, wetlands, regulatory compliance, cultural and historic resources, industrial hygiene, health and safety, ecological resources, endangered species, indoor air quality, and high-voltage power lines were not included as part of this assessment.

1.5 Special Terms and Conditions

The services described in this report were performed in a manner consistent with generally accepted professional consulting principles and practices and in accordance with the practices and scope of service elements recommended by ASTM for a Phase I ESA. Our services were performed in accordance with our agreement with our Client. No other warranty, expressed or implied, is made.

1.6 User Reliance

This report has been prepared for, on behalf, and in the name of McLane Company, Inc. and cannot be relied upon by any other party without the prior written consent of EI. This report is an instrument of service prepared for the exclusive use of McLane Company, Inc., and may not be reproduced or distributed without the prior written authorization from The EI Group, Inc. and McLane Company, Inc. This report is solely for the use and information of our Client or as otherwise noted. Any unauthorized use of this report is strictly prohibited and we assume no liability for any such use.

2.0 SITE DESCRIPTION

2.1 LOCATION AND LEGAL DESCRIPTION

The Site is a 0.77 acre vacant tract of land located about 0.25 miles north of the intersection of Riverbluff Avenue and Alabama Street in Redlands, San Bernardino County, California, at latitude 34.089400 north, longitude 117.209700 west (see **Figure 1**). According to our interview with Mr. Donald Teunissen, the Site's owner, the Site consists of the following parcel with the following Assessor's Parcel Number (APN):

APN: 0167-391-06

A Parcel Map and a legal description for the Site provided by Client are contained in **Appendix B**.

2.2 SITE AND VICINITY CHARACTERISTICS

The Site is located in an area of Redlands generally characterized by agricultural, commercial and municipal uses.

2.3 CURRENT SITE USE AND IMPROVEMENTS

The Site is currently vacant, and is littered with old tires, used lumber, agricultural debris and other general trash scattered about the Site (see **Figure 2**). In the center of the Site, EI observed a wooden shed containing dilapidated furniture.

Aside from the shed, no evidence of past permanent structures was visible. Mr. Teunissen also stated that no structure was present when he acquired the land from the city of Redlands in 1995 or 1996.

EI observed a concrete valve box, which Mr. Teunissen said was a groundwater monitoring well used by the City to monitor area groundwater quality in the immediate vicinity of the nearby landfill. Remnants of a former chain link fence were present in random locations around the perimeter of the Site.

2.4 ADJOINING PROPERTY USE

EI observed the following adjacent property uses from the Site and/or publicly accessible rights-of-way.

North
Santa Ana River

West
City of Redlands California Street Landfill. According to EI's 2010 telephone interview with the City of Redlands Public Works Department's Solid Waste Manager Mr. Gary Van Dorst, the landfill has been capped and covered with vegetation since 1970.

East
Prologis distribution facility, treated water retention ponds and a large vacant field

South
Vacant field and Palmetto Avenue

Northwest
City of Redlands Water Reclamation facility as well as the City's Class III Landfill for non hazardous solid wastes.

3.0 USER PROVIDED INFORMATION

A Phase I Environmental Site Assessment User Questionnaire (ESA Questionnaire) was submitted to the Client (User), and was completed by Client and returned to EI (**Appendix C**). The following is a summary of information provided.

3.1 TITLE RECORDS

Review of a chain-of-title for the Site was not requested by Client.

3.2 ENVIRONMENTAL LIENS / ACTIVITY AND USE LIMITATIONS

Review of environmental liens for the Site was not requested by Client. The Client was not aware of any liens or activity and use limitations (AUL) for the Site.

3.3 SPECIALIZED KNOWLEDGE

The Client did not report any specialized knowledge of the Site.

3.4 COMMONLY KNOWN OR REASONABLY ASCERTAINABLE INFORMATION

The Client did not report any commonly known or reasonably ascertainable information regarding the Site that would help the Environmental Professional identify conditions indicative of releases or threatened releases of petroleum products or hazardous materials at the Site.

3.5 VALUATION REDUCTION FOR ENVIRONMENTAL ISSUES

The User of the report indicated that the purchase price for the Site is consistent with the fair market value.

3.6 OWNER, PROPERTY MANAGER AND OCCUPANT INFORMATION

The Client identified Mr. Donald Teunissen as the current owner.

3.7 REASON FOR PERFORMING PHASE I ESA

The Client indicated that the Phase I ESA was requested in support of its environmental due diligence in association with a contemplated real estate transaction.

3.8 PREVIOUS REPORTS

The user provided the following previous environmental reports, pertaining to an adjoining site, for EI's review.

Phase I Environmental Site Assessment Report, Teunissen Property; LFR, Inc., 2006

The LFR report did not identify evidence of *recognized environmental conditions* at the Site. Observations and recommendations presented in the report include the following.

- Numerous 55 gallon and smaller drums were located on the Site at the time of LFR's Site reconnaissance, as were several pieces farm equipment and old

vehicles. LFR recommended that these items be removed from the Site and properly disposed.

- At least two septic systems were located on the Site.
- LFR reported the possible presence of an abandoned fuel UST on Site and recommended proper removal of it in accordance with applicable regulations.
- LFR reported the potential presence of asbestos-containing materials (ACMs) and lead-based paint (LBP) in remaining structures on the Site should be removed in accordance with applicable regulations.
- LFR recommended that development activities on the western half of the Site account for the potential presence of subsurface features such as irrigation lines.

Phase I Environmental Site Assessment Report, Fainbarg and Perricone Parcels; Nova Consultants, Inc.; 2006

Nova Consultants (Nova) did not identify evidence of *recognized environmental conditions* at the Site. Observations and recommendations presented in the report include the following.

- Site grading operations may encounter septic tanks associated with a small farmhouse located along the eastern boundary of parcel 24.
- Historic operations at Norton Air Force Base, located approximately one mile northwest of the Site, have contaminated groundwater beneath the Site with chlorinated solvents. The groundwater contaminant plume extends southwesterly from the Site.
- Regional groundwater contamination is present from agricultural drainage, urban runoff, septic systems, sewer collection systems, etc.
- The Grant Sewage Disposal ponds are located approximately 0.25 miles north of the Site. The presence of the facility could represent a concern for future development of the Site if sensitive receptors are part of the planned development.
- Two 150-gallon above ground storage tanks were observed near the southeastern corner of Parcel 34.
- Pole-mounted transformers located along Palmetto Avenue may contain polychlorinated bi-phenyls (PCBs) due to the age of property.
- Pesticides, fertilizers, and herbicides were probably historically used at the Site.

- Nova recommended proper removal and disposal of demolition debris and household trash located on the Sit

- Nova noted the possibility of small USTs on Site due to diesel powered wind generators, and that the USTs may require removal. Similarly, smudge pots observed at the Site will also require proper removal.

- Nova also noted that Site grading operations may encounter irrigation piping and associated appurtenances.

- Nova recommended that two groundwater wells located near the southeastern corner of Parcel 34 will require proper plugging and abandonment.

4.0 RECORDS REVIEW

4.1 STANDARD ENVIRONMENTAL RECORD SOURCES

EI obtained information for the Site from the following local, State and Federal sources.

4.1.1 Local Sources

EI contacted the following local agencies for information about the Site. Records of Communication with the following City of Redlands representatives are presented in **Appendix D**.

Engineering Department

According to Mr. John Morales of the City of Redlands Engineering Department, records indicate that a treated water overflow pipe that transmits the water to the retention ponds on the east side of Alabama Street is located beneath the Site. Mr. Morales also reported the potential that a sewer pipe is located beneath the Site.

Joint Lab

According to Ms. Rebecca Schwartz of the City of Redlands Joint Lab, there is no actively monitored well on the Site and she is not aware of any information regarding the "monitoring well" described by the Owner, Mr. Teunissen.

4.1.2 State and Tribal Sources

A review of State and Tribal regulatory files for facilities of environmental concern in the vicinity of the Site was performed by EDR, a private regulatory database research firm. A copy of the EDR report summarizing the results of the database review is presented as **Appendix E**.

SUMMARY OF STATE AND TRIBAL AGENCY DATABASE FINDINGS			
REGULATORY DATABASE	MINIMUM SEARCH DISTANCE	SITE LISTED	TOTAL LISTED
State Hazardous Waste Sites (STATE)	1 mile	No	
Solid Waste Disposal/Landfill Sites (SWL)	½ mile	No	2
Leaking Underground Storage Tank Sites (LUST)	½ mile	No	
Registered Underground/Aboveground Storage Tank Sites (UST/AST)	Property & Adjoining	Yes	1
Spills Cases (OCP)	Property & Adjoining	No	

SUMMARY OF STATE AND TRIBAL AGENCY DATABASE FINDINGS			
REGULATORY DATABASE	MINIMUM SEARCH DISTANCE	SITE LISTED	TOTAL LISTED
Activity or Use Limitations (AUL)	½ mile	No	
Voluntary Cleanup Sites (VCP)	½ mile	No	
Brownfield Sites	½ mile	No	
San Bernardino County Permits	¼-mile	No	5

Site

The State UST database lists one UST registered for the Site as AG-TEUNISSEN AGRICULTURAL 9092 ALABAMA ST. A review of prior Phase I ESA reports completed for the adjacent site in 2006 indicate that the UST was removed in 2001 and a "no further action" letter was issued by the San Bernardino County Fire Department, Hazardous Materials Division (HMD) on March 16, 2001. Site owner representative Mr. Tim Howard reported that during the excavation of citrus trees and their associated root systems on the property, no additional USTs were discovered at the Site.

Surrounding Properties

A review of the State LUST database revealed one LUST registered to the California Street Landfill. The release was remediated and the case "closed" in 1995. The release was gasoline that penetrated the soil only, with no groundwater contact. This location is topographically downgradient from the Site. This location was an "orphan" site on the EDR report, and was therefore not plotted on the radius map. A supplemental report from EDR for this facility is included in **Appendix E**.

A review of the Solid Waste Facility/Landfill Sites (SWF/LF) list indicates that there are two SWF/LF facilities within approximately 0.5 miles of the target Site.

One, HASKELL CO. INDUSTRIAL COMPOST 2130 NEVADA AVENUE W [*sic*], is within 0.5 miles of the Site in a topographically downgradient position. This facility appears to be a proposed location for composting of food waste, green materials, biosolids and wood waste. The listing does not provide any other relevant information.

The second, CALIFORNIA STREET LANDFILL 2151 NEVADA STREET [*sic*], is located within 0.25 miles of the Site in a topographically downgradient position. This facility is listed as an active solid waste landfill that accepts construction/demolition debris, mixed municipal waste, biosolids and other designated wastes. The property comprises approximately 115 acres. Financial assurance status is listed as

"Adequate", with closure planned for the year 2042. The listing does not provide any information that indicates environmental violations associated with this property.

A review of the Waste Management Unit Database System (WMUDS/SWAT) list, revealed one WMUDS/SWAT facility within approximately 0.5 miles of the Site. LANDFILL, CALIFORNIA STREET 2151 NEVADA ST [*sic*] is the same facility mentioned above. This property is listed as an active Solid Waste Class III landfill that accepts non-hazardous solid wastes. Other than a general statement that this class of landfill can cause a major threat to groundwater if violations occur, there is no information indicating any environmental issues related to the property.

4.1.3 Federal Sources

A review of Federal regulatory files for facilities of environmental concern in the vicinity of the Site was performed by EDR, a private regulatory database research firm. A copy of the EDR report summarizing the results of the review is presented as **Appendix F**.

SUMMARY OF FEDERAL AGENCY DATABASE FINDINGS			
REGULATORY DATABASE	MINIMUM SEARCH DISTANCE	SITE LISTED	TOTAL LISTED
National Priorities List (NPL)	1 mile	No	1
Delisted NPL	½ mile	No	
Comprehensive Environmental Response, Cleanup, and Liability Information System (CERCLIS) list	½ mile	No	
No Further Remedial Action Planned sites removed from CERCLIS (CERCLIS NFRAP) list	½ mile	No	
Resource Conservation and Recovery Act (RCRA) Corrective Action (CORRACTS) list	1 mile	No	
RCRA Treatment, Storage and Disposal (TSD) Facility list	½ mile	No	
RCRA Generators List	Property and Adjoining	No	
Institutional Control (IC) and Engineering Control (EC) list	Property	No	
Emergency Response Notification System (ERNS)	Property	No	
Department of Defense (DOD)	1 miles	No	1

SUMMARY OF FEDERAL AGENCY DATABASE FINDINGS			
REGULATORY DATABASE	MINIMUM SEARCH DISTANCE	SITE LISTED	TOTAL LISTED
Record of Decision (ROD)	1 mile	No	1

Site

The Site is not included in any of the Federal regulatory databases reviewed.

Adjoining Properties

No adjoining properties are included in any of the Federal regulatory databases reviewed.

Surrounding Properties

A review of the NPL list has revealed one NPL facility within 0.5 miles of the Site. USAF Norton Air Force Base located at I-10/US HWY 395 is approximately 0.25 miles of the Site in a topographically cross to upgradient position.

The EDR report includes extensive data regarding this facility. A summary of information for the facility includes the following.

"Norton Air Force Base (Norton), now San Bernardino International Airport, covers approximately 2,036 acres 58 miles east of Los Angeles near the City of San Bernardino, San Bernardino County, California. It is in a low-lying alluvial plain surrounded on the north and east by the San Bernardino Mountain Range. The base began operations in 1942 and has served as a major overhaul center for jet engines and the general repair of aircraft. Since 1962, the facility has served as a Military Airlift Command Base. In addition, Norton formerly had the responsibility for providing maintenance and logistics for liquid-fuel intercontinental ballistic missiles. Past hazardous waste management practices may have contributed to existing contamination problems throughout the base. The practices include burial of drums and other unspecified materials; disposal of waste oils, solvents and paint residues into landfills, unlined pits, ponds, and drying beds; storage in leaking underground tanks, and spills of AVGAS, oils, solvents, PCBs, and acidic plating solutions. Industrial solvents have been used extensively on the base."

The EPA website was consulted for a summary of the current status of this property, as follows.

"The third 5-Year Review completed in September 2010 revealed no protectiveness issues. As of 2009, primary contaminants trichloroethene and cis-1,2-dichloroethene no longer exceed their maximum contaminant levels (MCLs) in groundwater. Although, due to the long term decline in regional groundwater levels, some

monitoring wells within the central base area went dry while monitoring results indicated levels above MCLs. EPA identified a concern about possible residual vadose zone contamination and the potential for groundwater contamination if groundwater levels return to historical levels. As a result, EPA, the Air Force and the State will work collaboratively to confirm that the performance of the remedy addresses the potential risk associated with this pathway. In late 2009 and early 2010, the Site 2 landfill cap was modified from a vegetative cap to an asphalt cap for use as a vehicle parking and storage area."

Norton Air Force Base is listed on various other databases; a summary of them all is included in the NPL information above. The Department of Defense (i.e., United States Air Force) is well established as the Potentially Responsible Party for the soil and groundwater contamination. As a result of the regional groundwater issues, there may be increased administrative and/or engineering considerations for grading, trenching, or other subsurface work at the Site.

A review of the RCRA-SQG database indicates one RCRA-SQG listing within approximately 0.25 miles of the Site. HOME DEPOT USA HD5087 9377 ALABAMA ST [*sic*] is located 0.100 miles from the Site. No violations are listed for this property.

4.2 PHYSICAL SETTING SOURCES

EI reviewed the following physical setting sources for information related to the Site and surrounding area.

4.2.1 United State Geologic Survey Topographic Map

TOPOGRAPHIC INFORMATION FOR SITE AND SURROUNDING AREA		SOURCE(S)
Site Elevation	1,201 ft. above sea level	*USGS 7.5-minute Redlands, California, Quadrangle, 1967, photorevised 1988*
Surface Runoff/Topographic Gradient	General NW	
Nearest Surface Water	Santa Ana River, <0.25 miles north	

4.2.2 Soils

SOIL CHARACTERISTICS FOR SITE		SOURCE(S)
Soil Type	HANFORD	The EDR Radius Map Report with GeoCheck

Description	Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.	
SOIL CHARACTERISTICS FOR SITE		**SOURCE(S)**
Soil Type	TUJUNGA	The EDR Radius Map Report with GeoCheck
Description	Class A - High infiltration rates. Soils are deep, well drained to excessively drained sands and gravels.	
SOIL CHARACTERISTICS FOR SITE		**SOURCE(S)**
Soil Type	FLUVENTS	The EDR Radius Map Report with GeoCheck
Description	Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.	

4.2.3 Geology

According to the information provided in the Phase I Environmental Site Assessments conducted in 2006, the Site is underlain by Holocene Age alluvial deposits from the Santa Ana River.

The general topography of the Site slopes gently to the west.

4.2.4 Hydrogeology

There is no naturally occurring surface water located on the Site. The Bunker Hill Hydrologic Basin aquifer system is located beneath the Site. According to Mr. Teunissen, one groundwater monitoring well is located in the southwest portion of the property. Ms. Rebecca Schwartz of the City of Redlands, however, is not aware of any active groundwater monitoring occurring at the Site. Groundwater in the underlying shallow aquifer is degraded from agricultural use in the area. According to the City of Redlands Department of Public Works, Solid Waste Management Division, water supplied by the City of Redlands is pumped from deep aquifers that are not contaminated.

4.3 SITE AND ADJOINING PROPERTY HISTORICAL USE

4.3.1 Historic Aerial Photographs

EI obtained aerial photography of the Site area dated 1930, 1938, 1953, 1966, 1977, 1989, 1994, 2002, and 2005 from EDR. The results of our review of these photographs are presented below. Copies of the 1930 and 2005 aerial photographs are provided in **Appendix F**.

SUMMARY OF AERIAL PHOTOGRAPH REVIEW
1930 **Scale 1" = 666'**
Site: The Site appears vacant, with likely native/invasive vegetation.
Surrounding Area: To the north are trees, beyond which is the Santa Ana River. The surrounding area to the south, east, and west contains citrus groves, some containing likely housing structures.
1938 **Scale 1" = 555'**
Site: The Site appears unchanged from the 1930 aerial photograph.
Surrounding Area: The surrounding area appears unchanged from the 1930 aerial photograph.
1953 **Scale 1" = 555'**
Site: The Site appears unchanged from the 1938 aerial photograph.
Surrounding Area: The surrounding area appears unchanged from the 1930 aerial photograph.
1966 **Scale 1" = 555'**
Site: The Site appears unchanged from the 1953 aerial photograph.
Surrounding Area: North and west of the Site is a landfill, beyond which is the Santa Ana River. To the west is a sewage treatment plant. The surrounding areas to the south, east, and west contain citrus groves. Property to the south appears to contain barns/greenhouse..
1977 **Scale 1" = 555'**
Site: The Site appears unchanged from the 1966 aerial photograph.

SUMMARY OF AERIAL PHOTOGRAPH REVIEW
Surrounding Area: The surrounding areas appear mostly unchanged from the 1966 aerial photograph.
1989 **Scale 1" = 666'**
Site: The Site appears unchanged from the 1977 aerial photograph.
Surrounding Area: The surrounding areas appear mostly unchanged from the 1977 aerial photograph.
1994 **Scale 1" = 666'**
Site: The Site appears unchanged from the 1989 aerial photograph.
Surrounding Area: The surrounding areas appear mostly unchanged from the 1989 aerial photograph.
2002 **Scale 1" = 666'**
Site: The Site appears unchanged from the 1994 aerial photograph.
Surrounding Area: The surrounding areas appear mostly unchanged from the 1994 aerial photograph.
2005 **Scale 1" = 666'**
Site: The Site appears unchanged from the 2002 aerial photograph.
Surrounding Area: The property immediately south of the Site appears fallow. The rest of the surrounding areas appear mostly unchanged from the 2002 aerial photograph.

4.3.2 Historic Topographic Maps

An historic topographic map was obtained from the U.S. Geological Survey website (see **Figure 1**). The following is a summary of the historical topographic map review.

1988	SUMMARY OF HISTORICAL TOPOGRAPHIC MAPS
USGS 7.5-minute Redlands, California,	**Site:** No distinguishing landmarks are depicted on the Site.

1988	SUMMARY OF HISTORICAL TOPOGRAPHIC MAPS
Quadrangle, 1967, photorevised 1988	**Surrounding Area:** Surrounding areas to the east, west, and south show extensive citrus groves. To the East are the city landfill and the Grant sewage treatment facility To the north is the Santa Ana River. Further northwest is Norton Air Force Base, now San Bernardino International Airport.

4.3.3 City Directories

According to the EDR City Directory search, the Site and the surrounding area were not associated with any business or address that may have had listing in the local telephone directory (see **Appendix I**)

4.3.4 Fire Insurance Maps

Sanborn Fire Insurance Maps were requested from EDR. According to EDR, no Sanborn maps were available for the Site area (see **Appendix G**).

Aerial photographs and interviews confirm the use of the Site for agriculture (i.e., citrus orchards) from at least 1930.

5.0 SITE RECONNAISSANCE

The purpose of EI's Site Reconnaissance was to visually and physically observe uses and conditions that could result in the presence of hazardous materials or petroleum products on or beneath the Site. Mr. T.K. Kim, Associate Consultant, visited the Site on October 18, 2011. EI was accompanied by Mr. Donald Teunissen, the current owner of the Site, during the Site visit. Our observations were documented and pertinent features or areas of environmental concern were photographed and are referenced in the text. Selected Site photographs are included in **Appendix H** and Site features are depicted in **Figure 2**. A description of each area assessed is presented below.

5.1 METHODOLOGY AND LIMITING CONDITIONS

The Site reconnaissance was performed by walking and observing accessible portions of the Site.

5.2 GENERAL SITE SETTING

The Site is vacant land located in the northwest part of Redlands in an area characterized by agricultural, commercial and municipal uses.

5.3 PETROLEUM PRODUCTS/HAZARDOUS SUBSTANCES IN CONNECTION WITH IDENTIFIED USES

The Site is currently vacant. According to Mr. Teunissen, the Site was vacant land when he acquired it from the City of Redlands in 1995 or 1996.

5.4 DRAINAGE DISCHARGES

Storm water is discharged from the Site via sheet flow to the north.

5.5 EXTERIOR OBSERVATIONS

The Site is currently vacant and is littered with old tires, used lumber, agricultural debris and other general trash scattered around the Site. Mr. Teunissen also stated that no structures were present when he acquired the land from the City of Redlands in 1995/1996.

EI observed a concrete valve box at the Site, which Mr. Teunissen said was a groundwater monitoring well operated by the city. Remnants of a former chain link fence were present in random locations around the perimeter of the Site.

Item or Feature		Observed
Storage Tanks	Aboveground (AST)	No
	Underground (UST)	No
Oil/Water Separators		No

Item or Feature	Observed
Odors	No
Pools of Liquid	No
Drums/ Hazardous Substance and Petroleum Products Containers	No
Unidentified Substance Containers	No
PCB Equipment	No
Pits, Ponds or Lagoons	No
Stained Soil or Pavement	No
Stressed Vegetation	No
Solid Waste	Yes
Waste Water	No
Wells	Yes
Septic Systems	No
Other	No

PCB Equipment

While no PCB containing equipment was observed on the Site, some pole-mounted transformers were located near the Site, adjacent to the street. The transformers were not labeled regarding their PCB content. No staining on the transformers or the ground around the poles was observed.

Solid Waste

Solid waste was observed throughout the Site, primarily in the southwest portion of the property. This waste includes agricultural wastes, old tires, used clothing, empty containers, and furniture.

Wells

The EDR report makes no mention of a monitoring well on the Site. The current Owner, Mr. Teunissen, indicated a monitor well is located on the center portion of the Site. According Mr. Teunissen, it is in use by the City of Redlands to monitor shallow groundwater in the vicinity of the closed Landfill, located west-northwest of the Site.

5.6 INTERIOR OBSERVATIONS

The property is an approximately 0.77 acre vacant tract with no permanent structures. In the center of the Site, EI observed a wooden shed containing dilapidated furniture. Aside from the shed, no evidence of a permanent structure was visible.

6.0 INTERVIEWS

EI interviewed the following people as part of this assessment.

6.1 INTERVIEW WITH OWNER'S Representative

EI conducted an interview with Mr. Donald Teunissen, the current owner of the Site, to obtain information regarding current Site use and history. Mr. Teunissen confirmed that the APN parcel comprising the Site is 0167-091-06.

Mr. Teunissen said he believed that the Site had always been vacant. Mr. Teunissen stated that he acquired the property in a land swap for the parcel he owned west of the Site in 1995/1996. Mr. Teunissen was not aware of any releases on the Site or in its vicinity.

6.2 INTERVIEW WITH KEY SITE MANAGER

A Key Site Manager was not identified; therefore, no interview was conducted.

6.3 INTERVIEW WITH OCCUPANTS

The Site is currently vacant; therefore, no occupants were interviewed.

6.4 INTERVIEWS WITH LOCAL AGENCIES

Information from interviews with local agency officials is presented in Section 4.1.1.

6.5 INTERVIEWS WITH OTHERS

At the Client's request, EI did not interview any other persons as part of this assessment.

7.0 FINDINGS AND OPINION

The findings of this assessment, and EI's opinion regarding their potential impact on the Site, are summarized below.

7.1 HISTORICAL OR CURRENT *RECOGNIZED ENVIRONMENTAL CONDITIONS*

No visible or physical evidence of a current or historical release of hazardous substances or petroleum products at the Site was observed during EI's reconnaissance of the Site. The Site is not included on any of the Federal regulatory databases reviewed.

The City of Redlands historically operated the California Street Landfill at 1950 Nevada Avenue, west and cross/downgradient of the Site. That facility is listed on the State leaking underground storage tank (LUST) database with a case status of "closed". This listing is a *historical recognized environmental condition* in connection with the Site; however, due to its distance and cross-gradient location, it is not considered an environmental impairment for the Site.

Norton Air Force Base, now San Bernardino International Airport, located approximately 0.5 miles north and west of the Site, appears on the Federal National Priorities List (NPL) and is now closed. The listing is due to regional groundwater contamination by volatile organic compounds associated with historical operations at the base. This listing is a *historical recognized environmental condition* in connection with the Site; however, due to its distance and environmental regulatory status, it is not considered an environmental impairment for the Site.

7.2 *DE MINIMIS* CONDITIONS

EI did not observe any *de minimis* condition associated with the Site.

7.3 OPINION

Based on the findings of this assessment, it is EI's opinion that no historic or current *recognized environmental conditions* exist on Site. However, the presence of a regional volatile organic compound groundwater plume from Norton Air Force Base has the potential to affect groundwater beneath the Site.

7.4 DATA GAPS

No data gaps were identified during this assessment which would affect the Environmental Professional's ability to identify recognized environmental conditions in connection with the Site.

7.5 DEVIATIONS

There were no deviations from the ASTM standard practice during this assessment.

7.6 ADDITIONAL SERVICES

No additional services were authorized for this assessment.

8.0 CONCLUSIONS

The EI Group, Inc. has performed a Phase I Environmental Site Assessment in conformance with the scope and limitations of ASTM Practice E 1527-05 of the approximately one-acre vacant tract located at the northwest corner of the intersection of Palmetto Avenue and Alabama Street in Redlands, San Bernardino County, California. Any exceptions to, or deletions from, this practice are described in **Section 7.0** of this report.

This assessment has revealed no readily visible or physical evidence of current *recognized environmental conditions* in connection with the Site.

This assessment has identified two *historical recognized environmental conditions* in connection with the Site, as follows.

- The City of Redlands historically operated the California Street Landfill at 1950 Nevada Avenue, west and cross/downgradient of the Site. That facility is listed on the State leaking underground storage tank (LUST) database with a case status of "closed". This listing is a *historical recognized environmental condition* in connection with the Site.

- Norton Air Force Base, now San Bernardino International Airport, located approximately 0.5 miles north and west of the Site, appears on the Federal National Priorities List (NPL) and is now closed. The listing is due to regional groundwater contamination by volatile organic compounds associated with historical operations at the base. This listing is a *historical recognized environmental condition* in connection with the Site.

EI did not observe any *de minimis* condition associated with the Site.

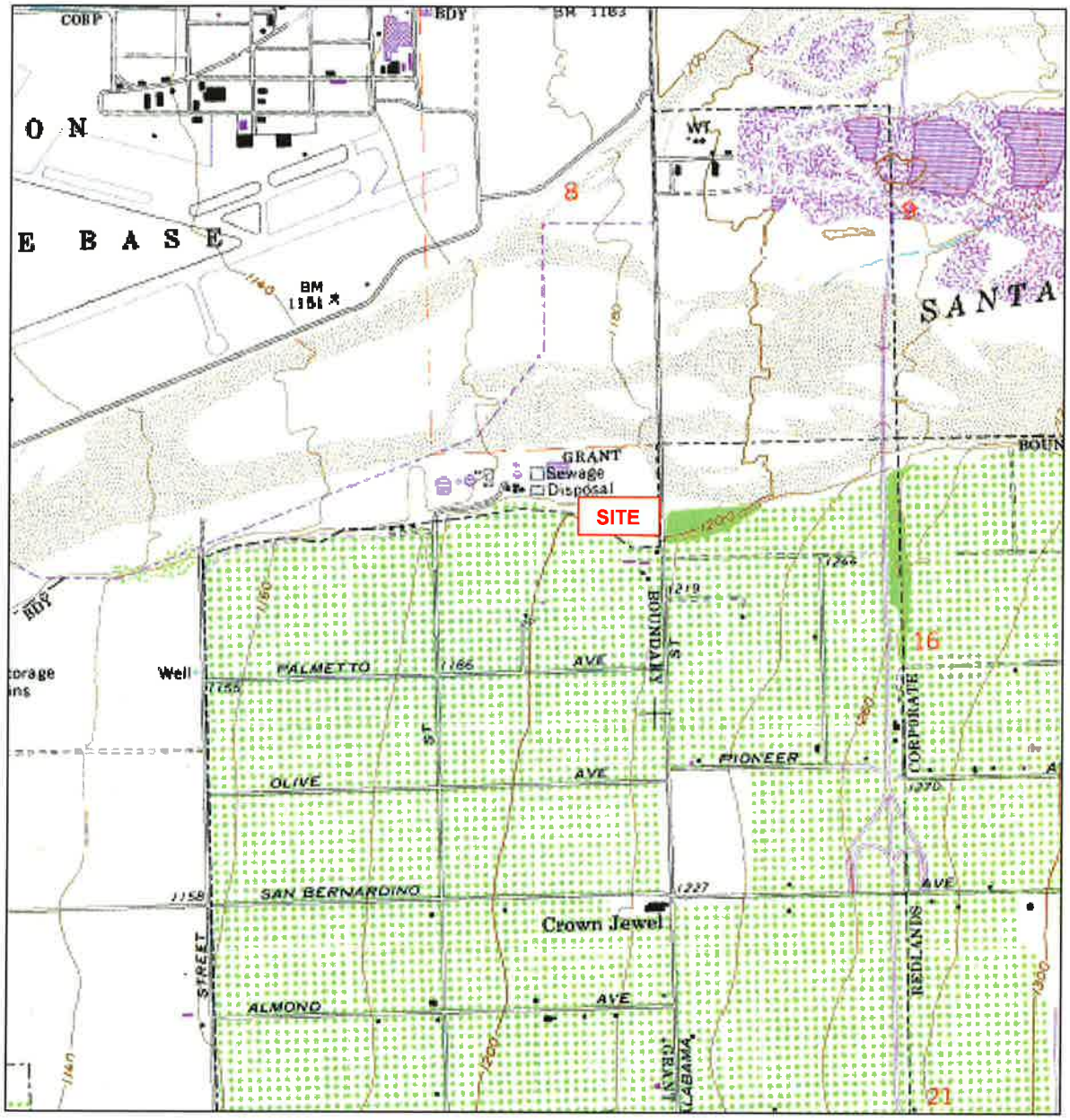
9.0 REFERENCES

References used in preparation of this report are cited throughout the text.

FIGURES

FIGURE 1

SITE LOCATION MAP



Source: USGS *Redlands, California* 7.5-minute series topographic quadrangle map, 1967, photorevised 1988

Scale: 1" = 2,000'

N
W E
S

FIGURE 1

SITE LOCATION MAP

Approximately 0.77-acre Vacant Tract
Redlands, California
EI Project No. ENTX110008.00

FIGURE 2

SITE DETAIL PLAN

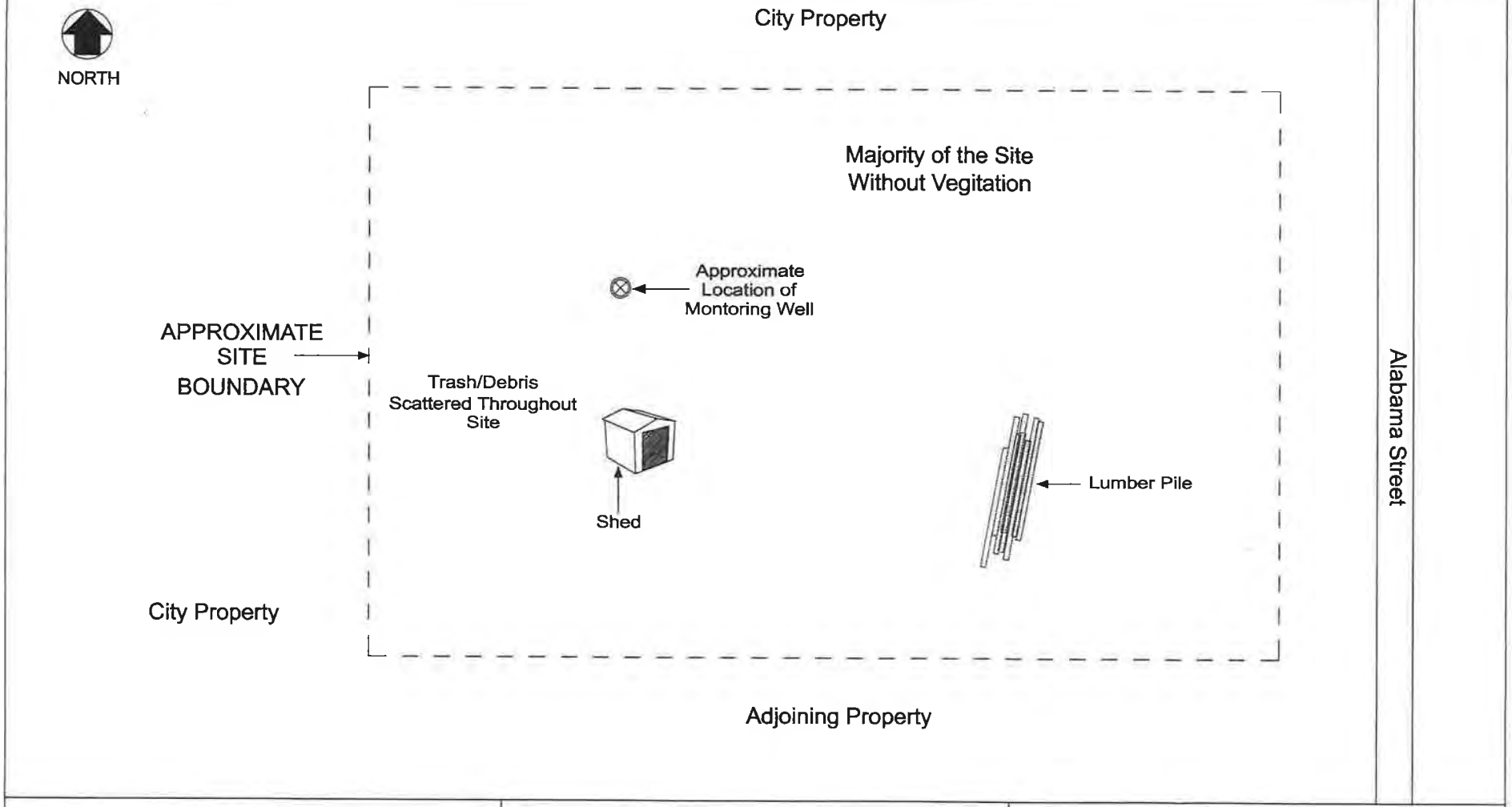


FIGURE NUMBER:	2	SITE PLAN 0.77-ACRE VACANT TRACT REDLANDS, CALIFORNIA	THE EI GROUP, INC. 1900 PRESTON ROAD #267 PMB 275 PLANO, TEXAS 75093 (972) 612-6900
DATE: 11-07-2011	DRAWN BY: MSW		
PROJECT NUMBER:	ENTX110008.00		
SCALE:	NTS		

APPENDICES

APPENDIX A

RESUMES

Larry G. Michel

SENIOR ENVIRONMENTAL SCIENTIST
DIRECTOR, TEXAS OPERATIONS

Professional Summary

Education & Training
B.S., Biology, Southwest Texas State University
M.S., Evolutionary Ecology, Angelo State University

Mr. Michel is EI's Director of Texas Operations and Senior Environmental Scientist for the Dallas, Texas, Branch of The EI Group. His career accomplishments include successful client development of and Senior Consultant to Fortune 100 and 500 Companies with experience on projects driven by CERCLA, RCRA, CWAA and TCEQ regulations. He is a seasoned Environmental Professional with over 30 years professional experience in Texas and the United States on projects related to: ASTM E 1527 Phase I ESAs; Phase II subsurface assessments; Environmental Impact Statements; wetland assessment and permitting; asbestos assessment and abatement; mold assessment and abatement; ASTM E 2018 Property Condition Assessments; underground/aboveground storage tank assessment/remediation; Spill Prevention Control and Countermeasure (SPCC) Plans; and, Third Party project review.

SPECIFIC PROJECT EXPERIENCE

AMERICAN AIRLINES
National Project Manager – Comprehensive Regulatory Compliance
Sole author of the successful proposal and National Program Manager for a comprehensive program of regulatory compliance for American Airlines. This national project involved assessment and remediation of above and underground storage tanks, large fuel depots/systems, SARA Title III reporting and asbestos surveys and abatement oversight at 22 of the nation's largest airports.

AUTONATION, INC., LEGAL DEPARTMENT
National Project Manager – Environmental Assessment, Remediation and Regulatory Compliance
Primary Client Liaison and Senior Project Manager for outside counsel to AutoNation, Inc., and Republic Services, Inc. Phase I Due Diligence Assessments, Phase II Site Investigations, UST removals, hydraulic lift assessments/removals, SPCC Plans, and wetlands assessments at automobile dealerships, waste transfer stations and municipal solid waste landfills.

J.C. PENNEY CORPORATION, INC.
National Project Manager– Underground Storage Tank Compliance
National Coordinator of a program for J.C. Penney Company which involved investigation and remediation of former tire, battery and accessory (TBA) facilities. Areas of environmental concern included USTs, used battery storage, waste oil tanks and hydraulic lifts.

J.C. PENNEY CORPORATION, INC.
National Program Manager – Asbestos Assessment and Abatement
National Program Manager for JC Penney Corporation, Inc.'s national program of asbestos assessment and abatement at over 400 retail stores in 9 States.

HOME DEPOT USA, INC.
National Project Manager – Wetlands Assessment and Permitting
Provided oversight and regulatory agency liaison for Home Depot USA's development of wetlands in Texas.

CARDINAL CAPITAL PARTNERS, INC.

National Program Coordinator – Comprehensive Environmental Due Diligence

Program Coordinator of independent, third party reviews of Phase I and II Environmental Site Assessments for Cardinal Capital Partners' sale-lease back transactions at over 400 sites nationally and internationally. Value of these transactions ranged from less than 1 million to 1.1 billion dollars.

VANGUARD CAR RENTAL USA, INC.

National Client Liaison – Environmental Assessment and Remediation

National Client Liaison for outside counsel to Vanguard Car Rental USA, Inc. (formerly Alamo and National Rent-A-Car) for projects involving: underground storage tank assessment, remediation, removal and closure; mold assessment and remediation; and Phase I Environmental Site Assessments.

STAUBACH RETAIL SERVICES

Client Manager – Environmental Due Diligence

Client Manager for Staubach Retail Services for projects including Phase I Environmental Site Assessments, asbestos surveys and underground storage tank assessment/remediation.

AEROSPACE VEHICLE PARTS MANUFACTURER

Project Manager – Site Assessment and Comprehensive Regulatory Compliance

Coordinated comprehensive program of surface and subsurface site investigation, regulatory agency negotiation, air quality monitoring and permitting and environmental regulatory compliance for an aerospace vehicle parts manufacturing facility in northwest Texas. Primary facility operations were chemical milling with strong acids or bases, chrome plating, anodizing and laser etching. Contaminants of concern included strong acids, metals in solution (e.g., chrome, nickel, etc) and phosgene gas (nerve agent).

CERAMIC TILE PLANT

Project Manager – Site Assessment, Remediation and Closure

Directed the site investigation, remediation and partial on-site closure of a ceramic tile facility in northeast Texas. Primary focus was lead (Pb) contaminated tile glazes in waste tile piles, their impact on a nearby intermittent steam, shallow groundwater and adjacent landowners/properties.

ROCKWELL INTERNATIONAL CORPORATION

National Program Manager – Environmental Assessment and Remediation

Program Manager and Lead Consultant for assessment and/or remediation of Rockwell International Corporation facilities in the United States, Puerto Rico and Mexico.

USEPA REGION VI

Team Leader – Field Investigation Team (FIT)

Team Leader for investigation and reporting of hazardous waste sites in Texas, New Mexico, Oklahoma, and Louisiana under RCRA and CERCLA as contractor to USEPA, Region VI.

PHILLIPS URANIUM CORPORATION

Environmental Analyst – Environmental Assessment and Monitoring

Conducted baseline assessment and monitoring programs for air, surface water, groundwater and radiological parameters in support of applications for State and Federal permits required to operate a deep subsurface uranium mine for the Energy and Minerals Division of Phillips Petroleum Company near Grants,
New Mexico. Authored reclamation plans for surface biota disturbed or destroyed by exploration activities. Prepared SPCC plans for entire mining support facilities.

Project Manager – Environmental Due Diligence
Coordinated the preliminary site assessment of commercial/industrial real estate properties at over 300 sites in Texas and the United States.

Program Manager – Asbestos Assessment
Program Manager for asbestos surveys of 100 Bank of America sites on behalf of a national property management firm.

Susan L. Mazzarella, LEED AP

Regional Sales Manager / Principal Consultant

Summary of Experience

Ms. Mazzarella has over 15 years of experience in the environmental, health, safety and sustainability (EHS&S) field, including sustainable building assessments and planning, compliance auditing and management, EHS management systems implementation, sustainability, on-site support services, regulatory program review, preparation, and implementation, and environmental site assessments. While working at EORM, she has focused on developing and implementing proactive EHS&S programs, analyzing regulatory requirements to achieve compliance in an efficient and cost-effective manner, and utilizing creative methods to promote and institute EHS&S policies and programs.

Professional Certifications and Memberships

Certificate in Environmental Auditing — University of California, Irvine

Paralegal Certificate in Environmental, Real Estate and Corporate Law — University of San Diego

Certificate 44843 — ISO 14001 Lead Auditor Certified (ANSI/RAB)

LEED Accredited Professional

Education

BA Business Administrative Studies — University of California, Riverside

Professional Experience

Environmental and Occupational Risk Management, Inc.

Regional Sales Manager — **October 2008 to Present**

Regional Manager — **January 2007 to December 2008**

Principal Consultant — **April 2005 to January 2007**

Senior EHS Consultant — **December 2000 to April 2005**

Ms. Mazzarella manages and provides outsource and project support to a variety of clients. Selected project experience includes:

- Conducting gap assessments, leading internal audits and developing environmental management systems programs (e.g., aspects identification and ranking procedure), as well as related procedures development (e.g. chemical and waste management) for customers striving for ISO 14001, OHSAS 18001, and RC 14001 certification.
- Leading multi-site, multi-disciplinary EHS compliance assessments and facility inspections to successfully assist clients in prioritization and management of compliance activities.
- Supporting sustainable building initiatives, including Leadership in Energy and Environmental Design (LEED) and High Performance Sustainable Buildings (HPSB).
- Developing strategies for achieving sustainability goals.
- Preparing and reviewing various environmental regulatory documents such as Hazardous Materials Management Plans, Biennial Reports, Hazardous Waste

Source Reduction Programs, DTSC Tiered Permitting Programs, SCAQMD Annual Update Forms and permits, TRI Form R reports, wastewater self-monitoring reports and permits, Storm Water Pollution Prevention Plans, Storm Water Management Plans, Emergency Response/Contingency Plans and Spill Prevention Control and Countermeasures (SPCC) Plans.

- Supporting air quality issues throughout California including:
  - Permitting – preparing new permits and permit modifications
  - Title V – auditing and successfully filing for Title V exemption
  - RECLAIM – preparing quarterly and annual submissions; purchasing/selling offset credits
  - Agency Inspections – supporting clients through SCAQMD inspections
  - Green House Gas Inventories – preparing GHG inventories for submission to The Climate Registry
  - Auditing – evaluating compliance with applicable rules, regulations and permit conditions
- Participating in development and implementation of health and safety programs such as hazard communication, injury and illness prevention, respiratory protection, lockout/tagout, and electrical safety.
- Facilitating strategic EHS planning sessions in which clients evaluate their short- and long-term EHS goals and objectives while establishing a roadmap to achieve desired targets.

Independent Consultant

January 2000 to December 2000

- Conducted a variety of EHS compliance audits for industrial clients including semi-conductor device manufacturers, pharmaceutical research and development facilities, brewing and related packaging operations, food processing plants, and other industrial entities.
- Provided on-site EHS support services for a pharmaceutical research and development company which included establishing and implementing procedures related to hazardous waste management, MSDS management, Chemical Hygiene Plan, Injury and Illness Prevention Plan, respiratory protection, and chemical inventory tracking.
- Authored and reviewed compliance guides describing step-by-step regulatory requirements for various EHS topics.
- Prepared written evaluations of fundamental differences between state and federal regulations for a variety of environmental topics.
- Assessed written programs, procedures, and overall implementation of various OSHA-required programs for a complex semi-conductor manufacturer.
- Researched applicability and potential operational impacts of several proposed SCAQMD rules to industries throughout the South Coast Air Basin.
- Assisted in several SCAQMD permitting projects for new and existing facilities.

Environmental Resources Management, Irvine, CA

Staff - Senior II Scientist **April 1993 to December 1999**

- Managed and conducted EHS due diligence audits for various national and international firms (including semi-conductor, real estate development, property

management, legal, food and beverage, aerospace, electronics, pharmaceutical, and oil and gas industries) throughout the United States and Mexico.

- Managed and conducted numerous ASTM Standard Phase I Environmental Site Assessments throughout the United States and other countries ranging in complexity from vacant lots to large multi-site industrial facilities.
- Oversaw numerous remedial site investigation projects involving staff personnel and various subcontractors.
- Managed team efforts to develop and maintain federal- and state-level environmental and OSHA compliance guides designed for client Internet access.
- Conducted ISO 14001 environmental management systems assessments for several manufacturing plants and provided recommendations for improving environmental management systems integration with standard business practices.
- Interacted extensively on clients' behalf with local, state, and federal agencies regarding permitting and regulatory issues and provided interpretive guidance to clients.
- Assessed current property conditions for major environmental insurance carrier through extensive review of existing reports and other documentation.

APPENDIX B

PARCEL MAPS
and
LEGAL DESCRIPTION

Exhibit "B"

ALL THAT PORTION OF LOT 8, BLOCK 71, RANCHO SAN BERNARDINO, IN THE CITY OF REDLANDS, COUNTY OF SAN BERNARDINO, STATE OF CALIFORNIA, AS PER PLAT RECORDED IN BOOK 7 OF MAPS, PAGE 2, OFFICIAL RECORDS OF SAID COUNTY, DESCRIBED AS FOLLOWS:

COMMENCING AT A POINT IN THE CENTERLINE OF ALABAMA STREET, DISTANT SOUTH 1085.98 FEET FROM THE NORTHEAST CORNER OF SAID BLOCK 71, RANCHO SAN BERNARDINO, AS SHOWN ON RECORD OF SURVEY RECORDED IN BOOK 60, PAGE 53 OF RECORDS OF SURVEY, OFFICIAL RECORDS OF SAID COUNTY; THENCE NORTH 89°10'16" WEST, 71.00 FEET TO THE WEST RIGHT-OF-WAY LINE OF ALABAMA STREET, BEING THE TRUE POINT OF BEGINNING; THENCE ALONG THE SOUTH LINE OF THAT CERTAIN PARCEL CONVEYED TO THE CITY OF REDLANDS BY INSTRUMENT NO. 93-184316, RECORDED APRIL 29, 1993, OFFICIAL RECORDS OF SAID COUNTY, NORTH 89°10'16" WEST (SHOWN AS SOUTH 89°10'00" EAST ON SAID INSTRUMENT NO. 93-184316), 230.63' FEET; THENCE NORTH 00°49'44" EAST, 146.00 FEET; THENCE SOUTH 89°10'16" EAST, 230.00 FEET TO THE WEST RIGHT-OF-WAY LINE OF ALABAMA STREET; THENCE ALONG THE WEST RIGHT-OF-WAY LINE OF ALABAMA STREET, SOUTH 00°34'57" WEST, 146.00 FEET TO THE POINT OF BEGINNING.

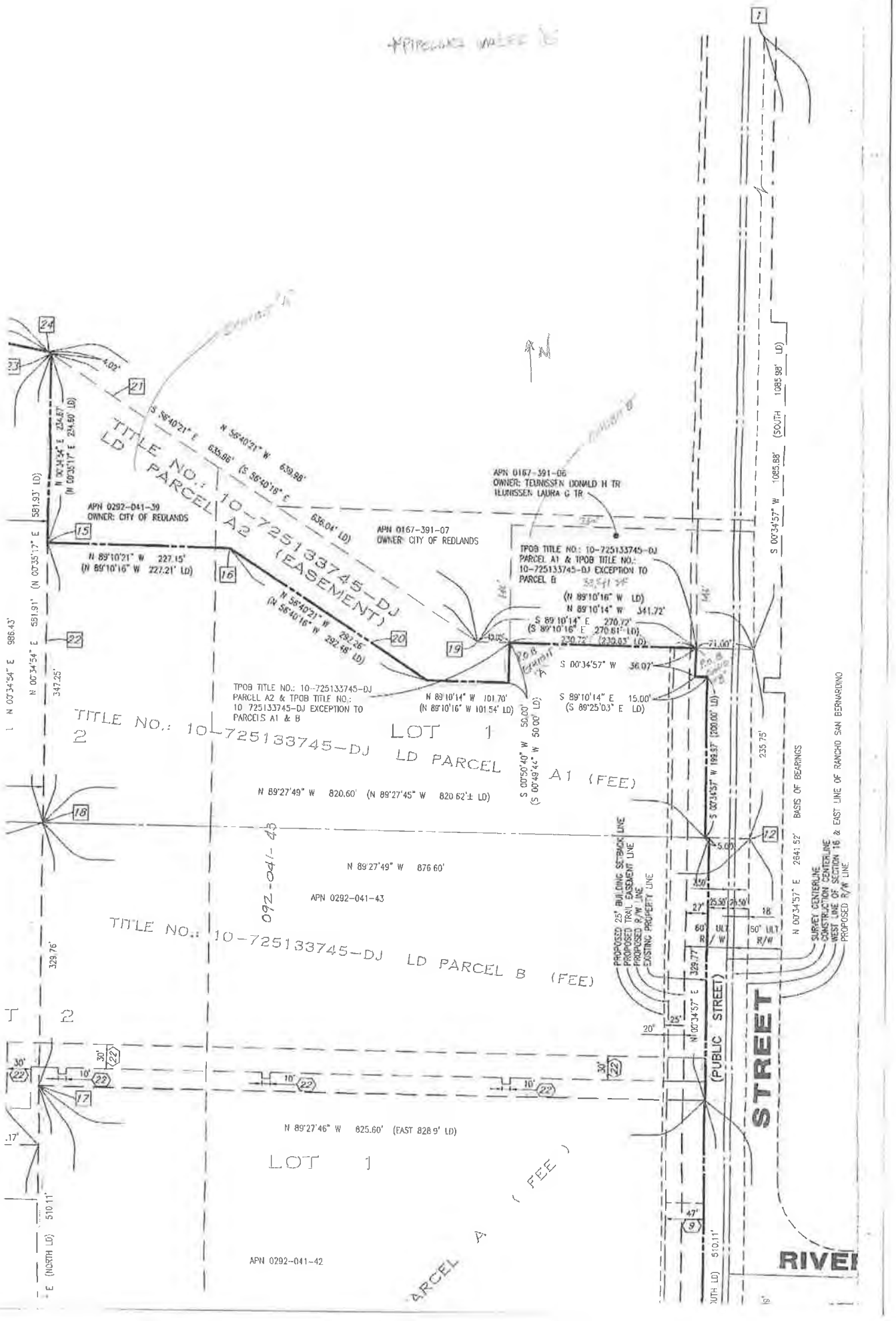
PREPARED BY:

Harold R Hartwick

HAROLD R. HARTWICK, L.S. NO. 2851

891006L04.DOC

Teunissen


TITLE NO.: 10-725133745-DJ
LD PARCEL A2
(EASEMENT)
APN 0292-041-39
OWNER: CITY OF REDLANDS
APN 0167-391-07
OWNER: CITY OF REDLANDS
APN 0167-391-06
OWNER: TEUNISSEN DONALD H TR
TEUNISSEN LAURA G TR
TPOB TITLE NO.: 10-725133745-DJ
PARCEL A1 & TPOB TITLE NO.:
10-725133745-DJ EXCEPTION TO
PARCEL B
TPOB TITLE NO.: 10-725133745-DJ
PARCEL A2 & TPOB TITLE NO.:
10-725133745-DJ EXCEPTION TO
PARCELS A1 & B
TITLE NO.: 10-725133745-DJ
LD PARCEL A1 (FEE)
LOT 1
TITLE NO.: 10-725133745-DJ LD PARCEL B (FEE)
APN 0292-041-43
APN 0292-041-42
LOT 1
PROPOSED 25' BUILDING SETBACK LINE
PROPOSED TRAIL EASEMENT LINE
PROPOSED R/W LINE
EXISTING PROPERTY LINE
SURVEY CENTERLINE
CONSTRUCTION CENTERLINE
WEST LINE OF SECTION 16 & EAST LINE OF RANCHO SAN BERNARDINO
PROPOSED R/W LINE
BASIS OF BEARINGS
STREET
(PUBLIC STREET)
RIVER

APPENDIX C

USER QUESTIONNAIRE

PHASE I ENVIRONMENTAL SITE ASSESSMENT (ESA) USER QUESTIONNAIRE

Facility Name and Address:	
Approximately 1-acre Vacant Tract, City of Redlands, CA	
Reason for the Phase I ESA:	
Type of property:	Vacant Land
Type of transaction (sale, purchase, etc.):	Contemplated Purchase
Site Owner and Contact Information:	Donald Teunissen (909) 709-6214
Site Contact Name Telephone Number	Donald Teunissen (909) 709-6214
Property Legal Description (if available)	The land referred to in this ESA is situated in the City of Redlands, County of San Bernardino, State of California, and is described as follows: THAT PORTION OF LOT 8, BLOCK 71, RANCHO SAN BERNARDINO, LYING NORTH OF THE MEANDERING LINE OF THE BLUFF ON THE SOUTH SIDE OF THE SANTA ANA RIVER, IN THE CITY OF REDLANDS, COUNTY OF SAN BERNARDINO, STATE OF CALIFORNIA, AS PER PLAT RECORDED IN BOOK 7 OF MAPS, PAGE 2, OFFICIAL RECORDS OF SAID COUNTY DESCRIBED AS FOLLOWS: COMMENCING AT THE NORTHEAST CORNER OF SAID BLOCK 71, THENCE SOUTH 00°34'57" WEST, 1085.98 FEET; THENCE NORTH 89°10'16" WEST, 71.00 FEET TO THE TRUE POINT OF BEGINNING; THENCE NORTH 89°10'16" WEST, 230.63 FEET; THENCE NORTH 00°49'44" EAST, 146.00 FEET; THENCE SOUTH 89°10'16" EAST, 230.00 FEET; THENCE SOUTH 00°34'57" WEST, 146.00 FEET TO THE POINT OF BEGINNING. APN: 0167-391-06
Parcel Identification Number (PIN)	0167-391-06
All parties who will rely on the Phase I ESA:	McLane Suneast, Inc.

In order to qualify for one of the *Landowner Liability Protections (LLPs)* offered by the Small Business Liability Relief and Brownfields Revitalization Act of 2001 (the "*Brownfields Amendments*"), the *user of this Phase I ESA* must provide the following information (if available) to the *environmental professional.* Failure to provide this information could result in a determination that "*all appropriate inquiry*" is not complete.

	Yes	No
1. Are you aware of any environmental cleanup liens against the subject property that are filed or recorded under federal, state, or local law?		X
2. Are you aware of any activity use limitations, such as engineering controls (engineered caps, liners, treatment methods, etc.), land use restrictions, or institutional controls (administrative measures restricting groundwater use, construction, or property use, etc.) that are in place at the site and/or have been filed or recorded in a registry under federal, tribal, state, or local law?		X
3. Do you have any specialized knowledge or experience related to the subject property or nearby properties? For example, are you involved in the same line of business as the current or former occupants of the subject property so that you would have specialized knowledge of the chemicals or processes used by this type of business?		X
4a. Does the purchase price being paid for the subject property reasonably reflects the fair market value of the subject property?	X	

4b. If you conclude that there is a difference in fair market price, have you considered whether the lower purchase price is because contamination is known or believed to be present at the *property*?		X
5. Are you aware of any commonly known or reasonably ascertainable information about the subject property that would help the environmental professional to identify conditions indicative of releases or threatened releases? For example, as a user,		X
5 (a) Do you know of the past uses of the property?		X
5 (b) Do you know of any specific chemicals that are present or were once present on the subject property?		X
5 (c) Do you know of spills or other chemical releases that have taken place at the subject property?		X
5 (d) Do you know of any environmental cleanups that have taken place at the subject property?		X
6. As the user of this ESA, based on your knowledge and experience related to the subject property, are there any obvious indicators that point to the presence or likely presence of contamination at the subject property?		X

If you answered "yes" to any of the questions (except 4a) above, please provide more detail below, or attach additional information to this document:

Name and Title of person completing questionnaire: (Please Print)	
LEW E. NEWHINNEY, Secretary & General Counsel	
Signature of person completing questionnaire:	Date:
L E Newhinney	10/14/11

PHASE I ENVIRONMENTAL SITE ASSESSMENT (ESA)
OWNER QUESTIONNAIRE

The EI Group, Inc. (EI) has been retained to perform a Phase I Environmental Site Assessment (ESA) of your facility in support of our Client's Environmental Due Diligence prior to a contemplated real estate transaction. The Phase I ESA process will involve a Site visit, interviews with key personnel, a records review and preparation of a Phase I ESA Report. In accordance with the American Society for Testing and Materials Standard Practice E 1527-05 for Phase I ESAs, and in the interest of a thorough assessment, we are required to ask the following questions of the Owner or the Owner's representative. Please complete the following form and return a copy via e-mail (lmichel@ei1.com) or fax (972-758-1902) to Larry Michel, Director, Texas Operations, The EI Group, Inc. On behalf of EI and our Client, thank you for your assistance with, and prompt attention to, this request.

Name: Donald H. Tennissen Title: owner Company: N.A.

Address: APN-0167-391-06 City: Redlands State: Ca. Zip:

Phone: 909-7096214 Fax: 909-425 1933 E-mail:

Site Name (if applicable): Site Location: Alabama ST.

PLEASE INDICATE YOUR RELATIONSHIP TO THE SITE.

□ Past Owner ☑ Current Owner □ Owner Representative □ Site Operator □ Site Occupant □ Other (describe)

Length of ownership/occupancy/involvement with the Site: 16 years

PLEASE ANSWER THE FOLLOWING QUESTIONS TO THE VERY BEST OF YOUR KNOWLEDGE BY MARKING THE APPROPRIATE BOX. "UNK" IS UNKNOWN, "NR" IS NO RESPONSE AND "N/A" IS NOT APPLICABLE.

Are you aware of any pending, threatened or past litigation relevant to hazardous substances or petroleum products in, on or from the property? □ Yes ☑ No □ Unk □ NR □ N/A
Comments:

Are you aware of any pending, threatened or past administrative proceedings relevant to hazardous substances or petroleum products in, on or from the property? □ Yes ☑ No □ Unk □ NR □ N/A
Comments:

Are you aware of any notices from any governmental entity regarding any possible violation of environmental laws or possible liability relating to hazardous substances or petroleum products? □ Yes ☑ No □ Unk □ NR □ N/A
Comments:

IF YOU HAVE ACCESS TO, AND CAN PROVIDE COPIES OF, ANY OF THE DOCUMENTS LISTED BELOW, PLEASE SO INDICATE AND PROVIDE A COPY TO EI BY US MAIL (1900 PRESTON ROAD, #257, PMB 275, PLANO, TX 75093) OR EMAIL (SEE ABOVE).

Environmental Site Assessment Reports, Environmental Compliance Audit Reports, Risk Assessment Reports	
Environmental Permits (i.e. solid/hazardous waste disposal, wastewater discharge, NPDES, underground injection)	
Underground or Above-Ground Storage Tank Registrations	
Material Safety Data Sheets (MSDS)	
Community Right-to-Know Plan, Safety Plans; Preparedness and Prevention Plans; SPCC Plans	
Hydrogeologic Reports for site or surrounding area	
Notices/correspondence from government agencies for past/current violations of environmental laws with respect to the property or relating to environmental liens encumbering the property	
Hazardous Waste Generator Notices/Reports	
Geotechnical Reports	
Recorded activity and use limitations	

UKN

Donald H. Tennissen
Person completing questionnaire (please print)

Signature

owner
Title

10/14/11
Date

APPENDIX D

RECORDS OF COMMUNICATION

THE EI GROUP, INC.
1900 Preston Road
#267, PMB 275
Plano, Texas 75093
(972) 612-6900
(972) 758-1902 fax

TELEPHONE CONVERSATION RECORD

Date: 10/25/11

Time: 2:05pm

Contact Name: Rebecca Schwartz of the City of Redlands Joint Lab

Number Called: 909-798-7506

Recorded By: T.K. Kim

Client/Prospect::

Project Number:

Ms. Schwartz informed me that the only water near the Site that is actively being monitored is any water that may flow under the Site via overflow pipe to the percolating/retention ponds across Alabama Street. She knows of no active ground well being monitored at the Site. Nearest monitoring well to the Site is situated on the former landfill west of the Site, and is mostly being monitored for methane and no contamination originating from the landfill is noted.

THE EI GROUP, INC.
1900 Preston Road
#267, PMB 275
Plano, Texas 75093
(972) 612-6900
(972) 758-1902 fax

TELEPHONE CONVERSATION RECORD

Date: 10/19/11

Time: 10:40am

Contact Name: John Morales, Engineering Department, City of Redlands

Number Called: 909-798-7

Recorded By: T.K. Kim

Client/Prospect:

Project Number:

Mr. Morales informed EI that a treated water discharge pipe, originating from the city waste water treatment center to the west, runs east-west orientation under the Site. He believe there also might be a sewer pipe, but cannot be certain without detailed investigation. Mr. Morales informed EI that there might be a groundwater well at the Site, but is not sure about monitoring activity and analytical results for the Well. He referred EI to Ms. Rebecca Schwartz of the City of Redlands Joint Lab for additional information.

APPENDIX E

ENVIRONMENTAL REGULATORY DATABASE REPORT

1-ACRE VACANT TRACT
PALMETTO AVE/ALABAMA STREET
REDLANDS, CA 92374

Inquiry Number: 3187528.2s
October 14, 2011

The EDR Radius Map™ Report with GeoCheck®

EDR® Environmental Data Resources Inc

440 Wheelers Farms Road
Milford, CT 06461
Toll Free: 800.352.0050
www.edrnet.com

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GEOCHECK ADDENDUM

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Physical Setting SSURGO Soil Map	A-5
Physical Setting Source Map	A-9
Physical Setting Source Map Findings	A-11
Physical Setting Source Records Searched	A-54

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

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EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc (EDR). The report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E 1527-05) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

TARGET PROPERTY INFORMATION

ADDRESS

PALMETTO AVE/ALABAMA STREET
REDLANDS, CA 92374

COORDINATES

Latitude (North):	34.089400 - 34° 5' 21.8"
Longitude (West):	117.209700 - 117° 12' 34.9"
Universal Tranverse Mercator:	Zone 11
UTM X (Meters):	480654.5
UTM Y (Meters):	3771893.8
Elevation:	1201 ft. above sea level

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property Map:	34117-A2 REDLANDS, CA
Most Recent Revision:	1988

AERIAL PHOTOGRAPHY IN THIS REPORT

Portions of Photo from:	2006, 2005
Source:	USDA

TARGET PROPERTY SEARCH RESULTS

The target property was not listed in any of the databases searched by EDR.

DATABASES WITH NO MAPPED SITES

No mapped sites were found in EDR's search of available ("reasonably ascertainable ") government records either on the target property or within the search radius around the target property for the following databases:

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

Proposed NPL..... Proposed National Priority List Sites

NPL LIENS..... Federal Superfund Liens

Federal Delisted NPL site list

Delisted NPL..... National Priority List Deletions

Federal CERCLIS list

FEDERAL FACILITY..... Federal Facility Site Information listing

Federal CERCLIS NFRAP site List

CERC-NFRAP..... CERCLIS No Further Remedial Action Planned

Federal RCRA generators list

RCRA-LQG..... RCRA - Large Quantity Generators
RCRA-SQG..... RCRA - Small Quantity Generators
RCRA-CESQG..... RCRA - Conditionally Exempt Small Quantity Generator

Federal ERNS list

ERNS..... Emergency Response Notification System

State- and tribal - equivalent NPL

RESPONSE..... State Response Sites

State- and tribal - equivalent CERCLIS

ENVIROSTOR..... EnviroStor Database

State and tribal leaking storage tank lists

LUST..... Geotracker's Leaking Underground Fuel Tank Report
SLIC..... Statewide SLIC Cases
INDIAN LUST..... Leaking Underground Storage Tanks on Indian Land

State and tribal registered storage tank lists

AST..... Aboveground Petroleum Storage Tank Facilities
INDIAN UST..... Underground Storage Tanks on Indian Land
FEMA UST..... Underground Storage Tank Listing

State and tribal voluntary cleanup sites

INDIAN VCP..... Voluntary Cleanup Priority Listing
VCP..... Voluntary Cleanup Program Properties

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS..... A Listing of Brownfields Sites

EXECUTIVE SUMMARY

Local Lists of Landfill / Solid Waste Disposal Sites

DEBRIS REGION 9	Torres Martinez Reservation Illegal Dump Site Locations
ODI	Open Dump Inventory
SWRCY	Recycler Database
HAULERS	Registered Waste Tire Haulers Listing
INDIAN ODI	Report on the Status of Open Dumps on Indian Lands

Local Lists of Hazardous waste / Contaminated Sites

US CDL	Clandestine Drug Labs
HIST Cal-Sites	Historical Calsites Database
SCH	School Property Evaluation Program
Toxic Pits	Toxic Pits Cleanup Act Sites
CDL	Clandestine Drug Labs
US HIST CDL	National Clandestine Laboratory Register

Local Lists of Registered Storage Tanks

CA FID UST	Facility Inventory Database
HIST UST	Hazardous Substance Storage Container Database
SWEEPS UST	SWEEPS UST Listing

Local Land Records

LIENS 2	CERCLA Lien Information
LUCIS	Land Use Control Information System
LIENS	Environmental Liens Listing
DEED	Deed Restriction Listing

Records of Emergency Release Reports

HMIRS	Hazardous Materials Information Reporting System
CHMIRS	California Hazardous Material Incident Report System
LDS	Land Disposal Sites Listing
MCS	Military Cleanup Sites Listing

Other Ascertainable Records

RCRA-NonGen	RCRA - Non Generators
DOT OPS	Incident and Accident Data
FUDS	Formerly Used Defense Sites
CONSENT	Superfund (CERCLA) Consent Decrees
UMTRA	Uranium Mill Tailings Sites
MINES	Mines Master Index File
TRIS	Toxic Chemical Release Inventory System
TSCA	Toxic Substances Control Act
FTTS	FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
HIST FTTS	FIFRA/TSCA Tracking System Administrative Case Listing
SSTS	Section 7 Tracking Systems
ICIS	Integrated Compliance Information System
PADS	PCB Activity Database System
MLTS	Material Licensing Tracking System

RADINFO	Radiation Information Database
FINDS	Facility Index System/Facility Registry System
RAATS	RCRA Administrative Action Tracking System
CA BOND EXP. PLAN	Bond Expenditure Plan
WDS	Waste Discharge System
NPDES	NPDES Permits Listing
Cortese	"Cortese" Hazardous Waste & Substances Sites List
HIST CORTESE	Hazardous Waste & Substance Site List
Notify 65	Proposition 65 Records
DRYCLEANERS	Cleaner Facilities
WIP	Well Investigation Program Case List
ENF	Enforcement Action Listing
San Bern. Co. Permit	Hazardous Material Permits
HAZNET	Facility and Manifest Data
EMI	Emissions Inventory Data
INDIAN RESERV	Indian Reservations
SCRD DRYCLEANERS	State Coalition for Remediation of Drycleaners Listing
FINANCIAL ASSURANCE	Financial Assurance Information Listing
HWP	EnviroStor Permitted Facilities Listing
PCB TRANSFORMER	PCB Transformer Registration Database
PROC	Certified Processors Database
MWMP	Medical Waste Management Program Listing
COAL ASH DOE	Sleam-Electric Plan Operation Data
COAL ASH EPA	Coal Combustion Residues Surface Impoundments List
HWT	Registered Hazardous Waste Transporter Database

EDR PROPRIETARY RECORDS

EDR Proprietary Records

Manufactured Gas Plants	EDR Proprietary Manufactured Gas Plants
EDR Historical Auto Stations	EDR Proprietary Historic Gas Stations
EDR Historical Cleaners	EDR Proprietary Historic Dry Cleaners

SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified in the following databases.

Elevations have been determined from the USGS Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified. Sites with an elevation equal to or higher than the target property have been differentiated below from sites with an elevation lower than the target property.
Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in ***bold italics*** are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

EXECUTIVE SUMMARY

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

NPL: Also known as Superfund, the National Priority List database is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund program. The source of this database is the U.S. EPA.

A review of the NPL list, as provided by EDR, and dated 06/30/2011 has revealed that there is 1 NPL site within approximately 1 mile of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
USAF NORTON AFB	*I-10 US HWY 395*	*NW 1/4 - 1/2 (0.392 mi.)*	*0*	*8*

Federal CERCLIS list

CERCLIS: The Comprehensive Environmental Response, Compensation and Liability Information System contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA). CERCLIS contains sites which are either proposed to or on the National Priorities List (NPL) and sites which are in the screening and assessment phase for possible inclusion on the NPL.

A review of the CERCLIS list, as provided by EDR, and dated 02/25/2011 has revealed that there is 1 CERCLIS site within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
USAF NORTON AFB	*I-10 US HWY 395*	*NW 1/4 - 1/2 (0.392 mi.)*	*0*	*8*

Federal RCRA CORRACTS facilities list

CORRACTS: CORRACTS is a list of handlers with RCRA Corrective Action Activity. This report shows which nationally-defined corrective action core events have occurred for every handler that has had corrective action activity.

A review of the CORRACTS list, as provided by EDR, and dated 03/09/2011 has revealed that there is 1 CORRACTS site within approximately 1 mile of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
USAF NORTON AFB	*I-10 US HWY 395*	*NW 1/4 - 1/2 (0.392 mi.)*	*0*	*8*

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA)

of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Transporters are individuals or entities that move hazardous waste from the generator offsite to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

A review of the RCRA-TSDF list, as provided by EDR, and dated 06/15/2011 has revealed that there is 1 RCRA-TSDF site within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
USAF NORTON AFB	*I-10 US HWY 395*	*NW 1/4 - 1/2 (0.392 mi.)*	*0*	*8*

Federal institutional controls / engineering controls registries

US ENG CONTROLS: A listing of sites with engineering controls in place.

A review of the US ENG CONTROLS list, as provided by EDR, and dated 03/16/2011 has revealed that there is 1 US ENG CONTROLS site within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
USAF NORTON AFB	*I-10 US HWY 395*	*NW 1/4 - 1/2 (0.392 mi.)*	*0*	*8*

US INST CONTROL: A listing of sites with institutional controls in place. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions are generally required as part of the institutional controls.

A review of the US INST CONTROL list, as provided by EDR, and dated 03/16/2011 has revealed that there is 1 US INST CONTROL site within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
USAF NORTON AFB	*I-10 US HWY 395*	*NW 1/4 - 1/2 (0.392 mi.)*	*0*	*8*

State and tribal landfill and/or solid waste disposal site lists

SWF/LF: The Solid Waste Facilities/Landfill Sites records typically contain an inventory of solid waste disposal facilities or landfills in a particular state. The data come from the Integrated Waste Management Board's Solid Waste Information System (SWIS) database.

A review of the SWF/LF list, as provided by EDR, and dated 08/22/2011 has revealed that there are 2 SWF/LF sites within approximately 0.5 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
CALIFORNIA STREET LANDFILL	*2151 NEVADA STREET*	*WSW 1/4 - 1/2 (0.473 mi.)*	*A2*	*50*
HASKELL CO. INDUSTRIAL COMPOST	2130 NEVADA AVENUE	WSW 1/4 - 1/2 (0.476 mi.)	A4	76

State and tribal registered storage tank lists

UST: The Underground Storage Tank database contains registered USTs. USTs are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA). The data come from the State Water Resources Control Board's Hazardous Substance Storage Container Database.

A review of the UST list, as provided by EDR, and dated 08/09/2011 has revealed that there is 1 UST site within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
AG-TEUNISSEN FARMING	9092 ALABAMA ST	SSE 0 - 1/8 (0.112 mi.)	1	49

ADDITIONAL ENVIRONMENTAL RECORDS

Local Lists of Landfill / Solid Waste Disposal Sites

WMUDS/SWAT: The Waste Management Unit Database System is used for program tracking and inventory of waste management units. The source is the State Water Resources Control Board.

A review of the WMUDS/SWAT list, as provided by EDR, and dated 04/01/2000 has revealed that there is 1 WMUDS/SWAT site within approximately 0.5 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
LANDFILL,CALIFORNIA STREET	***2151 NEVADA ST***	***WSW 1/4 - 1/2 (0.473 mi.)***	***A3***	***51***

Other Ascertainable Records

DOD: Consists of federally owned or administered lands, administered by the Department of Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.

A review of the DOD list, as provided by EDR, and dated 12/31/2005 has revealed that there is 1 DOD site within approximately 1 mile of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
NORTON AIR FORCE BASE (CLOSED)		NNW 1/4 - 1/2 (0.371 mi.)	0	8

ROD: Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid the cleanup.

A review of the ROD list, as provided by EDR, and dated 07/31/2011 has revealed that there is 1 ROD site within approximately 1 mile of the target property.

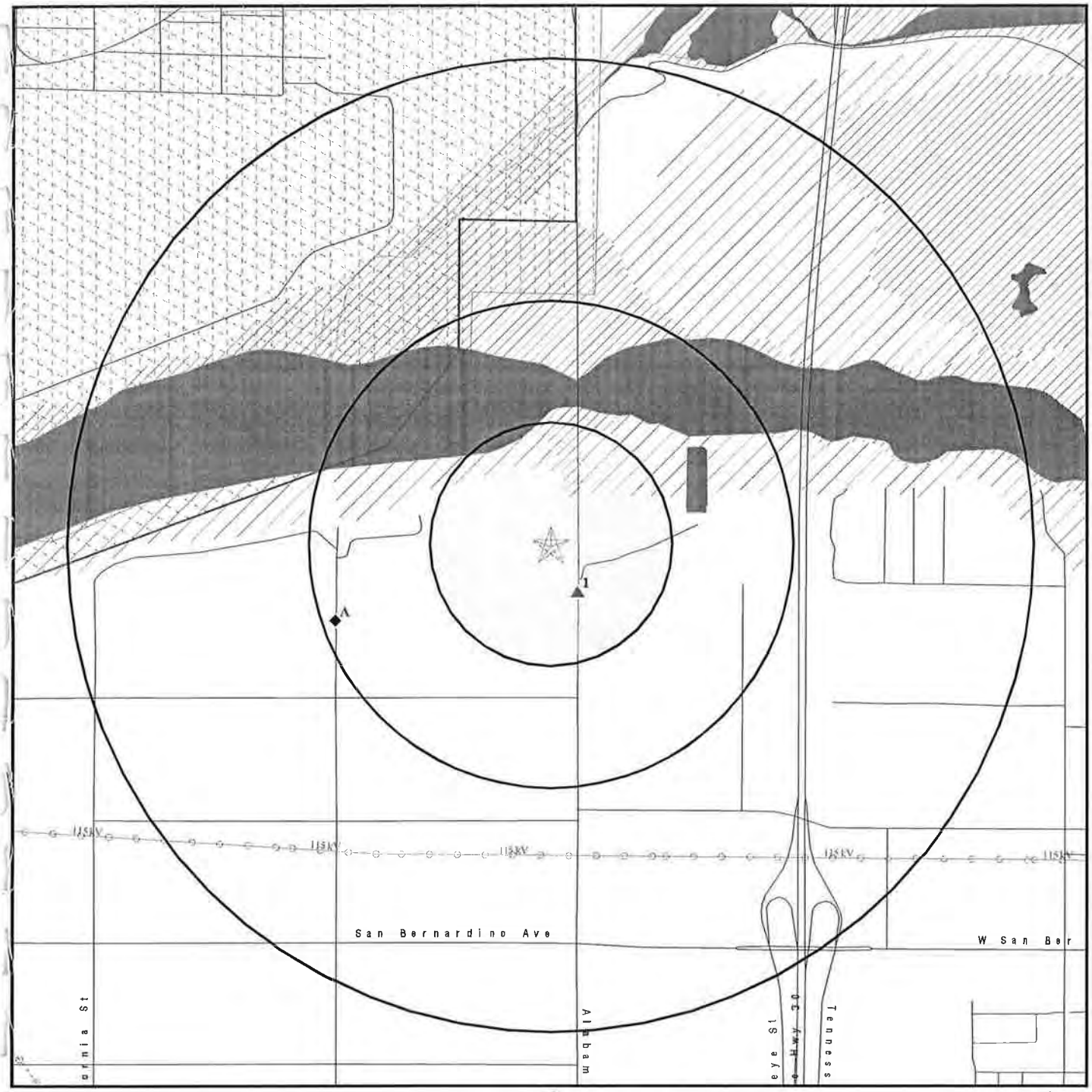
Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
USAF NORTON AFB	***I-10 US HWY 395***	***NW 1/4 - 1/2 (0.392 mi.)***	***0***	***8***

EXECUTIVE SUMMARY

Due to poor or inadequate address information, the following sites were not mapped. Count: 12 records.

Site Name	Database(s)
CHARTER LEASING	HIST CORTESE, LUST
FORT IRWIN LUCKY FUSE DISPOSAL	WMUDS/SWAT, HIST CORTESE, CHMIRS
TRACT #16465	NPDES
TRACT 16742	NPDES
TRACT 16586	NPDES
REDLANDS TRACT 16390	NPDES
TRACT 16806	NPDES
TRACT 16627	NPDES
TRACT 16586	NPDES
TRACT 17716 PINE	NPDES
PROLOGIS PARK RIVERBLUFF	San Bern. Co. Permit
BEST GROVE	San Bern. Co. Permit

OVERVIEW MAP - 3187528.2s



- ☆ Target Property
- ▲ Sites at elevations higher than or equal to the target property
- ◆ Sites at elevations lower than the target property
- Manufactured Gas Plants
- National Priority List Sites
- Dept. Defense Sites
- Indian Reservations BIA
- Power transmission lines
- Oil & Gas pipelines from USGS
- 100-year flood zone
- 500-year flood zone
- Areas of Concern

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: 1-ACRE VACANT TRACT	CLIENT: El Group
ADDRESS: PALMETTO AVE/ALABAMA STREET REDLANDS CA 92374	CONTACT: LARRY MICHEL
LAT/LONG: 34.0894 / 117.2097	INQUIRY #: 3187528.2s DATE: October 14, 2011 4:48 pm

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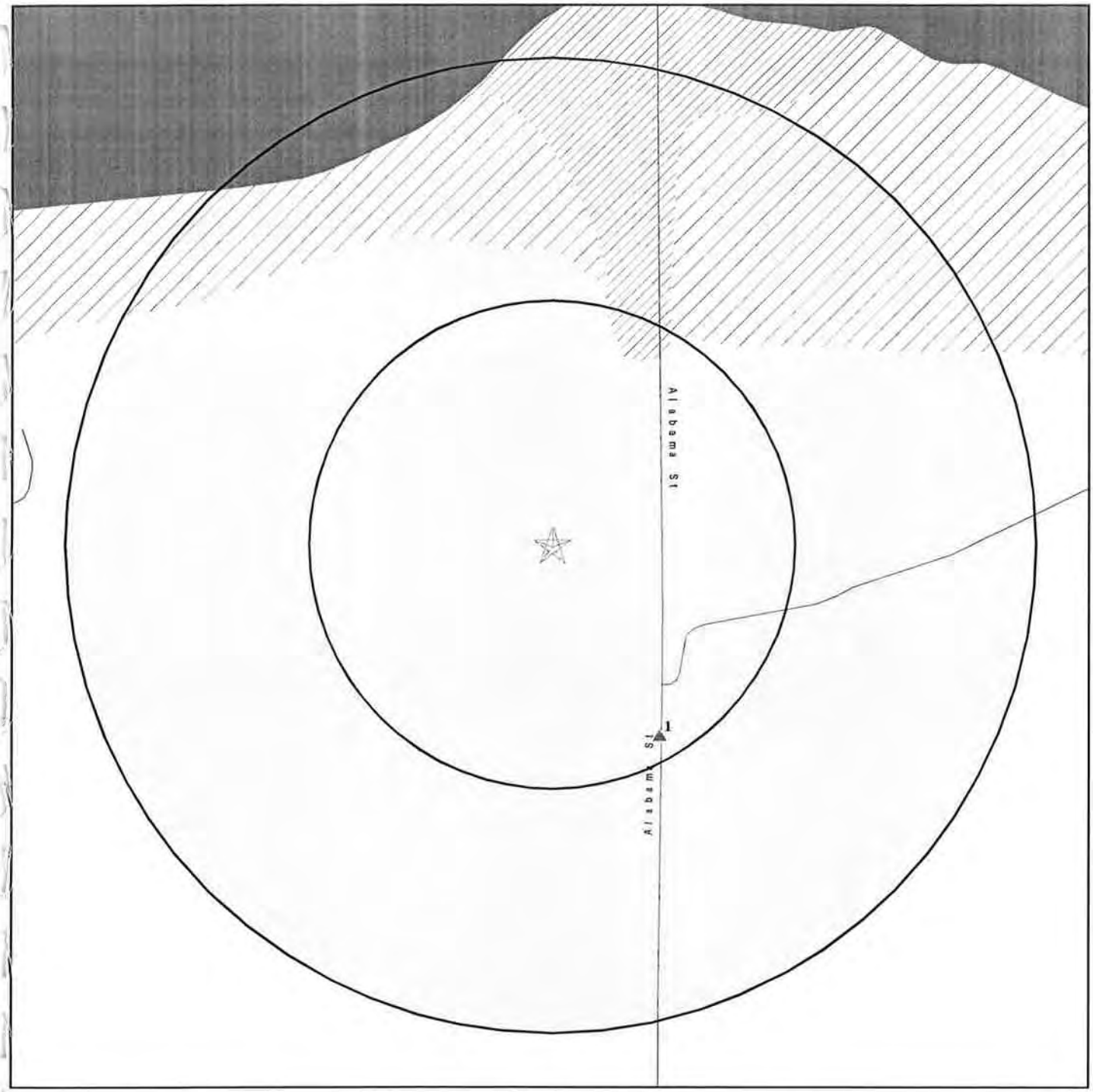
DETAIL MAP - 3187528.2s



0 1/16 1/8 1/4 Miles

- ☆ Target Property
- ▲ Sites at elevations higher than or equal to the target property
- ◆ Sites at elevations lower than the target property
- Manufactured Gas Plants
- Sensitive Receptors
- National Priority List Sites
- Dept. Defense Sites
- Indian Reservations BIA
- Oil & Gas pipelines from USGS
- 100-year flood zone
- 500-year flood zone
- Areas of Concern

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: 1-ACRE VACANT TRACT ADDRESS: PALMETTO AVE/ALABAMA STREET REDLANDS CA 92374 LAT/LONG: 34.0894 / 117.2097	CLIENT: EI Group CONTACT: LARRY MICHEL INQUIRY #: 3187528.2s DATE: October 14, 2011 4:49 pm

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MAP FINDINGS SUMMARY

Database	Target Property	Search Distance (Miles)	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
STANDARD ENVIRONMENTAL RECORDS								
Federal NPL site list								
NPL		1.000	0	0	1	0	NR	1
Proposed NPL		1.000	0	0	0	0	NR	0
NPL LIENS		TP	NR	NR	NR	NR	NR	0
Federal Delisted NPL site list								
Delisted NPL		1.000	0	0	0	0	NR	0
Federal CERCLIS list								
CERCLIS		0.500	0	0	1	NR	NR	1
FEDERAL FACILITY		1.000	0	0	0	0	NR	0
Federal CERCLIS NFRAP site List								
CERC-NFRAP		0.500	0	0	0	NR	NR	0
Federal RCRA CORRACTS facilities list								
CORRACTS		1.000	0	0	1	0	NR	1
Federal RCRA non-CORRACTS TSD facilities list								
RCRA-TSDF		0.500	0	0	1	NR	NR	1
Federal RCRA generators list								
RCRA-LQG		0.250	0	0	NR	NR	NR	0
RCRA-SQG		0.250	0	0	NR	NR	NR	0
RCRA-CESQG		0.250	0	0	NR	NR	NR	0
Federal institutional controls / engineering controls registries								
US ENG CONTROLS		0.500	0	0	1	NR	NR	1
US INST CONTROL		0.500	0	0	1	NR	NR	1
Federal ERNS list								
ERNS		TP	NR	NR	NR	NR	NR	0
State- and tribal - equivalent NPL								
RESPONSE		1.000	0	0	0	0	NR	0
State- and tribal - equivalent CERCLIS								
ENVIROSTOR		1.000	0	0	0	0	NR	0
State and tribal landfill and/or solid waste disposal site lists								
SWF/LF		0.500	0	0	2	NR	NR	2
State and tribal leaking storage tank lists								
LUST		0.500	0	0	0	NR	NR	0
SLIC		0.500	0	0	0	NR	NR	0

MAP FINDINGS SUMMARY

Database	Target Property	Search Distance (Miles)	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
INDIAN LUST		0.500	0	0	0	NR	NR	0
State and tribal registered storage tank lists								
UST		0.250	1	0	NR	NR	NR	1
AST		0.250	0	0	NR	NR	NR	0
INDIAN UST		0.250	0	0	NR	NR	NR	0
FEMA UST		0.250	0	0	NR	NR	NR	0
State and tribal voluntary cleanup sites								
INDIAN VCP		0.500	0	0	0	NR	NR	0
VCP		0.500	0	0	0	NR	NR	0
ADDITIONAL ENVIRONMENTAL RECORDS								
Local Brownfield lists								
US BROWNFIELDS		0.500	0	0	0	NR	NR	0
Local Lists of Landfill / Solid Waste Disposal Sites								
DEBRIS REGION 9		0.500	0	0	0	NR	NR	0
ODI		0.500	0	0	0	NR	NR	0
WMUDS/SWAT		0.500	0	0	1	NR	NR	1
SWRCY		0.500	0	0	0	NR	NR	0
HAULERS		TP	NR	NR	NR	NR	NR	0
INDIAN ODI		0.500	0	0	0	NR	NR	0
Local Lists of Hazardous waste / Contaminated Sites								
US CDL		TP	NR	NR	NR	NR	NR	0
HIST Cal-Sites		1.000	0	0	0	0	NR	0
SCH		0.250	0	0	NR	NR	NR	0
Toxic Pits		1.000	0	0	0	0	NR	0
CDL		TP	NR	NR	NR	NR	NR	0
US HIST CDL		TP	NR	NR	NR	NR	NR	0
Local Lists of Registered Storage Tanks								
CA FID UST		0.250	0	0	NR	NR	NR	0
HIST UST		0.250	0	0	NR	NR	NR	0
SWEEPS UST		0.250	0	0	NR	NR	NR	0
Local Land Records								
LIENS 2		TP	NR	NR	NR	NR	NR	0
LUCIS		0.500	0	0	0	NR	NR	0
LIENS		TP	NR	NR	NR	NR	NR	0
DEED		0.500	0	0	0	NR	NR	0
Records of Emergency Release Reports								
HMIRS		TP	NR	NR	NR	NR	NR	0
CHMIRS		TP	NR	NR	NR	NR	NR	0
LDS		TP	NR	NR	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Target Property	Search Distance (Miles)	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
MCS		TP	NR	NR	NR	NR	NR	0
Other Ascertainable Records								
RCRA-NonGen		0.250	0	0	NR	NR	NR	0
DOT OPS		TP	NR	NR	NR	NR	NR	0
DOD		1.000	0	0	1	0	NR	1
FUDS		1.000	0	0	0	0	NR	0
CONSENT		1.000	0	0	0	0	NR	0
ROD		1.000	0	0	1	0	NR	1
UMTRA		0.500	0	0	0	NR	NR	0
MINES		0.250	0	0	NR	NR	NR	0
TRIS		TP	NR	NR	NR	NR	NR	0
TSCA		TP	NR	NR	NR	NR	NR	0
FTTS		TP	NR	NR	NR	NR	NR	0
HIST FTTS		TP	NR	NR	NR	NR	NR	0
SSTS		TP	NR	NR	NR	NR	NR	0
ICIS		TP	NR	NR	NR	NR	NR	0
PADS		TP	NR	NR	NR	NR	NR	0
MLTS		TP	NR	NR	NR	NR	NR	0
RADINFO		TP	NR	NR	NR	NR	NR	0
FINDS		TP	NR	NR	NR	NR	NR	0
RAATS		TP	NR	NR	NR	NR	NR	0
CA BOND EXP. PLAN		1.000	0	0	0	0	NR	0
WDS		TP	NR	NR	NR	NR	NR	0
NPDES		TP	NR	NR	NR	NR	NR	0
Cortese		0.500	0	0	0	NR	NR	0
HIST CORTESE		0.500	0	0	0	NR	NR	0
Notify 65		1.000	0	0	0	0	NR	0
DRYCLEANERS		0.250	0	0	NR	NR	NR	0
WIP		0.250	0	0	NR	NR	NR	0
ENF		TP	NR	NR	NR	NR	NR	0
San Bern. Co. Permit		0.250	0	0	NR	NR	NR	0
HAZNET		TP	NR	NR	NR	NR	NR	0
EMI		TP	NR	NR	NR	NR	NR	0
INDIAN RESERV		1.000	0	0	0	0	NR	0
SCRD DRYCLEANERS		0.500	0	0	0	NR	NR	0
FINANCIAL ASSURANCE		TP	NR	NR	NR	NR	NR	0
HWP		1.000	0	0	0	0	NR	0
PCB TRANSFORMER		TP	NR	NR	NR	NR	NR	0
PROC		0.500	0	0	0	NR	NR	0
MWMP		0.250	0	0	NR	NR	NR	0
COAL ASH DOE		TP	NR	NR	NR	NR	NR	0
COAL ASH EPA		0.500	0	0	0	NR	NR	0
HWT		0.250	0	0	NR	NR	NR	0
EDR PROPRIETARY RECORDS								
EDR Proprietary Records								
Manufactured Gas Plants		1.000	0	0	0	0	NR	0
EDR Historical Auto Stations		0.250	0	0	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Target Property	Search Distance (Miles)	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
EDR Historical Cleaners		0.250	0	0	NR	NR	NR	0

NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

DOD **NORTON AIR FORCE BASE (CLOSED)** **DOD** **CUSA143166**
Region **N/A**
NNW
NORTON AIR FORCE BASE (CL (County), CA
1/4-1/2
1957 ft.

DOD:
Feature 1: Air Force DOD
Feature 2: Not reported
Feature 3: Not reported
URL: Not reported
Name 1: Norton Air Force Base (Closed)
Name 2: Not reported
Name 3: Not reported
State: CA
DOD Site: Yes
Tile name: CASAN_BERNARDINO

NPL **USAF NORTON AFB** **RCRA-TSDF** **1000417274**
Region **I-10 US HWY 395** **NPL** **CA4570024345**
NW **NORTON AFB, CA 92409** **CERCLIS**
1/4-1/2 **CORRACTS**
2071 ft. **RCRA-SQG**
US ENG CONTROLS
US INST CONTROL
ROD
PADS
FINDS
MANIFEST

RCRA-TSDF:
Date form received by agency: 09/01/1996
Facility name: USAF NORTON AFB
Facility address: 305 S TIPPECANOE AVE
SAN BERNARDINO, CA 92408
EPA ID: CA4570024345
Mailing address: 63RD CIV ENG SQU/DEEV
NORTON AFB, CA 92409
Contact: Not reported
Contact address: Not reported
Not reported
Contact country: Not reported
Contact telephone: Not reported
Contact email: Not reported
EPA Region: 09
Land type: Federal
Classification: TSDF
Description: Handler is engaged in the treatment, storage or disposal of hazardous waste

Owner/Operator Summary:
Owner/operator name: MULTIPLE OPS - USAF & DPDO
Owner/operator address: US DEPT OF AIR FORCE NORTON
CITY NOT REPORTED, CA 99999
Owner/operator country: Not reported
Owner/operator telephone: (714) 382-3909
Legal status: Federal
Owner/Operator Type: Operator
Owner/Op start date: Not reported

USAF NORTON AFB (Continued) **1000417274**

Owner/Op end date: Not reported

Owner/operator name: US AIR FORCE
Owner/operator address: NORTON AFB
SAN BERNARDINO, CA 92409
Owner/operator country: Not reported
Owner/operator telephone: (714) 382-3909
Legal status: Federal
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: Yes
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Historical Generators:
Date form received by agency: 09/01/1996
Facility name: USAF NORTON AFB
Classification: Small Quantity Generator

Date form received by agency: 03/11/1996
Facility name: USAF NORTON AFB
Site name: NORTON AIR FORCE BASE
Classification: Large Quantity Generator

Date form received by agency: 03/28/1994
Facility name: USAF NORTON AFB
Classification: Large Quantity Generator

Date form received by agency: 02/28/1992
Facility name: USAF NORTON AFB
Site name: NORTON AIR FORCE BASE
Classification: Large Quantity Generator

Date form received by agency: 04/17/1990
Facility name: USAF NORTON AFB
Site name: NORTON AIR FORCE BASE
Classification: Large Quantity Generator

Date form received by agency: 08/18/1980
Facility name: USAF NORTON AFB
Classification: Large Quantity Generator

USAF NORTON AFB (Continued) **1000417274**

Corrective Action Summary:

Event date:	04/01/1984
Event:	CA049SI
Event date:	06/01/1984
Event:	RFA Completed
Event date:	06/01/1984
Event:	CA049PA
Event date:	06/01/1984
Event:	CA029SF
Event date:	07/13/1989
Event:	RFI Imposition
Event date:	07/13/1989
Event:	CMS Imposition
Event date:	07/13/1989
Event:	Stabilization Measures Implemented, Groundwater extraction and treatment (e.g., to achieve groundwater containment, to achieve MCL).
Event date:	05/01/1992
Event:	Stabilization Construction Completed
Event date:	02/05/1993
Event:	RFI Approved
Event date:	02/05/1993
Event:	CMS Workplan Approved
Event date:	02/05/1993
Event:	RFI Workplan Approved
Event date:	02/05/1993
Event:	CMS Approved
Event date:	11/24/1993
Event:	Date For Remedy Selection (CM Imposed)
Event date:	10/07/1994
Event:	Corrective Measures Design Approved
Event date:	10/07/1994
Event:	CMI Workplan Approved
Event date:	06/01/1995
Event:	Certification Of Remedy Completion Or Construction Completion
Event date:	01/01/1996
Event:	CA Responsibility Referred To A Non-RCRA Federal Authority, Corrective Action at the facility or area referred to CERCLA.
Event date:	06/18/1998
Event:	Stabilization Measures Evaluation,This facility is not amenable to stabilization activity at the present time for reasons other than 1-

USAF NORTON AFB (Continued) **1000417274**

it appears to be technically infeasible or inappropriate (NF) or 2- there is a lack of technical information (IN). Reasons for this conclusion may be the status of closure at the facility, the degree of risk, timing considerations, the status of corrective action work at the facility, or other administrative considerations.

Event date: 06/18/1998
Event: CA Responsibility Referred To A Non-RCRA Federal Authority

Event date: 06/18/1998
Event: Igration of Contaminated Groundwater under Control, Yes, Migration of Contaminated Groundwater Under Control has been verified. Based on a review of information contained in the EI determination, it has been determined that migration of contaminated groundwater is under control at the facility. Specifically, this determination indicates that the migration of contaminated groundwater is under control, and that monitoring will be conducted to confirm that contaminated groundwater remains within the existing area of contaminated groundwater. This determination will be re-evaluated when the Agency becomes aware of significant changes at the facility.

Event date: 06/18/1998
Event: CA Prioritization, Facility or area was assigned a medium corrective action priority.

Event date: 06/18/1998
Event: Current Human Exposures under Control, Yes, Current Human Exposures Under Control has been verified. Based on a review of information contained in the EI determination, current human exposures are expected to be under control at the facility under current and reasonably expected conditions. This determination will be re-evaluated when the Agency/State becomes aware of significant changes at the facility.

Event date: 05/22/2000
Event: Igration of Contaminated Groundwater under Control, Unacceptable migration of contaminated groundwater is observed or expected.

Event date: 05/22/2000
Event: Current Human Exposures under Control, Yes, Current Human Exposures Under Control has been verified. Based on a review of information contained in the EI determination, current human exposures are expected to be under control at the facility under current and reasonably expected conditions. This determination will be re-evaluated when the Agency/State becomes aware of significant changes at the facility.

Facility Has Received Notices of Violations:
Regulation violated: Not reported
Area of violation: TSD IS-Ground-Water Monitoring
Date violation determined: 04/22/2003
Date achieved compliance: 07/27/2005
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 03/16/2005
Enf. disposition status: Not reported
Enf. disp. status date: Not reported

USAF NORTON AFB (Continued) **1000417274**

Enforcement lead agency: State
Proposed penalty amount: 0
Final penalty amount: 0
Paid penalty amount: 0

Regulation violated: F - 264.170-177.I
Area of violation: TSD - General
Date violation determined: 04/22/1993
Date achieved compliance: 01/28/1994
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 04/22/1993
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: 0
Final penalty amount: 0
Paid penalty amount: 0

Regulation violated: F - 262.30-34.C
Area of violation: Generators - General
Date violation determined: 04/22/1993
Date achieved compliance: 01/28/1994
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 04/22/1993
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: 0
Final penalty amount: 0
Paid penalty amount: 0

Regulation violated: F - 262.40-43.D
Area of violation: Generators - General
Date violation determined: 04/22/1993
Date achieved compliance: 01/28/1994
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 04/22/1993
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: 0
Final penalty amount: 0
Paid penalty amount: 0

Regulation violated: F - 264.190-201.J
Area of violation: TSD - General
Date violation determined: 04/22/1993
Date achieved compliance: 01/28/1994
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 04/22/1993
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State

USAF NORTON AFB (Continued) **1000417274**

Proposed penalty amount: 0
Final penalty amount: 0
Paid penalty amount: 0

Regulation violated: F - 264.70-77.E
Area of violation: TSD - General
Date violation determined: 05/15/1992
Date achieved compliance: 06/19/1992
Violation lead agency: State
Enforcement action: Not reported
Enforcement action date: Not reported
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: Not reported
Proposed penalty amount: 0
Final penalty amount: 0
Paid penalty amount: 0

Regulation violated: F - 270
Area of violation: TSD - General
Date violation determined: 05/15/1992
Date achieved compliance: 06/19/1992
Violation lead agency: State
Enforcement action: Not reported
Enforcement action date: Not reported
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: Not reported
Proposed penalty amount: 0
Final penalty amount: 0
Paid penalty amount: 0

Regulation violated: F - 262.10-12.A
Area of violation: Generators - General
Date violation determined: 05/15/1992
Date achieved compliance: 06/19/1992
Violation lead agency: State
Enforcement action: Not reported
Enforcement action date: Not reported
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: Not reported
Proposed penalty amount: 0
Final penalty amount: 0
Paid penalty amount: 0

Regulation violated: F - 264.30-37.C
Area of violation: TSD - General
Date violation determined: 05/15/1992
Date achieved compliance: 06/19/1992
Violation lead agency: State
Enforcement action: Not reported
Enforcement action date: Not reported
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: Not reported
Proposed penalty amount: 0

USAF NORTON AFB (Continued) **1000417274**

Final penalty amount: 0
Paid penalty amount: 0

Regulation violated: F - 270
Area of violation: TSD - General
Date violation determined: 02/27/1991
Date achieved compliance: 05/16/1991
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 04/12/1991
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: 0
Final penalty amount: 0
Paid penalty amount: 0

Regulation violated: FR - 270
Area of violation: TSD - General
Date violation determined: 10/30/1989
Date achieved compliance: 03/14/1990
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 12/11/1989
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: 0
Final penalty amount: 0
Paid penalty amount: 0

Regulation violated: FR - 270
Area of violation: TSD - General
Date violation determined: 07/26/1988
Date achieved compliance: 10/30/1989
Violation lead agency: EPA
Enforcement action: Not reported
Enforcement action date: Not reported
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: Not reported
Proposed penalty amount: 0
Final penalty amount: 0
Paid penalty amount: 0

Regulation violated: FR - 264.110-120.G
Area of violation: TSD - Closure/Post-Closure
Date violation determined: 08/20/1987
Date achieved compliance: 07/26/1988
Violation lead agency: EPA
Enforcement action: Not reported
Enforcement action date: Not reported
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: Not reported
Proposed penalty amount: 0
Final penalty amount: 0

USAF NORTON AFB (Continued) **1000417274**

Paid penalty amount: 0

Regulation violated: FR - 264.90-94,F
Area of violation: TSD IS-Ground-Water Monitoring
Date violation determined: 08/20/1987
Date achieved compliance: 07/26/1988
Violation lead agency: EPA
Enforcement action: Not reported
Enforcement action date: Not reported
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: Not reported
Proposed penalty amount: 0
Final penalty amount: 0
Paid penalty amount: 0

Regulation violated: FR - 270
Area of violation: TSD - General
Date violation determined: 08/20/1987
Date achieved compliance: 07/26/1988
Violation lead agency: EPA
Enforcement action: Not reported
Enforcement action date: Not reported
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: Not reported
Proposed penalty amount: 0
Final penalty amount: 0
Paid penalty amount: 0

Regulation violated: F - 270
Area of violation: TSD - General
Date violation determined: 06/23/1987
Date achieved compliance: 08/06/1987
Violation lead agency: State
Enforcement action: Not reported
Enforcement action date: Not reported
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: Not reported
Proposed penalty amount: 0
Final penalty amount: 0
Paid penalty amount: 0

Regulation violated: F - 270
Area of violation: TSD - General
Date violation determined: 06/23/1987
Date achieved compliance: 08/06/1987
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 08/06/1987
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: 0
Final penalty amount: 0
Paid penalty amount: 0

USAF NORTON AFB (Continued) **1000417274**

Evaluation Action Summary:

Evaluation date:	06/19/2008
Evaluation:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation:	Not reported
Date achieved compliance:	Not reported
Evaluation lead agency:	State
Evaluation date:	04/11/2007
Evaluation:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation:	Not reported
Date achieved compliance:	Not reported
Evaluation lead agency:	State
Evaluation date:	04/25/2006
Evaluation:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation:	Not reported
Date achieved compliance:	Not reported
Evaluation lead agency:	State
Evaluation date:	06/22/2005
Evaluation:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation:	Not reported
Date achieved compliance:	Not reported
Evaluation lead agency:	State
Evaluation date:	04/22/2003
Evaluation:	GROUNDWATER MONITORING EVALUATION
Area of violation:	TSD IS-Ground-Water Monitoring
Date achieved compliance:	07/27/2005
Evaluation lead agency:	State
Evaluation date:	01/26/1994
Evaluation:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation:	Not reported
Date achieved compliance:	Not reported
Evaluation lead agency:	State
Evaluation date:	03/08/1993
Evaluation:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation:	TSD - General
Date achieved compliance:	01/28/1994
Evaluation lead agency:	State
Evaluation date:	03/08/1993
Evaluation:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation:	Generators - General
Date achieved compliance:	01/28/1994
Evaluation lead agency:	State
Evaluation date:	03/30/1992
Evaluation:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation:	Generators - General
Date achieved compliance:	06/19/1992
Evaluation lead agency:	State
Evaluation date:	03/30/1992
Evaluation:	COMPLIANCE EVALUATION INSPECTION ON-SITE

USAF NORTON AFB (Continued) **1000417274**

Area of violation: TSD - General
Date achieved compliance: 06/19/1992
Evaluation lead agency: State

Evaluation date: 02/27/1991
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: TSD - General
Date achieved compliance: 05/16/1991
Evaluation lead agency: State

Evaluation date: 10/30/1989
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: TSD - General
Date achieved compliance: 03/14/1990
Evaluation lead agency: State

Evaluation date: 07/26/1988
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: TSD - General
Date achieved compliance: 10/30/1989
Evaluation lead agency: EPA

Evaluation date: 08/20/1987
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: TSD - Closure/Post-Closure
Date achieved compliance: 07/26/1988
Evaluation lead agency: EPA

Evaluation date: 08/20/1987
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: TSD - General
Date achieved compliance: 07/26/1988
Evaluation lead agency: EPA

Evaluation date: 08/20/1987
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: TSD IS-Ground-Water Monitoring
Date achieved compliance: 07/26/1988
Evaluation lead agency: EPA

Evaluation date: 07/30/1987
Evaluation: FINANCIAL RECORD REVIEW
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 07/30/1987
Evaluation: FINANCIAL RECORD REVIEW
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: EPA

Evaluation date: 06/23/1987
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

USAF NORTON AFB (Continued) **1000417274**

Evaluation date: 06/23/1987
Evaluation: NON-FINANCIAL RECORD REVIEW
Area of violation: TSD - General
Date achieved compliance: 08/06/1987
Evaluation lead agency: State

NPL:
EPA ID: CA4570024345
EPA Region: 09
Federal: Y
Final Date: 1987-07-22 00:00:00

Category Details:
NPL Status: Currently on the Final NPL
Category Description: Depth To Aquifer-> 50 And <= 100 Feet
Category Value: 80

NPL Status: Currently on the Final NPL
Category Description: Distance To Nearest Population-> 0 And <= 1/4 Mile
Category Value: 10

Site Details:
Site Name: NORTON AIR FORCE BASE (LNDFLL #2)
Site Status: Final
Site Zip: 92408
Site City: SAN BERNARDINO
Site State: CA
Federal Site: Yes
Site County: SAN BERNARDINO
EPA Region: 09
Date Proposed: 10/15/84
Date Deleted: Not reported
Date Finalized: 07/22/87

Substance Details:
NPL Status: Currently on the Final NPL
Substance ID: Not reported
Substance: Not reported
CAS #: Not reported
Pathway: Not reported
Scoring: Not reported

NPL Status: Currently on the Final NPL
Substance ID: U211
Substance: CARBON TETRACHLORIDE
CAS #: 56-23-5
Pathway: GROUND WATER PATHWAY
Scoring: 3

NPL Status: Currently on the Final NPL
Substance ID: U228
Substance: TRICHLOROETHYLENE (TCE)
CAS #: 79-01-6
Pathway: GROUND WATER PATHWAY
Scoring: 2

USAF NORTON AFB (Continued) **1000417274**

Summary Details:

Conditions at proposal October 15, 1984): Norton Air Force Base covers approximately 2,036 acres 58 miles east of Los Angeles near the City of San Bernardino, San Bernardino County, California. It is in a low-lying alluvial plain surroundedon the north and east by the San Bernardino Mountain Range. The base began operations in 1942 and has served as a major overhaul center for jet engines and the general repair of aircraft. Since 1962, the facility has served as a Military Airlift Command Base. In addition, Norton formerly had the responsibility for providing maintenance and logistics for liquid-fuel intercontinental ballistic missiles. Past ha ardous waste management practices may have contributed to existingcontamination problems throughout the base. The practices include burial of drums and other unspecified materials; disposal of waste oils, solvents, and paint residues into landfills, unlined pits, ponds, and drying beds; storage in leaking underground tanks; and spills of AVGAS, oils, solvents, PCBs, and acidic plating solutions. Industrial solvents have been used extensively on the base. Unknown quantities of spent solvents were disposed of in several base landfills.A well on the base has been contaminated with trichloroethylene TCE). The well water is currently being used in a blended system and is sampled quarterly to ensure that TCE is below the California State action level. The water is used by approximately ll,000 people who live and/or work on the base. Norton Air Force Base is participating in the Installation Restoration Program IRP), established in l978. Under this program, the Department of Defense seeks to identify, investigate, and clean up contamination from ha ardous materials. The Air Force has completed Phase I records search). Phase II remedial investigation) is underway. Status July 22, 1987): In November 1986, the California Regional Water Quality Control Board issued a Cleanup and Abatement Order requiring Norton to clean up one on-base area, the Industrial Waste Water Treatment Plant Sludge Drying Beds. Phase II-Stage 2 of the IRP was completed in December 1986. It focusedon characteri ation of the contamination at 18 on-base areas. More than 22 areas have been identified to date. Additional areas will be studied in Stage 3, scheduled to begin in the fall of 1987. Within the boundaries of this Federal facility, there are areas subject to the Subtitle C corrective action authorities of the Resource Conservation and Recovery Act RCRA). However, no such areas were included in scoring this specific site. Therefore, this Federal facility site isbeing placed on the Federal section of the NPL under the NPL/RCRA policy announced on September 8, 1983 48 FR 40662).

Site Status Details:

NPL Status:	Final
Proposed Date:	10/15/1984
Final Date:	07/22/1987
Deleted Date:	Not reported

Narratives Details:

NPL Name:	NORTON AIR FORCE BASE (LNDFLL #2)
City:	SAN BERNARDINO
State:	CA

CERCLIS:

Site ID:	0902760
EPA ID:	CA4570024345
Facility County:	SAN BERNARDINO

USAF NORTON AFB (Continued) **1000417274**

Short Name:	NORTON AIR FORCE BASE (LN
Congressional District:	40
IFMS ID:	0978
SMSA Number:	6780
USGC Hydro Unit:	18070203
Federal Facility:	Federal Facility
DMNSN Number:	2003.00000
Site Orphan Flag:	N
RCRA ID:	Not reported
USGS Quadrangle:	Not reported
Site Init By Prog:	Not reported
NFRAP Flag:	Not reported
Parent ID:	Not reported
RST Code:	Not reported
EPA Region:	09
Classification:	Military Related
Site Settings Code:	SU
NPL Status:	Currently on the Final NPL
DMNSN Unit Code:	ACRE
RBRAC Code:	Not reported
RResp Fed Agency Code:	USAF
Non NPL Status:	Not reported
Non NPL Status Date:	Not reported
Site Fips Code:	06071
CC Concurrence Date:	20060516
CC Concurrence FY:	2006
Alias EPA ID:	Not reported
Site FUDS Flag:	Not reported

CERCLIS Site Contact Name(s):

Contact ID:	9271184.00000
Contact Name:	Karen Jurist
Contact Tel:	(415) 972-3219
Contact Title:	Site Assessment Manager (SAM)
Contact Email:	Not reported
Contact ID:	9270048.00000
Contact Name:	Jeff Inglis
Contact Tel:	(415) 972-3095
Contact Title:	Site Assessment Manager (SAM)
Contact Email:	Not reported
Contact ID:	13002167.00000
Contact Name:	Carl Brickner
Contact Tel:	(415) 972-3814
Contact Title:	Site Assessment Manager (SAM)
Contact Email:	Not reported
Contact ID:	9270192.00000
Contact Name:	Nadia Hollan
Contact Tel:	(415) 972-3187
Contact Title:	Remedial Project Manager (RPM)
Contact Email:	Not reported
Contact ID:	9270438.00000
Contact Name:	Dawn Richmond
Contact Tel:	(415) 972-3097

USAF NORTON AFB (Continued) **1000417274**

Contact Title: Site Assessment Manager (SAM)
Contact Email: Not reported

CERCLIS Site Alias Name(s):
Alias ID: 101
Alias Name: AREA II LANDFILL
Alias Address: GOLF COURSE
NORTON AFB, CA 92409
Alias ID: 201
Alias Name: NORTON AIR FORCE BASE (LANDFILL #2)
Alias Address: Not reported
CA
Alias ID: 202
Alias Name: NORTON AIR FORCE BASE
Alias Address: I-10-US 395
SAN BERNARDINO, CA 92408
Alias ID: 203
Alias Name: NORTON AIR FORCE BASE (LNDFLL #2)
Alias Address: I-10-US 395
SAN BERNARDINO, CA 92409
Alias ID: 9270149
Alias Name: NORTON USAF BASE
Alias Address: 63ABG/CC
NORTON AFB, CA 86023
Alias ID: 201
Alias Comments: PREVIOUS EPA ID# AZD 981 416 977

Site Description: The Base Closure team has worked closely with the City of Riverside to ensure that controls are in place to protect the public from exposure to contamination. The Air Force constructed a groundwater extraction and treatment remedy in 1994 and is currently operating two pump and treat systems which have treated over 90 million gallons of contaminated groundwater to date. Approximately 325 lbs. of TCE have been removed from the groundwater. Additionally, a soil vapor extraction system is currently operating and 6,247 lbs. of TCE have been removed from the contamination source area. Since 1994, the Air Force has excavated approximately 40,000 cubic yards of contaminated soils from various locations on the base which were then treated and disposed of on-site, or transported to an off site disposal facility. The Air Force also closed numerous underground storage tanks and excavate and treated contaminated soil using bioremediation technology in 1996. An investigation of alleged radiological contamination was conducted and results showed that elevated levels of radionuclides in groundwater were caused by naturally occurring uranium. In 1996, the Air Force removed a waste line contaminated with radium paint residue and another industrial waste line. A JP-4 aircraft fuel system which was not contaminated will be salvaged for future use by the airport.In 1980, DOD issued a policy requiring identification of hazardous waste sites. In 1982, Norton issued the Phase I Records Search. In 1985, the site issued the Phase II Problem Confirmation Study. In June 1989, after various investigations, the Air Force signed the Norton AFB Federal Facility Agreement. In November 1990, Norton AFB began the Central Base Area (CBA) OU Groundwater Investigation to define the extent of the plume. In 1991, through a removal action, TCE-contaminated soil was treated onsite. In early 1993, the Air Force issued a draft RI, FS and proposed plan. In June 1992, the Air Force began a treatability test of the ground water pump and treat system. In 1993, Norton AFB issued the Final FS and Plan.The 2,003-acre Norton AFB is located in San Bernardino County, California (40th Congressional District), approximately 65 miles east of Los Angeles. The site is bounded by the Santa Ana River to the south, and other adjacent areas are used for residential,

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industrial, and agricultural purposes. Operations at the site began in 1942, and the facility served as a major overhaul center for jet engines and the general repair of aircraft. The site formerly had the responsibility of providing maintenance and logistics for liquid-fuel intercontinental ballistic missiles. There are more than 20 areas of contamination on the base including two landfills, six discharge areas, four chemical pits, a fire training area, a fuel spill area, a polychlorinated biphenyl (PCB) spill area, a chemical spill area, two waste storage areas, an underground storage area, and a low-level radioactive waste burial site. Soil contaminants included PCBs, trichloroethylene (TCE), petroleum hydrocarbons, metals such as lead and polycyclic aromatic hydrocarbons. An off-site groundwater plume (TCE) has impacted several municipal drinking water wells. Norton AFB was closed by the Department of Defense in March 1994, based on the legislative requirements in the Base Realignment and Closure Act of 1990. Consistent with the reuse alternatives identified in the Final Environmental Impact Statement, the Base is being redeveloped as an airport with mixed non-aviation, light industrial land use. Norton Air Force Base is located in the city of San Bernardino, San Bernardino County, California, 55 miles east of Los Angeles and 60 miles west of Palm Springs. The main surface water features near the site are City Creek, Warm Creek, the Twin Creek flood control channel, and the Santa Ana River, which flows southwest along the southern base boundary. The aquifer system beneath the site is part of the Bunker Hill hydrologic basin. Drinking water is derived from the middle and lower water-bearing zones. The site is classified as residential and light industrial. Adjacent properties includes area of residences, light and heavy industry, and agriculture. The population of the county is 1,418,380. The site was activated in March 1942 as an engine repair center for Air Force, U. S. Navy, and private industry aircraft. The site became a Military Airlift Command base in 1966. In 1968, the Aerospace Audiovisual Services established its headquarters at the base. The site also provided airlift and sustenance capabilities for air and combat units world-wide. Solvents, specifically TCE, were used in servicing aircraft from 1940s to the early 1980s. Former waste disposal, handling, and discharge practices have resulted in the contamination of soil and the upper water-bearing zone of a drinking water aquifer. The base was officially added to the U.S. EPA National Priorities List (NPL) on July 22, 1987. The U.S. EPA, California Department of Toxic Substances Control (DTSC), and the U.S. Air Force signed an interagency agreement, known as the Norton AFB Federal Facility Agreement (FFA) on June 29, 1989, which governs the conduct of environmental investigation and cleanup activities. The Air Force, U.S. EPA, DTSC, and the Regional Water Quality Control Board (RWQCB) Santa Ana Region comprise the Base Realignment and Closure (BRAC) Cleanup Team (BCT), with the Air Force serving as lead agency. The base has been subdivided into six separate areas for purposes of investigation and description of base activities. Since closure and redevelopment of portions of the base, many streets have been renamed. -The Central Base Area (CBA), which reflects the western one-third of the former base, was the most developed portion of the base and included the majority of offices, warehouses, on-base housing, engineering yards, and aircraft repair facilities. -The former Ballistic Missile Organization (BMO) complex is located south of the CBA and across Mill Street. The former BMO complex has been deeded to the Inland Valley Development Agency and a portion is occupied by the Defense Finance and Accounting Service. -The airfield includes the runways, ramps, aircraft parking, and hangars used for aircraft repair. The airfield covers the eastern two-thirds of the former base. -The Northeast Base Area (NBA) is located north of the airfield and represents the portion of the base with the oldest buildings. The original aircraft hangars and repair facilities are located within the NBA, as well as the former base Landfill No. 2. -The Golf Course Area (GCA) is located south of the airfield and is the

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current site of the Palm Meadows Golf Course. Prior to construction of the golf course, the GCA was used as a landfill (IRP Site 10), liquid waste disposal (IRP Site 1), a quartermaster's salvage yard, and chemical warfare training area, among other activities. -The former industrial waste treatment plant (IWTP) facility is located south of the GCA and was used for the treatment of liquid wastes generated as part of aircraft maintenance and repainting. Several investigations were conducted from 1982 to date. The 1982 to 1988 investigations resulted in identification of 22 Installation Restoration Program (IRP) sites. During closure of the base, additional records investigations resulted in identification of 73 AOCs. Contamination at the Small Arms Range (SAR) and the pipeline excavation at Building 752 was identified during cleanup actions performed at these sites. OU2: Site Specific Information IRP Site 1 - IRP Site 1 is in the GCA and was the location of former unlined lagoons used from 1950 to 1960 for the disposal of liquid waste generated during aircraft repair. During the 1960s, a portion of the golf course was constructed over the site without removing all industrial waste. The Remedial Investigation (RI) identified soils contaminated with paints, solvents, oil, fuels, and solids that had been washed into the industrial waste system. Chlorobenzene, 1,2-dichlorobenzene (DCB), and 1,4-DCB exceeded industrial PRGs. An Engineering Evaluation/Cost Analysis (EE/CA) identified removal of contaminated soil to a depth of approximately 30 feet below ground surface (bgs), backfilling with clean soil, and restoring the site as a portion of a fairway and green. A total of 20,325 tons of contaminated soil was excavated from an area of approximately 25,000 square feet, to the top of the perched-zone groundwater at a depth of approximately 29 feet bgs. The excavation was located next to a berm that supports the airfield perimeter road. Based on confirmation sampling results the contamination extended beneath the perimeter road. For technical and implementability reasons, the deep and lateral contamination was not removed. The area of affected soil left in place covers approximately 3,800 square feet. IRP Site 1 is part of the active golf course, and the property is currently zoned industrial/commercial by the city of San Bernardino. The projected long-term use of the site is expected to be commercial/industrial-related options for the property. IRP Site 2 - IRP Site 2 is located in the northeast corner of former Norton AFB and is the location of a former base landfill used between 1958 and 1980. Originally, it covered approximately 31 acres and was used for the disposal of general refuse, office waste, industrial waste, and industrial waste treatment plant (IWTP) sludge. Under CERCLA, the presumptive remedy for landfills is to leave waste in place and to provide an appropriate containment system. Under the presumptive remedy guidelines, various cover systems and associated gas control systems were evaluated in an EE/CA for IRP Site 2, and a natural soil cover was selected with an appropriate surface water control system. Because landfill gas (e.g., methane, PCE, trichloroethene [TCE], and vinyl chloride) was present, a landfill gas control system was also required. The cover, surface water control, and gas control systems were described in an Action Memorandum (AM). The design for the landfill has been implemented with consolidation into a smaller footprint and construction of the landfill cover and gas collection/control systems completed in December 1998 and accepted by the BRAC Cleanup Team (BCT) in February 1999. Site 2 is a closed landfill, and the property is currently zoned industrial/commercial by the city of San Bernardino. The projected long-term use of the site is expected to be passive open space. IRP Site 5 - IRP Site 5 served as the training area for fire control and abatement exercises from the late 1950s through the 1970s. Site 5 is in the southern portion of the former base, east of the golf course. Fire training exercises involved floating a layer of oil, fuel, or other combustible material on a layer of water and repeatedly igniting and extinguishing the material. RI results showed the site to contain metals (cadmium, copper, lead,

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and zinc) and dioxins in near-surface soils (to 10 feet bgs) and fuels (benzene, toluene, ethylbenzene, xylenes [BTEX]), solvents, and PAHs in deeper soils up to 40 feet bgs. The EE/CA and subsequent AM for IRP Site 5 selected soil vapor extraction (SVE) for remediation of fuel contamination, excavation followed by stabilization of the metals/dioxin-contaminated soil, and excavation and disposal of the PAH-contaminated soil. This removal action was completed during 1998 and involved an area of approximately 100,000 square feet. Excavation was performed to a maximum depth of 13 feet bgs, and confirmation samples were taken on the sidewalls and bottom of the excavation. The SAR impact berm adjacent to IRP Site 5 was also removed during the Site 5 removal action. The SVE component of the remedy removed 22,600 pounds of hydrocarbons. The SVE system was operated from January 10, 1996, until July 10, 1997. The effectiveness of the SVE system was assessed through confirmation soil boring samples and vadose zone leaching modeling. The model simulations indicated that the SVE removal adequately addressed the hydrocarbon contamination and was protective of groundwater. The soil excavation was performed in two phases. The first phase consisted of the removal of 21,104 tons of contaminated soil and 4,589 tons of rock and debris. This material was transported to the IRP Site 2 landfill. The lead in the contaminated soil was stabilized using 15 percent (by weight) Portland cement to meet State of California nonhazardous waste criteria. The soil that met nonhazardous criteria was used as foundation material for the landfill cap. The material not meeting the California nonhazardous waste criteria (1,443 tons) met federal nonhazardous waste criteria and was shipped to Browning Ferris Industries (BFI) landfill in La Paz, Arizona, for disposal. The second phase involved excavation of 3,496 tons of contaminated soil, stabilized with 15 percent (by weight) Portland cement, which was shipped to the BFI landfill in Arizona for disposal as an RCRA nonhazardous waste. The excavation area was backfilled with clean soil to the level of the former topographic grade. No groundwater contamination is associated with IRP Site 5. The site is being used for storage of golf course landscape waste prior to off-site disposal, and the property is currently zoned industrial/commercial by the city of San Bernardino. The projected long-term use of the site is expected to be industrial/commercial-related. Small Arms Range - The SAR was located immediately adjacent to IRP Site 5 and historically included an impact berm. The berm was contaminated by lead projectiles as a result of small arms practice, and a removal action was addressed in a work plan. Because the berm was contiguous with Site 5, portions of the berm were removed during the Site 5 removal action. A total of 11,478 tons of material was removed from the SAR, including 210 tons of bullet fragments and rock, classified as RCRA hazardous waste, and disposed at the Laidlaw Environmental Services landfill in Westmoreland, California. Nonhazardous waste, including 128 tons of rock and debris and 9,124 tons of soil, was placed at the IRP Site 2 landfill. The remaining 2,106 tons of soil were stabilized with 15 percent (by weight) Portland cement. This material did not meet California nonhazardous waste criteria and was shipped to the BFI landfill in Arizona for disposal. Confirmation samples were collected, and lead was detected above the residential PRG at one location. Following completion of the soil removal action, much of the remaining portion of the SAR impact berm was pushed into the Site 5 excavation as fill. The soil from the berm was then covered with soil imported from the adjacent riverbed to bring the Site 5 area back to its original grade. The firing line area of the SAR remains as a ground depression and is not being used. Projected long-term plans for the area are industrial/commercial-related use. The firing line area remains as a ground depression and is not being used. Projected long-term use of the site is expected to be commercial/industrial-related options for the property. IRP Site 7 - IRP Site 7 is located in the southeast corner of the former IWTP

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compound. Although Site 7 is part of this CERCLA ROD, as part of the former IWTP, Site 7 also must be closed as part of the RCRA corrective action termination of the interim status facility (two separate closure processes). The site included 12 concrete-walled, unlined sludge-drying beds, covering approximately 17,280 square feet. The beds were used to dry sludge generated at the IWTP until 1987. During removal of the sludge, it was temporarily stored at the northeast corner of the site. The former waste pile appears to have been located on what is now highly weathered asphalt pavement. Physical removal and disposal of the concrete-walled sludge-drying beds and surface soils were completed in March 2004, and the CERCLA closure report is in review. The site is currently not being used. The property is zoned industrial/commercial by the city of San Bernardino. Projected long-term use of the site is expected to be commercial/industrial-related options for the property. IRP Site 10 - Site 10 is located along the southern base boundary in the eastern portion of the golf course. Landfill No. 1 was used by the Air Force from 1943 to 1958, primarily for disposal of general refuse, which was apparently burned at the site. The 1984 to 1995 investigations, which included sampling for metals, pesticides, PAHs, and PCBs, indicated the presence of metals in ash (primarily chromium and lead) above the residential soil PRGs in shallow soil (0 to 2 feet bgs). Based on the RI data for metals, an RA for Site 10 was evaluated in an EE/CA. Because contamination was not significantly above industrial soil cleanup goals, the Air Force elected to establish a deed restriction for the site. However, the ecological risk assessment (ERA) determined that the contamination was localized, and concentrations of chromium and lead at the hot spots posed a significant risk to plants and animals. The Air Force responded by developing a hot-spot removal plan for Site 10. A removal action was performed at four hot spot locations that resulted in excavation of 340 cubic yards of contaminated soil. Approximately 224 cubic yards of contaminated soil were disposed at the Site 2 landfill, and 116 cubic yards were disposed off site. Physical removal and disposal of dioxin-contaminated soil were completed in 2004, and the closure report is in preparation. The northern portion of the site is used as a golf course fairway, and the property is currently zoned industrial/commercial by the city of San Bernardino. Projected long-term use of the site north of the base boundary is expected to be industrial-related. The southern portion of the site includes habitat for two endangered species, and is bounded by a man-made flood protection levee. The southern portion is off base and is zoned open space with unrestricted public access. IRP Site 17 - IRP Site 17 is located in the southwestern corner of the former IWTP compound. Although Site 17 is part of the CERCLA ROD, as part of the former IWTP, Site 17 is undergoing RCRA closure as part of the corrective action termination of the RCRA interim status facility (two separate processes). The former IWTP treated industrial wastewater from the repair of military aircraft from 1960 to 1993. Most of the IWTP facility was removed in 1995. IRP Site 17 is comprised of two connected brick-lined sumps that the Air Force constructed during the early 1960s for the purpose of burning waste fuels and solvents. The Air Force initiated burning, but in 1961 permission for continued burning was denied by local air quality authorities. Therefore, the sumps were used for waste destruction for a limited time but were used primarily as holding tanks for the IWTP and as an oil/water separator until 1985. The area immediately south of the sumps was also used for storage of solvent and plating wastes contained in 55-gallon drums. Site 17 was subject to a series of site investigations initiated in 1984. Site investigations have identified a zone of fine-grained soils, 25 to 55 feet bgs, that underlie and overlie two zones of coarser-grained soils. An EE/CA prepared for Site 17 presented a detailed analysis of the subsurface conditions at the site. In summary, there are two water-bearing zones below the Site 17 area. The first zone is a perched groundwater layer that is supported by a layer of finer-grained silts and clays

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extending from approximately 25 to 55 feet bgs. Collectively, the zone of finer-grained soils starting at 25 feet bgs and the perched groundwater supported by the finergrained soils is termed the "perched zone." Below the zone of finer-grained soil material is the second zone, termed the "upper aquifer." The upper aquifer comprises sands and gravels that extend to at least 500 feet below the site. During the early 1980s, the top of the upper aquifer was in contact with the zone of finer-grained soil material at 50 feet bgs. Between 1984 and 1988, the elevation of the upper aquifer dropped 7 to 10 feet, below the soil layer of the perched zone. Between 1988 and 1993, the water elevation decreased another 15 to 25 feet, resulting in several dry monitoring wells. The depth to groundwater in the upper aquifer now ranges from approximately 75 to 90 feet bgs (depending on seasonal fluctuations) in the area of IRP Site 17. The perched-zone groundwater contamination is assumed to have resulted from the former chemical waste storage at Site 17. The source may have been from the drums of waste solvents once stored at Site 17 or leakage from the Site 17 sumps. Due to the sandy nature of the surface soils, the solvent migrated downward to the perched zone, where further downward migration was retarded by the finer-grained soils. The two sumps, which were part of the IWTP, were removed in 2003, and the CERCLA closure report is in preparation. The site is currently not being used. The property is zoned industrial/commercial by the city of San Bernardino. Projected long-term use of the site is expected to be as industrial/commercial-related options for the property. IRP Site 19 - Site 19, located in the CBA to the south of Building 763, was formerly used as a drum storage area and aircraft washing facility. Drums of fuels, oils, electroplating solutions, TCE and trichloroethane (TCA) sludge, and cyanide waste solutions were stored on an unpaved fenced lot. The area south of Building 763 was the general location of the original aircraft washing facility. This facility was removed in 1966, and the area was resurfaced with 20 inches of concrete to become part of the flight line. Site 19 was investigated during the 1984 to 1986 IRP and the 1991 to 1993 RIs. PCBs were detected in excess of residential PRGs, primarily in the upper 6 inches of soil beneath the concrete runway apron. An interim ROD was developed for IRP Site 19 to identify a use restriction documenting the presence of the contamination. This ROD and its decision for IRP Site 19 will supersede the interim ROD. No groundwater contamination is associated with this site. The long-term future land use for Site 19 is to retain the runway apron for use by the San Bernardino International Airport Authority (SBIAA) airfield. AOC 4 - Building 301, located in the NBA near U and 102nd streets, was an equipment and vehicle washing facility. During the 1950s, the building was part of a spray painting facility. At the time of base closure (1994), it was used by civilian auto hobby personnel. AOC 4 consists of the foundation of former Building 301, an adjacent washing slab, and adjacent soil areas. A separator/dosing chamber was removed and its location evaluated as part of the basewide underground storage tank (UST) program. A solids collection pit and two trench drains were identified during the site investigation. The concrete washing slab was heavily stained, particularly near the trench drains. Drums of oil and other materials were stored in sheds along the southern drain line. A 4-foot-by 4-foot-wide area surrounded by a 6-foot-tall chain-link fence is located to the north of the washing slab and may represent the location of a former waste receptacle. The area is capped with a wooden cover, and the material under the cover may be fill. The area of affected soil is approximately 40 feet by 120 feet. No groundwater contamination is associated with this AOC. AOC 4 is on a parcel that was transferred by SBIAA to the San Bernardino County Fire Department under a Federal Aviation Administration (FAA) covenant that allows only industrial, commercial, or aircraft support usage. The Fire Department has refurbished Building 302 for office use and vehicle repair and is using the area west of the building (north of AOC 4) as a household

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hazardous waste collection point. Remedial alternatives were evaluated in an EE/CA. The Air Force identified ICs as the preferred alternative in the AM. Paved areas south of Building 302 are being used for vehicle and equipment storage. The western half of AOC 4 is covered by grassy weeds, while the eastern half is paved and includes a covered storage area. The Fire Department plans to use the paved area for equipment storage, while there are no plans for use of the grassy area of AOC 4 outside of the fenced storage yard. The property is currently zoned industrial/commercial by the city of San Bernardino. Projected long-term use of the site is expected to be industrial/commercial-related options for the property. AOC 18 - Former Buildings 451 and 452 were located in the CBA, east of Tippecanoe Avenue and north of Harry Sheppard Boulevard. Building 451 was a former garage and gas station in operation from 1942 to the late 1960s or early 1970s; Building 452 was the site of USTs. A 1942 site drawing indicates five 12,000-gallon gasoline USTs, a fueling station, and an oil storage house (Buildings 452, 451, and 450, respectively), although a 1967 site drawing indicates only two 12,000-gallon USTs were present. All structures and USTs have been removed. AOC 18 was investigated during the confirmation study (CS) and expanded source investigation (ESI). The soil contamination covers an area of approximately 600 feet. Prior to the initial redevelopment activities, AOC 18 was covered by an asphalt-paved parking lot that served the adjacent base post office. From January 2000 to 2004, the surface of the AOC was bare earth facilitating aeration (volatilization) of the fuel-related chemicals. The site is now paved with asphalt as part of the Mattel warehouse and distribution center. Remedial alternatives were previously evaluated in an EE/CA. The Air Force identified ICs in the AM as the preferred RA. AOC 18 is on property that was transferred to Inland Valley Development Agency (IVDA). IVDA has demolished all structures in the vicinity of AOC 18 and removed all pavement in preparation for redevelopment. The property is currently zoned industrial/commercial by the city of San Bernardino. Projected long-term use of the site is expected to be industrial/commercial-related options for the property. AOC 33 - Building 747, located in the southeastern corner of the CBA, was one of the primary industrial facilities at Norton AFB. Although AOC 33 is part of this CERCLA ROD, as part of the former Industrial Waste Line (IWL), it is also part of the RCRA corrective action termination of the interim status facility (two separate closure processes). The building was constructed in 1942 and renovated in 1944, 1953, and 1955. From 1942 to 1966, the building supported operations for the repair and overhaul of engines and other aircraft parts. Building 747 was converted into a freight terminal facility in 1966, and the building served as offices and storage facilities. Subsurface soil contamination at AOC 33 is associated with sumps (some recently removed) buried beneath an asphalt access road immediately south of Building 747. The sump portion of AOC 33 is part of the IWL that is undergoing RCRA corrective action termination as an interim status facility. AOC 33 was investigated during the CBA OU RI, CS, and the ESI. No groundwater contamination is associated with AOC 33. Remedial alternatives were evaluated in an EE/CA. The Air Force identified a deed restriction in the AM as the preferred RA. The sump and surrounding soil were removed in 2003. The CERCLA closure report is in preparation. AOC 33 is on property that has been leased by the Air Force to SBIAA. Building 747 has been subleased by SBIAA to several entities for commercial use. The property is currently zoned industrial/commercial by the city of San Bernardino. Projected long-term use of the site is expected to be industrial/commercial-related options for the property, including aviation support. AOC 39 - AOC 39 is located west of Club House Drive and south of the southern perimeter road, where an underground storm drainpipe empties into a grass-covered fairway drainage ditch. The discharge serves storm drain lines that originate along the southern flight line area. An oil/water separator removes oil prior to

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discharge into the ditch. The discharge point possibly received waste from the flight line and Buildings 695, 763, and 795. Aerial photographs from the 1950s and later indicate that fluids from aircraft repair and fueling emptied into the storm drain system. A 1982 interview record indicated that flight line oils were occasionally observed in the golf course drain. No groundwater contamination is associated with AOC 39. Remedial alternatives of AOC 39 were previously evaluated in an EE/CA. The Air Force selected deed restrictions in the AM as the preferred RA. AOC 39 was evaluated further in the BWFS. AOC 70 - AOC 70 was a percolation pond used for treated IWTP effluent during the mid-1980s to 1993. Although AOC 70 is part of this CERCLA ROD, as part of the former IWTP, AOC 70 also must be closed as part of the RCRA corrective action termination of the interim status facility (two separate closure processes). On December 31, 2004, DTSC-RCRA acknowledged that AOC 70 was clean closed. The 0.25-acre pond site was constructed upon sandy soils that readily facilitated infiltration of the treated effluent into the subsurface. There was no outflow from the pond. The pond dried out when the IWTP ceased functioning in mid-1993. AOC 70 was investigated under the CS Addendum No. 2. RAs were evaluated in an EE/CA. The Air Force selected a soil removal action in the AM as the preferred remedy. The Air Force completed the removal action in 1997 and backfilled the site with certified clean fill. No groundwater contamination is associated with the AOC. AOC 70 is within a parcel of the base that has been leased to IVDA. The property is currently zoned industrial/commercial by the city of San Bernardino. Projected long-term use of the site is expected to be as industrial/commercial-related options for the property consistent with city of San Bernardino zoning. Building 752 - Building 752 is located in the eastern portion of the CBA adjacent to the airfield. The building was used during the 1940s and 1950s for the repair of aircraft instruments, including painting instrument dials with radio-luminescent paint containing radium-226. The room used for painting dials was sealed in 1955 when painting operations ceased. During the period that painting occurred, paint waste was flushed into a sink connected to the sanitary sewer. Investigations of the sink and piping system showed that they were contaminated by radium-226. This included the piping system outside of the building to where it connected with the sanitary sewer. Cleanup of the interior piping system and interior surfaces of Building 752 were handled under separate programs. Cleanup of soils affected by radium-226 waste outside of Building 752 are being addressed in this ROD. To determine whether soils outside of the building had been affected by the discharge of paint waste into the sanitary sewer pipe, the pipe was excavated for visual characterization and soil sampling. The pipe was constructed of 6-inch vitreous clay in 3-foot sections. Two soil samples collected as part of the initial site characterization were found to contain radium-226 at 169 ?10 picoCuries per gram (pCi/g) and 1,940 ?20 pCi/g (background is 1.41 pCi/g). The entire waste line piping was surveyed with a field instrument and found to exhibit gamma radiation above background levels. Excavation of the piping system was conducted July 23 through August 1, 1996. The excavation was approximately 3 feet deep where the waste line exited the southwest corner of the building, and extended to a depth of 9 feet where the waste line entered the sanitary sewer. All excavated soil and piping was disposed off site. Before backfilling the trench, a new waste line was installed between the building and the sanitary sewer. After backfilling the trench, asphalt pavement was placed over the excavation. As part of the overall radium-226 investigation of the Building 752 area, additional radium-226 contamination was discovered in an area immediately west of the building. Building drawings from the 1950s indicate a wooden loading dock attached to the building over the affected area. In February 2001, the loading dock area was sampled for radium-226. The investigators determined that the area of concern is 11 by 55 feet, with depth of contamination between 1 and 4 feet bgs. The estimated volume of affected

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soil is 1,400 cubic feet. Radium-226 contaminated soil was removed in 2004. The closure report is in preparation. All contaminated soil will be properly disposed. Currently the site is not in use. The property is currently zoned industrial/commercial by the city of San Bernardino. Projected long-term use of the building and surrounding area is expected to be industrial/commercial-related options for the property (airfield support). Northeast Base Area PCE Plume - The NBA has two PCE plumes, one in the eastern portion (east PCE plume) where the former Site 2 landfill is situated, and a smaller plume in the central portion (west PCE plume). Only the west PCE plume has been above the maximum contaminant level (MCL) for PCE since April 2003. The average gradient in the NBA has been observed to fluctuate between a low of 0.004 foot per foot (October 2003) and a high of 0.039 foot per foot (April 1996). Seasonal variation remains relatively constant. The source of the contamination contributing to the NBA west PCE plume is not believed to be associated with IRP Site 2. PCE concentrations are higher in the west plume than those in the east plume, whereas they would be expected to be less due to contaminant dispersal. The groundwater flow direction in the NBA is to the west to west-northwest. Groundwater quality data for the NBA plume wells do not indicate significant movement of the plumes, either horizontally or vertically. The property overlying the NBA plume is zoned industrial/commercial by the city of San Bernardino. The projected long-term use for Site 2, which overlies the east plume, is expected to be passive open space or potentially a long-term, open storage area. The projected long-term use for the property over the west plume is industrial/commercial, possibly warehousing. A Record of Decision (ROD) addressing Operable Unit 2 (OU2) was completed in September of 2005.

CERCLIS Assessment History:

Action Code:	001
Action:	DISCOVERY
Date Started:	Not reported
Date Completed:	08/01/1980
Priority Level:	Not reported
Operable Unit:	SITEWIDE
Primary Responsibility:	Federal Facilities
Planning Status:	Not reported
Urgency Indicator:	Not reported
Action Anomaly:	Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code:	001
Action:	SITE INSPECTION
Date Started:	Not reported
Date Completed:	04/01/1984
Priority Level:	Higher priority for further assessment
Operable Unit:	SITEWIDE
Primary Responsibility:	Federal Facilities
Planning Status:	Not reported
Urgency Indicator:	Not reported
Action Anomaly:	Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code:	001
Action:	PRELIMINARY ASSESSMENT

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Date Started:	Not reported
Date Completed:	04/01/1984
Priority Level:	Low priority for further assessment
Operable Unit:	SITEWIDE
Primary Responsibility:	Federal Facilities
Planning Status:	Not reported
Urgency Indicator:	Not reported
Action Anomaly:	Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code:	001
Action:	PROPOSAL TO NATIONAL PRIORITIES LIST
Date Started:	Not reported
Date Completed:	10/15/1984
Priority Level:	Not reported
Operable Unit:	SITEWIDE
Primary Responsibility:	Federal Facilities
Planning Status:	Not reported
Urgency Indicator:	Not reported
Action Anomaly:	Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code:	001
Action:	FINAL LISTING ON NATIONAL PRIORITIES LIST
Date Started:	Not reported
Date Completed:	07/22/1987
Priority Level:	Not reported
Operable Unit:	SITEWIDE
Primary Responsibility:	Federal Facilities
Planning Status:	Not reported
Urgency Indicator:	Not reported
Action Anomaly:	Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code:	001
Action:	HAZARD RANKING SYSTEM PACKAGE
Date Started:	Not reported
Date Completed:	06/01/1988
Priority Level:	Not reported
Operable Unit:	SITEWIDE
Primary Responsibility:	EPA Fund-Financed
Planning Status:	Not reported
Urgency Indicator:	Not reported
Action Anomaly:	Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code:	001
Action:	INTERAGENCY AGREEMENT NEGOTIATIONS
Date Started:	05/05/1987
Date Completed:	06/29/1989
Priority Level:	Not reported

USAF NORTON AFB (Continued) **1000417274**

Operable Unit: SITEWIDE
Primary Responsibility: Federal Enforcement
Planning Status: Primary
Urgency Indicator: Not reported
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 001
Action: FEDERAL INTERAGENCY AGREEMENT
Date Started: 05/05/1987
Date Completed: 06/29/1989
Priority Level: Not reported
Operable Unit: SITEWIDE
Primary Responsibility: Federal Enforcement
Planning Status: Primary
Urgency Indicator: Not reported
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 001
Action: FEDERAL FACILITY REMOVAL
Date Started: 01/04/1991
Date Completed: 04/08/1992
Priority Level: Cleaned up
Operable Unit: SITEWIDE
Primary Responsibility: Federal Facilities
Planning Status: Primary
Urgency Indicator: Not reported
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 001
Action: RECORD OF DECISION
Date Started: Not reported
Date Completed: 11/24/1993
Priority Level: Not reported
Operable Unit: CENTRAL BASE AREA
Primary Responsibility: Federal Facilities
Planning Status: Primary
Urgency Indicator: Not reported
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 001
Action: FEDERAL FACILITY REMEDIAL INVESTIGATION/FEASIBILITY STUDY
Date Started: 06/29/1989
Date Completed: 11/24/1993
Priority Level: Not reported
Operable Unit: CENTRAL BASE AREA
Primary Responsibility: Federal Facilities
Planning Status: Primary

USAF NORTON AFB (Continued) **1000417274**

Urgency Indicator: Not reported
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 001
Action: FEDERAL FACILITY REMEDIAL DESIGN
Date Started: 11/24/1993
Date Completed: 09/16/1994
Priority Level: Not reported
Operable Unit: CENTRAL BASE AREA
Primary Responsibility: Federal Facilities
Planning Status: Primary
Urgency Indicator: Not reported
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 001
Action: Restoration Advisory Board
Date Started: 12/01/1994
Date Completed: Not reported
Priority Level: Not reported
Operable Unit: SITEWIDE
Primary Responsibility: Federal Facilities
Planning Status: Not reported
Urgency Indicator: Not reported
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 001
Action: ENGINEERING EVALUATION/COST ANALYSIS
Date Started: Not reported
Date Completed: 03/29/1996
Priority Level: Not reported
Operable Unit: BASEWIDE
Primary Responsibility: Federal Facilities
Planning Status: Not reported
Urgency Indicator: Not reported
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 001
Action: FEDERAL FACILITY REMEDIAL ACTION
Date Started: 09/16/1994
Date Completed: 07/26/1996
Priority Level: Not reported
Operable Unit: CENTRAL BASE AREA
Primary Responsibility: Federal Facilities
Planning Status: Primary
Urgency Indicator: Not reported
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

USAF NORTON AFB (Continued) **1000417274**

Action Code:	017
Action:	FEDERAL FACILITY REMOVAL
Date Started:	09/20/1996
Date Completed:	11/15/1996
Priority Level:	Not reported
Operable Unit:	BASEWIDE
Primary Responsibility:	Federal Facilities
Planning Status:	Not reported
Urgency Indicator:	Not reported
Action Anomaly:	Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code:	006
Action:	FEDERAL FACILITY REMOVAL
Date Started:	03/25/1996
Date Completed:	04/22/1997
Priority Level:	Partially Cleaned up
Operable Unit:	BASEWIDE
Primary Responsibility:	Federal Facilities
Planning Status:	Not reported
Urgency Indicator:	Not reported
Action Anomaly:	Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code:	003
Action:	RECORD OF DECISION
Date Started:	Not reported
Date Completed:	06/25/1997
Priority Level:	Not reported
Operable Unit:	BASEWIDE
Primary Responsibility:	Federal Facilities
Planning Status:	Not reported
Urgency Indicator:	Not reported
Action Anomaly:	Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code:	012
Action:	FEDERAL FACILITY REMOVAL
Date Started:	04/15/1996
Date Completed:	07/22/1997
Priority Level:	Not reported
Operable Unit:	BASEWIDE
Primary Responsibility:	Federal Facilities
Planning Status:	Not reported
Urgency Indicator:	Not reported
Action Anomaly:	Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code:	008
Action:	FEDERAL FACILITY REMOVAL
Date Started:	04/18/1996

USAF NORTON AFB (Continued) **1000417274**

Date Completed:	12/19/1997
Priority Level:	Partially Cleaned up
Operable Unit:	BASEWIDE
Primary Responsibility:	Federal Facilities
Planning Status:	Not reported
Urgency Indicator:	Non-Time Critical
Action Anomaly:	Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code:	009
Action:	FEDERAL FACILITY REMOVAL
Date Started:	06/30/1997
Date Completed:	12/08/1998
Priority Level:	Not reported
Operable Unit:	BASEWIDE
Primary Responsibility:	Federal Facilities
Planning Status:	Not reported
Urgency Indicator:	Not reported
Action Anomaly:	Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code:	011
Action:	FEDERAL FACILITY REMOVAL
Date Started:	06/25/1997
Date Completed:	12/08/1998
Priority Level:	Not reported
Operable Unit:	BASEWIDE
Primary Responsibility:	Federal Facilities
Planning Status:	Not reported
Urgency Indicator:	Not reported
Action Anomaly:	Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code:	002
Action:	FEDERAL FACILITY REMOVAL
Date Started:	12/21/1995
Date Completed:	07/28/1999
Priority Level:	Not reported
Operable Unit:	BASEWIDE
Primary Responsibility:	Federal Facilities
Planning Status:	Primary
Urgency Indicator:	Not reported
Action Anomaly:	Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code:	007
Action:	FEDERAL FACILITY REMOVAL
Date Started:	04/25/1996
Date Completed:	09/30/1999
Priority Level:	Stabilized
Operable Unit:	BASEWIDE

USAF NORTON AFB (Continued) **1000417274**

Primary Responsibility: Federal Facilities
Planning Status: Approved
Urgency Indicator: Non-Time Critical
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 001
Action: FEDERAL FACILITY FIVE YEAR REVIEW
Date Started: 03/05/1999
Date Completed: 10/27/1999
Priority Level: Not reported
Operable Unit: SITEWIDE
Primary Responsibility: Federal Facilities
Planning Status: Not reported
Urgency Indicator: Not reported
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 002
Action: OPERATIONS AND MAINTENANCE
Date Started: 11/28/1999
Date Completed: Not reported
Priority Level: Not reported
Operable Unit: BASEWIDE
Primary Responsibility: Federal Facilities
Planning Status: Not reported
Urgency Indicator: Not reported
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 003
Action: FEDERAL FACILITY REMEDIAL INVESTIGATION/FEASIBILITY STUDY
Date Started: 10/01/1998
Date Completed: 06/10/2003
Priority Level: Not reported
Operable Unit: BASEWIDE
Primary Responsibility: Federal Facilities
Planning Status: Not reported
Urgency Indicator: Not reported
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 016
Action: FEDERAL FACILITY REMOVAL
Date Started: 12/11/2003
Date Completed: 12/03/2004
Priority Level: Not reported
Operable Unit: BASEWIDE
Primary Responsibility: Federal Facilities
Planning Status: Not reported
Urgency Indicator: Not reported
Action Anomaly: Not reported

USAF NORTON AFB (Continued) **1000417274**

For detailed financial records, contact EDR for a Site Report.:

Action Code:	002
Action:	FEDERAL FACILITY FIVE YEAR REVIEW
Date Started:	02/28/2005
Date Completed:	09/20/2005
Priority Level:	Not reported
Operable Unit:	SITEWIDE
Primary Responsibility:	Federal Facilities
Planning Status:	Not reported
Urgency Indicator:	Not reported
Action Anomaly:	Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code:	002
Action:	RECORD OF DECISION
Date Started:	Not reported
Date Completed:	09/29/2005
Priority Level:	Final Remedy Selected at Site
Operable Unit:	BASEWIDE
Primary Responsibility:	Federal Facilities
Planning Status:	Primary
Urgency Indicator:	Not reported
Action Anomaly:	Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code:	014
Action:	FEDERAL FACILITY REMOVAL
Date Started:	11/24/2003
Date Completed:	09/29/2005
Priority Level:	Not reported
Operable Unit:	BASEWIDE
Primary Responsibility:	Federal Facilities
Planning Status:	Not reported
Urgency Indicator:	Not reported
Action Anomaly:	Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code:	013
Action:	FEDERAL FACILITY REMOVAL
Date Started:	02/02/2004
Date Completed:	09/29/2005
Priority Level:	Not reported
Operable Unit:	BASEWIDE
Primary Responsibility:	Federal Facilities
Planning Status:	Not reported
Urgency Indicator:	Not reported
Action Anomaly:	Not reported

For detailed financial records, contact EDR for a Site Report.:

USAF NORTON AFB (Continued) **1000417274**

Action Code:	015
Action:	FEDERAL FACILITY REMOVAL
Date Started:	12/17/2003
Date Completed:	09/29/2005
Priority Level:	Not reported
Operable Unit:	BASEWIDE
Primary Responsibility:	Federal Facilities
Planning Status:	Not reported
Urgency Indicator:	Not reported
Action Anomaly:	Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code:	001
Action:	OPERATIONS AND MAINTENANCE
Date Started:	07/26/1996
Date Completed:	12/21/2005
Priority Level:	Not reported
Operable Unit:	CENTRAL BASE AREA
Primary Responsibility:	Federal Facilities
Planning Status:	Primary
Urgency Indicator:	Not reported
Action Anomaly:	Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code:	001
Action:	PRELIMINARY CLOSE-OUT REPORT PREPARED
Date Started:	Not reported
Date Completed:	05/16/2006
Priority Level:	Not reported
Operable Unit:	BASEWIDE
Primary Responsibility:	EPA Fund-Financed
Planning Status:	Primary
Urgency Indicator:	Not reported
Action Anomaly:	Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code:	003
Action:	FEDERAL FACILITY FIVE YEAR REVIEW
Date Started:	Not reported
Date Completed:	09/30/2010
Priority Level:	Not reported
Operable Unit:	SITEWIDE
Primary Responsibility:	Federal Facilities
Planning Status:	Not reported
Urgency Indicator:	Not reported
Action Anomaly:	Not reported

For detailed financial records, contact EDR for a Site Report.:

Federal Register Details:

Fed Register Date:	07/22/1987
Fed Register Volume:	52
Page Number:	27620

USAF NORTON AFB (Continued) **1000417274**

Fed Register Date: 10/15/1984
Fed Register Volume: 49
Page Number: 40320

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49 additional US CERCLIS Financial: record(s) in the EDR Site Report.

CORRACTS:

EPA ID: CA4570024345
EPA Region: 09
Area Name: ENTIRE FACILITY
Actual Date: 01/01/1996
Action: CA210SF - CA Responsibility Referred To A Non-RCRA Federal Authority, Corrective Action at the facility or area referred to CERCLA
NAICS Code(s): 332813 92811 92811
Electroplating, Plating, Polishing, Anodizing, and Coloring
National Security
National Security
Original schedule date: Not reported
Schedule end date: Not reported

EPA ID: CA4570024345
EPA Region: 09
Area Name: CENTRAL BASE AREA OU
Actual Date: 02/05/1993
Action: CA150 - RFI Workplan Approved
NAICS Code(s): 332813 92811 92811
Electroplating, Plating, Polishing, Anodizing, and Coloring
National Security
National Security
Original schedule date: Not reported
Schedule end date: Not reported

EPA ID: CA4570024345
EPA Region: 09
Area Name: CENTRAL BASE AREA OU
Actual Date: 02/05/1993
Action: CA200 - RFI Approved
NAICS Code(s): 332813 92811 92811
Electroplating, Plating, Polishing, Anodizing, and Coloring
National Security
National Security
Original schedule date: Not reported
Schedule end date: Not reported

EPA ID: CA4570024345
EPA Region: 09
Area Name: CENTRAL BASE AREA OU
Actual Date: 02/05/1993
Action: CA300 - CMS Workplan Approved
NAICS Code(s): 332813 92811 92811
Electroplating, Plating, Polishing, Anodizing, and Coloring
National Security
National Security

USAF NORTON AFB (Continued) **1000417274**

Original schedule date: Not reported
Schedule end date: Not reported

EPA ID: CA4570024345
EPA Region: 09
Area Name: CENTRAL BASE AREA OU
Actual Date: 02/05/1993
Action: CA350 - CMS Approved
NAICS Code(s): 332813 92811 92811
Electroplating, Plating, Polishing, Anodizing, and Coloring
National Security
National Security
Original schedule date: Not reported
Schedule end date: Not reported

EPA ID: CA4570024345
EPA Region: 09
Area Name: ENTIRE FACILITY
Actual Date: 04/01/1984
Action: CA049SI
NAICS Code(s): 332813 92811 92811
Electroplating, Plating, Polishing, Anodizing, and Coloring
National Security
National Security
Original schedule date: Not reported
Schedule end date: Not reported

EPA ID: CA4570024345
EPA Region: 09
Area Name: CENTRAL BASE AREA OU
Actual Date: 05/01/1992
Action: CA650 - Stabilization Construction Completed
NAICS Code(s): 332813 92811 92811
Electroplating, Plating, Polishing, Anodizing, and Coloring
National Security
National Security
Original schedule date: Not reported
Schedule end date: Not reported

EPA ID: CA4570024345
EPA Region: 09
Area Name: ENTIRE FACILITY
Actual Date: 05/22/2000
Action: CA750NO - Migration of Contaminated Groundwater under Control, Unacceptable migration of contaminated groundwater is observed or expected
NAICS Code(s): 332813 92811 92811
Electroplating, Plating, Polishing, Anodizing, and Coloring
National Security
National Security
Original schedule date: Not reported
Schedule end date: Not reported

EPA ID: CA4570024345
EPA Region: 09
Area Name: ENTIRE FACILITY
Actual Date: 05/22/2000

USAF NORTON AFB (Continued) **1000417274**

Action:	CA725YE - Current Human Exposures Under Control, Yes, Current Human Exposures Under Control has been verified
NAICS Code(s):	332813 92811 92811 Electroplating, Plating, Polishing, Anodizing, and Coloring National Security National Security
Original schedule date:	Not reported
Schedule end date:	Not reported

EPA ID:	CA4570024345
EPA Region:	09
Area Name:	ENTIRE FACILITY
Actual Date:	06/01/1984
Action:	CA029SF
NAICS Code(s):	332813 92811 92811 Electroplating, Plating, Polishing, Anodizing, and Coloring National Security National Security
Original schedule date:	Not reported
Schedule end date:	Not reported

EPA ID:	CA4570024345
EPA Region:	09
Area Name:	ENTIRE FACILITY
Actual Date:	06/01/1984
Action:	CA049PA
NAICS Code(s):	332813 92811 92811 Electroplating, Plating, Polishing, Anodizing, and Coloring National Security National Security
Original schedule date:	Not reported
Schedule end date:	Not reported

EPA ID:	CA4570024345
EPA Region:	09
Area Name:	ENTIRE FACILITY
Actual Date:	06/01/1984
Action:	CA050 - RFA Completed
NAICS Code(s):	332813 92811 92811 Electroplating, Plating, Polishing, Anodizing, and Coloring National Security National Security
Original schedule date:	Not reported
Schedule end date:	Not reported

EPA ID:	CA4570024345
EPA Region:	09
Area Name:	CENTRAL BASE AREA OU
Actual Date:	06/01/1995
Action:	CA550 - Certification Of Remedy Completion Or Construction Completion
NAICS Code(s):	332813 92811 92811 Electroplating, Plating, Polishing, Anodizing, and Coloring National Security National Security
Original schedule date:	Not reported
Schedule end date:	Not reported

USAF NORTON AFB (Continued) **1000417274**

EPA ID: CA4570024345
EPA Region: 09
Area Name: ENTIRE FACILITY
Actual Date: 06/18/1998
Action: CA210 - CA Responsibility Referred To A Non-RCRA Federal Authority
NAICS Code(s): 332813 92811 92811
Electroplating, Plating, Polishing, Anodizing, and Coloring
National Security
National Security
Original schedule date: Not reported
Schedule end date: Not reported

EPA ID: CA4570024345
EPA Region: 09
Area Name: ENTIRE FACILITY
Actual Date: 06/18/1998
Action: CA725YE - Current Human Exposures Under Control, Yes, Current Human Exposures Under Control has been verified
NAICS Code(s): 332813 92811 92811
Electroplating, Plating, Polishing, Anodizing, and Coloring
National Security
National Security
Original schedule date: Not reported
Schedule end date: Not reported

EPA ID: CA4570024345
EPA Region: 09
Area Name: ENTIRE FACILITY
Actual Date: 06/18/1998
Action: CA750YE - Migration of Contaminated Groundwater under Control, Yes, Migration of Contaminated Groundwater Under Control has been verified
NAICS Code(s): 332813 92811 92811
Electroplating, Plating, Polishing, Anodizing, and Coloring
National Security
National Security
Original schedule date: Not reported
Schedule end date: Not reported

EPA ID: CA4570024345
EPA Region: 09
Area Name: ENTIRE FACILITY
Actual Date: 06/18/1998
Action: CA225NR - Stabilization Measures Evaluation, This facility is, not amenable to stabilization activity at the, present time for reasons other than (1) it appears to be technically, infeasible or inappropriate (NF) or (2) there is a lack of technical, information (IN). Reasons for this conclusion may be the status of, closure at the facility, the degree of risk, timing considerations, the status of corrective action work at the facility, or other, administrative considerations
NAICS Code(s): 332813 92811 92811
Electroplating, Plating, Polishing, Anodizing, and Coloring
National Security
National Security
Original schedule date: Not reported
Schedule end date: Not reported

USAF NORTON AFB (Continued) **1000417274**

EPA ID: CA4570024345
EPA Region: 09
Area Name: ENTIRE FACILITY
Actual Date: 06/18/1998
Action: CA075ME - CA Prioritization, Facility or area was assigned a medium corrective action priority
NAICS Code(s): 332813 92811 92811
Electroplating, Plating, Polishing, Anodizing, and Coloring
National Security
National Security
Original schedule date: Not reported
Schedule end date: Not reported

EPA ID: CA4570024345
EPA Region: 09
Area Name: CENTRAL BASE AREA OU
Actual Date: 07/13/1989
Action: CA600GW - Stabilization Measures Implemented, Groundwater extraction and treatment
NAICS Code(s): 332813 92811 92811
Electroplating, Plating, Polishing, Anodizing, and Coloring
National Security
National Security
Original schedule date: Not reported
Schedule end date: Not reported

EPA ID: CA4570024345
EPA Region: 09
Area Name: ENTIRE FACILITY
Actual Date: 07/13/1989
Action: CA100 - RFI Imposition
NAICS Code(s): 332813 92811 92811
Electroplating, Plating, Polishing, Anodizing, and Coloring
National Security
National Security
Original schedule date: Not reported
Schedule end date: Not reported

EPA ID: CA4570024345
EPA Region: 09
Area Name: ENTIRE FACILITY
Actual Date: 07/13/1989
Action: CA250 - CMS Imposition
NAICS Code(s): 332813 92811 92811
Electroplating, Plating, Polishing, Anodizing, and Coloring
National Security
National Security
Original schedule date: Not reported
Schedule end date: Not reported

EPA ID: CA4570024345
EPA Region: 09
Area Name: CENTRAL BASE AREA OU
Actual Date: 10/07/1994
Action: CA500 - CMI Workplan Approved
NAICS Code(s): 332813 92811 92811
Electroplating, Plating, Polishing, Anodizing, and Coloring

USAF NORTON AFB (Continued) **1000417274**

National Security
National Security
Original schedule date: Not reported
Schedule end date: Not reported

EPA ID: CA4570024345
EPA Region: 09
Area Name: CENTRAL BASE AREA OU
Actual Date: 10/07/1994
Action: CA450 - Corrective Measures Design Approved
NAICS Code(s): 332813 92811 92811
Electroplating, Plating, Polishing, Anodizing, and Coloring
National Security
National Security
Original schedule date: Not reported
Schedule end date: Not reported

EPA ID: CA4570024345
EPA Region: 09
Area Name: CENTRAL BASE AREA OU
Actual Date: 11/24/1993
Action: CA400 - Date For Remedy Selection (CM Imposed)
NAICS Code(s): 332813 92811 92811
Electroplating, Plating, Polishing, Anodizing, and Coloring
National Security
National Security
Original schedule date: Not reported
Schedule end date: Not reported

US ENG CONTROLS:
EPA ID: CA4570024345
Site ID: 0902760
Name: NORTON AIR FORCE BASE (LNDFLL #2)
Address: I-10/US 395 FORMER NORTON AFB
SAN BERNARDINO, CA 92408
EPA Region: 09
County: SAN BERNARDINO
Event Code: Not reported
Actual Date: Not reported

Action ID: 001
Action Name: RECORD OF DECISION
Action Completion date: 11/24/1993
Planned Complet. date: 12/31/1993
Operable Unit: 01
Contaminated Media : Groundwater
Engineering Control: Air Stripping

Action ID: 001
Action Name: RECORD OF DECISION
Action Completion date: 11/24/1993
Planned Complet. date: 12/31/1993
Operable Unit: 01
Contaminated Media : Groundwater
Engineering Control: Alternate Drinking Water, (N.O.S.)

Action ID: 001

USAF NORTON AFB (Continued) **1000417274**

Action Name: RECORD OF DECISION
Action Completion date: 11/24/1993
Planned Complet. date: 12/31/1993
Operable Unit: 01
Contaminated Media : Groundwater
Engineering Control: Carbon Adsorption

Action ID: 001
Action Name: RECORD OF DECISION
Action Completion date: 11/24/1993
Planned Complet. date: 12/31/1993
Operable Unit: 01
Contaminated Media : Groundwater
Engineering Control: Discharge

Action ID: 001
Action Name: RECORD OF DECISION
Action Completion date: 11/24/1993
Planned Complet. date: 12/31/1993
Operable Unit: 01
Contaminated Media : Groundwater
Engineering Control: Extraction

Action ID: 001
Action Name: RECORD OF DECISION
Action Completion date: 11/24/1993
Planned Complet. date: 12/31/1993
Operable Unit: 01
Contaminated Media : Groundwater
Engineering Control: Monitoring

Action ID: 001
Action Name: RECORD OF DECISION
Action Completion date: 11/24/1993
Planned Complet. date: 12/31/1993
Operable Unit: 01
Contaminated Media : Groundwater
Engineering Control: Pump And Treat

Action ID: 001
Action Name: RECORD OF DECISION
Action Completion date: 11/24/1993
Planned Complet. date: 12/31/1993
Operable Unit: 01
Contaminated Media : Groundwater
Engineering Control: Reinjection

Action ID: 001
Action Name: RECORD OF DECISION
Action Completion date: 11/24/1993
Planned Complet. date: 12/31/1993
Operable Unit: 01
Contaminated Media : Soil
Engineering Control: Carbon Adsorption

Action ID: 001
Action Name: RECORD OF DECISION

USAF NORTON AFB (Continued) **1000417274**

Action Completion date: 11/24/1993
Planned Complet. date: 12/31/1993
Operable Unit: 01
Contaminated Media : Soil
Engineering Control: Disposal

Action ID: 001
Action Name: RECORD OF DECISION
Action Completion date: 11/24/1993
Planned Complet. date: 12/31/1993
Operable Unit: 01
Contaminated Media : Soil
Engineering Control: Excavation

Action ID: 001
Action Name: RECORD OF DECISION
Action Completion date: 11/24/1993
Planned Complet. date: 12/31/1993
Operable Unit: 01
Contaminated Media : Soil
Engineering Control: Monitoring

Action ID: 001
Action Name: RECORD OF DECISION
Action Completion date: 11/24/1993
Planned Complet. date: 12/31/1993
Operable Unit: 01
Contaminated Media : Soil
Engineering Control: Soil Vapor Extraction (ex-situ)

Action ID: 001
Action Name: RECORD OF DECISION
Action Completion date: 11/24/1993
Planned Complet. date: 12/31/1993
Operable Unit: 01
Contaminated Media : Soil
Engineering Control: Soil Vapor Extraction (in-situ)

Action ID: 002
Action Name: RECORD OF DECISION
Action Completion date: 9/29/2005
Planned Complet. date: 9/30/2005
Operable Unit: 02
Contaminated Media : Soil
Engineering Control: Disposal

Action ID: 002
Action Name: RECORD OF DECISION
Action Completion date: 9/29/2005
Planned Complet. date: 9/30/2005
Operable Unit: 02
Contaminated Media : Soil
Engineering Control: Excavation

Action ID: 002
Action Name: RECORD OF DECISION
Action Completion date: 9/29/2005

USAF NORTON AFB (Continued) **1000417274**

Planned Complet. date: 9/30/2005
Operable Unit: 02
Contaminated Media : Soil
Engineering Control: No Further Action

Action ID: 003
Action Name: RECORD OF DECISION
Action Completion date: 6/25/1997
Planned Complet. date: 6/30/1997
Operable Unit: 02
Contaminated Media : Groundwater
Engineering Control: No Further Action

Action ID: 003
Action Name: RECORD OF DECISION
Action Completion date: 6/25/1997
Planned Complet. date: 6/30/1997
Operable Unit: 02
Contaminated Media : Soil
Engineering Control: No Further Action

US INST CONTROL:
EPA ID: CA4570024345
Site ID: 0902760
Name: NORTON AIR FORCE BASE (LNDFLL #2)
Action Name: RECORD OF DECISION
Address: I-10/US 395 FORMER NORTON AFB
SAN BERNARDINO, CA 92408
EPA Region: 09
County: SAN BERNARDINO
Event Code: Not reported
Inst. Control: Deed Restriction
Actual Date: Not reported
Complet. Date: 11/24/1993
Operable Unit: 01
Contaminated Media : Groundwater

EPA ID: CA4570024345
Site ID: 0902760
Name: NORTON AIR FORCE BASE (LNDFLL #2)
Action Name: RECORD OF DECISION
Address: I-10/US 395 FORMER NORTON AFB
SAN BERNARDINO, CA 92408
EPA Region: 09
County: SAN BERNARDINO
Event Code: Not reported
Inst. Control: Deed Restriction
Actual Date: Not reported
Complet. Date: 11/24/1993
Operable Unit: 01
Contaminated Media : Soil

EPA ID: CA4570024345
Site ID: 0902760
Name: NORTON AIR FORCE BASE (LNDFLL #2)
Action Name: RECORD OF DECISION

USAF NORTON AFB (Continued) **1000417274**

Address: I-10/US 395 FORMER NORTON AFB
SAN BERNARDINO, CA 92408
EPA Region: 09
County: SAN BERNARDINO
Event Code: Not reported
Inst. Control: Covenant
Actual Date: Not reported
Complet. Date: 9/29/2005
Operable Unit: 02
Contaminated Media : Soil

EPA ID: CA4570024345
Site ID: 0902760
Name: NORTON AIR FORCE BASE (LNDFLL #2)
Action Name: RECORD OF DECISION
Address: I-10/US 395 FORMER NORTON AFB
SAN BERNARDINO, CA 92408
EPA Region: 09
County: SAN BERNARDINO
Event Code: Not reported
Inst. Control: Deed Restriction
Actual Date: Not reported
Complet. Date: 6/25/1997
Operable Unit: 02
Contaminated Media : Soil

ROD:

Full-text of USEPA Record of Decision(s) is available from EDR.

PADS:
EPAID: CA4570024345
Facility name: USAF NORTON AFB
Facility Address: 63 CES DEV
NORTON AFB, CA 92409
Facility country: US
Generator: Yes
Storer: No
Transporter: No
Disposer: No
Research facility: No
Smelter: No
Facility owner name: US DOD
Contact title: Not reported
Contact name: DIENZO EDMUND M
Contact tel: (714)382-2444
Contact extension: Not reported
Mailing address: 63 CES DEV
NORTON AFB, CA 92409
Mailing country: US
Cert. title: Not reported
Cert. name: Not reported
Cert. date: 6/22/1990
Date received: 7/11/1990

FINDS:

USAF NORTON AFB (Continued) **1000417274**

Registry ID: 110000830815

Environmental Interest/Information System

NCDB (National Compliance Data Base) supports implementation of the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) and the Toxic Substances Control Act (TSCA). The system tracks inspections in regions and states with cooperative agreements, enforcement actions, and settlements.

The NEI (National Emissions Inventory) database contains information on stationary and mobile sources that emit criteria air pollutants and their precursors, as well as hazardous air pollutants (HAPs).

California Hazardous Waste Tracking System - Datamart (HWTS-DATAMART) provides California with information on hazardous waste shipments for generators, transporters, and treatment, storage, and disposal facilities.

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

CERCLIS (Comprehensive Environmental Response, Compensation, and Liability Information System) is the Superfund database that is used to support management in all phases of the Superfund program. The system contains information on all aspects of hazardous waste sites, including an inventory of sites, planned and actual site activities, and financial information.

NY MANIFEST:

EPA ID:	CA4570024345
Country:	USA
Mailing Name:	UNITED STATES MILITARY - D.P.D.O.
Mailing Contact:	UNITED STATES MILITARY - D.P.D.O.
Mailing Address:	BUILDING 948
Mailing Address 2:	Not reported
Mailing City:	NORTON AIR FORCE BASE
Mailing State:	CA
Mailing Zip:	92405
Mailing Zip4:	Not reported
Mailing Country:	USA
Mailing Phone:	714-382-6501

Document ID:	NYA2651931
Manifest Status:	Completed after the designated time period for a TSDF to get a copy to the DEC
Trans1 State ID:	54068
Trans2 State ID:	AMOX23602
Generator Ship Date:	850425
Trans1 Recv Date:	850425
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	850606
Part A Recv Date:	850515

USAF NORTON AFB (Continued) **1000417274**

Part B Recv Date:	850703
Generator EPA ID:	CA4570024345
Trans1 EPA ID:	CAD006913206
Trans2 EPA ID:	CAD006913206
TSDF ID:	NY7890008975
Waste Code:	D001 - NON-LISTED IGNITABLE WASTES
Quantity:	06880
Units:	G - Gallons (liquids only)* (8.3 pounds)
Number of Containers:	001
Container Type:	TT - Cargo tank, tank trucks
Handling Method:	B Incineration, heat recovery, burning.
Specific Gravity:	085
Year:	85

Document ID:	NYA2704788
Manifest Status:	Completed after the designated time period for a TSDF to get a copy to the DEC
Trans1 State ID:	54068
Trans2 State ID:	ACFX88990
Generator Ship Date:	850306
Trans1 Recv Date:	850306
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	850425
Part A Recv Date:	850515
Part B Recv Date:	850524
Generator EPA ID:	CA4570024345
Trans1 EPA ID:	CAD006913206
Trans2 EPA ID:	CAD006913206
TSDF ID:	NY7890008975
Waste Code:	D001 - NON-LISTED IGNITABLE WASTES
Quantity:	46300
Units:	P - Pounds
Number of Containers:	001
Container Type:	TT - Cargo tank, tank trucks
Handling Method:	B Incineration, heat recovery, burning.
Specific Gravity:	089
Year:	85

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1 **AG-TEUNISSEN FARMING** **UST** **U003785068**
SSE **9092 ALABAMA ST** **N/A**
< 1/8 **REDLANDS, CA 92374**
0.112 mi.
593 ft.

Relative:
Higher

Actual:
1220 ft.

UST:

Facility ID:	15049
Latitude:	34.08778
Longitude:	-117.20873

A2 **CALIFORNIA STREET LANDFILL** **SWF/LF** **S107030110**
WSW **2151 NEVADA STREET** **FINANCIAL ASSURANCE** **N/A**
1/4-1/2 **REDLANDS, CA**
0.473 mi.
2496 ft. **Site 1 of 3 in cluster A**

Relative:
Lower

Actual:
1186 ft.

SWF/LF (SWIS):

Region:	STATE
Facility ID:	36-AA-0017
Lat/Long:	34.0886100 / -117.221
Owner Name:	City Of Redlands
Owner Telephone:	9097987698
Owner Address:	Municipal Utilities Dept. - POBox 3005
Owner Address2:	35 Cajon Street , Suite 15 A
Owner City,St,Zip:	Redlands, CA 92373
Operator:	City Of Redlands
Operator Phone:	9097987698
Operator Address:	Municipal Utilities Dept. - POBox 3005
Operator Address2:	35 Cajon Street , Suite 15 A
Operator City,St,Zip:	Redlands, CA 92373
Operator's Status:	Active
Permit Date:	01/14/2009
Permit Status:	Permitted
Permitted Acreage:	115
Activity:	Solid Waste Landfill
Regulation Status:	Permitted
Landuse Name:	Rural,Open Space - Nonirrigated,Industrial,Agricultural
GIS Source:	Map
Category:	Disposal
Unit Number:	01
Inspection Frequency:	Monthly
Accepted Waste:	Construction/demolition,Mixed municipal,Other designated,Sludge (BioSolids)
Closure Date:	01/01/2042
Closure Type:	Estimated
Disposal Acreage:	106
SWIS Num:	36-AA-0017
Waste Discharge Requirement Num:	III
Program Type:	BOE Reporting Disposal Facility,Financial Assurance Responsibilities,Remaining Capacity Landfill
Permitted Throughput with Units:	829
Actual Throughput with Units:	Tons/day
Permitted Capacity with Units:	10000000
Remaining Capacity:	6800000
Remaining Capacity with Units:	Cubic Yards

FINASS2:

Region:	2
Id Number:	36-AA-0017
SWIS_NO:	36-AA-0017
CA1:	PLEDGE OF REVENUE
CA2:	Not reported
Closure Mech1:	ENTERPRISE FUND
Closure Mech2:	Not reported
PostClosure Mech1:	PLEDGE OF REVENUE
PostClosure Mech2:	Not reported
Lia Mech1:	SELF-INS. & RISK MANAGEMENT
Lia Mech2:	Not reported
Closure Anniv Date:	1994-04-08

CALIFORNIA STREET LANDFILL (Continued) **S107030110**

Closure Coverage:	6,688,115.00
Closure Approved:	-1
Closure Adequacy Date:	Not reported
Closure InfCoverage:	6,688,115.00
Closure Inf Coverage Date:	2007-06-01
Closure Plan Coverage:	6,022,785.00
Closure Plan Date:	2002-05-01
PostClose Anniv Date:	1994-04-08
PostClose Coverage:	4,428,143.00
PostClose Approved:	-1
PostClose Adequacy Date:	Not reported
PostClose Inf Coverage:	4,428,143.00
PostClose Inf Coverage Date:	2007-06-01
PostClose Plan Coverage:	3987634
PostClose Plan Date:	2002-05-01
CorAct Anniv Date:	2008-09-05
CorActCoverage:	34,380.00
CorActApproved:	-1
CorAct Mec Adequacy Date:	Not reported
CorAct Inf Coverage:	34,380.00
CorAct Inf Coverage Date:	2007-06-01
CorAct Inf SourceID:	1
CorActPlanCoverage:	28,600.00
CorAct Plan Date:	2003-05-16
Lia Anniv Date:	1993-12-07
Lia Coverage:	1,000,000.00
Lia Approved:	-1
Financial Total:	0.00
Review Date:	2002-02-25
Total Coverage:	11,150,638.00

A3 **LANDFILL,CALIFORNIA STREET** **WDS** **S103442703**
WSW **2151 NEVADA ST** **NPDES** **N/A**
1/4-1/2 **REDLANDS CA, CA 92373** **WMUDS/SWAT**
0.473 mi. **ENF**
2496 ft. **Site 2 of 3 in cluster A** **EMI**

Relative:
Lower

Actual:
1186 ft.

CA WDS:

Facility ID:	Santa Ana River 360303001
Facility Type:	Solid Waste Site-Class III - Landfills for non hazardous solid wastes.
Facility Status:	Active - Any facility with a continuous or seasonal discharge that is under Waste Discharge Requirements.
NPDES Number:	Not reported
Subregion:	8
Facility Telephone:	9097987698
Facility Contact:	Gary Phelps
Agency Name:	REDLANDS CITY OF
Agency Address:	PO BOX 3005
Agency City,St,Zip:	REDLANDS 92373
Agency Contact:	DOUGLAS HEDRICK
Agency Telephone:	9097987698
Agency Type:	City
SIC Code:	4953
SIC Code 2:	Not reported
Primary Waste:	Solid Wastes
Primary Waste Type:	Nonhazardous Solid Wastes/Influent or Solid Wastes that contain nonhazardous putrescible and non putrescible solid, semisolid, and liquid wastes (E.G., garbage, trash, refuse, paper, demolition and

LANDFILL,CALIFORNIA STREET (Continued) **S103442703**

construction wastes, manure, vegetable or animal solid and semisolid waste).
Secondary Waste: Not reported
Secondary Waste Type: Not reported
Design Flow: 0
Baseline Flow: 0
Reclamation: No reclamation requirements associated with this facility.
POTW: The facility is not a POTW.
Treat To Water: Major Threat to Water Quality. A violation could render unusable a ground water or surface water resource used as a significant drink water supply, require closure of an area used for contact recreation, result in long-term deleterious effects on shell fish spawning or growth areas of aquatic resources, or directly expose the public to toxic substances.
Complexity: Category B - Any facility having a physical, chemical, or biological waste treatment system (except for septic systems with subsurface disposal), or any Class II or III disposal site, or facilities without treatment systems that are complex, such as marinas with petroleum products, solid wastes, and sewage pump out facilities.

NPDES:
Npdes Number: CAS000002
Facility Status: Terminated
Agency Id: Not reported
Region: 8
Regulatory Measure Id: 350485
Order No: 2009-0009-DWQ
Regulatory Measure Type: Enrollee
Place Id: Not reported
WDID: 8 36C353108
Program Type: Construction
Adoption Date Of Regulatory Measure: Not reported
Effective Date Of Regulatory Measure: 08/21/2008
Expiration Date Of Regulatory Measure: Not reported
Termination Date Of Regulatory Measure: 06/02/2009
Discharge Name: Redlands City Municipal Utilities & Engineering Department
Discharge Address: 36 Cajon St Ste 15A
Discharge City: Redlands
Discharge State: CA
Discharge Zip: Not reported

WMUDS/SWAT:
Edit Date: 19931007
Complexity: Category B - Any facility having a physical, chemical, or biological waste treatment system (except for septic systems with subsurface disposal), or any Class II or III disposal site, or facilities without treatment systems that are complex, such as marinas with petroleum products, solid wastes, and sewage pump out facilities.
Primary Waste: Solid Wastes
Primary Waste Type: Nonhazardous Solid Wastes/Influent or Solid Wastes that contain nonhazardous putrescible and non putrescible solid, semisolid, and liquid wastes (E.G., garbage, trash, refuse, paper, demolition and construction wastes, manure, vegetable or animal solid and semisolid waste).
Secondary Waste: Not reported
Secondary Waste Type: Not reported

LANDFILL,CALIFORNIA STREET (Continued) **S103442703**

Base Meridian:	SB
NPID:	Not reported
Tonnage:	380
Regional Board ID:	Not reported
Municipal Solid Waste:	True
Superorder:	True
Open To Public:	True
Waste List:	True
Agency Type:	City
Agency Name:	REDLANDS, CITY OF
Agency Department:	MUNICIPAL UTILITIES DEPT
Agency Address:	PO BOX 3005
Agency City,St,Zip:	REDLANDS CA 92373
Agency Contact:	GARY PHELPS
Agency Telephone:	9097987698
Land Owner Name:	CITY OF REDLANDS
Land Owner Address:	P.O. BOX 3005
Land Owner City,St,Zip:	REDLANDS, CA 92373
Land Owner Contact:	GARY PHELPS
Land Owner Phone:	7147932641
Region:	8
Facility Type:	Solid Waste Site-Class III - Landfills for non hazardous solid wastes.
Facility Description:	Not reported
Facility Telephone:	9097987698
SWAT Facility Name:	CALIFORNIA STREET LANDFILL
Primary SIC:	4953
Secondary SIC:	Not reported
Comments:	Not reported
Last Facility Editors:	BDNBDNBDN
Waste Discharge System:	True
Solid Waste Assessment Test Program:	True
Toxic Pits Cleanup Act Program:	False
Resource Conservation Recovery Act:	False
Department of Defence:	False
Solid Waste Assessment Test Program:	CITY OF REDLANDS
Threat to Water Quality:	Major Threat to Water Quality. A violation could render unusable a ground water or surface water resource used as a significant drink water supply, require closure of an area used for contact recreation, result in long-term deleterious effects on shell fish spawning or growth areas of aquatic resources, or directly expose the public to toxic substances.
Sub Chapter 15:	True
Regional Board Project Officer:	Not reported
Number of WMUDS at Facility:	1
Section Range:	01S03W08
RCRA Facility:	No
Waste Discharge Requirements:	Active - Any facility with a continuous or seasonal discharge that is under Waste Discharge Requirements.
Self-Monitoring Rept. Frequency:	Quarterly Submittal
Waste Discharge System ID:	8 360303001
Solid Waste Information ID:	36-AA-0017

ENF:

Region:	8
Facility Id:	236433
Agency Name:	Not reported
Place Type:	Facility

LANDFILL,CALIFORNIA STREET (Continued) **S103442703**

Place Subtype:	Land fill
Facility Type:	Solid Waste Class III - nonhazardous solid wastes
Agency Type:	Not reported
# Of Agencies:	Not reported
Place Latitude:	Not reported
Place Longitude:	Not reported
SIC Code 1:	4953
SIC Desc 1:	Refuse Systems
SIC Code 2:	Not reported
SIC Desc 2:	Not reported
SIC Code 3:	Not reported
SIC Desc 3:	Not reported
NAICS Code 1:	Not reported
NAICS Desc 1:	Not reported
NAICS Code 2:	Not reported
NAICS Desc 2:	Not reported
NAICS Code 3:	Not reported
NAICS Desc 3:	Not reported
# Of Places:	1
Source Of Facility:	Enf Action
Design Flow:	Not reported
Threat To Water Quality:	Not reported
Complexity:	Not reported
Pretreatment:	Not reported
Facility Waste Type:	Not reported
Facility Waste Type 2:	Not reported
Facility Waste Type 3:	Not reported
Facility Waste Type 4:	Not reported
Program:	LNDISP
# Of Programs:	1
WDID:	Not reported
Reg Measure Id:	Not reported
Reg Measure Type:	Not reported
Region:	Not reported
Order #:	Not reported
Npdes# CA#:	Not reported
Major-Minor:	Not reported
Npdes Type:	Not reported
Reclamation:	Not reported
Dredge Fill Fee:	Not reported
301H:	Not reported
Application Fee Amt Received:	Not reported
Status:	Not reported
Status Date:	Not reported
Effective Date:	Not reported
Expiration/Review Date:	Not reported
Termination Date:	Not reported
WDR Review - Amend:	Not reported
WDR Review - Revise/Renew:	Not reported
WDR Review - Rescind:	Not reported
WDR Review - No Action Required:	Not reported
WDR Review - Pending:	Not reported
WDR Review - Planned:	Not reported
Status Enrollee:	Not reported
Individual/General:	Not reported
Fee Code:	Not reported
Direction/Voice:	Not reported

LANDFILL,CALIFORNIA STREET (Continued) **S103442703**

Enforcement Id(EID):	223181
Region:	8
Order / Resolution Number:	94-03421
Enforcement Action Type:	Clean-up and Abatement Order
Effective Date:	04/22/1994
Adoption/Issuance Date:	Not reported
Achieve Date:	Not reported
Termination Date:	Not reported
ACL Issuance Date:	Not reported
EPL Issuance Date:	Not reported
Status:	Historical
Title:	Enforcement - 8 360303001
Description:	RESCINDS CAO 91-97
Program:	LNDISP
Latest Milestone Completion Date:	Not reported
# Of Programs1:	1
Total Assessment Amount:	0
Initial Assessed Amount:	0
Liability $ Amount:	0
Project $ Amount:	0
Liability $ Paid:	0
Project $ Completed:	0
Total $ Paid/Completed Amount:	0

Region:	8
Facility Id:	236433
Agency Name:	Not reported
Place Type:	Facility
Place Subtype:	Land fill
Facility Type:	Solid Waste Class III - nonhazardous solid wastes
Agency Type:	Not reported
# Of Agencies:	Not reported
Place Latitude:	Not reported
Place Longitude:	Not reported
SIC Code 1:	4953
SIC Desc 1:	Refuse Systems
SIC Code 2:	Not reported
SIC Desc 2:	Not reported
SIC Code 3:	Not reported
SIC Desc 3:	Not reported
NAICS Code 1:	Not reported
NAICS Desc 1:	Not reported
NAICS Code 2:	Not reported
NAICS Desc 2:	Not reported
NAICS Code 3:	Not reported
NAICS Desc 3:	Not reported
# Of Places:	1
Source Of Facility:	Enf Action
Design Flow:	Not reported
Threat To Water Quality:	Not reported
Complexity:	Not reported
Pretreatment:	Not reported
Facility Waste Type:	Not reported
Facility Waste Type 2:	Not reported
Facility Waste Type 3:	Not reported
Facility Waste Type 4:	Not reported
Program:	LNDISP

LANDFILL,CALIFORNIA STREET (Continued) **S103442703**

# Of Programs:	1
WDID:	Not reported
Reg Measure Id:	Not reported
Reg Measure Type:	Not reported
Region:	Not reported
Order #:	Not reported
Npdes# CA#:	Not reported
Major-Minor:	Not reported
Npdes Type:	Not reported
Reclamation:	Not reported
Dredge Fill Fee:	Not reported
301H:	Not reported
Application Fee Amt Received:	Not reported
Status:	Not reported
Status Date:	Not reported
Effective Date:	Not reported
Expiration/Review Date:	Not reported
Termination Date:	Not reported
WDR Review - Amend:	Not reported
WDR Review - Revise/Renew:	Not reported
WDR Review - Rescind:	Not reported
WDR Review - No Action Required:	Not reported
WDR Review - Pending:	Not reported
WDR Review - Planned:	Not reported
Status Enrollee:	Not reported
Individual/General:	Not reported
Fee Code:	Not reported
Direction/Voice:	Not reported
Enforcement Id(EID):	244964
Region:	8
Order / Resolution Number:	UNKNOWN
Enforcement Action Type:	13267 Letter
Effective Date:	10/01/2002
Adoption/Issuance Date:	Not reported
Achieve Date:	Not reported
Termination Date:	Not reported
ACL Issuance Date:	Not reported
EPL Issuance Date:	Not reported
Status:	Active
Title:	Enforcement - 8 360303001
Description:	13267 LETTER FOR RAD WASTE INVESTIGATION.
Program:	LNDISP
Latest Milestone Completion Date:	01/02/2003
# Of Programs1:	1
Total Assessment Amount:	0
Initial Assessed Amount:	0
Liability $ Amount:	0
Project $ Amount:	0
Liability $ Paid:	0
Project $ Completed:	0
Total $ Paid/Completed Amount:	0
Region:	8
Facility Id:	236433
Agency Name:	Not reported
Place Type:	Facility
Place Subtype:	Land fill

LANDFILL,CALIFORNIA STREET (Continued) **S103442703**

Facility Type:	Solid Waste Class III - nonhazardous solid wastes
Agency Type:	Not reported
# Of Agencies:	Not reported
Place Latitude:	Not reported
Place Longitude:	Not reported
SIC Code 1:	4953
SIC Desc 1:	Refuse Systems
SIC Code 2:	Not reported
SIC Desc 2:	Not reported
SIC Code 3:	Not reported
SIC Desc 3:	Not reported
NAICS Code 1:	Not reported
NAICS Desc 1:	Not reported
NAICS Code 2:	Not reported
NAICS Desc 2:	Not reported
NAICS Code 3:	Not reported
NAICS Desc 3:	Not reported
# Of Places:	1
Source Of Facility:	Enf Action
Design Flow:	Not reported
Threat To Water Quality:	Not reported
Complexity:	Not reported
Pretreatment:	Not reported
Facility Waste Type:	Not reported
Facility Waste Type 2:	Not reported
Facility Waste Type 3:	Not reported
Facility Waste Type 4:	Not reported
Program:	LNDISP
# Of Programs:	1
WDID:	Not reported
Reg Measure Id:	Not reported
Reg Measure Type:	Not reported
Region:	Not reported
Order #:	Not reported
Npdes# CA#:	Not reported
Major-Minor:	Not reported
Npdes Type:	Not reported
Reclamation:	Not reported
Dredge Fill Fee:	Not reported
301H:	Not reported
Application Fee Amt Received:	Not reported
Status:	Not reported
Status Date:	Not reported
Effective Date:	Not reported
Expiration/Review Date:	Not reported
Termination Date:	Not reported
WDR Review - Amend:	Not reported
WDR Review - Revise/Renew:	Not reported
WDR Review - Rescind:	Not reported
WDR Review - No Action Required:	Not reported
WDR Review - Pending:	Not reported
WDR Review - Planned:	Not reported
Status Enrollee:	Not reported
Individual/General:	Not reported
Fee Code:	Not reported
Direction/Voice:	Not reported
Enforcement Id(EID):	336625

LANDFILL,CALIFORNIA STREET (Continued) **S103442703**

Region:	8
Order / Resolution Number:	Not reported
Enforcement Action Type:	Notice to Comply
Effective Date:	11/01/2007
Adoption/Issuance Date:	Not reported
Achieve Date:	11/15/2007
Termination Date:	11/15/2007
ACL Issuance Date:	Not reported
EPL Issuance Date:	Not reported
Status:	Historical
Title:	NTC 11/1/07 for City of Redlands, CA St. Landfill
Description:	The City failed to complete site maintenance activities by Oct. 1 as required by Drainage and E
Program:	LNDISP
Latest Milestone Completion Date:	Not reported
# Of Programs1:	1
Total Assessment Amount:	0
Initial Assessed Amount:	0
Liability $ Amount:	0
Project $ Amount:	0
Liability $ Paid:	0
Project $ Completed:	0
Total $ Paid/Completed Amount:	0

Region:	8
Facility Id:	236433
Agency Name:	Redlands City
Place Type:	Facility
Place Subtype:	Land fill
Facility Type:	Solid Waste Class III - nonhazardous solid wastes
Agency Type:	City Agency
# Of Agencies:	1
Place Latitude:	Not reported
Place Longitude:	Not reported
SIC Code 1:	4953
SIC Desc 1:	Refuse Systems
SIC Code 2:	Not reported
SIC Desc 2:	Not reported
SIC Code 3:	Not reported
SIC Desc 3:	Not reported
NAICS Code 1:	Not reported
NAICS Desc 1:	Not reported
NAICS Code 2:	Not reported
NAICS Desc 2:	Not reported
NAICS Code 3:	Not reported
NAICS Desc 3:	Not reported
# Of Places:	1
Source Of Facility:	Reg Meas
Design Flow:	0.0001
Threat To Water Quality:	2
Complexity:	B
Pretreatment:	X - Facility is not a POTW
Facility Waste Type:	Nonhazardous solid wastes
Facility Waste Type 2:	Not reported
Facility Waste Type 3:	Not reported
Facility Waste Type 4:	Not reported
Program:	LNDISP
# Of Programs:	1

LANDFILL,CALIFORNIA STREET (Continued) **S103442703**

WDID:	8 360303001
Reg Measure Id:	132779
Reg Measure Type:	WDR
Region:	8
Order #:	R8-2004-0008
Npdes# CA#:	Not reported
Major-Minor:	Not reported
Npdes Type:	Not reported
Reclamation:	N - No
Dredge Fill Fee:	Not reported
301H:	Not reported
Application Fee Amt Received:	Not reported
Status:	Active
Status Date:	01/19/2011
Effective Date:	04/30/2004
Expiration/Review Date:	04/30/2011
Termination Date:	Not reported
WDR Review - Amend:	Not reported
WDR Review - Revise/Renew:	Not reported
WDR Review - Rescind:	Not reported
WDR Review - No Action Required:	Not reported
WDR Review - Pending:	Not reported
WDR Review - Planned:	Not reported
Status Enrollee:	N
Individual/General:	I
Fee Code:	50 - Land Disposal Site paying tipping fee
Direction/Voice:	Passive
Enforcement Id(EID):	374284
Region:	8
Order / Resolution Number:	R8-2004-0008
Enforcement Action Type:	Notice of Violation
Effective Date:	02/25/2010
Adoption/Issuance Date:	02/25/2010
Achieve Date:	Not reported
Termination Date:	12/30/2010
ACL Issuance Date:	Not reported
EPL Issuance Date:	Not reported
Status:	Historical
Title:	NOV 02/25/2010 for Redlands City
Description:	NOV was issued to the City for the violations. The City must submit information required by Ma
Program:	LNDISP
Latest Milestone Completion Date:	Not reported
# Of Programs1:	1
Total Assessment Amount:	0
Initial Assessed Amount:	0
Liability $ Amount:	0
Project $ Amount:	0
Liability $ Paid:	0
Project $ Completed:	0
Total $ Paid/Completed Amount:	0

Region:	8
Facility Id:	236433
Agency Name:	Redlands City
Place Type:	Facility
Place Subtype:	Land fill
Facility Type:	Solid Waste Class III - nonhazardous solid wastes

LANDFILL,CALIFORNIA STREET (Continued) **S103442703**

Agency Type:	City Agency
# Of Agencies:	1
Place Latitude:	Not reported
Place Longitude:	Not reported
SIC Code 1:	4953
SIC Desc 1:	Refuse Systems
SIC Code 2:	Not reported
SIC Desc 2:	Not reported
SIC Code 3:	Not reported
SIC Desc 3:	Not reported
NAICS Code 1:	Not reported
NAICS Desc 1:	Not reported
NAICS Code 2:	Not reported
NAICS Desc 2:	Not reported
NAICS Code 3:	Not reported
NAICS Desc 3:	Not reported
# Of Places:	1
Source Of Facility:	Reg Meas
Design Flow:	0.0001
Threat To Water Quality:	2
Complexity:	B
Pretreatment:	X - Facility is not a POTW
Facility Waste Type:	Nonhazardous solid wastes
Facility Waste Type 2:	Not reported
Facility Waste Type 3:	Not reported
Facility Waste Type 4:	Not reported
Program:	LNDISP
# Of Programs:	1
WDID:	8 360303001
Reg Measure Id:	132779
Reg Measure Type:	WDR
Region:	8
Order #:	R8-2004-0008
Npdes# CA#:	Not reported
Major-Minor:	Not reported
Npdes Type:	Not reported
Reclamation:	N - No
Dredge Fill Fee:	Not reported
301H:	Not reported
Application Fee Amt Received:	Not reported
Status:	Active
Status Date:	01/19/2011
Effective Date:	04/30/2004
Expiration/Review Date:	04/30/2011
Termination Date:	Not reported
WDR Review - Amend:	Not reported
WDR Review - Revise/Renew:	Not reported
WDR Review - Rescind:	Not reported
WDR Review - No Action Required:	Not reported
WDR Review - Pending:	Not reported
WDR Review - Planned:	Not reported
Status Enrollee:	N
Individual/General:	I
Fee Code:	50 - Land Disposal Site paying tipping fee
Direction/Voice:	Passive
Enforcement Id(EID):	372345
Region:	8

LANDFILL,CALIFORNIA STREET (Continued) **S103442703**

Order / Resolution Number:	Not reported
Enforcement Action Type:	Notice to Comply
Effective Date:	12/08/2009
Adoption/Issuance Date:	12/08/2009
Achieve Date:	Not reported
Termination Date:	12/23/2009
ACL Issuance Date:	Not reported
EPL Issuance Date:	Not reported
Status:	Historical
Title:	NTC 12/08/2009 for Redlands City
Description:	NTC issued for minor violations: water ponding, inadequate BMPs, and erosion on sideslope.
Program:	LNDISP
Latest Milestone Completion Date:	Not reported
# Of Programs1:	1
Total Assessment Amount:	0
Initial Assessed Amount:	0
Liability $ Amount:	0
Project $ Amount:	0
Liability $ Paid:	0
Project $ Completed:	0
Total $ Paid/Completed Amount:	0

Region:	8
Facility Id:	236433
Agency Name:	Not reported
Place Type:	Facility
Place Subtype:	Land fill
Facility Type:	Solid Waste Class III - nonhazardous solid wastes
Agency Type:	Not reported
# Of Agencies:	Not reported
Place Latitude:	Not reported
Place Longitude:	Not reported
SIC Code 1:	4953
SIC Desc 1:	Refuse Systems
SIC Code 2:	Not reported
SIC Desc 2:	Not reported
SIC Code 3:	Not reported
SIC Desc 3:	Not reported
NAICS Code 1:	Not reported
NAICS Desc 1:	Not reported
NAICS Code 2:	Not reported
NAICS Desc 2:	Not reported
NAICS Code 3:	Not reported
NAICS Desc 3:	Not reported
# Of Places:	1
Source Of Facility:	Enf Action
Design Flow:	Not reported
Threat To Water Quality:	Not reported
Complexity:	Not reported
Pretreatment:	Not reported
Facility Waste Type:	Not reported
Facility Waste Type 2:	Not reported
Facility Waste Type 3:	Not reported
Facility Waste Type 4:	Not reported
Program:	LNDISP
# Of Programs:	1
WDID:	Not reported

LANDFILL,CALIFORNIA STREET (Continued) **S103442703**

Reg Measure Id:	Not reported
Reg Measure Type:	Not reported
Region:	Not reported
Order #:	Not reported
Npdes# CA#:	Not reported
Major-Minor:	Not reported
Npdes Type:	Not reported
Reclamation:	Not reported
Dredge Fill Fee:	Not reported
301H:	Not reported
Application Fee Amt Received:	Not reported
Status:	Not reported
Status Date:	Not reported
Effective Date:	Not reported
Expiration/Review Date:	Not reported
Termination Date:	Not reported
WDR Review - Amend:	Not reported
WDR Review - Revise/Renew:	Not reported
WDR Review - Rescind:	Not reported
WDR Review - No Action Required:	Not reported
WDR Review - Pending:	Not reported
WDR Review - Planned:	Not reported
Status Enrollee:	Not reported
Individual/General:	Not reported
Fee Code:	Not reported
Direction/Voice:	Not reported
Enforcement Id(EID):	223527
Region:	8
Order / Resolution Number:	91-097
Enforcement Action Type:	Clean-up and Abatement Order
Effective Date:	06/24/1991
Adoption/Issuance Date:	Not reported
Achieve Date:	4/22/1994
Termination Date:	Not reported
ACL Issuance Date:	Not reported
EPL Issuance Date:	Not reported
Status:	Historical
Title:	Enforcement - 8 360303001
Description:	TIME SCHEDULE FOR DRAINAGE IMPROVEMENTS
Program:	LNDISP
Latest Milestone Completion Date:	04/22/1994
# Of Programs1:	1
Total Assessment Amount:	0
Initial Assessed Amount:	0
Liability $ Amount:	0
Project $ Amount:	0
Liability $ Paid:	0
Project $ Completed:	0
Total $ Paid/Completed Amount:	0

Region:	8
Facility Id:	236433
Agency Name:	Not reported
Place Type:	Facility
Place Subtype:	Land fill
Facility Type:	Solid Waste Class III - nonhazardous solid wastes
Agency Type:	Not reported

LANDFILL,CALIFORNIA STREET (Continued) **S103442703**

# Of Agencies:	Not reported
Place Latitude:	Not reported
Place Longitude:	Not reported
SIC Code 1:	4953
SIC Desc 1:	Refuse Systems
SIC Code 2:	Not reported
SIC Desc 2:	Not reported
SIC Code 3:	Not reported
SIC Desc 3:	Not reported
NAICS Code 1:	Not reported
NAICS Desc 1:	Not reported
NAICS Code 2:	Not reported
NAICS Desc 2:	Not reported
NAICS Code 3:	Not reported
NAICS Desc 3:	Not reported
# Of Places:	1
Source Of Facility:	Enf Action
Design Flow:	Not reported
Threat To Water Quality:	Not reported
Complexity:	Not reported
Pretreatment:	Not reported
Facility Waste Type:	Not reported
Facility Waste Type 2:	Not reported
Facility Waste Type 3:	Not reported
Facility Waste Type 4:	Not reported
Program:	LNDISP
# Of Programs:	1
WDID:	Not reported
Reg Measure Id:	Not reported
Reg Measure Type:	Not reported
Region:	Not reported
Order #:	Not reported
Npdes# CA#:	Not reported
Major-Minor:	Not reported
Npdes Type:	Not reported
Reclamation:	Not reported
Dredge Fill Fee:	Not reported
301H:	Not reported
Application Fee Amt Received:	Not reported
Status:	Not reported
Status Date:	Not reported
Effective Date:	Not reported
Expiration/Review Date:	Not reported
Termination Date:	Not reported
WDR Review - Amend:	Not reported
WDR Review - Revise/Renew:	Not reported
WDR Review - Rescind:	Not reported
WDR Review - No Action Required:	Not reported
WDR Review - Pending:	Not reported
WDR Review - Planned:	Not reported
Status Enrollee:	Not reported
Individual/General:	Not reported
Fee Code:	Not reported
Direction/Voice:	Not reported
Enforcement Id(EID):	234318
Region:	8
Order / Resolution Number:	UNKNOWN

LANDFILL,CALIFORNIA STREET (Continued) **S103442703**

Enforcement Action Type:	Notice to Comply
Effective Date:	02/15/2000
Adoption/Issuance Date:	Not reported
Achieve Date:	3/10/2000
Termination Date:	Not reported
ACL Issuance Date:	Not reported
EPL Issuance Date:	Not reported
Status:	Historical
Title:	Enforcement - 8 360303001
Description:	NTC ISSUED FOR LACK OF EROSION PROTECTION ON BARE, SE-FACING SLOPES, AC
Program:	LNDISP
Latest Milestone Completion Date:	03/10/2000
# Of Programs1:	1
Total Assessment Amount:	0
Initial Assessed Amount:	0
Liability $ Amount:	0
Project $ Amount:	0
Liability $ Paid:	0
Project $ Completed:	0
Total $ Paid/Completed Amount:	0

Region:	8
Facility Id:	236433
Agency Name:	Not reported
Place Type:	Facility
Place Subtype:	Land fill
Facility Type:	Solid Waste Class III - nonhazardous solid wastes
Agency Type:	Not reported
# Of Agencies:	Not reported
Place Latitude:	Not reported
Place Longitude:	Not reported
SIC Code 1:	4953
SIC Desc 1:	Refuse Systems
SIC Code 2:	Not reported
SIC Desc 2:	Not reported
SIC Code 3:	Not reported
SIC Desc 3:	Not reported
NAICS Code 1:	Not reported
NAICS Desc 1:	Not reported
NAICS Code 2:	Not reported
NAICS Desc 2:	Not reported
NAICS Code 3:	Not reported
NAICS Desc 3:	Not reported
# Of Places:	1
Source Of Facility:	Enf Action
Design Flow:	Not reported
Threat To Water Quality:	Not reported
Complexity:	Not reported
Pretreatment:	Not reported
Facility Waste Type:	Not reported
Facility Waste Type 2:	Not reported
Facility Waste Type 3:	Not reported
Facility Waste Type 4:	Not reported
Program:	LNDISP
# Of Programs:	1
WDID:	Not reported
Reg Measure Id:	Not reported

LANDFILL,CALIFORNIA STREET (Continued) **S103442703**

Reg Measure Type:	Not reported
Region:	Not reported
Order #:	Not reported
Npdes# CA#:	Not reported
Major-Minor:	Not reported
Npdes Type:	Not reported
Reclamation:	Not reported
Dredge Fill Fee:	Not reported
301H:	Not reported
Application Fee Amt Received:	Not reported
Status:	Not reported
Status Date:	Not reported
Effective Date:	Not reported
Expiration/Review Date:	Not reported
Termination Date:	Not reported
WDR Review - Amend:	Not reported
WDR Review - Revise/Renew:	Not reported
WDR Review - Rescind:	Not reported
WDR Review - No Action Required:	Not reported
WDR Review - Pending:	Not reported
WDR Review - Planned:	Not reported
Status Enrollee:	Not reported
Individual/General:	Not reported
Fee Code:	Not reported
Direction/Voice:	Not reported
Enforcement Id(EID):	234228
Region:	8
Order / Resolution Number:	UNKNOWN
Enforcement Action Type:	Oral Communication
Effective Date:	10/25/1999
Adoption/Issuance Date:	Not reported
Achieve Date:	12/30/1999
Termination Date:	10/25/1999
ACL Issuance Date:	Not reported
EPL Issuance Date:	Not reported
Status:	Historical
Title:	Enforcement - 8 360303001
Description:	Discharger was notified while in the field that the exposed trash needed to be covered ASAP.
Program:	LNDISP
Latest Milestone Completion Date:	12/30/1999
# Of Programs1:	1
Total Assessment Amount:	0
Initial Assessed Amount:	0
Liability $ Amount:	0
Project $ Amount:	0
Liability $ Paid:	0
Project $ Completed:	0
Total $ Paid/Completed Amount:	0

Region:	8
Facility Id:	236433
Agency Name:	Not reported
Place Type:	Facility
Place Subtype:	Land fill
Facility Type:	Solid Waste Class III - nonhazardous solid wastes
Agency Type:	Not reported
# Of Agencies:	Not reported

LANDFILL,CALIFORNIA STREET (Continued) **S103442703**

Place Latitude:	Not reported
Place Longitude:	Not reported
SIC Code 1:	4953
SIC Desc 1:	Refuse Systems
SIC Code 2:	Not reported
SIC Desc 2:	Not reported
SIC Code 3:	Not reported
SIC Desc 3:	Not reported
NAICS Code 1:	Not reported
NAICS Desc 1:	Not reported
NAICS Code 2:	Not reported
NAICS Desc 2:	Not reported
NAICS Code 3:	Not reported
NAICS Desc 3:	Not reported
# Of Places:	1
Source Of Facility:	Enf Action
Design Flow:	Not reported
Threat To Water Quality:	Not reported
Complexity:	Not reported
Pretreatment:	Not reported
Facility Waste Type:	Not reported
Facility Waste Type 2:	Not reported
Facility Waste Type 3:	Not reported
Facility Waste Type 4:	Not reported
Program:	LNDISP
# Of Programs:	1
WDID:	Not reported
Reg Measure Id:	Not reported
Reg Measure Type:	Not reported
Region:	Not reported
Order #:	Not reported
Npdes# CA#:	Not reported
Major-Minor:	Not reported
Npdes Type:	Not reported
Reclamation:	Not reported
Dredge Fill Fee:	Not reported
301H:	Not reported
Application Fee Amt Received:	Not reported
Status:	Not reported
Status Date:	Not reported
Effective Date:	Not reported
Expiration/Review Date:	Not reported
Termination Date:	Not reported
WDR Review - Amend:	Not reported
WDR Review - Revise/Renew:	Not reported
WDR Review - Rescind:	Not reported
WDR Review - No Action Required:	Not reported
WDR Review - Pending:	Not reported
WDR Review - Planned:	Not reported
Status Enrollee:	Not reported
Individual/General:	Not reported
Fee Code:	Not reported
Direction/Voice:	Not reported
Enforcement Id(EID):	234191
Region:	8
Order / Resolution Number:	UNKNOWN
Enforcement Action Type:	Oral Communication

LANDFILL,CALIFORNIA STREET (Continued) **S103442703**

Effective Date:	01/10/2000
Adoption/Issuance Date:	Not reported
Achieve Date:	1/11/2000
Termination Date:	01/10/2000
ACL Issuance Date:	Not reported
EPL Issuance Date:	Not reported
Status:	Historical
Title:	Enforcement - 8 360303001
Description:	Notofied discharger's representative by phone that future late reports would result in a NOV let
Program:	LNDISP
Latest Milestone Completion Date:	01/11/2000
# Of Programs1:	1
Total Assessment Amount:	0
Initial Assessed Amount:	0
Liability $ Amount:	0
Project $ Amount:	0
Liability $ Paid:	0
Project $ Completed:	0
Total $ Paid/Completed Amount:	0

Region:	8
Facility Id:	236433
Agency Name:	Not reported
Place Type:	Facility
Place Subtype:	Land fill
Facility Type:	Solid Waste Class III - nonhazardous solid wastes
Agency Type:	Not reported
# Of Agencies:	Not reported
Place Latitude:	Not reported
Place Longitude:	Not reported
SIC Code 1:	4953
SIC Desc 1:	Refuse Systems
SIC Code 2:	Not reported
SIC Desc 2:	Not reported
SIC Code 3:	Not reported
SIC Desc 3:	Not reported
NAICS Code 1:	Not reported
NAICS Desc 1:	Not reported
NAICS Code 2:	Not reported
NAICS Desc 2:	Not reported
NAICS Code 3:	Not reported
NAICS Desc 3:	Not reported
# Of Places:	1
Source Of Facility:	Enf Action
Design Flow:	Not reported
Threat To Water Quality:	Not reported
Complexity:	Not reported
Pretreatment:	Not reported
Facility Waste Type:	Not reported
Facility Waste Type 2:	Not reported
Facility Waste Type 3:	Not reported
Facility Waste Type 4:	Not reported
Program:	LNDISP
# Of Programs:	1
WDID:	Not reported
Reg Measure Id:	Not reported
Reg Measure Type:	Not reported

LANDFILL,CALIFORNIA STREET (Continued) **S103442703**

Region:	Not reported
Order #:	Not reported
Npdes# CA#:	Not reported
Major-Minor:	Not reported
Npdes Type:	Not reported
Reclamation:	Not reported
Dredge Fill Fee:	Not reported
301H:	Not reported
Application Fee Amt Received:	Not reported
Status:	Not reported
Status Date:	Not reported
Effective Date:	Not reported
Expiration/Review Date:	Not reported
Termination Date:	Not reported
WDR Review - Amend:	Not reported
WDR Review - Revise/Renew:	Not reported
WDR Review - Rescind:	Not reported
WDR Review - No Action Required:	Not reported
WDR Review - Pending:	Not reported
WDR Review - Planned:	Not reported
Status Enrollee:	Not reported
Individual/General:	Not reported
Fee Code:	Not reported
Direction/Voice:	Not reported
Enforcement Id(EID):	234077
Region:	8
Order / Resolution Number:	UNKNOWN
Enforcement Action Type:	Staff Enforcement Letter
Effective Date:	09/21/1995
Adoption/Issuance Date:	Not reported
Achieve Date:	Not reported
Termination Date:	09/21/1995
ACL Issuance Date:	Not reported
EPL Issuance Date:	Not reported
Status:	Historical
Title:	Enforcement - 8 360303001
Description:	Evaluation Monitoring Program Workplan implemented.
Program:	LNDISP
Latest Milestone Completion Date:	Not reported
# Of Programs1:	1
Total Assessment Amount:	0
Initial Assessed Amount:	0
Liability $ Amount:	0
Project $ Amount:	0
Liability $ Paid:	0
Project $ Completed:	0
Total $ Paid/Completed Amount:	0

Region:	8
Facility Id:	236433
Agency Name:	Not reported
Place Type:	Facility
Place Subtype:	Land fill
Facility Type:	Solid Waste Class III - nonhazardous solid wastes
Agency Type:	Not reported
# Of Agencies:	Not reported
Place Latitude:	Not reported

LANDFILL,CALIFORNIA STREET (Continued) **S103442703**

Place Longitude:	Not reported
SIC Code 1:	4953
SIC Desc 1:	Refuse Systems
SIC Code 2:	Not reported
SIC Desc 2:	Not reported
SIC Code 3:	Not reported
SIC Desc 3:	Not reported
NAICS Code 1:	Not reported
NAICS Desc 1:	Not reported
NAICS Code 2:	Not reported
NAICS Desc 2:	Not reported
NAICS Code 3:	Not reported
NAICS Desc 3:	Not reported
# Of Places:	1
Source Of Facility:	Enf Action
Design Flow:	Not reported
Threat To Water Quality:	Not reported
Complexity:	Not reported
Pretreatment:	Not reported
Facility Waste Type:	Not reported
Facility Waste Type 2:	Not reported
Facility Waste Type 3:	Not reported
Facility Waste Type 4:	Not reported
Program:	LNDISP
# Of Programs:	1
WDID:	Not reported
Reg Measure Id:	Not reported
Reg Measure Type:	Not reported
Region:	Not reported
Order #:	Not reported
Npdes# CA#:	Not reported
Major-Minor:	Not reported
Npdes Type:	Not reported
Reclamation:	Not reported
Dredge Fill Fee:	Not reported
301H:	Not reported
Application Fee Amt Received:	Not reported
Status:	Not reported
Status Date:	Not reported
Effective Date:	Not reported
Expiration/Review Date:	Not reported
Termination Date:	Not reported
WDR Review - Amend:	Not reported
WDR Review - Revise/Renew:	Not reported
WDR Review - Rescind:	Not reported
WDR Review - No Action Required:	Not reported
WDR Review - Pending:	Not reported
WDR Review - Planned:	Not reported
Status Enrollee:	Not reported
Individual/General:	Not reported
Fee Code:	Not reported
Direction/Voice:	Not reported
Enforcement Id(EID):	234076
Region:	8
Order / Resolution Number:	UNKNOWN
Enforcement Action Type:	Staff Enforcement Letter
Effective Date:	06/30/1992

LANDFILL,CALIFORNIA STREET (Continued) **S103442703**

Adoption/Issuance Date:	Not reported
Achieve Date:	Not reported
Termination Date:	06/30/1992
ACL Issuance Date:	Not reported
EPL Issuance Date:	Not reported
Status:	Historical
Title:	Enforcement - 8 360303001
Description:	Verification monitoring program established for site.
Program:	LNDISP
Latest Milestone Completion Date:	Not reported
# Of Programs1:	1
Total Assessment Amount:	0
Initial Assessed Amount:	0
Liability $ Amount:	0
Project $ Amount:	0
Liability $ Paid:	0
Project $ Completed:	0
Total $ Paid/Completed Amount:	0

Region:	8
Facility Id:	236433
Agency Name:	Not reported
Place Type:	Facility
Place Subtype:	Land fill
Facility Type:	Solid Waste Class III - nonhazardous solid wastes
Agency Type:	Not reported
# Of Agencies:	Not reported
Place Latitude:	Not reported
Place Longitude:	Not reported
SIC Code 1:	4953
SIC Desc 1:	Refuse Systems
SIC Code 2:	Not reported
SIC Desc 2:	Not reported
SIC Code 3:	Not reported
SIC Desc 3:	Not reported
NAICS Code 1:	Not reported
NAICS Desc 1:	Not reported
NAICS Code 2:	Not reported
NAICS Desc 2:	Not reported
NAICS Code 3:	Not reported
NAICS Desc 3:	Not reported
# Of Places:	1
Source Of Facility:	Enf Action
Design Flow:	Not reported
Threat To Water Quality:	Not reported
Complexity:	Not reported
Pretreatment:	Not reported
Facility Waste Type:	Not reported
Facility Waste Type 2:	Not reported
Facility Waste Type 3:	Not reported
Facility Waste Type 4:	Not reported
Program:	LNDISP
# Of Programs:	1
WDID:	Not reported
Reg Measure Id:	Not reported
Reg Measure Type:	Not reported
Region:	Not reported

LANDFILL,CALIFORNIA STREET (Continued) **S103442703**

Order #:	Not reported
Npdes# CA#:	Not reported
Major-Minor:	Not reported
Npdes Type:	Not reported
Reclamation:	Not reported
Dredge Fill Fee:	Not reported
301H:	Not reported
Application Fee Amt Received:	Not reported
Status:	Not reported
Status Date:	Not reported
Effective Date:	Not reported
Expiration/Review Date:	Not reported
Termination Date:	Not reported
WDR Review - Amend:	Not reported
WDR Review - Revise/Renew:	Not reported
WDR Review - Rescind:	Not reported
WDR Review - No Action Required:	Not reported
WDR Review - Pending:	Not reported
WDR Review - Planned:	Not reported
Status Enrollee:	Not reported
Individual/General:	Not reported
Fee Code:	Not reported
Direction/Voice:	Not reported
Enforcement Id(EID):	234075
Region:	8
Order / Resolution Number:	UNKNOWN
Enforcement Action Type:	Oral Communication
Effective Date:	10/25/1999
Adoption/Issuance Date:	Not reported
Achieve Date:	12/30/1999
Termination Date:	10/25/1999
ACL Issuance Date:	Not reported
EPL Issuance Date:	Not reported
Status:	Historical
Title:	Enforcement - 8 360303001
Description:	Discharger was notified during field inspection that low area along access road would probably
Program:	LNDISP
Latest Milestone Completion Date:	12/30/1999
# Of Programs1:	1
Total Assessment Amount:	0
Initial Assessed Amount:	0
Liability $ Amount:	0
Project $ Amount:	0
Liability $ Paid:	0
Project $ Completed:	0
Total $ Paid/Completed Amount:	0

Region:	8
Facility Id:	236433
Agency Name:	Not reported
Place Type:	Facility
Place Subtype:	Land fill
Facility Type:	Solid Waste Class III - nonhazardous solid wastes
Agency Type:	Not reported
# Of Agencies:	Not reported
Place Latitude:	Not reported
Place Longitude:	Not reported

LANDFILL,CALIFORNIA STREET (Continued) **S103442703**

SIC Code 1:	4953
SIC Desc 1:	Refuse Systems
SIC Code 2:	Not reported
SIC Desc 2:	Not reported
SIC Code 3:	Not reported
SIC Desc 3:	Not reported
NAICS Code 1:	Not reported
NAICS Desc 1:	Not reported
NAICS Code 2:	Not reported
NAICS Desc 2:	Not reported
NAICS Code 3:	Not reported
NAICS Desc 3:	Not reported
# Of Places:	1
Source Of Facility:	Enf Action
Design Flow:	Not reported
Threat To Water Quality:	Not reported
Complexity:	Not reported
Pretreatment:	Not reported
Facility Waste Type:	Not reported
Facility Waste Type 2:	Not reported
Facility Waste Type 3:	Not reported
Facility Waste Type 4:	Not reported
Program:	LNDISP
# Of Programs:	1
WDID:	Not reported
Reg Measure Id:	Not reported
Reg Measure Type:	Not reported
Region:	Not reported
Order #:	Not reported
Npdes# CA#:	Not reported
Major-Minor:	Not reported
Npdes Type:	Not reported
Reclamation:	Not reported
Dredge Fill Fee:	Not reported
301H:	Not reported
Application Fee Amt Received:	Not reported
Status:	Not reported
Status Date:	Not reported
Effective Date:	Not reported
Expiration/Review Date:	Not reported
Termination Date:	Not reported
WDR Review - Amend:	Not reported
WDR Review - Revise/Renew:	Not reported
WDR Review - Rescind:	Not reported
WDR Review - No Action Required:	Not reported
WDR Review - Pending:	Not reported
WDR Review - Planned:	Not reported
Status Enrollee:	Not reported
Individual/General:	Not reported
Fee Code:	Not reported
Direction/Voice:	Not reported
Enforcement Id(EID):	234074
Region:	8
Order / Resolution Number:	UNKNOWN
Enforcement Action Type:	Oral Communication
Effective Date:	10/25/1999
Adoption/Issuance Date:	Not reported

LANDFILL,CALIFORNIA STREET (Continued) **S103442703**

Achieve Date:	12/30/1999
Termination Date:	10/25/1999
ACL Issuance Date:	Not reported
EPL Issuance Date:	Not reported
Status:	Historical
Title:	Enforcement - 8 360303001
Description:	Discharger was notified that all culverts must be kept clear of wind-blown weeds & debris.
Program:	LNDISP
Latest Milestone Completion Date:	12/30/1999
# Of Programs1:	1
Total Assessment Amount:	0
Initial Assessed Amount:	0
Liability $ Amount:	0
Project $ Amount:	0
Liability $ Paid:	0
Project $ Completed:	0
Total $ Paid/Completed Amount:	0
Region:	8
Facility Id:	236433
Agency Name:	Not reported
Place Type:	Facility
Place Subtype:	Land fill
Facility Type:	Solid Waste Class III - nonhazardous solid wastes
Agency Type:	Not reported
# Of Agencies:	Not reported
Place Latitude:	Not reported
Place Longitude:	Not reported
SIC Code 1:	4953
SIC Desc 1:	Refuse Systems
SIC Code 2:	Not reported
SIC Desc 2:	Not reported
SIC Code 3:	Not reported
SIC Desc 3:	Not reported
NAICS Code 1:	Not reported
NAICS Desc 1:	Not reported
NAICS Code 2:	Not reported
NAICS Desc 2:	Not reported
NAICS Code 3:	Not reported
NAICS Desc 3:	Not reported
# Of Places:	1
Source Of Facility:	Enf Action
Design Flow:	Not reported
Threat To Water Quality:	Not reported
Complexity:	Not reported
Pretreatment:	Not reported
Facility Waste Type:	Not reported
Facility Waste Type 2:	Not reported
Facility Waste Type 3:	Not reported
Facility Waste Type 4:	Not reported
Program:	LNDISP
# Of Programs:	1
WDID:	Not reported
Reg Measure Id:	Not reported
Reg Measure Type:	Not reported
Region:	Not reported
Order #:	Not reported

LANDFILL,CALIFORNIA STREET (Continued) **S103442703**

Npdes# CA#:	Not reported
Major-Minor:	Not reported
Npdes Type:	Not reported
Reclamation:	Not reported
Dredge Fill Fee:	Not reported
301H:	Not reported
Application Fee Amt Received:	Not reported
Status:	Not reported
Status Date:	Not reported
Effective Date:	Not reported
Expiration/Review Date:	Not reported
Termination Date:	Not reported
WDR Review - Amend:	Not reported
WDR Review - Revise/Renew:	Not reported
WDR Review - Rescind:	Not reported
WDR Review - No Action Required:	Not reported
WDR Review - Pending:	Not reported
WDR Review - Planned:	Not reported
Status Enrollee:	Not reported
Individual/General:	Not reported
Fee Code:	Not reported
Direction/Voice:	Not reported
Enforcement Id(EID):	234073
Region:	8
Order / Resolution Number:	UNKNOWN
Enforcement Action Type:	Oral Communication
Effective Date:	10/25/1999
Adoption/Issuance Date:	Not reported
Achieve Date:	12/30/1999
Termination Date:	10/25/1999
ACL Issuance Date:	Not reported
EPL Issuance Date:	Not reported
Status:	Historical
Title:	Enforcement - 8 360303001
Description:	Discharger was notified during inspection that hydroseeding or other erosion control measures
Program:	LNDISP
Latest Milestone Completion Date:	12/30/1999
# Of Programs1:	1
Total Assessment Amount:	0
Initial Assessed Amount:	0
Liability $ Amount:	0
Project $ Amount:	0
Liability $ Paid:	0
Project $ Completed:	0
Total $ Paid/Completed Amount:	0

EMI:

Year:	2002
County Code:	36
Air Basin:	SC
Facility ID:	74413
Air District Name:	SC
SIC Code:	9199
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	210

LANDFILL,CALIFORNIA STREET (Continued) **S103442703**

Reactive Organic Gases Tons/Yr:	4
Carbon Monoxide Emissions Tons/Yr:	21
NOX - Oxides of Nitrogen Tons/Yr:	10
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	1
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0
Year:	2003
County Code:	36
Air Basin:	SC
Facility ID:	74413
Air District Name:	SC
SIC Code:	9199
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	210
Reactive Organic Gases Tons/Yr:	4
Carbon Monoxide Emissions Tons/Yr:	21
NOX - Oxides of Nitrogen Tons/Yr:	10
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	1
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0
Year:	2004
County Code:	36
Air Basin:	SC
Facility ID:	74413
Air District Name:	SC
SIC Code:	9199
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	209.65
Reactive Organic Gases Tons/Yr:	2.45
Carbon Monoxide Emissions Tons/Yr:	21.0131
NOX - Oxides of Nitrogen Tons/Yr:	10.227
SOX - Oxides of Sulphur Tons/Yr:	0.395
Particulate Matter Tons/Yr:	1.383
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0.42
Year:	2005
County Code:	36
Air Basin:	SC
Facility ID:	74413
Air District Name:	SC
SIC Code:	9199
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	2.7908
Reactive Organic Gases Tons/Yr:	.12865928
Carbon Monoxide Emissions Tons/Yr:	26.125
NOX - Oxides of Nitrogen Tons/Yr:	8.535
SOX - Oxides of Sulphur Tons/Yr:	.439
Particulate Matter Tons/Yr:	.674
Part. Matter 10 Micrometers & Smllr Tons/Yr:	.282428

A4
WSW
1/4-1/2
0.476 mi.
2515 ft.

HASKELL CO. INDUSTRIAL COMPOSTING FAC.
2130 NEVADA AVENUE
REDLANDS, CA

SWF/LF **S107863487**
N/A

Site 3 of 3 in cluster A

Relative:
Lower

Actual:
1187 ft.

SWF/LF (SWIS):

Region:	STATE
Facility ID:	36-AA-0443
Lat/Long:	34.0866699 / -117.21668
Owner Name:	City Of Redlands
Owner Telephone:	9097987698
Owner Address:	Municipal Utilities Dept. - POBox 3005
Owner Address2:	35 Cajon Street , Suite 15 A
Owner City,St,Zip:	Redlands, CA 92373
Operator:	ABT-Haskell, LLC
Operator Phone:	Not reported
Operator Address:	Not reported
Operator Address2:	280 Business Park Circle, Suite 411
Operator City,St,Zip:	St. Augustine, FL 32095
Operator's Status:	Planned
Permit Date:	Not reported
Permit Status:	Not reported
Permitted Acreage:	Not reported
Activity:	Composting Facility (Sludge)
Regulation Status:	Proposed
Landuse Name:	Wetlands,Industrial,Commercial,Agricultural
GIS Source:	Map
Category:	Composting
Unit Number:	01
Inspection Frequency:	None
Accepted Waste:	Food Wastes,Green Materials,Sludge (BioSolids),Wood waste
Closure Date:	Not reported
Closure Type:	Not reported
Disposal Acreage:	Not reported
SWIS Num:	36-AA-0443
Waste Discharge Requirement Num:	Not reported
Program Type:	Not reported
Permitted Throughput with Units:	Not reported
Actual Throughput with Units:	Not reported
Permitted Capacity with Units:	Not reported
Remaining Capacity:	Not reported
Remaining Capacity with Units:	Not reported

Count: 12 records.

ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
REDLANDS	S110071676	PROLOGIS PARK RIVERBLUFF	27352ND RIVER BLF & ALABAMA	92374	San Bern. Co. Permit
REDLANDS	S109849351	BEST GROVE	NEC ALABAMA & PALMETO	92374	San Bern. Co. Permit
REDLANDS	S109461382	TRACT #16465	NWC OF SAN BERNARDINO AVE & J	92374	NPDES
REDLANDS	S109461579	TRACT 16742	S OF CENTER ST OF RDG E	92374	NPDES
REDLANDS	S109461544	TRACT 16586	N OF 10 FREEWAY BTN FRD & YUC	92374	NPDES
REDLANDS	S109455618	REDLANDS TRACT 16390	REDLANDS TRACT 16390		NPDES
REDLANDS	S109461590	TRACT 16806	SEC TEXAS & PENNSYLVANIA	92374	NPDES
REDLANDS	S109461553	TRACT 16627	SEC OF PIONEER AVE & JUDSON S	92374	NPDES
SAN BERNARDINO	S110736738	TRACT 16586	I 10 & WABASH AVE	92374	NPDES
SAN BERNARDINO	S104747455	CHARTER LEASING	265 MILL ST	92408	HIST CORTESE, LUST
SAN BERNARDINO	S109461745	TRACT 17716 PINE	NEC PINE AVE & BELMONT	92408	NPDES
SAN BERNARDINO COUN	S103442535	FORT IRWIN LUCKY FUSE DISPOSAL	FORT IRWIN		WMUDS/SWAT, HIST CORTESE, CHI

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

Number of Days to Update: Provides confirmation that EDR is reporting records that have been updated within 90 days from the date the government agency made the information available to the public.

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

NPL: National Priority List

National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC) and regional EPA offices.

Date of Government Version: 06/30/2011
Date Data Arrived at EDR: 07/12/2011
Date Made Active in Reports: 09/29/2011
Number of Days to Update: 79

Source: EPA
Telephone: N/A
Last EDR Contact: 10/12/2011
Next Scheduled EDR Contact: 01/23/2012
Data Release Frequency: Quarterly

NPL Site Boundaries

Sources:

EPA's Environmental Photographic Interpretation Center (EPIC)
Telephone: 202-564-7333

EPA Region 1
Telephone 617-918-1143

EPA Region 3
Telephone 215-814-5418

EPA Region 4
Telephone 404-562-8033

EPA Region 5
Telephone 312-886-6686

EPA Region 10
Telephone 206-553-8665

EPA Region 6
Telephone: 214-655-6659

EPA Region 7
Telephone: 913-551-7247

EPA Region 8
Telephone: 303-312-6774

EPA Region 9
Telephone: 415-947-4246

Proposed NPL: Proposed National Priority List Sites

A site that has been proposed for listing on the National Priorities List through the issuance of a proposed rule in the Federal Register. EPA then accepts public comments on the site, responds to the comments, and places on the NPL those sites that continue to meet the requirements for listing.

Date of Government Version: 06/30/2011
Date Data Arrived at EDR: 07/12/2011
Date Made Active in Reports: 09/29/2011
Number of Days to Update: 79

Source: EPA
Telephone: N/A
Last EDR Contact: 10/12/2011
Next Scheduled EDR Contact: 01/23/2012
Data Release Frequency: Quarterly

NPL LIENS: Federal Superfund Liens

Federal Superfund Liens. Under the authority granted the USEPA by CERCLA of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner received notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

Date of Government Version: 10/15/1991
Date Data Arrived at EDR: 02/02/1994
Date Made Active in Reports: 03/30/1994
Number of Days to Update: 56

Source: EPA
Telephone: 202-564-4267
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Federal Delisted NPL site list

DELISTED NPL: National Priority List Deletions

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

Date of Government Version: 06/30/2011
Date Data Arrived at EDR: 07/12/2011
Date Made Active in Reports: 09/29/2011
Number of Days to Update: 79

Source: EPA
Telephone: N/A
Last EDR Contact: 10/12/2011
Next Scheduled EDR Contact: 01/23/2012
Data Release Frequency: Quarterly

Federal CERCLIS list

CERCLIS: Comprehensive Environmental Response, Compensation, and Liability Information System

CERCLIS contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). CERCLIS contains sites which are either proposed to or on the National Priorities List (NPL) and sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 02/25/2011
Date Data Arrived at EDR: 03/01/2011
Date Made Active in Reports: 05/02/2011
Number of Days to Update: 62

Source: EPA
Telephone: 703-412-9810
Last EDR Contact: 09/01/2011
Next Scheduled EDR Contact: 12/12/2011
Data Release Frequency: Quarterly

FEDERAL FACILITY: Federal Facility Site Information listing

A listing of National Priority List (NPL) and Base Realignment and Closure (BRAC) sites found in the Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) Database where EPAa??s Federal Facilities Restoration and Reuse Office is involved in cleanup activities.

Date of Government Version: 12/10/2010
Date Data Arrived at EDR: 01/11/2011
Date Made Active in Reports: 02/16/2011
Number of Days to Update: 36

Source: Environmental Protection Agency
Telephone: 703-603-8704
Last EDR Contact: 10/14/2011
Next Scheduled EDR Contact: 01/23/2012
Data Release Frequency: Varies

Federal CERCLIS NFRAP site List

CERCLIS-NFRAP: CERCLIS No Further Remedial Action Planned

Archived sites are sites that have been removed and archived from the inventory of CERCLIS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list this site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. This decision does not necessarily mean that there is no hazard associated with a given site; it only means that, based upon available information, the location is not judged to be a potential NPL site.

Date of Government Version: 02/25/2011
Date Data Arrived at EDR: 03/01/2011
Date Made Active in Reports: 05/02/2011
Number of Days to Update: 62

Source: EPA
Telephone: 703-412-9810
Last EDR Contact: 09/01/2011
Next Scheduled EDR Contact: 12/12/2011
Data Release Frequency: Quarterly

Federal RCRA CORRACTS facilities list

CORRACTS: Corrective Action Report

CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 03/09/2011
Date Data Arrived at EDR: 03/15/2011
Date Made Active in Reports: 06/14/2011
Number of Days to Update: 91

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: Quarterly

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF: RCRA - Treatment, Storage and Disposal

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Transporters are individuals or entities that move hazardous waste from the generator offsite to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

Date of Government Version: 06/15/2011
Date Data Arrived at EDR: 07/07/2011
Date Made Active in Reports: 08/08/2011
Number of Days to Update: 32

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 10/05/2011
Next Scheduled EDR Contact: 01/16/2012
Data Release Frequency: Quarterly

Federal RCRA generators list

RCRA-LQG: RCRA - Large Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

Date of Government Version: 06/15/2011
Date Data Arrived at EDR: 07/07/2011
Date Made Active in Reports: 08/08/2011
Number of Days to Update: 32

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 10/05/2011
Next Scheduled EDR Contact: 01/16/2012
Data Release Frequency: Quarterly

RCRA-SQG: RCRA - Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

Date of Government Version: 06/15/2011
Date Data Arrived at EDR: 07/07/2011
Date Made Active in Reports: 08/08/2011
Number of Days to Update: 32

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 10/05/2011
Next Scheduled EDR Contact: 01/16/2012
Data Release Frequency: Quarterly

RCRA-CESQG: RCRA - Conditionally Exempt Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Conditionally exempt small quantity generators (CESQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

Date of Government Version: 06/15/2011
Date Data Arrived at EDR: 07/07/2011
Date Made Active in Reports: 08/08/2011
Number of Days to Update: 32

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 10/05/2011
Next Scheduled EDR Contact: 01/16/2012
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Federal institutional controls / engineering controls registries

US ENG CONTROLS: Engineering Controls Sites List

A listing of sites with engineering controls in place. Engineering controls include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health.

Date of Government Version: 03/16/2011
Date Data Arrived at EDR: 03/25/2011
Date Made Active in Reports: 06/14/2011
Number of Days to Update: 81

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: Varies

US INST CONTROL: Sites with Institutional Controls

A listing of sites with institutional controls in place. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions are generally required as part of the institutional controls.

Date of Government Version: 03/16/2011
Date Data Arrived at EDR: 03/25/2011
Date Made Active in Reports: 06/14/2011
Number of Days to Update: 81

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: Varies

Federal ERNS list

ERNS: Emergency Response Notification System

Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 07/05/2011
Date Data Arrived at EDR: 07/05/2011
Date Made Active in Reports: 09/29/2011
Number of Days to Update: 86

Source: National Response Center, United States Coast Guard
Telephone: 202-267-2180
Last EDR Contact: 10/04/2011
Next Scheduled EDR Contact: 01/16/2012
Data Release Frequency: Annually

State- and tribal - equivalent NPL

RESPONSE: State Response Sites

Identifies confirmed release sites where DTSC is involved in remediation, either in a lead or oversight capacity. These confirmed release sites are generally high-priority and high potential risk.

Date of Government Version: 08/09/2011
Date Data Arrived at EDR: 08/09/2011
Date Made Active in Reports: 09/09/2011
Number of Days to Update: 31

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 09/15/2011
Next Scheduled EDR Contact: 11/21/2011
Data Release Frequency: Quarterly

State- and tribal - equivalent CERCLIS

ENVIROSTOR: EnviroStor Database

The Department of Toxic Substances Control's (DTSC's) Site Mitigation and Brownfields Reuse Program's (SMBRP's) EnviroStor database identifes sites that have known contamination or sites for which there may be reasons to investigate further. The database includes the following site types: Federal Superfund sites (National Priorities List (NPL)); State Response, including Military Facilities and State Superfund; Voluntary Cleanup; and School sites. EnviroStor provides similar information to the information that was available in CalSites, and provides additional site information, including, but not limited to, identification of formerly-contaminated properties that have been released for reuse, properties where environmental deed restrictions have been recorded to prevent inappropriate land uses, and risk characterization information that is used to assess potential impacts to public health and the environment at contaminated sites.

Date of Government Version: 08/09/2011
Date Data Arrived at EDR: 08/09/2011
Date Made Active in Reports: 09/09/2011
Number of Days to Update: 31

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 09/15/2011
Next Scheduled EDR Contact: 11/21/2011
Data Release Frequency: Quarterly

State and tribal landfill and/or solid waste disposal site lists

SWF/LF (SWIS): Solid Waste Information System

Active, Closed and Inactive Landfills. SWF/LF records typically contain an inve ntory of solid waste disposal facilities or landfills. These may be active or i nactive facilities or open dumps that failed to meet RCRA Section 4004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 08/22/2011
Date Data Arrived at EDR: 08/24/2011
Date Made Active in Reports: 10/03/2011
Number of Days to Update: 40

Source: Department of Resources Recycling and Recovery
Telephone: 916-341-6320
Last EDR Contact: 08/24/2011
Next Scheduled EDR Contact: 12/05/2011
Data Release Frequency: Quarterly

State and tribal leaking storage tank lists

LUST REG 9: Leaking Underground Storage Tank Report

Orange, Riverside, San Diego counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 03/01/2001
Date Data Arrived at EDR: 04/23/2001
Date Made Active in Reports: 05/21/2001
Number of Days to Update: 28

Source: California Regional Water Quality Control Board San Diego Region (9)
Telephone: 858-637-5595
Last EDR Contact: 09/26/2011
Next Scheduled EDR Contact: 01/09/2012
Data Release Frequency: No Update Planned

LUST REG 7: Leaking Underground Storage Tank Case Listing

Leaking Underground Storage Tank locations. Imperial, Riverside, San Diego, Santa Barbara counties.

Date of Government Version: 02/26/2004
Date Data Arrived at EDR: 02/26/2004
Date Made Active in Reports: 03/24/2004
Number of Days to Update: 27

Source: California Regional Water Quality Control Board Colorado River Basin Region (7)
Telephone: 760-776-8943
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

LUST REG 6V: Leaking Underground Storage Tank Case Listing

Leaking Underground Storage Tank locations. Inyo, Kern, Los Angeles, Mono, San Bernardino counties.

Date of Government Version: 06/07/2005
Date Data Arrived at EDR: 06/07/2005
Date Made Active in Reports: 06/29/2005
Number of Days to Update: 22

Source: California Regional Water Quality Control Board Victorville Branch Office (6)
Telephone: 760-241-7365
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: No Update Planned

LUST REG 6L: Leaking Underground Storage Tank Case Listing

For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 09/09/2003
Date Data Arrived at EDR: 09/10/2003
Date Made Active in Reports: 10/07/2003
Number of Days to Update: 27

Source: California Regional Water Quality Control Board Lahontan Region (6)
Telephone: 530-542-5572
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: No Update Planned

LUST REG 5: Leaking Underground Storage Tank Database

Leaking Underground Storage Tank locations. Alameda, Alpine, Amador, Butte, Colusa, Contra Costa, Calveras, El Dorado, Fresno, Glenn, Kern, Kings, Lake, Lassen, Madera, Mariposa, Merced, Modoc, Napa, Nevada, Placer, Plumas, Sacramento, San Joaquin, Shasta, Solano, Stanislaus, Sutter, Tehama, Tulare, Tuolumne, Yolo, Yuba counties.

Date of Government Version: 07/01/2008
Date Data Arrived at EDR: 07/22/2008
Date Made Active in Reports: 07/31/2008
Number of Days to Update: 9

Source: California Regional Water Quality Control Board Central Valley Region (5)
Telephone: 916-464-4834
Last EDR Contact: 07/01/2011
Next Scheduled EDR Contact: 10/17/2011
Data Release Frequency: Quarterly

LUST REG 4: Underground Storage Tank Leak List

Los Angeles, Ventura counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 09/07/2004
Date Data Arrived at EDR: 09/07/2004
Date Made Active in Reports: 10/12/2004
Number of Days to Update: 35

Source: California Regional Water Quality Control Board Los Angeles Region (4)
Telephone: 213-576-6710
Last EDR Contact: 09/06/2011
Next Scheduled EDR Contact: 12/19/2011
Data Release Frequency: No Update Planned

LUST REG 3: Leaking Underground Storage Tank Database

Leaking Underground Storage Tank locations. Monterey, San Benito, San Luis Obispo, Santa Barbara, Santa Cruz counties.

Date of Government Version: 05/19/2003
Date Data Arrived at EDR: 05/19/2003
Date Made Active in Reports: 06/02/2003
Number of Days to Update: 14

Source: California Regional Water Quality Control Board Central Coast Region (3)
Telephone: 805-542-4786
Last EDR Contact: 07/18/2011
Next Scheduled EDR Contact: 10/31/2011
Data Release Frequency: No Update Planned

LUST REG 2: Fuel Leak List

Leaking Underground Storage Tank locations. Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano, Sonoma counties.

Date of Government Version: 09/30/2004
Date Data Arrived at EDR: 10/20/2004
Date Made Active in Reports: 11/19/2004
Number of Days to Update: 30

Source: California Regional Water Quality Control Board San Francisco Bay Region (2)
Telephone: 510-622-2433
Last EDR Contact: 09/19/2011
Next Scheduled EDR Contact: 01/02/2012
Data Release Frequency: Quarterly

LUST REG 1: Active Toxic Site Investigation

Del Norte, Humboldt, Lake, Mendocino, Modoc, Siskiyou, Sonoma, Trinity counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 02/01/2001
Date Data Arrived at EDR: 02/28/2001
Date Made Active in Reports: 03/29/2001
Number of Days to Update: 29

Source: California Regional Water Quality Control Board North Coast (1)
Telephone: 707-570-3769
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

LUST: Geotracker's Leaking Underground Fuel Tank Report

Leaking Underground Storage Tank Incident Reports. LUST records contain an inventory of reported leaking underground storage tank incidents. Not all states maintain these records, and the information stored varies by state. For more information on a particular leaking underground storage tank sites, please contact the appropriate regulatory agency.

Date of Government Version: 08/09/2011
Date Data Arrived at EDR: 08/11/2011
Date Made Active in Reports: 09/12/2011
Number of Days to Update: 32

Source: State Water Resources Control Board
Telephone: see region list
Last EDR Contact: 09/20/2011
Next Scheduled EDR Contact: 01/02/2012
Data Release Frequency: Quarterly

LUST REG 8: Leaking Underground Storage Tanks

California Regional Water Quality Control Board Santa Ana Region (8). For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 02/14/2005
Date Data Arrived at EDR: 02/15/2005
Date Made Active in Reports: 03/28/2005
Number of Days to Update: 41

Source: California Regional Water Quality Control Board Santa Ana Region (8)
Telephone: 909-782-4496
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: Varies

SLIC: Statewide SLIC Cases

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 08/09/2011
Date Data Arrived at EDR: 08/11/2011
Date Made Active in Reports: 09/12/2011
Number of Days to Update: 32

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 09/20/2011
Next Scheduled EDR Contact: 01/02/2012
Data Release Frequency: Varies

SLIC REG 1: Active Toxic Site Investigations

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/03/2003
Date Data Arrived at EDR: 04/07/2003
Date Made Active in Reports: 04/25/2003
Number of Days to Update: 18

Source: California Regional Water Quality Control Board, North Coast Region (1)
Telephone: 707-576-2220
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

SLIC REG 2: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/30/2004
Date Data Arrived at EDR: 10/20/2004
Date Made Active in Reports: 11/19/2004
Number of Days to Update: 30

Source: Regional Water Quality Control Board San Francisco Bay Region (2)
Telephone: 510-286-0457
Last EDR Contact: 09/19/2011
Next Scheduled EDR Contact: 01/02/2012
Data Release Frequency: Quarterly

SLIC REG 3: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 05/18/2006
Date Data Arrived at EDR: 05/18/2006
Date Made Active in Reports: 06/15/2006
Number of Days to Update: 28

Source: California Regional Water Quality Control Board Central Coast Region (3)
Telephone: 805-549-3147
Last EDR Contact: 07/18/2011
Next Scheduled EDR Contact: 10/31/2011
Data Release Frequency: Semi-Annually

SLIC REG 4: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 11/17/2004
Date Data Arrived at EDR: 11/18/2004
Date Made Active in Reports: 01/04/2005
Number of Days to Update: 47

Source: Region Water Quality Control Board Los Angeles Region (4)
Telephone: 213-576-6600
Last EDR Contact: 07/01/2011
Next Scheduled EDR Contact: 10/17/2011
Data Release Frequency: Varies

SLIC REG 5: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/01/2005
Date Data Arrived at EDR: 04/05/2005
Date Made Active in Reports: 04/21/2005
Number of Days to Update: 16

Source: Regional Water Quality Control Board Central Valley Region (5)
Telephone: 916-464-3291
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: Semi-Annually

SLIC REG 6V: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 05/24/2005
Date Data Arrived at EDR: 05/25/2005
Date Made Active in Reports: 06/16/2005
Number of Days to Update: 22

Source: Regional Water Quality Control Board, Victorville Branch
Telephone: 619-241-6583
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: Semi-Annually

SLIC REG 6L: SLIC Sites
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/07/2004
Date Data Arrived at EDR: 09/07/2004
Date Made Active in Reports: 10/12/2004
Number of Days to Update: 35

Source: California Regional Water Quality Control Board, Lahontan Region
Telephone: 530-542-5574
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

SLIC REG 7: SLIC List
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 11/24/2004
Date Data Arrived at EDR: 11/29/2004
Date Made Active in Reports: 01/04/2005
Number of Days to Update: 36

Source: California Regional Quality Control Board, Colorado River Basin Region
Telephone: 760-346-7491
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

SLIC REG 8: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/03/2008
Date Data Arrived at EDR: 04/03/2008
Date Made Active in Reports: 04/14/2008
Number of Days to Update: 11

Source: California Region Water Quality Control Board Santa Ana Region (8)
Telephone: 951-782-3298
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: Semi-Annually

SLIC REG 9: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/10/2007
Date Data Arrived at EDR: 09/11/2007
Date Made Active in Reports: 09/28/2007
Number of Days to Update: 17

Source: California Regional Water Quality Control Board San Diego Region (9)
Telephone: 858-467-2980
Last EDR Contact: 08/08/2011
Next Scheduled EDR Contact: 11/21/2011
Data Release Frequency: Annually

INDIAN LUST R10: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Alaska, Idaho, Oregon and Washington.

Date of Government Version: 08/04/2011
Date Data Arrived at EDR: 08/05/2011
Date Made Active in Reports: 09/13/2011
Number of Days to Update: 39

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: Quarterly

INDIAN LUST R1: Leaking Underground Storage Tanks on Indian Land
A listing of leaking underground storage tank locations on Indian Land.

Date of Government Version: 05/05/2011
Date Data Arrived at EDR: 08/02/2011
Date Made Active in Reports: 09/13/2011
Number of Days to Update: 42

Source: EPA Region 1
Telephone: 617-918-1313
Last EDR Contact: 08/02/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: Varies

INDIAN LUST R8: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Colorado, Montana, North Dakota, South Dakota, Utah and Wyoming.

Date of Government Version: 08/18/2011
Date Data Arrived at EDR: 08/19/2011
Date Made Active in Reports: 09/13/2011
Number of Days to Update: 25

Source: EPA Region 8
Telephone: 303-312-6271
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: Quarterly

INDIAN LUST R6: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in New Mexico and Oklahoma.

Date of Government Version: 05/10/2011
Date Data Arrived at EDR: 05/11/2011
Date Made Active in Reports: 06/14/2011
Number of Days to Update: 34

Source: EPA Region 6
Telephone: 214-665-6597
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: Varies

INDIAN LUST R4: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Florida, Mississippi and North Carolina.

Date of Government Version: 08/11/2011
Date Data Arrived at EDR: 08/12/2011
Date Made Active in Reports: 09/13/2011
Number of Days to Update: 32

Source: EPA Region 4
Telephone: 404-562-8677
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: Semi-Annually

INDIAN LUST R9: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Arizona, California, New Mexico and Nevada

Date of Government Version: 01/31/2011
Date Data Arrived at EDR: 02/01/2011
Date Made Active in Reports: 03/21/2011
Number of Days to Update: 48

Source: Environmental Protection Agency
Telephone: 415-972-3372
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: Quarterly

INDIAN LUST R7: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Iowa, Kansas, and Nebraska

Date of Government Version: 02/16/2011
Date Data Arrived at EDR: 06/02/2011
Date Made Active in Reports: 09/13/2011
Number of Days to Update: 103

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 08/02/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: Varies

State and tribal registered storage tank lists

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

UST: Active UST Facilities
Active UST facilities gathered from the local regulatory agencies

Date of Government Version: 08/09/2011
Date Data Arrived at EDR: 08/11/2011
Date Made Active in Reports: 09/09/2011
Number of Days to Update: 29

Source: SWRCB
Telephone: 916-480-1028
Last EDR Contact: 09/20/2011
Next Scheduled EDR Contact: 01/02/2012
Data Release Frequency: Semi-Annually

AST: Aboveground Petroleum Storage Tank Facilities
Registered Aboveground Storage Tanks.

Date of Government Version: 08/01/2009
Date Data Arrived at EDR: 09/10/2009
Date Made Active in Reports: 10/01/2009
Number of Days to Update: 21

Source: State Water Resources Control Board
Telephone: 916-341-5712
Last EDR Contact: 10/11/2011
Next Scheduled EDR Contact: 01/23/2012
Data Release Frequency: Quarterly

INDIAN UST R10: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 10 (Alaska, Idaho, Oregon, Washington, and Tribal Nations).

Date of Government Version: 08/04/2011
Date Data Arrived at EDR: 08/05/2011
Date Made Active in Reports: 09/13/2011
Number of Days to Update: 39

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: Quarterly

INDIAN UST R9: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 9 (Arizona, California, Hawaii, Nevada, the Pacific Islands, and Tribal Nations).

Date of Government Version: 08/04/2011
Date Data Arrived at EDR: 08/05/2011
Date Made Active in Reports: 09/13/2011
Number of Days to Update: 39

Source: EPA Region 9
Telephone: 415-972-3368
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: Quarterly

INDIAN UST R8: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 8 (Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming and 27 Tribal Nations).

Date of Government Version: 08/18/2011
Date Data Arrived at EDR: 08/19/2011
Date Made Active in Reports: 09/13/2011
Number of Days to Update: 25

Source: EPA Region 8
Telephone: 303-312-6137
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: Quarterly

INDIAN UST R7: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 7 (Iowa, Kansas, Missouri, Nebraska, and 9 Tribal Nations).

Date of Government Version: 04/01/2011
Date Data Arrived at EDR: 06/01/2011
Date Made Active in Reports: 06/14/2011
Number of Days to Update: 13

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 08/02/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: Varies

INDIAN UST R6: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 6 (Louisiana, Arkansas, Oklahoma, New Mexico, Texas and 65 Tribes).

Date of Government Version: 05/10/2011
Date Data Arrived at EDR: 05/11/2011
Date Made Active in Reports: 06/14/2011
Number of Days to Update: 34

Source: EPA Region 6
Telephone: 214-665-7591
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: Semi-Annually

INDIAN UST R5: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 5 (Michigan, Minnesota and Wisconsin and Tribal Nations).

Date of Government Version: 07/01/2011
Date Data Arrived at EDR: 08/26/2011
Date Made Active in Reports: 09/13/2011
Number of Days to Update: 18

Source: EPA Region 5
Telephone: 312-886-6136
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: Varies

INDIAN UST R4: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 4 (Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee and Tribal Nations)

Date of Government Version: 08/11/2011
Date Data Arrived at EDR: 08/12/2011
Date Made Active in Reports: 09/13/2011
Number of Days to Update: 32

Source: EPA Region 4
Telephone: 404-562-9424
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: Semi-Annually

INDIAN UST R1: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 1 (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont and ten Tribal Nations).

Date of Government Version: 05/05/2011
Date Data Arrived at EDR: 08/08/2011
Date Made Active in Reports: 09/13/2011
Number of Days to Update: 36

Source: EPA, Region 1
Telephone: 617-918-1313
Last EDR Contact: 08/02/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: Varies

FEMA UST: Underground Storage Tank Listing

A listing of all FEMA owned underground storage tanks.

Date of Government Version: 01/01/2010
Date Data Arrived at EDR: 02/16/2010
Date Made Active in Reports: 04/12/2010
Number of Days to Update: 55

Source: FEMA
Telephone: 202-646-5797
Last EDR Contact: 07/18/2011
Next Scheduled EDR Contact: 10/31/2011
Data Release Frequency: Varies

State and tribal voluntary cleanup sites

INDIAN VCP R7: Voluntary Cleanup Priority Lisitng

A listing of voluntary cleanup priority sites located on Indian Land located in Region 7.

Date of Government Version: 03/20/2008
Date Data Arrived at EDR: 04/22/2008
Date Made Active in Reports: 05/19/2008
Number of Days to Update: 27

Source: EPA, Region 7
Telephone: 913-551-7365
Last EDR Contact: 04/20/2009
Next Scheduled EDR Contact: 07/20/2009
Data Release Frequency: Varies

VCP: Voluntary Cleanup Program Properties

Contains low threat level properties with either confirmed or unconfirmed releases and the project proponents have request that DTSC oversee investigation and/or cleanup activities and have agreed to provide coverage for DTSC's costs.

Date of Government Version: 08/09/2011
Date Data Arrived at EDR: 08/09/2011
Date Made Active in Reports: 09/09/2011
Number of Days to Update: 31

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 09/15/2011
Next Scheduled EDR Contact: 11/21/2011
Data Release Frequency: Quarterly

INDIAN VCP R1: Voluntary Cleanup Priority Listing
A listing of voluntary cleanup priority sites located on Indian Land located in Region 1.

Date of Government Version: 05/05/2011
Date Data Arrived at EDR: 07/05/2011
Date Made Active in Reports: 09/13/2011
Number of Days to Update: 70

Source: EPA, Region 1
Telephone: 617-918-1102
Last EDR Contact: 10/04/2011
Next Scheduled EDR Contact: 01/16/2012
Data Release Frequency: Varies

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS: A Listing of Brownfields Sites
Included in the listing are brownfields properties addresses by Cooperative Agreement Recipients and brownfields properties addressed by Targeted Brownfields Assessments. Targeted Brownfields Assessments-EPA's Targeted Brownfields Assessments (TBA) program is designed to help states, tribes, and municipalities--especially those without EPA Brownfields Assessment Demonstration Pilots--minimize the uncertainties of contamination often associated with brownfields. Under the TBA program, EPA provides funding and/or technical assistance for environmental assessments at brownfields sites throughout the country. Targeted Brownfields Assessments supplement and work with other efforts under EPA's Brownfields Initiative to promote cleanup and redevelopment of brownfields. Cooperative Agreement Recipients-States, political subdivisions, territories, and Indian tribes become Brownfields Cleanup Revolving Loan Fund (BCRLF) cooperative agreement recipients when they enter into BCRLF cooperative agreements with the U.S. EPA. EPA selects BCRLF cooperative agreement recipients based on a proposal and application process. BCRLF cooperative agreement recipients must use EPA funds provided through BCRLF cooperative agreement for specified brownfields-related cleanup activities.

Date of Government Version: 06/27/2011
Date Data Arrived at EDR: 06/27/2011
Date Made Active in Reports: 09/13/2011
Number of Days to Update: 78

Source: Environmental Protection Agency
Telephone: 202-566-2777
Last EDR Contact: 09/28/2011
Next Scheduled EDR Contact: 01/09/2012
Data Release Frequency: Semi-Annually

Local Lists of Landfill / Solid Waste Disposal Sites

ODI: Open Dump Inventory
An open dump is defined as a disposal facility that does not comply with one or more of the Part 257 or Part 258 Subtitle D Criteria.

Date of Government Version: 06/30/1985
Date Data Arrived at EDR: 08/09/2004
Date Made Active in Reports: 09/17/2004
Number of Days to Update: 39

Source: Environmental Protection Agency
Telephone: 800-424-9346
Last EDR Contact: 06/09/2004
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

DEBRIS REGION 9: Torres Martinez Reservation Illegal Dump Site Locations
A listing of illegal dump sites location on the Torres Martinez Indian Reservation located in eastern Riverside County and northern Imperial County, California.

Date of Government Version: 01/12/2009
Date Data Arrived at EDR: 05/07/2009
Date Made Active in Reports: 09/21/2009
Number of Days to Update: 137

Source: EPA, Region 9
Telephone: 415-947-4219
Last EDR Contact: 09/26/2011
Next Scheduled EDR Contact: 01/09/2012
Data Release Frequency: No Update Planned

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

WMUDS/SWAT: Waste Management Unit Database

Waste Management Unit Database System. WMUDS is used by the State Water Resources Control Board staff and the Regional Water Quality Control Boards for program tracking and inventory of waste management units. WMUDS is composed of the following databases: Facility Information, Scheduled Inspections Information, Waste Management Unit Information, SWAT Program Information, SWAT Report Summary Information, SWAT Report Summary Data, Chapter 15 (formerly Subchapter 15) Information, Chapter 15 Monitoring Parameters, TPCA Program Information, RCRA Program Information, Closure Information, and Interested Parties Information.

Date of Government Version: 04/01/2000
Date Data Arrived at EDR: 04/10/2000
Date Made Active in Reports: 05/10/2000
Number of Days to Update: 30

Source: State Water Resources Control Board
Telephone: 916-227-4448
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

SWRCY: Recycler Database

A listing of recycling facilities in California.

Date of Government Version: 06/01/2011
Date Data Arrived at EDR: 06/21/2011
Date Made Active in Reports: 07/15/2011
Number of Days to Update: 24

Source: Department of Conservation
Telephone: 916-323-3836
Last EDR Contact: 09/20/2011
Next Scheduled EDR Contact: 01/02/2012
Data Release Frequency: Quarterly

HAULERS: Registered Waste Tire Haulers Listing

A listing of registered waste tire haulers.

Date of Government Version: 05/24/2011
Date Data Arrived at EDR: 05/24/2011
Date Made Active in Reports: 06/15/2011
Number of Days to Update: 22

Source: Integrated Waste Management Board
Telephone: 916-341-6422
Last EDR Contact: 09/06/2011
Next Scheduled EDR Contact: 12/05/2011
Data Release Frequency: Varies

INDIAN ODI: Report on the Status of Open Dumps on Indian Lands

Location of open dumps on Indian land.

Date of Government Version: 12/31/1998
Date Data Arrived at EDR: 12/03/2007
Date Made Active in Reports: 01/24/2008
Number of Days to Update: 52

Source: Environmental Protection Agency
Telephone: 703-308-8245
Last EDR Contact: 08/08/2011
Next Scheduled EDR Contact: 11/21/2011
Data Release Frequency: Varies

Local Lists of Hazardous waste / Contaminated Sites

US CDL: Clandestine Drug Labs

A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

Date of Government Version: 06/08/2011
Date Data Arrived at EDR: 09/16/2011
Date Made Active in Reports: 09/29/2011
Number of Days to Update: 13

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 09/07/2011
Next Scheduled EDR Contact: 12/19/2011
Data Release Frequency: Quarterly

HIST CAL-SITES: Calsites Database

The Calsites database contains potential or confirmed hazardous substance release properties. In 1996, California EPA reevaluated and significantly reduced the number of sites in the Calsites database. No longer updated by the state agency. It has been replaced by ENVIROSTOR.

Date of Government Version: 08/08/2005
Date Data Arrived at EDR: 08/03/2006
Date Made Active in Reports: 08/24/2006
Number of Days to Update: 21

Source: Department of Toxic Substance Control
Telephone: 916-323-3400
Last EDR Contact: 02/23/2009
Next Scheduled EDR Contact: 05/25/2009
Data Release Frequency: No Update Planned

SCH: School Property Evaluation Program

This category contains proposed and existing school sites that are being evaluated by DTSC for possible hazardous materials contamination. In some cases, these properties may be listed in the CalSites category depending on the level of threat to public health and safety or the environment they pose.

Date of Government Version: 08/09/2011
Date Data Arrived at EDR: 08/09/2011
Date Made Active in Reports: 09/09/2011
Number of Days to Update: 31

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 09/15/2011
Next Scheduled EDR Contact: 11/21/2011
Data Release Frequency: Quarterly

TOXIC PITS: Toxic Pits Cleanup Act Sites

Toxic PITS Cleanup Act Sites. TOXIC PITS identifies sites suspected of containing hazardous substances where cleanup has not yet been completed.

Date of Government Version: 07/01/1995
Date Data Arrived at EDR: 08/30/1995
Date Made Active in Reports: 09/26/1995
Number of Days to Update: 27

Source: State Water Resources Control Board
Telephone: 916-227-4364
Last EDR Contact: 01/26/2009
Next Scheduled EDR Contact: 04/27/2009
Data Release Frequency: No Update Planned

CDL: Clandestine Drug Labs

A listing of drug lab locations. Listing of a location in this database does not indicate that any illegal drug lab materials were or were not present there, and does not constitute a determination that the location either requires or does not require additional cleanup work.

Date of Government Version: 06/30/2011
Date Data Arrived at EDR: 08/11/2011
Date Made Active in Reports: 09/09/2011
Number of Days to Update: 29

Source: Department of Toxic Substances Control
Telephone: 916-255-6504
Last EDR Contact: 10/03/2011
Next Scheduled EDR Contact: 01/16/2012
Data Release Frequency: Varies

US HIST CDL: National Clandestine Laboratory Register

A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

Date of Government Version: 09/01/2007
Date Data Arrived at EDR: 11/19/2008
Date Made Active in Reports: 03/30/2009
Number of Days to Update: 131

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 03/23/2009
Next Scheduled EDR Contact: 06/22/2009
Data Release Frequency: No Update Planned

Local Lists of Registered Storage Tanks

CA FID UST: Facility Inventory Database

The Facility Inventory Database (FID) contains a historical listing of active and inactive underground storage tank locations from the State Water Resource Control Board. Refer to local/county source for current data.

Date of Government Version: 10/31/1994
Date Data Arrived at EDR: 09/05/1995
Date Made Active in Reports: 09/29/1995
Number of Days to Update: 24

Source: California Environmental Protection Agency
Telephone: 916-341-5851
Last EDR Contact: 12/28/1998
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

UST MENDOCINO: Mendocino County UST Database
A listing of underground storage tank locations in Mendocino County.

Date of Government Version: 09/23/2009
Date Data Arrived at EDR: 09/23/2009
Date Made Active in Reports: 10/01/2009
Number of Days to Update: 8

Source: Department of Public Health
Telephone: 707-463-4466
Last EDR Contact: 09/06/2011
Next Scheduled EDR Contact: 12/19/2011
Data Release Frequency: Annually

HIST UST: Hazardous Substance Storage Container Database
The Hazardous Substance Storage Container Database is a historical listing of UST sites. Refer to local/county source for current data.

Date of Government Version: 10/15/1990
Date Data Arrived at EDR: 01/25/1991
Date Made Active in Reports: 02/12/1991
Number of Days to Update: 18

Source: State Water Resources Control Board
Telephone: 916-341-5851
Last EDR Contact: 07/26/2001
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

SWEEPS UST: SWEEPS UST Listing
Statewide Environmental Evaluation and Planning System. This underground storage tank listing was updated and maintained by a company contacted by the SWRCB in the early 1990's. The listing is no longer updated or maintained. The local agency is the contact for more information on a site on the SWEEPS list.

Date of Government Version: 06/01/1994
Date Data Arrived at EDR: 07/07/2005
Date Made Active in Reports: 08/11/2005
Number of Days to Update: 35

Source: State Water Resources Control Board
Telephone: N/A
Last EDR Contact: 06/03/2005
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

Local Land Records

LIENS 2: CERCLA Lien Information
A Federal CERCLA ('Superfund') lien can exist by operation of law at any site or property at which EPA has spent Superfund monies. These monies are spent to investigate and address releases and threatened releases of contamination. CERCLIS provides information as to the identity of these sites and properties.

Date of Government Version: 09/09/2011
Date Data Arrived at EDR: 09/16/2011
Date Made Active in Reports: 09/29/2011
Number of Days to Update: 13

Source: Environmental Protection Agency
Telephone: 202-564-6023
Last EDR Contact: 08/12/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: Varies

LUCIS: Land Use Control Information System
LUCIS contains records of land use control information pertaining to the former Navy Base Realignment and Closure properties.

Date of Government Version: 12/09/2005
Date Data Arrived at EDR: 12/11/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 31

Source: Department of the Navy
Telephone: 843-820-7326
Last EDR Contact: 07/11/2011
Next Scheduled EDR Contact: 09/05/2011
Data Release Frequency: Varies

LIENS: Environmental Liens Listing
A listing of property locations with environmental liens for California where DTSC is a lien holder.

Date of Government Version: 06/28/2011
Date Data Arrived at EDR: 06/29/2011
Date Made Active in Reports: 07/08/2011
Number of Days to Update: 9

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: Varies

DEED: Deed Restriction Listing

Site Mitigation and Brownfields Reuse Program Facility Sites with Deed Restrictions & Hazardous Waste Management Program Facility Sites with Deed / Land Use Restriction. The DTSC Site Mitigation and Brownfields Reuse Program (SMBRP) list includes sites cleaned up under the program's oversight and generally does not include current or former hazardous waste facilities that required a hazardous waste facility permit. The list represents deed restrictions that are active. Some sites have multiple deed restrictions. The DTSC Hazardous Waste Management Program (HWMP) has developed a list of current or former hazardous waste facilities that have a recorded land use restriction at the local county recorder's office. The land use restrictions on this list were required by the DTSC HWMP as a result of the presence of hazardous substances that remain on site after the facility (or part of the facility) has been closed or cleaned up. The types of land use restriction include deed notice, deed restriction, or a land use restriction that binds current and future owners.

Date of Government Version: 09/12/2011
Date Data Arrived at EDR: 09/13/2011
Date Made Active in Reports: 10/07/2011
Number of Days to Update: 24

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 09/13/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: Semi-Annually

Records of Emergency Release Reports

HMIRS: Hazardous Materials Information Reporting System

Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 07/05/2011
Date Data Arrived at EDR: 07/05/2011
Date Made Active in Reports: 09/30/2011
Number of Days to Update: 87

Source: U.S. Department of Transportation
Telephone: 202-366-4555
Last EDR Contact: 10/04/2011
Next Scheduled EDR Contact: 01/16/2012
Data Release Frequency: Annually

CHMIRS: California Hazardous Material Incident Report System

California Hazardous Material Incident Reporting System. CHMIRS contains information on reported hazardous material incidents (accidental releases or spills).

Date of Government Version: 12/31/2010
Date Data Arrived at EDR: 05/03/2011
Date Made Active in Reports: 06/15/2011
Number of Days to Update: 43

Source: Office of Emergency Services
Telephone: 916-845-8400
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: Varies

LDS: Land Disposal Sites Listing

The Land Disposal program regulates of waste discharge to land for treatment, storage and disposal in waste management units.

Date of Government Version: 08/09/2011
Date Data Arrived at EDR: 08/11/2011
Date Made Active in Reports: 09/12/2011
Number of Days to Update: 32

Source: State Water Qualilty Control Board
Telephone: 866-480-1028
Last EDR Contact: 09/20/2011
Next Scheduled EDR Contact: 01/02/2012
Data Release Frequency: Quarterly

MCS: Military Cleanup Sites Listing

The State Water Resources Control Board and nine Regional Water Quality Control Boards partner with the Department of Defense (DoD) through the Defense and State Memorandum of Agreement (DSMOA) to oversee the investigation and remediation of water quality issues at military facilities.

Date of Government Version: 08/09/2011
Date Data Arrived at EDR: 08/11/2011
Date Made Active in Reports: 09/12/2011
Number of Days to Update: 32

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 09/20/2011
Next Scheduled EDR Contact: 01/02/2012
Data Release Frequency: Quarterly

Other Ascertainable Records

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

RCRA-NonGen: RCRA - Non Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

Date of Government Version: 06/15/2011
Date Data Arrived at EDR: 07/07/2011
Date Made Active in Reports: 08/08/2011
Number of Days to Update: 32

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 10/05/2011
Next Scheduled EDR Contact: 01/16/2012
Data Release Frequency: Varies

DOT OPS: Incident and Accident Data

Department of Transporation, Office of Pipeline Safety Incident and Accident data.

Date of Government Version: 01/12/2011
Date Data Arrived at EDR: 02/11/2011
Date Made Active in Reports: 05/02/2011
Number of Days to Update: 80

Source: Department of Transporation, Office of Pipeline Safety
Telephone: 202-366-4595
Last EDR Contact: 08/09/2011
Next Scheduled EDR Contact: 11/21/2011
Data Release Frequency: Varies

DOD: Department of Defense Sites

This data set consists of federally owned or administered lands, administered by the Department of Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 11/10/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 62

Source: USGS
Telephone: 888-275-8747
Last EDR Contact: 07/22/2011
Next Scheduled EDR Contact: 10/31/2011
Data Release Frequency: Semi-Annually

FUDS: Formerly Used Defense Sites

The listing includes locations of Formerly Used Defense Sites properties where the US Army Corps of Engineers is actively working or will take necessary cleanup actions.

Date of Government Version: 12/31/2009
Date Data Arrived at EDR: 08/12/2010
Date Made Active in Reports: 12/02/2010
Number of Days to Update: 112

Source: U.S. Army Corps of Engineers
Telephone: 202-528-4285
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: Varies

CONSENT: Superfund (CERCLA) Consent Decrees

Major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund) sites. Released periodically by United States District Courts after settlement by parties to litigation matters.

Date of Government Version: 06/01/2011
Date Data Arrived at EDR: 08/19/2011
Date Made Active in Reports: 09/29/2011
Number of Days to Update: 41

Source: Department of Justice, Consent Decree Library
Telephone: Varies
Last EDR Contact: 10/03/2011
Next Scheduled EDR Contact: 01/16/2012
Data Release Frequency: Varies

ROD: Records Of Decision

Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid in the cleanup.

Date of Government Version: 07/31/2011
Date Data Arrived at EDR: 09/14/2011
Date Made Active in Reports: 09/29/2011
Number of Days to Update: 15

Source: EPA
Telephone: 703-416-0223
Last EDR Contact: 09/14/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: Annually

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

UMTRA: Uranium Mill Tailings Sites

Uranium ore was mined by private companies for federal government use in national defense programs. When the mills shut down, large piles of the sand-like material (mill tailings) remain after uranium has been extracted from the ore. Levels of human exposure to radioactive materials from the piles are low; however, in some cases tailings were used as construction materials before the potential health hazards of the tailings were recognized.

Date of Government Version: 09/14/2010
Date Data Arrived at EDR: 10/21/2010
Date Made Active in Reports: 01/28/2011
Number of Days to Update: 99

Source: Department of Energy
Telephone: 505-845-0011
Last EDR Contact: 08/31/2011
Next Scheduled EDR Contact: 12/12/2011
Data Release Frequency: Varies

MINES: Mines Master Index File

Contains all mine identification numbers issued for mines active or opened since 1971. The data also includes violation information.

Date of Government Version: 08/18/2011
Date Data Arrived at EDR: 09/08/2011
Date Made Active in Reports: 09/29/2011
Number of Days to Update: 21

Source: Department of Labor, Mine Safety and Health Administration
Telephone: 303-231-5959
Last EDR Contact: 09/08/2011
Next Scheduled EDR Contact: 12/19/2011
Data Release Frequency: Semi-Annually

TRIS: Toxic Chemical Release Inventory System

Toxic Release Inventory System. TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313.

Date of Government Version: 12/31/2009
Date Data Arrived at EDR: 12/17/2010
Date Made Active in Reports: 03/21/2011
Number of Days to Update: 94

Source: EPA
Telephone: 202-566-0250
Last EDR Contact: 09/01/2011
Next Scheduled EDR Contact: 12/12/2011
Data Release Frequency: Annually

TSCA: Toxic Substances Control Act

Toxic Substances Control Act. TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list. It includes data on the production volume of these substances by plant site.

Date of Government Version: 12/31/2006
Date Data Arrived at EDR: 09/29/2010
Date Made Active in Reports: 12/02/2010
Number of Days to Update: 64

Source: EPA
Telephone: 202-260-5521
Last EDR Contact: 09/27/2011
Next Scheduled EDR Contact: 01/09/2012
Data Release Frequency: Every 4 Years

FTTS: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)

FTTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA and EPCRA (Emergency Planning and Community Right-to-Know Act). To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25

Source: EPA/Office of Prevention, Pesticides and Toxic Substances
Telephone: 202-566-1667
Last EDR Contact: 08/31/2011
Next Scheduled EDR Contact: 12/12/2011
Data Release Frequency: Quarterly

FTTS INSP: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)

A listing of FIFRA/TSCA Tracking System (FTTS) inspections and enforcements.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25

Source: EPA
Telephone: 202-566-1667
Last EDR Contact: 08/31/2011
Next Scheduled EDR Contact: 12/12/2011
Data Release Frequency: Quarterly

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

HIST FTTS: FIFRA/TSCA Tracking System Administrative Case Listing

A complete administrative case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2007
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

HIST FTTS INSP: FIFRA/TSCA Tracking System Inspection & Enforcement Case Listing

A complete inspection and enforcement case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2008
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

SSTS: Section 7 Tracking Systems

Section 7 of the Federal Insecticide, Fungicide and Rodenticide Act, as amended (92 Stat. 829) requires all registered pesticide-producing establishments to submit a report to the Environmental Protection Agency by March 1st each year. Each establishment must report the types and amounts of pesticides, active ingredients and devices being produced, and those having been produced and sold or distributed in the past year.

Date of Government Version: 12/31/2009
Date Data Arrived at EDR: 12/10/2010
Date Made Active in Reports: 02/25/2011
Number of Days to Update: 77

Source: EPA
Telephone: 202-564-4203
Last EDR Contact: 08/18/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: Annually

ICIS: Integrated Compliance Information System

The Integrated Compliance Information System (ICIS) supports the information needs of the national enforcement and compliance program as well as the unique needs of the National Pollutant Discharge Elimination System (NPDES) program.

Date of Government Version: 01/07/2011
Date Data Arrived at EDR: 01/21/2011
Date Made Active in Reports: 03/21/2011
Number of Days to Update: 59

Source: Environmental Protection Agency
Telephone: 202-564-5088
Last EDR Contact: 09/26/2011
Next Scheduled EDR Contact: 01/09/2012
Data Release Frequency: Quarterly

PADS: PCB Activity Database System

PCB Activity Database. PADS Identifies generators, transporters, commercial storers and/or brokers and disposers of PCB's who are required to notify the EPA of such activities.

Date of Government Version: 11/01/2010
Date Data Arrived at EDR: 11/10/2010
Date Made Active in Reports: 02/16/2011
Number of Days to Update: 98

Source: EPA
Telephone: 202-566-0500
Last EDR Contact: 07/22/2011
Next Scheduled EDR Contact: 10/31/2011
Data Release Frequency: Annually

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

MLTS: Material Licensing Tracking System

MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites which possess or use radioactive materials and which are subject to NRC licensing requirements. To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 06/21/2011
Date Data Arrived at EDR: 07/15/2011
Date Made Active in Reports: 09/13/2011
Number of Days to Update: 60

Source: Nuclear Regulatory Commission
Telephone: 301-415-7169
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: Quarterly

RADINFO: Radiation Information Database

The Radiation Information Database (RADINFO) contains information about facilities that are regulated by U.S. Environmental Protection Agency (EPA) regulations for radiation and radioactivity.

Date of Government Version: 01/11/2011
Date Data Arrived at EDR: 01/13/2011
Date Made Active in Reports: 02/16/2011
Number of Days to Update: 34

Source: Environmental Protection Agency
Telephone: 202-343-9775
Last EDR Contact: 10/13/2011
Next Scheduled EDR Contact: 01/23/2012
Data Release Frequency: Quarterly

FINDS: Facility Index System/Facility Registry System

Facility Index System. FINDS contains both facility information and 'pointers' to other sources that contain more detail. EDR includes the following FINDS databases in this report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System).

Date of Government Version: 04/14/2010
Date Data Arrived at EDR: 04/16/2010
Date Made Active in Reports: 05/27/2010
Number of Days to Update: 41

Source: EPA
Telephone: (415) 947-8000
Last EDR Contact: 09/13/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: Quarterly

RAATS: RCRA Administrative Action Tracking System

RCRA Administration Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA. For administration actions after September 30, 1995, data entry in the RAATS database was discontinued. EPA will retain a copy of the database for historical records. It was necessary to terminate RAATS because a decrease in agency resources made it impossible to continue to update the information contained in the database.

Date of Government Version: 04/17/1995
Date Data Arrived at EDR: 07/03/1995
Date Made Active in Reports: 08/07/1995
Number of Days to Update: 35

Source: EPA
Telephone: 202-564-4104
Last EDR Contact: 06/02/2008
Next Scheduled EDR Contact: 09/01/2008
Data Release Frequency: No Update Planned

BRS: Biennial Reporting System

The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BRS captures detailed data from two groups: Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities.

Date of Government Version: 12/31/2009
Date Data Arrived at EDR: 03/01/2011
Date Made Active in Reports: 05/02/2011
Number of Days to Update: 62

Source: EPA/NTIS
Telephone: 800-424-9346
Last EDR Contact: 09/01/2011
Next Scheduled EDR Contact: 12/12/2011
Data Release Frequency: Biennially

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

CA BOND EXP. PLAN: Bond Expenditure Plan
Department of Health Services developed a site-specific expenditure plan as the basis for an appropriation of Hazardous Substance Cleanup Bond Act funds. It is not updated.

Date of Government Version: 01/01/1989
Date Data Arrived at EDR: 07/27/1994
Date Made Active in Reports: 08/02/1994
Number of Days to Update: 6

Source: Department of Health Services
Telephone: 916-255-2118
Last EDR Contact: 05/31/1994
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

WDS: Waste Discharge System
Sites which have been issued waste discharge requirements.

Date of Government Version: 06/19/2007
Date Data Arrived at EDR: 06/20/2007
Date Made Active in Reports: 06/29/2007
Number of Days to Update: 9

Source: State Water Resources Control Board
Telephone: 916-341-5227
Last EDR Contact: 08/31/2011
Next Scheduled EDR Contact: 12/12/2011
Data Release Frequency: Quarterly

NPDES: NPDES Permits Listing
A listing of NPDES permits, including stormwater.

Date of Government Version: 08/23/2011
Date Data Arrived at EDR: 08/24/2011
Date Made Active in Reports: 10/03/2011
Number of Days to Update: 40

Source: State Water Resources Control Board
Telephone: 916-445-9379
Last EDR Contact: 08/24/2011
Next Scheduled EDR Contact: 12/05/2011
Data Release Frequency: Quarterly

CORTESE: "Cortese" Hazardous Waste & Substances Sites List
The sites for the list are designated by the State Water Resource Control Board (LUST), the Integrated Waste Board (SWF/LS), and the Department of Toxic Substances Control (Cal-Sites). This listing is no longer updated by the state agency.

Date of Government Version: 07/01/2011
Date Data Arrived at EDR: 07/01/2011
Date Made Active in Reports: 07/15/2011
Number of Days to Update: 14

Source: CAL EPA/Office of Emergency Information
Telephone: 916-323-3400
Last EDR Contact: 10/04/2011
Next Scheduled EDR Contact: 01/16/2012
Data Release Frequency: Quarterly

HIST CORTESE: Hazardous Waste & Substance Site List
The sites for the list are designated by the State Water Resource Control Board [LUST], the Integrated Waste Board [SWF/LS], and the Department of Toxic Substances Control [CALSITES].

Date of Government Version: 04/01/2001
Date Data Arrived at EDR: 01/22/2009
Date Made Active in Reports: 04/08/2009
Number of Days to Update: 76

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 01/22/2009
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

NOTIFY 65: Proposition 65 Records
Listings of all Proposition 65 incidents reported to counties by the State Water Resources Control Board and the Regional Water Quality Control Board. This database is no longer updated by the reporting agency.

Date of Government Version: 10/21/1993
Date Data Arrived at EDR: 11/01/1993
Date Made Active in Reports: 11/19/1993
Number of Days to Update: 18

Source: State Water Resources Control Board
Telephone: 916-445-3846
Last EDR Contact: 09/26/2011
Next Scheduled EDR Contact: 01/09/2012
Data Release Frequency: No Update Planned

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

DRYCLEANERS: Cleaner Facilities

A list of drycleaner related facilities that have EPA ID numbers. These are facilities with certain SIC codes: power laundries, family and commercial; garment pressing and cleaner's agents; linen supply; coin-operated laundries and cleaning; drycleaning plants, except rugs; carpet and upholster cleaning; industrial launderers; laundry and garment services.

Date of Government Version: 06/28/2011
Date Data Arrived at EDR: 07/21/2011
Date Made Active in Reports: 08/11/2011
Number of Days to Update: 21

Source: Department of Toxic Substance Control
Telephone: 916-327-4498
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: Annually

WIP: Well Investigation Program Case List

Well Investigation Program case in the San Gabriel and San Fernando Valley area.

Date of Government Version: 07/03/2009
Date Data Arrived at EDR: 07/21/2009
Date Made Active in Reports: 08/03/2009
Number of Days to Update: 13

Source: Los Angeles Water Quality Control Board
Telephone: 213-576-6726
Last EDR Contact: 10/03/2011
Next Scheduled EDR Contact: 01/16/2012
Data Release Frequency: Varies

ENF: Enforcement Action Listing

A listing of Water Board Enforcement Actions. Formal is everything except Oral/Verbal Communication, Notice of Violation, Expedited Payment Letter, and Staff Enforcement Letter.

Date of Government Version: 08/15/2011
Date Data Arrived at EDR: 08/23/2011
Date Made Active in Reports: 10/03/2011
Number of Days to Update: 41

Source: State Water Resoruces Control Board
Telephone: 916-445-9379
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: Varies

HAZNET: Facility and Manifest Data

Facility and Manifest Data. The data is extracted from the copies of hazardous waste manifests received each year by the DTSC. The annual volume of manifests is typically 700,000 - 1,000,000 annually, representing approximately 350,000 - 500,000 shipments. Data are from the manifests submitted without correction, and therefore many contain some invalid values for data elements such as generator ID, TSD ID, waste category, and disposal method.

Date of Government Version: 12/31/2010
Date Data Arrived at EDR: 07/19/2011
Date Made Active in Reports: 08/16/2011
Number of Days to Update: 28

Source: California Environmental Protection Agency
Telephone: 916-255-1136
Last EDR Contact: 07/19/2011
Next Scheduled EDR Contact: 10/31/2011
Data Release Frequency: Annually

EMI: Emissions Inventory Data

Toxics and criteria pollutant emissions data collected by the ARB and local air pollution agencies.

Date of Government Version: 12/31/2008
Date Data Arrived at EDR: 09/29/2010
Date Made Active in Reports: 10/18/2010
Number of Days to Update: 19

Source: California Air Resources Board
Telephone: 916-322-2990
Last EDR Contact: 09/30/2011
Next Scheduled EDR Contact: 01/09/2012
Data Release Frequency: Varies

INDIAN RESERV: Indian Reservations

This map layer portrays Indian administered lands of the United States that have any area equal to or greater than 640 acres.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 12/08/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 34

Source: USGS
Telephone: 202-208-3710
Last EDR Contact: 07/22/2011
Next Scheduled EDR Contact: 10/31/2011
Data Release Frequency: Semi-Annually

SCRD DRYCLEANERS: State Coalition for Remediation of Drycleaners Listing

The State Coalition for Remediation of Drycleaners was established in 1998, with support from the U.S. EPA Office of Superfund Remediation and Technology Innovation. It is comprised of representatives of states with established drycleaner remediation programs. Currently the member states are Alabama, Connecticut, Florida, Illinois, Kansas, Minnesota, Missouri, North Carolina, Oregon, South Carolina, Tennessee, Texas, and Wisconsin.

Date of Government Version: 03/07/2011
Date Data Arrived at EDR: 03/09/2011
Date Made Active in Reports: 05/02/2011
Number of Days to Update: 54

Source: Environmental Protection Agency
Telephone: 615-532-8599
Last EDR Contact: 07/15/2011
Next Scheduled EDR Contact: 11/07/2011
Data Release Frequency: Varies

PROC: Certified Processors Database

A listing of certified processors.

Date of Government Version: 06/01/2011
Date Data Arrived at EDR: 06/21/2011
Date Made Active in Reports: 07/15/2011
Number of Days to Update: 24

Source: Department of Conservation
Telephone: 916-323-3836
Last EDR Contact: 09/20/2011
Next Scheduled EDR Contact: 01/02/2012
Data Release Frequency: Quarterly

MWMP: Medical Waste Management Program Listing

The Medical Waste Management Program (MWMP) ensures the proper handling and disposal of medical waste by permitting and inspecting medical waste Offsite Treatment Facilities (PDF) and Transfer Stations (PDF) throughout the state. MWMP also oversees all Medical Waste Transporters.

Date of Government Version: 09/09/2011
Date Data Arrived at EDR: 09/13/2011
Date Made Active in Reports: 10/10/2011
Number of Days to Update: 27

Source: Department of Public Health
Telephone: 916-558-1784
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: Varies

COAL ASH DOE: Sleam-Electric Plan Operation Data

A listing of power plants that store ash in surface ponds.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 08/07/2009
Date Made Active in Reports: 10/22/2009
Number of Days to Update: 76

Source: Department of Energy
Telephone: 202-586-8719
Last EDR Contact: 07/18/2011
Next Scheduled EDR Contact: 10/31/2011
Data Release Frequency: Varies

COAL ASH EPA: Coal Combustion Residues Surface Impoundments List

A listing of coal combustion residues surface impoundments with high hazard potential ratings.

Date of Government Version: 08/17/2010
Date Data Arrived at EDR: 01/03/2011
Date Made Active in Reports: 03/21/2011
Number of Days to Update: 77

Source: Environmental Protection Agency
Telephone: N/A
Last EDR Contact: 09/16/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: Varies

HWT: Registered Hazardous Waste Transporter Database

A listing of hazardous waste transporters. In California, unless specifically exempted, it is unlawful for any person to transport hazardous wastes unless the person holds a valid registration issued by DTSC. A hazardous waste transporter registration is valid for one year and is assigned a unique registration number.

Date of Government Version: 07/18/2011
Date Data Arrived at EDR: 07/19/2011
Date Made Active in Reports: 08/11/2011
Number of Days to Update: 23

Source: Department of Toxic Substances Control
Telephone: 916-440-7145
Last EDR Contact: 07/19/2011
Next Scheduled EDR Contact: 10/31/2011
Data Release Frequency: Quarterly

HWP: EnviroStor Permitted Facilities Listing
Detailed information on permitted hazardous waste facilities and corrective action ("cleanups") tracked in EnviroStor.

Date of Government Version: 08/09/2010
Date Data Arrived at EDR: 08/11/2010
Date Made Active in Reports: 08/20/2010
Number of Days to Update: 9

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 09/01/2011
Next Scheduled EDR Contact: 12/12/2011
Data Release Frequency: Quarterly

FINANCIAL ASSURANCE 2: Financial Assurance Information Listing
A listing of financial assurance information for solid waste facilities. Financial assurance is intended to ensure that resources are available to pay for the cost of closure, post-closure care, and corrective measures if the owner or operator of a regulated facility is unable or unwilling to pay.

Date of Government Version: 03/15/2011
Date Data Arrived at EDR: 03/16/2011
Date Made Active in Reports: 04/26/2011
Number of Days to Update: 41

Source: California Integrated Waste Management Board
Telephone: 916-341-6066
Last EDR Contact: 09/14/2011
Next Scheduled EDR Contact: 12/05/2011
Data Release Frequency: Varies

FINANCIAL ASSURANCE 1: Financial Assurance Information Listing
Financial Assurance information

Date of Government Version: 03/01/2007
Date Data Arrived at EDR: 06/01/2007
Date Made Active in Reports: 06/29/2007
Number of Days to Update: 28

Source: Department of Toxic Substances Control
Telephone: 916-255-3628
Last EDR Contact: 08/05/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: Varies

FEDLAND: Federal and Indian Lands
Federally and Indian administrated lands of the United States. Lands included are administrated by: Army Corps of Engineers, Bureau of Reclamation, National Wild and Scenic River, National Wildlife Refuge, Public Domain Land, Wilderness, Wilderness Study Area, Wildlife Management Area, Bureau of Indian Affairs, Bureau of Land Management, Department of Justice, Forest Service, Fish and Wildlife Service, National Park Service.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 02/06/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 339

Source: U.S. Geological Survey
Telephone: 888-275-8747
Last EDR Contact: 07/22/2011
Next Scheduled EDR Contact: 10/31/2011
Data Release Frequency: N/A

PCB TRANSFORMER: PCB Transformer Registration Database
The database of PCB transformer registrations that includes all PCB registration submittals.

Date of Government Version: 01/01/2008
Date Data Arrived at EDR: 02/18/2009
Date Made Active in Reports: 05/29/2009
Number of Days to Update: 100

Source: Environmental Protection Agency
Telephone: 202-566-0517
Last EDR Contact: 08/05/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: Varies

EDR PROPRIETARY RECORDS

EDR Proprietary Records

Manufactured Gas Plants: EDR Proprietary Manufactured Gas Plants
The EDR Proprietary Manufactured Gas Plant Database includes records of coal gas plants (manufactured gas plants) compiled by EDR's researchers. Manufactured gas sites were used in the United States from the 1800's to 1950's to produce a gas that could be distributed and used as fuel. These plants used whale oil, rosin, coal, or a mixture of coal, oil, and water that also produced a significant amount of waste. Many of the byproducts of the gas production, such as coal tar (oily waste containing volatile and non-volatile chemicals), sludges, oils and other compounds are potentially hazardous to human health and the environment. The byproduct from this process was frequently disposed of directly at the plant site and can remain or spread slowly, serving as a continuous source of soil and groundwater contamination.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

EDR Historical Auto Stations: EDR Proprietary Historic Gas Stations

EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR Historical Cleaners: EDR Proprietary Historic Dry Cleaners

EDR has searched selected national collections of business directories and has collected listings of potential dry cleaner sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include dry cleaning establishments. The categories reviewed included, but were not limited to dry cleaners, cleaners, laundry, laundromat, cleaning/laundry, wash & dry etc.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

COUNTY RECORDS

ALAMEDA COUNTY:

Contaminated Sites

A listing of contaminated sites overseen by the Toxic Release Program (oil and groundwater contamination from chemical releases and spills) and the Leaking Underground Storage Tank Program (soil and ground water contamination from leaking petroleum USTs).

Date of Government Version: 07/21/2011
Date Data Arrived at EDR: 07/21/2011
Date Made Active in Reports: 08/11/2011
Number of Days to Update: 21

Source: Alameda County Environmental Health Services
Telephone: 510-567-6700
Last EDR Contact: 10/03/2011
Next Scheduled EDR Contact: 01/16/2012
Data Release Frequency: Semi-Annually

Underground Tanks

Underground storage tank sites located in Alameda county.

Date of Government Version: 07/21/2011
Date Data Arrived at EDR: 07/21/2011
Date Made Active in Reports: 08/11/2011
Number of Days to Update: 21

Source: Alameda County Environmental Health Services
Telephone: 510-567-6700
Last EDR Contact: 10/03/2011
Next Scheduled EDR Contact: 01/16/2012
Data Release Frequency: Semi-Annually

BUTTE COUNTY:

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

CUPA Facility Listing
Cupa facility list.

Date of Government Version: 03/29/2011
Date Data Arrived at EDR: 04/20/2011
Date Made Active in Reports: 05/17/2011
Number of Days to Update: 27

Source: Public Health Department
Telephone: 530-538-7149
Last EDR Contact: 07/18/2011
Next Scheduled EDR Contact: 10/31/2011
Data Release Frequency: Varies

COLUSA COUNTY:

CUPA Facility List
Cupa facility list.

Date of Government Version: 12/01/2010
Date Data Arrived at EDR: 04/20/2011
Date Made Active in Reports: 05/17/2011
Number of Days to Update: 27

Source: Health & Human Services
Telephone: 530-458-0396
Last EDR Contact: 10/04/2011
Next Scheduled EDR Contact: 10/31/2011
Data Release Frequency: Varies

CONTRA COSTA COUNTY:

Site List
List includes sites from the underground tank, hazardous waste generator and business plan/2185 programs.

Date of Government Version: 08/30/2011
Date Data Arrived at EDR: 08/31/2011
Date Made Active in Reports: 09/19/2011
Number of Days to Update: 19

Source: Contra Costa Health Services Department
Telephone: 925-646-2286
Last EDR Contact: 08/09/2011
Next Scheduled EDR Contact: 11/21/2011
Data Release Frequency: Semi-Annually

EL DORADO COUNTY:

CUPA Facility List
CUPA facility list.

Date of Government Version: 09/09/2011
Date Data Arrived at EDR: 09/09/2011
Date Made Active in Reports: 10/03/2011
Number of Days to Update: 24

Source: El Dorado County Environmental Management Department
Telephone: 530-621-6623
Last EDR Contact: 08/22/2011
Next Scheduled EDR Contact: 11/21/2011
Data Release Frequency: Varies

FRESNO COUNTY:

CUPA Resources List
Certified Unified Program Agency. CUPA's are responsible for implementing a unified hazardous materials and hazardous waste management regulatory program. The agency provides oversight of businesses that deal with hazardous materials, operate underground storage tanks or aboveground storage tanks.

Date of Government Version: 07/18/2011
Date Data Arrived at EDR: 07/19/2011
Date Made Active in Reports: 08/11/2011
Number of Days to Update: 23

Source: Dept. of Community Health
Telephone: 559-445-3271
Last EDR Contact: 07/18/2011
Next Scheduled EDR Contact: 10/31/2011
Data Release Frequency: Semi-Annually

HUMBOLDT COUNTY:

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

CUPA Facility List
CUPA facility list.

Date of Government Version: 02/08/2011
Date Data Arrived at EDR: 03/03/2011
Date Made Active in Reports: 03/24/2011
Number of Days to Update: 21

Source: Humboldt County Environmental Health
Telephone: N/A
Last EDR Contact: 10/11/2011
Next Scheduled EDR Contact: 12/12/2011
Data Release Frequency: Varies

INYO COUNTY:

CUPA Facility List
Cupa facility list.

Date of Government Version: 09/12/2011
Date Data Arrived at EDR: 09/13/2011
Date Made Active in Reports: 10/03/2011
Number of Days to Update: 20

Source: Inyo County Environmental Health Services
Telephone: 760-878-0238
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/12/2011
Data Release Frequency: Varies

KERN COUNTY:

Underground Storage Tank Sites & Tank Listing
Kern County Sites and Tanks Listing.

Date of Government Version: 08/31/2010
Date Data Arrived at EDR: 09/01/2010
Date Made Active in Reports: 09/30/2010
Number of Days to Update: 29

Source: Kern County Environment Health Services Department
Telephone: 661-862-8700
Last EDR Contact: 09/13/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: Quarterly

KINGS COUNTY:

CUPA Facility List
A listing of sites included in the county?s Certified Unified Program Agency database. California?s Secretary for Environmental Protection established the unified hazardous materials and hazardous waste regulatory program as required by chapter 6.11 of the California Health and Safety Code. The Unified Program consolidates the administration, permits, inspections, and enforcement activities.

Date of Government Version: 06/09/2011
Date Data Arrived at EDR: 06/09/2011
Date Made Active in Reports: 07/08/2011
Number of Days to Update: 29

Source: Kings County Department of Public Health
Telephone: 559-584-1411
Last EDR Contact: 09/26/2011
Next Scheduled EDR Contact: 12/12/2011
Data Release Frequency: Varies

LOS ANGELES COUNTY:

San Gabriel Valley Areas of Concern
San Gabriel Valley areas where VOC contamination is at or above the MCL as designated by region 9 EPA office.

Date of Government Version: 03/30/2009
Date Data Arrived at EDR: 03/31/2009
Date Made Active in Reports: 10/23/2009
Number of Days to Update: 206

Source: EPA Region 9
Telephone: 415-972-3178
Last EDR Contact: 09/26/2011
Next Scheduled EDR Contact: 01/09/2012
Data Release Frequency: No Update Planned

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

HMS: Street Number List
Industrial Waste and Underground Storage Tank Sites.

Date of Government Version: 07/28/2011
Date Data Arrived at EDR: 09/13/2011
Date Made Active in Reports: 10/07/2011
Number of Days to Update: 24

Source: Department of Public Works
Telephone: 626-458-3517
Last EDR Contact: 07/18/2011
Next Scheduled EDR Contact: 10/31/2011
Data Release Frequency: Semi-Annually

List of Solid Waste Facilities
Solid Waste Facilities in Los Angeles County.

Date of Government Version: 07/25/2011
Date Data Arrived at EDR: 07/27/2011
Date Made Active in Reports: 08/11/2011
Number of Days to Update: 15

Source: La County Department of Public Works
Telephone: 818-458-5185
Last EDR Contact: 07/27/2011
Next Scheduled EDR Contact: 11/07/2011
Data Release Frequency: Varies

City of Los Angeles Landfills
Landfills owned and maintained by the City of Los Angeles.

Date of Government Version: 03/05/2009
Date Data Arrived at EDR: 03/10/2009
Date Made Active in Reports: 04/08/2009
Number of Days to Update: 29

Source: Engineering & Construction Division
Telephone: 213-473-7869
Last EDR Contact: 08/23/2011
Next Scheduled EDR Contact: 12/05/2011
Data Release Frequency: Varies

Site Mitigation List
Industrial sites that have had some sort of spill or complaint.

Date of Government Version: 02/09/2011
Date Data Arrived at EDR: 02/09/2011
Date Made Active in Reports: 03/04/2011
Number of Days to Update: 23

Source: Community Health Services
Telephone: 323-890-7806
Last EDR Contact: 07/22/2011
Next Scheduled EDR Contact: 11/07/2011
Data Release Frequency: Annually

City of El Segundo Underground Storage Tank
Underground storage tank sites located in El Segundo city.

Date of Government Version: 02/03/2011
Date Data Arrived at EDR: 02/08/2011
Date Made Active in Reports: 03/03/2011
Number of Days to Update: 23

Source: City of El Segundo Fire Department
Telephone: 310-524-2236
Last EDR Contact: 07/25/2011
Next Scheduled EDR Contact: 11/07/2011
Data Release Frequency: Semi-Annually

City of Long Beach Underground Storage Tank
Underground storage tank sites located in the city of Long Beach.

Date of Government Version: 03/28/2003
Date Data Arrived at EDR: 10/23/2003
Date Made Active in Reports: 11/26/2003
Number of Days to Update: 34

Source: City of Long Beach Fire Department
Telephone: 562-570-2563
Last EDR Contact: 05/02/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: Annually

City of Torrance Underground Storage Tank
Underground storage tank sites located in the city of Torrance.

Date of Government Version: 07/18/2011
Date Data Arrived at EDR: 07/21/2011
Date Made Active in Reports: 08/11/2011
Number of Days to Update: 21

Source: City of Torrance Fire Department
Telephone: 310-618-2973
Last EDR Contact: 07/18/2011
Next Scheduled EDR Contact: 10/31/2011
Data Release Frequency: Semi-Annually

MADERA COUNTY:

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

CUPA Facility List

A listing of sites included in the county?s Certified Unified Program Agency database. California?s Secretary for Environmental Protection established the unified hazardous materials and hazardous waste regulatory program as required by chapter 6.11 of the California Health and Safety Code. The Unified Program consolidates the administration, permits, inspections, and enforcement activities.

Date of Government Version: 09/13/2011
Date Data Arrived at EDR: 09/13/2011
Date Made Active in Reports: 10/04/2011
Number of Days to Update: 21

Source: Madera County Environmental Health
Telephone: 559-675-7823
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/12/2011
Data Release Frequency: Varies

MARIN COUNTY:

Underground Storage Tank Sites

Currently permitted USTs in Marin County.

Date of Government Version: 07/15/2011
Date Data Arrived at EDR: 07/25/2011
Date Made Active in Reports: 08/11/2011
Number of Days to Update: 17

Source: Public Works Department Waste Management
Telephone: 415-499-6647
Last EDR Contact: 10/11/2011
Next Scheduled EDR Contact: 01/23/2012
Data Release Frequency: Semi-Annually

MERCED COUNTY:

CUPA Facility List

CUPA facility list.

Date of Government Version: 06/06/2011
Date Data Arrived at EDR: 06/06/2011
Date Made Active in Reports: 06/15/2011
Number of Days to Update: 9

Source: Merced County Environmental Health
Telephone: 209-381-1094
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/12/2011
Data Release Frequency: Varies

MONTEREY COUNTY:

CUPA Facility Listing

CUPA Program listing from the Environmental Health Division.

Date of Government Version: 07/07/2011
Date Data Arrived at EDR: 07/08/2011
Date Made Active in Reports: 08/11/2011
Number of Days to Update: 34

Source: Monterey County Health Department
Telephone: 831-796-1297
Last EDR Contact: 08/31/2011
Next Scheduled EDR Contact: 12/12/2011
Data Release Frequency: Varies

NAPA COUNTY:

Sites With Reported Contamination

A listing of leaking underground storage tank sites located in Napa county.

Date of Government Version: 07/09/2008
Date Data Arrived at EDR: 07/09/2008
Date Made Active in Reports: 07/31/2008
Number of Days to Update: 22

Source: Napa County Department of Environmental Management
Telephone: 707-253-4269
Last EDR Contact: 09/06/2011
Next Scheduled EDR Contact: 12/19/2011
Data Release Frequency: No Update Planned

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Closed and Operating Underground Storage Tank Sites
Underground storage tank sites located in Napa county.

Date of Government Version: 01/15/2008
Date Data Arrived at EDR: 01/16/2008
Date Made Active in Reports: 02/08/2008
Number of Days to Update: 23

Source: Napa County Department of Environmental Management
Telephone: 707-253-4269
Last EDR Contact: 09/06/2011
Next Scheduled EDR Contact: 12/19/2011
Data Release Frequency: No Update Planned

NEVADA COUNTY:

CUPA Facility List
CUPA facility list.

Date of Government Version: 08/22/2011
Date Data Arrived at EDR: 08/23/2011
Date Made Active in Reports: 09/19/2011
Number of Days to Update: 27

Source: Community Development Agency
Telephone: 530-265-1467
Last EDR Contact: 08/22/2011
Next Scheduled EDR Contact: 11/21/2011
Data Release Frequency: Varies

ORANGE COUNTY:

List of Industrial Site Cleanups
Petroleum and non-petroleum spills.

Date of Government Version: 08/01/2011
Date Data Arrived at EDR: 08/23/2011
Date Made Active in Reports: 09/19/2011
Number of Days to Update: 27

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 08/17/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: Annually

List of Underground Storage Tank Cleanups
Orange County Underground Storage Tank Cleanups (LUST).

Date of Government Version: 08/02/2011
Date Data Arrived at EDR: 08/23/2011
Date Made Active in Reports: 10/03/2011
Number of Days to Update: 41

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 08/17/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: Quarterly

List of Underground Storage Tank Facilities
Orange County Underground Storage Tank Facilities (UST).

Date of Government Version: 08/01/2011
Date Data Arrived at EDR: 08/23/2011
Date Made Active in Reports: 09/16/2011
Number of Days to Update: 24

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 08/17/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: Quarterly

PLACER COUNTY:

Master List of Facilities
List includes aboveground tanks, underground tanks and cleanup sites.

Date of Government Version: 06/20/2011
Date Data Arrived at EDR: 06/21/2011
Date Made Active in Reports: 07/08/2011
Number of Days to Update: 17

Source: Placer County Health and Human Services
Telephone: 530-889-7312
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: Semi-Annually

RIVERSIDE COUNTY:

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Listing of Underground Tank Cleanup Sites
Riverside County Underground Storage Tank Cleanup Sites (LUST).

Date of Government Version: 07/14/2011
Date Data Arrived at EDR: 07/22/2011
Date Made Active in Reports: 08/11/2011
Number of Days to Update: 20

Source: Department of Environmental Health
Telephone: 951-358-5055
Last EDR Contact: 09/26/2011
Next Scheduled EDR Contact: 01/09/2012
Data Release Frequency: Quarterly

Underground Storage Tank Tank List
Underground storage tank sites located in Riverside county.

Date of Government Version: 07/20/2011
Date Data Arrived at EDR: 07/22/2011
Date Made Active in Reports: 08/11/2011
Number of Days to Update: 20

Source: Department of Environmental Health
Telephone: 951-358-5055
Last EDR Contact: 09/26/2011
Next Scheduled EDR Contact: 01/26/2012
Data Release Frequency: Quarterly

SACRAMENTO COUNTY:

Toxic Site Clean-Up List
List of sites where unauthorized releases of potentially hazardous materials have occurred.

Date of Government Version: 05/02/2011
Date Data Arrived at EDR: 07/19/2011
Date Made Active in Reports: 08/11/2011
Number of Days to Update: 23

Source: Sacramento County Environmental Management
Telephone: 916-875-8406
Last EDR Contact: 10/07/2011
Next Scheduled EDR Contact: 01/23/2012
Data Release Frequency: Quarterly

Master Hazardous Materials Facility List
Any business that has hazardous materials on site - hazardous material storage sites, underground storage tanks, waste generators.

Date of Government Version: 05/02/2011
Date Data Arrived at EDR: 07/19/2011
Date Made Active in Reports: 08/11/2011
Number of Days to Update: 23

Source: Sacramento County Environmental Management
Telephone: 916-875-8406
Last EDR Contact: 10/07/2011
Next Scheduled EDR Contact: 01/23/2012
Data Release Frequency: Quarterly

SAN BERNARDINO COUNTY:

Hazardous Material Permits
This listing includes underground storage tanks, medical waste handlers/generators, hazardous materials handlers, hazardous waste generators, and waste oil generators/handlers.

Date of Government Version: 08/26/2011
Date Data Arrived at EDR: 08/31/2011
Date Made Active in Reports: 09/19/2011
Number of Days to Update: 19

Source: San Bernardino County Fire Department Hazardous Materials Division
Telephone: 909-387-3041
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: Quarterly

SAN DIEGO COUNTY:

Hazardous Materials Management Division Database
The database includes: HE58 - This report contains the business name, site address, business phone number, establishment 'H' permit number, type of permit, and the business status. HE17 - In addition to providing the same information provided in the HE58 listing, HE17 provides inspection dates, violations received by the establishment, hazardous waste generated, the quantity, method of storage, treatment/disposal of waste and the hauler, and information on underground storage tanks. Unauthorized Release List - Includes a summary of environmental contamination cases in San Diego County (underground tank cases, non-tank cases, groundwater contamination, and soil contamination are included.)

Date of Government Version: 09/09/2010
Date Data Arrived at EDR: 09/15/2010
Date Made Active in Reports: 09/29/2010
Number of Days to Update: 14

Source: Hazardous Materials Management Division
Telephone: 619-338-2268
Last EDR Contact: 09/16/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: Quarterly

Solid Waste Facilities

San Diego County Solid Waste Facilities.

Date of Government Version: 10/01/2010
Date Data Arrived at EDR: 11/16/2010
Date Made Active in Reports: 01/25/2011
Number of Days to Update: 70

Source: Department of Health Services
Telephone: 619-338-2209
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: Varies

Environmental Case Listing

The listing contains all underground tank release cases and projects pertaining to properties contaminated with hazardous substances that are actively under review by the Site Assessment and Mitigation Program.

Date of Government Version: 03/23/2010
Date Data Arrived at EDR: 06/15/2010
Date Made Active in Reports: 07/09/2010
Number of Days to Update: 24

Source: San Diego County Department of Environmental Health
Telephone: 619-338-2371
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: No Update Planned

SAN FRANCISCO COUNTY:

Local Oversite Facilities

A listing of leaking underground storage tank sites located in San Francisco county.

Date of Government Version: 09/19/2008
Date Data Arrived at EDR: 09/19/2008
Date Made Active in Reports: 09/29/2008
Number of Days to Update: 10

Source: Department Of Public Health San Francisco County
Telephone: 415-252-3920
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: Quarterly

Underground Storage Tank Information

Underground storage tank sites located in San Francisco county.

Date of Government Version: 11/29/2010
Date Data Arrived at EDR: 03/10/2011
Date Made Active in Reports: 03/15/2011
Number of Days to Update: 5

Source: Department of Public Health
Telephone: 415-252-3920
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: Quarterly

SAN JOAQUIN COUNTY:

San Joaquin Co. UST

A listing of underground storage tank locations in San Joaquin county.

Date of Government Version: 06/27/2011
Date Data Arrived at EDR: 06/29/2011
Date Made Active in Reports: 07/08/2011
Number of Days to Update: 9

Source: Environmental Health Department
Telephone: N/A
Last EDR Contact: 09/26/2011
Next Scheduled EDR Contact: 01/09/2012
Data Release Frequency: Semi-Annually

SAN LUIS OBISPO COUNTY:

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

CUPA Facility List
Cupa Facility List.

Date of Government Version: 09/12/2011
Date Data Arrived at EDR: 09/13/2011
Date Made Active in Reports: 10/07/2011
Number of Days to Update: 24

Source: San Luis Obispo County Public Health Department
Telephone: 805-781-5596
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/12/2011
Data Release Frequency: Varies

SAN MATEO COUNTY:

Business Inventory
List includes Hazardous Materials Business Plan, hazardous waste generators, and underground storage tanks.

Date of Government Version: 07/13/2011
Date Data Arrived at EDR: 07/15/2011
Date Made Active in Reports: 08/11/2011
Number of Days to Update: 27

Source: San Mateo County Environmental Health Services Division
Telephone: 650-363-1921
Last EDR Contact: 09/19/2011
Next Scheduled EDR Contact: 01/12/2012
Data Release Frequency: Annually

Fuel Leak List
A listing of leaking underground storage tank sites located in San Mateo county.

Date of Government Version: 06/20/2011
Date Data Arrived at EDR: 06/21/2011
Date Made Active in Reports: 07/15/2011
Number of Days to Update: 24

Source: San Mateo County Environmental Health Services Division
Telephone: 650-363-1921
Last EDR Contact: 09/19/2011
Next Scheduled EDR Contact: 01/02/2012
Data Release Frequency: Semi-Annually

SANTA BARBARA COUNTY:

CUPA Facility Listing
CUPA Program Listing from the Environmental Health Services division.

Date of Government Version: 09/08/2011
Date Data Arrived at EDR: 09/09/2011
Date Made Active in Reports: 10/07/2011
Number of Days to Update: 28

Source: Santa Barbara County Public Health Department
Telephone: 805-686-8167
Last EDR Contact: 08/31/2011
Next Scheduled EDR Contact: 12/12/2011
Data Release Frequency: Varies

SANTA CLARA COUNTY:

HIST LUST - Fuel Leak Site Activity Report
A listing of open and closed leaking underground storage tanks. This listing is no longer updated by the county. Leaking underground storage tanks are now handled by the Department of Environmental Health.

Date of Government Version: 03/29/2005
Date Data Arrived at EDR: 03/30/2005
Date Made Active in Reports: 04/21/2005
Number of Days to Update: 22

Source: Santa Clara Valley Water District
Telephone: 408-265-2600
Last EDR Contact: 03/23/2009
Next Scheduled EDR Contact: 06/22/2009
Data Release Frequency: No Update Planned

LOP Listing
A listing of leaking underground storage tanks located in Santa Clara county.

Date of Government Version: 09/06/2011
Date Data Arrived at EDR: 09/13/2011
Date Made Active in Reports: 10/10/2011
Number of Days to Update: 27

Source: Department of Environmental Health
Telephone: 408-918-3417
Last EDR Contact: 09/06/2011
Next Scheduled EDR Contact: 12/19/2011
Data Release Frequency: Annually

Hazardous Material Facilities
Hazardous material facilities, including underground storage tank sites.

Date of Government Version: 09/01/2011
Date Data Arrived at EDR: 09/01/2011
Date Made Active in Reports: 10/03/2011
Number of Days to Update: 32

Source: City of San Jose Fire Department
Telephone: 408-535-7694
Last EDR Contact: 08/31/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: Annually

SANTA CRUZ COUNTY:

CUPA Facility List
CUPA facility listing.

Date of Government Version: 08/31/2011
Date Data Arrived at EDR: 08/31/2011
Date Made Active in Reports: 09/09/2011
Number of Days to Update: 9

Source: Santa Cruz County Environmental Health
Telephone: 831-464-2761
Last EDR Contact: 08/31/2011
Next Scheduled EDR Contact: 12/12/2011
Data Release Frequency: Varies

SHASTA COUNTY:

CUPA Facility List
Cupa Facility List.

Date of Government Version: 08/31/2011
Date Data Arrived at EDR: 08/31/2011
Date Made Active in Reports: 09/19/2011
Number of Days to Update: 19

Source: Shasta County Department of Resource Management
Telephone: 530-225-5789
Last EDR Contact: 08/31/2011
Next Scheduled EDR Contact: 12/12/2011
Data Release Frequency: Varies

SOLANO COUNTY:

Leaking Underground Storage Tanks
A listing of leaking underground storage tank sites located in Solano county.

Date of Government Version: 06/09/2011
Date Data Arrived at EDR: 06/29/2011
Date Made Active in Reports: 07/08/2011
Number of Days to Update: 9

Source: Solano County Department of Environmental Management
Telephone: 707-784-6770
Last EDR Contact: 09/19/2011
Next Scheduled EDR Contact: 01/02/2012
Data Release Frequency: Quarterly

Underground Storage Tanks
Underground storage tank sites located in Solano county.

Date of Government Version: 06/09/2011
Date Data Arrived at EDR: 07/01/2011
Date Made Active in Reports: 07/13/2011
Number of Days to Update: 12

Source: Solano County Department of Environmental Management
Telephone: 707-784-6770
Last EDR Contact: 09/19/2011
Next Scheduled EDR Contact: 01/02/2012
Data Release Frequency: Quarterly

SONOMA COUNTY:

Leaking Underground Storage Tank Sites
A listing of leaking underground storage tank sites located in Sonoma county.

Date of Government Version: 04/05/2011
Date Data Arrived at EDR: 04/06/2011
Date Made Active in Reports: 05/12/2011
Number of Days to Update: 36

Source: Department of Health Services
Telephone: 707-565-6565
Last EDR Contact: 10/03/2011
Next Scheduled EDR Contact: 01/16/2012
Data Release Frequency: Quarterly

SUTTER COUNTY:

Underground Storage Tanks

Underground storage tank sites located in Sutter county.

Date of Government Version: 06/13/2011
Date Data Arrived at EDR: 06/14/2011
Date Made Active in Reports: 07/13/2011
Number of Days to Update: 29

Source: Sutter County Department of Agriculture
Telephone: 530-822-7500
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: Semi-Annually

VENTURA COUNTY:

Business Plan, Hazardous Waste Producers, and Operating Underground Tanks

The BWT list indicates by site address whether the Environmental Health Division has Business Plan (B), Waste Producer (W), and/or Underground Tank (T) information.

Date of Government Version: 07/26/2011
Date Data Arrived at EDR: 08/26/2011
Date Made Active in Reports: 09/19/2011
Number of Days to Update: 24

Source: Ventura County Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 08/23/2011
Next Scheduled EDR Contact: 12/05/2011
Data Release Frequency: Quarterly

Inventory of Illegal Abandoned and Inactive Sites

Ventura County Inventory of Closed, Illegal Abandoned, and Inactive Sites.

Date of Government Version: 04/01/2011
Date Data Arrived at EDR: 04/07/2011
Date Made Active in Reports: 05/12/2011
Number of Days to Update: 35

Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 10/11/2011
Next Scheduled EDR Contact: 01/23/2012
Data Release Frequency: Annually

Listing of Underground Tank Cleanup Sites

Ventura County Underground Storage Tank Cleanup Sites (LUST).

Date of Government Version: 05/29/2008
Date Data Arrived at EDR: 06/24/2008
Date Made Active in Reports: 07/31/2008
Number of Days to Update: 37

Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 08/23/2011
Next Scheduled EDR Contact: 12/05/2011
Data Release Frequency: Quarterly

Medical Waste Program List

To protect public health and safety and the environment from potential exposure to disease causing agents, the Environmental Health Division Medical Waste Program regulates the generation, handling, storage, treatment and disposal of medical waste throughout the County.

Date of Government Version: 07/26/2011
Date Data Arrived at EDR: 08/08/2011
Date Made Active in Reports: 09/09/2011
Number of Days to Update: 32

Source: Ventura County Resource Management Agency
Telephone: 805-654-2813
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: Quarterly

Underground Tank Closed Sites List
Ventura County Operating Underground Storage Tank Sites (UST)/Underground Tank Closed Sites List.

Date of Government Version: 05/25/2011
Date Data Arrived at EDR: 06/21/2011
Date Made Active in Reports: 07/13/2011
Number of Days to Update: 22

Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 09/20/2011
Next Scheduled EDR Contact: 01/02/2012
Data Release Frequency: Quarterly

YOLO COUNTY:

Underground Storage Tank Comprehensive Facility Report
Underground storage tank sites located in Yolo county.

Date of Government Version: 08/15/2011
Date Data Arrived at EDR: 08/23/2011
Date Made Active in Reports: 09/16/2011
Number of Days to Update: 24

Source: Yolo County Department of Health
Telephone: 530-666-8646
Last EDR Contact: 10/11/2011
Next Scheduled EDR Contact: 01/09/2012
Data Release Frequency: Annually

YUBA COUNTY:

CUPA Facility List
CUPA facility listing for Yuba County.

Date of Government Version: 08/23/2011
Date Data Arrived at EDR: 08/26/2011
Date Made Active in Reports: 09/19/2011
Number of Days to Update: 24

Source: Yuba County Environmental Health Department
Telephone: 530-749-7523
Last EDR Contact: 08/08/2011
Next Scheduled EDR Contact: 11/21/2011
Data Release Frequency: Varies

OTHER DATABASE(S)

Depending on the geographic area covered by this report, the data provided in these specialty databases may or may not be complete. For example, the existence of wetlands information data in a specific report does not mean that all wetlands in the area covered by the report are included. Moreover, the absence of any reported wetlands information does not necessarily mean that wetlands do not exist in the area covered by the report.

CT MANIFEST: Hazardous Waste Manifest Data
Facility and manifest data. Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a tsd facility.

Date of Government Version: 12/31/2007
Date Data Arrived at EDR: 08/26/2009
Date Made Active in Reports: 09/11/2009
Number of Days to Update: 16

Source: Department of Environmental Protection
Telephone: 860-424-3375
Last EDR Contact: 08/26/2011
Next Scheduled EDR Contact: 12/05/2011
Data Release Frequency: Annually

NJ MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2010
Date Data Arrived at EDR: 07/20/2011
Date Made Active in Reports: 08/11/2011
Number of Days to Update: 22

Source: Department of Environmental Protection
Telephone: N/A
Last EDR Contact: 07/20/2011
Next Scheduled EDR Contact: 10/31/2011
Data Release Frequency: Annually

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

NY MANIFEST: Facility and Manifest Data
Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a TSD facility.

Date of Government Version: 08/01/2011
Date Data Arrived at EDR: 08/09/2011
Date Made Active in Reports: 09/16/2011
Number of Days to Update: 38

Source: Department of Environmental Conservation
Telephone: 518-402-8651
Last EDR Contact: 08/09/2011
Next Scheduled EDR Contact: 11/21/2011
Data Release Frequency: Annually

PA MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2008
Date Data Arrived at EDR: 12/01/2009
Date Made Active in Reports: 12/14/2009
Number of Days to Update: 13

Source: Department of Environmental Protection
Telephone: 717-783-8990
Last EDR Contact: 09/26/2011
Next Scheduled EDR Contact: 01/09/2012
Data Release Frequency: Annually

RI MANIFEST: Manifest information
Hazardous waste manifest information

Date of Government Version: 12/31/2010
Date Data Arrived at EDR: 06/24/2011
Date Made Active in Reports: 06/30/2011
Number of Days to Update: 6

Source: Department of Environmental Management
Telephone: 401-222-2797
Last EDR Contact: 08/31/2011
Next Scheduled EDR Contact: 12/12/2011
Data Release Frequency: Annually

WI MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2010
Date Data Arrived at EDR: 08/19/2011
Date Made Active in Reports: 09/15/2011
Number of Days to Update: 27

Source: Department of Natural Resources
Telephone: N/A
Last EDR Contact: 09/19/2011
Next Scheduled EDR Contact: 01/02/2012
Data Release Frequency: Annually

Oil/Gas Pipelines: This data was obtained by EDR from the USGS in 1994. It is referred to by USGS as GeoData Digital Line Graphs from 1:100,000-Scale Maps. It was extracted from the transportation category including some oil, but primarily gas pipelines.

Electric Power Transmission Line Data
Source: Rextag Strategies Corp.
Telephone: (281) 769-2247
U.S. Electric Transmission and Power Plants Systems Digital GIS Data

Sensitive Receptors: There are individuals deemed sensitive receptors due to their fragile immune systems and special sensitivity to environmental discharges. These sensitive receptors typically include the elderly, the sick, and children. While the location of all sensitive receptors cannot be determined, EDR indicates those buildings and facilities - schools, daycares, hospitals, medical centers, and nursing homes - where individuals who are sensitive receptors are likely to be located.

AHA Hospitals:
Source: American Hospital Association, Inc.
Telephone: 312-280-5991
The database includes a listing of hospitals based on the American Hospital Association's annual survey of hospitals.

Medical Centers: Provider of Services Listing
Source: Centers for Medicare & Medicaid Services
Telephone: 410-786-3000
A listing of hospitals with Medicare provider number, produced by Centers of Medicare & Medicaid Services, a federal agency within the U.S. Department of Health and Human Services.

Nursing Homes
Source: National Institutes of Health
Telephone: 301-594-6248
Information on Medicare and Medicaid certified nursing homes in the United States.

Public Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on elementary and secondary public education in the United States. It is a comprehensive, annual, national statistical database of all public elementary and secondary schools and school districts, which contains data that are comparable across all states.

Private Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on private school locations in the United States.

Daycare Centers: Licensed Facilities
Source: Department of Social Services
Telephone: 916-657-4041

Flood Zone Data: This data, available in select counties across the country, was obtained by EDR in 2003 & 2011 from the Federal Emergency Management Agency (FEMA). Data depicts 100-year and 500-year flood zones as defined by FEMA.

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002 and 2005 from the U.S. Fish and Wildlife Service.

Scanned Digital USGS 7.5' Topographic Map (DRG)
Source: United States Geologic Survey
A digital raster graphic (DRG) is a scanned image of a U.S. Geological Survey topographic map. The map images are made by scanning published paper maps on high-resolution scanners. The raster image is georeferenced and fit to the Universal Transverse Mercator (UTM) projection.

STREET AND ADDRESS INFORMATION

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GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Sample Collected:	07/21/2009	Findings:	4.6 UG/L
Chemical:	PERCHLORATE		
Sample Collected:	07/28/2009	Findings:	25. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	07/28/2009	Findings:	4.7 UG/L
Chemical:	PERCHLORATE		
Sample Collected:	08/27/2009	Findings:	26. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	09/29/2009	Findings:	27. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	09/29/2009	Findings:	4.5 UG/L
Chemical:	PERCHLORATE		
Sample Collected:	10/28/2009	Findings:	24. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	05/07/2010	Findings:	4.342 UG/L
Chemical:	PERCHLORATE		
Sample Collected:	05/11/2010	Findings:	28.69 MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	08/16/2010	Findings:	27.04 MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	08/16/2010	Findings:	26. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	09/07/2010	Findings:	24. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	09/07/2010	Findings:	4.1 UG/L
Chemical:	PERCHLORATE		
Sample Collected:	09/16/2010	Findings:	24. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	09/16/2010	Findings:	4.5 UG/L
Chemical:	PERCHLORATE		
Sample Collected:	10/07/2010	Findings:	24. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	10/07/2010	Findings:	4.6 UG/L
Chemical:	PERCHLORATE		
Sample Collected:	12/20/2010	Findings:	28.041 MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	01/03/2011	Findings:	27.921 MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	01/03/2011	Findings:	4.02 UG/L
Chemical:	PERCHLORATE		
Sample Collected:	01/19/2011	Findings:	27.405 MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	01/27/2011	Findings:	26.466 MG/L
Chemical:	NITRATE (AS NO3)		

Sample Collected:	03/04/2011	Findings:	28.16 MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	03/04/2011	Findings:	4.4 UG/L
Chemical:	PERCHLORATE		
Sample Collected:	03/15/2011	Findings:	26. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	03/15/2011	Findings:	4.2 UG/L
Chemical:	PERCHLORATE		

9
West
1/2 - 1 Mile
Lower

FED USGS **USGS3135188**

Agency cd:	USGS	Site no:	340527117130601
Site name:	001S003W17C003S		
Latitude:	340527	EDR Site id:	USGS3135188
Longitude:	1171306	Dec lat:	34.09084573
Dec lon:	-117.21920682	Coor meth:	M
Coor accr:	S	Latlong datum:	NAD27
Dec latlong datum:	NAD83	District:	06
State:	06	County:	071
Country:	US	Land net:	Not Reported
Location map:	REDLANDS	Map scale:	24000
Altitude:	1176.00		
Altitude method:	Level or other surveying method		
Altitude accuracy:	.1		
Altitude datum:	National Geodetic Vertical Datum of 1929		
Hydrologic:	Santa Ana, California. Area = 1680 sq.mi.		
Topographic:	Not Reported		
Site type:	Ground-water other than Spring	Date construction:	19560101
Date inventoried:	Not Reported	Mean greenwich time offset:	PST
Local standard time flag:	Y		
Type of ground water site:	Single well, other than collector or Ranney type		
Aquifer Type:	Not Reported		
Aquifer:	Not Reported		
Well depth:	296	Hole depth:	296
Source of depth data:	Not Reported		
Project number:	Not Reported		
Real time data flag:	0	Daily flow data begin date:	0000-00-00
Daily flow data end date:	0000-00-00	Daily flow data count:	0
Peak flow data begin date:	0000-00-00	Peak flow data end date:	0000-00-00
Peak flow data count:	0	Water quality data begin date:	1974-10-03
Water quality data end date:	1992-06-30	Water quality data count:	13
Ground water data begin date:	2003-06-11	Ground water data end date:	2003-06-11
Ground water data count:	1		

Ground-water levels, Number of Measurements: 1

Date	Feet below Surface	Feet to Sealevel
2003-06-11	167.83	

10
ESE
1/2 - 1 Mile
Higher

FED USGS **USGS3135149**

Agency cd:	USGS	Site no:	340513117115701
Site name:	001S003W16F001S		
Latitude:	340513	EDR Site id:	USGS3135149
Longitude:	1171157	Dec lat:	34.08695696
Dec lon:	-117.2000393	Coor meth:	M
Coor accr:	S	Latlong datum:	NAD27
Dec latlong datum:	NAD83	District:	06
State:	06	County:	071
Country:	US	Land net:	Not Reported
Location map:	Not Reported	Map scale:	Not Reported
Altitude:	1257.00		
Altitude method:	Interpolated from topographic map		
Altitude accuracy:	Not Reported		
Altitude datum:	National Geodetic Vertical Datum of 1929		
Hydrologic:	Santa Ana. California. Area = 1680 sq.mi.		
Topographic:	Not Reported		
Site type:	Ground-water other than Spring	Date construction:	19310101
Date inventoried:	Not Reported	Mean greenwich time offset:	PST
Local standard time flag:	Y		
Type of ground water site:	Single well, other than collector or Ranney type		
Aquifer Type:	Not Reported		
Aquifer:	Not Reported		
Well depth:	Not Reported	Hole depth:	400
Source of depth data:	Not Reported		
Project number:	Not Reported		
Real time data flag:	0	Daily flow data begin date:	0000-00-00
Daily flow data end date:	0000-00-00	Daily flow data count:	0
Peak flow data begin date:	0000-00-00	Peak flow data end date:	0000-00-00
Peak flow data count:	0	Water quality data begin date:	1975-05-28
Water quality data end date:	1975-05-28	Water quality data count:	1
Ground water data begin date:	0000-00-00	Ground water data end date:	0000-00-00
Ground water data count:	0		

Ground-water levels, Number of Measurements: 0

11
SE
1/2 - 1 Mile
Higher

FED USGS **USGS3135282**

Agency cd:	USGS	Site no:	340454117120902
Site name:	001S003W16L004S		
Latitude:	340454	EDR Site id:	USGS3135282
Longitude:	1171209	Dec lat:	34.08167939
Dec lon:	-117.20337271	Coor meth:	M
Coor accr:	U	Latlong datum:	NAD27
Dec latlong datum:	NAD83	District:	06
State:	06	County:	071
Country:	US	Land net:	Not Reported
Location map:	Not Reported	Map scale:	Not Reported
Altitude:	Not Reported		
Altitude method:	Not Reported		
Altitude accuracy:	10		
Altitude datum:	Not Reported		
Hydrologic:	Santa Ana. California. Area = 1680 sq.mi.		
Topographic:	Not Reported		
Site type:	Ground-water other than Spring	Date construction:	Not Reported
Date inventoried:	Not Reported	Mean greenwich time offset:	PST

Local standard time flag:	Y		
Type of ground water site:	Single well, other than collector or Ranney type		
Aquifer Type:	Not Reported		
Aquifer:	Not Reported		
Well depth:	Not Reported	Hole depth:	Not Reported
Source of depth data:	Not Reported		
Project number:	Not Reported		
Real time data flag:	0	Daily flow data begin date:	0000-00-00
Daily flow data end date:	0000-00-00	Daily flow data count:	0
Peak flow data begin date:	0000-00-00	Peak flow data end date:	0000-00-00
Peak flow data count:	0	Water quality data begin date:	1974-10-01
Water quality data end date:	1974-10-01	Water quality data count:	1
Ground water data begin date:	0000-00-00	Ground water data end date:	0000-00-00
Ground water data count:	0		

Ground-water levels, Number of Measurements: 0

12
SW
1/2 - 1 Mile
Lower

FED USGS **USGS3135278**

Agency cd:	USGS	Site no:	340453117130101
Site name:	001S003W17L001S		
Latitude:	340453	EDR Site id:	USGS3135278
Longitude:	1171301	Dec lat:	34.08140166
Dec lon:	-117.21781777	Coor meth:	M
Coor accr:	S	Latlong datum:	NAD27
Dec latlong datum:	NAD83	District:	06
State:	06	County:	071
Country:	US	Land net:	Not Reported
Location map:	Not Reported	Map scale:	Not Reported
Altitude:	1189.00		
Altitude method:	Level or other surveying method		
Altitude accuracy:	.1		
Altitude datum:	National Geodetic Vertical Datum of 1929		
Hydrologic:	Santa Ana. California. Area = 1680 sq.mi.		
Topographic:	Not Reported		
Site type:	Ground-water other than Spring	Date construction:	19220101
Date inventoried:	Not Reported	Mean greenwich time offset:	PST
Local standard time flag:	Y		
Type of ground water site:	Single well, other than collector or Ranney type		
Aquifer Type:	Not Reported		
Aquifer:	Not Reported		
Well depth:	188	Hole depth:	188
Source of depth data:	Not Reported		
Project number:	Not Reported		
Real time data flag:	0	Daily flow data begin date:	0000-00-00
Daily flow data end date:	0000-00-00	Daily flow data count:	0
Peak flow data begin date:	0000-00-00	Peak flow data end date:	0000-00-00
Peak flow data count:	0	Water quality data begin date:	1974-10-03
Water quality data end date:	1986-08-07	Water quality data count:	2
Ground water data begin date:	0000-00-00	Ground water data end date:	0000-00-00
Ground water data count:	0		

Ground-water levels, Number of Measurements: 0

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

	Database	EDR ID Number
13 **SE** **1/2 - 1 Mile** **Higher**	**FED USGS**	**USGS3135219**

Agency cd:	USGS	Site no:	340455117115701
Site name:	001S003W16L002S		
Latitude:	340455	EDR Site id:	USGS3135219
Longitude:	1171157	Dec lat:	34.08195715
Dec lon:	-117.20003923	Coor meth:	M
Coor accr:	S	Latlong datum:	NAD27
Dec latlong datum:	NAD83	District:	06
State:	06	County:	071
Country:	US	Land net:	Not Reported
Location map:	Not Reported	Map scale:	Not Reported
Altitude:	1268.00		
Altitude method:	Level or other surveying method		
Altitude accuracy:	.1		
Altitude datum:	National Geodetic Vertical Datum of 1929		
Hydrologic:	Santa Ana, California. Area = 1680 sq.mi.		
Topographic:	Not Reported		
Site type:	Ground-water other than Spring	Date construction:	19290101
Date inventoried:	Not Reported	Mean greenwich time offset:	PST
Local standard time flag:	Y		
Type of ground water site:	Single well, other than collector or Ranney type		
Aquifer Type:	Not Reported		
Aquifer:	Not Reported		
Well depth:	430	Hole depth:	430
Source of depth data:	Not Reported		
Project number:	Not Reported		
Real time data flag:	Not Reported	Daily flow data begin date:	Not Reported
Daily flow data end date:	Not Reported	Daily flow data count:	Not Reported
Peak flow data begin date:	Not Reported	Peak flow data end date:	Not Reported
Peak flow data count:	Not Reported	Water quality data begin date:	Not Reported
Water quality data end date:	Not Reported	Water quality data count:	Not Reported
Ground water data begin date:	Not Reported	Ground water data end date:	Not Reported
Ground water data count:	Not Reported		

Ground-water levels, Number of Measurements: 0

14 **South** **1/2 - 1 Mile** **Higher**	**FED USGS**	**USGS3135246**

Agency cd:	USGS	Site no:	340442117123601
Site name:	001S003W17R001S		
Latitude:	340442	EDR Site id:	USGS3135246
Longitude:	1171236	Dec lat:	34.0783462
Dec lon:	-117.21087299	Coor meth:	M
Coor accr:	S	Latlong datum:	NAD27
Dec latlong datum:	NAD83	District:	06
State:	06	County:	071
Country:	US	Land net:	Not Reported
Location map:	Not Reported	Map scale:	Not Reported

Altitude:	1216.00		
Altitude method:	Interpolated from topographic map		
Altitude accuracy:	Not Reported		
Altitude datum:	National Geodetic Vertical Datum of 1929		
Hydrologic:	Santa Ana. California. Area = 1680 sq.mi.		
Topographic:	Not Reported		
Site type:	Ground-water other than Spring	Date construction:	19130101
Date inventoried:	Not Reported	Mean greenwich time offset:	PST
Local standard time flag:	Y		
Type of ground water site:	Single well, other than collector or Ranney type		
Aquifer Type:	Not Reported		
Aquifer:	Not Reported		
Well depth:	360	Hole depth:	360
Source of depth data:	Not Reported		
Project number:	Not Reported		
Real time data flag:	0	Daily flow data begin date:	0000-00-00
Daily flow data end date:	0000-00-00	Daily flow data count:	0
Peak flow data begin date:	0000-00-00	Peak flow data end date:	0000-00-00
Peak flow data count:	0	Water quality data begin date:	1986-08-07
Water quality data end date:	1986-08-07	Water quality data count:	1
Ground water data begin date:	0000-00-00	Ground water data end date:	0000-00-00
Ground water data count:	0		

Ground-water levels, Number of Measurements: 0

15
NNE
1/2 - 1 Mile
Higher

FED USGS **USGS3135099**

Agency cd:	USGS	Site no:	340600117121501
Site name:	001S003W09E001S		
Latitude:	340600	EDR Site id:	USGS3135099
Longitude:	1171215	Dec lat:	34.10001202
Dec lon:	-117.20503967	Coor meth:	M
Coor accr:	S	Latlong datum:	NAD27
Dec latlong datum:	NAD83	District:	06
State:	06	County:	071
Country:	US	Land net:	Not Reported
Location map:	Not Reported	Map scale:	Not Reported
Altitude:	1204.00		
Altitude method:	Interpolated from topographic map		
Altitude accuracy:	Not Reported		
Altitude datum:	National Geodetic Vertical Datum of 1929		
Hydrologic:	Santa Ana. California. Area = 1680 sq.mi.		
Topographic:	Not Reported		
Site type:	Ground-water other than Spring	Date construction:	19420101
Date inventoried:	Not Reported	Mean greenwich time offset:	PST
Local standard time flag:	Y		
Type of ground water site:	Single well, other than collector or Ranney type		
Aquifer Type:	Not Reported		
Aquifer:	Not Reported		
Well depth:	Not Reported	Hole depth:	100
Source of depth data:	Not Reported		
Project number:	Not Reported		
Real time data flag:	Not Reported	Daily flow data begin date:	Not Reported
Daily flow data end date:	Not Reported	Daily flow data count:	Not Reported
Peak flow data begin date:	Not Reported	Peak flow data end date:	Not Reported

Peak flow data count:	Not Reported	Water quality data begin date:	Not Reported
Water quality data end date:	Not Reported	Water quality data count:	Not Reported
Ground water data begin date:	Not Reported	Ground water data end date:	Not Reported
Ground water data count:	Not Reported		

Ground-water levels, Number of Measurements: 0

16
West
1/2 - 1 Mile
Lower

FED USGS **USGS3135191**

Agency cd:	USGS	Site no:	340528117132101
Site name:	HOLE-11 LYSIMETER AT 90		
Latitude:	340528	EDR Site id:	USGS3135191
Longitude:	1171321	Dec lat:	34.09112351
Dec lon:	-117.22337367	Coor meth:	M
Coor accr:	U	Latlong datum:	NAD27
Dec latlong datum:	NAD83	District:	06
State:	06	County:	071
Country:	US	Land net:	Not Reported
Location map:	Not Reported	Map scale:	Not Reported
Altitude:	Not Reported		
Altitude method:	Not Reported		
Altitude accuracy:	10		
Altitude datum:	Not Reported		
Hydrologic:	Santa Ana. California. Area = 1680 sq.mi.		
Topographic:	Not Reported		
Site type:	Ground-water other than Spring	Date construction:	Not Reported
Date inventoried:	Not Reported	Mean greenwich time offset:	PST
Local standard time flag:	Y		
Type of ground water site:	Test hole, not completed as a well		
Aquifer Type:	Not Reported		
Aquifer:	Not Reported		
Well depth:	Not Reported	Hole depth:	Not Reported
Source of depth data:	Not Reported		
Project number:	Not Reported		
Real time data flag:	0	Daily flow data begin date:	0000-00-00
Daily flow data end date:	0000-00-00	Daily flow data count:	0
Peak flow data begin date:	0000-00-00	Peak flow data end date:	0000-00-00
Peak flow data count:	0	Water quality data begin date:	1977-06-22
Water quality data end date:	1977-06-22	Water quality data count:	1
Ground water data begin date:	0000-00-00	Ground water data end date:	0000-00-00
Ground water data count:	0		

Ground-water levels, Number of Measurements: 0

D17
North
1/2 - 1 Mile
Lower

CA WELLS **CADW40000006680**

Longitude:	-117.2075
Latiude:	34.1014
Stwellno:	01S03W09E002S
Districtco:	3
Welluseco:	Z
Countyco:	36
Gwcode:	800206
Site id:	CADW40000006680

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

Database	EDR ID Number
FED USGS	**USGS3134885**

D18
North
1/2 - 1 Mile
Lower

Agency cd:	USGS	Site no:	340605117122401
Site name:	001S003W09E002S		
Latitude:	340605	EDR Site id:	USGS3134885
Longitude:	1171224	Dec lat:	34.10140086
Dec lon:	-117.20753979	Coor meth:	M
Coor accr:	S	Latlong datum:	NAD27
Dec latlong datum:	NAD83	District:	06
State:	06	County:	071
Country:	US	Land net:	Not Reported
Location map:	REDLANDS	Map scale:	24000
Altitude:	1190.00		
Altitude method:	Interpolated from topographic map		
Altitude accuracy:	5		
Altitude datum:	National Geodetic Vertical Datum of 1929		
Hydrologic:	Santa Ana. California. Area = 1680 sq.mi.		
Topographic:	Not Reported		
Site type:	Ground-water other than Spring	Date construction:	19540908
Date inventoried:	19860114	Mean greenwich time offset:	PST
Local standard time flag:	Y		
Type of ground water site:	Single well, other than collector or Ranney type		
Aquifer Type:	Not Reported		
Aquifer:	Not Reported		
Well depth:	401	Hole depth:	401
Source of depth data:	logs		
Project number:	Not Reported		
Real time data flag:	0	Daily flow data begin date:	0000-00-00
Daily flow data end date:	0000-00-00	Daily flow data count:	0
Peak flow data begin date:	0000-00-00	Peak flow data end date:	0000-00-00
Peak flow data count:	0	Water quality data begin date:	1974-10-03
Water quality data end date:	2001-05-15	Water quality data count:	32
Ground water data begin date:	1955-03-28	Ground water data end date:	2004-10-22
Ground water data count:	249		

Ground-water levels, Number of Measurements: 249

Date	Feet below Surface	Feet to Sealevel	Date	Feet below Surface	Feet to Sealevel
2004-10-22	199.28				
Note: The site had been pumped recently.					
2004-04-20	187.41				
Note: The site had been pumped recently.					
2004-04-20					
Note: The site was being pumped.					
2003-10-22	187.28				
Note: The site had been pumped recently.					
2003-04-23	176.05		2002-10-29	176.13	
2002-10-28					
Note: The site was being pumped.					
2002-04-08	161.73				
Note: The site had been pumped recently.					
2001-10-23	158.00				
Note: The site had been pumped recently.					

Ground-water levels, continued.

Date	Feet below Surface	Feet to Sealevel	Date	Feet below Surface	Feet to Sealevel
2001-04-18					
Note: The site was being pumped.					
2000-10-23	145.34				
Note: The site had been pumped recently.					
1999-10-18	127.29				
Note: The site had been pumped recently.					
1999-04-14	114.38				
Note: The site had been pumped recently.					
1998-10-19	116.09		1998-04-14	119.04	
1997-10-27	138.05				
1997-04-14	127.03				
Note: The site had been pumped recently.					
1996-10-07	136.82				
1996-04-22	122.14				
Note: The site had been pumped recently.					
1995-10-24	131.68				
Note: The site had been pumped recently.					
1995-04-19	123.63				
Note: A nearby site that taps the same aquifer was being pumped.					
1994-10-26	151.77				
Note: The site had been pumped recently.					
1994-04-20					
Note: The site was being pumped.					
1993-10-19	143.81				
Note: A nearby site that taps the same aquifer was being pumped.					
1993-04-12	135.92				
Note: A nearby site that taps the same aquifer was being pumped.					
1992-10-31	164.14				
Note: A nearby site that taps the same aquifer was being pumped.					
1992-10-29					
Note: The site was being pumped.					
1992-06-12	154.34				
Note: A nearby site that taps the same aquifer was being pumped.					
1991-11-27	159.95				
Note: The site had been pumped recently.					
1991-06-17					
Note: The site was being pumped.					
1991-04-24					
Note: The site was being pumped.					
1990-12-03					
Note: The site was being pumped.					
1990-10-30					
Note: The site was being pumped.					
1990-06-25					
Note: The site was being pumped.					
1989-11-28	130.21				
Note: A nearby site that taps the same aquifer was being pumped.					
1989-10-26					
Note: The site was being pumped.					
1989-09-21	127.20				
Note: A nearby site that taps the same aquifer was being pumped.					
1989-04-26					
Note: The site was being pumped.					
1988-11-23					
Note: The site was being pumped.					

Ground-water levels, continued.

Date	Feet below Surface	Feet to Sealevel	Date	Feet below Surface	Feet to Sealevel
1988-10-13					
Note: The site was being pumped.					
1988-06-30	104.75				
Note: A nearby site that taps the same aquifer was being pumped.					
1987-12-08					
Note: The site was being pumped.					
1987-06-16	88.77				
Note: A nearby site that taps the same aquifer was being pumped.					
1987-04-01	106.0		1987-01-02	105.6	
1986-10-01	98.2		1986-09-01	103.9	
1986-08-01	106.4		1986-07-01	103.0	
1986-06-19	76.86				
Note: The site had been pumped recently.					
1986-06-01	98.0		1986-05-01	74.0	
1986-04-01	72.4		1986-03-01	95.1	
1986-02-01	70.7				
1986-01-14	71.74				
Note: A nearby site that taps the same aquifer was being pumped.					
1986-01-02	96.0		1985-12-06	73.7	
1985-12-01	73.7				
1985-10-25	87.9				
Note: The site was being pumped.					
1985-10-01	87.9				
1985-09-30	87.0				
Note: The site was being pumped.					
1985-09-01	87.0				
1985-08-30	91.0				
Note: The site was being pumped.					
1985-08-01	91.0				
1985-07-30	89.2				
Note: The site was being pumped.					
1985-07-01	89.2				
1985-06-25	83.9				
Note: The site was being pumped.					
1985-06-01	83.9		1985-05-30	84.7	
1985-05-01	84.7				
1985-04-22	82.0				
Note: The site was being pumped.					
1985-03-22	71.0				
1985-02-26	79.0				
Note: The site was being pumped.					
1984-12-20	67.5				
Note: The site was being pumped.					
1984-11-27	70.4				
Note: The site was being pumped.					
1984-10-23	72.0				
1984-09-13	83.5				
Note: The site was being pumped.					
1984-08-27	70.2				
1984-07-11	71.0				
Note: The site was being pumped.					
1984-06-14	59.0		1984-04-19	56.7	
1984-03-22	56.0		1984-02-21	56.2	
1984-01-23	55.0				
1983-12-27	79.0				
Note: The site was being pumped.					

Ground-water levels, continued.

Date	Feet below Surface	Feet to Sealevel
1983-11-30	79.0	
Note: The site was being pumped.		
1983-10-31	51.9	
1981-10-16	97.1	
1981-08-13	93.3	
1981-06-11	89.1	
1980-08-14	117.1	
Note: The site was being pumped.		
1980-07-23	118.9	
Note: The site was being pumped.		
1980-06-13	115.3	
Note: The site was being pumped.		
1980-05-15	88.4	
1980-04-16	89.1	
Note: The site was being pumped.		
1980-03-14	89.6	
Note: The site was being pumped.		
1980-01-18	128.4	
Note: The site was being pumped.		
1979-12-15	135.1	
Note: The site was being pumped.		
1979-11-19	139.9	
Note: The site was being pumped.		
1979-10-11	139.0	
Note: The site was being pumped.		
1979-09-13	137.6	
Note: The site was being pumped.		
1979-08-09	135.1	
Note: The site was being pumped.		
1979-07-13	140.3	
Note: The site was being pumped.		
1979-06-13	151.1	
Note: The site was being pumped.		
1979-05-18	149.9	
Note: The site was being pumped.		
1979-04-12	145.8	
Note: The site was being pumped.		
1979-03-15	148.0	
Note: The site was being pumped.		
1979-02-20	149.7	
Note: The site was being pumped.		
1979-01-18	152.8	
Note: The site was being pumped.		
1978-12-14	151.2	
Note: The site was being pumped.		
1978-11-16	157.1	
Note: The site was being pumped.		
1978-10-12	155.9	
Note: The site was being pumped.		
1978-09-14	154.4	
Note: The site was being pumped.		
1978-08-11	152.6	
Note: The site was being pumped.		
1977-07-07	182.6	
Note: The site was being pumped.		
1981-11-18	92.0	
1981-09-18	91.2	
1981-07-23	91.6	
1980-09-18	91.2	

Ground-water levels, continued.

Date	Feet below Surface	Feet to Sealevel
1977-06-08	189.2	
Note: The site was being pumped.		
1977-05-11	183.2	
Note: The site was being pumped.		
1977-04-14	165.5	
Note: The site was being pumped.		
1977-03-10	182.5	
Note: The site was being pumped.		
1977-02-10	182.0	
Note: The site was being pumped.		
1977-01-19	155.9	
1976-12-17	187.5	
Note: The site was being pumped.		
1976-11-19	185.0	
1976-08-14	164.4	
1976-05-20	163.7	
1976-05-05	162.9	
1976-04-23	162.4	
1976-04-10	162.5	
1976-03-20	162.6	
1976-02-14	169.0	
1975-12-20	165.7	
1971-01-23	144.3	
1970-10-11	148.8	
1970-06-17	141.6	
1970-04-25	137.1	
1970-03-24	159.5	
Note: The site was being pumped.		
1970-02-14	139.1	
Note: Other conditions existed that would affect the measured water level.		
1969-08-12	129.2	
1969-06-16	146.7	
Note: The site was being pumped.		
1969-04-26	124.7	
1969-04-11	155.8	
Note: The site was being pumped.		
1969-04-01	146.7	
1969-01-29	196.3	
1968-08-21	192.5	
Note: The site was being pumped.		
1968-07-26	190.5	
1968-06-19	202.7	
Note: The site was being pumped.		
1967-07-27	199.4	
1967-05-01	217.9	
1966-08-03	213.0	
1966-05-14	208.5	
1965-12-27	231.1	
1965-10-27	231.2	
1965-07-19	219.9	
1965-05-02	209.3	
1965-02-24	225.2	
1964-11-20	212.9	
1964-09-24	208.6	
1964-06-27	192.5	

Date	Feet below Surface	Feet to Sealevel
1976-10-16	165.9	
1976-05-28	163.8	
1976-05-15	163.3	
1976-04-29	163.1	
1976-04-16	162.3	
1976-03-27	162.4	
1976-03-13	162.7	
1976-01-17	164.7	
1972-01-09	155.9	
1970-11-27	152.0	
1970-07-30	145.8	
1970-05-16	139.1	
1969-07-02	121.9	
1969-03-06	190.8	
1967-06-02	207.3	
1966-09-29	216.7	
1966-06-28	211.0	
1966-02-24	228.9	
1965-11-29	214.4	
1965-08-24	220.0	
1965-06-01	219.2	
1965-03-22	209.7	
1965-01-27	209.1	
1964-10-28	210.7	
1964-08-17	206.1	
1964-05-27	200.8	

Ground-water levels, continued.

Date	Feet below Surface	Feet to Sealevel
1964-04-06	199.2	
1963-09-25	194.8	
1963-07-30	189.3	
1963-05-29	188.5	
1963-03-19	192.2	
1963-01-28	183.9	
1962-09-08	179.8	
1962-06-28	178.9	
1961-10-28	169.9	
1961-07-13	160.8	
1961-05-23	159.3	
1961-03-09	154.6	
1961-01-27	153.7	
1960-07-05	154.6	
1960-01-13	141.7	
1959-09-17	147.6	
1959-06-11	135.8	
1959-04-16	130.0	
1959-01-28	125.6	
1958-10-08	121.1	
1958-08-07	107.2	
1956-10-30	131.6	
1956-08-28	131.0	
1956-06-06	129.8	
1956-03-27	127.6	
1956-01-16	130.3	
1955-11-07	133.1	
1955-09-06	129.7	
1955-07-05	138.4	
1955-05-02	113.0	
1964-03-27	199.1	
1963-08-26	195.0	
1963-06-26	188.0	
1963-04-29	185.3	
1963-02-28	189.4	
1962-10-26	183.7	
1962-07-25	177.8	
1961-11-02	171.7	
1961-08-10	172.5	
1961-06-16	160.3	
1961-04-17	157.5	
1961-02-17	153.7	
1960-11-30	155.3	
1960-02-24	129.1	
1959-12-07	155.1	
1959-08-05	137.1	
1959-05-14	130.2	
1959-03-13	129.2	
1958-11-14	135.8	
1958-09-10	110.6	
1956-12-27	131.1	
1956-09-28	131.2	
1956-07-18	130.4	
1956-05-03	128.2	
1956-02-24	128.1	
1955-12-03	126.1	
1955-10-03	131.9	
1955-08-02	126.3	
1955-06-06	128.5	
1955-03-28	116.9	

19
SE
1/2 - 1 Mile
Higher

FED USGS **USGS3135277**

Agency cd:	USGS	Site no:	340453117114801
Site name:	001S003W16K001S		
Latitude:	340453	EDR Site id:	USGS3135277
Longitude:	1171148	Dec lat:	34.08140161
Dec lon:	-117.19753912	Coor meth:	M
Coor accr:	S	Latlong datum:	NAD27
Dec latlong datum:	NAD83	District:	06
State:	06	County:	071
Country:	US	Land net:	Not Reported
Location map:	Not Reported	Map scale:	Not Reported
Altitude:	1292.00		
Altitude method:	Level or other surveying method		
Altitude accuracy:	.1		
Altitude datum:	National Geodetic Vertical Datum of 1929		
Hydrologic:	Santa Ana. California. Area = 1680 sq.mi.		
Topographic:	Not Reported		
Site type:	Ground-water other than Spring	Date construction:	19360101
Date inventoried:	Not Reported	Mean greenwich time offset:	PST

Local standard time flag:	Y		
Type of ground water site:	Single well, other than collector or Ranney type		
Aquifer Type:	Not Reported		
Aquifer:	Not Reported		
Well depth:	351	Hole depth:	351
Source of depth data:	Not Reported		
Project number:	Not Reported		
Real time data flag:	0	Daily flow data begin date:	0000-00-00
Daily flow data end date:	0000-00-00	Daily flow data count:	0
Peak flow data begin date:	0000-00-00	Peak flow data end date:	0000-00-00
Peak flow data count:	0	Water quality data begin date:	1975-06-12
Water quality data end date:	1975-06-12	Water quality data count:	1
Ground water data begin date:	0000-00-00	Ground water data end date:	0000-00-00
Ground water data count:	0		

Ground-water levels, Number of Measurements: 0

20
NE
1/2 - 1 Mile
Higher

CA WELLS **801**

Water System Information:

Prime Station Code:	01S/03W-04N03 S	User ID:	TAN
FRDS Number:	3610064025	County:	San Beernardino
District Number:	13	Station Type:	WELL/AMBNT/MUN/INTAKE/SUPPLY
Water Type:	Well/Groundwater	Well Status:	Inactive Raw
Source Lat/Long:	340600.0 1171200.0	Precision:	Undefined
Source Name:	WELL 040A - INACTIVE		
System Number:	3610064		
System Name:	EAST VALLEY WD		
Organization That Operates System:	PO BOX 3427 SAN BERNARDINO, CA 92413		
Pop Served:	55000	Connections:	18303
Area Served:	SAN BERNARDINO VIC		
Sample Collected:	01/09/2006	Findings:	57.89 PCI/L
Chemical:	GROSS ALPHA		
Sample Collected:	01/09/2006	Findings:	8.43 PCI/L
Chemical:	GROSS ALPHA COUNTING ERROR		
Sample Collected:	01/09/2006	Findings:	48.47 PCI/L
Chemical:	URANIUM (PCI/L)		
Sample Collected:	01/09/2006	Findings:	14.65 PCI/L
Chemical:	URANIUM COUNTING ERROR		
Sample Collected:	02/10/2007	Findings:	470. US
Chemical:	SPECIFIC CONDUCTANCE		
Sample Collected:	02/10/2007	Findings:	6.7
Chemical:	PH, LABORATORY		
Sample Collected:	02/10/2007	Findings:	180. MG/L
Chemical:	ALKALINITY (TOTAL) AS CACO3		

Sample Collected:	02/10/2007	Findings:	220. MG/L
Chemical:	BICARBONATE ALKALINITY		
Sample Collected:	02/10/2007	Findings:	200. MG/L
Chemical:	HARDNESS (TOTAL) AS CACO3		
Sample Collected:	02/10/2007	Findings:	62. MG/L
Chemical:	CALCIUM		
Sample Collected:	02/10/2007	Findings:	11. MG/L
Chemical:	MAGNESIUM		
Sample Collected:	02/10/2007	Findings:	25. MG/L
Chemical:	SODIUM		
Sample Collected:	02/10/2007	Findings:	2.6 MG/L
Chemical:	POTASSIUM		
Sample Collected:	02/10/2007	Findings:	16. MG/L
Chemical:	CHLORIDE		
Sample Collected:	02/10/2007	Findings:	0.18 MG/L
Chemical:	FLUORIDE (F) (NATURAL-SOURCE)		
Sample Collected:	02/10/2007	Findings:	120. UG/L
Chemical:	BORON		
Sample Collected:	02/10/2007	Findings:	3900. UG/L
Chemical:	IRON		
Sample Collected:	02/10/2007	Findings:	35. UG/L
Chemical:	MANGANESE		
Sample Collected:	02/10/2007	Findings:	4. UG/L
Chemical:	VANADIUM		
Sample Collected:	02/10/2007	Findings:	180. UG/L
Chemical:	ALUMINUM		
Sample Collected:	02/10/2007	Findings:	30. PCI/L
Chemical:	GROSS ALPHA		
Sample Collected:	02/10/2007	Findings:	4.1 PCI/L
Chemical:	GROSS ALPHA COUNTING ERROR		
Sample Collected:	02/10/2007	Findings:	45. PCI/L
Chemical:	URANIUM (PCI/L)		
Sample Collected:	02/10/2007	Findings:	310. MG/L
Chemical:	TOTAL DISSOLVED SOLIDS		
Sample Collected:	02/10/2007	Findings:	42. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	02/10/2007	Findings:	3. PCI/L
Chemical:	URANIUM COUNTING ERROR		
Sample Collected:	02/10/2007	Findings:	8700. UG/L
Chemical:	NITRATE + NITRITE (AS N)		
Sample Collected:	02/10/2007	Findings:	1.2 PCI/L
Chemical:	GROSS ALPHA MDA95		
Sample Collected:	02/10/2007	Findings:	0.87 PCI/L
Chemical:	URANIUM MDA95		

Sample Collected:	02/10/2007	Findings:	0.15 MG/L
Chemical:	FLUORIDE (F) (NATURAL-SOURCE)		
Sample Collected:	02/10/2007	Findings:	37. PCI/L
Chemical:	GROSS ALPHA		
Sample Collected:	02/10/2007	Findings:	4.8 PCI/L
Chemical:	GROSS ALPHA COUNTING ERROR		
Sample Collected:	02/10/2007	Findings:	44. PCI/L
Chemical:	URANIUM (PCI/L)		
Sample Collected:	02/10/2007	Findings:	41. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	02/10/2007	Findings:	2.9 PCI/L
Chemical:	URANIUM COUNTING ERROR		
Sample Collected:	02/10/2007	Findings:	1.1 PCI/L
Chemical:	GROSS ALPHA MDA95		
Sample Collected:	02/10/2007	Findings:	0.87 PCI/L
Chemical:	URANIUM MDA95		
Sample Collected:	02/10/2007	Findings:	31. PCI/L
Chemical:	GROSS ALPHA		
Sample Collected:	02/10/2007	Findings:	4.2 PCI/L
Chemical:	GROSS ALPHA COUNTING ERROR		
Sample Collected:	02/10/2007	Findings:	45. PCI/L
Chemical:	URANIUM (PCI/L)		
Sample Collected:	02/10/2007	Findings:	3. PCI/L
Chemical:	URANIUM COUNTING ERROR		
Sample Collected:	02/10/2007	Findings:	1.4 PCI/L
Chemical:	GROSS ALPHA MDA95		
Sample Collected:	02/10/2007	Findings:	0.87 PCI/L
Chemical:	URANIUM MDA95		
Sample Collected:	02/10/2007	Findings:	30. PCI/L
Chemical:	GROSS ALPHA		
Sample Collected:	02/10/2007	Findings:	4.3 PCI/L
Chemical:	GROSS ALPHA COUNTING ERROR		
Sample Collected:	02/10/2007	Findings:	44. PCI/L
Chemical:	URANIUM (PCI/L)		
Sample Collected:	02/10/2007	Findings:	3. PCI/L
Chemical:	URANIUM COUNTING ERROR		
Sample Collected:	02/10/2007	Findings:	1.7 PCI/L
Chemical:	GROSS ALPHA MDA95		
Sample Collected:	02/10/2007	Findings:	0.87 PCI/L
Chemical:	URANIUM MDA95		
Sample Collected:	02/11/2007	Findings:	0.14 MG/L
Chemical:	FLUORIDE (F) (NATURAL-SOURCE)		
Sample Collected:	02/11/2007	Findings:	26. PCI/L
Chemical:	GROSS ALPHA		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Sample Collected:	02/11/2007	Findings:	3.6 PCI/L
Chemical:	GROSS ALPHA COUNTING ERROR		
Sample Collected:	02/11/2007	Findings:	40. PCI/L
Chemical:	URANIUM (PCI/L)		
Sample Collected:	02/11/2007	Findings:	43. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	02/11/2007	Findings:	2.8 PCI/L
Chemical:	URANIUM COUNTING ERROR		
Sample Collected:	02/11/2007	Findings:	1.2 PCI/L
Chemical:	GROSS ALPHA MDA95		
Sample Collected:	02/11/2007	Findings:	0.87 PCI/L
Chemical:	URANIUM MDA95		
Sample Collected:	02/11/2007	Findings:	460. US
Chemical:	SPECIFIC CONDUCTANCE		
Sample Collected:	02/11/2007	Findings:	6.8
Chemical:	PH, LABORATORY		
Sample Collected:	02/11/2007	Findings:	170. MG/L
Chemical:	ALKALINITY (TOTAL) AS CACO3		
Sample Collected:	02/11/2007	Findings:	210. MG/L
Chemical:	BICARBONATE ALKALINITY		
Sample Collected:	02/11/2007	Findings:	200. MG/L
Chemical:	HARDNESS (TOTAL) AS CACO3		
Sample Collected:	02/11/2007	Findings:	61. MG/L
Chemical:	CALCIUM		
Sample Collected:	02/11/2007	Findings:	12. MG/L
Chemical:	MAGNESIUM		
Sample Collected:	02/11/2007	Findings:	26. MG/L
Chemical:	SODIUM		
Sample Collected:	02/11/2007	Findings:	3.1 MG/L
Chemical:	POTASSIUM		
Sample Collected:	02/11/2007	Findings:	16. MG/L
Chemical:	CHLORIDE		
Sample Collected:	02/11/2007	Findings:	0.17 MG/L
Chemical:	FLUORIDE (F) (NATURAL-SOURCE)		
Sample Collected:	02/11/2007	Findings:	4.6 UG/L
Chemical:	VANADIUM		
Sample Collected:	02/11/2007	Findings:	26. PCI/L
Chemical:	GROSS ALPHA		
Sample Collected:	02/11/2007	Findings:	3.6 PCI/L
Chemical:	GROSS ALPHA COUNTING ERROR		
Sample Collected:	02/11/2007	Findings:	40. PCI/L
Chemical:	URANIUM (PCI/L)		
Sample Collected:	02/11/2007	Findings:	310. MG/L
Chemical:	TOTAL DISSOLVED SOLIDS		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Sample Collected:	02/11/2007	Findings:	43. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	02/11/2007	Findings:	2.9 PCI/L
Chemical:	URANIUM COUNTING ERROR		
Sample Collected:	02/11/2007	Findings:	9800. UG/L
Chemical:	NITRATE + NITRITE (AS N)		
Sample Collected:	02/11/2007	Findings:	1.1 PCI/L
Chemical:	GROSS ALPHA MDA95		
Sample Collected:	02/11/2007	Findings:	0.87 PCI/L
Chemical:	URANIUM MDA95		
Sample Collected:	08/01/2009	Findings:	20. PCI/L
Chemical:	GROSS ALPHA		
Sample Collected:	08/01/2009	Findings:	3. PCI/L
Chemical:	GROSS ALPHA COUNTING ERROR		
Sample Collected:	08/01/2009	Findings:	28. PCI/L
Chemical:	URANIUM (PCI/L)		
Sample Collected:	08/01/2009	Findings:	47. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	08/01/2009	Findings:	2.4 PCI/L
Chemical:	URANIUM COUNTING ERROR		
Sample Collected:	08/01/2009	Findings:	1.3 PCI/L
Chemical:	GROSS ALPHA MDA95		
Sample Collected:	08/01/2009	Findings:	0.88 PCI/L
Chemical:	URANIUM MDA95		
Sample Collected:	08/01/2009	Findings:	47. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	08/02/2009	Findings:	20. C
Chemical:	SOURCE TEMPERATURE C		
Sample Collected:	08/02/2009	Findings:	480. US
Chemical:	SPECIFIC CONDUCTANCE		
Sample Collected:	08/02/2009	Findings:	7.6
Chemical:	PH, LABORATORY		
Sample Collected:	08/02/2009	Findings:	160. MG/L
Chemical:	ALKALINITY (TOTAL) AS CACO3		
Sample Collected:	08/02/2009	Findings:	190. MG/L
Chemical:	BICARBONATE ALKALINITY		
Sample Collected:	08/02/2009	Findings:	200. MG/L
Chemical:	HARDNESS (TOTAL) AS CACO3		
Sample Collected:	08/02/2009	Findings:	60. MG/L
Chemical:	CALCIUM		
Sample Collected:	08/02/2009	Findings:	11. MG/L
Chemical:	MAGNESIUM		
Sample Collected:	08/02/2009	Findings:	25. MG/L
Chemical:	SODIUM		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Sample Collected:	08/02/2009	Findings:	3. MG/L
Chemical:	POTASSIUM		
Sample Collected:	08/02/2009	Findings:	15. MG/L
Chemical:	CHLORIDE		
Sample Collected:	08/02/2009	Findings:	0.22 MG/L
Chemical:	FLUORIDE (F) (NATURAL-SOURCE)		
Sample Collected:	08/02/2009	Findings:	140. UG/L
Chemical:	BORON		
Sample Collected:	08/02/2009	Findings:	19. PCI/L
Chemical:	GROSS ALPHA		
Sample Collected:	08/02/2009	Findings:	3. PCI/L
Chemical:	GROSS ALPHA COUNTING ERROR		
Sample Collected:	08/02/2009	Findings:	3.9e-002 UG/L
Chemical:	DIBROMOCHLOROPROPANE (DBCP)		
Sample Collected:	08/02/2009	Findings:	290. MG/L
Chemical:	TOTAL DISSOLVED SOLIDS		
Sample Collected:	08/02/2009	Findings:	0.74
Chemical:	LANGELIER INDEX @ 60 C		
Sample Collected:	08/02/2009	Findings:	4.e-002
Chemical:	LANGELIER INDEX AT SOURCE TEMP.		
Sample Collected:	08/02/2009	Findings:	47. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	08/02/2009	Findings:	11.98
Chemical:	AGGRSSIVE INDEX (CORROSIVITY)		
Sample Collected:	08/02/2009	Findings:	11000. UG/L
Chemical:	NITRATE + NITRITE (AS N)		
Sample Collected:	08/02/2009	Findings:	1.3 PCI/L
Chemical:	GROSS ALPHA MDA95		
Sample Collected:	08/02/2009	Findings:	47. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	08/02/2009	Findings:	22. PCI/L
Chemical:	GROSS ALPHA		
Sample Collected:	08/02/2009	Findings:	3.2 PCI/L
Chemical:	GROSS ALPHA COUNTING ERROR		
Sample Collected:	08/02/2009	Findings:	31. PCI/L
Chemical:	URANIUM (PCI/L)		
Sample Collected:	08/02/2009	Findings:	2.5 PCI/L
Chemical:	URANIUM COUNTING ERROR		
Sample Collected:	08/02/2009	Findings:	1.1 PCI/L
Chemical:	GROSS ALPHA MDA95		
Sample Collected:	08/02/2009	Findings:	0.88 PCI/L
Chemical:	URANIUM MDA95		
Sample Collected:	12/09/2009	Findings:	24. PCI/L
Chemical:	URANIUM (PCI/L)		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Sample Collected:	12/09/2009	Findings:	60. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	12/09/2009	Findings:	2. PCI/L
Chemical:	URANIUM COUNTING ERROR		
Sample Collected:	12/09/2009	Findings:	0.87 PCI/L
Chemical:	URANIUM MDA95		
Sample Collected:	12/14/2009	Findings:	48. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	12/23/2009	Findings:	46. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	12/28/2009	Findings:	46. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	01/04/2010	Findings:	24. PCI/L
Chemical:	GROSS ALPHA		
Sample Collected:	01/04/2010	Findings:	3.4 PCI/L
Chemical:	GROSS ALPHA COUNTING ERROR		
Sample Collected:	01/04/2010	Findings:	25. PCI/L
Chemical:	URANIUM (PCI/L)		
Sample Collected:	01/04/2010	Findings:	47. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	01/04/2010	Findings:	2. PCI/L
Chemical:	URANIUM COUNTING ERROR		
Sample Collected:	01/04/2010	Findings:	1.3 PCI/L
Chemical:	GROSS ALPHA MDA95		
Sample Collected:	01/04/2010	Findings:	0.88 PCI/L
Chemical:	URANIUM MDA95		
Sample Collected:	01/11/2010	Findings:	48. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	01/19/2010	Findings:	48. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	01/28/2010	Findings:	48. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	02/03/2010	Findings:	24. PCI/L
Chemical:	GROSS ALPHA		
Sample Collected:	02/03/2010	Findings:	3.2 PCI/L
Chemical:	GROSS ALPHA COUNTING ERROR		
Sample Collected:	02/03/2010	Findings:	26. PCI/L
Chemical:	URANIUM (PCI/L)		
Sample Collected:	02/03/2010	Findings:	47. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	02/03/2010	Findings:	2.1 PCI/L
Chemical:	URANIUM COUNTING ERROR		
Sample Collected:	02/03/2010	Findings:	0.91 PCI/L
Chemical:	GROSS ALPHA MDA95		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Sample Collected:	02/03/2010	Findings:	0.87 PCI/L
Chemical:	URANIUM MDA95		
Sample Collected:	02/09/2010	Findings:	0.57 UG/L
Chemical:	TETRACHLOROETHYLENE		
Sample Collected:	02/09/2010	Findings:	47. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	02/16/2010	Findings:	47. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	02/24/2010	Findings:	46. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	03/03/2010	Findings:	25. PCI/L
Chemical:	GROSS ALPHA		
Sample Collected:	03/03/2010	Findings:	3.5 PCI/L
Chemical:	GROSS ALPHA COUNTING ERROR		
Sample Collected:	03/03/2010	Findings:	24. PCI/L
Chemical:	URANIUM (PCI/L)		
Sample Collected:	03/03/2010	Findings:	46. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	03/03/2010	Findings:	2. PCI/L
Chemical:	URANIUM COUNTING ERROR		
Sample Collected:	03/03/2010	Findings:	1.2 PCI/L
Chemical:	GROSS ALPHA MDA95		
Sample Collected:	03/03/2010	Findings:	0.87 PCI/L
Chemical:	URANIUM MDA95		
Sample Collected:	03/10/2010	Findings:	47. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	03/17/2010	Findings:	44. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	03/25/2010	Findings:	44. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	03/30/2010	Findings:	44. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	04/28/2010	Findings:	22. PCI/L
Chemical:	GROSS ALPHA		
Sample Collected:	04/28/2010	Findings:	3.3 PCI/L
Chemical:	GROSS ALPHA COUNTING ERROR		
Sample Collected:	04/28/2010	Findings:	30. PCI/L
Chemical:	URANIUM (PCI/L)		
Sample Collected:	04/28/2010	Findings:	48. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	04/28/2010	Findings:	2.4 PCI/L
Chemical:	URANIUM COUNTING ERROR		
Sample Collected:	04/28/2010	Findings:	1.4 PCI/L
Chemical:	GROSS ALPHA MDA95		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Sample Collected:	04/28/2010	Findings:	0.88 PCI/L
Chemical:	URANIUM MDA95		
Sample Collected:	05/05/2010	Findings:	47. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	05/11/2010	Findings:	18. PCI/L
Chemical:	GROSS ALPHA		
Sample Collected:	05/11/2010	Findings:	2.9 PCI/L
Chemical:	GROSS ALPHA COUNTING ERROR		
Sample Collected:	05/11/2010	Findings:	25. PCI/L
Chemical:	URANIUM (PCI/L)		
Sample Collected:	05/11/2010	Findings:	45. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	05/11/2010	Findings:	2.2 PCI/L
Chemical:	URANIUM COUNTING ERROR		
Sample Collected:	05/11/2010	Findings:	1.4 PCI/L
Chemical:	GROSS ALPHA MDA95		
Sample Collected:	05/11/2010	Findings:	0.88 PCI/L
Chemical:	URANIUM MDA95		
Sample Collected:	05/26/2010	Findings:	44. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	06/02/2010	Findings:	18. PCI/L
Chemical:	GROSS ALPHA		
Sample Collected:	06/02/2010	Findings:	2.7 PCI/L
Chemical:	GROSS ALPHA COUNTING ERROR		
Sample Collected:	06/02/2010	Findings:	24. PCI/L
Chemical:	URANIUM (PCI/L)		
Sample Collected:	06/02/2010	Findings:	45. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	06/02/2010	Findings:	2.2 PCI/L
Chemical:	URANIUM COUNTING ERROR		
Sample Collected:	06/02/2010	Findings:	1. PCI/L
Chemical:	GROSS ALPHA MDA95		
Sample Collected:	06/02/2010	Findings:	0.87 PCI/L
Chemical:	URANIUM MDA95		
Sample Collected:	06/10/2010	Findings:	20. C
Chemical:	SOURCE TEMPERATURE C		
Sample Collected:	06/10/2010	Findings:	470. US
Chemical:	SPECIFIC CONDUCTANCE		
Sample Collected:	06/10/2010	Findings:	7.7
Chemical:	PH, LABORATORY		
Sample Collected:	06/10/2010	Findings:	150. MG/L
Chemical:	ALKALINITY (TOTAL) AS CACO3		
Sample Collected:	06/10/2010	Findings:	180. MG/L
Chemical:	BICARBONATE ALKALINITY		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Sample Collected:	06/10/2010	Findings:	180. MG/L
Chemical:	HARDNESS (TOTAL) AS CACO3		
Sample Collected:	06/10/2010	Findings:	60. MG/L
Chemical:	CALCIUM		
Sample Collected:	06/10/2010	Findings:	11. MG/L
Chemical:	MAGNESIUM		
Sample Collected:	06/10/2010	Findings:	26. MG/L
Chemical:	SODIUM		
Sample Collected:	06/10/2010	Findings:	2.8 MG/L
Chemical:	POTASSIUM		
Sample Collected:	06/10/2010	Findings:	15. MG/L
Chemical:	CHLORIDE		
Sample Collected:	06/10/2010	Findings:	0.24 MG/L
Chemical:	FLUORIDE (F) (NATURAL-SOURCE)		
Sample Collected:	06/10/2010	Findings:	120. UG/L
Chemical:	BORON		
Sample Collected:	06/10/2010	Findings:	310. MG/L
Chemical:	TOTAL DISSOLVED SOLIDS		
Sample Collected:	06/10/2010	Findings:	0.8
Chemical:	LANGELIER INDEX @ 60 C		
Sample Collected:	06/10/2010	Findings:	0.1
Chemical:	LANGELIER INDEX AT SOURCE TEMP.		
Sample Collected:	06/10/2010	Findings:	44. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	06/10/2010	Findings:	12.04
Chemical:	AGGRSSIVE INDEX (CORROSIVITY)		
Sample Collected:	06/10/2010	Findings:	10000. UG/L
Chemical:	NITRATE + NITRITE (AS N)		
Sample Collected:	06/16/2010	Findings:	44. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	06/23/2010	Findings:	45. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	06/25/2010	Findings:	24. PCI/L
Chemical:	GROSS ALPHA		
Sample Collected:	06/25/2010	Findings:	3.3 PCI/L
Chemical:	GROSS ALPHA COUNTING ERROR		
Sample Collected:	06/25/2010	Findings:	31. PCI/L
Chemical:	URANIUM (PCI/L)		
Sample Collected:	06/25/2010	Findings:	2.5 PCI/L
Chemical:	URANIUM COUNTING ERROR		
Sample Collected:	06/25/2010	Findings:	1.1 PCI/L
Chemical:	GROSS ALPHA MDA95		
Sample Collected:	06/25/2010	Findings:	0.88 PCI/L
Chemical:	URANIUM MDA95		

Sample Collected:	07/02/2010	Findings:	18. PCI/L
Chemical:	GROSS ALPHA		
Sample Collected:	07/02/2010	Findings:	2.8 PCI/L
Chemical:	GROSS ALPHA COUNTING ERROR		
Sample Collected:	07/02/2010	Findings:	21. PCI/L
Chemical:	URANIUM (PCI/L)		
Sample Collected:	07/02/2010	Findings:	44. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	07/02/2010	Findings:	1.9 PCI/L
Chemical:	URANIUM COUNTING ERROR		
Sample Collected:	07/02/2010	Findings:	1.2 PCI/L
Chemical:	GROSS ALPHA MDA95		
Sample Collected:	07/02/2010	Findings:	0.87 PCI/L
Chemical:	URANIUM MDA95		
Sample Collected:	07/07/2010	Findings:	44. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	07/13/2010	Findings:	44. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	07/21/2010	Findings:	26. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	07/28/2010	Findings:	45. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	08/10/2010	Findings:	24. PCI/L
Chemical:	GROSS ALPHA		
Sample Collected:	08/10/2010	Findings:	3.5 PCI/L
Chemical:	GROSS ALPHA COUNTING ERROR		
Sample Collected:	08/10/2010	Findings:	21. PCI/L
Chemical:	URANIUM (PCI/L)		
Sample Collected:	08/10/2010	Findings:	46. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	08/10/2010	Findings:	1.8 PCI/L
Chemical:	URANIUM COUNTING ERROR		
Sample Collected:	08/10/2010	Findings:	1.2 PCI/L
Chemical:	GROSS ALPHA MDA95		
Sample Collected:	08/10/2010	Findings:	0.88 PCI/L
Chemical:	URANIUM MDA95		
Sample Collected:	08/18/2010	Findings:	45. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	08/25/2010	Findings:	44. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	09/02/2010	Findings:	21. PCI/L
Chemical:	GROSS ALPHA		
Sample Collected:	09/02/2010	Findings:	3.1 PCI/L
Chemical:	GROSS ALPHA COUNTING ERROR		

Sample Collected:	09/02/2010	Findings:	24. PCI/L
Chemical:	URANIUM (PCI/L)		
Sample Collected:	09/02/2010	Findings:	41. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	09/02/2010	Findings:	2. PCI/L
Chemical:	URANIUM COUNTING ERROR		
Sample Collected:	09/02/2010	Findings:	1.3 PCI/L
Chemical:	GROSS ALPHA MDA95		
Sample Collected:	09/02/2010	Findings:	0.88 PCI/L
Chemical:	URANIUM MDA95		
Sample Collected:	09/08/2010	Findings:	45. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	09/14/2010	Findings:	44. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	09/22/2010	Findings:	25. PCI/L
Chemical:	GROSS ALPHA		
Sample Collected:	09/22/2010	Findings:	3.5 PCI/L
Chemical:	GROSS ALPHA COUNTING ERROR		
Sample Collected:	09/22/2010	Findings:	0.69 PCI/L
Chemical:	RADIUM 228 COUNTING ERROR		
Sample Collected:	09/22/2010	Findings:	24. PCI/L
Chemical:	URANIUM (PCI/L)		
Sample Collected:	09/22/2010	Findings:	2. PCI/L
Chemical:	URANIUM COUNTING ERROR		
Sample Collected:	09/22/2010	Findings:	1.3 PCI/L
Chemical:	GROSS ALPHA MDA95		
Sample Collected:	09/22/2010	Findings:	0.88 PCI/L
Chemical:	URANIUM MDA95		
Sample Collected:	09/22/2010	Findings:	0.29 PCI/L
Chemical:	RADIUM 228 MDA95		
Sample Collected:	09/22/2010	Findings:	0.686 PCI/L
Chemical:	RADIUM 228 COUNTING ERROR		
Sample Collected:	09/22/2010	Findings:	0.294 PCI/L
Chemical:	RADIUM 228 MDA95		
Sample Collected:	09/23/2010	Findings:	46. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	09/29/2010	Findings:	46. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	10/07/2010	Findings:	15. PCI/L
Chemical:	GROSS ALPHA		
Sample Collected:	10/07/2010	Findings:	2.5 PCI/L
Chemical:	GROSS ALPHA COUNTING ERROR		
Sample Collected:	10/07/2010	Findings:	21. PCI/L
Chemical:	URANIUM (PCI/L)		

Sample Collected:	10/07/2010	Findings:	47. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	10/07/2010	Findings:	1.9 PCI/L
Chemical:	URANIUM COUNTING ERROR		
Sample Collected:	10/07/2010	Findings:	1.2 PCI/L
Chemical:	GROSS ALPHA MDA95		
Sample Collected:	10/07/2010	Findings:	0.88 PCI/L
Chemical:	URANIUM MDA95		
Sample Collected:	10/12/2010	Findings:	49. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	10/19/2010	Findings:	49. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	10/28/2010	Findings:	49. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	11/02/2010	Findings:	22. PCI/L
Chemical:	GROSS ALPHA		
Sample Collected:	11/02/2010	Findings:	3.2 PCI/L
Chemical:	GROSS ALPHA COUNTING ERROR		
Sample Collected:	11/02/2010	Findings:	20. PCI/L
Chemical:	URANIUM (PCI/L)		
Sample Collected:	11/02/2010	Findings:	50. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	11/02/2010	Findings:	1.8 PCI/L
Chemical:	URANIUM COUNTING ERROR		
Sample Collected:	11/02/2010	Findings:	1.2 PCI/L
Chemical:	GROSS ALPHA MDA95		
Sample Collected:	11/02/2010	Findings:	0.88 PCI/L
Chemical:	URANIUM MDA95		
Sample Collected:	11/09/2010	Findings:	49. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	11/16/2010	Findings:	50. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	11/23/2010	Findings:	51. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	12/01/2010	Findings:	22. PCI/L
Chemical:	GROSS ALPHA		
Sample Collected:	12/01/2010	Findings:	3.2 PCI/L
Chemical:	GROSS ALPHA COUNTING ERROR		
Sample Collected:	12/01/2010	Findings:	21. PCI/L
Chemical:	URANIUM (PCI/L)		
Sample Collected:	12/01/2010	Findings:	51. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	12/01/2010	Findings:	2. PCI/L
Chemical:	URANIUM COUNTING ERROR		

Sample Collected:	12/01/2010	Findings:	1.1 PCI/L
Chemical:	GROSS ALPHA MDA95		
Sample Collected:	12/01/2010	Findings:	0.88 PCI/L
Chemical:	URANIUM MDA95		
Sample Collected:	12/07/2010	Findings:	52. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	12/14/2010	Findings:	52. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	12/15/2010	Findings:	19. PCI/L
Chemical:	GROSS ALPHA		
Sample Collected:	12/15/2010	Findings:	2.9 PCI/L
Chemical:	GROSS ALPHA COUNTING ERROR		
Sample Collected:	12/15/2010	Findings:	23. PCI/L
Chemical:	URANIUM (PCI/L)		
Sample Collected:	12/15/2010	Findings:	1.9 PCI/L
Chemical:	URANIUM COUNTING ERROR		
Sample Collected:	12/15/2010	Findings:	1.1 PCI/L
Chemical:	GROSS ALPHA MDA95		
Sample Collected:	12/15/2010	Findings:	0.88 PCI/L
Chemical:	URANIUM MDA95		
Sample Collected:	12/21/2010	Findings:	52. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	12/28/2010	Findings:	52. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	01/04/2011	Findings:	22. PCI/L
Chemical:	GROSS ALPHA		
Sample Collected:	01/04/2011	Findings:	3.2 PCI/L
Chemical:	GROSS ALPHA COUNTING ERROR		
Sample Collected:	01/04/2011	Findings:	29. PCI/L
Chemical:	URANIUM (PCI/L)		
Sample Collected:	01/04/2011	Findings:	52. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	01/04/2011	Findings:	2.2 PCI/L
Chemical:	URANIUM COUNTING ERROR		
Sample Collected:	01/04/2011	Findings:	1.1 PCI/L
Chemical:	GROSS ALPHA MDA95		
Sample Collected:	01/04/2011	Findings:	0.88 PCI/L
Chemical:	URANIUM MDA95		
Sample Collected:	01/11/2011	Findings:	51. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	01/18/2011	Findings:	51. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	01/25/2011	Findings:	52. MG/L
Chemical:	NITRATE (AS NO3)		

Sample Collected:	02/01/2011	Findings:	22. PCI/L
Chemical:	GROSS ALPHA		
Sample Collected:	02/01/2011	Findings:	3.3 PCI/L
Chemical:	GROSS ALPHA COUNTING ERROR		
Sample Collected:	02/01/2011	Findings:	24. PCI/L
Chemical:	URANIUM (PCI/L)		
Sample Collected:	02/01/2011	Findings:	53. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	02/01/2011	Findings:	1.9 PCI/L
Chemical:	URANIUM COUNTING ERROR		
Sample Collected:	02/01/2011	Findings:	1.1 PCI/L
Chemical:	GROSS ALPHA MDA95		
Sample Collected:	02/01/2011	Findings:	0.88 PCI/L
Chemical:	URANIUM MDA95		
Sample Collected:	02/09/2011	Findings:	52. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	02/15/2011	Findings:	53. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	02/22/2011	Findings:	52. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	03/01/2011	Findings:	22. PCI/L
Chemical:	GROSS ALPHA		
Sample Collected:	03/01/2011	Findings:	3.3 PCI/L
Chemical:	GROSS ALPHA COUNTING ERROR		
Sample Collected:	03/01/2011	Findings:	25. PCI/L
Chemical:	URANIUM (PCI/L)		
Sample Collected:	03/01/2011	Findings:	55. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	03/01/2011	Findings:	2.1 PCI/L
Chemical:	URANIUM COUNTING ERROR		
Sample Collected:	03/01/2011	Findings:	1.5 PCI/L
Chemical:	GROSS ALPHA MDA95		
Sample Collected:	03/01/2011	Findings:	0.87 PCI/L
Chemical:	URANIUM MDA95		
Sample Collected:	03/08/2011	Findings:	52. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	03/22/2011	Findings:	19. PCI/L
Chemical:	GROSS ALPHA		
Sample Collected:	03/22/2011	Findings:	3.1 PCI/L
Chemical:	GROSS ALPHA COUNTING ERROR		
Sample Collected:	03/22/2011	Findings:	22. PCI/L
Chemical:	URANIUM (PCI/L)		
Sample Collected:	03/22/2011	Findings:	52. MG/L
Chemical:	NITRATE (AS NO3)		

Sample Collected:	03/22/2011	Findings:	1.9 PCI/L
Chemical:	URANIUM COUNTING ERROR		
Sample Collected:	03/22/2011	Findings:	1.4 PCI/L
Chemical:	GROSS ALPHA MDA95		
Sample Collected:	03/22/2011	Findings:	0.88 PCI/L
Chemical:	URANIUM MDA95		
Sample Collected:	03/29/2011	Findings:	52. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	04/06/2011	Findings:	21. PCI/L
Chemical:	GROSS ALPHA		
Sample Collected:	04/06/2011	Findings:	3.1 PCI/L
Chemical:	GROSS ALPHA COUNTING ERROR		
Sample Collected:	04/06/2011	Findings:	24. PCI/L
Chemical:	URANIUM (PCI/L)		
Sample Collected:	04/06/2011	Findings:	52. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	04/06/2011	Findings:	1.9 PCI/L
Chemical:	URANIUM COUNTING ERROR		
Sample Collected:	04/06/2011	Findings:	1.3 PCI/L
Chemical:	GROSS ALPHA MDA95		
Sample Collected:	04/06/2011	Findings:	0.88 PCI/L
Chemical:	URANIUM MDA95		
Sample Collected:	04/12/2011	Findings:	54. MG/L
Chemical:	NITRATE (AS NO3)		

21
SSE
1/2 - 1 Mile
Higher

FED USGS **USGS3135414**

Agency cd:	USGS	Site no:	340436117121301
Site name:	001S003W21C001S		
Latitude:	340436	EDR Site id:	USGS3135414
Longitude:	1171213	Dec lat:	34.07667959
Dec lon:	-117.2044838	Coor meth:	M
Coor accr:	S	Latlong datum:	NAD27
Dec latlong datum:	NAD83	District:	06
State:	06	County:	071
Country:	US	Land net:	Not Reported
Location map:	Not Reported	Map scale:	Not Reported
Altitude:	1249.00		
Altitude method:	Interpolated from topographic map		
Altitude accuracy:	Not Reported		
Altitude datum:	National Geodetic Vertical Datum of 1929		
Hydrologic:	Santa Ana. California. Area = 1680 sq.mi.		
Topographic:	Not Reported		
Site type:	Ground-water other than Spring	Date construction:	Not Reported
Date inventoried:	Not Reported	Mean greenwich time offset:	PST
Local standard time flag:	Y		
Type of ground water site:	Single well, other than collector or Ranney type		
Aquifer Type:	Not Reported		
Aquifer:	Not Reported		
Well depth:	167	Hole depth:	167
Source of depth data:	Not Reported		
Project number:	Not Reported		
Real time data flag:	Not Reported	Daily flow data begin date:	Not Reported
Daily flow data end date:	Not Reported	Daily flow data count:	Not Reported
Peak flow data begin date:	Not Reported	Peak flow data end date:	Not Reported

Peak flow data count:	Not Reported	Water quality data begin date:	Not Reported
Water quality data end date:	Not Reported	Water quality data count:	Not Reported
Ground water data begin date:	Not Reported	Ground water data end date:	Not Reported
Ground water data count:	Not Reported		

Ground-water levels, Number of Measurements: 0

22
SE
1/2 - 1 Mile
Higher

FED USGS **USGS3135273**

Agency cd:	USGS	Site no:	340452117114101
Site name:	001S003W16K002S		
Latitude:	340452	EDR Site id:	USGS3135273
Longitude:	1171141	Dec lat:	34.08112384
Dec lon:	-117.19559459	Coor meth:	M
Coor accr:	S	Latlong datum:	NAD27
Dec latlong datum:	NAD83	District:	06
State:	06	County:	071
Country:	US	Land net:	Not Reported
Location map:	Not Reported	Map scale:	Not Reported
Altitude:	1291.00		
Altitude method:	Interpolated from topographic map		
Altitude accuracy:	Not Reported		
Altitude datum:	National Geodetic Vertical Datum of 1929		
Hydrologic:	Santa Ana. California. Area = 1680 sq.mi.		
Topographic:	Not Reported		
Site type:	Ground-water other than Spring	Date construction:	19040101
Date inventoried:	Not Reported	Mean greenwich time offset:	PST
Local standard time flag:	Y		
Type of ground water site:	Single well, other than collector or Ranney type		
Aquifer Type:	Not Reported		
Aquifer:	Not Reported		
Well depth:	Not Reported	Hole depth:	256
Source of depth data:	Not Reported		
Project number:	Not Reported		
Real time data flag:	Not Reported	Daily flow data begin date:	Not Reported
Daily flow data end date:	Not Reported	Daily flow data count:	Not Reported
Peak flow data begin date:	Not Reported	Peak flow data end date:	Not Reported
Peak flow data count:	Not Reported	Water quality data begin date:	Not Reported
Water quality data end date:	Not Reported	Water quality data count:	Not Reported
Ground water data begin date:	Not Reported	Ground water data end date:	Not Reported
Ground water data count:	Not Reported		

Ground-water levels, Number of Measurements: 0

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS
RADON

AREA RADON INFORMATION

State Database: CA Radon

Radon Test Results

Zipcode	Num Tests	> 4 pCi/L
92374	85	0

Federal EPA Radon Zone for SAN BERNARDINO County: 2

Note: Zone 1 indoor average level > 4 pCi/L.
: Zone 2 indoor average level >= 2 pCi/L and <= 4 pCi/L.
: Zone 3 indoor average level < 2 pCi/L.

Federal Area Radon Information for Zip Code: 92374

Number of sites tested: 2

Area	Average Activity	% <4 pCi/L	% 4-20 pCi/L	% >20 pCi/L
Living Area - 1st Floor	0.500 pCi/L	100%	0%	0%
Living Area - 2nd Floor	Not Reported	Not Reported	Not Reported	Not Reported
Basement	Not Reported	Not Reported	Not Reported	Not Reported

PHYSICAL SETTING SOURCE RECORDS SEARCHED

TOPOGRAPHIC INFORMATION

USGS 7.5' Digital Elevation Model (DEM)
Source: United States Geologic Survey
EDR acquired the USGS 7.5' Digital Elevation Model in 2002 and updated it in 2006. The 7.5 minute DEM corresponds to the USGS 1:24,000- and 1:25,000-scale topographic quadrangle maps. The DEM provides elevation data with consistent elevation units and projection.

Scanned Digital USGS 7.5' Topographic Map (DRG)
Source: United States Geologic Survey
A digital raster graphic (DRG) is a scanned image of a U.S. Geological Survey topographic map. The map images are made by scanning published paper maps on high-resolution scanners. The raster image is georeferenced and fit to the Universal Transverse Mercator (UTM) projection.

HYDROLOGIC INFORMATION

Flood Zone Data: This data, available in select counties across the country, was obtained by EDR in 2003 & 2011 from the Federal Emergency Management Agency (FEMA). Data depicts 100-year and 500-year flood zones as defined by FEMA.

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002 and 2005 from the U.S. Fish and Wildlife Service.

HYDROGEOLOGIC INFORMATION

AQUIFLOW^{R} Information System
Source: EDR proprietary database of groundwater flow information
EDR has developed the AQUIFLOW Information System (AIS) to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted to regulatory authorities at select sites and has extracted the date of the report, hydrogeologically determined groundwater flow direction and depth to water table information.

GEOLOGIC INFORMATION

Geologic Age and Rock Stratigraphic Unit
Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - A digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

STATSGO: State Soil Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Services
The U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) leads the national Conservation Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps.

SSURGO: Soil Survey Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Services (NRCS)
Telephone: 800-672-5559
SSURGO is the most detailed level of mapping done by the Natural Resources Conservation Services, mapping scales generally range from 1:12,000 to 1:63,360. Field mapping methods using national standards are used to construct the soil maps in the Soil Survey Geographic (SSURGO) database. SSURGO digitizing duplicates the original soil survey maps. This level of mapping is designed for use by landowners, townships and county natural resource planning and management.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

LOCAL / REGIONAL WATER AGENCY RECORDS

FEDERAL WATER WELLS

PWS: Public Water Systems
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Public Water System data from the Federal Reporting Data System. A PWS is any water system which provides water to at least 25 people for at least 60 days annually. PWSs provide water from wells, rivers and other sources.

PWS ENF: Public Water Systems Violation and Enforcement Data
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Violation and Enforcement data for Public Water Systems from the Safe Drinking Water Information System (SDWIS) after August 1995. Prior to August 1995, the data came from the Federal Reporting Data System (FRDS).

USGS Water Wells: USGS National Water Inventory System (NWIS)
This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on wells, springs, and other sources of groundwater.

STATE RECORDS

Water Well Database
Source: Department of Water Resources
Telephone: 916-651-9648

California Drinking Water Quality Database
Source: Department of Health Services
Telephone: 916-324-2319
The database includes all drinking water compliance and special studies monitoring for the state of California since 1984. It consists of over 3,200,000 individual analyses along with well and water system information.

OTHER STATE DATABASE INFORMATION

California Oil and Gas Well Locations
Source: Department of Conservation
Telephone: 916-323-1779
Oil and Gas well locations in the state.

RADON

State Database: CA Radon
Source: Department of Health Services
Telephone: 916-324-2208
Radon Database for California

Area Radon Information
Source: USGS
Telephone: 703-356-4020
The National Radon Database has been developed by the U.S. Environmental Protection Agency (USEPA) and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey. The study covers the years 1986 - 1992. Where necessary data has been supplemented by information collected at private sources such as universities and research institutions.

EPA Radon Zones
Source: EPA
Telephone: 703-356-4020
Sections 307 & 309 of IRAA directed EPA to list and identify areas of U.S. with the potential for elevated indoor radon levels.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

OTHER

Airport Landing Facilities: Private and public use landing facilities
Source: Federal Aviation Administration, 800-457-6656

Epicenters: World earthquake epicenters, Richter 5 or greater
Source: Department of Commerce, National Oceanic and Atmospheric Administration

California Earthquake Fault Lines: The fault lines displayed on EDR's Topographic map are digitized quaternary fault lines, prepared in 1975 by the United State Geological Survey. Additional information (also from 1975) regarding activity at specific fault lines comes from California's Preliminary Fault Activity Map prepared by the California Division of Mines and Geology.

STREET AND ADDRESS INFORMATION

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1-ACRE VACANT TRACT
27234 Palmetto Avenue
REDLANDS, CA 92374

Inquiry Number: 3187528.4
October 24, 2011

The EDR-City Directory Abstract

EDR® Environmental Data Resources Inc

440 Wheelers Farms Road
Milford, CT 06461
800.352.0050
www.edrnet.com

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Findings

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

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EXECUTIVE SUMMARY

DESCRIPTION

Environmental Data Resources, Inc.'s (EDR) City Directory Abstract is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's City Directory Abstract includes a search and abstract of available city directory data. For each address, the directory lists the name of the corresponding occupant at five year intervals.

RESEARCH SUMMARY

The following research sources were consulted in the preparation of this report. An "X" indicates where information was identified in the source and provided in this report.

Year	Source	TP	Adjoining	Text Abstract	Source Image
2008	HAINES & COMPANY INC.	-	X	X	-
1995	HAINES & COMPANY INC.	-	X	X	-
1984	HAINES & COMPANY INC.	-	X	X	-
1974	HAINES & COMPANY INC.	-	X	X	-

EXECUTIVE SUMMARY

SELECTED ADDRESSES

The following addresses were selected by the client, for EDR to research. An "X" indicates where information was identified.

Address	*Type*	*Findings*
8852 Alabama Street	Client Entered	

FINDINGS

TARGET PROPERTY INFORMATION

ADDRESS

27234 Palmetto Avenue
REDLANDS, CA 92374

FINDINGS DETAIL

Target Property research detail.

No Addresses Found

FINDINGS

ADJOINING PROPERTY DETAIL

The following Adjoining Property addresses were researched for this report. Detailed findings are provided for each address.

Palmetto Avenue

Palmetto Avenue

Year	*Uses*	*Source*
2008	No address listings beyond (26717) Palmetto Avenue	HAINES & COMPANY INC.
1995	No address listings Palmetto Avenue	HAINES & COMPANY INC.
1984	No address listings beyond (27050) Palmetto Avenue	HAINES & COMPANY INC.
1974	No address listings beyond (27050) Palmetto Avenue	HAINES & COMPANY INC.

FINDINGS

TARGET PROPERTY: ADDRESS NOT IDENTIFIED IN RESEARCH SOURCE

The following Target Property addresses were researched for this report, and the addresses were not identified in the research source.

Address Researched	Address Not Identified in Research Source
27234 Palmetto Avenue	2008, 1995, 1984, 1974

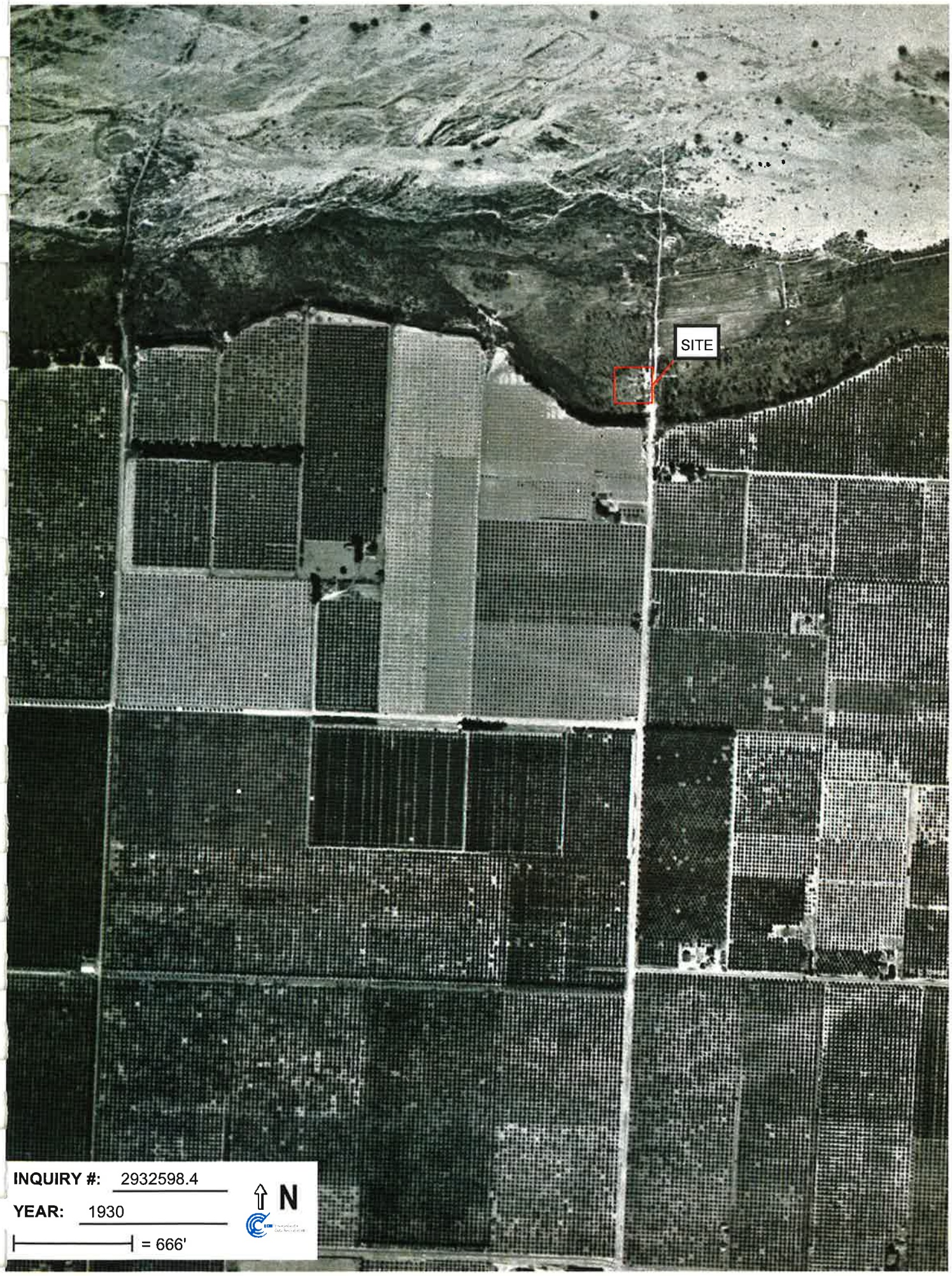
ADJOINING PROPERTY: ADDRESSES NOT IDENTIFIED IN RESEARCH SOURCE

The following Adjoining Property addresses were researched for this report, and the addresses were not identified in research source.

Address Researched	Address Not Identified in Research Source
Palmetto Avenue	No Years Found
8852 Alabama Street	2008, 1995, 1984, 1974

APPENDIX F

AERIAL PHOTOGRAPHS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INQUIRY #: 2932598.4
YEAR: 1930
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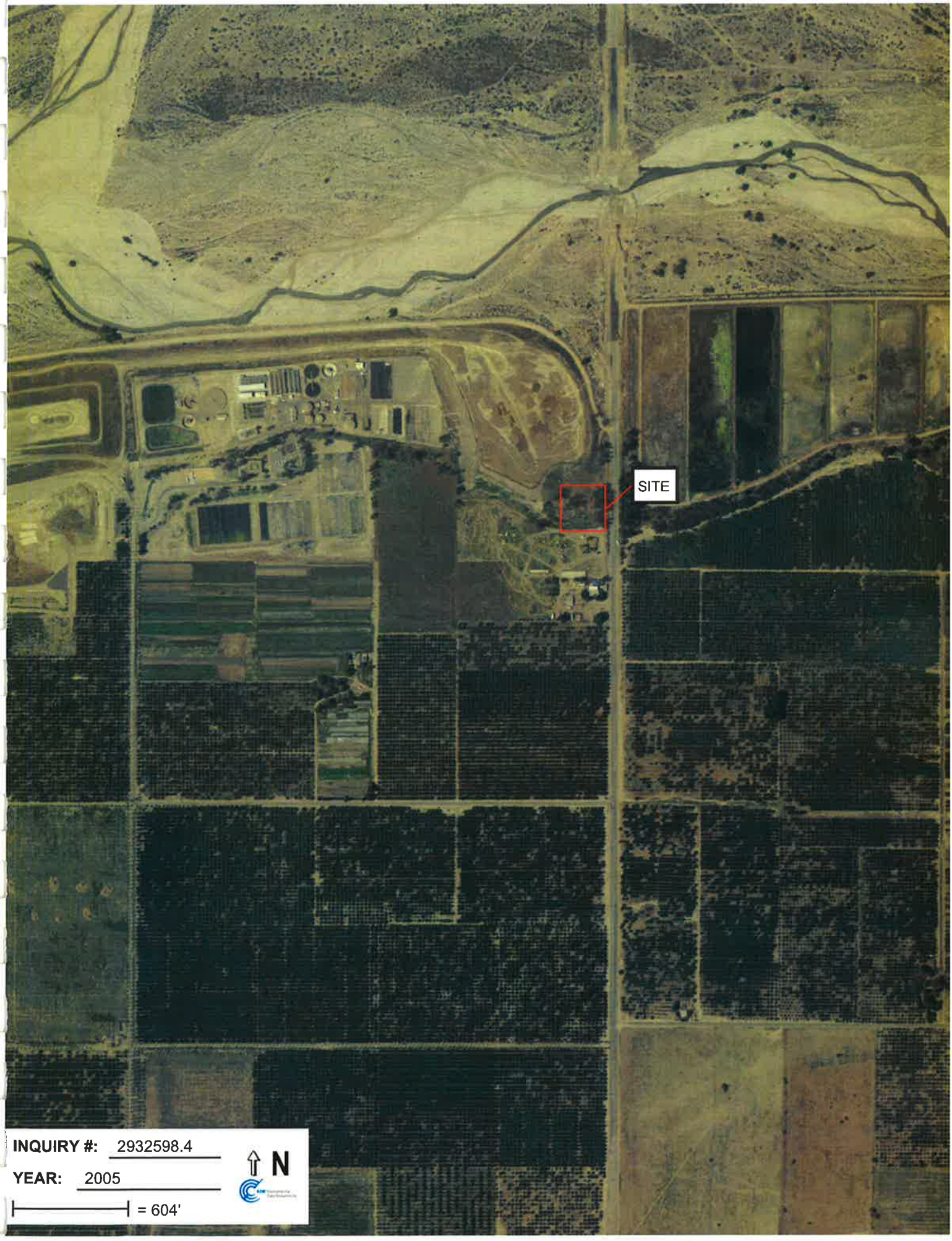
N


SITE
INQUIRY #: 2932598.4
YEAR: 2005
= 604'
N

APPENDIX G

SANBORN MAPS

1-ACRE VACANT TRACT
PALMETTO AVE/ALABAMA STREET
REDLANDS, CA 92374

Inquiry Number: 3187528.3
October 14, 2011

Certified Sanborn® Map Report

EDR® Environmental Data Resources Inc

440 Wheelers Farms Road
Milford, CT 06461
800.352.0050
www.edrnet.com

Certified Sanborn® Map Report

10/14/11

Site Name:
1-ACRE VACANT TRACT
PALMETTO AVE/ALABAMA
REDLANDS, CA 92374

Client Name:
EI Group
1900 Preston Road
Plano, TX 75093

EDR Inquiry # 3187528.3

Contact: LARRY MICHEL

EDR® Environmental Data Resources Inc

The complete Sanborn Library collection has been searched by EDR, and fire insurance maps covering the target property location provided by EI Group were identified for the years listed below. The certified Sanborn Library search results in this report can be authenticated by visiting www.edrnet.com/sanborn and entering the certification number. Only Environmental Data Resources Inc. (EDR) is authorized to grant rights for commercial reproduction of maps by Sanborn Library LLC, the copyright holder for the collection.

Certified Sanborn Results:

Site Name: 1-ACRE VACANT TRACT
Address: PALMETTO AVE/ALABAMA STREET
City, State, Zip: REDLANDS, CA 92374
Cross Street:
P.O. # NA
Project: ENTX110009.00
Certification # DD6C-4414-ABC5

Sanborn® Library search results
Certification # DD6C-4414-ABC5

UNMAPPED PROPERTY

This report certifies that the complete holdings of the Sanborn Library, LLC collection have been searched based on client supplied target property information, and fire insurance maps covering the target property were not found.

The Sanborn Library includes more than 1.2 million Sanborn fire insurance maps, which track historical property usage in approximately 12,000 American cities and towns. Collections searched:

- ✔ Library of Congress
- ✔ University Publications of America
- ✔ EDR Private Collection

The Sanborn Library LLC Since 1866™

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APPENDIX H

SITE PHOTOGRAPHS

Photograph 1: Southwest view of the Site

Photograph 2: Southern view of the Site, with Alabama Street on east

Photograph 3: Northern view of the Site with old border fencing from Alabama Street

Photograph 4: Eastern view of the site, looking west to the city landfill

Photograph 5: Shed and lumber/trash around the Site

Photograph 6: View of the slope leading to adjacent property on south

Photograph 7: Interior of the shed

Photograph 8: City landfill groundwater monitoring well enclosure

Photograph 9: Lumber on east of the Site

Photograph 10: View of the wastewater treatment pipeline on east adjacent closed landfill

Photograph 11: Northern border of the Site

Photograph 12: Typical land condition and trash around the Site

APPENDIX C: REGULATORY DATABASE REPORT

PARTNER

NWC Palmetto Avenue and Alabama Street
NWC Palmetto Avenue and Alabama Street
Redlands, CA 92374

Inquiry Number: 5122089.2s
November 30, 2017

The EDR Radius Map™ Report with GeoCheck®

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

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Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

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EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc (EDR). The report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E 1527-13) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

TARGET PROPERTY INFORMATION

ADDRESS

NWC PALMETTO AVENUE AND ALABAMA STREET
REDLANDS, CA 92374

COORDINATES

Latitude (North):	34.0862340 - 34° 5' 10.44''
Longitude (West):	117.2102230 - 117° 12' 36.80''
Universal Tranverse Mercator:	Zone 11
UTM X (Meters):	480605.6
UTM Y (Meters):	3771542.8
Elevation:	1217 ft. above sea level

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property Map:	5630631 REDLANDS, CA
Version Date:	2012

AERIAL PHOTOGRAPHY IN THIS REPORT

Portions of Photo from:	20140603
Source:	USDA

MAPPED SITES SUMMARY

Target Property Address:
NWC PALMETTO AVENUE AND ALABAMA STREET
REDLANDS, CA 92374

Click on Map ID to see full detail.

MAP ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	RELATIVE ELEVATION	DIST (ft. & mi.) DIRECTION
1	REDLANDS DISTRIBUTIO	NORTHEAST CORNER OF	NPDES		TP
Reg	NORTON AIR FORCE BAS		DOD	Same	1308, 0.248, NNW
Reg	USAF NORTON AFB	305 S TIPPECANOE AVE	NPL, SEMS, CORRACTS, RCRA-TSDF, RCRA-SQG, US ENG..	Same	1077, 0.204, NW
2	AG-TEUNISSEN FARMING	9092 ALABAMA ST	UST	Higher	1 ft.
A3	PERFORMANCE TEAM - R	26940 PALMETTO AVE	HAZNET, San Bern. Co. Permit	Lower	474, 0.090, WSW
A4	REDLANDS LOGISTICS C	26940 PALMETTO AVE	San Bern. Co. Permit	Lower	474, 0.090, WSW
5	HOME DEPOT USA HD508	9377 ALABAMA ST	RCRA-SQG	Higher	530, 0.100, SSE
B6	HASKELL CO. INDUSTRI	2130 NEVADA AVENUE	SWF/LF	Lower	974, 0.184, West
7	AG-NEVADA 15 WINDMAC	NE NEVADA & PALMETTO	San Bern. Co. Permit	Lower	999, 0.189, WSW
B8	LANDFILL,CALIFORNIA	2151 NEVADA ST	SWF/LF, WMUDS/SWAT, LDS, EMI, ENF, Financial...	Lower	1014, 0.192, West
9	PIONEER INDUSTRIAL C	9425 NEVADA ST STE A	San Bern. Co. Permit	Lower	1018, 0.193, SW
10	CALIFORNIA STREET LA	35 CAJON STREET, P.O	MINES	Lower	1094, 0.207, WNW
C11	THE HOME DEPOT DISTR	27352 RIVERBLUFF AVE	San Bern. Co. Permit	Higher	1154, 0.219, NE
C12	HOME DEPOT #HD5087	27352 RIVER BLUFF AV	RCRA-LQG, HAZNET, San Bern. Co. Permit	Higher	1154, 0.219, NE
13	FORMER SKEET RANGE N		UXO	Lower	3680, 0.697, NW
14	FORMER SKEET RANGE N		UXO	Lower	4177, 0.791, NNW

EXECUTIVE SUMMARY

TARGET PROPERTY SEARCH RESULTS

The target property was identified in the following records. For more information on this property see page 8 of the attached EDR Radius Map report:

Site	Database(s)	EPA ID
REDLANDS DISTRIBUTIO NORTHEAST CORNER OF REDLANDS, CA 92374	NPDES Facility Status: Terminated Facility Status: Active	N/A

DATABASES WITH NO MAPPED SITES

No mapped sites were found in EDR's search of available ("reasonably ascertainable ") government records either on the target property or within the search radius around the target property for the following databases:

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

Proposed NPL ---------- Proposed National Priority List Sites
NPL LIENS ---------- Federal Superfund Liens

Federal Delisted NPL site list

Delisted NPL ---------- National Priority List Deletions

Federal CERCLIS list

FEDERAL FACILITY ---------- Federal Facility Site Information listing

Federal CERCLIS NFRAP site list

SEMS-ARCHIVE ---------- Superfund Enterprise Management System Archive

Federal RCRA generators list

RCRA-CESQG ---------- RCRA - Conditionally Exempt Small Quantity Generator

Federal institutional controls / engineering controls registries

LUCIS ---------- Land Use Control Information System

Federal ERNS list

ERNS ---------- Emergency Response Notification System

State- and tribal - equivalent NPL

RESPONSE ---------- State Response Sites

State- and tribal - equivalent CERCLIS

ENVIROSTOR ---- EnviroStor Database

State and tribal leaking storage tank lists

LUST ---- Geotracker's Leaking Underground Fuel Tank Report
INDIAN LUST ---- Leaking Underground Storage Tanks on Indian Land
SLIC ---- Statewide SLIC Cases

State and tribal registered storage tank lists

FEMA UST ---- Underground Storage Tank Listing
AST ---- Aboveground Petroleum Storage Tank Facilities
INDIAN UST ---- Underground Storage Tanks on Indian Land

State and tribal voluntary cleanup sites

VCP ---- Voluntary Cleanup Program Properties
INDIAN VCP ---- Voluntary Cleanup Priority Listing

State and tribal Brownfields sites

BROWNFIELDS ---- Considered Brownfieds Sites Listing

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS ---- A Listing of Brownfields Sites

Local Lists of Landfill / Solid Waste Disposal Sites

SWRCY ---- Recycler Database
HAULERS ---- Registered Waste Tire Haulers Listing
INDIAN ODI ---- Report on the Status of Open Dumps on Indian Lands
DEBRIS REGION 9 ---- Torres Martinez Reservation Illegal Dump Site Locations
ODI ---- Open Dump Inventory
IHS OPEN DUMPS ---- Open Dumps on Indian Land

Local Lists of Hazardous waste / Contaminated Sites

US HIST CDL ---- Delisted National Clandestine Laboratory Register
HIST Cal-Sites ---- Historical Calsites Database
SCH ---- School Property Evaluation Program
CDL ---- Clandestine Drug Labs
Toxic Pits ---- Toxic Pits Cleanup Act Sites
US CDL ---- National Clandestine Laboratory Register

Local Lists of Registered Storage Tanks

SWEEPS UST ---- SWEEPS UST Listing
HIST UST ---- Hazardous Substance Storage Container Database

CA FID UST ---- Facility Inventory Database

Local Land Records

LIENS ---- Environmental Liens Listing
LIENS 2 ---- CERCLA Lien Information
DEED ---- Deed Restriction Listing

Records of Emergency Release Reports

HMIRS ---- Hazardous Materials Information Reporting System
CHMIRS ---- California Hazardous Material Incident Report System
LDS ---- Land Disposal Sites Listing
MCS ---- Military Cleanup Sites Listing
SPILLS 90 ---- SPILLS 90 data from FirstSearch

Other Ascertainable Records

RCRA NonGen / NLR ---- RCRA - Non Generators / No Longer Regulated
FUDS ---- Formerly Used Defense Sites
SCRD DRYCLEANERS ---- State Coalition for Remediation of Drycleaners Listing
US FIN ASSUR ---- Financial Assurance Information
EPA WATCH LIST ---- EPA WATCH LIST
2020 COR ACTION ---- 2020 Corrective Action Program List
TSCA ---- Toxic Substances Control Act
TRIS ---- Toxic Chemical Release Inventory System
SSTS ---- Section 7 Tracking Systems
RMP ---- Risk Management Plans
RAATS ---- RCRA Administrative Action Tracking System
PRP ---- Potentially Responsible Parties
PADS ---- PCB Activity Database System
ICIS ---- Integrated Compliance Information System
FTTS ---- FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
MLTS ---- Material Licensing Tracking System
COAL ASH DOE ---- Steam-Electric Plant Operation Data
COAL ASH EPA ---- Coal Combustion Residues Surface Impoundments List
PCB TRANSFORMER ---- PCB Transformer Registration Database
RADINFO ---- Radiation Information Database
HIST FTTS ---- FIFRA/TSCA Tracking System Administrative Case Listing
DOT OPS ---- Incident and Accident Data
CONSENT ---- Superfund (CERCLA) Consent Decrees
INDIAN RESERV ---- Indian Reservations
FUSRAP ---- Formerly Utilized Sites Remedial Action Program
UMTRA ---- Uranium Mill Tailings Sites
LEAD SMELTERS ---- Lead Smelter Sites
US AIRS ---- Aerometric Information Retrieval System Facility Subsystem
US MINES ---- Mines Master Index File
ABANDONED MINES ---- Abandoned Mines
FINDS ---- Facility Index System/Facility Registry System
DOCKET HWC ---- Hazardous Waste Compliance Docket Listing
ECHO ---- Enforcement & Compliance History Information
FUELS PROGRAM ---- EPA Fuels Program Registered Listing
CA BOND EXP. PLAN ---- Bond Expenditure Plan
Cortese ---- "Cortese" Hazardous Waste & Substances Sites List

CUPA Listings - CUPA Resources List
DRYCLEANERS - Cleaner Facilities
EMI - Emissions Inventory Data
ENF - Enforcement Action Listing
Financial Assurance - Financial Assurance Information Listing
HAZNET - Facility and Manifest Data
ICE - ICE
HIST CORTESE - Hazardous Waste & Substance Site List
HWP - EnviroStor Permitted Facilities Listing
HWT - Registered Hazardous Waste Transporter Database
MWMP - Medical Waste Management Program Listing
PEST LIC - Pesticide Regulation Licenses Listing
PROC - Certified Processors Database
Notify 65 - Proposition 65 Records
UIC - UIC Listing
WASTEWATER PITS - Oil Wastewater Pits Listing
WDS - Waste Discharge System
WIP - Well Investigation Program Case List

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP - EDR Proprietary Manufactured Gas Plants
EDR Hist Auto - EDR Exclusive Historical Auto Stations
EDR Hist Cleaner - EDR Exclusive Historical Cleaners

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA LF - Recovered Government Archive Solid Waste Facilities List
RGA LUST - Recovered Government Archive Leaking Underground Storage Tank

SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified in the following databases.

Elevations have been determined from the USGS Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified. Sites with an elevation equal to or higher than the target property have been differentiated below from sites with an elevation lower than the target property.
Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in ***bold italics*** are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

NPL: Also known as Superfund, the National Priority List database is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund program. The source of this database is the U.S. EPA.

A review of the NPL list, as provided by EDR, and dated 05/30/2017 has revealed that there is 1 NPL site within approximately 1 mile of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
USAF NORTON AFB	*305 S TIPPECANOE AVE*	*NW 1/8 - 1/4 (0.204 mi.)*	*0*	*13*

Federal CERCLIS list

SEMS: SEMS (Superfund Enterprise Management System) tracks hazardous waste sites, potentially hazardous waste sites, and remedial activities performed in support of EPA's Superfund Program across the United States. The list was formerly know as CERCLIS, renamed to SEMS by the EPA in 2015. The list contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). This dataset also contains sites which are either proposed to or on the National Priorities List (NPL) and the sites which are in the screening and assessment phase for possible inclusion on the NPL.

A review of the SEMS list, as provided by EDR, and dated 07/11/2017 has revealed that there is 1 SEMS site within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
USAF NORTON AFB	*305 S TIPPECANOE AVE*	*NW 1/8 - 1/4 (0.204 mi.)*	*0*	*13*

Federal RCRA CORRACTS facilities list

CORRACTS: CORRACTS is a list of handlers with RCRA Corrective Action Activity. This report shows which nationally-defined corrective action core events have occurred for every handler that has had corrective action activity.

A review of the CORRACTS list, as provided by EDR, and dated 09/13/2017 has revealed that there is 1 CORRACTS site within approximately 1 mile of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
USAF NORTON AFB	*305 S TIPPECANOE AVE*	*NW 1/8 - 1/4 (0.204 mi.)*	*0*	*13*

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Transporters are individuals or entities that move hazardous waste from the generator offsite to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

A review of the RCRA-TSDF list, as provided by EDR, and dated 09/13/2017 has revealed that there is 1

RCRA-TSDF site within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
USAF NORTON AFB	***305 S TIPPECANOE AVE***	***NW 1/8 - 1/4 (0.204 mi.)***	***0***	***13***

Federal RCRA generators list

RCRA-LQG: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

A review of the RCRA-LQG list, as provided by EDR, and dated 09/13/2017 has revealed that there is 1 RCRA-LQG site within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
HOME DEPOT #HD5087	***27352 RIVER BLUFF AV***	***NE 1/8 - 1/4 (0.219 mi.)***	***C12***	***85***

RCRA-SQG: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

A review of the RCRA-SQG list, as provided by EDR, and dated 09/13/2017 has revealed that there are 2 RCRA-SQG sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
USAF NORTON AFB	***305 S TIPPECANOE AVE***	***NW 1/8 - 1/4 (0.204 mi.)***	***0***	***13***
HOME DEPOT USA HD508	9377 ALABAMA ST	SSE 0 - 1/8 (0.100 mi.)	5	52

Federal institutional controls / engineering controls registries

US ENG CONTROLS: A listing of sites with engineering controls in place.

A review of the US ENG CONTROLS list, as provided by EDR, and dated 08/10/2017 has revealed that there is 1 US ENG CONTROLS site within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
USAF NORTON AFB	***305 S TIPPECANOE AVE***	***NW 1/8 - 1/4 (0.204 mi.)***	***0***	***13***

US INST CONTROL: A listing of sites with institutional controls in place. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions are generally required as part of the institutional controls.

A review of the US INST CONTROL list, as provided by EDR, and dated 08/10/2017 has revealed that there is 1 US INST CONTROL site within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
USAF NORTON AFB	***305 S TIPPECANOE AVE***	***NW 1/8 - 1/4 (0.204 mi.)***	***0***	***13***

State and tribal landfill and/or solid waste disposal site lists

SWF/LF: The Solid Waste Facilities/Landfill Sites records typically contain an inventory of solid waste disposal facilities or landfills in a particular state. The data come from the Integrated Waste Management Board's Solid Waste Information System (SWIS) database.

A review of the SWF/LF list, as provided by EDR, has revealed that there are 2 SWF/LF sites within approximately 0.5 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
HASKELL CO. INDUSTRI	2130 NEVADA AVENUE	W 1/8 - 1/4 (0.184 mi.)	B6	54
Database: SWF/LF (SWIS), Date of Government Version: 08/14/2017 Facility ID: 36-AA-0443 Operational Status: Planned Regulation Status: Proposed				
LANDFILL,CALIFORNIA	***2151 NEVADA ST***	***W 1/8 - 1/4 (0.192 mi.)***	***B8***	***55***
Database: SWF/LF (SWIS), Date of Government Version: 08/14/2017 Facility ID: 36-AA-0017 Operational Status: Active Regulation Status: Permitted				

State and tribal registered storage tank lists

UST: The Underground Storage Tank database contains registered USTs. USTs are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA). The data come from the State Water Resources Control Board's Hazardous Substance Storage Container Database.

A review of the UST list, as provided by EDR, has revealed that there is 1 UST site within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
AG-TEUNISSEN FARMING	9092 ALABAMA ST	0 - 1/8 (0.000 mi.)	2	51
Database: UST, Date of Government Version: 09/11/2017 Facility Id: 88015440				

EXECUTIVE SUMMARY

ADDITIONAL ENVIRONMENTAL RECORDS

Local Lists of Landfill / Solid Waste Disposal Sites

WMUDS/SWAT: The Waste Management Unit Database System is used for program tracking and inventory of waste management units. The source is the State Water Resources Control Board.

A review of the WMUDS/SWAT list, as provided by EDR, and dated 04/01/2000 has revealed that there is 1 WMUDS/SWAT site within approximately 0.5 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
LANDFILL,CALIFORNIA	***2151 NEVADA ST***	***W 1/8 - 1/4 (0.192 mi.)***	***B8***	***55***

Other Ascertainable Records

DOD: Consists of federally owned or administered lands, administered by the Department of Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.

A review of the DOD list, as provided by EDR, and dated 12/31/2005 has revealed that there is 1 DOD site within approximately 1 mile of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
NORTON AIR FORCE BAS		NNW 1/8 - 1/4 (0.248 mi.)	0	13

ROD: Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid the cleanup.

A review of the ROD list, as provided by EDR, and dated 09/27/2017 has revealed that there is 1 ROD site within approximately 1 mile of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
USAF NORTON AFB	***305 S TIPPECANOE AVE***	***NW 1/8 - 1/4 (0.204 mi.)***	***0***	***13***

UXO: A listing of unexploded ordnance site locations

A review of the UXO list, as provided by EDR, and dated 10/25/2016 has revealed that there are 2 UXO sites within approximately 1 mile of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
FORMER SKEET RANGE N		NW 1/2 - 1 (0.697 mi.)	13	92
FORMER SKEET RANGE N		NNW 1/2 - 1 (0.791 mi.)	14	92

MINES: A listing of mine site locations from the Office of Mine Reclamation.

A review of the MINES list, as provided by EDR, and dated 09/11/2017 has revealed that there is 1 MINES site within approximately 0.25 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
CALIFORNIA STREET LA	35 CAJON STREET, P.O	WNW 1/8 - 1/4 (0.207 mi.)	10	84

San Bern. Co. Permit: San Bernardino County Fire Department Hazardous Materials Division.

A review of the San Bern. Co. Permit list, as provided by EDR, and dated 08/31/2017 has revealed that there are 6 San Bern. Co. Permit sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
THE HOME DEPOT DISTR Facility Status: ACTIVE Facility Status: FEE EXEMPT Facility Status: INACTIVE Facility Id: FA0012064	27352 RIVERBLUFF AVE	NE 1/8 - 1/4 (0.219 mi.)	C11	85
HOME DEPOT #HD5087 Facility Status: INACTIVE Facility Id: FA0012874	***27352 RIVER BLUFF AV***	***NE 1/8 - 1/4 (0.219 mi.)***	***C12***	***85***

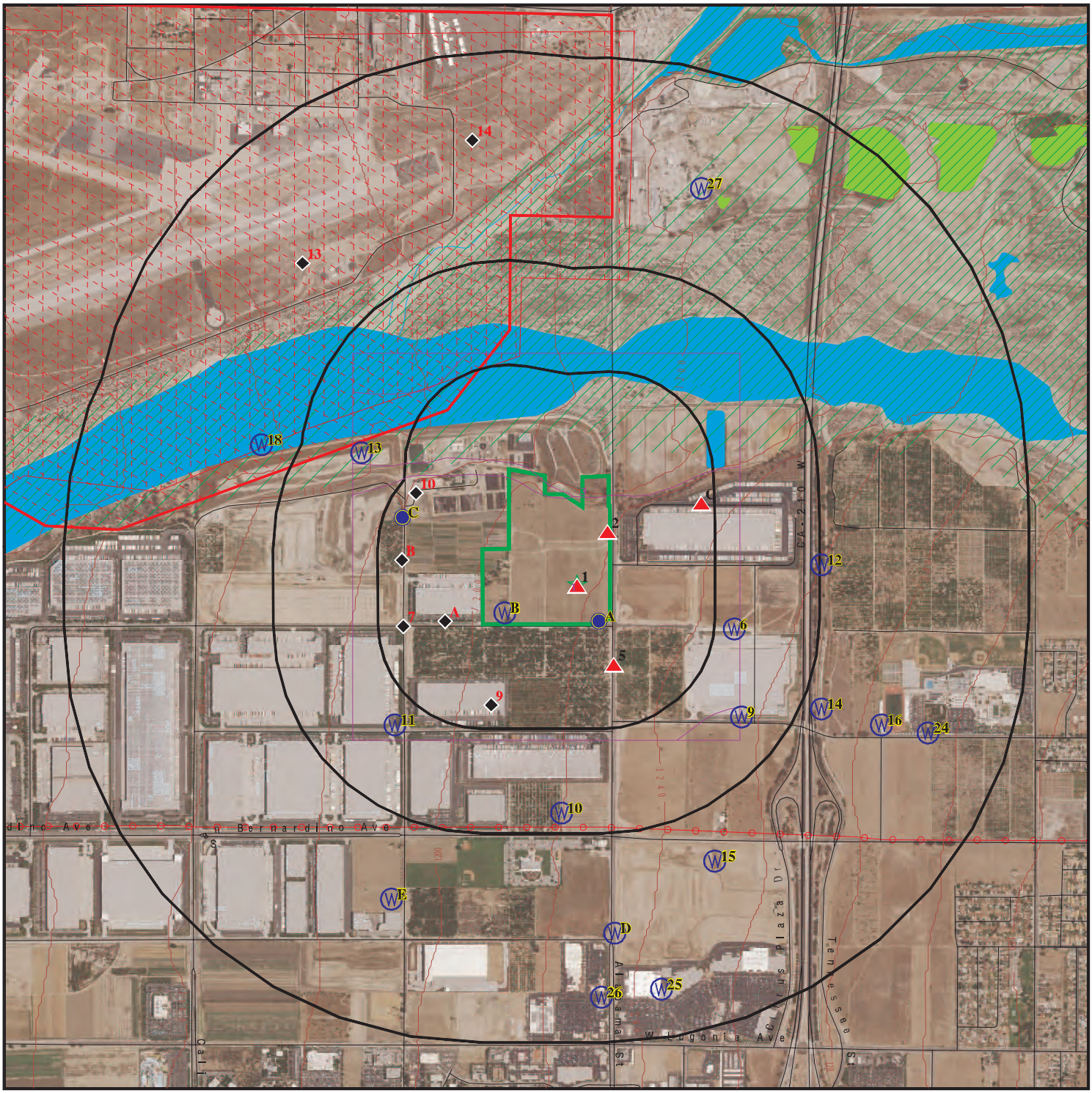
Lower Elevation	Address	Direction / Distance	Map ID	Page
PERFORMANCE TEAM - R Facility Status: ACTIVE Facility Id: FA0016951	***26940 PALMETTO AVE***	***WSW 0 - 1/8 (0.090 mi.)***	***A3***	***51***
REDLANDS LOGISTICS C Facility Status: ACTIVE Facility Id: FA0010032	26940 PALMETTO AVE	WSW 0 - 1/8 (0.090 mi.)	A4	52
AG-NEVADA 15 WINDMAC Facility Status: INACTIVE Facility Id: FA0000584	NE NEVADA & PALMETTO	WSW 1/8 - 1/4 (0.189 mi.)	7	55
PIONEER INDUSTRIAL C Facility Status: ACTIVE Facility Status: INACTIVE Facility Id: FA0013751 Facility Id: FA0010649	9425 NEVADA ST STE A	SW 1/8 - 1/4 (0.193 mi.)	9	84

EXECUTIVE SUMMARY

Due to poor or inadequate address information, the following sites were not mapped. Count: 5 records.

Site Name	Database(s)
CHARTER LEASING	LUST, HIST CORTESE
U.S. AIR FORCE - NORTON AFB (FORME	SLIC
SOUTHERN PACIFIC RAIL YARD	SLIC
CRAFTON-REDLANDS AREA	CA BOND EXP. PLAN
NEW HIGH SCHOOL NO.3	ENVIROSTOR, SCH

OVERVIEW MAP - 5122089.2S



Target Property

Sites at elevations higher than or equal to the target property

Sites at elevations lower than the target property

Manufactured Gas Plants

National Priority List Sites

Dept. Defense Sites

Indian Reservations BIA

Power transmission lines

100-year flood zone

500-year flood zone

National Wetland Inventory

State Wetlands

Upgradient Area

Areas of Concern

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME:	NWC Palmetto Avenue and Alabama Street	CLIENT:	Partner Engineering and Science, Inc.
ADDRESS:	NWC Palmetto Avenue and Alabama Street Redlands CA 92374	CONTACT:	Karli Mcmurray
LAT/LONG:	34.086234 / 117.210223	INQUIRY #:	5122089.2s
		DATE:	November 30, 2017 11:09 am

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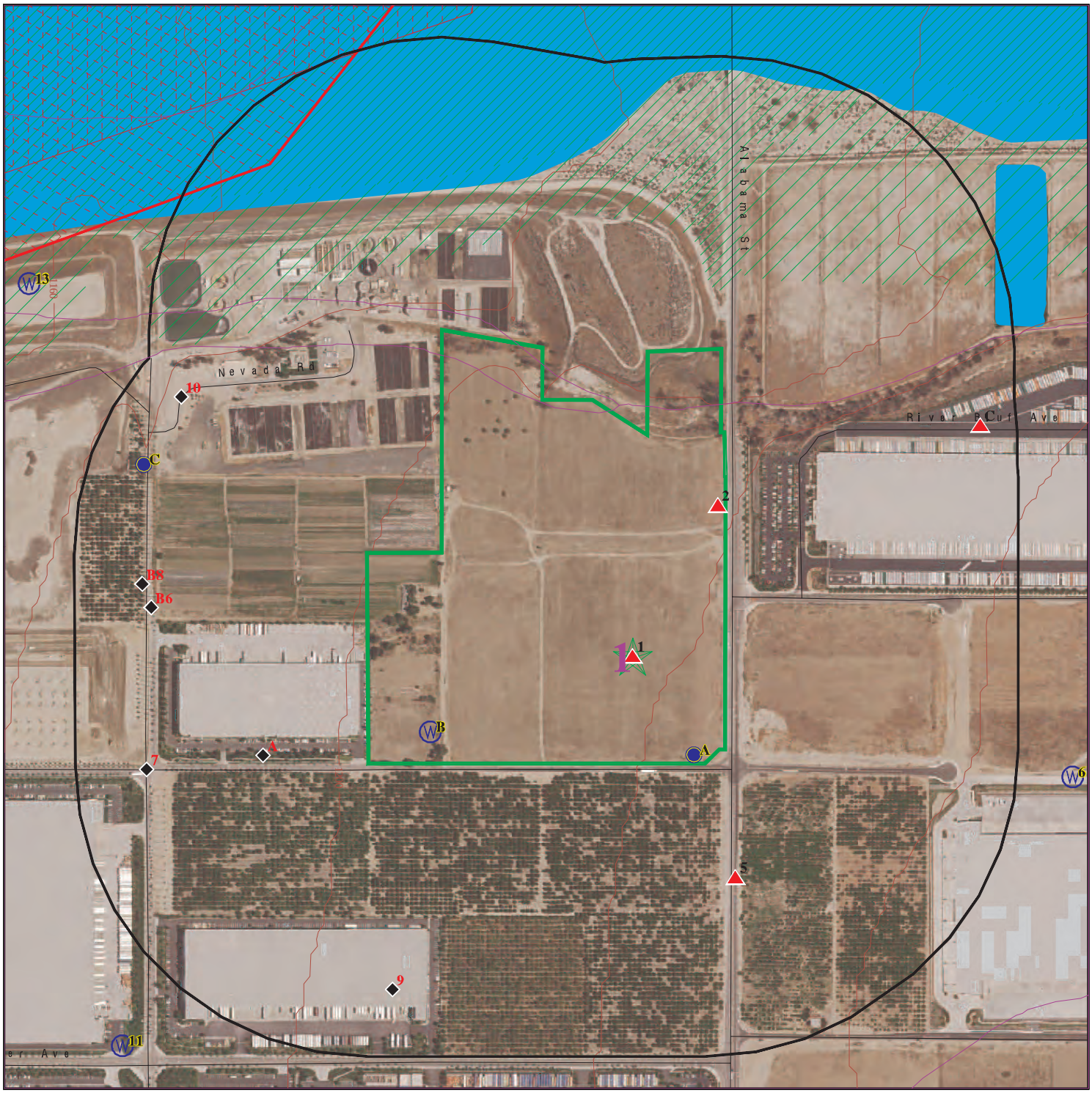
DETAIL MAP - 5122089.2S



Target Property

Sites at elevations higher than or equal to the target property

Sites at elevations lower than the target property

Manufactured Gas Plants

Sensitive Receptors

National Priority List Sites

Dept. Defense Sites

0 1/16 1/8 1/4 Miles

Indian Reservations BIA

100-year flood zone

500-year flood zone

Areas of Concern

N

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME:	NWC Palmetto Avenue and Alabama Street	CLIENT:	Partner Engineering and Science, Inc.
ADDRESS:	NWC Palmetto Avenue and Alabama Street Redlands CA 92374	CONTACT:	Karli Mcmurray
LAT/LONG:	34.086234 / 117.210223	INQUIRY #:	5122089.2s
		DATE:	November 30, 2017 11:11 am

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MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
STANDARD ENVIRONMENTAL RECORDS								
Federal NPL site list								
NPL	1.000		0	1	0	0	NR	1
Proposed NPL	1.000		0	0	0	0	NR	0
NPL LIENS	TP		NR	NR	NR	NR	NR	0
Federal Delisted NPL site list								
Delisted NPL	1.000		0	0	0	0	NR	0
Federal CERCLIS list								
FEDERAL FACILITY	0.500		0	0	0	NR	NR	0
SEMS	0.500		0	1	0	NR	NR	1
Federal CERCLIS NFRAP site list								
SEMS-ARCHIVE	0.500		0	0	0	NR	NR	0
Federal RCRA CORRACTS facilities list								
CORRACTS	1.000		0	1	0	0	NR	1
Federal RCRA non-CORRACTS TSD facilities list								
RCRA-TSDF	0.500		0	1	0	NR	NR	1
Federal RCRA generators list								
RCRA-LQG	0.250		0	1	NR	NR	NR	1
RCRA-SQG	0.250		1	1	NR	NR	NR	2
RCRA-CESQG	0.250		0	0	NR	NR	NR	0
Federal institutional controls / engineering controls registries								
LUCIS	0.500		0	0	0	NR	NR	0
US ENG CONTROLS	0.500		0	1	0	NR	NR	1
US INST CONTROL	0.500		0	1	0	NR	NR	1
Federal ERNS list								
ERNS	TP		NR	NR	NR	NR	NR	0
State- and tribal - equivalent NPL								
RESPONSE	1.000		0	0	0	0	NR	0
State- and tribal - equivalent CERCLIS								
ENVIROSTOR	1.000		0	0	0	0	NR	0
State and tribal landfill and/or solid waste disposal site lists								
SWF/LF	0.500		0	2	0	NR	NR	2
State and tribal leaking storage tank lists								
LUST	0.500		0	0	0	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
INDIAN LUST	0.500		0	0	0	NR	NR	0
SLIC	0.500		0	0	0	NR	NR	0
State and tribal registered storage tank lists								
FEMA UST	0.250		0	0	NR	NR	NR	0
UST	0.250		1	0	NR	NR	NR	1
AST	0.250		0	0	NR	NR	NR	0
INDIAN UST	0.250		0	0	NR	NR	NR	0
State and tribal voluntary cleanup sites								
VCP	0.500		0	0	0	NR	NR	0
INDIAN VCP	0.500		0	0	0	NR	NR	0
State and tribal Brownfields sites								
BROWNFIELDS	0.500		0	0	0	NR	NR	0
ADDITIONAL ENVIRONMENTAL RECORDS								
Local Brownfield lists								
US BROWNFIELDS	0.500		0	0	0	NR	NR	0
Local Lists of Landfill / Solid Waste Disposal Sites								
WMUDS/SWAT	0.500		0	1	0	NR	NR	1
SWRCY	0.500		0	0	0	NR	NR	0
HAULERS	TP		NR	NR	NR	NR	NR	0
INDIAN ODI	0.500		0	0	0	NR	NR	0
DEBRIS REGION 9	0.500		0	0	0	NR	NR	0
ODI	0.500		0	0	0	NR	NR	0
IHS OPEN DUMPS	0.500		0	0	0	NR	NR	0
Local Lists of Hazardous waste / Contaminated Sites								
US HIST CDL	TP		NR	NR	NR	NR	NR	0
HIST Cal-Sites	1.000		0	0	0	0	NR	0
SCH	0.250		0	0	NR	NR	NR	0
CDL	TP		NR	NR	NR	NR	NR	0
Toxic Pits	1.000		0	0	0	0	NR	0
US CDL	TP		NR	NR	NR	NR	NR	0
Local Lists of Registered Storage Tanks								
SWEEPS UST	0.250		0	0	NR	NR	NR	0
HIST UST	0.250		0	0	NR	NR	NR	0
CA FID UST	0.250		0	0	NR	NR	NR	0
Local Land Records								
LIENS	TP		NR	NR	NR	NR	NR	0
LIENS 2	TP		NR	NR	NR	NR	NR	0
DEED	0.500		0	0	0	NR	NR	0
Records of Emergency Release Reports								
HMIRS	TP		NR	NR	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
CHMIRS	TP		NR	NR	NR	NR	NR	0
LDS	TP		NR	NR	NR	NR	NR	0
MCS	TP		NR	NR	NR	NR	NR	0
SPILLS 90	TP		NR	NR	NR	NR	NR	0
Other Ascertainable Records								
RCRA NonGen / NLR	0.250		0	0	NR	NR	NR	0
FUDS	1.000		0	0	0	0	NR	0
DOD	1.000		0	1	0	0	NR	1
SCRD DRYCLEANERS	0.500		0	0	0	NR	NR	0
US FIN ASSUR	TP		NR	NR	NR	NR	NR	0
EPA WATCH LIST	TP		NR	NR	NR	NR	NR	0
2020 COR ACTION	0.250		0	0	NR	NR	NR	0
TSCA	TP		NR	NR	NR	NR	NR	0
TRIS	TP		NR	NR	NR	NR	NR	0
SSTS	TP		NR	NR	NR	NR	NR	0
ROD	1.000		0	1	0	0	NR	1
RMP	TP		NR	NR	NR	NR	NR	0
RAATS	TP		NR	NR	NR	NR	NR	0
PRP	TP		NR	NR	NR	NR	NR	0
PADS	TP		NR	NR	NR	NR	NR	0
ICIS	TP		NR	NR	NR	NR	NR	0
FTTS	TP		NR	NR	NR	NR	NR	0
MLTS	TP		NR	NR	NR	NR	NR	0
COAL ASH DOE	TP		NR	NR	NR	NR	NR	0
COAL ASH EPA	0.500		0	0	0	NR	NR	0
PCB TRANSFORMER	TP		NR	NR	NR	NR	NR	0
RADINFO	TP		NR	NR	NR	NR	NR	0
HIST FTTS	TP		NR	NR	NR	NR	NR	0
DOT OPS	TP		NR	NR	NR	NR	NR	0
CONSENT	1.000		0	0	0	0	NR	0
INDIAN RESERV	1.000		0	0	0	0	NR	0
FUSRAP	1.000		0	0	0	0	NR	0
UMTRA	0.500		0	0	0	NR	NR	0
LEAD SMELTERS	TP		NR	NR	NR	NR	NR	0
US AIRS	TP		NR	NR	NR	NR	NR	0
US MINES	0.250		0	0	NR	NR	NR	0
ABANDONED MINES	0.250		0	0	NR	NR	NR	0
FINDS	TP		NR	NR	NR	NR	NR	0
UXO	1.000		0	0	0	2	NR	2
DOCKET HWC	TP		NR	NR	NR	NR	NR	0
ECHO	TP		NR	NR	NR	NR	NR	0
FUELS PROGRAM	0.250		0	0	NR	NR	NR	0
CA BOND EXP. PLAN	1.000		0	0	0	0	NR	0
Cortese	0.500		0	0	0	NR	NR	0
CUPA Listings	0.250		0	0	NR	NR	NR	0
DRYCLEANERS	0.250		0	0	NR	NR	NR	0
EMI	TP		NR	NR	NR	NR	NR	0
ENF	TP		NR	NR	NR	NR	NR	0
Financial Assurance	TP		NR	NR	NR	NR	NR	0
HAZNET	TP		NR	NR	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
ICE	TP		NR	NR	NR	NR	NR	0
HIST CORTESE	0.500		0	0	0	NR	NR	0
HWP	1.000		0	0	0	0	NR	0
HWT	0.250		0	0	NR	NR	NR	0
MINES	0.250		0	1	NR	NR	NR	1
MWMP	0.250		0	0	NR	NR	NR	0
NPDES	TP	1	NR	NR	NR	NR	NR	1
San Bern. Co. Permit	0.250		2	4	NR	NR	NR	6
PEST LIC	TP		NR	NR	NR	NR	NR	0
PROC	0.500		0	0	0	NR	NR	0
Notify 65	1.000		0	0	0	0	NR	0
UIC	TP		NR	NR	NR	NR	NR	0
WASTEWATER PITS	0.500		0	0	0	NR	NR	0
WDS	TP		NR	NR	NR	NR	NR	0
WIP	0.250		0	0	NR	NR	NR	0
EDR HIGH RISK HISTORICAL RECORDS								
EDR Exclusive Records								
EDR MGP	1.000		0	0	0	0	NR	0
EDR Hist Auto	0.125		0	NR	NR	NR	NR	0
EDR Hist Cleaner	0.125		0	NR	NR	NR	NR	0
EDR RECOVERED GOVERNMENT ARCHIVES								
Exclusive Recovered Govt. Archives								
RGA LF	TP		NR	NR	NR	NR	NR	0
RGA LUST	TP		NR	NR	NR	NR	NR	0
- Totals --		1	4	18	0	2	0	25

NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

1
Target Property
Actual: 1217 ft.

REDLANDS DISTRIBUTION CENTER BUILDING 13
NORTHEAST CORNER OF ALABAMA STREET AND PALMETTO AVENUE
REDLANDS, CA 92374

NPDES **S117041705**
N/A

NPDES:

Npdes Number:	CAS000002
Facility Status:	Terminated
Agency Id:	0
Region:	8
Regulatory Measure Id:	445808
Order No:	2009-0009-DWQ
Regulatory Measure Type:	Enrollee
Place Id:	Not reported
WDID:	8 36C370295
Program Type:	Construction
Adoption Date Of Regulatory Measure:	Not reported
Effective Date Of Regulatory Measure:	07/17/2014
Expiration Date Of Regulatory Measure:	Not reported
Termination Date Of Regulatory Measure:	03/14/2016
Discharge Name:	Prologis LP
Discharge Address:	2817 E Cedar St Suite 200
Discharge City:	Ontario
Discharge State:	California
Discharge Zip:	91761
RECEIVED DATE:	Not reported
PROCESSED DATE:	Not reported
STATUS CODE NAME:	Not reported
STATUS DATE:	Not reported
PLACE SIZE:	Not reported
PLACE SIZE UNIT:	Not reported
FACILITY CONTACT NAME:	Not reported
FACILITY CONTACT TITLE:	Not reported
FACILITY CONTACT PHONE:	Not reported
FACILITY CONTACT PHONE EXT:	Not reported
FACILITY CONTACT EMAIL:	Not reported
OPERATOR NAME:	Not reported
OPERATOR ADDRESS:	Not reported
OPERATOR CITY:	Not reported
OPERATOR STATE:	Not reported
OPERATOR ZIP:	Not reported
OPERATOR CONTACT NAME:	Not reported
OPERATOR CONTACT TITLE:	Not reported
OPERATOR CONTACT PHONE:	Not reported
OPERATOR CONTACT PHONE EXT:	Not reported
OPERATOR CONTACT EMAIL:	Not reported
OPERATOR TYPE:	Not reported
DEVELOPER NAME:	Not reported
DEVELOPER ADDRESS:	Not reported
DEVELOPER CITY:	Not reported
DEVELOPER STATE:	Not reported
DEVELOPER ZIP:	Not reported
DEVELOPER CONTACT NAME:	Not reported
DEVELOPER CONTACT TITLE:	Not reported
CONSTYPE LINEAR UTILITY IND:	Not reported
EMERGENCY PHONE NO:	Not reported
EMERGENCY PHONE EXT:	Not reported
CONSTYPE ABOVE GROUND IND:	Not reported
CONSTYPE BELOW GROUND IND:	Not reported
CONSTYPE CABLE LINE IND:	Not reported

REDLANDS DISTRIBUTION CENTER BUILDING 13 (Continued) **S117041705**

CONSTYPE COMM LINE IND:	Not reported
CONSTYPE COMMERTIAL IND:	Not reported
CONSTYPE ELECTRICAL LINE IND:	Not reported
CONSTYPE GAS LINE IND:	Not reported
CONSTYPE INDUSTRIAL IND:	Not reported
CONSTYPE OTHER DESRIPTION:	Not reported
CONSTYPE OTHER IND:	Not reported
CONSTYPE RECONS IND:	Not reported
CONSTYPE RESIDENTIAL IND:	Not reported
CONSTYPE TRANSPORT IND:	Not reported
CONSTYPE UTILITY DESCRIPTION:	Not reported
CONSTYPE UTILITY IND:	Not reported
CONSTYPE WATER SEWER IND:	Not reported
DIR DISCHARGE USWATER IND:	Not reported
RECEIVING WATER NAME:	Not reported
CERTIFIER NAME:	Not reported
CERTIFIER TITLE:	Not reported
CERTIFICATION DATE:	Not reported
PRIMARY SIC:	Not reported
SECONDARY SIC:	Not reported
TERTIARY SIC:	Not reported
Npdes Number:	Not reported
Facility Status:	Not reported
Agency Id:	Not reported
Region:	8
Regulatory Measure Id:	476029
Order No:	Not reported
Regulatory Measure Type:	Construction
Place Id:	Not reported
WDID:	8 36C377233
Program Type:	Not reported
Adoption Date Of Regulatory Measure:	Not reported
Effective Date Of Regulatory Measure:	Not reported
Expiration Date Of Regulatory Measure:	Not reported
Termination Date Of Regulatory Measure:	Not reported
Discharge Name:	Not reported
Discharge Address:	Not reported
Discharge City:	Not reported
Discharge State:	Not reported
Discharge Zip:	Not reported
RECEIVED DATE:	07/28/2016
PROCESSED DATE:	08/17/2016
STATUS CODE NAME:	Active
STATUS DATE:	08/17/2016
PLACE SIZE:	13.3
PLACE SIZE UNIT:	Acres
FACILITY CONTACT NAME:	James Jachetta
FACILITY CONTACT TITLE:	LRP
FACILITY CONTACT PHONE:	949-400-4691
FACILITY CONTACT PHONE EXT:	Not reported
FACILITY CONTACT EMAIL:	jachetta@prologis.com
OPERATOR NAME:	Prologis
OPERATOR ADDRESS:	17777 Center Court Drive North Suite 100
OPERATOR CITY:	Cerritos
OPERATOR STATE:	California
OPERATOR ZIP:	90703

REDLANDS DISTRIBUTION CENTER BUILDING 13 (Continued) **S117041705**

OPERATOR CONTACT NAME:	James Jachetta
OPERATOR CONTACT TITLE:	LRP
OPERATOR CONTACT PHONE:	949-400-4691
OPERATOR CONTACT PHONE EXT:	Not reported
OPERATOR CONTACT EMAIL:	jachetta@prologis.com
OPERATOR TYPE:	Private Business
DEVELOPER NAME:	Prologis
DEVELOPER ADDRESS:	17777 Center Court Drive North Suite 100
DEVELOPER CITY:	Cerritos
DEVELOPER STATE:	California
DEVELOPER ZIP:	90703
DEVELOPER CONTACT NAME:	James Jachetta
DEVELOPER CONTACT TITLE:	LRP
CONSTYPE LINEAR UTILITY IND:	N
EMERGENCY PHONE NO:	Not reported
EMERGENCY PHONE EXT:	Not reported
CONSTYPE ABOVE GROUND IND:	N
CONSTYPE BELOW GROUND IND:	N
CONSTYPE CABLE LINE IND:	N
CONSTYPE COMM LINE IND:	N
CONSTYPE COMMERTIAL IND:	Y
CONSTYPE ELECTRICAL LINE IND:	N
CONSTYPE GAS LINE IND:	N
CONSTYPE INDUSTRIAL IND:	N
CONSTYPE OTHER DESRIPTION:	Not reported
CONSTYPE OTHER IND:	N
CONSTYPE RECONS IND:	N
CONSTYPE RESIDENTIAL IND:	N
CONSTYPE TRANSPORT IND:	N
CONSTYPE UTILITY DESCRIPTION:	Not reported
CONSTYPE UTILITY IND:	N
CONSTYPE WATER SEWER IND:	N
DIR DISCHARGE USWATER IND:	N
RECEIVING WATER NAME:	Santa Ana River, Prado Dam, Santa Ana River, Pacific Ocean
CERTIFIER NAME:	James Jachetta
CERTIFIER TITLE:	Vice President
CERTIFICATION DATE:	28-JUL-16
PRIMARY SIC:	Not reported
SECONDARY SIC:	Not reported
TERTIARY SIC:	Not reported
Npdes Number:	CAS000002
Facility Status:	Active
Agency Id:	0
Region:	8
Regulatory Measure Id:	476029
Order No:	2009-0009-DWQ
Regulatory Measure Type:	Enrollee
Place Id:	Not reported
WDID:	8 36C377233
Program Type:	Construction
Adoption Date Of Regulatory Measure:	Not reported
Effective Date Of Regulatory Measure:	08/17/2016
Expiration Date Of Regulatory Measure:	Not reported
Termination Date Of Regulatory Measure:	Not reported
Discharge Name:	Prologis
Discharge Address:	17777 Center Court Drive North Suite 100

REDLANDS DISTRIBUTION CENTER BUILDING 13 (Continued) **S117041705**

Discharge City:	Cerritos
Discharge State:	California
Discharge Zip:	90703
RECEIVED DATE:	Not reported
PROCESSED DATE:	Not reported
STATUS CODE NAME:	Not reported
STATUS DATE:	Not reported
PLACE SIZE:	Not reported
PLACE SIZE UNIT:	Not reported
FACILITY CONTACT NAME:	Not reported
FACILITY CONTACT TITLE:	Not reported
FACILITY CONTACT PHONE:	Not reported
FACILITY CONTACT PHONE EXT:	Not reported
FACILITY CONTACT EMAIL:	Not reported
OPERATOR NAME:	Not reported
OPERATOR ADDRESS:	Not reported
OPERATOR CITY:	Not reported
OPERATOR STATE:	Not reported
OPERATOR ZIP:	Not reported
OPERATOR CONTACT NAME:	Not reported
OPERATOR CONTACT TITLE:	Not reported
OPERATOR CONTACT PHONE:	Not reported
OPERATOR CONTACT PHONE EXT:	Not reported
OPERATOR CONTACT EMAIL:	Not reported
OPERATOR TYPE:	Not reported
DEVELOPER NAME:	Not reported
DEVELOPER ADDRESS:	Not reported
DEVELOPER CITY:	Not reported
DEVELOPER STATE:	Not reported
DEVELOPER ZIP:	Not reported
DEVELOPER CONTACT NAME:	Not reported
DEVELOPER CONTACT TITLE:	Not reported
CONSTYPE LINEAR UTILITY IND:	Not reported
EMERGENCY PHONE NO:	Not reported
EMERGENCY PHONE EXT:	Not reported
CONSTYPE ABOVE GROUND IND:	Not reported
CONSTYPE BELOW GROUND IND:	Not reported
CONSTYPE CABLE LINE IND:	Not reported
CONSTYPE COMM LINE IND:	Not reported
CONSTYPE COMMERTIAL IND:	Not reported
CONSTYPE ELECTRICAL LINE IND:	Not reported
CONSTYPE GAS LINE IND:	Not reported
CONSTYPE INDUSTRIAL IND:	Not reported
CONSTYPE OTHER DESRIPTION:	Not reported
CONSTYPE OTHER IND:	Not reported
CONSTYPE RECONS IND:	Not reported
CONSTYPE RESIDENTIAL IND:	Not reported
CONSTYPE TRANSPORT IND:	Not reported
CONSTYPE UTILITY DESCRIPTION:	Not reported
CONSTYPE UTILITY IND:	Not reported
CONSTYPE WATER SEWER IND:	Not reported
DIR DISCHARGE USWATER IND:	Not reported
RECEIVING WATER NAME:	Not reported
CERTIFIER NAME:	Not reported
CERTIFIER TITLE:	Not reported
CERTIFICATION DATE:	Not reported
PRIMARY SIC:	Not reported

REDLANDS DISTRIBUTION CENTER BUILDING 13 (Continued) **S117041705**

SECONDARY SIC:	Not reported
TERTIARY SIC:	Not reported
Npdes Number:	Not reported
Facility Status:	Not reported
Agency Id:	Not reported
Region:	8
Regulatory Measure Id:	445808
Order No:	Not reported
Regulatory Measure Type:	Construction
Place Id:	Not reported
WDID:	8 36C370295
Program Type:	Not reported
Adoption Date Of Regulatory Measure:	Not reported
Effective Date Of Regulatory Measure:	Not reported
Expiration Date Of Regulatory Measure:	Not reported
Termination Date Of Regulatory Measure:	03/14/2016
Discharge Name:	Not reported
Discharge Address:	Not reported
Discharge City:	Not reported
Discharge State:	Not reported
Discharge Zip:	Not reported
RECEIVED DATE:	07/01/2014
PROCESSED DATE:	07/17/2014
STATUS CODE NAME:	Terminated
STATUS DATE:	03/30/2016
PLACE SIZE:	27.42
PLACE SIZE UNIT:	Acres
FACILITY CONTACT NAME:	Scott Mulkay
FACILITY CONTACT TITLE:	Not reported
FACILITY CONTACT PHONE:	909-673-8730
FACILITY CONTACT PHONE EXT:	Not reported
FACILITY CONTACT EMAIL:	smulkay@prologis.com
OPERATOR NAME:	Prologis LP
OPERATOR ADDRESS:	2817 E Cedar St Suite 200
OPERATOR CITY:	Ontario
OPERATOR STATE:	California
OPERATOR ZIP:	91761
OPERATOR CONTACT NAME:	Scott Mulkay
OPERATOR CONTACT TITLE:	Vice President
OPERATOR CONTACT PHONE:	909-673-8700
OPERATOR CONTACT PHONE EXT:	Not reported
OPERATOR CONTACT EMAIL:	smulkay@prologis.com
OPERATOR TYPE:	Private Business
DEVELOPER NAME:	Prologis LP
DEVELOPER ADDRESS:	2817 E Cedar St Suite 200
DEVELOPER CITY:	Ontario
DEVELOPER STATE:	California
DEVELOPER ZIP:	91761
DEVELOPER CONTACT NAME:	Scott Mulkay
DEVELOPER CONTACT TITLE:	Vice President
CONSTYPE LINEAR UTILITY IND:	N
EMERGENCY PHONE NO:	Not reported
EMERGENCY PHONE EXT:	Not reported
CONSTYPE ABOVE GROUND IND:	N
CONSTYPE BELOW GROUND IND:	N
CONSTYPE CABLE LINE IND:	N

REDLANDS DISTRIBUTION CENTER BUILDING 13 (Continued) **S117041705**

CONSTYPE COMM LINE IND:	N
CONSTYPE COMMERTIAL IND:	Y
CONSTYPE ELECTRICAL LINE IND:	N
CONSTYPE GAS LINE IND:	N
CONSTYPE INDUSTRIAL IND:	Y
CONSTYPE OTHER DESRIPTION:	Not reported
CONSTYPE OTHER IND:	N
CONSTYPE RECONS IND:	N
CONSTYPE RESIDENTIAL IND:	N
CONSTYPE TRANSPORT IND:	N
CONSTYPE UTILITY DESCRIPTION:	Not reported
CONSTYPE UTILITY IND:	N
CONSTYPE WATER SEWER IND:	Y
DIR DISCHARGE USWATER IND:	N
RECEIVING WATER NAME:	Santa Ana River
CERTIFIER NAME:	Scott Mulkay
CERTIFIER TITLE:	Vice President
CERTIFICATION DATE:	01-JUL-14
PRIMARY SIC:	Not reported
SECONDARY SIC:	Not reported
TERTIARY SIC:	Not reported

DOD **NORTON AIR FORCE BASE (CLOSED)** **DOD** **CUSA143166**
Region **N/A**
NNW **NORTON AIR FORCE BASE (CL (County), CA**
1/8-1/4
1308 ft.

DOD:

Feature 1:	Air Force DOD
Feature 2:	Not reported
Feature 3:	Not reported
URL:	Not reported
Name 1:	Norton Air Force Base (Closed)
Name 2:	Not reported
Name 3:	Not reported
State:	CA
DOD Site:	Yes
Tile name:	CASAN_BERNARDINO

NPL **USAF NORTON AFB** **NPL** **1000417274**
Region **305 S TIPPECANOE AVE** **SEMS** **CA4570024345**
NW **SAN BERNARDINO, CA 92408** **CORRACTS**
1/8-1/4 **RCRA-TSDF**
1077 ft. **RCRA-SQG**
US ENG CONTROLS
US INST CONTROL
ROD
PADS

NPL:

EPA ID:	CA4570024345
Cerclis ID:	902760
EPA Region:	9
Federal:	Y
Final Date:	1987-07-22 00:00:00

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Site Score: 39.649999999999999
Latitude: 34.098059999999997
Longitude: -117.2372

Category Details:
NPL Status: Currently on the Final NPL
Category Description: Depth To Aquifer-> 50 And <= 100 Feet
Category Value: 80

NPL Status: Currently on the Final NPL
Category Description: Distance To Nearest Population-> 0 And <= 1/4 Mile
Category Value: 10

Site Details:
Site Name: NORTON AIR FORCE BASE (LNDFLL #2)
Site Status: Final
Site Zip: 92408
Site City: SAN BERNARDINO
Site State: CA
Federal Site: Yes
Site County: SAN BERNARDINO
EPA Region: 09
Date Proposed: 10/15/84
Date Deleted: Not reported
Date Finalized: 07/22/87

Substance Details:
NPL Status: Currently on the Final NPL
Substance ID: Not reported
Substance: Not reported
CAS #: Not reported
Pathway: Not reported
Scoring: Not reported

NPL Status: Currently on the Final NPL
Substance ID: U211
Substance: CARBON TETRACHLORIDE
CAS #: 56-23-5
Pathway: GROUND WATER PATHWAY
Scoring: 3

NPL Status: Currently on the Final NPL
Substance ID: U228
Substance: TRICHLOROETHYLENE (TCE)
CAS #: 79-01-6
Pathway: GROUND WATER PATHWAY
Scoring: 2

Summary Details:

Conditions at proposal October 15, 1984): Norton Air Force Base covers approximately 2,036 acres 58 miles east of Los Angeles near the City of San Bernardino, San Bernardino County, California. It is in a low-lying alluvial plain surroundedon the north and east by the San Bernardino Mountain Range. The base began operations in 1942 and has served as a major overhaul center for jet engines and the general repair of aircraft. Since 1962, the facility

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has served as a Military Airlift Command Base. In addition, Norton formerly had the responsibility for providing maintenance and logistics for liquid-fuel intercontinental ballistic missiles. Past ha ardous waste management practices may have contributed to existingcontamination problems throughout the base. The practices include burial of drums and other unspecified materials; disposal of waste oils, solvents, and paint residues into landfills, unlined pits, ponds, and drying beds; storage in leaking underground tanks; and spills of AVGAS, oils, solvents, PCBs, and acidic plating solutions. Industrial solvents have been used extensively on the base. Unknown quantities of spent solvents were disposed of in several base landfills.A well on the base has been contaminated with trichloroethylene TCE). The well water is currently being used in a blended system and is sampled quarterly to ensure that TCE is below the California State action level. The water is used by approximately ll,000 people who live and/or work on the base. Norton Air Force Base is participating in the Installation Restoration Program IRP), established in l978. Under this program, the Department of Defense seeks to identify, investigate, and clean up contamination from ha ardous materials. The Air Force has completed Phase I records search). Phase II remedial investigation) is underway. Status July 22, 1987): In November 1986, the California Regional Water Quality Control Board issued a Cleanup and Abatement Order requiring Norton to clean up one on-base area, the Industrial Waste Water Treatment Plant Sludge Drying Beds. Phase II-Stage 2 of the IRP was completed in December 1986. It focusedon characteri ation of the contamination at 18 on-base areas. More than 22 areas have been identified to date. Additional areas will be studied in Stage 3, scheduled to begin in the fall of 1987. Within the boundaries of this Federal facility, there are areas subject to the Subtitle C corrective action authorities of the Resource Conservation and Recovery Act RCRA). However, no such areas were included in scoring this specific site. Therefore, this Federal facility site isbeing placed on the Federal section of the NPL under the NPL/RCRA policy announced on September 8, 1983 48 FR 40662).

Site Status Details:
- NPL Status: Final
- Proposed Date: 10/15/1984
- Final Date: 07/22/1987
- Deleted Date: Not reported

Narratives Details:
- NPL Name: NORTON AIR FORCE BASE (LNDFLL #2)
- City: SAN BERNARDINO
- State: CA

SEMS:
- Site ID: 902760
- EPA ID: CA4570024345
- Federal Facility: Y
- NPL: Currently on the Final NPL
- Non NPL Status: Not reported

Following information was gathered from the prior CERCLIS update completed in 10/2013:
- Site ID: 0902760
- EPA ID: CA4570024345
- Facility County: SAN BERNARDINO
- Short Name: NORTON AIR FORCE BASE (LN

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Congressional District:	31
IFMS ID:	0978
SMSA Number:	6780
USGC Hydro Unit:	18070203
Federal Facility:	Federal Facility
DMNSN Number:	2003.00000
Site Orphan Flag:	N
RCRA ID:	Not reported
USGS Quadrangle:	Not reported
Site Init By Prog:	Not reported
NFRAP Flag:	Not reported
Parent ID:	Not reported
RST Code:	Not reported
EPA Region:	09
Classification:	Military Related
Site Settings Code:	SU
NPL Status:	Currently on the Final NPL
DMNSN Unit Code:	ACRE
RBRAC Code:	Not reported
RResp Fed Agency Code:	USAF
Non NPL Status:	Not reported
Non NPL Status Date:	/ /
Site Fips Code:	06071
CC Concurrence Date:	05/16/06
CC Concurrence FY:	2006
Alias EPA ID:	Not reported
Site FUDS Flag:	Not reported

CERCLIS Site Contact Name(s):

Contact ID:	9270192.00000
Contact Name:	Nadia Burke
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Contact Title:	Remedial Project Manager (RPM)
Contact Email:	Not reported

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Contact Title:	Site Assessment Manager (SAM)
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Contact ID:	13003858.00000
Contact Name:	Sharon Murray
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Contact Email:	Not reported

Contact ID:	13004003.00000
Contact Name:	Carl Brickner
Contact Tel:	Not reported
Contact Title:	Site Assessment Manager (SAM)
Contact Email:	Not reported

CERCLIS Site Alias Name(s):

Alias ID:	101
Alias Name:	AREA II LANDFILL

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Alias Address: GOLF COURSE
NORTON AFB, CA 92409
Alias ID: 201
Alias Name: NORTON AIR FORCE BASE (LANDFILL #2)
Alias Address: Not reported
CA
Alias ID: 202
Alias Name: NORTON AIR FORCE BASE
Alias Address: I-10-US 395
SAN BERNARDINO, CA 92408
Alias ID: 203
Alias Name: NORTON AIR FORCE BASE (LNDFLL #2)
Alias Address: I-10-US 395
SAN BERNARDINO, CA 92409
Alias ID: 9270149
Alias Name: NORTON USAF BASE
Alias Address: 63ABG/CC
NORTON AFB, CA 86023
Alias ID: 201
Alias Comments: PREVIOUS EPA ID# AZD 981 416 977
Site Description: The Base Closure team has worked closely with the City of Riverside to ensure that controls are in place to protect the public from exposure to contamination. The Air Force constructed a groundwater extraction and treatment remedy in 1994 and is currently operating two pump and treat systems which have treated over 90 million gallons of contaminated groundwater to date. Approximately 325 lbs. of TCE have been removed from the groundwater. Additionally, a soil vapor extraction system is currently operating and 6,247 lbs. of TCE have been removed from the contamination source area. Since 1994, the Air Force has excavated approximately 40,000 cubic yards of contaminated soils from various locations on the base which were then treated and disposed of on-site, or transported to an off site disposal facility. The Air Force also closed numerous underground storage tanks and excavate and treated contaminated soil using bioremediation technology in 1996. An investigation of alleged radiological contamination was conducted and results showed that elevated levels of radionuclides in groundwater were caused by naturally occurring uranium. In 1996, the Air Force removed a waste line contaminated with radium paint residue and another industrial waste line. A JP-4 aircraft fuel system which was not contaminated will be salvaged for future use by the airport.In 1980, DOD issued a policy requiring identification of hazardous waste sites. In 1982, Norton issued the Phase I Records Search. In 1985, the site issued the Phase II Problem Confirmation Study. In June 1989, after various investigations, the Air Force signed the Norton AFB Federal Facility Agreement. In November 1990, Norton AFB began the Central Base Area (CBA) OU Groundwater Investigation to define the extent of the plume. In 1991, through a removal action, TCE-contaminated soil was treated onsite. In early 1993, the Air Force issued a draft RI, FS and proposed plan. In June 1992, the Air Force began a treatability test of the ground water pump and treat system. In 1993, Norton AFB issued the Final FS and Plan.The 2,003-acre Norton AFB is located in San Bernardino County, California (40th Congressional District), approximately 65 miles east of Los Angeles. The site is bounded by the Santa Ana River to the south, and other adjacent areas are used for residential, industrial, and agricultural purposes. Operations at the site began in 1942, and the facility served as a major overhaul center for jet engines and the general repair of aircraft. The site formerly had the responsibility of providing maintenance and logistics for liquid-fuel intercontinental ballistic missiles. There are more than 20 areas of contamination on the base including two landfills, six discharge areas, four chemical pits, a fire training area, a

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fuel spill area, a polychlorinated biphenyl (PCB) spill area, a chemical spill area, two waste storage areas, an underground storage area, and a low-level radioactive waste burial site. Soil contaminants included PCBs, trichloroethylene (TCE), petroleum hydrocarbons, metals such as lead and polycyclic aromatic hydrocarbons. An off-site groundwater plume (TCE) has impacted several municipal drinking water wells. Norton AFB was closed by the Department of Defense in March 1994, based on the legislative requirements in the Base Realignment and Closure Act of 1990. Consistent with the reuse alternatives identified in the Final Environmental Impact Statement, the Base is being redeveloped as an airport with mixed non-aviation, light industrial land use. Norton Air Force Base is located in the city of San Bernardino, San Bernardino County, California, 55 miles east of Los Angeles and 60 miles west of Palm Springs. The main surface water features near the site are City Creek, Warm Creek, the Twin Creek flood control channel, and the Santa Ana River, which flows southwest along the southern base boundary. The aquifer system beneath the site is part of the Bunker Hill hydrologic basin. Drinking water is derived from the middle and lower water-bearing zones. The site is classified as residential and light industrial. Adjacent properties includes area of residences, light and heavy industry, and agriculture. The population of the county is 1,418,380. The site was activated in March 1942 as an engine repair center for Air Force, U. S. Navy, and private industry aircraft. The site became a Military Airlift Command base in 1966. In 1968, the Aerospace Audiovisual Services established its headquarters at the base. The site also provided airlift and sustenance capabilities for air and combat units world-wide. Solvents, specifically TCE, were used in servicing aircraft from 1940s to the early 1980s. Former waste disposal, handling, and discharge practices have resulted in the contamination of soil and the upper water-bearing zone of a drinking water aquifer. The base was officially added to the U.S. EPA National Priorities List (NPL) on July 22, 1987. The U.S. EPA, California Department of Toxic Substances Control (DTSC), and the U.S. Air Force signed an interagency agreement, known as the Norton AFB Federal Facility Agreement (FFA) on June 29, 1989, which governs the conduct of environmental investigation and cleanup activities. The Air Force, U.S. EPA, DTSC, and the Regional Water Quality Control Board (RWQCB) Santa Ana Region comprise the Base Realignment and Closure (BRAC) Cleanup Team (BCT), with the Air Force serving as lead agency. The base has been subdivided into six separate areas for purposes of investigation and description of base activities. Since closure and redevelopment of portions of the base, many streets have been renamed. -The Central Base Area (CBA), which reflects the western one-third of the former base, was the most developed portion of the base and included the majority of offices, warehouses, on-base housing, engineering yards, and aircraft repair facilities. -The former Ballistic Missile Organization (BMO) complex is located south of the CBA and across Mill Street. The former BMO complex has been deeded to the Inland Valley Development Agency and a portion is occupied by the Defense Finance and Accounting Service. -The airfield includes the runways, ramps, aircraft parking, and hangars used for aircraft repair. The airfield covers the eastern two-thirds of the former base. -The Northeast Base Area (NBA) is located north of the airfield and represents the portion of the base with the oldest buildings. The original aircraft hangars and repair facilities are located within the NBA, as well as the former base Landfill No. 2. -The Golf Course Area (GCA) is located south of the airfield and is the current site of the Palm Meadows Golf Course. Prior to construction of the golf course, the GCA was used as a landfill (IRP Site 10), liquid waste disposal (IRP Site 1), a quartermaster's salvage yard, and chemical warfare training area, among other activities. -The former industrial waste treatment plant (IWTP) facility is located south of the GCA and was used for the treatment of liquid wastes generated as part of aircraft maintenance and

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repainting. Several investigations were conducted from 1982 to date. The 1982 to 1988 investigations resulted in identification of 22 Installation Restoration Program (IRP) sites. During closure of the base, additional records investigations resulted in identification of 73 AOCs. Contamination at the Small Arms Range (SAR) and the pipeline excavation at Building 752 was identified during cleanup actions performed at these sites. OU2: Site Specific Information IRP Site 1 - IRP Site 1 is in the GCA and was the location of former unlined lagoons used from 1950 to 1960 for the disposal of liquid waste generated during aircraft repair. During the 1960s, a portion of the golf course was constructed over the site without removing all industrial waste. The Remedial Investigation (RI) identified soils contaminated with paints, solvents, oil, fuels, and solids that had been washed into the industrial waste system. Chlorobenzene, 1,2-dichlorobenzene (DCB), and 1,4-DCB exceeded industrial PRGs. An Engineering Evaluation/Cost Analysis (EE/CA) identified removal of contaminated soil to a depth of approximately 30 feet below ground surface (bgs), backfilling with clean soil, and restoring the site as a portion of a fairway and green. A total of 20,325 tons of contaminated soil was excavated from an area of approximately 25,000 square feet, to the top of the perched-zone groundwater at a depth of approximately 29 feet bgs. The excavation was located next to a berm that supports the airfield perimeter road. Based on confirmation sampling results the contamination extended beneath the perimeter road. For technical and implementability reasons, the deep and lateral contamination was not removed. The area of affected soil left in place covers approximately 3,800 square feet. IRP Site 1 is part of the active golf course, and the property is currently zoned industrial/commercial by the city of San Bernardino. The projected long-term use of the site is expected to be commercial/industrial-related options for the property. IRP Site 2 - IRP Site 2 is located in the northeast corner of former Norton AFB and is the location of a former base landfill used between 1958 and 1980. Originally, it covered approximately 31 acres and was used for the disposal of general refuse, office waste, industrial waste, and industrial waste treatment plant (IWTP) sludge. Under CERCLA, the presumptive remedy for landfills is to leave waste in place and to provide an appropriate containment system. Under the presumptive remedy guidelines, various cover systems and associated gas control systems were evaluated in an EE/CA for IRP Site 2, and a natural soil cover was selected with an appropriate surface water control system. Because landfill gas (e.g., methane, PCE, trichloroethene [TCE], and vinyl chloride) was present, a landfill gas control system was also required. The cover, surface water control, and gas control systems were described in an Action Memorandum (AM). The design for the landfill has been implemented with consolidation into a smaller footprint and construction of the landfill cover and gas collection/control systems completed in December 1998 and accepted by the BRAC Cleanup Team (BCT) in February 1999. Site 2 is a closed landfill, and the property is currently zoned industrial/commercial by the city of San Bernardino. The projected long-term use of the site is expected to be passive open space. IRP Site 5 - IRP Site 5 served as the training area for fire control and abatement exercises from the late 1950s through the 1970s. Site 5 is in the southern portion of the former base, east of the golf course. Fire training exercises involved floating a layer of oil, fuel, or other combustible material on a layer of water and repeatedly igniting and extinguishing the material. RI results showed the site to contain metals (cadmium, copper, lead, and zinc) and dioxins in near-surface soils (to 10 feet bgs) and fuels (benzene, toluene, ethylbenzene, xylenes [BTEX]), solvents, and PAHs in deeper soils up to 40 feet bgs. The EE/CA and subsequent AM for IRP Site 5 selected soil vapor extraction (SVE) for remediation of fuel contamination, excavation followed by stabilization of the metals/dioxin-contaminated soil, and excavation and disposal of the PAH-contaminated soil. This removal action was

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completed during 1998 and involved an area of approximately 100,000 square feet. Excavation was performed to a maximum depth of 13 feet bgs, and confirmation samples were taken on the sidewalls and bottom of the excavation. The SAR impact berm adjacent to IRP Site 5 was also removed during the Site 5 removal action. The SVE component of the remedy removed 22,600 pounds of hydrocarbons. The SVE system was operated from January 10, 1996, until July 10, 1997. The effectiveness of the SVE system was assessed through confirmation soil boring samples and vadose zone leaching modeling. The model simulations indicated that the SVE removal adequately addressed the hydrocarbon contamination and was protective of groundwater. The soil excavation was performed in two phases. The first phase consisted of the removal of 21,104 tons of contaminated soil and 4,589 tons of rock and debris. This material was transported to the IRP Site 2 landfill. The lead in the contaminated soil was stabilized using 15 percent (by weight) Portland cement to meet State of California nonhazardous waste criteria. The soil that met nonhazardous criteria was used as foundation material for the landfill cap. The material not meeting the California nonhazardous waste criteria (1,443 tons) met federal nonhazardous waste criteria and was shipped to Browning Ferris Industries (BFI) landfill in La Paz, Arizona, for disposal. The second phase involved excavation of 3,496 tons of contaminated soil, stabilized with 15 percent (by weight) Portland cement, which was shipped to the BFI landfill in Arizona for disposal as an RCRA nonhazardous waste. The excavation area was backfilled with clean soil to the level of the former topographic grade. No groundwater contamination is associated with IRP Site 5. The site is being used for storage of golf course landscape waste prior to off-site disposal, and the property is currently zoned industrial/commercial by the city of San Bernardino. The projected long-term use of the site is expected to be industrial/commercial-related. Small Arms Range - The SAR was located immediately adjacent to IRP Site 5 and historically included an impact berm. The berm was contaminated by lead projectiles as a result of small arms practice, and a removal action was addressed in a work plan. Because the berm was contiguous with Site 5, portions of the berm were removed during the Site 5 removal action. A total of 11,478 tons of material was removed from the SAR, including 210 tons of bullet fragments and rock, classified as RCRA hazardous waste, and disposed at the Laidlaw Environmental Services landfill in Westmoreland, California. Nonhazardous waste, including 128 tons of rock and debris and 9,124 tons of soil, was placed at the IRP Site 2 landfill. The remaining 2,106 tons of soil were stabilized with 15 percent (by weight) Portland cement. This material did not meet California nonhazardous waste criteria and was shipped to the BFI landfill in Arizona for disposal. Confirmation samples were collected, and lead was detected above the residential PRG at one location. Following completion of the soil removal action, much of the remaining portion of the SAR impact berm was pushed into the Site 5 excavation as fill. The soil from the berm was then covered with soil imported from the adjacent riverbed to bring the Site 5 area back to its original grade. The firing line area of the SAR remains as a ground depression and is not being used. Projected long-term plans for the area are industrial/commercial-related use. The firing line area remains as a ground depression and is not being used. Projected long-term use of the site is expected to be commercial/industrial-related options for the property. IRP Site 7 - IRP Site 7 is located in the southeast corner of the former IWTP compound. Although Site 7 is part of this CERCLA ROD, as part of the former IWTP, Site 7 also must be closed as part of the RCRA corrective action termination of the interim status facility (two separate closure processes). The site included 12 concrete-walled, unlined sludge-drying beds, covering approximately 17,280 square feet. The beds were used to dry sludge generated at the IWTP until 1987. During removal of the sludge, it was temporarily stored at

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the northeast corner of the site. The former waste pile appears to have been located on what is now highly weathered asphalt pavement. Physical removal and disposal of the concrete-walled sludge-drying beds and surface soils were completed in March 2004, and the CERCLA closure report is in review. The site is currently not being used. The property is zoned industrial/commercial by the city of San Bernardino. Projected long-term use of the site is expected to be commercial/industrial-related options for the property. IRP Site 10 - Site 10 is located along the southern base boundary in the eastern portion of the golf course. Landfill No. 1 was used by the Air Force from 1943 to 1958, primarily for disposal of general refuse, which was apparently burned at the site. The 1984 to 1995 investigations, which included sampling for metals, pesticides, PAHs, and PCBs, indicated the presence of metals in ash (primarily chromium and lead) above the residential soil PRGs in shallow soil (0 to 2 feet bgs). Based on the RI data for metals, an RA for Site 10 was evaluated in an EE/CA. Because contamination was not significantly above industrial soil cleanup goals, the Air Force elected to establish a deed restriction for the site. However, the ecological risk assessment (ERA) determined that the contamination was localized, and concentrations of chromium and lead at the hot spots posed a significant risk to plants and animals. The Air Force responded by developing a hot-spot removal plan for Site 10. A removal action was performed at four hot spot locations that resulted in excavation of 340 cubic yards of contaminated soil. Approximately 224 cubic yards of contaminated soil were disposed at the Site 2 landfill, and 116 cubic yards were disposed off site. Physical removal and disposal of dioxin-contaminated soil were completed in 2004, and the closure report is in preparation. The northern portion of the site is used as a golf course fairway, and the property is currently zoned industrial/commercial by the city of San Bernardino. Projected long-term use of the site north of the base boundary is expected to be industrial-related. The southern portion of the site includes habitat for two endangered species, and is bounded by a man-made flood protection levee. The southern portion is off base and is zoned open space with unrestricted public access. IRP Site 17 - IRP Site 17 is located in the southwestern corner of the former IWTP compound. Although Site 17 is part of the CERCLA ROD, as part of the former IWTP, Site 17 is undergoing RCRA closure as part of the corrective action termination of the RCRA interim status facility (two separate processes). The former IWTP treated industrial wastewater from the repair of military aircraft from 1960 to 1993. Most of the IWTP facility was removed in 1995. IRP Site 17 is comprised of two connected brick-lined sumps that the Air Force constructed during the early 1960s for the purpose of burning waste fuels and solvents. The Air Force initiated burning, but in 1961 permission for continued burning was denied by local air quality authorities. Therefore, the sumps were used for waste destruction for a limited time but were used primarily as holding tanks for the IWTP and as an oil/water separator until 1985. The area immediately south of the sumps was also used for storage of solvent and plating wastes contained in 55-gallon drums. Site 17 was subject to a series of site investigations initiated in 1984. Site investigations have identified a zone of fine-grained soils, 25 to 55 feet bgs, that underlie and overlie two zones of coarser-grained soils. An EE/CA prepared for Site 17 presented a detailed analysis of the subsurface conditions at the site. In summary, there are two water-bearing zones below the Site 17 area. The first zone is a perched groundwater layer that is supported by a layer of finer-grained silts and clays extending from approximately 25 to 55 feet bgs. Collectively, the zone of finer-grained soils starting at 25 feet bgs and the perched groundwater supported by the finergrained soils is termed the "perched zone." Below the zone of finer-grained soil material is the second zone, termed the "upper aquifer." The upper aquifer comprises sands and gravels that extend to at least 500 feet below the site. During the early 1980s, the top of the upper aquifer

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was in contact with the zone of finer-grained soil material at 50 feet bgs. Between 1984 and 1988, the elevation of the upper aquifer dropped 7 to 10 feet, below the soil layer of the perched zone. Between 1988 and 1993, the water elevation decreased another 15 to 25 feet, resulting in several dry monitoring wells. The depth to groundwater in the upper aquifer now ranges from approximately 75 to 90 feet bgs (depending on seasonal fluctuations) in the area of IRP Site 17. The perched-zone groundwater contamination is assumed to have resulted from the former chemical waste storage at Site 17. The source may have been from the drums of waste solvents once stored at Site 17 or leakage from the Site 17 sumps. Due to the sandy nature of the surface soils, the solvent migrated downward to the perched zone, where further downward migration was retarded by the finer-grained soils. The two sumps, which were part of the IWTP, were removed in 2003, and the CERCLA closure report is in preparation. The site is currently not being used. The property is zoned industrial/commercial by the city of San Bernardino. Projected long-term use of the site is expected to be as industrial/commercial-related options for the property. IRP Site 19 - Site 19, located in the CBA to the south of Building 763, was formerly used as a drum storage area and aircraft washing facility. Drums of fuels, oils, electroplating solutions, TCE and trichloroethane (TCA) sludge, and cyanide waste solutions were stored on an unpaved fenced lot. The area south of Building 763 was the general location of the original aircraft washing facility. This facility was removed in 1966, and the area was resurfaced with 20 inches of concrete to become part of the flight line. Site 19 was investigated during the 1984 to 1986 IRP and the 1991 to 1993 RIs. PCBs were detected in excess of residential PRGs, primarily in the upper 6 inches of soil beneath the concrete runway apron. An interim ROD was developed for IRP Site 19 to identify a use restriction documenting the presence of the contamination. This ROD and its decision for IRP Site 19 will supersede the interim ROD. No groundwater contamination is associated with this site. The long-term future land use for Site 19 is to retain the runway apron for use by the San Bernardino International Airport Authority (SBIAA) airfield. AOC 4 - Building 301, located in the NBA near U and 102nd streets, was an equipment and vehicle washing facility. During the 1950s, the building was part of a spray painting facility. At the time of base closure (1994), it was used by civilian auto hobby personnel. AOC 4 consists of the foundation of former Building 301, an adjacent washing slab, and adjacent soil areas. A separator/dosing chamber was removed and its location evaluated as part of the basewide underground storage tank (UST) program. A solids collection pit and two trench drains were identified during the site investigation. The concrete washing slab was heavily stained, particularly near the trench drains. Drums of oil and other materials were stored in sheds along the southern drain line. A 4-foot-by 4-foot-wide area surrounded by a 6-foot-tall chain-link fence is located to the north of the washing slab and may represent the location of a former waste receptacle. The area is capped with a wooden cover, and the material under the cover may be fill. The area of affected soil is approximately 40 feet by 120 feet. No groundwater contamination is associated with this AOC. AOC 4 is on a parcel that was transferred by SBIAA to the San Bernardino County Fire Department under a Federal Aviation Administration (FAA) covenant that allows only industrial, commercial, or aircraft support usage. The Fire Department has refurbished Building 302 for office use and vehicle repair and is using the area west of the building (north of AOC 4) as a household hazardous waste collection point. Remedial alternatives were evaluated in an EE/CA. The Air Force identified ICs as the preferred alternative in the AM. Paved areas south of Building 302 are being used for vehicle and equipment storage. The western half of AOC 4 is covered by grassy weeds, while the eastern half is paved and includes a covered storage area. The Fire Department plans to use the paved area for equipment storage, while there are

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no plans for use of the grassy area of AOC 4 outside of the fenced storage yard. The property is currently zoned industrial/commercial by the city of San Bernardino. Projected long-term use of the site is expected to be industrial/commercial-related options for the property. AOC 18 - Former Buildings 451 and 452 were located in the CBA, east of Tippecanoe Avenue and north of Harry Sheppard Boulevard. Building 451 was a former garage and gas station in operation from 1942 to the late 1960s or early 1970s; Building 452 was the site of USTs. A 1942 site drawing indicates five 12,000-gallon gasoline USTs, a fueling station, and an oil storage house (Buildings 452, 451, and 450, respectively), although a 1967 site drawing indicates only two 12,000-gallon USTs were present. All structures and USTs have been removed. AOC 18 was investigated during the confirmation study (CS) and expanded source investigation (ESI). The soil contamination covers an area of approximately 600 feet. Prior to the initial redevelopment activities, AOC 18 was covered by an asphalt-paved parking lot that served the adjacent base post office. From January 2000 to 2004, the surface of the AOC was bare earth facilitating aeration (volatilization) of the fuel-related chemicals. The site is now paved with asphalt as part of the Mattel warehouse and distribution center. Remedial alternatives were previously evaluated in an EE/CA. The Air Force identified ICs in the AM as the preferred RA. AOC 18 is on property that was transferred to Inland Valley Development Agency (IVDA). IVDA has demolished all structures in the vicinity of AOC 18 and removed all pavement in preparation for redevelopment. The property is currently zoned industrial/commercial by the city of San Bernardino. Projected long-term use of the site is expected to be industrial/commercial-related options for the property. AOC 33 - Building 747, located in the southeastern corner of the CBA, was one of the primary industrial facilities at Norton AFB. Although AOC 33 is part of this CERCLA ROD, as part of the former Industrial Waste Line (IWL), it is also part of the RCRA corrective action termination of the interim status facility (two separate closure processes). The building was constructed in 1942 and renovated in 1944, 1953, and 1955. From 1942 to 1966, the building supported operations for the repair and overhaul of engines and other aircraft parts. Building 747 was converted into a freight terminal facility in 1966, and the building served as offices and storage facilities. Subsurface soil contamination at AOC 33 is associated with sumps (some recently removed) buried beneath an asphalt access road immediately south of Building 747. The sump portion of AOC 33 is part of the IWL that is undergoing RCRA corrective action termination as an interim status facility. AOC 33 was investigated during the CBA OU RI, CS, and the ESI. No groundwater contamination is associated with AOC 33. Remedial alternatives were evaluated in an EE/CA. The Air Force identified a deed restriction in the AM as the preferred RA. The sump and surrounding soil were removed in 2003. The CERCLA closure report is in preparation. AOC 33 is on property that has been leased by the Air Force to SBIAA. Building 747 has been subleased by SBIAA to several entities for commercial use. The property is currently zoned industrial/commercial by the city of San Bernardino. Projected long-term use of the site is expected to be industrial/commercial-related options for the property, including aviation support. AOC 39 - AOC 39 is located west of Club House Drive and south of the southern perimeter road, where an underground storm drainpipe empties into a grass-covered fairway drainage ditch. The discharge serves storm drain lines that originate along the southern flight line area. An oil/water separator removes oil prior to discharge into the ditch. The discharge point possibly received waste from the flight line and Buildings 695, 763, and 795. Aerial photographs from the 1950s and later indicate that fluids from aircraft repair and fueling emptied into the storm drain system. A 1982 interview record indicated that flight line oils were occasionally observed in the golf course drain. No groundwater contamination is associated with AOC 39. Remedial alternatives of AOC 39 were

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previously evaluated in an EE/CA. The Air Force selected deed restrictions in the AM as the preferred RA. AOC 39 was evaluated further in the BWFS. AOC 70 - AOC 70 was a percolation pond used for treated IWTP effluent during the mid-1980s to 1993. Although AOC 70 is part of this CERCLA ROD, as part of the former IWTP, AOC 70 also must be closed as part of the RCRA corrective action termination of the interim status facility (two separate closure processes). On December 31, 2004, DTSC-RCRA acknowledged that AOC 70 was clean closed. The 0.25-acre pond site was constructed upon sandy soils that readily facilitated infiltration of the treated effluent into the subsurface. There was no outflow from the pond. The pond dried out when the IWTP ceased functioning in mid-1993. AOC 70 was investigated under the CS Addendum No. 2. RAs were evaluated in an EE/CA. The Air Force selected a soil removal action in the AM as the preferred remedy. The Air Force completed the removal action in 1997 and backfilled the site with certified clean fill. No groundwater contamination is associated with the AOC. AOC 70 is within a parcel of the base that has been leased to IVDA. The property is currently zoned industrial/commercial by the city of San Bernardino. Projected long-term use of the site is expected to be as industrial/commercial-related options for the property consistent with city of San Bernardino zoning. Building 752 - Building 752 is located in the eastern portion of the CBA adjacent to the airfield. The building was used during the 1940s and 1950s for the repair of aircraft instruments, including painting instrument dials with radio-luminescent paint containing radium-226. The room used for painting dials was sealed in 1955 when painting operations ceased. During the period that painting occurred, paint waste was flushed into a sink connected to the sanitary sewer. Investigations of the sink and piping system showed that they were contaminated by radium-226. This included the piping system outside of the building to where it connected with the sanitary sewer. Cleanup of the interior piping system and interior surfaces of Building 752 were handled under separate programs. Cleanup of soils affected by radium-226 waste outside of Building 752 are being addressed in this ROD. To determine whether soils outside of the building had been affected by the discharge of paint waste into the sanitary sewer pipe, the pipe was excavated for visual characterization and soil sampling. The pipe was constructed of 6-inch vitreous clay in 3-foot sections. Two soil samples collected as part of the initial site characterization were found to contain radium-226 at 169 ?10 picoCuries per gram (pCi/g) and 1,940 ?20 pCi/g (background is 1.41 pCi/g). The entire waste line piping was surveyed with a field instrument and found to exhibit gamma radiation above background levels. Excavation of the piping system was conducted July 23 through August 1, 1996. The excavation was approximately 3 feet deep where the waste line exited the southwest corner of the building, and extended to a depth of 9 feet where the waste line entered the sanitary sewer. All excavated soil and piping was disposed off site. Before backfilling the trench, a new waste line was installed between the building and the sanitary sewer. After backfilling the trench, asphalt pavement was placed over the excavation. As part of the overall radium-226 investigation of the Building 752 area, additional radium-226 contamination was discovered in an area immediately west of the building. Building drawings from the 1950s indicate a wooden loading dock attached to the building over the affected area. In February 2001, the loading dock area was sampled for radium-226. The investigators determined that the area of concern is 11 by 55 feet, with depth of contamination between 1 and 4 feet bgs. The estimated volume of affected soil is 1,400 cubic feet. Radium-226 contaminated soil was removed in 2004. The closure report is in preparation. All contaminated soil will be properly disposed. Currently the site is not in use. The property is currently zoned industrial/commercial by the city of San Bernardino. Projected long-term use of the building and surrounding area is expected to be industrial/commercial-related options for the property (airfield

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support). Northeast Base Area PCE Plume - The NBA has two PCE plumes, one in the eastern portion (east PCE plume) where the former Site 2 landfill is situated, and a smaller plume in the central portion (west PCE plume). Only the west PCE plume has been above the maximum contaminant level (MCL) for PCE since April 2003. The average gradient in the NBA has been observed to fluctuate between a low of 0.004 foot per foot (October 2003) and a high of 0.039 foot per foot (April 1996). Seasonal variation remains relatively constant. The source of the contamination contributing to the NBA west PCE plume is not believed to be associated with IRP Site 2. PCE concentrations are higher in the west plume than those in the east plume, whereas they would be expected to be less due to contaminant dispersal. The groundwater flow direction in the NBA is to the west to west-northwest. Groundwater quality data for the NBA plume wells do not indicate significant movement of the plumes, either horizontally or vertically. The property overlying the NBA plume is zoned industrial/commercial by the city of San Bernardino. The projected long-term use for Site 2, which overlies the east plume, is expected to be passive open space or potentially a long-term, open storage area. The projected long-term use for the property over the west plume is industrial/commercial, possibly warehousing. A Record of Decision (ROD) addressing Operable Unit 2 (OU2) was completed in September of 2005.

CERCLIS Assessment History:

Action Code:	001
Action:	DISCOVERY
Date Started:	/ /
Date Completed:	08/01/80
Priority Level:	Not reported
Operable Unit:	SITEWIDE
Primary Responsibility:	Federal Facilities
Planning Status:	Not reported
Urgency Indicator:	Not reported
Action Anomaly:	Not reported

Action Code:	001
Action:	PRELIMINARY ASSESSMENT
Date Started:	/ /
Date Completed:	04/01/84
Priority Level:	Low priority for further assessment
Operable Unit:	SITEWIDE
Primary Responsibility:	Federal Facilities
Planning Status:	Not reported
Urgency Indicator:	Not reported
Action Anomaly:	Not reported

Action Code:	001
Action:	SITE INSPECTION
Date Started:	/ /
Date Completed:	04/01/84
Priority Level:	Higher priority for further assessment
Operable Unit:	SITEWIDE
Primary Responsibility:	Federal Facilities
Planning Status:	Not reported
Urgency Indicator:	Not reported
Action Anomaly:	Not reported

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Action Code: 001
Action: PROPOSAL TO NATIONAL PRIORITIES LIST
Date Started: / /
Date Completed: 10/15/84
Priority Level: Not reported
Operable Unit: SITEWIDE
Primary Responsibility: Federal Facilities
Planning Status: Not reported
Urgency Indicator: Not reported
Action Anomaly: Not reported

Action Code: 001
Action: FINAL LISTING ON NATIONAL PRIORITIES LIST
Date Started: / /
Date Completed: 07/22/87
Priority Level: Not reported
Operable Unit: SITEWIDE
Primary Responsibility: Federal Facilities
Planning Status: Not reported
Urgency Indicator: Not reported
Action Anomaly: Not reported

Action Code: 001
Action: HAZARD RANKING SYSTEM PACKAGE
Date Started: / /
Date Completed: 06/01/88
Priority Level: Not reported
Operable Unit: SITEWIDE
Primary Responsibility: EPA Fund-Financed
Planning Status: Not reported
Urgency Indicator: Not reported
Action Anomaly: Not reported

Action Code: 001
Action: INTERAGENCY AGREEMENT NEGOTIATIONS
Date Started: 05/05/87
Date Completed: 06/29/89
Priority Level: Not reported
Operable Unit: SITEWIDE
Primary Responsibility: Federal Enforcement
Planning Status: Primary
Urgency Indicator: Not reported
Action Anomaly: Not reported

Action Code: 001
Action: FEDERAL INTERAGENCY AGREEMENT
Date Started: 05/05/87
Date Completed: 06/29/89
Priority Level: Not reported
Operable Unit: SITEWIDE
Primary Responsibility: Federal Enforcement
Planning Status: Primary
Urgency Indicator: Not reported

USAF NORTON AFB (Continued) **1000417274**

Action Anomaly: Not reported

Action Code: 001
Action: FEDERAL FACILITY REMOVAL
Date Started: 01/04/91
Date Completed: 04/08/92
Priority Level: Cleaned up
Operable Unit: SITEWIDE
Primary Responsibility: Federal Facilities
Planning Status: Primary
Urgency Indicator: Not reported
Action Anomaly: Not reported

Action Code: 001
Action: FEDERAL FACILITY REMEDIAL INVESTIGATION/FEASIBILITY STUDY
Date Started: 06/29/89
Date Completed: 11/24/93
Priority Level: Not reported
Operable Unit: CENTRAL BASE AREA
Primary Responsibility: Federal Facilities
Planning Status: Primary
Urgency Indicator: Not reported
Action Anomaly: Not reported

Action Code: 001
Action: RECORD OF DECISION
Date Started: / /
Date Completed: 11/24/93
Priority Level: Not reported
Operable Unit: CENTRAL BASE AREA
Primary Responsibility: Federal Facilities
Planning Status: Primary
Urgency Indicator: Not reported
Action Anomaly: Not reported

Action Code: 001
Action: FEDERAL FACILITY REMEDIAL DESIGN
Date Started: 11/24/93
Date Completed: 09/16/94
Priority Level: Not reported
Operable Unit: CENTRAL BASE AREA
Primary Responsibility: Federal Facilities
Planning Status: Primary
Urgency Indicator: Not reported
Action Anomaly: Not reported

Action Code: 001
Action: ENGINEERING EVALUATION/COST ANALYSIS
Date Started: / /
Date Completed: 03/29/96
Priority Level: Not reported
Operable Unit: BASEWIDE
Primary Responsibility: Federal Facilities

USAF NORTON AFB (Continued) **1000417274**

Planning Status: Not reported
Urgency Indicator: Not reported
Action Anomaly: Not reported

Action Code: 001
Action: FEDERAL FACILITY REMEDIAL ACTION
Date Started: 09/16/94
Date Completed: 07/26/96
Priority Level: Not reported
Operable Unit: CENTRAL BASE AREA
Primary Responsibility: Federal Facilities
Planning Status: Primary
Urgency Indicator: Not reported
Action Anomaly: Not reported

Action Code: 017
Action: FEDERAL FACILITY REMOVAL
Date Started: 09/20/96
Date Completed: 11/15/96
Priority Level: Not reported
Operable Unit: BASEWIDE
Primary Responsibility: Federal Facilities
Planning Status: Not reported
Urgency Indicator: Not reported
Action Anomaly: Not reported

Action Code: 006
Action: FEDERAL FACILITY REMOVAL
Date Started: 03/25/96
Date Completed: 04/22/97
Priority Level: Partially Cleaned up
Operable Unit: BASEWIDE
Primary Responsibility: Federal Facilities
Planning Status: Not reported
Urgency Indicator: Not reported
Action Anomaly: Not reported

Action Code: 003
Action: RECORD OF DECISION
Date Started: / /
Date Completed: 06/25/97
Priority Level: Not reported
Operable Unit: BASEWIDE
Primary Responsibility: Federal Facilities
Planning Status: Not reported
Urgency Indicator: Not reported
Action Anomaly: Not reported

Action Code: 012
Action: FEDERAL FACILITY REMOVAL
Date Started: 04/15/96
Date Completed: 07/22/97

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Priority Level: Not reported
Operable Unit: BASEWIDE
Primary Responsibility: Federal Facilities
Planning Status: Not reported
Urgency Indicator: Not reported
Action Anomaly: Not reported

Action Code: 008
Action: FEDERAL FACILITY REMOVAL
Date Started: 04/18/96
Date Completed: 12/19/97
Priority Level: Partially Cleaned up
Operable Unit: BASEWIDE
Primary Responsibility: Federal Facilities
Planning Status: Not reported
Urgency Indicator: Non-Time Critical
Action Anomaly: Not reported

Action Code: 011
Action: FEDERAL FACILITY REMOVAL
Date Started: 06/25/97
Date Completed: 12/08/98
Priority Level: Not reported
Operable Unit: BASEWIDE
Primary Responsibility: Federal Facilities
Planning Status: Not reported
Urgency Indicator: Not reported
Action Anomaly: Not reported

Action Code: 009
Action: FEDERAL FACILITY REMOVAL
Date Started: 06/30/97
Date Completed: 12/08/98
Priority Level: Not reported
Operable Unit: BASEWIDE
Primary Responsibility: Federal Facilities
Planning Status: Not reported
Urgency Indicator: Not reported
Action Anomaly: Not reported

Action Code: 002
Action: FEDERAL FACILITY REMOVAL
Date Started: 12/21/95
Date Completed: 07/28/99
Priority Level: Not reported
Operable Unit: BASEWIDE
Primary Responsibility: Federal Facilities
Planning Status: Primary
Urgency Indicator: Not reported
Action Anomaly: Not reported

Action Code: 007

USAF NORTON AFB (Continued) **1000417274**

Action:	FEDERAL FACILITY REMOVAL
Date Started:	04/25/96
Date Completed:	09/30/99
Priority Level:	Stabilized
Operable Unit:	BASEWIDE
Primary Responsibility:	Federal Facilities
Planning Status:	Approved
Urgency Indicator:	Non-Time Critical
Action Anomaly:	Not reported

Action Code:	001
Action:	FEDERAL FACILITY FIVE YEAR REVIEW
Date Started:	03/05/99
Date Completed:	10/27/99
Priority Level:	Not reported
Operable Unit:	SITEWIDE
Primary Responsibility:	Federal Facilities
Planning Status:	Not reported
Urgency Indicator:	Not reported
Action Anomaly:	Not reported

Action Code:	003
Action:	FEDERAL FACILITY REMEDIAL INVESTIGATION/FEASIBILITY STUDY
Date Started:	10/01/98
Date Completed:	06/10/03
Priority Level:	Not reported
Operable Unit:	BASEWIDE
Primary Responsibility:	Federal Facilities
Planning Status:	Not reported
Urgency Indicator:	Not reported
Action Anomaly:	Not reported

Action Code:	016
Action:	FEDERAL FACILITY REMOVAL
Date Started:	12/11/03
Date Completed:	12/03/04
Priority Level:	Not reported
Operable Unit:	BASEWIDE
Primary Responsibility:	Federal Facilities
Planning Status:	Not reported
Urgency Indicator:	Not reported
Action Anomaly:	Not reported

Action Code:	002
Action:	FEDERAL FACILITY FIVE YEAR REVIEW
Date Started:	02/28/05
Date Completed:	09/20/05
Priority Level:	Not reported
Operable Unit:	SITEWIDE
Primary Responsibility:	Federal Facilities
Planning Status:	Not reported
Urgency Indicator:	Not reported
Action Anomaly:	Not reported

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Action Code:	014
Action:	FEDERAL FACILITY REMOVAL
Date Started:	11/24/03
Date Completed:	09/29/05
Priority Level:	Not reported
Operable Unit:	BASEWIDE
Primary Responsibility:	Federal Facilities
Planning Status:	Not reported
Urgency Indicator:	Not reported
Action Anomaly:	Not reported

Action Code:	015
Action:	FEDERAL FACILITY REMOVAL
Date Started:	12/17/03
Date Completed:	09/29/05
Priority Level:	Not reported
Operable Unit:	BASEWIDE
Primary Responsibility:	Federal Facilities
Planning Status:	Not reported
Urgency Indicator:	Not reported
Action Anomaly:	Not reported

Action Code:	013
Action:	FEDERAL FACILITY REMOVAL
Date Started:	02/02/04
Date Completed:	09/29/05
Priority Level:	Not reported
Operable Unit:	BASEWIDE
Primary Responsibility:	Federal Facilities
Planning Status:	Not reported
Urgency Indicator:	Not reported
Action Anomaly:	Not reported

Action Code:	002
Action:	RECORD OF DECISION
Date Started:	/ /
Date Completed:	09/29/05
Priority Level:	Final Remedy Selected at Site
Operable Unit:	BASEWIDE
Primary Responsibility:	Federal Facilities
Planning Status:	Primary
Urgency Indicator:	Not reported
Action Anomaly:	Not reported

Action Code:	001
Action:	OPERATIONS AND MAINTENANCE
Date Started:	07/26/96
Date Completed:	12/21/05
Priority Level:	Not reported
Operable Unit:	CENTRAL BASE AREA
Primary Responsibility:	Federal Facilities
Planning Status:	Primary
Urgency Indicator:	Not reported

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Action Anomaly: Not reported

Action Code: 001
Action: PRELIMINARY CLOSE-OUT REPORT PREPARED
Date Started: / /
Date Completed: 05/16/06
Priority Level: Not reported
Operable Unit: BASEWIDE
Primary Responsibility: EPA Fund-Financed
Planning Status: Primary
Urgency Indicator: Not reported
Action Anomaly: Not reported

Action Code: 003
Action: FEDERAL FACILITY FIVE YEAR REVIEW
Date Started: / /
Date Completed: 09/30/10
Priority Level: Not reported
Operable Unit: SITEWIDE
Primary Responsibility: Federal Facilities
Planning Status: Not reported
Urgency Indicator: Not reported
Action Anomaly: Not reported

Action Code: 001
Action: Restoration Advisory Board
Date Started: 12/01/94
Date Completed: / /
Priority Level: Not reported
Operable Unit: SITEWIDE
Primary Responsibility: Federal Facilities
Planning Status: Not reported
Urgency Indicator: Not reported
Action Anomaly: Not reported

Action Code: 002
Action: OPERATIONS AND MAINTENANCE
Date Started: 11/28/99
Date Completed: / /
Priority Level: Not reported
Operable Unit: BASEWIDE
Primary Responsibility: Federal Facilities
Planning Status: Not reported
Urgency Indicator: Not reported
Action Anomaly: Not reported

Federal Register Details:
Fed Register Date: 07/22/87
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Fed Register Date: 10/15/84
Fed Register Volume: 49
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CORRACTS:

EPA ID:	CA4570024345
EPA Region:	09
Area Name:	CENTRAL BASE AREA OU
Actual Date:	19950601
Action:	CA550 - Certification Of Remedy Completion Or Construction Completion
NAICS Code(s):	332813 92811 92811
	Electroplating, Plating, Polishing, Anodizing, and Coloring
	National Security
	National Security
Original schedule date:	Not reported
Schedule end date:	Not reported

EPA ID:	CA4570024345
EPA Region:	09
Area Name:	ENTIRE FACILITY
Actual Date:	19950601
Action:	CA550RC
NAICS Code(s):	332813 92811 92811
	Electroplating, Plating, Polishing, Anodizing, and Coloring
	National Security
	National Security
Original schedule date:	19950601
Schedule end date:	Not reported

EPA ID:	CA4570024345
EPA Region:	09
Area Name:	CENTRAL BASE AREA OU
Actual Date:	19920501
Action:	CA650 - Stabilization Construction Completed
NAICS Code(s):	332813 92811 92811
	Electroplating, Plating, Polishing, Anodizing, and Coloring
	National Security
	National Security
Original schedule date:	Not reported
Schedule end date:	Not reported

EPA ID:	CA4570024345
EPA Region:	09
Area Name:	CENTRAL BASE AREA OU
Actual Date:	19930205
Action:	CA200 - RFI Approved
NAICS Code(s):	332813 92811 92811
	Electroplating, Plating, Polishing, Anodizing, and Coloring
	National Security
	National Security
Original schedule date:	Not reported
Schedule end date:	Not reported

EPA ID:	CA4570024345
EPA Region:	09
Area Name:	CENTRAL BASE AREA OU
Actual Date:	19930205
Action:	CA300 - CMS Workplan Approved
NAICS Code(s):	332813 92811 92811

USAF NORTON AFB (Continued) **1000417274**

Electroplating, Plating, Polishing, Anodizing, and Coloring
National Security
National Security
Original schedule date: Not reported
Schedule end date: Not reported

EPA ID: CA4570024345
EPA Region: 09
Area Name: CENTRAL BASE AREA OU
Actual Date: 19930205
Action: CA350 - CMS Approved
NAICS Code(s): 332813 92811 92811
Electroplating, Plating, Polishing, Anodizing, and Coloring
National Security
National Security
Original schedule date: Not reported
Schedule end date: Not reported

EPA ID: CA4570024345
EPA Region: 09
Area Name: CENTRAL BASE AREA OU
Actual Date: 19930205
Action: CA150 - RFI Workplan Approved
NAICS Code(s): 332813 92811 92811
Electroplating, Plating, Polishing, Anodizing, and Coloring
National Security
National Security
Original schedule date: Not reported
Schedule end date: Not reported

EPA ID: CA4570024345
EPA Region: 09
Area Name: CENTRAL BASE AREA OU
Actual Date: 19941007
Action: CA450 - Corrective Measures Design Approved
NAICS Code(s): 332813 92811 92811
Electroplating, Plating, Polishing, Anodizing, and Coloring
National Security
National Security
Original schedule date: Not reported
Schedule end date: Not reported

EPA ID: CA4570024345
EPA Region: 09
Area Name: CENTRAL BASE AREA OU
Actual Date: 19941007
Action: CA500 - CMI Workplan Approved
NAICS Code(s): 332813 92811 92811
Electroplating, Plating, Polishing, Anodizing, and Coloring
National Security
National Security
Original schedule date: Not reported
Schedule end date: Not reported

EPA ID: CA4570024345
EPA Region: 09
Area Name: CENTRAL BASE AREA OU

USAF NORTON AFB (Continued) **1000417274**

Actual Date: 19890713
Action: CA600GW - Stabilization Measures Implemented, Groundwater extraction and treatment
NAICS Code(s): 332813 92811 92811
Electroplating, Plating, Polishing, Anodizing, and Coloring
National Security
National Security
Original schedule date: Not reported
Schedule end date: Not reported

EPA ID: CA4570024345
EPA Region: 09
Area Name: ENTIRE FACILITY
Actual Date: 19980618
Action: CA750YE - Migration of Contaminated Groundwater under Control, Yes, Migration of Contaminated Groundwater Under Control has been verified
NAICS Code(s): 332813 92811 92811
Electroplating, Plating, Polishing, Anodizing, and Coloring
National Security
National Security
Original schedule date: 19980618
Schedule end date: Not reported

EPA ID: CA4570024345
EPA Region: 09
Area Name: ENTIRE FACILITY
Actual Date: 20000522
Action: CA725YE - Current Human Exposures Under Control, Yes, Current Human Exposures Under Control has been verified
NAICS Code(s): 332813 92811 92811
Electroplating, Plating, Polishing, Anodizing, and Coloring
National Security
National Security
Original schedule date: 20000522
Schedule end date: Not reported

EPA ID: CA4570024345
EPA Region: 09
Area Name: ENTIRE FACILITY
Actual Date: 20000522
Action: CA750NO - Migration of Contaminated Groundwater under Control, Unacceptable migration of contaminated groundwater is observed or expected
NAICS Code(s): 332813 92811 92811
Electroplating, Plating, Polishing, Anodizing, and Coloring
National Security
National Security
Original schedule date: 20000522
Schedule end date: Not reported

EPA ID: CA4570024345
EPA Region: 09
Area Name: CENTRAL BASE AREA OU
Actual Date: 19931124
Action: CA400 - Date For Remedy Selection (CM Imposed)
NAICS Code(s): 332813 92811 92811
Electroplating, Plating, Polishing, Anodizing, and Coloring

USAF NORTON AFB (Continued) **1000417274**

National Security
National Security
Original schedule date: Not reported
Schedule end date: Not reported

EPA ID: CA4570024345
EPA Region: 09
Area Name: ENTIRE FACILITY
Actual Date: 19931124
Action: CA400 - Date For Remedy Selection (CM Imposed)
NAICS Code(s): 332813 92811 92811
Electroplating, Plating, Polishing, Anodizing, and Coloring
National Security
National Security
Original schedule date: 19931124
Schedule end date: Not reported

RCRA-TSDF:
Date form received by agency: 09/01/1996
Facility name: USAF NORTON AFB
Facility address: 305 S TIPPECANOE AVE
SAN BERNARDINO, CA 92408
EPA ID: CA4570024345
Mailing address: 63RD CIV ENG SQU/DEEV
NORTON AFB, CA 92409
Contact: Not reported
Contact address: Not reported
Not reported
Contact country: US
Contact telephone: Not reported
Contact email: Not reported
EPA Region: 09
Land type: Federal
Classification: TSDF
Description: Handler is engaged in the treatment, storage or disposal of hazardous waste

Owner/Operator Summary:
Owner/operator name: MULTIPLE OPS - USAF & DPDO
Owner/operator address: US DEPT OF AIR FORCE NORTON
CITY NOT REPORTED, CA 99999
Owner/operator country: Not reported
Owner/operator telephone: 714-382-3909
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Federal
Owner/Operator Type: Operator
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Owner/operator name: US AIR FORCE
Owner/operator address: NORTON AFB
SAN BERNARDINO, CA 92409
Owner/operator country: Not reported
Owner/operator telephone: 714-382-3909

USAF NORTON AFB (Continued) **1000417274**

Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Federal
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: Yes
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Historical Generators:
Date form received by agency: 09/01/1996
Site name: USAF NORTON AFB
Classification: Small Quantity Generator

Date form received by agency: 03/11/1996
Site name: NORTON AIR FORCE BASE
Classification: Large Quantity Generator

Date form received by agency: 03/28/1994
Site name: USAF NORTON AFB
Classification: Large Quantity Generator

Date form received by agency: 02/28/1992
Site name: NORTON AIR FORCE BASE
Classification: Large Quantity Generator

Date form received by agency: 04/17/1990
Site name: NORTON AIR FORCE BASE
Classification: Large Quantity Generator

Date form received by agency: 08/18/1980
Site name: USAF NORTON AFB
Classification: Large Quantity Generator

Corrective Action Summary:
Event date: 04/01/1984
Event: PA OR CERCLA INSPECTION

Event date: 06/01/1984
Event: LEAD AGENCY DETERMINATION

USAF NORTON AFB (Continued) **1000417274**

Event date: 06/01/1984
Event: PA OR CERCLA INSPECTION

Event date: 06/01/1984
Event: RFA COMPLETED

Event date: 07/13/1989
Event: INVESTIGATION IMPOSITION

Event date: 07/13/1989
Event: STABILIZATION/INTERIM MEASURES DECISION-GROUNDWATER EXTRACTION & TREATMENT

Event date: 07/13/1989
Event: CMS IMPOSITION

Event date: 05/01/1992
Event: STABILIZATION CONSTRUCTION COMPLETED

Event date: 02/05/1993
Event: INVESTIGATION COMPLETE

Event date: 02/05/1993
Event: CMS WORKPLAN APPROVED

Event date: 02/05/1993
Event: INVESTIGATION WORKPLAN APPROVED

Event date: 02/05/1993
Event: CMS COMPLETE

Event date: 11/24/1993
Event: REMEDY DECISION

Event date: 11/24/1993
Event: REMEDY DECISION

Event date: 10/07/1994
Event: CMI WORKPLAN APPROVED

Event date: 10/07/1994
Event: CORRECTIVE MEASURES DESIGN APPROVED

Event date: 06/01/1995
Event: REMEDY CONSTRUCTION

Event date: 06/01/1995
Event: REMEDY CONSTRUCTION-REMEDY CONSTRUCTED

Event date: 01/01/1996
Event: REFERRED TO A NON-RCRA AUTHORITY-REFERRED TO CERCLA

Event date: 06/18/1998
Event: HUMAN EXPOSURES CONTROLLED DETERMINATION-YES, APPLICABLE AS OF THIS DATE

Event date: 06/18/1998

USAF NORTON AFB (Continued) **1000417274**

Event: CA PRIORITIZATION-MEDIUM CA PRIORITY

Event date: 06/18/1998
Event: REFERRED TO A NON-RCRA AUTHORITY

Event date: 06/18/1998
Event: STABILIZATION MEASURES EVALUATION-FACILITY NOT AMENABLE TO STABILIZATION

Event date: 06/18/1998
Event: RELEASE TO GW CONTROLLED DETERMINATION-YES, APPLICABLE AS OF THIS DATE

Event date: 06/18/1998
Event: RELEASE TO GW CONTROLLED DETERMINATION-YES, APPLICABLE AS OF THIS DATE

Event date: 05/22/2000
Event: RELEASE TO GW CONTROLLED DETERMINATION-FACILITY DOES NOT MEET DEFINITION

Event date: 05/22/2000
Event: RELEASE TO GW CONTROLLED DETERMINATION-FACILITY DOES NOT MEET DEFINITION

Event date: 05/22/2000
Event: HUMAN EXPOSURES CONTROLLED DETERMINATION-YES, APPLICABLE AS OF THIS DATE

Event date: 05/22/2000
Event: HUMAN EXPOSURES CONTROLLED DETERMINATION-YES, APPLICABLE AS OF THIS DATE

Facility Has Received Notices of Violations:
Regulation violated: Not reported
Area of violation: TSD IS-Ground-Water Monitoring
Date violation determined: 04/22/2003
Date achieved compliance: 07/27/2005
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 03/16/2005
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: F - 264.170-177.I
Area of violation: TSD - General
Date violation determined: 04/22/1993
Date achieved compliance: 01/28/1994
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 04/22/1993
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported

USAF NORTON AFB (Continued) **1000417274**

Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: F - 264.190-201.J
Area of violation: TSD - General
Date violation determined: 04/22/1993
Date achieved compliance: 01/28/1994
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 04/22/1993
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: F - 262.30-34.C
Area of violation: Generators - General
Date violation determined: 04/22/1993
Date achieved compliance: 01/28/1994
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 04/22/1993
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: F - 262.40-43.D
Area of violation: Generators - General
Date violation determined: 04/22/1993
Date achieved compliance: 01/28/1994
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 04/22/1993
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: F - 264.30-37.C
Area of violation: TSD - General
Date violation determined: 05/15/1992
Date achieved compliance: 06/19/1992
Violation lead agency: State
Enforcement action: Not reported
Enforcement action date: Not reported
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: Not reported
Proposed penalty amount: Not reported
Final penalty amount: Not reported

USAF NORTON AFB (Continued) **1000417274**

Paid penalty amount: Not reported

Regulation violated: F - 264.70-77.E
Area of violation: TSD - General
Date violation determined: 05/15/1992
Date achieved compliance: 06/19/1992
Violation lead agency: State
Enforcement action: Not reported
Enforcement action date: Not reported
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: Not reported
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: F - 270
Area of violation: TSD - General
Date violation determined: 05/15/1992
Date achieved compliance: 06/19/1992
Violation lead agency: State
Enforcement action: Not reported
Enforcement action date: Not reported
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: Not reported
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: F - 262.10-12.A
Area of violation: Generators - General
Date violation determined: 05/15/1992
Date achieved compliance: 06/19/1992
Violation lead agency: State
Enforcement action: Not reported
Enforcement action date: Not reported
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: Not reported
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: F - 270
Area of violation: TSD - General
Date violation determined: 02/27/1991
Date achieved compliance: 05/16/1991
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 04/12/1991
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

USAF NORTON AFB (Continued) **1000417274**

Regulation violated: FR - 270
Area of violation: TSD - General
Date violation determined: 10/30/1989
Date achieved compliance: 03/14/1990
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 12/11/1989
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: FR - 270
Area of violation: TSD - General
Date violation determined: 07/26/1988
Date achieved compliance: 10/30/1989
Violation lead agency: EPA
Enforcement action: Not reported
Enforcement action date: Not reported
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: Not reported
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: FR - 264.90-94.F
Area of violation: TSD IS-Ground-Water Monitoring
Date violation determined: 08/20/1987
Date achieved compliance: 07/26/1988
Violation lead agency: EPA
Enforcement action: Not reported
Enforcement action date: Not reported
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: Not reported
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: FR - 270
Area of violation: TSD - General
Date violation determined: 08/20/1987
Date achieved compliance: 07/26/1988
Violation lead agency: EPA
Enforcement action: Not reported
Enforcement action date: Not reported
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: Not reported
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: FR - 264.110-120.G

USAF NORTON AFB (Continued) **1000417274**

Area of violation: TSD - Closure/Post-Closure
Date violation determined: 08/20/1987
Date achieved compliance: 07/26/1988
Violation lead agency: EPA
Enforcement action: Not reported
Enforcement action date: Not reported
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: Not reported
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: F - 270
Area of violation: TSD - General
Date violation determined: 06/23/1987
Date achieved compliance: 08/06/1987
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 08/06/1987
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: F - 270
Area of violation: TSD - General
Date violation determined: 06/23/1987
Date achieved compliance: 08/06/1987
Violation lead agency: State
Enforcement action: Not reported
Enforcement action date: Not reported
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: Not reported
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Evaluation Action Summary:
Evaluation date: 04/13/2017
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 04/19/2016
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 04/29/2015
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported

USAF NORTON AFB (Continued) **1000417274**

Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 06/19/2008
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 04/11/2007
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 04/25/2006
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 06/22/2005
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 04/22/2003
Evaluation: GROUNDWATER MONITORING EVALUATION
Area of violation: TSD IS-Ground-Water Monitoring
Date achieved compliance: 07/27/2005
Evaluation lead agency: State

Evaluation date: 01/26/1994
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 03/08/1993
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: TSD - General
Date achieved compliance: 01/28/1994
Evaluation lead agency: State

Evaluation date: 03/08/1993
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Generators - General
Date achieved compliance: 01/28/1994
Evaluation lead agency: State

Evaluation date: 03/30/1992
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: TSD - General
Date achieved compliance: 06/19/1992
Evaluation lead agency: State

USAF NORTON AFB (Continued) **1000417274**

Evaluation date: 03/30/1992
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Generators - General
Date achieved compliance: 06/19/1992
Evaluation lead agency: State

Evaluation date: 02/27/1991
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: TSD - General
Date achieved compliance: 05/16/1991
Evaluation lead agency: State

Evaluation date: 10/30/1989
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: TSD - General
Date achieved compliance: 03/14/1990
Evaluation lead agency: State

Evaluation date: 07/26/1988
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: TSD - General
Date achieved compliance: 10/30/1989
Evaluation lead agency: EPA

Evaluation date: 08/20/1987
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: TSD - General
Date achieved compliance: 07/26/1988
Evaluation lead agency: EPA

Evaluation date: 08/20/1987
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: TSD - Closure/Post-Closure
Date achieved compliance: 07/26/1988
Evaluation lead agency: EPA

Evaluation date: 08/20/1987
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: TSD IS-Ground-Water Monitoring
Date achieved compliance: 07/26/1988
Evaluation lead agency: EPA

Evaluation date: 07/30/1987
Evaluation: FINANCIAL RECORD REVIEW
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 07/30/1987
Evaluation: FINANCIAL RECORD REVIEW
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: EPA

Evaluation date: 06/23/1987
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported

USAF NORTON AFB (Continued) **1000417274**

Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 06/23/1987
Evaluation: NON-FINANCIAL RECORD REVIEW
Area of violation: TSD - General
Date achieved compliance: 08/06/1987
Evaluation lead agency: State

US ENG CONTROLS:
EPA ID: CA4570024345
Site ID: 0902760
Name: NORTON AIR FORCE BASE (LNDFLL #2)
Address: I-10/US 395 FORMER NORTON AFB
SAN BERNARDINO, CA 92408
EPA Region: 09
County: SAN BERNARDINO
Event Code: Not reported
Actual Date: 09/30/2005
Contact Name: Not reported
Contact Phone and Ext: Not reported
Event Code Description: Not reported

Action ID: 001
Action Name: RECORD OF DECISION
Action Completion date: 11/24/1993
Operable Unit: 01
Contaminated Media : Groundwater
Engineering Control: Air Stripping
Contact Name: Not reported
Contact Phone and Ext: Not reported
Event Code Description: Not reported

Action ID: 001
Action Name: RECORD OF DECISION
Action Completion date: 11/24/1993
Operable Unit: 01
Contaminated Media : Groundwater
Engineering Control: Alternate Drinking Water, (N.O.S.)
Contact Name: Not reported
Contact Phone and Ext: Not reported
Event Code Description: Not reported

Action ID: 001
Action Name: RECORD OF DECISION
Action Completion date: 11/24/1993
Operable Unit: 01
Contaminated Media : Groundwater
Engineering Control: Carbon Adsorption
Contact Name: Not reported
Contact Phone and Ext: Not reported
Event Code Description: Not reported

Action ID: 001
Action Name: RECORD OF DECISION
Action Completion date: 11/24/1993
Operable Unit: 01
Contaminated Media : Groundwater

USAF NORTON AFB (Continued) **1000417274**

Engineering Control: Discharge
Contact Name: Not reported
Contact Phone and Ext: Not reported
Event Code Description: Not reported

Action ID: 001
Action Name: RECORD OF DECISION
Action Completion date: 11/24/1993
Operable Unit: 01
Contaminated Media : Groundwater
Engineering Control: Extraction
Contact Name: Not reported
Contact Phone and Ext: Not reported
Event Code Description: Not reported

Action ID: 001
Action Name: RECORD OF DECISION
Action Completion date: 11/24/1993
Operable Unit: 01
Contaminated Media : Groundwater
Engineering Control: Monitoring
Contact Name: Not reported
Contact Phone and Ext: Not reported
Event Code Description: Not reported

Action ID: 001
Action Name: RECORD OF DECISION
Action Completion date: 11/24/1993
Operable Unit: 01
Contaminated Media : Groundwater
Engineering Control: Pump And Treat
Contact Name: Not reported
Contact Phone and Ext: Not reported
Event Code Description: Not reported

Action ID: 001
Action Name: RECORD OF DECISION
Action Completion date: 11/24/1993
Operable Unit: 01
Contaminated Media : Groundwater
Engineering Control: Reinjection
Contact Name: Not reported
Contact Phone and Ext: Not reported
Event Code Description: Not reported

Action ID: 001
Action Name: RECORD OF DECISION
Action Completion date: 11/24/1993
Operable Unit: 01
Contaminated Media : Soil
Engineering Control: Carbon Adsorption
Contact Name: Not reported
Contact Phone and Ext: Not reported
Event Code Description: Not reported

Action ID: 001
Action Name: RECORD OF DECISION

USAF NORTON AFB (Continued) **1000417274**

Action Completion date: 11/24/1993
Operable Unit: 01
Contaminated Media : Soil
Engineering Control: Disposal
Contact Name: Not reported
Contact Phone and Ext: Not reported
Event Code Description: Not reported

Action ID: 001
Action Name: RECORD OF DECISION
Action Completion date: 11/24/1993
Operable Unit: 01
Contaminated Media : Soil
Engineering Control: Excavation
Contact Name: Not reported
Contact Phone and Ext: Not reported
Event Code Description: Not reported

Action ID: 001
Action Name: RECORD OF DECISION
Action Completion date: 11/24/1993
Operable Unit: 01
Contaminated Media : Soil
Engineering Control: Monitoring
Contact Name: Not reported
Contact Phone and Ext: Not reported
Event Code Description: Not reported

Action ID: 001
Action Name: RECORD OF DECISION
Action Completion date: 11/24/1993
Operable Unit: 01
Contaminated Media : Soil
Engineering Control: Soil Vapor Extraction (ex-situ)
Contact Name: Not reported
Contact Phone and Ext: Not reported
Event Code Description: Not reported

Action ID: 001
Action Name: RECORD OF DECISION
Action Completion date: 11/24/1993
Operable Unit: 01
Contaminated Media : Soil
Engineering Control: Soil Vapor Extraction (in-situ)
Contact Name: Not reported
Contact Phone and Ext: Not reported
Event Code Description: Not reported

Action ID: 002
Action Name: RECORD OF DECISION
Action Completion date: 09/29/2005
Operable Unit: 02
Contaminated Media : Soil
Engineering Control: Disposal
Contact Name: Not reported
Contact Phone and Ext: Not reported
Event Code Description: Not reported

USAF NORTON AFB (Continued) **1000417274**

Action ID: 002
Action Name: RECORD OF DECISION
Action Completion date: 09/29/2005
Operable Unit: 02
Contaminated Media : Soil
Engineering Control: Excavation
Contact Name: Not reported
Contact Phone and Ext: Not reported
Event Code Description: Not reported

Action ID: 002
Action Name: RECORD OF DECISION
Action Completion date: 09/29/2005
Operable Unit: 02
Contaminated Media : Soil
Engineering Control: No Further Action
Contact Name: Not reported
Contact Phone and Ext: Not reported
Event Code Description: Not reported

Action ID: 003
Action Name: RECORD OF DECISION
Action Completion date: 06/25/1997
Operable Unit: 02
Contaminated Media : Groundwater
Engineering Control: No Further Action
Contact Name: Not reported
Contact Phone and Ext: Not reported
Event Code Description: Not reported

Action ID: 003
Action Name: RECORD OF DECISION
Action Completion date: 06/25/1997
Operable Unit: 02
Contaminated Media : Soil
Engineering Control: No Further Action
Contact Name: Not reported
Contact Phone and Ext: Not reported
Event Code Description: Not reported

US INST CONTROL:
EPA ID: CA4570024345
Site ID: 0902760
Name: NORTON AIR FORCE BASE (LNDFLL #2)
Action Name: RECORD OF DECISION
Address: I-10/US 395 FORMER NORTON AFB
SAN BERNARDINO, CA 92408
EPA Region: 09
County: SAN BERNARDINO
Event Code: Not reported
Inst. Control: Deed Restriction
Actual Date: 12/31/1993
Complet. Date: 11/24/1993
Operable Unit: 01
Contaminated Media : Groundwater
Contact Name : Not reported

USAF NORTON AFB (Continued) **1000417274**

Contact Phone and Ext : Not reported
Event Code Description: Not reported

EPA ID: CA4570024345
Site ID: 0902760
Name: NORTON AIR FORCE BASE (LNDFLL #2)
Action Name: RECORD OF DECISION
Address: I-10/US 395 FORMER NORTON AFB
SAN BERNARDINO, CA 92408
EPA Region: 09
County: SAN BERNARDINO
Event Code: Not reported
Inst. Control: Deed Restriction
Actual Date: 12/31/1993
Complet. Date: 11/24/1993
Operable Unit: 01
Contaminated Media : Soil
Contact Name : Not reported
Contact Phone and Ext : Not reported
Event Code Description: Not reported

EPA ID: CA4570024345
Site ID: 0902760
Name: NORTON AIR FORCE BASE (LNDFLL #2)
Action Name: RECORD OF DECISION
Address: I-10/US 395 FORMER NORTON AFB
SAN BERNARDINO, CA 92408
EPA Region: 09
County: SAN BERNARDINO
Event Code: Not reported
Inst. Control: Covenant
Actual Date: 09/30/2005
Complet. Date: 09/29/2005
Operable Unit: 02
Contaminated Media : Soil
Contact Name : Not reported
Contact Phone and Ext : Not reported
Event Code Description: Not reported

EPA ID: CA4570024345
Site ID: 0902760
Name: NORTON AIR FORCE BASE (LNDFLL #2)
Action Name: RECORD OF DECISION
Address: I-10/US 395 FORMER NORTON AFB
SAN BERNARDINO, CA 92408
EPA Region: 09
County: SAN BERNARDINO
Event Code: Not reported
Inst. Control: Deed Restriction
Actual Date: 06/30/1997
Complet. Date: 06/25/1997
Operable Unit: 02
Contaminated Media : Soil
Contact Name : Not reported
Contact Phone and Ext : Not reported
Event Code Description: Not reported

USAF NORTON AFB (Continued) **1000417274**

ROD:

Full-text of USEPA Record of Decision(s) is available from EDR.

PADS:

EPAID:	CA4570024345
Facility name:	USAF NORTON AFB
Facility Address:	63 CES DEV NORTON AFB, CA 92409
Facility country:	US
Generator:	Yes
Storer:	No
Transporter:	No
Disposer:	No
Research facility:	No
Smelter:	No
Facility owner name:	US DOD
Contact title:	Not reported
Contact name:	DIENZO EDMUND M
Contact tel:	(714)382-2444
Contact extension:	Not reported
Mailing address:	63 CES DEV NORTON AFB, CA 92409
Mailing country:	US
Cert. title:	Not reported
Cert. name:	Not reported
Cert. date:	06/22/1990
Date received:	07/11/1990

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2 **AG-TEUNISSEN FARMING** **UST** **U003785068**
9092 ALABAMA ST **N/A**
< 1/8 **REDLANDS, CA 92374**
1 ft.

UST:

Relative:
Higher

Facility ID:	88015440
Permitting Agency:	SAN BERNARDINO COUNTY
Latitude:	34.089741

Actual:
1218 ft.

Longitude:	-117.20894

A3 **PERFORMANCE TEAM - REDLANDS, CA - B21** **HAZNET** **S113776172**
WSW **26940 PALMETTO AVE** **San Bern. Co. Permit** **N/A**
< 1/8 **REDLANDS, CA 92374**
0.090 mi.
474 ft. **Site 1 of 2 in cluster A**

Relative:
Lower

HAZNET:

envid:	S113776172
Year:	2012
GEPAID:	CAC002689236
Contact:	BEATRIZ DEAN
Telephone:	9092024195
Mailing Name:	Not reported
Mailing Address:	26940 PALMETTO AVE
Mailing City,St,Zip:	REDLANDS, CA 923741521
Gen County:	San Bernardino

Actual:
1195 ft.

PERFORMANCE TEAM - REDLANDS, CA - B21 (Continued) **S113776172**

TSD EPA ID: CAD008252405
TSD County: Los Angeles
Waste Category: Not reported
Disposal Method: Fuel Blending Prior To Energy Recovery At Another Site
Tons: 0.066
Cat Decode: Not reported
Method Decode: Not reported
Facility County: San Bernardino

San Bern. Co. Permit:
Region: SAN BERNARDINO
Facility ID: FA0016951
Owner: Craig Kaplan
Permit Number: PT0036255
Permit Category: HAZARDOUS MATERIALS 1-3 CHEMICALS SPECIAL
Facility Status: ACTIVE
Expiration Date: 09/30/2017

A4
WSW
< 1/8
0.090 mi.
474 ft.

REDLANDS LOGISTICS CENTER **San Bern. Co. Permit** **S107863396**
26940 PALMETTO AVE **N/A**
REDLANDS, CA 92374

Site 2 of 2 in cluster A

Relative:
Lower

Actual:
1195 ft.

San Bern. Co. Permit:
Region: SAN BERNARDINO
Facility ID: FA0010032
Owner: THRIFTY OIL CO
Permit Number: PT0017799
Permit Category: HAZARDOUS MATERIALS 1-3 CHEMICALS SPECIAL
Facility Status: ACTIVE
Expiration Date: 11/30/2017

5
SSE
< 1/8
0.100 mi.
530 ft.

HOME DEPOT USA HD5087 **RCRA-SQG** **1012176154**
9377 ALABAMA ST **CAR000200139**
REDLANDS, CA 92374

Relative:
Higher

Actual:
1228 ft.

RCRA-SQG:
Date form received by agency: 04/30/2009
Facility name: HOME DEPOT USA HD5087
Facility address: 9377 ALABAMA ST
REDLANDS, CA 92374
EPA ID: CAR000200139
Mailing address: 1905 ASTON AVE
NO 100
CARLSBAD, CA 92008
Contact: ROSA L WHIPPLE
Contact address: 1905 ASTON AVE NO 100
CARLSBAD, CA 92008
Contact country: US
Contact telephone: 800-451-8346
Telephone ext.: 8842
Contact email: RWHIPPLE@3ECOMPANY.COM
EPA Region: 09

HOME DEPOT USA HD5087 (Continued) **1012176154**

Classification: Small Small Quantity Generator
Description: Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:
Owner/operator name: HOME DEPOT USA
Owner/operator address: Not reported
Not reported
Owner/operator country: Not reported
Owner/operator telephone: Not reported
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: 05/18/2009
Owner/Op end date: Not reported

Owner/operator name: HOME DEPOT USA
Owner/operator address: 2455 PACES FERRY RD D 17
ATLANTA, GA 30339
Owner/operator country: US
Owner/operator telephone: Not reported
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: 05/18/2009
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

. Waste code: D001
. Waste name: IGNITABLE WASTE

. Waste code: D002
. Waste name: CORROSIVE WASTE

HOME DEPOT USA HD5087 (Continued) **1012176154**

. Waste code: D009
. Waste name: MERCURY

. Waste code: D016
. Waste name: 2,4-D (2,4-DICHLOROPHENOXYACETIC ACID)

. Waste code: D018
. Waste name: BENZENE

. Waste code: D035
. Waste name: METHYL ETHYL KETONE

Violation Status: No violations found

B6 **HASKELL CO. INDUSTRIAL COMPOSTING FAC.** **SWF/LF** **S107863487**
West **2130 NEVADA AVENUE** **N/A**
1/8-1/4 **REDLANDS, CA**
0.184 mi.
974 ft. **Site 1 of 2 in cluster B**

Relative:
Lower

Actual:
1187 ft.

SWF/LF (SWIS):

Region:	STATE
Facility ID:	36-AA-0443
Lat/Long:	34.08667 / -117.21668
Owner Name:	City Of Redlands
Owner Telephone:	9097987698
Owner Address:	Quality of Life Dept.-Utilities
Owner Address2:	35 Cajon Street , Suite 222/ POBox3005
Owner City,St,Zip:	Redlands, CA 92373
Operational Status:	Planned
Operator:	ABT-Haskell, LLC
Operator Phone:	Not reported
Operator Address:	Not reported
Operator Address2:	280 Business Park Circle, Suite 411
Operator City,St,Zip:	St. Augustine, FL 32095
Permit Date:	Not reported
Permit Status:	Not reported
Permitted Acreage:	Not reported
Activity:	Composting Facility (Sludge)
Regulation Status:	Proposed
Landuse Name:	Wetlands,Industrial,Commercial,Agricultural
GIS Source:	Map
Category:	Composting
Unit Number:	01
Inspection Frequency:	None
Accepted Waste:	Food Wastes,Green Materials,Sludge (BioSolids),Wood waste
Closure Date:	Not reported
Closure Type:	Not reported
Disposal Acreage:	Not reported
SWIS Num:	36-AA-0443
Waste Discharge Requirement Num:	Not reported
Program Type:	Not reported
Permitted Throughput with Units:	Not reported
Actual Throughput with Units:	Not reported
Permitted Capacity with Units:	Not reported
Remaining Capacity:	Not reported
Remaining Capacity with Units:	Not reported
Lat/Long:	34.08667 / -117.21668

7
WSW
1/8-1/4
0.189 mi.
999 ft.

AG-NEVADA 15 WINDMACHINE
NE NEVADA & PALMETTO ST
REDLANDS, CA 92373

San Bern. Co. Permit

U003785087
N/A

Relative:
Lower

Actual:
1189 ft.

San Bern. Co. Permit:

Region:	SAN BERNARDINO
Facility ID:	FA0000584
Owner:	OAKMONT REDLANDS PALMETTO AV
Permit Number:	PT0010946
Permit Category:	UST OWNERSHIP/OPERATING PERMIT (PER UST)
Facility Status:	INACTIVE
Expiration Date:	10/31/1988

Region:	SAN BERNARDINO
Facility ID:	FA0000584
Owner:	OAKMONT REDLANDS PALMETTO AV
Permit Number:	PT0003928
Permit Category:	HAZMAT HANDLER - UST ONLY
Facility Status:	INACTIVE
Expiration Date:	10/31/1988

B8
West
1/8-1/4
0.192 mi.
1014 ft.

LANDFILL,CALIFORNIA STREET
2151 NEVADA ST
REDLANDS CA, CA 92373

Site 2 of 2 in cluster B

SWF/LF
WMUDS/SWAT
LDS
EMI
ENF
Financial Assurance
WDS

S103442703
N/A

Relative:
Lower

Actual:
1186 ft.

SWF/LF (SWIS):

Region:	STATE
Facility ID:	36-AA-0017
Lat/Long:	34.08861 / -117.221
Owner Name:	City Of Redlands
Owner Telephone:	9097987698
Owner Address:	Quality of Life Dept.-Utilities
Owner Address2:	35 Cajon Street , Suite 222/ POBox3005
Owner City,St,Zip:	Redlands, CA 92373
Operational Status:	Active
Operator:	City Of Redlands
Operator Phone:	9097987698
Operator Address:	Quality of Life Dept.-Utilities
Operator Address2:	35 Cajon Street , Suite 222/ POBox3005
Operator City,St,Zip:	Redlands, CA 92373
Permit Date:	01/14/2009
Permit Status:	Permitted
Permitted Acreage:	$115.00
Activity:	Solid Waste Landfill
Regulation Status:	Permitted
Landuse Name:	Rural,Open Space - Nonirrigated,Industrial,Agricultural
GIS Source:	Map
Category:	Disposal
Unit Number:	01
Inspection Frequency:	Monthly
Accepted Waste:	Construction/demolition,Mixed municipal,Other designated,Sludge (BioSolids)
Closure Date:	01/01/2042
Closure Type:	Estimated

LANDFILL,CALIFORNIA STREET (Continued) **S103442703**

Disposal Acreage: $106.00
SWIS Num: 36-AA-0017
Waste Discharge Requirement Num: III
Program Type: BOE Reporting Disposal Facility,Financial Assurance Responsibilities,Remaining Capacity Landfill
Permitted Throughput with Units: 829
Actual Throughput with Units: Tons/day
Permitted Capacity with Units: 10000000
Remaining Capacity: 6800000
Remaining Capacity with Units: Cubic Yards
Lat/Long: 34.08861 / -117.221

WMUDS/SWAT:
Edit Date: 19931007
Complexity: Category B - Any facility having a physical, chemical, or biological waste treatment system (except for septic systems with subsurface disposal), or any Class II or III disposal site, or facilities without treatment systems that are complex, such as marinas with petroleum products, solid wastes, and sewage pump out facilities.
Primary Waste: SLDWST
Primary Waste Type: Nonhazardous Solid Wastes/Influent or Solid Wastes that contain nonhazardous putrescible and non putrescible solid, semisolid, and liquid wastes (E.G., garbage, trash, refuse, paper, demolition and construction wastes, manure, vegetable or animal solid and semisolid waste).
Secondary Waste: Not reported
Secondary Waste Type: Not reported
Base Meridian: SB
NPID: Not reported
Tonnage: 380
Regional Board ID: Not reported
Municipal Solid Waste: True
Superorder: True
Open To Public: True
Waste List: True
Agency Type: City
Agency Name: REDLANDS, CITY OF
Agency Department: MUNICIPAL UTILITIES DEPT
Agency Address: PO BOX 3005
Agency City,St,Zip: REDLANDS CA 92373
Agency Contact: GARY PHELPS
Agency Telephone: 9097987698
Land Owner Name: CITY OF REDLANDS
Land Owner Address: P.O. BOX 3005
Land Owner City,St,Zip: REDLANDS, CA 92373
Land Owner Contact: GARY PHELPS
Land Owner Phone: 7147932641
Region: 8
Facility Type: Solid Waste Site-Class III - Landfills for non hazardous solid wastes.
Facility Description: Not reported
Facility Telephone: 9097987698
SWAT Facility Name: CALIFORNIA STREET LANDFILL
Primary SIC: 4953
Secondary SIC: Not reported
Comments: Not reported
Last Facility Editors: BDNBDNBDN
Waste Discharge System: True

LANDFILL,CALIFORNIA STREET (Continued) **S103442703**

Solid Waste Assessment Test Program:	True
Toxic Pits Cleanup Act Program:	False
Resource Conservation Recovery Act:	False
Department of Defence:	False
Solid Waste Assessment Test Program:	CITY OF REDLANDS
Threat to Water Quality:	Major Threat to Water Quality. A violation could render unusable a ground water or surface water resource used as a significant drink water supply, require closure of an area used for contact recreation, result in long-term deleterious effects on shell fish spawning or growth areas of aquatic resources, or directly expose the public to toxic substances.
Sub Chapter 15:	True
Regional Board Project Officer:	Not reported
Number of WMUDS at Facility:	1
Section Range:	01S03W08
RCRA Facility:	No
Waste Discharge Requirements:	A
Self-Monitoring Rept. Frequency:	Quarterly Submittal
Waste Discharge System ID:	8 360303001
Solid Waste Information ID:	36-AA-0017

LDS:

Global Id:	L10004733296
Latitude:	34.08861
Longitude:	-117.221
Case Type:	Land Disposal Site
Status:	Open - Operating
Status Date:	12/05/2014
Lead Agency:	SANTA ANA RWQCB (REGION 8)
Caseworker:	WBR
Local Agency:	Not reported
RB Case Number:	8 360303001
LOC Case Number:	Not reported
File Location:	Not reported
Potential Media Affect:	Not reported
EDR Link ID:	L10004733296
Potential Contaminants of Concern:	Not reported
Site History:	SITE HISTORY The City of Redlands is conducting Detection Monitoring Program for groundwater monitoring at the site. The California Street Landfill is an approximately 115-acre, active Class III landfill owned and operated by the City of Redlands, and includes the original 63-acre unlined portion and the approximately 52-acre lined expansion area. The facility is located in the northeastern portion of the San Bernardino Valley, along a reach of the southern bank of the Santa Ana River channel approximately 3.5 miles northwest of the City of Redlands in southeastern San Bernardino County. The landfill is located at 2151 Nevada Street, Redlands, California, 92373, in the northern half of the northeast portion of Section 17, Township I South, Range 3 West, San Bernardino Baseline and Meridian. From 1963 until present, the CSL has accepted municipal solid wastes generated within the City of Redlands consisting primarily of residential, commercial, and industrial waste, with a minor fraction of dried sewage sludge from the Citys wastewater treatment plant located adjacent to the CSL. No designated or hazardous wastes were knowingly accepted for on-site disposal. Groundwater beneath the CSL is impacted by perchlorate, tetrachloroethene (PCE), trichloroethene

LANDFILL,CALIFORNIA STREET (Continued) **S103442703**

(TCE), and 1,2-dibromo-3-chloropropane (DBCP). On March 8, 2004, the City submitted a report, as required under Contingency Response D.6.a.ii of Order No. 98-99, which demonstrated that all groundwater impacts originated from sources other than the landfill (3D GeoServices, 2004). GEOLOGIC SETTING The CSL is located within the eastern portion of the Transverse Ranges Geomorphic Province of California within the structurally down-dropped San Bernardino Valley structural block. This structural block is bounded to the north and south by the San Andreas and San Jacinto faults, respectively, and consists of over 1,000 feet of alluvium derived from the adjacent San Bernardino and San Gabriel Mountains delivered to the valley floor by coalescing streams flowing from the upland areas. The maximum thickness of alluvium in the area is estimated to be greater than 1,200 feet approximately one mile northwest of the landfill. The maximum thickness of alluvium beneath the landfill is greater than 700 feet (RWQCB, 2008). Ground surface elevations range from 955 feet above mean sea level (amsl) on the western end of the site to 1,040 feet amsl on the eastern end. SITE HYDROGEOLOGIC SETTING The CSL is situated along the southern bank of Reach 5 of the Santa Ana River channel, within the Upper Santa Ana River Hydrologic Area, in the Mill Creek Hydrologic Sub-Area of the Santa Ana River Watershed (Santa Ana Hydrologic Basin). No natural lakes or other bodies of standing water, ephemeral seeps, or springs occur at the site. Groundwater beneath the CSL occurs at approximately 166 to 203 feet below ground surface (bgs) within alluvial deposits. Historical groundwater elevation measurements indicate that groundwater flows to the west at an average hydraulic gradient of approximately 0.01 foot per foot (ft/ft).

Click here to access the California GeoTracker records for this facility:

EMI:

Year:	2002
County Code:	36
Air Basin:	SC
Facility ID:	74413
Air District Name:	SC
SIC Code:	9199
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	210
Reactive Organic Gases Tons/Yr:	4
Carbon Monoxide Emissions Tons/Yr:	21
NOX - Oxides of Nitrogen Tons/Yr:	10
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	1
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

Year:	2003
County Code:	36
Air Basin:	SC
Facility ID:	74413
Air District Name:	SC
SIC Code:	9199
Air District Name:	SOUTH COAST AQMD

LANDFILL,CALIFORNIA STREET (Continued) **S103442703**

Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	210
Reactive Organic Gases Tons/Yr:	4
Carbon Monoxide Emissions Tons/Yr:	21
NOX - Oxides of Nitrogen Tons/Yr:	10
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	1
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

Year:	2004
County Code:	36
Air Basin:	SC
Facility ID:	74413
Air District Name:	SC
SIC Code:	9199
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	209.65
Reactive Organic Gases Tons/Yr:	2.45
Carbon Monoxide Emissions Tons/Yr:	21.0131
NOX - Oxides of Nitrogen Tons/Yr:	10.227
SOX - Oxides of Sulphur Tons/Yr:	0.395
Particulate Matter Tons/Yr:	1.383
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0.42

Year:	2005
County Code:	36
Air Basin:	SC
Facility ID:	74413
Air District Name:	SC
SIC Code:	9199
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	2.7908
Reactive Organic Gases Tons/Yr:	.12865928
Carbon Monoxide Emissions Tons/Yr:	26.125
NOX - Oxides of Nitrogen Tons/Yr:	8.535
SOX - Oxides of Sulphur Tons/Yr:	.439
Particulate Matter Tons/Yr:	.674
Part. Matter 10 Micrometers and Smllr Tons/Yr:	.282428

Year:	2014
County Code:	36
Air Basin:	SC
Facility ID:	74413
Air District Name:	SC
SIC Code:	4953
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	0.88093958042
Reactive Organic Gases Tons/Yr:	0.36407
Carbon Monoxide Emissions Tons/Yr:	1.75688
NOX - Oxides of Nitrogen Tons/Yr:	2.30272

LANDFILL,CALIFORNIA STREET (Continued) **S103442703**

SOX - Oxides of Sulphur Tons/Yr:	0.57448
Particulate Matter Tons/Yr:	0.63586
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0.63586

Year:	2015
County Code:	36
Air Basin:	SC
Facility ID:	74413
Air District Name:	SC
SIC Code:	4953
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	0.99727707497
Reactive Organic Gases Tons/Yr:	0.52926743
Carbon Monoxide Emissions Tons/Yr:	1.86055723
NOX - Oxides of Nitrogen Tons/Yr:	2.436757
SOX - Oxides of Sulphur Tons/Yr:	0.49647
Particulate Matter Tons/Yr:	0.58702
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0.58702

ENF:

Region:	8
Facility Id:	236433
Agency Name:	Not reported
Place Type:	Waste Management Unit
Place Subtype:	Land fill
Facility Type:	Solid Waste Class III - nonhazardous solid wastes
Agency Type:	Not reported
# Of Agencies:	Not reported
Place Latitude:	34.08861
Place Longitude:	-117.221
SIC Code 1:	4953
SIC Desc 1:	Refuse Systems
SIC Code 2:	Not reported
SIC Desc 2:	Not reported
SIC Code 3:	Not reported
SIC Desc 3:	Not reported
NAICS Code 1:	Not reported
NAICS Desc 1:	Not reported
NAICS Code 2:	Not reported
NAICS Desc 2:	Not reported
NAICS Code 3:	Not reported
NAICS Desc 3:	Not reported
# Of Places:	1
Source Of Facility:	Enf Action
Design Flow:	Not reported
Threat To Water Quality:	Not reported
Complexity:	Not reported
Pretreatment:	Not reported
Facility Waste Type:	Not reported
Facility Waste Type 2:	Not reported
Facility Waste Type 3:	Not reported
Facility Waste Type 4:	Not reported
Program:	Not reported
Program Category1:	Not reported
Program Category2:	LNDISP

LANDFILL,CALIFORNIA STREET (Continued) **S103442703**

# Of Programs:	Not reported
WDID:	Not reported
Reg Measure Id:	Not reported
Reg Measure Type:	Not reported
Region:	Not reported
Order #:	Not reported
Npdes# CA#:	Not reported
Major-Minor:	Not reported
Npdes Type:	Not reported
Reclamation:	Not reported
Dredge Fill Fee:	Not reported
301H:	Not reported
Application Fee Amt Received:	Not reported
Status:	Not reported
Status Date:	Not reported
Effective Date:	Not reported
Expiration/Review Date:	Not reported
Termination Date:	Not reported
WDR Review - Amend:	Not reported
WDR Review - Revise/Renew:	Not reported
WDR Review - Rescind:	Not reported
WDR Review - No Action Required:	Not reported
WDR Review - Pending:	Not reported
WDR Review - Planned:	Not reported
Status Enrollee:	Not reported
Individual/General:	Not reported
Fee Code:	Not reported
Direction/Voice:	Not reported
Enforcement Id(EID):	244964
Region:	8
Order / Resolution Number:	UNKNOWN
Enforcement Action Type:	13267 Letter
Effective Date:	10/01/2002
Adoption/Issuance Date:	Not reported
Achieve Date:	Not reported
Termination Date:	02/18/2014
ACL Issuance Date:	Not reported
EPL Issuance Date:	Not reported
Status:	Historical
Title:	Enforcement - 8 360303001
Description:	13267 LETTER FOR RAD WASTE INVESTIGATION.
Program:	LNDISP
Latest Milestone Completion Date:	2003-01-02
# Of Programs1:	1
Total Assessment Amount:	0
Initial Assessed Amount:	0
Liability $ Amount:	0
Project $ Amount:	0
Liability $ Paid:	0
Project $ Completed:	0
Total $ Paid/Completed Amount:	0

Region:	8
Facility Id:	236433
Agency Name:	Not reported
Place Type:	Waste Management Unit
Place Subtype:	Land fill

LANDFILL,CALIFORNIA STREET (Continued) **S103442703**

Facility Type:	Solid Waste Class III - nonhazardous solid wastes
Agency Type:	Not reported
# Of Agencies:	Not reported
Place Latitude:	34.08861
Place Longitude:	-117.221
SIC Code 1:	4953
SIC Desc 1:	Refuse Systems
SIC Code 2:	Not reported
SIC Desc 2:	Not reported
SIC Code 3:	Not reported
SIC Desc 3:	Not reported
NAICS Code 1:	Not reported
NAICS Desc 1:	Not reported
NAICS Code 2:	Not reported
NAICS Desc 2:	Not reported
NAICS Code 3:	Not reported
NAICS Desc 3:	Not reported
# Of Places:	1
Source Of Facility:	Enf Action
Design Flow:	Not reported
Threat To Water Quality:	Not reported
Complexity:	Not reported
Pretreatment:	Not reported
Facility Waste Type:	Not reported
Facility Waste Type 2:	Not reported
Facility Waste Type 3:	Not reported
Facility Waste Type 4:	Not reported
Program:	Not reported
Program Category1:	Not reported
Program Category2:	LNDISP
# Of Programs:	Not reported
WDID:	Not reported
Reg Measure Id:	Not reported
Reg Measure Type:	Not reported
Region:	Not reported
Order #:	Not reported
Npdes# CA#:	Not reported
Major-Minor:	Not reported
Npdes Type:	Not reported
Reclamation:	Not reported
Dredge Fill Fee:	Not reported
301H:	Not reported
Application Fee Amt Received:	Not reported
Status:	Not reported
Status Date:	Not reported
Effective Date:	Not reported
Expiration/Review Date:	Not reported
Termination Date:	Not reported
WDR Review - Amend:	Not reported
WDR Review - Revise/Renew:	Not reported
WDR Review - Rescind:	Not reported
WDR Review - No Action Required:	Not reported
WDR Review - Pending:	Not reported
WDR Review - Planned:	Not reported
Status Enrollee:	Not reported
Individual/General:	Not reported
Fee Code:	Not reported

LANDFILL,CALIFORNIA STREET (Continued) **S103442703**

Direction/Voice:	Not reported
Enforcement Id(EID):	234318
Region:	8
Order / Resolution Number:	UNKNOWN
Enforcement Action Type:	Notice to Comply
Effective Date:	02/15/2000
Adoption/Issuance Date:	Not reported
Achieve Date:	2000-03-10
Termination Date:	Not reported
ACL Issuance Date:	Not reported
EPL Issuance Date:	Not reported
Status:	Historical
Title:	Enforcement - 8 360303001
Description:	NTC ISSUED FOR LACK OF EROSION PROTECTION ON BARE, SE-FACING SLOPES, ACTIVE FILL AREA OF LANDFILL.
Program:	LNDISP
Latest Milestone Completion Date:	2000-03-10
# Of Programs1:	1
Total Assessment Amount:	0
Initial Assessed Amount:	0
Liability $ Amount:	0
Project $ Amount:	0
Liability $ Paid:	0
Project $ Completed:	0
Total $ Paid/Completed Amount:	0

Region:	8
Facility Id:	236433
Agency Name:	Not reported
Place Type:	Waste Management Unit
Place Subtype:	Land fill
Facility Type:	Solid Waste Class III - nonhazardous solid wastes
Agency Type:	Not reported
# Of Agencies:	Not reported
Place Latitude:	34.08861
Place Longitude:	-117.221
SIC Code 1:	4953
SIC Desc 1:	Refuse Systems
SIC Code 2:	Not reported
SIC Desc 2:	Not reported
SIC Code 3:	Not reported
SIC Desc 3:	Not reported
NAICS Code 1:	Not reported
NAICS Desc 1:	Not reported
NAICS Code 2:	Not reported
NAICS Desc 2:	Not reported
NAICS Code 3:	Not reported
NAICS Desc 3:	Not reported
# Of Places:	1
Source Of Facility:	Enf Action
Design Flow:	Not reported
Threat To Water Quality:	Not reported
Complexity:	Not reported
Pretreatment:	Not reported
Facility Waste Type:	Not reported
Facility Waste Type 2:	Not reported
Facility Waste Type 3:	Not reported

LANDFILL,CALIFORNIA STREET (Continued) **S103442703**

Facility Waste Type 4:	Not reported
Program:	Not reported
Program Category1:	Not reported
Program Category2:	LNDISP
# Of Programs:	Not reported
WDID:	Not reported
Reg Measure Id:	Not reported
Reg Measure Type:	Not reported
Region:	Not reported
Order #:	Not reported
Npdes# CA#:	Not reported
Major-Minor:	Not reported
Npdes Type:	Not reported
Reclamation:	Not reported
Dredge Fill Fee:	Not reported
301H:	Not reported
Application Fee Amt Received:	Not reported
Status:	Not reported
Status Date:	Not reported
Effective Date:	Not reported
Expiration/Review Date:	Not reported
Termination Date:	Not reported
WDR Review - Amend:	Not reported
WDR Review - Revise/Renew:	Not reported
WDR Review - Rescind:	Not reported
WDR Review - No Action Required:	Not reported
WDR Review - Pending:	Not reported
WDR Review - Planned:	Not reported
Status Enrollee:	Not reported
Individual/General:	Not reported
Fee Code:	Not reported
Direction/Voice:	Not reported
Enforcement Id(EID):	234228
Region:	8
Order / Resolution Number:	UNKNOWN
Enforcement Action Type:	Oral Communication
Effective Date:	10/25/1999
Adoption/Issuance Date:	Not reported
Achieve Date:	1999-12-30
Termination Date:	10/25/1999
ACL Issuance Date:	Not reported
EPL Issuance Date:	Not reported
Status:	Historical
Title:	Enforcement - 8 360303001
Description:	Discharger was notified while in the field that the exposed trash needed to be covered ASAP.
Program:	LNDISP
Latest Milestone Completion Date:	1999-12-30
# Of Programs1:	1
Total Assessment Amount:	0
Initial Assessed Amount:	0
Liability $ Amount:	0
Project $ Amount:	0
Liability $ Paid:	0
Project $ Completed:	0
Total $ Paid/Completed Amount:	0

LANDFILL,CALIFORNIA STREET (Continued) **S103442703**

Region:	8
Facility Id:	236433
Agency Name:	Not reported
Place Type:	Waste Management Unit
Place Subtype:	Land fill
Facility Type:	Solid Waste Class III - nonhazardous solid wastes
Agency Type:	Not reported
# Of Agencies:	Not reported
Place Latitude:	34.08861
Place Longitude:	-117.221
SIC Code 1:	4953
SIC Desc 1:	Refuse Systems
SIC Code 2:	Not reported
SIC Desc 2:	Not reported
SIC Code 3:	Not reported
SIC Desc 3:	Not reported
NAICS Code 1:	Not reported
NAICS Desc 1:	Not reported
NAICS Code 2:	Not reported
NAICS Desc 2:	Not reported
NAICS Code 3:	Not reported
NAICS Desc 3:	Not reported
# Of Places:	1
Source Of Facility:	Enf Action
Design Flow:	Not reported
Threat To Water Quality:	Not reported
Complexity:	Not reported
Pretreatment:	Not reported
Facility Waste Type:	Not reported
Facility Waste Type 2:	Not reported
Facility Waste Type 3:	Not reported
Facility Waste Type 4:	Not reported
Program:	Not reported
Program Category1:	Not reported
Program Category2:	LNDISP
# Of Programs:	Not reported
WDID:	Not reported
Reg Measure Id:	Not reported
Reg Measure Type:	Not reported
Region:	Not reported
Order #:	Not reported
Npdes# CA#:	Not reported
Major-Minor:	Not reported
Npdes Type:	Not reported
Reclamation:	Not reported
Dredge Fill Fee:	Not reported
301H:	Not reported
Application Fee Amt Received:	Not reported
Status:	Not reported
Status Date:	Not reported
Effective Date:	Not reported
Expiration/Review Date:	Not reported
Termination Date:	Not reported
WDR Review - Amend:	Not reported
WDR Review - Revise/Renew:	Not reported
WDR Review - Rescind:	Not reported
WDR Review - No Action Required:	Not reported

LANDFILL,CALIFORNIA STREET (Continued) **S103442703**

WDR Review - Pending:	Not reported
WDR Review - Planned:	Not reported
Status Enrollee:	Not reported
Individual/General:	Not reported
Fee Code:	Not reported
Direction/Voice:	Not reported
Enforcement Id(EID):	234191
Region:	8
Order / Resolution Number:	UNKNOWN
Enforcement Action Type:	Oral Communication
Effective Date:	01/10/2000
Adoption/Issuance Date:	Not reported
Achieve Date:	2000-01-11
Termination Date:	01/10/2000
ACL Issuance Date:	Not reported
EPL Issuance Date:	Not reported
Status:	Historical
Title:	Enforcement - 8 360303001
Description:	Notofied discharger's representative by phone that future late reports would result in a NOV letter from the RWQCB.
Program:	LNDISP
Latest Milestone Completion Date:	2000-01-11
# Of Programs1:	1
Total Assessment Amount:	0
Initial Assessed Amount:	0
Liability $ Amount:	0
Project $ Amount:	0
Liability $ Paid:	0
Project $ Completed:	0
Total $ Paid/Completed Amount:	0

Region:	8
Facility Id:	236433
Agency Name:	Not reported
Place Type:	Waste Management Unit
Place Subtype:	Land fill
Facility Type:	Solid Waste Class III - nonhazardous solid wastes
Agency Type:	Not reported
# Of Agencies:	Not reported
Place Latitude:	34.08861
Place Longitude:	-117.221
SIC Code 1:	4953
SIC Desc 1:	Refuse Systems
SIC Code 2:	Not reported
SIC Desc 2:	Not reported
SIC Code 3:	Not reported
SIC Desc 3:	Not reported
NAICS Code 1:	Not reported
NAICS Desc 1:	Not reported
NAICS Code 2:	Not reported
NAICS Desc 2:	Not reported
NAICS Code 3:	Not reported
NAICS Desc 3:	Not reported
# Of Places:	1
Source Of Facility:	Enf Action
Design Flow:	Not reported
Threat To Water Quality:	Not reported

LANDFILL,CALIFORNIA STREET (Continued) **S103442703**

Complexity:	Not reported
Pretreatment:	Not reported
Facility Waste Type:	Not reported
Facility Waste Type 2:	Not reported
Facility Waste Type 3:	Not reported
Facility Waste Type 4:	Not reported
Program:	Not reported
Program Category1:	Not reported
Program Category2:	LNDISP
# Of Programs:	Not reported
WDID:	Not reported
Reg Measure Id:	Not reported
Reg Measure Type:	Not reported
Region:	Not reported
Order #:	Not reported
Npdes# CA#:	Not reported
Major-Minor:	Not reported
Npdes Type:	Not reported
Reclamation:	Not reported
Dredge Fill Fee:	Not reported
301H:	Not reported
Application Fee Amt Received:	Not reported
Status:	Not reported
Status Date:	Not reported
Effective Date:	Not reported
Expiration/Review Date:	Not reported
Termination Date:	Not reported
WDR Review - Amend:	Not reported
WDR Review - Revise/Renew:	Not reported
WDR Review - Rescind:	Not reported
WDR Review - No Action Required:	Not reported
WDR Review - Pending:	Not reported
WDR Review - Planned:	Not reported
Status Enrollee:	Not reported
Individual/General:	Not reported
Fee Code:	Not reported
Direction/Voice:	Not reported
Enforcement Id(EID):	234077
Region:	8
Order / Resolution Number:	UNKNOWN
Enforcement Action Type:	Staff Enforcement Letter
Effective Date:	09/21/1995
Adoption/Issuance Date:	Not reported
Achieve Date:	Not reported
Termination Date:	09/21/1995
ACL Issuance Date:	Not reported
EPL Issuance Date:	Not reported
Status:	Historical
Title:	Enforcement - 8 360303001
Description:	Evaluation Monitoring Program Workplan implemented.
Program:	LNDISP
Latest Milestone Completion Date:	Not reported
# Of Programs1:	1
Total Assessment Amount:	0
Initial Assessed Amount:	0
Liability $ Amount:	0
Project $ Amount:	0

LANDFILL,CALIFORNIA STREET (Continued) **S103442703**

Liability $ Paid:	0
Project $ Completed:	0
Total $ Paid/Completed Amount:	0
Region:	8
Facility Id:	236433
Agency Name:	Not reported
Place Type:	Waste Management Unit
Place Subtype:	Land fill
Facility Type:	Solid Waste Class III - nonhazardous solid wastes
Agency Type:	Not reported
# Of Agencies:	Not reported
Place Latitude:	34.08861
Place Longitude:	-117.221
SIC Code 1:	4953
SIC Desc 1:	Refuse Systems
SIC Code 2:	Not reported
SIC Desc 2:	Not reported
SIC Code 3:	Not reported
SIC Desc 3:	Not reported
NAICS Code 1:	Not reported
NAICS Desc 1:	Not reported
NAICS Code 2:	Not reported
NAICS Desc 2:	Not reported
NAICS Code 3:	Not reported
NAICS Desc 3:	Not reported
# Of Places:	1
Source Of Facility:	Enf Action
Design Flow:	Not reported
Threat To Water Quality:	Not reported
Complexity:	Not reported
Pretreatment:	Not reported
Facility Waste Type:	Not reported
Facility Waste Type 2:	Not reported
Facility Waste Type 3:	Not reported
Facility Waste Type 4:	Not reported
Program:	Not reported
Program Category1:	Not reported
Program Category2:	LNDISP
# Of Programs:	Not reported
WDID:	Not reported
Reg Measure Id:	Not reported
Reg Measure Type:	Not reported
Region:	Not reported
Order #:	Not reported
Npdes# CA#:	Not reported
Major-Minor:	Not reported
Npdes Type:	Not reported
Reclamation:	Not reported
Dredge Fill Fee:	Not reported
301H:	Not reported
Application Fee Amt Received:	Not reported
Status:	Not reported
Status Date:	Not reported
Effective Date:	Not reported
Expiration/Review Date:	Not reported
Termination Date:	Not reported

LANDFILL,CALIFORNIA STREET (Continued) **S103442703**

WDR Review - Amend:	Not reported
WDR Review - Revise/Renew:	Not reported
WDR Review - Rescind:	Not reported
WDR Review - No Action Required:	Not reported
WDR Review - Pending:	Not reported
WDR Review - Planned:	Not reported
Status Enrollee:	Not reported
Individual/General:	Not reported
Fee Code:	Not reported
Direction/Voice:	Not reported
Enforcement Id(EID):	234076
Region:	8
Order / Resolution Number:	UNKNOWN
Enforcement Action Type:	Staff Enforcement Letter
Effective Date:	06/30/1992
Adoption/Issuance Date:	Not reported
Achieve Date:	Not reported
Termination Date:	06/30/1992
ACL Issuance Date:	Not reported
EPL Issuance Date:	Not reported
Status:	Historical
Title:	Enforcement - 8 360303001
Description:	Verification monitoring program established for site.
Program:	LNDISP
Latest Milestone Completion Date:	Not reported
# Of Programs1:	1
Total Assessment Amount:	0
Initial Assessed Amount:	0
Liability $ Amount:	0
Project $ Amount:	0
Liability $ Paid:	0
Project $ Completed:	0
Total $ Paid/Completed Amount:	0

Region:	8
Facility Id:	236433
Agency Name:	Not reported
Place Type:	Waste Management Unit
Place Subtype:	Land fill
Facility Type:	Solid Waste Class III - nonhazardous solid wastes
Agency Type:	Not reported
# Of Agencies:	Not reported
Place Latitude:	34.08861
Place Longitude:	-117.221
SIC Code 1:	4953
SIC Desc 1:	Refuse Systems
SIC Code 2:	Not reported
SIC Desc 2:	Not reported
SIC Code 3:	Not reported
SIC Desc 3:	Not reported
NAICS Code 1:	Not reported
NAICS Desc 1:	Not reported
NAICS Code 2:	Not reported
NAICS Desc 2:	Not reported
NAICS Code 3:	Not reported
NAICS Desc 3:	Not reported
# Of Places:	1

LANDFILL,CALIFORNIA STREET (Continued) **S103442703**

Source Of Facility:	Enf Action
Design Flow:	Not reported
Threat To Water Quality:	Not reported
Complexity:	Not reported
Pretreatment:	Not reported
Facility Waste Type:	Not reported
Facility Waste Type 2:	Not reported
Facility Waste Type 3:	Not reported
Facility Waste Type 4:	Not reported
Program:	Not reported
Program Category1:	Not reported
Program Category2:	LNDISP
# Of Programs:	Not reported
WDID:	Not reported
Reg Measure Id:	Not reported
Reg Measure Type:	Not reported
Region:	Not reported
Order #:	Not reported
Npdes# CA#:	Not reported
Major-Minor:	Not reported
Npdes Type:	Not reported
Reclamation:	Not reported
Dredge Fill Fee:	Not reported
301H:	Not reported
Application Fee Amt Received:	Not reported
Status:	Not reported
Status Date:	Not reported
Effective Date:	Not reported
Expiration/Review Date:	Not reported
Termination Date:	Not reported
WDR Review - Amend:	Not reported
WDR Review - Revise/Renew:	Not reported
WDR Review - Rescind:	Not reported
WDR Review - No Action Required:	Not reported
WDR Review - Pending:	Not reported
WDR Review - Planned:	Not reported
Status Enrollee:	Not reported
Individual/General:	Not reported
Fee Code:	Not reported
Direction/Voice:	Not reported
Enforcement Id(EID):	234075
Region:	8
Order / Resolution Number:	UNKNOWN
Enforcement Action Type:	Oral Communication
Effective Date:	10/25/1999
Adoption/Issuance Date:	Not reported
Achieve Date:	1999-12-30
Termination Date:	10/25/1999
ACL Issuance Date:	Not reported
EPL Issuance Date:	Not reported
Status:	Historical
Title:	Enforcement - 8 360303001
Description:	Discharger was notified during field inspection that low area along access road would probably require grading to prevent water ponding in the area.
Program:	LNDISP
Latest Milestone Completion Date:	1999-12-30

LANDFILL,CALIFORNIA STREET (Continued) **S103442703**

# Of Programs1:	1
Total Assessment Amount:	0
Initial Assessed Amount:	0
Liability $ Amount:	0
Project $ Amount:	0
Liability $ Paid:	0
Project $ Completed:	0
Total $ Paid/Completed Amount:	0
Region:	8
Facility Id:	236433
Agency Name:	Not reported
Place Type:	Waste Management Unit
Place Subtype:	Land fill
Facility Type:	Solid Waste Class III - nonhazardous solid wastes
Agency Type:	Not reported
# Of Agencies:	Not reported
Place Latitude:	34.08861
Place Longitude:	-117.221
SIC Code 1:	4953
SIC Desc 1:	Refuse Systems
SIC Code 2:	Not reported
SIC Desc 2:	Not reported
SIC Code 3:	Not reported
SIC Desc 3:	Not reported
NAICS Code 1:	Not reported
NAICS Desc 1:	Not reported
NAICS Code 2:	Not reported
NAICS Desc 2:	Not reported
NAICS Code 3:	Not reported
NAICS Desc 3:	Not reported
# Of Places:	1
Source Of Facility:	Enf Action
Design Flow:	Not reported
Threat To Water Quality:	Not reported
Complexity:	Not reported
Pretreatment:	Not reported
Facility Waste Type:	Not reported
Facility Waste Type 2:	Not reported
Facility Waste Type 3:	Not reported
Facility Waste Type 4:	Not reported
Program:	Not reported
Program Category1:	Not reported
Program Category2:	LNDISP
# Of Programs:	Not reported
WDID:	Not reported
Reg Measure Id:	Not reported
Reg Measure Type:	Not reported
Region:	Not reported
Order #:	Not reported
Npdes# CA#:	Not reported
Major-Minor:	Not reported
Npdes Type:	Not reported
Reclamation:	Not reported
Dredge Fill Fee:	Not reported
301H:	Not reported
Application Fee Amt Received:	Not reported

LANDFILL,CALIFORNIA STREET (Continued) **S103442703**

Status:	Not reported
Status Date:	Not reported
Effective Date:	Not reported
Expiration/Review Date:	Not reported
Termination Date:	Not reported
WDR Review - Amend:	Not reported
WDR Review - Revise/Renew:	Not reported
WDR Review - Rescind:	Not reported
WDR Review - No Action Required:	Not reported
WDR Review - Pending:	Not reported
WDR Review - Planned:	Not reported
Status Enrollee:	Not reported
Individual/General:	Not reported
Fee Code:	Not reported
Direction/Voice:	Not reported
Enforcement Id(EID):	234074
Region:	8
Order / Resolution Number:	UNKNOWN
Enforcement Action Type:	Oral Communication
Effective Date:	10/25/1999
Adoption/Issuance Date:	Not reported
Achieve Date:	1999-12-30
Termination Date:	10/25/1999
ACL Issuance Date:	Not reported
EPL Issuance Date:	Not reported
Status:	Historical
Title:	Enforcement - 8 360303001
Description:	Discharger was notified that all culverts must be kept clear of wind-blown weeds & debris.
Program:	LNDISP
Latest Milestone Completion Date:	1999-12-30
# Of Programs1:	1
Total Assessment Amount:	0
Initial Assessed Amount:	0
Liability $ Amount:	0
Project $ Amount:	0
Liability $ Paid:	0
Project $ Completed:	0
Total $ Paid/Completed Amount:	0

Region:	8
Facility Id:	236433
Agency Name:	Not reported
Place Type:	Waste Management Unit
Place Subtype:	Land fill
Facility Type:	Solid Waste Class III - nonhazardous solid wastes
Agency Type:	Not reported
# Of Agencies:	Not reported
Place Latitude:	34.08861
Place Longitude:	-117.221
SIC Code 1:	4953
SIC Desc 1:	Refuse Systems
SIC Code 2:	Not reported
SIC Desc 2:	Not reported
SIC Code 3:	Not reported
SIC Desc 3:	Not reported
NAICS Code 1:	Not reported

LANDFILL,CALIFORNIA STREET (Continued) **S103442703**

NAICS Desc 1:	Not reported
NAICS Code 2:	Not reported
NAICS Desc 2:	Not reported
NAICS Code 3:	Not reported
NAICS Desc 3:	Not reported
# Of Places:	1
Source Of Facility:	Enf Action
Design Flow:	Not reported
Threat To Water Quality:	Not reported
Complexity:	Not reported
Pretreatment:	Not reported
Facility Waste Type:	Not reported
Facility Waste Type 2:	Not reported
Facility Waste Type 3:	Not reported
Facility Waste Type 4:	Not reported
Program:	Not reported
Program Category1:	Not reported
Program Category2:	LNDISP
# Of Programs:	Not reported
WDID:	Not reported
Reg Measure Id:	Not reported
Reg Measure Type:	Not reported
Region:	Not reported
Order #:	Not reported
Npdes# CA#:	Not reported
Major-Minor:	Not reported
Npdes Type:	Not reported
Reclamation:	Not reported
Dredge Fill Fee:	Not reported
301H:	Not reported
Application Fee Amt Received:	Not reported
Status:	Not reported
Status Date:	Not reported
Effective Date:	Not reported
Expiration/Review Date:	Not reported
Termination Date:	Not reported
WDR Review - Amend:	Not reported
WDR Review - Revise/Renew:	Not reported
WDR Review - Rescind:	Not reported
WDR Review - No Action Required:	Not reported
WDR Review - Pending:	Not reported
WDR Review - Planned:	Not reported
Status Enrollee:	Not reported
Individual/General:	Not reported
Fee Code:	Not reported
Direction/Voice:	Not reported
Enforcement Id(EID):	234073
Region:	8
Order / Resolution Number:	UNKNOWN
Enforcement Action Type:	Oral Communication
Effective Date:	10/25/1999
Adoption/Issuance Date:	Not reported
Achieve Date:	1999-12-30
Termination Date:	10/25/1999
ACL Issuance Date:	Not reported
EPL Issuance Date:	Not reported
Status:	Historical

LANDFILL,CALIFORNIA STREET (Continued) **S103442703**

Title:	Enforcement - 8 360303001
Description:	Discharger was notified during inspection that hydroseeding or other erosion control measures needed to be implemented for the recently graded slopes as soon as possible.
Program:	LNDISP
Latest Milestone Completion Date:	1999-12-30
# Of Programs1:	1
Total Assessment Amount:	0
Initial Assessed Amount:	0
Liability $ Amount:	0
Project $ Amount:	0
Liability $ Paid:	0
Project $ Completed:	0
Total $ Paid/Completed Amount:	0
Region:	8
Facility Id:	236433
Agency Name:	Not reported
Place Type:	Waste Management Unit
Place Subtype:	Land fill
Facility Type:	Solid Waste Class III - nonhazardous solid wastes
Agency Type:	Not reported
# Of Agencies:	Not reported
Place Latitude:	34.08861
Place Longitude:	-117.221
SIC Code 1:	4953
SIC Desc 1:	Refuse Systems
SIC Code 2:	Not reported
SIC Desc 2:	Not reported
SIC Code 3:	Not reported
SIC Desc 3:	Not reported
NAICS Code 1:	Not reported
NAICS Desc 1:	Not reported
NAICS Code 2:	Not reported
NAICS Desc 2:	Not reported
NAICS Code 3:	Not reported
NAICS Desc 3:	Not reported
# Of Places:	1
Source Of Facility:	Enf Action
Design Flow:	Not reported
Threat To Water Quality:	Not reported
Complexity:	Not reported
Pretreatment:	Not reported
Facility Waste Type:	Not reported
Facility Waste Type 2:	Not reported
Facility Waste Type 3:	Not reported
Facility Waste Type 4:	Not reported
Program:	Not reported
Program Category1:	Not reported
Program Category2:	LNDISP
# Of Programs:	Not reported
WDID:	Not reported
Reg Measure Id:	Not reported
Reg Measure Type:	Not reported
Region:	Not reported
Order #:	Not reported
Npdes# CA#:	Not reported

LANDFILL,CALIFORNIA STREET (Continued) **S103442703**

Major-Minor:	Not reported
Npdes Type:	Not reported
Reclamation:	Not reported
Dredge Fill Fee:	Not reported
301H:	Not reported
Application Fee Amt Received:	Not reported
Status:	Not reported
Status Date:	Not reported
Effective Date:	Not reported
Expiration/Review Date:	Not reported
Termination Date:	Not reported
WDR Review - Amend:	Not reported
WDR Review - Revise/Renew:	Not reported
WDR Review - Rescind:	Not reported
WDR Review - No Action Required:	Not reported
WDR Review - Pending:	Not reported
WDR Review - Planned:	Not reported
Status Enrollee:	Not reported
Individual/General:	Not reported
Fee Code:	Not reported
Direction/Voice:	Not reported
Enforcement Id(EID):	223527
Region:	8
Order / Resolution Number:	91-097
Enforcement Action Type:	Clean-up and Abatement Order
Effective Date:	06/24/1991
Adoption/Issuance Date:	Not reported
Achieve Date:	1994-04-22
Termination Date:	Not reported
ACL Issuance Date:	Not reported
EPL Issuance Date:	Not reported
Status:	Historical
Title:	Enforcement - 8 360303001
Description:	TIME SCHEDULE FOR DRAINAGE IMPROVEMENTS
Program:	LNDISP
Latest Milestone Completion Date:	1994-04-22
# Of Programs1:	1
Total Assessment Amount:	0
Initial Assessed Amount:	0
Liability $ Amount:	0
Project $ Amount:	0
Liability $ Paid:	0
Project $ Completed:	0
Total $ Paid/Completed Amount:	0

Region:	8
Facility Id:	236433
Agency Name:	Not reported
Place Type:	Waste Management Unit
Place Subtype:	Land fill
Facility Type:	Solid Waste Class III - nonhazardous solid wastes
Agency Type:	Not reported
# Of Agencies:	Not reported
Place Latitude:	34.08861
Place Longitude:	-117.221
SIC Code 1:	4953
SIC Desc 1:	Refuse Systems

LANDFILL,CALIFORNIA STREET (Continued) **S103442703**

SIC Code 2:	Not reported
SIC Desc 2:	Not reported
SIC Code 3:	Not reported
SIC Desc 3:	Not reported
NAICS Code 1:	Not reported
NAICS Desc 1:	Not reported
NAICS Code 2:	Not reported
NAICS Desc 2:	Not reported
NAICS Code 3:	Not reported
NAICS Desc 3:	Not reported
# Of Places:	1
Source Of Facility:	Enf Action
Design Flow:	Not reported
Threat To Water Quality:	Not reported
Complexity:	Not reported
Pretreatment:	Not reported
Facility Waste Type:	Not reported
Facility Waste Type 2:	Not reported
Facility Waste Type 3:	Not reported
Facility Waste Type 4:	Not reported
Program:	Not reported
Program Category1:	Not reported
Program Category2:	LNDISP
# Of Programs:	Not reported
WDID:	Not reported
Reg Measure Id:	Not reported
Reg Measure Type:	Not reported
Region:	Not reported
Order #:	Not reported
Npdes# CA#:	Not reported
Major-Minor:	Not reported
Npdes Type:	Not reported
Reclamation:	Not reported
Dredge Fill Fee:	Not reported
301H:	Not reported
Application Fee Amt Received:	Not reported
Status:	Not reported
Status Date:	Not reported
Effective Date:	Not reported
Expiration/Review Date:	Not reported
Termination Date:	Not reported
WDR Review - Amend:	Not reported
WDR Review - Revise/Renew:	Not reported
WDR Review - Rescind:	Not reported
WDR Review - No Action Required:	Not reported
WDR Review - Pending:	Not reported
WDR Review - Planned:	Not reported
Status Enrollee:	Not reported
Individual/General:	Not reported
Fee Code:	Not reported
Direction/Voice:	Not reported
Enforcement Id(EID):	223181
Region:	8
Order / Resolution Number:	94-03421
Enforcement Action Type:	Clean-up and Abatement Order
Effective Date:	04/22/1994
Adoption/Issuance Date:	Not reported

LANDFILL,CALIFORNIA STREET (Continued) **S103442703**

Achieve Date:	Not reported
Termination Date:	Not reported
ACL Issuance Date:	Not reported
EPL Issuance Date:	Not reported
Status:	Historical
Title:	Enforcement - 8 360303001
Description:	RESCINDS CAO 91-97
Program:	LNDISP
Latest Milestone Completion Date:	Not reported
# Of Programs1:	1
Total Assessment Amount:	0
Initial Assessed Amount:	0
Liability $ Amount:	0
Project $ Amount:	0
Liability $ Paid:	0
Project $ Completed:	0
Total $ Paid/Completed Amount:	0

Region:	8
Facility Id:	236433
Agency Name:	Redlands City
Place Type:	Waste Management Unit
Place Subtype:	Land fill
Facility Type:	Solid Waste Class III - nonhazardous solid wastes
Agency Type:	City Agency
# Of Agencies:	1
Place Latitude:	34.08861
Place Longitude:	-117.221
SIC Code 1:	4953
SIC Desc 1:	Refuse Systems
SIC Code 2:	Not reported
SIC Desc 2:	Not reported
SIC Code 3:	Not reported
SIC Desc 3:	Not reported
NAICS Code 1:	Not reported
NAICS Desc 1:	Not reported
NAICS Code 2:	Not reported
NAICS Desc 2:	Not reported
NAICS Code 3:	Not reported
NAICS Desc 3:	Not reported
# Of Places:	1
Source Of Facility:	Reg Meas
Design Flow:	0.0001
Threat To Water Quality:	2
Complexity:	B
Pretreatment:	X - Facility is not a POTW
Facility Waste Type:	Solid wastes, NEC
Facility Waste Type 2:	Not reported
Facility Waste Type 3:	Not reported
Facility Waste Type 4:	Not reported
Program:	LFOPER
Program Category1:	LNDISP
Program Category2:	LNDISP
# Of Programs:	1
WDID:	8 360303001
Reg Measure Id:	132779
Reg Measure Type:	WDR

LANDFILL,CALIFORNIA STREET (Continued) **S103442703**

Region:	8
Order #:	R8-2004-0008
Npdes# CA#:	Not reported
Major-Minor:	Not reported
Npdes Type:	Not reported
Reclamation:	N - No
Dredge Fill Fee:	Not reported
301H:	Not reported
Application Fee Amt Received:	Not reported
Status:	Active
Status Date:	05/21/2014
Effective Date:	04/30/2004
Expiration/Review Date:	04/30/2016
Termination Date:	Not reported
WDR Review - Amend:	Not reported
WDR Review - Revise/Renew:	Not reported
WDR Review - Rescind:	Not reported
WDR Review - No Action Required:	Not reported
WDR Review - Pending:	Not reported
WDR Review - Planned:	Not reported
Status Enrollee:	N
Individual/General:	I
Fee Code:	50 - Land Disposal Site paying tipping fee
Direction/Voice:	Passive
Enforcement Id(EID):	374284
Region:	8
Order / Resolution Number:	Not reported
Enforcement Action Type:	Notice of Violation
Effective Date:	02/25/2010
Adoption/Issuance Date:	02/25/2010
Achieve Date:	Not reported
Termination Date:	12/30/2010
ACL Issuance Date:	Not reported
EPL Issuance Date:	Not reported
Status:	Historical
Title:	NOV 02/25/2010 for Redlands City
Description:	NOV was issued to the City for the violations. The City must submit information required by March 26, 2010. NOV responses received from the City on 3/23/10 and 3/31/10. RB staff continued to work with the City to resolve the NOV issues from 4/1/10 through 12/30/10. All NOV issues were resolved on 12/30/10 (approval letter attached).
Program:	LFOPER
Latest Milestone Completion Date:	Not reported
# Of Programs1:	1
Total Assessment Amount:	0
Initial Assessed Amount:	0
Liability $ Amount:	0
Project $ Amount:	0
Liability $ Paid:	0
Project $ Completed:	0
Total $ Paid/Completed Amount:	0
Region:	8
Facility Id:	236433
Agency Name:	Redlands City
Place Type:	Waste Management Unit

LANDFILL,CALIFORNIA STREET (Continued) **S103442703**

Place Subtype:	Land fill
Facility Type:	Solid Waste Class III - nonhazardous solid wastes
Agency Type:	City Agency
# Of Agencies:	1
Place Latitude:	34.08861
Place Longitude:	-117.221
SIC Code 1:	4953
SIC Desc 1:	Refuse Systems
SIC Code 2:	Not reported
SIC Desc 2:	Not reported
SIC Code 3:	Not reported
SIC Desc 3:	Not reported
NAICS Code 1:	Not reported
NAICS Desc 1:	Not reported
NAICS Code 2:	Not reported
NAICS Desc 2:	Not reported
NAICS Code 3:	Not reported
NAICS Desc 3:	Not reported
# Of Places:	1
Source Of Facility:	Reg Meas
Design Flow:	0.0001
Threat To Water Quality:	2
Complexity:	B
Pretreatment:	X - Facility is not a POTW
Facility Waste Type:	Solid wastes, NEC
Facility Waste Type 2:	Not reported
Facility Waste Type 3:	Not reported
Facility Waste Type 4:	Not reported
Program:	LFOPER
Program Category1:	LNDISP
Program Category2:	LNDISP
# Of Programs:	1
WDID:	8 360303001
Reg Measure Id:	132779
Reg Measure Type:	WDR
Region:	8
Order #:	R8-2004-0008
Npdes# CA#:	Not reported
Major-Minor:	Not reported
Npdes Type:	Not reported
Reclamation:	N - No
Dredge Fill Fee:	Not reported
301H:	Not reported
Application Fee Amt Received:	Not reported
Status:	Active
Status Date:	05/21/2014
Effective Date:	04/30/2004
Expiration/Review Date:	04/30/2016
Termination Date:	Not reported
WDR Review - Amend:	Not reported
WDR Review - Revise/Renew:	Not reported
WDR Review - Rescind:	Not reported
WDR Review - No Action Required:	Not reported
WDR Review - Pending:	Not reported
WDR Review - Planned:	Not reported
Status Enrollee:	N
Individual/General:	I

LANDFILL,CALIFORNIA STREET (Continued) **S103442703**

Fee Code:	50 - Land Disposal Site paying tipping fee
Direction/Voice:	Passive
Enforcement Id(EID):	372345
Region:	8
Order / Resolution Number:	Not reported
Enforcement Action Type:	Notice to Comply
Effective Date:	12/08/2009
Adoption/Issuance Date:	12/08/2009
Achieve Date:	Not reported
Termination Date:	12/23/2009
ACL Issuance Date:	Not reported
EPL Issuance Date:	Not reported
Status:	Historical
Title:	NTC 12/08/2009 for Redlands City
Description:	NTC issued for minor violations: water ponding, inadequate BMPs, and erosion on sideslope.
Program:	LFOPER
Latest Milestone Completion Date:	Not reported
# Of Programs1:	1
Total Assessment Amount:	0
Initial Assessed Amount:	0
Liability $ Amount:	0
Project $ Amount:	0
Liability $ Paid:	0
Project $ Completed:	0
Total $ Paid/Completed Amount:	0

Region:	8
Facility Id:	236433
Agency Name:	Not reported
Place Type:	Waste Management Unit
Place Subtype:	Land fill
Facility Type:	Solid Waste Class III - nonhazardous solid wastes
Agency Type:	Not reported
# Of Agencies:	Not reported
Place Latitude:	34.08861
Place Longitude:	-117.221
SIC Code 1:	4953
SIC Desc 1:	Refuse Systems
SIC Code 2:	Not reported
SIC Desc 2:	Not reported
SIC Code 3:	Not reported
SIC Desc 3:	Not reported
NAICS Code 1:	Not reported
NAICS Desc 1:	Not reported
NAICS Code 2:	Not reported
NAICS Desc 2:	Not reported
NAICS Code 3:	Not reported
NAICS Desc 3:	Not reported
# Of Places:	1
Source Of Facility:	Enf Action
Design Flow:	Not reported
Threat To Water Quality:	Not reported
Complexity:	Not reported
Pretreatment:	Not reported
Facility Waste Type:	Not reported
Facility Waste Type 2:	Not reported

LANDFILL,CALIFORNIA STREET (Continued) **S103442703**

Facility Waste Type 3:	Not reported
Facility Waste Type 4:	Not reported
Program:	Not reported
Program Category1:	Not reported
Program Category2:	LNDISP
# Of Programs:	Not reported
WDID:	Not reported
Reg Measure Id:	Not reported
Reg Measure Type:	Not reported
Region:	Not reported
Order #:	Not reported
Npdes# CA#:	Not reported
Major-Minor:	Not reported
Npdes Type:	Not reported
Reclamation:	Not reported
Dredge Fill Fee:	Not reported
301H:	Not reported
Application Fee Amt Received:	Not reported
Status:	Not reported
Status Date:	Not reported
Effective Date:	Not reported
Expiration/Review Date:	Not reported
Termination Date:	Not reported
WDR Review - Amend:	Not reported
WDR Review - Revise/Renew:	Not reported
WDR Review - Rescind:	Not reported
WDR Review - No Action Required:	Not reported
WDR Review - Pending:	Not reported
WDR Review - Planned:	Not reported
Status Enrollee:	Not reported
Individual/General:	Not reported
Fee Code:	Not reported
Direction/Voice:	Not reported
Enforcement Id(EID):	336625
Region:	8
Order / Resolution Number:	R8-2004-0008
Enforcement Action Type:	Notice to Comply
Effective Date:	11/01/2007
Adoption/Issuance Date:	Not reported
Achieve Date:	2007-11-15
Termination Date:	11/15/2007
ACL Issuance Date:	Not reported
EPL Issuance Date:	Not reported
Status:	Historical
Title:	NTC 11/1/07 for City of Redlands, CA St. Landfill
Description:	The City failed to complete site maintenance activities by Oct. 1 as required by Drainage and Erosion Control E.5 of Order No. R8-2004-0008. An NTC was issued to achieve compliance by 11/15/07.
Program:	LNDISP
Latest Milestone Completion Date:	Not reported
# Of Programs1:	1
Total Assessment Amount:	0
Initial Assessed Amount:	0
Liability $ Amount:	0
Project $ Amount:	0
Liability $ Paid:	0

LANDFILL,CALIFORNIA STREET (Continued) **S103442703**

Project $ Completed: 0
Total $ Paid/Completed Amount: 0

CA Financial Assurance 2:
Region: 2
SWIS_NO: 36-AA-0017
Closure Approved: Yes
Closure Inf Coverage Date: 06/01/2007
Closure Plan Coverage: $5,801,777.00
Closure Plan Date: 04/01/2008
PostClose Approved: Yes
PostClose Adequacy Date: 04/01/2008
PostClose Inf Coverage: $4,428,143.00
PostClose Inf Coverage Date: 06/01/2007
CorActCoverage: $34,380.00
CorActApproved: Yes
CorAct Mec Adequacy Date: Not reported
CorAct Inf Coverage: $34,380.00
CorActPlanCoverage: $813,076.00
CorAct Plan Date: 03/07/2014
Lia Coverage: $1,000,000.00
Lia Approved: Yes
Review: 02/25/2002
Closure Mechanism A: ENTERPRISE FUND
Closure Mechanism B: Not reported
Closure Coverage: $6,688,115.00
Closure Adequacy: Not reported
Closure Inflation Estimate: $6,688,115.00
Post Closure Mechanism A: PLEDGE OF REVENUE
Post Closure Established A: 04/08/1994
Post Closure Mechanism B: Not reported
Post Closure Coverate: $4,428,143.00
Post Closure Adequacy: Not reported
Corrective Action Extablished A: 09/05/2008
Corrective Actiont Coverage: $34,380.00
Corrective Action Approved: Yes
Corrective Action Inflation Estimate: $34,380.00
Corrective Action Inflationdate: 06/01/2007
Corrective Action Plan Estimate: $813,076.00
Liability Mechanism A: SELF-INS. & RISK MANAGEMENT
Liability Established A: 12/07/1993
Liability Mechanism B: Not reported
CostAnniversary: 02/01/2003
ClosureEstablishedA: 04/08/1994
ClosureEstablishedB: Not reported
ClosureDisbursement: 0
PostClosureEstablishedB: Not reported
PostClosureDisbursement: 0
CorrectiveActionMechanismA: PLEDGE OF REVENUE
CorrectiveActionMechanismB: Not reported
CorrectiveActionExtablishedB: Not reported
CorrectiveActiontDisbursement: 0
LiabilityEstablishedB: Not reported
LiabilityAdequacy: Not reported
Contact: Not reported

LANDFILL,CALIFORNIA STREET (Continued) **S103442703**

WDS:

Facility ID:	Santa Ana River 360303001
Facility Type:	Solid Waste Site-Class III - Landfills for non hazardous solid wastes.
Facility Status:	Active - Any facility with a continuous or seasonal discharge that is under Waste Discharge Requirements.
NPDES Number:	Not reported
Subregion:	8
Facility Telephone:	9097987698
Facility Contact:	Gary Phelps
Agency Name:	REDLANDS CITY OF
Agency Address:	PO BOX 3005
Agency City,St,Zip:	REDLANDS 92373
Agency Contact:	DOUGLAS HEDRICK
Agency Telephone:	9097987698
Agency Type:	City
SIC Code:	4953
SIC Code 2:	Not reported
Primary Waste Type:	Nonhazardous Solid Wastes/Influent or Solid Wastes that contain nonhazardous putrescible and non putrescible solid, semisolid, and liquid wastes (E.G., garbage, trash, refuse, paper, demolition and construction wastes, manure, vegetable or animal solid and semisolid waste).
Primary Waste:	SLDWST
Waste Type2:	Not reported
Waste2:	Solid Wastes
Primary Waste Type:	Nonhazardous Solid Wastes/Influent or Solid Wastes that contain nonhazardous putrescible and non putrescible solid, semisolid, and liquid wastes (E.G., garbage, trash, refuse, paper, demolition and construction wastes, manure, vegetable or animal solid and semisolid waste).
Secondary Waste:	Not reported
Secondary Waste Type:	Not reported
Design Flow:	0
Baseline Flow:	0
Reclamation:	No reclamation requirements associated with this facility.
POTW:	The facility is not a POTW.
Treat To Water:	Major Threat to Water Quality. A violation could render unusable a ground water or surface water resource used as a significant drink water supply, require closure of an area used for contact recreation, result in long-term deleterious effects on shell fish spawning or growth areas of aquatic resources, or directly expose the public to toxic substances.
Complexity:	Category B - Any facility having a physical, chemical, or biological waste treatment system (except for septic systems with subsurface disposal), or any Class II or III disposal site, or facilities without treatment systems that are complex, such as marinas with petroleum products, solid wastes, and sewage pump out facilities.

9
SW
1/8-1/4
0.193 mi.
1018 ft.

PIONEER INDUSTRIAL CENTER
9425 NEVADA ST STE A
REDLANDS, CA 92335

San Bern. Co. Permit

EDR ID Number: S109849236
EPA ID Number: N/A

Relative:
Lower

Actual:
1206 ft.

San Bern. Co. Permit:

Region:	SAN BERNARDINO
Facility ID:	FA0013751
Owner:	PROLOGIS INC
Permit Number:	PT0024177
Permit Category:	HAZARDOUS MATERIALS 1-3 CHEMICALS SPECIAL
Facility Status:	ACTIVE
Expiration Date:	04/30/2017

Region:	SAN BERNARDINO
Facility ID:	FA0010649
Owner:	DAVIS PARTNERS LLC
Permit Number:	PT0018351
Permit Category:	HAZMAT HANDLER 0-10 EMPLOYEES
Facility Status:	INACTIVE
Expiration Date:	11/30/2009

10
WNW
1/8-1/4
0.207 mi.
1094 ft.

CALIFORNIA STREET LANDFILL BORROW AREA
35 CAJON STREET, P.O. BOX 3005
, CA

MINES

EDR ID Number: S117661229
EPA ID Number: N/A

Relative:
Lower

Actual:
1183 ft.

MINES:

Latitude:	34.089444
Longitude:	-117.216944
Lead Agency identification code:	36.3
Lead Agency name:	City of Redlands
Year of the operator supplied annual report:	2003
Type of report submitted by operator:	2
Number of acres disturbed by the mine:	0
Status of mining operation:	RECLAIMED
Status of mine reclamation:	RECLAMATION CERTIFIED COMPLETE BY LEAD AGENCY
Mine operator:	CITY OF REDLANDS
Operator Address:	35 CAJON STREET, P.O. BOX 3005
Operator City, State, Zip:	REDLANDS, CA 92373
Operator County:	Not reported
Mine owner:	CITY OF REDLANDS
Owner Address:	35 CAJON STREET, P.O. BOX 3005
Owner City, State, Zip:	REDLANDS, CA 92373
Owner County:	Not reported
Reclamation plan identification number:	Not reported
Primary product produced by the mine:	FILL DIRT
Other products produced by the mine:	Not reported
Type of mining utilized by mine:	UNDETERMINED
Conditional use permit identification number:	CUP 592
Number of acres permitted for mining disturbance:	52
Total amount of funds posted by the mine for reclamation:	39000
Financial Assurance Cost Estimate for reclamation:	Not reported

C11
NE
1/8-1/4
0.219 mi.
1154 ft.

THE HOME DEPOT DISTRIBUTION CENTER #5087
27352 RIVERBLUFF AVE
REDLANDS, CA 92374

San Bern. Co. Permit

S110168947
N/A

Site 1 of 2 in cluster C

Relative:
Higher

Actual:
1230 ft.

San Bern. Co. Permit:

Region: SAN BERNARDINO
Facility ID: FA0012064
Owner: The Home Depot U.S.A., Inc.
Permit Number: PT0021411
Permit Category: HAZARDOUS MATERIALS 11-30 CHEMICALS
Facility Status: ACTIVE
Expiration Date: 02/28/2018

Region: SAN BERNARDINO
Facility ID: FA0012064
Owner: The Home Depot U.S.A., Inc.
Permit Number: PT0021412
Permit Category: LARGE QUANTITY GENERATOR
Facility Status: ACTIVE
Expiration Date: 02/28/2018

Region: SAN BERNARDINO
Facility ID: FA0012064
Owner: The Home Depot U.S.A., Inc.
Permit Number: PT0037555
Permit Category: RCRA LQG GENERAL ACTIVITY(NB)
Facility Status: FEE EXEMPT
Expiration Date: 02/28/2018

Region: SAN BERNARDINO
Facility ID: FA0012064
Owner: The Home Depot U.S.A., Inc.
Permit Number: PT0024961
Permit Category: EPCRA FACILITY
Facility Status: INACTIVE
Expiration Date: 02/28/2014

C12
NE
1/8-1/4
0.219 mi.
1154 ft.

HOME DEPOT #HD5087
27352 RIVER BLUFF AVENUE
REDLANDS, CA 92374

RCRA-LQG
HAZNET
San Bern. Co. Permit

1012176404
CAR000203455

Site 2 of 2 in cluster C

Relative:
Higher

Actual:
1230 ft.

RCRA-LQG:

Date form received by agency: 02/12/2016
Facility name: HOME DEPOT #HD5087
Facility address: 27352 RIVER BLUFF AVENUE
REDLANDS, CA 92374
EPA ID: CAR000203455
Mailing address: SAN FELILPE ST, SUITE 1000
HOUSTON, TX 77056
Contact: ASHLEY CAMPBELL
Contact address: SAN FELILPE ST, SUITE 1000
HOUSTON, TX 77056
Contact country: US
Contact telephone: 713-985-5472
Contact email: ASHLEY.CAMPBELL@STERICYCLE.COM
EPA Region: 09

HOME DEPOT #HD5087 (Continued) **1012176404**

Classification: Large Quantity Generator
Description: Handler: generates 1,000 kg or more of hazardous waste during any calendar month; or generates more than 1 kg of acutely hazardous waste during any calendar month; or generates more than 100 kg of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month; or generates 1 kg or less of acutely hazardous waste during any calendar month, and accumulates more than 1 kg of acutely hazardous waste at any time; or generates 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month, and accumulates more than 100 kg of that material at any time

Owner/Operator Summary:
Owner/operator name: THE HOME DEPOT USA INC
Owner/operator address: PACES FERRY ROAD
ATLANTA, GA 30339
Owner/operator country: US
Owner/operator telephone: 770-433-8211
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: 10/19/2009
Owner/Op end date: Not reported

Owner/operator name: HOME DEPOT #HD5087
Owner/operator address: Not reported
Not reported
Owner/operator country: Not reported
Owner/operator telephone: Not reported
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: 10/19/2009
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No

HOME DEPOT #HD5087 (Continued) **1012176404**

Used oil transporter: No

. Waste code: 122
. Waste name: Alkaline solution without metals (pH > 12.5)

. Waste code: 141
. Waste name: Off-specification, aged, or surplus inorganics

. Waste code: 181
. Waste name: Other inorganic solid waste

. Waste code: 213
. Waste name: Hydrocarbon solvents (benzene, hexane, Stoddard, etc.)

. Waste code: 214
. Waste name: Unspecified solvent mixture

. Waste code: 331
. Waste name: Off-specification, aged, or surplus organics

. Waste code: 791
. Waste name: Liquids with pH < 2

. Waste code: D001
. Waste name: IGNITABLE WASTE

. Waste code: D002
. Waste name: CORROSIVE WASTE

. Waste code: D005
. Waste name: BARIUM

. Waste code: D007
. Waste name: CHROMIUM

. Waste code: D008
. Waste name: LEAD

. Waste code: D009
. Waste name: MERCURY

. Waste code: D016
. Waste name: 2,4-D (2,4-DICHLOROPHENOXYACETIC ACID)

. Waste code: D018
. Waste name: BENZENE

. Waste code: D035
. Waste name: METHYL ETHYL KETONE

. Waste code: D039
. Waste name: TETRACHLOROETHYLENE

Historical Generators:
Date form received by agency: 03/01/2014
Site name: HOME DEPOT #HD5087
Classification: Large Quantity Generator

HOME DEPOT #HD5087 (Continued) **1012176404**

. Waste code: D001
. Waste name: IGNITABLE WASTE

. Waste code: D002
. Waste name: CORROSIVE WASTE

. Waste code: D005
. Waste name: BARIUM

. Waste code: D006
. Waste name: CADMIUM

. Waste code: D007
. Waste name: CHROMIUM

. Waste code: D008
. Waste name: LEAD

. Waste code: D009
. Waste name: MERCURY

. Waste code: D016
. Waste name: 2,4-D (2,4-DICHLOROPHENOXYACETIC ACID)

. Waste code: D018
. Waste name: BENZENE

. Waste code: D035
. Waste name: METHYL ETHYL KETONE

Date form received by agency: 10/27/2009
Site name: HOME DEPOT USA HD5087
Classification: Small Quantity Generator

. Waste code: D001
. Waste name: IGNITABLE WASTE

. Waste code: D002
. Waste name: CORROSIVE WASTE

. Waste code: D005
. Waste name: BARIUM

. Waste code: D007
. Waste name: CHROMIUM

. Waste code: D008
. Waste name: LEAD

. Waste code: D009
. Waste name: MERCURY

. Waste code: D011
. Waste name: SILVER

. Waste code: D016
. Waste name: 2,4-D (2,4-DICHLOROPHENOXYACETIC ACID)

HOME DEPOT #HD5087 (Continued) **1012176404**

. Waste code: D018
. Waste name: BENZENE

. Waste code: U160
. Waste name: 2-BUTANONE, PEROXIDE (R,T) (OR) METHYL ETHYL KETONE PEROXIDE (R,T)

Biennial Reports:

Last Biennial Reporting Year: 2017

Annual Waste Handled:

Waste code: D001
Waste name: IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.
Amount (Lbs): 21977

Waste code: D002
Waste name: A WASTE WHICH HAS A PH OF LESS THAN 2 OR GREATER THAN 12.5 IS CONSIDERED TO BE A CORROSIVE HAZARDOUS WASTE. SODIUM HYDROXIDE, A CAUSTIC SOLUTION WITH A HIGH PH, IS OFTEN USED BY INDUSTRIES TO CLEAN OR DEGREASE PARTS. HYDROCHLORIC ACID, A SOLUTION WITH A LOW PH, IS USED BY MANY INDUSTRIES TO CLEAN METAL PARTS PRIOR TO PAINTING. WHEN THESE CAUSTIC OR ACID SOLUTIONS BECOME CONTAMINATED AND MUST BE DISPOSED, THE WASTE WOULD BE A CORROSIVE HAZARDOUS WASTE.
Amount (Lbs): 7658

Waste code: D005
Waste name: BARIUM
Amount (Lbs): 2569

Waste code: D007
Waste name: CHROMIUM
Amount (Lbs): 2569

Waste code: D008
Waste name: LEAD
Amount (Lbs): 2569

Waste code: D009
Waste name: MERCURY
Amount (Lbs): 394

Waste code: D016
Waste name: 2,4-D
Amount (Lbs): 5035

Waste code: D018
Waste name: BENZENE
Amount (Lbs): 18896

Waste code: D035
Waste name: METHYL ETHYL KETONE
Amount (Lbs): 21659

HOME DEPOT #HD5087 (Continued) **1012176404**

Waste code: D039
Waste name: TETRACHLOROETHYLENE
Amount (Lbs): 2569

Violation Status: No violations found

HAZNET:
envid: 1012176404
Year: 2016
GEPAID: CAR000203455
Contact: ASHLEY CAMPBELL
Telephone: 7139855472
Mailing Name: Not reported
Mailing Address: 5151 SAN FELIPE ST
Mailing City,St,Zip: HOUSTON, TX 770560000
Gen County: San Bernardino
TSD EPA ID: CAD008364432
TSD County: Los Angeles
Waste Category: Off-specification, aged or surplus organics
Disposal Method: Fuel Blending Prior To Energy Recovery At Another Site
Tons: 4.62
Cat Decode: Off-specification, aged or surplus organics
Method Decode: Fuel Blending Prior To Energy Recovery At Another Site
Facility County: San Bernardino

envid: 1012176404
Year: 2016
GEPAID: CAR000203455
Contact: ASHLEY CAMPBELL
Telephone: 7139855472
Mailing Name: Not reported
Mailing Address: 5151 SAN FELIPE ST
Mailing City,St,Zip: HOUSTON, TX 770560000
Gen County: San Bernardino
TSD EPA ID: CAD008364432
TSD County: Los Angeles
Waste Category: Unspecified solvent mixture
Disposal Method: Fuel Blending Prior To Energy Recovery At Another Site
Tons: 10.3645
Cat Decode: Unspecified solvent mixture
Method Decode: Fuel Blending Prior To Energy Recovery At Another Site
Facility County: San Bernardino

envid: 1012176404
Year: 2016
GEPAID: CAR000203455
Contact: ASHLEY CAMPBELL
Telephone: 7139855472
Mailing Name: Not reported
Mailing Address: 5151 SAN FELIPE ST
Mailing City,St,Zip: HOUSTON, TX 770560000
Gen County: San Bernardino
TSD EPA ID: CAD008364432
TSD County: Los Angeles
Waste Category: Other inorganic solid waste
Disposal Method: Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)

HOME DEPOT #HD5087 (Continued) **1012176404**

Tons: 0.31
Cat Decode: Other inorganic solid waste
Method Decode: Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Facility County: San Bernardino

envid: 1012176404
Year: 2016
GEPAID: CAR000203455
Contact: ASHLEY CAMPBELL
Telephone: 7139855472
Mailing Name: Not reported
Mailing Address: 5151 SAN FELIPE ST
Mailing City,St,Zip: HOUSTON, TX 770560000
Gen County: San Bernardino
TSD EPA ID: CAD008364432
TSD County: Los Angeles
Waste Category: Alkaline solution without metals pH >= 12.5
Disposal Method: Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons: 2.114
Cat Decode: Alkaline solution without metals pH >= 12.5
Method Decode: Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Facility County: San Bernardino

envid: 1012176404
Year: 2016
GEPAID: CAR000203455
Contact: ASHLEY CAMPBELL
Telephone: 7139855472
Mailing Name: Not reported
Mailing Address: 5151 SAN FELIPE ST
Mailing City,St,Zip: HOUSTON, TX 770560000
Gen County: San Bernardino
TSD EPA ID: CAD008364432
TSD County: Los Angeles
Waste Category: Liquids with pH <= 2
Disposal Method: Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons: 0.188
Cat Decode: Liquids with pH <= 2
Method Decode: Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Facility County: San Bernardino

Click this hyperlink while viewing on your computer to access
55 additional CA_HAZNET: record(s) in the EDR Site Report.

San Bern. Co. Permit:
Region: SAN BERNARDINO
Facility ID: FA0012874
Owner: Prologis
Permit Number: PT0022500
Permit Category: HAZMAT HANDLER 0-10 EMPLOYEES
Facility Status: INACTIVE
Expiration Date: 11/30/2010

13
NW
1/2-1
0.697 mi.
3680 ft.

FORMER SKEET RANGE NO. 1
SAN BERNARDINO, CA

UXO

1018153477
N/A

Relative:
Lower

Actual:
1148 ft.

UXO:

DoD Component:	Air Force
Sort Order:	3
Installation Name:	NORTON
Facility Address 2:	Not reported
Site ID:	SR400
Site Type:	Small Arms Range
Latitude:	34.097424
Longitude:	-117.221660

14
NNW
1/2-1
0.791 mi.
4177 ft.

FORMER SKEET RANGE NO. 2
SAN BERNARDINO, CA

UXO

1018153483
N/A

Relative:
Lower

Actual:
1174 ft.

UXO:

DoD Component:	Air Force
Sort Order:	3
Installation Name:	NORTON
Facility Address 2:	Not reported
Site ID:	SR401
Site Type:	Small Arms Range
Latitude:	34.101683
Longitude:	-117.214585

Count: 5 records. ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
REDLANDS	S107736878	NEW HIGH SCHOOL NO.3	TEXAS STREET/W. PIONEER AVENUE	92374	ENVIROSTOR, SCH
REDLANDS & VICINITY	S105960464	CRAFTON-REDLANDS AREA	BUNKER HILL GROUND WATER SUB-B	92374	CA BOND EXP. PLAN
SAN BERNARDINO	S108985941	U.S. AIR FORCE - NORTON AFB (FORME	MILL STREET		SLIC
SAN BERNARDINO	S108543100	SOUTHERN PACIFIC RAIL YARD	NA MILL STREET		SLIC
SAN BERNARDINO	S104747455	CHARTER LEASING	265 MILL ST	92408	LUST, HIST CORTESE

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

Number of Days to Update: Provides confirmation that EDR is reporting records that have been updated within 90 days from the date the government agency made the information available to the public.

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

NPL: National Priority List

National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC) and regional EPA offices.

Date of Government Version: 05/30/2017
Date Data Arrived at EDR: 06/08/2017
Date Made Active in Reports: 09/15/2017
Number of Days to Update: 99

Source: EPA
Telephone: N/A
Last EDR Contact: 11/03/2017
Next Scheduled EDR Contact: 01/15/2018
Data Release Frequency: Quarterly

NPL Site Boundaries

Sources:

EPA's Environmental Photographic Interpretation Center (EPIC)
Telephone: 202-564-7333

EPA Region 1
Telephone 617-918-1143

EPA Region 6
Telephone: 214-655-6659

EPA Region 3
Telephone 215-814-5418

EPA Region 7
Telephone: 913-551-7247

EPA Region 4
Telephone 404-562-8033

EPA Region 8
Telephone: 303-312-6774

EPA Region 5
Telephone 312-886-6686

EPA Region 9
Telephone: 415-947-4246

EPA Region 10
Telephone 206-553-8665

Proposed NPL: Proposed National Priority List Sites

A site that has been proposed for listing on the National Priorities List through the issuance of a proposed rule in the Federal Register. EPA then accepts public comments on the site, responds to the comments, and places on the NPL those sites that continue to meet the requirements for listing.

Date of Government Version: 05/30/2017
Date Data Arrived at EDR: 06/09/2017
Date Made Active in Reports: 09/15/2017
Number of Days to Update: 98

Source: EPA
Telephone: N/A
Last EDR Contact: 11/03/2017
Next Scheduled EDR Contact: 01/15/2018
Data Release Frequency: Quarterly

NPL LIENS: Federal Superfund Liens

Federal Superfund Liens. Under the authority granted the USEPA by CERCLA of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner received notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

Date of Government Version: 10/15/1991
Date Data Arrived at EDR: 02/02/1994
Date Made Active in Reports: 03/30/1994
Number of Days to Update: 56

Source: EPA
Telephone: 202-564-4267
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Federal Delisted NPL site list

Delisted NPL: National Priority List Deletions

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

Date of Government Version: 05/30/2017
Date Data Arrived at EDR: 06/09/2017
Date Made Active in Reports: 09/15/2017
Number of Days to Update: 98

Source: EPA
Telephone: N/A
Last EDR Contact: 11/03/2017
Next Scheduled EDR Contact: 01/15/2018
Data Release Frequency: Quarterly

Federal CERCLIS list

FEDERAL FACILITY: Federal Facility Site Information listing

A listing of National Priority List (NPL) and Base Realignment and Closure (BRAC) sites found in the Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) Database where EPA Federal Facilities Restoration and Reuse Office is involved in cleanup activities.

Date of Government Version: 11/07/2016
Date Data Arrived at EDR: 01/05/2017
Date Made Active in Reports: 04/07/2017
Number of Days to Update: 92

Source: Environmental Protection Agency
Telephone: 703-603-8704
Last EDR Contact: 10/06/2017
Next Scheduled EDR Contact: 01/15/2018
Data Release Frequency: Varies

SEMS: Superfund Enterprise Management System

SEMS (Superfund Enterprise Management System) tracks hazardous waste sites, potentially hazardous waste sites, and remedial activities performed in support of EPA's Superfund Program across the United States. The list was formerly know as CERCLIS, renamed to SEMS by the EPA in 2015. The list contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). This dataset also contains sites which are either proposed to or on the National Priorities List (NPL) and the sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 07/11/2017
Date Data Arrived at EDR: 07/21/2017
Date Made Active in Reports: 10/06/2017
Number of Days to Update: 77

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 11/03/2017
Next Scheduled EDR Contact: 01/29/2018
Data Release Frequency: Quarterly

Federal CERCLIS NFRAP site list

SEMS-ARCHIVE: Superfund Enterprise Management System Archive

SEMS-ARCHIVE (Superfund Enterprise Management System Archive) tracks sites that have no further interest under the Federal Superfund Program based on available information. The list was formerly known as the CERCLIS-NFRAP, renamed to SEMS ARCHIVE by the EPA in 2015. EPA may perform a minimal level of assessment work at a site while it is archived if site conditions change and/or new information becomes available. Archived sites have been removed and archived from the inventory of SEMS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list the site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. The decision does not necessarily mean that there is no hazard associated with a given site; it only means that. based upon available information, the location is not judged to be potential NPL site.

Date of Government Version: 07/11/2017
Date Data Arrived at EDR: 07/28/2017
Date Made Active in Reports: 10/06/2017
Number of Days to Update: 70

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 11/03/2017
Next Scheduled EDR Contact: 01/29/2018
Data Release Frequency: Quarterly

Federal RCRA CORRACTS facilities list

CORRACTS: Corrective Action Report

CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 09/13/2017
Date Data Arrived at EDR: 09/26/2017
Date Made Active in Reports: 10/06/2017
Number of Days to Update: 10

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 09/26/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Quarterly

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF: RCRA - Treatment, Storage and Disposal

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Transporters are individuals or entities that move hazardous waste from the generator offsite to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

Date of Government Version: 09/13/2017
Date Data Arrived at EDR: 09/26/2017
Date Made Active in Reports: 10/06/2017
Number of Days to Update: 10

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 09/26/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Quarterly

Federal RCRA generators list

RCRA-LQG: RCRA - Large Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

Date of Government Version: 09/13/2017
Date Data Arrived at EDR: 09/26/2017
Date Made Active in Reports: 10/06/2017
Number of Days to Update: 10

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 09/26/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Quarterly

RCRA-SQG: RCRA - Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

Date of Government Version: 09/13/2017
Date Data Arrived at EDR: 09/26/2017
Date Made Active in Reports: 10/06/2017
Number of Days to Update: 10

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 09/26/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Quarterly

RCRA-CESQG: RCRA - Conditionally Exempt Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Conditionally exempt small quantity generators (CESQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

Date of Government Version: 09/13/2017
Date Data Arrived at EDR: 09/26/2017
Date Made Active in Reports: 10/06/2017
Number of Days to Update: 10

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 09/26/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Quarterly

Federal institutional controls / engineering controls registries

LUCIS: Land Use Control Information System

LUCIS contains records of land use control information pertaining to the former Navy Base Realignment and Closure properties.

Date of Government Version: 05/22/2017
Date Data Arrived at EDR: 06/13/2017
Date Made Active in Reports: 09/15/2017
Number of Days to Update: 94

Source: Department of the Navy
Telephone: 843-820-7326
Last EDR Contact: 11/08/2017
Next Scheduled EDR Contact: 02/26/2018
Data Release Frequency: Varies

US ENG CONTROLS: Engineering Controls Sites List

A listing of sites with engineering controls in place. Engineering controls include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health.

Date of Government Version: 08/10/2017
Date Data Arrived at EDR: 08/30/2017
Date Made Active in Reports: 10/13/2017
Number of Days to Update: 44

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 11/27/2017
Next Scheduled EDR Contact: 03/12/2018
Data Release Frequency: Varies

US INST CONTROL: Sites with Institutional Controls

A listing of sites with institutional controls in place. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions are generally required as part of the institutional controls.

Date of Government Version: 08/10/2017
Date Data Arrived at EDR: 08/30/2017
Date Made Active in Reports: 10/13/2017
Number of Days to Update: 44

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 11/27/2017
Next Scheduled EDR Contact: 03/12/2018
Data Release Frequency: Varies

Federal ERNS list

ERNS: Emergency Response Notification System

Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 09/18/2017
Date Data Arrived at EDR: 09/21/2017
Date Made Active in Reports: 10/13/2017
Number of Days to Update: 22

Source: National Response Center, United States Coast Guard
Telephone: 202-267-2180
Last EDR Contact: 09/21/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Quarterly

State- and tribal - equivalent NPL

RESPONSE: State Response Sites

Identifies confirmed release sites where DTSC is involved in remediation, either in a lead or oversight capacity. These confirmed release sites are generally high-priority and high potential risk.

Date of Government Version: 07/31/2017
Date Data Arrived at EDR: 08/01/2017
Date Made Active in Reports: 08/15/2017
Number of Days to Update: 14

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 10/31/2017
Next Scheduled EDR Contact: 02/12/2018
Data Release Frequency: Quarterly

State- and tribal - equivalent CERCLIS

ENVIROSTOR: EnviroStor Database

The Department of Toxic Substances Control's (DTSC's) Site Mitigation and Brownfields Reuse Program's (SMBRP's) EnviroStor database identifes sites that have known contamination or sites for which there may be reasons to investigate further. The database includes the following site types: Federal Superfund sites (National Priorities List (NPL)); State Response, including Military Facilities and State Superfund; Voluntary Cleanup; and School sites. EnviroStor provides similar information to the information that was available in CalSites, and provides additional site information, including, but not limited to, identification of formerly-contaminated properties that have been released for reuse, properties where environmental deed restrictions have been recorded to prevent inappropriate land uses, and risk characterization information that is used to assess potential impacts to public health and the environment at contaminated sites.

Date of Government Version: 07/31/2017
Date Data Arrived at EDR: 08/01/2017
Date Made Active in Reports: 08/15/2017
Number of Days to Update: 14

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 10/31/2017
Next Scheduled EDR Contact: 02/12/2018
Data Release Frequency: Quarterly

State and tribal landfill and/or solid waste disposal site lists

SWF/LF (SWIS): Solid Waste Information System

Active, Closed and Inactive Landfills. SWF/LF records typically contain an inve ntory of solid waste disposal facilities or landfills. These may be active or i nactive facilities or open dumps that failed to meet RCRA Section 4004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 08/14/2017
Date Data Arrived at EDR: 08/17/2017
Date Made Active in Reports: 09/21/2017
Number of Days to Update: 35

Source: Department of Resources Recycling and Recovery
Telephone: 916-341-6320
Last EDR Contact: 11/14/2017
Next Scheduled EDR Contact: 02/26/2018
Data Release Frequency: Quarterly

State and tribal leaking storage tank lists

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

LUST REG 1: Active Toxic Site Investigation

Del Norte, Humboldt, Lake, Mendocino, Modoc, Siskiyou, Sonoma, Trinity counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 02/01/2001
Date Data Arrived at EDR: 02/28/2001
Date Made Active in Reports: 03/29/2001
Number of Days to Update: 29

Source: California Regional Water Quality Control Board North Coast (1)
Telephone: 707-570-3769
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

LUST REG 8: Leaking Underground Storage Tanks

California Regional Water Quality Control Board Santa Ana Region (8). For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 02/14/2005
Date Data Arrived at EDR: 02/15/2005
Date Made Active in Reports: 03/28/2005
Number of Days to Update: 41

Source: California Regional Water Quality Control Board Santa Ana Region (8)
Telephone: 909-782-4496
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: Varies

LUST REG 9: Leaking Underground Storage Tank Report

Orange, Riverside, San Diego counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 03/01/2001
Date Data Arrived at EDR: 04/23/2001
Date Made Active in Reports: 05/21/2001
Number of Days to Update: 28

Source: California Regional Water Quality Control Board San Diego Region (9)
Telephone: 858-637-5595
Last EDR Contact: 09/26/2011
Next Scheduled EDR Contact: 01/09/2012
Data Release Frequency: No Update Planned

LUST: Leaking Underground Fuel Tank Report (GEOTRACKER)

Leaking Underground Storage Tank (LUST) Sites included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

Date of Government Version: 09/11/2017
Date Data Arrived at EDR: 09/12/2017
Date Made Active in Reports: 11/09/2017
Number of Days to Update: 58

Source: State Water Resources Control Board
Telephone: see region list
Last EDR Contact: 09/12/2017
Next Scheduled EDR Contact: 12/25/2017
Data Release Frequency: Quarterly

LUST REG 3: Leaking Underground Storage Tank Database

Leaking Underground Storage Tank locations. Monterey, San Benito, San Luis Obispo, Santa Barbara, Santa Cruz counties.

Date of Government Version: 05/19/2003
Date Data Arrived at EDR: 05/19/2003
Date Made Active in Reports: 06/02/2003
Number of Days to Update: 14

Source: California Regional Water Quality Control Board Central Coast Region (3)
Telephone: 805-542-4786
Last EDR Contact: 07/18/2011
Next Scheduled EDR Contact: 10/31/2011
Data Release Frequency: No Update Planned

LUST REG 4: Underground Storage Tank Leak List

Los Angeles, Ventura counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 09/07/2004
Date Data Arrived at EDR: 09/07/2004
Date Made Active in Reports: 10/12/2004
Number of Days to Update: 35

Source: California Regional Water Quality Control Board Los Angeles Region (4)
Telephone: 213-576-6710
Last EDR Contact: 09/06/2011
Next Scheduled EDR Contact: 12/19/2011
Data Release Frequency: No Update Planned

LUST REG 5: Leaking Underground Storage Tank Database
Leaking Underground Storage Tank locations. Alameda, Alpine, Amador, Butte, Colusa, Contra Costa, Calveras, El Dorado, Fresno, Glenn, Kern, Kings, Lake, Lassen, Madera, Mariposa, Merced, Modoc, Napa, Nevada, Placer, Plumas, Sacramento, San Joaquin, Shasta, Solano, Stanislaus, Sutter, Tehama, Tulare, Tuolumne, Yolo, Yuba counties.

Date of Government Version: 07/01/2008
Date Data Arrived at EDR: 07/22/2008
Date Made Active in Reports: 07/31/2008
Number of Days to Update: 9

Source: California Regional Water Quality Control Board Central Valley Region (5)
Telephone: 916-464-4834
Last EDR Contact: 07/01/2011
Next Scheduled EDR Contact: 10/17/2011
Data Release Frequency: No Update Planned

LUST REG 6L: Leaking Underground Storage Tank Case Listing
For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 09/09/2003
Date Data Arrived at EDR: 09/10/2003
Date Made Active in Reports: 10/07/2003
Number of Days to Update: 27

Source: California Regional Water Quality Control Board Lahontan Region (6)
Telephone: 530-542-5572
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: No Update Planned

LUST REG 6V: Leaking Underground Storage Tank Case Listing
Leaking Underground Storage Tank locations. Inyo, Kern, Los Angeles, Mono, San Bernardino counties.

Date of Government Version: 06/07/2005
Date Data Arrived at EDR: 06/07/2005
Date Made Active in Reports: 06/29/2005
Number of Days to Update: 22

Source: California Regional Water Quality Control Board Victorville Branch Office (6)
Telephone: 760-241-7365
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: No Update Planned

LUST REG 2: Fuel Leak List
Leaking Underground Storage Tank locations. Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano, Sonoma counties.

Date of Government Version: 09/30/2004
Date Data Arrived at EDR: 10/20/2004
Date Made Active in Reports: 11/19/2004
Number of Days to Update: 30

Source: California Regional Water Quality Control Board San Francisco Bay Region (2)
Telephone: 510-622-2433
Last EDR Contact: 09/19/2011
Next Scheduled EDR Contact: 01/02/2012
Data Release Frequency: Quarterly

LUST REG 7: Leaking Underground Storage Tank Case Listing
Leaking Underground Storage Tank locations. Imperial, Riverside, San Diego, Santa Barbara counties.

Date of Government Version: 02/26/2004
Date Data Arrived at EDR: 02/26/2004
Date Made Active in Reports: 03/24/2004
Number of Days to Update: 27

Source: California Regional Water Quality Control Board Colorado River Basin Region (7)
Telephone: 760-776-8943
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

INDIAN LUST R10: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Alaska, Idaho, Oregon and Washington.

Date of Government Version: 10/07/2016
Date Data Arrived at EDR: 01/26/2017
Date Made Active in Reports: 05/05/2017
Number of Days to Update: 99

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 11/07/2017
Next Scheduled EDR Contact: 02/05/2018
Data Release Frequency: Quarterly

INDIAN LUST R9: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Arizona, California, New Mexico and Nevada

Date of Government Version: 04/13/2017
Date Data Arrived at EDR: 07/27/2017
Date Made Active in Reports: 10/13/2017
Number of Days to Update: 78

Source: Environmental Protection Agency
Telephone: 415-972-3372
Last EDR Contact: 10/27/2017
Next Scheduled EDR Contact: 02/05/2018
Data Release Frequency: Varies

INDIAN LUST R7: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Iowa, Kansas, and Nebraska

Date of Government Version: 04/14/2017
Date Data Arrived at EDR: 07/27/2017
Date Made Active in Reports: 10/06/2017
Number of Days to Update: 71

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 10/27/2017
Next Scheduled EDR Contact: 02/05/2018
Data Release Frequency: Varies

INDIAN LUST R6: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in New Mexico and Oklahoma.

Date of Government Version: 04/24/2017
Date Data Arrived at EDR: 07/27/2017
Date Made Active in Reports: 10/06/2017
Number of Days to Update: 71

Source: EPA Region 6
Telephone: 214-665-6597
Last EDR Contact: 10/27/2017
Next Scheduled EDR Contact: 02/05/2018
Data Release Frequency: Varies

INDIAN LUST R4: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Florida, Mississippi and North Carolina.

Date of Government Version: 10/14/2016
Date Data Arrived at EDR: 01/27/2017
Date Made Active in Reports: 05/05/2017
Number of Days to Update: 98

Source: EPA Region 4
Telephone: 404-562-8677
Last EDR Contact: 10/27/2017
Next Scheduled EDR Contact: 02/05/2018
Data Release Frequency: Semi-Annually

INDIAN LUST R1: Leaking Underground Storage Tanks on Indian Land
A listing of leaking underground storage tank locations on Indian Land.

Date of Government Version: 04/14/2017
Date Data Arrived at EDR: 07/27/2017
Date Made Active in Reports: 10/06/2017
Number of Days to Update: 71

Source: EPA Region 1
Telephone: 617-918-1313
Last EDR Contact: 10/27/2017
Next Scheduled EDR Contact: 02/05/2018
Data Release Frequency: Varies

INDIAN LUST R5: Leaking Underground Storage Tanks on Indian Land
Leaking underground storage tanks located on Indian Land in Michigan, Minnesota and Wisconsin.

Date of Government Version: 04/26/2017
Date Data Arrived at EDR: 07/27/2017
Date Made Active in Reports: 10/13/2017
Number of Days to Update: 78

Source: EPA, Region 5
Telephone: 312-886-7439
Last EDR Contact: 10/27/2017
Next Scheduled EDR Contact: 02/05/2018
Data Release Frequency: Varies

INDIAN LUST R8: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Colorado, Montana, North Dakota, South Dakota, Utah and Wyoming.

Date of Government Version: 05/01/2017
Date Data Arrived at EDR: 07/27/2017
Date Made Active in Reports: 10/13/2017
Number of Days to Update: 78

Source: EPA Region 8
Telephone: 303-312-6271
Last EDR Contact: 10/27/2017
Next Scheduled EDR Contact: 02/05/2018
Data Release Frequency: Varies

SLIC: Statewide SLIC Cases (GEOTRACKER)

Cleanup Program Sites (CPS; also known as Site Cleanups [SC] and formerly known as Spills, Leaks, Investigations, and Cleanups [SLIC] sites) included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

Date of Government Version: 09/11/2017
Date Data Arrived at EDR: 09/12/2017
Date Made Active in Reports: 11/09/2017
Number of Days to Update: 58

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 09/12/2017
Next Scheduled EDR Contact: 12/25/2017
Data Release Frequency: Varies

SLIC REG 1: Active Toxic Site Investigations

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/03/2003
Date Data Arrived at EDR: 04/07/2003
Date Made Active in Reports: 04/25/2003
Number of Days to Update: 18

Source: California Regional Water Quality Control Board, North Coast Region (1)
Telephone: 707-576-2220
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

SLIC REG 2: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/30/2004
Date Data Arrived at EDR: 10/20/2004
Date Made Active in Reports: 11/19/2004
Number of Days to Update: 30

Source: Regional Water Quality Control Board San Francisco Bay Region (2)
Telephone: 510-286-0457
Last EDR Contact: 09/19/2011
Next Scheduled EDR Contact: 01/02/2012
Data Release Frequency: Quarterly

SLIC REG 3: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 05/18/2006
Date Data Arrived at EDR: 05/18/2006
Date Made Active in Reports: 06/15/2006
Number of Days to Update: 28

Source: California Regional Water Quality Control Board Central Coast Region (3)
Telephone: 805-549-3147
Last EDR Contact: 07/18/2011
Next Scheduled EDR Contact: 10/31/2011
Data Release Frequency: Semi-Annually

SLIC REG 4: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 11/17/2004
Date Data Arrived at EDR: 11/18/2004
Date Made Active in Reports: 01/04/2005
Number of Days to Update: 47

Source: Region Water Quality Control Board Los Angeles Region (4)
Telephone: 213-576-6600
Last EDR Contact: 07/01/2011
Next Scheduled EDR Contact: 10/17/2011
Data Release Frequency: Varies

SLIC REG 5: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/01/2005
Date Data Arrived at EDR: 04/05/2005
Date Made Active in Reports: 04/21/2005
Number of Days to Update: 16

Source: Regional Water Quality Control Board Central Valley Region (5)
Telephone: 916-464-3291
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: Semi-Annually

SLIC REG 6V: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 05/24/2005
Date Data Arrived at EDR: 05/25/2005
Date Made Active in Reports: 06/16/2005
Number of Days to Update: 22

Source: Regional Water Quality Control Board, Victorville Branch
Telephone: 619-241-6583
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: Semi-Annually

SLIC REG 6L: SLIC Sites
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/07/2004
Date Data Arrived at EDR: 09/07/2004
Date Made Active in Reports: 10/12/2004
Number of Days to Update: 35

Source: California Regional Water Quality Control Board, Lahontan Region
Telephone: 530-542-5574
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

SLIC REG 7: SLIC List
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 11/24/2004
Date Data Arrived at EDR: 11/29/2004
Date Made Active in Reports: 01/04/2005
Number of Days to Update: 36

Source: California Regional Quality Control Board, Colorado River Basin Region
Telephone: 760-346-7491
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

SLIC REG 8: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/03/2008
Date Data Arrived at EDR: 04/03/2008
Date Made Active in Reports: 04/14/2008
Number of Days to Update: 11

Source: California Region Water Quality Control Board Santa Ana Region (8)
Telephone: 951-782-3298
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: Semi-Annually

SLIC REG 9: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/10/2007
Date Data Arrived at EDR: 09/11/2007
Date Made Active in Reports: 09/28/2007
Number of Days to Update: 17

Source: California Regional Water Quality Control Board San Diego Region (9)
Telephone: 858-467-2980
Last EDR Contact: 08/08/2011
Next Scheduled EDR Contact: 11/21/2011
Data Release Frequency: Annually

State and tribal registered storage tank lists

FEMA UST: Underground Storage Tank Listing
A listing of all FEMA owned underground storage tanks.

Date of Government Version: 05/15/2017
Date Data Arrived at EDR: 05/30/2017
Date Made Active in Reports: 10/13/2017
Number of Days to Update: 136

Source: FEMA
Telephone: 202-646-5797
Last EDR Contact: 10/13/2017
Next Scheduled EDR Contact: 01/22/2018
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

UST: Active UST Facilities
Active UST facilities gathered from the local regulatory agencies

Date of Government Version: 09/11/2017
Date Data Arrived at EDR: 09/12/2017
Date Made Active in Reports: 11/08/2017
Number of Days to Update: 57

Source: SWRCB
Telephone: 916-341-5851
Last EDR Contact: 09/12/2017
Next Scheduled EDR Contact: 12/25/2017
Data Release Frequency: Semi-Annually

AST: Aboveground Petroleum Storage Tank Facilities
A listing of aboveground storage tank petroleum storage tank locations.

Date of Government Version: 07/06/2016
Date Data Arrived at EDR: 07/12/2016
Date Made Active in Reports: 09/19/2016
Number of Days to Update: 69

Source: California Environmental Protection Agency
Telephone: 916-327-5092
Last EDR Contact: 09/25/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Quarterly

INDIAN UST R6: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 6 (Louisiana, Arkansas, Oklahoma, New Mexico, Texas and 65 Tribes).

Date of Government Version: 10/01/2016
Date Data Arrived at EDR: 01/26/2017
Date Made Active in Reports: 05/05/2017
Number of Days to Update: 99

Source: EPA Region 6
Telephone: 214-665-7591
Last EDR Contact: 10/27/2017
Next Scheduled EDR Contact: 02/05/2018
Data Release Frequency: Semi-Annually

INDIAN UST R7: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 7 (Iowa, Kansas, Missouri, Nebraska, and 9 Tribal Nations).

Date of Government Version: 05/02/2017
Date Data Arrived at EDR: 07/27/2017
Date Made Active in Reports: 10/06/2017
Number of Days to Update: 71

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 10/27/2017
Next Scheduled EDR Contact: 02/05/2018
Data Release Frequency: Varies

INDIAN UST R10: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 10 (Alaska, Idaho, Oregon, Washington, and Tribal Nations).

Date of Government Version: 04/25/2017
Date Data Arrived at EDR: 07/27/2017
Date Made Active in Reports: 10/13/2017
Number of Days to Update: 78

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 10/27/2017
Next Scheduled EDR Contact: 02/05/2018
Data Release Frequency: Varies

INDIAN UST R4: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 4 (Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee and Tribal Nations)

Date of Government Version: 10/14/2016
Date Data Arrived at EDR: 01/27/2017
Date Made Active in Reports: 05/05/2017
Number of Days to Update: 98

Source: EPA Region 4
Telephone: 404-562-9424
Last EDR Contact: 10/27/2017
Next Scheduled EDR Contact: 02/05/2018
Data Release Frequency: Semi-Annually

INDIAN UST R1: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 1 (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont and ten Tribal Nations).

Date of Government Version: 04/14/2017
Date Data Arrived at EDR: 07/27/2017
Date Made Active in Reports: 10/06/2017
Number of Days to Update: 71

Source: EPA, Region 1
Telephone: 617-918-1313
Last EDR Contact: 10/27/2017
Next Scheduled EDR Contact: 02/05/2018
Data Release Frequency: Varies

INDIAN UST R8: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 8 (Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming and 27 Tribal Nations).

Date of Government Version: 05/01/2017
Date Data Arrived at EDR: 07/27/2017
Date Made Active in Reports: 10/13/2017
Number of Days to Update: 78

Source: EPA Region 8
Telephone: 303-312-6137
Last EDR Contact: 10/27/2017
Next Scheduled EDR Contact: 02/05/2018
Data Release Frequency: Varies

INDIAN UST R9: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 9 (Arizona, California, Hawaii, Nevada, the Pacific Islands, and Tribal Nations).

Date of Government Version: 04/13/2017
Date Data Arrived at EDR: 07/27/2017
Date Made Active in Reports: 10/13/2017
Number of Days to Update: 78

Source: EPA Region 9
Telephone: 415-972-3368
Last EDR Contact: 10/27/2017
Next Scheduled EDR Contact: 02/05/2018
Data Release Frequency: Varies

INDIAN UST R5: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 5 (Michigan, Minnesota and Wisconsin and Tribal Nations).

Date of Government Version: 04/26/2017
Date Data Arrived at EDR: 07/27/2017
Date Made Active in Reports: 10/06/2017
Number of Days to Update: 71

Source: EPA Region 5
Telephone: 312-886-6136
Last EDR Contact: 10/27/2017
Next Scheduled EDR Contact: 02/05/2018
Data Release Frequency: Varies

State and tribal voluntary cleanup sites

VCP: Voluntary Cleanup Program Properties

Contains low threat level properties with either confirmed or unconfirmed releases and the project proponents have request that DTSC oversee investigation and/or cleanup activities and have agreed to provide coverage for DTSC's costs.

Date of Government Version: 07/31/2017
Date Data Arrived at EDR: 08/01/2017
Date Made Active in Reports: 08/15/2017
Number of Days to Update: 14

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 10/31/2017
Next Scheduled EDR Contact: 02/12/2018
Data Release Frequency: Quarterly

INDIAN VCP R1: Voluntary Cleanup Priority Listing

A listing of voluntary cleanup priority sites located on Indian Land located in Region 1.

Date of Government Version: 07/27/2015
Date Data Arrived at EDR: 09/29/2015
Date Made Active in Reports: 02/18/2016
Number of Days to Update: 142

Source: EPA, Region 1
Telephone: 617-918-1102
Last EDR Contact: 09/25/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Varies

INDIAN VCP R7: Voluntary Cleanup Priority Lisitng
A listing of voluntary cleanup priority sites located on Indian Land located in Region 7.

Date of Government Version: 03/20/2008
Date Data Arrived at EDR: 04/22/2008
Date Made Active in Reports: 05/19/2008
Number of Days to Update: 27

Source: EPA, Region 7
Telephone: 913-551-7365
Last EDR Contact: 04/20/2009
Next Scheduled EDR Contact: 07/20/2009
Data Release Frequency: Varies

State and tribal Brownfields sites

BROWNFIELDS: Considered Brownfieds Sites Listing
A listing of sites the SWRCB considers to be Brownfields since these are sites have come to them through the MOA Process.

Date of Government Version: 09/21/2017
Date Data Arrived at EDR: 09/21/2017
Date Made Active in Reports: 11/09/2017
Number of Days to Update: 49

Source: State Water Resources Control Board
Telephone: 916-323-7905
Last EDR Contact: 09/21/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Quarterly

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS: A Listing of Brownfields Sites
Brownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Cleaning up and reinvesting in these properties takes development pressures off of undeveloped, open land, and both improves and protects the environment. Assessment, Cleanup and Redevelopment Exchange System (ACRES) stores information reported by EPA Brownfields grant recipients on brownfields properties assessed or cleaned up with grant funding as well as information on Targeted Brownfields Assessments performed by EPA Regions. A listing of ACRES Brownfield sites is obtained from Cleanups in My Community. Cleanups in My Community provides information on Brownfields properties for which information is reported back to EPA, as well as areas served by Brownfields grant programs.

Date of Government Version: 06/19/2017
Date Data Arrived at EDR: 06/20/2017
Date Made Active in Reports: 09/15/2017
Number of Days to Update: 87

Source: Environmental Protection Agency
Telephone: 202-566-2777
Last EDR Contact: 09/20/2017
Next Scheduled EDR Contact: 01/01/2018
Data Release Frequency: Semi-Annually

Local Lists of Landfill / Solid Waste Disposal Sites

WMUDS/SWAT: Waste Management Unit Database
Waste Management Unit Database System. WMUDS is used by the State Water Resources Control Board staff and the Regional Water Quality Control Boards for program tracking and inventory of waste management units. WMUDS is composed of the following databases: Facility Information, Scheduled Inspections Information, Waste Management Unit Information, SWAT Program Information, SWAT Report Summary Information, SWAT Report Summary Data, Chapter 15 (formerly Subchapter 15) Information, Chapter 15 Monitoring Parameters, TPCA Program Information, RCRA Program Information, Closure Information, and Interested Parties Information.

Date of Government Version: 04/01/2000
Date Data Arrived at EDR: 04/10/2000
Date Made Active in Reports: 05/10/2000
Number of Days to Update: 30

Source: State Water Resources Control Board
Telephone: 916-227-4448
Last EDR Contact: 11/06/2017
Next Scheduled EDR Contact: 02/19/2018
Data Release Frequency: No Update Planned

SWRCY: Recycler Database
A listing of recycling facilities in California.

Date of Government Version: 09/11/2017
Date Data Arrived at EDR: 09/12/2017
Date Made Active in Reports: 09/21/2017
Number of Days to Update: 9

Source: Department of Conservation
Telephone: 916-323-3836
Last EDR Contact: 09/12/2017
Next Scheduled EDR Contact: 12/25/2017
Data Release Frequency: Quarterly

HAULERS: Registered Waste Tire Haulers Listing
A listing of registered waste tire haulers.

Date of Government Version: 05/30/2017
Date Data Arrived at EDR: 05/31/2017
Date Made Active in Reports: 08/15/2017
Number of Days to Update: 76

Source: Integrated Waste Management Board
Telephone: 916-341-6422
Last EDR Contact: 11/09/2017
Next Scheduled EDR Contact: 02/26/2018
Data Release Frequency: Varies

INDIAN ODI: Report on the Status of Open Dumps on Indian Lands
Location of open dumps on Indian land.

Date of Government Version: 12/31/1998
Date Data Arrived at EDR: 12/03/2007
Date Made Active in Reports: 01/24/2008
Number of Days to Update: 52

Source: Environmental Protection Agency
Telephone: 703-308-8245
Last EDR Contact: 10/30/2017
Next Scheduled EDR Contact: 02/12/2018
Data Release Frequency: Varies

DEBRIS REGION 9: Torres Martinez Reservation Illegal Dump Site Locations
A listing of illegal dump sites location on the Torres Martinez Indian Reservation located in eastern Riverside County and northern Imperial County, California.

Date of Government Version: 01/12/2009
Date Data Arrived at EDR: 05/07/2009
Date Made Active in Reports: 09/21/2009
Number of Days to Update: 137

Source: EPA, Region 9
Telephone: 415-947-4219
Last EDR Contact: 10/20/2017
Next Scheduled EDR Contact: 02/05/2018
Data Release Frequency: No Update Planned

ODI: Open Dump Inventory
An open dump is defined as a disposal facility that does not comply with one or more of the Part 257 or Part 258 Subtitle D Criteria.

Date of Government Version: 06/30/1985
Date Data Arrived at EDR: 08/09/2004
Date Made Active in Reports: 09/17/2004
Number of Days to Update: 39

Source: Environmental Protection Agency
Telephone: 800-424-9346
Last EDR Contact: 06/09/2004
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

IHS OPEN DUMPS: Open Dumps on Indian Land
A listing of all open dumps located on Indian Land in the United States.

Date of Government Version: 04/01/2014
Date Data Arrived at EDR: 08/06/2014
Date Made Active in Reports: 01/29/2015
Number of Days to Update: 176

Source: Department of Health & Human Serivces, Indian Health Service
Telephone: 301-443-1452
Last EDR Contact: 11/03/2017
Next Scheduled EDR Contact: 02/12/2018
Data Release Frequency: Varies

Local Lists of Hazardous waste / Contaminated Sites

US HIST CDL: National Clandestine Laboratory Register
A listing of clandestine drug lab locations that have been removed from the DEAs National Clandestine Laboratory Register.

Date of Government Version: 07/13/2017
Date Data Arrived at EDR: 09/06/2017
Date Made Active in Reports: 10/06/2017
Number of Days to Update: 30

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 11/28/2017
Next Scheduled EDR Contact: 03/12/2018
Data Release Frequency: No Update Planned

HIST CAL-SITES: Calsites Database

The Calsites database contains potential or confirmed hazardous substance release properties. In 1996, California EPA reevaluated and significantly reduced the number of sites in the Calsites database. No longer updated by the state agency. It has been replaced by ENVIROSTOR.

Date of Government Version: 08/08/2005
Date Data Arrived at EDR: 08/03/2006
Date Made Active in Reports: 08/24/2006
Number of Days to Update: 21

Source: Department of Toxic Substance Control
Telephone: 916-323-3400
Last EDR Contact: 02/23/2009
Next Scheduled EDR Contact: 05/25/2009
Data Release Frequency: No Update Planned

SCH: School Property Evaluation Program

This category contains proposed and existing school sites that are being evaluated by DTSC for possible hazardous materials contamination. In some cases, these properties may be listed in the CalSites category depending on the level of threat to public health and safety or the environment they pose.

Date of Government Version: 07/31/2017
Date Data Arrived at EDR: 08/01/2017
Date Made Active in Reports: 08/15/2017
Number of Days to Update: 14

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 10/31/2017
Next Scheduled EDR Contact: 02/12/2018
Data Release Frequency: Quarterly

CDL: Clandestine Drug Labs

A listing of drug lab locations. Listing of a location in this database does not indicate that any illegal drug lab materials were or were not present there, and does not constitute a determination that the location either requires or does not require additional cleanup work.

Date of Government Version: 06/30/2017
Date Data Arrived at EDR: 08/18/2017
Date Made Active in Reports: 09/21/2017
Number of Days to Update: 34

Source: Department of Toxic Substances Control
Telephone: 916-255-6504
Last EDR Contact: 10/10/2017
Next Scheduled EDR Contact: 01/22/2018
Data Release Frequency: Varies

TOXIC PITS: Toxic Pits Cleanup Act Sites

Toxic PITS Cleanup Act Sites. TOXIC PITS identifies sites suspected of containing hazardous substances where cleanup has not yet been completed.

Date of Government Version: 07/01/1995
Date Data Arrived at EDR: 08/30/1995
Date Made Active in Reports: 09/26/1995
Number of Days to Update: 27

Source: State Water Resources Control Board
Telephone: 916-227-4364
Last EDR Contact: 01/26/2009
Next Scheduled EDR Contact: 04/27/2009
Data Release Frequency: No Update Planned

US CDL: Clandestine Drug Labs

A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

Date of Government Version: 07/13/2017
Date Data Arrived at EDR: 09/06/2017
Date Made Active in Reports: 10/06/2017
Number of Days to Update: 30

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 11/28/2017
Next Scheduled EDR Contact: 03/12/2018
Data Release Frequency: Quarterly

Local Lists of Registered Storage Tanks

SWEEPS UST: SWEEPS UST Listing

Statewide Environmental Evaluation and Planning System. This underground storage tank listing was updated and maintained by a company contacted by the SWRCB in the early 1990's. The listing is no longer updated or maintained. The local agency is the contact for more information on a site on the SWEEPS list.

Date of Government Version: 06/01/1994
Date Data Arrived at EDR: 07/07/2005
Date Made Active in Reports: 08/11/2005
Number of Days to Update: 35

Source: State Water Resources Control Board
Telephone: N/A
Last EDR Contact: 06/03/2005
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

UST MENDOCINO: Mendocino County UST Database

A listing of underground storage tank locations in Mendocino County.

Date of Government Version: 06/02/2017
Date Data Arrived at EDR: 06/06/2017
Date Made Active in Reports: 08/25/2017
Number of Days to Update: 80

Source: Department of Public Health
Telephone: 707-463-4466
Last EDR Contact: 11/28/2017
Next Scheduled EDR Contact: 03/12/2018
Data Release Frequency: Annually

HIST UST: Hazardous Substance Storage Container Database

The Hazardous Substance Storage Container Database is a historical listing of UST sites. Refer to local/county source for current data.

Date of Government Version: 10/15/1990
Date Data Arrived at EDR: 01/25/1991
Date Made Active in Reports: 02/12/1991
Number of Days to Update: 18

Source: State Water Resources Control Board
Telephone: 916-341-5851
Last EDR Contact: 07/26/2001
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

CA FID UST: Facility Inventory Database

The Facility Inventory Database (FID) contains a historical listing of active and inactive underground storage tank locations from the State Water Resource Control Board. Refer to local/county source for current data.

Date of Government Version: 10/31/1994
Date Data Arrived at EDR: 09/05/1995
Date Made Active in Reports: 09/29/1995
Number of Days to Update: 24

Source: California Environmental Protection Agency
Telephone: 916-341-5851
Last EDR Contact: 12/28/1998
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

Local Land Records

LIENS: Environmental Liens Listing

A listing of property locations with environmental liens for California where DTSC is a lien holder.

Date of Government Version: 08/31/2017
Date Data Arrived at EDR: 09/05/2017
Date Made Active in Reports: 11/08/2017
Number of Days to Update: 64

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 08/31/2017
Next Scheduled EDR Contact: 12/18/2017
Data Release Frequency: Varies

LIENS 2: CERCLA Lien Information

A Federal CERCLA ('Superfund') lien can exist by operation of law at any site or property at which EPA has spent Superfund monies. These monies are spent to investigate and address releases and threatened releases of contamination. CERCLIS provides information as to the identity of these sites and properties.

Date of Government Version: 07/11/2017
Date Data Arrived at EDR: 07/26/2017
Date Made Active in Reports: 10/13/2017
Number of Days to Update: 79

Source: Environmental Protection Agency
Telephone: 202-564-6023
Last EDR Contact: 11/03/2017
Next Scheduled EDR Contact: 02/05/2018
Data Release Frequency: Semi-Annually

DEED: Deed Restriction Listing

Site Mitigation and Brownfields Reuse Program Facility Sites with Deed Restrictions & Hazardous Waste Management Program Facility Sites with Deed / Land Use Restriction. The DTSC Site Mitigation and Brownfields Reuse Program (SMBRP) list includes sites cleaned up under the program's oversight and generally does not include current or former hazardous waste facilities that required a hazardous waste facility permit. The list represents deed restrictions that are active. Some sites have multiple deed restrictions. The DTSC Hazardous Waste Management Program (HWMP) has developed a list of current or former hazardous waste facilities that have a recorded land use restriction at the local county recorder's office. The land use restrictions on this list were required by the DTSC HWMP as a result of the presence of hazardous substances that remain on site after the facility (or part of the facility) has been closed or cleaned up. The types of land use restriction include deed notice, deed restriction, or a land use restriction that binds current and future owners.

Date of Government Version: 09/05/2017
Date Data Arrived at EDR: 09/06/2017
Date Made Active in Reports: 11/08/2017
Number of Days to Update: 63

Source: DTSC and SWRCB
Telephone: 916-323-3400
Last EDR Contact: 09/06/2017
Next Scheduled EDR Contact: 12/18/2017
Data Release Frequency: Semi-Annually

Records of Emergency Release Reports

HMIRS: Hazardous Materials Information Reporting System

Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 09/21/2017
Date Data Arrived at EDR: 09/21/2017
Date Made Active in Reports: 10/13/2017
Number of Days to Update: 22

Source: U.S. Department of Transportation
Telephone: 202-366-4555
Last EDR Contact: 09/21/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Quarterly

CHMIRS: California Hazardous Material Incident Report System

California Hazardous Material Incident Reporting System. CHMIRS contains information on reported hazardous material incidents (accidental releases or spills).

Date of Government Version: 05/09/2017
Date Data Arrived at EDR: 07/26/2017
Date Made Active in Reports: 09/21/2017
Number of Days to Update: 57

Source: Office of Emergency Services
Telephone: 916-845-8400
Last EDR Contact: 10/27/2017
Next Scheduled EDR Contact: 02/05/2018
Data Release Frequency: Varies

LDS: Land Disposal Sites Listing (GEOTRACKER)

Land Disposal sites (Landfills) included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

Date of Government Version: 09/11/2017
Date Data Arrived at EDR: 09/12/2017
Date Made Active in Reports: 11/09/2017
Number of Days to Update: 58

Source: State Water Qualilty Control Board
Telephone: 866-480-1028
Last EDR Contact: 09/12/2017
Next Scheduled EDR Contact: 12/25/2017
Data Release Frequency: Quarterly

MCS: Military Cleanup Sites Listing (GEOTRACKER)

Military sites (consisting of: Military UST sites; Military Privatized sites; and Military Cleanup sites [formerly known as DoD non UST]) included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

Date of Government Version: 09/11/2017
Date Data Arrived at EDR: 09/12/2017
Date Made Active in Reports: 11/09/2017
Number of Days to Update: 58

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 09/12/2017
Next Scheduled EDR Contact: 12/25/2017
Data Release Frequency: Quarterly

SPILLS 90: SPILLS90 data from FirstSearch

Spills 90 includes those spill and release records available exclusively from FirstSearch databases. Typically, they may include chemical, oil and/or hazardous substance spills recorded after 1990. Duplicate records that are already included in EDR incident and release records are not included in Spills 90.

Date of Government Version: 06/06/2012
Date Data Arrived at EDR: 01/03/2013
Date Made Active in Reports: 02/22/2013
Number of Days to Update: 50

Source: FirstSearch
Telephone: N/A
Last EDR Contact: 01/03/2013
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

Other Ascertainable Records

RCRA NonGen / NLR: RCRA - Non Generators / No Longer Regulated

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

Date of Government Version: 09/13/2017
Date Data Arrived at EDR: 09/26/2017
Date Made Active in Reports: 10/06/2017
Number of Days to Update: 10

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 09/26/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Quarterly

FUDS: Formerly Used Defense Sites

The listing includes locations of Formerly Used Defense Sites properties where the US Army Corps of Engineers is actively working or will take necessary cleanup actions.

Date of Government Version: 01/31/2015
Date Data Arrived at EDR: 07/08/2015
Date Made Active in Reports: 10/13/2015
Number of Days to Update: 97

Source: U.S. Army Corps of Engineers
Telephone: 202-528-4285
Last EDR Contact: 11/22/2017
Next Scheduled EDR Contact: 03/05/2018
Data Release Frequency: Varies

DOD: Department of Defense Sites

This data set consists of federally owned or administered lands, administered by the Department of Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 11/10/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 62

Source: USGS
Telephone: 888-275-8747
Last EDR Contact: 10/13/2017
Next Scheduled EDR Contact: 01/22/2018
Data Release Frequency: Semi-Annually

FEDLAND: Federal and Indian Lands

Federally and Indian administrated lands of the United States. Lands included are administrated by: Army Corps of Engineers, Bureau of Reclamation, National Wild and Scenic River, National Wildlife Refuge, Public Domain Land, Wilderness, Wilderness Study Area, Wildlife Management Area, Bureau of Indian Affairs, Bureau of Land Management, Department of Justice, Forest Service, Fish and Wildlife Service, National Park Service.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 02/06/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 339

Source: U.S. Geological Survey
Telephone: 888-275-8747
Last EDR Contact: 10/11/2017
Next Scheduled EDR Contact: 01/22/2018
Data Release Frequency: N/A

SCRD DRYCLEANERS: State Coalition for Remediation of Drycleaners Listing

The State Coalition for Remediation of Drycleaners was established in 1998, with support from the U.S. EPA Office of Superfund Remediation and Technology Innovation. It is comprised of representatives of states with established drycleaner remediation programs. Currently the member states are Alabama, Connecticut, Florida, Illinois, Kansas, Minnesota, Missouri, North Carolina, Oregon, South Carolina, Tennessee, Texas, and Wisconsin.

Date of Government Version: 01/01/2017
Date Data Arrived at EDR: 02/03/2017
Date Made Active in Reports: 04/07/2017
Number of Days to Update: 63

Source: Environmental Protection Agency
Telephone: 615-532-8599
Last EDR Contact: 11/17/2017
Next Scheduled EDR Contact: 02/26/2018
Data Release Frequency: Varies

US FIN ASSUR: Financial Assurance Information

All owners and operators of facilities that treat, store, or dispose of hazardous waste are required to provide proof that they will have sufficient funds to pay for the clean up, closure, and post-closure care of their facilities.

Date of Government Version: 05/10/2017
Date Data Arrived at EDR: 05/17/2017
Date Made Active in Reports: 09/15/2017
Number of Days to Update: 121

Source: Environmental Protection Agency
Telephone: 202-566-1917
Last EDR Contact: 11/01/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Quarterly

EPA WATCH LIST: EPA WATCH LIST

EPA maintains a "Watch List" to facilitate dialogue between EPA, state and local environmental agencies on enforcement matters relating to facilities with alleged violations identified as either significant or high priority. Being on the Watch List does not mean that the facility has actually violated the law only that an investigation by EPA or a state or local environmental agency has led those organizations to allege that an unproven violation has in fact occurred. Being on the Watch List does not represent a higher level of concern regarding the alleged violations that were detected, but instead indicates cases requiring additional dialogue between EPA, state and local agencies - primarily because of the length of time the alleged violation has gone unaddressed or unresolved.

Date of Government Version: 08/30/2013
Date Data Arrived at EDR: 03/21/2014
Date Made Active in Reports: 06/17/2014
Number of Days to Update: 88

Source: Environmental Protection Agency
Telephone: 617-520-3000
Last EDR Contact: 11/06/2017
Next Scheduled EDR Contact: 02/19/2018
Data Release Frequency: Quarterly

2020 COR ACTION: 2020 Corrective Action Program List

The EPA has set ambitious goals for the RCRA Corrective Action program by creating the 2020 Corrective Action Universe. This RCRA cleanup baseline includes facilities expected to need corrective action. The 2020 universe contains a wide variety of sites. Some properties are heavily contaminated while others were contaminated but have since been cleaned up. Still others have not been fully investigated yet, and may require little or no remediation. Inclusion in the 2020 Universe does not necessarily imply failure on the part of a facility to meet its RCRA obligations.

Date of Government Version: 04/22/2013
Date Data Arrived at EDR: 03/03/2015
Date Made Active in Reports: 03/09/2015
Number of Days to Update: 6

Source: Environmental Protection Agency
Telephone: 703-308-4044
Last EDR Contact: 11/09/2017
Next Scheduled EDR Contact: 02/19/2018
Data Release Frequency: Varies

TSCA: Toxic Substances Control Act

Toxic Substances Control Act. TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list. It includes data on the production volume of these substances by plant site.

Date of Government Version: 12/31/2012
Date Data Arrived at EDR: 01/15/2015
Date Made Active in Reports: 01/29/2015
Number of Days to Update: 14

Source: EPA
Telephone: 202-260-5521
Last EDR Contact: 09/22/2017
Next Scheduled EDR Contact: 01/01/2018
Data Release Frequency: Every 4 Years

TRIS: Toxic Chemical Release Inventory System

Toxic Release Inventory System. TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313.

Date of Government Version: 12/31/2014
Date Data Arrived at EDR: 11/24/2015
Date Made Active in Reports: 04/05/2016
Number of Days to Update: 133
Source: EPA
Telephone: 202-566-0250
Last EDR Contact: 11/20/2017
Next Scheduled EDR Contact: 03/05/2018
Data Release Frequency: Annually

SSTS: Section 7 Tracking Systems

Section 7 of the Federal Insecticide, Fungicide and Rodenticide Act, as amended (92 Stat. 829) requires all registered pesticide-producing establishments to submit a report to the Environmental Protection Agency by March 1st each year. Each establishment must report the types and amounts of pesticides, active ingredients and devices being produced, and those having been produced and sold or distributed in the past year.

Date of Government Version: 12/31/2009
Date Data Arrived at EDR: 12/10/2010
Date Made Active in Reports: 02/25/2011
Number of Days to Update: 77
Source: EPA
Telephone: 202-564-4203
Last EDR Contact: 10/27/2017
Next Scheduled EDR Contact: 02/05/2018
Data Release Frequency: Annually

ROD: Records Of Decision

Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid in the cleanup.

Date of Government Version: 09/27/2017
Date Data Arrived at EDR: 10/12/2017
Date Made Active in Reports: 10/20/2017
Number of Days to Update: 8
Source: EPA
Telephone: 703-416-0223
Last EDR Contact: 11/03/2017
Next Scheduled EDR Contact: 12/18/2017
Data Release Frequency: Annually

RMP: Risk Management Plans

When Congress passed the Clean Air Act Amendments of 1990, it required EPA to publish regulations and guidance for chemical accident prevention at facilities using extremely hazardous substances. The Risk Management Program Rule (RMP Rule) was written to implement Section 112(r) of these amendments. The rule, which built upon existing industry codes and standards, requires companies of all sizes that use certain flammable and toxic substances to develop a Risk Management Program, which includes a(n): Hazard assessment that details the potential effects of an accidental release, an accident history of the last five years, and an evaluation of worst-case and alternative accidental releases; Prevention program that includes safety precautions and maintenance, monitoring, and employee training measures; and Emergency response program that spells out emergency health care, employee training measures and procedures for informing the public and response agencies (e.g the fire department) should an accident occur.

Date of Government Version: 02/01/2017
Date Data Arrived at EDR: 02/09/2017
Date Made Active in Reports: 04/07/2017
Number of Days to Update: 57
Source: Environmental Protection Agency
Telephone: 202-564-8600
Last EDR Contact: 10/23/2017
Next Scheduled EDR Contact: 02/05/2018
Data Release Frequency: Varies

RAATS: RCRA Administrative Action Tracking System

RCRA Administration Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA. For administration actions after September 30, 1995, data entry in the RAATS database was discontinued. EPA will retain a copy of the database for historical records. It was necessary to terminate RAATS because a decrease in agency resources made it impossible to continue to update the information contained in the database.

Date of Government Version: 04/17/1995
Date Data Arrived at EDR: 07/03/1995
Date Made Active in Reports: 08/07/1995
Number of Days to Update: 35
Source: EPA
Telephone: 202-564-4104
Last EDR Contact: 06/02/2008
Next Scheduled EDR Contact: 09/01/2008
Data Release Frequency: No Update Planned

PRP: Potentially Responsible Parties
A listing of verified Potentially Responsible Parties

Date of Government Version: 10/25/2013
Date Data Arrived at EDR: 10/17/2014
Date Made Active in Reports: 10/20/2014
Number of Days to Update: 3
Source: EPA
Telephone: 202-564-6023
Last EDR Contact: 11/03/2017
Next Scheduled EDR Contact: 02/19/2018
Data Release Frequency: Quarterly

PADS: PCB Activity Database System
PCB Activity Database. PADS Identifies generators, transporters, commercial storers and/or brokers and disposers of PCB's who are required to notify the EPA of such activities.

Date of Government Version: 06/01/2017
Date Data Arrived at EDR: 06/09/2017
Date Made Active in Reports: 10/13/2017
Number of Days to Update: 126
Source: EPA
Telephone: 202-566-0500
Last EDR Contact: 10/13/2017
Next Scheduled EDR Contact: 01/22/2018
Data Release Frequency: Annually

ICIS: Integrated Compliance Information System
The Integrated Compliance Information System (ICIS) supports the information needs of the national enforcement and compliance program as well as the unique needs of the National Pollutant Discharge Elimination System (NPDES) program.

Date of Government Version: 11/18/2016
Date Data Arrived at EDR: 11/23/2016
Date Made Active in Reports: 02/10/2017
Number of Days to Update: 79
Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 10/11/2017
Next Scheduled EDR Contact: 01/22/2018
Data Release Frequency: Quarterly

FTTS: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
FTTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA and EPCRA (Emergency Planning and Community Right-to-Know Act). To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25
Source: EPA/Office of Prevention, Pesticides and Toxic Substances
Telephone: 202-566-1667
Last EDR Contact: 08/18/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: Quarterly

FTTS INSP: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
A listing of FIFRA/TSCA Tracking System (FTTS) inspections and enforcements.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25
Source: EPA
Telephone: 202-566-1667
Last EDR Contact: 08/18/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: Quarterly

MLTS: Material Licensing Tracking System
MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites which possess or use radioactive materials and which are subject to NRC licensing requirements. To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 08/30/2016
Date Data Arrived at EDR: 09/08/2016
Date Made Active in Reports: 10/21/2016
Number of Days to Update: 43
Source: Nuclear Regulatory Commission
Telephone: 301-415-7169
Last EDR Contact: 10/16/2017
Next Scheduled EDR Contact: 11/20/2017
Data Release Frequency: Quarterly

COAL ASH DOE: Steam-Electric Plant Operation Data
A listing of power plants that store ash in surface ponds.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 08/07/2009
Date Made Active in Reports: 10/22/2009
Number of Days to Update: 76
Source: Department of Energy
Telephone: 202-586-8719
Last EDR Contact: 10/03/2017
Next Scheduled EDR Contact: 12/18/2017
Data Release Frequency: Varies

COAL ASH EPA: Coal Combustion Residues Surface Impoundments List
A listing of coal combustion residues surface impoundments with high hazard potential ratings.

Date of Government Version: 07/01/2014
Date Data Arrived at EDR: 09/10/2014
Date Made Active in Reports: 10/20/2014
Number of Days to Update: 40
Source: Environmental Protection Agency
Telephone: N/A
Last EDR Contact: 09/08/2017
Next Scheduled EDR Contact: 12/18/2017
Data Release Frequency: Varies

PCB TRANSFORMER: PCB Transformer Registration Database
The database of PCB transformer registrations that includes all PCB registration submittals.

Date of Government Version: 02/01/2011
Date Data Arrived at EDR: 10/19/2011
Date Made Active in Reports: 01/10/2012
Number of Days to Update: 83
Source: Environmental Protection Agency
Telephone: 202-566-0517
Last EDR Contact: 10/26/2017
Next Scheduled EDR Contact: 02/05/2018
Data Release Frequency: Varies

RADINFO: Radiation Information Database
The Radiation Information Database (RADINFO) contains information about facilities that are regulated by U.S. Environmental Protection Agency (EPA) regulations for radiation and radioactivity.

Date of Government Version: 10/02/2017
Date Data Arrived at EDR: 10/05/2017
Date Made Active in Reports: 10/13/2017
Number of Days to Update: 8
Source: Environmental Protection Agency
Telephone: 202-343-9775
Last EDR Contact: 10/05/2017
Next Scheduled EDR Contact: 01/15/2018
Data Release Frequency: Quarterly

HIST FTTS: FIFRA/TSCA Tracking System Administrative Case Listing
A complete administrative case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40
Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2007
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

HIST FTTS INSP: FIFRA/TSCA Tracking System Inspection & Enforcement Case Listing
A complete inspection and enforcement case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2008
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

DOT OPS: Incident and Accident Data

Department of Transporation, Office of Pipeline Safety Incident and Accident data.

Date of Government Version: 07/31/2012
Date Data Arrived at EDR: 08/07/2012
Date Made Active in Reports: 09/18/2012
Number of Days to Update: 42

Source: Department of Transporation, Office of Pipeline Safety
Telephone: 202-366-4595
Last EDR Contact: 10/31/2017
Next Scheduled EDR Contact: 02/12/2018
Data Release Frequency: Varies

CONSENT: Superfund (CERCLA) Consent Decrees

Major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund) sites. Released periodically by United States District Courts after settlement by parties to litigation matters.

Date of Government Version: 06/30/2017
Date Data Arrived at EDR: 08/03/2017
Date Made Active in Reports: 10/20/2017
Number of Days to Update: 78

Source: Department of Justice, Consent Decree Library
Telephone: Varies
Last EDR Contact: 09/25/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Varies

BRS: Biennial Reporting System

The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BRS captures detailed data from two groups: Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities.

Date of Government Version: 12/31/2015
Date Data Arrived at EDR: 02/22/2017
Date Made Active in Reports: 09/28/2017
Number of Days to Update: 218

Source: EPA/NTIS
Telephone: 800-424-9346
Last EDR Contact: 11/20/2017
Next Scheduled EDR Contact: 03/05/2018
Data Release Frequency: Biennially

INDIAN RESERV: Indian Reservations

This map layer portrays Indian administered lands of the United States that have any area equal to or greater than 640 acres.

Date of Government Version: 12/31/2014
Date Data Arrived at EDR: 07/14/2015
Date Made Active in Reports: 01/10/2017
Number of Days to Update: 546

Source: USGS
Telephone: 202-208-3710
Last EDR Contact: 10/11/2017
Next Scheduled EDR Contact: 01/22/2018
Data Release Frequency: Semi-Annually

FUSRAP: Formerly Utilized Sites Remedial Action Program

DOE established the Formerly Utilized Sites Remedial Action Program (FUSRAP) in 1974 to remediate sites where radioactive contamination remained from Manhattan Project and early U.S. Atomic Energy Commission (AEC) operations.

Date of Government Version: 12/23/2016
Date Data Arrived at EDR: 12/27/2016
Date Made Active in Reports: 02/17/2017
Number of Days to Update: 52

Source: Department of Energy
Telephone: 202-586-3559
Last EDR Contact: 11/02/2017
Next Scheduled EDR Contact: 02/19/2018
Data Release Frequency: Varies

UMTRA: Uranium Mill Tailings Sites

Uranium ore was mined by private companies for federal government use in national defense programs. When the mills shut down, large piles of the sand-like material (mill tailings) remain after uranium has been extracted from the ore. Levels of human exposure to radioactive materials from the piles are low; however, in some cases tailings were used as construction materials before the potential health hazards of the tailings were recognized.

Date of Government Version: 06/23/2017
Date Data Arrived at EDR: 10/11/2017
Date Made Active in Reports: 11/03/2017
Number of Days to Update: 23

Source: Department of Energy
Telephone: 505-845-0011
Last EDR Contact: 11/22/2017
Next Scheduled EDR Contact: 03/05/2018
Data Release Frequency: Varies

LEAD SMELTER 1: Lead Smelter Sites

A listing of former lead smelter site locations.

Date of Government Version: 05/30/2017
Date Data Arrived at EDR: 06/09/2017
Date Made Active in Reports: 09/15/2017
Number of Days to Update: 98

Source: Environmental Protection Agency
Telephone: 703-603-8787
Last EDR Contact: 11/03/2017
Next Scheduled EDR Contact: 01/15/2018
Data Release Frequency: Varies

LEAD SMELTER 2: Lead Smelter Sites

A list of several hundred sites in the U.S. where secondary lead smelting was done from 1931and 1964. These sites may pose a threat to public health through ingestion or inhalation of contaminated soil or dust

Date of Government Version: 04/05/2001
Date Data Arrived at EDR: 10/27/2010
Date Made Active in Reports: 12/02/2010
Number of Days to Update: 36

Source: American Journal of Public Health
Telephone: 703-305-6451
Last EDR Contact: 12/02/2009
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

US AIRS (AFS): Aerometric Information Retrieval System Facility Subsystem (AFS)

The database is a sub-system of Aerometric Information Retrieval System (AIRS). AFS contains compliance data on air pollution point sources regulated by the U.S. EPA and/or state and local air regulatory agencies. This information comes from source reports by various stationary sources of air pollution, such as electric power plants, steel mills, factories, and universities, and provides information about the air pollutants they produce. Action, air program, air program pollutant, and general level plant data. It is used to track emissions and compliance data from industrial plants.

Date of Government Version: 10/12/2016
Date Data Arrived at EDR: 10/26/2016
Date Made Active in Reports: 02/03/2017
Number of Days to Update: 100

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 09/26/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Annually

US AIRS MINOR: Air Facility System Data

A listing of minor source facilities.

Date of Government Version: 10/12/2016
Date Data Arrived at EDR: 10/26/2016
Date Made Active in Reports: 02/03/2017
Number of Days to Update: 100

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 09/26/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Annually

US MINES: Mines Master Index File

Contains all mine identification numbers issued for mines active or opened since 1971. The data also includes violation information.

Date of Government Version: 07/31/2017
Date Data Arrived at EDR: 08/30/2017
Date Made Active in Reports: 10/13/2017
Number of Days to Update: 44

Source: Department of Labor, Mine Safety and Health Administration
Telephone: 303-231-5959
Last EDR Contact: 11/28/2017
Next Scheduled EDR Contact: 03/12/2018
Data Release Frequency: Semi-Annually

US MINES 2: Ferrous and Nonferrous Metal Mines Database Listing

This map layer includes ferrous (ferrous metal mines are facilities that extract ferrous metals, such as iron ore or molybdenum) and nonferrous (Nonferrous metal mines are facilities that extract nonferrous metals, such as gold, silver, copper, zinc, and lead) metal mines in the United States.

Date of Government Version: 12/05/2005
Date Data Arrived at EDR: 02/29/2008
Date Made Active in Reports: 04/18/2008
Number of Days to Update: 49

Source: USGS
Telephone: 703-648-7709
Last EDR Contact: 09/01/2017
Next Scheduled EDR Contact: 12/11/2017
Data Release Frequency: Varies

US MINES 3: Active Mines & Mineral Plants Database Listing

Active Mines and Mineral Processing Plant operations for commodities monitored by the Minerals Information Team of the USGS.

Date of Government Version: 04/14/2011
Date Data Arrived at EDR: 06/08/2011
Date Made Active in Reports: 09/13/2011
Number of Days to Update: 97

Source: USGS
Telephone: 703-648-7709
Last EDR Contact: 09/01/2017
Next Scheduled EDR Contact: 12/11/2017
Data Release Frequency: Varies

ABANDONED MINES: Abandoned Mines

An inventory of land and water impacted by past mining (primarily coal mining) is maintained by OSMRE to provide information needed to implement the Surface Mining Control and Reclamation Act of 1977 (SMCRA). The inventory contains information on the location, type, and extent of AML impacts, as well as, information on the cost associated with the reclamation of those problems. The inventory is based upon field surveys by State, Tribal, and OSMRE program officials. It is dynamic to the extent that it is modified as new problems are identified and existing problems are reclaimed.

Date of Government Version: 09/25/2017
Date Data Arrived at EDR: 09/26/2017
Date Made Active in Reports: 10/20/2017
Number of Days to Update: 24

Source: Department of Interior
Telephone: 202-208-2609
Last EDR Contact: 09/25/2017
Next Scheduled EDR Contact: 12/25/2017
Data Release Frequency: Quarterly

FINDS: Facility Index System/Facility Registry System

Facility Index System. FINDS contains both facility information and 'pointers' to other sources that contain more detail. EDR includes the following FINDS databases in this report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System).

Date of Government Version: 07/23/2017
Date Data Arrived at EDR: 09/06/2017
Date Made Active in Reports: 09/15/2017
Number of Days to Update: 9

Source: EPA
Telephone: (415) 947-8000
Last EDR Contact: 09/06/2017
Next Scheduled EDR Contact: 12/18/2017
Data Release Frequency: Quarterly

DOCKET HWC: Hazardous Waste Compliance Docket Listing

A complete list of the Federal Agency Hazardous Waste Compliance Docket Facilities.

Date of Government Version: 02/13/2017
Date Data Arrived at EDR: 02/15/2017
Date Made Active in Reports: 11/03/2017
Number of Days to Update: 261

Source: Environmental Protection Agency
Telephone: 202-564-0527
Last EDR Contact: 11/21/2017
Next Scheduled EDR Contact: 03/12/2018
Data Release Frequency: Varies

ECHO: Enforcement & Compliance History Information

ECHO provides integrated compliance and enforcement information for about 800,000 regulated facilities nationwide.

Date of Government Version: 09/02/2017
Date Data Arrived at EDR: 09/06/2017
Date Made Active in Reports: 10/20/2017
Number of Days to Update: 44

Source: Environmental Protection Agency
Telephone: 202-564-2280
Last EDR Contact: 09/06/2017
Next Scheduled EDR Contact: 12/18/2017
Data Release Frequency: Quarterly

UXO: Unexploded Ordnance Sites
A listing of unexploded ordnance site locations

Date of Government Version: 10/25/2016
Date Data Arrived at EDR: 06/02/2017
Date Made Active in Reports: 10/13/2017
Number of Days to Update: 133
Source: Department of Defense
Telephone: 703-704-1564
Last EDR Contact: 10/16/2017
Next Scheduled EDR Contact: 01/29/2018
Data Release Frequency: Varies

FUELS PROGRAM: EPA Fuels Program Registered Listing
This listing includes facilities that are registered under the Part 80 (Code of Federal Regulations) EPA Fuels Programs. All companies now are required to submit new and updated registrations.

Date of Government Version: 08/17/2017
Date Data Arrived at EDR: 08/17/2017
Date Made Active in Reports: 09/15/2017
Number of Days to Update: 29
Source: EPA
Telephone: 800-385-6164
Last EDR Contact: 11/20/2017
Next Scheduled EDR Contact: 03/05/2018
Data Release Frequency: Quarterly

CA BOND EXP. PLAN: Bond Expenditure Plan
Department of Health Services developed a site-specific expenditure plan as the basis for an appropriation of Hazardous Substance Cleanup Bond Act funds. It is not updated.

Date of Government Version: 01/01/1989
Date Data Arrived at EDR: 07/27/1994
Date Made Active in Reports: 08/02/1994
Number of Days to Update: 6
Source: Department of Health Services
Telephone: 916-255-2118
Last EDR Contact: 05/31/1994
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

CORTESE: "Cortese" Hazardous Waste & Substances Sites List
The sites for the list are designated by the State Water Resource Control Board (LUST), the Integrated Waste Board (SWF/LS), and the Department of Toxic Substances Control (Cal-Sites).

Date of Government Version: 09/21/2017
Date Data Arrived at EDR: 09/21/2017
Date Made Active in Reports: 10/13/2017
Number of Days to Update: 22
Source: CAL EPA/Office of Emergency Information
Telephone: 916-323-3400
Last EDR Contact: 09/21/2017
Next Scheduled EDR Contact: 01/01/2018
Data Release Frequency: Quarterly

DRYCLEANERS: Cleaner Facilities
A list of drycleaner related facilities that have EPA ID numbers. These are facilities with certain SIC codes: power laundries, family and commercial; garment pressing and cleaner's agents; linen supply; coin-operated laundries and cleaning; drycleaning plants, except rugs; carpet and upholster cleaning; industrial launderers; laundry and garment services.

Date of Government Version: 08/02/2017
Date Data Arrived at EDR: 08/08/2017
Date Made Active in Reports: 10/16/2017
Number of Days to Update: 69
Source: Department of Toxic Substance Control
Telephone: 916-327-4498
Last EDR Contact: 08/08/2017
Next Scheduled EDR Contact: 12/18/2017
Data Release Frequency: Annually

EMI: Emissions Inventory Data
Toxics and criteria pollutant emissions data collected by the ARB and local air pollution agencies.

Date of Government Version: 12/31/2015
Date Data Arrived at EDR: 03/21/2017
Date Made Active in Reports: 08/15/2017
Number of Days to Update: 147
Source: California Air Resources Board
Telephone: 916-322-2990
Last EDR Contact: 09/22/2017
Next Scheduled EDR Contact: 01/01/2018
Data Release Frequency: Varies

ENF: Enforcement Action Listing

A listing of Water Board Enforcement Actions. Formal is everything except Oral/Verbal Communication, Notice of Violation, Expedited Payment Letter, and Staff Enforcement Letter.

Date of Government Version: 08/18/2017
Date Data Arrived at EDR: 08/22/2017
Date Made Active in Reports: 10/24/2017
Number of Days to Update: 63

Source: State Water Resoruces Control Board
Telephone: 916-445-9379
Last EDR Contact: 11/01/2017
Next Scheduled EDR Contact: 02/05/2018
Data Release Frequency: Varies

Financial Assurance 1: Financial Assurance Information Listing

Financial Assurance information

Date of Government Version: 07/21/2017
Date Data Arrived at EDR: 07/25/2017
Date Made Active in Reports: 10/17/2017
Number of Days to Update: 84

Source: Department of Toxic Substances Control
Telephone: 916-255-3628
Last EDR Contact: 10/23/2017
Next Scheduled EDR Contact: 02/05/2018
Data Release Frequency: Varies

Financial Assurance 2: Financial Assurance Information Listing

A listing of financial assurance information for solid waste facilities. Financial assurance is intended to ensure that resources are available to pay for the cost of closure, post-closure care, and corrective measures if the owner or operator of a regulated facility is unable or unwilling to pay.

Date of Government Version: 08/15/2017
Date Data Arrived at EDR: 08/22/2017
Date Made Active in Reports: 10/25/2017
Number of Days to Update: 64

Source: California Integrated Waste Management Board
Telephone: 916-341-6066
Last EDR Contact: 11/09/2017
Next Scheduled EDR Contact: 02/26/2018
Data Release Frequency: Varies

HAZNET: Facility and Manifest Data

Facility and Manifest Data. The data is extracted from the copies of hazardous waste manifests received each year by the DTSC. The annual volume of manifests is typically 700,000 - 1,000,000 annually, representing approximately 350,000 - 500,000 shipments. Data are from the manifests submitted without correction, and therefore many contain some invalid values for data elements such as generator ID, TSD ID, waste category, and disposal method. This database begins with calendar year 1993.

Date of Government Version: 12/31/2016
Date Data Arrived at EDR: 07/12/2017
Date Made Active in Reports: 10/17/2017
Number of Days to Update: 97

Source: California Environmental Protection Agency
Telephone: 916-255-1136
Last EDR Contact: 10/10/2017
Next Scheduled EDR Contact: 01/22/2018
Data Release Frequency: Annually

ICE: ICE

Contains data pertaining to the Permitted Facilities with Inspections / Enforcements sites tracked in Envirostor.

Date of Government Version: 08/21/2017
Date Data Arrived at EDR: 08/22/2017
Date Made Active in Reports: 10/25/2017
Number of Days to Update: 64

Source: Department of Toxic Subsances Control
Telephone: 877-786-9427
Last EDR Contact: 11/20/2017
Next Scheduled EDR Contact: 03/05/2018
Data Release Frequency: Quarterly

HIST CORTESE: Hazardous Waste & Substance Site List

The sites for the list are designated by the State Water Resource Control Board [LUST], the Integrated Waste Board [SWF/LS], and the Department of Toxic Substances Control [CALSITES]. This listing is no longer updated by the state agency.

Date of Government Version: 04/01/2001
Date Data Arrived at EDR: 01/22/2009
Date Made Active in Reports: 04/08/2009
Number of Days to Update: 76

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 01/22/2009
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

HWP: EnviroStor Permitted Facilities Listing
Detailed information on permitted hazardous waste facilities and corrective action ("cleanups") tracked in EnviroStor.

Date of Government Version: 08/21/2017
Date Data Arrived at EDR: 08/22/2017
Date Made Active in Reports: 10/25/2017
Number of Days to Update: 64
Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 11/20/2017
Next Scheduled EDR Contact: 03/05/2018
Data Release Frequency: Quarterly

HWT: Registered Hazardous Waste Transporter Database
A listing of hazardous waste transporters. In California, unless specifically exempted, it is unlawful for any person to transport hazardous wastes unless the person holds a valid registration issued by DTSC. A hazardous waste transporter registration is valid for one year and is assigned a unique registration number.

Date of Government Version: 10/10/2017
Date Data Arrived at EDR: 10/10/2017
Date Made Active in Reports: 10/17/2017
Number of Days to Update: 7
Source: Department of Toxic Substances Control
Telephone: 916-440-7145
Last EDR Contact: 10/10/2017
Next Scheduled EDR Contact: 01/22/2018
Data Release Frequency: Quarterly

MINES: Mines Site Location Listing
A listing of mine site locations from the Office of Mine Reclamation.

Date of Government Version: 09/11/2017
Date Data Arrived at EDR: 09/12/2017
Date Made Active in Reports: 11/01/2017
Number of Days to Update: 50
Source: Department of Conservation
Telephone: 916-322-1080
Last EDR Contact: 09/12/2017
Next Scheduled EDR Contact: 12/25/2017
Data Release Frequency: Quarterly

MWMP: Medical Waste Management Program Listing
The Medical Waste Management Program (MWMP) ensures the proper handling and disposal of medical waste by permitting and inspecting medical waste Offsite Treatment Facilities (PDF) and Transfer Stations (PDF) throughout the state. MWMP also oversees all Medical Waste Transporters.

Date of Government Version: 09/01/2017
Date Data Arrived at EDR: 09/06/2017
Date Made Active in Reports: 11/08/2017
Number of Days to Update: 63
Source: Department of Public Health
Telephone: 916-558-1784
Last EDR Contact: 09/06/2017
Next Scheduled EDR Contact: 12/18/2017
Data Release Frequency: Varies

NPDES: NPDES Permits Listing
A listing of NPDES permits, including stormwater.

Date of Government Version: 08/14/2017
Date Data Arrived at EDR: 08/17/2017
Date Made Active in Reports: 10/17/2017
Number of Days to Update: 61
Source: State Water Resources Control Board
Telephone: 916-445-9379
Last EDR Contact: 11/14/2017
Next Scheduled EDR Contact: 02/26/2018
Data Release Frequency: Quarterly

PEST LIC: Pesticide Regulation Licenses Listing
A listing of licenses and certificates issued by the Department of Pesticide Regulation. The DPR issues licenses and/or certificates to: Persons and businesses that apply or sell pesticides; Pest control dealers and brokers; Persons who advise on agricultural pesticide applications.

Date of Government Version: 09/05/2017
Date Data Arrived at EDR: 09/06/2017
Date Made Active in Reports: 11/08/2017
Number of Days to Update: 63
Source: Department of Pesticide Regulation
Telephone: 916-445-4038
Last EDR Contact: 09/06/2017
Next Scheduled EDR Contact: 12/18/2017
Data Release Frequency: Quarterly

PROC: Certified Processors Database
A listing of certified processors.

Date of Government Version: 09/11/2017
Date Data Arrived at EDR: 09/12/2017
Date Made Active in Reports: 10/18/2017
Number of Days to Update: 36
Source: Department of Conservation
Telephone: 916-323-3836
Last EDR Contact: 09/12/2017
Next Scheduled EDR Contact: 12/25/2017
Data Release Frequency: Quarterly

NOTIFY 65: Proposition 65 Records
Listings of all Proposition 65 incidents reported to counties by the State Water Resources Control Board and the Regional Water Quality Control Board. This database is no longer updated by the reporting agency.

Date of Government Version: 06/16/2017
Date Data Arrived at EDR: 06/20/2017
Date Made Active in Reports: 10/17/2017
Number of Days to Update: 119
Source: State Water Resources Control Board
Telephone: 916-445-3846
Last EDR Contact: 09/18/2017
Next Scheduled EDR Contact: 01/01/2018
Data Release Frequency: No Update Planned

UIC: UIC Listing
A listing of wells identified as underground injection wells, in the California Oil and Gas Wells database.

Date of Government Version: 01/20/2017
Date Data Arrived at EDR: 03/14/2017
Date Made Active in Reports: 05/03/2017
Number of Days to Update: 50
Source: Deaprtment of Conservation
Telephone: 916-445-2408
Last EDR Contact: 09/12/2017
Next Scheduled EDR Contact: 12/25/2017
Data Release Frequency: Varies

WASTEWATER PITS: Oil Wastewater Pits Listing
Water officials discovered that oil producers have been dumping chemical-laden wastewater into hundreds of unlined pits that are operating without proper permits. Inspections completed by the Central Valley Regional Water Quality Control Board revealed the existence of previously unidentified waste sites. The water board?s review found that more than one-third of the region?s active disposal pits are operating without permission.

Date of Government Version: 04/15/2015
Date Data Arrived at EDR: 04/17/2015
Date Made Active in Reports: 06/23/2015
Number of Days to Update: 67
Source: RWQCB, Central Valley Region
Telephone: 559-445-5577
Last EDR Contact: 10/13/2017
Next Scheduled EDR Contact: 01/22/2018
Data Release Frequency: Varies

WDS: Waste Discharge System
Sites which have been issued waste discharge requirements.

Date of Government Version: 06/19/2007
Date Data Arrived at EDR: 06/20/2007
Date Made Active in Reports: 06/29/2007
Number of Days to Update: 9
Source: State Water Resources Control Board
Telephone: 916-341-5227
Last EDR Contact: 11/14/2017
Next Scheduled EDR Contact: 03/05/2018
Data Release Frequency: Quarterly

WIP: Well Investigation Program Case List
Well Investigation Program case in the San Gabriel and San Fernando Valley area.

Date of Government Version: 07/03/2009
Date Data Arrived at EDR: 07/21/2009
Date Made Active in Reports: 08/03/2009
Number of Days to Update: 13
Source: Los Angeles Water Quality Control Board
Telephone: 213-576-6726
Last EDR Contact: 09/25/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP: EDR Proprietary Manufactured Gas Plants

The EDR Proprietary Manufactured Gas Plant Database includes records of coal gas plants (manufactured gas plants) compiled by EDR's researchers. Manufactured gas sites were used in the United States from the 1800's to 1950's to produce a gas that could be distributed and used as fuel. These plants used whale oil, rosin, coal, or a mixture of coal, oil, and water that also produced a significant amount of waste. Many of the byproducts of the gas production, such as coal tar (oily waste containing volatile and non-volatile chemicals), sludges, oils and other compounds are potentially hazardous to human health and the environment. The byproduct from this process was frequently disposed of directly at the plant site and can remain or spread slowly, serving as a continuous source of soil and groundwater contamination.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

EDR Hist Auto: EDR Exclusive Historical Auto Stations

EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR Hist Cleaner: EDR Exclusive Historical Cleaners

EDR has searched selected national collections of business directories and has collected listings of potential dry cleaner sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include dry cleaning establishments. The categories reviewed included, but were not limited to dry cleaners, cleaners, laundry, laundromat, cleaning/laundry, wash & dry etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA LF: Recovered Government Archive Solid Waste Facilities List

The EDR Recovered Government Archive Landfill database provides a list of landfills derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Resources Recycling and Recovery in California.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 01/13/2014
Number of Days to Update: 196

Source: Department of Resources Recycling and Recovery
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

RGA LUST: Recovered Government Archive Leaking Underground Storage Tank

The EDR Recovered Government Archive Leaking Underground Storage Tank database provides a list of LUST incidents derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the State Water Resources Control Board in California.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 12/30/2013
Number of Days to Update: 182

Source: State Water Resources Control Board
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

COUNTY RECORDS

ALAMEDA COUNTY:

Contaminated Sites

A listing of contaminated sites overseen by the Toxic Release Program (oil and groundwater contamination from chemical releases and spills) and the Leaking Underground Storage Tank Program (soil and ground water contamination from leaking petroleum USTs).

Date of Government Version: 09/22/2017
Date Data Arrived at EDR: 09/22/2017
Date Made Active in Reports: 10/10/2017
Number of Days to Update: 18

Source: Alameda County Environmental Health Services
Telephone: 510-567-6700
Last EDR Contact: 09/21/2017
Next Scheduled EDR Contact: 01/22/2018
Data Release Frequency: Semi-Annually

Underground Tanks

Underground storage tank sites located in Alameda county.

Date of Government Version: 10/11/2017
Date Data Arrived at EDR: 10/12/2017
Date Made Active in Reports: 11/08/2017
Number of Days to Update: 27

Source: Alameda County Environmental Health Services
Telephone: 510-567-6700
Last EDR Contact: 10/10/2017
Next Scheduled EDR Contact: 04/24/2047
Data Release Frequency: Semi-Annually

AMADOR COUNTY:

CUPA Facility List

Cupa Facility List

Date of Government Version: 09/13/2017
Date Data Arrived at EDR: 09/15/2017
Date Made Active in Reports: 11/14/2017
Number of Days to Update: 60

Source: Amador County Environmental Health
Telephone: 209-223-6439
Last EDR Contact: 08/31/2017
Next Scheduled EDR Contact: 12/18/2017
Data Release Frequency: Varies

BUTTE COUNTY:

CUPA Facility Listing

Cupa facility list.

Date of Government Version: 04/21/2017
Date Data Arrived at EDR: 04/25/2017
Date Made Active in Reports: 08/09/2017
Number of Days to Update: 106

Source: Public Health Department
Telephone: 530-538-7149
Last EDR Contact: 09/18/2017
Next Scheduled EDR Contact: 10/23/2017
Data Release Frequency: No Update Planned

CALVERAS COUNTY:

CUPA Facility Listing
Cupa Facility Listing

Date of Government Version: 08/31/2017
Date Data Arrived at EDR: 09/05/2017
Date Made Active in Reports: 11/08/2017
Number of Days to Update: 64

Source: Calveras County Environmental Health
Telephone: 209-754-6399
Last EDR Contact: 09/05/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Quarterly

COLUSA COUNTY:

CUPA Facility List
Cupa facility list.

Date of Government Version: 08/07/2017
Date Data Arrived at EDR: 08/08/2017
Date Made Active in Reports: 10/16/2017
Number of Days to Update: 69

Source: Health & Human Services
Telephone: 530-458-0396
Last EDR Contact: 11/01/2017
Next Scheduled EDR Contact: 02/19/2018
Data Release Frequency: Semi-Annually

CONTRA COSTA COUNTY:

Site List
List includes sites from the underground tank, hazardous waste generator and business plan/2185 programs.

Date of Government Version: 08/17/2017
Date Data Arrived at EDR: 08/22/2017
Date Made Active in Reports: 10/25/2017
Number of Days to Update: 64

Source: Contra Costa Health Services Department
Telephone: 925-646-2286
Last EDR Contact: 10/30/2017
Next Scheduled EDR Contact: 02/12/2018
Data Release Frequency: Semi-Annually

DEL NORTE COUNTY:

CUPA Facility List
Cupa Facility list

Date of Government Version: 10/31/2017
Date Data Arrived at EDR: 11/01/2017
Date Made Active in Reports: 11/14/2017
Number of Days to Update: 13

Source: Del Norte County Environmental Health Division
Telephone: 707-465-0426
Last EDR Contact: 10/25/2017
Next Scheduled EDR Contact: 02/12/2018
Data Release Frequency: Varies

EL DORADO COUNTY:

CUPA Facility List
CUPA facility list.

Date of Government Version: 08/18/2017
Date Data Arrived at EDR: 08/22/2017
Date Made Active in Reports: 10/24/2017
Number of Days to Update: 63

Source: El Dorado County Environmental Management Department
Telephone: 530-621-6623
Last EDR Contact: 10/30/2017
Next Scheduled EDR Contact: 02/12/2018
Data Release Frequency: Varies

FRESNO COUNTY:

CUPA Resources List

Certified Unified Program Agency. CUPA's are responsible for implementing a unified hazardous materials and hazardous waste management regulatory program. The agency provides oversight of businesses that deal with hazardous materials, operate underground storage tanks or aboveground storage tanks.

Date of Government Version: 10/03/2017
Date Data Arrived at EDR: 10/06/2017
Date Made Active in Reports: 11/15/2017
Number of Days to Update: 40

Source: Dept. of Community Health
Telephone: 559-445-3271
Last EDR Contact: 09/27/2017
Next Scheduled EDR Contact: 01/15/2018
Data Release Frequency: Semi-Annually

GLENN COUNTY:

CUPA Facility List

Cupa facility list

Date of Government Version: 10/25/2017
Date Data Arrived at EDR: 10/27/2017
Date Made Active in Reports: 11/15/2017
Number of Days to Update: 19

Source: Glenn County Air Pollution Control District
Telephone: 830-934-6500
Last EDR Contact: 10/23/2017
Next Scheduled EDR Contact: 02/05/2018
Data Release Frequency: Varies

HUMBOLDT COUNTY:

CUPA Facility List

CUPA facility list.

Date of Government Version: 08/03/2017
Date Data Arrived at EDR: 08/08/2017
Date Made Active in Reports: 10/16/2017
Number of Days to Update: 69

Source: Humboldt County Environmental Health
Telephone: N/A
Last EDR Contact: 11/14/2017
Next Scheduled EDR Contact: 03/05/2018
Data Release Frequency: Semi-Annually

IMPERIAL COUNTY:

CUPA Facility List

Cupa facility list.

Date of Government Version: 10/23/2017
Date Data Arrived at EDR: 10/24/2017
Date Made Active in Reports: 11/15/2017
Number of Days to Update: 22

Source: San Diego Border Field Office
Telephone: 760-339-2777
Last EDR Contact: 10/23/2017
Next Scheduled EDR Contact: 02/05/2018
Data Release Frequency: Varies

INYO COUNTY:

CUPA Facility List
Cupa facility list.

Date of Government Version: 06/08/2017
Date Data Arrived at EDR: 06/09/2017
Date Made Active in Reports: 08/04/2017
Number of Days to Update: 56

Source: Inyo County Environmental Health Services
Telephone: 760-878-0238
Last EDR Contact: 11/14/2017
Next Scheduled EDR Contact: 03/05/2018
Data Release Frequency: Varies

KERN COUNTY:

Underground Storage Tank Sites & Tank Listing
Kern County Sites and Tanks Listing.

Date of Government Version: 08/07/2017
Date Data Arrived at EDR: 08/08/2017
Date Made Active in Reports: 09/21/2017
Number of Days to Update: 44

Source: Kern County Environment Health Services Department
Telephone: 661-862-8700
Last EDR Contact: 11/01/2017
Next Scheduled EDR Contact: 02/19/2018
Data Release Frequency: Quarterly

KINGS COUNTY:

CUPA Facility List
A listing of sites included in the county's Certified Unified Program Agency database. California's Secretary for Environmental Protection established the unified hazardous materials and hazardous waste regulatory program as required by chapter 6.11 of the California Health and Safety Code. The Unified Program consolidates the administration, permits, inspections, and enforcement activities.

Date of Government Version: 09/22/2017
Date Data Arrived at EDR: 09/22/2017
Date Made Active in Reports: 10/16/2017
Number of Days to Update: 24

Source: Kings County Department of Public Health
Telephone: 559-584-1411
Last EDR Contact: 11/14/2017
Next Scheduled EDR Contact: 03/05/2018
Data Release Frequency: Varies

LAKE COUNTY:

CUPA Facility List
Cupa facility list

Date of Government Version: 11/09/2017
Date Data Arrived at EDR: 11/10/2017
Date Made Active in Reports: 11/15/2017
Number of Days to Update: 5

Source: Lake County Environmental Health
Telephone: 707-263-1164
Last EDR Contact: 10/16/2017
Next Scheduled EDR Contact: 01/29/2018
Data Release Frequency: Varies

LASSEN COUNTY:

CUPA Facility List
Cupa facility list

Date of Government Version: 07/24/2017
Date Data Arrived at EDR: 07/26/2017
Date Made Active in Reports: 10/16/2017
Number of Days to Update: 82

Source: Lassen County Environmental Health
Telephone: 530-251-8528
Last EDR Contact: 10/23/2017
Next Scheduled EDR Contact: 02/05/2018
Data Release Frequency: Varies

LOS ANGELES COUNTY:

San Gabriel Valley Areas of Concern
San Gabriel Valley areas where VOC contamination is at or above the MCL as designated by region 9 EPA office.

Date of Government Version: 03/30/2009
Date Data Arrived at EDR: 03/31/2009
Date Made Active in Reports: 10/23/2009
Number of Days to Update: 206
Source: EPA Region 9
Telephone: 415-972-3178
Last EDR Contact: 09/18/2017
Next Scheduled EDR Contact: 01/01/2018
Data Release Frequency: No Update Planned

HMS: Street Number List
Industrial Waste and Underground Storage Tank Sites.

Date of Government Version: 10/11/2017
Date Data Arrived at EDR: 10/12/2017
Date Made Active in Reports: 10/17/2017
Number of Days to Update: 5
Source: Department of Public Works
Telephone: 626-458-3517
Last EDR Contact: 10/10/2017
Next Scheduled EDR Contact: 01/22/2018
Data Release Frequency: Semi-Annually

List of Solid Waste Facilities
Solid Waste Facilities in Los Angeles County.

Date of Government Version: 07/17/2017
Date Data Arrived at EDR: 07/18/2017
Date Made Active in Reports: 09/21/2017
Number of Days to Update: 65
Source: La County Department of Public Works
Telephone: 818-458-5185
Last EDR Contact: 10/17/2017
Next Scheduled EDR Contact: 01/29/2018
Data Release Frequency: Varies

City of Los Angeles Landfills
Landfills owned and maintained by the City of Los Angeles.

Date of Government Version: 01/01/2017
Date Data Arrived at EDR: 04/21/2017
Date Made Active in Reports: 10/09/2017
Number of Days to Update: 171
Source: Engineering & Construction Division
Telephone: 213-473-7869
Last EDR Contact: 10/16/2017
Next Scheduled EDR Contact: 01/29/2018
Data Release Frequency: Varies

Site Mitigation List
Industrial sites that have had some sort of spill or complaint.

Date of Government Version: 06/21/2017
Date Data Arrived at EDR: 06/23/2017
Date Made Active in Reports: 10/30/2017
Number of Days to Update: 129
Source: Community Health Services
Telephone: 323-890-7806
Last EDR Contact: 11/14/2017
Next Scheduled EDR Contact: 01/29/2018
Data Release Frequency: Annually

City of El Segundo Underground Storage Tank
Underground storage tank sites located in El Segundo city.

Date of Government Version: 01/21/2017
Date Data Arrived at EDR: 04/19/2017
Date Made Active in Reports: 05/10/2017
Number of Days to Update: 21
Source: City of El Segundo Fire Department
Telephone: 310-524-2236
Last EDR Contact: 10/16/2017
Next Scheduled EDR Contact: 01/29/2018
Data Release Frequency: Semi-Annually

City of Long Beach Underground Storage Tank
Underground storage tank sites located in the city of Long Beach.

Date of Government Version: 03/09/2017
Date Data Arrived at EDR: 03/10/2017
Date Made Active in Reports: 05/03/2017
Number of Days to Update: 54
Source: City of Long Beach Fire Department
Telephone: 562-570-2563
Last EDR Contact: 10/23/2017
Next Scheduled EDR Contact: 02/05/2018
Data Release Frequency: Annually

City of Torrance Underground Storage Tank
Underground storage tank sites located in the city of Torrance.

Date of Government Version: 07/11/2017
Date Data Arrived at EDR: 07/14/2017
Date Made Active in Reports: 09/21/2017
Number of Days to Update: 69

Source: City of Torrance Fire Department
Telephone: 310-618-2973
Last EDR Contact: 10/10/2017
Next Scheduled EDR Contact: 01/22/2018
Data Release Frequency: Semi-Annually

MADERA COUNTY:

CUPA Facility List
A listing of sites included in the county's Certified Unified Program Agency database. California's Secretary for Environmental Protection established the unified hazardous materials and hazardous waste regulatory program as required by chapter 6.11 of the California Health and Safety Code. The Unified Program consolidates the administration, permits, inspections, and enforcement activities.

Date of Government Version: 10/26/2017
Date Data Arrived at EDR: 10/27/2017
Date Made Active in Reports: 11/06/2017
Number of Days to Update: 10

Source: Madera County Environmental Health
Telephone: 559-675-7823
Last EDR Contact: 11/14/2017
Next Scheduled EDR Contact: 03/05/2018
Data Release Frequency: Varies

MARIN COUNTY:

Underground Storage Tank Sites
Currently permitted USTs in Marin County.

Date of Government Version: 09/28/2017
Date Data Arrived at EDR: 10/05/2017
Date Made Active in Reports: 11/08/2017
Number of Days to Update: 34

Source: Public Works Department Waste Management
Telephone: 415-473-6647
Last EDR Contact: 09/27/2017
Next Scheduled EDR Contact: 01/15/2018
Data Release Frequency: Semi-Annually

MERCED COUNTY:

CUPA Facility List
CUPA facility list.

Date of Government Version: 10/02/2017
Date Data Arrived at EDR: 10/03/2017
Date Made Active in Reports: 10/17/2017
Number of Days to Update: 14

Source: Merced County Environmental Health
Telephone: 209-381-1094
Last EDR Contact: 11/14/2017
Next Scheduled EDR Contact: 03/05/2018
Data Release Frequency: Varies

MONO COUNTY:

CUPA Facility List
CUPA Facility List

Date of Government Version: 08/08/2017
Date Data Arrived at EDR: 09/06/2017
Date Made Active in Reports: 10/16/2017
Number of Days to Update: 40

Source: Mono County Health Department
Telephone: 760-932-5580
Last EDR Contact: 11/21/2017
Next Scheduled EDR Contact: 03/12/2018
Data Release Frequency: Varies

MONTEREY COUNTY:

CUPA Facility Listing
CUPA Program listing from the Environmental Health Division.

Date of Government Version: 09/11/2017
Date Data Arrived at EDR: 09/15/2017
Date Made Active in Reports: 11/28/2017
Number of Days to Update: 74
Source: Monterey County Health Department
Telephone: 831-796-1297
Last EDR Contact: 11/20/2017
Next Scheduled EDR Contact: 03/05/2018
Data Release Frequency: Varies

NAPA COUNTY:

Sites With Reported Contamination
A listing of leaking underground storage tank sites located in Napa county.

Date of Government Version: 01/09/2017
Date Data Arrived at EDR: 01/11/2017
Date Made Active in Reports: 03/02/2017
Number of Days to Update: 50
Source: Napa County Department of Environmental Management
Telephone: 707-253-4269
Last EDR Contact: 11/21/2017
Next Scheduled EDR Contact: 03/12/2018
Data Release Frequency: No Update Planned

Closed and Operating Underground Storage Tank Sites
Underground storage tank sites located in Napa county.

Date of Government Version: 08/24/2017
Date Data Arrived at EDR: 08/25/2017
Date Made Active in Reports: 10/27/2017
Number of Days to Update: 63
Source: Napa County Department of Environmental Management
Telephone: 707-253-4269
Last EDR Contact: 11/21/2017
Next Scheduled EDR Contact: 03/12/2018
Data Release Frequency: No Update Planned

NEVADA COUNTY:

CUPA Facility List
CUPA facility list.

Date of Government Version: 11/02/2017
Date Data Arrived at EDR: 11/07/2017
Date Made Active in Reports: 11/15/2017
Number of Days to Update: 8
Source: Community Development Agency
Telephone: 530-265-1467
Last EDR Contact: 10/25/2017
Next Scheduled EDR Contact: 02/12/2018
Data Release Frequency: Varies

ORANGE COUNTY:

List of Industrial Site Cleanups
Petroleum and non-petroleum spills.

Date of Government Version: 08/07/2017
Date Data Arrived at EDR: 08/11/2017
Date Made Active in Reports: 10/11/2017
Number of Days to Update: 61
Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 11/06/2017
Next Scheduled EDR Contact: 02/19/2018
Data Release Frequency: Annually

List of Underground Storage Tank Cleanups
Orange County Underground Storage Tank Cleanups (LUST).

Date of Government Version: 08/07/2017
Date Data Arrived at EDR: 08/11/2017
Date Made Active in Reports: 09/21/2017
Number of Days to Update: 41
Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 11/06/2017
Next Scheduled EDR Contact: 02/19/2018
Data Release Frequency: Quarterly

List of Underground Storage Tank Facilities
Orange County Underground Storage Tank Facilities (UST).

Date of Government Version: 08/07/2017
Date Data Arrived at EDR: 08/09/2017
Date Made Active in Reports: 09/21/2017
Number of Days to Update: 43

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 11/07/2017
Next Scheduled EDR Contact: 02/19/2018
Data Release Frequency: Quarterly

PLACER COUNTY:

Master List of Facilities
List includes aboveground tanks, underground tanks and cleanup sites.

Date of Government Version: 09/05/2017
Date Data Arrived at EDR: 09/06/2017
Date Made Active in Reports: 11/08/2017
Number of Days to Update: 63

Source: Placer County Health and Human Services
Telephone: 530-745-2363
Last EDR Contact: 08/31/2017
Next Scheduled EDR Contact: 12/18/2017
Data Release Frequency: Semi-Annually

PLUMAS COUNTY:

CUPA Facility List
Plumas County CUPA Program facilities.

Date of Government Version: 10/23/2017
Date Data Arrived at EDR: 11/03/2017
Date Made Active in Reports: 11/15/2017
Number of Days to Update: 12

Source: Plumas County Environmental Health
Telephone: 530-283-6355
Last EDR Contact: 11/01/2017
Next Scheduled EDR Contact: 02/05/2018
Data Release Frequency: Varies

RIVERSIDE COUNTY:

Listing of Underground Tank Cleanup Sites
Riverside County Underground Storage Tank Cleanup Sites (LUST).

Date of Government Version: 10/11/2017
Date Data Arrived at EDR: 10/12/2017
Date Made Active in Reports: 11/09/2017
Number of Days to Update: 28

Source: Department of Environmental Health
Telephone: 951-358-5055
Last EDR Contact: 09/18/2017
Next Scheduled EDR Contact: 01/01/2018
Data Release Frequency: Quarterly

Underground Storage Tank Tank List
Underground storage tank sites located in Riverside county.

Date of Government Version: 10/12/2017
Date Data Arrived at EDR: 10/12/2017
Date Made Active in Reports: 11/08/2017
Number of Days to Update: 27

Source: Department of Environmental Health
Telephone: 951-358-5055
Last EDR Contact: 09/18/2017
Next Scheduled EDR Contact: 01/01/2018
Data Release Frequency: Quarterly

SACRAMENTO COUNTY:

Toxic Site Clean-Up List
List of sites where unauthorized releases of potentially hazardous materials have occurred.

Date of Government Version: 08/02/2017
Date Data Arrived at EDR: 10/03/2017
Date Made Active in Reports: 10/06/2017
Number of Days to Update: 3

Source: Sacramento County Environmental Management
Telephone: 916-875-8406
Last EDR Contact: 10/03/2017
Next Scheduled EDR Contact: 01/15/2018
Data Release Frequency: Quarterly

Master Hazardous Materials Facility List

Any business that has hazardous materials on site - hazardous material storage sites, underground storage tanks, waste generators.

Date of Government Version: 08/02/2017
Date Data Arrived at EDR: 10/03/2017
Date Made Active in Reports: 11/16/2017
Number of Days to Update: 44

Source: Sacramento County Environmental Management
Telephone: 916-875-8406
Last EDR Contact: 10/03/2017
Next Scheduled EDR Contact: 01/15/2018
Data Release Frequency: Quarterly

SAN BENITO COUNTY:

CUPA Facility List

Cupa facility list

Date of Government Version: 11/01/2017
Date Data Arrived at EDR: 11/03/2017
Date Made Active in Reports: 11/17/2017
Number of Days to Update: 14

Source: San Benito County Environmental Health
Telephone: N/A
Last EDR Contact: 11/01/2017
Next Scheduled EDR Contact: 02/19/2018
Data Release Frequency: Varies

SAN BERNARDINO COUNTY:

Hazardous Material Permits

This listing includes underground storage tanks, medical waste handlers/generators, hazardous materials handlers, hazardous waste generators, and waste oil generators/handlers.

Date of Government Version: 08/31/2017
Date Data Arrived at EDR: 09/19/2017
Date Made Active in Reports: 11/16/2017
Number of Days to Update: 58

Source: San Bernardino County Fire Department Hazardous Materials Division
Telephone: 909-387-3041
Last EDR Contact: 11/06/2017
Next Scheduled EDR Contact: 02/19/2018
Data Release Frequency: Quarterly

SAN DIEGO COUNTY:

Hazardous Materials Management Division Database

The database includes: HE58 - This report contains the business name, site address, business phone number, establishment 'H' permit number, type of permit, and the business status. HE17 - In addition to providing the same information provided in the HE58 listing, HE17 provides inspection dates, violations received by the establishment, hazardous waste generated, the quantity, method of storage, treatment/disposal of waste and the hauler, and information on underground storage tanks. Unauthorized Release List - Includes a summary of environmental contamination cases in San Diego County (underground tank cases, non-tank cases, groundwater contamination, and soil contamination are included.)

Date of Government Version: 09/05/2017
Date Data Arrived at EDR: 09/06/2017
Date Made Active in Reports: 11/08/2017
Number of Days to Update: 63

Source: Hazardous Materials Management Division
Telephone: 619-338-2268
Last EDR Contact: 09/06/2017
Next Scheduled EDR Contact: 12/18/2017
Data Release Frequency: Quarterly

Solid Waste Facilities
San Diego County Solid Waste Facilities.

Date of Government Version: 10/31/2015
Date Data Arrived at EDR: 11/07/2015
Date Made Active in Reports: 01/04/2016
Number of Days to Update: 58
Source: Department of Health Services
Telephone: 619-338-2209
Last EDR Contact: 10/23/2017
Next Scheduled EDR Contact: 02/05/2018
Data Release Frequency: Varies

Environmental Case Listing
The listing contains all underground tank release cases and projects pertaining to properties contaminated with hazardous substances that are actively under review by the Site Assessment and Mitigation Program.

Date of Government Version: 03/23/2010
Date Data Arrived at EDR: 06/15/2010
Date Made Active in Reports: 07/09/2010
Number of Days to Update: 24
Source: San Diego County Department of Environmental Health
Telephone: 619-338-2371
Last EDR Contact: 11/29/2017
Next Scheduled EDR Contact: 03/19/2018
Data Release Frequency: No Update Planned

SAN FRANCISCO COUNTY:

Local Oversite Facilities
A listing of leaking underground storage tank sites located in San Francisco county.

Date of Government Version: 09/19/2008
Date Data Arrived at EDR: 09/19/2008
Date Made Active in Reports: 09/29/2008
Number of Days to Update: 10
Source: Department Of Public Health San Francisco County
Telephone: 415-252-3920
Last EDR Contact: 11/01/2017
Next Scheduled EDR Contact: 02/19/2018
Data Release Frequency: Quarterly

Underground Storage Tank Information
Underground storage tank sites located in San Francisco county.

Date of Government Version: 05/03/2017
Date Data Arrived at EDR: 05/08/2017
Date Made Active in Reports: 08/25/2017
Number of Days to Update: 109
Source: Department of Public Health
Telephone: 415-252-3920
Last EDR Contact: 11/01/2017
Next Scheduled EDR Contact: 02/19/2018
Data Release Frequency: Quarterly

SAN JOAQUIN COUNTY:

San Joaquin Co. UST
A listing of underground storage tank locations in San Joaquin county.

Date of Government Version: 10/03/2017
Date Data Arrived at EDR: 10/06/2017
Date Made Active in Reports: 10/10/2017
Number of Days to Update: 4
Source: Environmental Health Department
Telephone: N/A
Last EDR Contact: 08/28/2017
Next Scheduled EDR Contact: 01/01/2018
Data Release Frequency: Semi-Annually

SAN LUIS OBISPO COUNTY:

CUPA Facility List
Cupa Facility List.

Date of Government Version: 08/18/2017
Date Data Arrived at EDR: 08/22/2017
Date Made Active in Reports: 10/25/2017
Number of Days to Update: 64
Source: San Luis Obispo County Public Health Department
Telephone: 805-781-5596
Last EDR Contact: 11/14/2017
Next Scheduled EDR Contact: 03/05/2018
Data Release Frequency: Varies

SAN MATEO COUNTY:

Business Inventory
List includes Hazardous Materials Business Plan, hazardous waste generators, and underground storage tanks.

Date of Government Version: 09/15/2017
Date Data Arrived at EDR: 09/19/2017
Date Made Active in Reports: 10/17/2017
Number of Days to Update: 28
Source: San Mateo County Environmental Health Services Division
Telephone: 650-363-1921
Last EDR Contact: 09/07/2017
Next Scheduled EDR Contact: 12/25/2017
Data Release Frequency: Annually

Fuel Leak List
A listing of leaking underground storage tank sites located in San Mateo county.

Date of Government Version: 09/15/2017
Date Data Arrived at EDR: 09/19/2017
Date Made Active in Reports: 11/09/2017
Number of Days to Update: 51
Source: San Mateo County Environmental Health Services Division
Telephone: 650-363-1921
Last EDR Contact: 09/07/2017
Next Scheduled EDR Contact: 12/25/2017
Data Release Frequency: Semi-Annually

SANTA BARBARA COUNTY:

CUPA Facility Listing
CUPA Program Listing from the Environmental Health Services division.

Date of Government Version: 09/08/2011
Date Data Arrived at EDR: 09/09/2011
Date Made Active in Reports: 10/07/2011
Number of Days to Update: 28
Source: Santa Barbara County Public Health Department
Telephone: 805-686-8167
Last EDR Contact: 11/14/2017
Next Scheduled EDR Contact: 03/05/2018
Data Release Frequency: Varies

SANTA CLARA COUNTY:

Cupa Facility List
Cupa facility list

Date of Government Version: 08/07/2017
Date Data Arrived at EDR: 08/10/2017
Date Made Active in Reports: 10/16/2017
Number of Days to Update: 67
Source: Department of Environmental Health
Telephone: 408-918-1973
Last EDR Contact: 11/14/2017
Next Scheduled EDR Contact: 03/05/2018
Data Release Frequency: Varies

HIST LUST - Fuel Leak Site Activity Report
A listing of open and closed leaking underground storage tanks. This listing is no longer updated by the county. Leaking underground storage tanks are now handled by the Department of Environmental Health.

Date of Government Version: 03/29/2005
Date Data Arrived at EDR: 03/30/2005
Date Made Active in Reports: 04/21/2005
Number of Days to Update: 22
Source: Santa Clara Valley Water District
Telephone: 408-265-2600
Last EDR Contact: 03/23/2009
Next Scheduled EDR Contact: 06/22/2009
Data Release Frequency: No Update Planned

LOP Listing
A listing of leaking underground storage tanks located in Santa Clara county.

Date of Government Version: 03/03/2014
Date Data Arrived at EDR: 03/05/2014
Date Made Active in Reports: 03/18/2014
Number of Days to Update: 13
Source: Department of Environmental Health
Telephone: 408-918-3417
Last EDR Contact: 11/21/2017
Next Scheduled EDR Contact: 03/12/2018
Data Release Frequency: Annually

Hazardous Material Facilities
Hazardous material facilities, including underground storage tank sites.

Date of Government Version: 08/07/2017
Date Data Arrived at EDR: 08/15/2017
Date Made Active in Reports: 10/24/2017
Number of Days to Update: 70

Source: City of San Jose Fire Department
Telephone: 408-535-7694
Last EDR Contact: 11/01/2017
Next Scheduled EDR Contact: 02/19/2018
Data Release Frequency: Annually

SANTA CRUZ COUNTY:

CUPA Facility List
CUPA facility listing.

Date of Government Version: 01/21/2017
Date Data Arrived at EDR: 02/22/2017
Date Made Active in Reports: 05/23/2017
Number of Days to Update: 90

Source: Santa Cruz County Environmental Health
Telephone: 831-464-2761
Last EDR Contact: 11/14/2017
Next Scheduled EDR Contact: 03/05/2018
Data Release Frequency: Varies

SHASTA COUNTY:

CUPA Facility List
Cupa Facility List.

Date of Government Version: 06/15/2017
Date Data Arrived at EDR: 06/19/2017
Date Made Active in Reports: 08/09/2017
Number of Days to Update: 51

Source: Shasta County Department of Resource Management
Telephone: 530-225-5789
Last EDR Contact: 11/14/2017
Next Scheduled EDR Contact: 03/05/2018
Data Release Frequency: Varies

SOLANO COUNTY:

Leaking Underground Storage Tanks
A listing of leaking underground storage tank sites located in Solano county.

Date of Government Version: 09/26/2017
Date Data Arrived at EDR: 09/27/2017
Date Made Active in Reports: 11/10/2017
Number of Days to Update: 44

Source: Solano County Department of Environmental Management
Telephone: 707-784-6770
Last EDR Contact: 09/25/2017
Next Scheduled EDR Contact: 12/25/2017
Data Release Frequency: Quarterly

Underground Storage Tanks
Underground storage tank sites located in Solano county.

Date of Government Version: 09/26/2017
Date Data Arrived at EDR: 09/27/2017
Date Made Active in Reports: 11/08/2017
Number of Days to Update: 42

Source: Solano County Department of Environmental Management
Telephone: 707-784-6770
Last EDR Contact: 09/25/2017
Next Scheduled EDR Contact: 12/25/2017
Data Release Frequency: Quarterly

SONOMA COUNTY:

Cupa Facility List
Cupa Facility list

Date of Government Version: 09/25/2017
Date Data Arrived at EDR: 09/27/2017
Date Made Active in Reports: 11/16/2017
Number of Days to Update: 50

Source: County of Sonoma Fire & Emergency Services Department
Telephone: 707-565-1174
Last EDR Contact: 09/25/2017
Next Scheduled EDR Contact: 01/01/2018
Data Release Frequency: Varies

Leaking Underground Storage Tank Sites

A listing of leaking underground storage tank sites located in Sonoma county.

Date of Government Version: 10/03/2017
Date Data Arrived at EDR: 10/06/2017
Date Made Active in Reports: 11/10/2017
Number of Days to Update: 35

Source: Department of Health Services
Telephone: 707-565-6565
Last EDR Contact: 09/25/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Quarterly

STANISLAUS COUNTY:

CUPA Facility List

Cupa facility list

Date of Government Version: 11/01/2017
Date Data Arrived at EDR: 11/10/2017
Date Made Active in Reports: 11/16/2017
Number of Days to Update: 6

Source: Stanislaus County Department of Ennvironmental Protection
Telephone: 209-525-6751
Last EDR Contact: 10/16/2017
Next Scheduled EDR Contact: 01/29/2018
Data Release Frequency: Varies

SUTTER COUNTY:

Underground Storage Tanks

Underground storage tank sites located in Sutter county.

Date of Government Version: 08/31/2017
Date Data Arrived at EDR: 09/05/2017
Date Made Active in Reports: 11/08/2017
Number of Days to Update: 64

Source: Sutter County Department of Agriculture
Telephone: 530-822-7500
Last EDR Contact: 08/31/2017
Next Scheduled EDR Contact: 12/18/2017
Data Release Frequency: Semi-Annually

TEHAMA COUNTY:

CUPA Facility List

Cupa facilities

Date of Government Version: 07/19/2017
Date Data Arrived at EDR: 08/11/2017
Date Made Active in Reports: 10/16/2017
Number of Days to Update: 66

Source: Tehama County Department of Environmental Health
Telephone: 530-527-8020
Last EDR Contact: 11/14/2017
Next Scheduled EDR Contact: 02/19/2018
Data Release Frequency: Varies

TRINITY COUNTY:

CUPA Facility List

Cupa facility list

Date of Government Version: 10/23/2017
Date Data Arrived at EDR: 10/24/2017
Date Made Active in Reports: 11/16/2017
Number of Days to Update: 23

Source: Department of Toxic Substances Control
Telephone: 760-352-0381
Last EDR Contact: 10/23/2017
Next Scheduled EDR Contact: 02/05/2018
Data Release Frequency: Varies

TULARE COUNTY:

CUPA Facility List
Cupa program facilities

Date of Government Version: 09/27/2017
Date Data Arrived at EDR: 09/28/2017
Date Made Active in Reports: 10/16/2017
Number of Days to Update: 18

Source: Tulare County Environmental Health Services Division
Telephone: 559-624-7400
Last EDR Contact: 11/14/2017
Next Scheduled EDR Contact: 02/19/2018
Data Release Frequency: Varies

TUOLUMNE COUNTY:

CUPA Facility List
Cupa facility list

Date of Government Version: 10/24/2017
Date Data Arrived at EDR: 10/25/2017
Date Made Active in Reports: 11/16/2017
Number of Days to Update: 22

Source: Divison of Environmental Health
Telephone: 209-533-5633
Last EDR Contact: 10/23/2017
Next Scheduled EDR Contact: 02/05/2018
Data Release Frequency: Varies

VENTURA COUNTY:

Business Plan, Hazardous Waste Producers, and Operating Underground Tanks
The BWT list indicates by site address whether the Environmental Health Division has Business Plan (B), Waste Producer (W), and/or Underground Tank (T) information.

Date of Government Version: 06/26/2017
Date Data Arrived at EDR: 08/03/2017
Date Made Active in Reports: 10/16/2017
Number of Days to Update: 74

Source: Ventura County Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 10/23/2017
Next Scheduled EDR Contact: 02/05/2018
Data Release Frequency: Quarterly

Inventory of Illegal Abandoned and Inactive Sites
Ventura County Inventory of Closed, Illegal Abandoned, and Inactive Sites.

Date of Government Version: 12/01/2011
Date Data Arrived at EDR: 12/01/2011
Date Made Active in Reports: 01/19/2012
Number of Days to Update: 49

Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 09/27/2017
Next Scheduled EDR Contact: 01/15/2018
Data Release Frequency: Annually

Listing of Underground Tank Cleanup Sites
Ventura County Underground Storage Tank Cleanup Sites (LUST).

Date of Government Version: 05/29/2008
Date Data Arrived at EDR: 06/24/2008
Date Made Active in Reports: 07/31/2008
Number of Days to Update: 37

Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 11/08/2017
Next Scheduled EDR Contact: 02/26/2018
Data Release Frequency: Quarterly

Medical Waste Program List
To protect public health and safety and the environment from potential exposure to disease causing agents, the Environmental Health Division Medical Waste Program regulates the generation, handling, storage, treatment and disposal of medical waste throughout the County.

Date of Government Version: 06/26/2017
Date Data Arrived at EDR: 08/03/2017
Date Made Active in Reports: 10/17/2017
Number of Days to Update: 75

Source: Ventura County Resource Management Agency
Telephone: 805-654-2813
Last EDR Contact: 10/23/2017
Next Scheduled EDR Contact: 02/05/2018
Data Release Frequency: Quarterly

Underground Tank Closed Sites List
Ventura County Operating Underground Storage Tank Sites (UST)/Underground Tank Closed Sites List.

Date of Government Version: 08/28/2017
Date Data Arrived at EDR: 09/12/2017
Date Made Active in Reports: 09/21/2017
Number of Days to Update: 9
Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 09/12/2017
Next Scheduled EDR Contact: 12/25/2017
Data Release Frequency: Quarterly

YOLO COUNTY:

Underground Storage Tank Comprehensive Facility Report
Underground storage tank sites located in Yolo county.

Date of Government Version: 09/27/2017
Date Data Arrived at EDR: 10/02/2017
Date Made Active in Reports: 11/14/2017
Number of Days to Update: 43
Source: Yolo County Department of Health
Telephone: 530-666-8646
Last EDR Contact: 09/27/2017
Next Scheduled EDR Contact: 01/15/2018
Data Release Frequency: Annually

YUBA COUNTY:

CUPA Facility List
CUPA facility listing for Yuba County.

Date of Government Version: 11/08/2017
Date Data Arrived at EDR: 11/10/2017
Date Made Active in Reports: 11/16/2017
Number of Days to Update: 6
Source: Yuba County Environmental Health Department
Telephone: 530-749-7523
Last EDR Contact: 10/25/2017
Next Scheduled EDR Contact: 02/12/2018
Data Release Frequency: Varies

OTHER DATABASE(S)

Depending on the geographic area covered by this report, the data provided in these specialty databases may or may not be complete. For example, the existence of wetlands information data in a specific report does not mean that all wetlands in the area covered by the report are included. Moreover, the absence of any reported wetlands information does not necessarily mean that wetlands do not exist in the area covered by the report.

CT MANIFEST: Hazardous Waste Manifest Data
Facility and manifest data. Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a tsd facility.

Date of Government Version: 07/28/2017
Date Data Arrived at EDR: 08/18/2017
Date Made Active in Reports: 11/14/2017
Number of Days to Update: 88
Source: Department of Energy & Environmental Protection
Telephone: 860-424-3375
Last EDR Contact: 11/14/2017
Next Scheduled EDR Contact: 02/26/2018
Data Release Frequency: No Update Planned

NJ MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2016
Date Data Arrived at EDR: 04/11/2017
Date Made Active in Reports: 07/27/2017
Number of Days to Update: 107
Source: Department of Environmental Protection
Telephone: N/A
Last EDR Contact: 10/05/2017
Next Scheduled EDR Contact: 01/22/2018
Data Release Frequency: Annually

NY MANIFEST: Facility and Manifest Data

Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a TSD facility.

Date of Government Version: 10/01/2017
Date Data Arrived at EDR: 11/01/2017
Date Made Active in Reports: 11/13/2017
Number of Days to Update: 12

Source: Department of Environmental Conservation
Telephone: 518-402-8651
Last EDR Contact: 11/01/2017
Next Scheduled EDR Contact: 02/12/2018
Data Release Frequency: Quarterly

PA MANIFEST: Manifest Information

Hazardous waste manifest information.

Date of Government Version: 12/31/2016
Date Data Arrived at EDR: 07/25/2017
Date Made Active in Reports: 09/25/2017
Number of Days to Update: 62

Source: Department of Environmental Protection
Telephone: 717-783-8990
Last EDR Contact: 10/16/2017
Next Scheduled EDR Contact: 01/29/2018
Data Release Frequency: Annually

RI MANIFEST: Manifest information

Hazardous waste manifest information

Date of Government Version: 12/31/2013
Date Data Arrived at EDR: 06/19/2015
Date Made Active in Reports: 07/15/2015
Number of Days to Update: 26

Source: Department of Environmental Management
Telephone: 401-222-2797
Last EDR Contact: 11/16/2017
Next Scheduled EDR Contact: 03/05/2018
Data Release Frequency: Annually

WI MANIFEST: Manifest Information

Hazardous waste manifest information.

Date of Government Version: 12/31/2016
Date Data Arrived at EDR: 04/13/2017
Date Made Active in Reports: 07/14/2017
Number of Days to Update: 92

Source: Department of Natural Resources
Telephone: N/A
Last EDR Contact: 09/11/2017
Next Scheduled EDR Contact: 12/25/2017
Data Release Frequency: Annually

Oil/Gas Pipelines

Source: PennWell Corporation

Petroleum Bundle (Crude Oil, Refined Products, Petrochemicals, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)) N = Natural Gas Bundle (Natural Gas, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)). This map includes information copyrighted by PennWell Corporation. This information is provided on a best effort basis and PennWell Corporation does not guarantee its accuracy nor warrant its fitness for any particular purpose. Such information has been reprinted with the permission of PennWell.

Electric Power Transmission Line Data

Source: PennWell Corporation

This map includes information copyrighted by PennWell Corporation. This information is provided on a best effort basis and PennWell Corporation does not guarantee its accuracy nor warrant its fitness for any particular purpose. Such information has been reprinted with the permission of PennWell.

Sensitive Receptors: There are individuals deemed sensitive receptors due to their fragile immune systems and special sensitivity to environmental discharges. These sensitive receptors typically include the elderly, the sick, and children. While the location of all sensitive receptors cannot be determined, EDR indicates those buildings and facilities - schools, daycares, hospitals, medical centers, and nursing homes - where individuals who are sensitive receptors are likely to be located.

AHA Hospitals:

Source: American Hospital Association, Inc.
Telephone: 312-280-5991

The database includes a listing of hospitals based on the American Hospital Association's annual survey of hospitals.

Medical Centers: Provider of Services Listing

Source: Centers for Medicare & Medicaid Services
Telephone: 410-786-3000

A listing of hospitals with Medicare provider number, produced by Centers of Medicare & Medicaid Services, a federal agency within the U.S. Department of Health and Human Services.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Nursing Homes
Source: National Institutes of Health
Telephone: 301-594-6248
Information on Medicare and Medicaid certified nursing homes in the United States.
Public Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on elementary and secondary public education in the United States. It is a comprehensive, annual, national statistical database of all public elementary and secondary schools and school districts, which contains data that are comparable across all states.
Private Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on private school locations in the United States.
Daycare Centers: Licensed Facilities
Source: Department of Social Services
Telephone: 916-657-4041

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.
Source: FEMA
Telephone: 877-336-2627
Date of Government Version: 2003, 2015

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005 and 2010 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetland Inventory
Source: Department of Fish & Game
Telephone: 916-445-0411

Current USGS 7.5 Minute Topographic Map
Source: U.S. Geological Survey

STREET AND ADDRESS INFORMATION

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GEOCHECK ®- PHYSICAL SETTING SOURCE ADDENDUM

TARGET PROPERTY ADDRESS

NWC PALMETTO AVENUE AND ALABAMA STREET
NWC PALMETTO AVENUE AND ALABAMA STREET
REDLANDS, CA 92374

TARGET PROPERTY COORDINATES

Latitude (North):	34.086234 - 34° 5' 10.44''
Longitude (West):	117.210223 - 117° 12' 36.80''
Universal Tranverse Mercator:	Zone 11
UTM X (Meters):	480605.6
UTM Y (Meters):	3771542.8
Elevation:	1217 ft. above sea level

USGS TOPOGRAPHIC MAP

Target Property Map:	5630631 REDLANDS, CA
Version Date:	2012

EDR's GeoCheck Physical Setting Source Addendum is provided to assist the environmental professional in forming an opinion about the impact of potential contaminant migration.

Assessment of the impact of contaminant migration generally has two principal investigative components:

1. Groundwater flow direction, and
2. Groundwater flow velocity.

Groundwater flow direction may be impacted by surface topography, hydrology, hydrogeology, characteristics of the soil, and nearby wells. Groundwater flow velocity is generally impacted by the nature of the geologic strata.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW DIRECTION INFORMATION

Groundwater flow direction for a particular site is best determined by a qualified environmental professional using site-specific well data. If such data is not reasonably ascertainable, it may be necessary to rely on other sources of information, such as surface topographic information, hydrologic information, hydrogeologic data collected on nearby properties, and regional groundwater flow information (from deep aquifers).

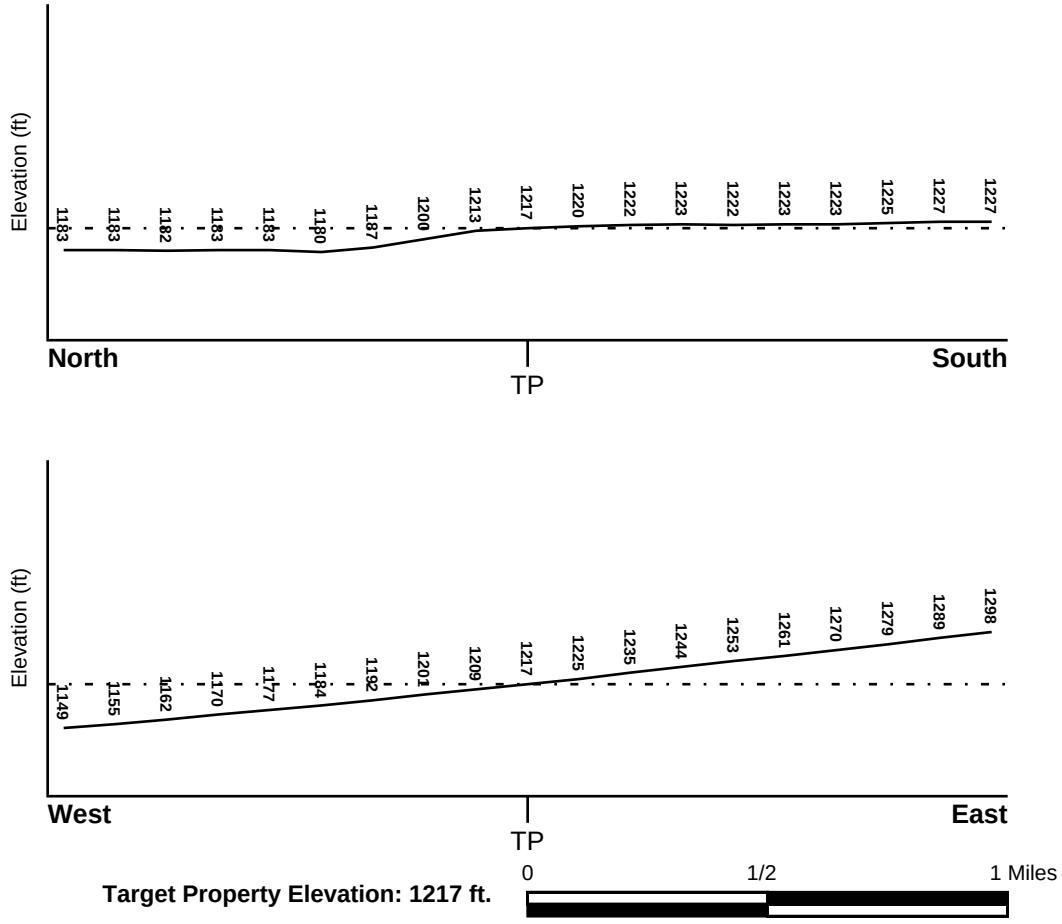
TOPOGRAPHIC INFORMATION

Surface topography may be indicative of the direction of surficial groundwater flow. This information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

TARGET PROPERTY TOPOGRAPHY

General Topographic Gradient: General NW

SURROUNDING TOPOGRAPHY: ELEVATION PROFILES



Source: Topography has been determined from the USGS 7.5' Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

HYDROLOGIC INFORMATION

Surface water can act as a hydrologic barrier to groundwater flow. Such hydrologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Refer to the Physical Setting Source Map following this summary for hydrologic information (major waterways and bodies of water).

FEMA FLOOD ZONE

Flood Plain Panel at Target Property	FEMA Source Type
06071C8704H	FEMA FIRM Flood data

Additional Panels in search area:	FEMA Source Type
06071C8701H	FEMA FIRM Flood data
06071C8702H	FEMA FIRM Flood data
06071C8703H	FEMA FIRM Flood data

NATIONAL WETLAND INVENTORY

NWI Quad at Target Property	NWI Electronic Data Coverage
NOT AVAILABLE	YES - refer to the Overview Map and Detail Map

HYDROGEOLOGIC INFORMATION

Hydrogeologic information obtained by installation of wells on a specific site can often be an indicator of groundwater flow direction in the immediate area. Such hydrogeologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Site-Specific Hydrogeological Data*:

Search Radius:	1.25 miles
Status:	Not found

AQUIFLOW®

Search Radius: 1.000 Mile.

EDR has developed the AQUIFLOW Information System to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted by environmental professionals to regulatory authorities at select sites and has extracted the date of the report, groundwater flow direction as determined hydrogeologically, and the depth to water table.

MAP ID	LOCATION FROM TP	GENERAL DIRECTION GROUNDWATER FLOW
Not Reported		

* ©1996 Site−specific hydrogeological data gathered by CERCLIS Alerts, Inc., Bainbridge Island, WA. All rights reserved. All of the information and opinions presented are those of the cited EPA report(s), which were completed under a Comprehensive Environmental Response Compensation and Liability Information System (CERCLIS) investigation.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW VELOCITY INFORMATION

Groundwater flow velocity information for a particular site is best determined by a qualified environmental professional using site specific geologic and soil strata data. If such data are not reasonably ascertainable, it may be necessary to rely on other sources of information, including geologic age identification, rock stratigraphic unit and soil characteristics data collected on nearby properties and regional soil information. In general, contaminant plumes move more quickly through sandy-gravelly types of soils than silty-clayey types of soils.

GEOLOGIC INFORMATION IN GENERAL AREA OF TARGET PROPERTY

Geologic information can be used by the environmental professional in forming an opinion about the relative speed at which contaminant migration may be occurring.

ROCK STRATIGRAPHIC UNIT

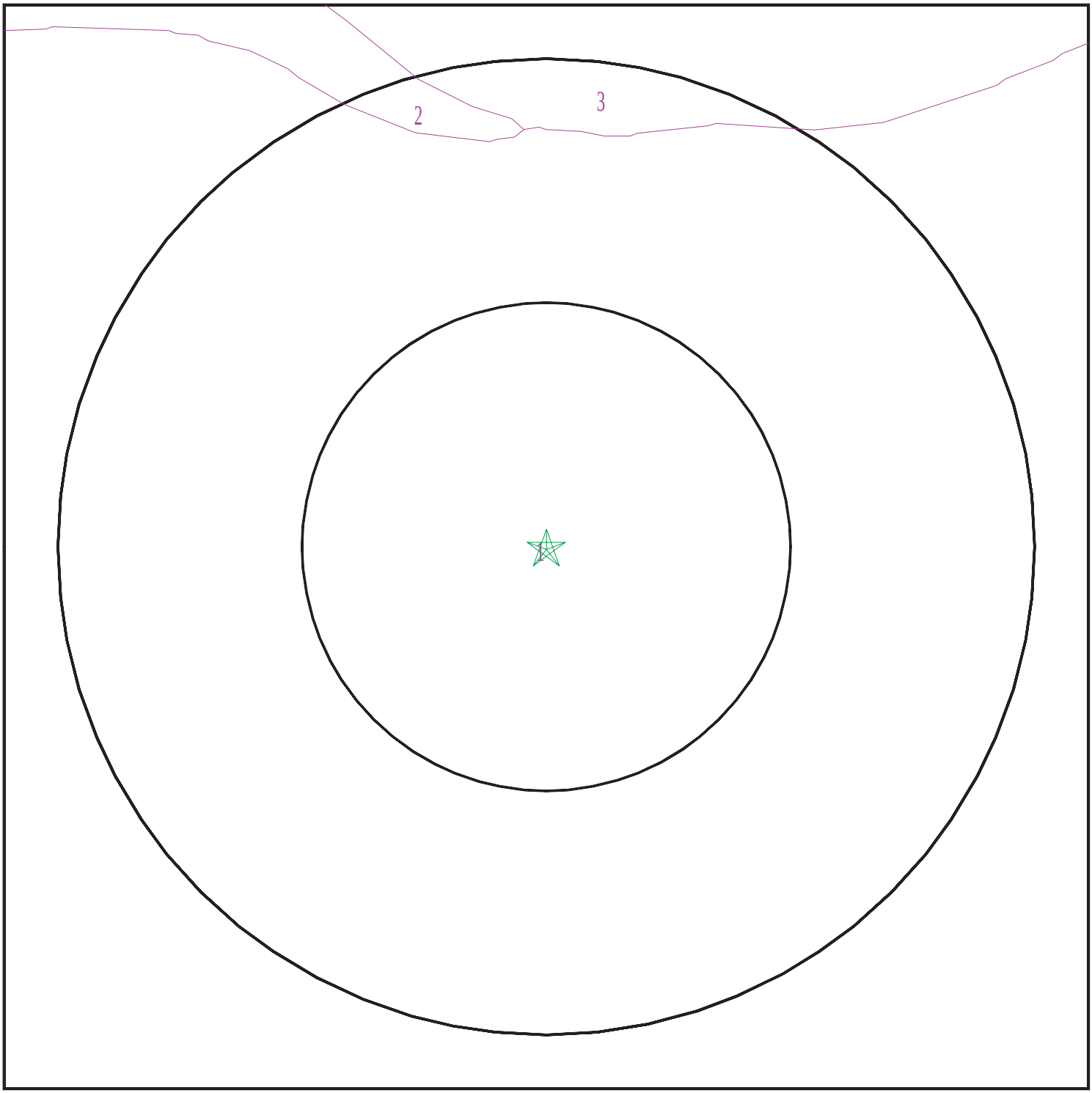
Era:	Cenozoic
System:	Quaternary
Series:	Quaternary
Code:	Q *(decoded above as Era, System & Series)*

GEOLOGIC AGE IDENTIFICATION

Category: Stratifed Sequence

Geologic Age and Rock Stratigraphic Unit Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - a digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

SSURGO SOIL MAP - 5122089.2s



Target Property
SSURGO Soil
Water

0 1/16 1/8 1/4 Miles

N

SITE NAME:	NWC Palmetto Avenue and Alabama Street	CLIENT:	Partner Engineering and Science, Inc.
ADDRESS:	NWC Palmetto Avenue and Alabama Street Redlands CA 92374	CONTACT:	Karli Mcmurray
LAT/LONG:	34.086234 / 117.210223	INQUIRY #:	5122089.2s
		DATE:	November 30, 2017 11:11 am

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GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

DOMINANT SOIL COMPOSITION IN GENERAL AREA OF TARGET PROPERTY

The U.S. Department of Agriculture's (USDA) Soil Conservation Service (SCS) leads the National Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. The following information is based on Soil Conservation Service SSURGO data.

Soil Map ID: 1

Soil Component Name: HANFORD

Soil Surface Texture: sandy loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Moderate

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	11 inches	sandy loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 42 Min: 14	Max: 7.8 Min: 6.1
2	11 inches	59 inches	fine sandy loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 42 Min: 14	Max: 7.8 Min: 5.6

Soil Map ID: 2

Soil Component Name: TUJUNGA

Soil Surface Texture: gravelly loamy sand

Hydrologic Group: Class A - High infiltration rates. Soils are deep, well drained to excessively drained sands and gravels.

Soil Drainage Class: Somewhat excessively drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Moderate

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	18 inches	gravelly loamy sand	Granular materials (35 pct. or less passing No. 200), Stone Fragments, Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 141 Min: 42	Max: 7.3 Min: 6.1
2	18 inches	59 inches	loamy sand	Granular materials (35 pct. or less passing No. 200), Stone Fragments, Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 141 Min: 42	Max: 7.8 Min: 6.1

Soil Map ID: 3

Soil Component Name: FLUVENTS

Soil Surface Texture: gravelly sand

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Somewhat excessively drained

Hydric Status: Partially hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	9 inches	gravelly sand	Granular materials (35 pct. or less passing No. 200), Stone Fragments, Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 141 Min: 42	Max: 8.4 Min: 6.6
2	9 inches	29 inches	stratified gravelly sand to gravelly loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 42 Min: 14	Max: 8.4 Min: 6.6
3	29 inches	59 inches	stratified gravelly sand to gravelly loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 42 Min: 14	Max: 8.4 Min: 6.6

LOCAL / REGIONAL WATER AGENCY RECORDS

EDR Local/Regional Water Agency records provide water well information to assist the environmental professional in assessing sources that may impact ground water flow direction, and in forming an opinion about the impact of contaminant migration on nearby drinking water wells.

WELL SEARCH DISTANCE INFORMATION

DATABASE	SEARCH DISTANCE (miles)
Federal USGS	1.000
Federal FRDS PWS	Nearest PWS within 1 mile
State Database	1.000

FEDERAL USGS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
A2	USGS40000140787	0 - 1/8 Mile SE
A3	USGS40000140786	0 - 1/8 Mile SE

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

FEDERAL USGS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
B4	USGS40000140793	1/8 - 1/4 Mile WSW
B5	USGS40000140794	1/8 - 1/4 Mile WSW
C8	USGS40000140844	1/4 - 1/2 Mile WNW
9	USGS40000140739	1/2 - 1 Mile SE
10	USGS40000140701	1/2 - 1 Mile South
11	USGS40000140735	1/2 - 1 Mile SW
12	USGS40000140827	1/2 - 1 Mile East
13	USGS40000140876	1/2 - 1 Mile WNW
14	USGS40000140745	1/2 - 1 Mile ESE
15	USGS40000140657	1/2 - 1 Mile SSE
16	USGS40000140734	1/2 - 1 Mile ESE
D17	USGS40000140614	1/2 - 1 Mile South
18	USGS40000140879	1/2 - 1 Mile WNW
D19	USGS40000140602	1/2 - 1 Mile South
E20	USGS40000140632	1/2 - 1 Mile SSW
E21	USGS40000140633	1/2 - 1 Mile SSW
E22	USGS40000140634	1/2 - 1 Mile SSW
E23	USGS40000140616	1/2 - 1 Mile SSW
24	USGS40000140730	1/2 - 1 Mile ESE
25	USGS40000140559	1/2 - 1 Mile SSE
26	USGS40000140557	1/2 - 1 Mile South
27	USGS40000141040	1/2 - 1 Mile NNE

FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

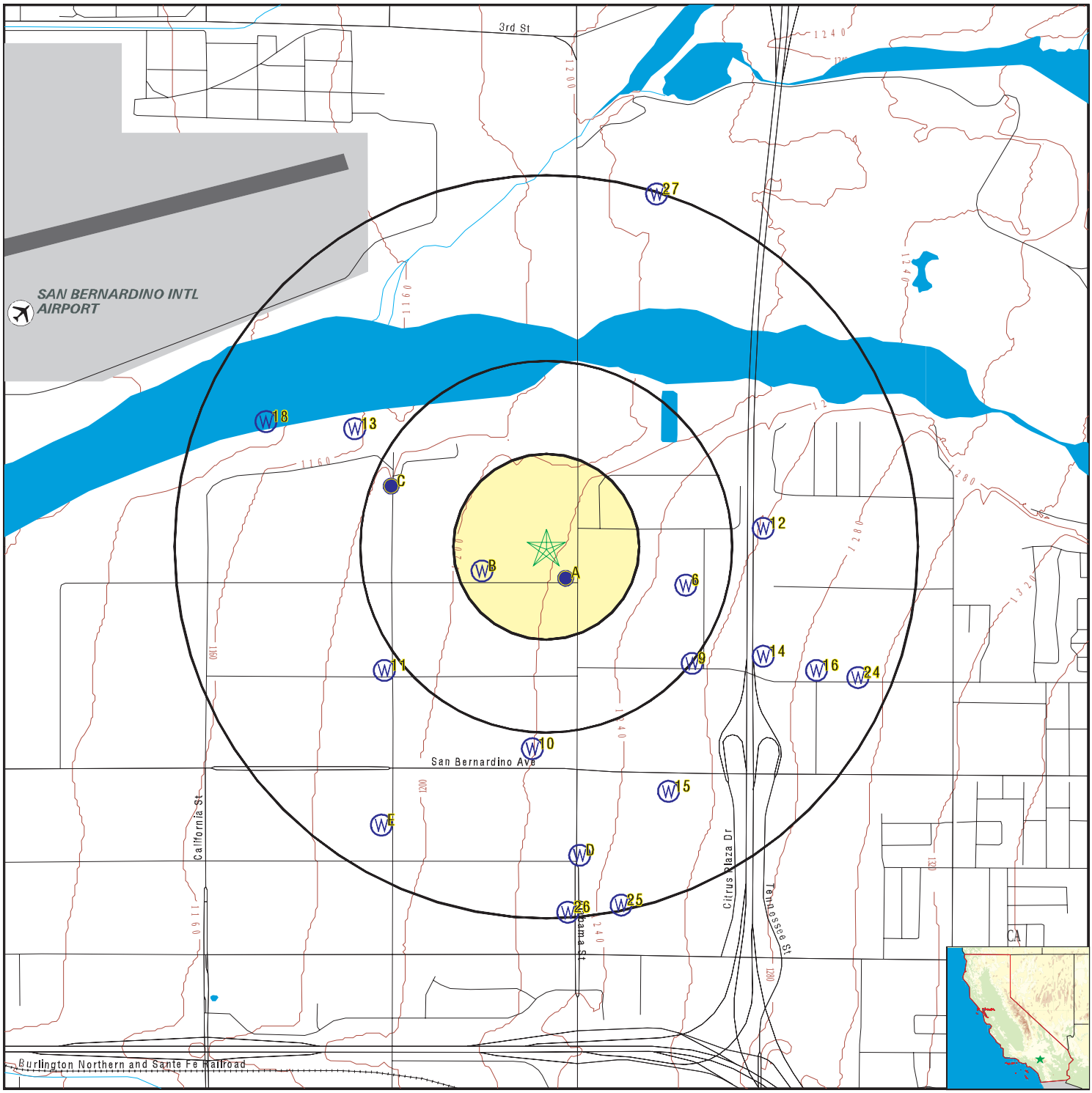
MAP ID	WELL ID	LOCATION FROM TP
No PWS System Found		

Note: PWS System location is not always the same as well location.

STATE DATABASE WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
A1	CADW60000023205	0 - 1/8 Mile SSE
6	18784	1/4 - 1/2 Mile ESE
C7	CADW60000001449	1/4 - 1/2 Mile WNW

PHYSICAL SETTING SOURCE MAP - 5122089.2s



County Boundary
Major Roads
Contour Lines
Earthquake Fault Lines
Airports
Earthquake epicenter, Richter 5 or greater
Water Wells
Public Water Supply Wells
Cluster of Multiple Icons

Groundwater Flow Direction
GI Indeterminate Groundwater Flow at Location
GV Groundwater Flow Varies at Location
HD Closest Hydrogeological Data
Oil, gas or related wells

SITE NAME:	NWC Palmetto Avenue and Alabama Street	CLIENT:	Partner Engineering and Science, Inc.
ADDRESS:	NWC Palmetto Avenue and Alabama Street Redlands CA 92374	CONTACT:	Karli Mcmurray
LAT/LONG:	34.086234 / 117.210223	INQUIRY #:	5122089.2s
		DATE:	November 30, 2017 11:11 am

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GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

A1
SSE **CA WELLS** **CADW60000023205**
0 - 1/8 Mile
Higher

Objectid:	23205
Latitude:	34.085
Longitude:	-117.2098
Site code:	340850N1172098W001
State well numbe:	01S03W17H001S
Local well name:	''
Well use id:	6
Well use descrip:	Unknown
County id:	36
County name:	San Bernardino
Basin code:	'8-2.06'
Basin desc:	Bunker Hill
Dwr region id:	80238
Dwr region:	Southern Region Office
Site id:	CADW60000023205

A2
SE **FED USGS** **USGS40000140787**
0 - 1/8 Mile
Higher

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-340506117123001		
Monloc name:	001S003W17H008S		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	18070203	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	34.0850126
Longitude:	-117.2092063	Sourcemap scale:	24000
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	1215
Vert measure units:	feet	Vertacc measure val:	20
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	California Coastal Basin aquifers		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	Not Reported	Welldepth:	Not Reported
Welldepth units:	Not Reported	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 0

A3
SE **FED USGS** **USGS40000140786**
0 - 1/8 Mile
Higher

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-340506117122901		
Monloc name:	001S003W17H001S		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	18070203	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	34.0850126
Longitude:	-117.2089285	Sourcemap scale:	24000
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	1222.65
Vert measure units:	feet	Vertacc measure val:	.1
Vert accmeasure units:	feet		
Vertcollection method:	Level or other surveying method		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	California Coastal Basin aquifers		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	19260908	Welldepth:	182.5
Welldepth units:	ft	Wellholedepth:	220
Wellholedepth units:	ft		

Ground-water levels, Number of Measurements: 166

Date	Feet below Surface	Feet to Sealevel	Date	Feet below Surface	Feet to Sealevel
2004-10-25					
Note: The site was dry (no water level recorded).					
2004-04-20					
Note: The site was dry (no water level recorded).					
2003-10-23					
Note: The site was dry (no water level recorded).					
2003-04-22					
Note: The site was dry (no water level recorded).					
2002-10-30					
Note: The site was dry (no water level recorded).					
2002-04-08	161.42				
2001-10-23	159.13				
Note: A nearby site that taps the same aquifer had been pumped recently.					
2001-04-16	142.00		2000-10-24	145.56	
2000-04-12	130.68		1999-10-18	130.62	
1999-04-14	117.94		1998-10-19	123.18	
1998-04-14	124.66		1997-10-27	141.16	
1997-04-14	129.56				
Note: A nearby site that taps the same aquifer was being pumped.					
1996-10-07	138.29		1996-04-22	125.56	
1995-10-24	135.33		1995-04-18	126.31	
1994-10-25	154.50		1994-04-20	142.20	
1993-10-19	153.14				
Note: A nearby site that taps the same aquifer was being pumped.					
1993-04-12	144.65				
1992-10-29	175.07				
Note: A nearby site that taps the same aquifer was being pumped.					
1992-06-12	164.81		1991-11-27	167.24	
1991-06-17	156.18		1990-12-03	154.00	
1990-06-25	144.20				
1989-11-28	140.71				
Note: A nearby site that taps the same aquifer was being pumped.					

Ground-water levels, continued.

Date	Feet below Surface	Feet to Sealevel	Date	Feet below Surface	Feet to Sealevel
1989-09-21	138.46		1988-11-22	125.79	
1988-07-06	117.07		1987-12-08	106.07	
1987-06-17	100.84		1986-11-20	98.03	
1986-06-19	88.35		1986-01-15	84.33	
1963-05-29	198.7		1963-04-26	198.1	
1963-03-20	200.6		1963-02-28	204.5	
1962-10-25	199.3				
Note: A nearby site that taps the same aquifer was flowing.					
1962-09-18	196.2				
Note: A nearby site that taps the same aquifer was flowing.					
1962-07-25	184.3		1962-06-28	184.4	
1962-05-28	183.0		1962-04-16	180.5	
1962-03-26	180.5		1962-03-01	186.1	
1962-01-16	186.5		1961-12-21	178.4	
1961-09-28	193.3				
Note: The site was being pumped.					
1961-08-10	192.9				
Note: The site was being pumped.					
1961-07-13	192.1				
Note: The site was being pumped.					
1961-06-15	188.3				
Note: The site was being pumped.					
1961-05-25	188.1				
Note: The site was being pumped.					
1961-04-16	184.6				
Note: The site was being pumped.					
1961-03-13	187.8				
Note: The site was being pumped.					
1961-02-20	173.7				
1961-01-25	184.5				
Note: The site was being pumped.					
1960-12-27	182.7				
Note: The site was being pumped.					
1960-11-25	183.0				
Note: The site was being pumped.					
1960-10-05	188.1				
Note: The site was being pumped.					
1960-07-05	168.5				
Note: The site was being pumped.					
1960-03-24	152.9		1960-02-03	155.4	
1959-08-06	161.1				
Note: The site was being pumped.					
1959-06-10	154.6		1959-04-14	147.9	
1959-03-13	143.8		1958-12-20	157.7	
1958-11-13	149.4		1958-09-10	144.2	
1958-07-19	128.0		1958-06-12	128.4	
1958-05-09	131.5		1958-04-10	144.3	
1958-03-10	152.2		1958-02-10	155.9	
1958-01-11	158.2		1957-11-07	163.1	
1957-03-21	147.4		1957-02-20	150.5	
1956-09-18	161.2		1956-01-17	150.2	
1955-12-06	148.3		1955-09-08	167.7	
1955-08-05	185.8				
1955-07-08	197.2				
Note: The site was being pumped.					

Ground-water levels, continued.

Date	Feet below Surface	Feet to Sealevel	Date	Feet below Surface	Feet to Sealevel
1955-06-09	175.5				
Note: The site was being pumped.					
1955-05-04	157.8				
Note: The site was being pumped.					
1954-04-17	119.2		1954-02-09	128.7	
1953-12-31	140.5		1953-10-26	135.0	
1952-05-09	97.6		1952-03-12	111.0	
1952-01-23	118.1		1951-08-06	121.3	
1951-05-10	111.0		1951-03-06	106.5	
1950-03-07	90.6		1950-01-09	95.2	
1949-11-01	99.9		1949-09-08	97.8	
1949-06-03	89.1		1949-03-28	80.4	
1948-12-18	88.6		1948-07-09	82.4	
1948-05-27	82.7				
Note: The site had been pumped recently.					
1948-04-20	78.7		1948-03-15	75.5	
1948-01-24	76.6		1947-10-24	78.6	
1947-08-30	87.2				
Note: The site was being pumped.					
1947-07-17	85.1				
Note: The site was being pumped.					
1947-04-12	65.0		1947-01-24	59.3	
1946-10-10	83.1				
Note: The site was being pumped.					
1946-07-05	67.0		1946-04-16	57.8	
1945-03-29	51.0		1945-01-09	57.0	
1945-01-04	58.5		1944-03-31	52.8	
1944-01-04	60.2		1943-04-03	51.0	
1943-01-06	65.0		1942-09-30	69.6	
1942-07-04	63.9		1942-04-06	54.7	
1941-12-29	55.7		1941-09-29	62.5	
1941-07-30	58.7		1941-04-28	49.3	
1941-04-04	51.2		1941-01-04	65.6	
1940-09-30	85.4				
Note: The site was being pumped.					
1940-07-03	66.4		1940-03-22	57.8	
1940-02-27	59.6		1940-01-02	66.4	
1939-11-29	68.1		1939-10-31	68.4	
1939-09-28	69.7		1939-07-31	67.4	
1939-03-30	59.0		1939-02-25	60.2	
1939-01-03	64.2		1938-07-16	76.5	
1935-07-19	97.2		1935-04-16	90.3	
1935-02-26	94.4		1935-01-12	99.0	
1934-10-24	104.5		1932-12-16	87.5	
1932-11-15	99.0				
Note: The site was being pumped.					
1932-09-12	87.1				
1932-07-12	87.4				
Note: The site was being pumped.					
1932-05-11	76.9		1932-03-11	80.9	
1932-02-15	86.0		1932-01-14	88.9	
1931-12-10	92.7				

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

B4
WSW
1/8 - 1/4 Mile
Lower

FED USGS **USGS40000140793**

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-340507117124401		
Monloc name:	001S003W17H003S		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	18070203	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	34.0852904
Longitude:	-117.2130954	Sourcemap scale:	Not Reported
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	1205.00
Vert measure units:	feet	Vertacc measure val:	.1
Vert accmeasure units:	feet		
Vertcollection method:	Level or other surveying method		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	California Coastal Basin aquifers		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	19340101	Welldepth:	286
Welldepth units:	ft	Wellholedepth:	300
Wellholedepth units:	ft		

Ground-water levels, Number of Measurements: 0

B5
WSW
1/8 - 1/4 Mile
Lower

FED USGS **USGS40000140794**

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-340507117124501		
Monloc name:	001S003W17H005S		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	18070203	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	34.0852904
Longitude:	-117.2133732	Sourcemap scale:	Not Reported
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	1205.00
Vert measure units:	feet	Vertacc measure val:	10
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	California Coastal Basin aquifers		
Formation type:	Not Reported		

Aquifer type:	Not Reported		
Construction date:	19630101	Welldepth:	590
Welldepth units:	ft	Wellholedepth:	600
Wellholedepth units:	ft		

Ground-water levels, Number of Measurements: 0

6
ESE **CA WELLS** **18784**
1/4 - 1/2 Mile
Higher

Water System Information:

Prime Station Code:	3610037-054	User ID:	TAN
FRDS Number:	3610037054	County:	San Beernardino
District Number:	13	Station Type:	WELL/AMBNT/MUN/INTAKE/SUPPLY
Water Type:	Well/Groundwater	Well Status:	Active Raw
Source Lat/Long:	340505.0 1171210.0	Precision:	1,000 Feet (10 Seconds)
Source Name:	CHURCH STREET WELL		
System Number:	3610037		
System Name:	REDLANDS CITY MUD-WATER DIV		
Organization That Operates System:			
	PO BOX 3005		
	REDLANDS, CA 92373		
Pop Served:	69300	Connections:	18447
Area Served:	REDLANDS		
Sample Collected:	27-MAR-12	Findings:	19.228 MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	20-APR-12	Findings:	19.441 MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	23-APR-12	Findings:	24.113 MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	30-APR-12	Findings:	24.12 MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	03-MAY-12	Findings:	24.025 MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	08-MAY-12	Findings:	23.966 MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	16-MAY-12	Findings:	22.402 MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	24-MAY-12	Findings:	24. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	31-MAY-12	Findings:	22.243 MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	07-JUN-12	Findings:	19.771 MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	03-JUL-12	Findings:	5.2 PCI/L
Chemical:	GROSS ALPHA		

Sample Collected:	03-JUL-12	Findings:	2.9 PCI/L
Chemical:	GROSS ALPHA COUNTING ERROR		
Sample Collected:	03-JUL-12	Findings:	0.19 NTU
Chemical:	TURBIDITY, LABORATORY		
Sample Collected:	03-JUL-12	Findings:	3. PCI/L
Chemical:	GROSS ALPHA MDA95		
Sample Collected:	05-JUL-12	Findings:	21.871 MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	12-JUL-12	Findings:	21.071 MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	19-JUL-12	Findings:	21.667 MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	26-JUL-12	Findings:	15.53 MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	09-AUG-12	Findings:	23. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	09-AUG-12	Findings:	5200. MG/L
Chemical:	NITRATE + NITRITE (AS N)		
Sample Collected:	16-AUG-12	Findings:	21.085 MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	23-AUG-12	Findings:	20.82 MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	30-AUG-12	Findings:	21.062 MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	06-SEP-12	Findings:	20.852 MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	27-SEP-12	Findings:	20. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	18-OCT-12	Findings:	20.003 MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	25-OCT-12	Findings:	20.021 MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	01-NOV-12	Findings:	14.628 MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	08-NOV-12	Findings:	20.099 MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	15-NOV-12	Findings:	20.676 MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	06-DEC-12	Findings:	19.015 MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	13-DEC-12	Findings:	17.938 MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	20-DEC-12	Findings:	19.337 MG/L
Chemical:	NITRATE (AS NO3)		

Sample Collected:	03-JAN-13	Findings:	20. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	03-JAN-13	Findings:	4600. MG/L
Chemical:	NITRATE + NITRITE (AS N)		
Sample Collected:	10-JAN-13	Findings:	20.132 MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	14-JAN-13	Findings:	20.716 MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	23-JAN-13	Findings:	23.838 MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	01-FEB-13	Findings:	18.799 MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	25-MAR-13	Findings:	17.745 MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	04-APR-13	Findings:	19.107 MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	11-APR-13	Findings:	19.488 MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	18-APR-13	Findings:	19.494 MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	22-APR-13	Findings:	19.335 MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	02-MAY-13	Findings:	18.836 MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	16-MAY-13	Findings:	20.062 MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	23-MAY-13	Findings:	19.673 MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	30-MAY-13	Findings:	19.301 MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	06-JUN-13	Findings:	19.041 MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	13-JUN-13	Findings:	19.847 MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	20-JUN-13	Findings:	18.683 MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	27-JUN-13	Findings:	18.669 MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	03-JUL-13	Findings:	20.225 MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	11-JUL-13	Findings:	19.244 MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	18-JUL-13	Findings:	14. MG/L
Chemical:	NITRATE (AS NO3)		

Sample Collected:	01-AUG-13	Findings:	19.814 MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	08-AUG-13	Findings:	19.406 MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	15-AUG-13	Findings:	13. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	29-AUG-13	Findings:	16. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	05-SEP-13	Findings:	19. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	12-SEP-13	Findings:	20. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	19-SEP-13	Findings:	18. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	26-SEP-13	Findings:	19.375 MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	26-SEP-13	Findings:	19. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	17-OCT-13	Findings:	19. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	21-OCT-13	Findings:	19. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	07-JAN-14	Findings:	13. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	15-MAY-14	Findings:	19.953 MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	22-MAY-14	Findings:	20.152 MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	05-JUN-14	Findings:	19.545 MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	12-JUN-14	Findings:	19.547 MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	19-JUN-14	Findings:	19.498 MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	26-JUN-14	Findings:	14.021 MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	03-JUL-14	Findings:	18.728 MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	10-JUL-14	Findings:	18.84 MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	17-JUL-14	Findings:	18.864 MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	24-JUL-14	Findings:	18.564 MG/L
Chemical:	NITRATE (AS NO3)		

Sample Collected:	29-JUL-14	Findings:	18.246 MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	07-AUG-14	Findings:	17.627 MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	07-AUG-14	Findings:	440. US
Chemical:	SPECIFIC CONDUCTANCE		
Sample Collected:	07-AUG-14	Findings:	8.1
Chemical:	PH, LABORATORY		
Sample Collected:	07-AUG-14	Findings:	110. MG/L
Chemical:	ALKALINITY (TOTAL) AS CACO3		
Sample Collected:	07-AUG-14	Findings:	140. MG/L
Chemical:	BICARBONATE ALKALINITY		
Sample Collected:	07-AUG-14	Findings:	190. MG/L
Chemical:	HARDNESS (TOTAL) AS CACO3		
Sample Collected:	07-AUG-14	Findings:	54. MG/L
Chemical:	CALCIUM		
Sample Collected:	07-AUG-14	Findings:	13. MG/L
Chemical:	MAGNESIUM		
Sample Collected:	07-AUG-14	Findings:	14. MG/L
Chemical:	SODIUM		
Sample Collected:	07-AUG-14	Findings:	1.9 MG/L
Chemical:	POTASSIUM		
Sample Collected:	07-AUG-14	Findings:	23. MG/L
Chemical:	CHLORIDE		
Sample Collected:	07-AUG-14	Findings:	30. MG/L
Chemical:	SULFATE		
Sample Collected:	07-AUG-14	Findings:	0.7 MG/L
Chemical:	FLUORIDE (F) (NATURAL-SOURCE)		
Sample Collected:	07-AUG-14	Findings:	2.9 PCI/L
Chemical:	GROSS ALPHA COUNTING ERROR		
Sample Collected:	07-AUG-14	Findings:	2.5e-002 UG/L
Chemical:	DIBROMOCHLOROPROPANE (DBCP)		
Sample Collected:	07-AUG-14	Findings:	240. MG/L
Chemical:	TOTAL DISSOLVED SOLIDS		
Sample Collected:	07-AUG-14	Findings:	0.94
Chemical:	LANGELIER INDEX @ 60 C		
Sample Collected:	07-AUG-14	Findings:	3. PCI/L
Chemical:	GROSS ALPHA MDA95		
Sample Collected:	12-AUG-14	Findings:	17.776 MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	21-AUG-14	Findings:	16.932 MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	28-AUG-14	Findings:	17.612 MG/L
Chemical:	NITRATE (AS NO3)		

Sample Collected:	04-SEP-14	Findings:	17.153 MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	11-SEP-14	Findings:	18. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	18-SEP-14	Findings:	17. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	25-SEP-14	Findings:	17. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	02-OCT-14	Findings:	17. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	09-OCT-14	Findings:	17. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	16-OCT-14	Findings:	16. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	23-OCT-14	Findings:	17. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	30-OCT-14	Findings:	17. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	06-NOV-14	Findings:	17. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	11-DEC-14	Findings:	14.011 MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	17-DEC-14	Findings:	17.271 MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	26-DEC-14	Findings:	17.345 MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	30-MAR-15	Findings:	17.926 MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	07-MAY-15	Findings:	18.516 MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	21-MAY-15	Findings:	18.238 MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	11-JUN-15	Findings:	17.311 MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	02-JUL-15	Findings:	4.2013 MG/L
Chemical:	NITRATE (AS N)		
Sample Collected:	02-JUL-15	Findings:	18.599 MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	06-AUG-15	Findings:	18.365 MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	12-AUG-15	Findings:	19.0543 MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	27-AUG-15	Findings:	17.036 MG/L
Chemical:	NITRATE (AS NO3)		

Sample Collected:	17-SEP-15	Findings:	20. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	01-OCT-15	Findings:	20. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	14-JAN-16	Findings:	2.9581 MG/L
Chemical:	NITRATE (AS N)		
Sample Collected:	14-JAN-16	Findings:	3.2 MG/L
Chemical:	NITRATE (AS N)		
Sample Collected:	14-JAN-16	Findings:	3.2 MG/L
Chemical:	NITRATE + NITRITE (AS N)		
Sample Collected:	03-MAR-16	Findings:	3.1956 MG/L
Chemical:	NITRATE (AS N)		
Sample Collected:	16-JUN-16	Findings:	2.9635 MG/L
Chemical:	NITRATE (AS N)		
Sample Collected:	30-JUN-16	Findings:	4.4085 MG/L
Chemical:	NITRATE (AS N)		
Sample Collected:	07-JUL-16	Findings:	3.5539 MG/L
Chemical:	NITRATE (AS N)		
Sample Collected:	28-JUL-16	Findings:	4.6 MG/L
Chemical:	NITRATE (AS N)		
Sample Collected:	28-JUL-16	Findings:	400. US
Chemical:	SPECIFIC CONDUCTANCE		
Sample Collected:	11-AUG-16	Findings:	4.4558 MG/L
Chemical:	NITRATE (AS N)		
Sample Collected:	18-AUG-16	Findings:	4.4363 MG/L
Chemical:	NITRATE (AS N)		
Sample Collected:	25-AUG-16	Findings:	4.3691 MG/L
Chemical:	NITRATE (AS N)		
Sample Collected:	01-SEP-16	Findings:	4.3306 MG/L
Chemical:	NITRATE (AS N)		
Sample Collected:	08-SEP-16	Findings:	4.269 MG/L
Chemical:	NITRATE (AS N)		
Sample Collected:	15-SEP-16	Findings:	4.2371 MG/L
Chemical:	NITRATE (AS N)		
Sample Collected:	22-SEP-16	Findings:	4.2091 MG/L
Chemical:	NITRATE (AS N)		
Sample Collected:	28-SEP-16	Findings:	4.203 MG/L
Chemical:	NITRATE (AS N)		
Sample Collected:	17-NOV-16	Findings:	4.1994 MG/L
Chemical:	NITRATE (AS N)		
Sample Collected:	30-MAR-17	Findings:	4.41 MG/L
Chemical:	NITRATE (AS N)		
Sample Collected:	05-APR-17	Findings:	4.4468 MG/L
Chemical:	NITRATE (AS N)		

Sample Collected:	14-APR-17	Findings:	4.4177 MG/L
Chemical:	NITRATE (AS N)		
Sample Collected:	20-APR-17	Findings:	380. US
Chemical:	SPECIFIC CONDUCTANCE		
Sample Collected:	20-APR-17	Findings:	7.6
Chemical:	PH, LABORATORY		
Sample Collected:	20-APR-17	Findings:	4.7 MG/L
Chemical:	NITRATE (AS N)		
Sample Collected:	20-APR-17	Findings:	21. MG/L
Chemical:	CHLORIDE		
Sample Collected:	20-APR-17	Findings:	32. MG/L
Chemical:	SULFATE		
Sample Collected:	20-APR-17	Findings:	0.7 MG/L
Chemical:	FLUORIDE (F) (NATURAL-SOURCE)		
Sample Collected:	20-APR-17	Findings:	0.16 NTU
Chemical:	TURBIDITY, LABORATORY		
Sample Collected:	20-APR-17	Findings:	200. MG/L
Chemical:	HARDNESS (TOTAL) AS CACO3		
Sample Collected:	20-APR-17	Findings:	58. MG/L
Chemical:	CALCIUM		
Sample Collected:	20-APR-17	Findings:	13. MG/L
Chemical:	MAGNESIUM		
Sample Collected:	20-APR-17	Findings:	14. MG/L
Chemical:	SODIUM		
Sample Collected:	20-APR-17	Findings:	2.1 MG/L
Chemical:	POTASSIUM		
Sample Collected:	20-APR-17	Findings:	6.55 PCI/L
Chemical:	GROSS ALPHA		
Sample Collected:	20-APR-17	Findings:	0.412 PCI/L
Chemical:	GROSS ALPHA COUNTING ERROR		
Sample Collected:	20-APR-17	Findings:	1.06 PCI/L
Chemical:	GROSS ALPHA MDA95		
Sample Collected:	04-MAY-17	Findings:	4.3742 MG/L
Chemical:	NITRATE (AS N)		
Sample Collected:	18-MAY-17	Findings:	4.4238 MG/L
Chemical:	NITRATE (AS N)		
Sample Collected:	18-MAY-17	Findings:	140. MG/L
Chemical:	ALKALINITY (TOTAL) AS CACO3		
Sample Collected:	18-MAY-17	Findings:	170. MG/L
Chemical:	BICARBONATE ALKALINITY		
Sample Collected:	18-MAY-17	Findings:	2.3e-002 UG/L
Chemical:	DIBROMOCHLOROPROPANE (DBCP)		
Sample Collected:	18-MAY-17	Findings:	280. MG/L
Chemical:	TOTAL DISSOLVED SOLIDS		

Sample Collected: 22-JUN-17 Findings: 4.9502 MG/L
Chemical: NITRATE (AS N)

C7
WNW
1/4 - 1/2 Mile
Lower

CA WELLS **CADW60000001449**

Objectid:	1449
Latitude:	34.0886
Longitude:	-117.2175
Site code:	340886N1172175W001
State well numbe:	01S03W17C005S
Local well name:	''
Well use id:	6
Well use descrip:	Unknown
County id:	36
County name:	San Bernardino
Basin code:	'8-2.06'
Basin desc:	Bunker Hill
Dwr region id:	80238
Dwr region:	Southern Region Office
Site id:	CADW60000001449

C8
WNW
1/4 - 1/2 Mile
Lower

FED USGS **USGS40000140844**

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-340519117130301		
Monloc name:	001S003W17C005S		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	Not Reported	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	34.0886111
Longitude:	-117.2175	Sourcemap scale:	24000
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Global positioning system (GPS), uncorrected		
Horiz coord refsys:	NAD83	Vert measure val:	1180.70
Vert measure units:	feet	Vertacc measure val:	20
Vert accmeasure units:	feet		
Vertcollection method:	Reported		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	California Coastal Basin aquifers		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	20030310	Welldepth:	320
Welldepth units:	ft	Wellholedepth:	320
Wellholedepth units:	ft		

Ground-water levels, Number of Measurements: 4

Date	Feet below Surface	Feet to Sealevel	Date	Feet below Surface	Feet to Sealevel
2004-10-25	192.64		2004-04-21	180.05	
2003-10-23	183.36		2003-08-06	177.43	

9
SE
1/2 - 1 Mile
Higher

FED USGS **USGS40000140739**

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-340454117120902		
Monloc name:	001S003W16L004S		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	18070203	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	34.0816794
Longitude:	-117.2033727	Sourcemap scale:	Not Reported
Horiz Acc measure:	Unknown	Horiz Acc measure units:	Unknown
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	Not Reported
Vert measure units:	Not Reported	Vertacc measure val:	Not Reported
Vert accmeasure units:	Not Reported		
Vertcollection method:	Not Reported		
Vert coord refsys:	Not Reported	Countrycode:	US
Aquifername:	California Coastal Basin aquifers		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	Not Reported	Welldepth:	Not Reported
Welldepth units:	Not Reported	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 0

10
South
1/2 - 1 Mile
Higher

FED USGS **USGS40000140701**

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-340442117123601		
Monloc name:	001S003W17R001S		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	18070203	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	34.0783462
Longitude:	-117.210873	Sourcemap scale:	Not Reported
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	1216.00
Vert measure units:	feet	Vertacc measure val:	20
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	California Coastal Basin aquifers		
Formation type:	Not Reported		

Aquifer type:	Not Reported		
Construction date:	19130101	Welldepth:	360
Welldepth units:	ft	Wellholedepth:	360
Wellholedepth units:	ft		

Ground-water levels, Number of Measurements: 0

11
SW
1/2 - 1 Mile
Lower

FED USGS **USGS40000140735**

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-340453117130101		
Monloc name:	001S003W17L001S		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	18070203	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	34.0814017
Longitude:	-117.2178178	Sourcemap scale:	Not Reported
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	1189.00
Vert measure units:	feet	Vertacc measure val:	.1
Vert accmeasure units:	feet		
Vertcollection method:	Level or other surveying method		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	California Coastal Basin aquifers		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	19220101	Welldepth:	188
Welldepth units:	ft	Wellholedepth:	188
Wellholedepth units:	ft		

Ground-water levels, Number of Measurements: 0

12
East
1/2 - 1 Mile
Higher

FED USGS **USGS40000140827**

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-340513117115701		
Monloc name:	001S003W16F001S		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	18070203	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	34.086957
Longitude:	-117.2000393	Sourcemap scale:	Not Reported
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	1257.00
Vert measure units:	feet	Vertacc measure val:	20
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	California Coastal Basin aquifers		
Formation type:	Not Reported		

Aquifer type:	Not Reported		
Construction date:	19310101	Welldepth:	Not Reported
Welldepth units:	Not Reported	Wellholedepth:	400
Wellholedepth units:	ft		

Ground-water levels, Number of Measurements: 0

13
WNW **FED USGS** **USGS40000140876**
1/2 - 1 Mile
Lower

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-340527117130601		
Monloc name:	001S003W17C003S		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	18070203	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	34.0908457
Longitude:	-117.2192068	Sourcemap scale:	24000
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	1176.00
Vert measure units:	feet	Vertacc measure val:	.1
Vert accmeasure units:	feet		
Vertcollection method:	Level or other surveying method		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	California Coastal Basin aquifers		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	19560101	Welldepth:	296
Welldepth units:	ft	Wellholedepth:	296
Wellholedepth units:	ft		

Ground-water levels, Number of Measurements: 1

Date	Feet below Surface	Feet to Sealevel
2003-06-11	167.83	

14
ESE **FED USGS** **USGS40000140745**
1/2 - 1 Mile
Higher

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-340455117115701		
Monloc name:	001S003W16L002S		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	18070203	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	34.0819572
Longitude:	-117.2000392	Sourcemap scale:	Not Reported

Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	1268.00
Vert measure units:	feet	Vertacc measure val:	.1
Vert accmeasure units:	feet		
Vertcollection method:	Level or other surveying method		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	California Coastal Basin aquifers		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	19290101	Welldepth:	430
Welldepth units:	ft	Wellholedepth:	430
Wellholedepth units:	ft		

Ground-water levels, Number of Measurements: 0

15
SSE **FED USGS** **USGS40000140657**
1/2 - 1 Mile
Higher

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-340436117121301		
Monloc name:	001S003W21C001S		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	18070203	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	34.0766796
Longitude:	-117.2044838	Sourcemap scale:	Not Reported
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	1249.00
Vert measure units:	feet	Vertacc measure val:	20
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	California Coastal Basin aquifers		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	Not Reported	Welldepth:	167
Welldepth units:	ft	Wellholedepth:	167
Wellholedepth units:	ft		

Ground-water levels, Number of Measurements: 0

16
ESE **FED USGS** **USGS40000140734**
1/2 - 1 Mile
Higher

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-340453117114801		
Monloc name:	001S003W16K001S		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	18070203	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	34.0814016
Longitude:	-117.1975391	Sourcemap scale:	Not Reported

Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	1292.00
Vert measure units:	feet	Vertacc measure val:	.1
Vert accmeasure units:	feet		
Vertcollection method:	Level or other surveying method		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	California Coastal Basin aquifers		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	19360101	Welldepth:	351
Welldepth units:	ft	Wellholedepth:	351
Wellholedepth units:	ft		

Ground-water levels, Number of Measurements: 0

D17
South
1/2 - 1 Mile
Higher

FED USGS **USGS40000140614**

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-340428117122901		
Monloc name:	001S003W20A001S		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	18070203	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	34.0744575
Longitude:	-117.2089284	Sourcemap scale:	Not Reported
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	1228.00
Vert measure units:	feet	Vertacc measure val:	.1
Vert accmeasure units:	feet		
Vertcollection method:	Level or other surveying method		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	California Coastal Basin aquifers		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	19030101	Welldepth:	Not Reported
Welldepth units:	Not Reported	Wellholedepth:	195
Wellholedepth units:	ft		

Ground-water levels, Number of Measurements: 0

18
WNW
1/2 - 1 Mile
Lower

FED USGS **USGS40000140879**

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-340528117132101		
Monloc name:	HOLE-11 LYSIMETER AT 90		
Monloc type:	Well: Test hole not completed as a well		
Monloc desc:	Not Reported		
Huc code:	18070203	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	34.0911235
Longitude:	-117.2233737	Sourcemap scale:	Not Reported

Horiz Acc measure:	Unknown	Horiz Acc measure units:	Unknown
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	Not Reported
Vert measure units:	Not Reported	Vertacc measure val:	Not Reported
Vert accmeasure units:	Not Reported		
Vertcollection method:	Not Reported		
Vert coord refsys:	Not Reported	Countrycode:	US
Aquifername:	California Coastal Basin aquifers		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	Not Reported	Welldepth:	Not Reported
Welldepth units:	Not Reported	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 0

D19
South **FED USGS** **USGS40000140602**
1/2 - 1 Mile
Higher

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-340426117122701		
Monloc name:	001S003W21E005S		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	18070203	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	34.0739019
Longitude:	-117.2083728	Sourcemap scale:	Not Reported
Horiz Acc measure:	Unknown	Horiz Acc measure units:	Unknown
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	Not Reported
Vert measure units:	Not Reported	Vertacc measure val:	Not Reported
Vert accmeasure units:	Not Reported		
Vertcollection method:	Not Reported		
Vert coord refsys:	Not Reported	Countrycode:	US
Aquifername:	California Coastal Basin aquifers		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	Not Reported	Welldepth:	Not Reported
Welldepth units:	Not Reported	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 0

E20
SSW **FED USGS** **USGS40000140632**
1/2 - 1 Mile
Lower

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-340432117130201		
Monloc name:	HOLE-02 LYSIMETER AT 30		
Monloc type:	Well: Test hole not completed as a well		
Monloc desc:	Not Reported		
Huc code:	18070203	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	34.0755686
Longitude:	-117.2180955	Sourcemap scale:	Not Reported

Horiz Acc measure:	Unknown	Horiz Acc measure units:	Unknown
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	Not Reported
Vert measure units:	Not Reported	Vertacc measure val:	Not Reported
Vert accmeasure units:	Not Reported		
Vertcollection method:	Not Reported		
Vert coord refsys:	Not Reported	Countrycode:	US
Aquifername:	California Coastal Basin aquifers		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	Not Reported	Welldepth:	Not Reported
Welldepth units:	Not Reported	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 0

E21
SSW **FED USGS** **USGS40000140633**
1/2 - 1 Mile
Lower

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-340432117130202		
Monloc name:	HOLE-02 LYSIMETER AT 50		
Monloc type:	Well: Test hole not completed as a well		
Monloc desc:	Not Reported		
Huc code:	18070203	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	34.0755686
Longitude:	-117.2180955	Sourcemap scale:	Not Reported
Horiz Acc measure:	Unknown	Horiz Acc measure units:	Unknown
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	Not Reported
Vert measure units:	Not Reported	Vertacc measure val:	Not Reported
Vert accmeasure units:	Not Reported		
Vertcollection method:	Not Reported		
Vert coord refsys:	Not Reported	Countrycode:	US
Aquifername:	California Coastal Basin aquifers		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	Not Reported	Welldepth:	Not Reported
Welldepth units:	Not Reported	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 0

E22
SSW **FED USGS** **USGS40000140634**
1/2 - 1 Mile
Lower

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-340432117130203		
Monloc name:	HOLE-02 LYSIMETER AT 113		
Monloc type:	Well: Test hole not completed as a well		
Monloc desc:	Not Reported		
Huc code:	18070203	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	34.0755686
Longitude:	-117.2180955	Sourcemap scale:	Not Reported

Horiz Acc measure:	Unknown	Horiz Acc measure units:	Unknown
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	Not Reported
Vert measure units:	Not Reported	Vertacc measure val:	Not Reported
Vert accmeasure units:	Not Reported		
Vertcollection method:	Not Reported		
Vert coord refsys:	Not Reported	Countrycode:	US
Aquifername:	California Coastal Basin aquifers		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	Not Reported	Welldepth:	Not Reported
Welldepth units:	Not Reported	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 0

E23
SSW **FED USGS** **USGS40000140616**
1/2 - 1 Mile
Lower

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-340429117130001		
Monloc name:	001S003W20C001S		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	18070203	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	34.0747353
Longitude:	-117.2175399	Sourcemap scale:	Not Reported
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	1192.00
Vert measure units:	feet	Vertacc measure val:	20
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	California Coastal Basin aquifers		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	19040101	Welldepth:	Not Reported
Welldepth units:	Not Reported	Wellholedepth:	642
Wellholedepth units:	ft		

Ground-water levels, Number of Measurements: 0

24
ESE **FED USGS** **USGS40000140730**
1/2 - 1 Mile
Higher

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-340452117114101		
Monloc name:	001S003W16K002S		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	18070203	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	34.0811238
Longitude:	-117.1955946	Sourcemap scale:	Not Reported

Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	1291.00
Vert measure units:	feet	Vertacc measure val:	20
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	California Coastal Basin aquifers		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	19040101	Welldepth:	Not Reported
Welldepth units:	Not Reported	Wellholedepth:	256
Wellholedepth units:	ft		

Ground-water levels, Number of Measurements: 0

25
SSE **FED USGS** **USGS40000140559**
1/2 - 1 Mile
Higher

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-340420117122101		
Monloc name:	001S003W21E003S		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	18070203	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	34.0722353
Longitude:	-117.206706	Sourcemap scale:	Not Reported
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	1243.00
Vert measure units:	feet	Vertacc measure val:	20
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	California Coastal Basin aquifers		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	19110101	Welldepth:	306
Welldepth units:	ft	Wellholedepth:	306
Wellholedepth units:	ft		

Ground-water levels, Number of Measurements: 0

26
South **FED USGS** **USGS40000140557**
1/2 - 1 Mile
Higher

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-340419117123001		
Monloc name:	001S003W20H005S		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	18070203	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	34.0719576
Longitude:	-117.2092062	Sourcemap scale:	Not Reported

Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	1228.00
Vert measure units:	feet	Vertacc measure val:	10
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	California Coastal Basin aquifers		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	19610101	Welldepth:	Not Reported
Welldepth units:	Not Reported	Wellholedepth:	500
Wellholedepth units:	ft		

Ground-water levels, Number of Measurements: 0

27
NNE
1/2 - 1 Mile
Lower

FED USGS **USGS40000141040**

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-340600117121501		
Monloc name:	001S003W09E001S		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	18070203	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	34.100012
Longitude:	-117.2050397	Sourcemap scale:	Not Reported
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	1204.00
Vert measure units:	feet	Vertacc measure val:	20
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	California Coastal Basin aquifers		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	19420101	Welldepth:	Not Reported
Welldepth units:	Not Reported	Wellholedepth:	100
Wellholedepth units:	ft		

Ground-water levels, Number of Measurements: 0

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS
RADON

AREA RADON INFORMATION

State Database: CA Radon

Radon Test Results

Zipcode	Num Tests	> 4 pCi/L
92374	85	0

Federal EPA Radon Zone for SAN BERNARDINO County: 2

Note: Zone 1 indoor average level > 4 pCi/L.
: Zone 2 indoor average level >= 2 pCi/L and <= 4 pCi/L.
: Zone 3 indoor average level < 2 pCi/L.

Federal Area Radon Information for Zip Code: 92374

Number of sites tested: 2

Area	Average Activity	% <4 pCi/L	% 4-20 pCi/L	% >20 pCi/L
Living Area - 1st Floor	0.500 pCi/L	100%	0%	0%
Living Area - 2nd Floor	Not Reported	Not Reported	Not Reported	Not Reported
Basement	Not Reported	Not Reported	Not Reported	Not Reported

PHYSICAL SETTING SOURCE RECORDS SEARCHED

TOPOGRAPHIC INFORMATION

USGS 7.5' Digital Elevation Model (DEM)
Source: United States Geologic Survey
EDR acquired the USGS 7.5' Digital Elevation Model in 2002 and updated it in 2006. The 7.5 minute DEM corresponds to the USGS 1:24,000- and 1:25,000-scale topographic quadrangle maps. The DEM provides elevation data with consistent elevation units and projection.

Current USGS 7.5 Minute Topographic Map
Source: U.S. Geological Survey

HYDROLOGIC INFORMATION

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.
Source: FEMA
Telephone: 877-336-2627
Date of Government Version: 2003, 2015

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005 and 2010 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetland Inventory
Source: Department of Fish & Game
Telephone: 916-445-0411

HYDROGEOLOGIC INFORMATION

AQUIFLOW^{R} Information System
Source: EDR proprietary database of groundwater flow information
EDR has developed the AQUIFLOW Information System (AIS) to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted to regulatory authorities at select sites and has extracted the date of the report, hydrogeologically determined groundwater flow direction and depth to water table information.

GEOLOGIC INFORMATION

Geologic Age and Rock Stratigraphic Unit
Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - A digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

STATSGO: State Soil Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)
The U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) leads the national Conservation Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps.

SSURGO: Soil Survey Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)
Telephone: 800-672-5559
SSURGO is the most detailed level of mapping done by the Natural Resources Conservation Service, mapping scales generally range from 1:12,000 to 1:63,360. Field mapping methods using national standards are used to construct the soil maps in the Soil Survey Geographic (SSURGO) database. SSURGO digitizing duplicates the original soil survey maps. This level of mapping is designed for use by landowners, townships and county natural resource planning and management.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

LOCAL / REGIONAL WATER AGENCY RECORDS

FEDERAL WATER WELLS

PWS: Public Water Systems
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Public Water System data from the Federal Reporting Data System. A PWS is any water system which provides water to at least 25 people for at least 60 days annually. PWSs provide water from wells, rivers and other sources.

PWS ENF: Public Water Systems Violation and Enforcement Data
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Violation and Enforcement data for Public Water Systems from the Safe Drinking Water Information System (SDWIS) after August 1995. Prior to August 1995, the data came from the Federal Reporting Data System (FRDS).

USGS Water Wells: USGS National Water Inventory System (NWIS)
This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on wells, springs, and other sources of groundwater.

STATE RECORDS

Water Well Database
Source: Department of Water Resources
Telephone: 916-651-9648

California Drinking Water Quality Database
Source: Department of Public Health
Telephone: 916-324-2319
The database includes all drinking water compliance and special studies monitoring for the state of California since 1984. It consists of over 3,200,000 individual analyses along with well and water system information.

OTHER STATE DATABASE INFORMATION

California Oil and Gas Well Locations
Source: Department of Conservation
Telephone: 916-323-1779
Oil and Gas well locations in the state.

RADON

State Database: CA Radon
Source: Department of Health Services
Telephone: 916-324-2208
Radon Database for California

Area Radon Information
Source: USGS
Telephone: 703-356-4020
The National Radon Database has been developed by the U.S. Environmental Protection Agency (USEPA) and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey. The study covers the years 1986 - 1992. Where necessary data has been supplemented by information collected at private sources such as universities and research institutions.

EPA Radon Zones
Source: EPA
Telephone: 703-356-4020
Sections 307 & 309 of IRAA directed EPA to list and identify areas of U.S. with the potential for elevated indoor radon levels.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

OTHER

Airport Landing Facilities: Private and public use landing facilities
Source: Federal Aviation Administration, 800-457-6656

Epicenters: World earthquake epicenters, Richter 5 or greater
Source: Department of Commerce, National Oceanic and Atmospheric Administration

California Earthquake Fault Lines: The fault lines displayed on EDR's Topographic map are digitized quaternary fault lines, prepared in 1975 by the United State Geological Survey. Additional information (also from 1975) regarding activity at specific fault lines comes from California's Preliminary Fault Activity Map prepared by the California Division of Mines and Geology.

STREET AND ADDRESS INFORMATION

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APPENDIX D: PHASE II SUBSURFACE INVESTIGATION REPORT

PARTNER

PARTNER
Engineering and Science, Inc.®

PHASE II SUBSURFACE INVESTIGATION REPORT

NWC Palmetto Avenue and Alabama Street
Redlands, California 92374

January 3, 2018
Partner Project Number: 17-203002.2
Client Reference No. DUKEAJ-501

Prepared for:

Duke Realty Limited Partnership
200 Spectrum Center Drive, Suite 1600
Irvine, California 92618

Engineers who understand your business

PARTNER
Engineering and Science, Inc.

January 3, 2018

Mr. Adam Schmid
Duke Realty Limited Partnership
200 Spectrum Center Drive, Suite 1600
Irvine, California 92618

Subject: Phase II Subsurface Investigation Report
NWC Palmetto Avenue and Alabama Street
Redlands, California 92374
Partner Project Number: 17-203002.2
Client Reference No. DUKEAJ-501

Dear Mr. Schmid:

Partner Engineering and Science, Inc. (Partner) is pleased to provide the results of the assessment performed on the above-referenced property. The following report describes the field activities, methods, and findings of the Phase II Subsurface Investigation conducted at the above-referenced property.

This assessment was performed utilizing methods and procedures consistent with good commercial or customary practices designed to conform to acceptable industry standards. The independent conclusions represent Partner's best professional judgment based upon existing conditions and the information and data available to us during the course of this assignment.

We appreciate the opportunity to provide these services. If you have any questions concerning this report, or if we can assist you in any other matter, please contact Bob Geiger at (310) 615-4500.

Sincerely,

Partner Engineering and Science, Inc.

Joshua Cain
Staff Scientist

Samantha J. Fujita, PG
Regional Manager – Subsurface Investigation

Bob Geiger
Principal

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1.0 INTRODUCTION

1.1 Purpose

The purpose of the investigation was to evaluate the potential impact of volatile organic compounds (VOCs), organochlorine pesticides (OCPs), and/or arsenic as a consequence of a release or releases from the former on-site agricultural and service/repair activities. Duke Realty provided project authorization of a Partner Proposal scope email dated November 29, 2017.

1.2 Limitations

This report presents a summary of work conducted by Partner. The work includes observations of site conditions encountered and the analytical results provided by an independent third party laboratory of samples collected during the course of the project. The number and location of samples were selected to provide the required information. However, it cannot be assumed that the limited available data are representative of subsurface conditions in areas not sampled.

Conclusions and/or recommendations are based on the observations, laboratory analyses, and the governing regulations. Conclusions and/or recommendations beyond those stated and reported herein should not be inferred from this document.

Partner warrants that the environmental consulting services contained herein were accomplished in accordance with generally-accepted practices in the environmental engineering, geology, and hydrogeology fields that existed at the time and location of work. No other warranties are implied or expressed.

1.3 User Reliance

Partner was engaged by Duke Realty Limited Partnership (the Addressee), or their authorized representative, to perform this investigation. The engagement agreement specifically states the scope and purpose of the investigation, as well as the contractual obligations and limitations of both parties. This report and the information therein, are for the exclusive use of the Addressee. This report has no other purpose and may not be relied upon, or used, by any other person or entity without the written consent of Partner. Third parties that obtain this report, or the information therein, shall have no rights of recourse or recovery against Partner, its officers, employees, vendors, successors or assigns. Any such unauthorized user shall be responsible to protect, indemnify and hold Partner, the Addressee and their respective officers, employees, vendors, successors and assigns harmless from any and all claims, damages, losses, liabilities, expenses (including reasonable attorneys' fees) and costs attributable to such use. Unauthorized use of this report shall constitute acceptance of, and commitment to, these responsibilities, which shall be irrevocable and shall apply regardless of the cause of action or legal theory pled or asserted.

This report has been completed under specific Terms and Conditions relating to scope, relying parties, limitations of liability, indemnification, dispute resolution, and other factors relevant to any reliance on this report. Any parties relying on this report do so having accepted the Terms and Conditions for which this report was completed.

2.0 SITE BACKGROUND

2.1 Site Description

The subject property consists of five parcels of land comprising approximately 55.94 acres located on the northwest corner of the Palmetto Avenue and Alabama Street intersection within a mixed agricultural, commercial, and industrial area of San Bernardino County, California. The subject property is currently occupied by primarily vacant/fallow agricultural land; as well as a small portion of active agricultural fields and temporary residence for agricultural and residential use. On-site operations consist of undeveloped, vacant land use, cultivation, and apiaristry (beekeeping) agriculture. In addition to the current utility poles, irrigation piping, and fencing structures, the subject property is also improved with unpaved roads, and sewer access manholes and confined spaces.

The subject property is bound by a fallow agricultural field, The Redlands Wastewater Treatment Facility and undeveloped woodland and grassland to the north; Palmetto Avenue to the south, followed by citrus orchards and agricultural land; Alabama Street to the east followed by a vacant field/fallow agricultural land, an industrial warehouse building occupied by Prologis, and Home Depot; and a fallow agricultural field and an industrial warehouse building occupied by Performance Team Freight to the west. Refer to Figure 1 for a site plan showing site features and surrounding properties.

2.2 Site History

Partner is concurrently conducting a *Phase I Environmental Site Assessment Report* (Phase I) on behalf of Duke Realty Limited Partnership. According to the reviewed historical sources, the subject property was formerly developed with a rural single-family residence and agricultural fields (citrus orchards)/farms as early as 1899; developed with three rural single-family residential structures, farm storage buildings and agricultural fields (citrus orchards)/farms between 1930 and circa 1994; developed with three rural single-family residential structures, farm storage buildings, fallow/unused agricultural fields and active agricultural fields (citrus orchards)/farms between 2002 and circa 2006; developed with one rural single-family residential structure, farm storage buildings, fallow/unused agricultural fields and active agricultural fields between 2009 and circa 2015; and developed with fallow/unused agricultural fields and active agricultural fields the current access roads in 2016.

Preliminary information acquired during the Phase I indicated the following suspect environmental conditions :

- The subject property was historically used for agricultural purposes. There is a potential that agricultural related chemicals such as pesticides, herbicides, and fertilizers, may have been used, stored, mixed, and applied on-site. The subject property is either unpaved dirt, grass-covered or currently used as an agricultural field and is proposed for development – change in land-use from agricultural to commercial.

As such and concurrent with the Phase I ESA, a Phase II Subsurface Investigation was warranted to further evaluate soil quality conditions with respect to former agricultural use and the proposed change in land-use.

2.3 Geology and Hydrogeology

Based on a review of the United States Geological Survey (USGS) *Redlands, California* Quadrangle topographic map, the subject property is situated at an elevation approximately 1,200 feet above mean sea level, and the local topography is sloping gently to the west-northwest. Refer to Figure 2 for a topographic map of the site vicinity.

According to the California Geological Survey, the subject property is located within the Transverse Ranges province. The Transverse Ranges are an east-west trending series of steep mountain ranges and valleys. The east-west structure of the Transverse Ranges is oblique to the normal northwest trend of coastal California, hence the name "Transverse." The province extends offshore to include San Miguel, Santa Rosa, and Santa Cruz islands. Its eastern extension, the San Bernardino Mountains, has been displaced to the south along the San Andreas Fault. Intense north-south compression is squeezing the Transverse Ranges. As a result, this is one of the most rapidly rising regions on earth. Great thicknesses of Cenozoic petroleum-rich sedimentary rocks have been folded and faulted, making this one of the important oil producing areas in the United States

Based on borings advanced during this investigation, the underlying subsurface consists predominantly of sandy silt (SM) from the ground surface to approximately five feet below ground surface (bgs). Refer to Appendix A for boring logs from this investigation.

Groundwater was not encountered during this investigation and was not a part of the scope of work. According to the State Water Resources Control Board (SWRCB) GeoTracker website, a nearby closed Leaking Underground Storage Tank (LUST) site is California Shell at 941 California Street in the City of Redlands, which is approximately 1.58 mile southwest of the subject property and is overseen by the San Bernardino County Fire Department as Case Number 2003019. The site maintained four groundwater monitoring wells in the area. With depth to groundwater ranging from 90 to 95 feet bgs and a direction of flow to the east.

3.0 FIELD ACTIVITIES

The scope of the Phase II Subsurface Investigation included the advancement of 11 borings (B1 through B1) for the collection of representative soil samples and the collection of 26 shallow soil samples (S1 through S26). Refer to Table 1 for a summary of the borings, sampling schedule and laboratory analyses for this investigation.

3.1 Preparatory Activities

Prior to the initiation of fieldwork, Partner completed the following activities.

3.1.1 Utility Clearance

Partner delineated the work area with white spray paint and notified Underground Service Alert (USA) to clear public utility lines as required by law at least two business days prior to drilling activities. USA issued ticket number A173311463-00A for the project.

In addition, Partner subcontracted with Ground Penetrating Radar Systems (GPRS) on December 11, 2017 to clear boring locations of utilities. GPRS systematically free-traversed each proposed boring location with a Radiodetection model RD7000 electromagnetic induction (EM) equipment unit with line-tracing capabilities, and a GSSI model SIR-3000 ground penetrating radar (GPR) unit. The equipment readouts were interpreted in real time for evidence of utility lines and/or other subsurface features of potential concern. Based on the findings of the GPR survey, no subsurface utilities were identified within the proposed boring locations.

3.1.2 Health and Safety Plan

Partner reviewed the site-specific Health and Safety Plan with on-site personnel involved in the project prior to the commencement of drilling activities.

3.2 Drilling Equipment

On December 11, 2017, Partner subcontracted with Minute Man Drilling (MMD) to provide and operate drilling equipment. MMD, under the direction of Partner, advanced borings B1 through B11 with a truck-mounted Geoprobe Model 5410 direct push rig. Partner manually collected soil samples from each shallow soil sample location (S1 through S26) using a shovel and hand trowel. Sampling equipment was decontaminated between sample locations to prevent cross-contamination.

3.3 Boring Locations

Boring B1 was advanced in the northeast corner of the subject property. Borings B2 through B6 were advanced in the northwest, northeast, central, west, and south portions of the former agricultural building, respectively. Borings B7 through B9 were advanced in the northeast, north, and northwest corner of the field, respectively. Borings B9 and B10 were advanced to the east and south exterior of the existing farm shack, respectively.

For shallow soil samples S1 through S26, the subject property was divided into 26 evenly-sized sections and a sample was collected in each section.

Refer to Figure 3 for a map indicating sample locations.

3.4 Soil Sampling

Borings B1 through B11 were unpaved. Borings B1 through B11 were advanced to a terminal depth of five feet bgs.

Soil samples were collected using a two-foot long by 1.5-inch diameter sampler with a two-foot long acetate liner and sampling point. The sampler was advanced by the direct-push drill rig using four-foot long for the truck-mounted rig by 1.25-inch diameter hollow rods with the inner rods in place. At approximately one foot above the desired sampling depth, an inner rod was removed and the sampler was advanced to the desired sampling depth to allow undisturbed soil to enter the sampling liner. The sampler was retrieved from the subsurface and the soil-filled liner was removed.

Each acetate liner was cut using a pipe-cutter. Samples were collected from the lower half of the liner using a disposable plastic syringe and retained in two sodium bisulfate-preserved and one methanol-preserved volatile organics analysis (VOA) vials in accordance with United States Environmental Protection Agency (EPA) Method 5035 sampling protocol. The remainder of the lower half of the liner was capped on either end with Teflon tape and plastic caps. The capped liners and VOA vials were labeled for identification and stored in an iced cooler. The soil in the upper half of the liner was visually inspected for discoloration, monitored for odors, classified in accordance with the Unified Soil Classification System, placed in a sealable plastic bag, and field-screened with a photoionization detector (PID). None of the samples exhibited discoloration or an odor and none of the PID readings suggested the presence of elevated volatile organics concentrations.

For the shallow soil samples, at the desired sampling depth, soil was transferred into a laboratory-supplied, four-ounce, wide-mouth, unpreserved glass jar, which was filled to capacity to minimize headspace and the potential for volatilization; sealed with a threaded, Teflon-lined lid; labeled for identification; and stored in an iced cooler.

Soil samples were collected from borings B1 through B11 at two and five feet bgs. Shallow soil samples were collected at S1 through S26 from approximately six inches bgs.

3.5 Post-Sampling Activities

The boreholes were backfilled with hydrated bentonite chips following sampling activities. No significant amounts of derived wastes were generated during this investigation.

4.0 LABORATORY ANALYSIS

4.1 Laboratory Analysis

Partner collected 22 soil samples and 26 surficial soil samples on December 11, 2017, which were transported in an iced cooler under proper chain-of-custody protocol to Jones Environmental, Inc. (JEI), a state-certified laboratory [California Department of Public Health (CDPH) Environmental Laboratory Accreditation Program (ELAP) certificate number 6C73103] in the City of Santa Fe Springs, for analysis on December 12, 2017. Based on field-screening results, visual observations, and/or olfactory observations, one soil sample per five-foot boring (11 soil samples total) was analyzed for VOCs in accordance with EPA Method 8260B. Samples from S1 through S26 and from two feet bgs from borings B1 through B11 were composited into 18 composite samples (C1 through C18) with each composite consisting of two or three discrete samples collected from proximal borings at the same depths. The 18 composite samples were analyzed for OCPs in accordance with EPA Method 8081A. Eighteen discrete soil samples (one from each composite sample) were analyzed for arsenic in accordance with EPA Method 6010B. The remaining soil samples were placed on hold at the laboratory. Refer to Table 2 for a summary of the composite samples.

4.2 Laboratory Analytical Results

Laboratory analytical results are included in Appendix B and discussed below.

4.2.1 Soil Sample Analytical Results

One of the analyzed soil samples (B3-5) contained a detectable concentration of toluene exceeding the laboratory Practical Quantitation Limits (PQLs). The remaining VOCs were not detected in any of the analyzed soil samples at concentrations exceeding the laboratory PQLs.

Fourteen of the analyzed composite soil samples (C1, C3, C5, C7 through C16, and C18) contained 4,4-dichlorodiphenyldichloroethylene (DDE) above the laboratory PQL. Ten of the analyzed composite soil samples (C1, C3, C5 C9, C11, C12, C13, C15, C16, and C18) contained 4,4-dichlorodiphenyltrichloroethane (DDT) above the laboratory PQL. Five of the analyzed composite soil samples (C11, C12, C13, C15, and C18) contained 4,4-dichlorodiphenyldichloroethane (DDD) above the laboratory PQL. One of the analyzed composite soil samples (C9) contained dieldrin and endrin aldehyde above the laboratory PQLs. Two of the analyzed composite soil samples (C12 and C18) contained endrin above the laboratory PQL. No other OCPs were detected in the analyzed composite soil samples.

None of the analyzed discrete soil samples contained detectable concentrations of arsenic above the laboratory PQL.

Refer to Tables 3 and 4 for a summary of the soil sample VOCs and OCPs laboratory analysis results, respectively.

5.0 DISCUSSION AND CONCLUSIONS

5.1 Regulatory Agency Guidance

Department of Toxic Substances Control Regional Screening Levels

Regional Screening Levels (RSLs) [formerly Preliminary Remediation Goals (PRGs)] are generic, risk-based chemical concentrations developed by the EPA for use in initial screening-level evaluations. RSLs combine human health toxicity values with standard exposure factors to estimate contaminant concentrations that are considered to be health protective of human exposures over a lifetime through direct-contact exposure pathways (e.g., via inhalation and/or ingestion of and/or dermal contact with impacted soil and/or indoor air). RSLs are not legally enforceable standards, but rather are considered guidelines to evaluate if potential risks associated with encountered chemical impacts may warrant further evaluation.

The Department of Toxic Substances Control (DTSC) Office of Human and Ecological Risk (HERO) developed California-Modified RSLs based on a review of 1) the differences in methodology between PRGs and RSLs 2) RSL concentrations, and 3) recent toxicity values.

5.2 Discussion

None of the detected concentrations of OCPs exceeded residential and commercial/industrial RSLs. Arsenic and VOCs were not detected in the analyzed soil samples at concentrations exceeding laboratory PQLs and the PQLs were below applicable regulatory guidelines. The concentrations of OCPs detected during this investigation are not expected to represent a concern to human health or the environment at this time.

There does not appear to be evidence of a release to soil beyond *de minimis* levels as a result of the former on-site agricultural and repair/service use at this time.

5.3 Summary and Conclusions

Partner conducted a Phase II Subsurface Investigation at the subject property to investigate the potential impact of VOCs, OCPs, and/or arsenic to soil as a consequence of a release or releases from the former on-site agricultural and service/repair activities. The scope of the Phase II Subsurface Investigation included 11 soil borings and 26 shallow soil samples. Eleven soil samples were analyzed for VOCs, 18 composite soil samples were analyzed for OCPs, and 18 discrete soil samples were analyzed for arsenic.

Subsurface lithology encountered in the upper five feet bgs consisted of silty sand. Groundwater was not encountered during this investigation.

Soil samples did not contain detectable concentrations of OCPs in excess of applicable RSLs. Arsenic and VOCs were not detected in the analyzed soil samples at concentrations exceeding laboratory PQLs and the PQLs were below applicable regulatory guidelines.

Based on the Subsurface Investigation, there is evidence of a *de minimis* release of hazardous materials from the subject property which does not represent a concern to human health or the environment at this time. Partner recommends no further investigation with respect to the former on-site agricultural and service/repair activities.

TABLES

Table 1: Summary of Investigation Scope
NWC of Palmetto Avenue and Alabama Street
Redlands, California 92374
Partner Project Number 17-203002.2
December 2017

Boring Identification	Location	Terminal Depth (feet bgs)	Matrix Sampled	Sampling Depths* (feet bgs)	Target Analytes
B1	Northeast corner of property	5	Soil	2, 5	VOCs
B2	Northwest area of former agricultural building	5	Soil	2, 5	VOCs
B3	Northeast area of former agricultural building	5	Soil	2, 5	VOCs
B4	Central area of former agricultural building	5	Soil	2, 5	VOCs
B5	Western area of former agricultural building	5	Soil	2, 5	VOCs
B6	Southern area of former agricultural building	5	Soil	2, 5	VOCs
B7	Northeast region of field	5	Soil	2, 5	VOCs
B8	North border of field	5	Soil	2, 5	VOCs
B9	Northwest corner of field	5	Soil	2, 5	VOCs
B10	East exterior of existing farm shack	5	Soil	2, 5	VOCs
B11	South exterior of existing farm shack	5	Soil	2, 5	VOCs

Notes:
*Depths in bold analyzed for volatile organic compounds (VOCs) in accordance with United States Environmental Protection Agency (EPA) Method 8260B.
bgs = below ground surface

Table 2: Summary of Composite Samples
NWC of Palmetto Avenue and Alabama Street
Redlands, California 92374
Partner Project Number 17-203002.2
December 2017

Composite Identification	Sample Identification*	Target Analytes	Composite Identification*	Sample Identification*	Target Analytes
C1	S1	OCPs and Arsenic	C10	S12	OCPs and Arsenic
	S2			B5-2	
				B6-2	
C2	S3	OCPs and Arsenic	C11	S13	OCPs and Arsenic
	B9-2			S14	
C3	S4	OCPs and Arsenic	C12	S15	OCPs and Arsenic
	B8-2			S16	
C4	S5	OCPs and Arsenic	C13	S17	OCPs and Arsenic
	B1-2			S24	
C5	S6	OCPs and Arsenic	C14	S18	OCPs and Arsenic
	B3-2			S23	
C6	B2-2	OCPs and Arsenic	C15	S19	OCPs and Arsenic
	B4-2			S22	
C7	S7	OCPs and Arsenic	C16	S20	OCPs and Arsenic
	B7-2			S21	
C8	S8	OCPs and Arsenic	C17	S25	OCPs and Arsenic
	S9			B11-2	
C9	S10	OCPs and Arsenic	C18	S26	OCPs and Arsenic
	S11			B10-2	

Notes:
*Samples in bold analyzed for arsenic in accordance with United States Environmental Protection Agency (EPA) Method 6010B. Each composite sample analyzed for organochlorine pesticides (OCPs) in accordance with EPA Method 8081A.

Table 3: Soil Sample VOCs Laboratory Results
NWC of Palmetto Avenue and Alabama Street
Redlands, California 92374
Partner Project Number 17-203002.2
December 2017

EPA Method	VOCs via 8260B	
Units	(µg/kg)	
Sample Identification	Toluene	Other VOCs
B1-5	< 1.0	ND
B2-2	< 1.0	ND
B3-5	1.4	ND
B4-2	< 1.0	ND
B5-2	< 1.0	ND
B6-5	< 1.0	ND
B7-2	< 1.0	ND
B8-5	< 1.0	ND
B9-2	< 1.0	ND
B10-5	< 1.0	ND
B11-2	< 1.0	ND
Residential RSL	1,100	Varies
Industrial RSL	5,400	Varies

Notes:

VOCs = volatile organic compounds

EPA = United States Environmental Protection Agency

µg/kg = micrograms per kilogram

RSL = August 2017 Department of Toxic Substances Control (DTSC) Regional Screening Levels (RSLs). If DTSC RSLs do not exist, June 2017 EPA Region 9 RSLs were utilized, as denoted by *.

< = not detected above indicated laboratory Practical Quantitation Limit (PQL)

ND = not detected above laboratory PQLs

Values in bold exceed laboratory PQLs

Table 4: Soil Sample OCPs Laboratory Results
NWC of Palmetto Avenue and Alabama Street
Redlands, California 92374
Partner Project Number 17-203002.2
December 2017

EPA Method	OCPs via 8081A						
Units	(µg/kg)						
Sample Identification	4,4-DDD	4,4-DDE	4,4-DDT	Dieldrin	Endrin	Endrin Aldehyde	Other OCPs
C1	< 10	87	12	< 10	< 10	< 10	ND
C2	< 10	< 10	< 10	< 10	< 10	< 10	ND
C3	< 10	120	11	< 10	< 10	< 10	ND
C4	< 10	< 10	< 10	< 10	< 10	< 10	ND
C5	< 10	130	21	< 10	< 10	< 10	ND
C6	< 10	< 10	< 10	< 10	< 10	< 10	ND
C7	< 10	15	< 10	< 10	< 10	< 10	ND
C8	< 10	32	< 10	< 10	< 10	< 10	ND
C9	< 10	12	96	12	< 10	27	ND
C10	< 10	9	< 10	< 10	< 10	< 10	ND
C11	13	160	31	< 10	< 10	< 10	ND
C12	11	180	25	< 10	9	< 10	ND
C13	19	220	19	< 10	< 10	< 10	ND
C14	< 10	48	< 10	< 10	< 10	< 10	ND
C15	11	69	17	< 10	< 10	< 10	ND
C16	< 10	60	14	< 10	< 10	< 10	ND
C17	< 10	< 10	< 10	< 10	< 10	< 10	ND
C18	180	350	290	< 10	89	< 10	ND
Residential RSL	1,900	2,000	1,900	34	19,000	NA	Varies
Industrial RSL	9,600	9,300	8,500	140	250,000	NA	Varies

Notes:

EPA = United States Environmental Protection Agency

OCP = organochlorine pesticides

µg/kg = micrograms per kilogram

< = not detected above indicated laboratory Practical Quantitation Limit (PQL)

ND = not detected above laboratory PQLs

RSL = June 2017 EPA Regional Screening Levels (RSLs)

NA = not applicable

Values in bold exceed laboratory PQLs

DDD = dichlorodiphenyldichloroethane

DDE = dichlorodiphenyldichloroethylene

DDT = dichlorodiphenyltrichloroethane

FIGURES

PARTNER

PARTNER
Engineering and Science, Inc.
2154 Torrance Boulevard, Suite 200
Torrance, California 90501

Project Number: 17-203002.2

Legend

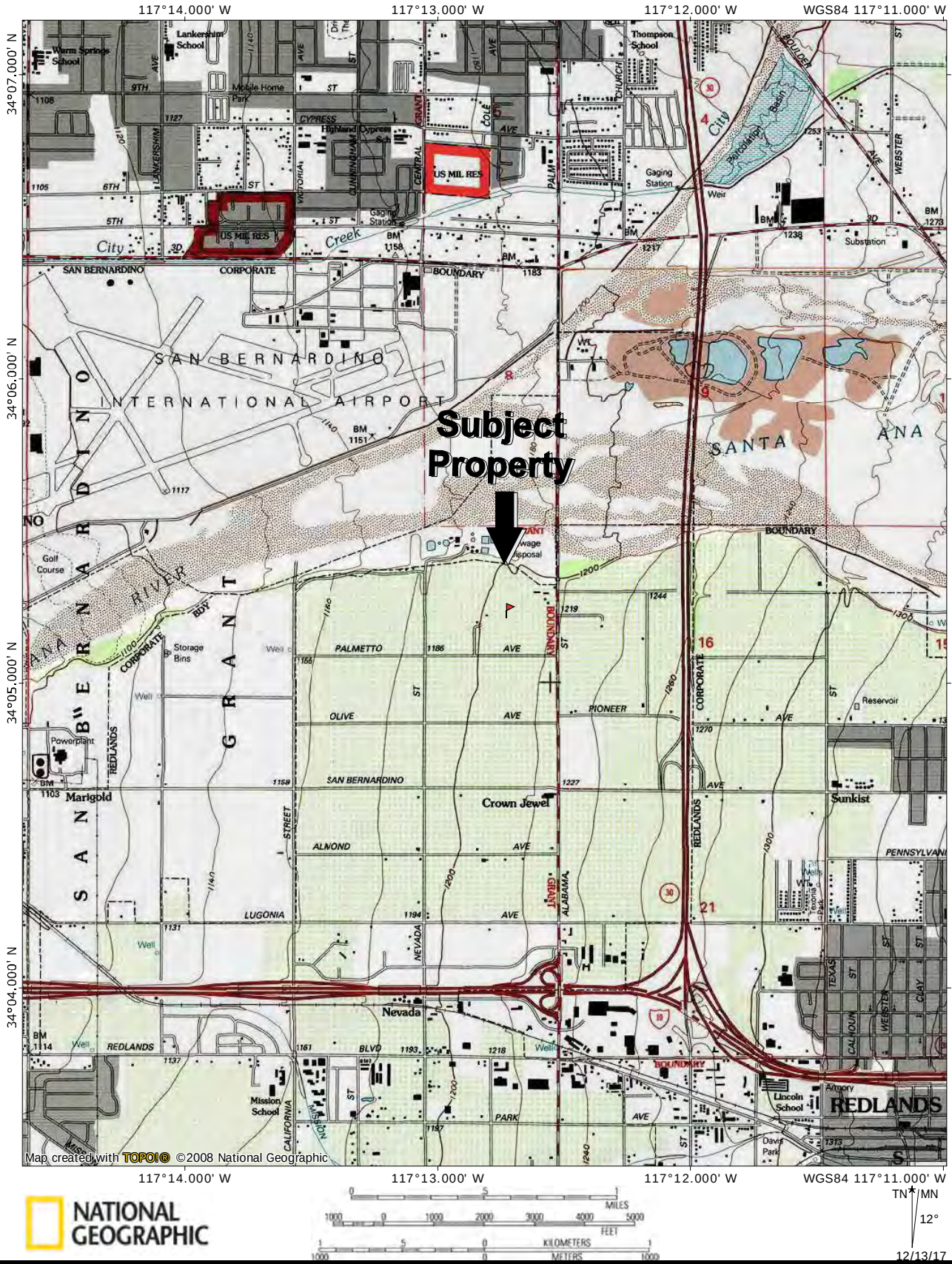
N

Subject Site

Site Plan

Figure	Prepared By	Date
1	J. Cain	December 2017

NWC Palmetto Avenue and Alabama Street
Redlands, California 92374



NATIONAL GEOGRAPHIC

PARTNER
Engineering and Science, Inc.
2154 Torrance Boulevard, Suite 200
Torrance, California 90501

Project Number: 17-203002.2

N

USGS Redlands, California Quadrangle
Version: 1996 Current as of: 1996

Topographic Map

Figure	Prepared By	Date
2	S. Fujita	December 2017

NWC Palmetto Avenue and Alabama Street
Redlands, California 92374

PARTNER
Engineering and Science, Inc.
2154 Torrance Boulevard, Suite 200
Torrance, California 90501

Project Number: 17-203002.2

Legend

- Subject Site
- Boring Location
- Shallow Soil Sample Location

Sample Location Map

Figure	Prepared By	Date
1	J. Cain	December 2017

NWC Palmetto Avenue and Alabama Street
Redlands, California 92374

APPENDIX A: BORING LOGS

PARTNER

Boring Number:	B1		Page 1 of 1
Location:	Northeast corner of property	Date Started:	12/11/2017
Site Address:	Corner Alabama Street & Palmetto Avenue	Date Completed:	12/11/2017
	Redlands, California 92374	Depth to Groundwater:	N/A
Project Number:	17-203002.2	Field Technician:	J.Cain
Drill Rig Type:	Geoprobe M5400 Truck-mounted drill rig	Partner Engineering and Science	
Sampling Equipment:	VOAs, Acetate Liner	2154 Torrance Boulevard, Suite 200	
Borehole Diameter:	2.25 inches	Torrance, California 90501	

Depth	Sample	PID	USCS	Description	Notes
1					unpaved at surface
2	B1-2	0.1	SM	Grayish Brown (2.5 Y 5/2) silty sand (very fine- to fine-grained), loose, dry	
3					
4					
5	B1-5	0.3	SM	Grayish Brown (2.5 Y 5/2) silty sand (very fine- to fine-grained), loose, dry	
6					Boring terminated at five feet bgs. Groundwater was not encountered. Boring backfilled with hydrated bentonite and capped with soil.
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Boring Number:	B2		Page 1 of 1
Location:	Northwest area of former agricultural building	Date Started:	12/11/2017
Site Address:	Corner Alabama Street & Palmetto Avenue	Date Completed:	12/11/2017
	Redlands, California 92374	Depth to Groundwater:	N/A
Project Number:	17-203002.2	Field Technician:	J.Cain
Drill Rig Type:	Geoprobe M5400 Truck-mounted drill rig	Partner Engineering and Science	
Sampling Equipment:	VOAs, Acetate Liner	2154 Torrance Boulevard, Suite 200	
Borehole Diameter:	2.25 inches	Torrance, California 90501	

Depth	Sample	PID	USCS	Description	Notes
1					unpaved at surface
2	B2-2	0.0	SM	Grayish Brown (2.5 Y 5/2) silty sand (very fine- to fine-grained), loose, dry	
3					
4					
5	B2-5	0.1	SM	Grayish Brown (2.5 Y 5/2) silty sand (very fine- to fine-grained), loose, dry	
6					Boring terminated at five feet bgs. Groundwater was not encountered. Boring backfilled with hydrated bentonite and capped with soil.
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Boring Number:	B3		Page 1 of 1
Location:	Northeast area of former agricultural building	Date Started:	12/11/2017
Site Address:	Corner Alabama Street & Palmetto Avenue	Date Completed:	12/11/2017
	Redlands, California 92374	Depth to Groundwater:	N/A
Project Number:	17-203002.2	Field Technician:	J.Cain
Drill Rig Type:	Geoprobe M5400 Truck-mounted drill rig	Partner Engineering and Science	
Sampling Equipment:	VOAs, Acetate Liner	2154 Torrance Boulevard, Suite 200	
Borehole Diameter:	2.25 inches	Torrance, California 90501	

Depth	Sample	PID	USCS	Description	Notes
1					unpaved at surface
2	B3-2	0.0	SM	Grayish Brown (2.5 Y 5/2) silty sand (very fine- to fine-grained), loose, dry	
3					
4					
5	B3-5	0.0	SM	Grayish Brown (2.5 Y 5/2) silty sand (very fine- to fine-grained), loose, dry	
6					Boring terminated at five feet bgs. Groundwater was not encountered. Boring backfilled with hydrated bentonite and capped with soil.
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Boring Number:	B4		Page 1 of 1
Location:	Central area of former agricultural building	Date Started:	12/11/2017
Site Address:	Corner Alabama Street & Palmetto Avenue	Date Completed:	12/11/2017
	Redlands, California 92374	Depth to Groundwater:	N/A
Project Number:	17-203002.2	Field Technician:	J.Cain
Drill Rig Type:	Geoprobe M5400 Truck-mounted drill rig	Partner Engineering and Science	
Sampling Equipment:	VOAs, Acetate Liner	2154 Torrance Boulevard, Suite 200	
Borehole Diameter:	2.25 inches	Torrance, California 90501	

Depth	Sample	PID	USCS	Description	Notes
1					unpaved at surface
2	B4-2	0.1	SM	Grayish Brown (2.5 Y 5/2) silty sand (very fine- to fine-grained), loose, dry	
3					
4					
5	B4-5	0.2	SM	Grayish Brown (2.5 Y 5/2) silty sand (very fine- to fine-grained), loose, dry	
6					Boring terminated at five feet bgs. Groundwater was not encountered. Boring backfilled with hydrated bentonite and capped with soil.
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Boring Number:	B5		Page 1 of 1
Location:	Western area of former agricultural building	Date Started:	12/11/2017
Site Address:	Corner Alabama Street & Palmetto Avenue	Date Completed:	12/11/2017
	Redlands, California 92374	Depth to Groundwater:	N/A
Project Number:	17-203002.2	Field Technician:	J.Cain
Drill Rig Type:	Geoprobe M5400 Truck-mounted drill rig	Partner Engineering and Science	
Sampling Equipment:	VOAs, Acetate Liner	2154 Torrance Boulevard, Suite 200	
Borehole Diameter:	2.25 inches	Torrance, California 90501	

Depth	Sample	PID	USCS	Description	Notes
1					unpaved at surface
2	B5-2	0.0	SM	Grayish Brown (2.5 Y 5/2) silty sand (very fine- to fine-grained), loose, dry	
3					
4					
5	B5-5	0.1	SM	Grayish Brown (2.5 Y 5/2) silty sand (very fine- to fine-grained), loose, dry	
6					Boring terminated at five feet bgs. Groundwater was not encountered. Boring backfilled with hydrated bentonite and capped with soil.
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Boring Number:	B6		Page 1 of 1
Location:	Southern area of former agricultural building	Date Started:	12/11/2017
Site Address:	Corner Alabama Street & Palmetto Avenue	Date Completed:	12/11/2017
	Redlands, California 92374	Depth to Groundwater:	N/A
Project Number:	17-203002.2	Field Technician:	J.Cain
Drill Rig Type:	Geoprobe M5400 Truck-mounted drill rig	Partner Engineering and Science	
Sampling Equipment:	VOAs, Acetate Liner	2154 Torrance Boulevard, Suite 200	
Borehole Diameter:	2.25 inches	Torrance, California 90501	

Depth	Sample	PID	USCS	Description	Notes
1					unpaved at surface
2	B6-2	0.3	SM	Grayish Brown (2.5 Y 5/2) silty sand (very fine- to fine-grained), loose, dry	
3					
4					
5	B6-5	0.1	SM	Grayish Brown (2.5 Y 5/2) silty sand (very fine- to fine-grained), loose, dry	
6					Boring terminated at five feet bgs. Groundwater was not encountered. Boring backfilled with hydrated bentonite and capped with soil.
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Boring Number:	B7				Page 1 of 1
Location:	Northeast region of field			Date Started:	12/11/2017
Site Address:	Corner Alabama Street & Palmetto Avenue			Date Completed:	12/11/2017
	Redlands, California 92374			Depth to Groundwater:	N/A
Project Number:	17-203002.2			Field Technician:	J.Cain
Drill Rig Type:	Geoprobe M5400 Truck-mounted drill rig			Partner Engineering and Science	
Sampling Equipment:	VOAs, Acetate Liner			2154 Torrance Boulevard, Suite 200	
Borehole Diameter:	2.25 inches			Torrance, California 90501	

Depth	Sample	PID	USCS	Description	Notes
1					unpaved at surface
2	B7-2	8.2	SM	Grayish Brown (2.5 Y 5/2) silty sand (very fine- to fine-grained), loose, dry	
3					
4					
5	B7-5	6.5	SM	Grayish Brown (2.5 Y 5/2) silty sand (very fine- to fine-grained), loose, dry	
6					Boring terminated at five feet bgs. Groundwater was not encountered. Boring backfilled with hydrated bentonite and capped with soil.
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Boring Number:	B8		Page 1 of 1
Location:	North border of field	Date Started:	12/11/2017
Site Address:	Corner Alabama Street & Palmetto Avenue	Date Completed:	12/11/2017
	Redlands, California 92374	Depth to Groundwater:	N/A
Project Number:	17-203002.2	Field Technician:	J.Cain
Drill Rig Type:	Geoprobe M5400 Truck-mounted drill rig	Partner Engineering and Science	
Sampling Equipment:	VOAs, Acetate Liner	2154 Torrance Boulevard, Suite 200	
Borehole Diameter:	2.25 inches	Torrance, California 90501	

Depth	Sample	PID	USCS	Description	Notes
1					unpaved at surface
2	B8-2	0.1	SM	Grayish Brown (2.5 Y 5/2) silty sand (very fine- to fine-grained), loose, dry	
3					
4					
5	B8-5	0.1	SM	Grayish Brown (2.5 Y 5/2) silty sand (very fine- to fine-grained), loose, dry	
6					Boring terminated at five feet bgs. Groundwater was not encountered. Boring backfilled with hydrated bentonite and capped with soil.
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Boring Number:	B9		Page 1 of 1
Location:	Northwest corner of field	Date Started:	12/11/2017
Site Address:	Corner Alabama Street & Palmetto Avenue	Date Completed:	12/11/2017
	Redlands, California 92374	Depth to Groundwater:	N/A
Project Number:	17-203002.2	Field Technician:	J.Cain
Drill Rig Type:	Geoprobe M5400 Truck-mounted drill rig	Partner Engineering and Science	
Sampling Equipment:	VOAs, Acetate Liner	2154 Torrance Boulevard, Suite 200	
Borehole Diameter:	2.25 inches	Torrance, California 90501	

Depth	Sample	PID	USCS	Description	Notes
1					unpaved at surface
2	B9-2	0.2	SM	Grayish Brown (2.5 Y 5/2) silty sand (very fine- to fine-grained), loose, dry	
3					
4					
5	B9-5	1.0	SM	Grayish Brown (2.5 Y 5/2) silty sand (very fine- to fine-grained), loose, dry	
6					Boring terminated at five feet bgs. Groundwater was not encountered. Boring backfilled with hydrated bentonite and capped with soil.
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Boring Number:	B10		Page 1 of 1
Location:	Eastern exterior of existing farm shack	Date Started:	12/11/2017
Site Address:	Corner Alabama Street & Palmetto Avenue	Date Completed:	12/11/2017
	Redlands, California 92374	Depth to Groundwater:	N/A
Project Number:	17-203002.2	Field Technician:	J.Cain
Drill Rig Type:	Geoprobe M5400 Truck-mounted drill rig	Partner Engineering and Science	
Sampling Equipment:	VOAs, Acetate Liner	2154 Torrance Boulevard, Suite 200	
Borehole Diameter:	2.25 inches	Torrance, California 90501	

Depth	Sample	PID	USCS	Description	Notes
1					unpaved at surface
2	B10-2	0.0	SM	Light brownish gray (2.5 Y 6/2) silty sand (very fine- to fine-grained), loose, dry	
3					
4					
5	B10-5	0.0	SM	Light brownish gray (2.5 Y 6/2) silty sand (very fine- to fine-grained), loose, dry	
6					Boring terminated at five feet bgs. Groundwater was not encountered. Boring backfilled with hydrated bentonite and capped with soil.
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Boring Number:	B11				Page 1 of 1
Location:	South exterior of existing farm shack			Date Started:	12/11/2017
Site Address:	Corner Alabama Street & Palmetto Avenue			Date Completed:	12/11/2017
	Redlands, California 92374			Depth to Groundwater:	N/A
Project Number:	17-203002.2			Field Technician:	J.Cain
Drill Rig Type:	Geoprobe M5400 Truck-mounted drill rig			Partner Engineering and Science	
Sampling Equipment:	VOAs, Acetate Liner			2154 Torrance Boulevard, Suite 200	
Borehole Diameter:	2.25 inches			Torrance, California 90501	

Depth	Sample	PID	USCS	Description	Notes
1					unpaved at surface
2	B11-2	0.0	SM	Dark grayish brown (2.5 Y 4/2) silty sand (very fine- to fine-grained), loose, dry	
3					
4					
5	B11-5	0.0	SM	Dark grayish brown (2.5 Y 4/2) silty sand (very fine- to fine-grained), loose, dry	
6					Boring terminated at five feet bgs. Groundwater was not encountered. Boring backfilled with hydrated bentonite and capped with soil.
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APPENDIX B: LABORATORY ANALYTICAL REPORTS

PARTNER

JONES ENVIRONMENTAL, INC.

714-449-9937
562-646-1611
805-399-0060

11007 FOREST PLACE
SANTA FE SPRINGS, CA 90670
WWW.JONESENV.COM

JONES ENVIRONMENTAL
LABORATORY RESULTS

Client:	Partner Engineering & Science, Inc.	**Report date:**	12/13/2017
Client Address:	2154 Torrance Blvd., Suite 200 Torrance, CA 90501	**JEL Ref. No.:** **Client Ref. No:**	ST-11554 17-203002.2
Attn:	Samantha Fujita	**Date Sampled:** **Date Received:**	12/11/2017 12/12/2017
Project:	Redlands	**Date Analyzed:**	12/12/2017
Project Address:	Alabama & Palmetto Redlands, CA 92374	**Physical State:**	Soil

ANALYSES REQUESTED

1. EPA 8260B by 5035 – Volatile Organics by GC/MS + Oxygenates
2. EPA 6010B by 3050B – Arsenic by ICP-OES
3. EPA 8081A by 3546 – Chlorinated Pesticides by GC/ECD

Approval:

Carolyn Carroll
Stationary Lab Manager

JONES ENVIRONMENTAL, INC.
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11007 FOREST PLACE
SANTA FE SPRINGS, CA 90670
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JONES ENVIRONMENTAL LABORATORY RESULTS

Client:	Partner Engineering & Science, Inc.	**Report date:**	12/13/2017
Client Address:	2154 Torrance Blvd., Suite 200 Torrance, CA 90501	**JEL Ref. No.:** **Client Ref. No.:**	ST-11554 17-203002.2
Attn:	Samantha Fujita	**Date Sampled:**	12/11/2017
		Date Received:	12/12/2017
Project:	Redlands	**Date Analyzed:**	12/12/2017
Project Address:	Alabama & Palmetto Redlands, CA 92374	**Physical State:**	Soil

EPA 8260B by 5035 – Volatile Organics by GC/MS + Oxygenates

Sample ID:	**B1-5**	**B2-2**	**B3-5**	**B4-2**	**B5-2**		
JEL ID:	**ST-11554-28**	**ST-11554-29**	**ST-11554-32**	**ST-11554-33**	**ST-11554-35**	**Practical Quantitation Limit**	**Units**
Analytes:							
Benzene	ND	ND	ND	ND	ND	1.0	µg/kg
Bromobenzene	ND	ND	ND	ND	ND	1.0	µg/kg
Bromodichloromethane	ND	ND	ND	ND	ND	1.0	µg/kg
Bromoform	ND	ND	ND	ND	ND	1.0	µg/kg
n-Butylbenzene	ND	ND	ND	ND	ND	1.0	µg/kg
sec-Butylbenzene	ND	ND	ND	ND	ND	1.0	µg/kg
tert-Butylbenzene	ND	ND	ND	ND	ND	1.0	µg/kg
Carbon tetrachloride	ND	ND	ND	ND	ND	1.0	µg/kg
Chlorobenzene	ND	ND	ND	ND	ND	1.0	µg/kg
Chloroform	ND	ND	ND	ND	ND	1.0	µg/kg
2-Chlorotoluene	ND	ND	ND	ND	ND	1.0	µg/kg
4-Chlorotoluene	ND	ND	ND	ND	ND	1.0	µg/kg
Dibromochloromethane	ND	ND	ND	ND	ND	1.0	µg/kg
1,2-Dibromo-3-chloropropane	ND	ND	ND	ND	ND	1.0	µg/kg
1,2-Dibromoethane (EDB)	ND	ND	ND	ND	ND	1.0	µg/kg
Dibromomethane	ND	ND	ND	ND	ND	1.0	µg/kg
1,2- Dichlorobenzene	ND	ND	ND	ND	ND	1.0	µg/kg
1,3-Dichlorobenzene	ND	ND	ND	ND	ND	1.0	µg/kg
1,4-Dichlorobenzene	ND	ND	ND	ND	ND	1.0	µg/kg
Dichlorodifluoromethane	ND	ND	ND	ND	ND	5.0	µg/kg
1,1-Dichloroethane	ND	ND	ND	ND	ND	1.0	µg/kg
1,2-Dichloroethane	ND	ND	ND	ND	ND	1.0	µg/kg
1,1-Dichloroethene	ND	ND	ND	ND	ND	1.0	µg/kg
cis-1,2-Dichloroethene	ND	ND	ND	ND	ND	1.0	µg/kg
trans-1,2-Dichloroethene	ND	ND	ND	ND	ND	1.0	µg/kg
1,2-Dichloropropane	ND	ND	ND	ND	ND	1.0	µg/kg
1,3-Dichloropropane	ND	ND	ND	ND	ND	1.0	µg/kg
2,2-Dichloropropane	ND	ND	ND	ND	ND	1.0	µg/kg
1,1-Dichloropropene	ND	ND	ND	ND	ND	1.0	µg/kg

JONES ENVIRONMENTAL LABORATORY RESULTS

EPA 8260B by 5035 – Volatile Organics by GC/MS + Oxygenates

Sample ID:	**B1-5**	**B2-2**	**B3-5**	**B4-2**	**B5-2**		
JEL ID:	**ST-11554-28**	**ST-11554-29**	**ST-11554-32**	**ST-11554-33**	**ST-11554-35**	**Practical Quantitation Limit**	**Units**
Analytes:							
cis-1,3-Dichloropropene	ND	ND	ND	ND	ND	1.0	µg/kg
trans-1,3-Dichloropropene	ND	ND	ND	ND	ND	1.0	µg/kg
Ethylbenzene	ND	ND	ND	ND	ND	1.0	µg/kg
Freon 113	ND	ND	ND	ND	ND	5.0	µg/kg
Hexachlorobutadiene	ND	ND	ND	ND	ND	1.0	µg/kg
Isopropylbenzene	ND	ND	ND	ND	ND	1.0	µg/kg
4-Isopropyltoluene	ND	ND	ND	ND	ND	1.0	µg/kg
Methylene chloride	ND	ND	ND	ND	ND	1.0	µg/kg
Naphthalene	ND	ND	ND	ND	ND	1.0	µg/kg
n-Propylbenzene	ND	ND	ND	ND	ND	1.0	µg/kg
Styrene	ND	ND	ND	ND	ND	1.0	µg/kg
1,1,1,2-Tetrachloroethane	ND	ND	ND	ND	ND	1.0	µg/kg
1,1,2,2-Tetrachloroethane	ND	ND	ND	ND	ND	1.0	µg/kg
Tetrachloroethylene	ND	ND	ND	ND	ND	1.0	µg/kg
Toluene	ND	ND	**1.4**	ND	ND	1.0	µg/kg
1,2,3-Trichlorobenzene	ND	ND	ND	ND	ND	1.0	µg/kg
1,2,4-Trichlorobenzene	ND	ND	ND	ND	ND	1.0	µg/kg
1,1,1-Trichloroethane	ND	ND	ND	ND	ND	1.0	µg/kg
1,1,2-Trichloroethane	ND	ND	ND	ND	ND	1.0	µg/kg
Trichloroethylene	ND	ND	ND	ND	ND	1.0	µg/kg
Trichlorofluoromethane	ND	ND	ND	ND	ND	5.0	µg/kg
1,2,3-Trichloropropane	ND	ND	ND	ND	ND	1.0	µg/kg
1,2,4-Trimethylbenzene	ND	ND	ND	ND	ND	1.0	µg/kg
1,3,5-Trimethylbenzene	ND	ND	ND	ND	ND	1.0	µg/kg
Vinyl chloride	ND	ND	ND	ND	ND	1.0	µg/kg
m,p-Xylene	ND	ND	ND	ND	ND	1.0	µg/kg
o-Xylene	ND	ND	ND	ND	ND	1.0	µg/kg
MTBE	ND	ND	ND	ND	ND	5.0	µg/kg
Ethyl-tert-butylether	ND	ND	ND	ND	ND	5.0	µg/kg
Di-isopropylether	ND	ND	ND	ND	ND	5.0	µg/kg
tert-amylmethylether	ND	ND	ND	ND	ND	5.0	µg/kg
tert-Butylalcohol	ND	ND	ND	ND	ND	50.0	µg/kg
Dilution Factor	1	1	1	1	1		
Surrogate Recoveries:						**QC Limits**	
Dibromofluoromethane	113%	117%	115%	115%	118%	60 - 140	
Toluene-d_8	105%	104%	103%	106%	102%	60 - 140	
4-Bromofluorobenzene	104%	100%	99%	101%	100%	60 - 140	
	VOC4-121217-CHECKS	VOC4-121217-CHECKS	VOC4-121217-CHECKS	VOC4-121217-CHECKS	VOC4-121217-CHECKS		

ND= Not Detected

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JONES ENVIRONMENTAL LABORATORY RESULTS

Client:	Partner Engineering & Science, Inc.	**Report date:**	12/13/2017
Client Address:	2154 Torrance Blvd., Suite 200 Torrance, CA 90501	**JEL Ref. No.:** **Client Ref. No.:**	ST-11554 17-203002.2
Attn:	Samantha Fujita	**Date Sampled:** **Date Received:**	12/11/2017 12/12/2017
Project:	Redlands	**Date Analyzed:**	12/12/2017
Project Address:	Alabama & Palmetto Redlands, CA 92374	**Physical State:**	Soil

EPA 8260B by 5035 – Volatile Organics by GC/MS + Oxygenates

Sample ID:	**B6-5**	**B7-2**	**B8-5**	**B9-2**	**B10-5**		
JEL ID:	**ST-11554-38**	**ST-11554-39**	**ST-11554-42**	**ST-11554-43**	**ST-11554-46**	**Practical Quantitation Limit**	**Units**
Analytes:							
Benzene	ND	ND	ND	ND	ND	1.0	µg/kg
Bromobenzene	ND	ND	ND	ND	ND	1.0	µg/kg
Bromodichloromethane	ND	ND	ND	ND	ND	1.0	µg/kg
Bromoform	ND	ND	ND	ND	ND	1.0	µg/kg
n-Butylbenzene	ND	ND	ND	ND	ND	1.0	µg/kg
sec-Butylbenzene	ND	ND	ND	ND	ND	1.0	µg/kg
tert-Butylbenzene	ND	ND	ND	ND	ND	1.0	µg/kg
Carbon tetrachloride	ND	ND	ND	ND	ND	1.0	µg/kg
Chlorobenzene	ND	ND	ND	ND	ND	1.0	µg/kg
Chloroform	ND	ND	ND	ND	ND	1.0	µg/kg
2-Chlorotoluene	ND	ND	ND	ND	ND	1.0	µg/kg
4-Chlorotoluene	ND	ND	ND	ND	ND	1.0	µg/kg
Dibromochloromethane	ND	ND	ND	ND	ND	1.0	µg/kg
1,2-Dibromo-3-chloropropane	ND	ND	ND	ND	ND	1.0	µg/kg
1,2-Dibromoethane (EDB)	ND	ND	ND	ND	ND	1.0	µg/kg
Dibromomethane	ND	ND	ND	ND	ND	1.0	µg/kg
1,2- Dichlorobenzene	ND	ND	ND	ND	ND	1.0	µg/kg
1,3-Dichlorobenzene	ND	ND	ND	ND	ND	1.0	µg/kg
1,4-Dichlorobenzene	ND	ND	ND	ND	ND	1.0	µg/kg
Dichlorodifluoromethane	ND	ND	ND	ND	ND	5.0	µg/kg
1,1-Dichloroethane	ND	ND	ND	ND	ND	1.0	µg/kg
1,2-Dichloroethane	ND	ND	ND	ND	ND	1.0	µg/kg
1,1-Dichloroethene	ND	ND	ND	ND	ND	1.0	µg/kg
cis-1,2-Dichloroethene	ND	ND	ND	ND	ND	1.0	µg/kg
trans-1,2-Dichloroethene	ND	ND	ND	ND	ND	1.0	µg/kg
1,2-Dichloropropane	ND	ND	ND	ND	ND	1.0	µg/kg
1,3-Dichloropropane	ND	ND	ND	ND	ND	1.0	µg/kg
2,2-Dichloropropane	ND	ND	ND	ND	ND	1.0	µg/kg
1,1-Dichloropropene	ND	ND	ND	ND	ND	1.0	µg/kg

JONES ENVIRONMENTAL LABORATORY RESULTS

EPA 8260B by 5035 – Volatile Organics by GC/MS + Oxygenates

Sample ID:	**B6-5**	**B7-2**	**B8-5**	**B9-2**	**B10-5**		
JEL ID:	**ST-11554-38**	**ST-11554-39**	**ST-11554-42**	**ST-11554-43**	**ST-11554-46**	**Practical Quantitation Limit**	**Units**
Analytes:							
cis-1,3-Dichloropropene	ND	ND	ND	ND	ND	1.0	µg/kg
trans-1,3-Dichloropropene	ND	ND	ND	ND	ND	1.0	µg/kg
Ethylbenzene	ND	ND	ND	ND	ND	1.0	µg/kg
Freon 113	ND	ND	ND	ND	ND	5.0	µg/kg
Hexachlorobutadiene	ND	ND	ND	ND	ND	1.0	µg/kg
Isopropylbenzene	ND	ND	ND	ND	ND	1.0	µg/kg
4-Isopropyltoluene	ND	ND	ND	ND	ND	1.0	µg/kg
Methylene chloride	ND	ND	ND	ND	ND	1.0	µg/kg
Naphthalene	ND	ND	ND	ND	ND	1.0	µg/kg
n-Propylbenzene	ND	ND	ND	ND	ND	1.0	µg/kg
Styrene	ND	ND	ND	ND	ND	1.0	µg/kg
1,1,1,2-Tetrachloroethane	ND	ND	ND	ND	ND	1.0	µg/kg
1,1,2,2-Tetrachloroethane	ND	ND	ND	ND	ND	1.0	µg/kg
Tetrachloroethylene	ND	ND	ND	ND	ND	1.0	µg/kg
Toluene	ND	ND	ND	ND	ND	1.0	µg/kg
1,2,3-Trichlorobenzene	ND	ND	ND	ND	ND	1.0	µg/kg
1,2,4-Trichlorobenzene	ND	ND	ND	ND	ND	1.0	µg/kg
1,1,1-Trichloroethane	ND	ND	ND	ND	ND	1.0	µg/kg
1,1,2-Trichloroethane	ND	ND	ND	ND	ND	1.0	µg/kg
Trichloroethylene	ND	ND	ND	ND	ND	1.0	µg/kg
Trichlorofluoromethane	ND	ND	ND	ND	ND	5.0	µg/kg
1,2,3-Trichloropropane	ND	ND	ND	ND	ND	1.0	µg/kg
1,2,4-Trimethylbenzene	ND	ND	ND	ND	ND	1.0	µg/kg
1,3,5-Trimethylbenzene	ND	ND	ND	ND	ND	1.0	µg/kg
Vinyl chloride	ND	ND	ND	ND	ND	1.0	µg/kg
m,p-Xylene	ND	ND	ND	ND	ND	1.0	µg/kg
o-Xylene	ND	ND	ND	ND	ND	1.0	µg/kg
MTBE	ND	ND	ND	ND	ND	5.0	µg/kg
Ethyl-tert-butylether	ND	ND	ND	ND	ND	5.0	µg/kg
Di-isopropylether	ND	ND	ND	ND	ND	5.0	µg/kg
tert-amylmethylether	ND	ND	ND	ND	ND	5.0	µg/kg
tert-Butylalcohol	ND	ND	ND	ND	ND	50.0	µg/kg
Dilution Factor	1	1	1	1	1		
Surrogate Recoveries:						**QC Limits**	
Dibromofluoromethane	113%	117%	114%	116%	113%	60 - 140	
Toluene-d_8	105%	106%	103%	103%	104%	60 - 140	
4-Bromofluorobenzene	106%	106%	102%	101%	101%	60 - 140	
	VOC4-121217-CHECKS	VOC4-121217-CHECKS	VOC4-121217-CHECKS	VOC4-121217-CHECKS	VOC4-121217-CHECKS		

ND= Not Detected

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JONES ENVIRONMENTAL LABORATORY RESULTS

Client:	Partner Engineering & Science, Inc.	**Report date:**	12/13/2017
Client Address:	2154 Torrance Blvd., Suite 200 Torrance, CA 90501	**JEL Ref. No.:** **Client Ref. No.:**	ST-11554 17-203002.2
Attn:	Samantha Fujita	**Date Sampled:** **Date Received:**	12/11/2017 12/12/2017
Project:	Redlands	**Date Analyzed:**	12/12/2017
Project Address:	Alabama & Palmetto Redlands, CA 92374	**Physical State:**	Soil

EPA 8260B by 5035 – Volatile Organics by GC/MS + Oxygenates

Sample ID: **B11-2**

JEL ID:	**ST-11554-47**	**Practical Quantitation Limit**	**Units**
Analytes:			
Benzene	ND	1.0	µg/kg
Bromobenzene	ND	1.0	µg/kg
Bromodichloromethane	ND	1.0	µg/kg
Bromoform	ND	1.0	µg/kg
n-Butylbenzene	ND	1.0	µg/kg
sec-Butylbenzene	ND	1.0	µg/kg
tert-Butylbenzene	ND	1.0	µg/kg
Carbon tetrachloride	ND	1.0	µg/kg
Chlorobenzene	ND	1.0	µg/kg
Chloroform	ND	1.0	µg/kg
2-Chlorotoluene	ND	1.0	µg/kg
4-Chlorotoluene	ND	1.0	µg/kg
Dibromochloromethane	ND	1.0	µg/kg
1,2-Dibromo-3-chloropropane	ND	1.0	µg/kg
1,2-Dibromoethane (EDB)	ND	1.0	µg/kg
Dibromomethane	ND	1.0	µg/kg
1,2- Dichlorobenzene	ND	1.0	µg/kg
1,3-Dichlorobenzene	ND	1.0	µg/kg
1,4-Dichlorobenzene	ND	1.0	µg/kg
Dichlorodifluoromethane	ND	5.0	µg/kg
1,1-Dichloroethane	ND	1.0	µg/kg
1,2-Dichloroethane	ND	1.0	µg/kg
1,1-Dichloroethene	ND	1.0	µg/kg
cis-1,2-Dichloroethene	ND	1.0	µg/kg
trans-1,2-Dichloroethene	ND	1.0	µg/kg
1,2-Dichloropropane	ND	1.0	µg/kg
1,3-Dichloropropane	ND	1.0	µg/kg
2,2-Dichloropropane	ND	1.0	µg/kg
1,1-Dichloropropene	ND	1.0	µg/kg

JONES ENVIRONMENTAL LABORATORY RESULTS

EPA 8260B by 5035 – Volatile Organics by GC/MS + Oxygenates

Sample ID: B11-2

JEL ID:	ST-11554-47	Practical Quantitation Limit	Units
Analytes:			
cis-1,3-Dichloropropene	ND	1.0	µg/kg
trans-1,3-Dichloropropene	ND	1.0	µg/kg
Ethylbenzene	ND	1.0	µg/kg
Freon 113	ND	5.0	µg/kg
Hexachlorobutadiene	ND	1.0	µg/kg
Isopropylbenzene	ND	1.0	µg/kg
4-Isopropyltoluene	ND	1.0	µg/kg
Methylene chloride	ND	1.0	µg/kg
Naphthalene	ND	1.0	µg/kg
n-Propylbenzene	ND	1.0	µg/kg
Styrene	ND	1.0	µg/kg
1,1,1,2-Tetrachloroethane	ND	1.0	µg/kg
1,1,2,2-Tetrachloroethane	ND	1.0	µg/kg
Tetrachloroethylene	ND	1.0	µg/kg
Toluene	ND	1.0	µg/kg
1,2,3-Trichlorobenzene	ND	1.0	µg/kg
1,2,4-Trichlorobenzene	ND	1.0	µg/kg
1,1,1-Trichloroethane	ND	1.0	µg/kg
1,1,2-Trichloroethane	ND	1.0	µg/kg
Trichloroethylene	ND	1.0	µg/kg
Trichlorofluoromethane	ND	5.0	µg/kg
1,2,3-Trichloropropane	ND	1.0	µg/kg
1,2,4-Trimethylbenzene	ND	1.0	µg/kg
1,3,5-Trimethylbenzene	ND	1.0	µg/kg
Vinyl chloride	ND	1.0	µg/kg
m,p-Xylene	ND	1.0	µg/kg
o-Xylene	ND	1.0	µg/kg
MTBE	ND	5.0	µg/kg
Ethyl-tert-butylether	ND	5.0	µg/kg
Di-isopropylether	ND	5.0	µg/kg
tert-amylmethylether	ND	5.0	µg/kg
tert-Butylalcohol	ND	50.0	µg/kg
Dilution Factor	1		

Surrogate Recoveries:		QC Limits
Dibromofluoromethane	116%	60 - 140
Toluene-d_8	105%	60 - 140
4-Bromofluorobenzene	99%	60 - 140

VOC4-121217-CHECKS

ND= Not Detected

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JONES ENVIRONMENTAL QUALITY CONTROL INFORMATION

Client:	Partner Engineering & Science, Inc.	**Report date:**	12/13/2017
Client Address:	2154 Torrance Blvd., Suite 200 Torrance, CA 90501	**JEL Ref. No.:** **Client Ref. No.:**	ST-11554 17-203002.2
Attn:	Samantha Fujita	**Date Sampled:** **Date Received:**	12/11/2017 12/12/2017
Project:	Redlands	**Date Analyzed:**	12/12/2017
Project Address:	Alabama & Palmetto Redlands, CA 92374	**Physical State:**	Soil

EPA 8260B by 5035 – Volatile Organics by GC/MS + Oxygenates

Sample ID:	**METHOD BLANK**		
JEL ID:	**121217-V4MB1**	**Practical Quantitation Limit**	**Units**
Analytes:			
Benzene	ND	1.0	µg/kg
Bromobenzene	ND	1.0	µg/kg
Bromodichloromethane	ND	1.0	µg/kg
Bromoform	ND	1.0	µg/kg
n-Butylbenzene	ND	1.0	µg/kg
sec-Butylbenzene	ND	1.0	µg/kg
tert-Butylbenzene	ND	1.0	µg/kg
Carbon tetrachloride	ND	1.0	µg/kg
Chlorobenzene	ND	1.0	µg/kg
Chloroform	ND	1.0	µg/kg
2-Chlorotoluene	ND	1.0	µg/kg
4-Chlorotoluene	ND	1.0	µg/kg
Dibromochloromethane	ND	1.0	µg/kg
1,2-Dibromo-3-chloropropane	ND	1.0	µg/kg
1,2-Dibromoethane (EDB)	ND	1.0	µg/kg
Dibromomethane	ND	1.0	µg/kg
1,2- Dichlorobenzene	ND	1.0	µg/kg
1,3-Dichlorobenzene	ND	1.0	µg/kg
1,4-Dichlorobenzene	ND	1.0	µg/kg
Dichlorodifluoromethane	ND	5.0	µg/kg
1,1-Dichloroethane	ND	1.0	µg/kg
1,2-Dichloroethane	ND	1.0	µg/kg
1,1-Dichloroethene	ND	1.0	µg/kg
cis-1,2-Dichloroethene	ND	1.0	µg/kg
trans-1,2-Dichloroethene	ND	1.0	µg/kg
1,2-Dichloropropane	ND	1.0	µg/kg
1,3-Dichloropropane	ND	1.0	µg/kg
2,2-Dichloropropane	ND	1.0	µg/kg
1,1-Dichloropropene	ND	1.0	µg/kg

JONES ENVIRONMENTAL QUALITY CONTROL INFORMATION

EPA 8260B by 5035 – Volatile Organics by GC/MS + Oxygenates

Sample ID:	METHOD BLANK		
JEL ID:	121217-V4MB1	**Practical Quantitation Limit**	**Units**
Analytes:			
cis-1,3-Dichloropropene	ND	1.0	µg/kg
trans-1,3-Dichloropropene	ND	1.0	µg/kg
Ethylbenzene	ND	1.0	µg/kg
Freon 113	ND	5.0	µg/kg
Hexachlorobutadiene	ND	1.0	µg/kg
Isopropylbenzene	ND	1.0	µg/kg
4-Isopropyltoluene	ND	1.0	µg/kg
Methylene chloride	ND	1.0	µg/kg
Naphthalene	ND	1.0	µg/kg
n-Propylbenzene	ND	1.0	µg/kg
Styrene	ND	1.0	µg/kg
1,1,1,2-Tetrachloroethane	ND	1.0	µg/kg
1,1,2,2-Tetrachloroethane	ND	1.0	µg/kg
Tetrachloroethylene	ND	1.0	µg/kg
Toluene	ND	1.0	µg/kg
1,2,3-Trichlorobenzene	ND	1.0	µg/kg
1,2,4-Trichlorobenzene	ND	1.0	µg/kg
1,1,1-Trichloroethane	ND	1.0	µg/kg
1,1,2-Trichloroethane	ND	1.0	µg/kg
Trichloroethylene	ND	1.0	µg/kg
Trichlorofluoromethane	ND	5.0	µg/kg
1,2,3-Trichloropropane	ND	1.0	µg/kg
1,2,4-Trimethylbenzene	ND	1.0	µg/kg
1,3,5-Trimethylbenzene	ND	1.0	µg/kg
Vinyl chloride	ND	1.0	µg/kg
m,p-Xylene	ND	1.0	µg/kg
o-Xylene	ND	1.0	µg/kg
MTBE	ND	5.0	µg/kg
Ethyl-tert-butylether	ND	5.0	µg/kg
Di-isopropylether	ND	5.0	µg/kg
tert-amylmethylether	ND	5.0	µg/kg
tert-Butylalcohol	ND	50.0	µg/kg
Dilution Factor	1		
Surrogate Recoveries:		**QC Limits**	
Dibromofluoromethane	102%	60 - 140	
Toluene-d_8	105%	60 - 140	
4-Bromofluorobenzene	98%	60 - 140	
	VOC4-121217-CHECKS		

ND= Not Detected

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JONES ENVIRONMENTAL QUALITY CONTROL INFORMATION

Client:	Partner Engineering & Science, Inc.	**Report date:**	12/13/2017
Client Address:	2154 Torrance Blvd., Suite 200 Torrance, CA 90501	**JEL Ref. No.:**	ST-11554
		Client Ref. No.:	17-203002.2
Attn:	Samantha Fujita	**Date Sampled:**	12/11/2017
		Date Received:	12/12/2017
Project:	Redlands	**Date Analyzed:**	12/12/2017
Project Address:	Alabama & Palmetto Redlands, CA 92374	**Physical State:**	Soil

EPA 8260B by 5035 – Volatile Organics by GC/MS + Oxygenates

Sample Spiked: CLEAN SOIL **GC#:** VOC4-121217-CHECKS

JEL ID:	**121217-V4MS1**	**121217-V4MSD1**			**121217-V4LCS1**	
Parameter	MS Recovery (%)	MSD Recovery (%)	RPD	Acceptability Range (%)	LCS	Acceptability Range (%)
Vinyl Chloride	59%	62%	3.5%	60 - 140	59%	70 - 130
1,1-Dichloroethylene	73%	77%	5.4%	60 - 140	75%	70 - 130
Cis-1,2-Dichloroethene	128%	138%	7.2%	70 - 130	127%	70 - 130
1,1,1-Trichloroethane	107%	101%	5.8%	70 - 130	108%	70 - 130
Benzene	111%	116%	4.2%	70 - 130	112%	70 - 130
Trichloroethylene	110%	115%	4.8%	70 - 130	109%	70 - 130
Toluene	118%	125%	5.7%	70 - 130	119%	70 - 130
Tetrachloroethene	111%	120%	8.0%	70 - 130	111%	70 - 130
Chlorobenzene	116%	120%	3.4%	70 - 130	117%	70 - 130
Ethylbenzene	112%	120%	6.9%	70 - 130	114%	70 - 130
1,2,4 Trimethylbenzene	108%	109%	1.2%	70 - 130	110%	70 - 130
Surrogate Recovery:						
Dibromofluoromethane	105%	106%		60 - 140	105%	60 - 140
Toluene-d_8	104%	102%		60 - 140	103%	60 - 140
4-Bromofluorobenzene	100%	103%		60 - 140	99%	60 - 140

MS = Matrix Spike
MSD = Matrix Spike Duplicate
RPD = Relative Percent Difference; Acceptability range for RPD is ≤ 15%

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JONES ENVIRONMENTAL LABORATORY RESULTS

Client:	Partner Engineering & Science, Inc.	**Report date:**	12/13/2017
Client Address:	2154 Torrance Blvd., Suite 200 Torrance, CA 90501	**JEL Ref. No.:**	ST-11554
		Client Ref. No.:	17-203002.2
Attn:	Samantha Fujita	**Date Sampled:**	12/11/2017
		Date Received:	12/12/2017
Project:	Redlands	**Date Analyzed:**	12/13/2017
Project Address:	Alabama & Palmetto Redlands, CA 92374	**Physical State:**	Soil

Sample ID: **S1** **JEL ID:** **ST-11554-01**

EPA 6010B by 3051A - Lead by ICP-OES

	Result	Dilution	Batch	Prepared	Analyzed	Practical Quantitation Limit	Units
Analytes:							
Arsenic, As	ND	1	I17121201	12/12/2017	12/13/2017	0.5	mg/kg

ND= Not Detected

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JONES ENVIRONMENTAL LABORATORY RESULTS

Client:	Partner Engineering & Science, Inc.	**Report date:**	12/13/2017
Client Address:	2154 Torrance Blvd., Suite 200 Torrance, CA 90501	**JEL Ref. No.:**	ST-11554
		Client Ref. No.:	17-203002.2
Attn:	Samantha Fujita	**Date Sampled:**	12/11/2017
		Date Received:	12/12/2017
Project:	Redlands	**Date Analyzed:**	12/13/2017
Project Address:	Alabama & Palmetto Redlands, CA 92374	**Physical State:**	Soil

Sample ID: **S3** **JEL ID:** **ST-11554-03**

EPA 6010B by 3051A - Lead by ICP-OES

	Result	Dilution	Batch	Prepared	Analyzed	Practical Quantitation Limit	Units
Analytes:							
Arsenic, As	ND	1	I17121201	12/12/2017	12/13/2017	0.5	mg/kg

ND= Not Detected

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JONES ENVIRONMENTAL LABORATORY RESULTS

Client:	Partner Engineering & Science, Inc.	**Report date:**	12/13/2017
Client Address:	2154 Torrance Blvd., Suite 200 Torrance, CA 90501	**JEL Ref. No.:** **Client Ref. No.:**	ST-11554 17-203002.2
Attn:	Samantha Fujita	**Date Sampled:**	12/11/2017
		Date Received:	12/12/2017
Project:	Redlands	**Date Analyzed:**	12/13/2017
Project Address:	Alabama & Palmetto Redlands, CA 92374	**Physical State:**	Soil

Sample ID: **S5** **JEL ID:** **ST-11554-05**

EPA 6010B by 3051A - Lead by ICP-OES

	Result	Dilution	Batch	Prepared	Analyzed	Practical Quantitation Limit	Units
Analytes:							
Arsenic, As	ND	1	I17121201	12/12/2017	12/13/2017	0.5	mg/kg

ND= Not Detected

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JONES ENVIRONMENTAL LABORATORY RESULTS

Client:	Partner Engineering & Science, Inc.	**Report date:**	12/13/2017
Client Address:	2154 Torrance Blvd., Suite 200 Torrance, CA 90501	**JEL Ref. No.:**	ST-11554
		Client Ref. No.:	17-203002.2
Attn:	Samantha Fujita	**Date Sampled:**	12/11/2017
		Date Received:	12/12/2017
Project:	Redlands	**Date Analyzed:**	12/13/2017
Project Address:	Alabama & Palmetto Redlands, CA 92374	**Physical State:**	Soil

Sample ID: **S8** **JEL ID:** **ST-11554-08**

EPA 6010B by 3051A - Lead by ICP-OES

	Result	Dilution	Batch	Prepared	Analyzed	Practical Quantitation Limit	Units
Analytes:							
Arsenic, As	ND	1	I17121201	12/12/2017	12/13/2017	0.5	mg/kg

ND= Not Detected

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JONES ENVIRONMENTAL LABORATORY RESULTS

Client:	Partner Engineering & Science, Inc.	**Report date:**	12/13/2017
Client Address:	2154 Torrance Blvd., Suite 200 Torrance, CA 90501	**JEL Ref. No.:** **Client Ref. No.:**	ST-11554 17-203002.2
Attn:	Samantha Fujita	**Date Sampled:**	12/11/2017
		Date Received:	12/12/2017
Project:	Redlands	**Date Analyzed:**	12/13/2017
Project Address:	Alabama & Palmetto Redlands, CA 92374	**Physical State:**	Soil

Sample ID: **S10** **JEL ID:** **ST-11554-10**

EPA 6010B by 3051A - Lead by ICP-OES

	Result	Dilution	Batch	Prepared	Analyzed	Practical Quantitation Limit	Units
Analytes:							
Arsenic, As	ND	1	I17121201	12/12/2017	12/13/2017	0.5	mg/kg

ND= Not Detected

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JONES ENVIRONMENTAL LABORATORY RESULTS

Client:	Partner Engineering & Science, Inc.	**Report date:**	12/13/2017
Client Address:	2154 Torrance Blvd., Suite 200 Torrance, CA 90501	**JEL Ref. No.:** **Client Ref. No.:**	ST-11554 17-203002.2
Attn:	Samantha Fujita	**Date Sampled:**	12/11/2017
		Date Received:	12/12/2017
Project:	Redlands	**Date Analyzed:**	12/13/2017
Project Address:	Alabama & Palmetto Redlands, CA 92374	**Physical State:**	Soil

Sample ID: **S13** **JEL ID:** **ST-11554-13**

EPA 6010B by 3051A - Lead by ICP-OES

	Result	Dilution	Batch	Prepared	Analyzed	Practical Quantitation Limit	Units
Analytes:							
Arsenic, As	ND	1	I17121201	12/12/2017	12/13/2017	0.5	mg/kg

ND= Not Detected

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JONES ENVIRONMENTAL LABORATORY RESULTS

Client:	Partner Engineering & Science, Inc.	**Report date:**	12/13/2017
Client Address:	2154 Torrance Blvd., Suite 200 Torrance, CA 90501	**JEL Ref. No.:** **Client Ref. No.:**	ST-11554 17-203002.2
Attn:	Samantha Fujita	**Date Sampled:**	12/11/2017
		Date Received:	12/12/2017
Project:	Redlands	**Date Analyzed:**	12/13/2017
Project Address:	Alabama & Palmetto Redlands, CA 92374	**Physical State:**	Soil

Sample ID: **S15** **JEL ID:** **ST-11554-15**

EPA 6010B by 3051A - Lead by ICP-OES

	Result	Dilution	Batch	Prepared	Analyzed	Practical Quantitation Limit	Units
Analytes:							
Arsenic, As	ND	1	I17121201	12/12/2017	12/13/2017	0.5	mg/kg

ND= Not Detected

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JONES ENVIRONMENTAL LABORATORY RESULTS

Client:	Partner Engineering & Science, Inc.	**Report date:**	12/13/2017
Client Address:	2154 Torrance Blvd., Suite 200 Torrance, CA 90501	**JEL Ref. No.:**	ST-11554
		Client Ref. No.:	17-203002.2
Attn:	Samantha Fujita	**Date Sampled:**	12/11/2017
		Date Received:	12/12/2017
Project:	Redlands	**Date Analyzed:**	12/13/2017
Project Address:	Alabama & Palmetto Redlands, CA 92374	**Physical State:**	Soil

Sample ID: **S17** **JEL ID:** **ST-11554-17**

EPA 6010B by 3051A - Lead by ICP-OES

	Result	Dilution	Batch	Prepared	Analyzed	Practical Quantitation Limit	Units
Analytes:							
Arsenic, As	ND	1	I17121201	12/12/2017	12/13/2017	0.5	mg/kg

ND= Not Detected

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Client:	Partner Engineering & Science, Inc.	**Report date:**	12/13/2017
Client Address:	2154 Torrance Blvd., Suite 200 Torrance, CA 90501	**JEL Ref. No.:** **Client Ref. No.:**	ST-11554 17-203002.2
Attn:	Samantha Fujita	**Date Sampled:**	12/11/2017
		Date Received:	12/12/2017
Project:	Redlands	**Date Analyzed:**	12/13/2017
Project Address:	Alabama & Palmetto Redlands, CA 92374	**Physical State:**	Soil

Sample ID: **S19** **JEL ID:** **ST-11554-19**

EPA 6010B by 3051A - Lead by ICP-OES

	Result	Dilution	Batch	Prepared	Analyzed	Practical Quantitation Limit	Units
Analytes:							
Arsenic, As	ND	1	I17121201	12/12/2017	12/13/2017	0.5	mg/kg

ND= Not Detected

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JONES ENVIRONMENTAL LABORATORY RESULTS

Client:	Partner Engineering & Science, Inc.	**Report date:**	12/13/2017
Client Address:	2154 Torrance Blvd., Suite 200 Torrance, CA 90501	**JEL Ref. No.:** **Client Ref. No.:**	ST-11554 17-203002.2
Attn:	Samantha Fujita	**Date Sampled:**	12/11/2017
		Date Received:	12/12/2017
Project:	Redlands	**Date Analyzed:**	12/13/2017
Project Address:	Alabama & Palmetto Redlands, CA 92374	**Physical State:**	Soil

Sample ID: **S21** **JEL ID:** **ST-11554-21**

EPA 6010B by 3051A - Lead by ICP-OES

	Result	Dilution	Batch	Prepared	Analyzed	Practical Quantitation Limit	Units
Analytes:							
Arsenic, As	ND	1	I17121201	12/12/2017	12/13/2017	0.5	mg/kg

ND= Not Detected

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JONES ENVIRONMENTAL LABORATORY RESULTS

Client:	Partner Engineering & Science, Inc.	**Report date:**	12/13/2017
Client Address:	2154 Torrance Blvd., Suite 200 Torrance, CA 90501	**JEL Ref. No.:**	ST-11554
		Client Ref. No.:	17-203002.2
Attn:	Samantha Fujita	**Date Sampled:**	12/11/2017
		Date Received:	12/12/2017
Project:	Redlands	**Date Analyzed:**	12/13/2017
Project Address:	Alabama & Palmetto Redlands, CA 92374	**Physical State:**	Soil

Sample ID: **S23** **JEL ID:** **ST-11554-23**

EPA 6010B by 3051A - Lead by ICP-OES

	Result	Dilution	Batch	Prepared	Analyzed	Practical Quantitation Limit	Units
Analytes:							
Arsenic, As	ND	1	I17121201	12/12/2017	12/13/2017	0.5	mg/kg

ND= Not Detected

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JONES ENVIRONMENTAL LABORATORY RESULTS

Client:	Partner Engineering & Science, Inc.	**Report date:**	12/13/2017
Client Address:	2154 Torrance Blvd., Suite 200 Torrance, CA 90501	**JEL Ref. No.:** **Client Ref. No.:**	ST-11554 17-203002.2
Attn:	Samantha Fujita	**Date Sampled:**	12/11/2017
		Date Received:	12/12/2017
Project:	Redlands	**Date Analyzed:**	12/13/2017
Project Address:	Alabama & Palmetto Redlands, CA 92374	**Physical State:**	Soil

Sample ID: **S25** **JEL ID:** **ST-11554-25**

EPA 6010B by 3051A - Lead by ICP-OES

	Result	Dilution	Batch	Prepared	Analyzed	Practical Quantitation Limit	Units
Analytes:							
Arsenic, As	ND	1	I17121202	12/12/2017	12/13/2017	0.5	mg/kg

ND= Not Detected

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JONES ENVIRONMENTAL LABORATORY RESULTS

Client:	Partner Engineering & Science, Inc.	**Report date:**	12/13/2017
Client Address:	2154 Torrance Blvd., Suite 200 Torrance, CA 90501	**JEL Ref. No.:**	ST-11554
		Client Ref. No.:	17-203002.2
Attn:	Samantha Fujita	**Date Sampled:**	12/11/2017
		Date Received:	12/12/2017
Project:	Redlands	**Date Analyzed:**	12/13/2017
Project Address:	Alabama & Palmetto Redlands, CA 92374	**Physical State:**	Soil

Sample ID: **B2-2** **JEL ID:** **ST-11544-29**

EPA 6010B by 3051A - Lead by ICP-OES

	Result	Dilution	Batch	Prepared	Analyzed	Practical Quantitation Limit	Units
Analytes:							
Arsenic, As	ND	1	I17121202	12/12/2017	12/13/2017	0.5	mg/kg

ND= Not Detected

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JONES ENVIRONMENTAL LABORATORY RESULTS

Client:	Partner Engineering & Science, Inc.	**Report date:**	12/13/2017
Client Address:	2154 Torrance Blvd., Suite 200 Torrance, CA 90501	**JEL Ref. No.:**	ST-11554
		Client Ref. No.:	17-203002.2
Attn:	Samantha Fujita	**Date Sampled:**	12/11/2017
		Date Received:	12/12/2017
Project:	Redlands	**Date Analyzed:**	12/13/2017
Project Address:	Alabama & Palmetto Redlands, CA 92374	**Physical State:**	Soil

Sample ID: **B5-2** **JEL ID:** **ST-11544-35**

EPA 6010B by 3051A - Lead by ICP-OES

	Result	Dilution	Batch	Prepared	Analyzed	Practical Quantitation Limit	Units
Analytes:							
Arsenic, As	ND	1	I17121202	12/12/2017	12/13/2017	0.5	mg/kg

ND= Not Detected

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JONES ENVIRONMENTAL LABORATORY RESULTS

Client:	Partner Engineering & Science, Inc.	**Report date:**	12/13/2017
Client Address:	2154 Torrance Blvd., Suite 200 Torrance, CA 90501	**JEL Ref. No.:** **Client Ref. No.:**	ST-11554 17-203002.2
Attn:	Samantha Fujita	**Date Sampled:**	12/11/2017
		Date Received:	12/12/2017
Project:	Redlands	**Date Analyzed:**	12/13/2017
Project Address:	Alabama & Palmetto Redlands, CA 92374	**Physical State:**	Soil

Sample ID: **B7-2** **JEL ID:** **ST-11544-39**

EPA 6010B by 3051A - Lead by ICP-OES

	Result	Dilution	Batch	Prepared	Analyzed	Practical Quantitation Limit	Units
Analytes:							
Arsenic, As	ND	1	I17121202	12/12/2017	12/13/2017	0.5	mg/kg

ND= Not Detected

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JONES ENVIRONMENTAL LABORATORY RESULTS

Client:	Partner Engineering & Science, Inc.	**Report date:**	12/13/2017
Client Address:	2154 Torrance Blvd., Suite 200 Torrance, CA 90501	**JEL Ref. No.:** **Client Ref. No.:**	ST-11554 17-203002.2
Attn:	Samantha Fujita	**Date Sampled:**	12/11/2017
		Date Received:	12/12/2017
Project:	Redlands	**Date Analyzed:**	12/13/2017
Project Address:	Alabama & Palmetto Redlands, CA 92374	**Physical State:**	Soil

Sample ID: **B8-2** **JEL ID:** **ST-11544-41**

EPA 6010B by 3051A - Lead by ICP-OES

	Result	Dilution	Batch	Prepared	Analyzed	Practical Quantitation Limit	Units
Analytes:							
Arsenic, As	ND	1	I17121202	12/12/2017	12/13/2017	0.5	mg/kg

ND= Not Detected

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JONES ENVIRONMENTAL LABORATORY RESULTS

Client:	Partner Engineering & Science, Inc.	**Report date:**	12/13/2017
Client Address:	2154 Torrance Blvd., Suite 200 Torrance, CA 90501	**JEL Ref. No.:** **Client Ref. No.:**	ST-11554 17-203002.2
Attn:	Samantha Fujita	**Date Sampled:**	12/11/2017
		Date Received:	12/12/2017
Project:	Redlands	**Date Analyzed:**	12/13/2017
Project Address:	Alabama & Palmetto Redlands, CA 92374	**Physical State:**	Soil

Sample ID: **B10-2** **JEL ID:** **ST-11544-45**

EPA 6010B by 3051A - Lead by ICP-OES

	Result	Dilution	Batch	Prepared	Analyzed	Practical Quantitation Limit	Units
Analytes:							
Arsenic, As	ND	1	I17121202	12/12/2017	12/13/2017	0.5	mg/kg

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JONES ENVIRONMENTAL QUALITY CONTROL INFORMATION

Client:	Partner Engineering & Science, Inc.	**Report date:**	12/13/2017
Client Address:	2154 Torrance Blvd., Suite 200 Torrance, CA 90501	**JEL Ref. No.:** **Client Ref. No.:**	ST-11554 17-203002.2
Attn:	Samantha Fujita	**Date Sampled:** **Date Received:**	12/11/2017 12/12/2017
Project:	Redlands	**Date Analyzed:**	12/13/2017
Project Address:	Alabama & Palmetto Redlands, CA 92374	**Physical State:**	Soil

BATCH: **I17121203** **Prepared:** 12/12/2017 **Analyzed:** 12/13/2017

EPA 6010B by 3051A - Lead by ICP-OES

	Result	Spike Level	Source Result	% Recovery	% RPD	% Recovery Limits	Units
METHOD BLANK:	**I171212-BLK3**						
Analyte:							
Arsenic, As	ND						mg/kg
LCS:	**I171212-LCS3**						
Analyte:							
Arsenic, As	**181**	200		91%		60 - 140	mg/kg
LCSD:	**I171212-LCSD3**						
Analyte:							
Arsenic, As	**182**	200		91%	0.6%	60 - 140	mg/kg

RPD = Relative Percent Difference; Acceptability range for RPD is ≤ 15%

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JONES ENVIRONMENTAL QUALITY CONTROL INFORMATION

Client:	Partner Engineering & Science, Inc.	**Report date:**	12/13/2017
Client Address:	2154 Torrance Blvd., Suite 200 Torrance, CA 90501	**JEL Ref. No.:** **Client Ref. No.:**	ST-11554 17-203002.2
Attn:	Samantha Fujita	**Date Sampled:** **Date Received:**	12/11/2017 12/12/2017
Project:	Redlands	**Date Analyzed:**	12/13/2017
Project Address:	Alabama & Palmetto Redlands, CA 92374	**Physical State:**	Soil

BATCH: **I17121301** **Prepared:** 12/13/2017 **Analyzed:** 12/13/2017

EPA 6010B by 3051A - Lead by ICP-OES

	Result	Spike Level	Source Result	% Recovery	% RPD	% Recovery Limits	Units
METHOD BLANK:	**I171213-BLK1**						
Analyte:							
Arsenic, As	ND						mg/kg
LCS:	**I171213-LCS1**						
Analyte:							
Arsenic, As	**145**	200		73%		60 - 140	mg/kg
LCSD:	**I171213-LCSD1**						
Analyte:							
Arsenic, As	**149**	200		75%	2.7%	60 - 140	mg/kg

RPD = Relative Percent Difference; Acceptability range for RPD is ≤ 15%

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JONES ENVIRONMENTAL LABORATORY RESULTS

Client:	Partner Engineering & Science, Inc.	**Report date:**	12/13/2017
Client Address:	2154 Torrance Blvd., Suite 200 Torrance, CA 90501	**JEL Ref. No.:**	ST-11554
		Client Ref. No.:	17-203002.2
Attn:	Samantha Fujita	**Date Sampled:**	12/11/2017
		Date Received:	12/12/2017
Project:	Redlands	**Date Analyzed:**	12/12/2017
Project Address:	Alabama & Palmetto Redlands, CA 92374	**Physical State:**	Soil

Sample ID: **C1** **JEL ID:** **ST-11554-01,02**

EPA 8081A by 3546 – Chlorinated Pesticides by GC/ECD

Analytes:	Result	Dilution	Batch	Prepared	Analyzed	Practical Quantitation Limit	Units
Aldrin	ND	1	8081_121217_01	12/12/2017	12/12/2017	10	µg/kg
α-BHC	ND	1	"	"	"	10	µg/kg
β-BHC	ND	1	"	"	"	10	µg/kg
γ-BHC (Lindane)	ND	1	"	"	"	10	µg/kg
δ-BHC	ND	1	"	"	"	10	µg/kg
γ-Chlordane	ND	1	"	"	"	10	µg/kg
α-Chlordane	ND	1	"	"	"	10	µg/kg
4,4'-DDD	ND	1	"	"	"	10	µg/kg
4,4'-DDE	**87**	1	"	"	"	10	µg/kg
4,4'-DDT	**12**	1	"	"	"	10	µg/kg
Dieldrin	ND	1	"	"	"	10	µg/kg
Endosulfan I	ND	1	"	"	"	10	µg/kg
Endosulfan II	ND	1	"	"	"	10	µg/kg
Endosulfan sulfate	ND	1	"	"	"	10	µg/kg
Endrin	ND	1	"	"	"	10	µg/kg
Endrin aldehyde	ND	1	"	"	"	10	µg/kg
Endrin ketone	ND	1	"	"	"	10	µg/kg
Heptachlor	ND	1	"	"	"	10	µg/kg
Heptachlor epoxide	ND	1	"	"	"	10	µg/kg
Methoxychlor	ND	1	"	"	"	20	µg/kg

Surrogate Recoveries:		QC Limits
TCMX	31%	30 - 120
Decachlorobiphenyl	32%	30 - 120

ND = Not Detected

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JONES ENVIRONMENTAL LABORATORY RESULTS

Client:	Partner Engineering & Science, Inc.	**Report date:**	12/13/2017
Client Address:	2154 Torrance Blvd., Suite 200 Torrance, CA 90501	**JEL Ref. No.:** **Client Ref. No.:**	ST-11554 17-203002.2
Attn:	Samantha Fujita	**Date Sampled:** **Date Received:**	12/11/2017 12/12/2017
Project:	Redlands	**Date Analyzed:**	12/12/2017
Project Address:	Alabama & Palmetto Redlands, CA 92374	**Physical State:**	Soil

Sample ID: **C6** **JEL ID:** **ST-11554-29,33**

EPA 8081A by 3546 – Chlorinated Pesticides by GC/ECD

Analytes:	Result	Dilution	Batch	Prepared	Analyzed	Practical Quantitation Limit	Units
Aldrin	ND	1	8081_121217_01	12/12/2017	12/12/2017	10	µg/kg
α-BHC	ND	1	"	"	"	10	µg/kg
β-BHC	ND	1	"	"	"	10	µg/kg
γ-BHC (Lindane)	ND	1	"	"	"	10	µg/kg
δ-BHC	ND	1	"	"	"	10	µg/kg
γ-Chlordane	ND	1	"	"	"	10	µg/kg
α-Chlordane	ND	1	"	"	"	10	µg/kg
4,4'-DDD	ND	1	"	"	"	10	µg/kg
4,4'-DDE	ND	1	"	"	"	10	µg/kg
4,4'-DDT	ND	1	"	"	"	10	µg/kg
Dieldrin	ND	1	"	"	"	10	µg/kg
Endosulfan I	ND	1	"	"	"	10	µg/kg
Endosulfan II	ND	1	"	"	"	10	µg/kg
Endosulfan sulfate	ND	1	"	"	"	10	µg/kg
Endrin	ND	1	"	"	"	10	µg/kg
Endrin aldehyde	ND	1	"	"	"	10	µg/kg
Endrin ketone	ND	1	"	"	"	10	µg/kg
Heptachlor	ND	1	"	"	"	10	µg/kg
Heptachlor epoxide	ND	1	"	"	"	10	µg/kg
Methoxychlor	ND	1	"	"	"	20	µg/kg

Surrogate Recoveries:		QC Limits
TCMX	50%	30 - 120
Decachlorobiphenyl	38%	30 - 120

ND = Not Detected

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JONES ENVIRONMENTAL LABORATORY RESULTS

Client:	Partner Engineering & Science, Inc.	**Report date:**	12/13/2017
Client Address:	2154 Torrance Blvd., Suite 200 Torrance, CA 90501	**JEL Ref. No.:** **Client Ref. No.:**	ST-11554 17-203002.2
Attn:	Samantha Fujita	**Date Sampled:** **Date Received:**	12/11/2017 12/12/2017
Project:	Redlands	**Date Analyzed:**	12/12/2017
Project Address:	Alabama & Palmetto Redlands, CA 92374	**Physical State:**	Soil

Sample ID: **C8** **JEL ID:** **ST-11554-08,09**

EPA 8081A by 3546 – Chlorinated Pesticides by GC/ECD

Analytes:	Result	Dilution	Batch	Prepared	Analyzed	Practical Quantitation Limit	Units
Aldrin	ND	1	8081_121217_01	12/12/2017	12/12/2017	10	µg/kg
α-BHC	ND	1	"	"	"	10	µg/kg
β-BHC	ND	1	"	"	"	10	µg/kg
γ-BHC (Lindane)	ND	1	"	"	"	10	µg/kg
δ-BHC	ND	1	"	"	"	10	µg/kg
γ-Chlordane	ND	1	"	"	"	10	µg/kg
α-Chlordane	ND	1	"	"	"	10	µg/kg
4,4'-DDD	ND	1	"	"	"	10	µg/kg
4,4'-DDE	**32**	1	"	"	"	10	µg/kg
4,4'-DDT	ND	1	"	"	"	10	µg/kg
Dieldrin	ND	1	"	"	"	10	µg/kg
Endosulfan I	ND	1	"	"	"	10	µg/kg
Endosulfan II	ND	1	"	"	"	10	µg/kg
Endosulfan sulfate	ND	1	"	"	"	10	µg/kg
Endrin	ND	1	"	"	"	10	µg/kg
Endrin aldehyde	ND	1	"	"	"	10	µg/kg
Endrin ketone	ND	1	"	"	"	10	µg/kg
Heptachlor	ND	1	"	"	"	10	µg/kg
Heptachlor epoxide	ND	1	"	"	"	10	µg/kg
Methoxychlor	ND	1	"	"	"	20	µg/kg

Surrogate Recoveries:		QC Limits
TCMX	34%	30 - 120
Decachlorobiphenyl	32%	30 - 120

ND = Not Detected

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JONES ENVIRONMENTAL LABORATORY RESULTS

Client:	Partner Engineering & Science, Inc.	**Report date:**	12/13/2017
Client Address:	2154 Torrance Blvd., Suite 200 Torrance, CA 90501	**JEL Ref. No.:** **Client Ref. No.:**	ST-11554 17-203002.2
Attn:	Samantha Fujita	**Date Sampled:** **Date Received:**	12/11/2017 12/12/2017
Project:	Redlands	**Date Analyzed:**	12/12/2017
Project Address:	Alabama & Palmetto Redlands, CA 92374	**Physical State:**	Soil

Sample ID: **C9** **JEL ID:** **ST-11554-10,11**

EPA 8081A by 3546 – Chlorinated Pesticides by GC/ECD

Analytes:	Result	Dilution	Batch	Prepared	Analyzed	Practical Quantitation Limit	Units
Aldrin	ND	1	8081_121217_01	12/12/2017	12/12/2017	10	µg/kg
α-BHC	ND	1	"	"	"	10	µg/kg
β-BHC	ND	1	"	"	"	10	µg/kg
γ-BHC (Lindane)	ND	1	"	"	"	10	µg/kg
δ-BHC	ND	1	"	"	"	10	µg/kg
γ-Chlordane	ND	1	"	"	"	10	µg/kg
α-Chlordane	ND	1	"	"	"	10	µg/kg
4,4'-DDD	**12**	1	"	"	"	10	µg/kg
4,4'-DDE	**96**	1	"	"	"	10	µg/kg
4,4'-DDT	ND	1	"	"	"	10	µg/kg
Dieldrin	**12**	1	"	"	"	10	µg/kg
Endosulfan I	ND	1	"	"	"	10	µg/kg
Endosulfan II	ND	1	"	"	"	10	µg/kg
Endosulfan sulfate	ND	1	"	"	"	10	µg/kg
Endrin	ND	1	"	"	"	10	µg/kg
Endrin aldehyde	**27**	1	"	"	"	10	µg/kg
Endrin ketone	ND	1	"	"	"	10	µg/kg
Heptachlor	ND	1	"	"	"	10	µg/kg
Heptachlor epoxide	ND	1	"	"	"	10	µg/kg
Methoxychlor	ND	1	"	"	"	20	µg/kg

Surrogate Recoveries:		QC Limits
TCMX	45%	30 - 120
Decachlorobiphenyl	41%	30 - 120

ND = Not Detected

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JONES ENVIRONMENTAL LABORATORY RESULTS

Client:	Partner Engineering & Science, Inc.	**Report date:**	12/13/2017
Client Address:	2154 Torrance Blvd., Suite 200 Torrance, CA 90501	**JEL Ref. No.:** **Client Ref. No.:**	ST-11554 17-203002.2
Attn:	Samantha Fujita	**Date Sampled:** **Date Received:**	12/11/2017 12/12/2017
Project:	Redlands	**Date Analyzed:**	12/12/2017
Project Address:	Alabama & Palmetto Redlands, CA 92374	**Physical State:**	Soil

Sample ID: **C10** **JEL ID:** **ST-11554-12,35,37**

EPA 8081A by 3546 – Chlorinated Pesticides by GC/ECD

	Result	Dilution	Batch	Prepared	Analyzed	Practical Quantitation Limit	Units
Analytes:							
Aldrin	ND	1	8081_121217_01	12/12/2017	12/12/2017	10	µg/kg
α-BHC	ND	1	"	"	"	10	µg/kg
β-BHC	ND	1	"	"	"	10	µg/kg
γ-BHC (Lindane)	ND	1	"	"	"	10	µg/kg
δ-BHC	ND	1	"	"	"	10	µg/kg
γ-Chlordane	ND	1	"	"	"	10	µg/kg
α-Chlordane	ND	1	"	"	"	10	µg/kg
4,4'-DDD	ND	1	"	"	"	10	µg/kg
4,4'-DDE	**9**	1	"	"	"	10	µg/kg
4,4'-DDT	ND	1	"	"	"	10	µg/kg
Dieldrin	ND	1	"	"	"	10	µg/kg
Endosulfan I	ND	1	"	"	"	10	µg/kg
Endosulfan II	ND	1	"	"	"	10	µg/kg
Endosulfan sulfate	ND	1	"	"	"	10	µg/kg
Endrin	ND	1	"	"	"	10	µg/kg
Endrin aldehyde	ND	1	"	"	"	10	µg/kg
Endrin ketone	ND	1	"	"	"	10	µg/kg
Heptachlor	ND	1	"	"	"	10	µg/kg
Heptachlor epoxide	ND	1	"	"	"	10	µg/kg
Methoxychlor	ND	1	"	"	"	20	µg/kg

Surrogate Recoveries:		QC Limits
TCMX	32%	30 - 120
Decachlorobiphenyl	36%	30 - 120

ND = Not Detected

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Client:	Partner Engineering & Science, Inc.	**Report date:**	12/13/2017
Client Address:	2154 Torrance Blvd., Suite 200 Torrance, CA 90501	**JEL Ref. No.:** **Client Ref. No.:**	ST-11554 17-203002.2
Attn:	Samantha Fujita	**Date Sampled:** **Date Received:**	12/11/2017 12/12/2017
Project:	Redlands	**Date Analyzed:**	12/12/2017
Project Address:	Alabama & Palmetto Redlands, CA 92374	**Physical State:**	Soil

Sample ID: **C11** **JEL ID:** **ST-11554-13,14**

EPA 8081A by 3546 – Chlorinated Pesticides by GC/ECD

Analytes:	Result	Dilution	Batch	Prepared	Analyzed	Practical Quantitation Limit	Units
Aldrin	ND	1	8081_121217_01	12/12/2017	12/12/2017	10	µg/kg
α-BHC	ND	1	"	"	"	10	µg/kg
β-BHC	ND	1	"	"	"	10	µg/kg
γ-BHC (Lindane)	ND	1	"	"	"	10	µg/kg
δ-BHC	ND	1	"	"	"	10	µg/kg
γ-Chlordane	ND	1	"	"	"	10	µg/kg
α-Chlordane	ND	1	"	"	"	10	µg/kg
4,4'-DDD	**13**	1	"	"	"	10	µg/kg
4,4'-DDE	**160**	1	"	"	"	10	µg/kg
4,4'-DDT	**31**	1	"	"	"	10	µg/kg
Dieldrin	ND	1	"	"	"	10	µg/kg
Endosulfan I	ND	1	"	"	"	10	µg/kg
Endosulfan II	ND	1	"	"	"	10	µg/kg
Endosulfan sulfate	ND	1	"	"	"	10	µg/kg
Endrin	ND	1	"	"	"	10	µg/kg
Endrin aldehyde	ND	1	"	"	"	10	µg/kg
Endrin ketone	ND	1	"	"	"	10	µg/kg
Heptachlor	ND	1	"	"	"	10	µg/kg
Heptachlor epoxide	ND	1	"	"	"	10	µg/kg
Methoxychlor	ND	1	"	"	"	20	µg/kg

Surrogate Recoveries:		QC Limits
TCMX	41%	30 - 120
Decachlorobiphenyl	35%	30 - 120

ND = Not Detected

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JONES ENVIRONMENTAL LABORATORY RESULTS

Client:	Partner Engineering & Science, Inc.	**Report date:**	12/13/2017
Client Address:	2154 Torrance Blvd., Suite 200 Torrance, CA 90501	**JEL Ref. No.:** **Client Ref. No.:**	ST-11554 17-203002.2
Attn:	Samantha Fujita	**Date Sampled:** **Date Received:**	12/11/2017 12/12/2017
Project:	Redlands	**Date Analyzed:**	12/12/2017
Project Address:	Alabama & Palmetto Redlands, CA 92374	**Physical State:**	Soil

Sample ID: **C12** **JEL ID:** **ST-11554-15,16**

EPA 8081A by 3546 – Chlorinated Pesticides by GC/ECD

Analytes:	Result	Dilution	Batch	Prepared	Analyzed	Practical Quantitation Limit	Units
Aldrin	ND	1	8081_121217_01	12/12/2017	12/12/2017	10	µg/kg
α-BHC	ND	1	"	"	"	10	µg/kg
β-BHC	ND	1	"	"	"	10	µg/kg
γ-BHC (Lindane)	ND	1	"	"	"	10	µg/kg
δ-BHC	ND	1	"	"	"	10	µg/kg
γ-Chlordane	ND	1	"	"	"	10	µg/kg
α-Chlordane	ND	1	"	"	"	10	µg/kg
4,4'-DDD	**11**	1	"	"	"	10	µg/kg
4,4'-DDE	**180**	1	"	"	"	10	µg/kg
4,4'-DDT	**25**	1	"	"	"	10	µg/kg
Dieldrin	ND	1	"	"	"	10	µg/kg
Endosulfan I	ND	1	"	"	"	10	µg/kg
Endosulfan II	ND	1	"	"	"	10	µg/kg
Endosulfan sulfate	ND	1	"	"	"	10	µg/kg
Endrin	**9**	1	"	"	"	10	µg/kg
Endrin aldehyde	ND	1	"	"	"	10	µg/kg
Endrin ketone	ND	1	"	"	"	10	µg/kg
Heptachlor	ND	1	"	"	"	10	µg/kg
Heptachlor epoxide	ND	1	"	"	"	10	µg/kg
Methoxychlor	ND	1	"	"	"	20	µg/kg

Surrogate Recoveries:		QC Limits
TCMX	31%	30 - 120
Decachlorobiphenyl	32%	30 - 120

ND = Not Detected

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JONES ENVIRONMENTAL LABORATORY RESULTS

Client:	Partner Engineering & Science, Inc.	**Report date:**	12/13/2017
Client Address:	2154 Torrance Blvd., Suite 200 Torrance, CA 90501	**JEL Ref. No.:** **Client Ref. No.:**	ST-11554 17-203002.2
Attn:	Samantha Fujita	**Date Sampled:** **Date Received:**	12/11/2017 12/12/2017
Project:	Redlands	**Date Analyzed:**	12/12/2017
Project Address:	Alabama & Palmetto Redlands, CA 92374	**Physical State:**	Soil

Sample ID: **C13** **JEL ID:** **ST-11554-17,24**

EPA 8081A by 3546 – Chlorinated Pesticides by GC/ECD

Analytes:	Result	Dilution	Batch	Prepared	Analyzed	Practical Quantitation Limit	Units
Aldrin	ND	1	8081_121217_01	12/12/2017	12/12/2017	10	µg/kg
α-BHC	ND	1	"	"	"	10	µg/kg
β-BHC	ND	1	"	"	"	10	µg/kg
γ-BHC (Lindane)	ND	1	"	"	"	10	µg/kg
δ-BHC	ND	1	"	"	"	10	µg/kg
γ-Chlordane	ND	1	"	"	"	10	µg/kg
α-Chlordane	ND	1	"	"	"	10	µg/kg
4,4'-DDD	**19**	1	"	"	"	10	µg/kg
4,4'-DDE	**220**	1	"	"	"	10	µg/kg
4,4'-DDT	**19**	1	"	"	"	10	µg/kg
Dieldrin	ND	1	"	"	"	10	µg/kg
Endosulfan I	ND	1	"	"	"	10	µg/kg
Endosulfan II	ND	1	"	"	"	10	µg/kg
Endosulfan sulfate	ND	1	"	"	"	10	µg/kg
Endrin	ND	1	"	"	"	10	µg/kg
Endrin aldehyde	ND	1	"	"	"	10	µg/kg
Endrin ketone	ND	1	"	"	"	10	µg/kg
Heptachlor	ND	1	"	"	"	10	µg/kg
Heptachlor epoxide	ND	1	"	"	"	10	µg/kg
Methoxychlor	ND	1	"	"	"	20	µg/kg

Surrogate Recoveries:		QC Limits
TCMX	36%	30 - 120
Decachlorobiphenyl	39%	30 - 120

ND = Not Detected

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JONES ENVIRONMENTAL LABORATORY RESULTS

Client:	Partner Engineering & Science, Inc.	**Report date:**	12/13/2017
Client Address:	2154 Torrance Blvd., Suite 200 Torrance, CA 90501	**JEL Ref. No.:**	ST-11554
		Client Ref. No.:	17-203002.2
Attn:	Samantha Fujita	**Date Sampled:**	12/11/2017
		Date Received:	12/12/2017
Project:	Redlands	**Date Analyzed:**	12/12/2017
Project Address:	Alabama & Palmetto Redlands, CA 92374	**Physical State:**	Soil

Sample ID: **C14** **JEL ID:** **ST-11554-18,23**

EPA 8081A by 3546 – Chlorinated Pesticides by GC/ECD

Analytes:	Result	Dilution	Batch	Prepared	Analyzed	Practical Quantitation Limit	Units
Aldrin	ND	1	8081_121217_01	12/12/2017	12/12/2017	10	µg/kg
α-BHC	ND	1	"	"	"	10	µg/kg
β-BHC	ND	1	"	"	"	10	µg/kg
γ-BHC (Lindane)	ND	1	"	"	"	10	µg/kg
δ-BHC	ND	1	"	"	"	10	µg/kg
γ-Chlordane	ND	1	"	"	"	10	µg/kg
α-Chlordane	ND	1	"	"	"	10	µg/kg
4,4'-DDD	ND	1	"	"	"	10	µg/kg
4,4'-DDE	**48**	1	"	"	"	10	µg/kg
4,4'-DDT	ND	1	"	"	"	10	µg/kg
Dieldrin	ND	1	"	"	"	10	µg/kg
Endosulfan I	ND	1	"	"	"	10	µg/kg
Endosulfan II	ND	1	"	"	"	10	µg/kg
Endosulfan sulfate	ND	1	"	"	"	10	µg/kg
Endrin	ND	1	"	"	"	10	µg/kg
Endrin aldehyde	ND	1	"	"	"	10	µg/kg
Endrin ketone	ND	1	"	"	"	10	µg/kg
Heptachlor	ND	1	"	"	"	10	µg/kg
Heptachlor epoxide	ND	1	"	"	"	10	µg/kg
Methoxychlor	ND	1	"	"	"	20	µg/kg

Surrogate Recoveries:		QC Limits
TCMX	33%	30 - 120
Decachlorobiphenyl	31%	30 - 120

ND = Not Detected

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JONES ENVIRONMENTAL LABORATORY RESULTS

Client:	Partner Engineering & Science, Inc.	**Report date:**	12/13/2017
Client Address:	2154 Torrance Blvd., Suite 200 Torrance, CA 90501	**JEL Ref. No.:** **Client Ref. No.:**	ST-11554 17-203002.2
Attn:	Samantha Fujita	**Date Sampled:** **Date Received:**	12/11/2017 12/12/2017
Project:	Redlands	**Date Analyzed:**	12/12/2017
Project Address:	Alabama & Palmetto Redlands, CA 92374	**Physical State:**	Soil

Sample ID: **C15** **JEL ID:** **ST-11554-19,22**

EPA 8081A by 3546 – Chlorinated Pesticides by GC/ECD

Analytes:	Result	Dilution	Batch	Prepared	Analyzed	Practical Quantitation Limit	Units
Aldrin	ND	1	8081_121217_01	12/12/2017	12/12/2017	10	µg/kg
α-BHC	ND	1	"	"	"	10	µg/kg
β-BHC	ND	1	"	"	"	10	µg/kg
γ-BHC (Lindane)	ND	1	"	"	"	10	µg/kg
δ-BHC	ND	1	"	"	"	10	µg/kg
γ-Chlordane	ND	1	"	"	"	10	µg/kg
α-Chlordane	ND	1	"	"	"	10	µg/kg
4,4'-DDD	**11**	1	"	"	"	10	µg/kg
4,4'-DDE	**69**	1	"	"	"	10	µg/kg
4,4'-DDT	**17**	1	"	"	"	10	µg/kg
Dieldrin	ND	1	"	"	"	10	µg/kg
Endosulfan I	ND	1	"	"	"	10	µg/kg
Endosulfan II	ND	1	"	"	"	10	µg/kg
Endosulfan sulfate	ND	1	"	"	"	10	µg/kg
Endrin	ND	1	"	"	"	10	µg/kg
Endrin aldehyde	ND	1	"	"	"	10	µg/kg
Endrin ketone	ND	1	"	"	"	10	µg/kg
Heptachlor	ND	1	"	"	"	10	µg/kg
Heptachlor epoxide	ND	1	"	"	"	10	µg/kg
Methoxychlor	ND	1	"	"	"	20	µg/kg

Surrogate Recoveries:		QC Limits
TCMX	34%	30 - 120
Decachlorobiphenyl	33%	30 - 120

ND = Not Detected

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Client:	Partner Engineering & Science, Inc.	**Report date:**	12/13/2017
Client Address:	2154 Torrance Blvd., Suite 200 Torrance, CA 90501	**JEL Ref. No.:** **Client Ref. No.:**	ST-11554 17-203002.2
Attn:	Samantha Fujita	**Date Sampled:** **Date Received:**	12/11/2017 12/12/2017
Project:	Redlands	**Date Analyzed:**	12/12/2017
Project Address:	Alabama & Palmetto Redlands, CA 92374	**Physical State:**	Soil

Sample ID: **C16** **JEL ID:** **ST-11554-20,21**

EPA 8081A by 3546 – Chlorinated Pesticides by GC/ECD

Analytes:	Result	Dilution	Batch	Prepared	Analyzed	Practical Quantitation Limit	Units
Aldrin	ND	1	8081_121217_01	12/12/2017	12/12/2017	10	µg/kg
α-BHC	ND	1	"	"	"	10	µg/kg
β-BHC	ND	1	"	"	"	10	µg/kg
γ-BHC (Lindane)	ND	1	"	"	"	10	µg/kg
δ-BHC	ND	1	"	"	"	10	µg/kg
γ-Chlordane	ND	1	"	"	"	10	µg/kg
α-Chlordane	ND	1	"	"	"	10	µg/kg
4,4'-DDD	ND	1	"	"	"	10	µg/kg
4,4'-DDE	**60**	1	"	"	"	10	µg/kg
4,4'-DDT	**14**	1	"	"	"	10	µg/kg
Dieldrin	ND	1	"	"	"	10	µg/kg
Endosulfan I	ND	1	"	"	"	10	µg/kg
Endosulfan II	ND	1	"	"	"	10	µg/kg
Endosulfan sulfate	ND	1	"	"	"	10	µg/kg
Endrin	ND	1	"	"	"	10	µg/kg
Endrin aldehyde	ND	1	"	"	"	10	µg/kg
Endrin ketone	ND	1	"	"	"	10	µg/kg
Heptachlor	ND	1	"	"	"	10	µg/kg
Heptachlor epoxide	ND	1	"	"	"	10	µg/kg
Methoxychlor	ND	1	"	"	"	20	µg/kg

Surrogate Recoveries:		QC Limits
TCMX	36%	30 - 120
Decachlorobiphenyl	39%	30 - 120

ND = Not Detected

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JONES ENVIRONMENTAL QUALITY CONTROL INFORMATION

Client:	Partner Engineering & Science, Inc.	**Report date:**	12/13/2017
Client Address:	2154 Torrance Blvd., Suite 200 Torrance, CA 90501	**JEL Ref. No.:** **Client Ref. No.:**	ST-11554 17-203002.2
Attn:	Samantha Fujita	**Date Sampled:** **Date Received:**	12/11/2017 12/12/2017
Project:	Redlands	**Date Analyzed:**	12/12/2017
Project Address:	Alabama & Palmetto Redlands, CA 92374	**Physical State:**	Soil

Sample ID: **Method Blank** **JEL ID:** **MB-121217_01**

EPA 8081A by 3546 – Chlorinated Pesticides by GC/ECD

Analytes:	Result	Dilution	Batch	Prepared	Analyzed	Practical Quantitation Limit	Units
Aldrin	ND	1	8081_121217_01	12/12/2017	12/12/2017	10	µg/kg
α-BHC	ND	1	"	"	"	10	µg/kg
β-BHC	ND	1	"	"	"	10	µg/kg
γ-BHC (Lindane)	ND	1	"	"	"	10	µg/kg
δ-BHC	ND	1	"	"	"	10	µg/kg
γ-Chlordane	ND	1	"	"	"	10	µg/kg
α-Chlordane	ND	1	"	"	"	10	µg/kg
4,4'-DDD	ND	1	"	"	"	10	µg/kg
4,4'-DDE	ND	1	"	"	"	10	µg/kg
4,4'-DDT	ND	1	"	"	"	10	µg/kg
Dieldrin	ND	1	"	"	"	10	µg/kg
Endosulfan I	ND	1	"	"	"	10	µg/kg
Endosulfan II	ND	1	"	"	"	10	µg/kg
Endosulfan sulfate	ND	1	"	"	"	10	µg/kg
Endrin	ND	1	"	"	"	10	µg/kg
Endrin aldehyde	ND	1	"	"	"	10	µg/kg
Endrin ketone	ND	1	"	"	"	10	µg/kg
Heptachlor	ND	1	"	"	"	10	µg/kg
Heptachlor epoxide	ND	1	"	"	"	10	µg/kg
Methoxychlor	ND	1	"	"	"	20	µg/kg

Surrogate Recoveries:		QC Limits
TCMX	71%	30 - 120
Decachlorobiphenyl	63%	30 - 120

ND = Not Detected

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JONES ENVIRONMENTAL QUALITY CONTROL INFORMATION

Client:	Partner Engineering & Science, Inc.	**Report date:**	12/13/2017
Client Address:	2154 Torrance Blvd., Suite 200 Torrance, CA 90501	**JEL Ref. No.:** **Client Ref. No.:**	ST-11554 17-203002.2
Attn:	Samantha Fujita	**Date Sampled:**	12/11/2017
		Date Received:	12/12/2017
Project:	Redlands	**Date Analyzed:**	12/12/2017
Project Address:	Alabama & Palmetto Redlands, CA 92374	**Physical State:**	Soil

BATCH: **8081_121217_01** **Prepared:** 12/12/2017 **Analyzed:** 12/12/2017

EPA 8081A by 3546 – Chlorinated Pesticides by GC/ECD

	LCS	LCS Duplicate	% RPD	Spike Level	% Recovery Limits	Units
	LCS1-121217	LCSD1-121217				
Analytes:						
β-BHC	**81.4**	**82.5**	1%	100	60 - 140	ppb
γ-Chlordane	**67.4**	**66.8**	1%	100	60 - 140	ppb
Aldrin	**61.0**	**62.8**	3%	100	60 - 140	ppb
4,4'-DDD	**68.9**	**67.8**	2%	100	60 - 140	ppb
4,4'-DDE	**67.9**	**66.9**	1%	100	60 - 140	ppb
4,4'-DDT	**70.6**	**69.0**	2%	100	60 - 140	ppb
Dieldrin	**71.3**	**70.9**	1%	100	60 - 140	ppb
Endosulfan I	**64.0**	**64.0**	0%	100	60 - 140	ppb
Endosulfan II	**69.4**	**67.0**	4%	100	60 - 140	ppb
Endrin	**82.8**	**81.7**	1%	100	60 - 140	ppb
Endrin ketone	**70.1**	**68.9**	2%	100	60 - 140	ppb
Heptachlor	**62.8**	**66.3**	5%	100	60 - 140	ppb
Heptachlor epoxide	**64.0**	**64.3**	0%	100	60 - 140	ppb
Surrogate Recoveries:						
TCMX	55%	53%			30 - 120	
Decachlorobiphenyl	62%	57%			30 - 120	

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Chain-of-Custody Record

Client Partner Engineering + Science
Project Name Redlands
Project Address Alabama + Palmetto
Redlands California 92374
Email sfujita@partneresi.com jcain@partneresi.com
Phone 310 483 1367
Report To Sam Fujita **Sampler** J. Cain

Date 12/11/17
Client Project # 17-203002.2

Turn Around Requested:
- ☐ Immediate Attention
- ☑ Rush 24 Hours
- ☐ Rush 48 Hours
- ☐ Rush 72 Hours
- ☐ Normal

Report Options
EDD ____
EDF* - 10% Surcharge____
*Global ID _____

Sample Container / Preservative Abbreviations
AS - Acetate Sleeve
SS - Stainless Steel Sleeve
BS - Brass Sleeve
G - Glass
AB - Amber Bottle
P - Plastic
SOBI - Sodium Bisulfate
MeOH - Methanol
HCl - Hydrochloric Acid
HNO3 - Nitric Acid
O - Other (See Notes)

LAB USE ONLY
Jones Project # ST-11554
Page 1 of 5
Sample Condition as Recieved:
Chilled ☐ yes ☐ no
Sealed ☐ yes ☐ no

Analysis Requested

Sample ID	Date	Sample Collection Time	Laboratory Sample ID	Preservative	Sample Container	Sample Matrix: Soil (S), Sludge (SL), Aqueous (A), Free Product (FP)	Arsenic	OCPs, Composite Samples only	Number of Containers	Notes & Special Instructions
S1	12/11/17	10:20	ST-11554-01		4oz jar	S	✓	C		Composite S1/S2 (C1)
S2		10:22	ST-11554-02							
S3		10:25	ST-11554-03				✓	C		Composite S3/B9 (C2)
S4		10:27	ST-11554-04					C		Composite S4/B8 (C3)
S5		10:30	ST-11554-05				✓	C		Composite S5/B1 (C4)
S6		10:33	ST-11554-06					C		Composite S6/B3 (C5)
S7		10:35	ST-11554-07					C		Composite S7/B7 (C7)
S8		10:37	ST-11554-08				✓	C		Composite S8/S9 (C8)
S9		11:25	ST-11554-09							
S10		11:27	ST-11554-10				✓	C		Composite S10/S11 (C9)

Relinquished By (Signature)	Printed Name: Joshua S. Cain	Received By (Signature)	Printed Name: J Watkins		Total Number of Containers
Company: Partner ESI	Date / Time	Company: Jones	Date: 12/11 Time: 1020		
Relinquished By (Signature)	Printed Name: J Watkins	Received By Laboratory (Signature)	Printed Name: Juan Camacho		
Company: JEL	Date: 12/12 Time: 1200	Company: Jones Env	Date: 12-12-17 Time: 1200		

Client signature on this Chain of Custody form constitutes acknowledgement that the above analyses have been reqested, and the information provided herein is correct and accurate.

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Chain-of-Custody Record

Client	See Page 1
Date	12/11/17
Project Name	
Client Project #	17-20302.2
Project Address	
Email	
Phone	
Report To	**Sampler**

Turn Around Requested:
- □ Immediate Attention
- ☑ Rush 24 Hours
- □ Rush 48 Hours
- □ Rush 72 Hours
- □ Normal

Report Options
EDD ____
EDF* - 10% Surcharge____
*Global ID _____

LAB USE ONLY
Jones Project #
ST-11554
Page 2 of 5

Sample Condition as Recieved:
Chilled □ yes □ no
Sealed □ yes □ no

Sample Container / Preservative Abbreviations

AS - Acetate Sleeve
SS - Stainless Steel Sleeve
BS - Brass Sleeve
G - Glass
AB - Amber Bottle
P - Plastic
SOBI - Sodium Bisulfate
MeOH - Methanol
HCl - Hydrochloric Acid
HNO3 - Nitric Acid
O - Other (See Notes)

Analysis Requested

Sample ID	Date	Sample Collection Time	Laboratory Sample ID	Preservative	Sample Container	Sample Matrix: Soil (S), Sludge (SL), Aqueous (A), Free Product (FP)	Arsenic	OCPs, composite samples only	Number of Containers	Notes & Special Instructions
S11	12/11/17	11:10	ST-11554-11		40z jar	S				Composite c9
S12		11:00	ST-11554-12					C		Composite S12/B5/B6
S13		11:03	ST-11554-13				✓	C		Composite S13/S14 (C10) (C11)
S14		11:13	ST-11554-14							
S15		11:30	ST-11554-15				✓	C		Composite S15/S16 (C12)
S16		11:47	ST-11554-16							
S17		11:45	ST-11554-17				✓	C		Composite S17/S24(C13)
S18		11:32	ST-11554-18					C		Composite S18/S23 (C14)
S19		11:15	ST-11554-19				✓	C		Composite S19/S22 (C15)
S20	↓	11:05	ST-11554-20		↓	↓		C		Composite S20/S21 (C16)

Relinquished By (Signature)	**Printed Name** Joshua S. Cain	**Received By (Signature)**	**Printed Name** JWatkins
Company Partner ESI,	**Date** **Time**	**Company** JONES	**Date** 12/11 **Time** 1020
Relinquished By (Signature)	**Printed Name** JWatkins	**Received By Laboratory (Signature)** Juan Camacho	**Printed Name** Juan Camacho
Company JONES	**Date:** 12/12 **Time** 1200	**Company** Jones Env	**Date** 12-12-17 **Time** 1200

Total Number of Containers

Client signature on this Chain of Custody form constitutes acknowledgement that the above analyses have been reqested, and the information provided herein is correct and accurate.

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Chain-of-Custody Record

Client See Page 1 | **Date** 12/11/17

Project Name | **Client Project #** 17-203002.2

Project Address

Email

Phone

Report To | **Sampler**

Turn Around Requested:
- ☐ Immediate Attention
- ☑ Rush 24 Hours
- ☐ Rush 48 Hours
- ☐ Rush 72 Hours
- ☐ Normal

Report Options
EDD ____
EDF* - 10% Surcharge____
*Global ID _____

LAB USE ONLY
Jones Project # ST-11554
Page 3 of 5

Sample Condition as Recieved:
Chilled ☐ yes ☐ no
Sealed ☐ yes ☐ no

Sample Container / Preservative Abbreviations

AS - Acetate Sleeve
SS - Stainless Steel Sleeve
BS - Brass Sleeve
G - Glass
AB - Amber Bottle
P - Plastic
SOBI - Sodium Bisulfate
MeOH - Methanol
HCl - Hydrochloric Acid
HNO3 - Nitric Acid
O - Other (See Notes)

Analysis Requested

Sample ID	Date	Sample Collection Time	Laboratory Sample ID	Preservative	Sample Container	Sample Matrix: Soil (S), Sludge (SL), Aqueous (A), Free Product (FP)	VOCs, EPA 8260	Arsenic	OCPs, Composite Samples only	Number of Containers	Notes & Special Instructions
S21	12/11/17	11:07	ST-11554-21		40z jar	S		✓			Composite S20/S21 (C16)
S22		11:17	ST-11554-22								Composite C15
S23		11:35	ST-11554-23					✓			Composite C14
S24		11:37	ST-11554-24								Composite C13
S25		11:40	ST-11554-25					✓	C		Composite S25/B11 (C17)
S26		11:42	ST-11554-26						C		Composite S26/B10 (C18)
B1-2			ST-11554-27		Steve VOAs						Composite C4
B1-5			ST-11554-28				✓				
B2-2			ST-11554-29				✓	✓	C		Composite B2/B4 (C6)
B2-5			ST-11554-30								

Relinquished By (Signature)	**Printed Name** Joshua S. Cain	**Received By (Signature)**	**Printed Name** J Watkins
Company Partner ESI	**Date** **Time**	**Company** JONES	**Date** 12/11 **Time** 1020
Relinquished By (Signature)	**Printed Name** J Watkins	**Received By Laboratory (Signature)** Juan Camacho	**Printed Name** Juan Camacho
Company JEL	**Date:** 12/12 **Time** 1200	**Company** Jones Env	**Date** 12-12-17 **Time** 1200

Total Number of Containers

Client signature on this Chain of Custody form constitutes acknowledgement that the above analyses have been reqested, and the information provided herein is correct and accurate.

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Chain-of-Custody Re

Client	See Page 1
Project Name	
Project Address	
Email	
Phone	
Report To	**Sampler**
Date	12/11/17
Client Project #	17-203002.2

Turn Around Requested:
- ☐ Immediate Attention
- ☑ Rush 24 Hours
- ☐ Rush 48 Hours
- ☐ Rush 72 Hours
- ☐ Normal

Report Options
EDD ____
EDF* - 10% Surcharge____
*Global ID _____

LAB USE ONLY
Jones Project #
ST-11554
Page 4 of 5

Sample Condition as Recieved:
Chilled ☐ yes ☐ no
Sealed ☐ yes ☐ no

Sample Container / Preservative Abbreviations

AS - Acetate Sleeve
SS - Stainless Steel Sleeve
BS - Brass Sleeve
G - Glass
AB - Amber Bottle
P - Plastic
SOBI - Sodium Bisulfate
MeOH - Methanol
HCl - Hydrochloric Acid
HNO3 - Nitric Acid
O - Other (See Notes)

Analysis Requested

Sample ID	Date	Sample Collection Time	Laboratory Sample ID	Preservative	Sample Container	Sample Matrix: Soil (S), Sludge (SL), Aqueous (A), Free Product (FP)	VOCs, EPA 8260	Arsenic	Number of Containers	Notes & Special Instructions
B3-2	12/11/17		ST-11554-31		VOA/Sleeve	S				Composite C5
B3-5			ST-11554-32				✓			
B4-2			ST-11554-33				✓			Composite C6
B4-5			ST-11554-34							
B5-2			ST-11554-35				✓	✓		Composite C10
B5-5			ST-11554-36							
B6-2			ST-11554-37							Composite C10
B6-5			ST-11554-38				✓			
B7-2			ST-11554-39				✓	✓		Composite C7
B7-5			ST-11554-40							

Relinquished By (Signature)	**Printed Name**	**Received By (Signature)**	**Printed Name**
Joshua S. Cain	Joshua S. Cain	JWatkins	JWatkins
Company	**Date / Time**	**Company**	**Date / Time**
Partner ESI		JONES	12/11 1020
Relinquished By (Signature)	**Printed Name**	**Received By Laboratory (Signature)**	**Printed Name**
JWatkins	JWatkins	Juan Camacho	Juan Camacho
Company	**Date: / Time**	**Company**	**Date / Time**
JONES	12/12 1200	Jones Env.	12-12-17 1200

Total Number of Containers

Client signature on this Chain of Custody form constitutes acknowledgement that the above analyses have been reqested, and the information provided herein is correct and accurate.

JONES ENVIRONMENTAL, INC.

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Chain-of-Custody Record

Client	See Page 1
Project Name	
Project Address	
Email	
Phone	
Report To	**Sampler**

Date 12/11/17
Client Project # 17-203002.2

Turn Around Requested:
- □ Immediate Attention
- ☑ Rush 24 Hours
- □ Rush 48 Hours
- □ Rush 72 Hours
- □ Normal

Report Options
EDD _____
EDF* - 10% Surcharge____
*Global ID _____

LAB USE ONLY
Jones Project # ST-11554
Page 5 of 5

Sample Condition as Recieved:
Chilled □ yes □ no
Sealed □ yes □ no

Sample Container / Preservative Abbreviations

AS - Acetate Sleeve
SS - Stainless Steel Sleeve
BS - Brass Sleeve
G - Glass
AB - Amber Bottle
P - Plastic
SOBI - Sodium Bisulfate
MeOH - Methanol
HCl - Hydrochloric Acid
HNO3 - Nitric Acid
O - Other (See Notes)

Analysis Requested

Sample ID	Date	Sample Collection Time	Laboratory Sample ID	Preservative	Sample Container	Sample Matrix: Soil (S), Sludge (SL), Aqueous (A), Free Product (FP)	VOCs, EPA 8260	Arsenic	Number of Containers	Notes & Special Instructions
B8-2	12/11/17		ST-11554-41		VOAs/Sleeve	S		✓		Composite C3
B8-5			ST-11554-42				✓			
B9-2			ST-11554-43				✓			Composite C2
B9-5			ST-11554-44							
B10-2			ST-11554-45					✓		Composite C18
B10-5			ST-11554-46				✓			
B11-2			ST-11554-47				✓			Composite C17
B11-5			ST-11554-48							

Relinquished By (Signature) Joshua A. Cain	**Printed Name** Joshua S. Cain	**Received By (Signature)**	**Printed Name** J Watkins
Company Partner ESI	**Date** **Time**	**Company** JONES	**Date** 12/11 **Time** 1020
Relinquished By (Signature)	**Printed Name** J Watkins	**Received By Laboratory (Signature)** Juan Camacho	**Printed Name** Juan Camacho
Company JONES	**Date:** 12/12 **Time** 1200	**Company** Jones Env.	**Date** 12-12-17 **Time** 1200

Total Number of Containers

Client signature on this Chain of Custody form constitutes acknowledgement that the above analyses have been reqested, and the information provided herein is correct and accurate.

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SAMPLE RECEIPT FORM

Jones ID: ST-11554

CLIENT: Partner
PROJECT: Redlands
DATE/TIME: 12-12-17 / 1200
RECEIVED BY: JC

Delivered by: ☐ Client ☑ Jones Courier ☐ UPS / FedEx / USPS ☐ Other

TEMPERATURE: Temp Criteria = 6°C > Temp > 0°C (NO frozen containers)

Temperature Cooler #1 5.7 °C ± 0.1°C Blank Sample (Sample)
Temperature Cooler #2 ____.____ °C ± 0.1°C Blank Sample

☐ Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling.
☐ Sample(s) outside temperature criteria. *
☐ Samples not received on ice.*

Ambient Temperature: 26.0 °C Checked by: JC

SAMPLE CONDITION:	YES	NO*	N/A
Chain of Custody (COC) document(s) received complete with samples	☑	☐	☐
☐ Collection date, collection time, matrix, and/or # of containers logged in based on sample labels missing. (circle) ☐ No analysis requested. ☐ Not relinquished. ☐ No date/time relinquished.			
Sample container label(s) consistent with COC	☑	☐	☐
Total number of containers received match COC	☑	☐	☐
Sample container(s) intact and in good condition	☑	☐	☐
Proper containers and sufficient volume for analyses requested	☑	☐	☐
Volatile analysis container(s) free of headspace	☐	☐	☑
Proper preservation for analyses requested	☑	☐	☐
Custody Seals Intact on Cooler/Sample	☐	☐	☑

CONTAINER TYPE:

Solid: glass jar / Acetate sleeve / VOAs Aqueous: ____

*Complete Non-Conformance if checked Checked by: JC

Comments:

JONES ENVIRONMENTAL, INC.

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JONES ENVIRONMENTAL
LABORATORY RESULTS

Client:	Partner Engineering & Science, Inc.	**Report date:**	12/14/2017
Client Address:	2154 Torrance Blvd., Suite 200 Torrance, CA 90501	**JEL Ref. No.:** **Client Ref. No:**	ST-11554 17-203002.2
Attn:	Samantha Fujita	**Date Sampled:**	12/11/2017
		Date Received:	12/12/2017
Project:	Redlands	**Date Analyzed:**	12/13/2017
Project Address:	Alabama & Palmetto Redlands, CA 92374	**Physical State:**	Soil

ANALYSES REQUESTED

1. EPA 8081A by 3546 – Chlorinated Pesticides by GC/ECD

Approval:

Carolyn Carroll
Stationary Lab Manager

JONES ENVIRONMENTAL, INC.
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SANTA FE SPRINGS, CA 90670
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JONES ENVIRONMENTAL LABORATORY RESULTS

Client:	Partner Engineering & Science, Inc.	**Report date:**	12/14/2017
Client Address:	2154 Torrance Blvd., Suite 200 Torrance, CA 90501	**JEL Ref. No.:**	ST-11554
		Client Ref. No.:	17-203002.2
Attn:	Samantha Fujita	**Date Sampled:**	12/11/2017
		Date Received:	12/12/2017
Project:	Redlands	**Date Analyzed:**	12/13/2017
Project Address:	Alabama & Palmetto Redlands, CA 92374	**Physical State:**	Soil

Sample ID: **C2** **JEL ID:** **ST-11554-03,43**

EPA 8081A by 3546 – Chlorinated Pesticides by GC/ECD

Analytes:	Result	Dilution	Batch	Prepared	Analyzed	Practical Quantitation Limit	Units
Aldrin	ND	1	8081_121317_01	12/13/2017	12/13/2017	10	µg/kg
α-BHC	ND	1	"	"	"	10	µg/kg
β-BHC	ND	1	"	"	"	10	µg/kg
γ-BHC (Lindane)	ND	1	"	"	"	10	µg/kg
δ-BHC	ND	1	"	"	"	10	µg/kg
γ-Chlordane	ND	1	"	"	"	10	µg/kg
α-Chlordane	ND	1	"	"	"	10	µg/kg
4,4'-DDD	ND	1	"	"	"	10	µg/kg
4,4'-DDE	ND	1	"	"	"	10	µg/kg
4,4'-DDT	ND	1	"	"	"	10	µg/kg
Dieldrin	ND	1	"	"	"	10	µg/kg
Endosulfan I	ND	1	"	"	"	10	µg/kg
Endosulfan II	ND	1	"	"	"	10	µg/kg
Endosulfan sulfate	ND	1	"	"	"	10	µg/kg
Endrin	ND	1	"	"	"	10	µg/kg
Endrin aldehyde	ND	1	"	"	"	10	µg/kg
Endrin ketone	ND	1	"	"	"	10	µg/kg
Heptachlor	ND	1	"	"	"	10	µg/kg
Heptachlor epoxide	ND	1	"	"	"	10	µg/kg
Methoxychlor	ND	1	"	"	"	20	µg/kg

Surrogate Recoveries:		QC Limits
TCMX	35%	30 - 120
Decachlorobiphenyl	31%	30 - 120

ND = Not Detected

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805-399-0060
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SANTA FE SPRINGS, CA 90670
WWW.JONESENV.COM

JONES ENVIRONMENTAL LABORATORY RESULTS

Client:	Partner Engineering & Science, Inc.	**Report date:**	12/14/2017
Client Address:	2154 Torrance Blvd., Suite 200 Torrance, CA 90501	**JEL Ref. No.:** **Client Ref. No.:**	ST-11554 17-203002.2
Attn:	Samantha Fujita	**Date Sampled:**	12/11/2017
		Date Received:	12/12/2017
Project:	Redlands	**Date Analyzed:**	12/13/2017
Project Address:	Alabama & Palmetto Redlands, CA 92374	**Physical State:**	Soil

Sample ID: **C3** **JEL ID:** **ST-11554-04,41**

EPA 8081A by 3546 – Chlorinated Pesticides by GC/ECD

Analytes:	Result	Dilution	Batch	Prepared	Analyzed	Practical Quantitation Limit	Units
Aldrin	ND	1	8081_121317_01	12/13/2017	12/13/2017	10	µg/kg
α-BHC	ND	1	"	"	"	10	µg/kg
β-BHC	ND	1	"	"	"	10	µg/kg
γ-BHC (Lindane)	ND	1	"	"	"	10	µg/kg
δ-BHC	ND	1	"	"	"	10	µg/kg
γ-Chlordane	ND	1	"	"	"	10	µg/kg
α-Chlordane	ND	1	"	"	"	10	µg/kg
4,4'-DDD	ND	1	"	"	"	10	µg/kg
4,4'-DDE	**120**	1	"	"	"	10	µg/kg
4,4'-DDT	**11**	1	"	"	"	10	µg/kg
Dieldrin	ND	1	"	"	"	10	µg/kg
Endosulfan I	ND	1	"	"	"	10	µg/kg
Endosulfan II	ND	1	"	"	"	10	µg/kg
Endosulfan sulfate	ND	1	"	"	"	10	µg/kg
Endrin	ND	1	"	"	"	10	µg/kg
Endrin aldehyde	ND	1	"	"	"	10	µg/kg
Endrin ketone	ND	1	"	"	"	10	µg/kg
Heptachlor	ND	1	"	"	"	10	µg/kg
Heptachlor epoxide	ND	1	"	"	"	10	µg/kg
Methoxychlor	ND	1	"	"	"	20	µg/kg

Surrogate Recoveries:		QC Limits
TCMX	53%	30 - 120
Decachlorobiphenyl	68%	30 - 120

ND = Not Detected

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JONES ENVIRONMENTAL LABORATORY RESULTS

Client:	Partner Engineering & Science, Inc.	**Report date:**	12/14/2017
Client Address:	2154 Torrance Blvd., Suite 200 Torrance, CA 90501	**JEL Ref. No.:** **Client Ref. No.:**	ST-11554 17-203002.2
Attn:	Samantha Fujita	**Date Sampled:**	12/11/2017
		Date Received:	12/12/2017
Project:	Redlands	**Date Analyzed:**	12/13/2017
Project Address:	Alabama & Palmetto Redlands, CA 92374	**Physical State:**	Soil

Sample ID: **C4** **JEL ID:** **ST-11554-05,27**

EPA 8081A by 3546 – Chlorinated Pesticides by GC/ECD

Analytes:	Result	Dilution	Batch	Prepared	Analyzed	Practical Quantitation Limit	Units
Aldrin	ND	1	8081_121317_01	12/13/2017	12/13/2017	10	µg/kg
α-BHC	ND	1	"	"	"	10	µg/kg
β-BHC	ND	1	"	"	"	10	µg/kg
γ-BHC (Lindane)	ND	1	"	"	"	10	µg/kg
δ-BHC	ND	1	"	"	"	10	µg/kg
γ-Chlordane	ND	1	"	"	"	10	µg/kg
α-Chlordane	ND	1	"	"	"	10	µg/kg
4,4'-DDD	ND	1	"	"	"	10	µg/kg
4,4'-DDE	ND	1	"	"	"	10	µg/kg
4,4'-DDT	ND	1	"	"	"	10	µg/kg
Dieldrin	ND	1	"	"	"	10	µg/kg
Endosulfan I	ND	1	"	"	"	10	µg/kg
Endosulfan II	ND	1	"	"	"	10	µg/kg
Endosulfan sulfate	ND	1	"	"	"	10	µg/kg
Endrin	ND	1	"	"	"	10	µg/kg
Endrin aldehyde	ND	1	"	"	"	10	µg/kg
Endrin ketone	ND	1	"	"	"	10	µg/kg
Heptachlor	ND	1	"	"	"	10	µg/kg
Heptachlor epoxide	ND	1	"	"	"	10	µg/kg
Methoxychlor	ND	1	"	"	"	20	µg/kg

Surrogate Recoveries:		QC Limits
TCMX	30%	30 - 120
Decachlorobiphenyl	32%	30 - 120

ND = Not Detected

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JONES ENVIRONMENTAL LABORATORY RESULTS

Client:	Partner Engineering & Science, Inc.	**Report date:**	12/14/2017
Client Address:	2154 Torrance Blvd., Suite 200 Torrance, CA 90501	**JEL Ref. No.:** **Client Ref. No.:**	ST-11554 17-203002.2
Attn:	Samantha Fujita	**Date Sampled:**	12/11/2017
		Date Received:	12/12/2017
Project:	Redlands	**Date Analyzed:**	12/13/2017
Project Address:	Alabama & Palmetto Redlands, CA 92374	**Physical State:**	Soil

Sample ID: **C5** **JEL ID:** **ST-11554-06,31**

EPA 8081A by 3546 – Chlorinated Pesticides by GC/ECD

	Result	Dilution	Batch	Prepared	Analyzed	Practical Quantitation Limit	Units
Analytes:							
Aldrin	ND	1	8081_121317_01	12/13/2017	12/13/2017	10	µg/kg
α-BHC	ND	1	"	"	"	10	µg/kg
β-BHC	ND	1	"	"	"	10	µg/kg
γ-BHC (Lindane)	ND	1	"	"	"	10	µg/kg
δ-BHC	ND	1	"	"	"	10	µg/kg
γ-Chlordane	ND	1	"	"	"	10	µg/kg
α-Chlordane	ND	1	"	"	"	10	µg/kg
4,4'-DDD	ND	1	"	"	"	10	µg/kg
4,4'-DDE	**130**	1	"	"	"	10	µg/kg
4,4'-DDT	**21**	1	"	"	"	10	µg/kg
Dieldrin	ND	1	"	"	"	10	µg/kg
Endosulfan I	ND	1	"	"	"	10	µg/kg
Endosulfan II	ND	1	"	"	"	10	µg/kg
Endosulfan sulfate	ND	1	"	"	"	10	µg/kg
Endrin	ND	1	"	"	"	10	µg/kg
Endrin aldehyde	ND	1	"	"	"	10	µg/kg
Endrin ketone	ND	1	"	"	"	10	µg/kg
Heptachlor	ND	1	"	"	"	10	µg/kg
Heptachlor epoxide	ND	1	"	"	"	10	µg/kg
Methoxychlor	ND	1	"	"	"	20	µg/kg

Surrogate Recoveries:		**QC Limits**
TCMX	56%	30 - 120
Decachlorobiphenyl	50%	30 - 120

ND = Not Detected

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JONES ENVIRONMENTAL LABORATORY RESULTS

Client:	Partner Engineering & Science, Inc.	**Report date:**	12/14/2017
Client Address:	2154 Torrance Blvd., Suite 200 Torrance, CA 90501	**JEL Ref. No.:** **Client Ref. No.:**	ST-11554 17-203002.2
Attn:	Samantha Fujita	**Date Sampled:** **Date Received:**	12/11/2017 12/12/2017
Project:	Redlands	**Date Analyzed:**	12/13/2017
Project Address:	Alabama & Palmetto Redlands, CA 92374	**Physical State:**	Soil

Sample ID: **C7** **JEL ID:** **ST-11554-07,39**

EPA 8081A by 3546 – Chlorinated Pesticides by GC/ECD

	Result	Dilution	Batch	Prepared	Analyzed	Practical Quantitation Limit	Units
Analytes:							
Aldrin	ND	1	8081_121317_01	12/13/2017	12/13/2017	10	µg/kg
α-BHC	ND	1	"	"	"	10	µg/kg
β-BHC	ND	1	"	"	"	10	µg/kg
γ-BHC (Lindane)	ND	1	"	"	"	10	µg/kg
δ-BHC	ND	1	"	"	"	10	µg/kg
γ-Chlordane	ND	1	"	"	"	10	µg/kg
α-Chlordane	ND	1	"	"	"	10	µg/kg
4,4'-DDD	ND	1	"	"	"	10	µg/kg
4,4'-DDE	**15**	1	"	"	"	10	µg/kg
4,4'-DDT	ND	1	"	"	"	10	µg/kg
Dieldrin	ND	1	"	"	"	10	µg/kg
Endosulfan I	ND	1	"	"	"	10	µg/kg
Endosulfan II	ND	1	"	"	"	10	µg/kg
Endosulfan sulfate	ND	1	"	"	"	10	µg/kg
Endrin	ND	1	"	"	"	10	µg/kg
Endrin aldehyde	ND	1	"	"	"	10	µg/kg
Endrin ketone	ND	1	"	"	"	10	µg/kg
Heptachlor	ND	1	"	"	"	10	µg/kg
Heptachlor epoxide	ND	1	"	"	"	10	µg/kg
Methoxychlor	ND	1	"	"	"	20	µg/kg

Surrogate Recoveries:		**QC Limits**
TCMX	55%	30 - 120
Decachlorobiphenyl	42%	30 - 120

ND = Not Detected

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JONES ENVIRONMENTAL LABORATORY RESULTS

Client:	Partner Engineering & Science, Inc.	**Report date:**	12/14/2017
Client Address:	2154 Torrance Blvd., Suite 200 Torrance, CA 90501	**JEL Ref. No.:** **Client Ref. No.:**	ST-11554 17-203002.2
Attn:	Samantha Fujita	**Date Sampled:**	12/11/2017
		Date Received:	12/12/2017
Project:	Redlands	**Date Analyzed:**	12/13/2017
Project Address:	Alabama & Palmetto Redlands, CA 92374	**Physical State:**	Soil

Sample ID: **C17** **JEL ID:** **ST-11554-25,47**

EPA 8081A by 3546 – Chlorinated Pesticides by GC/ECD

Analytes:	Result	Dilution	Batch	Prepared	Analyzed	Practical Quantitation Limit	Units
Aldrin	ND	1	8081_121317_01	12/13/2017	12/13/2017	10	µg/kg
α-BHC	ND	1	"	"	"	10	µg/kg
β-BHC	ND	1	"	"	"	10	µg/kg
γ-BHC (Lindane)	ND	1	"	"	"	10	µg/kg
δ-BHC	ND	1	"	"	"	10	µg/kg
γ-Chlordane	ND	1	"	"	"	10	µg/kg
α-Chlordane	ND	1	"	"	"	10	µg/kg
4,4'-DDD	ND	1	"	"	"	10	µg/kg
4,4'-DDE	ND	1	"	"	"	10	µg/kg
4,4'-DDT	ND	1	"	"	"	10	µg/kg
Dieldrin	ND	1	"	"	"	10	µg/kg
Endosulfan I	ND	1	"	"	"	10	µg/kg
Endosulfan II	ND	1	"	"	"	10	µg/kg
Endosulfan sulfate	ND	1	"	"	"	10	µg/kg
Endrin	ND	1	"	"	"	10	µg/kg
Endrin aldehyde	ND	1	"	"	"	10	µg/kg
Endrin ketone	ND	1	"	"	"	10	µg/kg
Heptachlor	ND	1	"	"	"	10	µg/kg
Heptachlor epoxide	ND	1	"	"	"	10	µg/kg
Methoxychlor	ND	1	"	"	"	20	µg/kg

Surrogate Recoveries:		QC Limits
TCMX	39%	30 - 120
Decachlorobiphenyl	32%	30 - 120

ND = Not Detected

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JONES ENVIRONMENTAL LABORATORY RESULTS

Client:	Partner Engineering & Science, Inc.	**Report date:**	12/14/2017
Client Address:	2154 Torrance Blvd., Suite 200 Torrance, CA 90501	**JEL Ref. No.:** **Client Ref. No.:**	ST-11554 17-203002.2
Attn:	Samantha Fujita	**Date Sampled:** **Date Received:**	12/11/2017 12/12/2017
Project:	Redlands	**Date Analyzed:**	12/13/2017
Project Address:	Alabama & Palmetto Redlands, CA 92374	**Physical State:**	Soil

Sample ID: **C18** **JEL ID:** **ST-11554-26,45**

EPA 8081A by 3546 – Chlorinated Pesticides by GC/ECD

	Result	Dilution	Batch	Prepared	Analyzed	Practical Quantitation Limit	Units
Analytes:							
Aldrin	ND	1	8081_121317_01	12/13/2017	12/13/2017	10	µg/kg
α-BHC	ND	1	"	"	"	10	µg/kg
β-BHC	ND	1	"	"	"	10	µg/kg
γ-BHC (Lindane)	ND	1	"	"	"	10	µg/kg
δ-BHC	ND	1	"	"	"	10	µg/kg
γ-Chlordane	ND	1	"	"	"	10	µg/kg
α-Chlordane	ND	1	"	"	"	10	µg/kg
4,4'-DDD	**180**	1	"	"	"	10	µg/kg
4,4'-DDE	**350**	1	"	"	"	10	µg/kg
4,4'-DDT	**290**	1	"	"	"	10	µg/kg
Dieldrin	ND	1	"	"	"	10	µg/kg
Endosulfan I	ND	1	"	"	"	10	µg/kg
Endosulfan II	ND	1	"	"	"	10	µg/kg
Endosulfan sulfate	ND	1	"	"	"	10	µg/kg
Endrin	**89**	1	"	"	"	10	µg/kg
Endrin aldehyde	ND	1	"	"	"	10	µg/kg
Endrin ketone	ND	1	"	"	"	10	µg/kg
Heptachlor	ND	1	"	"	"	10	µg/kg
Heptachlor epoxide	ND	1	"	"	"	10	µg/kg
Methoxychlor	ND	1	"	"	"	20	µg/kg

Surrogate Recoveries:		QC Limits
TCMX	51%	30 - 120
Decachlorobiphenyl	49%	30 - 120

ND = Not Detected

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JONES ENVIRONMENTAL QUALITY CONTROL INFORMATION

Client:	Partner Engineering & Science, Inc.	**Report date:**	12/14/2017
Client Address:	2154 Torrance Blvd., Suite 200 Torrance, CA 90501	**JEL Ref. No.:** **Client Ref. No.:**	ST-11554 17-203002.2
Attn:	Samantha Fujita	**Date Sampled:** **Date Received:**	12/11/2017 12/12/2017
Project:	Redlands	**Date Analyzed:**	12/13/2017
Project Address:	Alabama & Palmetto Redlands, CA 92374	**Physical State:**	Soil

Sample ID: **Method Blank** **JEL ID:** **MB-121317_01**

EPA 8081A by 3546 – Chlorinated Pesticides by GC/ECD

Analytes:	Result	Dilution	Batch	Prepared	Analyzed	Practical Quantitation Limit	Units
Aldrin	ND	1	8081_121317_01	12/13/2017	12/13/2017	10	µg/kg
α-BHC	ND	1	"	"	"	10	µg/kg
β-BHC	ND	1	"	"	"	10	µg/kg
γ-BHC (Lindane)	ND	1	"	"	"	10	µg/kg
δ-BHC	ND	1	"	"	"	10	µg/kg
γ-Chlordane	ND	1	"	"	"	10	µg/kg
α-Chlordane	ND	1	"	"	"	10	µg/kg
4,4'-DDD	ND	1	"	"	"	10	µg/kg
4,4'-DDE	ND	1	"	"	"	10	µg/kg
4,4'-DDT	ND	1	"	"	"	10	µg/kg
Dieldrin	ND	1	"	"	"	10	µg/kg
Endosulfan I	ND	1	"	"	"	10	µg/kg
Endosulfan II	ND	1	"	"	"	10	µg/kg
Endosulfan sulfate	ND	1	"	"	"	10	µg/kg
Endrin	ND	1	"	"	"	10	µg/kg
Endrin aldehyde	ND	1	"	"	"	10	µg/kg
Endrin ketone	ND	1	"	"	"	10	µg/kg
Heptachlor	ND	1	"	"	"	10	µg/kg
Heptachlor epoxide	ND	1	"	"	"	10	µg/kg
Methoxychlor	ND	1	"	"	"	20	µg/kg

Surrogate Recoveries:	QC Limits
TCMX	30 - 120
Decachlorobiphenyl	30 - 120

ND = Not Detected

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JONES ENVIRONMENTAL QUALITY CONTROL INFORMATION

Client:	Partner Engineering & Science, Inc.	**Report date:**	12/14/2017
Client Address:	2154 Torrance Blvd., Suite 200 Torrance, CA 90501	**JEL Ref. No.:** **Client Ref. No.:**	ST-11554 17-203002.2
Attn:	Samantha Fujita	**Date Sampled:** **Date Received:**	12/11/2017 12/12/2017
Project:	Redlands	**Date Analyzed:**	12/13/2017
Project Address:	Alabama & Palmetto Redlands, CA 92374	**Physical State:**	Soil

BATCH: **8081_121317_01** **Prepared:** 12/13/2017 **Analyzed:** 12/13/2017

EPA 8081A by 3546 – Chlorinated Pesticides by GC/ECD

	LCS	LCS Duplicate	% RPD	Spike Level	% Recovery Limits	Units
	LCS1-121317	LCSD1-121317				
Analytes:						
β-BHC	**111**	**121**	9%	100	60 - 140	ppb
γ-Chlordane	**84.9**	**91.0**	7%	100	60 - 140	ppb
Aldrin	**82.1**	**91.2**	10%	100	60 - 140	ppb
4,4'-DDD	**88.7**	**103**	15%	100	60 - 140	ppb
4,4'-DDE	**84.2**	**91.7**	9%	100	60 - 140	ppb
4,4'-DDT	**92.0**	**99.3**	8%	100	60 - 140	ppb
Dieldrin	**93.2**	**101**	8%	100	60 - 140	ppb
Endosulfan I	**82.2**	**89.6**	9%	100	60 - 140	ppb
Endosulfan II	**88.4**	**87.0**	2%	100	60 - 140	ppb
Endrin	**114**	**107**	7%	100	60 - 140	ppb
Endrin ketone	**90.6**	**96.5**	6%	100	60 - 140	ppb
Heptachlor	**94.2**	**104**	10%	100	60 - 140	ppb
Heptachlor epoxide	**84.0**	**91.6**	9%	100	60 - 140	ppb
Surrogate Recoveries:						
TCMX	91%	95%			30 - 120	
Decachlorobiphenyl	71%	76%			30 - 120	

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Chain-of-Custody Record

Client Partner Engineering + Science
Project Name Redlands
Project Address Alabama + Palmetto
Redlands California 92374
Email sfujita@partneresi.com jcain@partneresi.com
Phone 310 483 1367
Report To Sam Fujita **Sampler** J. Cain

Date 12/11/17
Client Project # 17-203002.2

Turn Around Requested:
- ☐ Immediate Attention
- ☑ Rush 24 Hours
- ☐ Rush 48 Hours
- ☐ Rush 72 Hours
- ☐ Normal

Report Options
EDD ____
EDF* - 10% Surcharge____
*Global ID _____

LAB USE ONLY
Jones Project # ST-11554-
Page 1 of 5

Sample Condition as Recieved:
Chilled ☐ yes ☐ no
Sealed ☐ yes ☐ no

Sample Container / Preservative Abbreviations
AS - Acetate Sleeve
SS - Stainless Steel Sleeve
BS - Brass Sleeve
G - Glass
AB - Amber Bottle
P - Plastic
SOBI - Sodium Bisulfate
MeOH - Methanol
HCl - Hydrochloric Acid
HNO3 - Nitric Acid
O - Other (See Notes)

Analysis Requested

Sample ID	Date	Sample Collection Time	Laboratory Sample ID	Preservative	Sample Container	Sample Matrix: Soil (S), Sludge (SL), Aqueous (A), Free Product (FP)	Arsenic	OCPs, Composite Samples only	Number of Containers	Notes & Special Instructions
S1	12/11/17	10:20	ST-11554-01		4oz jar	S	✓	C		Composite S1/S2 (C1)
S2		10:22	ST-11554-02							
S3		10:25	ST-11554-03				✓	C		Composite S3/B9 (C2)
S4		10:27	ST-11554-04					C		Composite S4/B8 (C3)
S5		10:30	ST-11554-05				✓	C		Composite S5/B1 (C4)
S6		10:33	ST-11554-06					C		Composite S6/B3 (C5)
S7		10:35	ST-11554-07					C		Composite S7/B7 (C7)
S8		10:37	ST-11554-08				✓	C		Composite S8/S9 (C8)
S9		11:25	ST-11554-09							
S10		11:27	ST-11554-10				✓	C		Composite S10/S11 (C9)

Relinquished By (Signature)	Printed Name	Received By (Signature)	Printed Name
	Joshua S. Cain		J Watkins
Company	**Date / Time**	**Company**	**Date / Time**
Partner ESI		Jones	12/11 1020
Relinquished By (Signature)	**Printed Name**	**Received By Laboratory (Signature)**	**Printed Name**
	J Watkins	Juan Camacho	Juan Camacho
Company	**Date / Time**	**Company**	**Date / Time**
JEL	12/12 1200	Jones Env	12-12-17 1200

Total Number of Containers

Client signature on this Chain of Custody form constitutes acknowledgement that the above analyses have been reqested, and the information provided herein is correct and accurate.

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Chain-of-Custody Record

Client See Page 1	**Date** 12/11/17
Project Name	**Client Project #** 17-20302.2
Project Address	
Email	
Phone	
Report To **Sampler**	

Turn Around Requested:
- □ Immediate Attention
- ☑ Rush 24 Hours
- □ Rush 48 Hours
- □ Rush 72 Hours
- □ Normal

Report Options
EDD ____
EDF* - 10% Surcharge____
*Global ID _____

LAB USE ONLY
Jones Project # ST-11554
Page 2 of 5

Sample Condition as Recieved:
Chilled □ yes □ no
Sealed □ yes □ no

Sample Container / Preservative Abbreviations

AS - Acetate Sleeve
SS - Stainless Steel Sleeve
BS - Brass Sleeve
G - Glass
AB - Amber Bottle
P - Plastic
SOBI - Sodium Bisulfate
MeOH - Methanol
HCl - Hydrochloric Acid
HNO3 - Nitric Acid
O - Other (See Notes)

Analysis Requested

Sample ID	Date	Sample Collection Time	Laboratory Sample ID	Preservative	Sample Container	Sample Matrix: Soil (S), Sludge (SL), Aqueous (A), Free Product (FP)	Arsenic	OCPs, composite samples only	Number of Containers	Notes & Special Instructions
S11	12/11/17	11:10	ST-11554-11		40z jar	S				Composite c9
S12		11:00	ST-11554-12					C		Composite S12/B5/B6
S13		11:03	ST-11554-13				✓	C		Composite S13/S14 (C10) (C11)
S14		11:13	ST-11554-14							
S15		11:30	ST-11554-15				✓	C		Composite S15/S16 (C12)
S16		11:47	ST-11554-16							
S17		11:45	ST-11554-17				✓	C		Composite S17/S24(C13)
S18		11:32	ST-11554-18					C		Composite S18/S23 (C14)
S19		11:15	ST-11554-19				✓	C		Composite S19/S22 (C15)
S20	↓	11:05	ST-11554-20		↓	↓		C		Composite S20/S21 (C16)

Relinquished By (Signature)	**Printed Name** Joshua S. Cain	**Received By (Signature)**	**Printed Name** JWatkins
Company Partner ESI,	**Date** **Time**	**Company** JONES	**Date** 12/11 **Time** 1020
Relinquished By (Signature)	**Printed Name** JWatkins	**Received By Laboratory (Signature)**	**Printed Name** Juan Camacho
Company JONES	**Date:** 12/12 **Time** 1200	**Company** Jones Env	**Date** 12-12-17 **Time** 1200

Total Number of Containers

Client signature on this Chain of Custody form constitutes acknowledgement that the above analyses have been reqested, and the information provided herein is correct and accurate.

Chain-of-Custody Record

JONES ENVIRONMENTAL, INC.
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Client	See Page 1
Project Name	
Project Address	
Email	
Phone	
Report To	**Sampler**

Date 12/11/17
Client Project # 17-203022

Turn Around Requested:
- ☐ Immediate Attention
- ☑ Rush 24 Hours
- ☐ Rush 48 Hours
- ☐ Rush 72 Hours
- ☐ Normal

Report Options
EDD ____
EDF* - 10% Surcharge____
*Global ID _____

LAB USE ONLY
Jones Project # ST-11554
Page 3 of 5

Sample Condition as Recieved:
Chilled ☐ yes ☐ no
Sealed ☐ yes ☐ no

Sample Container / Preservative Abbreviations

AS - Acetate Sleeve
SS - Stainless Steel Sleeve
BS - Brass Sleeve
G - Glass
AB - Amber Bottle
P - Plastic
SOBI - Sodium Bisulfate
MeOH - Methanol
HCl - Hydrochloric Acid
HNO3 - Nitric Acid
O - Other (See Notes)

Analysis Requested

Sample ID	Date	Sample Collection Time	Laboratory Sample ID	Preservative	Sample Container	Sample Matrix: Soil (S), Sludge (SL), Aqueous (A), Free Product (FP)	VOCs, EPA 8260	Arsenic	OCPs, Composite Samples only	Number of Containers	Notes & Special Instructions
S21	12/11/17	11:07	ST-11554-21		4oz jar	S		✓			Composite S20/S21 (C16)
S22		11:17	ST-11554-22								Composite C15
S23		11:35	ST-11554-23					✓			Composite C14
S24		11:37	ST-11554-24								Composite C13
S25		11:40	ST-11554-25					✓	C		Composite S25/B11 (C17)
S26		11:42	ST-11554-26						C		Composite S26/B10 (C18)
B1-2			ST-11554-27		Sleeve VOAs						Composite C4
B1-5			ST-11554-28				✓				
B2-2			ST-11554-29				✓	✓	C		Composite B2/B4 (C6)
B2-5			ST-11554-30								

Relinquished By (Signature)	**Printed Name** Joshua S. Cain	**Received By (Signature)**	**Printed Name** J Watkins
Company Partner ESI	**Date** **Time**	**Company** JONES	**Date** 12/11 **Time** 1020
Relinquished By (Signature)	**Printed Name** J Watkins	**Received By Laboratory (Signature)** Juan Camacho	**Printed Name** Juan Camacho
Company JEL	**Date:** 12/12 **Time** 1200	**Company** Jones Env	**Date** 12-12-17 **Time** 1200

Total Number of Containers

Client signature on this Chain of Custody form constitutes acknowledgement that the above analyses have been reqested, and the information provided herein is correct and accurate.

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Chain-of-Custody Re

Client	See Page 1
Project Name	
Project Address	
Email	
Phone	
Report To	**Sampler**
Date	12/11/17
Client Project #	17-203002.2

Turn Around Requested:
- ☐ Immediate Attention
- ☑ Rush 24 Hours
- ☐ Rush 48 Hours
- ☐ Rush 72 Hours
- ☐ Normal

Report Options
EDD ____
EDF* - 10% Surcharge____
*Global ID _____

LAB USE ONLY
Jones Project #
ST-11554
Page 4 of 5

Sample Condition as Recieved:
Chilled ☐ yes ☐ no
Sealed ☐ yes ☐ no

Sample Container / Preservative Abbreviations

AS - Acetate Sleeve
SS - Stainless Steel Sleeve
BS - Brass Sleeve
G - Glass
AB - Amber Bottle
P - Plastic
SOBI - Sodium Bisulfate
MeOH - Methanol
HCl - Hydrochloric Acid
HNO3 - Nitric Acid
O - Other (See Notes)

Analysis Requested

Sample ID	Date	Sample Collection Time	Laboratory Sample ID	Preservative	Sample Container	Sample Matrix: Soil (S), Sludge (SL), Aqueous (A), Free Product (FP)	VOCs, EPA 8260	Arsenic	Number of Containers	Notes & Special Instructions
B3-2	12/11/17		ST-11554-31		VOA/Sleeve	S				Composite C5
B3-5			ST-11554-32				✓			
B4-2			ST-11554-33				✓			Composite C6
B4-5			ST-11554-34							
B5-2			ST-11554-35				✓	✓		Composite C10
B5-5			ST-11554-36							
B6-2			ST-11554-37							Composite C10
B6-5			ST-11554-38				✓			
B7-2			ST-11554-39				✓	✓		Composite C7
B7-5			ST-11554-40							

Relinquished By (Signature)	**Printed Name**	**Received By (Signature)**	**Printed Name**
Joshua S. Cain	Joshua S. Cain	J Watkins	J Watkins
Company	**Date / Time**	**Company**	**Date / Time**
Partner ESI		JONES	12/11 1020
Relinquished By (Signature)	**Printed Name**	**Received By Laboratory (Signature)**	**Printed Name**
J Watkins	J Watkins	Juan Camacho	Juan Camacho
Company	**Date: / Time**	**Company**	**Date / Time**
JONES	12/12 1200	Jones Env.	12-12-17 1200

Total Number of Containers

Client signature on this Chain of Custody form constitutes acknowledgement that the above analyses have been reqested, and the information provided herein is correct and accurate.

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Chain-of-Custody Record

Client See Page 1

Project Name

Project Address

Email

Phone

Report To **Sampler**

Date 12/11/17

Client Project # 17-203002.2

Turn Around Requested:
- □ Immediate Attention
- ☑ Rush 24 Hours
- □ Rush 48 Hours
- □ Rush 72 Hours
- □ Normal

Report Options
EDD ____
EDF* - 10% Surcharge____
*Global ID _____

LAB USE ONLY

Jones Project # ST-11554

Page 5 of 5

Sample Condition as Recieved:
Chilled □ yes □ no
Sealed □ yes □ no

Sample Container / Preservative Abbreviations

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SOBI - Sodium Bisulfate
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HNO3 - Nitric Acid
O - Other (See Notes)

Analysis Requested

Sample ID	Date	Sample Collection Time	Laboratory Sample ID	Preservative	Sample Container	Sample Matrix: Soil (S), Sludge (SL), Aqueous (A), Free Product (FP)	VOCs, EPA 8260	Arsenic	Number of Containers	Notes & Special Instructions
B8-2	12/11/17		ST-11554-41		VOAs/Sleeve	S		✓		Composite C3
B8-5			ST-11554-42				✓			
B9-2			ST-11554-43				✓			Composite C2
B9-5			ST-11554-44							
B10-2			ST-11554-45					✓		Composite C18
B10-5			ST-11554-46				✓			
B11-2			ST-11554-47				✓			Composite C17
B11-5			ST-11554-48							

Relinquished By (Signature) Joshua A. Cain **Printed Name** Joshua S. Cain
Company Partner ESI **Date** **Time**

Received By (Signature) **Printed Name** JWatkins
Company JONES **Date** 12/11 **Time** 1020

Relinquished By (Signature) **Printed Name** JWatkins
Company JONES **Date:** 12/12 **Time** 1200

Received By Laboratory (Signature) Juan Camacho **Printed Name** Juan Camacho
Company Jones Env. **Date** 12-12-17 **Time** 1200

Total Number of Containers

Client signature on this Chain of Custody form constitutes acknowledgement that the above analyses have been reqested, and the information provided herein is correct and accurate.

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SAMPLE RECEIPT FORM

Jones ID: ST-11554

CLIENT: Partner
PROJECT: Redlands
DATE/TIME: 12-12-17 / 1200
RECEIVED BY: JC

Delivered by: ☐ Client ☑ Jones Courier ☐ UPS / FedEx / USPS ☐ Other

TEMPERATURE: Temp Criteria = 6°C > Temp > 0°C (NO frozen containers)

Temperature Cooler #1 5.7 °C ± 0.1°C Blank Sample (Sample)
Temperature Cooler #2 ____.____ °C ± 0.1°C Blank Sample

☐ Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling.
☐ Sample(s) outside temperature criteria. *
☐ Samples not received on ice.*

Ambient Temperature: 26.0 °C Checked by: JC

SAMPLE CONDITION:	YES	NO*	N/A
Chain of Custody (COC) document(s) received complete with samples	☑	☐	☐
☐ Collection date, collection time, matrix, and/or # of containers logged in based on sample labels missing. (circle) ☐ No analysis requested. ☐ Not relinquished. ☐ No date/time relinquished.			
Sample container label(s) consistent with COC	☑	☐	☐
Total number of containers received match COC	☑	☐	☐
Sample container(s) intact and in good condition	☑	☐	☐
Proper containers and sufficient volume for analyses requested	☑	☐	☐
Volatile analysis container(s) free of headspace	☐	☐	☑
Proper preservation for analyses requested	☑	☐	☐
Custody Seals Intact on Cooler/Sample	☐	☐	☑

CONTAINER TYPE:

Solid: glass jar / Acetate sleeve / VOAs Aqueous: ____

*Complete Non-Conformance if checked Checked by: JC

Comments:

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JONES ENVIRONMENTAL
LABORATORY RESULTS

Client:	Partner Engineering & Science, Inc.	**Report date:**	12/14/2017
Client Address:	2154 Torrance Blvd., Suite 200 Torrance, CA 90501	**JEL Ref. No.:** **Client Ref. No:**	ST-11554 17-203002.2
Attn:	Samantha Fujita	**Date Sampled:**	12/11/2017
		Date Received:	12/12/2017
Project:	Redlands	**Date Analyzed:**	12/14/2017
Project Address:	Alabama & Palmetto Redlands, CA 92374	**Physical State:**	Soil

ANALYSES REQUESTED

1. EPA 6010B by 3051A – Arsenic by ICP-OES

   Additional analysis added on 12/13/2017.

Approval:

Carolyn Carroll
Stationary Lab Manager

JONES ENVIRONMENTAL, INC.

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805-399-0060

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SANTA FE SPRINGS, CA 90670
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JONES ENVIRONMENTAL LABORATORY RESULTS

Client:	Partner Engineering & Science, Inc.	**Report date:**	12/14/2017
Client Address:	2154 Torrance Blvd., Suite 200 Torrance, CA 90501	**JEL Ref. No.:** **Client Ref. No.:**	ST-11554 17-203002.2
Attn:	Samantha Fujita	**Date Sampled:**	12/11/2017
		Date Received:	12/12/2017
Project:	Redlands	**Date Analyzed:**	12/14/2017
Project Address:	Alabama & Palmetto Redlands, CA 92374	**Physical State:**	Soil

Sample ID: **S6** **JEL ID:** **ST-11554-06**

EPA 6010B by 3051A - Lead by ICP-OES

	Result	Dilution	Batch	Prepared	Analyzed	Practical Quantitation Limit	Units
Analytes:							
Arsenic, As	ND	1	I17121401	12/14/2017	12/14/2017	0.5	mg/kg

ND= Not Detected

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JONES ENVIRONMENTAL QUALITY CONTROL INFORMATION

Client:	Partner Engineering & Science, Inc.	**Report date:**	12/14/2017
Client Address:	2154 Torrance Blvd., Suite 200 Torrance, CA 90501	**JEL Ref. No.:** **Client Ref. No.:**	ST-11554 17-203002.2
Attn:	Samantha Fujita	**Date Sampled:** **Date Received:**	12/11/2017 12/12/2017
Project:	Redlands	**Date Analyzed:**	12/14/2017
Project Address:	Alabama & Palmetto Redlands, CA 92374	**Physical State:**	Soil

BATCH: **I17121403** **Prepared:** 12/14/2017 **Analyzed:** 12/14/2017

EPA 6010B by 3051A - Lead by ICP-OES

	Result	Spike Level	Source Result	% Recovery	% RPD	% Recovery Limits	Units
METHOD BLANK:	**I171214-BLK1**						
Analyte:							
Arsenic, As	ND						mg/kg
LCS:	**I171214-LCS1**						
Analyte:							
Arsenic, As	**181**	200		91%		60 - 140	mg/kg
LCSD:	**I171214-LCSD1**						
Analyte:							
Arsenic, As	**185**	200		93%	2.2%	60 - 140	mg/kg

RPD = Relative Percent Difference; Acceptability range for RPD is ≤ 15%

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Chain-of-Custody Record

Client Partner Engineering + Science
Project Name Redlands
Project Address Alabama + Palmetto
Redlands California 92374
Email sfujita@partnersi.com jcain@partnersi.com
Phone 310 483 1367
Report To Sam Fujita **Sampler** J. Cain

Date 12/11/17
Client Project # 17-203002.2

Sample Container / Preservative Abbreviations

AS - Acetate Sleeve
SS - Stainless Steel Sleeve
BS - Brass Sleeve
G - Glass
AB - Amber Bottle
P - Plastic
SOBI - Sodium Bisulfate
MeOH - Methanol
HCl - Hydrochloric Acid
HNO3 - Nitric Acid
O - Other (See Notes)

Turn Around Requested:
- ☐ Immediate Attention
- ☑ Rush 24 Hours
- ☐ Rush 48 Hours
- ☐ Rush 72 Hours
- ☐ Normal

Report Options
EDD ____
EDF* - 10% Surcharge____
*Global ID _____

LAB USE ONLY
Jones Project # ST-11554-

Page 1 of 5

Sample Condition as Recieved:
Chilled ☐ yes ☐ no
Sealed ☐ yes ☐ no

Analysis Requested

Sample ID	Date	Sample Collection Time	Laboratory Sample ID	Preservative	Sample Container	Sample Matrix: Soil (S), Sludge (SL), Aqueous (A), Free Product (FP)	Arsenic	OCPs, Composite Samples only	Number of Containers	Notes & Special Instructions
S1	12/11/17	10:20	ST-11554-01		402 jar	S	✓	C		Composite S1/S2 (C1)
S2		10:22	ST-11554-02							
S3		10:25	ST-11554-03				✓	C		Composite S3/B9 (C2)
S4		10:27	ST-11554-04					C		Composite S4/B8 (C3)
S5		10:30	ST-11554-05				✓	C		Composite S5/B1 (C4)
S6		10:33	ST-11554-06			12/13 @ 00	✓	C		Composite S6/B3 (C5)
S7		10:35	ST-11554-07					C		Composite S7/B7 (C7)
S8		10:37	ST-11554-08				✓	C		Composite S8/S9 (C8)
S9		11:25	ST-11554-09							
S10		11:27	ST-11554-10				✓	C		Composite S10/S11 (C9)

Relinquished By (Signature)	**Printed Name** Joshua S. Cain	**Received By (Signature)**	**Printed Name** JWatkins
Company Partner ESI	**Date** **Time**	**Company** Jones	**Date** 12/11 **Time** 1020
Relinquished By (Signature)	**Printed Name** JWatkins	**Received By Laboratory (Signature)**	**Printed Name** Juan Camacho
Company JEL	**Date:** 12/12 **Time** 1200	**Company** Jones Env.	**Date** 12-12-17 **Time** 1200

Total Number of Containers

Client signature on this Chain of Custody form constitutes acknowledgement that the above analyses have been reqested, and the information provided herein is correct and accurate.

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Chain-of-Custody Record

Client See Page 1	**Date** 12/11/17
Project Name	**Client Project #** 17-20302.2
Project Address	
Email	
Phone	
Report To **Sampler**	

Turn Around Requested:
- □ Immediate Attention
- ☑ Rush 24 Hours
- □ Rush 48 Hours
- □ Rush 72 Hours
- □ Normal

Report Options
EDD ____
EDF* - 10% Surcharge____
*Global ID _____

LAB USE ONLY
Jones Project # ST-11554
Page 2 of 5

Sample Condition as Recieved:
Chilled □ yes □ no
Sealed □ yes □ no

Sample Container / Preservative Abbreviations

AS - Acetate Sleeve
SS - Stainless Steel Sleeve
BS - Brass Sleeve
G - Glass
AB - Amber Bottle
P - Plastic
SOBI - Sodium Bisulfate
MeOH - Methanol
HCl - Hydrochloric Acid
HNO3 - Nitric Acid
O - Other (See Notes)

Analysis Requested

Sample ID	Date	Sample Collection Time	Laboratory Sample ID	Preservative	Sample Container	Sample Matrix: Soil (S), Sludge (SL), Aqueous (A), Free Product (FP)	Arsenic	OCPs, composite samples only	Number of Containers	Notes & Special Instructions
S11	12/11/17	11:10	ST-11554-11		402 jar	S				Composite c9
S12		11:00	ST-11554-12					C		Composite S12/B5/B6
S13		11:03	ST-11554-13				✓	C		Composite S13/S14 (C10) (C11)
S14		11:13	ST-11554-14							
S15		11:30	ST-11554-15				✓	C		Composite S15/S16 (C12)
S16		11:47	ST-11554-16							
S17		11:45	ST-11554-17				✓	C		Composite S17/S24 (C13)
S18		11:32	ST-11554-18					C		Composite S18/S23 (C14)
S19		11:15	ST-11554-19				✓	C		Composite S19/S22 (C15)
S20		11:05	ST-11554-20					C		Composite S20/S21 (C16)

Relinquished By (Signature)	**Printed Name** Joshua S. Cain	**Received By (Signature)**	**Printed Name** JWatkins
Company Partner ESI,	**Date** **Time**	**Company** JONES	**Date** 12/11 **Time** 1020
Relinquished By (Signature)	**Printed Name** JWatkins	**Received By Laboratory (Signature)**	**Printed Name** Juan Camacho
Company JONES	**Date:** 12/12 **Time** 1200	**Company** Jones Env.	**Date** 12-12-17 **Time** 1200

Total Number of Containers

Client signature on this Chain of Custody form constitutes acknowledgement that the above analyses have been reqested, and the information provided herein is correct and accurate.

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Chain-of-Custody Record

Client See Page 1 | **Date** 12/11/17

Project Name | **Client Project #** 17-203022

Project Address

Email

Phone

Report To **Sampler**

Turn Around Requested:
- ☐ Immediate Attention
- ☑ Rush 24 Hours
- ☐ Rush 48 Hours
- ☐ Rush 72 Hours
- ☐ Normal

Report Options
EDD ____
EDF* - 10% Surcharge____
*Global ID _____

LAB USE ONLY
Jones Project # ST-11554
Page 3 of 5
Sample Condition as Recieved:
Chilled ☐ yes ☐ no
Sealed ☐ yes ☐ no

Sample Container / Preservative Abbreviations
AS - Acetate Sleeve
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HNO3 - Nitric Acid
O - Other (See Notes)

Analysis Requested

Sample ID	Date	Sample Collection Time	Laboratory Sample ID	Preservative	Sample Container	Sample Matrix: Soil (S), Sludge (SL), Aqueous (A), Free Product (FP)	VOCs, EPA 8260	Arsenic	OCPs, Composite Samples only	Number of Containers	Notes & Special Instructions
S21	12/11/17	11:07	ST-11554-21		40z jar	S		✓			Composite S20/S21 (C16)
S22		11:17	ST-11554-22								Composite C15
S23		11:35	ST-11554-23					✓			Composite C14
S24		11:37	ST-11554-24								Composite C13
S25		11:40	ST-11554-25					✓	C		Composite S25/B11 (C17)
S26		11:42	ST-11554-26						C		Composite S26/B10 (C18)
B1-2			ST-11554-27		Sleeve VOAs						Composite C4
B1-5			ST-11554-28				✓				
B2-2			ST-11554-29				✓	✓	C		Composite B2/B4 (C6)
B2-5			ST-11554-30								

Relinquished By (Signature)	**Printed Name** Joshua S. Cain	**Received By (Signature)**	**Printed Name** J Watkins
Company Partner ESI	**Date** **Time**	**Company** JONES	**Date** 12/11 **Time** 1020
Relinquished By (Signature)	**Printed Name** J Watkins	**Received By Laboratory (Signature)** Juan Camacho	**Printed Name** Juan Camacho
Company JEL	**Date:** 12/12 **Time** 1200	**Company** Jones Env.	**Date** 12-12-17 **Time** 1200

Total Number of Containers

Client signature on this Chain of Custody form constitutes acknowledgement that the above analyses have been reqested, and the information provided herein is correct and accurate.

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Chain-of-Custody Re

Client See Page 1

Project Name

Project Address

Email

Phone

Report To **Sampler**

Date 12/11/17

Client Project # 17-203002.2

Turn Around Requested:
- ☐ Immediate Attention
- ☑ Rush 24 Hours
- ☐ Rush 48 Hours
- ☐ Rush 72 Hours
- ☐ Normal

Report Options
EDD ____
EDF* - 10% Surcharge____
*Global ID _____

LAB USE ONLY
Jones Project # ST-11554
Page 4 of 5

Sample Condition as Recieved:
Chilled ☐ yes ☐ no
Sealed ☐ yes ☐ no

Sample Container / Preservative Abbreviations
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Analysis Requested

Sample ID	Date	Sample Collection Time	Laboratory Sample ID	Preservative	Sample Container	Sample Matrix: Soil (S), Sludge (SL), Aqueous (A), Free Product (FP)	VOCs, EPA 8260	Arsenic	Number of Containers	Notes & Special Instructions
B3-2	12/11/17		ST-11554-31		VOA's Sleeve	S				Composite C5
B3-5			ST-11554-32				✓			
B4-2			ST-11554-33				✓			Composite C6
B4-5			ST-11554-34							
B5-2			ST-11554-35				✓	✓		Composite C10
B5-5			ST-11554-36							
B6-2			ST-11554-37							Composite C10
B6-5			ST-11554-38				✓			
B7-2			ST-11554-39				✓	✓		Composite C7
B7-5			ST-11554-40							

Relinquished By (Signature)	Printed Name	Received By (Signature)	Printed Name	
Joshua S. Cam	Joshua S. Cam	JWatkins	JWatkins	Total Number of Containers
Company: Partner ESI	Date / Time	Company: JONES	Date / Time: 12/11 1020	
Relinquished By (Signature): JWatkins	Printed Name: J Watkins	Received By Laboratory (Signature): Juan Camacho	Printed Name: Juan Camacho	
Company: JONES	Date: 12/12 Time: 1200	Company: Jones Env.	Date: 12-12-17 Time: 1200	

Client signature on this Chain of Custody form constitutes acknowledgement that the above analyses have been reqested, and the information provided herein is correct and accurate.

JONES ENVIRONMENTAL, INC.

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www.jonesenv.com

Chain-of-Custody Record

Client	See Page 1
Project Name	
Project Address	
Email	
Phone	
Report To	**Sampler**
Date	12/11/17
Client Project #	17-203002.2

Turn Around Requested:
- ☐ Immediate Attention
- ☑ Rush 24 Hours
- ☐ Rush 48 Hours
- ☐ Rush 72 Hours
- ☐ Normal

Report Options
EDD ____
EDF* - 10% Surcharge____
*Global ID _____

LAB USE ONLY
Jones Project # ST-11554
Page 5 of 5
Sample Condition as Recieved:
Chilled ☐ yes ☐ no
Sealed ☐ yes ☐ no

Sample Container / Preservative Abbreviations
AS - Acetate Sleeve
SS - Stainless Steel Sleeve
BS - Brass Sleeve
G - Glass
AB - Amber Bottle
P - Plastic
SOBI - Sodium Bisulfate
MeOH - Methanol
HCl - Hydrochloric Acid
HNO3 - Nitric Acid
O - Other (See Notes)

Analysis Requested

Sample ID	Date	Sample Collection Time	Laboratory Sample ID	Preservative	Sample Container	Sample Matrix: Soil (S), Sludge (SL), Aqueous (A), Free Product (FP)	VOCs, EPA 8260	Arsenic	Number of Containers	Notes & Special Instructions
B8-2	12/11/17		ST-11554-41		VOAs/Sleeve	S		✓		Composite C3
B8-5			ST-11554-42				✓			
B9-2			ST-11554-43				✓			Composite C2
B9-5			ST-11554-44							
B10-2			ST-11554-45					✓		Composite C18
B10-5			ST-11554-46				✓			
B11-2			ST-11554-47				✓			Composite C17
B11-5	↓		ST-11554-48		↓	↓				

Relinquished By (Signature)	**Printed Name**	**Received By (Signature)**	**Printed Name**
Joshua A. Cain	Joshua S. Cain		JWatkins
Company	**Date / Time**	**Company**	**Date / Time**
Partner ESI		JONES	12/11 1020
Relinquished By (Signature)	**Printed Name**	**Received By Laboratory (Signature)**	**Printed Name**
	JWatkins	Juan Camacho	Juan Camacho
Company	**Date: / Time**	**Company**	**Date / Time**
JONES	12/12 1200	Jones Env.	12-12-17 1200

Total Number of Containers

Client signature on this Chain of Custody form constitutes acknowledgement that the above analyses have been reqested, and the information provided herein is correct and accurate.

APPENDIX E: QUALIFICATIONS

PARTNER

Burke Walker, REA
Partner Associate

Education
B.S. Biology: Emphasis in Ecology and Environmental Biology, California State University, Long Beach

Registrations
State of California Registered Environmental Assessor - REA I, #30207
HAZWOPER 40-Hour General On-Site Certified, since October 25, 2008
EPA Certified lead-based construction inspector, #NV-I-15309-1
California Department of Public Health Lead-Related Construction Inspector/Assessor, #15243
California Division of Occupational Safety and Health, Certified Asbestos Consultant, #10-4669
Radio Frequency Site Safety Awareness Certification, United States OSHA
Association of Environmental Professionals, CEQA Workshop, November 2009
Desert Tortoise Council Workshop, November 2010, USFWS/CDFG Approved

Summary of Professional Experience
Mr. Walker has eight years of experience in the environmental industry. He has significant experience in due diligence assessments for a variety of property types and the needs and requirements of varied number of reporting standards, including ASTM standards, EPA's All Appropriate Inquiry (AAI), and customized client formats. Specifically, Mr. Walker has performed Phase I Environmental Site Assessments, Environmental Transaction Screens, Regulatory Compliance Assessments, Asbestos Surveys and Lead-based Paint Surveys.

Mr. Walker served as a senior scientist on projects performed primarily for telecommunications carriers, lenders, developers, government agencies, and property management firms. Locations include a wide range of properties that include, but are not limited to, the following: office buildings, hotels, shopping malls, business parks, high tech industries, manufacturing facilities, retirement homes, large retail outlets, strip malls, auto dealers, gas stations, fast food facilities, warehouses, vineyards, housing developments, golf courses, personal storage unit facilities, government buildings, dry cleaners, apartment house complexes, former sludge ponds, an oil production field, trucking facilities, a ski resort and associated building complex, agricultural fields, fire stations, and residential homes.

Finally, Mr. Walker's diversity across residential, industrial, municipal, and commercial environments is a major contribution to Partner Engineering and Science's Associate team in the West, and Southwest regions of the United States.

Education

B.A., Environmental Studies, New England College, Henniker, New Hampshire

Registrations

Accredited AHERA Asbestos Building Inspector

Training

Asbestos Hazard and Emergency Response Act (AHERA) Building Inspection for Asbestos
Hazardous Waste Operations and Emergency Response (HAZWOPER), 40-hour (with First Aid, CPR)

Highlights

27+ years in the environmental service industry (environmental investigation/cleanup and environmental real estate due diligence)
Performed more than 1,500 ESAs throughout 37 US states and the District of Columbia
Reviewed and managed ESA projects/portfolios throughout all 50 states, and several countries abroad
Completed over 2,000 peer desk reviews and database search reviews
25+ years Fannie Mae DUS
21+ years Freddie Mac
21+ years HUD/HUD MAP

Experience Summary

Mr. Kidd currently serves as an environmental project manager and technical reviewer with Partner Engineering and Science, Inc.'s (Partner) senior review team for a variety of Clients. He is proficient in numerous scopes of work, such as, ASTM AAI, Standard & Poor's, Wells Fargo Bank, PNC Bank, Bank of America, JP Morgan/Chase Bank, Brach Banking & Trust, FDIC, SBA, CMBS Lenders.

As a Rhode Island native who collaged in New Hampshire with a semester abroad in England, Mr. Kidd began in the environmental service industry in Florida as a staff professional performing risk-based toxicological assessments to support investigation and cleanup activities for leaking petroleum station sites and industrial properties. Some of his field work supported monitoring well sampling and remedial cleanup system maintenance prior to performing transactional environmental assessments, as well as ASTM and other scopes of work that followed. Early scopes of work included North Carolina National Bank and Fannie Mae DUS. Mr. Kidd is also educated in leaking petroleum station investigations/remedial cleanup and performing Phase II subsurface investigations [drilling (hollow-stem, air hammer, hydraulic-push probe), soil/groundwater sampling, geophysical surveys, underground storage tank closure/removal field work, environmental sampling (asbestos, lead-based paint, drinking water, radon gas), and regulatory compliance auditing]. Mr. Kidd was a site manager for a state-awarded contract for investigating and remedying home sites which were identified with contaminated potable wells from inactive, closed, and/or abandoned petroleum stations, and properties with leaking USTs.

Mr. Kidd has worked for two specialized environmental due diligence assessment firms in Maryland where his responsibilities included performing ESAs, project management, portfolio management, client

management, report reviews, desktop services, historical source reviews, consulting services, indoor air quality assessments, mold/moisture surveys, and other related services.

Project Experience

Mr. Kidd is proficient in performing, reviewing and managing Phase I Environmental Site Assessments, Transaction Screens, Phase II subsurface investigations, Regulatory File Reviews, Compliance Auditing, Environmental Sampling, Indoor Air Quality testing, Mold Inspections, Third Party Desktop/Peer Reviews, Historical/Regulatory Database reviews, Petroleum Station Investigation and Remedial Cleanup Assessments.

Mill Property, Southern Pines, North Carolina. Mr. Kidd performed a Phase I ESA and a Phase II ESA at a knitting mill facility that specialized in the manufacturing of fabric for office cubicles. The site was adjoining to one of the five Aberdeen Pesticide Dumps Superfund site locations. The Phase II activities included soil borings and groundwater monitoring wells with sampling activities performed using U.S. EPA Superfund site protocol. The mill property site was identified with low levels of groundwater contamination.

Home Site, Roxboro, North Carolina. Mr. Kidd was involved with environmental investigations and cleanup under a contract with the state environmental regulatory agency to investigate petroleum hydrocarbon contamination that was identified in a home owner's private potable well. The investigation included historical research, a ground-penetrating radar/electromagnetic survey, field work for the removal of one UST, and contaminated soil removal. The source of the contamination was identified as a historical rural family general store. Notably the no wells or potable water were associated with the past operation of the general store.

Park 100, Indianapolis, Indiana. Mr. Kidd lead a small team of environmental professionals to perform the site reconnaissance at the 4.1 million square foot Park 100 industrial park located in Indianapolis, Indiana. The assessment was performed as part of the real estate due diligence associated with the merger of two major REIT firms. The assessment paid particular attention to onsite tenant uses that included light industrial, manufacturing, assembly, open-wheel racing car teams, and other activities involving the use, generation, storage, treatment or disposal of oils and hazardous substances.

Gasoline Station Portfolio, Getty Petroleum Marketing. Mr. Kidd Provided environmental analysis and review to identify and quantify the environmental liability associated with the potential sale of more than 1,000 branded, owned and leased, retail petroleum filling stations located in 21 states. Services included facility cataloging and review/consultation with the third party consultant overseeing investigation and cleanup activities for sites with subsurface petroleum impacts.

244 independent living facilities, Goldman Sachs. Mr. Kidd performed third-party oversight/review of Phase I ESAs conducted at 244 independent living facilities located across 40 states. Reports were reviewed for technical issues, Client Scope of Work, with findings and opinions provided for resolution of various issues identified including asbestos, radon gas, mold, USTs, contamination from historic land uses, and onsite regulatory listings.

Contact

bkidd@partneresi.com

Robert S. Geiger
Principal, National Client Manager

Education

MBA, University of Southern California
B.S., Civil Engineering, Marquette University

Highlights

20 years of experience focused on engineering and environmental consulting services.
Manages equity and lending scope due diligence services for a diverse set of clients.
Manages the execution of assessments on portfolios with the largest exceeding 150 sites nationwide.
Manages the execution of property owner services including capital budgeting and planning, design, energy efficiency and environmental compliance solutions.

Experience Summary

Mr. Geiger manages equity-level due diligence services to a variety of real estate investor clients including REITs, private equity, developers, attorneys, Fortune 500 corporate owners, and independent investors. He also serves an array of lender clients including institutional, portfolio, insurance company, CMBS, construction, agency, FHA/HUD, and SBA. Mr. Geiger draws on the resources of Partner staff located in over 30 offices throughout the U.S., Canada, and the UK to evaluate the condition and concerns associated with any property type, large or small. He and his team have concentrated experience in evaluating healthcare, office, industrial, hospitality, retail and multi-family properties.

Assessments

Mr. Geiger manages the execution of property condition, environmental, and seismic risk assessments in support of the physical due diligence of real estate assets for thousands of transactions, as well as managing construction document and draw reviews for development projects throughout the U.S. He and his team apply levels of expertise and reporting commensurate with the client's intended purpose, expectation, and risk exposure in the transaction. The Property Condition Assessment (PCA) scopes are approached with a generalist or with multiple specialty evaluations such as roof, MEP, envelope, and vertical transportation that exceed to varying degrees the ASTM 2018 guidelines. Also in evaluation of the physical aspects of buildings, Seismic Risk Assessments and Probable Maximum Loss reports are performed where applicable per ASTM 2026.

Phase I ESAs per ASTM E1527-13, EPA's All Appropriate Inquiry (AAI), and customized client formats are regularly conducted, and if necessary, followed-up with Phase II subsurface investigations and Remedial Cost Estimates. Moisture intrusion assessments have been performed when needed with moisture meters or intrusive cuts to verify and quantify any damages, and find and address the point source. Asbestos screenings and pre-demolition surveys, and radon and lead-based paint surveys are added to the environmental scope when requested or required. ALTA surveys and Zoning Reports are part of the engagements for his team. For development projects,

Mr. Geiger and his team provide Document and Cost Reviews, Draw Inspections, Funds Control and Disbursement services, and Completion Commitments to lender and owner clients to manage construction cost, quality, and schedule risks. He and his team routinely deliver these due diligence services on three and two week turnarounds, or on more expedited schedules when necessary to support a client with their transaction.

Solutions

For real estate owner clients, Mr. Geiger and his team provide programmatic and facility-specific services to reduce costs, manage liabilities, and develop assets and land. Many of the solutions provided to his real estate owner clients are a follow-up to services provided during our acquisition due diligence support. For example, his team has identified low and no cost energy efficiency opportunities with mechanical equipment in the process of performing PCAs, and then taken advantage of utility sponsored programs to fund the implementation and verification of energy conservation measures that attain 5 to 10% in bottom-line cost savings. For recently acquired, aged assets with planned rehabilitation, Mr. Geiger and his team support clients in reducing costs and liabilities associated with the management of asbestos containing materials.

For facility managers, Mr. Geiger and his team provide Facilities Condition Assessment (FCA) services for capital budgeting and planning purposes. The FCA services include the integration of FCA cost data into facilities management software applications for ongoing tracking and management of costs. For entire nationwide portfolios, he and his team have benchmarked all facilities; prioritized high usage facilities for field audits; identified no cost, low-cost, and capital intensive measures; supported the implementation of low cost measures with an return on investment of 18 months or less; evaluated utility rebates and incentives available to apply to the capital intensive measures; and tracked and reported on the facility and portfolio-wide energy consumption and cost savings. For facilities with flooding concerns, Mr. Geiger and his team have provided civil engineering consulting services focused on the evaluation of drainage issues, and the design of enhanced storm-water management capacities to mitigate the risk of loss.

Project Experience

Third-Party Lender Due Diligence Projects. Mr. Geiger and his team execute Phase I ESA, PCA, and PML scopes on a daily basis for institutional, portfolio, CMBS, and SBA lenders. Mr. Geiger is involved in the up-front pricing and project setup phases for single and multi-site portfolio transactions, tracks project progress and schedules, coordinates preliminary updates and notifications of concern for the client, participates in addressing identified concerns, and coordinates the involvement of internal resources to quickly address or quantify those concerns. Mr. Geiger and his team have supported thousands of transactions and he is responsible and accountable for the overall quality of service provided by his team.

Equity-scope, Acquisition Due Diligence Projects. For a variety of equity investor clients, Mr. Geiger and his team provide acquisition due diligence support for healthcare, office, industrial, hospitality, retail, and multi-family properties with scopes of work that exceed the reporting requirements of ASTM standards. For two 53-story and 30-story tower multi-family properties located in Chicago's South Loop, he managed a multi-disciplinary team of PCA specialists in compiling immediate repair and 20-year reserve costs for the Sponsor with the support of building envelope; roof; vertical transportation; structural; and mechanical, electrical and plumbing (MEP) specialists. For a private equity client involved in the acquisition of a New Orleans hotel, he coordinated a Phase I Environmental Site Assessment involving a Moisture Intrusion and Asbestos Containing Materials (ACM) Survey due to known concerns. The scope allowed for quantification of ACMs in the hotel and continued with ACM awareness training, abatement oversight, and negative exposure assessments that enabled the new ownership to realize six figure savings going forward by self-managing their ACM liabilities.

Asset and Facilities Management Projects. For capital budgeting and planning purposes, Mr. Geiger and his team perform PCA and FCA services to define necessary and recommended expenditures on building equipment and systems. For an S&P 500 company and leading seniors housing and healthcare REIT, Mr. Geiger and his team perform PCAs annually on over 150+ properties for the purpose of planning and managing cost expenditures on senior housing, medical office, skilled nursing, and hospital properties with known physical or leasing related concerns. For an electronic measurement equipment manufacturer, Mr. Geiger and his team performed FCAs on over 2 million square feet of manufacturing and R&D facilities in Santa Rosa, California; Colorado Springs, Colorado; and Penang, Malaysia. The FCA services provided a much needed benchmark for the condition of building shell and core, MEP-FP systems, handicap accessibility; and a basis for Board of Director level decisions on planned capital expenditures for the next five and ten year periods. Mr. Geiger and his team integrate their cost data into capital budgeting and planning software systems to provide clients with easy access to facility specific cost data, a tool for the ongoing tracking and updating of maintenance costs, and a dashboard of portfolio-wide data and metrics to facilitate enterprise-wide facilities management.

Affiliations

International Council of Shopping Centers
Urban Land Institute
National Association for Office and Industrial Parks
Association for Corporate Growth
U.S. Green Building Council
Mortgage Bankers Association
Environmental Bankers Association

Speaking

CapRate Healthcare Real Estate Summit, *Design Spectrum*, Chicago, IL 2015
Bisnow, *Design Construction Trends*, Chicago, IL 2015
Bisnow, *Creative Office*, Chicago, IL, 2014

Contact

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Duke - Alabama & Palmetto
CUP XXXX
City of Redlands, San Bernardino County, California

Preliminary Drainage Study

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Original Prepared Date: April 2018
Revision Date(s): July 2018

DJ Arellano, P.E.
Senior Engineer

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SECTION 1 - SUMMARY

PURPOSE

The purpose of this report is to document the hydrologic and hydraulic analyses performed in support of the Duke – Alabama and Palmetto project located in the City of Redlands, County of San Bernardino, California. The project site is located at the northwest corner of Alabama Street and Palmetto Avenue. The project proposes to build a warehouse facility on approximately 55 acres. This report will summarize the hydrologic and hydraulic analyses that were conducted in order to determine the necessary drainage improvements required to provide flood protection for the proposed building and safely convey the runoff through the site.

The scope of this report will include the following:

- Determine the peak 100-year and 10-year flow rates for the developed condition using the San Bernardino County Hydrology Rational Method.
- Determine the required storm drain facilities, alignment, and sizes required to flood protect the project site.
- Determine the necessary basin area and volume required for water quality treatment and to mitigate for increases in runoff.
- Preparation of a preliminary report summarizing the hydrology and hydraulic results.

DESCRIPTION OF WATERSHED

As previously described, the project is proposing a warehouse facility (approximately 1,116,930 square feet) on approximately 55 acres of vacant land. Existing elevations across the site vary from 1202 at the northwest corner to 1224 at the southeast corner (NAVD88 datum). The site currently slopes down at approximately 1.4% grade to the southeast. The existing drainage pattern for the site and the general area is characterized by sheet flows that follow the slope to the northwest. The runoff in this area is collected by an existing inlet located near the northwest corner. The inlet continues to convey runoff to the northwest and towards the Santa Ana River.

PROPOSED CONDITIONS

The project site is not impacted by off-site flows as there are existing streets around the perimeter of the project that convey any offsite flow away from the site. On-site flows generated by the proposed project will surface flow through the site utilizing ribbon gutters, curb and gutters, and grate inlets. There will be two subsurface storm drain lines that will be used to convey flow into the proposed infiltration basin. The basin is located along the northwesterly corner of the site. The basin will all ultimately discharge into the existing Line A storm drain.

Line A is an existing 96 inch diameter storm drain facility located along the frontage of Alabama Street. The As-Built plans for Line A show a hydraulic jump at approximately station 74+00. At this station, it also appears to be at a natural low point. In order to prevent the hydraulic jump from shooting out of the natural ground, the project intends to mitigate for increase runoff. Refer to Section 3 for more information on the hydraulic analysis and Appendix C to view the As-Built plans for Line A.

As previously mentioned, the lack of downstream facilities will require mitigation of increased flow. In order to mitigate the increase in runoff and not adversely affect the downstream facilities, the project proposes to discharge 64.8 cfs. Emergency escapes will be provided in the basin in case of a failure or improper maintenance of the infiltration basin. Emergency escapes will allow flow to escape into Alabama Street where flow will continue to drain north towards the Santa Ana River as has been the case historically.

METHODOLOGY

HYDROLOGY

Hydrologic calculations were performed in accordance with the San Bernardino County Hydrology Manual, dated August 1986. The rational method and synthetic unit hydrograph methods were utilized in hydrologic analyses.

The rainfall values were derived from National Oceanic and Atmospheric Administration (NOAA) Atlas 14 that are available on the NOAA website. Soil types were derived from the United States Department of Agriculture (USDA) National Resources Conservation Service (NRCS) web site.

Hydrology calculations were performed using a computer program developed by CivilDesign Corporation and Joseph E. Bonadiman and Associates Inc. The computer program is commonly referred to as CivilD which performs hydrologic calculations as outlined in the hydrology manual.

The Rational Method was used to determine the peak flow rates used to size and design the subsurface storm drain systems to convey on-site flows to the proposed basin. The flow rates were computed by generating a hydrologic "link-node" model in which the overall area is divided into separate drainage sub-areas, each tributary to a concentration point (node) determined by the proposed layout and grading.

The Synthetic Unit Hydrograph Method was utilized to determine the flow rates and volumes needed to evaluate and size the proposed infiltration basin in order to mitigate peak flow rates from the project site.

HYDRAULICS

Based on the results from the Rational Method Hydrology, a steady state hydraulic analysis of the storm drain system was performed to size/analyze on-site subsurface storm drain systems. The facilities were analyzed under the established 100-year flow rates. The computer program, Water Surface and Pressure Gradient (WSPG) from CivilDesign, Corp. Version 14.06 (originally Los Angeles County Flood Control District Program F0515P) was used to analyze the system. For additional information and results, see Appendix A.

Normal depth calculations and inlet calculations were performed using the Hydraulic Toolbox 4.1 Software developed by Federal Highway Administration (FHWA) in cooperation with Aquaveo. For results, see Appendix B.

Water quality basin calculations were performed using worksheets from the Santa Ana watershed region. Preliminary calculations and additional details can be found in the Preliminary WQMP (P-WQMP).

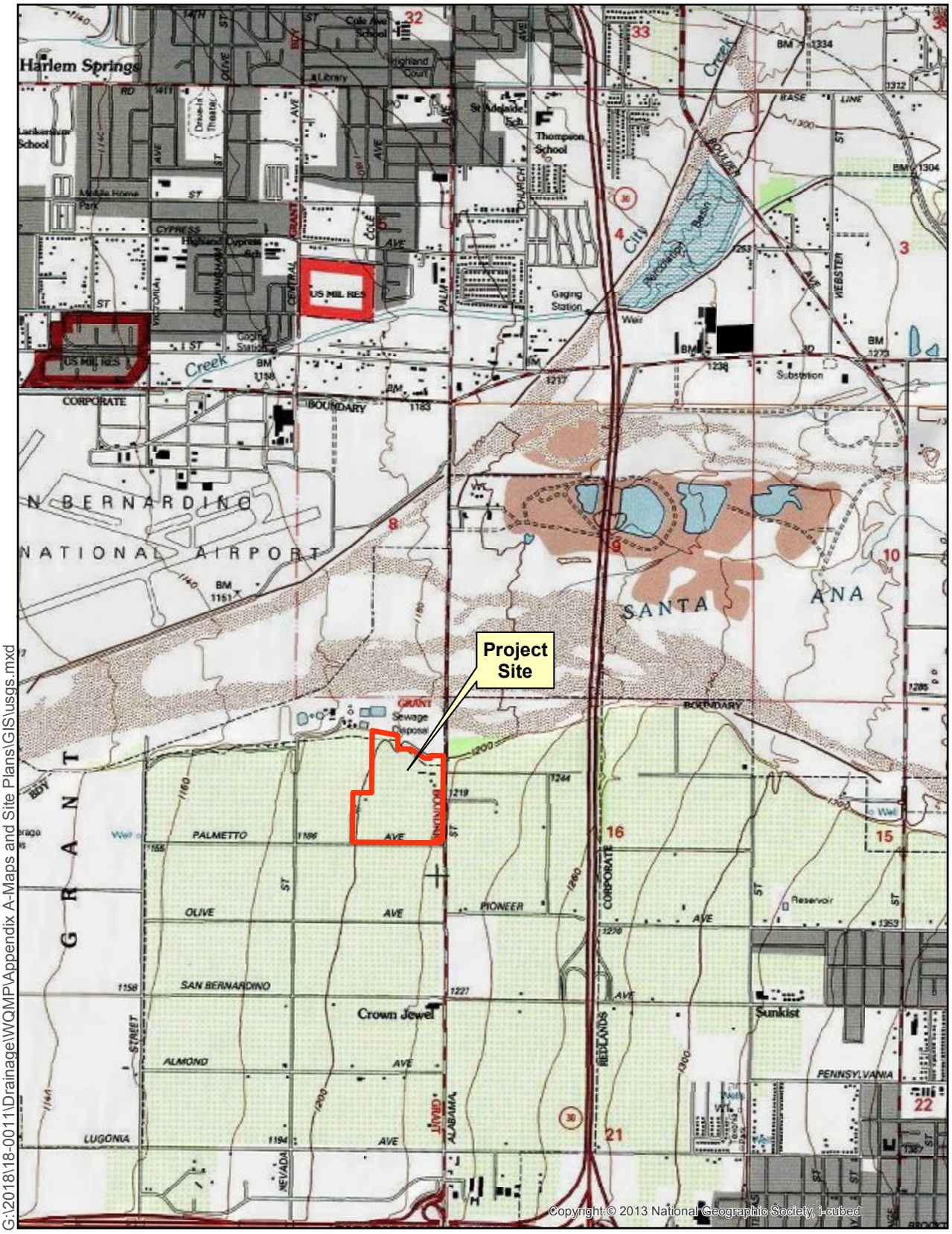
FIG. 1 VICINITY MAP

FIG. 2 USGS TOPOGRAPHY MAP

FIG. 3 AERIAL PHOTOGRAPH

FIG. 4 RECEIVING WATERBODIES

Figure 1. Vicinity Map



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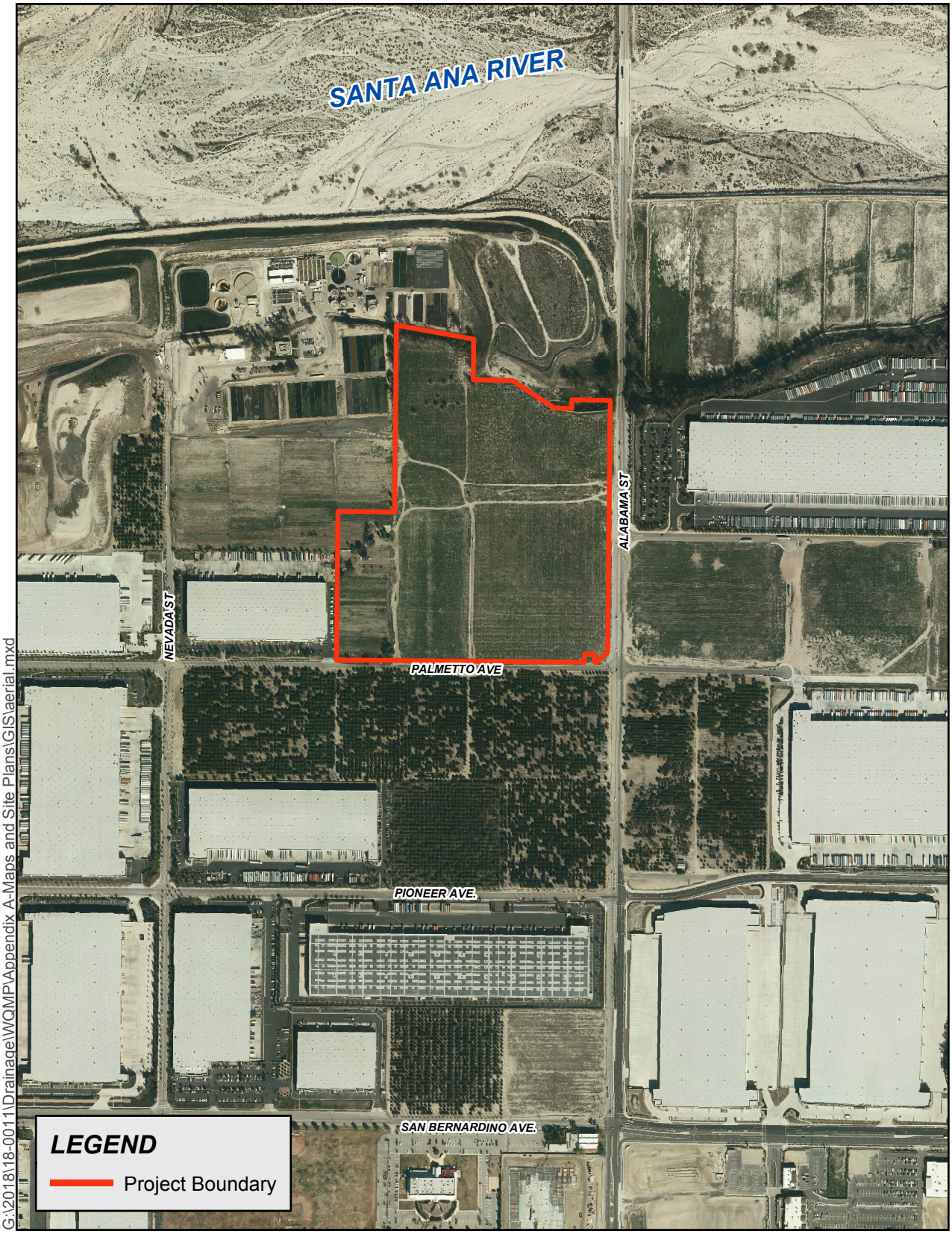
Sources: ESRI / USGS 7.5min Quad

Figure 2. USGS Topography Map

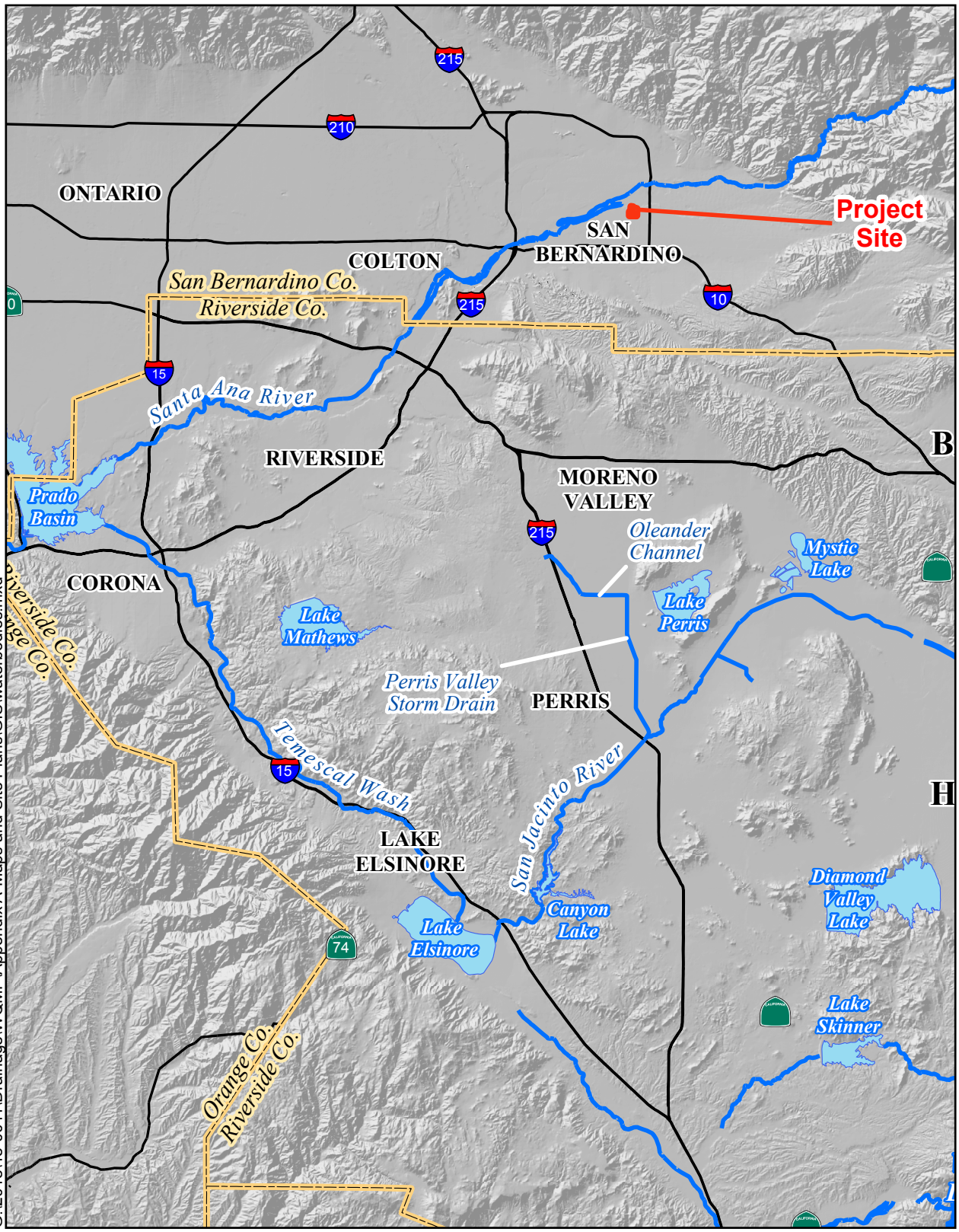
0 1,000 2,000
Feet



Sources: County of Riverside GIS, 2013; Eagle Aerial, April 2012.

Figure 3. Aerial Photograph

0 400 800 Feet



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Sources: USGS 30 Meter DEM;
USGS Digital Line Graph

Figure 4. Receiving Waterbodies

0 2 4 6
Miles

Flowpath

SECTION 2 - HYDROLOGY ANALYSIS

HYDROLOGY PARAMETERS

The San Bernardino County Hydrology Manual was used to determine several of the hydrological parameters. The following rainfall depths were utilized in the hydrology analyses. The rainfall values were obtained from the NOAA Atlas 14 website:

Table 1 – Precipitation Values

	Duration
Storm Event	1-Hour (inches)
2-Year	0.49
100-Year	1.25

The value for slope of intensity was determined to be 0.60. The NOAA Atlas 14 rainfall point precipitation table and the isohyetal maps from the San Bernardino County Hydrology manual have also been included in Appendix A.

Based on the Figure C-11 in the San Bernardino County Hydrology Manual, the project site is classified as soil type A. An NRCS Soils Survey Report was also created to compare soil types. The NRCS Soils Report also classified the project site as soil type A. The NRCS soils map and Figure C-11 is included in Appendix A.

The cover type was determined based on the existing land cover and proposed land use of the site. Hydrological computations for the existing condition were done using 'Undeveloped – Poor Cover'. The commercial landscaping cover type was used to represent the developed condition. The table below summarizes the runoff index values and the recommended values for percentage of impervious cover for each category:

Table 2 – Cover Type

Cover Type	Soil Group A	Soil Group B	Soil Group C	Soil Group D	Percentage of Impervious Cover
Undeveloped Poor Cover	67	78	86	89	0%
Commercial Landscaping	32	56	69	75	90%

ON-SITE RATIONAL METHOD HYDROLOGY

The rational method was used to determine peak flow rates in order to adequately size the proposed subsurface storm drains and associated inlets used to convey on-site flows to the proposed infiltration basin. The project site was hydrologically modeled as one watershed, and broken down into subareas. All of the subareas are tributary to Basin-1. The project is comprised of approximately 15% pervious cover (landscaping and basin area). The project was modeled as commercial land use, which assumes a 10% pervious cover and is slightly more conservative than what is proposed. As previously described, the basin will utilize an outlet structure to dewater the basin and discharge flows into the Line-A storm drain within Alabama Street.

Area-12 was infeasible to drain into the infiltration basin due to connecting to existing grading on Palmetto and providing a balanced site for earthwork quantities. Area-12 will drain into an infiltration trench using curb cuts and once the water quality volume is retained, the higher flows will spill out through the same curb cuts and drain down Palmetto Avenue.

The following table summarizes the rational method results at key points:

Table 3 – Rational Method Results

Point of Interest	10-Year Peak Flow Rate (cfs)	100-Year Peak Flow Rate (cfs)
Node 102– Initial Flow from Area-1	7.8	12.8
Add Area at Node 103 – Subarea Flow from Area-2	19.1	11.3
Node 103 – Total Flow tributary to Line 1 and Basin -1	19.1	31.8
Add Area at Node 104 – Subarea Flow from Area-3	6.0	10.5
Node 104 – Total Flow tributary to Line 1 and Basin -1	25.1	42.4
Add Area at Node 105 – Subarea Flow from Area-4	5.6	9.9
Node 105 – Total Flow tributary to Line 1 and Basin -1	30.7	52.3
Add Area at Node 106 – Subarea Flow from Area-5	10.9	19.2
Node 106– Total Flow tributary to Line 1 and Basin -1	41.6	71.5
Node 109 – Initial Flow from Area-6	10.8	17.7
Add Area at Node 110– Subarea Flow from Area-7	10.1	17.2
Node 110 – Total Flow tributary to Basin -1	20.8	34.9
Add Area at Node 111 – Subarea Flow from Area-8	6.0	10.8
Node 111 – Total Flow tributary to Basin -1	26.9	45.7
Add Area at Node 112 – Subarea Flow from Area-9	4.8	8.7
Node 112 – Total Flow tributary to Basin -1	31.7	54.4
Node 114– Initial Flow from Area-10 tributary to Line-2	4.9	8.0
Add Area at Node 107 – Subarea Flow from Area-11	1.4	4.8
Node 107 – Total Flow tributary to Basin-1	77.4	134.9
Node 202 – Total flow tributary to infiltration trench	1.2	1.9

The rational method output files and hydrology map have been included in Appendix A.

ON-SITE UNIT HYDROGRAPH METHOD HYDROLOGY

The unit hydrograph method was used to determine the peak flow rates and volumes in order to adequately size the proposed basin to address increased runoff mitigation. A unit hydrograph was performed for the entire project site (54.7 acres). Unit hydrographs were performed for both the existing condition and developed condition. The existing condition is used to establish a baseline for comparative purposes. The developed condition is used for design purposes, it was utilized in the basin routing analysis in order to size and analyze the proposed basin. The following table summarizes the results of the unit hydrograph analysis:

Table 4 – Unit Hydrograph Results

	Existing Condition		Proposed Condition	
Storm Event	Volume (Ac-ft.)	Peak Flow (cfs)	Volume (Ac-ft.)	Peak Flow (cfs)
100-Year, 24-Hour	16.352	114.6	19.706	137.6

The unit hydrograph output files and hydrology map have been included in Appendix A.

SECTION 3 - HYDRAULIC ANALYSIS

ON-SITE STORM DRAIN FACILITIES

The project proposes minimal subsurface storm drain for on-site conveyance. All onsite flows will rely on surface flow to convey on-site flows to the proposed infiltration basin. All on-site flows will be directed into the water quality infiltration basin for treatment. An outlet structure will control outflow for flows in excess of the water quality volume. The basin outflow will be discharged into the proposed Lateral-A1 storm drain. The outlet structure will mitigate the 100-year flow rate to 64.8 cfs before discharging into Line-A.

Line-1

Line-1 is a proposed 48" HDPE storm drain that will convey a total of 71.5 cfs from the proposed grate inlet located in the north eastern area of the truck court. A hydraulic model for this storm drain system will be created during final engineering. The initial hydraulic grade line (HGL) will be determined from the 100-year 24-hour basin routing model. Hydraulic Toolbox was used to preliminarily size Line-1.

Line-2

Line-2 is a proposed 24" HDPE storm drain that will convey a total of 8.0 cfs from the proposed grate inlet located in the south western parking area. A hydraulic model for this storm drain system will be created during final engineering. The initial hydraulic grade line (HGL) will be determined from the 100-year 24-hour basin routing model. Hydraulic Toolbox was used to preliminarily size Line-2.

Lateral-A1 (On-site/Off-site)

Lateral-A1 is a proposed 60" HDPE storm drain that will convey a total of 64.8 cfs from the proposed outlet structure located in the basin. A hydraulic model for this storm drain system was created to determine the stage-storage-discharge table through an iterative process. (See Basin Routing Analysis in this Section) The initial hydraulic grade line (HGL) was determined to be 1200.31 from the 100-year proposed condition WSPG model of Line-A.

Inlet Capacities

Line-1 and Line-2 use ADS grates grate inlets to convey onsite flows into the infiltration basin. The grates are sized to handle the 100-year peak flow rates. A table that includes the grates associated with their respective Node number and peak flowrate will be included during final engineering.

Drawdown

Basin-1 is an infiltration basin that has a natural infiltration rate of 3.0 inches per hour. The basin bottom area is 81,206 square feet. The basin is required by the County of San Bernardino to drain within 48 hours. The basin will drain the water quality volume and the increase in runoff in approximately 31.3 hours. Refer to the PWQMP Report for more information.

OFF-SITE STORM DRAIN FACILITIES

The project proposes to improve Alabama Street and Palmetto Avenue by widening the current edge of pavement and constructing curb and gutter along the project frontage. Natural low points along the project frontage on Alabama Street or Palmetto Avenue do not exist, so there are no further proposed storm drain connections to Line-A. A peak flow rate of 64.8 cfs is expected per the routing analysis (See Section 3 and Appendix B for more detail) to discharge into Line-A.

As previously mentioned, the project proposes to discharge its onsite flows into Line-A. Line-A is an existing storm drain facility with an upstream terminus at the corner of Alabama Street and Almond Avenue. This facility extends along Alabama Street and discharges into the Santa Ana River. Line-A will not be negatively impacted. Refer to section below and Routing Section for further information.

Line-A

Line-A is a varied sized reinforced concrete pipe (RCP) storm drain that currently conveys a total of 694.1 cfs. A hydraulic model for the existing condition of this storm drain system was created for comparative purposes. The existing stationing of Line A begins upstream at 10+00 and ends downstream at 84+00. The stationing had to be reversed in order for the hydraulic model to properly function. The WSPG model for the existing condition shows there is a hydraulic jump that occurs at station 73+33.60 (per As-built stationing) and 18+72.97 (per revised stationing). The hydraulic jump is located at a natural low point. This hydraulic jump controls the amount of runoff the project site may discharge into Line-A. Refer to Appendix C for Line-A As-Built plans and Appendix B for the hydraulic models.

A WSPG hydraulic model for the proposed condition of Line-A was created to determine how much runoff can be added to the storm drain system without causing the existing HGL at the low point to increase more than 2 feet above the existing natural ground. According to the As-Built plans for Line-A, the low point has an elevation of 1183.7. This means that the increase in runoff cannot cause the HGL to increase more than approximately 2 feet, which results in an elevation of roughly 1185.7'. Through an iterative process, it was determined that the project cannot outlet more than 80 cfs into Line-A. However, the project proposes to discharge only 64.8 cfs into Line-A due to the inlet control condition. Below is a table of some of the iterative results.

Table 5 – Iterations of mitigated flowrate at junction

Q (cfs)	HGL @ Hydraulic Jump (Elev.)	HGL @ Proposed Junction (Elev.)
50	1184.5	1200.31
70	1184.4	1200.31
80	1185.7	1200.31
100	1186.2	1200.31
129.8	1187.3	1200.31

BASIN ROUTING ANALYSIS

A routing analysis was completed to demonstrate that the basin contains substantial volume needed to mitigate to regulate outflow to maximum of 80 cfs for the all events up to the 100-year storm event.

A stage-storage-discharge table was determined through an iterative process of the proposed Lateral A-1. A hydraulic model was created based on the assumption of an initial HGL of 1200.31 (results from the proposed condition of Line-A), a slope of 0.003 ft/ft and a diameter size of 60". The hydraulic model was ran using different peak flowrates, which gave the water surface elevation in the basin for that particular run. For example, a flowrate of 80 cfs was used and it resulted in an HGL of 1203.4. From the basin stage-storage table, the volume at 1203.4 was used in acre-feet. This allowed us to create the stage-storage-discharge table using an iterative process. Refer to Appendix B for the stage-storage-discharge table.

The storage volume takes into account that the basin is connected to a single discharge point. In addition, it was assumed that there would not be any infiltration outflow as the basin is filling up for water quality volumes to remain conservative.

The following table displays the result of the routing analysis for the 100-year 24-hour storm event to demonstrate that the basin provides the necessary storage volume needed to restrict the outflow to maximum flowrate of 80 cfs.

The results achieve a flowrate to be 64.8 cfs, which is less than the maximum allowed flowrate of 80 cfs. This concludes that the project will not negatively impact the existing hydraulic jump or the overall hydraulics in Line-A.

Table 6 – Basin Routing Results

	Existing Condition		Proposed Condition		Basin Routing Results		
Storm Event	Volume (AC-ft.)	Peak Flow (cfs)	Volume (AC-ft.)	Peak Flow (cfs)	Peak Flow (cfs)	Maximum Basin Depth (feet)	Water Surface Elevation
100-Year, 24-Hour	16.352	114.6	19.706	137.6	64.8	3.4	1202.9

The basin routing calculations and other hydraulic calculations have been provided in Appendix B.

SECTION 4 - CONCLUSION

Based on the analyses and results of this report, the following conclusions were derived from the hydrology and hydraulic results:

- The proposed drainage improvements will adequately convey flows to the basin and provide flood protection for the 100-year storm event.
- The proposed basin will provide adequate water quality treatment and drawdown within 48 hours.
- The proposed project will not impact flooding condition to upstream or downstream properties.

APPENDIX A – HYDROLOGY

POINT PRECIPITATION VALUES (NOAA ATLAS 14)/ISOHYETAL MAPS

NOAA Atlas 14, Volume 6, Version 2
Location name: Redlands, California, USA*
Latitude: 34.0898°, Longitude: -117.2126°
Elevation: 1198.56 ft**
* source: ESRI Maps
** source: USGS

POINT PRECIPITATION FREQUENCY ESTIMATES

Sanja Perica, Sarah Dietz, Sarah Heim, Lillian Hiner, Kazungu Maitaria, Deborah Martin, Sandra Pavlovic, Ishani Roy, Carl Trypaluk, Dale Unruh, Fenglin Yan, Michael Yekta, Tan Zhao, Geoffrey Bonnin, Daniel Brewer, Li-Chuan Chen, Tye Parzybok, John Yarchoan

NOAA, National Weather Service, Silver Spring, Maryland

PF_tabular | PF_graphical | Maps_&_aerials

PF tabular

PDS-based point precipitation frequency estimates with 90% confidence intervals (in inches)[1]

Duration	Average recurrence interval (years)									
	1	2	5	10	25	50	100	200	500	1000
5-min	**0.100** (0.083-0.121)	**0.131** (0.109-0.159)	**0.172** (0.142-0.209)	**0.206** (0.169-0.253)	**0.254** (0.201-0.323)	**0.291** (0.226-0.378)	**0.330** (0.250-0.440)	**0.371** (0.273-0.509)	**0.428** (0.302-0.613)	**0.474** (0.323-0.703)
10-min	**0.143** (0.119-0.174)	**0.187** (0.156-0.228)	**0.246** (0.204-0.300)	**0.295** (0.243-0.363)	**0.363** (0.289-0.462)	**0.417** (0.324-0.542)	**0.473** (0.359-0.630)	**0.532** (0.392-0.730)	**0.614** (0.433-0.879)	**0.679** (0.463-1.01)
15-min	**0.173** (0.144-0.211)	**0.227** (0.188-0.275)	**0.298** (0.247-0.363)	**0.357** (0.293-0.439)	**0.440** (0.349-0.559)	**0.504** (0.392-0.656)	**0.572** (0.434-0.762)	**0.643** (0.474-0.882)	**0.742** (0.524-1.06)	**0.822** (0.560-1.22)
30-min	**0.259** (0.215-0.314)	**0.338** (0.281-0.411)	**0.444** (0.368-0.542)	**0.533** (0.438-0.655)	**0.656** (0.521-0.834)	**0.753** (0.585-0.978)	**0.854** (0.647-1.14)	**0.960** (0.707-1.32)	**1.11** (0.782-1.59)	**1.23** (0.835-1.82)
60-min	**0.378** (0.314-0.459)	**0.494** (0.410-0.600)	**0.649** (0.538-0.791)	**0.778** (0.639-0.956)	**0.958** (0.761-1.22)	**1.10** (0.855-1.43)	**1.25** (0.945-1.66)	**1.40** (1.03-1.92)	**1.62** (1.14-2.32)	**1.79** (1.22-2.66)
2-hr	**0.541** (0.450-0.657)	**0.696** (0.579-0.846)	**0.902** (0.748-1.10)	**1.07** (0.881-1.32)	**1.31** (1.04-1.66)	**1.49** (1.16-1.94)	**1.68** (1.27-2.23)	**1.87** (1.38-2.57)	**2.14** (1.51-3.06)	**2.35** (1.60-3.49)
3-hr	**0.665** (0.553-0.808)	**0.851** (0.707-1.03)	**1.10** (0.908-1.34)	**1.30** (1.07-1.60)	**1.58** (1.25-2.00)	**1.79** (1.39-2.33)	**2.01** (1.52-2.68)	**2.24** (1.65-3.07)	**2.55** (1.80-3.65)	**2.80** (1.91-4.14)
6-hr	**0.929** (0.773-1.13)	**1.18** (0.983-1.44)	**1.52** (1.26-1.85)	**1.79** (1.47-2.20)	**2.17** (1.72-2.76)	**2.46** (1.91-3.19)	**2.75** (2.08-3.66)	**3.05** (2.25-4.19)	**3.47** (2.44-4.96)	**3.79** (2.58-5.61)
12-hr	**1.23** (1.02-1.50)	**1.58** (1.31-1.92)	**2.04** (1.69-2.48)	**2.40** (1.98-2.96)	**2.91** (2.31-3.70)	**3.29** (2.56-4.28)	**3.68** (2.79-4.91)	**4.08** (3.01-5.60)	**4.63** (3.26-6.62)	**5.04** (3.44-7.48)
24-hr	**1.65** (1.46-1.91)	**2.15** (1.90-2.48)	**2.79** (2.46-3.23)	**3.31** (2.90-3.86)	**4.01** (3.40-4.84)	**4.55** (3.78-5.60)	**5.10** (4.13-6.42)	**5.66** (4.46-7.32)	**6.41** (4.85-8.64)	**6.99** (5.11-9.75)
2-day	**2.03** (1.80-2.34)	**2.67** (2.36-3.08)	**3.52** (3.10-4.07)	**4.21** (3.68-4.91)	**5.15** (4.36-6.20)	**5.87** (4.87-7.22)	**6.61** (5.35-8.32)	**7.37** (5.81-9.54)	**8.40** (6.36-11.3)	**9.20** (6.73-12.8)
3-day	**2.20** (1.94-2.53)	**2.93** (2.59-3.38)	**3.90** (3.44-4.51)	**4.69** (4.11-5.47)	**5.79** (4.91-6.98)	**6.65** (5.52-8.17)	**7.52** (6.10-9.48)	**8.44** (6.65-10.9)	**9.69** (7.33-13.1)	**10.7** (7.80-14.9)
4-day	**2.36** (2.09-2.72)	**3.17** (2.80-3.65)	**4.25** (3.75-4.92)	**5.15** (4.50-6.00)	**6.39** (5.41-7.69)	**7.36** (6.10-9.05)	**8.36** (6.77-10.5)	**9.40** (7.41-12.2)	**10.8** (8.21-14.6)	**12.0** (8.77-16.7)
7-day	**2.71** (2.40-3.12)	**3.69** (3.26-4.25)	**5.00** (4.41-5.79)	**6.09** (5.33-7.11)	**7.61** (6.45-9.17)	**8.81** (7.31-10.8)	**10.0** (8.14-12.6)	**11.3** (8.94-14.7)	**13.1** (9.94-17.7)	**14.6** (10.6-20.3)
10-day	**2.93** (2.59-3.37)	**4.02** (3.56-4.64)	**5.49** (4.85-6.36)	**6.72** (5.88-7.84)	**8.43** (7.14-10.2)	**9.78** (8.12-12.0)	**11.2** (9.06-14.1)	**12.7** (9.97-16.4)	**14.7** (11.1-19.8)	**16.3** (11.9-22.8)
20-day	**3.60** (3.19-4.15)	**5.01** (4.43-5.78)	**6.91** (6.09-7.99)	**8.50** (7.44-9.91)	**10.7** (9.10-12.9)	**12.5** (10.4-15.4)	**14.4** (11.6-18.1)	**16.3** (12.9-21.1)	**19.0** (14.4-25.7)	**21.2** (15.5-29.6)
30-day	**4.25** (3.76-4.89)	**5.90** (5.22-6.81)	**8.15** (7.19-9.43)	**10.1** (8.80-11.7)	**12.7** (10.8-15.3)	**14.8** (12.3-18.3)	**17.1** (13.8-21.5)	**19.4** (15.3-25.1)	**22.7** (17.2-30.6)	**25.4** (18.5-35.4)
45-day	**5.10** (4.51-5.87)	**7.04** (6.22-8.12)	**9.68** (8.54-11.2)	**11.9** (10.4-13.9)	**15.1** (12.8-18.2)	**17.6** (14.6-21.7)	**20.3** (16.4-25.5)	**23.1** (18.2-29.9)	**27.0** (20.4-36.4)	**30.2** (22.1-42.1)
60-day	**5.98** (5.30-6.89)	**8.17** (7.23-9.43)	**11.2** (9.86-12.9)	**13.7** (12.0-16.0)	**17.3** (14.7-20.9)	**20.2** (16.8-24.8)	**23.2** (18.8-29.2)	**26.4** (20.8-34.2)	**30.9** (23.4-41.7)	**34.6** (25.3-48.2)

[1] Precipitation frequency (PF) estimates in this table are based on frequency analysis of partial duration series (PDS).

Numbers in parenthesis are PF estimates at lower and upper bounds of the 90% confidence interval. The probability that precipitation frequency estimates (for a given duration and average recurrence interval) will be greater than the upper bound (or less than the lower bound) is 5%. Estimates at upper bounds are not checked against probable maximum precipitation (PMP) estimates and may be higher than currently valid PMP values.

Please refer to NOAA Atlas 14 document for more information.

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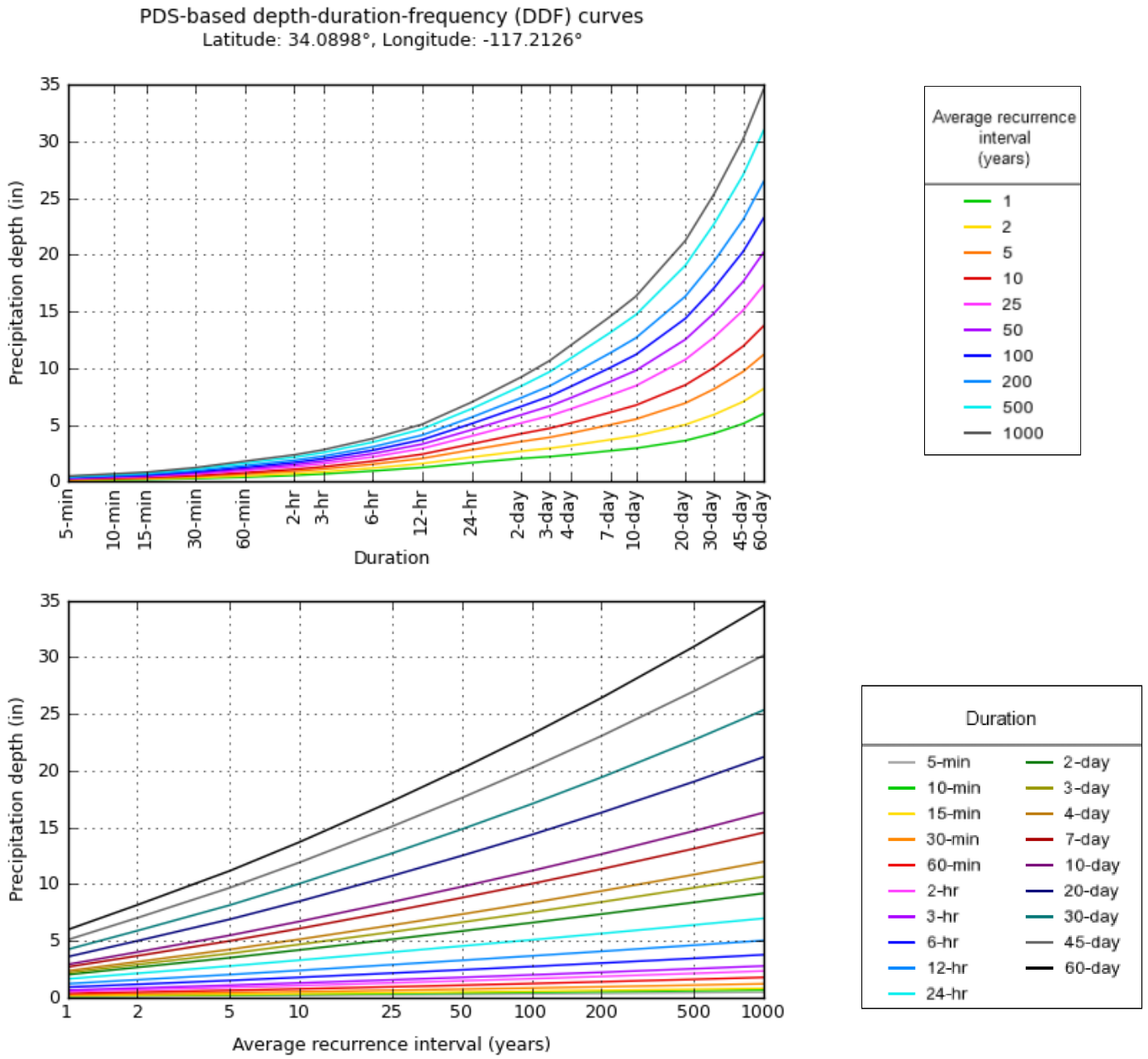
PF graphical



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Maps & aerials

Small scale terrain

Large scale terrain

Large scale map

Large scale aerial

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National Oceanic and Atmospheric Administration
National Weather Service
National Water Center
1325 East West Highway
Silver Spring, MD 20910
Questions?: HDSC.Questions@noaa.gov

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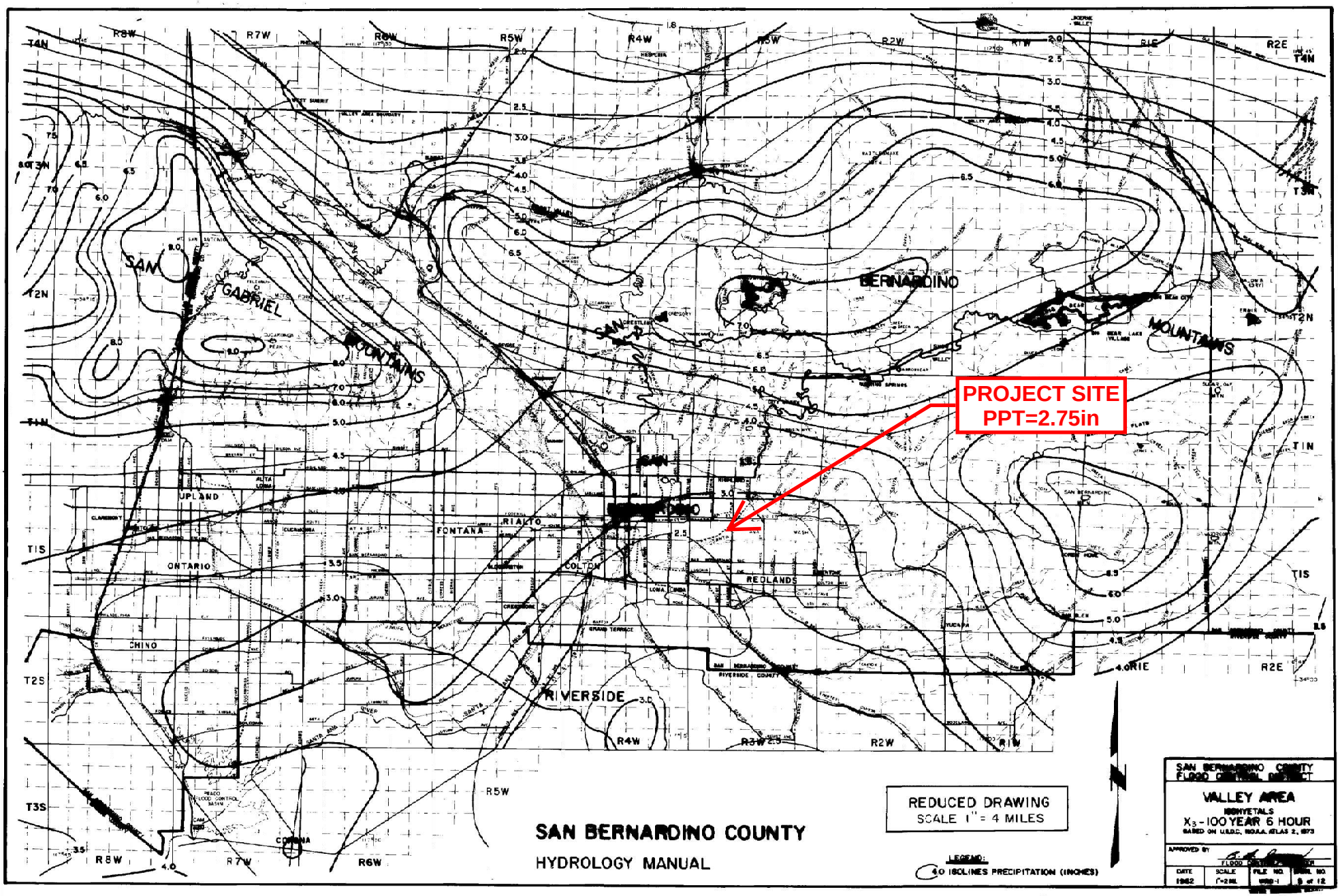
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RIALTO
COLTON
REDLANDS
RIVERSIDE
CORONA
REDUCED DRAWING
SCALE 1" = 4 MILES
LEGEND:
4.0 ISOLINES PRECIPITATION (INCHES)
SAN BERNARDINO COUNTY
HYDROLOGY MANUAL
SAN BERNARDINO COUNTY FLOOD CONTROL DISTRICT
VALLEY AREA
ISOHYETALS
X3 - 100 YEAR 6 HOUR
BASED ON U.S.D.C., N.O.A.A. ATLAS 2, 1973
APPROVED BY
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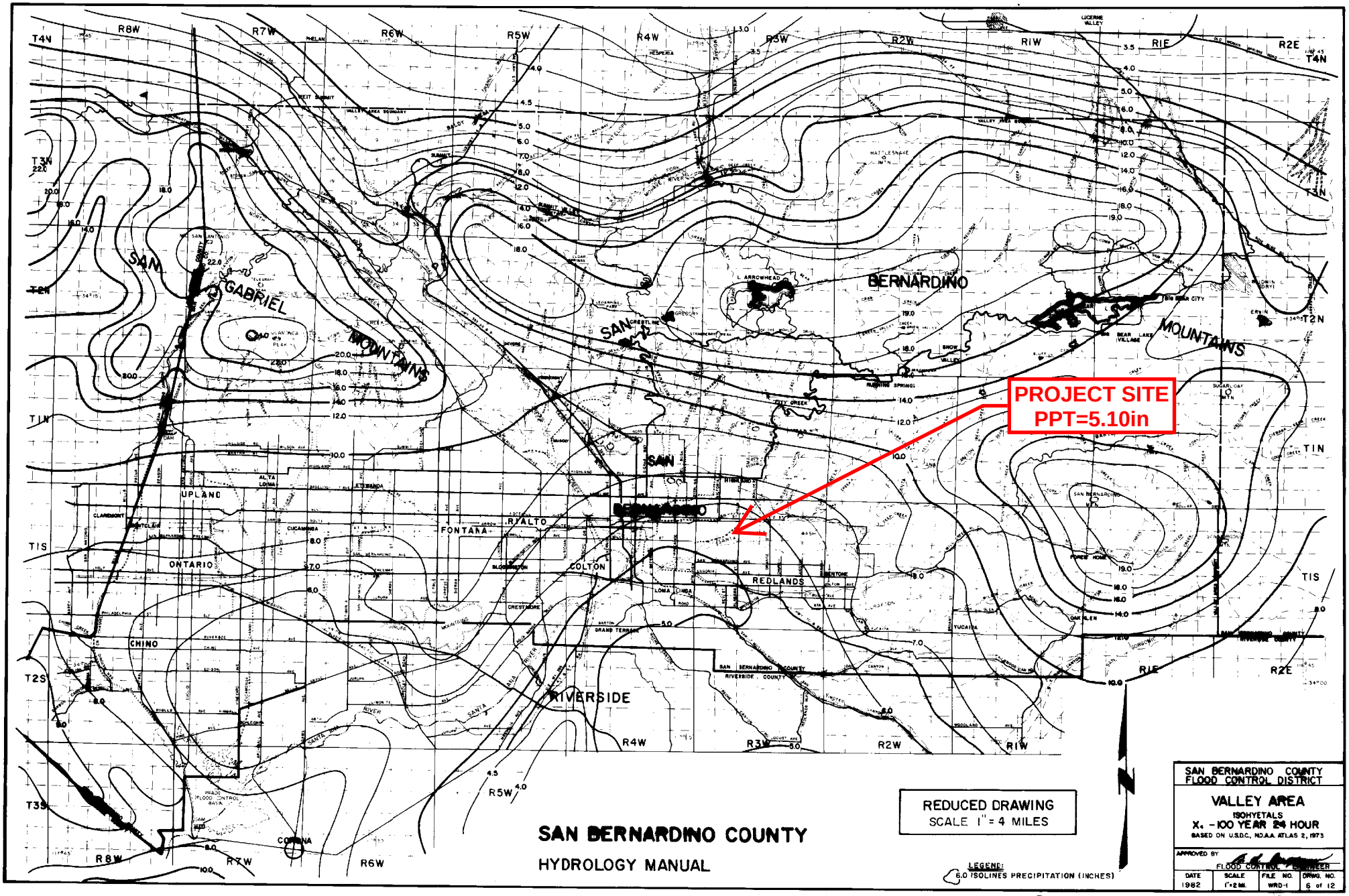
SCALE 1"=2 MI.
FILE NO. WRD-1
DWG. NO. 5 of 12

FIGURE B-5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ISOHYETALS
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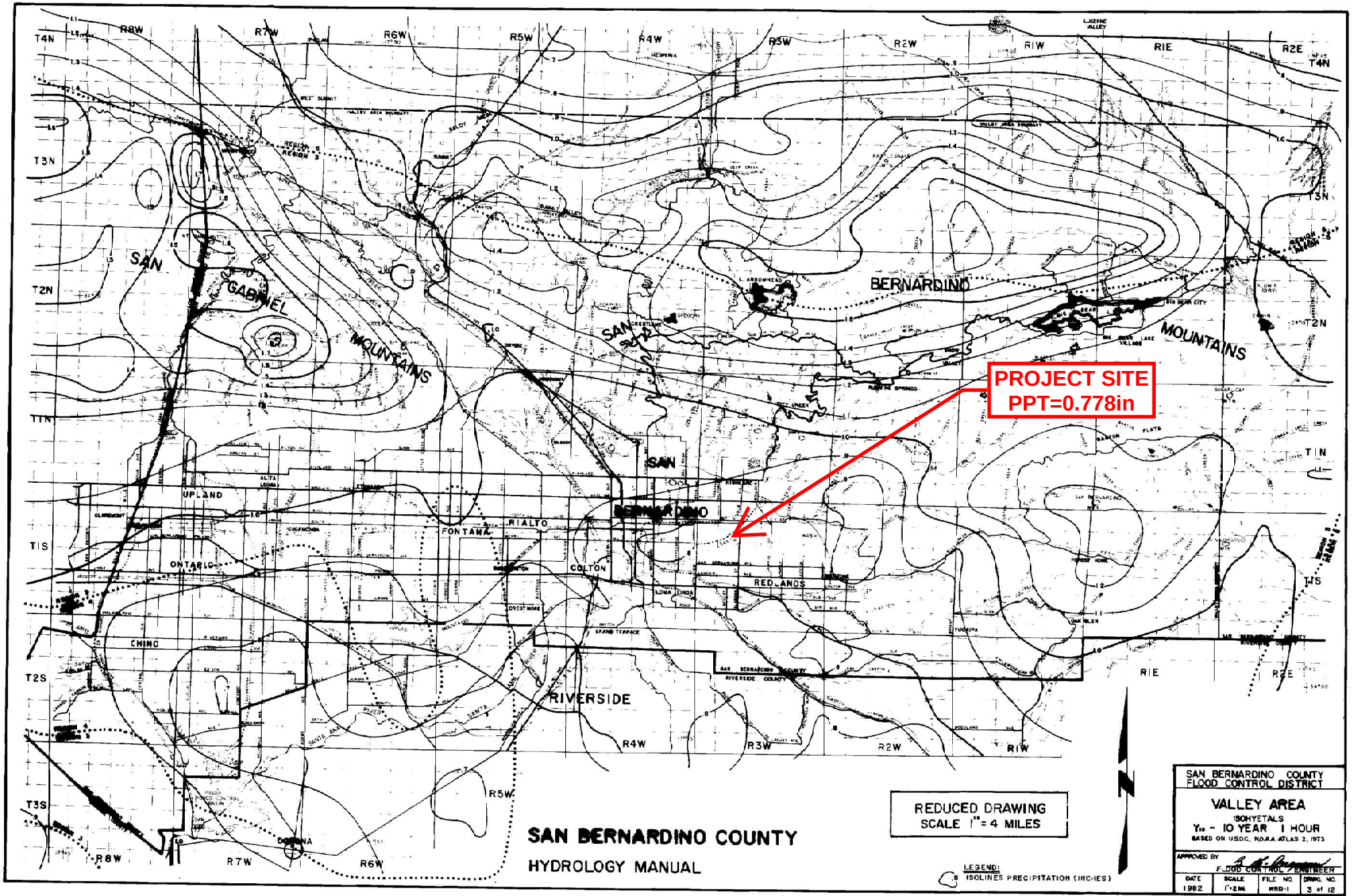
DRWG. NO. 6 of 12

FIGURE B-6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SAN BERNARDINO COUNTY
FLOOD CONTROL DISTRICT
VALLEY AREA
ISOHYETALS
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FLOOD CONTROL ENGINEER
DATE
1982
SCALE
1"=2 MI.
FILE NO.
WRD-1
DRWG. NO.
3 of 12
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SAN BERNARDINO MOUNTAINS
UPLAND
ONTARIO
CHINO
FONTANA
RIALTO
COLTON
SAN BERNARDINO
REDLANDS
LOMA LINDA
RIVERSIDE
CORONA
T4N
T3N
T2N
T1N
T1S
T2S
T3S
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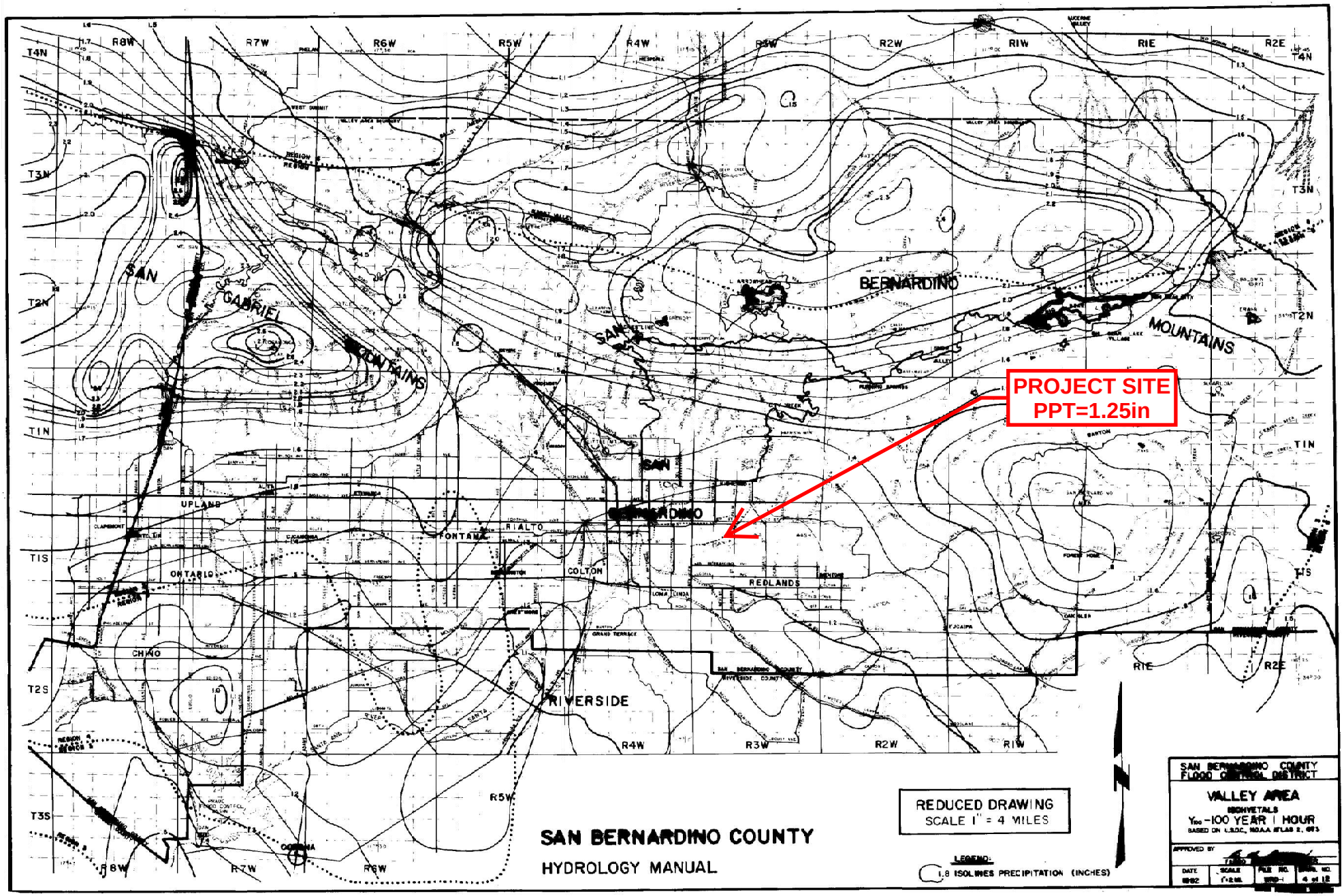
R1E
R2E

FIGURE B-3



B-12

FIGURE B-4

SOIL INFORMATION

Curve (1) Numbers of Hydrologic Soil-Cover Complexes For Pervious Areas-AMC II

Cover Type (3)	Quality of Cover (2)	Soil Group A	B	C	D
NATURAL COVERS -					
Barren (Rockland, eroded and graded land)		78	86	91	93
Chaparral, Broadleaf (Manzonita, ceanothus and scrub oak)	Poor	53	70	80	85
	Fair	40	63	75	81
	Good	31	57	71	78
Chaparral, Narrowleaf (Chamise and redshank)	Poor	71	82	88	91
	Fair	55	72	81	86
Grass, Annual or Perennial	Poor	67	78	86	89
	Fair	50	69	79	84
	Good	38	61	74	80
Meadows or Cienegas (Areas with seasonally high water table, principal vegetation is sod forming grass)	Poor	63	77	85	88
	Fair	51	70	80	84
	Good	30	58	71	78
Open Brush (Soft wood shrubs - buckwheat, sage, etc.)	Poor	62	76	84	88
	Fair	46	66	77	83
	Good	41	63	75	81
Woodland (Coniferous or broadleaf trees predominate. Canopy density is at least 50 percent.)	Poor	45	66	77	83
	Fair	36	60	73	79
	Good	25	55	70	77
Woodland, Grass (Coniferous or broadleaf trees with canopy density from 20 to 50 percent)	Poor	57	73	82	86
	Fair	44	65	77	82
	Good	33	58	72	79
URBAN COVERS -					
Residential or Commercial Landscaping (Lawn, shrubs, etc.)	Good	32	56	69	75
Turf (Irrigated and mowed grass)	Poor	58	74	83	87
	Fair	44	65	77	82
	Good	33	58	72	79
AGRICULTURAL COVERS -					
Fallow (Land plowed but not tilled or seeded)		77	86	91	94

SAN BERNARDINO COUNTY

HYDROLOGY MANUAL

CURVE NUMBERS FOR PERVIOUS AREAS

Figure C-3 (1 of 2)

Curve (1) Numbers of Hydrologic Soil-Cover Complexes For Pervious Areas-AMC II

Cover Type (3)	Quality of Cover (2)	Soil Group A	B	C	D
AGRICULTURAL COVERS (Continued)					
Legumes, Close Seeded (Alfalfa, sweetclover, timothy, etc.)	Poor	66	77	85	89
	Good	58	72	81	85
Orchards, Evergreen (Citrus, avocados, etc.)	Poor	57	73	82	86
	Fair	44	65	77	82
	Good	33	58	72	79
Pasture, Dryland (Annual grasses)	Poor	68	79	86	89
	Fair	49	69	79	84
	Good	39	61	74	80
Pasture, Irrigated (Legumes and perennial grass)	Poor	58	74	83	87
	Fair	44	65	77	82
	Good	33	58	72	79
Row Crops (Field crops - tomatoes, sugar beets, etc.)	Poor	72	81	88	91
	Good	67	78	85	89
Small grain (Wheat, oats, barley, etc.)	Poor	65	76	84	88
	Good	63	75	83	87

Notes:

1. All curve numbers are for Antecedent Moisture Condition (AMC) II.
2. Quality of cover definitions:

   Poor-Heavily grazed, regularly burned areas, or areas of high burn potential. Less than 50 percent of the ground surface is protected by plant cover or brush and tree canopy.

   Fair-Moderate cover with 50 percent to 75 percent of the ground surface protected.

   Good-Heavy or dense cover with more than 75 percent of the ground surface protected.
3. See Figure C-2 for definition of cover types.

SAN BERNARDINO COUNTY
HYDROLOGY MANUAL

CURVE NUMBERS FOR PERVIOUS AREAS

Figure C-3 (2 of 2)

ACTUAL IMPERVIOUS COVER

Land Use (1)	Range-Percent	Recommended Value For Average Conditions-Percent (2)
Natural or Agriculture	0 - 0	0
Public Park	10 - 25	15
School	30 - 50	40
Single Family Residential: (3)		
2.5 acre lots	5 - 15	10
1 acre lots	10 - 25	20
2 dwellings/acre	20 - 40	30
3-4 dwellings/acre	30 - 50	40
5-7 dwellings/acre	35 - 55	50
8-10 dwellings/acre	50 - 70	60
More than 10 dwellings/acre	65 - 90	80
Multiple Family Residential:		
Condominiums	45 - 70	65
Apartments	65 - 90	80
Mobile Home Park	60 - 85	75
Commercial, Downtown Business or Industrial	80 - 100	90

Notes:

1. Land use should be based on ultimate development of the watershed. Long range master plans for the County and incorporated cities should be reviewed to insure reasonable land use assumptions.

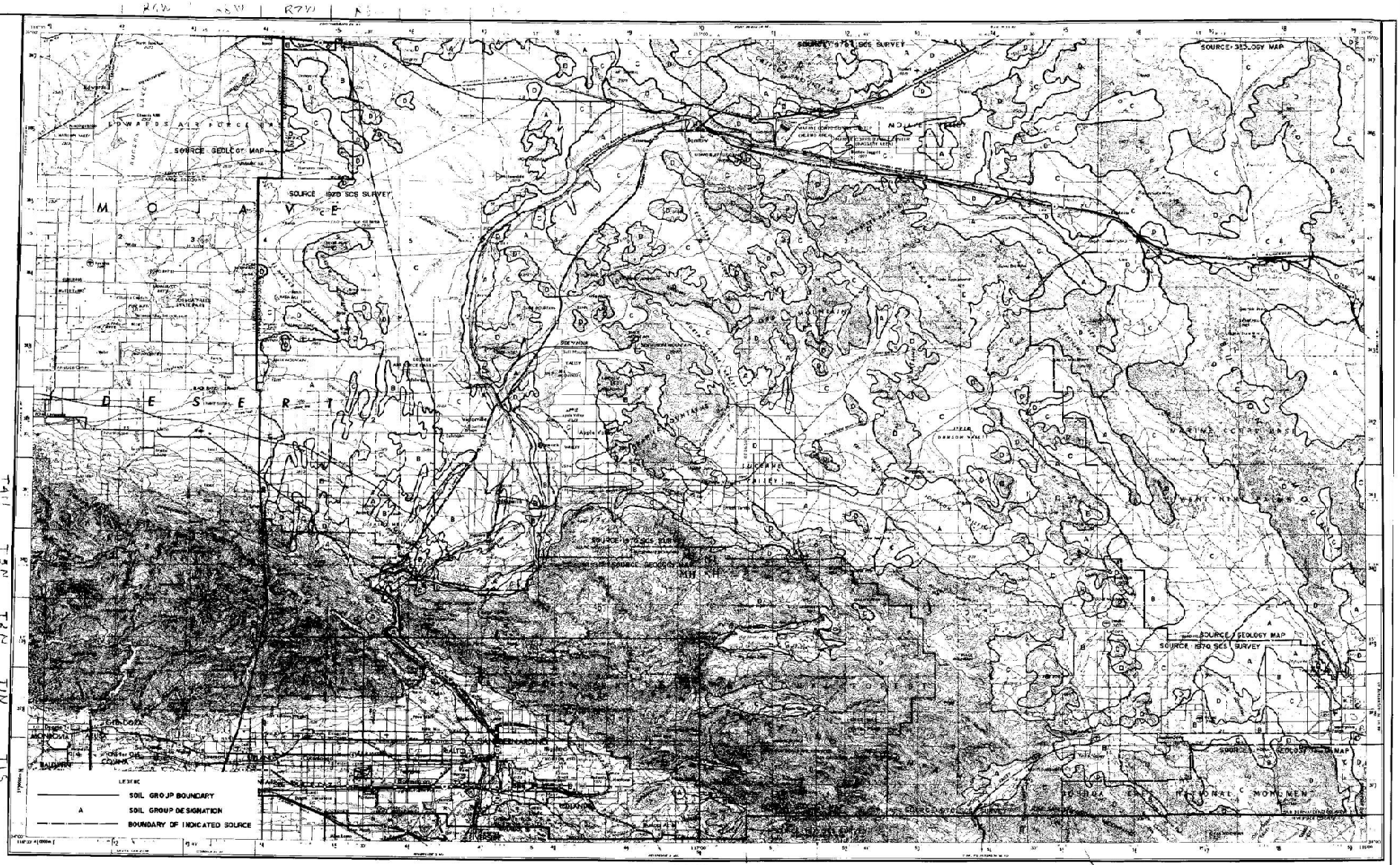
2. Recommended values are based on average conditions which may not apply to a particular study area. The percentage impervious may vary greatly even on comparable sized lots due to differences in dwelling size, improvements, etc. Landscape practices should also be considered as it is common in some areas to use ornamental gravels underlain by impervious plastic materials in place of lawns and shrubs. A field investigation of a study area shall always be made, and a review of aerial photos, where available, may assist in estimating the percentage of impervious cover in developed areas.

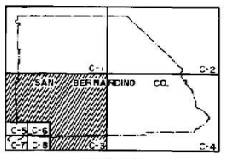
3. For typical equestrian subdivisions increase impervious area 5 percent over the values recommended in the table above.

SAN BERNARDINO COUNTY
HYDROLOGY MANUAL

ACTUAL IMPERVIOUS COVER
FOR
DEVELOPED AREAS

Figure C-4





INDEX MAP

Scale 1:250,000

CONTOUR INTERVAL 100 FEET
WITH SUPPLEMENTARY CONTOURS AT 100 FOOT INTERVALS
TRANSVERSE MERCATOR PROJECTION

BASE MAP REPRODUCED FROM U.S.G.S. "SAN BERNARDINO" TOPOGRAPHIC MAP

SCALE REDUCED BY 1/2

LOCATION DIAGRAM

SAN BERNARDINO COUNTY

HYDROLOGY MANUAL

HYDROLOGIC SOILS GROUP MAP FOR SOUTHCENTRAL AREA

FIGURE C-11

United States Department of Agriculture

NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for San Bernardino County Southwestern Part, California

April 4, 2018

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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Ps—Psamments, Fluvents and Frequently flooded soils.....15
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How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report
Soil Map

Map Scale: 1:3,480 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 50 100 200 300

Feet: 0 150 300 600 900

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 11N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: San Bernardino County Southwestern Part, California
Survey Area Data: Version 9, Sep 11, 2017

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jan 5, 2015—Jan 18, 2015

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background

MAP LEGEND

MAP INFORMATION

imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
HbA	Hanford sandy loam, 0 to 2 percent slopes	46.6	95.8%
Ps	Psamments, Fluvents and Frequently flooded soils	0.0	0.0%
TuB	Tujunga loamy sand, 0 to 5 percent slopes	2.0	4.2%
Totals for Area of Interest		**48.6**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or

landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

San Bernardino County Southwestern Part, California

HbA—Hanford sandy loam, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: hck5
Elevation: 150 to 900 feet
Mean annual precipitation: 10 to 20 inches
Mean annual air temperature: 63 degrees F
Frost-free period: 250 to 280 days
Farmland classification: Prime farmland if irrigated

Map Unit Composition

Hanford and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Hanford

Setting

Landform: Alluvial fans
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Alluvium derived from granite

Typical profile

H1 - 0 to 12 inches: sandy loam
H2 - 12 to 60 inches: fine sandy loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Well drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): High (1.98 to 5.95 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: Rare
Frequency of ponding: None
Available water storage in profile: Moderate (about 7.8 inches)

Interpretive groups

Land capability classification (irrigated): 1
Land capability classification (nonirrigated): 3c
Hydrologic Soil Group: A
Hydric soil rating: No

Minor Components

Greenfield, sandy loam

Percent of map unit: 5 percent
Hydric soil rating: No

Hanford, steeper slopes
Percent of map unit: 5 percent
Hydric soil rating: No

Unnamed
Percent of map unit: 5 percent
Hydric soil rating: No

Ps—Psamments, Fluvents and Frequently flooded soils

Map Unit Setting
National map unit symbol: hckh
Elevation: 10 to 1,500 feet
Mean annual precipitation: 10 to 25 inches
Mean annual air temperature: 59 to 64 degrees F
Frost-free period: 250 to 350 days
Farmland classification: Not prime farmland

Map Unit Composition
Psamments and similar soils: 50 percent
Fluvents and similar soils: 50 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Psamments

Setting
Landform: Drainageways
Landform position (three-dimensional): Riser
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Sandy alluvium

Typical profile
A - 0 to 12 inches: sand
C1 - 12 to 48 inches: fine sand
C2 - 48 to 60 inches: stratified gravelly sand to gravelly loamy sand

Properties and qualities
Slope: 0 to 5 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Somewhat excessively drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): High to very high (5.95 to 19.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: Frequent
Frequency of ponding: None
Available water storage in profile: Low (about 4.1 inches)

Interpretive groups
Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 4w
Hydrologic Soil Group: A
Hydric soil rating: No

Description of Fluvents

Setting
Landform: Drainageways
Landform position (three-dimensional): Riser
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Alluvium

Typical profile
A - 0 to 10 inches: gravelly sand
C1 - 10 to 30 inches: stratified gravelly sand to gravelly loam
C2 - 30 to 60 inches: stratified gravelly sand to gravelly loam

Properties and qualities
Slope: 0 to 5 percent
Depth to restrictive feature: More than 80 inches
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): High (1.98 to 5.95 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: Frequent
Frequency of ponding: None
Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water storage in profile: Moderate (about 6.1 inches)

Interpretive groups
Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4w
Hydrologic Soil Group: A
Hydric soil rating: Yes

TuB—Tujunga loamy sand, 0 to 5 percent slopes

Map Unit Setting
National map unit symbol: 2sx6y
Elevation: 650 to 3,110 feet
Mean annual precipitation: 10 to 25 inches
Mean annual air temperature: 62 to 65 degrees F
Frost-free period: 325 to 365 days
Farmland classification: Farmland of statewide importance

Map Unit Composition
Tujunga, loamy sand, and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Tujunga, Loamy Sand

Setting

Landform: Alluvial fans
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Alluvium derived from granite

Typical profile

A - 0 to 6 inches: loamy sand
C1 - 6 to 18 inches: loamy sand
C2 - 18 to 60 inches: loamy sand

Properties and qualities

Slope: 0 to 5 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Somewhat excessively drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): High to very high (5.95 to 19.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: Rare
Frequency of ponding: None
Available water storage in profile: Low (about 4.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: A
Hydric soil rating: No

Minor Components

Tujunga, gravelly loamy sand

Percent of map unit: 10 percent
Landform: Alluvial fans
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Hanford, sandy loam

Percent of map unit: 5 percent
Landform: Alluvial fans
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Soil Information for All Uses

Soil Properties and Qualities

The Soil Properties and Qualities section includes various soil properties and qualities displayed as thematic maps with a summary table for the soil map units in the selected area of interest. A single value or rating for each map unit is generated by aggregating the interpretive ratings of individual map unit components. This aggregation process is defined for each property or quality.

Soil Qualities and Features

Soil qualities are behavior and performance attributes that are not directly measured, but are inferred from observations of dynamic conditions and from soil properties. Example soil qualities include natural drainage, and frost action. Soil features are attributes that are not directly part of the soil. Example soil features include slope and depth to restrictive layer. These features can greatly impact the use and management of the soil.

Hydrologic Soil Group

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

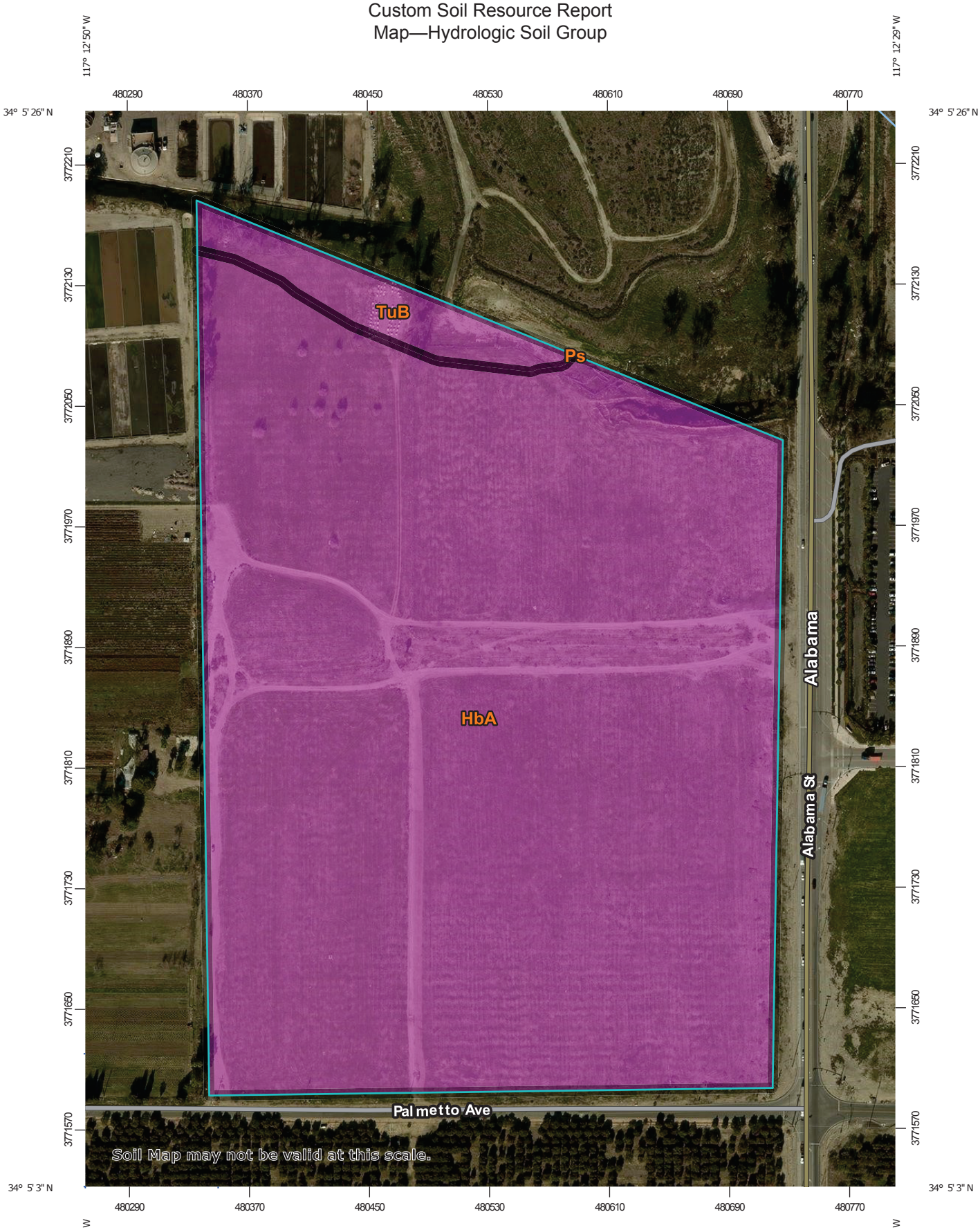
Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.



Map Scale: 1:3,480 if printed on A portrait (8.5" x 11") sheet.

N

Meters
0 50 100 200 300

Feet
0 150 300 600 900

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 11N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils

Soil Rating Polygons
- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Soil Rating Lines
- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Soil Rating Points
- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: San Bernardino County Southwestern Part, California
Survey Area Data: Version 9, Sep 11, 2017

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jan 5, 2015—Jan 18, 2015

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background

MAP LEGEND

MAP INFORMATION

imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Table—Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
HbA	Hanford sandy loam, 0 to 2 percent slopes	A	46.6	95.8%
Ps	Psamments, Fluvents and Frequently flooded soils	A	0.0	0.0%
TuB	Tujunga loamy sand, 0 to 5 percent slopes	A	2.0	4.2%
Totals for Area of Interest			**48.6**	**100.0%**

Rating Options—Hydrologic Soil Group

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

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RATIONAL METHOD (EXISTING CONDITION)

10-YEAR ONSITE HYDROLOGY (EXISTING CONDITION)

San Bernardino County Rational Hydrology Program

(Hydrology Manual Date - August 1986)

CIVILCADD/CIVILDESIGN Engineering Software, (c) 1989-2005 Version 7.1
Rational Hydrology Study Date: 07/26/18

18-0011 DUKE - ALABAMA & PALMETTO
RATIONAL METHOD HYDROLOGY - EXISTING CONDITION
10 YEAR STORM EVENT
FN: EXIST10.OUT MJS

Program License Serial Number 4010

********* Hydrology Study Control Information **********

Rational hydrology study storm event year is 10.0
Computed rainfall intensity:
Storm year = 10.00 1 hour rainfall = 0.778 (In.)
Slope used for rainfall intensity curve b = 0.6000
Soil antecedent moisture condition (AMC) = 2

++
Process from Point/Station 101.000 to Point/Station 102.000
**** INITIAL AREA EVALUATION ****

UNDEVELOPED (poor cover) subarea
Decimal fraction soil group A = 1.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2) = 67.00
Pervious ratio(Ap) = 1.0000 Max loss rate(Fm)= 0.578(In/Hr)
Initial subarea data:
Initial area flow distance = 927.000(Ft.)
Top (of initial area) elevation = 1219.200(Ft.)
Bottom (of initial area) elevation = 1206.700(Ft.)
Difference in elevation = 12.500(Ft.)
Slope = 0.01348 s(%)= 1.35
TC = k(0.525)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 19.100 min.
Rainfall intensity = 1.546(In/Hr) for a 10.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.563
Subarea runoff = 4.617(CFS)
Total initial stream area = 5.300(Ac.)
Pervious area fraction = 1.000
Initial area Fm value = 0.578(In/Hr)

++
Process from Point/Station 102.000 to Point/Station 103.000
**** IMPROVED CHANNEL TRAVEL TIME ****

Upstream point elevation = 1206.700(Ft.)
Downstream point elevation = 1201.000(Ft.)
Channel length thru subarea = 103.000(Ft.)
Channel base width = 0.000(Ft.)
Slope or 'Z' of left channel bank = 50.000
Slope or 'Z' of right channel bank = 50.000
Estimated mean flow rate at midpoint of channel = 6.592(CFS)
Manning's 'N' = 0.035
Maximum depth of channel = 1.000(Ft.)
Flow(q) thru subarea = 6.592(CFS)
Depth of flow = 0.235(Ft.), Average velocity = 2.394(Ft/s)
Channel flow top width = 23.469(Ft.)
Flow Velocity = 2.39(Ft/s)
Travel time = 0.72 min.
Time of concentration = 19.82 min.
Critical depth = 0.256(Ft.)
Adding area flow to channel
UNDEVELOPED (poor cover) subarea
Decimal fraction soil group A = 1.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2) = 67.00
Pervious ratio(Ap) = 1.0000 Max loss rate(Fm)= 0.578(In/Hr)
Rainfall intensity = 1.512(In/Hr) for a 10.0 year storm

Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.556
Subarea runoff =   3.874(CFS) for   4.800(Ac.)
Total runoff =   8.490(CFS)
Effective area this stream =   10.10(Ac.)
Total Study Area (Main Stream No. 1) =   10.10(Ac.)
Area averaged Fm value =   0.578(In/Hr)
Depth of flow =   0.258(Ft.), Average velocity =   2.550(Ft/s)
Critical depth =   0.281(Ft.)

++
Process from Point/Station   104.000 to Point/Station   104.000
**** SUBAREA FLOW ADDITION ****

UNDEVELOPED (poor cover) subarea
Decimal fraction soil group A = 1.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2) = 67.00
Pervious ratio(Ap) = 1.0000   Max loss rate(Fm)=   0.578(In/Hr)
Time of concentration =   19.82 min.
Rainfall intensity =   1.512(In/Hr) for a   10.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.556
Subarea runoff =   7.650(CFS) for   9.100(Ac.)
Total runoff =   16.140(CFS)
Effective area this stream =   19.20(Ac.)
Total Study Area (Main Stream No. 1) =   19.20(Ac.)
Area averaged Fm value =   0.578(In/Hr)

++
Process from Point/Station   105.000 to Point/Station   105.000
**** SUBAREA FLOW ADDITION ****

UNDEVELOPED (poor cover) subarea
Decimal fraction soil group A = 1.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2) = 67.00
Pervious ratio(Ap) = 1.0000   Max loss rate(Fm)=   0.578(In/Hr)
Time of concentration =   19.82 min.
Rainfall intensity =   1.512(In/Hr) for a   10.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.556
Subarea runoff =   18.662(CFS) for   22.200(Ac.)
Total runoff =   34.801(CFS)
Effective area this stream =   41.40(Ac.)
Total Study Area (Main Stream No. 1) =   41.40(Ac.)
Area averaged Fm value =   0.578(In/Hr)

++
Process from Point/Station   106.000 to Point/Station   106.000
**** SUBAREA FLOW ADDITION ****

UNDEVELOPED (poor cover) subarea
Decimal fraction soil group A = 1.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2) = 67.00
Pervious ratio(Ap) = 1.0000   Max loss rate(Fm)=   0.578(In/Hr)
Time of concentration =   19.82 min.
Rainfall intensity =   1.512(In/Hr) for a   10.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.556
Subarea runoff =   11.180(CFS) for   13.300(Ac.)
Total runoff =   45.982(CFS)
Effective area this stream =   54.70(Ac.)
Total Study Area (Main Stream No. 1) =   54.70(Ac.)
Area averaged Fm value =   0.578(In/Hr)
End of computations, Total Study Area =   54.70 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.
Note: These figures do not consider reduced effective area
effects caused by confluences in the rational equation.

Area averaged pervious area fraction(Ap) = 1.000
Area averaged SCS curve number = 67.0

100-YEAR ONSITE HYDROLOGY (EXISTING CONDITION)

San Bernardino County Rational Hydrology Program

(Hydrology Manual Date - August 1986)

CIVILCADD/CIVILDESIGN Engineering Software, (c) 1989-2005 Version 7.1
Rational Hydrology Study Date: 07/26/18

18-0011 DUKE - ALABAMA & PALMETTO
RATIONAL METHOD HYDROLOGY - EXISTING CONDITION
100 YEAR STORM EVENT
FN: EXIST100.OUT MJS

Program License Serial Number 4010

********* Hydrology Study Control Information **********

Rational hydrology study storm event year is 100.0
Computed rainfall intensity:
Storm year = 100.00 1 hour rainfall = 1.250 (In.)
Slope used for rainfall intensity curve b = 0.6000
Soil antecedent moisture condition (AMC) = 3

++
Process from Point/Station 101.000 to Point/Station 102.000
**** INITIAL AREA EVALUATION ****

UNDEVELOPED (poor cover) subarea
Decimal fraction soil group A = 1.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2) = 67.00
Adjusted SCS curve number for AMC 3 = 84.60
Pervious ratio(Ap) = 1.0000 Max loss rate(Fm)= 0.290(In/Hr)
Initial subarea data:
Initial area flow distance = 927.000(Ft.)
Top (of initial area) elevation = 1219.200(Ft.)
Bottom (of initial area) elevation = 1206.700(Ft.)
Difference in elevation = 12.500(Ft.)
Slope = 0.01348 s(%)= 1.35
TC = k(0.525)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 19.100 min.
Rainfall intensity = 2.484(In/Hr) for a 100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.795
Subarea runoff = 10.466(CFS)
Total initial stream area = 5.300(Ac.)
Pervious area fraction = 1.000
Initial area Fm value = 0.290(In/Hr)

++
Process from Point/Station 102.000 to Point/Station 103.000
**** IMPROVED CHANNEL TRAVEL TIME ****

Upstream point elevation = 1206.700(Ft.)
Downstream point elevation = 1201.000(Ft.)
Channel length thru subarea = 103.000(Ft.)
Channel base width = 0.000(Ft.)
Slope or 'Z' of left channel bank = 50.000
Slope or 'Z' of right channel bank = 50.000
Estimated mean flow rate at midpoint of channel = 15.029(CFS)
Manning's 'N' = 0.035
Maximum depth of channel = 1.000(Ft.)
Flow(q) thru subarea = 15.029(CFS)
Depth of flow = 0.320(Ft.), Average velocity = 2.941(Ft/s)
Channel flow top width = 31.968(Ft.)
Flow Velocity = 2.94(Ft/s)
Travel time = 0.58 min.
Time of concentration = 19.68 min.
Critical depth = 0.355(Ft.)
Adding area flow to channel
UNDEVELOPED (poor cover) subarea
Decimal fraction soil group A = 1.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2) = 67.00
Adjusted SCS curve number for AMC 3 = 84.60

Pervious ratio(Ap) = 1.0000 Max loss rate(Fm)= 0.290(In/Hr)
Rainfall intensity = 2.440(In/Hr) for a 100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.793
Subarea runoff = 9.075(CFS) for 4.800(Ac.)
Total runoff = 19.541(CFS)
Effective area this stream = 10.10(Ac.)
Total Study Area (Main Stream No. 1) = 10.10(Ac.)
Area averaged Fm value = 0.290(In/Hr)
Depth of flow = 0.353(Ft.), Average velocity = 3.141(Ft/s)
Critical depth = 0.395(Ft.)

++
Process from Point/Station 104.000 to Point/Station 104.000
**** SUBAREA FLOW ADDITION ****

UNDEVELOPED (poor cover) subarea
Decimal fraction soil group A = 1.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2) = 67.00
Adjusted SCS curve number for AMC 3 = 84.60
Pervious ratio(Ap) = 1.0000 Max loss rate(Fm)= 0.290(In/Hr)
Time of concentration = 19.68 min.
Rainfall intensity = 2.440(In/Hr) for a 100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.793
Subarea runoff = 17.606(CFS) for 9.100(Ac.)
Total runoff = 37.147(CFS)
Effective area this stream = 19.20(Ac.)
Total Study Area (Main Stream No. 1) = 19.20(Ac.)
Area averaged Fm value = 0.290(In/Hr)

++
Process from Point/Station 105.000 to Point/Station 105.000
**** SUBAREA FLOW ADDITION ****

UNDEVELOPED (poor cover) subarea
Decimal fraction soil group A = 1.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2) = 67.00
Adjusted SCS curve number for AMC 3 = 84.60
Pervious ratio(Ap) = 1.0000 Max loss rate(Fm)= 0.290(In/Hr)
Time of concentration = 19.68 min.
Rainfall intensity = 2.440(In/Hr) for a 100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.793
Subarea runoff = 42.952(CFS) for 22.200(Ac.)
Total runoff = 80.099(CFS)
Effective area this stream = 41.40(Ac.)
Total Study Area (Main Stream No. 1) = 41.40(Ac.)
Area averaged Fm value = 0.290(In/Hr)

++
Process from Point/Station 106.000 to Point/Station 106.000
**** SUBAREA FLOW ADDITION ****

UNDEVELOPED (poor cover) subarea
Decimal fraction soil group A = 1.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2) = 67.00
Adjusted SCS curve number for AMC 3 = 84.60
Pervious ratio(Ap) = 1.0000 Max loss rate(Fm)= 0.290(In/Hr)
Time of concentration = 19.68 min.
Rainfall intensity = 2.440(In/Hr) for a 100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.793
Subarea runoff = 25.732(CFS) for 13.300(Ac.)
Total runoff = 105.831(CFS)
Effective area this stream = 54.70(Ac.)
Total Study Area (Main Stream No. 1) = 54.70(Ac.)
Area averaged Fm value = 0.290(In/Hr)
End of computations, Total Study Area = 54.70 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.
Note: These figures do not consider reduced effective area

effects caused by confluences in the rational equation.

Area averaged pervious area fraction(Ap) = 1.000
Area averaged SCS curve number = 67.0

RATIONAL METHOD (PROPOSED CONDITION)

10-YEAR ONSITE HYDROLOGY (PROPOSED CONDITION)

San Bernardino County Rational Hydrology Program

(Hydrology Manual Date - August 1986)

CIVILCADD/CIVILDESIGN Engineering Software, (c) 1989-2005 Version 7.1
Rational Hydrology Study Date: 07/26/18

18-0011 DUKE - ALABAMA & PALMETTO
RATIONAL METHOD HYDROLOGY - PROPOSED CONDITION
10 YEAR STORM EVENT
FN: PROP10.OUT MJS

Program License Serial Number 4010

********* Hydrology Study Control Information **********

Rational hydrology study storm event year is 10.0
Computed rainfall intensity:
Storm year = 10.00 1 hour rainfall = 0.778 (In.)
Slope used for rainfall intensity curve b = 0.6000
Soil antecedent moisture condition (AMC) = 2

++

Process from Point/Station 101.000 to Point/Station 102.000
**** INITIAL AREA EVALUATION ****

COMMERCIAL subarea type
Decimal fraction soil group A = 1.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2) = 32.00
Pervious ratio(Ap) = 0.1000 Max loss rate(Fm)= 0.098(In/Hr)
Initial subarea data:
Initial area flow distance = 421.000(Ft.)
Top (of initial area) elevation = 1224.700(Ft.)
Bottom (of initial area) elevation = 1213.600(Ft.)
Difference in elevation = 11.100(Ft.)
Slope = 0.02637 s(%)= 2.64
TC = k(0.304)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 7.053 min.
Rainfall intensity = 2.811(In/Hr) for a 10.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.869
Subarea runoff = 7.814(CFS)
Total initial stream area = 3.200(Ac.)
Pervious area fraction = 0.100
Initial area Fm value = 0.098(In/Hr)

++

Process from Point/Station 102.000 to Point/Station 103.000
**** IMPROVED CHANNEL TRAVEL TIME ****

Upstream point elevation = 1213.600(Ft.)
Downstream point elevation = 1208.300(Ft.)
Channel length thru subarea = 373.000(Ft.)
Channel base width = 6.000(Ft.)
Slope or 'Z' of left channel bank = 50.000
Slope or 'Z' of right channel bank = 50.000
Estimated mean flow rate at midpoint of channel = 13.486(CFS)
Manning's 'N' = 0.015
Maximum depth of channel = 1.000(Ft.)
Flow(q) thru subarea = 13.486(CFS)
Depth of flow = 0.236(Ft.), Average velocity = 3.212(Ft/s)
Channel flow top width = 29.593(Ft.)
Flow Velocity = 3.21(Ft/s)
Travel time = 1.94 min.
Time of concentration = 8.99 min.
Critical depth = 0.285(Ft.)
Adding area flow to channel
COMMERCIAL subarea type
Decimal fraction soil group A = 1.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2) = 32.00
Pervious ratio(Ap) = 0.1000 Max loss rate(Fm)= 0.098(In/Hr)
Rainfall intensity = 2.430(In/Hr) for a 10.0 year storm

Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.864
Subarea runoff =   11.289(CFS) for   5.900(Ac.)
Total runoff =   19.103(CFS)
Effective area this stream =   9.10(Ac.)
Total Study Area (Main Stream No. 1) =   9.10(Ac.)
Area averaged Fm value =   0.098(In/Hr)
Depth of flow =   0.275(Ft.), Average velocity =   3.512(Ft/s)
Critical depth =   0.336(Ft.)

++
Process from Point/Station   103.000 to Point/Station   104.000
**** IMPROVED CHANNEL TRAVEL TIME ****
____
Upstream point elevation = 1208.300(Ft.)
Downstream point elevation = 1207.000(Ft.)
Channel length thru subarea =   265.000(Ft.)
Channel base width   =   6.000(Ft.)
Slope or 'Z' of left channel bank = 50.000
Slope or 'Z' of right channel bank = 50.000
Estimated mean flow rate at midpoint of channel =   22.122(CFS)
Manning's 'N'   = 0.015
Maximum depth of channel =   1.000(Ft.)
Flow(q) thru subarea =   22.122(CFS)
Depth of flow =   0.369(Ft.), Average velocity =   2.453(Ft/s)
Channel flow top width =   42.890(Ft.)
Flow Velocity =   2.45(Ft/s)
Travel time =   1.80 min.
Time of concentration =   10.79 min.
Critical depth =   0.359(Ft.)
 Adding area flow to channel
COMMERCIAL subarea type
Decimal fraction soil group A = 1.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2) = 32.00
Pervious ratio(Ap) = 0.1000   Max loss rate(Fm)=   0.098(In/Hr)
Rainfall intensity =   2.178(In/Hr) for a   10.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.860
Subarea runoff =   5.986(CFS) for   4.300(Ac.)
Total runoff =   25.089(CFS)
Effective area this stream =   13.40(Ac.)
Total Study Area (Main Stream No. 1) =   13.40(Ac.)
Area averaged Fm value =   0.098(In/Hr)
Depth of flow =   0.389(Ft.), Average velocity =   2.533(Ft/s)
Critical depth =   0.379(Ft.)

++
Process from Point/Station   104.000 to Point/Station   105.000
**** IMPROVED CHANNEL TRAVEL TIME ****
____
Upstream point elevation = 1207.000(Ft.)
Downstream point elevation = 1205.300(Ft.)
Channel length thru subarea =   290.000(Ft.)
Channel base width   =   6.000(Ft.)
Slope or 'Z' of left channel bank = 50.000
Slope or 'Z' of right channel bank = 50.000
Estimated mean flow rate at midpoint of channel =   27.933(CFS)
Manning's 'N'   = 0.015
Maximum depth of channel =   1.000(Ft.)
Flow(q) thru subarea =   27.933(CFS)
Depth of flow =   0.392(Ft.), Average velocity =   2.781(Ft/s)
Channel flow top width =   45.216(Ft.)
Flow Velocity =   2.78(Ft/s)
Travel time =   1.74 min.
Time of concentration =   12.53 min.
Critical depth =   0.398(Ft.)
 Adding area flow to channel
COMMERCIAL subarea type
Decimal fraction soil group A = 1.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2) = 32.00
Pervious ratio(Ap) = 0.1000   Max loss rate(Fm)=   0.098(In/Hr)
Rainfall intensity =   1.991(In/Hr) for a   10.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.856
Subarea runoff =   5.588(CFS) for   4.600(Ac.)
Total runoff =   30.677(CFS)

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Effective area this stream =       18.00(Ac.)
Total Study Area (Main Stream No. 1) =       18.00(Ac.)
Area averaged Fm value =    0.098(In/Hr)
Depth of flow =   0.408(Ft.), Average velocity =   2.848(Ft/s)
Critical depth =      0.418(Ft.)


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Process from Point/Station      105.000 to Point/Station      106.000
**** IMPROVED CHANNEL TRAVEL TIME ****
______________________________________________________________________________
Upstream point elevation =  1205.300(Ft.)
Downstream point elevation =  1204.200(Ft.)
Channel length thru subarea  =   282.000(Ft.)
Channel base width      =    6.000(Ft.)
Slope or 'Z' of left channel bank =  50.000
Slope or 'Z' of right channel bank =  50.000
Estimated mean flow rate at midpoint of channel =     36.152(CFS)
Manning's 'N'    = 0.015
Maximum depth of channel  =    1.000(Ft.)
Flow(q) thru subarea =     36.152(CFS)
Depth of flow =   0.476(Ft.), Average velocity =   2.550(Ft/s)
Channel flow top width =   53.589(Ft.)
Flow Velocity =    2.55(Ft/s)
Travel time  =    1.84 min.
Time of concentration =   14.37 min.
Critical depth =      0.449(Ft.)
 Adding area flow to channel
COMMERCIAL subarea type
Decimal fraction soil group A = 1.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2)  = 32.00
Pervious ratio(Ap) = 0.1000     Max loss rate(Fm)=     0.098(In/Hr)
Rainfall intensity =      1.834(In/Hr) for a    10.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.852
Subarea runoff =     10.887(CFS) for    8.600(Ac.)
Total runoff =     41.565(CFS)
Effective area this stream =       26.60(Ac.)
Total Study Area (Main Stream No. 1) =       26.60(Ac.)
Area averaged Fm value =    0.098(In/Hr)
Depth of flow =   0.504(Ft.), Average velocity =   2.641(Ft/s)
Critical depth =      0.477(Ft.)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      106.000 to Point/Station      107.000
**** PIPEFLOW TRAVEL TIME (Program estimated size) ****
______________________________________________________________________________
Upstream point/station elevation =  1201.600(Ft.)
Downstream point/station elevation =  1199.500(Ft.)
Pipe length  =   730.00(Ft.)   Manning's N = 0.015
No. of pipes = 1  Required pipe flow  =    41.565(CFS)
Nearest computed pipe diameter  =     42.00(In.)
Calculated individual pipe flow  =    41.565(CFS)
Normal flow depth in pipe =   30.84(In.)
Flow top width inside pipe =   37.10(In.)
Critical Depth =   24.08(In.)
Pipe flow velocity =      5.49(Ft/s)
Travel time through pipe =    2.22 min.
Time of concentration (TC) =    16.59 min.


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      106.000 to Point/Station      107.000
**** CONFLUENCE OF MINOR STREAMS ****
______________________________________________________________________________
Along Main Stream number: 1 in normal stream number 1
Stream flow area =     26.600(Ac.)
Runoff from this stream =     41.565(CFS)
Time of concentration =   16.59 min.
Rainfall intensity =     1.683(In/Hr)
Area averaged loss rate (Fm) =    0.0978(In/Hr)
Area averaged Pervious ratio (Ap) = 0.1000


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      108.000 to Point/Station      109.000
**** INITIAL AREA EVALUATION ****
______________________________________________________________________________
COMMERCIAL subarea type
Decimal fraction soil group A = 1.000
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Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2)  = 32.00
Pervious ratio(Ap) = 0.1000     Max loss rate(Fm)=     0.098(In/Hr)
Initial subarea data:
Initial area flow distance =   652.000(Ft.)
Top (of initial area) elevation =  1218.200(Ft.)
Bottom (of initial area) elevation =  1208.800(Ft.)
Difference in elevation =     9.400(Ft.)
Slope =    0.01442  s(%)=       1.44
TC = k(0.304)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =    9.480 min.
Rainfall intensity =      2.354(In/Hr) for a    10.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.863
Subarea runoff =     10.762(CFS)
Total initial stream area =        5.300(Ac.)
Pervious area fraction = 0.100
Initial area Fm value =    0.098(In/Hr)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      109.000 to Point/Station      110.000
**** IMPROVED CHANNEL TRAVEL TIME ****
________________________________________________________________________
Upstream point elevation =  1208.800(Ft.)
Downstream point elevation =  1207.000(Ft.)
Channel length thru subarea  =   363.000(Ft.)
Channel base width      =    6.000(Ft.)
Slope or 'Z' of left channel bank =  50.000
Slope or 'Z' of right channel bank =  50.000
Estimated mean flow rate at midpoint of channel =     15.834(CFS)
Manning's 'N'    = 0.015
Maximum depth of channel  =    1.000(Ft.)
Flow(q) thru subarea =     15.834(CFS)
Depth of flow =   0.319(Ft.), Average velocity =   2.262(Ft/s)
Channel flow top width =   37.892(Ft.)
Flow Velocity =    2.26(Ft/s)
Travel time  =    2.67 min.
Time of concentration =   12.15 min.
Critical depth =      0.309(Ft.)
 Adding area flow to channel
COMMERCIAL subarea type
Decimal fraction soil group A = 1.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2)  = 32.00
Pervious ratio(Ap) = 0.1000     Max loss rate(Fm)=     0.098(In/Hr)
Rainfall intensity =      2.028(In/Hr) for a    10.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.857
Subarea runoff =     10.083(CFS) for    6.700(Ac.)
Total runoff =     20.845(CFS)
Effective area this stream =       12.00(Ac.)
Total Study Area (Main Stream No. 1) =       38.60(Ac.)
Area averaged Fm value =    0.098(In/Hr)
Depth of flow =   0.359(Ft.), Average velocity =   2.426(Ft/s)
Critical depth =      0.350(Ft.)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      110.000 to Point/Station      111.000
**** IMPROVED CHANNEL TRAVEL TIME ****
________________________________________________________________________
Upstream point elevation =  1207.000(Ft.)
Downstream point elevation =  1204.900(Ft.)
Channel length thru subarea  =   431.000(Ft.)
Channel base width      =    6.000(Ft.)
Slope or 'Z' of left channel bank =  50.000
Slope or 'Z' of right channel bank =  50.000
Estimated mean flow rate at midpoint of channel =     23.894(CFS)
Manning's 'N'    = 0.015
Maximum depth of channel  =    1.000(Ft.)
Flow(q) thru subarea =     23.894(CFS)
Depth of flow =   0.382(Ft.), Average velocity =   2.495(Ft/s)
Channel flow top width =   44.173(Ft.)
Flow Velocity =    2.50(Ft/s)
Travel time  =    2.88 min.
Time of concentration =   15.03 min.
Critical depth =      0.371(Ft.)
 Adding area flow to channel
COMMERCIAL subarea type
Decimal fraction soil group A = 1.000
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Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2)  = 32.00
Pervious ratio(Ap) = 0.1000     Max loss rate(Fm)=     0.098(In/Hr)
Rainfall intensity =      1.785(In/Hr) for a    10.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.851
Subarea runoff =      6.033(CFS) for    5.700(Ac.)
Total runoff =     26.878(CFS)
Effective area this stream =       17.70(Ac.)
Total Study Area (Main Stream No. 1) =       44.30(Ac.)
Area averaged Fm value =    0.098(In/Hr)
Depth of flow =   0.401(Ft.), Average velocity =   2.571(Ft/s)
Critical depth =      0.391(Ft.)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      111.000 to Point/Station      112.000
**** IMPROVED CHANNEL TRAVEL TIME ****
________________________________________________________________________
Upstream point elevation =  1204.900(Ft.)
Downstream point elevation =  1203.000(Ft.)
Channel length thru subarea  =   366.000(Ft.)
Channel base width      =    6.000(Ft.)
Slope or 'Z' of left channel bank =  50.000
Slope or 'Z' of right channel bank =  50.000
Estimated mean flow rate at midpoint of channel =     29.318(CFS)
Manning's 'N'    = 0.015
Maximum depth of channel  =    1.000(Ft.)
Flow(q) thru subarea =     29.318(CFS)
Depth of flow =   0.411(Ft.), Average velocity =   2.691(Ft/s)
Channel flow top width =   47.065(Ft.)
Flow Velocity =    2.69(Ft/s)
Travel time  =    2.27 min.
Time of concentration =   17.30 min.
Critical depth =      0.406(Ft.)
 Adding area flow to channel
COMMERCIAL subarea type
Decimal fraction soil group A = 1.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2)  = 32.00
Pervious ratio(Ap) = 0.1000     Max loss rate(Fm)=     0.098(In/Hr)
Rainfall intensity =      1.641(In/Hr) for a    10.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.846
Subarea runoff =      4.784(CFS) for    5.100(Ac.)
Total runoff =     31.662(CFS)
Effective area this stream =       22.80(Ac.)
Total Study Area (Main Stream No. 1) =       49.40(Ac.)
Area averaged Fm value =    0.098(In/Hr)
Depth of flow =   0.424(Ft.), Average velocity =   2.744(Ft/s)
Critical depth =      0.422(Ft.)


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Process from Point/Station      112.000 to Point/Station      107.000
**** CONFLUENCE OF MINOR STREAMS ****
________________________________________________________________________
Along Main Stream number: 1 in normal stream number 2
Stream flow area =     22.800(Ac.)
Runoff from this stream =     31.662(CFS)
Time of concentration =   17.30 min.
Rainfall intensity =     1.641(In/Hr)
Area averaged loss rate (Fm) =    0.0978(In/Hr)
Area averaged Pervious ratio (Ap) = 0.1000


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      113.000 to Point/Station      114.000
**** INITIAL AREA EVALUATION ****
________________________________________________________________________
COMMERCIAL subarea type
Decimal fraction soil group A = 1.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2)  = 32.00
Pervious ratio(Ap) = 0.1000     Max loss rate(Fm)=     0.098(In/Hr)
Initial subarea data:
Initial area flow distance =   303.000(Ft.)
Top (of initial area) elevation =  1215.700(Ft.)
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Bottom (of initial area) elevation =  1209.600(Ft.)
Difference in elevation =     6.100(Ft.)
Slope =    0.02013  s(%)=       2.01
TC = k(0.304)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =    6.526 min.
Rainfall intensity =      2.945(In/Hr) for a    10.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.870
Subarea runoff =      4.869(CFS)
Total initial stream area =        1.900(Ac.)
Pervious area fraction = 0.100
Initial area Fm value =    0.098(In/Hr)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      114.000 to Point/Station      107.000
**** PIPEFLOW TRAVEL TIME (Program estimated size) ****
______________________________________________________________________________
Upstream point/station elevation =  1209.600(Ft.)
Downstream point/station elevation =  1199.500(Ft.)
Pipe length  =  1464.00(Ft.)   Manning's N = 0.015
No. of pipes = 1  Required pipe flow  =     4.869(CFS)
Nearest computed pipe diameter  =     18.00(In.)
Calculated individual pipe flow  =     4.869(CFS)
Normal flow depth in pipe =   10.51(In.)
Flow top width inside pipe =   17.74(In.)
Critical Depth =   10.18(In.)
Pipe flow velocity =      4.55(Ft/s)
Travel time through pipe =    5.37 min.
Time of concentration (TC) =    11.89 min.


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      107.000 to Point/Station      107.000
**** SUBAREA FLOW ADDITION ****
______________________________________________________________________________
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 32.00
Pervious ratio(Ap) = 1.0000     Max loss rate(Fm)=     0.978(In/Hr)
Time of concentration =    11.89 min.
Rainfall intensity =      2.054(In/Hr) for a    10.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.621
Subarea runoff =      1.384(CFS) for    3.000(Ac.)
Total runoff =      6.253(CFS)
Effective area this stream =        4.90(Ac.)
Total Study Area (Main Stream No. 1) =       54.30(Ac.)
Area averaged Fm value =    0.637(In/Hr)


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Process from Point/Station      112.000 to Point/Station      107.000
**** CONFLUENCE OF MINOR STREAMS ****
______________________________________________________________________________
Along Main Stream number: 1 in normal stream number 3
Stream flow area =      4.900(Ac.)
Runoff from this stream =      6.253(CFS)
Time of concentration =   11.89 min.
Rainfall intensity =     2.054(In/Hr)
Area averaged loss rate (Fm) =    0.6366(In/Hr)
Area averaged Pervious ratio (Ap) = 0.6510
Summary of stream data:

Stream Flow rate    Area     TC     Fm       Rainfall Intensity
 No.    (CFS)    (Ac.)       (min) (In/Hr)     (In/Hr)


1     41.56    26.600     16.59    0.098      1.683
2     31.66    22.800     17.30    0.098      1.641
3      6.25     4.900     11.89    0.637      2.054
Qmax(1) =
           1.000 *    1.000 *    41.565) +
           1.027 *    0.959 *    31.662) +
           0.738 *    1.000 *     6.253) + =      77.360
Qmax(2) =
           0.973 *    1.000 *    41.565) +
           1.000 *    1.000 *    31.662) +
           0.708 *    1.000 *     6.253) + =      76.552
Qmax(3) =
           1.234 *    0.717 *    41.565) +
           1.268 *    0.687 *    31.662) +
           1.000 *    1.000 *     6.253) + =      70.649

Total of 3 streams to confluence:
```

```
Flow rates before confluence point:
      41.565      31.662       6.253
Maximum flow rates at confluence using above data:
       77.360       76.552       70.649
Area of streams before confluence:
       26.600       22.800        4.900
Effective area values after confluence:
       53.358       54.300       39.650
Results of confluence:
Total flow rate =     77.360(CFS)
Time of concentration =    16.585 min.
Effective stream area after confluence =     53.358(Ac.)
Study area average Pervious fraction(Ap) =  0.150
Study area average soil loss rate(Fm) =    0.146(In/Hr)
Study area total (this main stream) =      54.30(Ac.)
End of computations, Total Study Area =           54.30 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.
Note: These figures do not consider reduced effective area
effects caused by confluences in the rational equation.

Area averaged pervious area fraction(Ap) = 0.150
Area averaged SCS curve number =  32.0
```

San Bernardino County Rational Hydrology Program

(Hydrology Manual Date - August 1986)

CIVILCADD/CIVILDESIGN Engineering Software, (c) 1989-2005 Version 7.1
Rational Hydrology Study Date: 07/26/18

18-0011 DUKE - ALABAMA & PALMETTO
RATIONAL METHOD HYDROLOGY - PROPOSED CONDITION
10 YEAR STORM EVENT - DRIVE AISLE ON PALMETTO
FN: DRIVE10.OUT MJS

Program License Serial Number 4010

********* Hydrology Study Control Information **********

Rational hydrology study storm event year is 10.0
Computed rainfall intensity:
Storm year = 10.00 1 hour rainfall = 0.778 (In.)
Slope used for rainfall intensity curve b = 0.6000
Soil antecedent moisture condition (AMC) = 2

++
Process from Point/Station 201.000 to Point/Station 202.000
**** INITIAL AREA EVALUATION ****

COMMERCIAL subarea type
Decimal fraction soil group A = 1.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2) = 32.00
Pervious ratio(Ap) = 0.1000 Max loss rate(Fm)= 0.098(In/Hr)
Initial subarea data:
Initial area flow distance = 243.000(Ft.)
Top (of initial area) elevation = 1212.000(Ft.)
Bottom (of initial area) elevation = 1202.200(Ft.)
Difference in elevation = 9.800(Ft.)
Slope = 0.04033 s(%)= 4.03
TC = k(0.304)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 5.200 min.
Rainfall intensity = 3.375(In/Hr) for a 10.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.874
Subarea runoff = 1.180(CFS)
Total initial stream area = 0.400(Ac.)
Pervious area fraction = 0.100
Initial area Fm value = 0.098(In/Hr)
End of computations, Total Study Area = 0.40 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.
Note: These figures do not consider reduced effective area
effects caused by confluences in the rational equation.

Area averaged pervious area fraction(Ap) = 0.100
Area averaged SCS curve number = 32.0

100-YEAR ONSITE HYDROLOGY (PROPOSED CONDITION)

San Bernardino County Rational Hydrology Program

(Hydrology Manual Date - August 1986)

CIVILCADD/CIVILDESIGN Engineering Software, (c) 1989-2005 Version 7.1
Rational Hydrology Study Date: 07/26/18

18-0011 DUKE - ALABAMA & PALMETTO
RATIONAL METHOD HYDROLOGY - PROPOSED CONDITION
100 YEAR STORM EVENT
FN: PROP100.OUT MJS

Program License Serial Number 4010

********* Hydrology Study Control Information **********

Rational hydrology study storm event year is 100.0
Computed rainfall intensity:
Storm year = 100.00 1 hour rainfall = 1.250 (In.)
Slope used for rainfall intensity curve b = 0.6000
Soil antecedent moisture condition (AMC) = 3

++
Process from Point/Station 101.000 to Point/Station 102.000
**** INITIAL AREA EVALUATION ****

COMMERCIAL subarea type
Decimal fraction soil group A = 1.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2) = 32.00
Adjusted SCS curve number for AMC 3 = 52.00
Pervious ratio(Ap) = 0.1000 Max loss rate(Fm)= 0.079(In/Hr)
Initial subarea data:
Initial area flow distance = 421.000(Ft.)
Top (of initial area) elevation = 1224.700(Ft.)
Bottom (of initial area) elevation = 1213.600(Ft.)
Difference in elevation = 11.100(Ft.)
Slope = 0.02637 s(%)= 2.64
TC = k(0.304)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 7.053 min.
Rainfall intensity = 4.516(In/Hr) for a 100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.884
Subarea runoff = 12.781(CFS)
Total initial stream area = 3.200(Ac.)
Pervious area fraction = 0.100
Initial area Fm value = 0.079(In/Hr)

++
Process from Point/Station 102.000 to Point/Station 103.000
**** IMPROVED CHANNEL TRAVEL TIME ****

Upstream point elevation = 1213.600(Ft.)
Downstream point elevation = 1208.300(Ft.)
Channel length thru subarea = 373.000(Ft.)
Channel base width = 6.000(Ft.)
Slope or 'Z' of left channel bank = 50.000
Slope or 'Z' of right channel bank = 50.000
Estimated mean flow rate at midpoint of channel = 22.354(CFS)
Manning's 'N' = 0.015
Maximum depth of channel = 1.000(Ft.)
Flow(q) thru subarea = 22.354(CFS)
Depth of flow = 0.295(Ft.), Average velocity = 3.656(Ft/s)
Channel flow top width = 35.479(Ft.)
Flow Velocity = 3.66(Ft/s)
Travel time = 1.70 min.
Time of concentration = 8.75 min.
Critical depth = 0.359(Ft.)
Adding area flow to channel
COMMERCIAL subarea type
Decimal fraction soil group A = 1.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2) = 32.00
Adjusted SCS curve number for AMC 3 = 52.00

Pervious ratio(Ap) = 0.1000 Max loss rate(Fm)= 0.079(In/Hr)
Rainfall intensity = 3.967(In/Hr) for a 100.0 year storm
Effective runoff coefficient used for area,(total area with modified rational method)(Q=KCIA) is C = 0.882
Subarea runoff = 19.069(CFS) for 5.900(Ac.)
Total runoff = 31.849(CFS)
Effective area this stream = 9.10(Ac.)
Total Study Area (Main Stream No. 1) = 9.10(Ac.)
Area averaged Fm value = 0.079(In/Hr)
Depth of flow = 0.343(Ft.), Average velocity = 4.001(Ft/s)
Critical depth = 0.422(Ft.)

++
Process from Point/Station 103.000 to Point/Station 104.000
**** IMPROVED CHANNEL TRAVEL TIME ****

Upstream point elevation = 1208.300(Ft.)
Downstream point elevation = 1207.000(Ft.)
Channel length thru subarea = 265.000(Ft.)
Channel base width = 6.000(Ft.)
Slope or 'Z' of left channel bank = 50.000
Slope or 'Z' of right channel bank = 50.000
Estimated mean flow rate at midpoint of channel = 37.146(CFS)
Manning's 'N' = 0.015
Maximum depth of channel = 1.000(Ft.)
Flow(q) thru subarea = 37.146(CFS)
Depth of flow = 0.459(Ft.), Average velocity = 2.797(Ft/s)
Channel flow top width = 51.887(Ft.)
Flow Velocity = 2.80(Ft/s)
Travel time = 1.58 min.
Time of concentration = 10.33 min.
Critical depth = 0.453(Ft.)
Adding area flow to channel
COMMERCIAL subarea type
Decimal fraction soil group A = 1.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2) = 32.00
Adjusted SCS curve number for AMC 3 = 52.00
Pervious ratio(Ap) = 0.1000 Max loss rate(Fm)= 0.079(In/Hr)
Rainfall intensity = 3.592(In/Hr) for a 100.0 year storm
Effective runoff coefficient used for area,(total area with modified rational method)(Q=KCIA) is C = 0.880
Subarea runoff = 10.518(CFS) for 4.300(Ac.)
Total runoff = 42.367(CFS)
Effective area this stream = 13.40(Ac.)
Total Study Area (Main Stream No. 1) = 13.40(Ac.)
Area averaged Fm value = 0.079(In/Hr)
Depth of flow = 0.485(Ft.), Average velocity = 2.891(Ft/s)
Critical depth = 0.480(Ft.)

++
Process from Point/Station 104.000 to Point/Station 105.000
**** IMPROVED CHANNEL TRAVEL TIME ****

Upstream point elevation = 1207.000(Ft.)
Downstream point elevation = 1205.300(Ft.)
Channel length thru subarea = 290.000(Ft.)
Channel base width = 6.000(Ft.)
Slope or 'Z' of left channel bank = 50.000
Slope or 'Z' of right channel bank = 50.000
Estimated mean flow rate at midpoint of channel = 47.377(CFS)
Manning's 'N' = 0.015
Maximum depth of channel = 1.000(Ft.)
Flow(q) thru subarea = 47.377(CFS)
Depth of flow = 0.489(Ft.), Average velocity = 3.179(Ft/s)
Channel flow top width = 54.926(Ft.)
Flow Velocity = 3.18(Ft/s)
Travel time = 1.52 min.
Time of concentration = 11.85 min.
Critical depth = 0.504(Ft.)
Adding area flow to channel
COMMERCIAL subarea type
Decimal fraction soil group A = 1.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2) = 32.00
Adjusted SCS curve number for AMC 3 = 52.00
Pervious ratio(Ap) = 0.1000 Max loss rate(Fm)= 0.079(In/Hr)
Rainfall intensity = 3.308(In/Hr) for a 100.0 year storm

Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.879
Subarea runoff =   9.943(CFS) for   4.600(Ac.)
Total runoff =   52.310(CFS)
Effective area this stream =   18.00(Ac.)
Total Study Area (Main Stream No. 1) =   18.00(Ac.)
Area averaged Fm value =   0.079(In/Hr)
Depth of flow =   0.510(Ft.), Average velocity =   3.259(Ft/s)
Critical depth =   0.527(Ft.)

++
Process from Point/Station   105.000 to Point/Station   106.000
**** IMPROVED CHANNEL TRAVEL TIME ****
____
Upstream point elevation = 1205.300(Ft.)
Downstream point elevation = 1204.200(Ft.)
Channel length thru subarea =   282.000(Ft.)
Channel base width   =   6.000(Ft.)
Slope or 'Z' of left channel bank = 50.000
Slope or 'Z' of right channel bank = 50.000
Estimated mean flow rate at midpoint of channel =   61.943(CFS)
Manning's 'N'   = 0.015
Maximum depth of channel =   1.000(Ft.)
Flow(q) thru subarea =   61.943(CFS)
Depth of flow =   0.594(Ft.), Average velocity =   2.920(Ft/s)
Channel flow top width =   65.410(Ft.)
Flow Velocity =   2.92(Ft/s)
Travel time =   1.61 min.
Time of concentration =   13.46 min.
Critical depth =   0.570(Ft.)
 Adding area flow to channel
COMMERCIAL subarea type
Decimal fraction soil group A = 1.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2) = 32.00
Adjusted SCS curve number for AMC 3 = 52.00
Pervious ratio(Ap) = 0.1000   Max loss rate(Fm)=   0.079(In/Hr)
Rainfall intensity =   3.064(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.877
Subarea runoff =   19.169(CFS) for   8.600(Ac.)
Total runoff =   71.479(CFS)
Effective area this stream =   26.60(Ac.)
Total Study Area (Main Stream No. 1) =   26.60(Ac.)
Area averaged Fm value =   0.079(In/Hr)
Depth of flow =   0.630(Ft.), Average velocity =   3.027(Ft/s)
Critical depth =   0.605(Ft.)

++
Process from Point/Station   106.000 to Point/Station   107.000
**** PIPEFLOW TRAVEL TIME (Program estimated size) ****
____
Upstream point/station elevation = 1201.600(Ft.)
Downstream point/station elevation = 1199.500(Ft.)
Pipe length =   730.00(Ft.)   Manning's N = 0.015
No. of pipes = 1 Required pipe flow =   71.479(CFS)
Nearest computed pipe diameter =   51.00(In.)
Calculated individual pipe flow =   71.479(CFS)
Normal flow depth in pipe =   38.20(In.)
Flow top width inside pipe =   44.22(In.)
Critical Depth =   30.12(In.)
Pipe flow velocity =   6.27(Ft/s)
Travel time through pipe =   1.94 min.
Time of concentration (TC) =   15.40 min.

++
Process from Point/Station   106.000 to Point/Station   107.000
**** CONFLUENCE OF MINOR STREAMS ****
____
Along Main Stream number: 1 in normal stream number 1
Stream flow area =   26.600(Ac.)
Runoff from this stream =   71.479(CFS)
Time of concentration =   15.40 min.
Rainfall intensity =   2.826(In/Hr)
Area averaged loss rate (Fm) =   0.0785(In/Hr)
Area averaged Pervious ratio (Ap) = 0.1000

++

Process from Point/Station 108.000 to Point/Station 109.000
**** INITIAL AREA EVALUATION ****

COMMERCIAL subarea type
Decimal fraction soil group A = 1.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2) = 32.00
Adjusted SCS curve number for AMC 3 = 52.00
Pervious ratio(Ap) = 0.1000 Max loss rate(Fm)= 0.079(In/Hr)
Initial subarea data:
Initial area flow distance = 652.000(Ft.)
Top (of initial area) elevation = 1218.200(Ft.)
Bottom (of initial area) elevation = 1208.800(Ft.)
Difference in elevation = 9.400(Ft.)
Slope = 0.01442 s(%)= 1.44
TC = k(0.304)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 9.480 min.
Rainfall intensity = 3.782(In/Hr) for a 100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.881
Subarea runoff = 17.666(CFS)
Total initial stream area = 5.300(Ac.)
Pervious area fraction = 0.100
Initial area Fm value = 0.079(In/Hr)

++
Process from Point/Station 109.000 to Point/Station 110.000
**** IMPROVED CHANNEL TRAVEL TIME ****

Upstream point elevation = 1208.800(Ft.)
Downstream point elevation = 1207.000(Ft.)
Channel length thru subarea = 363.000(Ft.)
Channel base width = 6.000(Ft.)
Slope or 'Z' of left channel bank = 50.000
Slope or 'Z' of right channel bank = 50.000
Estimated mean flow rate at midpoint of channel = 26.334(CFS)
Manning's 'N' = 0.015
Maximum depth of channel = 1.000(Ft.)
Flow(q) thru subarea = 26.334(CFS)
Depth of flow = 0.396(Ft.), Average velocity = 2.574(Ft/s)
Channel flow top width = 45.629(Ft.)
Flow Velocity = 2.57(Ft/s)
Travel time = 2.35 min.
Time of concentration = 11.83 min.
Critical depth = 0.389(Ft.)
Adding area flow to channel
COMMERCIAL subarea type
Decimal fraction soil group A = 1.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2) = 32.00
Adjusted SCS curve number for AMC 3 = 52.00
Pervious ratio(Ap) = 0.1000 Max loss rate(Fm)= 0.079(In/Hr)
Rainfall intensity = 3.311(In/Hr) for a 100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.879
Subarea runoff = 17.249(CFS) for 6.700(Ac.)
Total runoff = 34.915(CFS)
Effective area this stream = 12.00(Ac.)
Total Study Area (Main Stream No. 1) = 38.60(Ac.)
Area averaged Fm value = 0.079(In/Hr)
Depth of flow = 0.446(Ft.), Average velocity = 2.765(Ft/s)
Critical depth = 0.441(Ft.)

++
Process from Point/Station 110.000 to Point/Station 111.000
**** IMPROVED CHANNEL TRAVEL TIME ****

Upstream point elevation = 1207.000(Ft.)
Downstream point elevation = 1204.900(Ft.)
Channel length thru subarea = 431.000(Ft.)
Channel base width = 6.000(Ft.)
Slope or 'Z' of left channel bank = 50.000
Slope or 'Z' of right channel bank = 50.000
Estimated mean flow rate at midpoint of channel = 40.369(CFS)
Manning's 'N' = 0.015
Maximum depth of channel = 1.000(Ft.)
Flow(q) thru subarea = 40.369(CFS)
Depth of flow = 0.476(Ft.), Average velocity = 2.849(Ft/s)
Channel flow top width = 53.572(Ft.)

```
Flow Velocity =    2.85(Ft/s)
Travel time  =    2.52 min.
Time of concentration =   14.35 min.
Critical depth =      0.469(Ft.)
 Adding area flow to channel
COMMERCIAL subarea type
Decimal fraction soil group A = 1.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2)  = 32.00
Adjusted SCS curve number for AMC 3 = 52.00
Pervious ratio(Ap) = 0.1000     Max loss rate(Fm)=     0.079(In/Hr)
Rainfall intensity =      2.949(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.876
Subarea runoff =     10.811(CFS) for    5.700(Ac.)
Total runoff =     45.726(CFS)
Effective area this stream =       17.70(Ac.)
Total Study Area (Main Stream No. 1) =       44.30(Ac.)
Area averaged Fm value =    0.079(In/Hr)
Depth of flow =   0.501(Ft.), Average velocity =   2.940(Ft/s)
Critical depth =      0.496(Ft.)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      111.000 to Point/Station      112.000
**** IMPROVED CHANNEL TRAVEL TIME ****
------------------------------------------------------------------------------
Upstream point elevation =  1204.900(Ft.)
Downstream point elevation =  1203.000(Ft.)
Channel length thru subarea  =   366.000(Ft.)
Channel base width      =    6.000(Ft.)
Slope or 'Z' of left channel bank =  50.000
Slope or 'Z' of right channel bank =  50.000
Estimated mean flow rate at midpoint of channel =     50.093(CFS)
Manning's 'N'    = 0.015
Maximum depth of channel  =    1.000(Ft.)
Flow(q) thru subarea =     50.093(CFS)
Depth of flow =   0.513(Ft.), Average velocity =   3.081(Ft/s)
Channel flow top width =   57.343(Ft.)
Flow Velocity =    3.08(Ft/s)
Travel time  =    1.98 min.
Time of concentration =   16.33 min.
Critical depth =      0.516(Ft.)
 Adding area flow to channel
COMMERCIAL subarea type
Decimal fraction soil group A = 1.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2)  = 32.00
Adjusted SCS curve number for AMC 3 = 52.00
Pervious ratio(Ap) = 0.1000     Max loss rate(Fm)=     0.079(In/Hr)
Rainfall intensity =      2.729(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.874
Subarea runoff =      8.660(CFS) for    5.100(Ac.)
Total runoff =     54.386(CFS)
Effective area this stream =       22.80(Ac.)
Total Study Area (Main Stream No. 1) =       49.40(Ac.)
Area averaged Fm value =    0.079(In/Hr)
Depth of flow =   0.531(Ft.), Average velocity =   3.145(Ft/s)
Critical depth =      0.539(Ft.)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      112.000 to Point/Station      107.000
**** CONFLUENCE OF MINOR STREAMS ****
------------------------------------------------------------------------------
Along Main Stream number: 1 in normal stream number 2
Stream flow area =     22.800(Ac.)
Runoff from this stream =     54.386(CFS)
Time of concentration =   16.33 min.
Rainfall intensity =     2.729(In/Hr)
Area averaged loss rate (Fm) =    0.0785(In/Hr)
Area averaged Pervious ratio (Ap) = 0.1000


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      113.000 to Point/Station      114.000
**** INITIAL AREA EVALUATION ****
------------------------------------------------------------------------------
COMMERCIAL subarea type
```

```
Decimal fraction soil group A = 1.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2)  = 32.00
Adjusted SCS curve number for AMC 3 = 52.00
Pervious ratio(Ap) = 0.1000     Max loss rate(Fm)=     0.079(In/Hr)
Initial subarea data:
Initial area flow distance =   303.000(Ft.)
Top (of initial area) elevation =  1215.700(Ft.)
Bottom (of initial area) elevation =  1209.600(Ft.)
Difference in elevation =     6.100(Ft.)
Slope =    0.02013  s(%)=       2.01
TC = k(0.304)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =    6.526 min.
Rainfall intensity =      4.731(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.885
Subarea runoff =      7.957(CFS)
Total initial stream area =        1.900(Ac.)
Pervious area fraction = 0.100
Initial area Fm value =    0.079(In/Hr)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      114.000 to Point/Station      107.000
**** PIPEFLOW TRAVEL TIME (Program estimated size) ****
______________________________________________________________________________
Upstream point/station elevation =  1209.600(Ft.)
Downstream point/station elevation =  1199.500(Ft.)
Pipe length  =  1464.00(Ft.)   Manning's N = 0.015
No. of pipes = 1  Required pipe flow  =     7.957(CFS)
Nearest computed pipe diameter  =     21.00(In.)
Calculated individual pipe flow  =     7.957(CFS)
Normal flow depth in pipe =   12.91(In.)
Flow top width inside pipe =   20.44(In.)
Critical Depth =   12.55(In.)
Pipe flow velocity =      5.13(Ft/s)
Travel time through pipe =    4.76 min.
Time of concentration (TC) =    11.29 min.


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      107.000 to Point/Station      107.000
**** SUBAREA FLOW ADDITION ****
______________________________________________________________________________
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 32.00
Adjusted SCS curve number for AMC 3 = 52.00
Pervious ratio(Ap) = 1.0000     Max loss rate(Fm)=     0.785(In/Hr)
Time of concentration =    11.29 min.
Rainfall intensity =      3.406(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.765
Subarea runoff =      4.811(CFS) for    3.000(Ac.)
Total runoff =     12.768(CFS)
Effective area this stream =        4.90(Ac.)
Total Study Area (Main Stream No. 1) =       54.30(Ac.)
Area averaged Fm value =    0.511(In/Hr)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      112.000 to Point/Station      107.000
**** CONFLUENCE OF MINOR STREAMS ****
______________________________________________________________________________
Along Main Stream number: 1 in normal stream number 3
Stream flow area =      4.900(Ac.)
Runoff from this stream =     12.768(CFS)
Time of concentration =   11.29 min.
Rainfall intensity =     3.406(In/Hr)
Area averaged loss rate (Fm) =    0.5111(In/Hr)
Area averaged Pervious ratio (Ap) = 0.6510
Summary of stream data:

Stream Flow rate    Area     TC      Fm       Rainfall Intensity
 No.    (CFS)    (Ac.)       (min) (In/Hr)      (In/Hr)


1     71.48    26.600     15.40    0.079      2.826
2     54.39    22.800     16.33    0.079      2.729
3     12.77     4.900     11.29    0.511      3.406
Qmax(1) =
          1.000 *    1.000 *    71.479) +
          1.037 *    0.943 *    54.386) +
```

```
           0.800 *    1.000 *    12.768) + =     134.871
Qmax(2) =
           0.964 *    1.000 *    71.479) +
           1.000 *    1.000 *    54.386) +
           0.766 *    1.000 *    12.768) + =     133.107
Qmax(3) =
           1.211 *    0.733 *    71.479) +
           1.256 *    0.691 *    54.386) +
           1.000 *    1.000 *    12.768) + =     123.381

Total of 3 streams to confluence:
Flow rates before confluence point:
      71.479      54.386      12.768
Maximum flow rates at confluence using above data:
      134.871      133.107      123.381
Area of streams before confluence:
       26.600       22.800        4.900
Effective area values after confluence:
       53.004       54.300       40.146
Results of confluence:
Total flow rate =    134.871(CFS)
Time of concentration =    15.403 min.
Effective stream area after confluence =     53.004(Ac.)
Study area average Pervious fraction(Ap) =  0.150
Study area average soil loss rate(Fm) =    0.118(In/Hr)
Study area total (this main stream) =      54.30(Ac.)
End of computations, Total Study Area =           54.30 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.
Note: These figures do not consider reduced effective area
effects caused by confluences in the rational equation.

Area averaged pervious area fraction(Ap) = 0.150
Area averaged SCS curve number =  32.0
```

San Bernardino County Rational Hydrology Program

(Hydrology Manual Date - August 1986)

CIVILCADD/CIVILDESIGN Engineering Software, (c) 1989-2005 Version 7.1
Rational Hydrology Study Date: 07/26/18

18-0011 DUKE - ALABAMA & PALMETTO
RATIONAL METHOD HYDROLOGY - PROPOSED CONDITION
100 YEAR STORM EVENT - DRIVE AISLE ON PALMETTO
FN: DRIVE100.OUT MJS

Program License Serial Number 4010

********* Hydrology Study Control Information **********

Rational hydrology study storm event year is 100.0
Computed rainfall intensity:
Storm year = 100.00 1 hour rainfall = 1.250 (In.)
Slope used for rainfall intensity curve b = 0.6000
Soil antecedent moisture condition (AMC) = 3

++
Process from Point/Station 201.000 to Point/Station 202.000
**** INITIAL AREA EVALUATION ****

COMMERCIAL subarea type
Decimal fraction soil group A = 1.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2) = 32.00
Adjusted SCS curve number for AMC 3 = 52.00
Pervious ratio(Ap) = 0.1000 Max loss rate(Fm)= 0.079(In/Hr)
Initial subarea data:
Initial area flow distance = 243.000(Ft.)
Top (of initial area) elevation = 1212.000(Ft.)
Bottom (of initial area) elevation = 1202.200(Ft.)
Difference in elevation = 9.800(Ft.)
Slope = 0.04033 s(%)= 4.03
TC = k(0.304)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 5.200 min.
Rainfall intensity = 5.423(In/Hr) for a 100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.887
Subarea runoff = 1.924(CFS)
Total initial stream area = 0.400(Ac.)
Pervious area fraction = 0.100
Initial area Fm value = 0.079(In/Hr)
End of computations, Total Study Area = 0.40 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.
Note: These figures do not consider reduced effective area
effects caused by confluences in the rational equation.

Area averaged pervious area fraction(Ap) = 0.100
Area averaged SCS curve number = 32.0

EXISTING CONDITION UNIT HYDROGRAPH

EXISTING CONDITION
100-YEAR, 24-HOUR UNIT HYDROGRAPH

U n i t H y d r o g r a p h A n a l y s i s

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Study date 07/26/18

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San Bernardino County Synthetic Unit Hydrology Method
Manual date - August 1986

Program License Serial Number 4010

18-0011 DUKE - ALABAMA & PALMETTO
UNIT HYDROGRAPH HYDROLOGY
100-YEAR 24-HOUR STORM EVENT
EXISTING CONDITION -MJS

Storm Event Year = 100

Antecedent Moisture Condition = 3

English (in-lb) Input Units Used

English Rainfall Data (Inches) Input Values Used

English Units used in output format

Area averaged rainfall intensity isohyetal data:

Sub-Area (Ac.)	Duration (hours)	Isohyetal (In)
Rainfall data for year 100		
54.70	1	1.25
Rainfall data for year 100		
54.70	6	2.75
Rainfall data for year 100		
54.70	24	5.10

++

******** Area-averaged max loss rate, Fm ********

SCS curve No.(AMCII)	SCS curve NO.(AMC 3)	Area (Ac.)	Area Fraction	Fp(Fig C6) (In/Hr)	Ap (dec.)	Fm (In/Hr)
67.0	84.6	54.70	1.000	0.290	1.000	0.290

Area-averaged adjusted loss rate Fm (In/Hr) = 0.290

********* Area-Averaged low loss rate fraction, Yb **********

Area (Ac.)	Area Fract	SCS CN (AMC2)	SCS CN (AMC3)	S	Pervious Yield Fr
54.70	1.000	67.0	84.6	1.82	0.671

Area-averaged catchment yield fraction, Y = 0.671
Area-averaged low loss fraction, Yb = 0.329
User entry of time of concentration = 0.328 (hours)

++
Watershed area = 54.70(Ac.)
Catchment Lag time = 0.262 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 31.7581
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.290(In/Hr)
Average low loss rate fraction (Yb) = 0.329 (decimal)
VALLEY DEVELOPED S-Graph Selected
Computed peak 5-minute rainfall = 0.463(In)
Computed peak 30-minute rainfall = 0.947(In)
Specified peak 1-hour rainfall = 1.250(In)
Computed peak 3-hour rainfall = 2.027(In)
Specified peak 6-hour rainfall = 2.750(In)
Specified peak 24-hour rainfall = 5.100(In)

Rainfall depth area reduction factors:
Using a total area of 54.70(Ac.) (Ref: fig. E-4)

5-minute factor = 0.997 Adjusted rainfall = 0.461(In)
30-minute factor = 0.997 Adjusted rainfall = 0.945(In)
1-hour factor = 0.997 Adjusted rainfall = 1.247(In)
3-hour factor = 1.000 Adjusted rainfall = 2.026(In)
6-hour factor = 1.000 Adjusted rainfall = 2.750(In)
24-hour factor = 1.000 Adjusted rainfall = 5.100(In)

U n i t H y d r o g r a p h

Interval Number	'S' Graph Mean values	Unit Hydrograph ((CFS))
	(K = 661.53 (CFS))	
1	2.111	13.964
2	12.445	68.362
3	32.498	132.655
4	59.419	178.090
5	79.359	131.914
6	90.202	71.723
7	95.434	34.617
8	97.888	16.233
9	98.659	5.099
10	99.231	3.781
11	99.787	3.679
12	100.000	1.410

Peak Unit Number	Adjusted mass rainfall (In)	Unit rainfall (In)
1	0.4614	0.4614
2	0.6089	0.1474
3	0.7161	0.1072
4	0.8034	0.0873
5	0.8784	0.0750
6	0.9449	0.0665
7	1.0050	0.0601
8	1.0601	0.0551
9	1.1113	0.0511
10	1.1591	0.0478
11	1.2041	0.0450
12	1.2468	0.0426
13	1.2917	0.0449
14	1.3347	0.0430
15	1.3761	0.0413
16	1.4159	0.0398
17	1.4543	0.0385
18	1.4916	0.0372
19	1.5276	0.0361
20	1.5627	0.0350
21	1.5968	0.0341
22	1.6299	0.0332
23	1.6623	0.0323
24	1.6939	0.0316
25	1.7247	0.0308
26	1.7549	0.0302
27	1.7844	0.0295
28	1.8133	0.0289
29	1.8417	0.0284
30	1.8695	0.0278
31	1.8968	0.0273
32	1.9236	0.0268
33	1.9499	0.0263
34	1.9758	0.0259
35	2.0013	0.0255
36	2.0264	0.0251
37	2.0510	0.0246
38	2.0752	0.0242
39	2.0991	0.0239
40	2.1226	0.0235
41	2.1458	0.0232
42	2.1687	0.0229
43	2.1913	0.0226
44	2.2136	0.0223
45	2.2356	0.0220
46	2.2573	0.0217
47	2.2788	0.0215
48	2.3000	0.0212
49	2.3210	0.0210

50	2.3417	0.0207
51	2.3622	0.0205
52	2.3825	0.0203
53	2.4026	0.0201
54	2.4224	0.0199
55	2.4421	0.0196
56	2.4615	0.0195
57	2.4808	0.0193
58	2.4999	0.0191
59	2.5187	0.0189
60	2.5374	0.0187
61	2.5560	0.0185
62	2.5743	0.0184
63	2.5925	0.0182
64	2.6106	0.0180
65	2.6285	0.0179
66	2.6462	0.0177
67	2.6638	0.0176
68	2.6812	0.0174
69	2.6985	0.0173
70	2.7156	0.0171
71	2.7327	0.0170
72	2.7495	0.0169
73	2.7665	0.0170
74	2.7833	0.0168
75	2.8000	0.0167
76	2.8166	0.0166
77	2.8330	0.0165
78	2.8494	0.0163
79	2.8656	0.0162
80	2.8817	0.0161
81	2.8977	0.0160
82	2.9136	0.0159
83	2.9294	0.0158
84	2.9450	0.0157
85	2.9606	0.0156
86	2.9761	0.0155
87	2.9914	0.0154
88	3.0067	0.0153
89	3.0219	0.0152
90	3.0370	0.0151
91	3.0520	0.0150
92	3.0669	0.0149
93	3.0817	0.0148
94	3.0964	0.0147
95	3.1110	0.0146
96	3.1256	0.0146
97	3.1401	0.0145
98	3.1544	0.0144
99	3.1687	0.0143
100	3.1830	0.0142
101	3.1971	0.0141
102	3.2112	0.0141
103	3.2252	0.0140
104	3.2391	0.0139
105	3.2529	0.0138
106	3.2667	0.0138
107	3.2804	0.0137
108	3.2940	0.0136
109	3.3076	0.0136
110	3.3211	0.0135
111	3.3345	0.0134
112	3.3478	0.0134
113	3.3611	0.0133
114	3.3743	0.0132
115	3.3875	0.0132
116	3.4006	0.0131
117	3.4136	0.0130
118	3.4266	0.0130
119	3.4395	0.0129
120	3.4524	0.0128
121	3.4651	0.0128
122	3.4779	0.0127
123	3.4906	0.0127
124	3.5032	0.0126
125	3.5157	0.0126
126	3.5282	0.0125
127	3.5407	0.0125
128	3.5531	0.0124
129	3.5654	0.0123
130	3.5777	0.0123
131	3.5900	0.0122
132	3.6021	0.0122
133	3.6143	0.0121

134	3.6264	0.0121
135	3.6384	0.0120
136	3.6504	0.0120
137	3.6623	0.0119
138	3.6742	0.0119
139	3.6860	0.0118
140	3.6978	0.0118
141	3.7096	0.0117
142	3.7213	0.0117
143	3.7329	0.0117
144	3.7445	0.0116
145	3.7561	0.0116
146	3.7676	0.0115
147	3.7791	0.0115
148	3.7905	0.0114
149	3.8019	0.0114
150	3.8133	0.0113
151	3.8246	0.0113
152	3.8359	0.0113
153	3.8471	0.0112
154	3.8583	0.0112
155	3.8694	0.0111
156	3.8805	0.0111
157	3.8916	0.0111
158	3.9026	0.0110
159	3.9136	0.0110
160	3.9245	0.0109
161	3.9355	0.0109
162	3.9463	0.0109
163	3.9572	0.0108
164	3.9680	0.0108
165	3.9787	0.0108
166	3.9895	0.0107
167	4.0001	0.0107
168	4.0108	0.0107
169	4.0214	0.0106
170	4.0320	0.0106
171	4.0426	0.0106
172	4.0531	0.0105
173	4.0636	0.0105
174	4.0740	0.0105
175	4.0844	0.0104
176	4.0948	0.0104
177	4.1052	0.0104
178	4.1155	0.0103
179	4.1258	0.0103
180	4.1360	0.0103
181	4.1462	0.0102
182	4.1564	0.0102
183	4.1666	0.0102
184	4.1767	0.0101
185	4.1868	0.0101
186	4.1969	0.0101
187	4.2069	0.0100
188	4.2170	0.0100
189	4.2269	0.0100
190	4.2369	0.0100
191	4.2468	0.0099
192	4.2567	0.0099
193	4.2666	0.0099
194	4.2764	0.0098
195	4.2862	0.0098
196	4.2960	0.0098
197	4.3057	0.0098
198	4.3155	0.0097
199	4.3252	0.0097
200	4.3348	0.0097
201	4.3445	0.0096
202	4.3541	0.0096
203	4.3637	0.0096
204	4.3733	0.0096
205	4.3828	0.0095
206	4.3923	0.0095
207	4.4018	0.0095
208	4.4113	0.0095
209	4.4207	0.0094
210	4.4301	0.0094
211	4.4395	0.0094
212	4.4489	0.0094
213	4.4582	0.0093
214	4.4675	0.0093
215	4.4768	0.0093
216	4.4861	0.0093
217	4.4953	0.0092

218	4.5045	0.0092
219	4.5137	0.0092
220	4.5229	0.0092
221	4.5321	0.0091
222	4.5412	0.0091
223	4.5503	0.0091
224	4.5594	0.0091
225	4.5684	0.0091
226	4.5775	0.0090
227	4.5865	0.0090
228	4.5955	0.0090
229	4.6044	0.0090
230	4.6134	0.0089
231	4.6223	0.0089
232	4.6312	0.0089
233	4.6401	0.0089
234	4.6490	0.0089
235	4.6578	0.0088
236	4.6666	0.0088
237	4.6754	0.0088
238	4.6842	0.0088
239	4.6930	0.0088
240	4.7017	0.0087
241	4.7104	0.0087
242	4.7191	0.0087
243	4.7278	0.0087
244	4.7365	0.0087
245	4.7451	0.0086
246	4.7537	0.0086
247	4.7623	0.0086
248	4.7709	0.0086
249	4.7795	0.0086
250	4.7880	0.0085
251	4.7966	0.0085
252	4.8051	0.0085
253	4.8135	0.0085
254	4.8220	0.0085
255	4.8305	0.0085
256	4.8389	0.0084
257	4.8473	0.0084
258	4.8557	0.0084
259	4.8641	0.0084
260	4.8724	0.0084
261	4.8808	0.0083
262	4.8891	0.0083
263	4.8974	0.0083
264	4.9057	0.0083
265	4.9140	0.0083
266	4.9222	0.0083
267	4.9305	0.0082
268	4.9387	0.0082
269	4.9469	0.0082
270	4.9551	0.0082
271	4.9632	0.0082
272	4.9714	0.0082
273	4.9795	0.0081
274	4.9877	0.0081
275	4.9958	0.0081
276	5.0038	0.0081
277	5.0119	0.0081
278	5.0200	0.0081
279	5.0280	0.0080
280	5.0360	0.0080
281	5.0440	0.0080
282	5.0520	0.0080
283	5.0600	0.0080
284	5.0680	0.0080
285	5.0759	0.0079
286	5.0838	0.0079
287	5.0918	0.0079
288	5.0997	0.0079

Unit Period (number)	Unit Rainfall (In)	Unit Soil-Loss (In)	Effective Rainfall (In)
1	0.0079	0.0026	0.0053
2	0.0079	0.0026	0.0053
3	0.0079	0.0026	0.0053
4	0.0080	0.0026	0.0053
5	0.0080	0.0026	0.0054
6	0.0080	0.0026	0.0054
7	0.0080	0.0026	0.0054
8	0.0081	0.0027	0.0054

9	0.0081	0.0027	0.0054
10	0.0081	0.0027	0.0054
11	0.0081	0.0027	0.0055
12	0.0082	0.0027	0.0055
13	0.0082	0.0027	0.0055
14	0.0082	0.0027	0.0055
15	0.0082	0.0027	0.0055
16	0.0083	0.0027	0.0055
17	0.0083	0.0027	0.0056
18	0.0083	0.0027	0.0056
19	0.0083	0.0027	0.0056
20	0.0084	0.0028	0.0056
21	0.0084	0.0028	0.0056
22	0.0084	0.0028	0.0056
23	0.0085	0.0028	0.0057
24	0.0085	0.0028	0.0057
25	0.0085	0.0028	0.0057
26	0.0085	0.0028	0.0057
27	0.0086	0.0028	0.0057
28	0.0086	0.0028	0.0058
29	0.0086	0.0028	0.0058
30	0.0086	0.0028	0.0058
31	0.0087	0.0029	0.0058
32	0.0087	0.0029	0.0058
33	0.0087	0.0029	0.0059
34	0.0088	0.0029	0.0059
35	0.0088	0.0029	0.0059
36	0.0088	0.0029	0.0059
37	0.0089	0.0029	0.0059
38	0.0089	0.0029	0.0060
39	0.0089	0.0029	0.0060
40	0.0089	0.0029	0.0060
41	0.0090	0.0030	0.0060
42	0.0090	0.0030	0.0060
43	0.0091	0.0030	0.0061
44	0.0091	0.0030	0.0061
45	0.0091	0.0030	0.0061
46	0.0091	0.0030	0.0061
47	0.0092	0.0030	0.0062
48	0.0092	0.0030	0.0062
49	0.0093	0.0031	0.0062
50	0.0093	0.0031	0.0062
51	0.0093	0.0031	0.0063
52	0.0094	0.0031	0.0063
53	0.0094	0.0031	0.0063
54	0.0094	0.0031	0.0063
55	0.0095	0.0031	0.0064
56	0.0095	0.0031	0.0064
57	0.0096	0.0031	0.0064
58	0.0096	0.0032	0.0064
59	0.0096	0.0032	0.0065
60	0.0097	0.0032	0.0065
61	0.0097	0.0032	0.0065
62	0.0098	0.0032	0.0065
63	0.0098	0.0032	0.0066
64	0.0098	0.0032	0.0066
65	0.0099	0.0033	0.0066
66	0.0099	0.0033	0.0067
67	0.0100	0.0033	0.0067
68	0.0100	0.0033	0.0067
69	0.0101	0.0033	0.0068
70	0.0101	0.0033	0.0068
71	0.0102	0.0033	0.0068
72	0.0102	0.0034	0.0068
73	0.0103	0.0034	0.0069
74	0.0103	0.0034	0.0069
75	0.0104	0.0034	0.0069
76	0.0104	0.0034	0.0070
77	0.0105	0.0034	0.0070
78	0.0105	0.0035	0.0070
79	0.0106	0.0035	0.0071
80	0.0106	0.0035	0.0071
81	0.0107	0.0035	0.0071
82	0.0107	0.0035	0.0072
83	0.0108	0.0035	0.0072
84	0.0108	0.0036	0.0072
85	0.0109	0.0036	0.0073
86	0.0109	0.0036	0.0073
87	0.0110	0.0036	0.0074
88	0.0110	0.0036	0.0074
89	0.0111	0.0037	0.0074
90	0.0111	0.0037	0.0075
91	0.0112	0.0037	0.0075
92	0.0113	0.0037	0.0076

93	0.0113	0.0037	0.0076
94	0.0114	0.0038	0.0076
95	0.0115	0.0038	0.0077
96	0.0115	0.0038	0.0077
97	0.0116	0.0038	0.0078
98	0.0117	0.0038	0.0078
99	0.0117	0.0039	0.0079
100	0.0118	0.0039	0.0079
101	0.0119	0.0039	0.0080
102	0.0119	0.0039	0.0080
103	0.0120	0.0040	0.0081
104	0.0121	0.0040	0.0081
105	0.0122	0.0040	0.0082
106	0.0122	0.0040	0.0082
107	0.0123	0.0041	0.0083
108	0.0124	0.0041	0.0083
109	0.0125	0.0041	0.0084
110	0.0126	0.0041	0.0084
111	0.0127	0.0042	0.0085
112	0.0127	0.0042	0.0085
113	0.0128	0.0042	0.0086
114	0.0129	0.0043	0.0087
115	0.0130	0.0043	0.0087
116	0.0131	0.0043	0.0088
117	0.0132	0.0044	0.0089
118	0.0133	0.0044	0.0089
119	0.0134	0.0044	0.0090
120	0.0135	0.0044	0.0090
121	0.0136	0.0045	0.0091
122	0.0137	0.0045	0.0092
123	0.0138	0.0046	0.0093
124	0.0139	0.0046	0.0093
125	0.0141	0.0046	0.0094
126	0.0141	0.0047	0.0095
127	0.0143	0.0047	0.0096
128	0.0144	0.0047	0.0096
129	0.0146	0.0048	0.0098
130	0.0146	0.0048	0.0098
131	0.0148	0.0049	0.0099
132	0.0149	0.0049	0.0100
133	0.0151	0.0050	0.0101
134	0.0152	0.0050	0.0102
135	0.0154	0.0051	0.0103
136	0.0155	0.0051	0.0104
137	0.0157	0.0052	0.0105
138	0.0158	0.0052	0.0106
139	0.0160	0.0053	0.0107
140	0.0161	0.0053	0.0108
141	0.0163	0.0054	0.0110
142	0.0165	0.0054	0.0110
143	0.0167	0.0055	0.0112
144	0.0168	0.0055	0.0113
145	0.0169	0.0056	0.0113
146	0.0170	0.0056	0.0114
147	0.0173	0.0057	0.0116
148	0.0174	0.0057	0.0117
149	0.0177	0.0058	0.0119
150	0.0179	0.0059	0.0120
151	0.0182	0.0060	0.0122
152	0.0184	0.0060	0.0123
153	0.0187	0.0062	0.0125
154	0.0189	0.0062	0.0127
155	0.0193	0.0063	0.0129
156	0.0195	0.0064	0.0130
157	0.0199	0.0065	0.0133
158	0.0201	0.0066	0.0135
159	0.0205	0.0068	0.0138
160	0.0207	0.0068	0.0139
161	0.0212	0.0070	0.0142
162	0.0215	0.0071	0.0144
163	0.0220	0.0072	0.0148
164	0.0223	0.0073	0.0150
165	0.0229	0.0075	0.0154
166	0.0232	0.0076	0.0156
167	0.0239	0.0079	0.0160
168	0.0242	0.0080	0.0162
169	0.0251	0.0083	0.0168
170	0.0255	0.0084	0.0171
171	0.0263	0.0087	0.0177
172	0.0268	0.0088	0.0180
173	0.0278	0.0092	0.0187
174	0.0284	0.0093	0.0190
175	0.0295	0.0097	0.0198
176	0.0302	0.0099	0.0202

177	0.0316	0.0104	0.0212
178	0.0323	0.0106	0.0217
179	0.0341	0.0112	0.0229
180	0.0350	0.0115	0.0235
181	0.0372	0.0123	0.0250
182	0.0385	0.0127	0.0258
183	0.0413	0.0136	0.0277
184	0.0430	0.0142	0.0289
185	0.0426	0.0140	0.0286
186	0.0450	0.0148	0.0302
187	0.0511	0.0168	0.0343
188	0.0551	0.0182	0.0370
189	0.0665	0.0219	0.0446
190	0.0750	0.0242	0.0508
191	0.1072	0.0242	0.0830
192	0.1474	0.0242	0.1233
193	0.4614	0.0242	0.4373
194	0.0873	0.0242	0.0632
195	0.0601	0.0198	0.0403
196	0.0478	0.0157	0.0321
197	0.0449	0.0148	0.0301
198	0.0398	0.0131	0.0267
199	0.0361	0.0119	0.0242
200	0.0332	0.0109	0.0223
201	0.0308	0.0102	0.0207
202	0.0289	0.0095	0.0194
203	0.0273	0.0090	0.0183
204	0.0259	0.0085	0.0174
205	0.0246	0.0081	0.0165
206	0.0235	0.0077	0.0158
207	0.0226	0.0074	0.0151
208	0.0217	0.0072	0.0146
209	0.0210	0.0069	0.0141
210	0.0203	0.0067	0.0136
211	0.0196	0.0065	0.0132
212	0.0191	0.0063	0.0128
213	0.0185	0.0061	0.0124
214	0.0180	0.0059	0.0121
215	0.0176	0.0058	0.0118
216	0.0171	0.0056	0.0115
217	0.0170	0.0056	0.0114
218	0.0166	0.0055	0.0111
219	0.0162	0.0053	0.0109
220	0.0159	0.0052	0.0107
221	0.0156	0.0051	0.0104
222	0.0153	0.0050	0.0102
223	0.0150	0.0049	0.0101
224	0.0147	0.0048	0.0099
225	0.0145	0.0048	0.0097
226	0.0142	0.0047	0.0095
227	0.0140	0.0046	0.0094
228	0.0138	0.0045	0.0092
229	0.0136	0.0045	0.0091
230	0.0134	0.0044	0.0090
231	0.0132	0.0043	0.0088
232	0.0130	0.0043	0.0087
233	0.0128	0.0042	0.0086
234	0.0126	0.0042	0.0085
235	0.0125	0.0041	0.0084
236	0.0123	0.0040	0.0082
237	0.0121	0.0040	0.0081
238	0.0120	0.0039	0.0080
239	0.0118	0.0039	0.0079
240	0.0117	0.0039	0.0078
241	0.0116	0.0038	0.0078
242	0.0114	0.0038	0.0077
243	0.0113	0.0037	0.0076
244	0.0112	0.0037	0.0075
245	0.0111	0.0036	0.0074
246	0.0109	0.0036	0.0073
247	0.0108	0.0036	0.0073
248	0.0107	0.0035	0.0072
249	0.0106	0.0035	0.0071
250	0.0105	0.0035	0.0071
251	0.0104	0.0034	0.0070
252	0.0103	0.0034	0.0069
253	0.0102	0.0034	0.0069
254	0.0101	0.0033	0.0068
255	0.0100	0.0033	0.0067
256	0.0100	0.0033	0.0067
257	0.0099	0.0032	0.0066
258	0.0098	0.0032	0.0066
259	0.0097	0.0032	0.0065
260	0.0096	0.0032	0.0065

261	0.0095	0.0031	0.0064
262	0.0095	0.0031	0.0063
263	0.0094	0.0031	0.0063
264	0.0093	0.0031	0.0062
265	0.0092	0.0030	0.0062
266	0.0092	0.0030	0.0062
267	0.0091	0.0030	0.0061
268	0.0090	0.0030	0.0061
269	0.0090	0.0030	0.0060
270	0.0089	0.0029	0.0060
271	0.0088	0.0029	0.0059
272	0.0088	0.0029	0.0059
273	0.0087	0.0029	0.0058
274	0.0087	0.0029	0.0058
275	0.0086	0.0028	0.0058
276	0.0085	0.0028	0.0057
277	0.0085	0.0028	0.0057
278	0.0084	0.0028	0.0057
279	0.0084	0.0028	0.0056
280	0.0083	0.0027	0.0056
281	0.0083	0.0027	0.0055
282	0.0082	0.0027	0.0055
283	0.0082	0.0027	0.0055
284	0.0081	0.0027	0.0054
285	0.0081	0.0027	0.0054
286	0.0080	0.0026	0.0054
287	0.0080	0.0026	0.0053
288	0.0079	0.0026	0.0053

Total soil rain loss = 1.51(In)
Total effective rainfall = 3.59(In)
Peak flow rate in flood hydrograph = 114.63(CFS)

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24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

Hydrograph in 5 Minute intervals ((CFS))

Time(h+m)	Volume Ac.Ft	Q(CFS)	0	50.0	100.0	150.0	200.0
0+ 5	0.0005	0.07	Q				
0+10	0.0035	0.44	Q				
0+15	0.0114	1.14	Q				
0+20	0.0257	2.09	Q				
0+25	0.0450	2.79	Q				
0+30	0.0669	3.18	Q				
0+35	0.0901	3.37	Q				
0+40	0.1139	3.47	Q				
0+45	0.1381	3.50	Q				
0+50	0.1624	3.54	Q				
0+55	0.1870	3.57	Q				
1+ 0	0.2117	3.58	Q				
1+ 5	0.2364	3.59	Q				
1+10	0.2612	3.61	Q				
1+15	0.2861	3.62	Q				
1+20	0.3111	3.63	Q				
1+25	0.3362	3.64	Q				
1+30	0.3613	3.65	Q				
1+35	0.3865	3.66	Q				
1+40	0.4118	3.67	QV				
1+45	0.4372	3.68	QV				
1+50	0.4627	3.70	QV				
1+55	0.4882	3.71	QV				
2+ 0	0.5138	3.72	QV				
2+ 5	0.5395	3.73	QV				
2+10	0.5653	3.74	QV				
2+15	0.5912	3.76	QV				
2+20	0.6171	3.77	QV				
2+25	0.6432	3.78	QV				
2+30	0.6693	3.79	QV				
2+35	0.6955	3.81	QV				
2+40	0.7218	3.82	QV				
2+45	0.7482	3.83	QV				
2+50	0.7747	3.85	QV				
2+55	0.8013	3.86	QV				
3+ 0	0.8279	3.87	Q V				
3+ 5	0.8547	3.89	Q V				
3+10	0.8815	3.90	Q V				
3+15	0.9085	3.91	Q V				
3+20	0.9355	3.93	Q V				
3+25	0.9627	3.94	Q V				

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 3+30       0.9899      3.95  Q V       |          |          |          |
 3+35       1.0172      3.97  Q V       |          |          |          |
 3+40       1.0447      3.98  Q V       |          |          |          |
 3+45       1.0722      4.00  Q V       |          |          |          |
 3+50       1.0998      4.01  Q V       |          |          |          |
 3+55       1.1276      4.03  Q V       |          |          |          |
 4+ 0       1.1554      4.04  Q V       |          |          |          |
 4+ 5       1.1833      4.06  Q V       |          |          |          |
 4+10       1.2114      4.07  Q V       |          |          |          |
 4+15       1.2396      4.09  Q  V      |          |          |          |
 4+20       1.2678      4.10  Q  V      |          |          |          |
 4+25       1.2962      4.12  Q  V      |          |          |          |
 4+30       1.3247      4.14  Q  V      |          |          |          |
 4+35       1.3533      4.15  Q  V      |          |          |          |
 4+40       1.3820      4.17  Q  V      |          |          |          |
 4+45       1.4108      4.19  Q  V      |          |          |          |
 4+50       1.4398      4.20  Q  V      |          |          |          |
 4+55       1.4688      4.22  Q  V      |          |          |          |
 5+ 0       1.4980      4.24  Q  V      |          |          |          |
 5+ 5       1.5273      4.25  Q  V      |          |          |          |
 5+10       1.5567      4.27  Q  V      |          |          |          |
 5+15       1.5863      4.29  Q  V      |          |          |          |
 5+20       1.6159      4.31  Q  V      |          |          |          |
 5+25       1.6457      4.33  Q   V     |          |          |          |
 5+30       1.6756      4.34  Q   V     |          |          |          |
 5+35       1.7057      4.36  Q   V     |          |          |          |
 5+40       1.7358      4.38  Q   V     |          |          |          |
 5+45       1.7661      4.40  Q   V     |          |          |          |
 5+50       1.7966      4.42  Q   V     |          |          |          |
 5+55       1.8272      4.44  Q   V     |          |          |          |
 6+ 0       1.8579      4.46  Q   V     |          |          |          |
 6+ 5       1.8887      4.48  Q   V     |          |          |          |
 6+10       1.9197      4.50  Q   V     |          |          |          |
 6+15       1.9508      4.52  Q   V     |          |          |          |
 6+20       1.9821      4.54  Q   V     |          |          |          |
 6+25       2.0135      4.56  Q   V     |          |          |          |
 6+30       2.0451      4.58  Q    V    |          |          |          |
 6+35       2.0768      4.60  Q    V    |          |          |          |
 6+40       2.1086      4.63  Q    V    |          |          |          |
 6+45       2.1407      4.65  Q    V    |          |          |          |
 6+50       2.1728      4.67  Q    V    |          |          |          |
 6+55       2.2052      4.69  Q    V    |          |          |          |
 7+ 0       2.2377      4.72  Q    V    |          |          |          |
 7+ 5       2.2703      4.74  Q    V    |          |          |          |
 7+10       2.3031      4.76  Q    V    |          |          |          |
 7+15       2.3361      4.79  Q    V    |          |          |          |
 7+20       2.3693      4.81  Q    V    |          |          |          |
 7+25       2.4026      4.84  Q    V    |          |          |          |
 7+30       2.4361      4.86  Q    V    |          |          |          |
 7+35       2.4697      4.89  Q     V   |          |          |          |
 7+40       2.5036      4.92  Q     V   |          |          |          |
 7+45       2.5376      4.94  Q     V   |          |          |          |
 7+50       2.5718      4.97  Q     V   |          |          |          |
 7+55       2.6062      5.00  Q     V   |          |          |          |
 8+ 0       2.6408      5.02  |Q    V   |          |          |          |
 8+ 5       2.6756      5.05  |Q    V   |          |          |          |
 8+10       2.7106      5.08  |Q    V   |          |          |          |
 8+15       2.7458      5.11  |Q    V   |          |          |          |
 8+20       2.7812      5.14  |Q    V   |          |          |          |
 8+25       2.8168      5.17  |Q    V   |          |          |          |
 8+30       2.8526      5.20  |Q    V   |          |          |          |
 8+35       2.8886      5.23  |Q     V  |          |          |          |
 8+40       2.9248      5.26  |Q     V  |          |          |          |
 8+45       2.9612      5.29  |Q     V  |          |          |          |
 8+50       2.9979      5.32  |Q     V  |          |          |          |
 8+55       3.0348      5.36  |Q     V  |          |          |          |
 9+ 0       3.0719      5.39  |Q     V  |          |          |          |
 9+ 5       3.1093      5.43  |Q     V  |          |          |          |
 9+10       3.1469      5.46  |Q     V  |          |          |          |
 9+15       3.1848      5.50  |Q     V  |          |          |          |
 9+20       3.2229      5.53  |Q     V  |          |          |          |
 9+25       3.2612      5.57  |Q     V  |          |          |          |
 9+30       3.2998      5.61  |Q      V |          |          |          |
 9+35       3.3387      5.64  |Q      V |          |          |          |
 9+40       3.3778      5.68  |Q      V |          |          |          |
 9+45       3.4173      5.72  |Q      V |          |          |          |
 9+50       3.4570      5.76  |Q      V |          |          |          |
 9+55       3.4969      5.80  |Q      V |          |          |          |
10+ 0       3.5372      5.85  |Q      V |          |          |          |
10+ 5       3.5778      5.89  |Q      V |          |          |          |
10+10       3.6186      5.93  |Q      V |          |          |          |
10+15       3.6598      5.98  |Q      V |          |          |          |
10+20       3.7013      6.03  |Q       V|          |          |          |
10+25       3.7431      6.07  |Q       V|          |          |          |
```

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10+30       3.7853      6.12  |Q       V|          |          |          |
10+35       3.8278      6.17  |Q       V|          |          |          |
10+40       3.8706      6.22  |Q       V|          |          |          |
10+45       3.9138      6.27  |Q       V|          |          |          |
10+50       3.9573      6.32  |Q       V|          |          |          |
10+55       4.0012      6.38  |Q       V|          |          |          |
11+ 0       4.0455      6.43  |Q       V|          |          |          |
11+ 5       4.0902      6.49  |Q        V          |          |          |
11+10       4.1353      6.55  |Q        V          |          |          |
11+15       4.1807      6.60  |Q        V          |          |          |
11+20       4.2267      6.67  |Q        V          |          |          |
11+25       4.2730      6.73  |Q        V          |          |          |
11+30       4.3198      6.79  |Q        V          |          |          |
11+35       4.3670      6.86  |Q        V          |          |          |
11+40       4.4147      6.92  |Q        V          |          |          |
11+45       4.4628      6.99  |Q        V          |          |          |
11+50       4.5115      7.07  |Q        |V         |          |          |
11+55       4.5606      7.14  |Q        |V         |          |          |
12+ 0       4.6103      7.21  |Q        |V         |          |          |
12+ 5       4.6605      7.29  |Q        |V         |          |          |
12+10       4.7112      7.36  |Q        |V         |          |          |
12+15       4.7624      7.43  |Q        |V         |          |          |
12+20       4.8140      7.49  |Q        |V         |          |          |
12+25       4.8660      7.56  |Q        |V         |          |          |
12+30       4.9186      7.64  |Q        | V        |          |          |
12+35       4.9718      7.73  |Q        | V        |          |          |
12+40       5.0257      7.82  |Q        | V        |          |          |
12+45       5.0803      7.92  |Q        | V        |          |          |
12+50       5.1356      8.03  |Q        | V        |          |          |
12+55       5.1916      8.14  |Q        | V        |          |          |
13+ 0       5.2485      8.25  |Q        | V        |          |          |
13+ 5       5.3061      8.37  |Q        | V        |          |          |
13+10       5.3646      8.49  |Q        |  V       |          |          |
13+15       5.4239      8.62  |Q        |  V       |          |          |
13+20       5.4842      8.75  |Q        |  V       |          |          |
13+25       5.5454      8.89  |Q        |  V       |          |          |
13+30       5.6076      9.04  |Q        |  V       |          |          |
13+35       5.6709      9.19  |Q        |  V       |          |          |
13+40       5.7353      9.35  |Q        |   V      |          |          |
13+45       5.8008      9.51  |Q        |   V      |          |          |
13+50       5.8675      9.69  |Q        |   V      |          |          |
13+55       5.9355      9.87  |Q        |   V      |          |          |
14+ 0       6.0049     10.07  | Q       |   V      |          |          |
14+ 5       6.0757     10.28  | Q       |   V      |          |          |
14+10       6.1480     10.50  | Q       |    V     |          |          |
14+15       6.2220     10.74  | Q       |    V     |          |          |
14+20       6.2978     11.01  | Q       |    V     |          |          |
14+25       6.3755     11.28  | Q       |    V     |          |          |
14+30       6.4552     11.57  | Q       |    V     |          |          |
14+35       6.5370     11.88  | Q       |    V     |          |          |
14+40       6.6211     12.21  | Q       |     V    |          |          |
14+45       6.7076     12.56  | Q       |     V    |          |          |
14+50       6.7968     12.95  | Q       |     V    |          |          |
14+55       6.8889     13.37  | Q       |     V    |          |          |
15+ 0       6.9842     13.84  | Q       |      V   |          |          |
15+ 5       7.0829     14.34  | Q       |      V   |          |          |
15+10       7.1857     14.92  | Q       |      V   |          |          |
15+15       7.2927     15.55  |  Q      |      V   |          |          |
15+20       7.4048     16.28  |  Q      |       V  |          |          |
15+25       7.5223     17.05  |  Q      |       V  |          |          |
15+30       7.6450     17.82  |  Q      |       V  |          |          |
15+35       7.7726     18.54  |  Q      |        V |          |          |
15+40       7.9061     19.37  |  Q      |        V |          |          |
15+45       8.0482     20.64  |   Q     |        V |          |          |
15+50       8.2039     22.60  |   Q     |         V          |          |
15+55       8.3805     25.65  |    Q    |         V          |          |
16+ 0       8.5962     31.31  |     Q   |          V         |          |
16+ 5       8.9075     45.21  |      Q  |          V         |          |
16+10       9.4176     74.07  |         |   Q      |  V      |          |
16+15      10.1203    102.02  |         |          Q   V     |          |
16+20      10.9097    114.63  |         |          | Q   V   |          |
16+25      11.5294     89.97  |         |       Q  |      V  |          |
16+30      11.9412     59.79  |         |Q         |       V |          |
16+35      12.2145     39.69  |      Q  |          |       V |          |
16+40      12.4106     28.48  |    Q    |          |        V           |
16+45      12.5590     21.55  |   Q     |          |        V           |
16+50      12.6895     18.94  |  Q      |          |         V          |
16+55      12.8079     17.19  |  Q      |          |         V          |
17+ 0      12.9112     15.00  |  Q      |          |         V          |
17+ 5      13.0036     13.41  | Q       |          |         V          |
17+10      13.0900     12.55  | Q       |          |          V         |
17+15      13.1715     11.84  | Q       |          |          V         |
17+20      13.2489     11.23  | Q       |          |          V         |
17+25      13.3226     10.70  | Q       |          |          V         |
```

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17+30      13.3931     10.24  | Q       |         |         | V       |
17+35      13.4608      9.84  |Q        |         |         | V       |
17+40      13.5261      9.47  |Q        |         |         |  V      |
17+45      13.5891      9.15  |Q        |         |         |  V      |
17+50      13.6500      8.85  |Q        |         |         |  V      |
17+55      13.7091      8.58  |Q        |         |         |  V      |
18+ 0      13.7665      8.33  |Q        |         |         |  V      |
18+ 5      13.8223      8.10  |Q        |         |         |  V      |
18+10      13.8767      7.90  |Q        |         |         |  V      |
18+15      13.9299      7.72  |Q        |         |         |   V     |
18+20      13.9819      7.56  |Q        |         |         |   V     |
18+25      14.0329      7.41  |Q        |         |         |   V     |
18+30      14.0829      7.25  |Q        |         |         |   V     |
18+35      14.1319      7.11  |Q        |         |         |   V     |
18+40      14.1798      6.97  |Q        |         |         |   V     |
18+45      14.2269      6.83  |Q        |         |         |   V     |
18+50      14.2730      6.70  |Q        |         |         |   V     |
18+55      14.3183      6.58  |Q        |         |         |    V    |
19+ 0      14.3629      6.46  |Q        |         |         |    V    |
19+ 5      14.4066      6.35  |Q        |         |         |    V    |
19+10      14.4497      6.25  |Q        |         |         |    V    |
19+15      14.4920      6.15  |Q        |         |         |    V    |
19+20      14.5337      6.05  |Q        |         |         |    V    |
19+25      14.5748      5.96  |Q        |         |         |    V    |
19+30      14.6152      5.87  |Q        |         |         |    V    |
19+35      14.6551      5.79  |Q        |         |         |    V    |
19+40      14.6944      5.71  |Q        |         |         |    V    |
19+45      14.7331      5.63  |Q        |         |         |     V   |
19+50      14.7714      5.55  |Q        |         |         |     V   |
19+55      14.8091      5.48  |Q        |         |         |     V   |
20+ 0      14.8464      5.41  |Q        |         |         |     V   |
20+ 5      14.8832      5.34  |Q        |         |         |     V   |
20+10      14.9195      5.28  |Q        |         |         |     V   |
20+15      14.9555      5.22  |Q        |         |         |     V   |
20+20      14.9910      5.15  |Q        |         |         |     V   |
20+25      15.0260      5.10  |Q        |         |         |     V   |
20+30      15.0607      5.04  |Q        |         |         |     V   |
20+35      15.0951      4.98  Q        |         |         |     V   |
20+40      15.1290      4.93  Q        |         |         |      V  |
20+45      15.1626      4.88  Q        |         |         |      V  |
20+50      15.1959      4.83  Q        |         |         |      V  |
20+55      15.2288      4.78  Q        |         |         |      V  |
21+ 0      15.2613      4.73  Q        |         |         |      V  |
21+ 5      15.2936      4.68  Q        |         |         |      V  |
21+10      15.3255      4.64  Q        |         |         |      V  |
21+15      15.3572      4.59  Q        |         |         |      V  |
21+20      15.3885      4.55  Q        |         |         |      V  |
21+25      15.4196      4.51  Q        |         |         |      V  |
21+30      15.4504      4.47  Q        |         |         |      V  |
21+35      15.4809      4.43  Q        |         |         |      V  |
21+40      15.5111      4.39  Q        |         |         |      V  |
21+45      15.5411      4.35  Q        |         |         |       V |
21+50      15.5709      4.32  Q        |         |         |       V |
21+55      15.6003      4.28  Q        |         |         |       V |
22+ 0      15.6296      4.25  Q        |         |         |       V |
22+ 5      15.6586      4.21  Q        |         |         |       V |
22+10      15.6874      4.18  Q        |         |         |       V |
22+15      15.7159      4.15  Q        |         |         |       V |
22+20      15.7442      4.11  Q        |         |         |       V |
22+25      15.7723      4.08  Q        |         |         |       V |
22+30      15.8002      4.05  Q        |         |         |       V |
22+35      15.8279      4.02  Q        |         |         |       V |
22+40      15.8554      3.99  Q        |         |         |       V |
22+45      15.8827      3.96  Q        |         |         |       V |
22+50      15.9098      3.93  Q        |         |         |       V |
22+55      15.9367      3.91  Q        |         |         |       V |
23+ 0      15.9634      3.88  Q        |         |         |        V|
23+ 5      15.9900      3.85  Q        |         |         |        V|
23+10      16.0163      3.83  Q        |         |         |        V|
23+15      16.0425      3.80  Q        |         |         |        V|
23+20      16.0685      3.78  Q        |         |         |        V|
23+25      16.0943      3.75  Q        |         |         |        V|
23+30      16.1200      3.73  Q        |         |         |        V|
23+35      16.1455      3.70  Q        |         |         |        V|
23+40      16.1708      3.68  Q        |         |         |        V|
23+45      16.1960      3.66  Q        |         |         |        V|
23+50      16.2210      3.63  Q        |         |         |        V|
23+55      16.2459      3.61  Q        |         |         |        V|
24+ 0      16.2706      3.59  Q        |         |         |        V|
24+ 5      16.2946      3.49  Q        |         |         |        V|
24+10      16.3161      3.11  Q        |         |         |        V|
24+15      16.3325      2.39  Q        |         |         |        V|
24+20      16.3424      1.44  Q        |         |         |        V|
24+25      16.3475      0.73  Q        |         |         |        V|
```

24+30	16.3499	0.35	Q	|	|	|	V|
24+35	16.3510	0.16	Q	|	|	|	V|
24+40	16.3515	0.07	Q	|	|	|	V|
24+45	16.3518	0.05	Q	|	|	|	V|
24+50	16.3520	0.03	Q	|	|	|	V|
24+55	16.3520	0.01	Q	|	|	|	V|

PROPOSED CONDITION UNIT HYDROGRAPH

PROPOSED CONDITION
100-YEAR, 24-HOUR UNIT HYDROGRAPH

U n i t H y d r o g r a p h A n a l y s i s

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Study date 07/26/18

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San Bernardino County Synthetic Unit Hydrology Method
Manual date - August 1986

Program License Serial Number 4010

18-0011 DUKE - ALABAMA & PALMETTO
UNIT HYDROGRAPH HYDROLOGY
100-YEAR 24-HOUR STORM EVENT
PROPOSED CONDITION -MJS

Storm Event Year = 100

Antecedent Moisture Condition = 3

English (in-lb) Input Units Used

English Rainfall Data (Inches) Input Values Used

English Units used in output format

Area averaged rainfall intensity isohyetal data:

Sub-Area (Ac.)	Duration (hours)	Isohyetal (In)
Rainfall data for year 100		
54.30	1	1.25
Rainfall data for year 100		
54.30	6	2.75
Rainfall data for year 100		
54.30	24	5.10

++

******** Area-averaged max loss rate, Fm ********

SCS curve No.(AMCII)	SCS curve NO.(AMC 3)	Area (Ac.)	Area Fraction	Fp(Fig C6) (In/Hr)	Ap (dec.)	Fm (In/Hr)
32.0	52.0	54.30	1.000	0.785	0.150	0.118

Area-averaged adjusted loss rate Fm (In/Hr) = 0.118

********* Area-Averaged low loss rate fraction, Yb **********

Area (Ac.)	Area Fract	SCS CN (AMC2)	SCS CN (AMC3)	S	Pervious Yield Fr
8.14	0.150	32.0	52.0	9.23	0.166
46.15	0.850	98.0	98.0	0.20	0.954

Area-averaged catchment yield fraction, Y = 0.835
Area-averaged low loss fraction, Yb = 0.165
User entry of time of concentration = 0.257 (hours)

++
Watershed area = 54.30(Ac.)
Catchment Lag time = 0.206 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 40.5318
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.118(In/Hr)
Average low loss rate fraction (Yb) = 0.165 (decimal)
VALLEY DEVELOPED S-Graph Selected
Computed peak 5-minute rainfall = 0.463(In)
Computed peak 30-minute rainfall = 0.947(In)
Specified peak 1-hour rainfall = 1.250(In)
Computed peak 3-hour rainfall = 2.027(In)
Specified peak 6-hour rainfall = 2.750(In)

Specified peak 24-hour rainfall = 5.100(In)

Rainfall depth area reduction factors:
Using a total area of 54.30(Ac.) (Ref: fig. E-4)

5-minute factor = 0.997 Adjusted rainfall = 0.461(In)
30-minute factor = 0.997 Adjusted rainfall = 0.945(In)
1-hour factor = 0.997 Adjusted rainfall = 1.247(In)
3-hour factor = 1.000 Adjusted rainfall = 2.026(In)
6-hour factor = 1.000 Adjusted rainfall = 2.750(In)
24-hour factor = 1.000 Adjusted rainfall = 5.100(In)

U n i t H y d r o g r a p h

Interval Number	'S' Graph Mean values	Unit Hydrograph ((CFS))
	(K = 656.69 (CFS))	
1	3.107	20.404
2	20.076	111.432
3	50.784	201.656
4	78.829	184.168
5	91.651	84.201
6	96.945	34.765
7	98.542	10.491
8	99.272	4.791
9	100.000	4.782

Peak Unit Number	Adjusted mass rainfall (In)	Unit rainfall (In)
1	0.4615	0.4615
2	0.6089	0.1474
3	0.7161	0.1072
4	0.8034	0.0873
5	0.8785	0.0750
6	0.9449	0.0665
7	1.0050	0.0601
8	1.0601	0.0551
9	1.1113	0.0511
10	1.1591	0.0478
11	1.2042	0.0450
12	1.2468	0.0426
13	1.2917	0.0449
14	1.3347	0.0430
15	1.3761	0.0413
16	1.4159	0.0398
17	1.4544	0.0385
18	1.4916	0.0372
19	1.5277	0.0361
20	1.5627	0.0350
21	1.5968	0.0341
22	1.6300	0.0332
23	1.6623	0.0323
24	1.6939	0.0316
25	1.7247	0.0308
26	1.7549	0.0302
27	1.7844	0.0295
28	1.8133	0.0289
29	1.8417	0.0283
30	1.8695	0.0278
31	1.8968	0.0273
32	1.9236	0.0268
33	1.9499	0.0263
34	1.9758	0.0259
35	2.0013	0.0255
36	2.0264	0.0251
37	2.0510	0.0246
38	2.0752	0.0242
39	2.0991	0.0239
40	2.1226	0.0235
41	2.1458	0.0232
42	2.1687	0.0229
43	2.1913	0.0226
44	2.2136	0.0223
45	2.2356	0.0220
46	2.2573	0.0217
47	2.2788	0.0215
48	2.3000	0.0212
49	2.3210	0.0210
50	2.3417	0.0207
51	2.3622	0.0205

52	2.3825	0.0203
53	2.4026	0.0201
54	2.4224	0.0199
55	2.4421	0.0196
56	2.4615	0.0194
57	2.4808	0.0193
58	2.4999	0.0191
59	2.5187	0.0189
60	2.5375	0.0187
61	2.5560	0.0185
62	2.5744	0.0184
63	2.5925	0.0182
64	2.6106	0.0180
65	2.6285	0.0179
66	2.6462	0.0177
67	2.6638	0.0176
68	2.6812	0.0174
69	2.6985	0.0173
70	2.7156	0.0171
71	2.7327	0.0170
72	2.7495	0.0169
73	2.7665	0.0170
74	2.7833	0.0168
75	2.8000	0.0167
76	2.8166	0.0166
77	2.8330	0.0165
78	2.8494	0.0163
79	2.8656	0.0162
80	2.8817	0.0161
81	2.8977	0.0160
82	2.9136	0.0159
83	2.9294	0.0158
84	2.9450	0.0157
85	2.9606	0.0156
86	2.9761	0.0155
87	2.9915	0.0154
88	3.0067	0.0153
89	3.0219	0.0152
90	3.0370	0.0151
91	3.0520	0.0150
92	3.0669	0.0149
93	3.0817	0.0148
94	3.0964	0.0147
95	3.1110	0.0146
96	3.1256	0.0146
97	3.1401	0.0145
98	3.1544	0.0144
99	3.1687	0.0143
100	3.1830	0.0142
101	3.1971	0.0141
102	3.2112	0.0141
103	3.2252	0.0140
104	3.2391	0.0139
105	3.2529	0.0138
106	3.2667	0.0138
107	3.2804	0.0137
108	3.2940	0.0136
109	3.3076	0.0136
110	3.3211	0.0135
111	3.3345	0.0134
112	3.3478	0.0134
113	3.3611	0.0133
114	3.3743	0.0132
115	3.3875	0.0132
116	3.4006	0.0131
117	3.4136	0.0130
118	3.4266	0.0130
119	3.4395	0.0129
120	3.4524	0.0128
121	3.4652	0.0128
122	3.4779	0.0127
123	3.4906	0.0127
124	3.5032	0.0126
125	3.5157	0.0126
126	3.5282	0.0125
127	3.5407	0.0125
128	3.5531	0.0124
129	3.5654	0.0123
130	3.5777	0.0123
131	3.5900	0.0122
132	3.6021	0.0122
133	3.6143	0.0121
134	3.6264	0.0121
135	3.6384	0.0120

136	3.6504	0.0120
137	3.6623	0.0119
138	3.6742	0.0119
139	3.6860	0.0118
140	3.6978	0.0118
141	3.7096	0.0117
142	3.7213	0.0117
143	3.7329	0.0117
144	3.7446	0.0116
145	3.7561	0.0116
146	3.7676	0.0115
147	3.7791	0.0115
148	3.7905	0.0114
149	3.8019	0.0114
150	3.8133	0.0113
151	3.8246	0.0113
152	3.8359	0.0113
153	3.8471	0.0112
154	3.8583	0.0112
155	3.8694	0.0111
156	3.8805	0.0111
157	3.8916	0.0111
158	3.9026	0.0110
159	3.9136	0.0110
160	3.9245	0.0109
161	3.9355	0.0109
162	3.9463	0.0109
163	3.9572	0.0108
164	3.9680	0.0108
165	3.9787	0.0108
166	3.9895	0.0107
167	4.0002	0.0107
168	4.0108	0.0107
169	4.0214	0.0106
170	4.0320	0.0106
171	4.0426	0.0106
172	4.0531	0.0105
173	4.0636	0.0105
174	4.0740	0.0105
175	4.0844	0.0104
176	4.0948	0.0104
177	4.1052	0.0104
178	4.1155	0.0103
179	4.1258	0.0103
180	4.1360	0.0103
181	4.1463	0.0102
182	4.1564	0.0102
183	4.1666	0.0102
184	4.1767	0.0101
185	4.1868	0.0101
186	4.1969	0.0101
187	4.2069	0.0100
188	4.2170	0.0100
189	4.2269	0.0100
190	4.2369	0.0100
191	4.2468	0.0099
192	4.2567	0.0099
193	4.2666	0.0099
194	4.2764	0.0098
195	4.2862	0.0098
196	4.2960	0.0098
197	4.3057	0.0098
198	4.3155	0.0097
199	4.3252	0.0097
200	4.3348	0.0097
201	4.3445	0.0096
202	4.3541	0.0096
203	4.3637	0.0096
204	4.3733	0.0096
205	4.3828	0.0095
206	4.3923	0.0095
207	4.4018	0.0095
208	4.4113	0.0095
209	4.4207	0.0094
210	4.4301	0.0094
211	4.4395	0.0094
212	4.4489	0.0094
213	4.4582	0.0093
214	4.4675	0.0093
215	4.4768	0.0093
216	4.4861	0.0093
217	4.4953	0.0092
218	4.5045	0.0092
219	4.5137	0.0092

220	4.5229	0.0092
221	4.5321	0.0091
222	4.5412	0.0091
223	4.5503	0.0091
224	4.5594	0.0091
225	4.5684	0.0091
226	4.5775	0.0090
227	4.5865	0.0090
228	4.5955	0.0090
229	4.6044	0.0090
230	4.6134	0.0089
231	4.6223	0.0089
232	4.6312	0.0089
233	4.6401	0.0089
234	4.6490	0.0089
235	4.6578	0.0088
236	4.6666	0.0088
237	4.6754	0.0088
238	4.6842	0.0088
239	4.6930	0.0088
240	4.7017	0.0087
241	4.7104	0.0087
242	4.7191	0.0087
243	4.7278	0.0087
244	4.7365	0.0087
245	4.7451	0.0086
246	4.7537	0.0086
247	4.7623	0.0086
248	4.7709	0.0086
249	4.7795	0.0086
250	4.7880	0.0085
251	4.7966	0.0085
252	4.8051	0.0085
253	4.8136	0.0085
254	4.8220	0.0085
255	4.8305	0.0085
256	4.8389	0.0084
257	4.8473	0.0084
258	4.8557	0.0084
259	4.8641	0.0084
260	4.8724	0.0084
261	4.8808	0.0083
262	4.8891	0.0083
263	4.8974	0.0083
264	4.9057	0.0083
265	4.9140	0.0083
266	4.9222	0.0083
267	4.9305	0.0082
268	4.9387	0.0082
269	4.9469	0.0082
270	4.9551	0.0082
271	4.9633	0.0082
272	4.9714	0.0082
273	4.9795	0.0081
274	4.9877	0.0081
275	4.9958	0.0081
276	5.0039	0.0081
277	5.0119	0.0081
278	5.0200	0.0081
279	5.0280	0.0080
280	5.0360	0.0080
281	5.0440	0.0080
282	5.0520	0.0080
283	5.0600	0.0080
284	5.0680	0.0080
285	5.0759	0.0079
286	5.0838	0.0079
287	5.0918	0.0079
288	5.0997	0.0079

Unit Period (number)	Unit Rainfall (In)	Unit Soil-Loss (In)	Effective Rainfall (In)
1	0.0079	0.0013	0.0066
2	0.0079	0.0013	0.0066
3	0.0079	0.0013	0.0066
4	0.0080	0.0013	0.0066
5	0.0080	0.0013	0.0067
6	0.0080	0.0013	0.0067
7	0.0080	0.0013	0.0067
8	0.0081	0.0013	0.0067
9	0.0081	0.0013	0.0068
10	0.0081	0.0013	0.0068

11	0.0081	0.0013	0.0068
12	0.0082	0.0013	0.0068
13	0.0082	0.0013	0.0068
14	0.0082	0.0013	0.0069
15	0.0082	0.0014	0.0069
16	0.0083	0.0014	0.0069
17	0.0083	0.0014	0.0069
18	0.0083	0.0014	0.0069
19	0.0083	0.0014	0.0070
20	0.0084	0.0014	0.0070
21	0.0084	0.0014	0.0070
22	0.0084	0.0014	0.0070
23	0.0085	0.0014	0.0071
24	0.0085	0.0014	0.0071
25	0.0085	0.0014	0.0071
26	0.0085	0.0014	0.0071
27	0.0086	0.0014	0.0072
28	0.0086	0.0014	0.0072
29	0.0086	0.0014	0.0072
30	0.0086	0.0014	0.0072
31	0.0087	0.0014	0.0073
32	0.0087	0.0014	0.0073
33	0.0087	0.0014	0.0073
34	0.0088	0.0014	0.0073
35	0.0088	0.0014	0.0074
36	0.0088	0.0015	0.0074
37	0.0089	0.0015	0.0074
38	0.0089	0.0015	0.0074
39	0.0089	0.0015	0.0075
40	0.0089	0.0015	0.0075
41	0.0090	0.0015	0.0075
42	0.0090	0.0015	0.0075
43	0.0091	0.0015	0.0076
44	0.0091	0.0015	0.0076
45	0.0091	0.0015	0.0076
46	0.0091	0.0015	0.0076
47	0.0092	0.0015	0.0077
48	0.0092	0.0015	0.0077
49	0.0093	0.0015	0.0077
50	0.0093	0.0015	0.0078
51	0.0093	0.0015	0.0078
52	0.0094	0.0015	0.0078
53	0.0094	0.0015	0.0079
54	0.0094	0.0016	0.0079
55	0.0095	0.0016	0.0079
56	0.0095	0.0016	0.0079
57	0.0096	0.0016	0.0080
58	0.0096	0.0016	0.0080
59	0.0096	0.0016	0.0081
60	0.0097	0.0016	0.0081
61	0.0097	0.0016	0.0081
62	0.0098	0.0016	0.0081
63	0.0098	0.0016	0.0082
64	0.0098	0.0016	0.0082
65	0.0099	0.0016	0.0083
66	0.0099	0.0016	0.0083
67	0.0100	0.0016	0.0083
68	0.0100	0.0016	0.0084
69	0.0101	0.0017	0.0084
70	0.0101	0.0017	0.0084
71	0.0102	0.0017	0.0085
72	0.0102	0.0017	0.0085
73	0.0103	0.0017	0.0086
74	0.0103	0.0017	0.0086
75	0.0104	0.0017	0.0086
76	0.0104	0.0017	0.0087
77	0.0105	0.0017	0.0087
78	0.0105	0.0017	0.0088
79	0.0106	0.0017	0.0088
80	0.0106	0.0017	0.0088
81	0.0107	0.0018	0.0089
82	0.0107	0.0018	0.0089
83	0.0108	0.0018	0.0090
84	0.0108	0.0018	0.0090
85	0.0109	0.0018	0.0091
86	0.0109	0.0018	0.0091
87	0.0110	0.0018	0.0092
88	0.0110	0.0018	0.0092
89	0.0111	0.0018	0.0093
90	0.0111	0.0018	0.0093
91	0.0112	0.0018	0.0094
92	0.0113	0.0019	0.0094
93	0.0113	0.0019	0.0095
94	0.0114	0.0019	0.0095

95	0.0115	0.0019	0.0096
96	0.0115	0.0019	0.0096
97	0.0116	0.0019	0.0097
98	0.0117	0.0019	0.0097
99	0.0117	0.0019	0.0098
100	0.0118	0.0019	0.0099
101	0.0119	0.0020	0.0099
102	0.0119	0.0020	0.0100
103	0.0120	0.0020	0.0101
104	0.0121	0.0020	0.0101
105	0.0122	0.0020	0.0102
106	0.0122	0.0020	0.0102
107	0.0123	0.0020	0.0103
108	0.0124	0.0020	0.0104
109	0.0125	0.0021	0.0104
110	0.0126	0.0021	0.0105
111	0.0127	0.0021	0.0106
112	0.0127	0.0021	0.0106
113	0.0128	0.0021	0.0107
114	0.0129	0.0021	0.0108
115	0.0130	0.0021	0.0109
116	0.0131	0.0022	0.0109
117	0.0132	0.0022	0.0110
118	0.0133	0.0022	0.0111
119	0.0134	0.0022	0.0112
120	0.0135	0.0022	0.0113
121	0.0136	0.0022	0.0114
122	0.0137	0.0023	0.0114
123	0.0138	0.0023	0.0116
124	0.0139	0.0023	0.0116
125	0.0141	0.0023	0.0118
126	0.0141	0.0023	0.0118
127	0.0143	0.0024	0.0119
128	0.0144	0.0024	0.0120
129	0.0146	0.0024	0.0122
130	0.0146	0.0024	0.0122
131	0.0148	0.0024	0.0124
132	0.0149	0.0025	0.0124
133	0.0151	0.0025	0.0126
134	0.0152	0.0025	0.0127
135	0.0154	0.0025	0.0128
136	0.0155	0.0025	0.0129
137	0.0157	0.0026	0.0131
138	0.0158	0.0026	0.0132
139	0.0160	0.0026	0.0134
140	0.0161	0.0027	0.0135
141	0.0163	0.0027	0.0136
142	0.0165	0.0027	0.0137
143	0.0167	0.0027	0.0140
144	0.0168	0.0028	0.0141
145	0.0169	0.0028	0.0141
146	0.0170	0.0028	0.0142
147	0.0173	0.0028	0.0144
148	0.0174	0.0029	0.0146
149	0.0177	0.0029	0.0148
150	0.0179	0.0029	0.0149
151	0.0182	0.0030	0.0152
152	0.0184	0.0030	0.0153
153	0.0187	0.0031	0.0156
154	0.0189	0.0031	0.0158
155	0.0193	0.0032	0.0161
156	0.0194	0.0032	0.0162
157	0.0199	0.0033	0.0166
158	0.0201	0.0033	0.0168
159	0.0205	0.0034	0.0171
160	0.0207	0.0034	0.0173
161	0.0212	0.0035	0.0177
162	0.0215	0.0035	0.0179
163	0.0220	0.0036	0.0184
164	0.0223	0.0037	0.0186
165	0.0229	0.0038	0.0191
166	0.0232	0.0038	0.0194
167	0.0239	0.0039	0.0199
168	0.0242	0.0040	0.0202
169	0.0251	0.0041	0.0210
170	0.0255	0.0042	0.0213
171	0.0263	0.0043	0.0220
172	0.0268	0.0044	0.0224
173	0.0278	0.0046	0.0232
174	0.0283	0.0047	0.0237
175	0.0295	0.0049	0.0247
176	0.0302	0.0050	0.0252
177	0.0316	0.0052	0.0264
178	0.0323	0.0053	0.0270

179	0.0341	0.0056	0.0285
180	0.0350	0.0058	0.0293
181	0.0372	0.0061	0.0311
182	0.0385	0.0063	0.0321
183	0.0413	0.0068	0.0345
184	0.0430	0.0071	0.0359
185	0.0426	0.0070	0.0356
186	0.0450	0.0074	0.0376
187	0.0511	0.0084	0.0427
188	0.0551	0.0091	0.0461
189	0.0665	0.0098	0.0566
190	0.0750	0.0098	0.0652
191	0.1072	0.0098	0.0974
192	0.1474	0.0098	0.1376
193	0.4615	0.0098	0.4516
194	0.0873	0.0098	0.0775
195	0.0601	0.0098	0.0503
196	0.0478	0.0079	0.0400
197	0.0449	0.0074	0.0375
198	0.0398	0.0066	0.0333
199	0.0361	0.0059	0.0301
200	0.0332	0.0055	0.0277
201	0.0308	0.0051	0.0258
202	0.0289	0.0048	0.0242
203	0.0273	0.0045	0.0228
204	0.0259	0.0043	0.0216
205	0.0246	0.0040	0.0205
206	0.0235	0.0039	0.0197
207	0.0226	0.0037	0.0189
208	0.0217	0.0036	0.0182
209	0.0210	0.0035	0.0175
210	0.0203	0.0033	0.0169
211	0.0196	0.0032	0.0164
212	0.0191	0.0031	0.0159
213	0.0185	0.0030	0.0155
214	0.0180	0.0030	0.0151
215	0.0176	0.0029	0.0147
216	0.0171	0.0028	0.0143
217	0.0170	0.0028	0.0142
218	0.0166	0.0027	0.0138
219	0.0162	0.0027	0.0136
220	0.0159	0.0026	0.0133
221	0.0156	0.0026	0.0130
222	0.0153	0.0025	0.0128
223	0.0150	0.0025	0.0125
224	0.0147	0.0024	0.0123
225	0.0145	0.0024	0.0121
226	0.0142	0.0023	0.0119
227	0.0140	0.0023	0.0117
228	0.0138	0.0023	0.0115
229	0.0136	0.0022	0.0113
230	0.0134	0.0022	0.0112
231	0.0132	0.0022	0.0110
232	0.0130	0.0021	0.0108
233	0.0128	0.0021	0.0107
234	0.0126	0.0021	0.0105
235	0.0125	0.0020	0.0104
236	0.0123	0.0020	0.0103
237	0.0121	0.0020	0.0101
238	0.0120	0.0020	0.0100
239	0.0118	0.0019	0.0099
240	0.0117	0.0019	0.0098
241	0.0116	0.0019	0.0097
242	0.0114	0.0019	0.0096
243	0.0113	0.0019	0.0094
244	0.0112	0.0018	0.0093
245	0.0111	0.0018	0.0092
246	0.0109	0.0018	0.0091
247	0.0108	0.0018	0.0091
248	0.0107	0.0018	0.0090
249	0.0106	0.0017	0.0089
250	0.0105	0.0017	0.0088
251	0.0104	0.0017	0.0087
252	0.0103	0.0017	0.0086
253	0.0102	0.0017	0.0085
254	0.0101	0.0017	0.0085
255	0.0100	0.0017	0.0084
256	0.0100	0.0016	0.0083
257	0.0099	0.0016	0.0082
258	0.0098	0.0016	0.0082
259	0.0097	0.0016	0.0081
260	0.0096	0.0016	0.0080
261	0.0095	0.0016	0.0080
262	0.0095	0.0016	0.0079

263	0.0094	0.0015	0.0078
264	0.0093	0.0015	0.0078
265	0.0092	0.0015	0.0077
266	0.0092	0.0015	0.0077
267	0.0091	0.0015	0.0076
268	0.0090	0.0015	0.0075
269	0.0090	0.0015	0.0075
270	0.0089	0.0015	0.0074
271	0.0088	0.0015	0.0074
272	0.0088	0.0014	0.0073
273	0.0087	0.0014	0.0073
274	0.0087	0.0014	0.0072
275	0.0086	0.0014	0.0072
276	0.0085	0.0014	0.0071
277	0.0085	0.0014	0.0071
278	0.0084	0.0014	0.0070
279	0.0084	0.0014	0.0070
280	0.0083	0.0014	0.0070
281	0.0083	0.0014	0.0069
282	0.0082	0.0014	0.0069
283	0.0082	0.0013	0.0068
284	0.0081	0.0013	0.0068
285	0.0081	0.0013	0.0067
286	0.0080	0.0013	0.0067
287	0.0080	0.0013	0.0067
288	0.0079	0.0013	0.0066

Total soil rain loss = 0.74(In)
Total effective rainfall = 4.36(In)
Peak flow rate in flood hydrograph = 137.57(CFS)

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24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

Hydrograph in 5 Minute intervals ((CFS))

Time(h+m)	Volume Ac.Ft	Q(CFS)	0	50.0	100.0	150.0	200.0
0+ 5	0.0009	0.13	Q				
0+10	0.0069	0.87	Q				
0+15	0.0221	2.20	Q				
0+20	0.0457	3.42	Q				
0+25	0.0731	3.99	Q				
0+30	0.1023	4.23	Q				
0+35	0.1320	4.31	Q				
0+40	0.1620	4.36	Q				
0+45	0.1923	4.40	Q				
0+50	0.2227	4.41	Q				
0+55	0.2531	4.43	Q				
1+ 0	0.2837	4.44	Q				
1+ 5	0.3144	4.45	Q				
1+10	0.3452	4.47	Q				
1+15	0.3760	4.48	Q				
1+20	0.4070	4.49	Q				
1+25	0.4380	4.51	Q				
1+30	0.4692	4.52	Q				
1+35	0.5004	4.54	QV				
1+40	0.5317	4.55	QV				
1+45	0.5632	4.57	QV				
1+50	0.5947	4.58	QV				
1+55	0.6264	4.59	QV				
2+ 0	0.6581	4.61	QV				
2+ 5	0.6900	4.62	QV				
2+10	0.7219	4.64	QV				
2+15	0.7540	4.65	QV				
2+20	0.7862	4.67	QV				
2+25	0.8184	4.69	QV				
2+30	0.8508	4.70	QV				
2+35	0.8833	4.72	QV				
2+40	0.9159	4.73	QV				
2+45	0.9486	4.75	QV				
2+50	0.9814	4.77	QV				
2+55	1.0144	4.78	Q V				
3+ 0	1.0474	4.80	Q V				
3+ 5	1.0806	4.82	Q V				
3+10	1.1139	4.83	Q V				
3+15	1.1473	4.85	Q V				
3+20	1.1808	4.87	Q V				
3+25	1.2144	4.88	Q V				
3+30	1.2482	4.90	Q V				
3+35	1.2821	4.92	Q V				

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 3+40       1.3161      4.94  Q V       |          |          |          |
 3+45       1.3502      4.96  Q V       |          |          |          |
 3+50       1.3844      4.97  Q V       |          |          |          |
 3+55       1.4188      4.99  Q V       |          |          |          |
 4+ 0       1.4533      5.01  |QV       |          |          |          |
 4+ 5       1.4880      5.03  |Q V       |          |          |          |
 4+10       1.5228      5.05  |Q V       |          |          |          |
 4+15       1.5577      5.07  |Q V       |          |          |          |
 4+20       1.5927      5.09  |Q V       |          |          |          |
 4+25       1.6279      5.11  |Q V       |          |          |          |
 4+30       1.6632      5.13  |Q V       |          |          |          |
 4+35       1.6987      5.15  |Q V       |          |          |          |
 4+40       1.7343      5.17  |Q V       |          |          |          |
 4+45       1.7700      5.19  |Q V       |          |          |          |
 4+50       1.8059      5.21  |Q V       |          |          |          |
 4+55       1.8419      5.23  |Q V       |          |          |          |
 5+ 0       1.8781      5.25  |Q V       |          |          |          |
 5+ 5       1.9144      5.27  |Q V       |          |          |          |
 5+10       1.9509      5.30  |Q V       |          |          |          |
 5+15       1.9876      5.32  |Q  V      |          |          |          |
 5+20       2.0243      5.34  |Q  V      |          |          |          |
 5+25       2.0613      5.36  |Q  V      |          |          |          |
 5+30       2.0984      5.39  |Q  V      |          |          |          |
 5+35       2.1356      5.41  |Q  V      |          |          |          |
 5+40       2.1731      5.43  |Q  V      |          |          |          |
 5+45       2.2106      5.46  |Q  V      |          |          |          |
 5+50       2.2484      5.48  |Q  V      |          |          |          |
 5+55       2.2863      5.51  |Q  V      |          |          |          |
 6+ 0       2.3244      5.53  |Q  V      |          |          |          |
 6+ 5       2.3627      5.56  |Q  V      |          |          |          |
 6+10       2.4011      5.58  |Q  V      |          |          |          |
 6+15       2.4397      5.61  |Q  V      |          |          |          |
 6+20       2.4785      5.63  |Q   V     |          |          |          |
 6+25       2.5175      5.66  |Q   V     |          |          |          |
 6+30       2.5566      5.69  |Q   V     |          |          |          |
 6+35       2.5960      5.71  |Q   V     |          |          |          |
 6+40       2.6355      5.74  |Q   V     |          |          |          |
 6+45       2.6752      5.77  |Q   V     |          |          |          |
 6+50       2.7151      5.80  |Q   V     |          |          |          |
 6+55       2.7552      5.82  |Q   V     |          |          |          |
 7+ 0       2.7956      5.85  |Q   V     |          |          |          |
 7+ 5       2.8361      5.88  |Q   V     |          |          |          |
 7+10       2.8768      5.91  |Q   V     |          |          |          |
 7+15       2.9177      5.94  |Q   V     |          |          |          |
 7+20       2.9588      5.97  |Q    V    |          |          |          |
 7+25       3.0002      6.00  |Q    V    |          |          |          |
 7+30       3.0418      6.04  |Q    V    |          |          |          |
 7+35       3.0836      6.07  |Q    V    |          |          |          |
 7+40       3.1256      6.10  |Q    V    |          |          |          |
 7+45       3.1678      6.13  |Q    V    |          |          |          |
 7+50       3.2103      6.17  |Q    V    |          |          |          |
 7+55       3.2530      6.20  |Q    V    |          |          |          |
 8+ 0       3.2959      6.23  |Q    V    |          |          |          |
 8+ 5       3.3391      6.27  |Q    V    |          |          |          |
 8+10       3.3825      6.31  |Q    V    |          |          |          |
 8+15       3.4262      6.34  |Q    V    |          |          |          |
 8+20       3.4701      6.38  |Q     V   |          |          |          |
 8+25       3.5143      6.42  |Q     V   |          |          |          |
 8+30       3.5588      6.45  |Q     V   |          |          |          |
 8+35       3.6035      6.49  |Q     V   |          |          |          |
 8+40       3.6485      6.53  |Q     V   |          |          |          |
 8+45       3.6937      6.57  |Q     V   |          |          |          |
 8+50       3.7393      6.61  |Q     V   |          |          |          |
 8+55       3.7851      6.65  |Q     V   |          |          |          |
 9+ 0       3.8312      6.70  |Q     V   |          |          |          |
 9+ 5       3.8776      6.74  |Q     V   |          |          |          |
 9+10       3.9243      6.78  |Q     V   |          |          |          |
 9+15       3.9713      6.83  |Q      V  |          |          |          |
 9+20       4.0186      6.87  |Q      V  |          |          |          |
 9+25       4.0663      6.92  |Q      V  |          |          |          |
 9+30       4.1143      6.97  |Q      V  |          |          |          |
 9+35       4.1626      7.01  |Q      V  |          |          |          |
 9+40       4.2112      7.06  |Q      V  |          |          |          |
 9+45       4.2602      7.11  |Q      V  |          |          |          |
 9+50       4.3095      7.16  |Q      V  |          |          |          |
 9+55       4.3592      7.21  |Q      V  |          |          |          |
10+ 0       4.4092      7.27  |Q      V  |          |          |          |
10+ 5       4.4596      7.32  |Q       V |          |          |          |
10+10       4.5105      7.38  |Q       V |          |          |          |
10+15       4.5616      7.43  |Q       V |          |          |          |
10+20       4.6132      7.49  |Q       V |          |          |          |
10+25       4.6652      7.55  |Q       V |          |          |          |
10+30       4.7176      7.61  |Q       V |          |          |          |
10+35       4.7704      7.67  |Q       V |          |          |          |
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10+40       4.8237      7.73  |Q       V|          |          |          |
10+45       4.8774      7.80  |Q       V|          |          |          |
10+50       4.9316      7.86  |Q        V          |          |          |
10+55       4.9862      7.93  |Q        V          |          |          |
11+ 0       5.0413      8.00  |Q        V          |          |          |
11+ 5       5.0969      8.07  |Q        V          |          |          |
11+10       5.1529      8.14  |Q        V          |          |          |
11+15       5.2095      8.22  |Q        V          |          |          |
11+20       5.2667      8.29  |Q        V          |          |          |
11+25       5.3243      8.37  |Q        V          |          |          |
11+30       5.3825      8.45  |Q        V          |          |          |
11+35       5.4413      8.54  |Q        |V         |          |          |
11+40       5.5007      8.62  |Q        |V         |          |          |
11+45       5.5607      8.71  |Q        |V         |          |          |
11+50       5.6213      8.80  |Q        |V         |          |          |
11+55       5.6825      8.89  |Q        |V         |          |          |
12+ 0       5.7444      8.99  |Q        |V         |          |          |
12+ 5       5.8070      9.08  |Q        |V         |          |          |
12+10       5.8701      9.17  |Q        |V         |          |          |
12+15       5.9337      9.23  |Q        | V        |          |          |
12+20       5.9978      9.31  |Q        | V        |          |          |
12+25       6.0626      9.41  |Q        | V        |          |          |
12+30       6.1282      9.52  |Q        | V        |          |          |
12+35       6.1945      9.64  |Q        | V        |          |          |
12+40       6.2618      9.76  |Q        | V        |          |          |
12+45       6.3298      9.89  |Q        | V        |          |          |
12+50       6.3988     10.02  | Q       | V        |          |          |
12+55       6.4688     10.16  | Q       |  V       |          |          |
13+ 0       6.5398     10.30  | Q       |  V       |          |          |
13+ 5       6.6117     10.45  | Q       |  V       |          |          |
13+10       6.6848     10.61  | Q       |  V       |          |          |
13+15       6.7589     10.77  | Q       |  V       |          |          |
13+20       6.8343     10.94  | Q       |  V       |          |          |
13+25       6.9108     11.11  | Q       |   V      |          |          |
13+30       6.9886     11.30  | Q       |   V      |          |          |
13+35       7.0678     11.49  | Q       |   V      |          |          |
13+40       7.1484     11.70  | Q       |   V      |          |          |
13+45       7.2304     11.91  | Q       |   V      |          |          |
13+50       7.3140     12.14  | Q       |   V      |          |          |
13+55       7.3993     12.38  | Q       |    V     |          |          |
14+ 0       7.4862     12.63  | Q       |    V     |          |          |
14+ 5       7.5750     12.89  | Q       |    V     |          |          |
14+10       7.6659     13.19  | Q       |    V     |          |          |
14+15       7.7589     13.50  | Q       |    V     |          |          |
14+20       7.8542     13.84  | Q       |    V     |          |          |
14+25       7.9519     14.19  | Q       |     V    |          |          |
14+30       8.0522     14.56  | Q       |     V    |          |          |
14+35       8.1553     14.96  | Q       |     V    |          |          |
14+40       8.2612     15.39  |  Q      |     V    |          |          |
14+45       8.3704     15.85  |  Q      |     V    |          |          |
14+50       8.4831     16.36  |  Q      |      V   |          |          |
14+55       8.5995     16.91  |  Q      |      V   |          |          |
15+ 0       8.7202     17.52  |  Q      |      V   |          |          |
15+ 5       8.8455     18.19  |  Q      |      V   |          |          |
15+10       8.9760     18.95  |  Q      |       V  |          |          |
15+15       9.1124     19.80  |  Q      |       V  |          |          |
15+20       9.2554     20.77  |   Q     |       V  |          |          |
15+25       9.4056     21.80  |   Q     |        V |          |          |
15+30       9.5620     22.71  |   Q     |        V |          |          |
15+35       9.7238     23.50  |   Q     |        V |          |          |
15+40       9.8939     24.70  |   Q     |         V|          |          |
15+45      10.0782     26.75  |    Q    |         V|          |          |
15+50      10.2841     29.90  |    Q    |         V|          |          |
15+55      10.5236     34.78  |     Q   |          |V         |          |
16+ 0      10.8221     43.34  |       Q |          |V         |          |
16+ 5      11.2586     63.37  |         | Q        | V        |          |
16+10      11.9881    105.93  |         |          |Q  V      |          |
16+15      12.9356    137.57  |         |          |    VQ    |          |
16+20      13.7715    121.38  |         |          |   Q  V   |          |
16+25      14.2815     74.05  |         |   Q      |      V   |          |
16+30      14.6026     46.63  |         |Q         |         V|          |
16+35      14.8233     32.04  |      Q  |          |          V          |
16+40      15.0044     26.29  |     Q   |          |          V          |
16+45      15.1657     23.43  |    Q    |          |          V          |
16+50      15.3010     19.64  |  Q      |          |          |V         |
16+55      15.4248     17.98  |  Q      |          |          |V         |
17+ 0      15.5399     16.70  |  Q      |          |          |V         |
17+ 5      15.6478     15.67  |  Q      |          |          |V         |
17+10      15.7496     14.78  | Q       |          |          |V         |
17+15      15.8461     14.01  | Q       |          |          | V        |
17+20      15.9380     13.35  | Q       |          |          | V        |
17+25      16.0259     12.77  | Q       |          |          | V        |
17+30      16.1103     12.26  | Q       |          |          | V        |
17+35      16.1916     11.80  | Q       |          |          | V        |
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17+40      16.2700     11.39  | Q       |         |         |  V      |
17+45      16.3459     11.02  | Q       |         |         |  V      |
17+50      16.4195     10.68  | Q       |         |         |  V      |
17+55      16.4909     10.37  | Q       |         |         |  V      |
18+ 0      16.5603     10.08  | Q       |         |         |  V      |
18+ 5      16.6279      9.82  |Q        |         |         |  V      |
18+10      16.6939      9.59  |Q        |         |         |  V      |
18+15      16.7586      9.39  |Q        |         |         |   V     |
18+20      16.8220      9.21  |Q        |         |         |   V     |
18+25      16.8841      9.02  |Q        |         |         |   V     |
18+30      16.9450      8.83  |Q        |         |         |   V     |
18+35      17.0046      8.66  |Q        |         |         |   V     |
18+40      17.0630      8.49  |Q        |         |         |   V     |
18+45      17.1204      8.33  |Q        |         |         |   V     |
18+50      17.1767      8.17  |Q        |         |         |   V     |
18+55      17.2320      8.03  |Q        |         |         |   V     |
19+ 0      17.2863      7.89  |Q        |         |         |    V    |
19+ 5      17.3397      7.76  |Q        |         |         |    V    |
19+10      17.3923      7.63  |Q        |         |         |    V    |
19+15      17.4440      7.51  |Q        |         |         |    V    |
19+20      17.4950      7.40  |Q        |         |         |    V    |
19+25      17.5452      7.29  |Q        |         |         |    V    |
19+30      17.5946      7.18  |Q        |         |         |    V    |
19+35      17.6434      7.08  |Q        |         |         |    V    |
19+40      17.6915      6.98  |Q        |         |         |    V    |
19+45      17.7389      6.89  |Q        |         |         |     V   |
19+50      17.7858      6.80  |Q        |         |         |     V   |
19+55      17.8320      6.71  |Q        |         |         |     V   |
20+ 0      17.8776      6.63  |Q        |         |         |     V   |
20+ 5      17.9227      6.55  |Q        |         |         |     V   |
20+10      17.9673      6.47  |Q        |         |         |     V   |
20+15      18.0113      6.39  |Q        |         |         |     V   |
20+20      18.0548      6.32  |Q        |         |         |     V   |
20+25      18.0978      6.25  |Q        |         |         |     V   |
20+30      18.1404      6.18  |Q        |         |         |     V   |
20+35      18.1825      6.11  |Q        |         |         |     V   |
20+40      18.2241      6.05  |Q        |         |         |     V   |
20+45      18.2653      5.98  |Q        |         |         |      V  |
20+50      18.3061      5.92  |Q        |         |         |      V  |
20+55      18.3465      5.86  |Q        |         |         |      V  |
21+ 0      18.3865      5.81  |Q        |         |         |      V  |
21+ 5      18.4261      5.75  |Q        |         |         |      V  |
21+10      18.4653      5.70  |Q        |         |         |      V  |
21+15      18.5042      5.64  |Q        |         |         |      V  |
21+20      18.5427      5.59  |Q        |         |         |      V  |
21+25      18.5808      5.54  |Q        |         |         |      V  |
21+30      18.6186      5.49  |Q        |         |         |      V  |
21+35      18.6561      5.44  |Q        |         |         |      V  |
21+40      18.6933      5.40  |Q        |         |         |      V  |
21+45      18.7301      5.35  |Q        |         |         |       V |
21+50      18.7666      5.30  |Q        |         |         |       V |
21+55      18.8029      5.26  |Q        |         |         |       V |
22+ 0      18.8388      5.22  |Q        |         |         |       V |
22+ 5      18.8745      5.18  |Q        |         |         |       V |
22+10      18.9098      5.14  |Q        |         |         |       V |
22+15      18.9449      5.10  |Q        |         |         |       V |
22+20      18.9798      5.06  |Q        |         |         |       V |
22+25      19.0143      5.02  |Q        |         |         |       V |
22+30      19.0486      4.98  Q         |         |         |       V |
22+35      19.0827      4.94  Q         |         |         |       V |
22+40      19.1165      4.91  Q         |         |         |       V |
22+45      19.1500      4.87  Q         |         |         |       V |
22+50      19.1834      4.84  Q         |         |         |       V |
22+55      19.2164      4.80  Q         |         |         |        V|
23+ 0      19.2493      4.77  Q         |         |         |        V|
23+ 5      19.2819      4.74  Q         |         |         |        V|
23+10      19.3144      4.71  Q         |         |         |        V|
23+15      19.3466      4.68  Q         |         |         |        V|
23+20      19.3786      4.64  Q         |         |         |        V|
23+25      19.4103      4.61  Q         |         |         |        V|
23+30      19.4419      4.59  Q         |         |         |        V|
23+35      19.4733      4.56  Q         |         |         |        V|
23+40      19.5045      4.53  Q         |         |         |        V|
23+45      19.5355      4.50  Q         |         |         |        V|
23+50      19.5663      4.47  Q         |         |         |        V|
23+55      19.5969      4.44  Q         |         |         |        V|
24+ 0      19.6273      4.42  Q         |         |         |        V|
24+ 5      19.6566      4.26  Q         |         |         |        V|
24+10      19.6807      3.50  Q         |         |         |        V|
24+15      19.6955      2.15  Q         |         |         |        V|
24+20      19.7019      0.92  Q         |         |         |        V|
24+25      19.7044      0.36  Q         |         |         |        V|
24+30      19.7053      0.13  Q         |         |         |        V|
24+35      19.7057      0.06  Q         |         |         |        V|
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   24+40      19.7060      0.03  Q         |         |         |        V|
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HYDROLOGY MAPS

INFILTRATION TRENCH

202
1202.2
Q100=1.9 CFS
Q10=1.2 CFS

AREA-12
0.4
243'

201
1212.0

113
1215.7

AREA-10
1.9
303'

114
1209.6
Q100=8.0 CFS
Q10=4.9 CFS

PROP. LINE-2

PROP. 24" SD

109
1208.8
Q100=17.7 CFS
Q10=10.8 CFS

110
1207.0
SUB-AREA FLOW RATES
Q100=17.2 CFS
Q10=10.1 CFS
TOTAL FLOW RATES
Q100=34.9 CFS
Q10=20.8 CFS

111
1204.9
SUB-AREA FLOW RATES
Q100=10.8 CFS
Q10=6.0 CFS
TOTAL FLOW RATES
Q100=45.7 CFS
Q10=26.9 CFS

112
1203.0
SUB-AREA FLOW RATES
Q100=8.7 CFS
Q10=4.8 CFS
TOTAL FLOW RATES
Q100=54.4 CFS
Q10=31.7 CFS

PROP. 48" SD

WQ BASIN-1
BASIN TOP=1203.5'
BASIN BTM=1199.5'
WQ DCV=4.174 ACRE FT

AREA-11
3.0
-

107
*1199.5

SUB-AREA FLOW RATES
Q100=4.8 CFS
Q10=1.4 CFS
TOTAL FLOW RATES
Q100=134.9 CFS
Q10=77.4 CFS

AREA-6
5.3
652'

AREA-7
6.7
363'

AREA-8
5.7
431'

AREA-9
5.1
366'

108
1218.2

PALMETTO AVENUE

AREA-2
5.9
373'

AREA-3
4.3
265'

AREA-4
4.6
290'

AREA-5
8.6
282'

PROP. LINE-1

PROP. 48" SD

PROP. LATERAL-A1

PROP. 60" SD

103
1208.3
SUB-AREA FLOW RATES
Q100=19.1 CFS
Q10=11.3 CFS
TOTAL FLOW RATES
Q100=31.8 CFS
Q10=19.1 CFS

104
1207.0
SUB-AREA FLOW RATES
Q100=10.5 CFS
Q10=6.0 CFS
TOTAL FLOW RATES
Q100=42.4 CFS
Q10=25.1 CFS

105
1205.3
SUB-AREA FLOW RATES
Q100=9.9 CFS
Q10=5.8 CFS
TOTAL FLOW RATES
Q100=52.3 CFS
Q10=30.7 CFS

106
1204.2
*1201.6
SUB-AREA FLOW RATES
Q100=19.2 CFS
Q10=10.9 CFS
TOTAL FLOW RATES
Q100=71.5 CFS
Q10=41.6 CFS

102
1213.6
Q100=12.8 CFS
Q10=7.8 CFS

AREA-1
3.2
421'

101
1224.7

ALABAMA STREET

PROP. POC
1196.42± INV

EX. LINE-A SD

LEGEND

- DRAINAGE MANAGEMENT BOUNDARY
- FLOW DIRECTION
- LANDSCAPING
- 101 / 14xx — NODE DESIGNATION / NODE ELEVATION
- *14XX — *INVERT ELEVATION
- 5.0 / 1000' — WATERSHED AREA (ACRES) / WATER PATH (FT)

WEBB

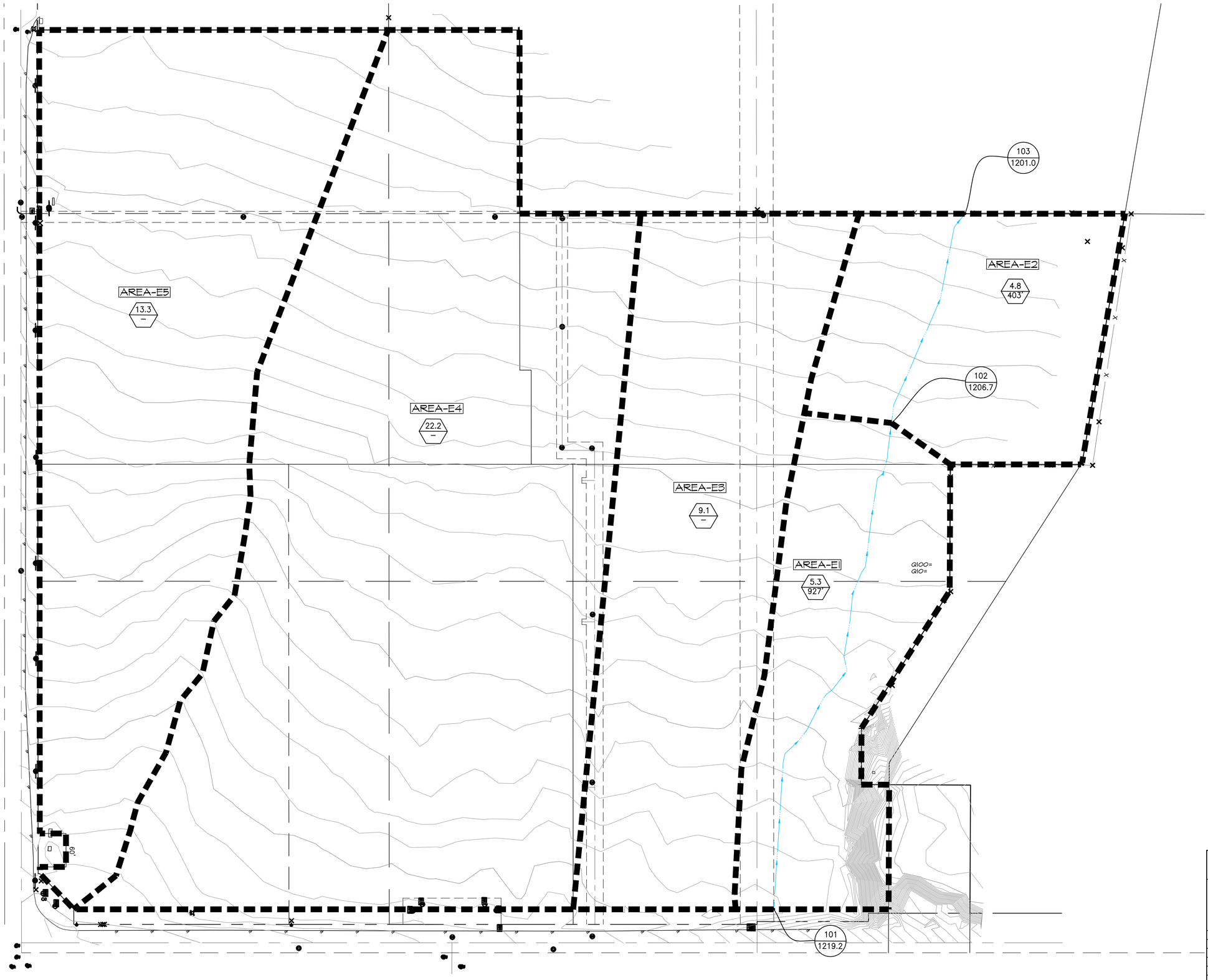
1" = 80'
40 0 80 160 240

SAN BERNARDINO COUNTY

RATIONAL METHOD HYDROLOGY MAP
DUKE - ALABAMA AND PALMETTO
PROPOSED CONDITION

SCALE: AS SHOWN	ALBERT A. WEBB ASSOCIATES	ENGINEERING CONSULTANTS 3788 McCRAY STREET RIVERSIDE CA. 92506 PH. (951) 686-1070 FAX (951) 788-1256	W.O. 18-0011
DATE: 7/26/18			SHEET |
DESIGNED: MJS			OF 1 SHEETS
CHECKED: CRC			DWG. NO.
PLN CK REF:			
F.B.			

G:\2018\18-0011\DRAINAGE\HYDROLOGY\DWG FOLDER\18-0011-PHYD-RATIONAL.DWG 7/26/2018 3:29:07 PM



SAN BERNARDINO COUNTY

RATIONAL METHOD HYDROLOGY MAP
DUKE - ALABAMA AND PALMETTO
EXISTING CONDITION

SCALE: AS SHOWN	ALBERT A. WEBB ASSOCIATES	ENGINEERING CONSULTANTS 3788 McCRAY STREET RIVERSIDE CA. 92506 PH. (951) 686-1070 FAX (951) 788-1256	W.O. 18-0011
DATE: 4/11/18			SHEET 1
DESIGNED: MJS			OF 1 SHEETS
CHECKED: CRC			
PLN CK REF:			DWG. NO.
F.B.			

G:\2018\18-0011\DRAINAGE\HYDROLOGY\DWG FOLDER\18-0011-PHYD-EXIST-RATIONAL.DWG 4/5/2018 6:59:25 PM

METRIC

APPENDIX B – HYDRAULICS

LINE-1 WSPG MODEL

*To be included during final engineering

Hydraulic Analysis Report

Project Data

Project Title: LINE 1

Designer:

Project Date: Friday, April 06, 2018

Project Units: U.S. Customary Units

Notes:

Channel Analysis: NODE 106 TO NODE 107

Notes:

Input Parameters

Channel Type: Circular

Pipe Diameter: 4.0000 ft

Longitudinal Slope: 0.0030 ft/ft

Manning's n: 0.0120

Flow: 71.5000 cfs

Result Parameters

Depth: 2.8042 ft

Area of Flow: 9.4111 ft^2

Wetted Perimeter: 7.9384 ft

Hydraulic Radius: 1.1855 ft

Average Velocity: 7.5974 ft/s

Top Width: 3.6624 ft

Froude Number: 0.8352

Critical Depth: 2.5566 ft

Critical Velocity: 8.4309 ft/s

Critical Slope: 0.0039 ft/ft

Critical Top Width: 3.84 ft

Calculated Max Shear Stress: 0.5249 lb/ft^2

Calculated Avg Shear Stress: 0.2219 lb/ft^2

LINE-2 WSPG MODEL

*To be included during final engineering

Hydraulic Analysis Report

Project Data

Project Title: LINE-2

Designer:

Project Date: Friday, April 06, 2018

Project Units: U.S. Customary Units

Notes:

Channel Analysis: NODE 114 TO NODE 107

Notes:

Input Parameters

Channel Type: Circular

Pipe Diameter: 2.0000 ft

Longitudinal Slope: 0.0030 ft/ft

Manning's n: 0.0120

Flow: 8.0000 cfs

Result Parameters

Depth: 1.1119 ft

Area of Flow: 1.7941 ft^2

Wetted Perimeter: 3.3659 ft

Hydraulic Radius: 0.5330 ft

Average Velocity: 4.4590 ft/s

Top Width: 1.9874 ft

Froude Number: 0.8270

Critical Depth: 1.0068 ft

Critical Velocity: 5.0490 ft/s

Critical Slope: 0.0042 ft/ft

Critical Top Width: 2.00 ft

Calculated Max Shear Stress: 0.2081 lb/ft^2

Calculated Avg Shear Stress: 0.0998 lb/ft^2

LATERAL-A1 WSPG MODEL

```
T1 DUKE - ALABAMA & PALMETTO                                                0
T2 ONSITE STORM DRAIN LATERAL A1
T3 FN: LATA1.WSW
SO   1000.0001196.420  1                        1200.310
R    1041.1501196.550  1      .012                            .000    .000 0
R    1410.0701197.700  1      .012                            .000  45.000 0
R    1677.5201198.530  1      .012                            .000  32.750 0
R    1936.4901199.340  1      .012                            .000 -32.750 0
R    1988.3701199.500  1      .012                            .000  60.000 0
WE   1988.3701199.500  4      .500
R    1991.3701199.900  4      .015                            .000    .000 0
SH   1991.3701199.900  4                        1199.900
CD   1  4   1    .000   5.000     .000  .000  .000   .00
CD   2  4   1    .000   3.000     .000  .000  .000   .00
CD   3  4   1    .000   1.500     .000  .000  .000   .00
CD   4  3   0    .000  10.000   10.000  .000  .000   .00
Q            64.800   .0
```

FILE: LATA1.WSW W S P G W - EDIT LISTING - Version 14.06 Date: 7-26-2018 Time: 3:25:15

WATER SURFACE PROFILE - CHANNEL DEFINITION LISTING PAGE 1

CARD CODE	SECT NO	CHN TYPE	NO OF PIER/PIP	AVE PIER WIDTH	HEIGHT 1 DIAMETER	BASE WIDTH	ZL	ZR	INV DROP	Y(1)	Y(2)	Y(3)	Y(4)	Y(5)	Y(6)	Y(7)	Y(8)	Y(9)	Y(10)
CD	1	4	1		5.000														
CD	2	4	1		3.000														
CD	3	4	1		1.500														
CD	4	3	0	.000	10.000	10.000	.000	.000	.00										

WATER SURFACE PROFILE - TITLE CARD LISTING

HEADING LINE NO 1 IS -
DUKE - ALABAMA & PALMETTO

HEADING LINE NO 2 IS -
ONSITE STORM DRAIN LATERAL A1

HEADING LINE NO 3 IS -
FN: LATA1.WSW

WATER SURFACE PROFILE - ELEMENT CARD LISTING

ELEMENT NO 1 IS A SYSTEM OUTLET * * *

U/S DATA	STATION	INVERT	SECT	W S ELEV
	1000.000	1196.420	1	1200.310

ELEMENT NO 2 IS A REACH * * *

U/S DATA	STATION	INVERT	SECT	N	RADIUS	ANGLE	ANG PT	MAN H
	1041.150	1196.550	1	.012	.000	.000	.000	0

ELEMENT NO 3 IS A REACH * * *

U/S DATA	STATION	INVERT	SECT	N	RADIUS	ANGLE	ANG PT	MAN H
	1410.070	1197.700	1	.012	.000	.000	45.000	0

ELEMENT NO 4 IS A REACH * * *

U/S DATA	STATION	INVERT	SECT	N	RADIUS	ANGLE	ANG PT	MAN H
	1677.520	1198.530	1	.012	.000	.000	32.750	0

ELEMENT NO 5 IS A REACH * * *

U/S DATA	STATION	INVERT	SECT	N	RADIUS	ANGLE	ANG PT	MAN H
	1936.490	1199.340	1	.012	.000	.000	-32.750	0

ELEMENT NO 6 IS A REACH * * *

U/S DATA	STATION	INVERT	SECT	N	RADIUS	ANGLE	ANG PT	MAN H
	1988.370	1199.500	1	.012	.000	.000	60.000	0

ELEMENT NO 7 IS A WALL ENTRANCE *

U/S DATA	STATION	INVERT	SECT	FP
	1988.370	1199.500	4	.500

ELEMENT NO 8 IS A REACH * * *

U/S DATA	STATION	INVERT	SECT	N	RADIUS	ANGLE	ANG PT	MAN H
	1991.370	1199.900	4	.015	.000	.000	.000	0

ELEMENT NO 9 IS A SYSTEM HEADWORKS * *

U/S DATA	STATION	INVERT	SECT	W S ELEV
	1991.370	1199.900	4	1199.900

Program Package Serial Number: 1585

WATER SURFACE PROFILE LISTING Date: 7-26-2018 Time: 3:25:17

DUKE - ALABAMA & PALMETTO
ONSITE STORM DRAIN LATERAL A1
FN: LATA1.WSW

Station	Invert Elev	Depth (FT)	Water Elev	Q (CFS)	Vel (FPS)	Vel Head	Energy Grd.El.	Super Elev	Critical Depth	Flow Top Width	Height/ Dia.-FT	Base Wt or I.D.	ZL	No Wth Prs/Pip
L/Elem	Ch Slope					SF Ave	HF	SE Dpth	Froude N	Norm Dp	"N"	X-Fall	ZR	Type Ch
1000.000	1196.420	3.890	1200.310	64.80	3.95	.24	1200.55	.00	2.27	4.16	5.000	.000	.00	1 .0
41.150	.0032					.0006	.02	3.89	.35	2.23	.012	.00	.00	PIPE
1041.150	1196.550	3.769	1200.319	64.80	4.08	.26	1200.58	.00	2.27	4.31	5.000	.000	.00	1 .0
57.958	.0031					.0007	.04	3.77	.37	2.23	.012	.00	.00	PIPE
1099.109	1196.731	3.601	1200.332	64.80	4.28	.28	1200.62	.00	2.27	4.49	5.000	.000	.00	1 .0
53.276	.0031					.0007	.04	3.60	.41	2.23	.012	.00	.00	PIPE
1152.385	1196.897	3.446	1200.343	64.80	4.49	.31	1200.66	.00	2.27	4.63	5.000	.000	.00	1 .0
48.887	.0031					.0008	.04	3.45	.45	2.23	.012	.00	.00	PIPE
1201.272	1197.049	3.303	1200.352	64.80	4.71	.34	1200.70	.00	2.27	4.73	5.000	.000	.00	1 .0
45.658	.0031					.0009	.04	3.30	.49	2.23	.012	.00	.00	PIPE
1246.930	1197.191	3.169	1200.360	64.80	4.94	.38	1200.74	.00	2.27	4.82	5.000	.000	.00	1 .0
42.747	.0031					.0011	.05	3.17	.53	2.23	.012	.00	.00	PIPE
1289.677	1197.325	3.043	1200.368	64.80	5.18	.42	1200.78	.00	2.27	4.88	5.000	.000	.00	1 .0
40.171	.0031					.0012	.05	3.04	.57	2.23	.012	.00	.00	PIPE
1329.848	1197.450	2.924	1200.374	64.80	5.43	.46	1200.83	.00	2.27	4.93	5.000	.000	.00	1 .0
37.402	.0031					.0013	.05	2.92	.62	2.23	.012	.00	.00	PIPE
1367.249	1197.566	2.812	1200.379	64.80	5.70	.50	1200.88	.00	2.27	4.96	5.000	.000	.00	1 .0
35.568	.0031					.0015	.05	2.81	.66	2.23	.012	.00	.00	PIPE

Program Package Serial Number: 1585

WATER SURFACE PROFILE LISTING Date: 7-26-2018 Time: 3:25:17

DUKE - ALABAMA & PALMETTO
ONSITE STORM DRAIN LATERAL A1
FN: LATA1.WSW

Station	Invert Elev	Depth (FT)	Water Elev	Q (CFS)	Vel (FPS)	Vel Head	Energy Grd.El.	Super Elev	Critical Depth	Flow Top Width	Height/ Dia.-FT	Base Wt or I.D.	ZL	No Wth Prs/Pip
L/Elem	Ch Slope					SF Ave	HF	SE Dpth	Froude N	Norm Dp	"N"	X-Fall	ZR	Type Ch
1402.817	1197.677	2.705	1200.382	64.80	5.97	.55	1200.94	.00	2.27	4.98	5.000	.000	.00	1 .0
7.253	.0031					.0016	.01	2.71	.71	2.23	.012	.00	.00	PIPE
1410.070	1197.700	2.683	1200.383	64.80	6.04	.57	1200.95	.00	2.27	4.99	5.000	.000	.00	1 .0
32.837	.0031					.0018	.06	2.68	.73	2.24	.012	.00	.00	PIPE
1442.907	1197.802	2.583	1200.385	64.80	6.33	.62	1201.01	.00	2.27	5.00	5.000	.000	.00	1 .0
31.042	.0031					.0020	.06	2.58	.78	2.24	.012	.00	.00	PIPE
1473.949	1197.898	2.487	1200.385	64.80	6.64	.68	1201.07	.00	2.27	5.00	5.000	.000	.00	1 .0
26.452	.0031					.0023	.06	2.49	.84	2.24	.012	.00	.00	PIPE
1500.401	1197.980	2.397	1200.377	64.80	6.97	.75	1201.13	.00	2.27	5.00	5.000	.000	.00	1 .0
23.300	.0031					.0026	.06	2.40	.90	2.24	.012	.00	.00	PIPE
1523.701	1198.053	2.310	1200.363	64.80	7.31	.83	1201.19	.00	2.27	4.99	5.000	.000	.00	1 .0
2.189	.0031					.0029	.01	2.31	.97	2.24	.012	.00	.00	PIPE
1525.890	1198.059	2.268	1200.328	64.80	7.48	.87	1201.20	.00	2.27	4.98	5.000	.000	.00	1 .0
HYDRAULIC JUMP														
1525.890	1198.059	2.237	1200.296	64.80	7.62	.90	1201.20	.00	2.27	4.97	5.000	.000	.00	1 .0
128.613	.0031					.0031	.40	2.24	1.03	2.24	.012	.00	.00	PIPE
1654.503	1198.459	2.237	1200.695	64.80	7.62	.90	1201.60	.00	2.27	4.97	5.000	.000	.00	1 .0
23.017	.0031					.0031	.07	2.24	1.03	2.24	.012	.00	.00	PIPE

Program Package Serial Number: 1585

WATER SURFACE PROFILE LISTING Date: 7-26-2018 Time: 3:25:17

DUKE - ALABAMA & PALMETTO
ONSITE STORM DRAIN LATERAL A1
FN: LATA1.WSW

Station	Invert Elev	Depth (FT)	Water Elev	Q (CFS)	Vel (FPS)	Vel Head	Energy Grd.El.	Super Elev	Critical Depth	Flow Top Width	Height/ Dia.-FT	Base Wt or I.D.	ZL	No Wth Prs/Pip
L/Elem	Ch Slope					SF Ave	HF	SE Dpth	Froude N	Norm Dp	"N"	X-Fall	ZR	Type Ch
1677.520	1198.530	2.232	1200.762	64.80	7.64	.91	1201.67	.00	2.27	4.97	5.000	.000	.00	1 .0
236.305	.0031					.0031	.74	2.23	1.03	2.23	.012	.00	.00	PIPE
1913.825	1199.269	2.232	1201.501	64.80	7.64	.91	1202.41	.00	2.27	4.97	5.000	.000	.00	1 .0
22.665	.0031					.0031	.07	2.23	1.03	2.23	.012	.00	.00	PIPE
1936.490	1199.340	2.241	1201.581	64.80	7.60	.90	1202.48	.00	2.27	4.97	5.000	.000	.00	1 .0
41.610	.0031					.0031	.13	2.24	1.02	2.24	.012	.00	.00	PIPE
1978.100	1199.468	2.241	1201.709	64.80	7.60	.90	1202.61	.00	2.27	4.97	5.000	.000	.00	1 .0
10.270	.0031					.0030	.03	2.24	1.02	2.24	.012	.00	.00	PIPE
1988.370	1199.500	2.268	1201.768	64.80	7.48	.87	1202.64	.00	2.27	4.98	5.000	.000	.00	1 .0
WALL	ENTRANCE													
1988.370	1199.500	3.435	1202.935	64.80	1.89	.06	1202.99	.00	1.09	10.00	10.000	10.000	.00	0 .0
1.159	.1333					.0002	.00	3.44	.18	.37	.015	.00	.00	BOX
1989.529	1199.655	3.275	1202.930	64.80	1.98	.06	1202.99	.00	1.09	10.00	10.000	10.000	.00	0 .0
1.099	.1333					.0002	.00	3.28	.19	.37	.015	.00	.00	BOX
1990.628	1199.801	3.123	1202.924	64.80	2.08	.07	1202.99	.00	1.09	10.00	10.000	10.000	.00	0 .0
.742	.1333					.0002	.00	3.12	.21	.37	.015	.00	.00	BOX
1991.370	1199.900	3.019	1202.919	64.80	2.15	.07	1202.99	.00	1.09	10.00	10.000	10.000	.00	0 .0

LINE-A (EXISTING WSPG MODEL) WITH STATION CONVERSIONS

AS-BUILT STATIONS CONVERTED TO HYDRUALIC MODEL STATIONS

AS-BUILT STATION	REVISED STATION
8206.570	1000.000
8186.500	1020.070
8089.630	1116.940
8001.980	1204.590
7993.320	1213.250
7898.000	1308.570
7709.750	1496.820
7164.330	2042.240
7159.670	2046.900
6624.330	2582.240
6619.670	2586.900
6400.000	2806.570
6390.000	2816.570
6024.330	3182.240
6019.670	3186.900
5564.080	3642.490
5559.420	3647.150
4998.330	4208.240
4993.670	4212.900
4433.330	4773.240
4428.670	4777.900
3868.330	5338.240
3863.670	5342.900
3390.330	5816.240
3385.670	5820.900
2910.330	6296.240
2905.670	6300.900
2440.310	6766.260
2435.650	6770.920
2348.530	6858.040
2056.330	7150.240
2051.670	7154.900
1682.330	7524.240
1677.670	7528.900
1346.330	7860.240
1341.670	7864.900
1003.580	8202.990
996.420	8210.150

LINE-A (PROPOSED WSPG MODEL)

```
T1 ALABAMA STREET STORM DRAIN - LINE A                                          0
T2 WSPG MODEL PER AS-BUILTS PLANS
T3 FN: LINEA.WSW
SO   1000.0001171.500  1                          1176.506.700
R    1020.0701171.540  1      .013                                 12.777    .000 0
R    1116.9401171.740  1      .013                                   .000    .000 0
R    1213.2501171.930  1      .013                                -61.313    .000 0
R    1308.5701172.120  1      .013                                 60.683    .000 0
R    1496.8201172.500  1      .013                                   .000    .000 0
R    2042.2401173.590  1      .013                                   .000   -.625 0
R    2046.9001173.680  1      .013                                   .000    .000 1
R    2582.2401193.230  1      .013                                   .000    .000 0
JX   2586.9001193.360  2  3   .013  164.900          1193.290        -45.0         .000
R    2607.1001196.370  1      .013                                   .000    .000 0
JX   2609.1001196.420  2  3   .013   64.800          1196.420        -45.0         .000
R    3182.2401205.670  2      .013                                   .000    .000 0
R    3186.9001205.720  2      .013                                   .000    .000 1
R    3642.4901206.910  2      .013                                   .000    .000 0
JX   3647.1501206.920  2  3   .013   74.200          1206.980        -45.0         .000
R    4208.2401208.040  2      .013                                   .000    .000 0
R    4212.9001208.050  2      .013                                   .000    .000 1
R    4773.2401209.170  2      .013                                   .000    .000 0
R    4777.9001209.180  2      .013                                   .000    .000 1
R    5338.2401210.300  2      .013                                   .000    .000 0
JX   5342.9001210.310  4  5   .013   96.300          1210.310        -90.0         .000
R    5816.2401211.260  4      .013                                   .000    .000 0
R    5820.9001211.280  4      .013                                   .000    .000 1
R    6296.2401212.220  4      .013                                   .000    .000 0
R    6300.9001212.230  4      .013                                   .000    .000 1
R    6766.2601213.160  4      .013                                   .000    .000 0
JX   6770.9201213.170  4  5   .013   61.200          1213.160        -90.0         .000
R    6858.0401213.340  4      .013                                   .000  -6.435 0
R    7150.2401213.930  4      .013                                   .000   6.387 0
JX   7154.9001213.940  6  5   .013   54.200          1217.180        -90.0         .000
R    7154.9001213.940  4      .013                                   .000    .000 1
R    7524.2401214.670  4      .013                                   .000    .000 0
JX   7528.9001215.680  6  5   .013   50.600          1217.180        -90.0         .000
R    7860.2401216.350  6      .013                                   .000    .000 0
JX   7864.9001216.360  6  5   .013   36.900          1217.850        -90.0         .000
R    8202.9901217.030  6      .013                                   .000    .000 0
R    8210.1501217.040  6      .013                                   .000    .000 0
SH   8210.1501217.040  6                          1523.000
CD   1  4   2    .000   6.000     .000  .000  .000   .00
CD   2  4   1    .000   8.000     .000  .000  .000   .00
CD   3  4   1    .000   4.000     .000  .000  .000   .00
CD   4  4   1    .000   7.000     .000  .000  .000   .00
CD   5  4   1    .000   3.000     .000  .000  .000   .00
CD   6  4   1    .000   6.000     .000  .000  .000   .00
Q           155.800   .0
```

FILE: LINEA.WSW W S P G W - EDIT LISTING - Version 14.06 Date: 7-26-2018 Time: 3:14:37

WATER SURFACE PROFILE - CHANNEL DEFINITION LISTING PAGE 1

CARD CODE	SECT NO	CHN TYPE	NO OF PIER/PIP	AVE PIER WIDTH	HEIGHT 1 DIAMETER	BASE WIDTH	ZL	ZR	INV DROP	Y(1)	Y(2)	Y(3)	Y(4)	Y(5)	Y(6)	Y(7)	Y(8)	Y(9)	Y(10)
CD	1	4	2		6.000														
CD	2	4	1		8.000														
CD	3	4	1		4.000														
CD	4	4	1		7.000														
CD	5	4	1		3.000														
CD	6	4	1		6.000														

W S P G W PAGE NO 1

WATER SURFACE PROFILE - TITLE CARD LISTING

HEADING LINE NO 1 IS -

ALABAMA STREET STORM DRAIN - LINE A

HEADING LINE NO 2 IS -

WSPG MODEL PER AS-BUILTS PLANS

HEADING LINE NO 3 IS -

FN: LINEA.WSW

W S P G W PAGE NO 2

WATER SURFACE PROFILE - ELEMENT CARD LISTING

ELEMENT NO 1 IS A SYSTEM OUTLET * * *

U/S DATA	STATION	INVERT	SECT	W S ELEV
	1000.000	1171.500	1	1176.506

ELEMENT NO 2 IS A REACH * * *

U/S DATA	STATION	INVERT	SECT	N	RADIUS	ANGLE	ANG PT	MAN H
	1020.070	1171.540	1	.013	90.000	12.777	.000	0

ELEMENT NO 3 IS A REACH * * *

U/S DATA	STATION	INVERT	SECT	N	RADIUS	ANGLE	ANG PT	MAN H
	1116.940	1171.740	1	.013	.000	.000	.000	0

ELEMENT NO 4 IS A REACH * * *

U/S DATA	STATION	INVERT	SECT	N	RADIUS	ANGLE	ANG PT	MAN H
	1213.250	1171.930	1	.013	90.000	-61.313	.000	0

ELEMENT NO 5 IS A REACH * * *

U/S DATA	STATION	INVERT	SECT	N	RADIUS	ANGLE	ANG PT	MAN H
	1308.570	1172.120	1	.013	89.999	60.683	.000	0

ELEMENT NO 6 IS A REACH * * *

U/S DATA	STATION	INVERT	SECT	N	RADIUS	ANGLE	ANG PT	MAN H
	1496.820	1172.500	1	.013	.000	.000	.000	0

ELEMENT NO 7 IS A REACH * * *

U/S DATA	STATION	INVERT	SECT	N	RADIUS	ANGLE	ANG PT	MAN H
	2042.240	1173.590	1	.013	.000	.000	-.625	0

ELEMENT NO 8 IS A REACH * * *

U/S DATA	STATION	INVERT	SECT	N	RADIUS	ANGLE	ANG PT	MAN H
	2046.900	1173.680	1	.013	.000	.000	.000	1

ELEMENT NO 9 IS A REACH * * *

U/S DATA	STATION	INVERT	SECT	N	RADIUS	ANGLE	ANG PT	MAN H
	2582.240	1193.230	1	.013	.000	.000	.000	0

ELEMENT NO 10 IS A JUNCTION * * * * * * *

U/S DATA	STATION	INVERT	SECT	LAT-1	LAT-2	N	Q3	Q4	INVERT-3	INVERT-4	PHI 3	PHI 4
	2586.900	1193.360	2	3	0	.013	164.900	.000	1193.290	.000	-45.000	.000
									RADIUS	ANGLE		
									.000	.000		

WARNING - ADJACENT SECTIONS ARE NOT IDENTICAL - SEE SECTION NUMBERS AND CHANNEL DEFINITIONS

ELEMENT NO 11 IS A REACH * * *

U/S DATA	STATION	INVERT	SECT	N	RADIUS	ANGLE	ANG PT	MAN H
	2607.100	1196.370	1	.013	.000	.000	.000	0

ELEMENT NO 12 IS A JUNCTION * * * * * * *

U/S DATA	STATION	INVERT	SECT	LAT-1	LAT-2	N	Q3	Q4	INVERT-3	INVERT-4	PHI 3	PHI 4
	2609.100	1196.420	2	3	0	.013	64.800	.000	1196.420	.000	-45.000	.000
									RADIUS	ANGLE		
									.000	.000		

W S P G W PAGE NO 3

WATER SURFACE PROFILE - ELEMENT CARD LISTING

ELEMENT NO 13 IS A REACH * * *

U/S DATA	STATION	INVERT	SECT	N	RADIUS	ANGLE	ANG PT	MAN H

		3182.240	1205.670	2			.013				.000	.000	.000	0
ELEMENT NO	14 IS A REACH	*	*	*										
	U/S DATA	STATION	INVERT	SECT			N				RADIUS	ANGLE	ANG PT	MAN H
		3186.900	1205.720	2			.013				.000	.000	.000	1
ELEMENT NO	15 IS A REACH	*	*	*										
	U/S DATA	STATION	INVERT	SECT			N				RADIUS	ANGLE	ANG PT	MAN H
		3642.490	1206.910	2			.013				.000	.000	.000	0
ELEMENT NO	16 IS A JUNCTION	*	*	*	*			*			*		*	
	U/S DATA	STATION	INVERT	SECT	LAT-1	LAT-2	N	Q3	Q4	INVERT-3	INVERT-4	PHI 3	PHI 4	
		3647.150	1206.920	2	3	0	.013	74.200	.000	1206.980	.000	-45.000	.000	
										RADIUS	ANGLE			
										.000	.000			
ELEMENT NO	17 IS A REACH	*	*	*										
	U/S DATA	STATION	INVERT	SECT			N				RADIUS	ANGLE	ANG PT	MAN H
		4208.240	1208.040	2			.013				.000	.000	.000	0
ELEMENT NO	18 IS A REACH	*	*	*										
	U/S DATA	STATION	INVERT	SECT			N				RADIUS	ANGLE	ANG PT	MAN H
		4212.900	1208.050	2			.013				.000	.000	.000	1
ELEMENT NO	19 IS A REACH	*	*	*										
	U/S DATA	STATION	INVERT	SECT			N				RADIUS	ANGLE	ANG PT	MAN H
		4773.240	1209.170	2			.013				.000	.000	.000	0
ELEMENT NO	20 IS A REACH	*	*	*										
	U/S DATA	STATION	INVERT	SECT			N				RADIUS	ANGLE	ANG PT	MAN H
		4777.900	1209.180	2			.013				.000	.000	.000	1
ELEMENT NO	21 IS A REACH	*	*	*										
	U/S DATA	STATION	INVERT	SECT			N				RADIUS	ANGLE	ANG PT	MAN H
		5338.240	1210.300	2			.013				.000	.000	.000	0
ELEMENT NO	22 IS A JUNCTION	*	*	*	*			*			*		*	
	U/S DATA	STATION	INVERT	SECT	LAT-1	LAT-2	N	Q3	Q4	INVERT-3	INVERT-4	PHI 3	PHI 4	
		5342.900	1210.310	4	5	0	.013	96.300	.000	1210.310	.000	-90.000	.000	
										RADIUS	ANGLE			
										.000	.000			

ELEMENT NO	23 IS A REACH	*	*	*									
U/S DATA	STATION	INVERT	SECT			N				RADIUS	ANGLE	ANG PT	MAN H
	5816.240	1211.260	4			.013				.000	.000	.000	0
ELEMENT NO	24 IS A REACH	*	*	*									
U/S DATA	STATION	INVERT	SECT			N				RADIUS	ANGLE	ANG PT	MAN H
	5820.900	1211.280	4			.013				.000	.000	.000	1
ELEMENT NO	25 IS A REACH	*	*	*									
U/S DATA	STATION	INVERT	SECT			N				RADIUS	ANGLE	ANG PT	MAN H
	6296.240	1212.220	4			.013				.000	.000	.000	0
ELEMENT NO	26 IS A REACH	*	*	*									
U/S DATA	STATION	INVERT	SECT			N				RADIUS	ANGLE	ANG PT	MAN H
	6300.900	1212.230	4			.013				.000	.000	.000	1
ELEMENT NO	27 IS A REACH	*	*	*									
U/S DATA	STATION	INVERT	SECT			N				RADIUS	ANGLE	ANG PT	MAN H
	6766.260	1213.160	4			.013				.000	.000	.000	0
ELEMENT NO	28 IS A JUNCTION	*	*	*	*			*			*		*	
U/S DATA	STATION	INVERT	SECT	LAT-1	LAT-2	N	Q3	Q4	INVERT-3	INVERT-4	PHI 3	PHI 4	
	6770.920	1213.170	4	5	0	.013	61.200	.000	1213.160	.000	-90.000	.000	
									RADIUS	ANGLE			
									.000	.000			
ELEMENT NO	29 IS A REACH	*	*	*									
U/S DATA	STATION	INVERT	SECT			N				RADIUS	ANGLE	ANG PT	MAN H
	6858.040	1213.340	4			.013				.000	.000	-6.435	0
ELEMENT NO	30 IS A REACH	*	*	*									
U/S DATA	STATION	INVERT	SECT			N				RADIUS	ANGLE	ANG PT	MAN H
	7150.240	1213.930	4			.013				.000	.000	6.387	0
ELEMENT NO	31 IS A JUNCTION	*	*	*	*			*			*		*	
U/S DATA	STATION	INVERT	SECT	LAT-1	LAT-2	N	Q3	Q4	INVERT-3	INVERT-4	PHI 3	PHI 4	
	7154.900	1213.940	6	5	0	.013	54.200	.000	1217.180	.000	-90.000	.000	
									RADIUS	ANGLE			
									.000	.000			

WARNING - ADJACENT SECTIONS ARE NOT IDENTICAL - SEE SECTION NUMBERS AND CHANNEL DEFINITIONS

ELEMENT NO 32 IS A REACH * * *

U/S DATA	STATION	INVERT	SECT	N	RADIUS	ANGLE	ANG PT	MAN H
	7154.900	1213.940	4	.013	.000	.000	.000	1

WATER SURFACE PROFILE - ELEMENT CARD LISTING

ELEMENT NO 33 IS A REACH * * *

U/S DATA	STATION	INVERT	SECT	N	RADIUS	ANGLE	ANG PT	MAN H
	7524.240	1214.670	4	.013	.000	.000	.000	0

ELEMENT NO 34 IS A JUNCTION * * * * * * *

U/S DATA	STATION	INVERT	SECT	LAT-1	LAT-2	N	Q3	Q4	INVERT-3	INVERT-4	PHI 3	PHI 4
	7528.900	1215.680	6	5	0	.013	50.600	.000	1217.180	.000	-90.000	.000

RADIUS	ANGLE
.000	.000

ELEMENT NO 35 IS A REACH * * *

U/S DATA	STATION	INVERT	SECT	N	RADIUS	ANGLE	ANG PT	MAN H
	7860.240	1216.350	6	.013	.000	.000	.000	0

ELEMENT NO 36 IS A JUNCTION * * * * * * *

U/S DATA	STATION	INVERT	SECT	LAT-1	LAT-2	N	Q3	Q4	INVERT-3	INVERT-4	PHI 3	PHI 4
	7864.900	1216.360	6	5	0	.013	36.900	.000	1217.850	.000	-90.000	.000

RADIUS	ANGLE
.000	.000

ELEMENT NO 37 IS A REACH * * *

U/S DATA	STATION	INVERT	SECT	N	RADIUS	ANGLE	ANG PT	MAN H
	8202.990	1217.030	6	.013	.000	.000	.000	0

ELEMENT NO 38 IS A REACH * * *

U/S DATA	STATION	INVERT	SECT	N	RADIUS	ANGLE	ANG PT	MAN H
	8210.150	1217.040	6	.013	.000	.000	.000	0

ELEMENT NO 39 IS A SYSTEM HEADWORKS * *

U/S DATA	STATION	INVERT	SECT	W S ELEV
	8210.150	1217.040	6	1523.000

Program Package Serial Number: 1585

WATER SURFACE PROFILE LISTING Date: 7-26-2018 Time: 3:14:39

ALABAMA STREET STORM DRAIN - LINE A
WSPG MODEL PER AS-BUILTS PLANS
FN: LINEA.WSW

Station / L/Elem	Invert Elev / Ch Slope	Depth (FT)	Water Elev	Q (CFS)	Vel (FPS)	Vel Head / SF Ave	Energy Grd.El. / HF	Super Elev / SE Dpth	Critical Depth / Froude N	Flow Top Width / Norm Dp	Height/Dia.-FT / "N"	Base Wt or I.D. / X-Fall	ZL / ZR	No Wth Prs/Pip / Type Ch
1000.000	1171.500	5.233	1176.733	758.90	14.50	3.27	1180.00	.15	5.23	4.01	6.000	.000	.00	2 .0
12.322	.0020					.0071	.09	5.38	.71	6.00	.013	.00	.00	PIPE
1012.322	1171.525	5.593	1177.118	758.90	13.83	2.97	1180.09	.10	5.23	3.02	6.000	.000	.00	2 .0
7.748	.0020					.0069	.05	5.69	.57	6.00	.013	.00	.00	PIPE
1020.070	1171.540	5.690	1177.230	758.90	13.69	2.91	1180.14	.00	5.23	2.65	6.000	.000	.00	2 .0
37.226	.0021					.0073	.27	5.69	.53	6.00	.013	.00	.00	PIPE
1057.296	1171.617	6.000	1177.617	758.90	13.42	2.80	1180.41	.00	5.23	.00	6.000	.000	.00	2 .0
59.644	.0021					.0079	.47	6.00	.00	6.00	.013	.00	.00	PIPE
1116.940	1171.740	6.356	1178.096	758.90	13.42	2.80	1180.89	.00	5.23	.00	6.000	.000	.00	2 .0
96.310	.0020					.0080	.77	.00	.00	6.00	.013	.00	.00	PIPE
1213.250	1171.930	7.400	1179.330	758.90	13.42	2.80	1182.13	.00	5.23	.00	6.000	.000	.00	2 .0
95.320	.0020					.0080	.77	.00	.00	6.00	.013	.00	.00	PIPE
1308.570	1172.120	8.435	1180.555	758.90	13.42	2.80	1183.35	.00	5.23	.00	6.000	.000	.00	2 .0
188.250	.0020					.0080	1.51	8.43	.00	6.00	.013	.00	.00	PIPE
1496.820	1172.500	9.566	1182.066	758.90	13.42	2.80	1184.86	.00	5.23	.00	6.000	.000	.00	2 .0
399.387	.0020					.0080	3.21	9.57	.00	6.00	.013	.00	.00	PIPE
1896.207	1173.298	11.978	1185.276	758.90	13.42	2.80	1188.07	.00	5.23	.00	6.000	.000	.00	2 .0

HYDRAULIC JUMP

Program Package Serial Number: 1585

WATER SURFACE PROFILE LISTING Date: 7-26-2018 Time: 3:14:39

ALABAMA STREET STORM DRAIN - LINE A
WSPG MODEL PER AS-BUILTS PLANS
FN: LINEA.WSW

Station / L/Elem	Invert Elev / Ch Slope	Depth (FT)	Water Elev	Q (CFS)	Vel (FPS)	Vel Head / SF Ave	Energy Grd.El. / HF	Super Elev / SE Dpth	Critical Depth / Froude N	Flow Top Width / Norm Dp	Height/Dia.-FT / "N"	Base Wt or I.D. / X-Fall	ZL / ZR	No Wth Prs/Pip / Type Ch
1896.207	1173.298	3.371	1176.669	758.90	23.19	8.35	1185.02	.00	5.23	5.95	6.000	.000	.00	2 .0
18.138	.0020					.0226	.41	3.37	1.74	6.00	.013	.00	.00	PIPE
1914.345	1173.334	3.303	1176.637	758.90	23.78	8.78	1185.42	.00	5.23	5.97	6.000	.000	.00	2 .0
32.978	.0020					.0249	.82	3.30	1.81	6.00	.013	.00	.00	PIPE
1947.323	1173.400	3.179	1176.579	758.90	24.94	9.66	1186.24	.00	5.23	5.99	6.000	.000	.00	2 .0
32.361	.0020					.0282	.91	3.18	1.95	6.00	.013	.00	.00	PIPE
1979.684	1173.465	3.061	1176.526	758.90	26.16	10.62	1187.15	.00	5.23	6.00	6.000	.000	.00	2 .0
31.671	.0020					.0320	1.01	3.06	2.10	6.00	.013	.00	.00	PIPE
2011.354	1173.528	2.949	1176.477	758.90	27.43	11.69	1188.16	.00	5.23	6.00	6.000	.000	.00	2 .0
30.885	.0020					.0364	1.12	2.95	2.25	6.00	.013	.00	.00	PIPE
2042.240	1173.590	2.842	1176.432	758.90	28.77	12.85	1189.29	.00	5.23	5.99	6.000	.000	.00	2 .0
4.660	.0193					.0389	.18	2.84	2.42	3.50	.013	.00	.00	PIPE
2046.900	1173.680	2.833	1176.513	758.90	28.89	12.96	1189.47	.00	5.23	5.99	6.000	.000	.00	2 .0
133.653	.0365					.0402	5.37	2.83	2.43	2.89	.013	.00	.00	PIPE
2180.553	1178.561	2.789	1181.350	758.90	29.47	13.49	1194.84	.00	5.23	5.99	6.000	.000	.00	2 .0
165.116	.0365					.0441	7.28	2.79	2.50	2.89	.013	.00	.00	PIPE
2345.669	1184.591	2.689	1187.280	758.90	30.91	14.83	1202.11	.00	5.23	5.97	6.000	.000	.00	2 .0
101.775	.0365					.0502	5.10	2.69	2.69	2.89	.013	.00	.00	PIPE

Program Package Serial Number: 1585

WATER SURFACE PROFILE LISTING Date: 7-26-2018 Time: 3:14:39

ALABAMA STREET STORM DRAIN - LINE A
WSPG MODEL PER AS-BUILTS PLANS
FN: LINEA.WSW

Station / L/Elem	Invert Elev / Ch Slope	Depth (FT)	Water Elev	Q (CFS)	Vel (FPS)	Vel Head / SF Ave	Energy Grd.El. / HF	Super Elev / SE Dpth	Critical Depth / Froude N	Flow Top Width / Norm Dp	Height/Dia.-FT / "N"	Base Wt or I.D. / X-Fall	ZL / ZR	No Wth Prs/Pip / Type Ch
2447.445	1188.307	2.593	1190.901	758.90	32.42	16.32	1207.22	.00	5.23	5.94	6.000	.000	.00	2 .0
74.873	.0365					.0571	4.27	2.59	2.88	2.89	.013	.00	.00	PIPE
2522.317	1191.042	2.501	1193.543	758.90	34.00	17.95	1211.49	.00	5.23	5.92	6.000	.000	.00	2 .0
59.923	.0365					.0650	3.90	2.50	3.08	2.89	.013	.00	.00	PIPE
2582.240	1193.230	2.414	1195.644	758.90	35.66	19.74	1215.39	.00	5.23	5.88	6.000	.000	.00	2 .0
JUNCT STR	.0279					.0746	.35	2.41	3.30		.013	.00	.00	PIPE
2586.900	1193.360	2.611	1195.971	594.00	25.15	9.82	1205.79	.00	4.71	5.95	6.000	.000	.00	2 .0
4.175	.1490					.0307	.13	2.61	2.22	1.73	.013	.00	.00	PIPE
2591.075	1193.982	2.669	1196.651	594.00	24.42	9.26	1205.91	.00	4.71	5.96	6.000	.000	.00	2 .0
6.117	.1490					.0277	.17	2.67	2.13	1.73	.013	.00	.00	PIPE
2597.192	1194.894	2.769	1197.663	594.00	23.29	8.42	1206.08	.00	4.71	5.98	6.000	.000	.00	2 .0
5.307	.1490					.0244	.13	2.77	1.99	1.73	.013	.00	.00	PIPE
2602.499	1195.684	2.873	1198.557	594.00	22.20	7.65	1206.21	.00	4.71	5.99	6.000	.000	.00	2 .0
4.601	.1490					.0214	.10	2.87	1.85	1.73	.013	.00	.00	PIPE
2607.100	1196.370	2.982	1199.352	594.00	21.17	6.96	1206.31	.00	4.71	6.00	6.000	.000	.00	2 .0
JUNCT STR	.0250					.0174	.03	2.98	1.73		.013	.00	.00	PIPE
2609.100	1196.420	3.894	1200.314	529.20	21.79	7.38	1207.69	.00	5.87	8.00	8.000	.000	.00	1 .0
37.963	.0161					.0147	.56	3.89	2.20	3.79	.013	.00	.00	PIPE

Program Package Serial Number: 1585

WATER SURFACE PROFILE LISTING Date: 7-26-2018 Time: 3:14:39

ALABAMA STREET STORM DRAIN - LINE A
WSPG MODEL PER AS-BUILTS PLANS
FN: LINEA.WSW

Station	Invert Elev	Depth (FT)	Water Elev	Q (CFS)	Vel (FPS)	Vel Head	Energy Grd.El.	Super Elev	Critical Depth	Flow Top Width	Height/ Dia.-FT	Base Wt or I.D.	ZL	No Wth Prs/Pip
L/Elem	Ch Slope					SF Ave	HF	SE Dpth	Froude N	Norm Dp	"N"	X-Fall	ZR	Type Ch
2647.063	1197.033	3.908	1200.941	529.20	21.69	7.30	1208.24	.00	5.87	8.00	8.000	.000	.00	1 .0
211.278	.0161					.0137	2.89	3.91	2.19	3.79	.013	.00	.00	PIPE
2858.341	1200.443	4.057	1204.500	529.20	20.68	6.64	1211.14	.00	5.87	8.00	8.000	.000	.00	1 .0
110.002	.0161					.0121	1.33	4.06	2.04	3.79	.013	.00	.00	PIPE
2968.343	1202.218	4.213	1206.431	529.20	19.72	6.04	1212.47	.00	5.87	7.99	8.000	.000	.00	1 .0
69.979	.0161					.0106	.74	4.21	1.90	3.79	.013	.00	.00	PIPE
3038.322	1203.347	4.377	1207.724	529.20	18.80	5.49	1213.21	.00	5.87	7.96	8.000	.000	.00	1 .0
48.287	.0161					.0094	.45	4.38	1.76	3.79	.013	.00	.00	PIPE
3086.609	1204.127	4.550	1208.677	529.20	17.92	4.99	1213.67	.00	5.87	7.92	8.000	.000	.00	1 .0
34.494	.0161					.0083	.29	4.55	1.64	3.79	.013	.00	.00	PIPE
3121.103	1204.683	4.733	1209.417	529.20	17.09	4.54	1213.95	.00	5.87	7.86	8.000	.000	.00	1 .0
24.921	.0161					.0073	.18	4.73	1.52	3.79	.013	.00	.00	PIPE
3146.024	1205.086	4.926	1210.012	529.20	16.29	4.12	1214.13	.00	5.87	7.78	8.000	.000	.00	1 .0
17.621	.0161					.0065	.11	4.93	1.41	3.79	.013	.00	.00	PIPE
3163.645	1205.370	5.131	1210.501	529.20	15.54	3.75	1214.25	.00	5.87	7.67	8.000	.000	.00	1 .0
11.742	.0161					.0058	.07	5.13	1.30	3.79	.013	.00	.00	PIPE
3175.387	1205.559	5.350	1210.910	529.20	14.81	3.41	1214.32	.00	5.87	7.53	8.000	.000	.00	1 .0
6.853	.0161					.0051	.04	5.35	1.20	3.79	.013	.00	.00	PIPE

Program Package Serial Number: 1585

WATER SURFACE PROFILE LISTING Date: 7-26-2018 Time: 3:14:39

ALABAMA STREET STORM DRAIN - LINE A
WSPG MODEL PER AS-BUILTS PLANS
FN: LINEA.WSW

Station / L/Elem	Invert Elev / Ch Slope	Depth (FT)	Water Elev	Q (CFS)	Vel (FPS)	Vel Head / SF Ave	Energy Grd.El. / HF	Super Elev / SE Dpth	Critical Depth / Froude N	Flow Top Width / Norm Dp	Height/Dia.-FT / "N"	Base Wt or I.D. / X-Fall	ZL / ZR	No Wth Prs/Pip / Type Ch
3182.240	1205.670	5.584	1211.255	529.20	14.12	3.10	1214.35	.00	5.87	7.35	8.000	.000	.00	1 .0
.853	.0107					.0048	.00	5.58	1.10	4.28	.013	.00	.00	PIPE
3183.093	1205.679	5.609	1211.288	529.20	14.06	3.07	1214.36	.00	5.87	7.32	8.000	.000	.00	1 .0
3.807	.0107					.0045	.02	5.61	1.09	4.28	.013	.00	.00	PIPE
3186.900	1205.720	5.865	1211.585	529.20	13.40	2.79	1214.37	.00	5.87	7.08	8.000	.000	.00	1 .0
16.813	.0026					.0041	.07	5.87	1.00	8.00	.013	.00	.00	PIPE
3203.713	1205.764	6.143	1211.907	529.20	12.78	2.53	1214.44	.00	5.87	6.75	8.000	.000	.00	1 .0
75.619	.0026					.0037	.28	6.14	.91	8.00	.013	.00	.00	PIPE
3279.332	1205.961	6.452	1212.414	529.20	12.18	2.30	1214.72	.00	5.87	6.32	8.000	.000	.00	1 .0
203.625	.0026					.0033	.68	6.45	.82	8.00	.013	.00	.00	PIPE
3482.957	1206.493	6.805	1213.298	529.20	11.61	2.09	1215.39	.00	5.87	5.70	8.000	.000	.00	1 .0
159.533	.0026					.0031	.50	6.81	.72	8.00	.013	.00	.00	PIPE
3642.490	1206.910	6.965	1213.875	529.20	11.39	2.02	1215.89	.00	5.87	5.37	8.000	.000	.00	1 .0
JUNCT STR	.0021					.0028	.01	6.96	.68		.013	.00	.00	PIPE
3647.150	1206.920	7.995	1214.915	455.00	9.05	1.27	1216.19	.00	5.43	.38	8.000	.000	.00	1 .0
10.608	.0020					.0024	.03	8.00	.14	8.00	.013	.00	.00	PIPE
3657.758	1206.941	8.000	1214.941	455.00	9.05	1.27	1216.21	.00	5.43	.00	8.000	.000	.00	1 .0
550.482	.0020					.0025	1.35	8.00	.00	8.00	.013	.00	.00	PIPE

Program Package Serial Number: 1585

WATER SURFACE PROFILE LISTING Date: 7-26-2018 Time: 3:14:39

ALABAMA STREET STORM DRAIN - LINE A
WSPG MODEL PER AS-BUILTS PLANS
FN: LINEA.WSW

Station / L/Elem	Invert Elev / Ch Slope	Depth (FT)	Water Elev	Q (CFS)	Vel (FPS)	Vel Head / SF Ave	Energy Grd.El. / HF	Super Elev / SE Dpth	Critical Depth / Froude N	Flow Top Width / Norm Dp	Height/Dia.-FT / "N"	Base Wt or I.D. / X-Fall	ZL / ZR	No Wth Prs/Pip / Type Ch
4208.240	1208.040	8.271	1216.311	455.00	9.05	1.27	1217.58	.00	5.43	.00	8.000	.000	.00	1 .0
4.660	.0021					.0025	.01	8.27	.00	8.00	.013	.00	.00	PIPE
4212.900	1208.050	8.336	1216.386	455.00	9.05	1.27	1217.66	.00	5.43	.00	8.000	.000	.00	1 .0
560.340	.0020					.0025	1.39	8.34	.00	8.00	.013	.00	.00	PIPE
4773.240	1209.170	8.611	1217.781	455.00	9.05	1.27	1219.05	.00	5.43	.00	8.000	.000	.00	1 .0
4.660	.0021					.0025	.01	8.61	.00	8.00	.013	.00	.00	PIPE
4777.900	1209.180	8.676	1217.856	455.00	9.05	1.27	1219.13	.00	5.43	.00	8.000	.000	.00	1 .0
560.340	.0020					.0025	1.39	8.68	.00	8.00	.013	.00	.00	PIPE
5338.240	1210.300	8.951	1219.251	455.00	9.05	1.27	1220.52	.00	5.43	.00	8.000	.000	.00	1 .0
JUNCT STR	.0021					.0028	.01	8.95	.00		.013	.00	.00	PIPE
5342.900	1210.310	9.496	1219.806	358.70	9.32	1.35	1221.16	.00	4.99	.00	7.000	.000	.00	1 .0
473.340	.0020					.0032	1.49	9.50	.00	7.00	.013	.00	.00	PIPE
5816.240	1211.260	10.039	1221.299	358.70	9.32	1.35	1222.65	.00	4.99	.00	7.000	.000	.00	1 .0
4.660	.0043					.0032	.01	10.04	.00	4.99	.013	.00	.00	PIPE
5820.900	1211.280	10.101	1221.381	358.70	9.32	1.35	1222.73	.00	4.99	.00	7.000	.000	.00	1 .0
475.340	.0020					.0032	1.50	10.10	.00	7.00	.013	.00	.00	PIPE
6296.240	1212.220	10.659	1222.879	358.70	9.32	1.35	1224.23	.00	4.99	.00	7.000	.000	.00	1 .0
4.660	.0021					.0032	.01	10.66	.00	7.00	.013	.00	.00	PIPE

Program Package Serial Number: 1585

WATER SURFACE PROFILE LISTING Date: 7-26-2018 Time: 3:14:39

ALABAMA STREET STORM DRAIN - LINE A
WSPG MODEL PER AS-BUILTS PLANS
FN: LINEA.WSW

Station / L/Elem	Invert Elev / Ch Slope	Depth (FT)	Water Elev	Q (CFS)	Vel (FPS)	Vel Head / SF Ave	Energy Grd.El. / HF	Super Elev / SE Dpth	Critical Depth / Froude N	Flow Top Width / Norm Dp	Height/Dia.-FT / "N"	Base Wt or I.D. / X-Fall	ZL / ZR	No Wth Prs/Pip / Type Ch
6300.900	1212.230	10.732	1222.962	358.70	9.32	1.35	1224.31	.00	4.99	.00	7.000	.000	.00	1 .0
465.360	.0020					.0032	1.47	10.73	.00	7.00	.013	.00	.00	PIPE
6766.260	1213.160	11.269	1224.429	358.70	9.32	1.35	1225.78	.00	4.99	.00	7.000	.000	.00	1 .0
JUNCT STR	.0021					.0027	.01	11.27	.00		.013	.00	.00	PIPE
6770.920	1213.170	12.113	1225.283	297.50	7.73	.93	1226.21	.00	4.54	.00	7.000	.000	.00	1 .0
87.120	.0020					.0022	.19	12.11	.00	6.16	.013	.00	.00	PIPE
6858.040	1213.340	12.152	1225.492	297.50	7.73	.93	1226.42	.00	4.54	.00	7.000	.000	.00	1 .0
292.200	.0020					.0022	.63	12.15	.00	6.00	.013	.00	.00	PIPE
7150.240	1213.930	12.215	1226.145	297.50	7.73	.93	1227.07	.00	4.54	.00	7.000	.000	.00	1 .0
JUNCT STR	.0021					.0027	.01	12.22	.00		.013	.00	.00	PIPE
7154.900	1213.940	12.410	1226.350	243.30	6.32	.62	1226.97	.00	4.09	.00	7.000	.000	.00	1 .0
7154.900	1213.940	12.441	1226.381	243.30	6.32	.62	1227.00	.00	4.09	.00	7.000	.000	.00	1 .0
369.340	.0020					.0015	.54	12.44	.00	4.99	.013	.00	.00	PIPE
7524.240	1214.670	12.246	1226.916	243.30	6.32	.62	1227.54	.00	4.09	.00	7.000	.000	.00	1 .0
JUNCT STR	.2168					.0018	.01	12.25	.00		.013	.00	.00	PIPE
7528.900	1215.680	11.454	1227.134	192.70	6.82	.72	1227.85	.00	3.79	.00	6.000	.000	.00	1 .0
331.340	.0020					.0021	.69	11.45	.00	4.99	.013	.00	.00	PIPE
7860.240	1216.350	11.470	1227.820	192.70	6.82	.72	1228.54	.00	3.79	.00	6.000	.000	.00	1 .0
JUNCT STR	.0021					.0017	.01	11.47	.00		.013	.00	.00	PIPE

Program Package Serial Number: 1585

WATER SURFACE PROFILE LISTING Date: 7-26-2018 Time: 3:14:39

ALABAMA STREET STORM DRAIN - LINE A
WSPG MODEL PER AS-BUILTS PLANS
FN: LINEA.WSW

Station	Invert Elev	Depth (FT)	Water Elev	Q (CFS)	Vel (FPS)	Vel Head	Energy Grd.El.	Super Elev	Critical Depth	Flow Top Width	Height/ Dia.-FT	Base Wt or I.D.	ZL	No Wth Prs/Pip
L/Elem	Ch Slope					SF Ave	HF	SE Dpth	Froude N	Norm Dp	"N"	X-Fall	ZR	Type Ch
7864.900	1216.360	11.967	1228.327	155.80	5.51	.47	1228.80	.00	3.39	.00	6.000	.000	.00	1 .0
338.090	.0020					.0014	.46	11.97	.00	4.16	.013	.00	.00	PIPE
8202.990	1217.030	11.755	1228.785	155.80	5.51	.47	1229.26	.00	3.39	.00	6.000	.000	.00	1 .0
7.160	.0014					.0014	.01	11.75	.00	4.83	.013	.00	.00	PIPE
8210.150	1217.040	11.754	1228.794	155.80	5.51	.47	1229.27	.00	3.39	.00	6.000	.000	.00	1 .0

INLET CAPACITIES

*To be included during final engineering

DRAWDOWN CALCULATION

Underground Storage System Drawdown Calculation

ALBERT A WEBB ASSOCIATES ENGINEERING CONSULTANTS

Designer: MJS
Date: 4/11/2018
Project: Duke - Alabama & Palmetto
Location: Southeast corner of Alabama Street and Palmetto Avenue
Area: DMA 1

(1)	VBMP =	186684	ft^3
(2)	Basin Bottom Area=	81206	ft^2
(3)	Infiltration Rate =	3	in/hr
(4)	Factor of Safety=	3.4	
(5)	Design Infiltration Rate =	0.9	in/hr

$$Drawdown = \frac{V_{BMP}\ (ft^3)}{Design\ Infiltration\ Rate\left(\frac{in}{hr}\right) \times \left(\frac{1ft}{12in}\right) \times Bottom\ Area\ (ft^2)}$$

Water Quality Drawdown Time=	31.3	hr

Volume at 1202.9'=	296143	ft^3
Basin Bottom Area=	81206	ft^2
Infiltration Rate =	0.9	in/hr

Drawdown Time for Enitre Volume=	48.0	hr

*The Geotechnical Infiltration Test Report shows recommend a design infiltration rates of 3 inches per hour at the expected depth. A factor of safety of 3.4 was determined by the PWQMP Report. The entire 100-year 24-hour volume will drain within the 48-hour mark.

STAGE-STORAGE/OUTFLOW TABLE

Project: DUKE- ALABAMA & PALMETTO
Basin Description: AUTOCAD STAGE STORGE VAULES

Contour Elevation	Contour Area (sq. ft)	Depth (ft)	Incremental Volume Avg. End (cu. ft)	Cumulative Volume Avg. End (cu. ft)	Incremental Volume Conic (cu. ft)	Cumulative Volume Conic (cu. ft)
1,199.50	81,204.59	N/A	N/A	0.00	N/A	0.00
1,199.60	81,555.04	0.10	8137.98	8137.98	8137.97	8137.97
1,199.70	81,906.02	0.10	8173.05	16311.03	8173.05	16311.02
1,199.80	82,257.54	0.10	8208.18	24519.21	8208.17	24519.19
1,199.90	82,609.58	0.10	8243.36	32762.57	8243.35	32762.54
1,200.00	82,962.15	0.10	8278.59	41041.15	8278.58	41041.12
1,200.10	83,315.26	0.10	8313.87	49355.03	8313.86	49354.99
1,200.20	83,668.89	0.10	8349.21	57704.23	8349.20	57704.19
1,200.30	84,023.06	0.10	8384.60	66088.83	8384.59	66088.78
1,200.40	84,377.76	0.10	8420.04	74508.87	8420.03	74508.81
1,200.50	84,732.98	0.10	8455.54	82964.41	8455.53	82964.35
1,200.60	85,088.74	0.10	8491.09	91455.49	8491.08	91455.43
1,200.70	85,445.03	0.10	8526.69	99982.18	8526.68	99982.11
1,200.80	85,801.85	0.10	8562.34	108544.53	8562.34	108544.45
1,200.90	86,159.20	0.10	8598.05	117142.58	8598.05	117142.49
1,201.00	86,517.08	0.10	8633.81	125776.39	8633.81	125776.30
1,201.10	86,875.49	0.10	8669.63	134446.02	8669.62	134445.92
1,201.20	87,234.43	0.10	8705.50	143151.52	8705.49	143151.41
1,201.30	87,593.90	0.10	8741.42	151892.93	8741.41	151892.82
1,201.40	87,953.90	0.10	8777.39	160670.32	8777.38	160670.21
1,201.50	88,314.44	0.10	8813.42	169483.74	8813.41	169483.62
1,201.60	88,675.50	0.10	8849.50	178333.24	8849.49	178333.11
1,201.70	89,037.09	0.10	8885.63	187218.87	8885.62	187218.73
1,201.80	89,399.22	0.10	8921.82	196140.68	8921.81	196140.54
1,201.90	89,761.87	0.10	8958.05	205098.74	8958.05	205098.59
1,202.00	90,125.06	0.10	8994.35	214093.08	8994.34	214092.93
1,202.10	90,488.77	0.10	9030.69	223123.77	9030.69	223123.61
1,202.20	90,853.02	0.10	9067.09	232190.86	9067.08	232190.70
1,202.30	91,217.80	0.10	9103.54	241294.40	9103.53	241294.23
1,202.40	91,583.10	0.10	9140.04	250434.45	9140.04	250434.27
1,202.50	91,948.94	0.10	9176.60	259611.05	9176.60	259610.87
1,202.60	92,315.31	0.10	9213.21	268824.26	9213.21	268824.07
1,202.70	92,682.21	0.10	9249.88	278074.14	9249.87	278073.94
1,202.80	93,049.64	0.10	9286.59	287360.73	9286.59	287360.53
1,202.90	93,417.60	0.10	9323.36	296684.09	9323.36	296683.88
1,203.00	93,786.09	0.10	9360.18	306044.28	9360.18	306044.06
1,203.10	94,155.11	0.10	9397.06	315441.34	9397.05	315441.12
1,203.20	94,524.66	0.10	9433.99	324875.33	9433.98	324875.10
1,203.30	94,894.74	0.10	9470.97	334346.30	9470.96	334346.06
1,203.40	95,265.36	0.10	9508.01	343854.30	9508.00	343854.06
1,203.50	95,636.50	0.10	9545.09	353399.40	9545.09	353399.15

Basin Stage-Storage-Outflow Table
18-0011Infiltration Basin

#	Elevation (FT)	Depth (FT)	Storage-Total (AC-FT)	Q (CFS)	
1.0	1,199.50	0.00	0.000	0.000	DEAD STORAGE
2.0	1,200.80	1.30	2.492	0.000	
3.0	1,201.70	2.20	4.298	0.000	
4.0	1,202.30	2.80	5.539	45.000	
5.0	1,202.50	3.00	5.960	50.000	
6.0	1,202.90	3.40	6.811	65.000	
7.0	1,203.00	3.50	7.026	68.000	
8.0	1,203.10	3.60	7.242	70.000	
9.0	1,203.40	3.90	7.894	80.000	
10.0	1,203.50	4.00	8.113	85.000	
11.0					
12.0					
13.0					
14.0					
15.0					
16.0					
17.0					
18.0					
19.0					

**No outflow was assumed below water quality depth of 1201.7

BASIN ROUTING
100-YEAR, 24-HOUR STORM EVENT

FLOOD HYDROGRAPH ROUTING PROGRAM
Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2005
Study date: 07/26/18

18-0011 DUKE - ALABAMA & PALMETTO
BASIN ROUTING CALCULATIONS
100-YEAR, 24-HOUR STORM EVENT
FN: ROUTE24100.OUT MJS

Program License Serial Number 4010

********** HYDROGRAPH INFORMATION **********

From study/file name: PROP24100.rte

**********HYDROGRAPH DATA**********

Number of intervals = 296
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 137.573 (CFS)
Total volume = 19.706 (Ac.Ft)

Status of hydrographs being held in storage

	Stream 1	Stream 2	Stream 3	Stream 4	Stream 5
Peak (CFS)	0.000	0.000	0.000	0.000	0.000
Vol (Ac.Ft)	0.000	0.000	0.000	0.000	0.000

****

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Process from Point/Station 101.000 to Point/Station 102.000
**** RETARDING BASIN ROUTING ****

User entry of depth-outflow-storage data

Total number of inflow hydrograph intervals = 296
Hydrograph time unit = 5.000 (Min.)
Initial depth in storage basin = 0.00(Ft.)

Initial basin depth = 0.00 (Ft.)
Initial basin storage = 0.00 (Ac.Ft)
Initial basin outflow = 0.00 (CFS)

Depth vs. Storage and Depth vs. Discharge data:

Basin Depth (Ft.)	Storage (Ac.Ft)	Outflow (CFS)	(S-O*dt/2) (Ac.Ft)	(S+O*dt/2) (Ac.Ft)
0.000	0.000	0.000	0.000	0.000
1.300	2.492	0.000	2.492	2.492
2.200	4.298	0.000	4.298	4.298
2.800	5.539	45.000	5.384	5.694
3.000	5.960	50.000	5.788	6.132
3.400	6.811	65.000	6.587	7.035
3.500	7.026	68.000	6.792	7.260
3.600	7.242	70.000	7.001	7.483
3.900	7.894	80.000	7.619	8.169
4.000	8.113	85.000	7.820	8.406

Hydrograph Detention Basin Routing

Graph values: 'I'= unit inflow; 'O'=outflow at time shown

Time (Hours)	Inflow (CFS)	Outflow (CFS)	Storage (Ac.Ft)		0	34.4	68.79	103.18	137.57	Depth (Ft.)
0.083	0.13	0.00	0.000	O	|	|	|	|	|	0.00
0.167	0.87	0.00	0.004	O	|	|	|	|	|	0.00
0.250	2.20	0.00	0.015	O	|	|	|	|	|	0.01
0.333	3.42	0.00	0.034	O	|	|	|	|	|	0.02
0.417	3.99	0.00	0.059	O	|	|	|	|	|	0.03
0.500	4.23	0.00	0.088	O	|	|	|	|	|	0.05
0.583	4.31	0.00	0.117	OI	|	|	|	|	|	0.06
0.667	4.36	0.00	0.147	OI	|	|	|	|	|	0.08
0.750	4.40	0.00	0.177	OI	|	|	|	|	|	0.09
0.833	4.41	0.00	0.207	OI	|	|	|	|	|	0.11

0.917	4.43	0.00	0.238	OI				0.12
1.000	4.44	0.00	0.268	OI				0.14
1.083	4.45	0.00	0.299	OI				0.16
1.167	4.47	0.00	0.330	OI				0.17
1.250	4.48	0.00	0.361	OI				0.19
1.333	4.49	0.00	0.391	OI				0.20
1.417	4.51	0.00	0.422	OI				0.22
1.500	4.52	0.00	0.454	OI				0.24
1.583	4.54	0.00	0.485	OI				0.25
1.667	4.55	0.00	0.516	OI				0.27
1.750	4.57	0.00	0.547	OI				0.29
1.833	4.58	0.00	0.579	OI				0.30
1.917	4.59	0.00	0.611	OI				0.32
2.000	4.61	0.00	0.642	OI				0.34
2.083	4.62	0.00	0.674	OI				0.35
2.167	4.64	0.00	0.706	OI				0.37
2.250	4.65	0.00	0.738	OI				0.38
2.333	4.67	0.00	0.770	OI				0.40
2.417	4.69	0.00	0.802	OI				0.42
2.500	4.70	0.00	0.835	OI				0.44
2.583	4.72	0.00	0.867	OI				0.45
2.667	4.73	0.00	0.900	OI				0.47
2.750	4.75	0.00	0.932	OI				0.49
2.833	4.77	0.00	0.965	OI				0.50
2.917	4.78	0.00	0.998	OI				0.52
3.000	4.80	0.00	1.031	OI				0.54
3.083	4.82	0.00	1.064	OI				0.56
3.167	4.83	0.00	1.097	OI				0.57
3.250	4.85	0.00	1.131	OI				0.59
3.333	4.87	0.00	1.164	OI				0.61
3.417	4.88	0.00	1.198	OI				0.62
3.500	4.90	0.00	1.231	OI				0.64
3.583	4.92	0.00	1.265	OI				0.66
3.667	4.94	0.00	1.299	OI				0.68
3.750	4.96	0.00	1.333	OI				0.70
3.833	4.97	0.00	1.367	OI				0.71
3.917	4.99	0.00	1.402	OI				0.73
4.000	5.01	0.00	1.436	OI				0.75
4.083	5.03	0.00	1.471	OI				0.77
4.167	5.05	0.00	1.505	OI				0.79
4.250	5.07	0.00	1.540	OI				0.80
4.333	5.09	0.00	1.575	OI				0.82
4.417	5.11	0.00	1.610	OI				0.84
4.500	5.13	0.00	1.646	OI				0.86
4.583	5.15	0.00	1.681	OI				0.88
4.667	5.17	0.00	1.716	OI				0.90
4.750	5.19	0.00	1.752	OI				0.91
4.833	5.21	0.00	1.788	OI				0.93
4.917	5.23	0.00	1.824	OI				0.95
5.000	5.25	0.00	1.860	OI				0.97
5.083	5.27	0.00	1.896	OI				0.99
5.167	5.30	0.00	1.933	OI				1.01
5.250	5.32	0.00	1.969	OI				1.03
5.333	5.34	0.00	2.006	OI				1.05
5.417	5.36	0.00	2.043	OI				1.07
5.500	5.39	0.00	2.080	OI				1.08
5.583	5.41	0.00	2.117	OI				1.10
5.667	5.43	0.00	2.154	OI				1.12
5.750	5.46	0.00	2.192	OI				1.14
5.833	5.48	0.00	2.230	OI				1.16
5.917	5.51	0.00	2.267	OI				1.18
6.000	5.53	0.00	2.305	OI				1.20
6.083	5.56	0.00	2.344	OI				1.22
6.167	5.58	0.00	2.382	OI				1.24
6.250	5.61	0.00	2.420	OI				1.26
6.333	5.63	0.00	2.459	OI				1.28
6.417	5.66	0.00	2.498	OI				1.30
6.500	5.69	0.00	2.537	OI				1.32
6.583	5.71	0.00	2.576	OI				1.34
6.667	5.74	0.00	2.616	OI				1.36
6.750	5.77	0.00	2.655	OI				1.38
6.833	5.80	0.00	2.695	OI				1.40
6.917	5.82	0.00	2.735	OI				1.42
7.000	5.85	0.00	2.775	OI				1.44
7.083	5.88	0.00	2.816	OI				1.46
7.167	5.91	0.00	2.856	OI				1.48
7.250	5.94	0.00	2.897	OI				1.50
7.333	5.97	0.00	2.938	OI				1.52
7.417	6.00	0.00	2.980	OI				1.54
7.500	6.04	0.00	3.021	OI				1.56
7.583	6.07	0.00	3.063	OI				1.58
7.667	6.10	0.00	3.105	OI				1.61
7.750	6.13	0.00	3.147	OI				1.63
7.833	6.17	0.00	3.189	OI				1.65

7.917	6.20	0.00	3.232	OI				1.67
8.000	6.23	0.00	3.274	OI				1.69
8.083	6.27	0.00	3.318	OI				1.71
8.167	6.31	0.00	3.361	OI				1.73
8.250	6.34	0.00	3.404	OI				1.75
8.333	6.38	0.00	3.448	OI				1.78
8.417	6.42	0.00	3.492	OI				1.80
8.500	6.45	0.00	3.537	OI				1.82
8.583	6.49	0.00	3.581	OI				1.84
8.667	6.53	0.00	3.626	OI				1.87
8.750	6.57	0.00	3.671	OI				1.89
8.833	6.61	0.00	3.716	OI				1.91
8.917	6.65	0.00	3.762	OI				1.93
9.000	6.70	0.00	3.808	OI				1.96
9.083	6.74	0.00	3.854	OI				1.98
9.167	6.78	0.00	3.901	OI				2.00
9.250	6.83	0.00	3.948	OI				2.03
9.333	6.87	0.00	3.995	OI				2.05
9.417	6.92	0.00	4.042	OI				2.07
9.500	6.97	0.00	4.090	OI				2.10
9.583	7.01	0.00	4.138	OI				2.12
9.667	7.06	0.00	4.187	OI				2.14
9.750	7.11	0.00	4.236	OI				2.17
9.833	7.16	0.00	4.285	OI				2.19
9.917	7.21	1.17	4.330	OI				2.22
10.000	7.27	2.52	4.367	OI				2.23
10.083	7.32	3.58	4.397	OI				2.25
10.167	7.38	4.42	4.420	O				2.26
10.250	7.43	5.08	4.438	O				2.27
10.333	7.49	5.61	4.453	O				2.27
10.417	7.55	6.03	4.464	O				2.28
10.500	7.61	6.38	4.474	O				2.29
10.583	7.67	6.66	4.482	O				2.29
10.667	7.73	6.89	4.488	O				2.29
10.750	7.80	7.08	4.493	O				2.29
10.833	7.86	7.25	4.498	O				2.30
10.917	7.93	7.39	4.502	O				2.30
11.000	8.00	7.52	4.505	O				2.30
11.083	8.07	7.63	4.509	O				2.30
11.167	8.14	7.74	4.511	O				2.30
11.250	8.22	7.84	4.514	O				2.30
11.333	8.29	7.93	4.517	O				2.31
11.417	8.37	8.02	4.519	O				2.31
11.500	8.45	8.11	4.522	O				2.31
11.583	8.54	8.19	4.524	O				2.31
11.667	8.62	8.28	4.526	OI				2.31
11.750	8.71	8.36	4.529	OI				2.31
11.833	8.80	8.45	4.531	OI				2.31
11.917	8.89	8.54	4.533	OI				2.31
12.000	8.99	8.63	4.536	O				2.32
12.083	9.08	8.72	4.538	O				2.32
12.167	9.17	8.81	4.541	O				2.32
12.250	9.23	8.89	4.543	O				2.32
12.333	9.31	8.98	4.546	O				2.32
12.417	9.41	9.06	4.548	O				2.32
12.500	9.52	9.15	4.550	O				2.32
12.583	9.64	9.25	4.553	O				2.32
12.667	9.76	9.35	4.556	O				2.32
12.750	9.89	9.45	4.559	O				2.33
12.833	10.02	9.56	4.562	O				2.33
12.917	10.16	9.68	4.565	O				2.33
13.000	10.30	9.80	4.568	O				2.33
13.083	10.45	9.93	4.572	O				2.33
13.167	10.61	10.06	4.576	O				2.33
13.250	10.77	10.20	4.579	O				2.34
13.333	10.94	10.35	4.583	O				2.34
13.417	11.11	10.50	4.587	O				2.34
13.500	11.30	10.66	4.592	O				2.34
13.583	11.49	10.82	4.596	O				2.34
13.667	11.70	10.99	4.601	O				2.35
13.750	11.91	11.17	4.606	O				2.35
13.833	12.14	11.36	4.611	O				2.35
13.917	12.38	11.56	4.617	O				2.35
14.000	12.63	11.77	4.623	O				2.36
14.083	12.89	11.99	4.629	O				2.36
14.167	13.19	12.22	4.635	OI				2.36
14.250	13.50	12.47	4.642	OI				2.37
14.333	13.84	12.74	4.649	OI				2.37
14.417	14.19	13.02	4.657	O				2.37
14.500	14.56	13.32	4.665	O				2.38
14.583	14.96	13.64	4.674	O				2.38
14.667	15.39	13.98	4.684	O				2.39
14.750	15.85	14.35	4.694	O				2.39
14.833	16.36	14.74	4.704	O				2.40

14.917	16.91	15.16	4.716	O					2.40
15.000	17.52	15.61	4.729	OI					2.41
15.083	18.19	16.11	4.742	OI					2.41
15.167	18.95	16.66	4.757	OI					2.42
15.250	19.80	17.26	4.774	O					2.43
15.333	20.77	17.93	4.793	O					2.44
15.417	21.80	18.68	4.813	OI					2.45
15.500	22.71	19.47	4.835	OI					2.46
15.583	23.50	20.28	4.857	OI					2.47
15.667	24.70	21.13	4.881	OI					2.48
15.750	26.75	22.15	4.909	OI					2.50
15.833	29.90	23.52	4.947	OI					2.51
15.917	34.78	25.48	5.001	O	I				2.54
16.000	43.34	28.49	5.084	O	I				2.58
16.083	63.37	34.01	5.236	O	I				2.65
16.167	105.93	45.09	5.547	O		I			2.80
16.250	137.57	51.62	6.052	O			I		3.04
16.333	121.38	60.53	6.558	O			I		3.28
16.417	74.05	64.79	6.799	O	I				3.39
16.500	46.63	64.28	6.770	I	O				3.38
16.583	32.04	61.42	6.608	I	O				3.30
16.667	26.29	57.73	6.399	I	O				3.21
16.750	23.43	53.97	6.185	I	O				3.11
16.833	19.64	50.26	5.975	I	O				3.01
16.917	17.98	47.71	5.767	I	O				2.91
17.000	16.70	45.32	5.566	I	O				2.81
17.083	15.67	39.44	5.386	I	O				2.73
17.167	14.78	34.06	5.237	I	O				2.65
17.250	14.01	29.69	5.117	I	O				2.60
17.333	13.35	26.14	5.019	I	O				2.55
17.417	12.77	23.23	4.939	I	O				2.51
17.500	12.26	20.85	4.873	I	O				2.48
17.583	11.80	18.89	4.819	I	O				2.45
17.667	11.39	17.27	4.774	I	O				2.43
17.750	11.02	15.93	4.737	I	O				2.41
17.833	10.68	14.80	4.706	I	O				2.40
17.917	10.37	13.85	4.680	I	O				2.38
18.000	10.08	13.05	4.658	I	O				2.37
18.083	9.82	12.36	4.639	O					2.36
18.167	9.59	11.77	4.623	O					2.36
18.250	9.39	11.26	4.609	O					2.35
18.333	9.21	10.83	4.597	O					2.34
18.417	9.02	10.45	4.586	O					2.34
18.500	8.83	10.11	4.577	O					2.33
18.583	8.66	9.81	4.568	O					2.33
18.667	8.49	9.53	4.561	O					2.33
18.750	8.33	9.28	4.554	O					2.32
18.833	8.17	9.05	4.548	O					2.32
18.917	8.03	8.84	4.542	O					2.32
19.000	7.89	8.65	4.536	O					2.32
19.083	7.76	8.46	4.531	O					2.31
19.167	7.63	8.29	4.527	O					2.31
19.250	7.51	8.13	4.522	O					2.31
19.333	7.40	7.98	4.518	O					2.31
19.417	7.29	7.84	4.514	O					2.30
19.500	7.18	7.71	4.511	O					2.30
19.583	7.08	7.58	4.507	O					2.30
19.667	6.98	7.46	4.504	O					2.30
19.750	6.89	7.34	4.500	O					2.30
19.833	6.80	7.23	4.497	O					2.30
19.917	6.71	7.13	4.495	O					2.30
20.000	6.63	7.02	4.492	O					2.29
20.083	6.55	6.93	4.489	O					2.29
20.167	6.47	6.83	4.486	O					2.29
20.250	6.39	6.74	4.484	O					2.29
20.333	6.32	6.66	4.482	O					2.29
20.417	6.25	6.57	4.479	O					2.29
20.500	6.18	6.49	4.477	O					2.29
20.583	6.11	6.42	4.475	O					2.29
20.667	6.05	6.34	4.473	O					2.28
20.750	5.98	6.27	4.471	O					2.28
20.833	5.92	6.20	4.469	O					2.28
20.917	5.86	6.13	4.467	O					2.28
21.000	5.81	6.07	4.465	O					2.28
21.083	5.75	6.00	4.464	O					2.28
21.167	5.70	5.94	4.462	O					2.28
21.250	5.64	5.88	4.460	O					2.28
21.333	5.59	5.82	4.459	O					2.28
21.417	5.54	5.76	4.457	O					2.28
21.500	5.49	5.71	4.455	O					2.28
21.583	5.44	5.65	4.454	O					2.28
21.667	5.40	5.60	4.453	O					2.27
21.750	5.35	5.55	4.451	O					2.27
21.833	5.30	5.50	4.450	O					2.27

21.917	5.26	5.45	4.448	|O	|	|	|	2.27
22.000	5.22	5.41	4.447	|O	|	|	|	2.27
22.083	5.18	5.36	4.446	|O	|	|	|	2.27
22.167	5.14	5.31	4.445	|O	|	|	|	2.27
22.250	5.10	5.27	4.443	|O	|	|	|	2.27
22.333	5.06	5.23	4.442	|O	|	|	|	2.27
22.417	5.02	5.18	4.441	|O	|	|	|	2.27
22.500	4.98	5.14	4.440	|O	|	|	|	2.27
22.583	4.94	5.10	4.439	|O	|	|	|	2.27
22.667	4.91	5.06	4.438	|O	|	|	|	2.27
22.750	4.87	5.03	4.437	|O	|	|	|	2.27
22.833	4.84	4.99	4.436	|O	|	|	|	2.27
22.917	4.80	4.95	4.435	|O	|	|	|	2.27
23.000	4.77	4.91	4.434	|O	|	|	|	2.27
23.083	4.74	4.88	4.433	|O	|	|	|	2.27
23.167	4.71	4.84	4.432	|O	|	|	|	2.26
23.250	4.68	4.81	4.431	|O	|	|	|	2.26
23.333	4.64	4.78	4.430	|O	|	|	|	2.26
23.417	4.61	4.74	4.429	|O	|	|	|	2.26
23.500	4.59	4.71	4.428	|O	|	|	|	2.26
23.583	4.56	4.68	4.427	|O	|	|	|	2.26
23.667	4.53	4.65	4.426	|O	|	|	|	2.26
23.750	4.50	4.62	4.425	|O	|	|	|	2.26
23.833	4.47	4.59	4.425	|O	|	|	|	2.26
23.917	4.44	4.56	4.424	|O	|	|	|	2.26
24.000	4.42	4.53	4.423	|O	|	|	|	2.26
24.083	4.26	4.49	4.422	IO	|	|	|	2.26
24.167	3.50	4.35	4.418	IO	|	|	|	2.26
24.250	2.15	4.01	4.409	O	|	|	|	2.25
24.333	0.92	3.46	4.394	O	|	|	|	2.25
24.417	0.36	2.84	4.376	O	|	|	|	2.24
24.500	0.13	2.26	4.360	O	|	|	|	2.23
24.583	0.06	1.78	4.347	O	|	|	|	2.22
24.667	0.03	1.40	4.337	O	|	|	|	2.22
24.750	0.00	1.09	4.328	O	|	|	|	2.21
24.833	0.00	0.85	4.321	O	|	|	|	2.21
24.917	0.00	0.66	4.316	O	|	|	|	2.21
25.000	0.00	0.51	4.312	O	|	|	|	2.21
25.083	0.00	0.40	4.309	O	|	|	|	2.21
25.167	0.00	0.31	4.307	O	|	|	|	2.20
25.250	0.00	0.24	4.305	O	|	|	|	2.20
25.333	0.00	0.19	4.303	O	|	|	|	2.20
25.417	0.00	0.15	4.302	O	|	|	|	2.20
25.500	0.00	0.11	4.301	O	|	|	|	2.20
25.583	0.00	0.09	4.300	O	|	|	|	2.20
25.667	0.00	0.07	4.300	O	|	|	|	2.20
25.750	0.00	0.05	4.299	O	|	|	|	2.20
25.833	0.00	0.04	4.299	O	|	|	|	2.20
25.917	0.00	0.03	4.299	O	|	|	|	2.20
26.000	0.00	0.03	4.299	O	|	|	|	2.20
26.083	0.00	0.02	4.299	O	|	|	|	2.20
26.167	0.00	0.02	4.298	O	|	|	|	2.20
26.250	0.00	0.01	4.298	O	|	|	|	2.20
26.333	0.00	0.01	4.298	O	|	|	|	2.20
26.417	0.00	0.01	4.298	O	|	|	|	2.20
26.500	0.00	0.01	4.298	O	|	|	|	2.20
26.583	0.00	0.00	4.298	O	|	|	|	2.20
26.667	0.00	0.00	4.298	O	|	|	|	2.20
26.750	0.00	0.00	4.298	O	|	|	|	2.20
26.833	0.00	0.00	4.298	O	|	|	|	2.20
26.917	0.00	0.00	4.298	O	|	|	|	2.20
27.000	0.00	0.00	4.298	O	|	|	|	2.20
27.083	0.00	0.00	4.298	O	|	|	|	2.20

Remaining water in basin = 4.30 (Ac.Ft)

**********HYDROGRAPH DATA**********

Number of intervals = 325
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 64.788 (CFS)
Total volume = 15.408 (Ac.Ft)

Status of hydrographs being held in storage

	Stream 1	Stream 2	Stream 3	Stream 4	Stream 5
Peak (CFS)	0.000	0.000	0.000	0.000	0.000
Vol (Ac.Ft)	0.000	0.000	0.000	0.000	0.000

****

APPENDIX C – REFERENCES

LINE A AS-BUILT PLANS

OFFSITE STORM DRAIN PLANS

CITRUS PLAZA PHASE II

PM 14742, COUNTY OF SAN BERNARDINO, STATE OF CALIFORNIA

GENERAL NOTES

1. All work shall be done in accordance with approved grading plan, the County of San Bernardino Std. Plans & Specifications, Chapter 70 of the Uniform building code, latest edition, preliminary soils report dated 3-12-2002 and done under the direction and supervision of the licensed soils engineer. Any deviation to the approved grading plan must be approved prior to the start of construction.

2. All survey Monuments shall be protected and perpetuated in place. Any disturbed or covered monuments shall by reset by a registered Civil Engineer or a licensed Land Surveyor.

3. Hours of operation shall be from 7:00 a.m. to 8:00 p.m., Monday through Saturday.

4. County inspector shall be given 48 hours notice to schedule a site pre-grade meeting prior to start of grading. 48 hours notice shall be given for all required inspections during the course of grading.

5. Repair or replace all existing damaged or altered public improvements as required by the County inspector in the field.

6. No fill shall be placed until preparation of original ground is approved by the Soils Engineer. Inspection and certification of fill placement shall be provided by the Soils Engineer during the process of grading. No rock or similar material greater than six (6) inches in diameter shall be placed unless recommendations for such placement have been approved by the Soils Engineer.

7. Maximum fill or cut slope shall be 2:1, unless otherwise approved by the Soils Engineer. Fill slopes shall not have less than 90% relative compaction as determined by ASTM D 1557-70 and certified by the Soils Engineer. No fill shall be placed on existing terrain which slopes greater than 2:1.

8. If any unknown sub-surface structures are encountered during grading, they shall be immediately brought to the attention of the Soils Engineer and the Design Engineer prior to proceeding with grading operations.

9. It shall be the contractor's responsibility to verify the location of all utilities or structures above or below ground, shown or not shown on these plans. He will be held responsible for all damage to any utilities or structures caused by his operation. The Design Engineer must by notified of any conflicts and grading must be terminated and streets restored until corrective measures have been approved by the County inspector.

10. Transportation Department permit is required for any construction, temporary or permanent, on County right-of-way or for use of County maintained roads by overload equipment.

11. Adjacent streets are to be cleaned daily of all dirt and debris that is the result of this operation.

12. Engineer must set grade stakes for all drainage devices. The contractor shall obtain all necessary inspections before pouring.

13. Strict adherence to dust control requirements shall be enforced.

14. The undersigned Civil Engineer accepts the responsibility for professional inspections in accordance with Section 7014 of the Uniform Building Code.

STEVEN D. LEVSEE R.C.E. 45926 — DATE 7/27/05

15. An As-Built Grading Plan shall be submitted by the Civil Engineer upon completion of construction.

16. The grading contractor shall submit a statement of compliance to the As-Built plan.

NOTICE TO CONTRACTOR

Contractor agrees that he shall assume sole and complete responsibility for job site conditions during the course of construction of this project including safety of all persons and property; that these requirements shall apply continuously and not be limited to normal working hours; and that the contractor shall defend, indemnify, and hold the owner and engineer harmless from any and all liability, real or alleged, in connection with the performance of work on this project, excepting for liability arising from the sole negligence of the owner or the engineer.

The existence and location of any underground utility pipes or structures shown on these plans were obtained by a search of available records. These locations are approximate and shall be confirmed in the field by the contractor, so that any necessary adjustment can be made in alignment and/or grade of the proposed improvement. The contractor is required to take due precautionary measures to protect any utility lines shown and any other lines not of record or not shown on these plans.

CITY OF REDLANDS GENERAL NOTES

1. ALL WORK SHALL CONFORM TO THE "STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (GREENBOOK)", 2003 EDITION (INCLUDING THE LATEST SUPPLEMENTAL AMENDMENTS THERETO), THE "STANDARD PLANS FOR PUBLIC WORKS CONSTRUCTION", 1997 EDITION (INCLUDING THE LATEST SUPPLEMENTAL AMENDMENTS THERETO), AND THESE CITY OF REDLANDS STANDARD SPECIFICATIONS. ALL WORK SHALL BE COMPLETED TO THE SATISFACTION OF THE PUBLIC WORKS DIRECTOR OR APPOINTED REPRESENTATIVE.
2. THE APPROXIMATE LOCATIONS OF KNOWN EXISTING UNDERGROUND UTILITIES ARE SHOWN ON THIS PLAN. THE UTILITIES ARE PLOTTED FROM RECORD AND FIELD DATA. THE ENGINEER ASSUMES NO LIABILITY AS TO THE EXACT LOCATION OF SAID LINES WHETHER SHOWN OR NOT SHOWN ON THE PLANS. THE CONTRACTOR IS TO NOTIFY ALL UTILITY COMPANIES PRIOR TO WORK OR EXCAVATION TO DETERMINE THE EXACT LOCATIONS OF UNDERGROUND LINES.
3. STREETS MAY BE REQUIRED TO HAVE A SEAL COAT APPLIED AT THE OPTION OF THE PUBLIC WORKS DIRECTOR OR APPOINTED REPRESENTATIVE. TYPE OF SEAL COAT IS TO BE DETERMINED BY THE PUBLIC WORKS DIRECTOR OR APPOINTED REPRESENTATIVE.
4. RESURFACE EXISTING ROADWAY, AS DIRECTED BY THE PUBLIC WORKS DIRECTOR OR APPOINTED REPRESENTATIVE, DUE TO UTILITY INSTALLATIONS AND CONSTRUCTION DAMAGE.
5. EXISTING STRIPING SHALL BE REMOVED AND REPLACED AS NECESSARY. NEW STRIPING AND PAVEMENT MARKINGS SHALL BE INSTALLED IN ACCORDANCE WITH THE STRIPING PLAN APPROVED BY THE PUBLIC WORKS DIRECTOR OR APPOINTED REPRESENTATIVE.
6. SECTION 4216/4217 OF THE GOVERNMENT CODE REQUIRES A DIG ALERT IDENTIFICATION NUMBER BE ISSUED BEFORE THE "ENCROACHMENT PERMIT" WILL BE VALID. FOR YOUR DIG ALERT ID NUMBER, CALL UNDERGROUND SERVICE ALERT (TOLL FREE) AT 1-800-227-2600, TWO WORKING DAYS BEFORE YOU DIG.
7. SOILS REPORT WITH LABORATORY TESTS OF THE "R" VALUE AND SOILS ENGINEER'S STREET STRUCTURAL SECTION RECOMMENDATION SHALL BE REVIEWED AND APPROVED BY THE CITY PRIOR TO ISSUANCE OF THE ENCROACHMENT PERMIT.
8. ASPHALT CONCRETE PAVEMENT SECTIONS ON NEW STREETS GREATER THAN 75 MM (3 IN.) THICK SHALL BE PLACED IN A MINIMUM OF TWO LIFTS WITH THE LAST LIFT BEING DELAYED UNTIL 95% OF ALL DEVELOPER CONSTRUCTION HAS BEEN COMPLETED.
9. THE FINAL PAVEMENT OR SURFACE LAYER OF ASPHALTIC CONCRETE ROADWAY PAVEMENT SHALL NOT BE PLACED UNTIL ALL UTILITIES AND UTILITY LATERALS WITHIN THE ROADWAY HAVE BEEN INSTALLED, COMPACTED, TESTED AND ACCEPTED BY THE CITY. ALL ON-SITE IMPROVEMENTS INCLUDING ALL GRADING HAVE BEEN COMPLETED AND ALL UNACCEPTABLE PARKWAY AND ROADWAY IMPROVEMENTS ARE REMOVED AND REPLACED TO THE SATISFACTION OF THE CITY.
10. PRIOR TO ROAD CONSTRUCTION, SURVEY MONUMENTS SHALL BE REFERENCED OUT AND COMER RECORDS FILED WITH THE COUNTY SURVEYOR. SURVEY POINTS DESTROYED DURING CONSTRUCTION SHALL BE RESET, AND A SECOND COMER RECORD FILED FOR THOSE POINTS PRIOR TO COMPLETION AND ACCEPTANCE OF THE PROJECT.

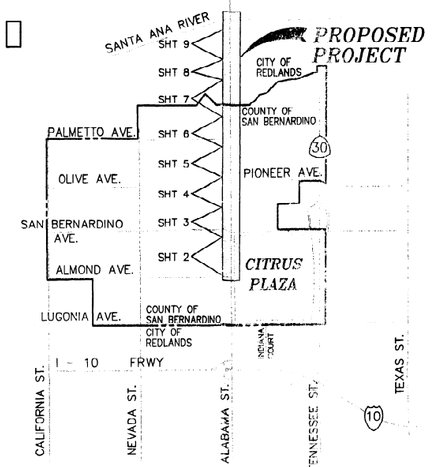
STORM DRAIN NOTES

1. ALL CONCRETE USED IN THE DISTRICT RIGHT OF WAY MUST MEET THE DISTRICT'S MINIMUM REQUIREMENTS OF THE REQUIRED CONCRETE DESIGN MIX. ALL CONCRETE SHALL CONFORM TO SECTION 201-1 OF THE STRUCTURAL SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, LATEST EDITION, EXCEPT AS FOLLOWS:
   A) ALL STRUCTURAL CONCRETE SHALL BE 4,000 psi WITH "A" GRADATION IN ALL INVERTS AND 4,000 psi WITH "B" GRADATION FOR ALL WALLS.
   B) CONCRETE FOR ROCK INLET AND OUTLET STRUCTURES, BOTTOM CONTROLS, SPLASH PAD AND OTHER PROPOSED STRUCTURES SHALL BE 560-B OR C-3250.
2. ALL PIPE LENGTHS ARE HORIZONTAL PROJECTIONS. UNLESS OTHERWISE SHOWN.
3. FOR TRENCH EXCAVATIONS IN NATIVE SOIL, SHORING SHALL BE PROVIDED TO SATISFY STATE OF CALIFORNIA SAFETY REQUIREMENTS.
4. PIPE CONSTRUCTION IN FILL AREA MUST BE COORDINATED WITH THE GRADING TO INSURE THAT WHEN THE FILL OPERATION HAS BEEN COMPLETED AT GRADE A MINIMUM OF ONE FOOT ABOVE THE TOP OF PIPE OR TO FIVE FEET (MAXIMUM) ABOVE THE PROPOSED SUBGRADE OF THE PIPE, THE STORM DRAIN TRENCH SHALL BE EXCAVATED AND THE PIPE INSTALLED.
5. ALL WORK MUST BE IN CONFORMANCE WITH THE SAN BERNARDINO COUNTY STANDARD SPECIFICATIONS WHICH MAY BE PURCHASED FROM THE COUNTY AND KEPT IN THE JOB SITE AT ALL TIMES.
6. THE CONTRACTOR MUST NOTIFY THE COUNTY OF SAN BERNARDINO INSPECTOR AT LEAST (2) WORKING DAYS PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION.
7. ALL FILLS MUST BE COMPACTED TO 90% RELATIVE COMPACTION AS DETERMINED BY THE CALIFORNIA TEST METHOD NO. 216-F, 1963 "FIVE LAYER METHOD". ALL BACKFILL MATERIAL MUST BE FREE OF VEGETABLE MATTER.
8. ALL SURVEYING REQUIRED FOR VERTICAL AND HORIZONTAL ALIGNMENT MUST BE PROVIDED BY THE CONTRACTOR OR DEVELOPER AND SUFFICIENT REFERENCE STAKING MUST BE IN ACCORDANCE WITH THE REQUEST OF THE COUNTY OF SAN BERNARDINO INSPECTOR.
9. ALL STORM DRAIN PIPE MUST BE BEDDED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
10. PRIOR TO THE PLACEMENT OF STORM DRAIN IMPROVEMENTS, THE DEVELOPER'S SOILS ENGINEER SHALL CERTIFY IN WRITING TO THE COUNTY INSPECTOR THAT THE STORM DRAINS' SUBGRADE IS OF ADEQUATE STRENGTH TO SUPPORT THE STRUCTURES AND ANY ANTICIPATED LOADS.
11. PRIOR TO THE COMMENCEMENT OF CONSTRUCTION, THE DEVELOPER'S CONTRACTOR SHALL OBTAIN A PERMIT FROM THE STATE DIVISION OF INDUSTRIAL SAFETY. A COPY OF THE PERMIT SHALL BE KEPT ON THE JOB SITE AT ALL TIMES.
12. WHENEVER APPLICABLE, THE DEVELOPER SHALL OBTAIN A PERMIT FROM THE STATE DEPT. OF FISH AND GAME IN ACCORDANCE WITH SECTION 1602 OF THE CALIFORNIA FISH AND GAME CODE PRIOR TO COMMENCEMENT OF CONSTRUCTION.
13. ALL STEEL THAT IS TO BE CONTINUOUS SHALL BE LAPPED A MINIMUM OF 45 BAR DIAMETERS.
14. ALL MATERIALS TESTING FOR THE DRAINAGE FACILITIES SHALL BE PROVIDED BY THE CONTRACTOR OR DEVELOPER IN ACCORDANCE WITH THE NUMBER, LOCATION AND FREQUENCY REQUESTED BY THE COUNTY INSPECTOR.
15. CHAMFER ALL EXPOSED EDGES OF CONCRETE 3/4" MIN.
16. A PERMIT FOR WORK WITHIN EXISTING STREET RIGHT-OF-WAY IS REQUIRED FROM THE COUNTY OF SAN BERNARDINO FOR ANY ENCROACHMENT NECESSARY FOR CONSTRUCTION IN THE STREET RIGHT-OF-WAY.
17. LENGTH OF MANHOLE STRUCTURES MAY BE INCREASED TO MEET PIPE ENDS AT OPTION OF CONTRACTOR AS LONG AS REINFORCING STEEL IS CONTINUED AS REQUIRED. ANY CHANGE IN SPUR LOCATION MUST BE APPROVED BY THE ENGINEER.
18. FLOOR OF MANHOLE STRUCTURE SHALL BE STEEL TROWELED TO SPRING LINE.
19. BODY OF MANHOLE STRUCTURE, INCLUDING SPUR, MUST BE POURED IN ONE CONTINUOUS OPERATION, EXCEPT THAT CONSTRUCTION JOINT AT THE SPRING LINE WITH A LONGITUDINAL KEYWAY IS PERMITTED.
20. ALL REINFORCING BARS MUST BE SECURELY HELD IN PLACE IN THE FORMS. TWO WAY MATS OF STEEL MUST BE WIRED TOGETHER BOTH WAYS AT ALTERNATE INTERSECTIONS.
21. STORM DRAIN BACKFILL FOR ALL FACILITIES WITHIN STREET RIGHT-OF-WAY IS TO BE PLACED AND COMPACTED UNDER COUNTY OF SAN BERNARDINO INSPECTION AND MEET OF EXCEED COUNTY OF SAN BERNARDINO MINIMUM STANDARDS.
22. ALL PIPE TO BE GROUTED.
23. AREA DRAIN PIPE SHALL BE:
   a) ACRYLONITRILE BUTADIENE STYRENE (A.B.S.) SOLID WALL PIPE CONFORMING TO A.S.T.M. D 2751, DR 35. -OR-
   b) POLYVINYL CHLORIDE PLASTIC (P.V.C.) PIPE CONFORMING TO A.S.T.M. D 3034, SDR 35 -OR-
   c) ASBESTOS CEMENT PIPE (A.C.P.) CONFORMING TO A.S.T.M. C-663 -OR-
   d) APPROVED EQUAL
24. R.C.P. SHALL COMPLY WITH ALL A.S.T.M. APPLICABLE STANDARDS.

LEGEND

- FIRE HYDRANT, VALVE
- WATER MAIN
- SEWER & MANHOLE
- STORM DRAIN
- CURB & GUTTER
- CATCH BASIN
- PARCEL BNDRY.
- CENTERLINE
- FLOW LINE
- EASEMENT
- RETAINING WALL
- EXISTING FIRE HYDRANT
- EXISTING STREET LIGHT
- MH — EXISTING MH
- EXISTING POWER POLE
- EXISTING STREET SIGN
- EXISTING FENCE
- EX. CURB & GUTTER
- 1210 — EXISTING CONTOUR
- 1219.4 + — EXISTING SPOT ELEVATION

TC — TOP OF CURB
TRC — TOP OF ROLLED CURB
FL — FLOW LINE
FS — FINISH SURFACE
HP — HIGH POINT
LP — LOW POINT
P — PAD ELEVATION
FF — FINISH FLOOR ELEV.
GB — GRADE BREAK
BVC — BEGIN VERT. CURVE
EVC — END VERT. CURVE
2% — RATE/FLOW
INV. — INVERT ELEV.



VICINITY/INDEX MAP

NOT TO SCALE

ESTIMATE OF QUANTITIES

NO.	DESCRIPTION	COUNTY R/W QUANTITY	CITY OF REDLANDS R/W QUANTITY	FLOOD CONTROL DISTRICT R/W QUANTITY	TOTAL QUANTITY	
29	INSTALL 18" RCP STORM DRAIN (2000D)	0	5	0	5	LF
30	INSTALL 36" RCP STORM DRAIN (SEE PROFILE FOR D-LOAD)	256	0	0	256	LF
31	INSTALL 45" RCP STORM DRAIN (SEE PROFILE FOR D-LOAD)	20	12	0	32	LF
32	INSTALL 72" RCP STORM DRAIN (SEE PROFILE FOR D-LOAD)	692	2730	416	3838	LF
33	INSTALL 84" RCP STORM DRAIN (SEE PROFILE FOR D-LOAD)	2163	0	0	2163	LF
34	INSTALL 96" RCP STORM DRAIN (SEE PROFILE FOR D-LOAD)	2550	183	0	2733	LF
35	CONST. MANHOLE PIPE TO PIPE PER APWA STD. 320-1	12	5	0	17	EA
36	CONST. MANHOLE PIPE TO PIPE PER APWA STD. 322-1	1	0	0	1	EA
37	CONST. CATCH BASIN TYPE "A" PER SBCTD STD. 206	1	0	0	1	EA
38	CONST. LOCAL DEPRESSION PER SBCTD STD. 203A	1	0	0	1	EA
39	CONST. CONCRETE COLLAR PER APWA STD. 380-2	1	0	0	1	EA
40	INSTALL WING TYPE HEADWALL PER SBCFCD STD. 209	0	0	1	1	EA
41	CONST. BRICK & MORTAR PLUG	8	2	0	10	EA
42	SAWCUT, REMOVE & REPLACE IN KIND EXISTING AC PAVEMENT	55,900	26,285	0	82,185	SF
43	PLACE 100# RIP- RAP & FILTER FABRIC PER NOTES - SHT 9	0	0	4,720	4,720	SF
44	CONST CHAIN LINK FENCE PER CALTRANS STD. B11-52, TYPE 7	0	0	44	44	LF
45	INSTALL SLOPED PROTECTION BARRIER PER APWA STD. 360-0	0	0	1	1	EA
46	CONST PRESSURE M.H. SHAFT W/ ECCENTRIC REDUCER PER APWA STD. 328-1	1	0	0	1	EA
47	RMV EX SIGN DURING CONST & REPLACE AFTER CONST	6	2	0	8	EA
48	CONST JUNCTION STRUCTURE PER APWA STD. 332-1 (CASE 1)	0	1	0	1	EA

NOTE: ALL RCP STORM DRAIN PIPE IS TO BE CONSTRUCTED ON A MINIMUM 6" SAND BEDDING

INDEX OF SHEETS

No.	DESCRIPTION
1	TITLE SHEET
2	STORM DRAIN PLAN & PROFILE
3	STORM DRAIN PLAN & PROFILE
4	STORM DRAIN PLAN & PROFILE
5	STORM DRAIN PLAN & PROFILE
6	STORM DRAIN PLAN & PROFILE
7	STORM DRAIN PLAN & PROFILE
8	STORM DRAIN PLAN & PROFILE
9	STORM DRAIN PLAN & PROFILE

FOR CONSTRUCTION

RECEIVED JUL 29 2005 PUBLIC WORKS DEPT.

RECORD DRAWINGS

CITY OF REDLANDS
PUBLIC WORKS DEPARTMENT

PLAN & PROFILE
STORM DRAIN PLAN

IN ALABAMA STREET
ALMOND AVENUE TO SANTA ANA RIVER
(REDLANDS CITY LIMITS)

Designed by _____ Date _____
Checked by _____ Date _____
Drawn by _____ Date _____
Checked by _____ Date _____

Approved by _____ Date 8/01/05
Public Works Director _____ R.C.E. 26123 26285
EXHIBIT MAP "A" ATTACHED TO SHEET 1 OF 3

1689 - SD - 01/04

Letter	Description	Date	Initial
	REVISIONS	Approved by:	

BENCH MARK
CITY OF REDLANDS
BENCH MARK NO. R-20 ELEV. 1265.833
LOCATION:
BRASS DISK IN TOP OF CURB NORTH SIDE OF SAN BERNARDINO AVE. BENEATH NORTHBOUND OVERPASS OF STATE ROUTE 30.

SOILS ENGINEER/GEOLOGIST
KLEINFELDER, INC.
1370 Valley Vista Dr. Suite 150
Diamond Bar, California 91765
Office (909) 396-0335 Fax (909) 396-1324

PREPARED FOR:
COMMERCE CONSTRUCTION CO., LP.
13191 Crossroads Parkway North
Sixth Floor
City of Industry, California 91746
Telephone: (562) 699-0453
Fax: (562) 699-4796

PREPARED BY:
PARDUE, CORNWELL & ASSOCIATES, INC.
Planning • Engineering • Surveying
151 KALMUS DRIVE BLDG. M, SUITE 2
COSTA MESA, CALIF. 92626
(714) 241-8400 241-8432 FAX
STEVEN D. LEVSEE R.C.E. 45926 DATE 7/27/05

REGISTERED PROFESSIONAL ENGINEER — STEVEN D. LEVSEE — NO. 45926 EXP. 12-31-06 — CIVIL — STATE OF CALIFORNIA

REVISIONS

No.	Description	Date	Init	M.D. NO.

COUNTY OF SAN BERNARDINO
C.S.A. 70, IMPROVEMENT ZONE - EV-1
Designed by: Approved by:
Drawn by:
Checked by:
Recommended by:
DISTRICT ENGINEER DATE

OFFSITE STORM DRAIN (PROJECT NO.) P 320040
PARCEL MAP NO 14742
CITRUS PLAZA
PHASE II
SEC. 21, T 1 S, R 3 W
ROAD NO.
FILE NO.
SHEET 1 OF 9

P 320040

P. 320040 80

CONTRACTOR TO VERIFY THE LOCATION OF ALL UTILITY CROSSINGS PRIOR TO CONSTRUCTION

EXIST GROUND @ CL OF PIPE

10+00.00 CL MH RIM=1230.6

13+44.00 CL MH RIM=1229.5

16+80.00 CL MH RIM=1228.3

HGL

1230

1220

1210

MATCHLINE-SEE SHEET 3

24" RCP SD 1217.15 INV

36" RCP SD LAT. A-1

36" RCP SD 1217.15 INV LAT. A-2

S=0.0020

80+49.45 9+88.00 BEG PIPE 1217.06 INV

9+68.64 END PIPE 1217.04 INV

80+41.08

10+03.98 BEG PIPE 1217.04 INV

80+33.87

$Q_{100}=0$ $V_{100}=0$ INSTALL 8.00 LF 48" RCP 2000D

76+95.78 13+41.67 END PIPE 1216.36 INV

13+46.33 BEG PIPE 1216.35 INV

76+91.12

$Q_{100}=155.8$ $V_{100}=5.51$ INSTALL 338.09 LF 72" RCP 2000D

73+59.78 16+77.67 END PIPE 1215.68 INV

16+82.33 BEG PIPE 1214.67 INV

73+55.12

$Q_{100}=192.7$ $V_{100}=6.82$ INSTALL 331.34 LF 72" RCP 2000D

20+00.00 MATCHLINE 1216.54 INV

$Q_{100}=243.3$ $V_{100}=6.32$ INSTALL 317.87 LF 84" RCP 2000D

PROFILE SCALES
VERT. 1"= 4'
HORIZ. 1"=40'

10 11 12 13 14 15 16 17 18 19 20

STORM DRAIN LINE "A"

ALABAMA STREET

ALMOND AVENUE

R/W

EX WATER

FUT SEWER EX GAS

95' EX 12" SEWER

EX SEWER

EDGE EX PAVEMENT

EX ELEC

91 92 93 94 95 96 97 98 99 100 101 102

10+00.00 CL MH =1+00.00 LINE "B"

9+88.00 END PIPE PLUG

LINE "A" N00°26'24"W

1+02.50 BEG PIPE

LINE "B" N89°57'20"E-S=0.0020

1+25.00 END PIPE PLUG 1217.18 INV

11+07.86 ANG PT

Q100=155.8 FR: PLATE 1 HYDROLOGY

LINE "A" N00°26'24"W

13+44.00 CL MH =1+00.00 LAT "A-1"

1+03.08 BEG PIPE

LATERAL "A-1" N89°33'36"E-S=0.0050

1+25.00 END PIPE 1217.96 INV

16+80.00 CL MH =1+00.00 LAT "A-2"

1+03.25 BEG PIPE

LATERAL "A-2" N89°33'36"E-S=0.0050

1+25.00 END PIPE 1217.29 INV

MATCHLINE-SEE SHEET 3

NOTE: STATIONS SHOWN AS 26+14.35 CORRESPOND TO WSPG OUTPUT

FUTURE ONSITE SD-72" PER SEPARATE PLANS

EXISTING FEATURES LEGEND

- (P)—PROTECT IN PLACE
- (R)—REMOVE EXISTING STRUCTURE
- (CP)—COORDINATE RELOCATION WITH AFFECTED AGENCY
- (AG)—ADJUST EXISTING MANHOLE TO GRADE

CONSTRUCTION NOTES

30—INSTALL 36" RCP STORM DRAIN (SEE PROFILE FOR D-LOAD)
31—INSTALL 48" RCP STORM DRAIN (SEE PROFILE FOR D-LOAD)
32—INSTALL 72" RCP STORM DRAIN (SEE PROFILE FOR D-LOAD)
33—INSTALL 84" RCP STORM DRAIN (SEE PROFILE FOR D-LOAD)
34—INSTALL 96" RCP STORM DRAIN (SEE PROFILE FOR D-LOAD)
35—CONST. MANHOLE PIPE TO PIPE PER APWA STD. 320-1
36—CONST. MANHOLE PIPE TO PIPE PER APWA STD. 322-1
37—CONST. CATCH BASIN TYPE "A" PER SBCTD STD. 206
38—CONST. LOCAL DEPRESSION PER SBCTD STD. 203A
39—CONST. CONCRETE COLLAR PER APWA STD. 380-2
40—INSTALL WING TYPE HEADWALL PER CALTRANS STD. D90
41—CONST. BRICK & MORTAR PLUG
42—SAWCUT, REMOVE, AND REPLACE EX AC IN KIND
43—PLACE 100# RIP-RAP & FILTER FABRIC PER NOTES - SHT 9
44—CONST CHAIN LINK FENCE PER CALTRANS STD. B11-52, TYPE 7
45—INSTALL SLOPED PROTECTION BARRIER PER APWA STD. 360-0
46—CONST PRESSURE M.H. SHAFT W/ ECCENTRIC REDUCER PER APWA STD. 328-1
47—RMV EX SIGN DURING CONST & REPLACE AFTER CONST

CITRUS PLAZA - PHASE II

STORM DRAIN LINE "A"

Underground Service Alert
CALL BEFORE YOU DIG
CALL TOLL FREE
1-800 422-4133
TWO WORKING DAYS BEFORE YOU DIG

FOR CONSTRUCTION

NORTH

GRAPHIC SCALE
40 0 30 40 80 160
(IN FEET)
1 inch = 40 ft.

BENCH MARK
CITY OF REDLANDS BENCH MARK NO. R-20 ELEV. 1265.833
LOCATION:
BRASS DISK IN TOP OF CURB NORTH SIDE OF SAN BERNARDINO AVE. BENEATH NORTHBOUND OVERPASS OF STATE ROUTE 30.

SOILS ENGINEER/GEOLOGIST
KLEINFELDER, INC.
1370 Valley Vista Dr. Suite 150
Diamond Bar, California 91765
Office (909) 396-0335 Fax (909) 396-1321

PREPARED FOR:
COMMERCE CONSTRUCTION CO, L.P.
13191 Crossroads Parkway North
Sixth Floor
City of Industry, California 91746
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(714) 241-8400 241-3432 FAX
STEVE LEVISEE R.C.E. 45926 DATE 6/20/05

REGISTERED PROFESSIONAL ENGINEER STEVEN D. LEVISEE NO. 45926 EXP. 12-31-06 CIVIL STATE OF CALIFORNIA

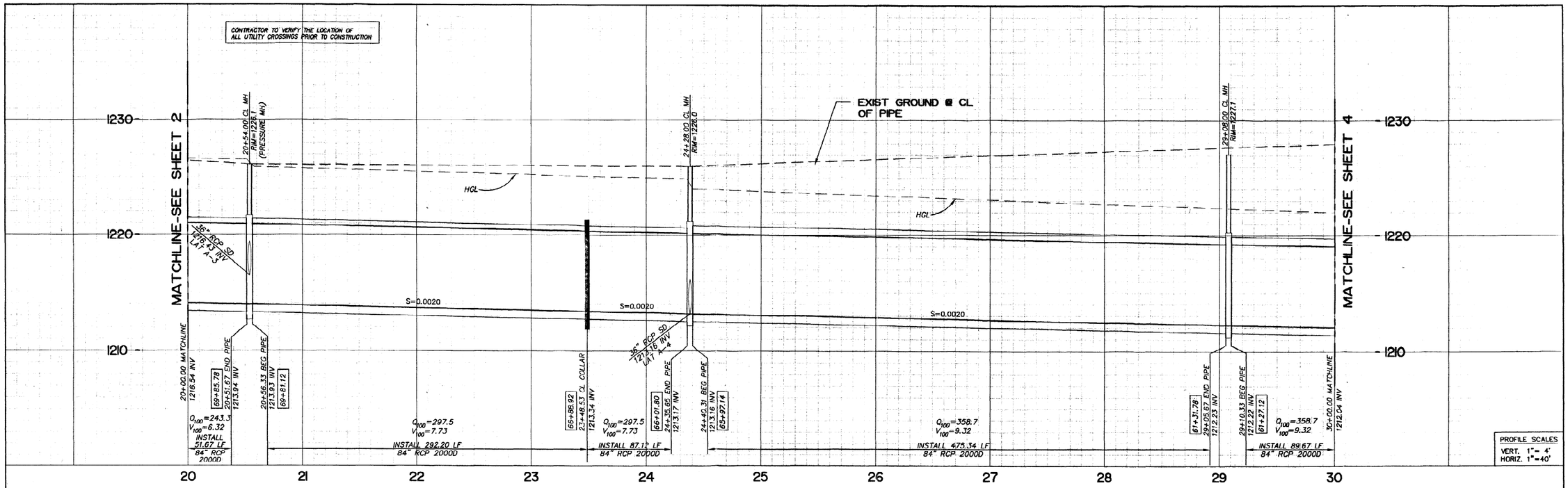
REVISIONS			
No.	Description	Date	Init.

COUNTY OF SAN BERNARDINO
DEPARTMENT OF PUBLIC WORKS

Designed by: Drawn by: Checked by:
Submitted by: C.D.E.
Recommended: Approved by: 6-20-05
LAND DEVELOPMENT ENGINEER DATE
APPROVED BY:
ASST. DIRECTOR OF PUBLIC WORKS DATE
DIRECTOR OF PUBLIC WORKS DATE

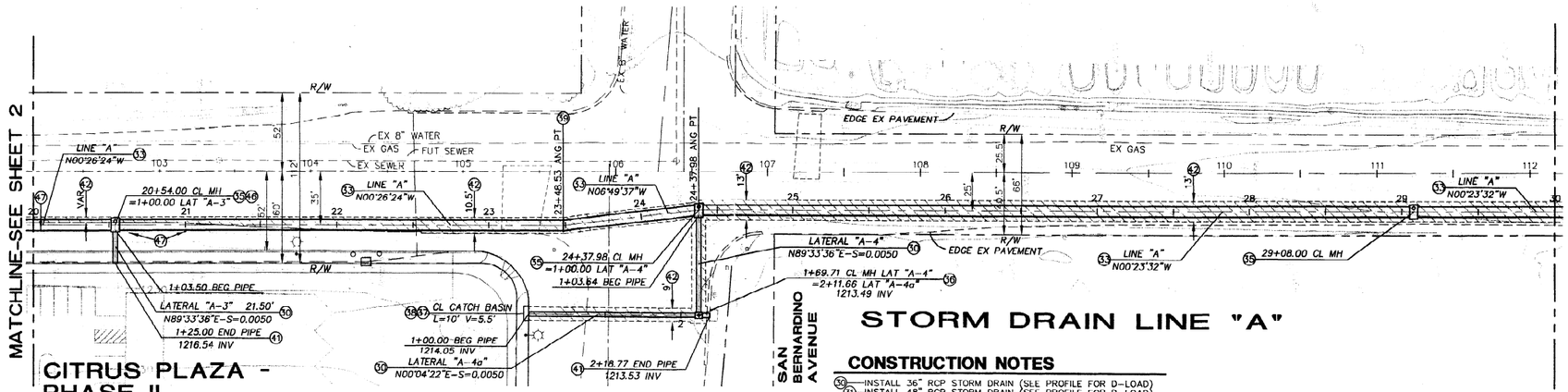
STORM DRAIN PLAN AND PROFILE
ALABAMA ST.
CITRUS PLAZA - PHASE II
SEC. 21, T 1 S, R 3 W

M.D. NO.
ROAD NO.
FILE NO.
SHEET 2 OF 9



STORM DRAIN LINE "A"

ALABAMA STREET



NOTE: STATIONS SHOWN AS 26+14.35 CORRESPOND TO WSPG OUTPUT

CONSTRUCTION NOTES

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Telephone: (562) 699-0453
Fax: (562) 699-4796

PREPARED BY:
PARDUE, CORNWELL & ASSOCIATES, INC.
Planning • Engineering • Surveying
151 KALMUS DRIVE BLDG. M, SUITE-2
COSTA MESA, CALIF. 92626
(714) 241-3400 241-3432 FAX
STEVE LEVISEE R.C.E. 45926 DATE 6/21/05

REGISTERED PROFESSIONAL ENGINEER STEVEN D. LEVISEE NO. 45926 EXP. 12-31-06 CIVIL STATE OF CALIFORNIA

REVISIONS			
No.	Description	Date	Init.

COUNTY OF SAN BERNARDINO
DEPARTMENT OF PUBLIC WORKS

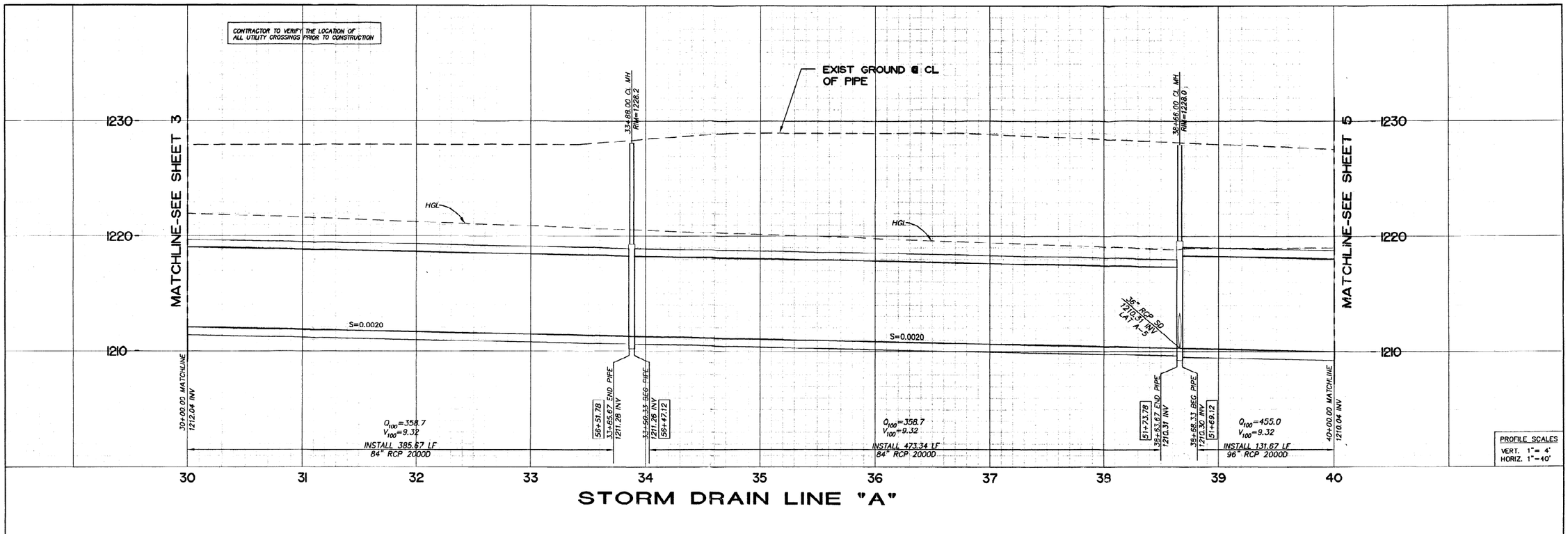
Designed by:	Drawn by:	Checked by:	APPROVED BY:

Submitted by: C.D.E.
Recommended / Approved by: 6-30-05
LAND DEVELOPMENT ENGINEER DATE
ASST. DIRECTOR OF PUBLIC WORKS DATE
DIRECTOR OF PUBLIC WORKS DATE

STORM DRAIN PLAN AND PROFILE
ALABAMA ST.
CITRUS PLAZA - PHASE II
SEC. 21, T 1 S, R 3 W

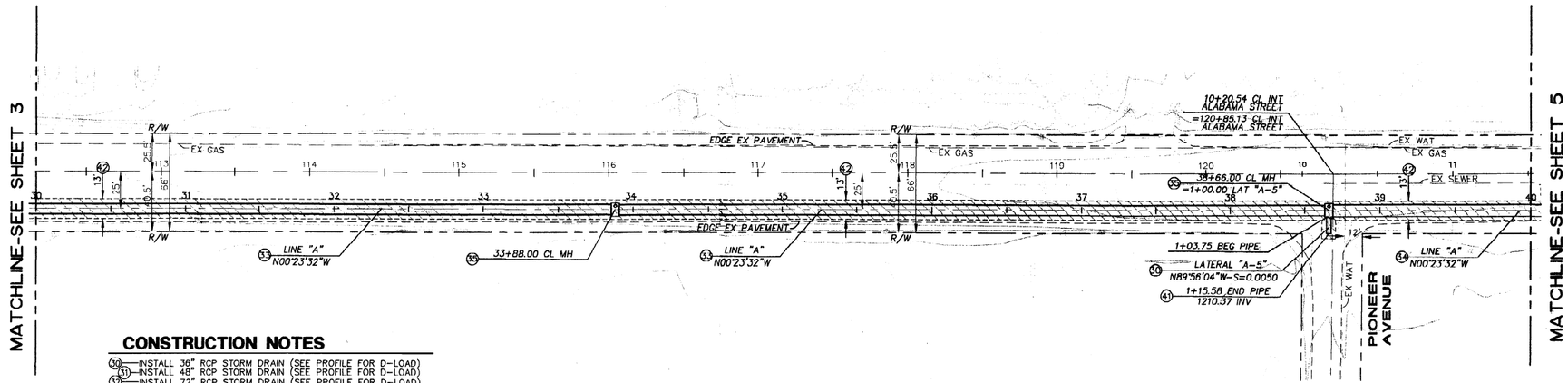
W.O. NO.
ROAD NO.
FILE NO.
SHEET 3 OF 9

RECORD DRAWINGS



STORM DRAIN LINE "A"

ALABAMA STREET



STORM DRAIN LINE "A"

NOTE: STATIONS SHOWN AS 26+14.35 CORRESPOND TO WSPC OUTPUT

FOR CONSTRUCTION

RECORD DRAWINGS

GRAPHIC SCALE

(IN FEET) 1 inch = 40 ft.

CONSTRUCTION NOTES

30 INSTALL 36" RCP STORM DRAIN (SEE PROFILE FOR D-LOAD)
31 INSTALL 48" RCP STORM DRAIN (SEE PROFILE FOR D-LOAD)
32 INSTALL 72" RCP STORM DRAIN (SEE PROFILE FOR D-LOAD)
33 INSTALL 84" RCP STORM DRAIN (SEE PROFILE FOR D-LOAD)
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35 CONST. MANHOLE PIPE TO PIPE PER APWA STD. 320-1
36 CONST. MANHOLE PIPE TO PIPE PER APWA STD. 322-1
37 CONST. CATCH BASIN TYPE "A" PER SBCTD STD. 208
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39 CONST. CONCRETE COLLAR PER APWA STD. 380-2
40 INSTALL WING TYPE HEADWALL PER CALTRANS STD. D90
41 CONST. BRICK & MORTAR PLUG
42 SAWCUT, REMOVE, AND REPLACE EX AC IN KIND
43 PLACE 100# RIP- RAP & FILTER FABRIC PER NOTES - SHT 9
44 CONST CHAIN LINK FENCE PER CALTRANS STD. B11-52, TYPE 7
45 INSTALL SLOPED PROTECTION BARRIER PER APWA STD. 360-D
46 CONST PRESSURE M.H. SHAFT W/ ECCENTRIC REDUCER PER APWA STD. 328-1
47 RMV EX SIGN DURING CONST & REPLACE AFTER CONST

EXISTING FEATURES LEGEND

[P] PROTECT IN PLACE
[R] REMOVE EXISTING STRUCTURE
[CR] COORDINATE RELOCATION WITH AFFECTED AGENCY
[AG] ADJUST EXISTING MANHOLE TO GRADE

Underground Service Alert
CALL BEFORE YOU DIG
CALL TOLL FREE
1-800 422-4133
TWO WORKING DAYS BEFORE YOU DIG

BENCH MARK
CITY OF REDLANDS BENCH MARK NO. R-20 ELEV. 1265.833
LOCATION:
BRASS DISK IN TOP OF CURB NORTH SIDE OF SAN BERNARDINO AVE. BENEATH NORTHBOUND OVERPASS OF STATE ROUTE 30.

SOILS ENGINEER/GEOLOGIST
KLEINFELDER, INC.
1370 Valley Vista Dr. Suite 150
Diamond Bar, California 91765
Office (909) 396-0335 Fax (909) 396-1324

PREPARED FOR:
COMMERCE CONSTRUCTION CO., L.P.
13191 Crossroads Parkway North
Sixth Floor
City of Industry, California 91746
Telephone: (562) 699-0453
Fax: (562) 699-4796

PREPARED BY:
PARDUE, CORNWELL & ASSOCIATES, INC.
Planning • Engineering • Surveying
151 KALMUS DRIVE BLDG. M, SUITE 2
COSTA MESA, CALIF. 92626
(714) 241-8400-241-3432 FAX
STEVE LEVISEE R.C.E. 15926 DATE 6/28/05

REGISTERED PROFESSIONAL ENGINEER STEVEN D. LEVISEE NO. 45926 EXP. 12-31-06 CIVIL STATE OF CALIFORNIA

REVISIONS			
No.	Description	Date	Init.

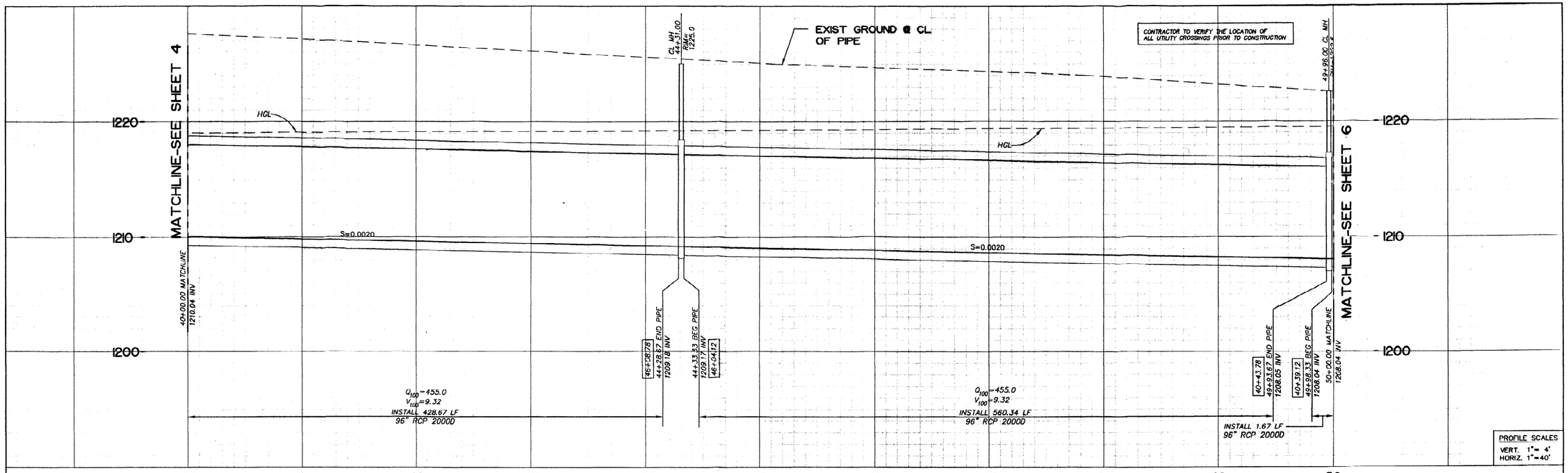
COUNTY OF SAN BERNARDINO
DEPARTMENT OF PUBLIC WORKS

Designed by:	Drawn by:	Checked by:

Submitted by: C.D.E.
Recomended: LAND DEVELOPMENT ENGINEER DATE
Approved by: DIRECTOR OF PUBLIC WORKS DATE
APPROVED BY: ASST. DIRECTOR OF PUBLIC WORKS DATE

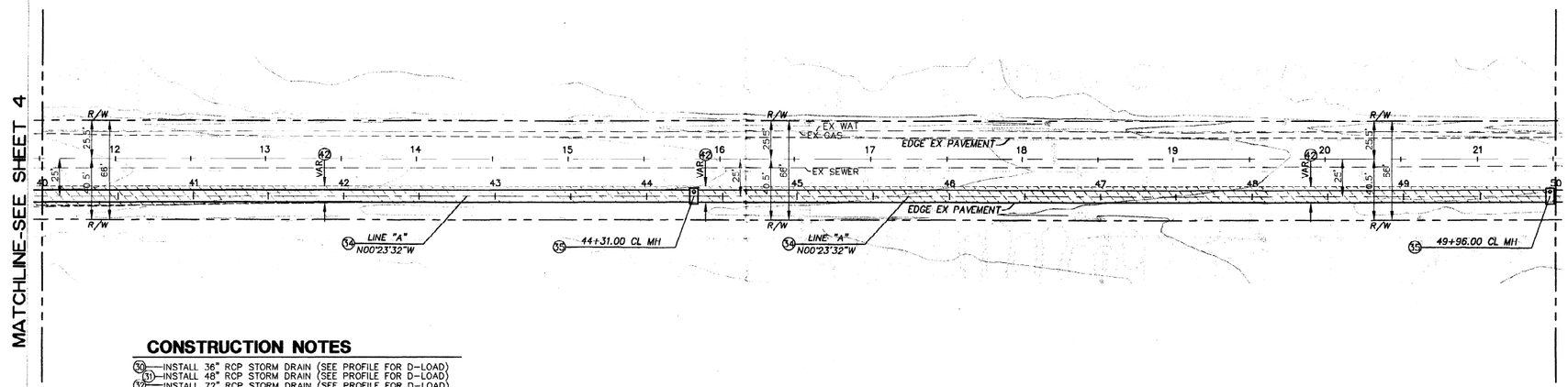
STORM DRAIN PLAN AND PROFILE
ALABAMA ST.
CITRUS PLAZA - PHASE II
SEC. 21, T 1 S, R 3 W

M.D. NO.
ROAD NO.
FILE NO.
SHEET 4 OF 9



STORM DRAIN LINE "A"

ALABAMA STREET



NOTE: STATIONS SHOWN AS 26+14.35 CORRESPOND TO WSPG OUTPUT

FOR CONSTRUCTION

RECORD DRAWINGS

CONSTRUCTION NOTES

30 INSTALL 36" RCP STORM DRAIN (SEE PROFILE FOR D-LOAD)
31 INSTALL 48" RCP STORM DRAIN (SEE PROFILE FOR D-LOAD)
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EXISTING FEATURES LEGEND

[P]—PROTECT IN PLACE
[R]—REMOVE EXISTING STRUCTURE
[CR]—COORDINATE RELOCATION WITH AFFECTED AGENCY
[AC]—ADJUST EXISTING MANHOLE TO GRADE

STORM DRAIN LINE "A"

Underground Service Alert
CALL BEFORE YOU DIG
CALL TOLL FREE
1-800
422-4133
TWO WORKING DAYS BEFORE YOU DIG

NORTH

GRAPHIC SCALE
40 0 20 40 80 160
(IN FEET)
1 inch = 40 ft.

BENCH MARK
CITY OF REDLANDS
BENCH MARK NO. R-20 ELEV. 1265.833
LOCATION:
BRASS DISK IN TOP OF CURB NORTH SIDE OF SAN BERNARDINO AVE. BENEATH NORTHBOUND OVERPASS OF STATE ROUTE 30.

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151 KALMUS DRIVE BLDG. M, SUITE 2
COSTA MESA, CALIF. 92626
(714) 241-6200 241-3432 FAX
STEVE LEVISEE R.C.E. 45926 DATE 6/29/05

REGISTERED PROFESSIONAL ENGINEER STEVEN D. LEVISEE NO. 45926 EXP. 12-31-06 CIVIL STATE OF CALIFORNIA

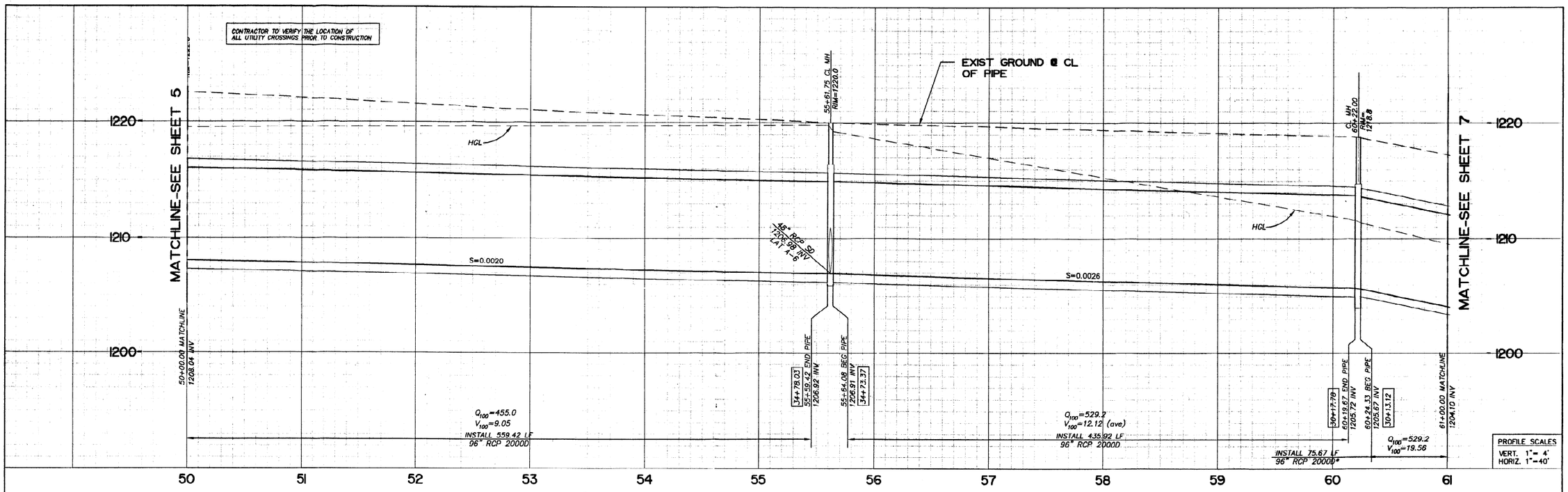
REVISIONS			
No.	Description	Date	Init.

COUNTY OF SAN BERNARDINO
DEPARTMENT OF PUBLIC WORKS

Designed by: Drawn by: Checked by: APPROVED BY:
Submitted by: C.D.E.
Recomended by: Approved by: 10-31-05
LAND DEVELOPMENT ENGINEER DATE
ASST. DIRECTOR OF PUBLIC WORKS DATE
DIRECTOR OF PUBLIC WORKS DATE

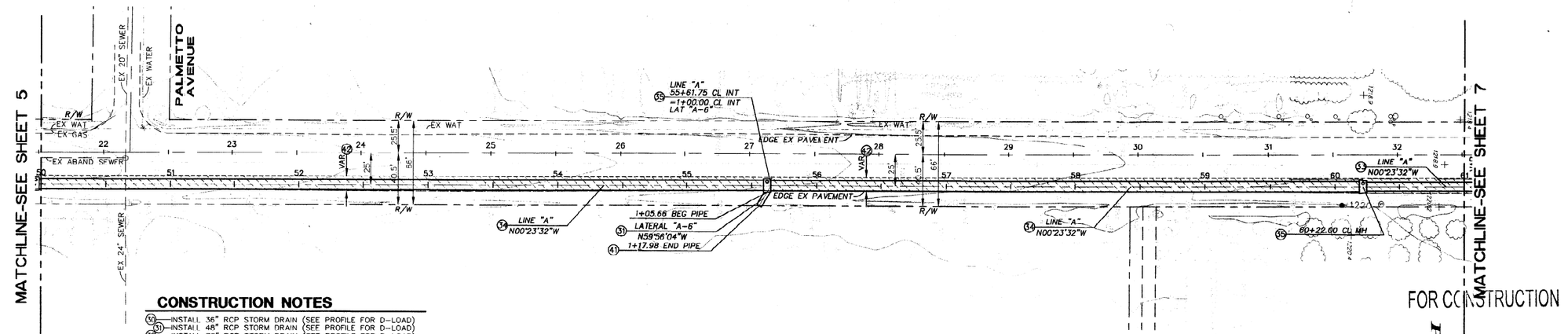
STORM DRAIN PLAN AND PROFILE
ALABAMA ST.
CITRUS PLAZA - PHASE II
SEC. 21, T 1 S, R 3 W

M.D. NO.
ROAD NO.
FILE NO.
SHEET 5 OF 9



STORM DRAIN LINE "A"

ALABAMA STREET



NOTE: STATIONS SHOWN AS 26+14.35 CORRESPOND TO WSPG OUTPUT

CONSTRUCTION NOTES

(30) INSTALL 36" RCP STORM DRAIN (SEE PROFILE FOR D-LOAD)
(31) INSTALL 48" RCP STORM DRAIN (SEE PROFILE FOR D-LOAD)
(32) INSTALL 72" RCP STORM DRAIN (SEE PROFILE FOR D-LOAD)
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(42) SAWCUT, REMOVE, AND REPLACE EX AC IN KIND
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EXISTING FEATURES LEGEND

[P]—PROTECT IN PLACE
[R]—REMOVE EXISTING STRUCTURE
[CR]—COORDINATE RELOCATION WITH AFFECTED AGENCY
[AG]—ADJUST EXISTING MANHOLE TO GRADE

STORM DRAIN LINE "A"

NOTE: * INDICATES 1-1/2" EXTRA CONCRETE COVER OVER INVERT STEEL

Underground Service Alert
CALL BEFORE YOU DIG
CALL TOLL FREE
1-800
422-4133
TWO WORKING DAYS BEFORE YOU DIG

FOR CONSTRUCTION

NORTH
PCA

GRAPHIC SCALE
40 0 20 40 80 160
(IN FEET)
1 inch = 40 ft.

BENCH MARK
CITY OF REDLANDS
BENCH MARK NO. R-20 ELEV. 1265.830
LOCATION:
BRASS DISK IN TOP OF CURB NORTH SIDE OF SAN BERNARDINO AVE. BENEATH NORTHBOUND OVERPASS OF STATE ROUTE 30.

SOILS ENGINEER/GEOLOGIST
KLEINFELDER, INC.
1370 Valley Vista Dr. Suite 150
Diamond Bar, California 91765
Office (909) 396-0335 Fax (909) 396-1324

PREPARED FOR:
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Sixth Floor
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Telephone: (562) 699-0453
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PREPARED BY:
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151 KALMUS DRIVE BLDG. M, SUITE 2
COSTA MESA, CALIF. 92626
(714) 241-8400 241-3432 FAX
STEVE LEVISEE R.C.E. 45926 6/23/05
STEVEN D. LEVISEE NO. 45926 EXP. 12-31-06 CIVIL STATE OF CALIFORNIA

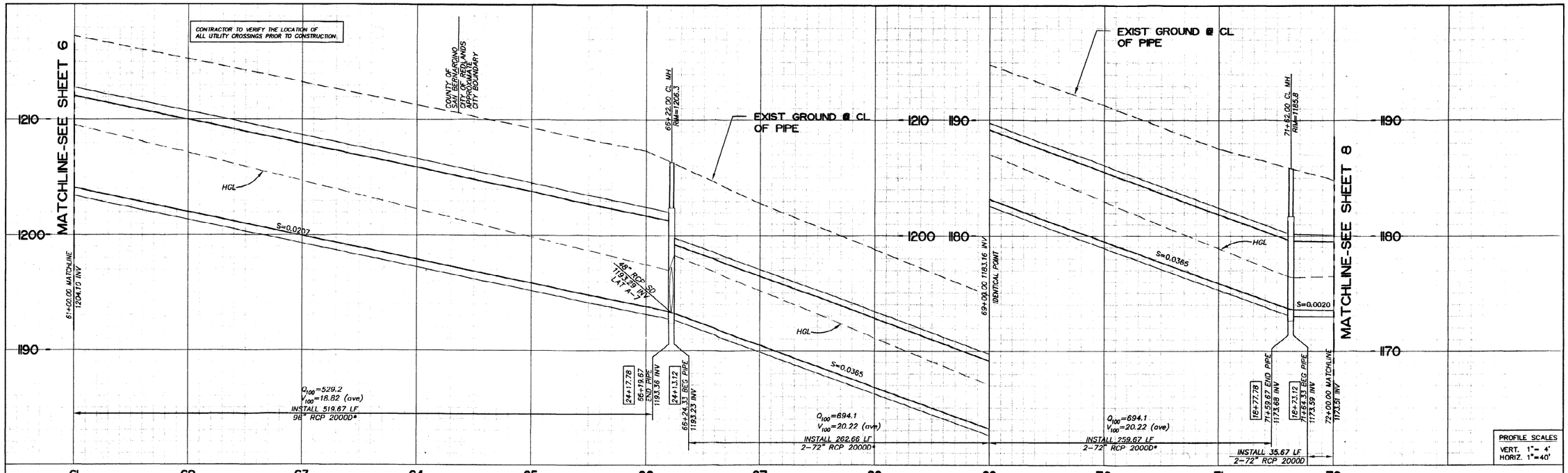
REVISIONS

No.	Description	Date	Init.

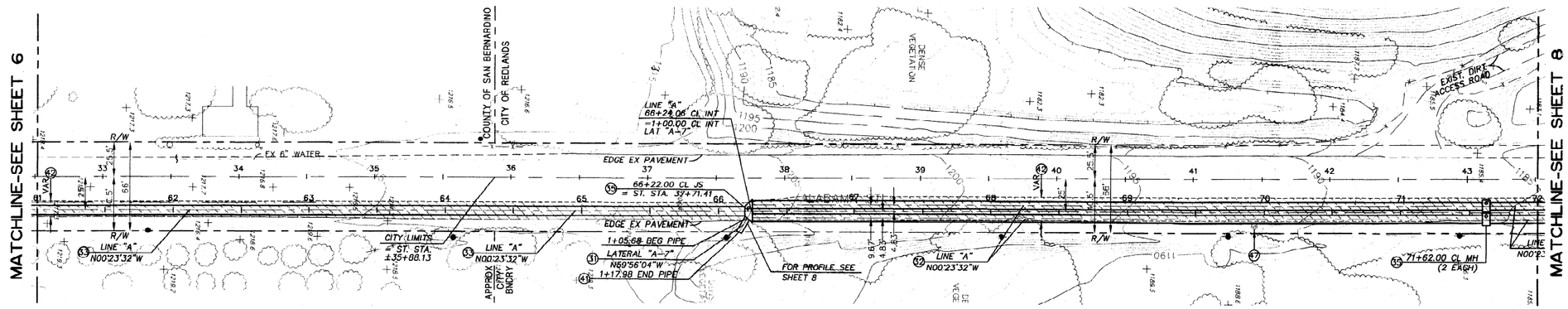
COUNTY OF SAN BERNARDINO
DEPARTMENT OF PUBLIC WORKS
Designed by: Drawn by: Checked by: APPROVED BY:
Submitted by: C.O.E.
Recomended by: Approved by:
LAND DEVELOPMENT ENGINEER DATE
ASST. DIRECTOR OF PUBLIC WORKS DATE
DIRECTOR OF PUBLIC WORKS DATE

STORM DRAIN PLAN AND PROFILE
ALABAMA ST.
CITRUS PLAZA - PHASE II
SEC. 21, T 1 S, R 3 W

M.D. NO.
ROAD NO.
FILE NO.
SHEET 6 OF 9



STORM DRAIN LINE "A"
ALABAMA STREET



STORM DRAIN LINE "A"

CONSTRUCTION NOTES

30. INSTALL 36" RCP STORM DRAIN (SEE PROFILE FOR D-LOAD)
31. INSTALL 48" RCP STORM DRAIN (SEE PROFILE FOR D-LOAD)
32. INSTALL 72" RCP STORM DRAIN (SEE PROFILE FOR D-LOAD)
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46. CONST PRESSURE M.H. SHAFT W/ ECCENTRIC REDUCER PER APWA STD. 328-1
47. RMV EX SIGN DURING CONST & REPLACE AFTER CONST

EXISTING FEATURES LEGEND

- [P] — PROTECT IN PLACE
- [R] — REMOVE EXISTING STRUCTURE
- [CR] — COORDINATE RELOCATION WITH AFFECTED AGENCY
- [AC] — ADJUST EXISTING MANHOLE TO GRADE

CURVE DATA

CURVE	RADIUS	LENGTH	TANGENT	DELTA
A	90.00'	70.69'	37.28'	45°00'00"

NOTE: * INDICATES 1-1/2" EXTRA CONCRETE COVER OVER INVERT STEEL

GRAPHIC SCALE
40 0 20 40 80 160
(IN FEET)
1 inch = 40 ft.

NORTH

PCA

Underground Service Alert
CALL BEFORE YOU DIG
CALL TOLL FREE
1-800
422-4133
TWO WORKING DAYS BEFORE YOU DIG

NOTE: STATIONS SHOWN AS
26+14.35
CORRESPOND TO WSPG OUTPUT

FOR CONSTRUCTION

Letter	Description	Date	Initial
	REVISIONS	Approved by:	

CITY OF REDLANDS
PUBLIC WORKS DEPARTMENT

PLAN & PROFILE
STORM DRAIN PLAN
IN ALABAMA STREET
ALMOND AVENUE TO SANTA ANA RIVER
(REDLANDS CITY LIMITS)

Designed by ____ Approved by ____ Date 6/30/05
Date ____
Checked by ____
Date ____
Drawn by ____
Date ____
Checked by ____
Date ____
Public Works Director R.C.E. 28129

1689 - SD - 01/04

BENCH MARK
CITY OF REDLANDS
BENCH MARK NO. R-20 ELEV. 1265.833
LOCATION:
BRASS DISK IN TOP OF CURB NORTH SIDE OF SAN BERNARDINO AVE. BENEATH NORTHBOUND OVERPASS OF STATE ROUTE 30.

SOILS ENGINEER/GEOLOGIST
KLEINFELDER, INC.
1370 Valley Vista Dr. Suite 150
Diamond Bar, California 91765
Office (909) 396-0335 Fax (909) 396-1324

PREPARED FOR:
COMMERCE CONSTRUCTION CO., LP.
13191 Crossroads Parkway North
Sixth Floor
City of Industry, California 91746
Telephone: (562) 699-0453
Fax: (562) 699-4796

PREPARED BY:
PARDUE, CORNWELL & ASSOCIATES, INC.
Planning • Engineering • Surveying
151 KALMUS DRIVE BLDG. M, SUITE 2
COSTA MESA, CALIF. 92626
(714) 241-3400 241-3432 FAX
STEVE LEVIBEE R.C.E. 45926 DATE 6/24/05

REGISTERED PROFESSIONAL ENGINEER STEVEN D. LEVIBEE NO. 45926 EXP. 11-30-06 CIVIL STATE OF CALIFORNIA

No.	Description	Date	Init.
	REVISIONS		

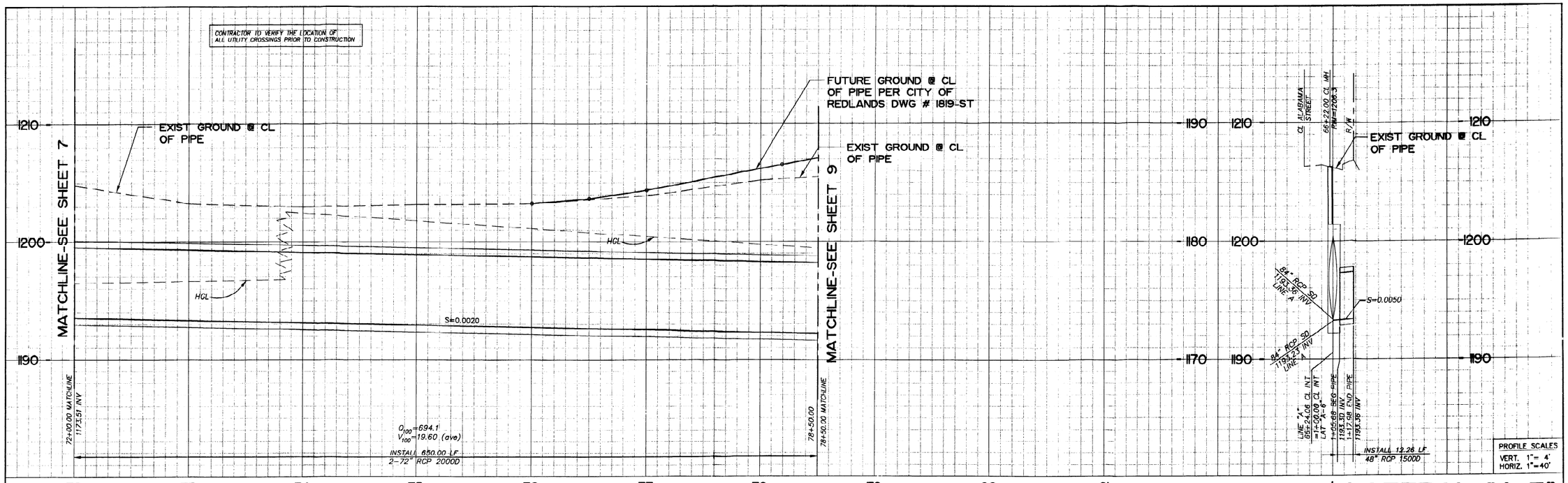
COUNTY OF SAN BERNARDINO
DEPARTMENT OF PUBLIC WORKS
Designed by: Drawn by: Checked by: APPROVED BY:
Submitted by: C.D.E. ASST. DIRECTOR OF PUBLIC WORKS DATE
Recommended: Approved by: 10-12-05
LAND DEVELOPMENT ENGINEER DATE DIRECTOR OF PUBLIC WORKS DATE

STORM DRAIN PLAN AND PROFILE
ALABAMA ST.
CITRUS PLAZA - PHASE II
SEC. 21, T 1 S, R 3 W

W.O. NO.
ROAD NO.
FILE NO.
SHEET 7 OF 9

RUNNER DRAWINGS

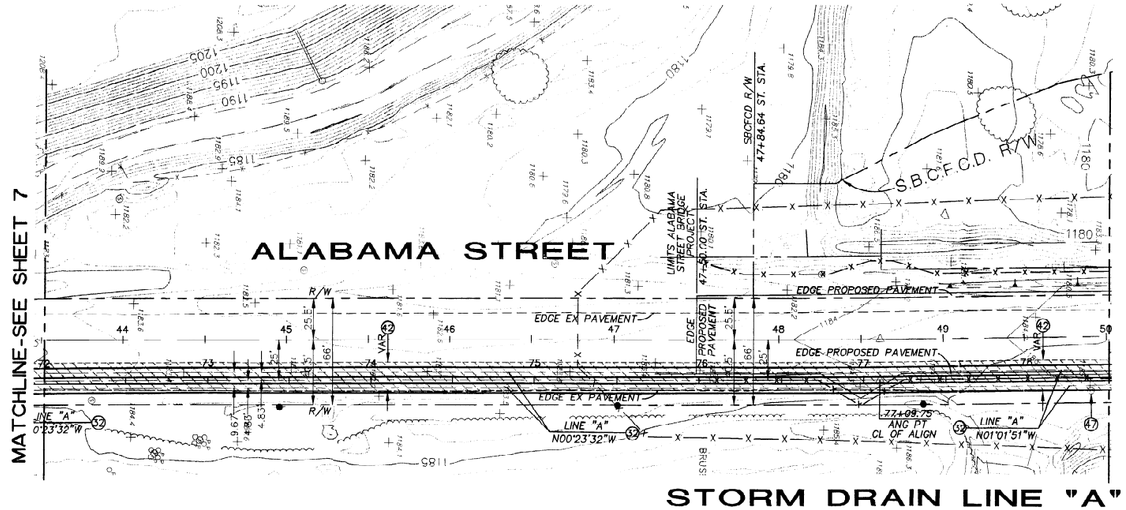
CONTRACTOR TO VERIFY THE LOCATION OF ALL UTILITY CROSSINGS PRIOR TO CONSTRUCTION



STORM DRAIN LINE "A"

PROFILE SCALES
VERT. 1"= 4'
HORIZ. 1"=40'

LATERAL "A-7"
FOR PLAN SEE SHEET 7



STORM DRAIN LINE "A"

CONSTRUCTION NOTES

29 INSTALL 18" RCP STORM DRAIN (2000-D)
30 INSTALL 36" RCP STORM DRAIN (SEE PROFILE FOR D-LOAD)
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47 RMV EX SIGN DURING CONST & REPLACE AFTER CONST

NORTH

GRAPHIC SCALE
40 0 20 40 80 160
(IN FEET)
1 inch = 40 ft.

NOTE: STATIONS SHOWN AS
26+14.35
CORRESPOND TO WSPG OUTPUT

FOR CONSTRUCTION

CURVE DATA

CURVE	RADIUS	LENGTH	TANGENT	DELTA
A	90.00'	95.31'	52.67'	60°40'42"
B	90.00'	96.32'	53.35'	61°19'01"
B	2,000'	287.16'	143.83'	08°13'35"

NOTE: * INDICATES 1-1/2" EXTRA CONCRETE COVER OVER INVERT STEEL

EXISTING FEATURES LEGEND
P—PROTECT IN PLACE
R—REMOVE EXISTING STRUCTURE
CR—COORDINATE RELOCATION WITH AFFECTED AGENCY
AG—ADJUST EXISTING MANHOLE TO GRADE

Underground Service Alert
CALL BEFORE YOU DIG
CALL TOLL FREE
1-800
422-4133
TWO WORKING DAYS BEFORE YOU DIG

Letter	Description	Date	Initial
	REVISIONS		Approved by:

CITY OF REDLANDS
PUBLIC WORKS DEPARTMENT
PLAN & PROFILE
STORM DRAIN PLAN
IN ALABAMA STREET
ALMOND AVENUE TO SANTA ANA RIVER
(REDLANDS CITY LIMITS)

Designed by ____ Date ____
Checked by ____ Date ____
Drawn by ASST. Date ____
Checked by ____ Date ____
Approved by ____ Date 8/20/05
Public Works Director R.C.E. 28120 26 705

SHEET 2 OF 3
EXHIBIT MAP "A" ATTACHED TO PERMIT NO. P-32001 dtd

1689 - SD - 01/04

BENCH MARK
CITY OF REDLANDS
BENCH MARK NO. R-20 ELEV. 1265.833
LOCATION:
BRASS DISK IN TOP OF CURB NORTH SIDE OF SAN BERNARDINO AVE. BENEATH NORTHBOUND OVERPASS OF STATE ROUTE 30.

SOILS ENGINEER/GEOLOGIST
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(714) 241-3400 241-3432 FAX
STEVE LEVISEE R.C.E. 45926 DATE 7/27/05

REGISTERED PROFESSIONAL ENGINEER STEVEN D. LEVISEE NO. 45926 EXP. 12-31-05 CIVIL STATE OF CALIFORNIA

No.	Description	Date	Init.
	REVISIONS		

COUNTY OF SAN BERNARDINO
DEPARTMENT OF PUBLIC WORKS
Designed by: Drawn by: Checked by: APPROVED BY:
Submitted by: C.D.E.
Recomended / Approved by: ASST. DIRECTOR OF PUBLIC WORKS DATE
LAND DEVELOPMENT ENGINEER DATE DIRECTOR OF PUBLIC WORKS DATE

STORM DRAIN PLAN AND PROFILE
ALABAMA ST.
CITRUS PLAZA - PHASE II
SEC. 21, T 1 S, R 3 W

W.O. NO.
ROAD NO.
FILE NO.
SHEET 8 OF 9

CONTRACTOR TO VERIFY THE LOCATION OF ALL UTILITY CROSSINGS PRIOR TO CONSTRUCTION

FUTURE GROUND @ CL OF PIPE PER CITY OF REDLANDS DWG # 1819-ST

EXIST GROUND @ CL OF PIPE

MATCHLINE-SEE SHEET 8

79+92.84 CL MH RIM=1187.8

79+02.88 CL MH RIM=1187.8

1190 / 1180 / 1170

1174.16 INV 18" LATERAL A-8

S=0.0020

S=0.006

1181.0 TW

HGL

RIP-RAP AND FILTER FABRIC

79+50.00 MATCHLINE 1172.21 INV

11+46.93

78+90.51 END PIPE 1172.13 INV

79+95.17-BEG PIPE 1172.12 INV

11+42.27

INSTALL 40.51 LF 2-72" RCP 2000D

79+93.32-PRC 1171.93 INV

80+01.98-CL INT 1171.91 INV

Q_{100}=694.1 V_{100}=12.97 (ave)

INSTALL 311.40 LF 2-72" RCP 2000D

81+86.50-BC

82+06.57-EC END PIPE 1171.50-INV 1181.0-TW

1171.54 INV

82+18.57 END APRON

82+18.57 BEG CHANNEL 1171.48 INV

6+15.87

6+30.87

Q_{100}=694.1 V_{100}=11.6 (ave)

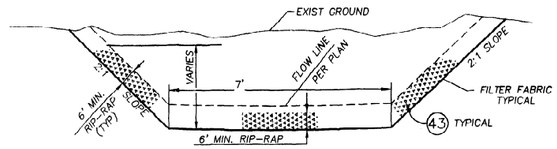
CONST 177.43 TRAP CHANNEL PER TYPICAL SECTION - HEREIN

83+96.00 END CHANNEL 1170.4 INV.

6+41.44

78 / 79 / 80 / 81 / 82 / 83 / 84

NOTE: STATIONS SHOWN AS 26+14.35 CORRESPOND TO WSPG OUTPUT



CHANNEL SECTION A-A

NOT TO SCALE

FILTER FABRIC TO BE PLACED BENEATH ALL RIP-RAP

100# RIP-RAP GRADATION
0-5% LARGER THAN-1000#
50-100% LARGER THAN-500#
90-100% LARGER THAN-75#

(SOURCE: ALABAMA STREET BRIDGE CONST PLANS)

NON-WOVEN FILTER FABRIC SPECIFICATION:

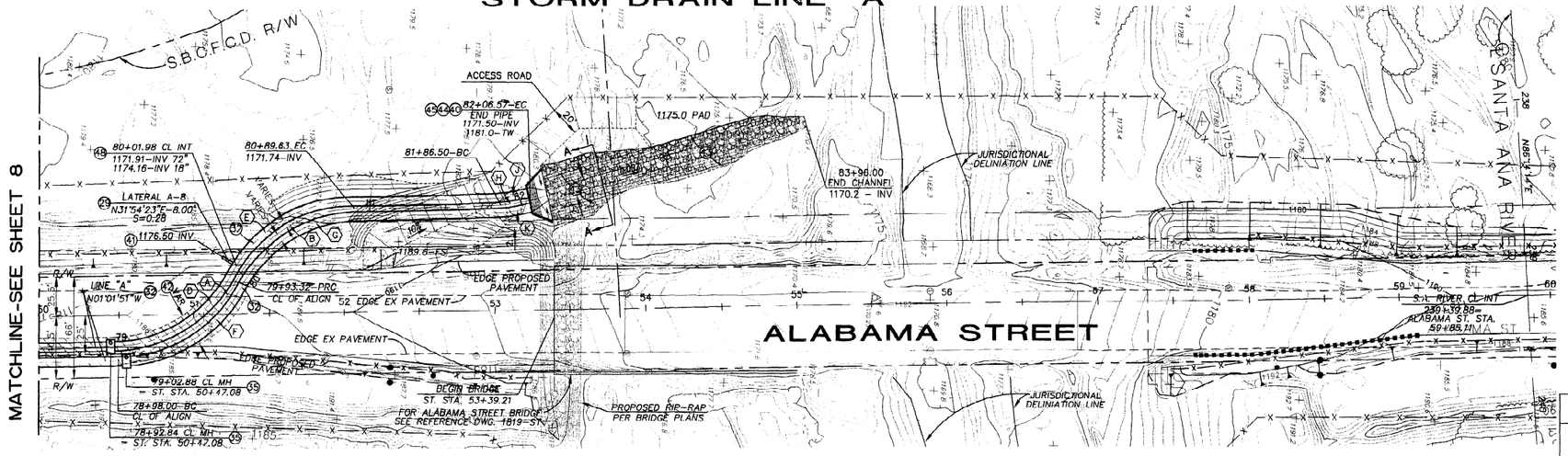
GRAB STRENGTH (ASTM D4632-86)	--	180 LBS. MIN.
ELONGATION (ASTM D4632-86)	--	50 % MIN.
PUNCTURE STRENGTH (ASTM D3787)	--	80 LBS. MIN.
PERMITTIVITY (ASTM D4491-85)	--	0.7
BURST STRENGTH (ASTM D3786)	--	320 PSI. MIN.
TOUGHNESS (% ELONGATION)	--	10,000 LBS. MIN.
ULTRAVIOLET RESISTANCE (ASTM D4355-84)	--	70/500 % STR RETAINED/ WEATHEROMETER HRS

4.3 RIP-RAP NOTES

PROFILE SCALES
VERT. 1"= 4'
HORIZ. 1"=40'

STORM DRAIN LINE "A"

NOTE: * INDICATES 1-1/2" EXTRA CONCRETE COVER OVER INVERT STEEL



STORM DRAIN LINE "A"

CURVE DATA

CURVE	RADIUS	LENGTH	TANGENT	DELTA
A	90.00'	95.31'	52.67'	60°40'42"
B	90.00'	96.32'	53.35'	61°19'01"
C	2.000'	287.16'	143.83'	08°13'35"
D	90.00'	95.33'	52.69'	60°41'24"
E	90.00'	95.30'	52.66'	60°40'00"
F	90.00'	95.30'	52.66'	60°40'00"
G	90.00'	93.43'	51.42'	59°28'43"
H	90.00'	20.07'	10.08'	12°46'31"
J	90.00'	16.01'	8.03'	10°11'27"
K	90.00'	15.97'	8.00'	10°09'54"

NORTH

GRAPHIC SCALE

40 0 20 40 80 160

(IN FEET) 1 inch = 40 ft.

FOR CONSTRUCTION

CONSTRUCTION NOTES

EXISTING FEATURES LEGEND

- (P)—PROTECT IN PLACE
- (R)—REMOVE EXISTING STRUCTURE
- (CR)—COORDINATE RELOCATION WITH AFFECTED AGENCY
- (AG)—ADJUST EXISTING MANHOLE TO GRADE

29—INSTALL 18" RCP STORM DRAIN (2000-D)
30—INSTALL 36" RCP STORM DRAIN (SEE PROFILE FOR D-LOAD)
31—INSTALL 48" RCP STORM DRAIN (SEE PROFILE FOR D-LOAD)
32—INSTALL 72" RCP STORM DRAIN (SEE PROFILE FOR D-LOAD)
33—INSTALL 84" RCP STORM DRAIN (SEE PROFILE FOR D-LOAD)
34—INSTALL 96" RCP STORM DRAIN (SEE PROFILE FOR D-LOAD)
35—CONST. MANHOLE PIPE TO PIPE PER APWA STD. 320-1
36—CONST. MANHOLE PIPE TO PIPE PER APWA STD. 322-1
37—CONST. CATCH BASIN TYPE "A" PER SBCTD STD. 206
38—CONST. LOCAL DEPRESSION PER SBCTD STD. 203A
39—CONST. CONCRETE COLLAR PER APWA STD. 380-2
40—INSTALL WING TYPE HEADWALL PER SBCFCD STD. 209
41—CONST. BRICK & MORTAR PLUG
42—SAWCUT, REMOVE, AND REPLACE EX AC IN KIND
43—PLACE 100# RIP-RAP & FILTER FABRIC PER NOTES - HEREON
44—CONST CHAIN LINK FENCE PER CALTRANS STD. B11-52, TYPE 7
45—INSTALL SLOPED PROTECTION BARRIER PER APWA STD. 360-0
46—CONST PRESSURE M.H. SHAFT W/ ECCENTRIC REDUCER PER APWA STD. 328-1
47—RMV EX SIGN DURING CONST & REPLACE AFTER CONST
48—CONST JUNCTION STRUCTURE PER APWA STD. 332-1 (CASE 1)

Underground Service Alert
CALL BEFORE YOU DIG
CALL TOLL FREE
1-800
422-4133
TWO WORKING DAYS BEFORE YOU DIG

Letter	Description	Date	Initial
	REVISIONS	Approved by:	

CITY OF REDLANDS
PUBLIC WORKS DEPARTMENT

PLAN & PROFILE
STORM DRAIN PLAN
IN ALABAMA STREET BRIDGINGS
ALMOND AVENUE TO SANTA ANA RIVER
(REDLANDS CITY LIMITS)

Designed by: Date: Checked by: Date: Drawn by: Date: Checked by: Date:

Approved by: Tom Evans Date 3/21/05
ASST Public Works Director R.C.E. 20129 exp 6-30-05

SHEET 3 OF 3 SHEETS
EXHIBIT MAP "A"
ATTACHMENT

1689 - SD - 01/04

BENCH MARK
CITY OF REDLANDS BENCH MARK NO. R-20 ELEV. 1265.833
LOCATION:
BRASS DISK IN TOP OF CURB NORTH SIDE OF SAN BERNARDINO AVE. BENEATH NORTHBOUND OVERPASS OF STATE ROUTE 30.

SOILS ENGINEER/GEOLOGIST
KLEINFELDER, INC.
1370 Valley Vista Dr. Suite 150
Diamond Bar, California 91765
Office (909) 396-0335 Fax (909) 396-1324

PREPARED FOR:
COMMERCE CONSTRUCTION CO., L.P.
1391 Crossroads Parkway North
Sixth Floor
City of Industry, California 91746
Telephone: (562) 699-0453
Fax: (562) 699-4796

PREPARED BY:
PARDUE, DORNWELL & ASSOCIATES, INC.
Planning • Engineering • Surveying
151 KALMUS DRIVE BLDG. M, SUITE 2
COSTA MESA, CALIF. 92626
(714) 241-3400-241-3432 FAX
STEVE LEVISEE R.C.E. 45926 DATE 7/27/05

REGISTERED PROFESSIONAL ENGINEER STEVEN D. LEVISEE NO. 45926 CIVIL STATE OF CALIFORNIA

No.	Description	Date	Init.
	REVISIONS		

COUNTY OF SAN BERNARDINO
DEPARTMENT OF PUBLIC WORKS

Designed by: Drawn by: Checked by: APPROVED BY:
Submitted by: C.D.F.
Recomendad / Approved by:
ASST. DIRECTOR OF PUBLIC WORKS DATE
LAND DEVELOPMENT ENGINEER DATE
DIRECTOR OF PUBLIC WORKS DATE

STORM DRAIN PLAN AND PROFILE
ALABAMA ST.
CITRUS PLAZA - PHASE II
SEC. 21, T 1 S, R 3 W

M.D. NO. P-32c/40/50
ROAD NO.
FILE NO.
SHEET 9 OF 9

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Preliminary Water Quality Management Plan

For:

Duke – Alabama & Palmetto

APN NO(S): 0167-391-06, 0292-041-35, 0292-041-42, 0292-041-43, 0292-041-47, AND 0292-041-48

Prepared for:

DUKE REALTY LIMITED PARTNERSHIP

200 Spectrum Center Drive, Suite 1600

Irvine, CA 91780

(949) 797-7050

Prepared by:

Albert A. Webb Associates

3788 McCray Street

Riverside, CA 92506

(949) 797-7050

Submittal Date: 4/19/2018

Revision Date(s): 7/2018

Approval Date:_____

Project Owner's Certification

This Water Quality Management Plan (WQMP) has been prepared for Duke Realty Corporation by Albert A. Webb Associates. The WQMP is intended to comply with the requirements of the County of San Bernardino and the NPDES Area wide Stormwater Program requiring the preparation of a WQMP. The undersigned, while it owns the subject property, is responsible for the implementation of the provisions of this plan and will ensure that this plan is amended as appropriate to reflect up-to-date conditions on the site consistent with San Bernardino County's Municipal Storm Water Management Program and the intent of the NPDES Permit for San Bernardino County and the incorporated cities of San Bernardino County within the Santa Ana Region. Once the undersigned transfers its interest in the property, its successors in interest and the city/county shall be notified of the transfer. The new owner will be informed of its responsibility under this WQMP. A copy of the approved WQMP shall be available on the subject site in perpetuity.

"I certify under a penalty of law that the provisions (implementation, operation, maintenance, and funding) of the WQMP have been accepted and that the plan will be transferred to future successors."

.

Project Data			
Permit/Application Number(s):	P20100233	Grading Permit Number(s):	*TBD
Tract/Parcel Map Number(s):	Parcel Map No. 17279	Building Permit Number(s):	*TBD
CUP, SUP, and/or APN (Specify Lot Numbers if Portions of Tract):			0167-391-06, 0292-041-35, 0292-041-42,0292-041-43, 0292-041-47, 0292-041-48

Owner's Signature			
Owner Name: Adam Schmid			
Title	Development Services Manager		
Company	Duke Realty Limited Parternship		
Address	200 Spectrum Center Drive, Suite 1600		
Email	adam.schmid@dukerealty.com		
Telephone #	(949) 797-7050		
Signature		Date	

Preparer's Certification

Project Data			
Permit/Application Number(s):	P20100233	Grading Permit Number(s):	*TBD
Tract/Parcel Map Number(s):	Parcel Map No. 17279	Building Permit Number(s):	*TBD
CUP, SUP, and/or APN (Specify Lot Numbers if Portions of Tract):			APN 0167-391-06, 0292-041-35, 0292-041-42,0292-041-43, 0292-041-47, 0292-041-48

"The selection, sizing and design of stormwater treatment and other stormwater quality and quantity control measures in this plan were prepared under my oversight and meet the requirements of Regional Water Quality Control Board Order No. R8-2010-0036."

Engineer: DJ Arellano, P.E.		PE Stamp Below
Title	Associate Engineer	
Company	Albert A. Webb Associates	
Address	3788 McCray Street	
Email	dj.arellano@webbassociates.com	
Telephone #	(951) 686-1070	
Signature		
Date		

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Appendix B - Water Quality BMP Calculations

Appendix C - Educational Materals (To be provided during Final WQMP Report)

Appendix D - Soils Report

Section 1 Discretionary Permit(s)

Form 1-1 Project Information					
Project Name	Duke – Alabama & Palmetto				
Project Owner Contact Name:	Adam Schmid				
Mailing Address:	200 Spectrum Center Drive, Suite 1600	E-mail Address:	adam.schmid@dukerealty.com	Telephone:	(949) 797-7050
Permit/Application Number(s):		Tract/Parcel Map Number(s):	Parcel Map No. 17279		
Additional Information/ Comments:	None				
Description of Project:	The project is proposing an industrial warehouse (approximately 1,116,930 ft^2) on approximately 54.7 acres. The project is located near the City of Redlands in an area referred to as the "Donut Hole" in the County of San Bernardino, California. The project site is bounded by Palmetto Avenue to the south, Alabama Street to the east, and a warehouse, vacant land and a treatment plant to the west. The project is located just south of the Santa Ana River. The project proposes to treat 54.3 acres of the project runoff with an infiltration basin. The remainder 0.4 acres will be treated using a series of curb cuts that will convey flows into an infiltration trench. (Please see WQMP Site Map in Appendix A)				
Provide summary of Conceptual WQMP conditions (if previously submitted and approved). Attach complete copy.	None				

Section 2 Project Description

2.1 Project Information

This section of the WQMP should provide the information listed below. The information provided for Conceptual/ Preliminary WQMP should give sufficient detail to identify the major proposed site design and LID BMPs and other anticipated water quality features that impact site planning. Final Project WQMP must specifically identify all BMP incorporated into the final site design and provide other detailed information as described herein.

The purpose of this information is to help determine the applicable development category, pollutants of concern, watershed description, and long term maintenance responsibilities for the project, and any applicable water quality credits. This information will be used in conjunction with the information in Section 3, Site Description, to establish the performance criteria and to select the LID BMP or other BMP for the project or other alternative programs that the project will participate in, which are described in Section 4.

Form 2.1-1 Description of Proposed Project

1 Development Category (Select all that apply):

☐ Significant re-development involving the addition or replacement of 5,000 ft² or more of impervious surface on an already developed site	☒ New development involving the creation of 10,000 ft² or more of impervious surface collectively over entire site	☐ Automotive repair shops with standard industrial classification (SIC) codes 5013, 5014, 5541, 7532- 7534, 7536-7539	☐ Restaurants (with SIC code 5812) where the land area of development is 5,000 ft² or more
☐ Hillside developments of 5,000 ft² or more which are located on areas with known erosive soil conditions or where the natural slope is 25 percent or more	☐ Developments of 2,500 ft² of impervious surface or more adjacent to (within 200 ft) or discharging directly into environmentally sensitive areas or waterbodies listed on the CWA Section 303(d) list of impaired waters.	☒ Parking lots of 5,000 ft² or more exposed to storm water	☐ Retail gasoline outlets that are either 5,000 ft² or more, or have a projected average daily traffic of 100 or more vehicles per day

☐ Non-Priority / Non-Category Project *May require source control LID BMPs and other LIP requirements. Please consult with local jurisdiction on specific requirements*.

2 Project Area (ft2):	2,382,640	**3** Number of Dwelling Units:	N/A	**4** SIC Code:	4226

5 Is Project going to be phased? Yes ☐ No ☒ *If yes, ensure that the WQMP evaluates each phase as a distinct DA, requiring LID BMPs to address runoff at time of completion.*

6 Does Project include roads? Yes ☐ No ☒ *If yes, ensure that applicable requirements for transportation projects are addressed (see Appendix A of TGD for WQMP)*

2.2 Property Ownership/Management

Describe the ownership/management of all portions of the project and site. State whether any infrastructure will transfer to public agencies (City, County, Caltrans, etc.) after project completion. State if a homeowners or property owners association will be formed and be responsible for the long-term maintenance of project stormwater facilities. Describe any lot-level stormwater features that will be the responsibility of individual property owners.

Form 2.2-1 Property Ownership/Management

Describe property ownership/management responsible for long-term maintenance of WQMP stormwater facilities:

Several water quality features requiring ongoing maintenance are implemented into this project, all of which will be the responsibility of the property owner. Should the property be sold to a third party at a later date, maintenance will then would be the responsibility of the new property owner. A Stormwater Best Management Practices Transfer, Access and Maintenance Agreement (Maintenance Agreement) will be signed during final approval to ensure ongoing maintenance.

2.3 Potential Stormwater Pollutants

Determine and describe expected stormwater pollutants of concern based on land uses and site activities (refer to Table 3-3 in the TGD for WQMP).

Form 2.3-1 Pollutants of Concern			
Pollutant	Please check: E=Expected, N=Not Expected		Additional Information and Comments
Pathogens (Bacterial / Virus)	E ☒	N ☐	Runoff from landscaped areas can bring with it nutrients including phosphorous. (Receiving water bodies: Prado Park Lake, Santa Ana River Reach -4, and -5)
Nutrients - Phosphorous	E ☒	N ☐	Runoff from landscaped areas can bring with it nutrients including phosphorous.
Nutrients - Nitrogen	E ☒	N ☐	Runoff from landscaped areas can bring with it nutrients including nitrogen.
Noxious Aquatic Plants	E ☒	N ☐	Aquatic plants are not highly expected with this project but may come from runoff from landscaped areas.
Sediment	E ☒	N ☐	Runoff along areas can erode slopes and carry sediment.
Metals	E ☒	N ☐	The primary source of metals would come from vehicular traffic. (Receiving water bodies: Santa Ana River Reach-3)
Oil and Grease	E ☒	N ☐	The primary source of oil and grease would come from vehicular traffic.
Trash/Debris	E ☒	N ☐	The primary source of oil and grease would come from parking lot area.
Pesticides / Herbicides	E ☒	N ☐	Runoff from landscaped areas can bring with it pesticides/herbicides.
Organic Compounds	E ☒	N ☐	Organic compounds can be introduced due to improper storage and disposal procedures.
Other:	E ☐	N ☐	
Other:	E ☐	N ☐	

2.4 Water Quality Credits

A water quality credit program is applicable for certain types of development projects if it is not feasible to meet the requirements for on-site LID. Proponents for eligible projects, as described below, can apply for water quality credits that would reduce project obligations for selecting and sizing other treatment BMP or participating in other alternative compliance programs. Refer to Section 6.2 in the TGD for WQMP to determine if water quality credits are applicable for the project.

Form 2.4-1 Water Quality Credits

1 Project Types that Qualify for Water Quality Credits: *Select all that apply*

☐ Redevelopment projects that reduce the overall impervious footprint of the project site. [Credit = % impervious reduced]	Higher density development projects ☐ Vertical density [20%] ☐ 7 units/ acre [5%]	☐ Mixed use development, (combination of residential, commercial, industrial, office, institutional, or other land uses which incorporate design principles that demonstrate environmental benefits not realized through single use projects) [20%]	☐ Brownfield redevelopment (redevelop real property complicated by presence or potential of hazardous contaminants) [25%]
☐ Redevelopment projects in established historic district, historic preservation area, or similar significant core city center areas [10%]	☐ Transit-oriented developments (mixed use residential or commercial area designed to maximize access to public transportation) [20%]	☐ In-fill projects (conversion of empty lots & other underused spaces < 5 acres, substantially surrounded by urban land uses, into more beneficially used spaces, such as residential or commercial areas) [10%]	☐ Live-Work developments (variety of developments designed to support residential and vocational needs) [20%]

2 Total Credit % *(Total all credit percentages up to a maximum allowable credit of 50 percent)*

Description of Water Quality Credit Eligibility (if applicable)	N/A - No water quality credit

Section 3 Site and Watershed Description

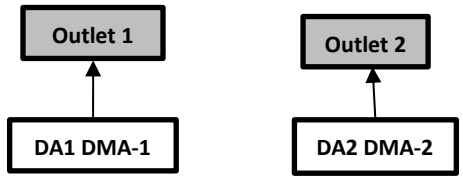
Describe the project site conditions that will facilitate the selection of BMP through an analysis of the physical conditions and limitations of the site and its receiving waters. Identify distinct drainage areas (DA) that collect flow from a portion of the site and describe how runoff from each DA (and sub-watershed DMAs) is conveyed to the site outlet(s). Refer to Section 3.2 in the TGD for WQMP. The form below is provided as an example. Then complete Forms 3.2 and 3.3 for each DA on the project site. ***If the project has more than one drainage area for stormwater management, then complete additional versions of these forms for each DA / outlet.***

Form 3-1 Site Location and Hydrologic Features

Site coordinates *take GPS measurement at approximate center of site*	Latitude 34° 5'15.0"N	Longitude117°12'38.7"W	Thomas Bros Map page Page 607, Grid G3 & H3

1 San Bernardino County climatic region: ☒ Valley ☐ Mountain

2 Does the site have more than one drainage area (DA): Yes☒ No☐ *If no, proceed to Form 3-2. If yes, then use this form to show a conceptual schematic describing DMAs and hydrologic feature connecting DMAs to the site outlet(s). An example is provided below that can be modified for proposed project or a drawing clearly showing DMA and flow routing may be attached*



Example only – modify for project specific WQMP using additional form

Conveyance DA1 DMA 1 flows to **Outlet 1**	Inlets and sub-surface storm drain pipes will be used to collect and convey runoff generated by 54.3 acres of the project site to a proposed infiltration basin for water quality treatment. Once the water quality volume is detained it will spill into Outlet 1. Outlet 1 will allow higher flows to bypass the basin and conveyed to the single project discharge point which is the existing Line A, Alabama Street storm drain. Outlet 1 will be a headwall with a concrete wall barrier to allow the DCV to be retained onsite.
DA2 DMA 2 flows to **Outlet 2**	The remainder 0.4 acres of the project could not be graded to drain into the infiltration basin due to existing grading conditions. Trying to change the grades in the drive aisle would cause the earthwork not to balance and would not be cost effective. The runoff from the drive aisle will instead be collected to into an infiltration trench using a series of curb cuts. Once the water quality volume is detained, the higher flows will spill out of the curb cuts and continue to flow out into Palmetto Avenue.
DA3 to Outlet 3	N/A

Form 3-2 Existing Hydrologic Characteristics for Drainage Area 1

For Drainage Area 1's sub-watershed DMA, provide the following characteristics	DMA 1	DMA B	DMA C	DMA D
1 DMA drainage area (ft^2)	2,366,150			
2 Existing site impervious area (ft^2)	0			
3 Antecedent moisture condition *For desert areas, use* *http://www.sbcounty.gov/dpw/floodcontrol/pdf/20100412_map.pdf*	III			
4 Hydrologic soil group *Refer to Watershed Mapping Tool – http://permitrack.sbcounty.gov/wap/*	A			
5 Longest flowpath length (ft)	2,270			
6 Longest flowpath slope (ft/ft)	0.01			
7 Current land cover type(s) *Select from Fig C-3 of Hydrology Manual*	Barren			
8 Pre-developed pervious area condition: *Based on the extent of wet season vegetated cover good >75%; Fair 50-75%; Poor <50% Attach photos of site to support rating*	Poor			

Form 3-2 Existing Hydrologic Characteristics for Drainage Area 1 (use only as needed for additional DMA w/in DA 1)				
For Drainage Area 1's sub-watershed DMA, provide the following characteristics	DMA E	DMA F	DMA G	DMA H
1 DMA drainage area (ft^2)				
2 Existing site impervious area (ft^2)				
3 Antecedent moisture condition *For desert areas, use http://www.sbcounty.gov/dpw/floodcontrol/pdf/20100412_map.pdf*				
4 Hydrologic soil group *Refer to Watershed Mapping Tool – http://permitrack.sbcounty.gov/wap/*				
5 Longest flowpath length (ft)				
6 Longest flowpath slope (ft/ft)				
7 Current land cover type(s) *Select from Fig C-3 of Hydrology Manual*				
8 Pre-developed pervious area condition: *Based on the extent of wet season vegetated cover good >75%; Fair 50-75%; Poor <50% Attach photos of site to support rating*				

Form 3-2 Existing Hydrologic Characteristics for Drainage Area 2

For Drainage Area 2's sub-watershed DMA, provide the following characteristics	DMA 2	DMA B	DMA C	DMA D
1 DMA drainage area (ft^2)	16,490			
2 Existing site impervious area (ft^2)	0			
3 Antecedent moisture condition *For desert areas, use http://www.sbcounty.gov/dpw/floodcontrol/pdf/20100412_map.pdf*	III			
4 Hydrologic soil group *Refer to Watershed Mapping Tool – http://permitrack.sbcounty.gov/wap/*	A			
5 Longest flowpath length (ft)	70			
6 Longest flowpath slope (ft/ft)	0.007			
7 Current land cover type(s) *Select from Fig C-3 of Hydrology Manual*	Barren			
8 Pre-developed pervious area condition: *Based on the extent of wet season vegetated cover good >75%; Fair 50-75%; Poor <50% Attach photos of site to support rating*	Poor			

Form 3-2 Existing Hydrologic Characteristics for Drainage Area 2 (use only as needed for additional DMA w/in DA 2)				
For Drainage Area 2's sub-watershed DMA, provide the following characteristics	DMA E	DMA F	DMA G	DMA H
1 DMA drainage area (ft^2)				
2 Existing site impervious area (ft^2)				
3 Antecedent moisture condition *For desert areas, use http://www.sbcounty.gov/dpw/floodcontrol/pdf/20100412_map.pdf*				
4 Hydrologic soil group *Refer to Watershed Mapping Tool – http://permitrack.sbcounty.gov/wap/*				
5 Longest flowpath length (ft)				
6 Longest flowpath slope (ft/ft)				
7 Current land cover type(s) *Select from Fig C-3 of Hydrology Manual*				
8 Pre-developed pervious area condition: *Based on the extent of wet season vegetated cover good >75%; Fair 50-75%; Poor <50% Attach photos of site to support rating*				

Form 3-3 Watershed Description for Drainage Area (DA1 & DA2)

Receiving waters *Refer to Watershed Mapping Tool - http://permitrack.sbcounty.gov/wap/ See 'Drainage Facilities" link at this website*	Prado Park Lake and Santa Ana River - Reaches 3, 4, and 5
Applicable TMDLs *Refer to Local Implementation Plan*	Middle Santa Ana River Baterial Indicator TMDL Watershed-wide Compliance Site Monitoring Prado Park Lake – Nutrients and Pathogens Santa Ana River Reach 3 – Pathogens, Lead, and Copper Santa Ana River Reach 4 – Pathogens Santa Ana River Reach 5- Nutrients and Pathogens
303(d) listed impairments *Refer to Local Implementation Plan and Watershed Mapping Tool – http://permitrack.sbcounty.gov/wap/ and State Water Resources Control Board website – http://www.waterboards.ca.gov/santaana/water_issues/programs/tmdl/index.shtml*	Metals, Nutirents, Pathogens
Environmentally Sensitive Areas (ESA) *Refer to Watershed Mapping Tool – http://permitrack.sbcounty.gov/wap/*	No
Unlined Downstream Water Bodies *Refer to Watershed Mapping Tool – http://permitrack.sbcounty.gov/wap/*	Yes, the Santa Ana River is unlined
Hydrologic Conditions of Concern	☐ Yes *Complete Hydrologic Conditions of Concern (HCOC) Assessment. Include Forms 4.2-2 through Form 4.2-5 and Hydromodification BMP Form 4.3-10 in submittal* ☒ No
Watershed–based BMP included in a RWQCB approved WAP	☐ Yes *Attach verification of regional BMP evaluation criteria in WAP* • *More Effective than On-site LID* • *Remaining Capacity for Project DCV* • *Upstream of any Water of the US* • *Operational at Project Completion* • *Long-Term Maintenance Plan* ☒ No

Section 4 Best Management Practices (BMP)

4.1 Source Control BMP

4.1.1 Pollution Prevention

Non-structural and structural source control BMP are required to be incorporated into all new development and significant redevelopment projects. Form 4.1-1 and 4.1-2 are used to describe specific source control BMPs used in the WQMP or to explain why a certain BMP is not applicable. Table 7-3 of the TGD for WQMP provides a list of applicable source control BMP for projects with specific types of potential pollutant sources or activities. The source control BMP in this table must be implemented for projects with these specific types of potential pollutant sources or activities.

The preparers of this WQMP have reviewed the source control BMP requirements for new development and significant redevelopment projects. The preparers have also reviewed the specific BMP required for project as specified in Forms 4.1-1 and 4.1-2. All applicable non-structural and structural source control BMP shall be implemented in the project.

Form 4.1-1 Non-Structural Source Control BMPs

Identifier	Name	Check One		Describe BMP Implementation OR, if not applicable, state reason
		Included	Not Applicable	
N1	Education of Property Owners, Tenants and Occupants on Stormwater BMPs	☒	☐	The property owner(s), tenant(s), operator(s), and/or occupant(s) should receive training on the importance of water quality treatment. The training should incude reading the educational materials on Appendix C. The property owner should bring awareness to all employees of the impacts of littering and improper water disposal.
N2	Activity Restrictions	☒	☐	Restrictions will include requiring dumpster lids to be closed at all times and prohibiting the blowing, sweeping , or hosing of debris into streets, storm drain inlets, and other conveyances. In particular, pesticide application in areas must be performed by an applicator certified by the California Department of Pesticide Regulation. No activity shall be allowed for which a specific BMP has not been included.
N3	Landscape Management BMPs	☒	☐	Landscape planning shall employ strategies to maximize water storage and conservation and minimize runoff, promote infiltration, and protect slopes from erosion. Such strategies include extensive mulching, low water use shrubs, and grouping of plants with similar water requirements. Maintenance personnel will regularly mow, remove all sediment, inspect and keep any equipment in good repair, i.e. broken sprinkler heads, etc. Any repairs will be done promtly.. In addition, fertilizer and pesticide use will be consistent with instructions contained on product labels and with the regulations administered by the State Department of Pesticide Regulation
N4	BMP Maintenance	☒	☐	Create regularly scheduled times for inspection and maintenance of infiltration basin. The frequency shall meet the current minimum County standard but shall be at a minimum once a month. A time in the late summer or early fall, prior to the storm season (October 1 to May 1), shall also be part of this schedule to reduce the amount of sediment, garden waste, and trash entering the storm drain system.
N5	Title 22 CCR Compliance (How development will comply)	☒	☐	Hazardous waste materials and wastes shall be collected and stored in covered containers in designated areas. In addition, signs shall be placed to ensure all hazardous waste is collected, removed and disposed of only at authorized disposal areas. Inspections shall be conducted regularly to check all containers and other equipment, used in handling hazardous waste, to minimize potential leaks and spills. Regular maintenance of all equipment will be conducted and repairs will be carried out promtly

Form 4.1-1 Non-Structural Source Control BMPs				
				after identification. Owner shall ensure all operations are in conformance with Title 22 Division 4.5 - Environmental Health Standards for the Management of Hazardous Materials.
N6	Local Water Quality Ordinances	☒	☐	This WQMP meets or exceeds local water quality ordinances.
N7	Spill Contingency Plan	☒	☐	Spill Contingency Plan to be determined by building owner prior to occucpancy. See SC-11 “Spill Prevention, Control, and Cleanup”, sample Spill Contingency Template, and SC-10 “Non-Storm water Discharges” in “BMP Fact Sheets”) for guidance and recommended procedures.
N8	Underground Storage Tank Compliance	☐	☒	There are no propossed underground storage tanks
N9	Hazardous Materials Disclosure Compliance	☒	☐	Compliance through the Phase 1 Site Assessments.

Form 4.1-1 Non-Structural Source Control BMPs

Identifier	Name	Check One		Describe BMP Implementation OR, if not applicable, state reason
		Included	Not Applicable	
N10	Uniform Fire Code Implementation	☒	☐	Hazardous waste materials and wastes shall be collected and stored in covered containers in designated areas. In addition, signs shall be placed to ensure all hazardous waste is collected, removed and disposed of only at authorized disposal areas. Inspections shall be conducted regularly to check all containers and other equipment, used in handling hazardous waste, to minimize potential leaks and spills. Regular maintenance of all equipment will be conducted and repairs will be carried out promtly after identification. Owner shall ensure all operations are in conformance with the Uniform Fire Code Article 80.
N11	Litter/Debris Control Program	☒	☐	Litter control and trash management will be provided by a contracted maintenance company.
N12	Employee Training	☒	☐	Training will be required within 6 months of hire dates for new employees, and then annually thereafter. Educational and training materials are included in Appendix E of this WQMP report.
N13	Housekeeping of Loading Docks	☒	☐	Employees shall be trained in loading/unloading procedures as well as proper spill containment and cleanup per the recommendations in CASQA BMP Handbook SD-31. Maintenance records shall be kept to ensure regular maintenance and inspection of loading dock areas.
N14	Catch Basin Inspection Program	☒	☐	Drainage facilities such as on-site inlets as well as the proposed treatment control BMPs shall be inspected annually, in the late summer or early fall, and cleaned as needed, or if accumulated sediment/debris fills 25% or more of the sediment /debris storage capacity of the facility. All portions of the drainage facilities will be evaluated annually to determine the adequacy of the inspection and maintenance frequency.
N15	Vacuum Sweeping of Private Streets and Parking Lots	☒	☐	Create regularly scheduled times for the sweeping of drive isles and parking lot areas. The frequency should meet the current minimum County standard but shall be at a minimum once a month. A time in the late summer or early fall, prior to the storm season (October 1 to May 1), shall also be part of this schedule to reduce the amount of sediment, garden waste, and trash entering the storm drain system

N16	Other Non-structural Measures for Public Agency Projects	☐	☒	N/A. Not a Public Agency Project.
N17	Comply with all other applicable NPDES permits	☒	☐	Construction general permit compliance will be accomplished via filing an NOI with SMARTS and preparing a project specific SWPPP document.

Form 4.1-2 Structural Source Control BMPs

Identifier	Name	Check One		Describe BMP Implementation OR, If not applicable, state reason
		Included	Not Applicable	
S1	Provide storm drain system stencilling and signage (CASQA New Development BMP Handbook SD-13)	☒	☐	Storm drain signage shall be employed along with previously mentioned owner environmental awareness education prohibiting dumping, littering, or discharges into storm drain inlets. The stenciling or signage shall employ the phrase "NO DUMPING FLOWS TO OCEAN" or an equally effective and approved phrase that will be stenciled on all catch basins and inlets to alert employees and the public to the destination of pollutants discharged in the storm drains. Legibility will be checked and repainted annually. Owner will be responsible for maintaining this signage.
S2	Design and construct outdoor material storage areas to reduce pollution introduction (CASQA New Development BMP Handbook SD-34)	☐	☒	Outdoor Storage is prohibited on-site.
S3	Design and construct trash and waste storage areas to reduce pollution introduction (CASQA New Development BMP Handbook SD-32)	☒	☐	Three trash container are proposed to be serve the proejct site. The locations will be shown on the WQMP Exhibit. Litter control and trash management will be provided by a contracted maintenance company. All trash enclosures shall be covered per County standards.
S4	Use efficient irrigation systems & landscape design, water conservation, smart controllers, and source control (Statewide Model Landscape Ordinance; CASQA New Development BMP Handbook SD-12)	☒	☐	Landscape planning shall employ strategies to maximize water storage and conservation and minimize runoff, promote infiltration, and protect slopes from erosion. Such strategies include extensive mulching, low water use shrubs, and grouping of plants with similar water requirements. Maintenance personnel will regularly inspect and keep in good repair, i.e. broken sprinkler heads, etc. will be repaired promptly. In addition, fertilizer and pesticide use will be consistent with instructions contained on product labels and with the regulations administered by the State Department of Pesticide Regulation.
S5	Finish grade of landscaped areas at a minimum of 1-2 inches below top of curb, sidewalk, or pavement	☒	☐	Depressed landscape has been proposed in areas that are less than 10% in grade. The landscaped areas that cannot be depressed are located either immediately adjacent to the proposed building or on slopes greater than 10%.
S6	Protect slopes and channels and provide energy dissipation (CASQA New Development BMP Handbook SD-10)	☒	☐	All side slopes (varying between 4:1 to 2:1) will be protected from erosion with landscaping in accordance with the recommendations CASQA SD-10. There are no channels proposed within this project site.

S7	Covered dock areas (CASQA New Development BMP Handbook SD-31)	☐	☒	There are no covered loading dock areas proposed.
S8	Covered maintenance bays with spill containment plans (CASQA New Development BMP Handbook SD-31)	☐	☒	There are no outoor maintenance bays proposed.
S9	Vehicle wash areas with spill containment plans (CASQA New Development BMP Handbook SD-33)	☐	☒	Vehicle washing prohibited on-site.
S10	Covered outdoor processing areas (CASQA New Development BMP Handbook SD-36)	☐	☒	There is no outdoor processing proposed for this development.

Form 4.1-2 Structural Source Control BMPs

Identifier	Name	Check One		Describe BMP Implementation OR, If not applicable, state reason
		Included	Not Applicable	
S11	Equipment wash areas with spill containment plans (CASQA New Development BMP Handbook SD-33)	☐	☒	Equipment washing is prohibited on-site.
S12	Fueling areas (CASQA New Development BMP Handbook SD-30)	☐	☒	Fueling areas prohibited on-site.
S13	Hillside landscaping (CASQA New Development BMP Handbook SD-10)	☐	☒	No hillsides on this site.
S14	Wash water control for food preparation areas	☐	☒	Project is not a food establishment
S15	Community car wash racks (CASQA New Development BMP Handbook SD-33)	☐	☒	Vehicle and equipmenet washing is prohibited on-site.

4.1.2 Preventative LID Site Design Practices

Site design practices associated with new LID requirements in the MS4 Permit should be considered in the earliest phases of a project. Preventative site design practices can result in smaller DCV for LID BMP and hydromodification control BMP by reducing runoff generation. Describe site design and drainage plan including:

- A narrative of site design practices utilized or rationale for not using practices
- A narrative of how site plan incorporates preventive site design practices
- Include an attached Site Plan layout which shows how preventative site design practices are included in WQMP

Refer to Section 5.2 of the TGD for WQMP for more details.

Form 4.1-3 Preventative LID Site Design Practices Checklist

Site Design Practices *If yes, explain how preventative site design practice is addressed in project site plan. If no, other LID BMPs must be selected to meet targets*
Minimize impervious areas: Yes ☒ No ☐ Explanation: This project has maximized the open landscaped areas to the maximum extent practicable and per County minimum landscape area requirements. The landscaping area is approximately 15% of the overall development area.
Maximize natural infiltration capacity: Yes ☒ No ☐ Explanation: An infiltratin basin and infiltration trench is proposed.
Preserve existing drainage patterns and time of concentration: Yes ☒ No ☐ Explanation: Existing westerly drainage pattern is maintained, and changes to times of concentration are preserved through the use of an infiltration basin.
Disconnect impervious areas: Yes ☒ No ☐ Explanation: Impervious areas have been disconnected to the maximum extent practical given the proejct type. Runoff from the eintre site will be directd into the proposed infiltartion basin.
Protect existing vegetation and sensitive areas: Yes ☐ No ☒ Explanation: The site has been used as a citrus orchard and is highly disturbed. Currently, adjacent areas are either agricultural or industrial/commercial. No environmentally sensitive or natural, undisturbed areas exist.
Re-vegetate disturbed areas: Yes ☒ No ☐ Explanation: The site will be completely developed and will be paved with with asphalt and will also include landscaping. There will be no undevelped disturbed areas.
Minimize unnecessary compaction in stormwater retention/infiltration basin/trench areas: Yes ☒ No ☐ Explanation: Provisions will be in place that will prevent unnecessary heavy equipement from driving over the proposed underground basin area. The area will be roped off to keep vehicles from driving within the area.This shall be noted on plans.
Utilize vegetated drainage swales in place of underground piping or imperviously lined swales: Yes ☐ No ☒ Explanation: The site layout and size does not allow for surface drainage swales but the projet minimize the use of underground piping.
Stake off areas that will be used for landscaping to minimize compaction during construction : Yes ☒ No ☐ Explanation: All landscaped areas shall be roped off to keep unwanted equipment from driving over these areas. This shall also be noted on construction drawings

4.2 Project Performance Criteria

The purpose of this section of the Project WQMP is to establish targets for post-development hydrology based on performance criteria specified in the MS4 Permit. These targets include runoff volume for water quality control (referred to as LID design capture volume), and runoff volume, time of concentration, and peak runoff for protection of any downstream waterbody segments with a HCOC. ***If the project has more than one outlet for stormwater runoff, then complete additional versions of these forms for each DA / outlet.***

Methods applied in the following forms include:

- For LID BMP Design Capture Volume (DCV), the San Bernardino County Stormwater Program requires use of the P_6 method (MS4 Permit Section XI.D.6a.ii) – Form 4.2-1
- For HCOC pre- and post-development hydrologic calculation, the San Bernardino County Stormwater Program requires the use of the Rational Method (San Bernardino County Hydrology Manual Section D). Forms 4.2-2 through Form 4.2-5 calculate hydrologic variables including runoff volume, time of concentration, and peak runoff from the project site pre- and post-development using the Hydrology Manual Rational Method approach. For projects greater than 640 acres (1.0 mi²), the Rational Method and these forms should not be used. For such projects, the Unit Hydrograph Method (San Bernardino County Hydrology Manual Section E) shall be applied for hydrologic calculations for HCOC performance criteria.

Refer to Section 4 in the TGD for WQMP for detailed guidance and instructions.

Form 4.2-1 LID BMP Performance Criteria for Design Capture Volume (DA 1)

1 Project area DA 1 (ft²): 2,361,832	**2** Imperviousness after applying preventative site design practices (Imp%): 85	**3** Runoff Coefficient (Rc): _0.661 *$R_c = 0.858(Imp\%)^3-0.78(Imp\%)^2+0.774(Imp\%)+0.04$*
4 Determine 1-hour rainfall depth for a 2-year return period $P_{2yr-1hr}$ (in): 0.494 *http://hdsc.nws.noaa.gov/hdsc/pfds/sa/sca_pfds.html*		
5 Compute P_6, Mean 6-hr Precipitation (inches): 0.731 *P_6 = Item 4 *C_1, where C_1 is a function of site climatic region specified in Form 3-1 Item 1 (Valley = 1.4807; Mountain = 1.909; Desert = 1.2371)*		
6 Drawdown Rate *Use 48 hours as the default condition. Selection and use of the 24 hour drawdown time condition is subject to approval by the local jurisdiction. The necessary BMP footprint is a function of drawdown time. While shorter drawdown times reduce the performance criteria for LID BMP design capture volume, the depth of water that can be stored is also reduced.*		24-hrs ☐ 48-hrs ☒
7 Compute design capture volume, DCV (ft³): 186,684 *DCV = 1/12 * [Item 1* Item 3 *Item 5 * C_2], where C_2 is a function of drawdown rate (24-hr = 1.582; 48-hr = 1.963)* *Compute separate DCV for each outlet from the project site per schematic drawn in Form 3-1 Item 2*		

Form 4.2-1 LID BMP Performance Criteria for Design Capture Volume (DA 2)

1 Project area DA 1 (ft^2): 16,490	**2** Imperviousness after applying preventative site design practices (Imp%): 70	**3** Runoff Coefficient (Rc): _0.494 *$R_c = 0.858(Imp\%)^{\wedge 3} - 0.78(Imp\%)^{\wedge 2} + 0.774(Imp\%) + 0.04$*
4 Determine 1-hour rainfall depth for a 2-year return period $P_{2yr\text{-}1hr}$ (in): 0.494 http://hdsc.nws.noaa.gov/hdsc/pfds/sa/sca_pfds.html		
5 Compute P_6, Mean 6-hr Precipitation (inches): 0.731 *P_6 = Item 4 *C_1, where C_1 is a function of site climatic region specified in Form 3-1 Item 1 (Valley = 1.4807; Mountain = 1.909; Desert = 1.2371)*		
6 Drawdown Rate *Use 48 hours as the default condition. Selection and use of the 24 hour drawdown time condition is subject to approval by the local jurisdiction. The necessary BMP footprint is a function of drawdown time. While shorter drawdown times reduce the performance criteria for LID BMP design capture volume, the depth of water that can be stored is also reduced.*		24-hrs ☐ 48-hrs ☒
7 Compute design capture volume, DCV (ft^3): 975 *DCV = 1/12 * [Item 1* Item 3 *Item 5 * C_2], where C_2 is a function of drawdown rate (24-hr = 1.582; 48-hr = 1.963)* *Compute separate DCV for each outlet from the project site per schematic drawn in Form 3-1 Item 2*		

Form 4.2-2 Summary of HCOC Assessment (DA 1 & DA2)

Does project have the potential to cause or contribute to an HCOC in a downstream channel: Yes ☐ No ☒

Go to: *http://permitrack.sbcounty.gov/wap/*

If "Yes", then complete HCOC assessment of site hydrology for 2yr storm event using Forms 4.2-3 through 4.2-5 and insert results below

(Forms 4.2-3 through 4.2-5 may be replaced by computer software analysis based on the San Bernardino County Hydrology Manual)

If "No," then proceed to Section 4.3 Project Conformance Analysis

Condition	Runoff Volume (ft^3)	Time of Concentration (min)	Peak Runoff (cfs)
Pre-developed	**1** N/A *Form 4.2-3 Item 12*	**2** N/A *Form 4.2-4 Item 13*	**3** N/A *Form 4.2-5 Item 10*
Post-developed	**4** N/A *Form 4.2-3 Item 13*	**5** N/A *Form 4.2-4 Item 14*	**6** N/A *Form 4.2-5 Item 14*
Difference	**7** *N/A* *Item 4 – Item 1*	**8** *N/A* *Item 2 – Item 5*	**9** *N/A* *Item 6 – Item 3*
Difference (as % of pre-developed)	**10** *N/A%* *Item 7 / Item 1*	**11** *N/A%* *Item 8 / Item 2*	**12** *N/A%* *Item 9 / Item 3*

Form 4.2-3 HCOC Assessment for Runoff Volume (DA 1&DA2)

Weighted Curve Number Determination for: Pre-developed DA	DMA A	DMA B	DMA C	DMA D	DMA E	DMA F	DMA G	DMA H
1a Land Cover type								
2a Hydrologic Soil Group (HSG)								
3a DMA Area, ft^2 *sum of areas of DMA should equal area of DA*								
4a Curve Number (CN) *use Items 1 and 2 to select the appropriate CN from Appendix C-2 of the TGD for WQMP*								
Weighted Curve Number Determination for: Post-developed DA	DMA A	DMA B	DMA C	DMA D	DMA E	DMA F	DMA G	DMA H
1b Land Cover type								
2b Hydrologic Soil Group (HSG)								
3b DMA Area, ft^2 *sum of areas of DMA should equal area of DA*								
4b Curve Number (CN) *use Items 5 and 6 to select the appropriate CN from Appendix C-2 of the TGD for WQMP*								

5 Pre-Developed area-weighted CN:	**7** Pre-developed soil storage capacity, S (in): *S = (1000 / Item 5) - 10*	**9** Initial abstraction, I_a (in): *I_a = 0.2 * Item 7*
6 Post-Developed area-weighted CN:	**8** Post-developed soil storage capacity, S (in): *S = (1000 / Item 6) - 10*	**10** Initial abstraction, I_a (in): *I_a = 0.2 * Item 8*

11 Precipitation for 2 yr, 24 hr storm (in):
Go to: http://hdsc.nws.noaa.gov/hdsc/pfds/sa/sca_pfds.html

12 Pre-developed Volume (ft^3):
*V_{pre} =(1 / 12) * (Item sum of Item 3) * [(Item 11 – Item 9)^2 / ((Item 11 – Item 9 + Item 7)*

13 Post-developed Volume (ft^3):
*V_{pre} =(1 / 12) * (Item sum of Item 3) * [(Item 11 – Item 10)^2 / ((Item 11 – Item 10 + Item 8)*

14 Volume Reduction needed to meet HCOC Requirement, (ft^3):
*V_{HCOC} = (Item 13 * 0.95) – Item 12*

Form 4.2-4 HCOC Assessment for Time of Concentration (DA 1 & DA2)

Compute time of concentration for pre and post developed conditions for each DA *(For projects using the Hydrology Manual complete the form below)*

Variables	Pre-developed DA1 *Use additional forms if there are more than 4 DMA*				Post-developed DA1 *Use additional forms if there are more than 4 DMA*			
	DMA A	DMA B	DMA C	DMA D	DMA A	DMA B	DMA C	DMA D
1 Length of flowpath (ft) *Use Form 3-2 Item 5 for pre-developed condition*								
2 Change in elevation (ft)								
3 Slope (ft/ft), S_o *= Item 2 / Item 1*								
4 Land cover								
5 Initial DMA Time of Concentration (min) *Appendix C-1 of the TGD for WQMP*								
6 Length of conveyance from DMA outlet to project site outlet (ft) *May be zero if DMA outlet is at project site outlet*								
7 Cross-sectional area of channel (ft^2)								
8 Wetted perimeter of channel (ft)								
9 Manning's roughness of channel (n)								
10 Channel flow velocity (ft/sec) V_{fps} *= (1.49 / Item 9) * (Item 7/Item 8)^0.67 * (Item 3)^0.5*								
11 Travel time to outlet (min) T_t *= Item 6 / (Item 10 * 60)*								
12 Total time of concentration (min) T_c *= Item 5 + Item 11*								
13 Pre-developed time of concentration (min): *Minimum of Item 12 pre-developed DMA*								
14 Post-developed time of concentration (min): *Minimum of Item 12 post-developed DMA*								
15 Additional time of concentration needed to meet HCOC requirement (min): $T_{C\text{-}HCOC}$ *= (Item 13 * 0.95) – Item 14*								

Form 4.2-5 HCOC Assessment for Peak Runoff (DA 1 & DA2)

Compute peak runoff for pre- and post-developed conditions

Variables		Pre-developed DA to Project Outlet (*Use additional forms if more than 3 DMA)*			Post-developed DA to Project Outlet (*Use additional forms if more than 3 DMA)*		
		DMA A	DMA B	DMA C	DMA A	DMA B	DMA C
1 Rainfall Intensity for storm duration equal to time of concentration *I_{peak} = 10^(LOG Form 4.2-1 Item 4 - 0.6 LOG Form 4.2-4 Item 5 /60)*							
2 Drainage Area of each DMA (Acres) *For DMA with outlet at project site outlet, include upstream DMA (Using example schematic in Form 3-1, DMA A will include drainage from DMA C)*							
3 Ratio of pervious area to total area *For DMA with outlet at project site outlet, include upstream DMA (Using example schematic in Form 3-1, DMA A will include drainage from DMA C)*							
4 Pervious area infiltration rate (in/hr) *Use pervious area CN and antecedent moisture condition with Appendix C-3 of the TGD for WQMP*							
5 Maximum loss rate (in/hr) *F_m = Item 3 * Item 4* *Use area-weighted F_m from DMA with outlet at project site outlet, include upstream DMA (Using example schematic in Form 3-1, DMA A will include drainage from DMA C)*							
6 Peak Flow from DMA (cfs) *Q_p =Item 2 * 0.9 * (Item 1 - Item 5)*							
7 Time of concentration adjustment factor for other DMA to site discharge point *Form 4.2-4 Item 12 DMA / Other DMA upstream of site discharge point (If ratio is greater than 1.0, then use maximum value of 1.0)*	DMA A	*n/a*			*n/a*		
	DMA B		*n/a*			*n/a*	
	DMA C			*n/a*			*n/a*

8 Pre-developed Q_p at T_c for DMA A: *Q_p = Item 6_{DMAA} + [Item 6_{DMAB} * (Item 1_{DMAA} - Item 5_{DMAB})/(Item 1_{DMAB} - Item 5_{DMAB})* Item $7_{DMAA/2}$] + [Item 6_{DMAC} * (Item 1_{DMAA} - Item 5_{DMAC})/(Item 1_{DMAC} - Item 5_{DMAC})* Item $7_{DMAA/3}$]*	**9** Pre-developed Q_p at T_c for DMA B: *Q_p = Item 6_{DMAB} + [Item 6_{DMAA} * (Item 1_{DMAB} - Item 5_{DMAA})/(Item 1_{DMAA} - Item 5_{DMAA})* Item $7_{DMAB/1}$] + [Item 6_{DMAC} * (Item 1_{DMAB} - Item 5_{DMAC})/(Item 1_{DMAC} - Item 5_{DMAC})* Item $7_{DMAB/3}$]*	**10** Pre-developed Q_p at T_c for DMA C: *Q_p = Item 6_{DMAC} + [Item 6_{DMAA} * (Item 1_{DMAC} - Item 5_{DMAA})/(Item 1_{DMAA} - Item 5_{DMAA})* Item $7_{DMAC/1}$] + [Item 6_{DMAB} * (Item 1_{DMAC} - Item 5_{DMAB})/(Item 1_{DMAB} - Item 5_{DMAB})* Item $7_{DMAC/2}$]*
10 Peak runoff from pre-developed condition confluence analysis (cfs): *Maximum of Item 8, 9, and 10 (including additional forms as needed)*		
11 Post-developed Q_p at T_c for DMA A: *Same as Item 8 for post-developed values*	**12** Post-developed Q_p at T_c for DMA B: *Same as Item 9 for post-developed values*	**13** Post-developed Q_p at T_c for DMA C: *Same as Item 10 for post-developed values*
14 Peak runoff from post-developed condition confluence analysis (cfs): *Maximum of Item 11, 12, and 13 (including additional forms as needed)*		
15 Peak runoff reduction needed to meet HCOC Requirement (cfs): *$Q_{p\text{-}HCOC}$ = (Item 14 * 0.95) – Item 10*		

4.3 Project Conformance Analysis

Complete the following forms for each project site DA to document that the proposed LID BMPs conform to the project DCV developed to meet performance criteria specified in the MS4 Permit (WQMP Template Section 4.2). For the LID DCV, the forms are ordered according to hierarchy of BMP selection as required by the MS4 Permit (see Section 5.3.1 in the TGD for WQMP). The forms compute the following for on-site LID BMP:

- Site Design and Hydrologic Source Controls (Form 4.3-2)
- Retention and Infiltration (Form 4.3-3)
- Harvested and Use (Form 4.3-4) or
- Biotreatment (Form 4.3-5).

At the end of each form, additional fields facilitate the determination of the extent of mitigation provided by the specific BMP category, allowing for use of the next category of BMP in the hierarchy, if necessary.

The first step in the analysis, using Section 5.3.2.1 of the TGD for WQMP, is to complete Forms 4.3-1 and 4.3-3) to determine if retention and infiltration BMPs are infeasible for the project. For each feasibility criterion in Form 4.3-1, if the answer is "Yes," provide all study findings that includes relevant calculations, maps, data sources, etc. used to make the determination of infeasibility.

Next, complete Forms 4.3-2 and 4.3-4 to determine the feasibility of applicable HSC and harvest and use BMPs, and, if their implementation is feasible, the extent of mitigation of the DCV.

If no site constraints exist that would limit the type of BMP to be implemented in a DA, evaluate the use of combinations of LID BMPs, including all applicable HSC BMPs to maximize on-site retention of the DCV. If no combination of BMP can mitigate the entire DCV, implement the single BMP type, or combination of BMP types, that maximizes on-site retention of the DCV within the minimum effective area.

If the combination of LID HSC, retention and infiltration, and harvest and use BMPs are unable to mitigate the entire DCV, then biotreatment BMPs may be implemented by the project proponent. If biotreatment BMPs are used, then they must be sized to provide sufficient capacity for effective treatment of the remainder of the volume-based performance criteria that cannot be achieved with LID BMPs (TGD for WQMP Section 5.4.4.2). **Under no circumstances shall any portion of the DCV be released from the site without effective mitigation and/or treatment**.

Form 4.3-1 Infiltration BMP Feasibility (DA 1)

Feasibility Criterion – Complete evaluation for each DA on the Project Site

[1] Would infiltration BMP pose significant risk for groundwater related concerns? Yes ☐ No ☒
Refer to Section 5.3.2.1 of the TGD for WQMP

If Yes, Provide basis: (attach)

[2] Would installation of infiltration BMP significantly increase the risk of geotechnical hazards? Yes ☐ No ☒
(Yes, if the answer to any of the following questions is yes, as established by a geotechnical expert):

- The location is less than 50 feet away from slopes steeper than 15 percent
- The location is less than eight feet from building foundations or an alternative setback.
- A study certified by a geotechnical professional or an available watershed study determines that stormwater infiltration would result in significantly increased risks of geotechnical hazards.

If Yes, Provide basis: (attach)

[3] Would infiltration of runoff on a Project site violate downstream water rights? Yes ☐ No ☒

If Yes, Provide basis: (attach)

[4] Is proposed infiltration facility located on hydrologic soil group (HSG) D soils or does the site geotechnical investigation indicate presence of soil characteristics, which support categorization as D soils? Yes ☐ No ☒

If Yes, Provide basis: (attach)

[5] Is the design infiltration rate, after accounting for safety factor of 2.0, below proposed facility less than 0.3 in/hr (accounting for soil amendments)? Yes ☐ No ☒

If Yes, Provide basis: (attach)

[6] Would on-site infiltration or reduction of runoff over pre-developed conditions be partially or fully inconsistent with watershed management strategies as defined in the WAP, or impair beneficial uses? Yes ☐ No ☒
See Section 3.5 of the TGD for WQMP and WAP

If Yes, Provide basis: (attach)

[7] Any answer from Item 1 through Item 3 is "Yes": Yes ☐ No ☒
If yes, infiltration of any volume is not feasible onsite. Proceed to Form 4.3-4, Harvest and Use BMP. If no, then proceed to Item 8 below.

[8] Any answer from Item 4 through Item 6 is "Yes": Yes ☐ No ☒
If yes, infiltration is permissible but is not required to be considered. Proceed to Form 4.3-2, Hydrologic Source Control BMP. If no, then proceed to Item 9, below.

[9] All answers to Item 1 through Item 6 are "No":
Infiltration of the full DCV is potentially feasible, LID infiltration BMP must be designed to infiltrate the full DCV to the MEP. Proceed to Form 4.3-2, Hydrologic Source Control BMP.

4.3.1 Site Design Hydrologic Source Control BMP

Section XI.E. of the Permit emphasizes the use of LID preventative measures; and the use of LID HSC BMPs reduces the portion of the DCV that must be addressed in downstream BMPs. Therefore, all applicable HSC shall be provided except where they are mutually exclusive with each other, or with other BMPs. Mutual exclusivity may result from overlapping BMP footprints such that either would be potentially feasible by itself, but both could not be implemented. Please note that while there are no numeric standards regarding the use of HSC, if a project cannot feasibly meet BMP sizing requirements or cannot fully address HCOCs, feasibility of all applicable HSC must be part of demonstrating that the BMP system has been designed to retain the maximum feasible portion of the DCV. Complete Form 4.3-2 to identify and calculate estimated retention volume from implementing site design HSC BMP. Refer to Section 5.4.1 in the TGD for more detailed guidance.

Form 4.3-2 Site Design Hydrologic Source Control BMPs (DA 1&DA2)

1 Implementation of Impervious Area Dispersion BMP (i.e. routing runoff from impervious to pervious areas), excluding impervious areas planned for routing to on-lot infiltration BMP: Yes ☐ No ☒ *If yes, complete Items 2-5; If no, proceed to Item 6*	DA DMA BMP Type	DA DMA BMP Type	DA DMA BMP Type *(Use additional forms for more BMPs)*
2 Total impervious area draining to pervious area (ft^2)	N/A		
3 Ratio of pervious area receiving runoff to impervious area	N/A		
4 Retention volume achieved from impervious area dispersion (ft^3) *V = Item2 * Item 3 * (0.5/12), assuming retention of 0.5 inches of runoff*	N/A		
5 Sum of retention volume achieved from impervious area dispersion (ft^3): N/A *$V_{retention}$ =Sum of Item 4 for all BMPs*			
6 Implementation of Localized On-lot Infiltration BMPs (e.g. on-lot rain gardens): Yes ☐ No ☒ *If yes, complete Items 7-13 for aggregate of all on-lot infiltration BMP in each DA; If no, proceed to Item 14*	DA DMA BMP Type	DA DMA BMP Type	DA DMA BMP Type *(Use additional forms for more BMPs)*
7 Ponding surface area (ft^2)	N/A		
8 Ponding depth (ft)	N/A		
9 Surface area of amended soil/gravel (ft^2)	N/A		
10 Average depth of amended soil/gravel (ft)	N/A		
11 Average porosity of amended soil/gravel	N/A		
12 Retention volume achieved from on-lot infiltration (ft^3) *$V_{retention}$ = (Item 7 *Item 8) + (Item 9 * Item 10 * Item 11)*	N/A		
13 Runoff volume retention from on-lot infiltration (ft^3): N/A *$V_{retention}$ =Sum of Item 12 for all BMPs*			

Form 4.3-2 cont. Site Design Hydrologic Source Control BMPs (DA 1 & DA2)

14 Implementation of evapotranspiration BMP (green, brown, or blue roofs): Yes ☐ No ☒ *If yes, complete Items 15-20. If no, proceed to Item 21*	DA DMA BMP Type	DA DMA BMP Type	DA DMA BMP Type *(Use additional forms for more BMPs)*
15 Rooftop area planned for ET BMP (ft^2)	N/A		
16 Average wet season ET demand (in/day) *Use local values, typical ~ 0.1*	N/A		
17 Daily ET demand (ft^3/day) *Item 15 * (Item 16 / 12)*	N/A		
18 Drawdown time (hrs) *Copy Item 6 in Form 4.2-1*	N/A		
19 Retention Volume (ft^3) $V_{retention}$ *= Item 17 * (Item 18 / 24)*	N/A		
20 Runoff volume retention from evapotranspiration BMPs (ft^3): N/A $V_{retention}$ *=Sum of Item 19 for all BMPs*			
21 Implementation of Street Trees: Yes ☐ No ☒ *If yes, complete Items 22-25. If no, proceed to Item 26*	DA DMA BMP Type	DA DMA BMP Type	DA DMA BMP Type *(Use additional forms for more BMPs)*
22 Number of Street Trees	N/A		
23 Average canopy cover over impervious area (ft^2)	N/A		
24 Runoff volume retention from street trees (ft^3) $V_{retention}$ *= Item 22 * Item 23 * (0.05/12) assume runoff retention of 0.05 inches*	N/A		
25 Runoff volume retention from street tree BMPs (ft^3): N/A $V_{retention}$ *= Sum of Item 24 for all BMPs*			
26 Implementation of residential rain barrel/cisterns: Yes☐ No ☒ *If yes, complete Items 27-29; If no, proceed to Item 30*	DA DMA BMP Type	DA DMA BMP Type	DA DMA BMP Type *(Use additional forms for more BMPs)*
27 Number of rain barrels/cisterns	N/A		
28 Runoff volume retention from rain barrels/cisterns (ft^3) $V_{retention}$ *= Item 27 * 3*	N/A		
29 Runoff volume retention from residential rain barrels/Cisterns (ft3): N/A $V_{retention}$ *=Sum of Item 28 for all BMPs*			
30 Total Retention Volume from Site Design Hydrologic Source Control BMPs: N/A *Sum of Items 5, 13, 20, 25 and 29*			

4.3.2 Infiltration BMPs

Use Form 4.3-3 to compute on-site retention of runoff from proposed retention and infiltration BMPs. Volume retention estimates are sensitive to the percolation rate used, which determines the amount of runoff that can be infiltrated within the specified drawdown time. The infiltration safety factor reduces field measured percolation to account for potential inaccuracy associated with field measurements, declining BMP performance over time, and compaction during construction. Appendix D of the TGD for WQMP provides guidance on estimating an appropriate safety factor to use in Form 4.3-3.

If site constraints limit the use of BMPs to a single type and implementation of retention and infiltration BMPs mitigate no more than 40% of the DCV, then they are considered infeasible and the Project Proponent may evaluate the effectiveness of BMPs lower in the LID hierarchy of use (Section 5.5.1 of the TGD for WQMP)

If implementation of infiltrations BMPs is feasible as determined using Form 4.3-1, then LID infiltration BMPs shall be implemented to the MEP (section 4.1 of the TGD for WQMP).

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Form 4.3-3 Infiltration LID BMP - including underground BMPs (DA 1)

1 Remaining LID DCV not met by site design HSC BMP (ft^3): 186,684 *V_{unmet} = Form 4.2-1 Item 7 - Form 4.3-2 Item 30*

BMP Type *Use columns to the right to compute runoff volume retention from proposed infiltration BMP (select BMP from Table 5-4 in TGD for WQMP) - Use additional forms for more BMPs*	DA 1 DMA 1 BMP Type Infiltration Basin	DA DMA BMP Type	DA DMA BMP Type *(Use additional forms for more BMPs)*
2 Infiltration rate of underlying soils (in/hr) *See Section 5.4.2 and Appendix D of the TGD for WQMP for minimum requirements for assessment methods*	3.0		
3 Infiltration safety factor *See TGD Section 5.4.2 and Appendix D*	3.4		
4 Design percolation rate (in/hr) *P_{design} = Item 2 / Item 3*	0.9		
5 Ponded water drawdown time (hr) *Copy Item 6 in Form 4.2-1*	48		
6 Maximum ponding depth (ft) *BMP specific, see Table 5-4 of the TGD for WQMP for BMP design details*	5		
7 Ponding Depth (ft) *d_{BMP} = Minimum of (1/12*Item 4*Item 5) or Item 6*	3.6		
8 Infiltrating surface area, SA_{BMP} (ft^2) *the lesser of the area needed for infiltration of full DCV or minimum space requirements from Table 5.7 of the TGD for WQMP*	81,206		
9 Amended soil depth, d_{media} (ft) *Only included in certain BMP types, see Table 5-4 in the TGD for WQMP for reference to BMP design details*	N/A		
10 Amended soil porosity	N/A		
11 Gravel depth, d_{media} (ft) *Only included in certain BMP types, see Table 5-4 of the TGD for WQMP for BMP design details*	N/A		
12 Gravel porosity	N/A		
13 Duration of storm as basin is filling (hrs) *Typical ~ 3hrs*	3		
14 Above Ground Retention Volume (ft^3) *$V_{retention}$ = Item 8 * [Item7 + (Item 9 * Item 10) + (Item 11 * Item 12) + (Item 13 * (Item 4 / 12))]*	310,613		
15 Underground Retention Volume (ft^3) *Volume determined using manufacturer's specifications and calculations*	N/A		

16 Total Retention Volume from LID Infiltration BMPs: 310,613 *(Sum of Items 14 and 15 for all infiltration BMP included in plan)*

17 Fraction of DCV achieved with infiltration BMP: 166% *Retention% = Item 16 / Form 4.2-1 Item 7*

18 Is full LID DCV retained onsite with combination of hydrologic source control and LID retention/infiltration BMPs? Yes ☒ No ☐

If yes, demonstrate conformance using Form 4.3-10; If no, then reduce Item 3, Factor of Safety to 2.0 and increase Item 8, Infiltrating Surface Area, such that the portion of the site area used for retention and infiltration BMPs equals or exceeds the minimum effective area thresholds (Table 5-7 of the TGD for WQMP) for the applicable category of development and repeat all above calculations.

Form 4.3-3 Infiltration LID BMP - including underground BMPs (DA 2)

1 Remaining LID DCV not met by site design HSC BMP (ft³): 975 *V_{unmet} = Form 4.2-1 Item 7 - Form 4.3-2 Item 30*

BMP Type *Use columns to the right to compute runoff volume retention from proposed infiltration BMP (select BMP from Table 5-4 in TGD for WQMP) - Use additional forms for more BMPs*	DA 2 DMA 2 BMP Type Infiltration Trench	DA DMA BMP Type	DA DMA BMP Type *(Use additional forms for more BMPs)*
2 Infiltration rate of underlying soils (in/hr) *See Section 5.4.2 and Appendix D of the TGD for WQMP for minimum requirements for assessment methods*	1.6		
3 Infiltration safety factor *See TGD Section 5.4.2 and Appendix D*	3.4		
4 Design percolation rate (in/hr) *P_{design} = Item 2 / Item 3*	0.5		
5 Ponded water drawdown time (hr) *Copy Item 6 in Form 4.2-1*	48		
6 Maximum ponding depth (ft) *BMP specific, see Table 5-4 of the TGD for WQMP for BMP design details*	0.5		
7 Ponding Depth (ft) *d_{BMP} = Minimum of (1/12*Item 4*Item 5) or Item 6*	0.5		
8 Infiltrating surface area, SA_{BMP} (ft²) *the lesser of the area needed for infiltration of full DCV or minimum space requirements from Table 5.7 of the TGD for WQMP*	846		
9 Amended soil depth, d_{media} (ft) *Only included in certain BMP types, see Table 5-4 in the TGD for WQMP for reference to BMP design details*	N/A		
10 Amended soil porosity	N/A		
11 Gravel depth, d_{media} (ft) *Only included in certain BMP types, see Table 5-4 of the TGD for WQMP for BMP design details*	4		
12 Gravel porosity	0.4		
13 Duration of storm as basin is filling (hrs) *Typical ~ 3hrs*	3		
14 Above Ground Retention Volume (ft³) *$V_{retention}$ = Item 8 * [Item7 + (Item 9 * Item 10) + (Item 11 * Item 12) + (Item 13 * (Item 4 / 12))]*	1,882		
15 Underground Retention Volume (ft³) *Volume determined using manufacturer's specifications and calculations*	N/A		

16 Total Retention Volume from LID Infiltration BMPs: 1,882 *(Sum of Items 14 and 15 for all infiltration BMP included in plan)*

17 Fraction of DCV achieved with infiltration BMP: 193% *Retention% = Item 16 / Form 4.2-1 Item 7*

18 Is full LID DCV retained onsite with combination of hydrologic source control and LID retention/infiltration BMPs? Yes ☒ No ☐

If yes, demonstrate conformance using Form 4.3-10; If no, then reduce Item 3, Factor of Safety to 2.0 and increase Item 8, Infiltrating Surface Area, such that the portion of the site area used for retention and infiltration BMPs equals or exceeds the minimum effective area thresholds (Table 5-7 of the TGD for WQMP) for the applicable category of development and repeat all above calculations.

4.3.3 Harvest and Use BMP

Harvest and use BMP may be considered if the full LID DCV cannot be met by maximizing infiltration BMPs. Use Form 4.3-4 to compute on-site retention of runoff from proposed harvest and use BMPs.

Volume retention estimates for harvest and use BMPs are sensitive to the on-site demand for captured stormwater. Since irrigation water demand is low in the wet season, when most rainfall events occur in San Bernardino County, the volume of water that can be used within a specified drawdown period is relatively low. The bottom portion of Form 4.3-4 facilitates the necessary computations to show infeasibility if a minimum incremental benefit of 40 percent of the LID DCV would not be achievable with MEP implementation of on-site harvest and use of stormwater (Section 5.5.4 of the TGD for WQMP).

Form 4.3-4 Harvest and Use BMPs (DA 1& DA2)

1 Remaining LID DCV not met by site design HSC or infiltration BMP (ft^3): N/A *V_{unmet} = Form 4.2-1 Item 7 - Form 4.3-2 Item 30 – Form 4.3-3 Item 16*			
BMP Type(s) *Compute runoff volume retention from proposed harvest and use BMP (Select BMPs from Table 5-4 of the TGD for WQMP) - Use additional forms for more BMPs*	DA DMA BMP Type	DA DMA BMP Type	DA DMA BMP Type *(Use additional forms for more BMPs)*
2 Describe cistern or runoff detention facility			
3 Storage volume for proposed detention type (ft^3) *Volume of cistern*			
4 Landscaped area planned for use of harvested stormwater (ft^2)			
5 Average wet season daily irrigation demand (in/day) Use local values, typical ~ 0.1 in/day			
6 Daily water demand (ft^3/day) *Item 4 * (Item 5 / 12)*			
7 Drawdown time (hrs) *Copy Item 6 from Form 4.2-1*			
8 Retention Volume (ft^3) *$V_{retention}$ = Minimum of (Item 3) or (Item 6 * (Item 7 / 24))*			
9 Total Retention Volume (ft^3) from Harvest and Use BMP *Sum of Item 8 for all harvest and use BMP included in plan*			
10 Is the full DCV retained with a combination of LID HSC, retention and infiltration, and harvest & use BMPs? Yes ☐ No ☐ *If yes, demonstrate conformance using Form 4.3-10. If no, then re-evaluate combinations of all LID BMP and optimize their implementation such that the maximum portion of the DCV is retained on-site (using a single BMP type or combination of BMP types). If the full DCV cannot be mitigated after this optimization process, proceed to Section 4.3.4.*			

4.3.4 Biotreatment BMP

Biotreatment BMPs may be considered if the full LID DCV cannot be met by maximizing retention and infiltration, and harvest and use BMPs. A key consideration when using biotreatment BMP is the effectiveness of the proposed BMP in addressing the pollutants of concern for the project (see Table 5-5 of the TGD for WQMP).

Use Form 4.3-5 to summarize the potential for volume based and/or flow based biotreatment options to biotreat the remaining unmet LID DCV w. Biotreatment computations are included as follows:

- Use Form 4.3-6 to compute biotreatment in small volume based biotreatment BMP (e.g. bioretention w/underdrains);
- Use Form 4.3-7 to compute biotreatment in large volume based biotreatment BMP (e.g. constructed wetlands);
- Use Form 4.3-8 to compute sizing criteria for flow-based biotreatment BMP (e.g. bioswales)

Form 4.3-5 Selection and Evaluation of Biotreatment BMP (DA 1&DA2)

1 Remaining LID DCV not met by site design HSC, infiltration, or harvest and use BMP for potential biotreatment (ft^3): N/A *Form 4.2-1 Item 7 - Form 4.3-2 Item 30 – Form 4.3-3 Item 16- Form 4.3-4 Item 9*	List pollutants of concern *Copy from Form 2.3-1.*	
2 Biotreatment BMP Selected *(Select biotreatment BMP(s) necessary to ensure all pollutants of concern are addressed through Unit Operations and Processes, described in Table 5-5 of the TGD for WQMP)*	Volume-based biotreatment *Use Forms 4.3-6 and 4.3-7 to compute treated volume*	Flow-based biotreatment *Use Form 4.3-8 to compute treated volume*
	☐ Bioretention with underdrain ☐ Planter box with underdrain ☐ Constructed wetlands ☐ Wet extended detention ☐ Dry extended detention	☐ Vegetated swale ☐ Vegetated filter strip ☐ Proprietary biotreatment
3 Volume biotreated in volume based biotreatment BMP (ft^3): *Form 4.3-6 Item 15 + Form 4.3-7 Item 13*	**4** Compute remaining LID DCV with implementation of volume based biotreatment BMP (ft^3): *Item 1 – Item 3*	**5** Remaining fraction of LID DCV for sizing flow based biotreatment BMP: % *Item 4 / Item 1*
6 Flow-based biotreatment BMP capacity provided (cfs): *Use Figure 5-2 of the TGD for WQMP to determine flow capacity required to provide biotreatment of remaining percentage of unmet LID DCV (Item 5), for the project's precipitation zone (Form 3-1 Item 1)*		
7 Metrics for MEP determination: • Provided a WQMP with the portion of site area used for suite of LID BMP equal to minimum thresholds in Table 5-7 of the TGD for WQMP for the proposed category of development: ☐ *If maximized on-site retention BMPs is feasible for partial capture, then LID BMP implementation must be optimized to retain and infiltrate the maximum portion of the DCV possible within the prescribed minimum effective area. The remaining portion of the DCV shall then be mitigated using biotreatment BMP.*		

Form 4.3-6 Volume Based Biotreatment (DA 1&DA2) – Bioretention and Planter Boxes with Underdrains

Biotreatment BMP Type *(Bioretention w/underdrain, planter box w/underdrain, other comparable BMP)*	DA DMA BMP Type	DA DMA BMP Type	DA DMA BMP Type *(Use additional forms for more BMPs)*
1 Pollutants addressed with BMP *List all pollutant of concern that will be effectively reduced through specific Unit Operations and Processes described in Table 5-5 of the TGD for WQMP*			
2 Amended soil infiltration rate *Typical ~ 5.0*			
3 Amended soil infiltration safety factor *Typical ~ 2.0*			
4 Amended soil design percolation rate (in/hr) P_{design} *= Item 2 / Item 3*			
5 Ponded water drawdown time (hr) *Copy Item 6 from Form 4.2-1*			
6 Maximum ponding depth (ft) *see Table 5-6 of the TGD for WQMP for reference to BMP design details*			
7 Ponding Depth (ft) d_{BMP} *= Minimum of (1/12 * Item 4 * Item 5) or Item 6*			
8 Amended soil surface area (ft^2)			
9 Amended soil depth (ft) *see Table 5-6 of the TGD for WQMP for reference to BMP design details*			
10 Amended soil porosity, *n*			
11 Gravel depth (ft) *see Table 5-6 of the TGD for WQMP for reference to BMP design details*			
12 Gravel porosity, *n*			
13 Duration of storm as basin is filling (hrs) *Typical ~ 3hrs*			
14 Biotreated Volume (ft^3) $V_{biotreated}$ *= Item 8 * [(Item 7/2) + (Item 9 * Item 10) +(Item 11 * Item 12) + (Item 13 * (Item 4 / 12))]*			
15 Total biotreated volume from bioretention and/or planter box with underdrains BMP: *Sum of Item 14 for all volume-based BMPs included in this form*			

Form 4.3-7 Volume Based Biotreatment (DA 1&DA2) – Constructed Wetlands and Extended Detention

Biotreatment BMP Type *Constructed wetlands, extended wet detention, extended dry detention, or other comparable proprietary BMP. If BMP includes multiple modules (e.g. forebay and main basin), provide separate estimates for storage and pollutants treated in each module.*	DA DMA BMP Type		DA DMA BMP Type *(Use additional forms for more BMPs)*	
	Forebay	Basin	Forebay	Basin
1 Pollutants addressed with BMP forebay and basin *List all pollutant of concern that will be effectively reduced through specific Unit Operations and Processes described in Table 5-5 of the TGD for WQMP*				
2 Bottom width (ft)				
3 Bottom length (ft)				
4 Bottom area (ft^2) A_{bottom} = *Item 2 * Item 3*				
5 Side slope (ft/ft)				
6 Depth of storage (ft)				
7 Water surface area (ft^2) $A_{surface}$ =*(Item 2 + (2 * Item 5 * Item 6)) * (Item 3 + (2 * Item 5 * Item 6))*				
8 Storage volume (ft^3) *For BMP with a forebay, ensure fraction of total storage is within ranges specified in BMP specific fact sheets, see Table 5-6 of the TGD for WQMP for reference to BMP design details* V =*Item 6 / 3 * [Item 4 + Item 7 + (Item 4 * Item 7)^0.5]*				
9 Drawdown Time (hrs) *Copy Item 6 from Form 2.1*				
10 Outflow rate (cfs) Q_{BMP} = *(Item* $8_{forebay}$ + *Item* 8_{basin}*) / (Item 9 * 3600)*				
11 Duration of design storm event (hrs)				
12 Biotreated Volume (ft^3) $V_{biotreated}$ = *(Item* $8_{forebay}$ + *Item* 8_{basin}*) +(Item 10 * Item 11 * 3600)*				
13 Total biotreated volume from constructed wetlands, extended dry detention, or extended wet detention : *(Sum of Item 12 for all BMP included in plan)*				

Form 4.3-8 Flow Based Biotreatment (DA 1&DA2)

Biotreatment BMP Type *Vegetated swale, vegetated filter strip, or other comparable proprietary BMP*	DA DMA BMP Type	DA DMA BMP Type	DA DMA BMP Type *(Use additional forms for more BMPs)*
1 Pollutants addressed with BMP *List all pollutant of concern that will be effectively reduced through specific Unit Operations and Processes described in TGD Table 5-5*			
2 Flow depth for water quality treatment (ft) *BMP specific, see Table 5-6 of the TGD for WQMP for reference to BMP design details*			
3 Bed slope (ft/ft) *BMP specific, see Table 5-6 of the TGD for WQMP for reference to BMP design details*			
4 Manning's roughness coefficient			
5 Bottom width (ft) b_w *= (Form 4.3-5 Item 6 * Item 4) / (1.49 * Item 2^1.67 * Item 3^0.5)*			
6 Side Slope (ft/ft) *BMP specific, see Table 5-6 of the TGD for WQMP for reference to BMP design details*			
7 Cross sectional area (ft^2) *A = (Item 5 * Item 2) + (Item 6 * Item 2^2)*			
8 Water quality flow velocity (ft/sec) *V = Form 4.3-5 Item 6 / Item 7*			
9 Hydraulic residence time (min) *Pollutant specific, see Table 5-6 of the TGD for WQMP for reference to BMP design details*			
10 Length of flow based BMP (ft) *L = Item 8 * Item 9 * 60*			
11 Water surface area at water quality flow depth (ft^2) SA_{top} *= (Item 5 + (2 * Item 2 * Item 6)) * Item 10*			

4.3.5 Conformance Summary

Complete Form 4.3-9 to demonstrate how on-site LID DCV is met with proposed site design hydrologic source control, infiltration, harvest and use, and/or biotreatment BMP. The bottom line of the form is used to describe the basis for infeasibility determination for on-site LID BMP to achieve full LID DCV, and provides methods for computing remaining volume to be addressed in an alternative compliance plan. If the project has more than one outlet, then complete additional versions of this form for each outlet.

Form 4.3-9 Conformance Summary and Alternative Compliance Volume Estimate (DA 1)

1 Total LID DCV for the Project DA-1 (ft^3): 186,684 *Copy Item 7 in Form 4.2-1*

2 On-site retention with site design hydrologic source control LID BMP (ft^3): N/A *Copy Item 30 in Form 4.3-2*

3 On-site retention with LID infiltration BMP (ft^3): 310,613 *Copy Item 16 in Form 4.3-3*

4 On-site retention with LID harvest and use BMP (ft^3): N/A *Copy Item 9 in Form 4.3-4*

5 On-site biotreatment with volume based biotreatment BMP (ft^3): N/A *Copy Item 3 in Form 4.3-5*

6 Flow capacity provided by flow based biotreatment BMP (cfs): N/A *Copy Item 6 in Form 4.3-5*

7 LID BMP performance criteria are achieved if answer to any of the following is "Yes":

- Full retention of LID DCV with site design HSC, infiltration, or harvest and use BMP: Yes ☒ No ☐
  If yes, sum of Items 2, 3, and 4 is greater than Item 1
- Combination of on-site retention BMPs for a portion of the LID DCV and volume-based biotreatment BMP that address all pollutants of concern for the remaining LID DCV: Yes ☐ No ☐
  If yes, a) sum of Items 2, 3, 4, and 5 is greater than Item 1, and Items 2, 3 and 4 are maximized; or b) Item 6 is greater than Form 4.3--5 Item 6 and Items 2, 3 and 4 are maximized
- On-site retention and infiltration is determined to be infeasible and biotreatment BMP provide biotreatment for all pollutants of concern for full LID DCV: Yes ☐ No ☐
  If yes, Form 4.3-1 Items 7 and 8 were both checked yes

8 If the LID DCV is not achieved by any of these means, then the project may be allowed to develop an alternative compliance plan. Check box that describes the scenario which caused the need for alternative compliance:

- Combination of HSC, retention and infiltration, harvest and use, and biotreatment BMPs provide less than full LID DCV capture: ☐
  Checked yes for Form 4.3-5 Item 7, Item 6 is zero, and sum of Items 2, 3, 4, and 5 is less than Item 1. If so, apply water quality credits and calculate volume for alternative compliance, V_{alt} *= (Item 1 – Item 2 – Item 3 – Item 4 – Item 5) * (100 - Form 2.4-1 Item 2)%*
- An approved Watershed Action Plan (WAP) demonstrates that water quality and hydrologic impacts of urbanization are more effective when managed in at an off-site facility: ☐
  Attach appropriate WAP section, including technical documentation, showing effectiveness comparisons for the project site and regional watershed

Form 4.3-9 Conformance Summary and Alternative Compliance Volume Estimate (DA 2)

1 Total LID DCV for the Project DA-1 (ft^3): 975 *Copy Item 7 in Form 4.2-1*

2 On-site retention with site design hydrologic source control LID BMP (ft^3): N/A *Copy Item 30 in Form 4.3-2*

3 On-site retention with LID infiltration BMP (ft^3): 1,882 *Copy Item 16 in Form 4.3-3*

4 On-site retention with LID harvest and use BMP (ft^3): N/A *Copy Item 9 in Form 4.3-4*

5 On-site biotreatment with volume based biotreatment BMP (ft^3): N/A *Copy Item 3 in Form 4.3-5*

6 Flow capacity provided by flow based biotreatment BMP (cfs): N/A *Copy Item 6 in Form 4.3-5*

7 LID BMP performance criteria are achieved if answer to any of the following is "Yes":

- Full retention of LID DCV with site design HSC, infiltration, or harvest and use BMP: Yes ☒ No ☐
  If yes, sum of Items 2, 3, and 4 is greater than Item 1
- Combination of on-site retention BMPs for a portion of the LID DCV and volume-based biotreatment BMP that address all pollutants of concern for the remaining LID DCV: Yes ☐ No ☐
  If yes, a) sum of Items 2, 3, 4, and 5 is greater than Item 1, and Items 2, 3 and 4 are maximized; or b) Item 6 is greater than Form 4.3--5 Item 6 and Items 2, 3 and 4 are maximized
- On-site retention and infiltration is determined to be infeasible and biotreatment BMP provide biotreatment for all pollutants of concern for full LID DCV: Yes ☐ No ☐
  If yes, Form 4.3-1 Items 7 and 8 were both checked yes

8 If the LID DCV is not achieved by any of these means, then the project may be allowed to develop an alternative compliance plan. Check box that describes the scenario which caused the need for alternative compliance:

- Combination of HSC, retention and infiltration, harvest and use, and biotreatment BMPs provide less than full LID DCV capture: ☐
  *Checked yes for Form 4.3-5 Item 7, Item 6 is zero, and sum of Items 2, 3, 4, and 5 is less than Item 1. If so, apply water quality credits and calculate volume for alternative compliance, V_{alt} = (Item 1 – Item 2 – Item 3 – Item 4 – Item 5) * (100 - Form 2.4-1 Item 2)%*
- An approved Watershed Action Plan (WAP) demonstrates that water quality and hydrologic impacts of urbanization are more effective when managed in at an off-site facility: ☐
  Attach appropriate WAP section, including technical documentation, showing effectiveness comparisons for the project site and regional watershed

4.3.6 Hydromodification Control BMP

Use Form 4.3-10 to compute the remaining runoff volume retention, after LID BMP are implemented, needed to address HCOC, and the increase in time of concentration and decrease in peak runoff necessary to meet targets for protection of waterbodies with a potential HCOC. Describe hydromodification control BMP that address HCOC, which may include off-site BMP and/or in-stream controls. Section 5.6 of the TGD for WQMP provides additional details on selection and evaluation of hydromodification control BMP.

Form 4.3-10 Hydromodification Control BMPs (DA 1&DA2)

1 Volume reduction needed for HCOC performance criteria (ft^3): N/A *(Form 4.2-2 Item 4 * 0.95) – Form 4.2-2 Item 1*	**2** On-site retention with site design hydrologic source control, infiltration, and harvest and use LID BMP (ft^3): *Sum of Form 4.3-9 Items 2, 3, and 4 Evaluate option to increase implementation of on-site retention in Forms 4.3-2, 4.3-3, and 4.3-4 in excess of LID DCV toward achieving HCOC volume reduction*
3 Remaining volume for HCOC volume capture (ft^3): *Item 1 – Item 2*	**4** Volume capture provided by incorporating additional on-site or off-site retention BMPs (ft^3): *Existing downstream BMP may be used to demonstrate additional volume capture (if so, attach to this WQMP a hydrologic analysis showing how the additional volume would be retained during a 2-yr storm event for the regional watershed)*

5 If Item 4 is less than Item 3, incorporate in-stream controls on downstream waterbody segment to prevent impacts due to hydromodification ☐ *Attach in-stream control BMP selection and evaluation to this WQMP*

6 Is Form 4.2-2 Item 11 less than or equal to 5%: Yes ☐ No ☐

If yes, HCOC performance criteria is achieved. If no, select one or more mitigation options below:

- Demonstrate increase in time of concentration achieved by proposed LID site design, LID BMP, and additional on-site or off-site retention BMP ☐
  BMP upstream of a waterbody segment with a potential HCOC may be used to demonstrate increased time of concentration through hydrograph attenuation (if so, show that the hydraulic residence time provided in BMP for a 2-year storm event is equal or greater than the addition time of concentration requirement in Form 4.2-4 Item 15)
- Increase time of concentration by preserving pre-developed flow path and/or increase travel time by reducing slope and increasing cross-sectional area and roughness for proposed on-site conveyance facilities ☐
- Incorporate appropriate in-stream controls for downstream waterbody segment to prevent impacts due to hydromodification, in a plan approved and signed by a licensed engineer in the State of California ☐

7 Form 4.2-2 Item 12 less than or equal to 5%: Yes ☐ No ☐

If yes, HCOC performance criteria is achieved. If no, select one or more mitigation options below:

- Demonstrate reduction in peak runoff achieved by proposed LID site design, LID BMPs, and additional on-site or off-site retention BMPs ☐
  BMPs upstream of a waterbody segment with a potential HCOC may be used to demonstrate additional peak runoff reduction through hydrograph attenuation (if so, attach to this WQMP, a hydrograph analysis showing how the peak runoff would be reduced during a 2-yr storm event)
- Incorporate appropriate in-stream controls for downstream waterbody segment to prevent impacts due to hydromodification, in a plan approved and signed by a licensed engineer in the State of California ☐

4.4 Alternative Compliance Plan (if applicable)

Describe an alternative compliance plan (if applicable) for projects not fully able to infiltrate, harvest and use, or biotreat the DCV via on-site LID practices. A project proponent must develop an alternative compliance plan to address the remainder of the LID DCV. Depending on project type some projects may qualify for water quality credits that can be applied to reduce the DCV that must be treated prior to development of an alternative compliance plan (see Form 2.4-1, Water Quality Credits). Form 4.3-9 Item 8 includes instructions on how to apply water quality credits when computing the DCV that must be met through alternative compliance. Alternative compliance plans may include one or more of the following elements:

- On-site structural treatment control BMP - All treatment control BMP should be located as close to possible to the pollutant sources and should not be located within receiving waters;
- Off-site structural treatment control BMP - Pollutant removal should occur prior to discharge of runoff to receiving waters;
- Urban runoff fund or In-lieu program, if available

Depending upon the proposed alternative compliance plan, approval by the executive officer may or may not be required (see Section 6 of the TGD for WQMP).

Section 5 Inspection and Maintenance Responsibility for Post Construction BMP

All BMP included as part of the project WQMP are required to be maintained through regular scheduled inspection and maintenance (refer to Section 8, Post Construction BMP Requirements, in the TGD for WQMP). Fully complete Form 5-1 summarizing all BMP included in the WQMP. Attach additional forms as needed. The WQMP shall also include a detailed Operation and Maintenance Plan for all BMP and may require a Maintenance Agreement (consult the jurisdiction's LIP). If a Maintenance Agreement is required, it must also be attached to the WQMP.

Form 5-1 BMP Inspection and Maintenance (use additional forms as necessary)

BMP	Reponsible Party(s)	Inspection/ Maintenance Activities Required	Minimum Frequency of Activities
Education for Property Owners and Employees	Property Owner	Distribute educational materials and conduct annual awareness training	Upon first occupancy and yearly thereafter
Activity Restrictions	Property Owner	The owner will restrict activities which may have a negative impact on storm water quality. Restrictions shall include prohibiting the storage of outdoor material, vehicle and equipment washing, outdoor processing, fueling up and wash water control for food preparation.	Continuous
Street Sweeping of Private Street & Parking Lots	Property Owner	Inspect parking lots for trash and accumulation of dust and debris. Street sweeping shall be conducted monthly.	Inspections -Monthly. Maintenance - Monthly.
Drainage Facility Inspection and Maintenance	Property Owner	Inspect twice annually in the early fall before the rainy season and in the late Spring after the rainy season. Remove debris/sediment build-up.	Inspect twice annually, once before and after the rainy season and after extreme storm events. Maintenance as needed.
Landscape Planning & maintenance . See below.	Property Owner	Mow, weed, & trim vegetation. Inspect inlet & outlet structures. Re-vegetate bare areas. See below for further details.	Inspect weekly. Maintenance as needed.
Efficient Irrigation	Property Owner	Repair and maintain leaky/broken sprinkler heads. See below for further details.	Inspect weekly and maintain as needed

Litter Control	Property Owner	Inspect areas for accumulation of trash and debris and haul trash off-site to City refuse.	Check Daily and empty as needed.
Water Quality Basin	Property Owner	Monthly inspections should occur for debris and litter removal and signs of ponding issues such as odors, insects, and overgrowth. Prior to October 1, conduct annual inspections and maintenance for erosion, clogging of outlets, standing water issues, and adequacy of infiltration. Visually inspect infiltration basin on a monthly basis because of their importance for water quality management and post-construction storm water pollution prevention. One of these inspections should be before October 1 and one should be after May 1. Remove litter, debris, and dead vegetation. Re-vegetate as needed. Check for signs of ponding issues such as odors, clogging of outlets, standing water, erosion, and adequacy of infiltration. Remove accumulated sediment and re-grade when the accumulated sediment volume is greater than 10% of the basin volume.	Inspect twice annually, once before and after the rainy season and after extreme storm events. Maintenance as needed.

Section 6 WQMP Attachments

6.1. Site Plan and Drainage Plan

Include a site plan and drainage plan sheet set containing the following minimum information:

- Project location
- Site boundary
- Land uses and land covers, as applicable
- Suitability/feasibility constraints
- Structural Source Control BMP locations
- Site Design Hydrologic Source Control BMP locations
- LID BMP details
- Drainage delineations and flow information
- Drainage connections

6.2 Electronic Data Submittal

Minimum requirements include submittal of PDF exhibits in addition to hard copies. Format must not require specialized software to open. If the local jurisdiction requires specialized electronic document formats (as described in their Local Implementation Plan), this section will describe the contents (e.g., layering, nomenclature, geo-referencing, etc.) of these documents so that they may be interpreted efficiently and accurately.

6.3 Post Construction

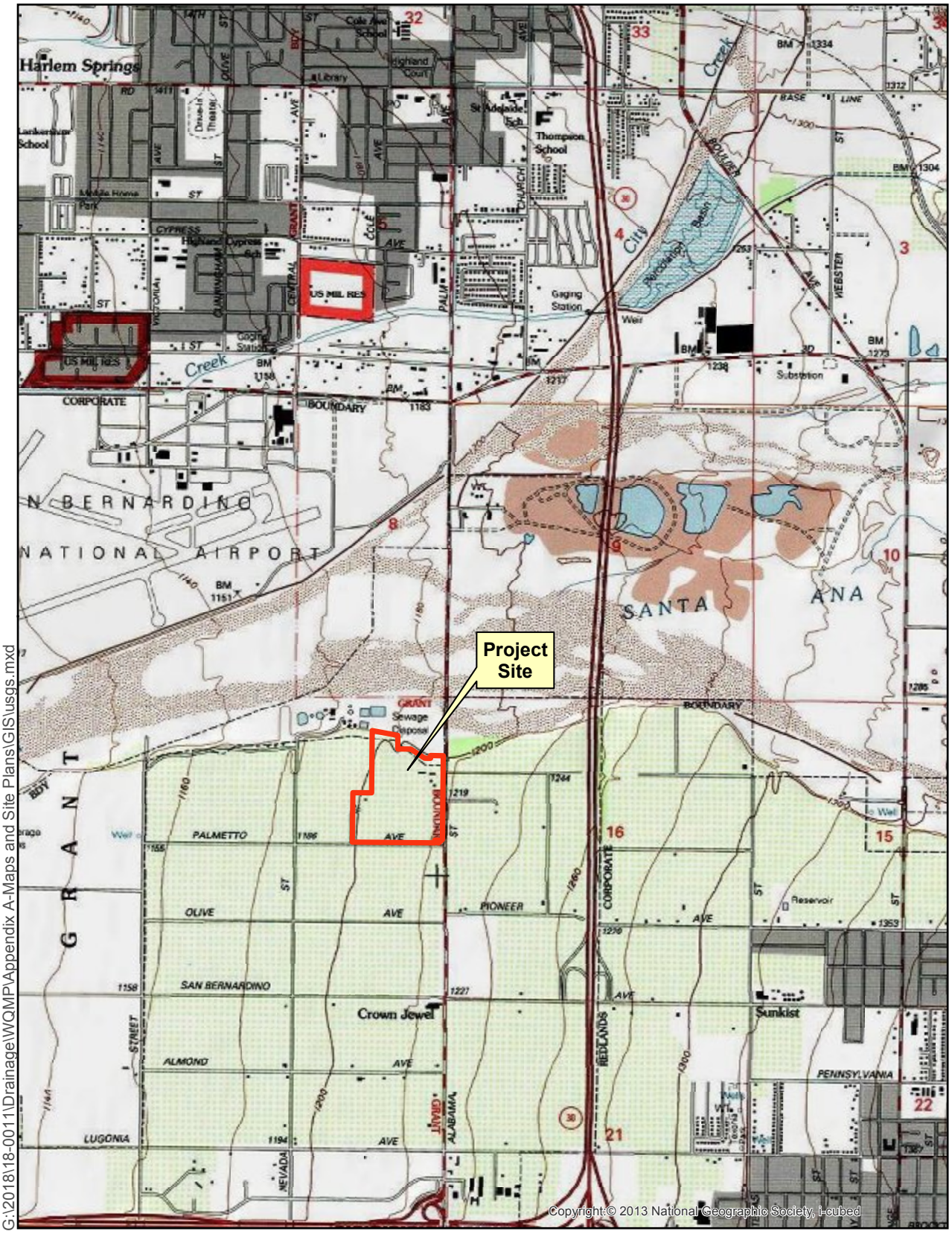
Attach all O&M Plans and Maintenance Agreements for BMP to the WQMP.

6.4 Other Supporting Documentation

- BMP Educational Materials
- Activity Restriction – C, C&R's & Lease Agreements

APPENDIX A – MAPS AND SITE PLAN

Figure 1. Vicinity Map



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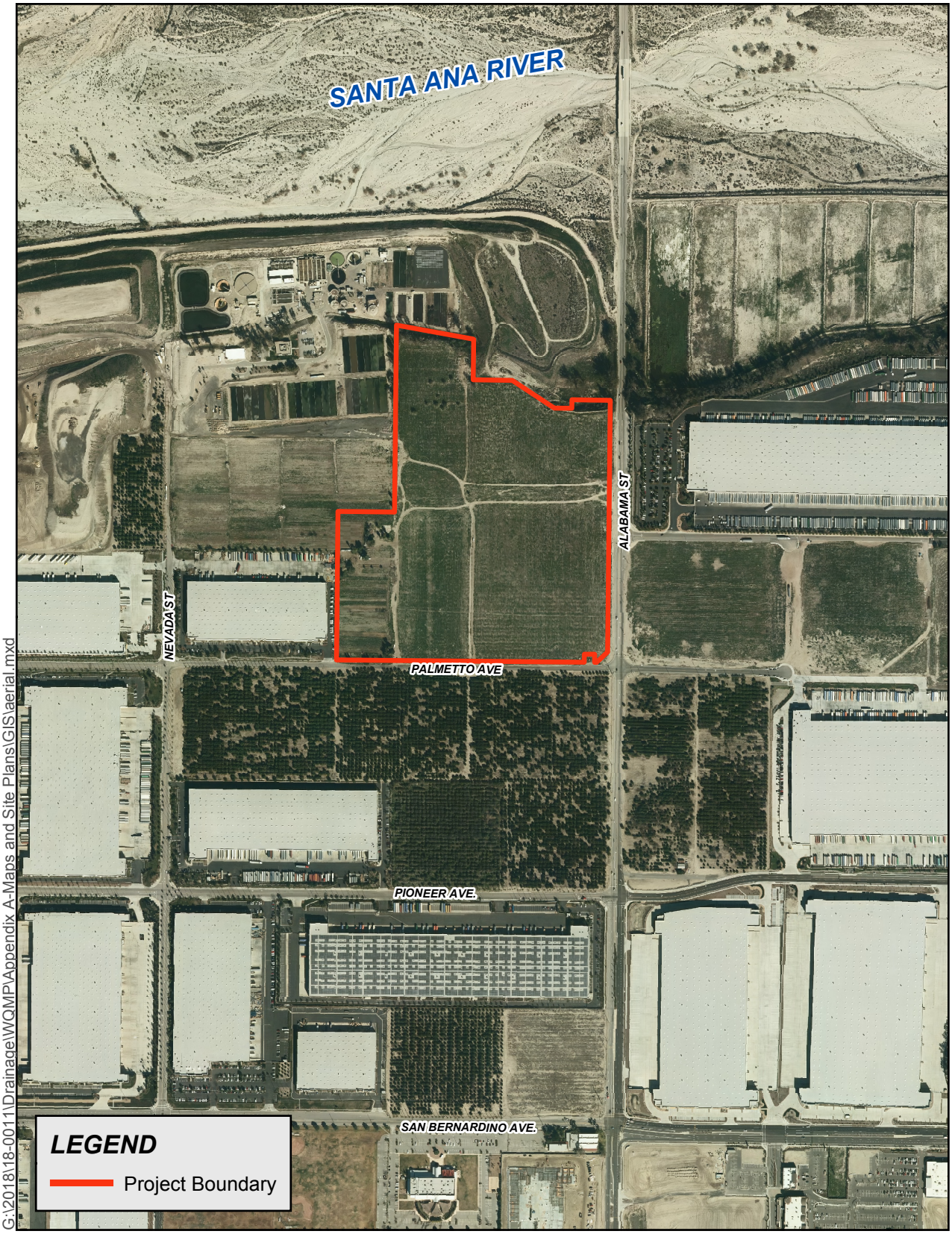
Sources: ESRI / USGS 7.5min Quad

Figure 2. USGS Topography Map

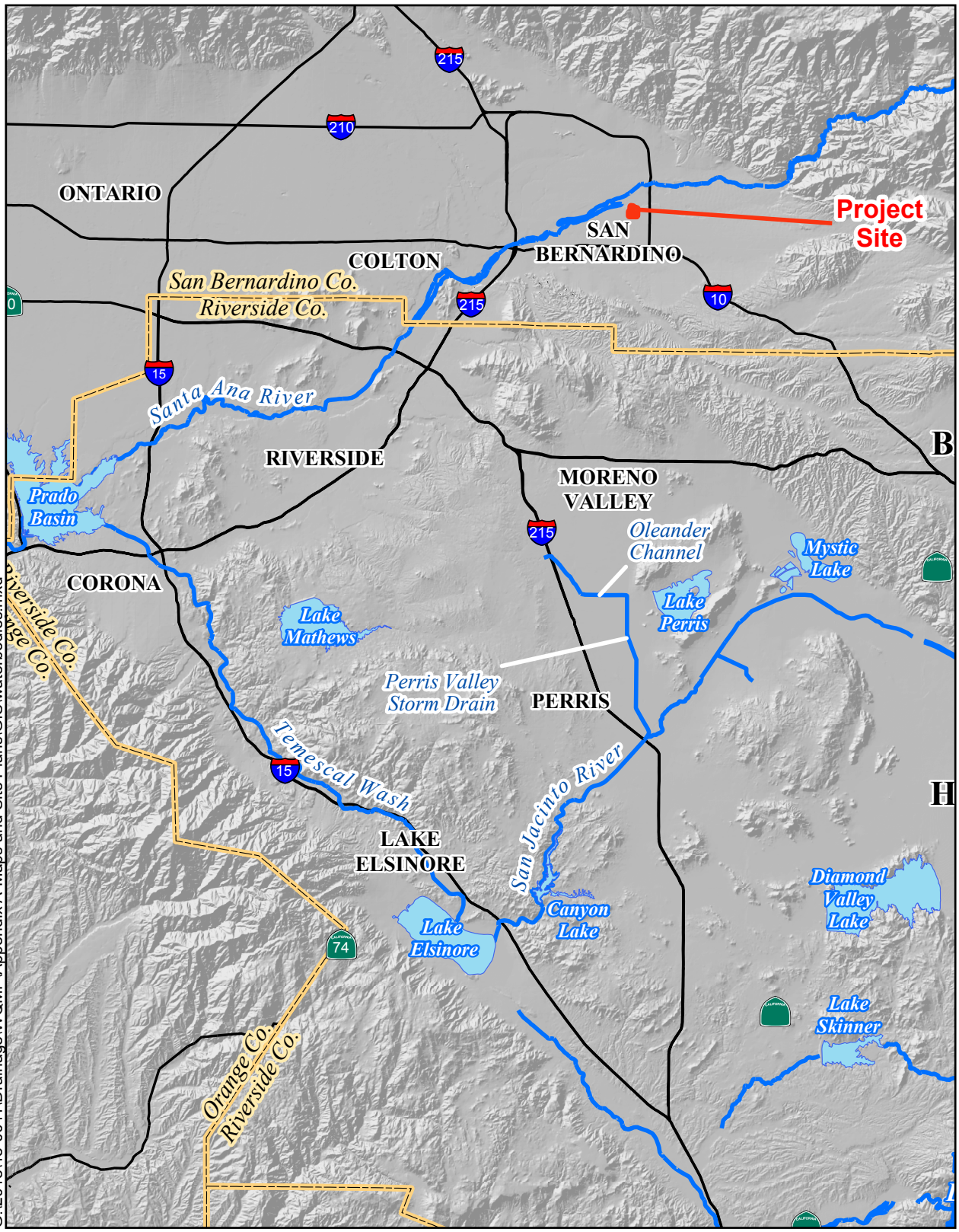
0 1,000 2,000
Feet



Sources: County of Riverside GIS, 2013; Eagle Aerial, April 2012.

Figure 3. Aerial Photograph

0 400 800 Feet



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Sources: USGS 30 Meter DEM;
USGS Digital Line Graph

Figure 4. Receiving Waterbodies

0 2 4 6
Miles

Flowpath

PROP. INFILTRATION TRENCH
LONGITUDINAL SLOPE=3%
AREA= 832 FT²
DCV=0.022 ACRE FT

PROP. 3' WIDE CURB CUTS EVERY 20'

DMA-2
0.4 ACRES

PROP. 24" SD

PROTECT SLOPES FROM EROSION W/ LANDSCAPE RECOMMENDATIONS IN ACCORDANCE CASQA SD-10 (TYP. FOR ALL SLOPES GREATER THAN 4:1)

PROP. FOREBAY

WQ BASIN-1

BASIN TOP=1203.5'
BASIN BTM=1199.5'
BASIN BTM AREA=81,206 FT²
WQ DCV=4.286 ACRE FT

PROP. FOREBAY

DISCHARGE POINT
Q100=129.8 CFS
Q10=74.4 CFS
Q(MITIGATED)=48.4 CFS

PROTECT SLOPES FROM EROSION W/ LANDSCAPE RECOMMENDATIONS IN ACCORDANCE CASQA SD-10 (TYP. FOR ALL SLOPES GREATER THAN 4:1)

PROTECT SLOPES FROM EROSION W/ LANDSCAPE RECOMMENDATIONS IN ACCORDANCE CASQA SD-10 (TYP. FOR ALL SLOPES GREATER THAN 4:1)

DMA-1
54.3 ACRES

PROP. 48" SD

PROP. 60" SD

PROP. POG

1196.42± INV

EX. LINE-A SD

PALMETTO AVENUE

ALABAMA STREET

LEGEND

- DRAINAGE MANAGEMENT BOUNDARY
- LANDSCAPING
- ROOF
- CONCRETE OR ASPHALT
- LID BMP
- FLOW DIRECTION
- SD — STORM DRAIN PIPE
- ROOF DRAIN DOWNSPOUT
- CURB OPENING/CUT
- STORM INLET
- TRASH ENCLOSURE

DRAINAGE MANAGEMENT AREA - 1

LEGEND	DMA-ID	TYPE	AREA (SF)
	L-1	LANDSCAPE	276712
	R-1	ROOF	1116934
	H-1	HARDSCAPE	907189
	BMP-1	LANDSCAPE	81206

%IMPERVIOUS=85%
%PERVIOUS=15%

DRAINAGE MANAGEMENT AREA - 2

LEGEND	DMA-ID	TYPE	AREA (SF)
	L-A	LANDSCAPE	4234
	H-A	HARDSCAPE	11410
	BMP-A	LANDSCAPE	846

%IMPERVIOUS=70%
%PERVIOUS=30%

SOURCE CONTROL NOTES

1. ALL INLETS SHALL BE MARK WITH THE WORDS "NO DUMPING DRAINS TO OCEAN" OR SIMILAR.
2. INTERIOR FLOOR DRAINS AND ELEVATOR SHAFT SUMP PUMPS WILL BE PLUMBED TO SANITARY SEWER.
3. MAINTAIN LANDSCAPING USING MINIMUM OR NO PESTICIDES.
4. ALL SLOPES GREATER THAN 4:1 SHOULD BE PROTECTED FROM EROSION USING CASQA SD-10 LANDSCAPE RECOMMENDATIONS
5. TRASH ENCLOSURE AREA SHALL BE COVERED PER COUNTY STANDARDS AND SHALL HAVE A SIGN THAT STATES "DO NOT DUMP HAZARDOUS MATERIALS HERE".
6. ALL INDUSTRIAL PROCESS ACTIVITIES ARE TO BE PERFORMED INDOORS. NO PROCESSES SHALL DRAIN TO EXTERIOR STORM DRAIN SYSTEM.
7. ROOF DOWNSPOUTS SHALL BE POSITIONED TO DIRECT STORMWATER AWAY FROM LOADING AREA. PROVIDE ROOF OVERHANG OVER THE LOADING AREA OR INSTALL DOOR SKIRTS AT EACH BAY THAT ENCLOSE THE END OF THE TRAILER.
8. PROVIDE A MEANS TO DRAIN FIRE SPRINKLER WATER TO SANITARY SEWER SYSTEM.
9. BOILER DRAIN LINES AND CONDENSATE DRAIN LINES SHALL BE DIRECTLY OR INDIRECTLY CONNECTED TO THE SANITARY SEWER SYSTEM AND MAY NOT DISCHARGE TO THE STORM DRAIN SYSTEM.
10. ROOFTOP EQUIPMENT WITH POTENTIAL TO PRODUCE POLLUTANTS SHALL BE ROOFED OR HAVE A SECONDARY CONTAINMENT.
11. ANY DRAINAGE SUMPS ON-SITE SHALL FEATURE SEDIMENT SUMP TO REDUCE THE QUANTITY OF SEDIMENT IN PUMPED WATER.

SITE PLAN RESTRICTION

1. THE USE OF OUTDOOR STORAGE OF EQUIPMENT AND MATERIALS ARE NOT PERMITTED.
2. VEHICLE AND EQUIPMENT CLEANING ARE NOT PERMITTED ON-SITE.
3. NO VEHICLE/EQUIPMENT REPAIR OR MAINTENANCE WILL BE DONE OUTDOORS.
4. NO TANKS, CONTAINERS, OR SINKS ARE TO BE USED FOR PARTS CLEANING OR RINSING.
5. NO FUELING AREAS ARE PERMITTED ON-SITE.
6. OWNER MUST IMPLEMENT THESE ACTIVITY RESTRICTIONS.

W S N E WEBB

1" = 80'
40 0 80 160 240

COUNTY OF SAN BERNARDINO

POST CONSTRUCTION BMP SITE PLAN
DUKE ALABAMA & PALMETTO

SCALE: AS SHOWN	ALBERT A. WEBB ASSOCIATES	ENGINEERING CONSULTANTS 3788 McCRAY STREET RIVERSIDE CA. 92506 PH. (951) 686-1070 FAX (951) 788-1256	W.O. 18-0011
DATE: 7/26/18			SHEET 1
DESIGNED: MJS			OF 2 SHEETS
CHECKED: CRC			
PLN CK REF:			DWG. NO.
F.B.			

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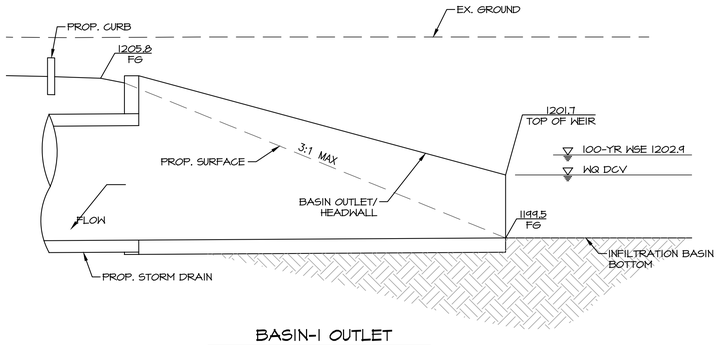
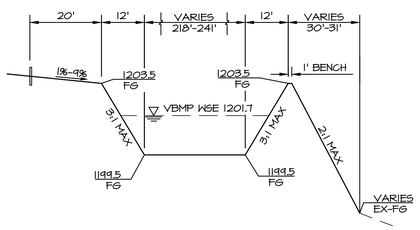


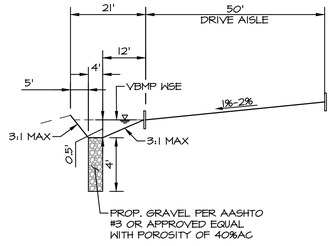
BASIN-1 OUTLET

NTS



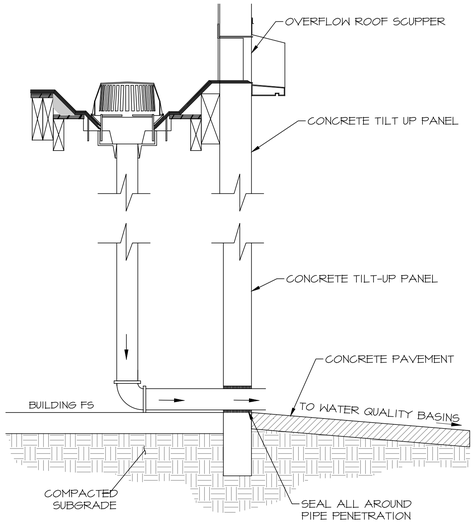
BASIN-1 TYPICAL SECTION

NTS



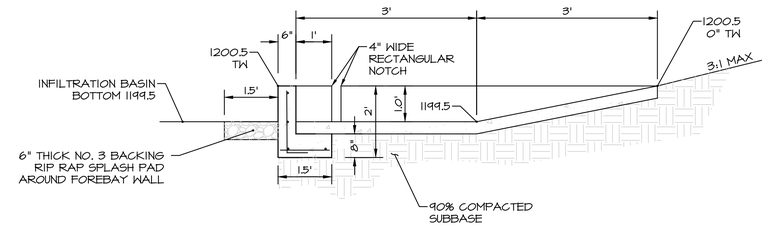
INFILTRATION TRENCH TYPICAL SECTION

NTS



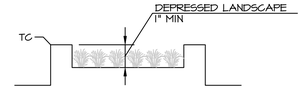
ROOF DRAIN DETAIL

N.T.S.



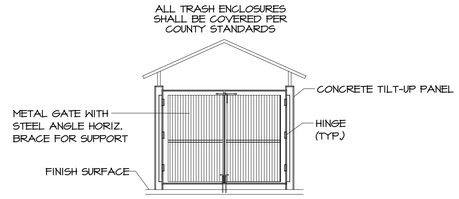
TYPICAL FOREBAY DETAIL

N.T.S



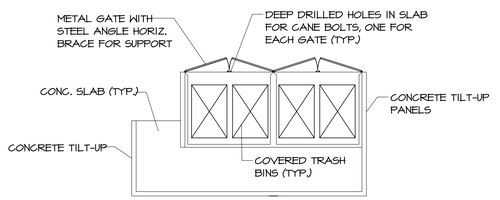
TYPICAL SECTION FOR SELF-RETAINING AREAS

N.T.S



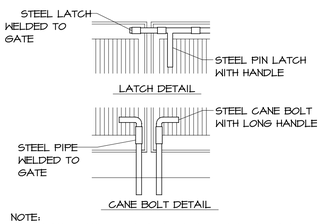
TRASH ENCLOSURE GATE ELEVATION

N.T.S.



TRASH ENCLOSURE PLAN DETAIL

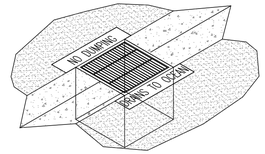
N.T.S.

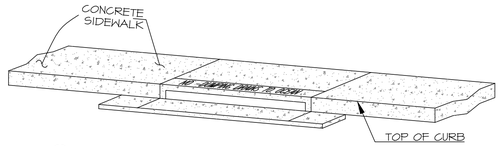


NOTE:
LATCH AND CANE TO BE AT EXTERIOR SIDE OF GATES

TRASH ENCLOSURE GATE LATCHES DETAIL

N.T.S.

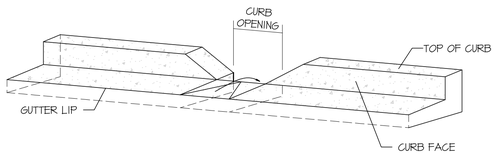




1. STENCILS TO HAVE 2" LETTERS AS FOLLOWS:
"NO DUMPING - DRAINS TO OCEAN"
2. PLACE BOTH STENCILS CENTERED WITHIN THE CATCHBASIN OPENINGS AND WITHIN THE TOP OF THE CURB.
3. SPRAY BOTH STENCILS WITH WHITE PAINT.
4. REMOVE STENCILS WHEN PAINT IS DRY.

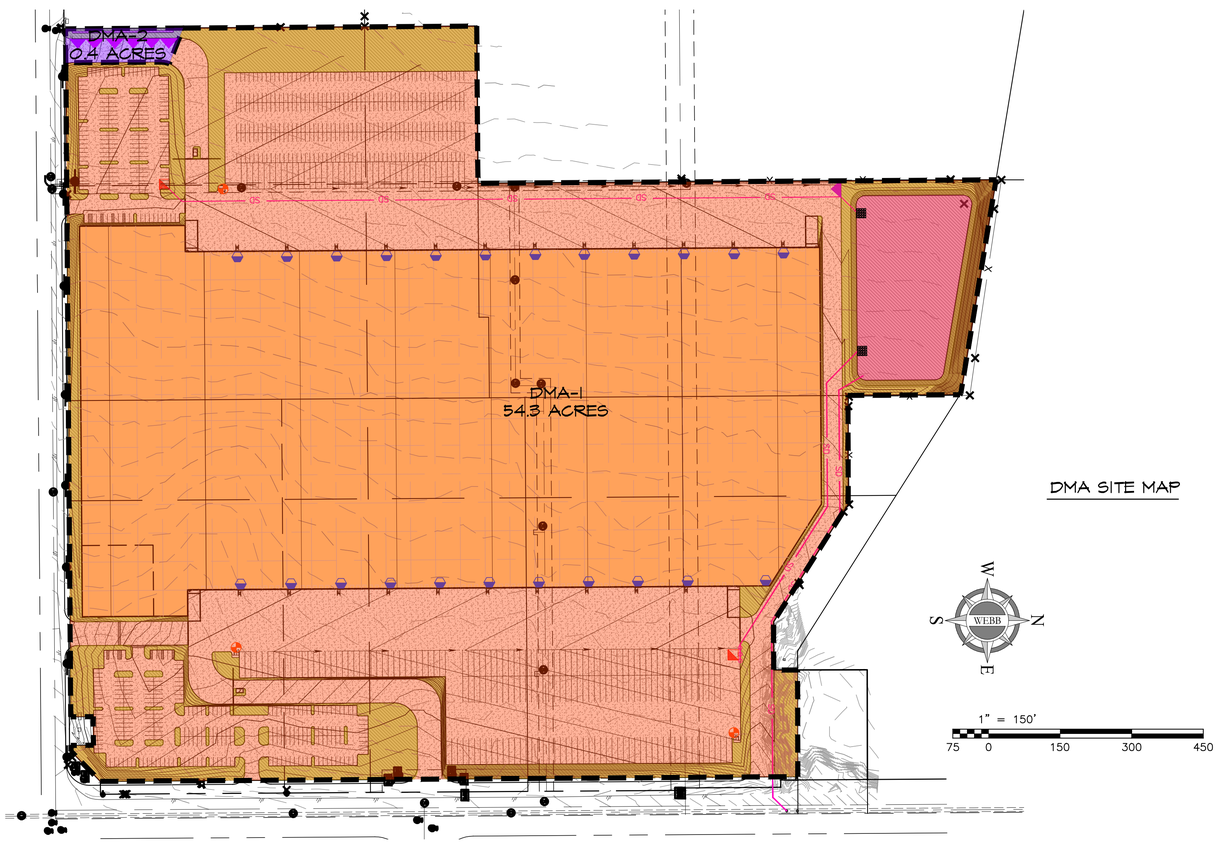
CATCH BASIN STENCILING DETAIL

NTS



TYPICAL CURB OPENING DETAIL

N.T.S.



DMA SITE MAP

COUNTY OF SAN BERNARDINO

POST CONSTRUCTION BMP SITE PLAN
DUKE ALABAMA & PALMETTO

SCALE: AS SHOWN	
DATE: 7/26/18	
DESIGNED: MJS	
CHECKED: CRC	
PLN CK REF:	
F.B.	

ALBERT A. WEBB ASSOCIATES
ENGINEERING CONSULTANTS
3788 McCRAY STREET
RIVERSIDE CA. 92506
PH. (951) 686-1070
FAX (951) 788-1256

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APPENDIX B – WATER QUALITY BMP CALCULATIONS

Underground Storage System Drawdown Calculation

ALBERT A WEBB ASSOCIATES ENGINEERING CONSULTANTS

Designer: MJS
Date: 4/11/2018
Project: Duke - Alabama & Palmetto
Location: Southeast corner of Alabama Street and Palmetto Avenue
Area: DMA 1

(1)	VBMP =	186684	ft^3
(2)	Basin Bottom Area=	81206	ft^2
(3)	Infiltration Rate =	3	in/hr
(4)	Factor of Safety=	3.4	
(5)	Design Infiltration Rate =	0.9	in/hr

$$Drawdown = \frac{V_{BMP}\ (ft^3)}{Design\ Infiltration\ Rate\left(\frac{in}{hr}\right) \times \left(\frac{1ft}{12in}\right) \times Bottom\ Area\ (ft^2)}$$

Water Quality Drawdown Time=	31.3	hr

Volume at 1202.9'=	296143	ft^3
Basin Bottom Area=	81206	ft^2
Infiltration Rate =	0.9	in/hr

Drawdown Time for Enitre Volume=	48.0	hr

*The Geotechnical Infiltration Test Report shows recommend a design infiltration rates of 3 inches per hour at the expected depth. A factor of safety of 3.4 was determined by the PWQMP Report. The entire 100-year 24-hour volume will drain within the 48-hour mark.

APPENDIX C – EDUCATIONAL MATERIALS

(TO BE PROVIDED DURING FINAL-WQMP)

APPENDIX D – SOILS REPORT

Worksheet H: Factor of Safety and Design Infiltration Rate and Worksheet

Factor Category		Factor Description	Assigned Weight (w)	Factor Value (v)	Product (p) p = w x v
A	Suitability Assessment	Soil assessment methods	0.25	1	0.25
		Predominant soil texture	0.25	2	0.5
		Site soil variability	0.25	2	0.5
		Depth to groundwater / impervious layer	0.25	1	0.25
		Suitability Assessment Safety Factor, $S_A = \Sigma p$			1.5
B	Design	Tributary area size	0.25	3	0.75
		Level of pretreatment/ expected sediment loads	0.25	2	0.5
		Redundancy	0.25	3	0.75
		Compaction during construction	0.25	1	0.25
		Design Safety Factor, $S_B = \Sigma p$			2.5
Combined Safety Factor, $S_{TOT} = S_A \times S_B$					3.4
Measured Infiltration Rate, inch/hr, K_M (corrected for test-specific bias)					3.0
Design Infiltration Rate, in/hr, $K_{DESIGN} = S_{TOT} \times K_M$					0.9

Supporting Data

Briefly describe infiltration test and provide reference to test forms:

A copy of the report that was completed for the infiltration tests has been provided in Appendix D.

There will need to be additional infiltration testing during final engineering. There needs to be a total of 7 more tests at the infiltration basin and 2 tests at the infiltration trench area.

Note: The minimum combined adjustment factor shall not be less than 2.0 and the maximum combined adjustment factor shall not exceed 9.0.

April 10, 2018

Duke Realty
200 Spectrum Center Drive, Suite 1600
Irvine, California 92618

SOUTHERN CALIFORNIA GEOTECHNICAL
A California Corporation

Attention: Mr. Adam Schmid
Development Services Manager

Project No.: **17G218-2**

Subject: **Results of Infiltration Testing**
Proposed Commercial/Industrial Building
NWC Alabama Street and Palmetto Avenue
San Bernardino County, California

Reference: Geotechnical Investigation, Proposed Commercial/Industrial Building, NWC Alabama Street and Palmetto Avenue, San Bernardino, California, prepared by Southern California Geotechnical, Inc. (SCG) for Duke Realty, SCG Project No. 17G218-1, dated December 15, 2017.

Dear Mr. Schmid:

In accordance with your request, we have conducted infiltration testing at the subject site. We are pleased to present this report summarizing the results of the infiltration testing and our design recommendations.

Scope of Services

The scope of services performed for this project was in general accordance with our Change Order 17G218-CO, dated March 9, 2018. The scope of services included site reconnaissance, subsurface exploration, field testing, and engineering analysis to determine the infiltration rates of the onsite soils. The infiltration testing was performed in general accordance with ASTM Test Method D-3385-03, Standard Test Method for Infiltration Rate of Soils in Field Using Double Ring Infiltrometer.

Site and Project Description

The subject site is located at the northwest corner of Palmetto Avenue and Alabama Street in an unincorporated portion of San Bernardino County near Redlands, California. The site is bounded to the north by a vacant lot, to the west by vacant land and a commercial/industrial building, to the south by Palmetto Avenue, and to the east by Alabama Street. The general location of the site is illustrated on the Site Location Map, included as Plate 1 of this report.

The site consists of several parcels, which total 56± acres in size. The majority of the site is vacant and undeveloped. The ground surface cover generally consists of exposed soil with moderate to dense native grass and weed growth, with several large trees located throughout the site. The northern region of the western parcel is developed with a small farm house. The majority of this parcel is currently being utilized for agricultural purposes. Ground surface cover

in this area and surrounding the farm house consists of exposed soil with moderate to dense native grass, weed growth, and planted crops. Multiple small to large trees are located throughout this parcel. A natural drainage course is present in the northeast corner of the overall site that is 20± feet lower in elevation than the adjacent site grades.

Detailed topographic information was provided by Albert A. Webb Associates (Webb). The site topography generally ranges from 1199± feet mean sea level (msl) in northwestern corner of the site to 1226± feet msl in the southeastern corner of the site. However, the bottom of the existing drainage course, located at the northeast corner of the site is at an elevation of 1186± feet msl. With the exception of the drainage course, the site topography slopes gently downward to the northwest at a gradient of 1± percent. In the northeast corner of the site, the site grades slope downward into the drainage course at an approximate inclination of ½h:1v (horizontal to vertical).

Proposed Development

A conceptual site plan, prepared by Albert A. Webb Associates (Webb), was provided to our office by the client. The plan indicates that the subject site will be developed with one (1) new commercial/industrial building. The proposed building will be 1,192,671± ft^2 in size, located in the central area of the site. The building will be constructed in a cross-dock configuration with loading docks along both the east and west sides of the building. The building will be surrounded by asphaltic concrete pavements for automobile parking and drive lanes and Portland cement concrete pavements for the loading dock areas. Several landscape planters and concrete flatwork are expected to be included throughout the site. The site plan does not indicate any proposed development within the existing drainage course located at the northeast corner of the site.

We understand that the proposed development will include on-site infiltration to dispose of storm water. Based on an Infiltration Test Exhibit, prepared by Webb, the project civil engineer, the proposed infiltration system will consist of two (2) detention/infiltration basins. The basins will be located in the northwest corner and in the southwest region of the site. The bottoms of the basins will extend to depths ranging from 4 to 7± feet below the existing site grades.

Previous Study

Southern California Geotechnical, Inc. (SCG) previously performed a geotechnical investigation at the subject site, referenced above. As a part of this study, ten (10) borings were advanced to depths of 5 to 30± feet below existing site grades. Artificial fill soils were encountered at the ground surface at one of the boring locations, extending to a depth of 6½± feet below the existing site grades. The fill soils generally consisted of very loose to loose fine to medium sands with varying amounts of coarse sand, silt, and fine gravel content. Native alluvial soils were encountered beneath the fill soils and at the ground surface at the remaining boring locations. The near-surface alluvium possessed a disturbed appearance and was identified as disturbed alluvium. These soils generally consisted of very loose to loose silty fine sands to fine sandy silts with trace amounts of fine root fibers. Undisturbed native alluvial soils were encountered at all of the boring locations, beneath the disturbed alluvium or fill soils, extending to the maximum depth explored of 30± feet below existing site grades. The native alluvium generally consisted of very loose to medium dense silty fine sands, fine sandy silts, and fine to medium sands. Free

water was not encountered during the drilling of any of the borings. Based on the lack of any water within the borings and the moisture contents of the recovered soil samples, the static groundwater is considered to have existed at a depth in excess of 30± feet at the time of the subsurface exploration. The approximate locations of the ten (10) borings from the previous study are indicated on the Infiltration Test Location Plan, included as Plate 2 of this report.

Subsurface Exploration

Scope of Exploration

The subsurface exploration consisted of five (5) backhoe excavated trenches, extending to depths of 4 to 7± feet below existing site grades. The trenches were logged during excavation by a member of our staff. The approximate locations of the infiltration trenches (identified as I-1 through I-5) are indicated on the Infiltration Test Location Plan, enclosed as Plate 2 of this report.

Geotechnical Conditions

Native alluvium was encountered at the ground surface at all of the infiltration trench locations, extending to at least the maximum depth explored of 7± feet below existing site grades. The alluvial soils generally consist of very loose to medium dense silty fine sands and fine sandy silts with varying amounts of medium to coarse sands. The Trench Logs, which illustrate the conditions encountered at the infiltration trench locations, are included with this report.

Groundwater

As part of our research, we reviewed available groundwater data in order to determine the historic high groundwater level for the site. Recent water level data was obtained from the California Department of Water Resources website, http://www.water.ca.gov/waterdatalibrary/. The nearest monitoring well is located in the southeastern region of the subject site. Water level readings within this monitoring well indicates high groundwater levels of 130± feet (April 2005) below the ground surface.

Infiltration Testing

We understand that the results of the testing will be used to prepare a preliminary design for the storm water infiltration system that will be used at the subject site. As previously mentioned, the infiltration testing was performed in general accordance with ASTM Test Method D-3385-03, Standard Test Method for Infiltration Rate of Soils in Field Using Double Ring Infiltrometer.

Two stainless steel infiltration rings were used for the infiltration testing. The outer infiltration ring is 2 feet in diameter and 20 inches in height. The inner infiltration ring is 1 foot in diameter and 20 inches in height. At the test locations, the outer ring was driven 3± inches into the soil at the base of each trench. The inner ring was centered inside the outer ring and subsequently driven 3± inches into the soil at the base of the trench. The rings were driven into the soil using a ten-pound sledge hammer. The soil surrounding the wall of the infiltration rings was only slightly disturbed during the driving process.

Infiltration Testing Procedure

Infiltration testing was performed at all five (5) of the test locations. The infiltration testing consisted of filling the inner ring and the annular space (the space between the inner and outer rings) with water, approximately 3 to 4 inches above the soil. To prevent the flow of water from one ring to the other, the water level in both the inner ring and the annular space between the rings was maintained using constant-head float valves. The volume of water that was added to maintain a constant head in the inner ring and the annular space during each time interval was determined and recorded. A cap was placed over the rings to minimize the evaporation of water during the tests.

The schedule for readings was determined based on the observed soil type at the base of each backhoe-excavated trench. Based on the existing soils at each infiltration test location, the volumetric measurements were made at increments of 10 minutes. The water volume measurements are presented on the spreadsheets enclosed with this report. The infiltration rates for each of the timed intervals are also tabulated on these spreadsheets.

The infiltration rates for the infiltration tests are calculated in centimeters per hour and then converted to inches per hour. The rates are summarized below:

Infiltration Test No.	Test Elevation (msl)	Soil Description	Infiltration Rate (inches/hour)
I-1	1198.5	Silty fine Sand	3.6
I-2	1198	Silty fine Sand, trace medium Sand	3.1
I-3	1198.5	Silty fine Sand	3.2
I-4	1195	Silty fine Sand	3.7
I-5	1197	Silty fine Sand, little medium Sand	2.5

Laboratory Testing

In-situ Moisture Content

The moisture contents for selected soil samples collected from the trenches were determined in accordance with ASTM D-2216 and are expressed as a percentage of the dry weight. These test results are presented on the Trench Logs.

Grain Size Analysis

The grain size distribution of selected soils collected from the base of each infiltration test trench has been determined using a range of wire mesh screens. These tests were performed in general accordance with ASTM D-422 and/or ASTM D-1140. The weight of the portion of the

sample retained on each screen is recorded and the percentage finer or coarser of the total weight is calculated. The results of these tests are presented at the end of this report.

Design Recommendations

A total of five (5) infiltration tests were performed at the subject site. As noted above, the calculated infiltration rates at the infiltration test locations range from 2.5 to 3.7 inches per hour. The primary factors affecting the infiltration rates are the varying relative densities and silt content of the encountered soils, which vary at different depths and locations at the subject site.

Based on the infiltration test results, we recommend a design infiltration rate of 3 inches per hour be used for the proposed detention/infiltration basin located in the northwest corner of the site and a design rate of 2.5 inches per hour for the basin located in the southwest region of the subject site.

The design of the proposed storm water infiltration systems should be performed by the project civil engineer, in accordance with the County of San Bernardino guidelines. However, it is recommended that the system be constructed so as to facilitate removal of silt and clay, or other deleterious materials from any water that may enter the system. The presence of such materials would decrease the effective infiltration rate. **It is recommended that the project civil engineer apply an appropriate factor of safety. The infiltration rates recommended above is based on the assumption that only clean water will be introduced to the subsurface profile. Any fines, debris, or organic materials could significantly impact the infiltration rates.** It should be noted that the recommended infiltration rates are based on infiltration testing at five (5) discrete locations and the overall infiltration rates of the storm water infiltration systems could vary considerably.

Infiltration versus Permeability

Infiltration rates are based on unsaturated flow. As water is introduced into soils by infiltration, the soils become saturated and the wetting front advances from the unsaturated zone to the saturated zone. Once the soils become saturated, infiltration rates become zero, and water can only move through soils by hydraulic conductivity at a rate determined by pressure head and soil permeability. The infiltration rates presented herein were determined in accordance with the ASTM Test Method D-3385-03 standard and are considered valid for the time and place of the actual test. Changes in soil moisture content will affect these infiltration rates. Infiltration rates should be expected to decrease until the soils become saturated. Soil permeability values will then govern groundwater movement. Permeability values may be on the order of 10 to 20 times less than infiltration rates. The system designer should incorporate adequate factors of safety and allow for overflow design into appropriate traditional storm drain systems, which would transport storm water off-site.

Location of Infiltration Systems

The use of on-site storm water infiltration systems carries a risk of creating adverse geotechnical conditions. Increasing the moisture content of the soil can cause the soil to lose internal shear strength and increase its compressibility, resulting in a change in the designed engineering properties. Overlying structures and pavements in the infiltration areas could potentially be

damaged due to saturation of subgrade soils. **The proposed infiltration systems for this site should be located at least 25 feet away from any structures, including retaining walls.** Even with this provision of locating the infiltration system at least 25 feet from the building, it is possible that infiltrating water into the subsurface soils could have an adverse effect on the proposed or existing structures. It should also be noted that utility trenches which happen to collect storm water can also serve as conduits to transmit storm water toward the structure, depending on the slope of the utility trench. Therefore, consideration should also be given to the proposed locations of underground utilities which may pass near the proposed infiltration system.

General Comments

This report has been prepared as an instrument of service for use by the client in order to aid in the evaluation of this property and to assist the architects and engineers in the design and preparation of the project plans and specifications. This report may be provided to the contractor(s) and other design consultants to disclose information relative to the project. However, this report is not intended to be utilized as a specification in and of itself, without appropriate interpretation by the project architect, structural engineer, and/or civil engineer. The design of the infiltration system is the responsibility of the civil engineer. The role of the geotechnical engineer is limited to determination of infiltration rate only. By using the design infiltration rates contained herein, the civil engineer agrees to indemnify, defend, and hold harmless the geotechnical engineer for all aspects of the design and performance of the infiltration system. The reproduction and distribution of this report must be authorized by the client and Southern California Geotechnical, Inc. Furthermore, any reliance on this report by an unauthorized third party is at such party's sole risk, and we accept no responsibility for damage or loss which may occur.

The analysis of this site was based on a subsurface profile interpolated from limited discrete soil samples. While the materials encountered in the project area are considered to be representative of the total area, some variations should be expected between trench locations and testing depths. If the conditions encountered during construction vary significantly from those detailed herein, we should be contacted immediately to determine if the conditions alter the recommendations contained herein.

This report has been based on assumed or provided characteristics of the proposed development. It is recommended that the owner, client, architect, structural engineer, and civil engineer carefully review these assumptions to ensure that they are consistent with the characteristics of the proposed development. If discrepancies exist, they should be brought to our attention to verify that they do not affect the conclusions and recommendations contained herein. We also recommend that the project plans and specifications be submitted to our office for review to verify that our recommendations have been correctly interpreted. The analysis, conclusions, and recommendations contained within this report have been promulgated in accordance with generally accepted professional geotechnical engineering practice. No other warranty is implied or expressed.

Closure

We sincerely appreciate the opportunity to be of service on this project. We look forward to providing additional consulting services during the course of the project. If we may be of further assistance in any manner, please contact our office.

Respectfully Submitted,

SOUTHERN CALIFORNIA GEOTECHNICAL, INC.

Scott McCann
Staff Scientist

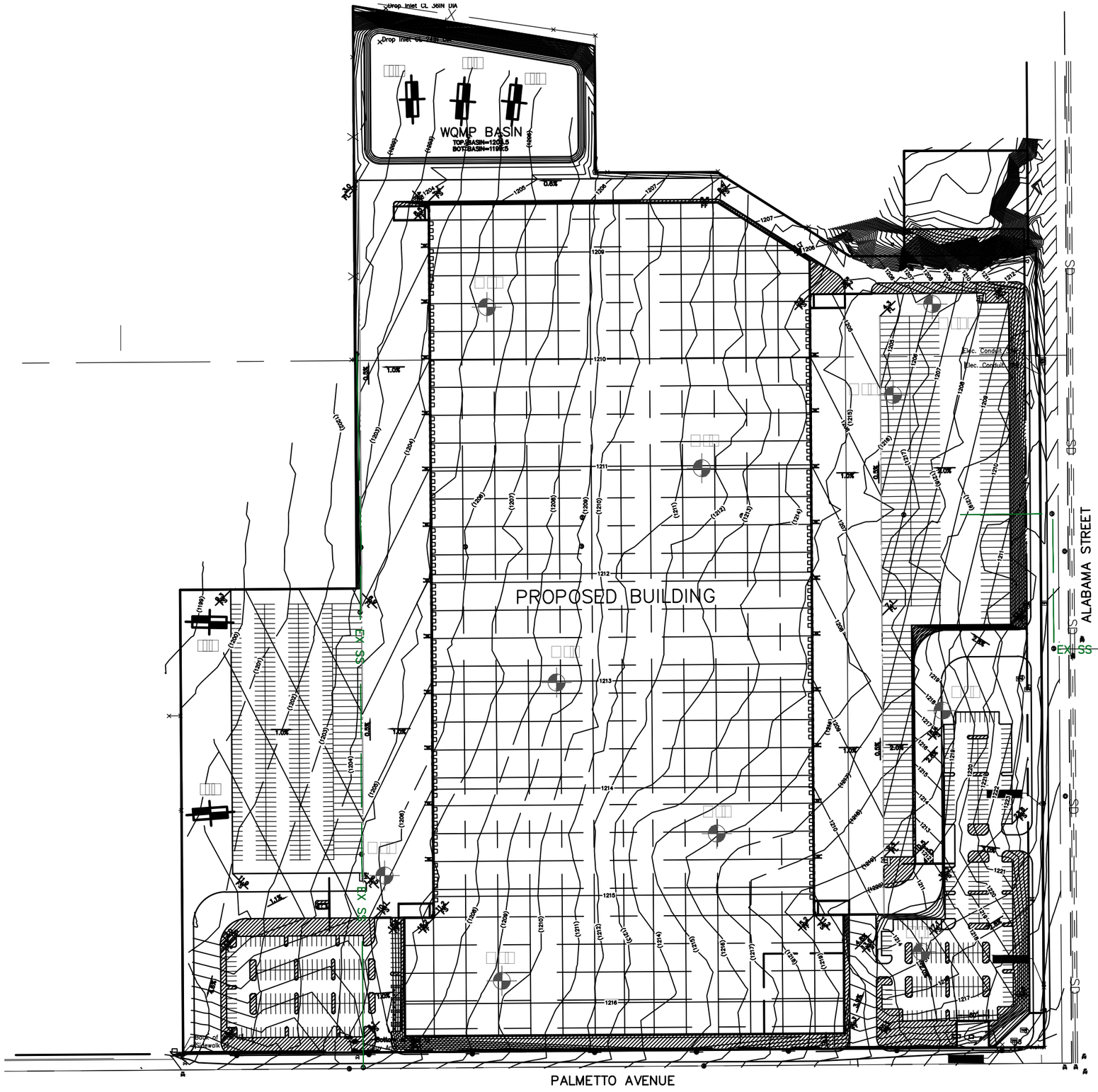
Gregory K. Mitchell, GE 2364
Principal Engineer

Distribution: (1) Addressee

Enclosures: Plate 1 - Site Location Map
Plate 2 - Infiltration Test Location Plan
Trench Logs (5 pages)
Infiltration Test Results Spreadsheets (5 pages)
Grain Size Distribution Graphs (5 pages)

SITE LOCATION MAP

□□□□□□□□□□MM□□□□□□□□□□



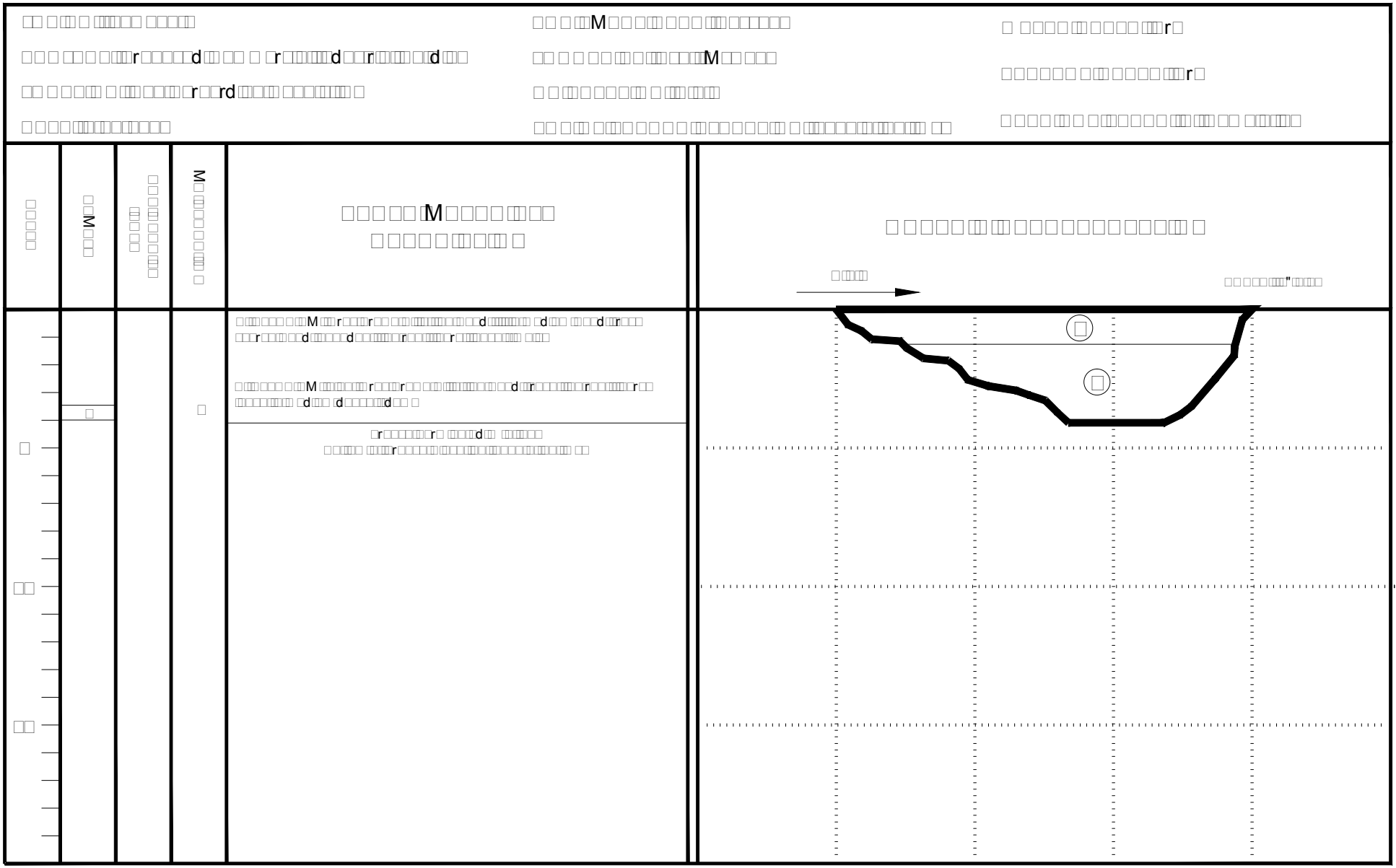
NORTH
SoCalGeo

□□□□□□□□□□□□□□□□

□□□□□XM□□□□□□□□□□□□□□□□

SOUTHERN CALIFORNIA GEOTECHNICAL

TRENCH NO.
I-1



TRENCH LOG

PLATE B-1

SOUTHERN CALIFORNIA GEOTECHNICAL

TRENCH NO.
I-2

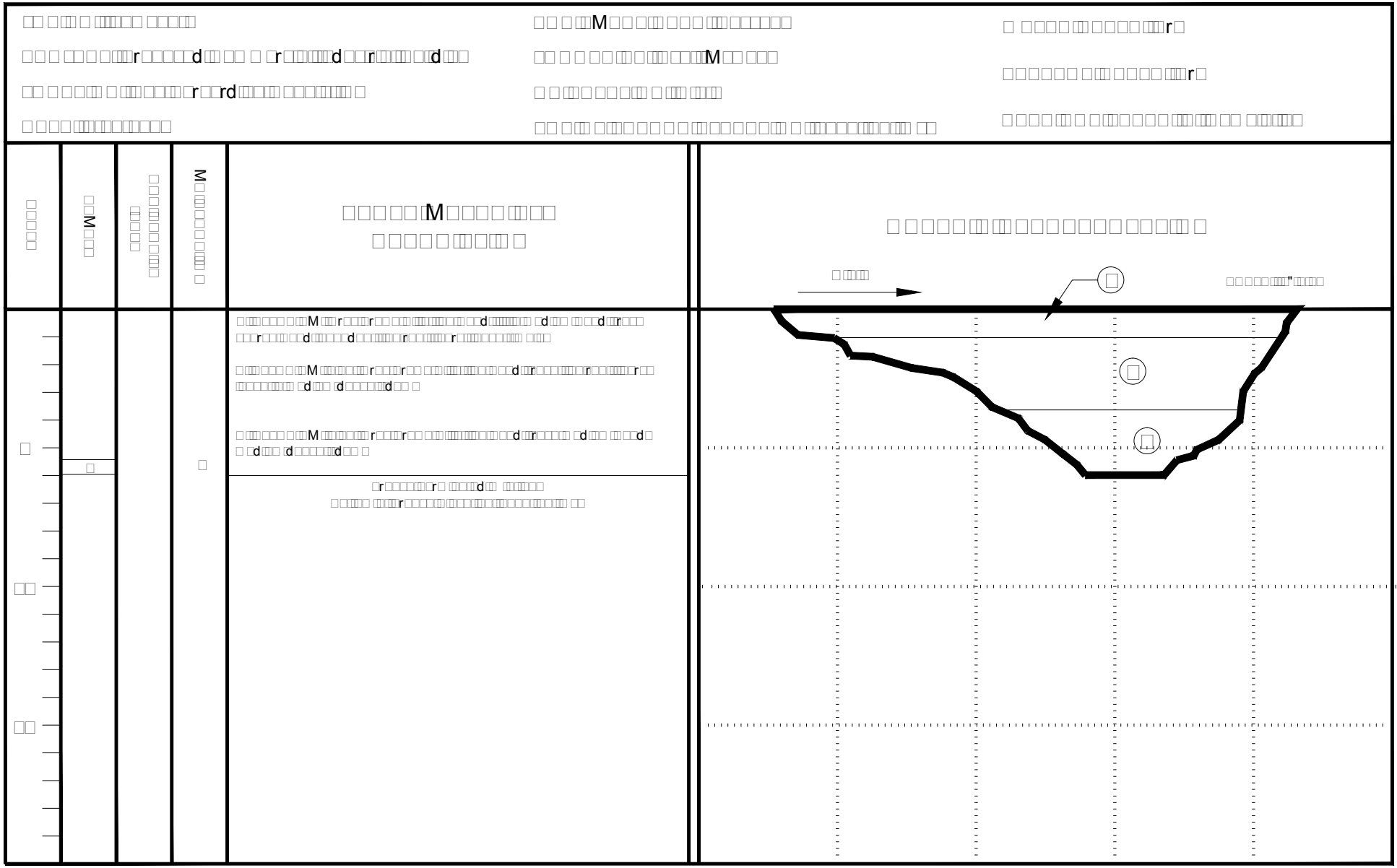
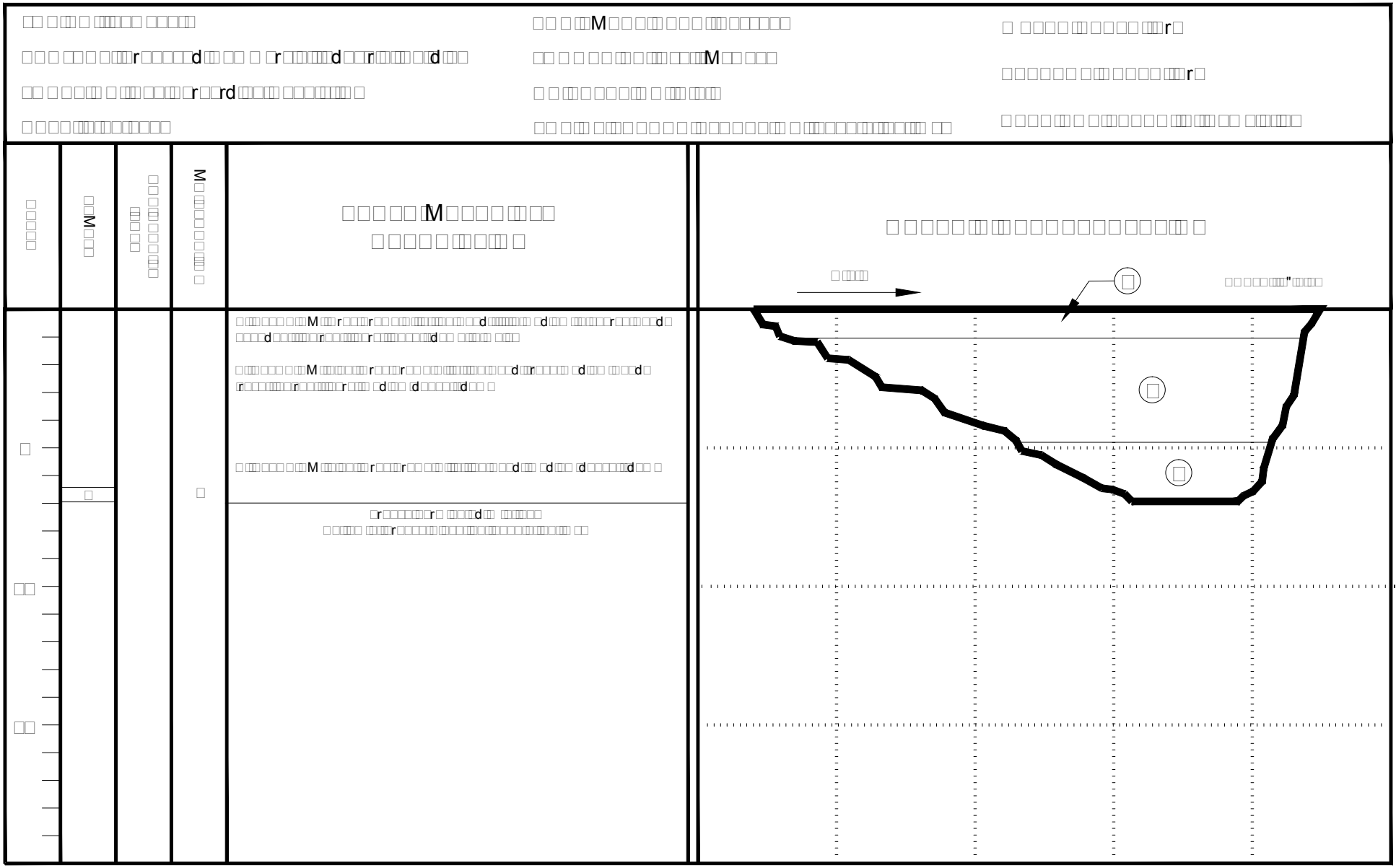


PLATE B-2

SOUTHERN CALIFORNIA GEOTECHNICAL

TRENCH NO.
I-3

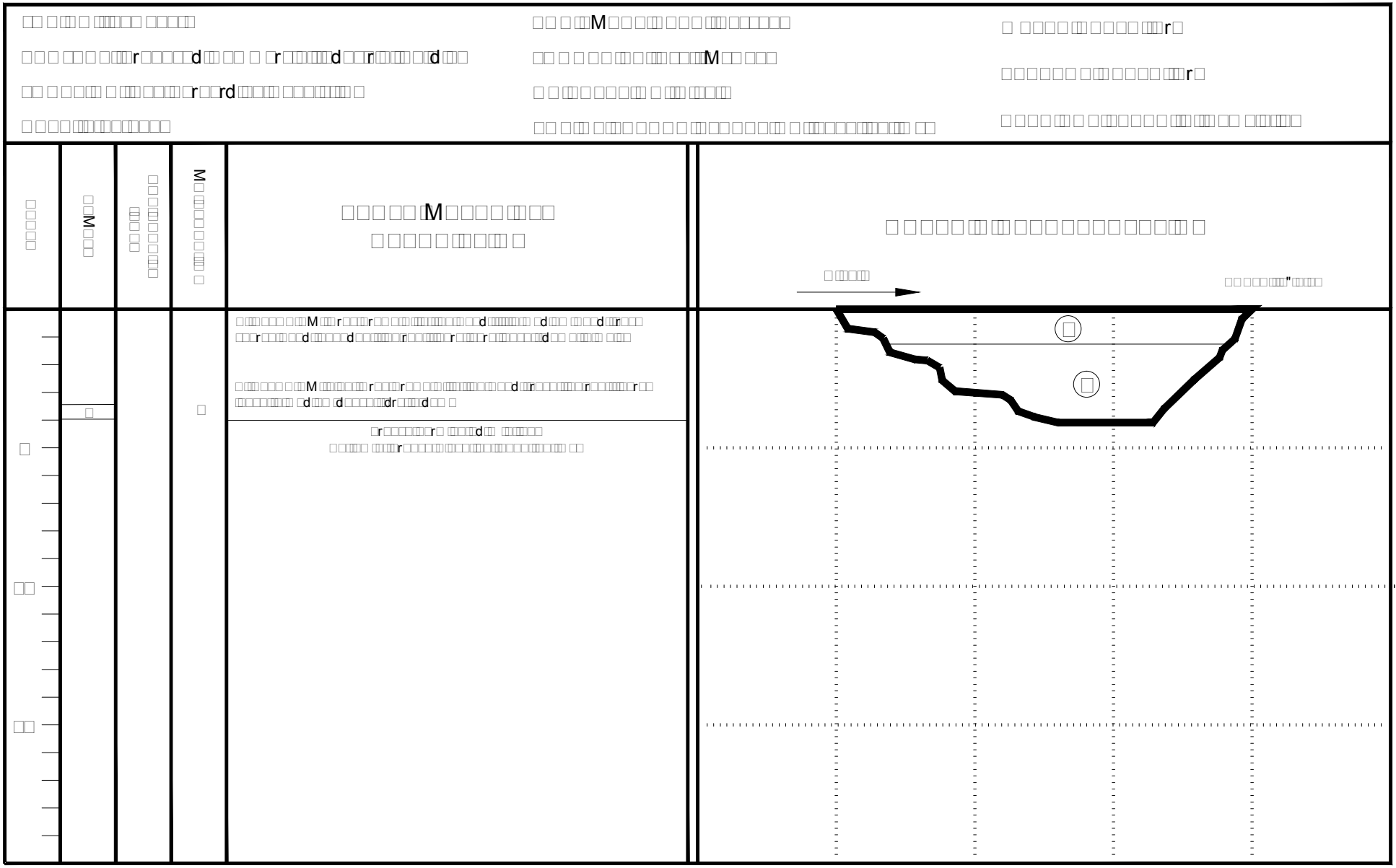


TRENCH LOG

PLATE B-3

SOUTHERN CALIFORNIA GEOTECHNICAL

TRENCH NO.
I-4

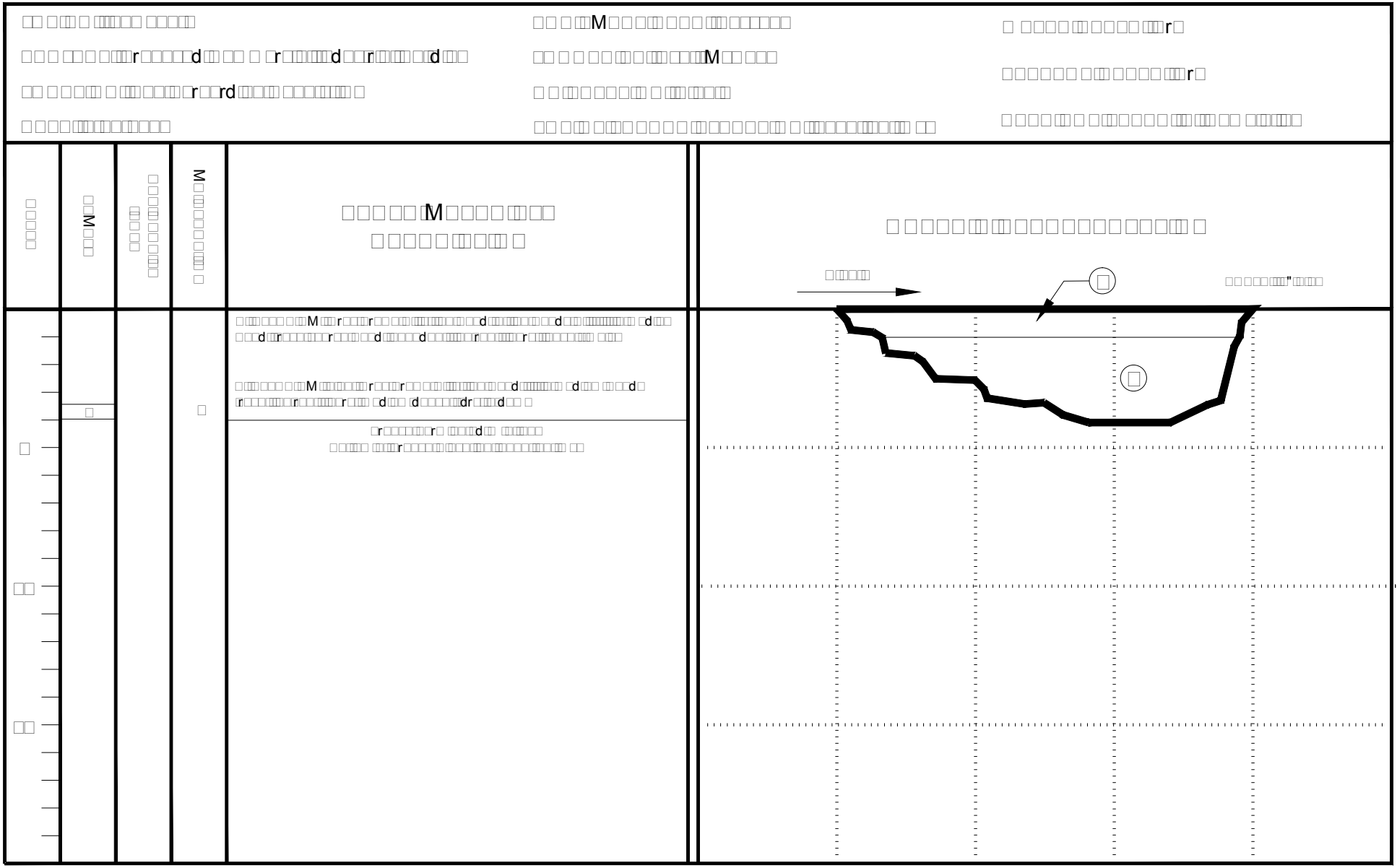


TRENCH LOG

PLATE B-4

SOUTHERN CALIFORNIA GEOTECHNICAL

TRENCH NO.
I-5



TRENCH LOG

PLATE B-5

INFILTRATION CALCULATIONS

Project Name	Proposed Commercial/Industrial Building
Project Location	San Bernardino County, CA
Project Number	17G218-2
Engineer	Scott McCann

Infiltration Test No: I-1

Constants

	Diameter (ft)	Area (ft^2)	Area (cm^2)
Inner	1	0.79	730
Anlr. Spac	2	2.36	2189

*Note: The infiltration rate was calculated based on current time interval

Test Interval		Time (hr)	Interval **Elapsed** (min)	Flow Readings: Inner Ring (ml)	Flow Readings: Ring Flow (cm^3)	Flow Readings: Annular Ring (ml)	Flow Readings: Space Flow (cm^3)	Infiltration Rates: Inner Ring* (cm/hr)	Infiltration Rates: Annular Space* (cm/hr)	Infiltration Rates: Inner Ring* (in/hr)	Infiltration Rates: Annular Space* (in/hr)
1	Initial	10:45 AM	10	250	1750	1000	5450	14.39	14.94	5.67	5.88
	Final	10:55 AM	**10**	2000		6450					
2	Initial	10:56 AM	10	300	1400	200	4500	11.51	12.33	4.53	4.86
	Final	11:06 AM	**21**	1700		4700					
3	Initial	11:07 AM	10	50	1250	0	4150	10.28	11.38	4.05	4.48
	Final	11:17 AM	**32**	1300		4150					
4	Initial	11:18 AM	10	50	1175	600	3900	9.66	10.69	3.80	4.21
	Final	11:28 AM	**43**	1225		4500					
5	Initial	11:29 AM	10	150	1125	500	3900	9.25	10.69	3.64	4.21
	Final	11:39 AM	**54**	1275		4400					
6	Initial	11:40 AM	10	200	1150	350	3850	9.46	10.55	3.72	4.15
	Final	11:50 AM	**65**	1350		4200					
7	Initial	11:51 AM	10	0	1125	200	3850	9.25	10.55	3.64	4.15
	Final	12:01 PM	**75**	1125		4050					

INFILTRATION CALCULATIONS

Project Name	Proposed Commercial/Industrial Building
Project Location	San Bernardino County, CA
Project Number	17G218-2
Engineer	Scott McCann

Infiltration Test No: I-2

Constants

	Diameter (ft)	Area (ft^2)	Area (cm^2)
Inner	1	0.79	730
Anlr. Spac	2	2.36	2189

*Note: The infiltration rate was calculated based on current time interval

Test Interval		Time (hr)	Interval **Elapsed** (min)	Flow Readings: Inner Ring (ml)	Flow Readings: Ring Flow (cm^3)	Flow Readings: Annular Ring (ml)	Flow Readings: Space Flow (cm^3)	Infiltration Rates: Inner Ring* (cm/hr)	Infiltration Rates: Annular Space* (cm/hr)	Infiltration Rates: Inner Ring* (in/hr)	Infiltration Rates: Annular Space* (in/hr)
1	Initial	9:15 AM	10	300	1500	900	4600	12.33	12.61	4.86	4.96
	Final	9:25 AM	**10**	1800		5500					
2	Initial	9:26 AM	10	200	1175	600	4250	9.66	11.65	3.80	4.59
	Final	9:36 AM	**21**	1375		4850					
3	Initial	9:37 AM	10	0	1075	250	4100	8.84	11.24	3.48	4.42
	Final	9:47 AM	**32**	1075		4350					
4	Initial	9:48 AM	10	50	1000	100	3950	8.22	10.83	3.24	4.26
	Final	9:58 AM	**43**	1050		4050					
5	Initial	9:59 AM	10	350	950	50	3850	7.81	10.55	3.08	4.15
	Final	10:09 AM	**54**	1300		3900					
6	Initial	10:10 AM	10	250	925	500	3850	7.61	10.55	2.99	4.15
	Final	10:20 AM	**65**	1175		4350					
7	Initial	10:21 AM	10	200	950	350	3850	7.81	10.55	3.08	4.15
	Final	10:31 AM	**75**	1150		4200					

INFILTRATION CALCULATIONS

Project Name	Proposed Commercial/Industrial Building
Project Location	San Bernardino County, CA
Project Number	17G218-2
Engineer	Scott McCann

Infiltration Test No: I-3

Constants

	Diameter (ft)	Area (ft^2)	Area (cm^2)
Inner	1	0.79	730
Anlr. Spac	2	2.36	2189

*Note: The infiltration rate was calculated based on current time interval

Test Interval		Time (hr)	Interval **Elapsed** (min)	Flow Readings: Inner Ring (ml)	Flow Readings: Ring Flow (cm^3)	Flow Readings: Annular Ring (ml)	Flow Readings: Space Flow (cm^3)	Infiltration Rates: Inner Ring* (cm/hr)	Infiltration Rates: Annular Space* (cm/hr)	Infiltration Rates: Inner Ring* (in/hr)	Infiltration Rates: Annular Space* (in/hr)
1	Initial	7:45 AM	10	450	1450	600	5400	11.92	14.80	4.69	5.83
	Final	7:55 AM	**10**	1900		6000					
2	Initial	7:56 AM	10	0	1225	200	4950	10.07	13.57	3.97	5.34
	Final	8:06 AM	**21**	1225		5150					
3	Initial	8:07 AM	10	200	1175	250	4700	9.66	12.88	3.80	5.07
	Final	8:17 AM	**32**	1375		4950					
4	Initial	8:18 AM	10	100	1050	350	4550	8.63	12.47	3.40	4.91
	Final	8:28 AM	**43**	1150		4900					
5	Initial	8:29 AM	10	150	1025	900	4450	8.43	12.20	3.32	4.80
	Final	8:39 AM	**54**	1175		5350					
6	Initial	8:40 AM	10	150	1025	1100	4400	8.43	12.06	3.32	4.75
	Final	8:50 AM	**65**	1175		5500					
7	Initial	8:51 AM	10	300	1000	400	4300	8.22	11.79	3.24	4.64
	Final	9:01 AM	**75**	1300		4700					

INFILTRATION CALCULATIONS

Project Name	Proposed Commercial/Industrial Building
Project Location	San Bernardino County, CA
Project Number	17G218-2
Engineer	Scott McCann

Infiltration Test No: I-4

Constants

	Diameter (ft)	Area (ft^2)	Area (cm^2)
Inner	1	0.79	730
Anlr. Spac	2	2.36	2189

*Note: The infiltration rate was calculated based on current time interval

Test Interval		Time (hr)	Interval **Elapsed** (min)	Flow Readings: Inner Ring (ml)	Flow Readings: Ring Flow (cm^3)	Flow Readings: Annular Ring (ml)	Flow Readings: Space Flow (cm^3)	Infiltration Rates: Inner Ring* (cm/hr)	Infiltration Rates: Annular Space* (cm/hr)	Infiltration Rates: Inner Ring* (in/hr)	Infiltration Rates: Annular Space* (in/hr)
1	Initial	12:30 PM	10	250	1600	700	4850	13.16	13.29	5.18	5.23
	Final	12:40 PM	**10**	1850		5550					
2	Initial	12:41 PM	10	0	1325	800	3900	10.90	10.69	4.29	4.21
	Final	12:51 PM	**21**	1325		4700					
3	Initial	12:52 PM	10	0	1225	450	3850	10.07	10.55	3.97	4.15
	Final	1:02 PM	**32**	1225		4300					
4	Initial	1:03 PM	10	0	1175	300	3900	9.66	10.69	3.80	4.21
	Final	1:13 PM	**43**	1175		4200					
5	Initial	1:14 PM	10	125	1175	650	3750	9.66	10.28	3.80	4.05
	Final	1:24 PM	**54**	1300		4400					
6	Initial	1:25 PM	10	1350	1150	4300	3650	9.46	10.01	3.72	3.94
	Final	1:35 PM	**65**	2500		7950					
7	Initial	1:36 PM	10	2550	1150	8150	3600	9.46	9.87	3.72	3.89
	Final	1:46 PM	**75**	3700		11750					

INFILTRATION CALCULATIONS

Project Name	Proposed Commercial/Industrial Building
Project Location	San Bernardino County, CA
Project Number	17G218-2
Engineer	Scott McCann

Infiltration Test No: I-5

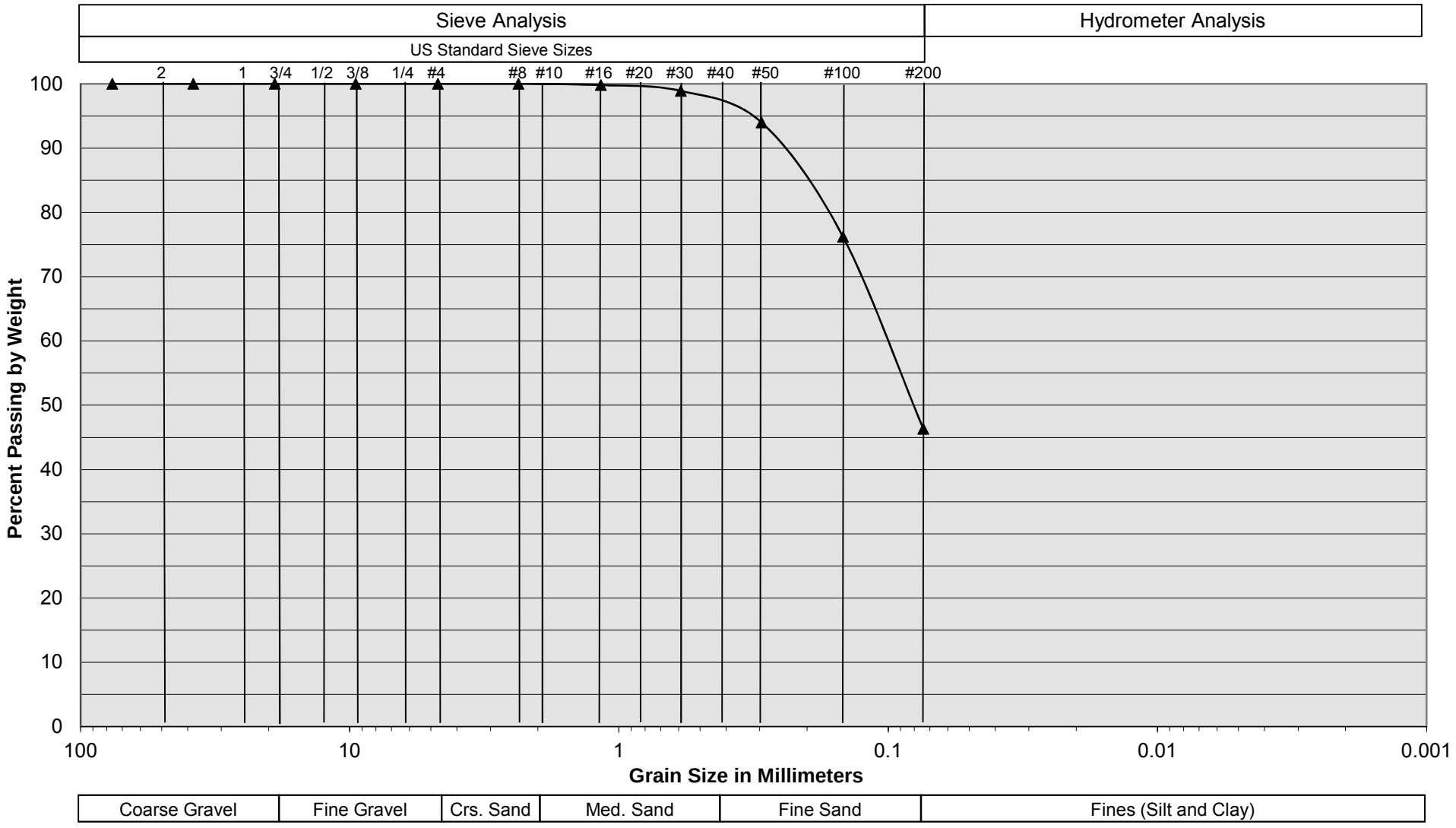
Constants

	Diameter (ft)	Area (ft^2)	Area (cm^2)
Inner	1	0.79	730
Anlr. Spac	2	2.36	2189

*Note: The infiltration rate was calculated based on current time interval

Test Interval		Time (hr)	Interval **Elapsed** (min)	Flow Readings: Inner Ring (ml)	Flow Readings: Ring Flow (cm^3)	Flow Readings: Annular Ring (ml)	Flow Readings: Space Flow (cm^3)	Infiltration Rates: Inner Ring* (cm/hr)	Infiltration Rates: Annular Space* (cm/hr)	Infiltration Rates: Inner Ring* (in/hr)	Infiltration Rates: Annular Space* (in/hr)
1	Initial	2:10 PM	10	250	1400	900	4400	11.51	12.06	4.53	4.75
	Final	2:20 PM	**10**	1650		5300					
2	Initial	2:21 PM	10	50	950	100	3850	7.81	10.55	3.08	4.15
	Final	2:31 PM	**21**	1000		3950					
3	Initial	2:32 PM	10	50	825	300	3700	6.78	10.14	2.67	3.99
	Final	2:42 PM	**32**	875		4000					
4	Initial	2:43 PM	10	900	825	4100	3350	6.78	9.18	2.67	3.62
	Final	2:53 PM	**43**	1725		7450					
5	Initial	2:54 PM	10	50	800	300	3350	6.58	9.18	2.59	3.62
	Final	3:04 PM	**54**	850		3650					
6	Initial	3:05 PM	10	900	800	3900	3400	6.58	9.32	2.59	3.67
	Final	3:15 PM	**65**	1700		7300					
7	Initial	3:16 PM	10	1725	775	7450	3350	6.37	9.18	2.51	3.62
	Final	3:26 PM	**75**	2500		10800					

Grain Size Distribution

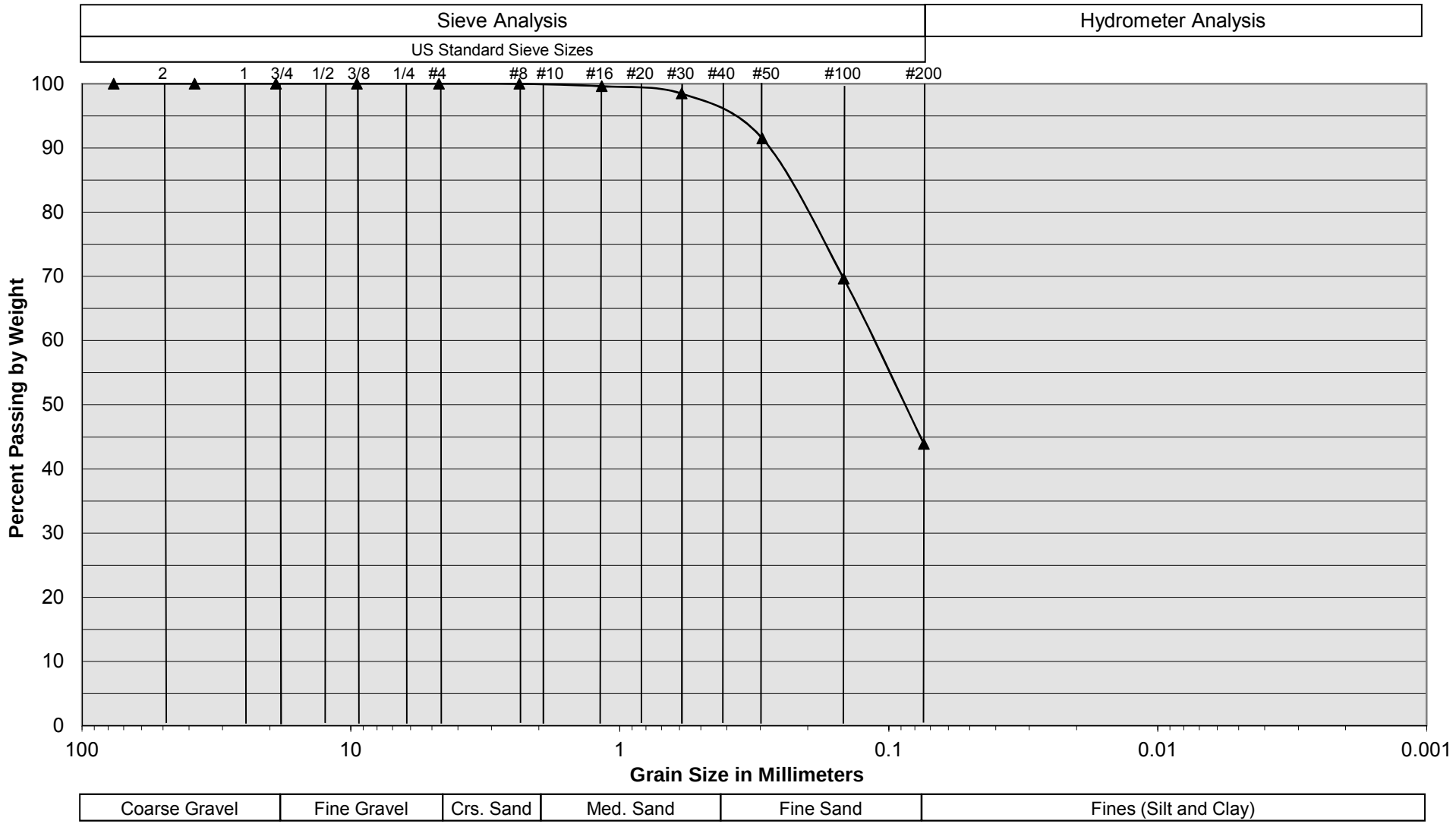


Sample Description	I-1 @ 4 feet
Soil Classification	Light Gray Brown Silty fine Sand

Proposed Commercial/Industrial Building
San Bernardino County, CA
Project No. 17G218-2
PLATE C-1

SoCalGeo
SOUTHERN CALIFORNIA GEOTECHNICAL
A California Corporation

Grain Size Distribution

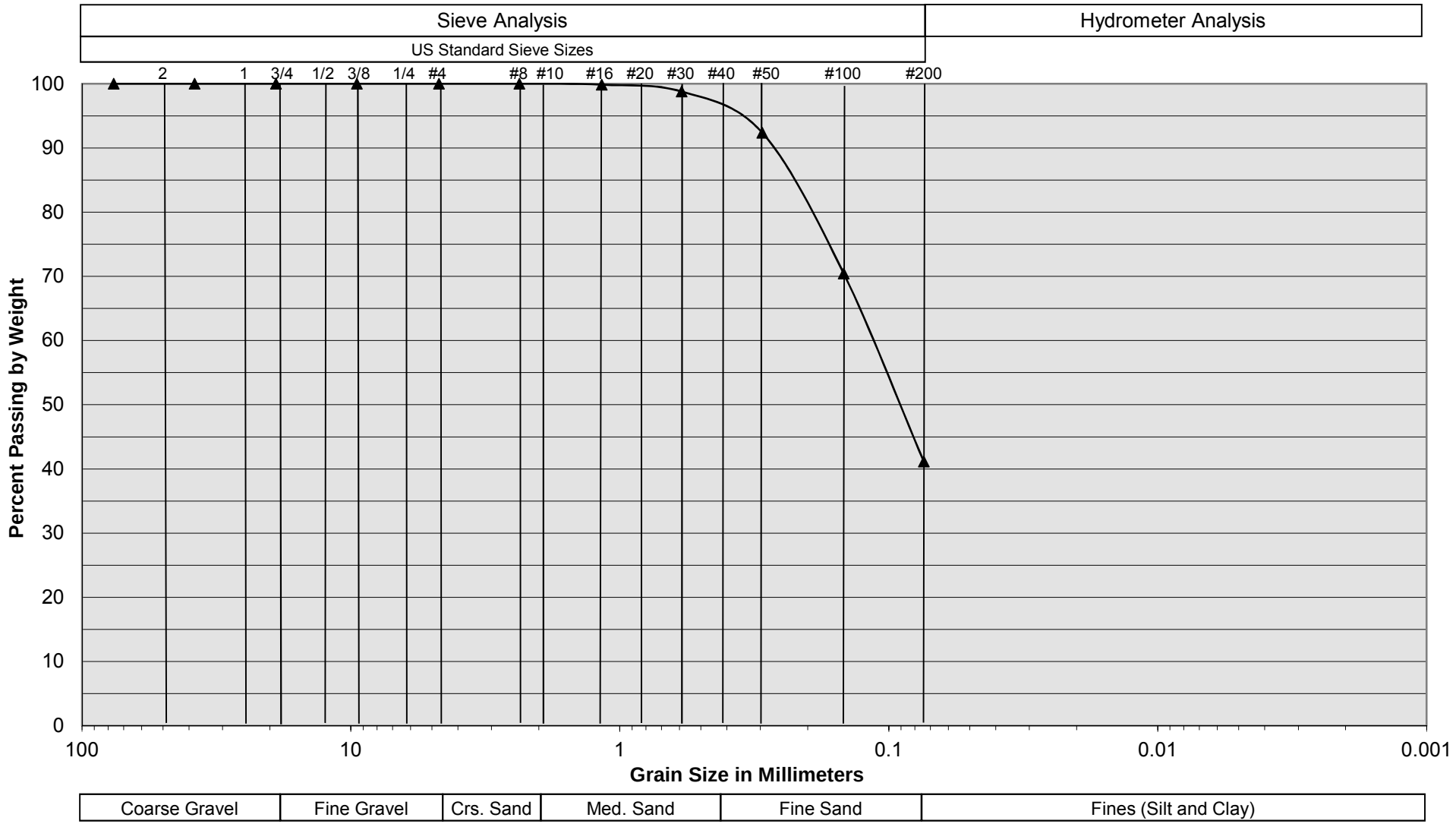


Sample Description	I-2 @ 6 feet
Soil Classification	Light Gray Brown Silty fine Sand, trace medium Sand

Proposed Commercial/Industrial Building
San Bernardino County, CA
Project No. 17G218-2
PLATE C-2

SoCalGeo
SOUTHERN CALIFORNIA GEOTECHNICAL
A California Corporation

Grain Size Distribution

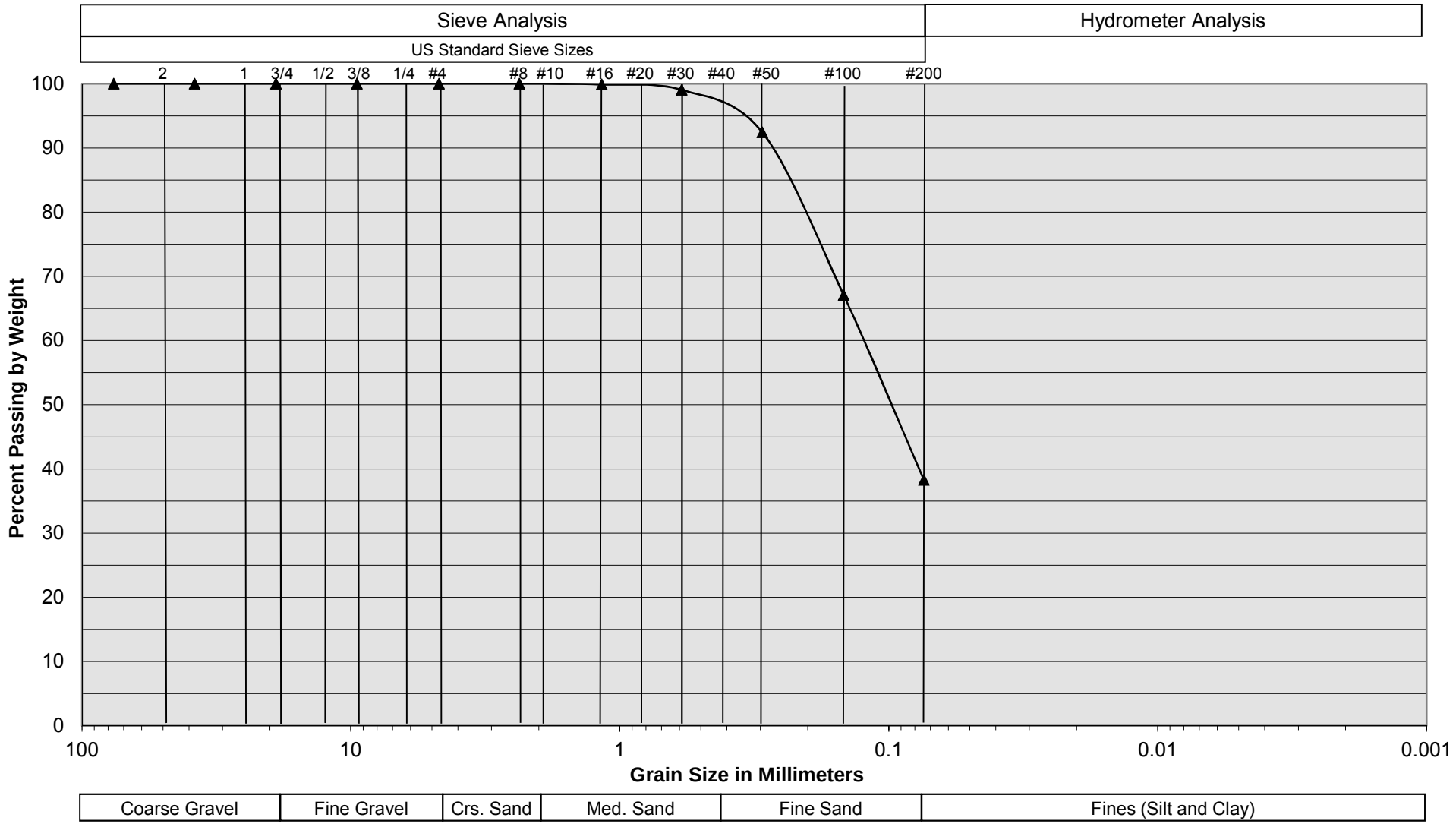


Sample Description	I-3 @ 7 feet
Soil Classification	Light Gray Brown Silty fine Sand

Proposed Commercial/Industrial Building
San Bernardino County, CA
Project No. 17G218-2
PLATE C-3

SoCalGeo
SOUTHERN CALIFORNIA GEOTECHNICAL
A California Corporation

Grain Size Distribution

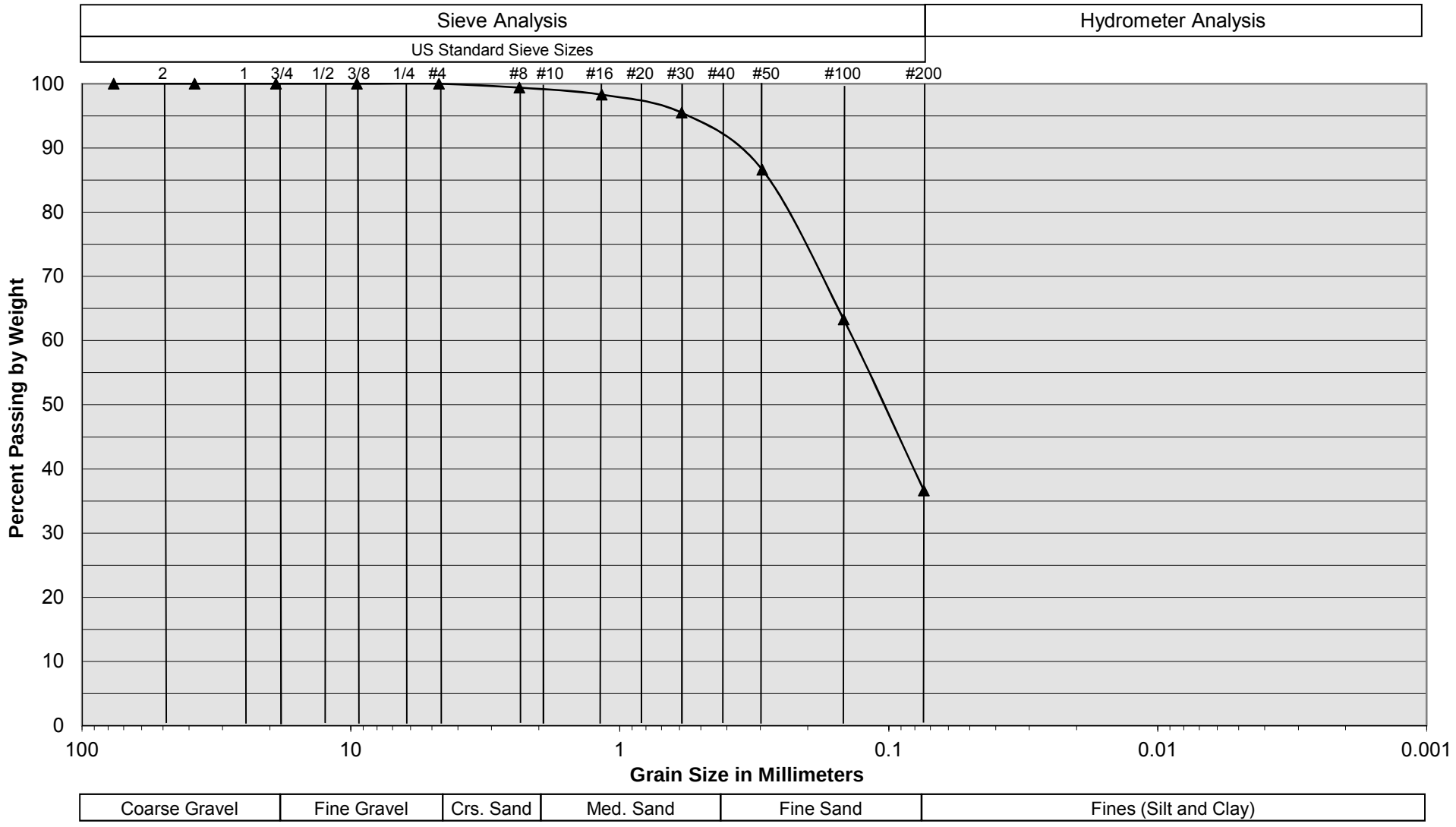


Sample Description	I-4 @ 4 feet
Soil Classification	Light Gray Brown Silty fine Sand

Proposed Commercial/Industrial Building
San Bernardino County, CA
Project No. 17G218-2
PLATE C-4

SoCalGeo
SOUTHERN CALIFORNIA GEOTECHNICAL
A California Corporation

Grain Size Distribution



Sample Description	I-5 @ 4 feet
Soil Classification	Light Gray Brown Silty fine Sand, little medium Sand

Proposed Commercial/Industrial Building
San Bernardino County, CA
Project No. 17G218-2
PLATE C-5

SoCalGeo
SOUTHERN CALIFORNIA GEOTECHNICAL
A California Corporation

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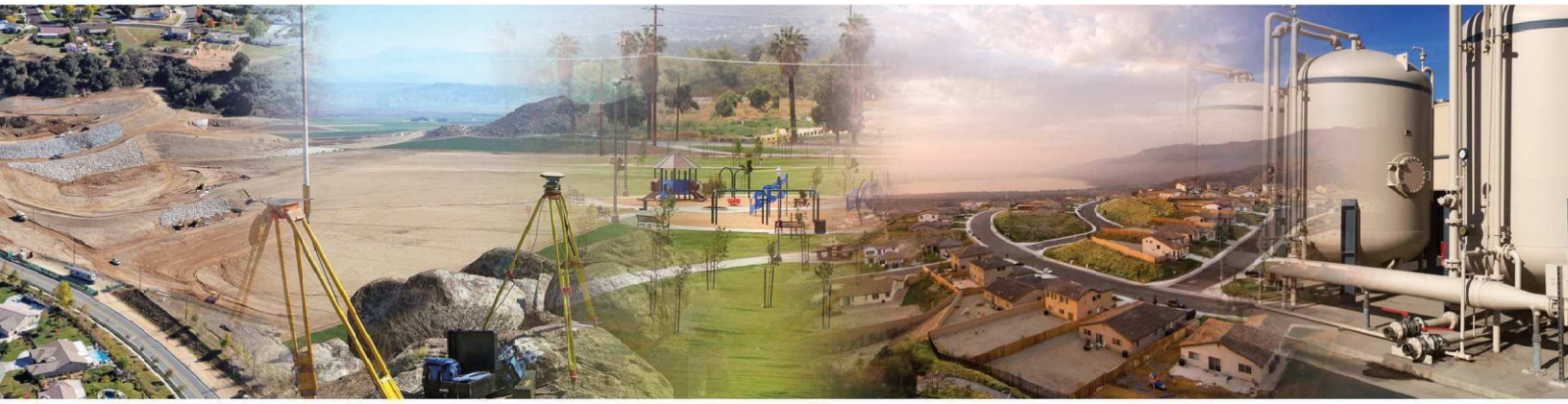
ALBERT A. WEBB ASSOCIATES



TRAFFIC IMPACT ANALYSIS (TIA) FOR DUKE REALTY- HIGH CUBE WAREHOUSE

July 2019

www.webbassociates.com

ALBERT A. WEBB ASSOCIATES

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July 11, 2019

Adam Schmid
Duke Realty, LLC
200 Spectrum Center Drive, Suite 1600
Irvine, CA 92618

RE: Final Traffic Impact Analysis Report for the proposed Duke Realty Warehouse in the County of San Bernardino, CA.

Dear Adam,

We are pleased to submit herewith our Final Traffic Impact Analysis Report for the proposed Duke Realty Warehouse Project, which we have prepared at your request.

If you have any questions regarding this report, please call the undersigned for clarification.

Sincerely yours,

ALBERT A. WEBB ASSOCIATES

Nicholas Lowe, M.S., P.E.
Associate Engineer

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Cumulative Project Information ..... Appendix B
Traffic Count Worksheets ..... Appendix C
Signal Warrant Worksheets ..... Appendix D
Level of Service Calculation Worksheets ..... Appendix E
Queuing Analysis ..... Appendix F
Model Worksheets ..... Appendix G

LIST OF DEFINITIONS & ACRONYMS

Access		Any entrance or exit point to a primary highway
Annual Average Daily Traffic	AADT	The total annual volume of traffic passing a point or segment of a highway in both directions divided by the number of days in the year
Capacity		The maximum hourly rate at which vehicles can reasonably be expected to traverse a point or uniform section of a lane or roadway during a given time period under prevailing roadway, traffic, and control conditions
Decision sight distance		The distance required for a driver to detect an unexpected or otherwise difficult-to-perceive information source or hazard in a roadway environment that may be visually cluttered, recognize the hazard or its threat potential, select an appropriate speed and path, and initiate and complete the required maneuver safely and efficiently
Design year		20 years following the opening year or year the project is open to traffic
Development traffic		Traffic volumes that are generated by the development
Directional distribution		The directional split of traffic during the peak or design hour, commonly expressed as a percentage in the peak and off-peak flow directions
Highway Capacity Manual	HCM	A manual published by the Transportation Research Board as a means of standardizing the techniques used to evaluate the quality of service provided by various transportation facilities
Institute of Transportation Engineers	ITE	An international educational and scientific association of transportation professionals. ITE facilitates the application of technology and scientific principles to research, planning, functional design, implementation, operation, policy development, and management for all transportation modes
Intersection sight distance		The distance at which a motorist attempting to enter or cross a highway should be able to observe traffic in order to make his desired movement. The required distance varies with the speed of the traffic on the main highway
Level of Service	LOS	A qualitative measure describing operational conditions within a traffic stream based on service measures such as speed and travel time, freedom to maneuver, traffic interruptions, comfort, and convenience
Opening year		The year the project is scheduled to be open to traffic
Pass-by trips		Trips that would have traveled on a street adjacent to a retail land use even if the retail land use was not present

Peak hour		That hour during which the maximum amount of travel occurs. It may be specified as the morning peak hour or the afternoon or evening peak hour
Queuing		A stacking of vehicles waiting to be serviced and/or processed
Sight distance		The distance visible to the driver of a passenger vehicle measured along the normal travel path of a roadway from a designated location and to a specified height above the roadway when the view is unobstructed by traffic
Stopping sight distance		The distance required by a driver of a vehicle, traveling at a given speed, to bring the vehicle to a stop after an object on the roadway becomes visible. It includes the distance traveled during driver perception and reaction times and the vehicle braking distance
Study area		The portion(s) of the transportation system, which is directly affected by the planned development, to be included within the scope of the TIA analysis
Traffic impact		The effect of site traffic on highway operations and safety
Traffic Impact Analysis	TIA	A traffic engineering study, which determines the potential traffic impacts of a proposed traffic generator. A complete analysis includes an estimation of future traffic with and without the proposed generator, analysis to traffic impacts, and recommended roadway improvements, which may be necessary to accommodate the expected traffic
Traffic Impact Study	TIS	A TIA that requires more comprehensive analysis and documentation based on forecasted traffic that is above a defined traffic threshold
Trip distribution		The allocation of the site-generated traffic among all possible approach and departure routes
Trip generation		The estimation of the number of origins from and destinations to a site resulting from the land-use activity on that site
Capital Investment Program	CIP	
Gross Floor Area	GFA	
Highway Capacity Manual	HCM	
High-occupancy vehicle	HOV	
Land use	LU	
Volume to capacity	V/C	
South Bound Left	SBL	
North Bound Left	NBL	
North Bound Right	NBR	

South Bound Right	SBR	
West Bound Right	WBR	
West Bound Left	WBL	
East Bound Right	EBR	
North Bound Through	NBT	
South Bound Through	SBT	
East Bound Through	EBT	
West Bound Through	WBT	
Thousand Square Feet	TSF	
Passenger Car	PCE	
San Bernardino County Association of Governments	SANBAG	
Manual of Uniform Traffic Control Devices	MUTCD	
Right In Right Out	RIRO	
Existing Plus Ambient Growth Plus Cumulative Plus Project	EACP	

1.0 EXECUTIVE SUMMARY

1.1 Introduction

The proposed Project is located on the northwest corner of the intersection of Alabama Street and Palmetto Avenue in San Bernardino County. It is located in the "Donut Hole" region of unincorporated San Bernardino County. The Project proposes to construct a transload and short-term storage warehouse at the site and construct required improvements to its frontage and any necessary measures to nearby intersections to maintain acceptable traffic operations.

1.2 Purpose of Report and Study Objectives

The purpose of this study is to evaluate the effects on traffic circulation produced from the proposed development of the Alabama Street and Palmetto Avenue High-Cube Transload and Short-Term Storage Warehouse (Project) in the County of San Bernardino.

The objectives of this study include the following:

- Document Existing (2018) traffic conditions in the vicinity of the proposed development;
- Determine the traffic generated from the proposed development;
- Evaluate Existing Plus Project (2018) traffic conditions;
- Evaluate Existing Plus Ambient Growth Plus Project (2020) traffic conditions;
- Evaluate Existing Plus Ambient Growth Plus Cumulative Plus Project (2020) traffic conditions;
- Evaluate Build-Out Year Plus Cumulative Projects (2040) traffic conditions;
- Evaluate Build-Out year Plus Cumulative Projects Plus Project (2040) traffic conditions;
- Determine if the level of service (LOS) required by the County of San Bernardino, City of Redlands City of Highland, and/or California Department of Transportation (Caltrans) will be maintained within the study area, and if not, determine the mitigation measures that will be necessary in order to maintain the required LOS;
- Determine if peak hour traffic signal warrants are met for any of the unsignalized study area intersections;
- Evaluate the adequacy of on-site circulation for the proposed development;
- Determine if safety and/or operational improvements are necessary due to the proposed development;
- Determine queue lengths at selected intersections.

1.3 Traffic and Transportation Mitigation Measures

This traffic impact analysis demonstrates that the direct traffic impacts generated by the Project can be mitigated to meet the required level of service if the following recommended mitigation measures are adopted.

1.3.1 Project Design Features - Roadway & Safety Improvements

- Construct partial width improvements on the northerly side of Palmetto Avenue at its ultimate cross-section as a collector street adjacent to Project boundary line.
- Construct partial width improvements on the westerly side of Alabama Street at its ultimate cross-section as a major arterial adjacent to Project boundary line.

- Modify the existing traffic signal at intersection of Alabama Street and River Bluff Avenue / Driveway 5 to provide full access for all movements at the intersection.
- Signing/striping should be implemented in conjunction with detailed construction plans for the Project site.
- Sight distance at the Project entrance roadway will be reviewed with respect to standard County of San Bernardino sight distance standards at the time of preparation of final grading, landscape, site development, and street improvement plans.

1.3.2 Project Design Features - Intersection Improvements

- Construct the intersection of West Driveway 1 and Palmetto Avenue (Int. 15) to include the following geometrics.
  Northbound: No proposed improvements.
  Southbound: Shared left-right turn lane.
  Eastbound: Convert through lane to shared through-left turn lane.
  Westbound: Convert through lane to shared through-right turn lane.

- Construct the intersection of West Driveway 2 and Palmetto Avenue (Int. 16) to include the following geometrics.
  Northbound: No proposed improvements.
  Southbound: Shared left-right turn lane.
  Eastbound: Convert through lane to shared through-left turn lane.
  Westbound: Convert through lane to shared through-right turn lane.

- Construct the intersection of East Driveway 3 and Palmetto Avenue (Int. 17) to include the following geometrics.
  Northbound: No proposed improvements.
  Southbound: Shared left-right turn lane.
  Eastbound: Convert through lane to shared through-left turn lane.
  Westbound: Convert through lane to shared through-right turn lane.

- Construct the intersection of Alabama Street and North Driveway 4 (Int. 18) to restrict the movements for right in right out only.
  Northbound: One through lane.
  Southbound: Convert through lane to shared through-right turn lane. Add two through lanes.
  Eastbound: Add a right turn lane.
  Westbound: Does not exist.

- Modify traffic signal and construct the intersection of River-Bluff Avenue / Driveway 5 and Alabama Street to include the following geometries.
  Northbound: One left turn lane. One through lane. One right turn lane.
  Southbound: One left turn lane. Two through lanes. One through-right turn lane.
  Eastbound: One left turn lane. One lane shared by through-right turn movements.
  Westbound: One left turn lane. One lane shared by through-right turn movements.

- Construct the intersection of Alabama Street and South Driveway 6 (Int. 19) to restrict the movements for right in right out only.
  Northbound: Two through lanes.
  Southbound: Convert through lane to shared through-right turn lane.
  Eastbound: Add a right turn lane.
  Westbound: Does not exist.

1.3.3 Project Fair Share Mitigation Summary

Table 1-1 summarizes the proposed mitigation measure and associated funding mechanism for the Project as a result of the traffic study. The Project will participate in the cost of off-site improvements through the payment of "fair share" mitigation fees, including the following:

- San Bernardino Associated Governments (SANBAG) Congestion Management Program

Program improvements: SANBAG congestion management program provides funding for the 2040 improvements mentioned in the Table 1-1. The fee of $0.73 per square foot is charged for every high –cube warehouse Project developed in the Redlands Donut Hole under the SANBAG congestion management program. These fees will be collected and utilized as needed by the County of San Bernardino to construct the improvements necessary to assist in maintaining the required level of service.

Non Program Improvements: The non-program improvements are the improvements which are not funded by any program in County of San Bernardino or Caltrans. The Project has one non-program improvement. As the impact is generated in 2040 Cumulative Plus Project Condition the fair share towards the improvement is calculated based on the number of Project trips and total number of cumulative trips.

The estimated fair share amount provided in the table is a rough estimate for informational purposes only and should not be considered final or binding. A thorough analysis of the necessary improvements and existing constraints should be completed in an engineering cost estimate.

Table 1-1 – Project Fair Share Mitigation Summary

No.	Intersection	Jurisidiction	Recommended Improvement	EP & EAP Improvements	EAPC (2020) Improvements		Build-Out Year (2040) Cumulative Plus Projects Improvements		Payment System	Fair Share Percentage	Estimated Fair Share Amount
				Project Improvements	Program [1] Improvements	Non Program Improvements	Program [1] Improvements	Non Program Improvements			
1	California Street (NS) / I-10 WB Ramps (EW)	Caltrans	1. One NBL Turn Lane		1. One NBL Turn Lane		1. One NBL Turn Lane		City of Redlands	2.87%	$287,000
2	California Street (NS) / I-10 EB Ramps (EW)	Caltrans	1. One SBL Turn Lane 2. One EBL Turn Lane		1. One SBL Turn Lane 2. One EBL Turn Lane		1. One SBL Turn Lane		City of Redlands	3.00%	$318,000
3	Alabama Street (NS) /5th Street (EW)	City of Highland	1. One Overlapping NBR Turn Lane	1. One Overlapping NBR Turn Lane					Project Improvement**		
5	Alabama Street (NS)/Dwy-5-Riverbluff Ave)EW)	Unincorporated/ Donut Hole	1. One EB Left Turn Lane and Shared Through- Right Turn Lane. 2. One NBLTurn Lane. 3. One WB Shared Through-Right Turn Lane 4. Restripe SB to One SB Shared Through- Right Turn Lane and Add Two Through Lanes and a Left Turn Lane.	1. One EB Left Turn Lane and Shared Through- Right Turn Lane. 2. One NBLTurn Lane. 3. One WB Shared Through-Right Turn Lane 4. Restripe SB to One SB Shared Through- Right Turn Lane and Add Two Through Lanes and a Left Turn Lane.					Project Improvement		
6	Alabama Street (NS) / Palmetto Avenue (EW)	Unincorporated / Donut Hole	1. One WBT Lane 2. One EBT Lane 3. Add One SB Left Turn Lane, Add Two Through Lane and Restripe SB Through to Shared SB Through- Right Lane	3. Add One SB Left Turn Lane, Add Two Through Lane and Restripe SB Through to Shared SB Through- Right Lane			1. One WBT Lane 2. One EBT Lane		Project Improvement/Program Improvement*		
8	Alabama Street (NS) / Lugonia Avenue (EW)	Unincorporated / Donut Hole / City of Redlands	1. One NBR Turn Lane 2. One WBL Turn Lane 3. One EBR Turn Lane 4. One WBR Turn Lane	1. One NBR Turn Lane			2. One WBL Turn Lane	3. One EBR Turn Lane 4. One WBR Turn Lane	Fair Share/Project Improvement**/ Program Improvement	13.29%	$106,320
9	Alabama Street (NS) / I-10 WB Ramps (EW)	Caltrans	1. One NBL Turn Lane 2. One SBR Turn Lane				1. One NBL Turn Lane 2. One SBR Turn Lane		Program Improvement*	6.00%	$49,500
10	Alabama Street (NS) / I-10 EB Ramps (EW)	Caltrans	1. One NBT Lane				1. One NBT Lane		Program Improvement*	4.52%	$13,108
14	SR 210 NB Ramps (NS) / San Bernardino Avenue (EW)	Caltrans	1. One WBT Lane 2.Restripe EB Lanes				1. One WBT Lane 2.Restripe EB Lanes		County of San Bernardino	10.00%	$82,500

[1]Per Section 9 of the County of San Bernardino Regional Transportation Development Mitigation Fee Plan - Program improvements constructed by project may be eligible for fee credit. In lieu fee payment is at discretion of County.

***Improvements already planned in San Bernardino Congestion Management Program. Fair share percentage and estimated cost for informational purposes only.**

****Project improvements are located outside of County of San Bernardino.**

Fair Share at an Intersection: Project Volume / (EACP Volume - Existing Volume)

2.0 INTRODUCTION

2.1 Purpose of Report and Study Objectives

The purpose of this study is to evaluate the effects on traffic circulation produced from the proposed development of the Project

The objectives of this study include the following:

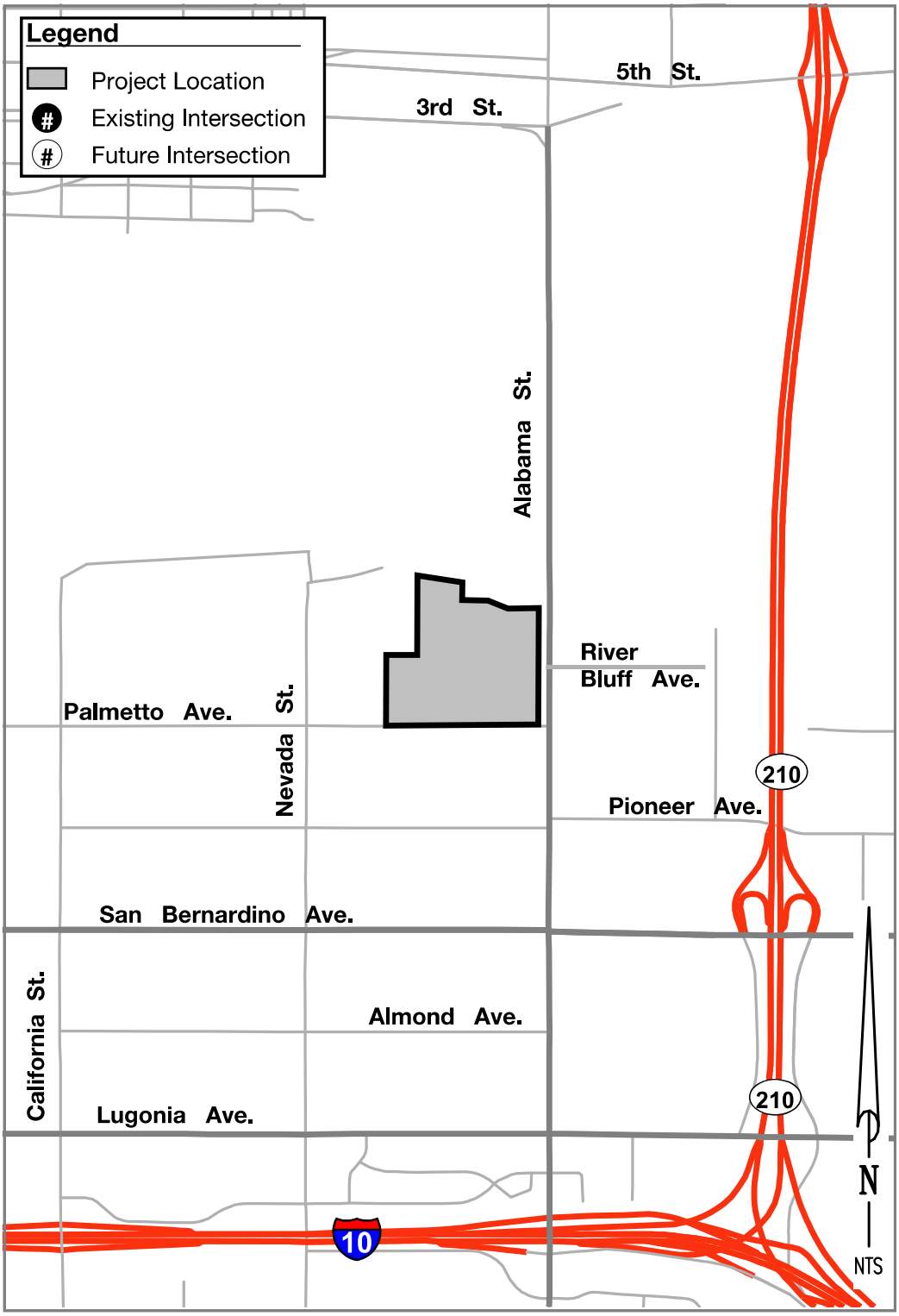
- Document Existing (2018) traffic conditions in the vicinity of the proposed development;
- Determine the traffic generated from the proposed development;
- Evaluate Existing Plus Project (2018) traffic conditions;
- Evaluate Existing Plus Ambient Growth Plus Project (2020) traffic conditions;
- Evaluate Existing Plus Ambient Growth Plus Cumulative Plus Project (2020) traffic conditions;
- Evaluate Build-Out Year Plus Cumulative Projects (2040) traffic conditions;
- Evaluate Build-Out year Plus Cumulative Projects Plus Project (2040) traffic conditions;
- Determine if the level of service (LOS) required by the County of San Bernardino, City of Redlands, City of Highland, and/or California Department of Transportation (Caltrans) will be maintained within the study area, and if not, determine the mitigation measures that will be necessary in order to maintain the required LOS;
- Determine if peak hour traffic signal warrants are met for any of the unsignalized study area intersections;
- Evaluate the adequacy of on-site circulation for the proposed development;
- Determine if safety and/or operational improvements are necessary due to the proposed development; and
- Determine queue lengths at selected intersections.

2.2 Site Location and Study Area

The proposed Project is located in the County of San Bernardino. The Project is located on the northwest corner of Alabama Street and Palmetto Avenue. The study area is located within the East Valley Specific Plan area.

The Project site location is presented on **Figure 1**.

Figure 1 Project Site Location Map



2.3 Development Project Description

2.3.1 Project Size and Description

The Project site encompasses approximately 54.76 acres. The Project is currently proposed for development of a 1,192,671 square feet gross floor area high-cube warehouse.

2.3.2 Existing Land Use and Zoning

Existing land use and zoning designations are as follows:

- Existing Zoning: IR (Regional Industrial)
- Existing Land Use: Vacant

2.3.3 Proposed Land Use and Zoning

Proposed land use and zoning designations are as follows:

- Proposed Zoning: IR (Regional Industrial)
- Proposed Land Use: Industrial

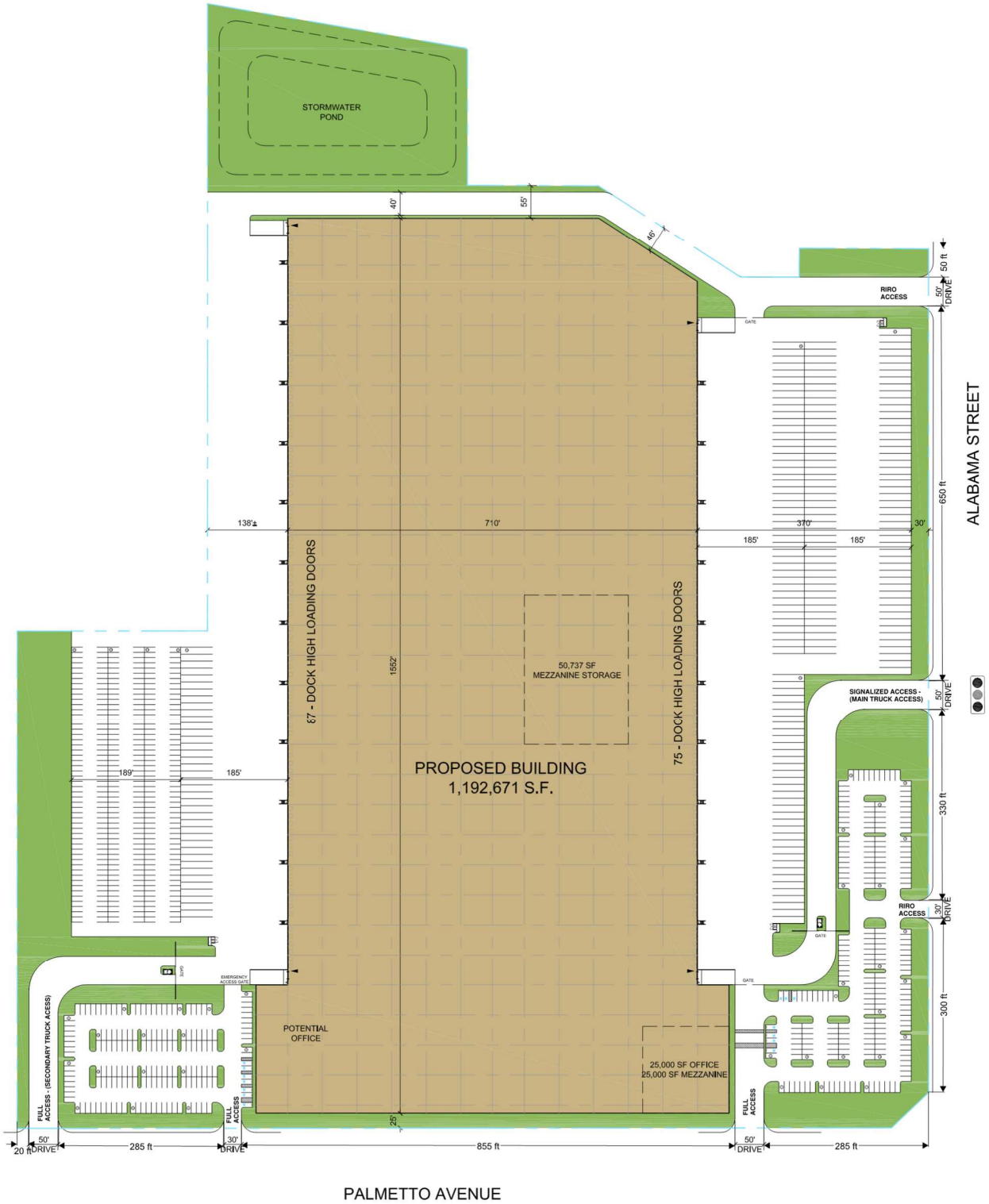
2.3.4 Site Plan of Proposed Project

The current proposed Project layout is shown on **Figure 2** which includes the proposed Project site access points. As indicated below, the Project will have access to Alabama Street east of the Project and Palmetto Avenue south of the Project.

The Project access points/driveways include the following:

1. N/S full-access driveway with one-way stop control on Palmetto Avenue (Int. 15);
2. N/S full-access driveway with one-way stop control on Palmetto Avenue (Int. 16);
3. N/S full-access driveway with one-way stop control on Palmetto Avenue (Int. 17);
4. E/W right-in/right-out driveway with one-way stop control on Alabama Street (Int. 18);
5. E/W full-access driveway with signalized control on Alabama Street (Int. 5);
6. E/W right-in/right-out driveway with one-way stop control on Alabama Street (Int. 19).

Figure 2 – Project Site Plan



2.3.5 Proposed Project Opening Year and Proposed Project Phasing

For analysis purposes, it is assumed that the Project will be developed in a single phase and full development is anticipated by 2020.

2.3.6 Sphere of Influence

The Project is within the sphere of influence or within one mile of the border of the City of San Bernardino, the City of Redlands, and the City of Highland.

2.3.7 Committed Roadway Improvements

Several intersection and roadway improvement Projects are planned to be constructed by the county and city in the future within the study area.

Intersection Improvements:

1. Alabama Street (NS) and Lugonia Avenue (EW)
    a. Add northbound right-turn lane and second westbound left-turn lane.
2. Alabama Street (NS) and San Bernardino Avenue (EW)
    a. Reconfigure eastbound approach for three through lanes and one right-turn lane. Reconfigure westbound approach to include two left-turn lanes.

The County also plans to improve following interchanges under the SANBAG Congestion Management Program:

1. I-10 (EW) and California Street (NS)
2. I-10 (EW) and Alabama Street (NS)

Roadway Improvements:

1. Alabama Street from Pioneer Avenue to Santa Ana River
    a. Widen the roadway from one lane in each direction to three lanes in each direction.
2. Alabama Street from I-10 WB Ramps to I-10 EB Ramps
    a. Widen overcrossing to two to three lanes in each direction. Re-configure ramps.
3. San Bernardino Avenue
    a. Widen the roadway from one lane in each direction to three lanes in each direction.

3.0 AREA CONDITIONS

3.1 Existing Roadway Descriptions

3.1.1 Primary Arterial

- 5th Street is a divided 4-lane east-west arterial in the project area with a painted median. It is classified as a primary arterial east of Palm Avenue/Alabama Street and is classified as a Major Highway west of Palm Avenue/Alabama Street in the City of Highlands General Plan Circulation Element and provides connectivity to the State Route-210 freeway. Its ultimate cross section includes six through lanes and a raised median. East of the freeway interchange, it continues as Greenspot Road. Street parking is not allowed. There are existing sidewalks on both sides of the street, and designated bike lanes in most areas within the study area.

3.1.2 Major Arterial

- Alabama Street is a divided 2-lane north-south arterial with a raised median in the frontage area of the project. Alabama Street is a divided 6-lane north-south arterial with a raised median south of the project. It is classified as a major arterial in the County of San Bernardino East Valley Area Plan and provides connectivity to the I-10 and SR-210 freeways. North of the City of Highland border, it continues as Palm Avenue and is classified as a Major Highway. Its ultimate cross section includes six through lanes and a raised median. Street parking is not allowed. There are existing sidewalks on both sides of the street and designated bike lanes where improvements have been constructed within the study area.
- San Bernardino Avenue is a divided 6-lane east-west arterial with a raised median in the project area. It is classified as a major arterial in the County of San Bernardino East Valley Area Plan and provides connectivity to the SR-210 freeway. Its ultimate cross section includes six through lanes and a raised median. Street parking is not allowed. There are existing sidewalks on both sides of the street where improvements have been constructed, but designated bike lanes do not exist within the study area.
- California Street is a divided 6-lane north-south arterial with a raised median in the project area. It is classified as a major arterial in the City of Redlands General Plan Circulation Element and provides connectivity to the I-10 freeway. Its ultimate cross section includes six through lanes and a raised median. Street parking is not allowed. There are existing sidewalks on both sides of the street where improvements have been constructed, but designated bike lanes do not exist within the study area.

3.1.3 Major Highway

- 3rd Street is a divided 4-lane east-west roadway in the project area with a painted median. It is classified as a major highway in the City of Highlands General Plan Circulation Element. Its ultimate cross section includes four through lanes and a raised median. Street parking is allowed. There are existing sidewalks on both sides of the street where improvements have been construction, but designated bike lanes do not exist within the study area.
- Lugonia Avenue is a divided 4-lane east-west roadway with a painted median in the project area. It is classified as a major highway in the County of San Bernardino East Valley Area Plan and provides connectivity to the SR-210 freeway. Its ultimate cross section includes four through lanes and a raised or

painted median. Street parking is not allowed. There are existing sidewalks on both sides of the street where improvements have been constructed, but designated bike lanes do not exist within the study area.

3.1.4 Collector

- Palmetto Avenue is an undivided 2-lane east-west roadway in the project area. It is classified as a collector in the County of San Bernardino East Valley Area Plan. Its ultimate cross section includes four through lanes and no median. Street parking is not allowed. There are existing sidewalks where improvements have been constructed, but designated bike lanes do not exist within the study area.

3.1.5 Local

- River Bluff Avenue is a divided 2-lane east-west roadway in the project area. It is not classified in the County of Riverside General Plan Circulation Element, but acts as a local roadway. It provides connectivity to one warehouse property. Street parking is not allowed. There are existing sidewalks on the north side of the street, but designated bike lanes do not exist within the study area.

3.2 Study Area Intersections and Roadways

Key study intersections and roadway segments are typically selected based on their location in relation to the vicinity of the project and whether potential significant project-related traffic will pass through them. The key intersections and roadway segments were identified in coordination with the County of San Bernardino staff and are shown on **Figure 3**. The study area includes the following intersections:

1. California Street (NS) / I-10 WB Ramps (EW)
2. California Street (NS) / I-10 EB Ramps (EW)
3. Alabama Street (NS) / 5th Street (EW)
4. Alabama Street (NS) / 3rd Street (EW)
5. Alabama Street (NS) / Project Driveway 5-River Bluff Avenue (EW)
6. Alabama Street (NS) / Palmetto Avenue (EW)
7. Alabama Street (NS) / San Bernardino Avenue (EW)
8. Alabama Street (NS) / Lugonia Avenue (EW)
9. Alabama Street (NS) / I-10 WB Ramps (EW)
10. Alabama Street (NS) / I-10 EB Ramps (EW)
11. SR-210 SB Ramps (NS) / 5th Street (EW)
12. SR-210 NB Ramps (NS) / 5th Street (EW)
13. SR-210 SB Ramps (NS) / San Bernardino Avenue (EW)
14. SR-210 NB Ramps (NS) / San Bernardino Avenue (EW)
15. Project Driveway 1 (NS) / Palmetto Avenue (EW)
16. Project Driveway 2 (NS) / Palmetto Avenue (EW)
17. Project Driveway 3 (NS) / Palmetto Avenue (EW)
18. Alabama Street (NS) / Project Driveway 4 (EW)
19. Alabama Street (NS) / Project Driveway 6 (EW)

3.3 Existing Traffic Controls and Intersection Geometrics

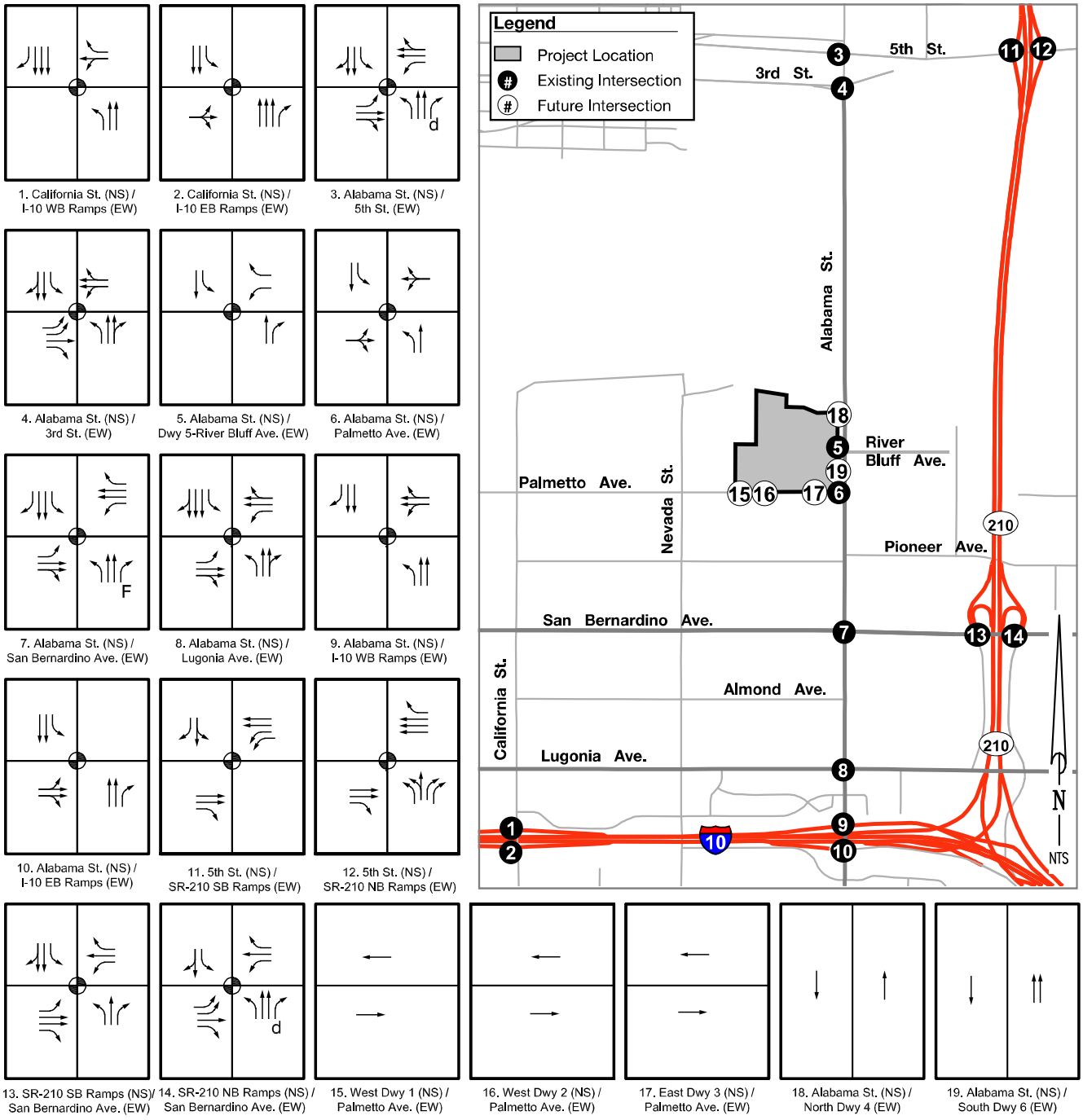
The existing roadway system is shown on **Figure 3**. It identifies the existing intersection traffic controls (i.e. signals and signage), intersection geometrics, and the number of vehicle lanes for each intersection within the study area.

3.4 Existing Traffic Volumes

Ninteen key study intersections have been identified as the locations at which to evaluate existing and future traffic operating conditions. Some portion of potential project-related traffic will pass through each of these locations, and their analysis will reveal the expected relative impacts of the project. These key study intersections noted in Section 3.2 were selected for evaluation based on discussions with the County of San Bernardino staff.

The existing AM peak period and PM peak period intersection turning movement counts at the 19 study intersections were conducted by Counts Unlimited, Inc. on February 21, 2018. Because of the high number of heavy vehicles in the area and the truck-intensive land use of the project, raw turning movement counts were converted into passenger car equivalent (PCE). PCE is defined as the number of passenger cars that will result in the same operational conditions as a single heavy vehicle of a particular type. The traffic count worksheets are provided in Appendix C. The AM and PM peak hour intersection turning movement volumes are presented on **Figure 4** and **Figure 5**, respectively.

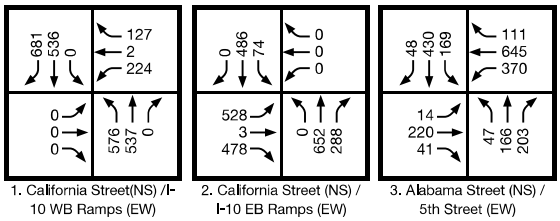
Figure 3 - Existing Roadway System



LEGEND

- Existing Traffic Signal
- Existing Lane Geometrics
- d Existing Defacto Right Turn
- F Existing Free Right Turn Lane

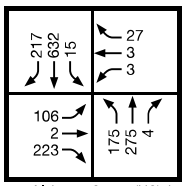
Figure 4 - Existing (2018) AM Peak Hour Intersection Volumes



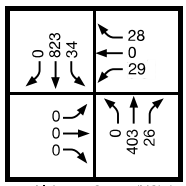
1. California Street(NS) /I-10 WB Ramps (EW)

2. California Street (NS) / I-10 EB Ramps (EW)

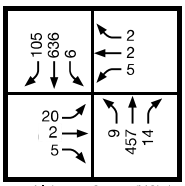
3. Alabama Street (NS) / 5th Street (EW)



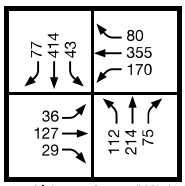
4. Alabama Street (NS) / 3rd Street (EW)



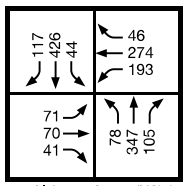
5. Alabama Street (NS) / River Bluff Avenue / Driveway 1 (EW)



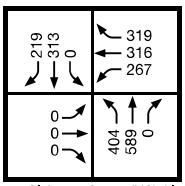
6. Alabama Street (NS) / Palmetto Avenue (EW)



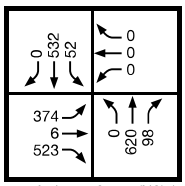
7. Alabama Street (NS) / San Bernardino Avenue (EW)



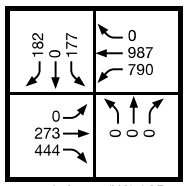
8. Alabama Street (NS) / Lugonia Avenue (EW)



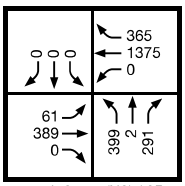
9. Alabama Street (NS) / I-10 WB Ramps (EW)



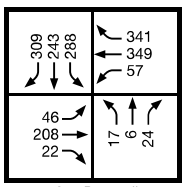
10. Alabama Street (NS) / I-10 EB Ramps (EW)



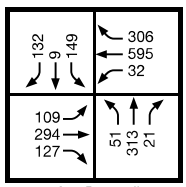
11. 5th Street (NS) / SR-210 SB Ramps (EW)



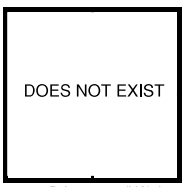
12. 5th Street (NS) / SR-210 NB Ramps (EW)



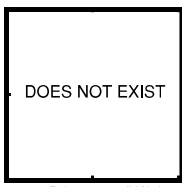
13. San Bernardino Avenue (NS) / SR 210 SB Ramps (EW)



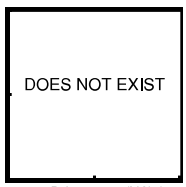
14. San Bernardino Avenue (NS) / SR 210 NB Ramps (EW)



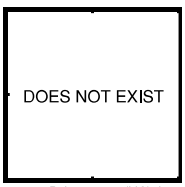
15. Driveway 2 (NS) / Palmetto Avenue (EW)



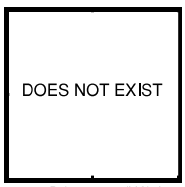
16. Driveway 3 (NS) / Palmetto Avenue (EW)



17. Driveway 4 (NS) / Palmetto Avenue (EW)



18. Driveway 5 (NS) / Palmetto Avenue (EW)



19. Driveway 6 (NS) / Palmetto Avenue (EW)

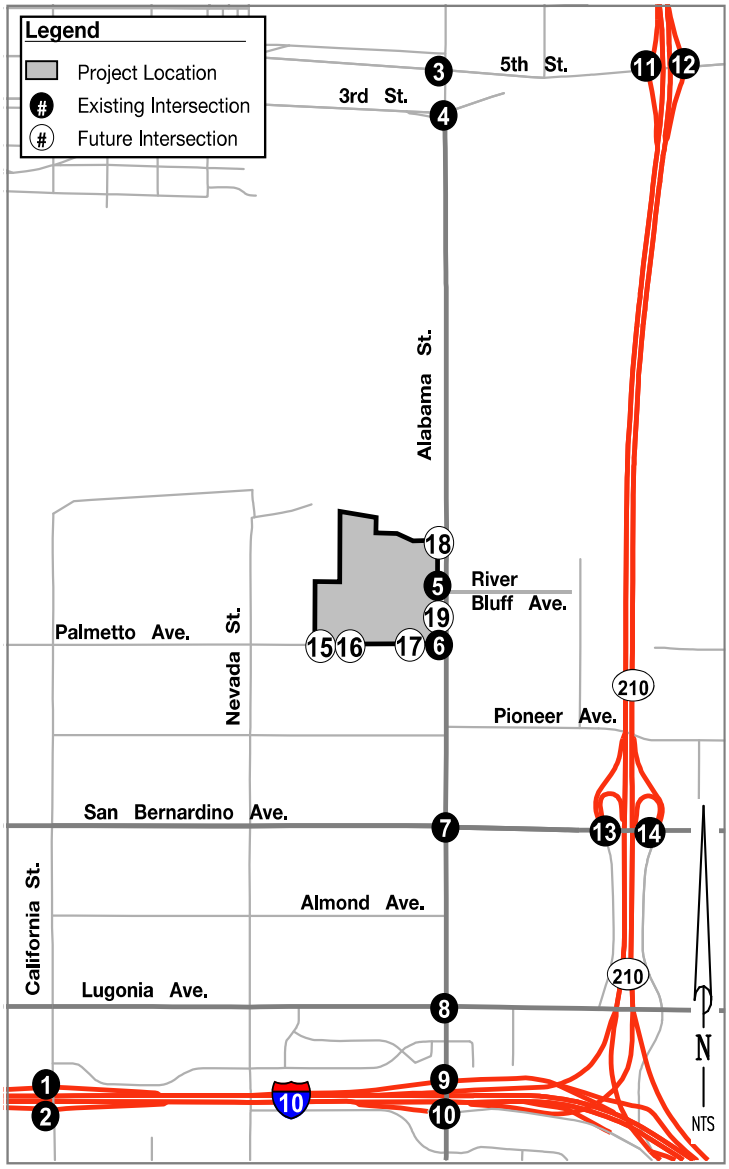
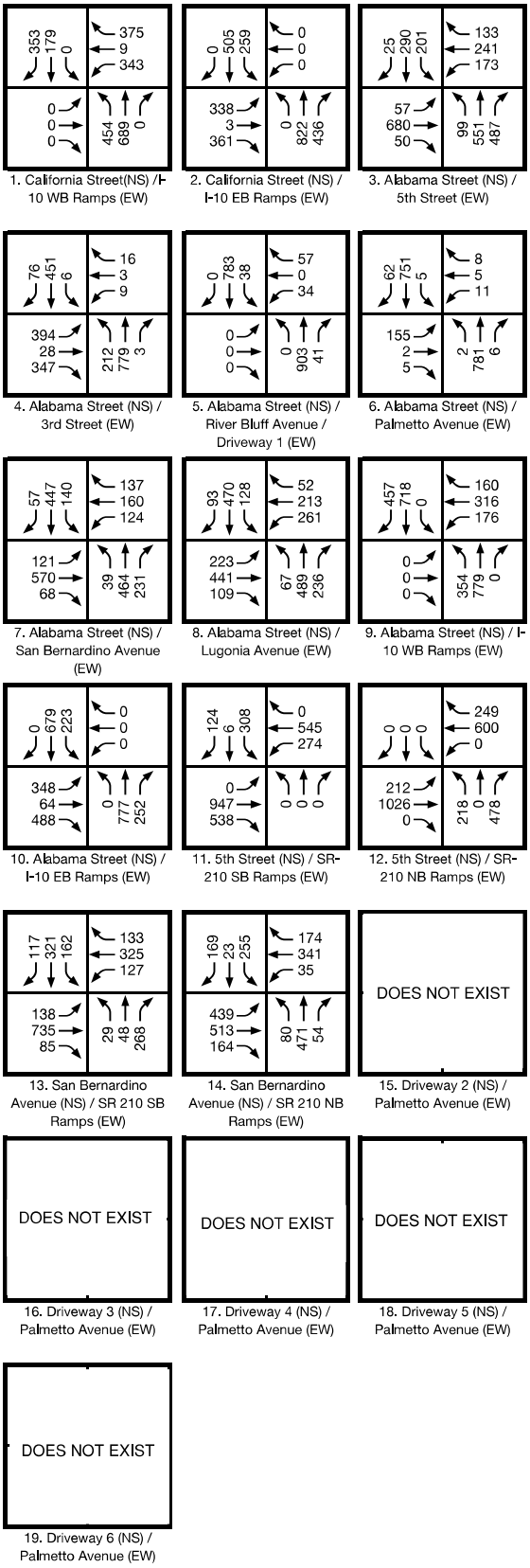


Figure 5 - Existing (2018) PM Peak Hour Intersection Volumes



3.5 Levels of Service – Existing (2018) Conditions

The intersection levels of service for existing (2018) conditions shown on **Table 3-1** are based upon the existing roadway system shown on **Figure 4** and the existing AM and PM peak hour intersection volumes shown on **Figure 5** and **Figure 6**, respectively. The level of service calculation worksheets are provided in Appendix E. The following study intersections are expected to operate at an unacceptable level of service:

1. California Street (NS)/ I-10 WB Ramps
2. California Street (NS) / I-10 EB Ramps

Table 3-1 – Intersection Levels of Service – Existing (2018) Conditions

Intersection	Peak Hour	Traffic Control	Delay (sec)	LOS
1. California Street (NS) / I-10 WB Ramps (EW)	AM PM	Signal	***69.7*** 33.7	***E*** C
2. California Street (NS) / I-10 EB Ramps (EW)	AM PM	Signal	**60.5** **56.8**	**E** **E**
3. Alabama Street (NS) / 5th Street (EW)	AM PM	Signal	34.6 48.4	C D
4. Alabama Street (NS) / 3rd Street (EW)	AM PM	Signal	20.4 31.8	C C
5. Alabama Street (NS) / Dwy 5-River Bluff Avenue (EW)	AM PM	Signal	7.1 6.9	A A
6. Alabama Street (NS) / Palmetto Avenue (EW)	AM PM	Signal	9.7 10.5	A B
7. Alabama Street (NS) / San Bernardino Avenue (EW)	AM PM	Signal	28.7 30.2	C C
8. Alabama Street (NS) / Lugonia Avenue (EW)	AM PM	Signal	23.9 33.5	C C
9. Alabama Street (NS) / I-10 WB Ramps (EW)	AM PM	Signal	34.0 29.1	C C
10. Alabama Street (NS) / I-10 EB Ramps (EW)	AM PM	Signal	27.5 33.3	C C
11. SR-210 SB Ramps (NS) / 5th Street (EW)	AM PM	Signal	22.0 23.6	C C
12. SR-210 NB Ramps (NS) / 5th Street (EW)	AM PM	Signal	16.7 20.2	B C
13. SR-210 SB Ramps (NS) / San Bernardino Avenue (EW)	AM PM	Signal	35.1 27.3	D C
14. SR-210 NB Ramps (NS) / San Bernardino Avenue (EW)	AM PM	Signal	33.7 35.3	C C
15. West Dwy 1 (NS) / Palmetto Avenue (EW)	AM PM	**Does Not Exist**		
16. West Dwy 2 (NS) / Palmetto Avenue (EW)	AM PM	**Does Not Exist**		
17. East Dwy 3 (NS) / Palmetto Avenue (EW)	AM PM	**Does Not Exist**		
18. Alabama Street (NS) / North Dwy 4 (EW)	AM PM	**Does Not Exist**		
19. Alabama Street (EW) / South Dwy 6 (EW)	AM PM	**Does Not Exist**		

3.6 General Plan Circulation

The current County of San Bernardino General Plan circulation element for the East Valley Area Plan is shown on **Figure 6,** City of Redlands General Plan circulation element is shown in **Figure 7**, City of Highland General Plan circulation element is shown in **Figure 8**.

3.7 Bicycle Facilities

The East Valley Area Plan includes a planned trail system that includes Class I, Class II, and Class IV bikeways. Class III bikeways are not currently within the plan area. While planned, no bicycle lanes exist in the project area within San Bernardino County. The East Valley Plan Trail System is shown on **Figure 9**.

3.8 Transit Facilities

The project area is served by OmniTrans route 15. A map of OmniTrans route 15 is shown on **Figure 10**. The nearest bus stop is located at the intersection of Alabama Street and San Bernardino Avenue.

3.9 Pedestrian Facilities

Pedestrian facilities only exist within the study area where developments have made frontage improvements. There are many sidewalk gaps in close proximity of the project site. Pedestrian facilities are nearly complete in other areas of the East Valley Area Plan that are closer to build-out conditions.

Figure 6– San Bernardino County General Plan Circulation and Transportation

Figure 7-City of Highland General Circulation Plan and Transportation

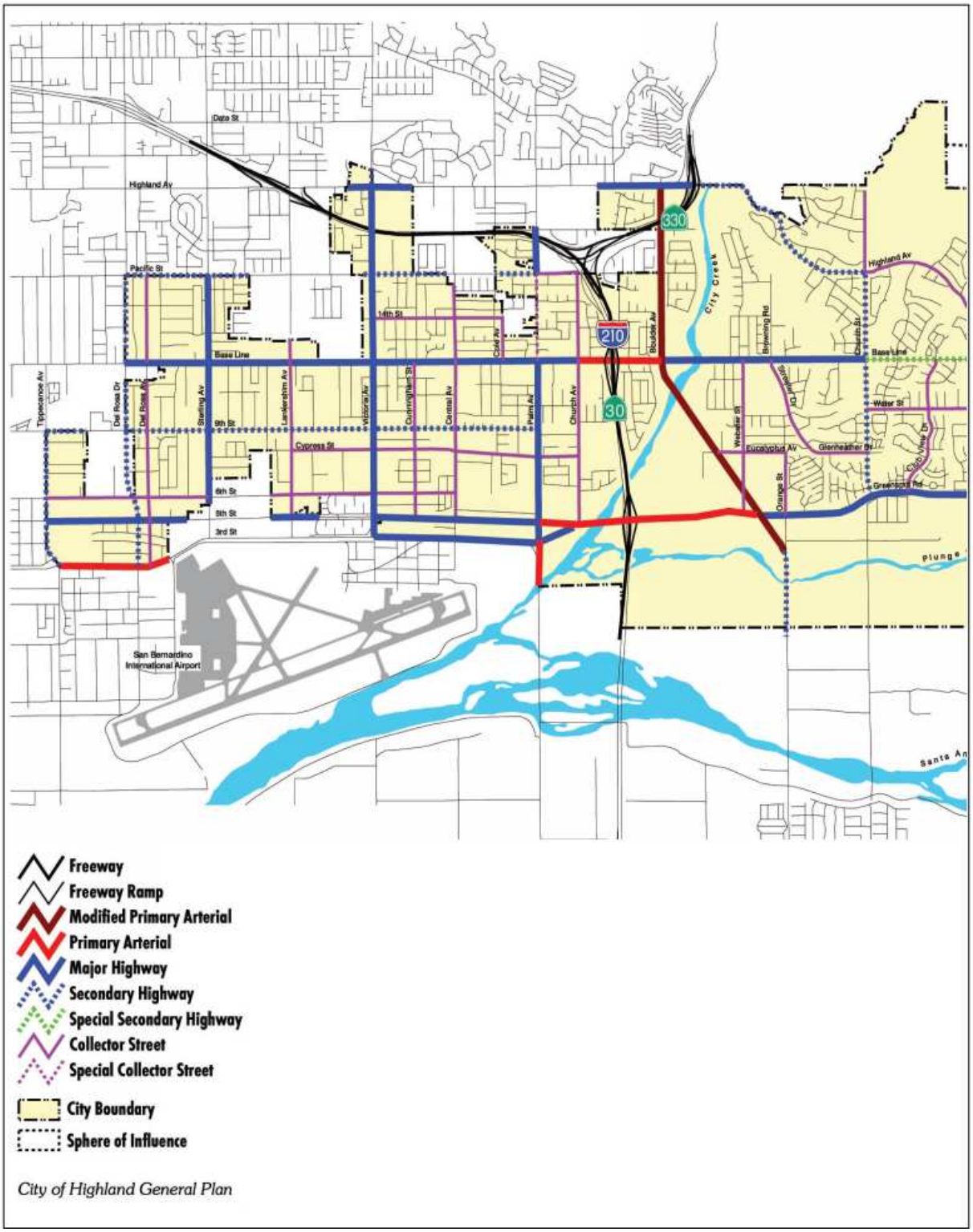


Figure 8-City of Redlands General Circulation Plan

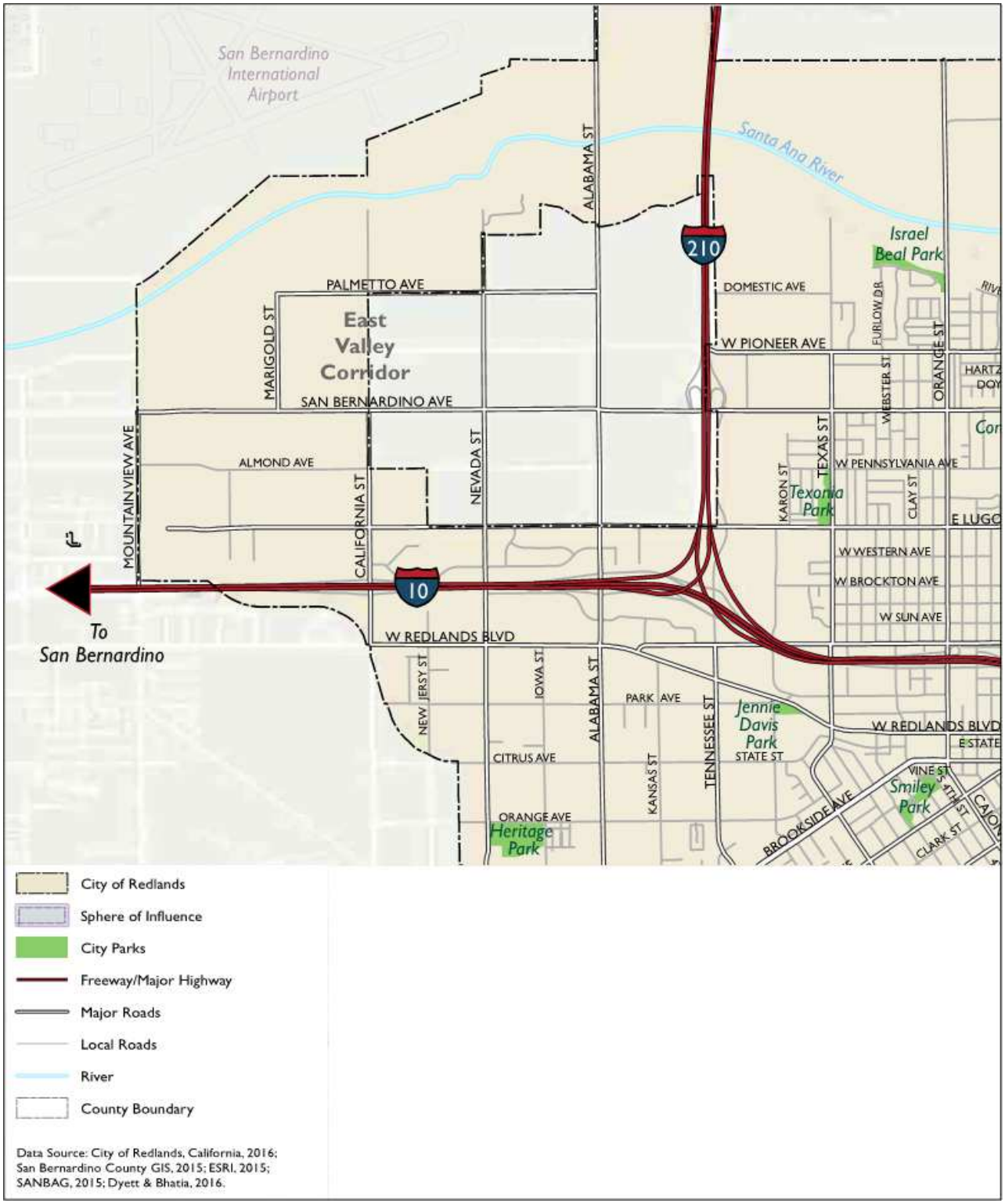
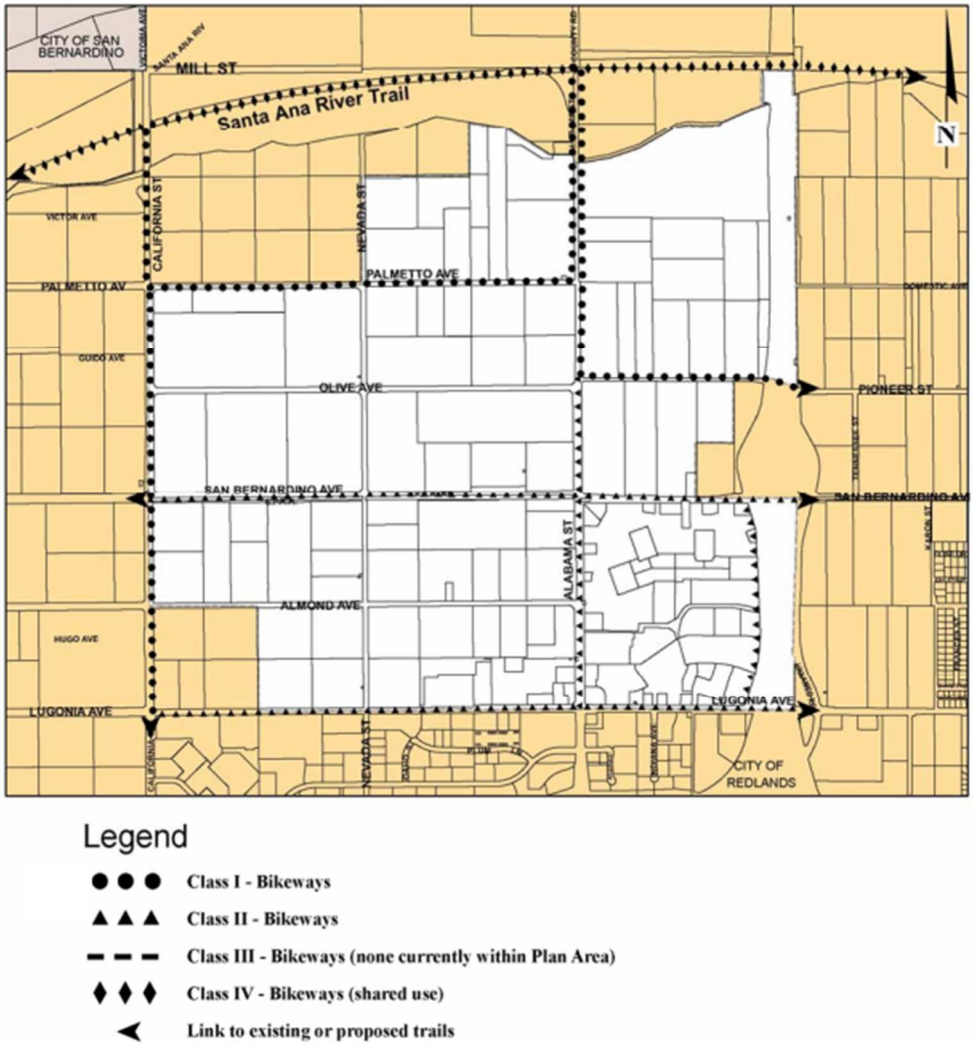


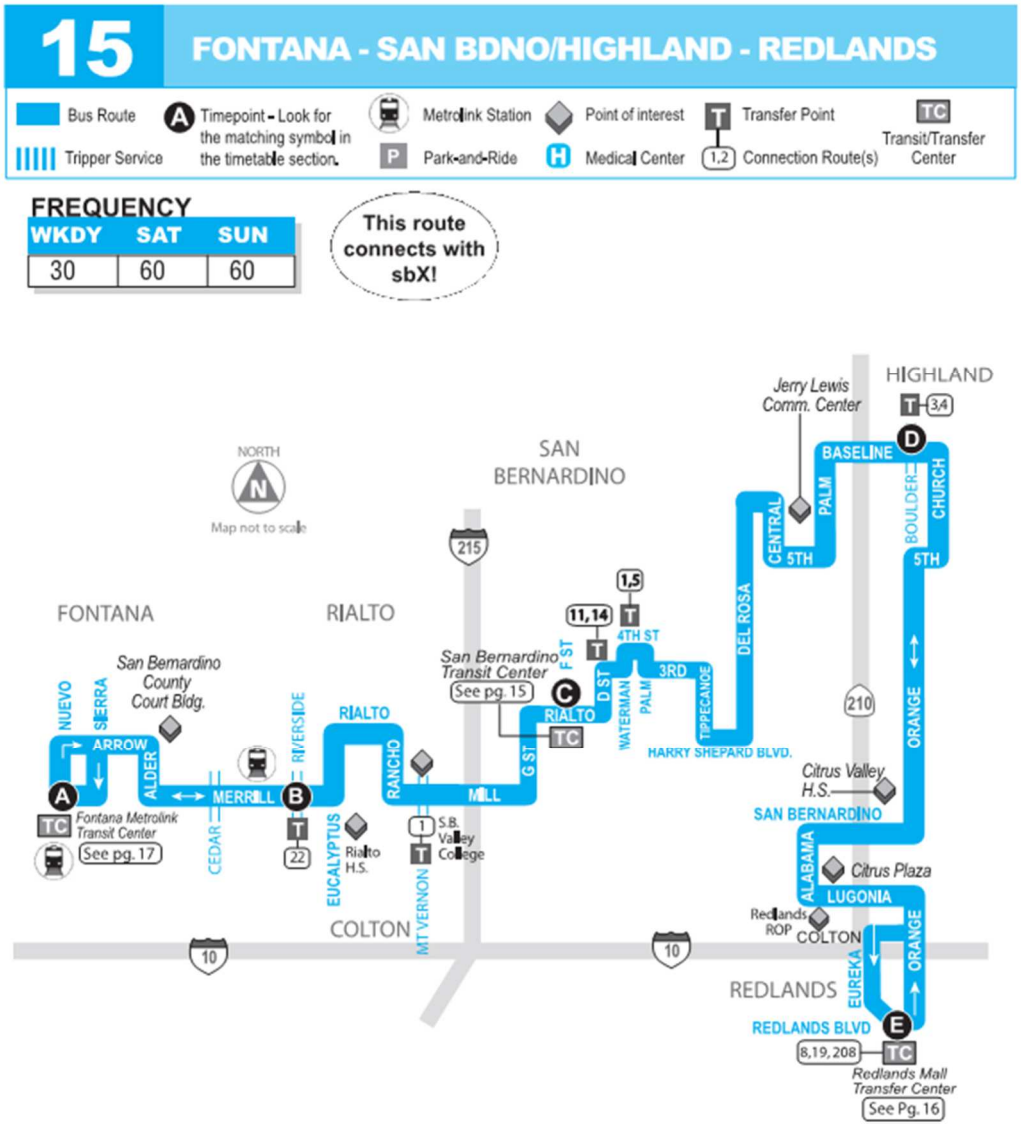
Figure 9– East Valley Plan Trail System



Legend

- Class I - Bikeways
- Class II - Bikeways
- Class III - Bikeways (none currently within Plan Area)
- Class IV - Bikeways (shared use)
- Link to existing or proposed trails

Figure 10 – OmniTrans Route 15 Map



4.0 PROJECTED FUTURE TRAFFIC

4.1 Method of Projection

In order to estimate the traffic impact characteristics of the Project, a multi-step process has been utilized. The first step is traffic generation which estimates the total arriving and departing traffic during a peak hour and on a daily basis. The traffic generation potential is forecast by applying the appropriate vehicle trip generation rates to the Project development tabulation. The second step of the forecasting process is traffic distribution, which identifies the origins and destinations of inbound and outbound Project traffic based on existing/expected future travel patterns in the study area. The third step is traffic assignment, which involves the allocation of Project traffic to study area street segments and intersections. Traffic distribution patterns are indicated by general percentage orientation, while traffic assignment allocates specific volume forecasts to individual roadway segments and intersection turning movements throughout the study area. The impact of the Project is isolated by comparing operation level of service conditions at selected key study intersections using expected future traffic volumes with and without forecasted Project traffic.

The method of traffic Projection is based on the following criteria:

- Existing traffic conditions (2018);
- Ambient growth Projections;
- Project generated traffic; and
- Cumulative Project generated traffic.
- Build-out (2040) year traffic

This report uses a Project opening year of 2020 for analysis purposes.

4.2 Project Generated Traffic

4.2.1 Project Trip Generation

Trip Generation Rates

Trip generation represents the amount of traffic traveling to and from the proposed Project, which are defined as inbound and outbound trips. An inbound and outbound trip by the same vehicle is considered two separate trips or trip ends. **Table 4-1** shows the peak hour and daily trip generation rates for the proposed Project by the associated land use. The trip generation volumes used in this study are based upon the development of a 1,192,671 square feet gross floor area warehouse.

The trip generation rates for this warehousing land use are based on the fitted curve equation for trip generation provided in the *Trip Generation Manual (10th Edition)* by the Institute of Transportation Engineers (ITE), 2017. The inbound and outbound peak hour trip generation rates are calculated by multiplying the total peak hour generation rate by the directional distribution provided in the *Trip Generation Manual*.

The County of San Bernardino utilizes Passenger Car Equivalent (PCE) factors that are recommended by the San Bernardino County Congestion Management Program (CMP), 2016 Update. PCE factors have been used to convert heavy truck trips (large 2-axles, 3-axles and 4+-axles) to passenger equivalent trips. A factor of 1.5

was applied to large 2-axle trucks, a factor of 2.0 was applied to 3-axle trucks and a factor of 3.0 was applied to 4+-axle trucks.

Table 4-1 – Trip Generation Rates

TRIP GENERATION RATES								
Land Use	Units[1]	AM Peak Hour			PM Peak Hour			Daily
		Total	In	Out	Total	In	Out	
High-Cube Transload and Short-Term Storage Warehouse	TSF	--	--	--	--	--	--	--
Trip Generation Rates[2]		0.080	0.062	0.018	0.100	0.028	0.072	1.40
PCE Inbound/Outbound Splits[3]		100%	77%	23%	100%	28%	72%	--
PASSENGER CAR EQUIVALENT RATES CALCULATIONS								
Land Use	Unit	AM Peak Hour			PM Peak Hour			Daily
		Total	In	Out	Total	In	Out	
Passenger Cars								
Recommended Mix (%)[4]		*79.57%*	*79.57%*	*79.57%*	*79.57%*	*79.57%*	*79.57%*	*79.57%*
PCE Factor[5]		*1.0*	*1.0*	*1.0*	*1.0*	*1.0*	*1.0*	*1.0*
PCE Rates		*0.064*	*0.049*	*0.015*	*0.080*	*0.022*	*0.057*	*1.114*
2-Axle Trucks								
Recommended Mix (%)[4]		*3.46%*	*3.46%*	*3.46%*	*3.46%*	*3.46%*	*3.46%*	*3.46%*
PCE Factor[5]		*1.5*	*1.5*	*1.5*	*1.5*	*1.5*	*1.5*	*1.5*
PCE Rates		*0.004*	*0.003*	*0.001*	*0.005*	*0.001*	*0.004*	*0.073*
3-Axle Trucks								
Recommended Mix (%)[4]		*4.64%*	*4.64%*	*4.64%*	*4.64%*	*4.64%*	*4.64%*	*4.64%*
PCE Factor[5]		*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*
PCE Rates		*0.008*	*0.006*	*0.002*	*0.009*	*0.003*	*0.007*	*0.130*
4-Axle Trucks								
Recommended Mix (%)[4]		*12.33%*	*12.33%*	*12.33%*	*12.33%*	*12.33%*	*12.33%*	*12.33%*
PCE Factor[5]		*3.0*	*3.0*	*3.0*	*3.0*	*3.0*	*3.0*	*3.0*
PCE Rates		*0.030*	*0.023*	*0.007*	*0.037*	*0.010*	*0.027*	*0.518*
Final Rates (PCE)								
Passenger Cars		*0.064*	*0.049*	*0.015*	*0.080*	*0.022*	*0.057*	*1.114*
Trucks (2 Axle)		*0.004*	*0.003*	*0.001*	*0.005*	*0.001*	*0.004*	*0.073*
Trucks (3 Axle)		*0.008*	*0.006*	*0.002*	*0.009*	*0.003*	*0.007*	*0.130*
Trucks (4+ Axle)		*0.030*	*0.023*	*0.007*	*0.037*	*0.010*	*0.027*	*0.518*

[1] TSF = 1,000 Square Feet Gross Floor Area.
[2] Average trip generation rates from Trip Generation Manual, ITE, 10th Edition (2017).
[3] Inbound/Outbound Splits per ITE Trip Generation, 10th Ed., 2017.
[4] Passenger car / 2 axle / 3 axle / 4+ axle truck split from Truck Trip Generation Study by the City of Fontana, 2003.
[5] PCE Factor per San Bernardino County CMP, 2016 Update are used.

Project Trip Generation

The trip generation potential for the proposed warehouse was forecast using ITE Land Use Code 154: High-Cube Transload and Short-Term Storage Warehouse equations. The trip generation volumes are developed by multiplying the trip generation rates from the previous section by the square footage of the proposed Project. **Table 4-2** presents the daily and peak hour trip generation for the proposed Project. As shown, the proposed Project is anticipated to generate approximately 2,202 daily PCE trip-ends, including 127 PCE trip-ends during the AM peak hour and 158 PCE trip-ends during the PM peak hour.

Table 4-2 – Project Trip Generation (in PCE)

Land Use	Qty	Unit	AM Peak Hour			PM Peak Hour			Daily
			Total	In	Out	Total	In	Out	
High-Cube Transload and Short-Term Storage Warehouse	1200	TSF							
Passenger Cars (PCE = 1.0)			*77*	*59*	*18*	*96*	*28*	*68*	*1,337*
Trucks (2 Axle, PCE = 1.5)			*5*	*4*	*1*	*6*	*2*	*4*	*87*
Trucks (3 Axle, PCE = 2.0)			*9*	*7*	*2*	*11*	*3*	*8*	*156*
Trucks (4+ Axle, PCE = 3.0)			*36*	*27*	*8*	*45*	*13*	*32*	*621*
PROJECT TOTAL (IN PCE)			127	97	29	158	46	112	2,202

TSF = 1,000 Square Feet Gross Floor Area.

4.2.2 Project Trip Distribution

Trip distribution represents the directional orientation of traffic to and from the Project site. Trip distribution is influenced by the geographical location of the site, type of land use in the study area, such as shopping centers and recreational sites, and proximity to the regional freeway system.

The trip directional orientation of traffic for the proposed Project was determined based upon the existing roadway system, existing traffic patterns, and existing and future land uses. The directional distribution for the proposed Project traffic for passenger vehicles and trucks assumed in this study are shown on **Figure 11** and **Figure 12**, respectively. This shows the direction that vehicles will travel from the Project site to their next destination.

4.2.3 Project Modal Split

The traffic reducing potential of public transit has not been considered in this study. Therefore, the traffic Projections provided in this report are considered conservative since public transit could reduce traffic volumes in the Project area.

4.2.4 Project Trip Assignment

Trip assignment is the result of assigning the previously-discussed trip generation numbers to the City's circulation system using the aforementioned trip distribution.

The Project related AM peak hour and PM peak hour intersection turning movement volumes for passenger cars and trucks plus passenger cars are shown on **Figure 13** and **Figure 14**, respectively. These figures show the number of turning movements at each intersection in the study area for the AM and PM hours.

Figure 11– Directional Distribution of Project Traffic (Passenger Cars)

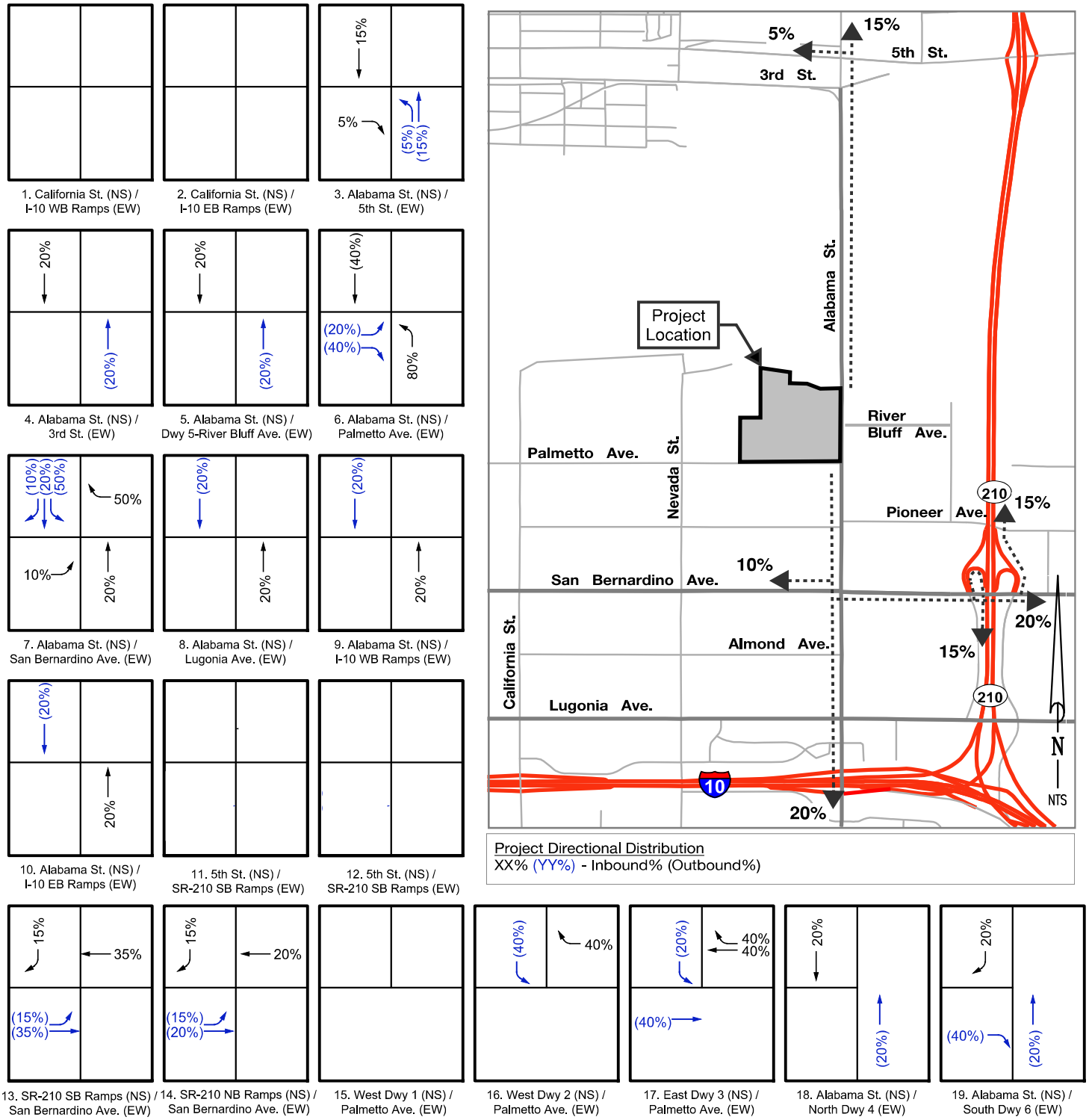


Figure 12 – Directional Distribution of Project Traffic (Trucks)

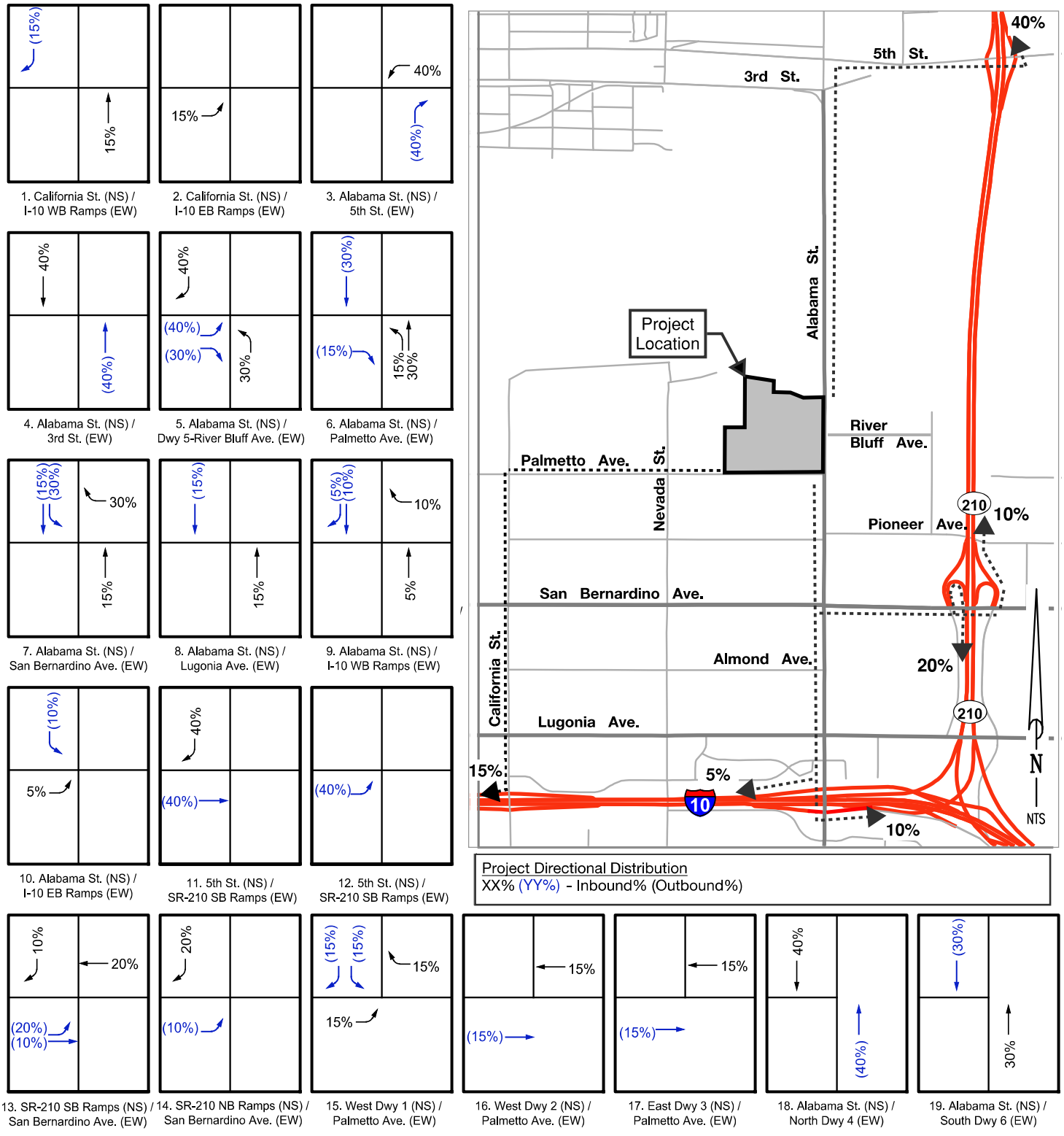


Figure 13– Project Only AM/PM Peak Hour Intersection Volumes (Passenger Cars Only)

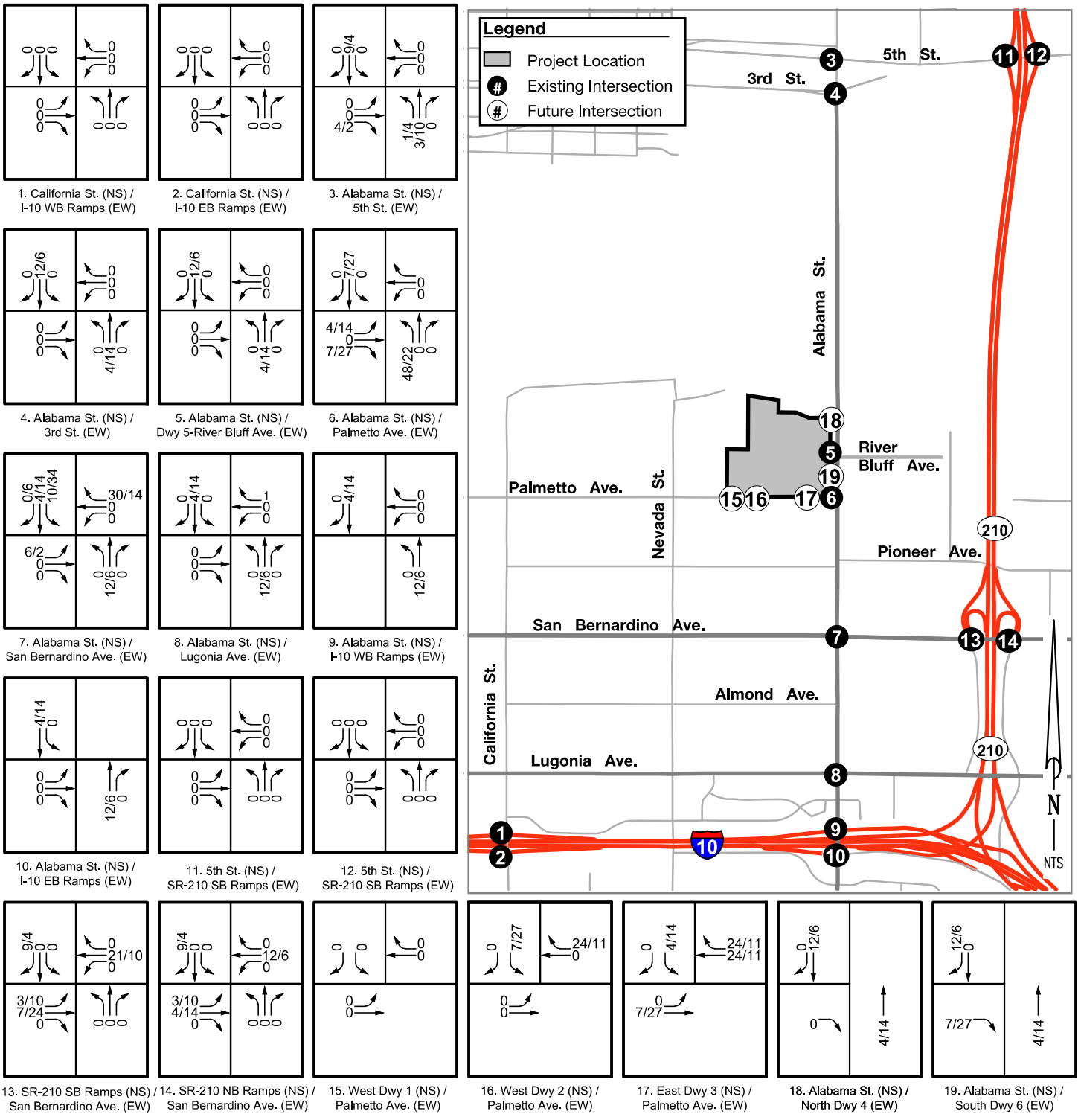
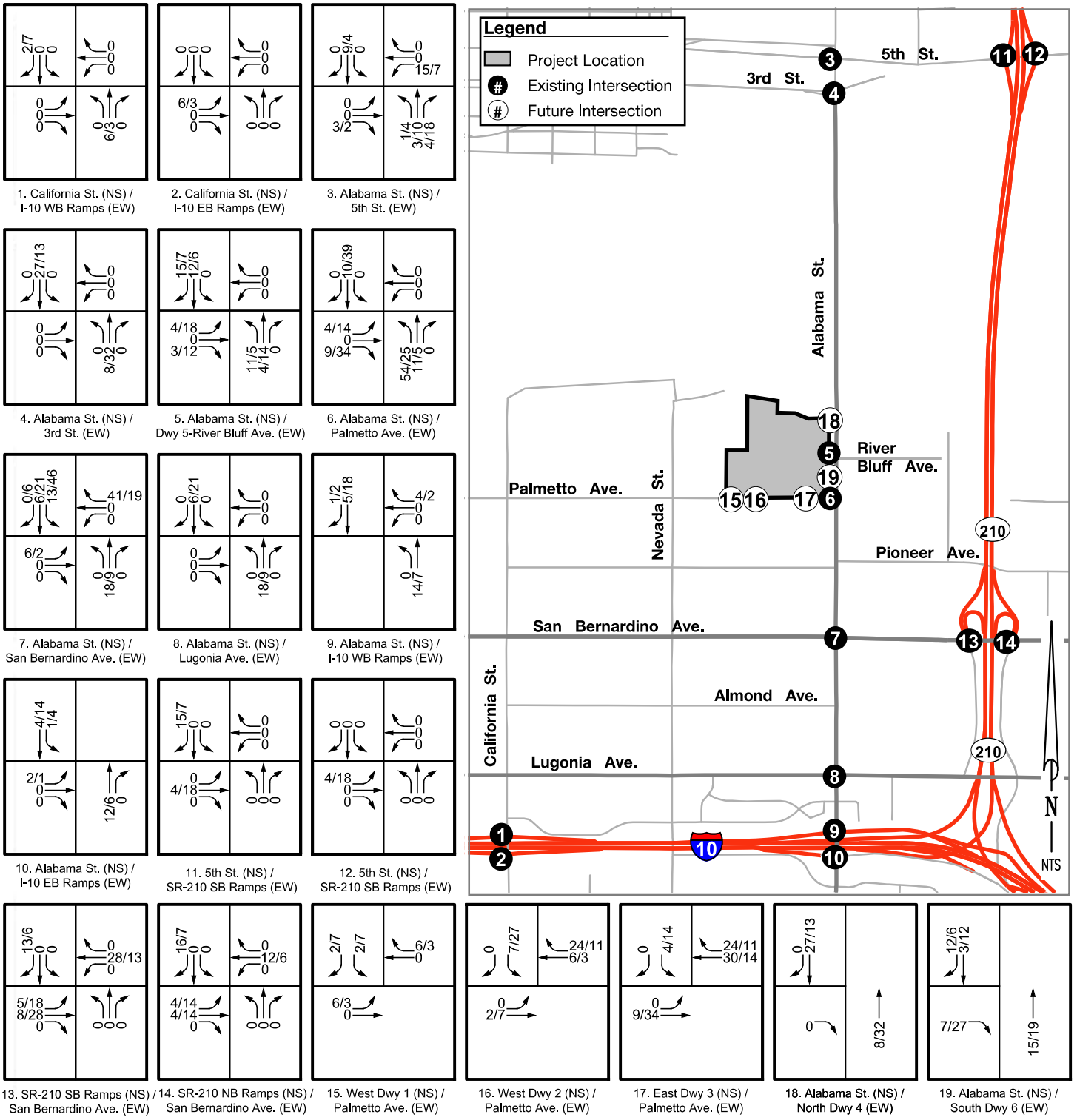


Figure 14– Project Only AM/PM Peak Hour Intersection Volumes (Passenger Cars + Trucks)



4.3 Cumulative Project Generated Traffic

Cumulative projects are those projects identified by the Counties and Cities within the study area that are anticipated to be completed and contribute vehicle trips to the roadway network by the project's opening year (2020). The County of San Bernardino, City of Highland, and City of Redlands provided Webb a list of projects that are in development within the study area of this project. Traffic from these cumulative projects is expected to have an impact on levels of service. The cumulative projects within the study area are listed in **Table 4-3** and the locations are provided in **Figure 15.** The AM and PM peak hour intersection turning movement volumes for cumulative projects are shown on **Figure 16** and **Figure 17**, respectively.

Figure 15-Cumulative Project Location Map

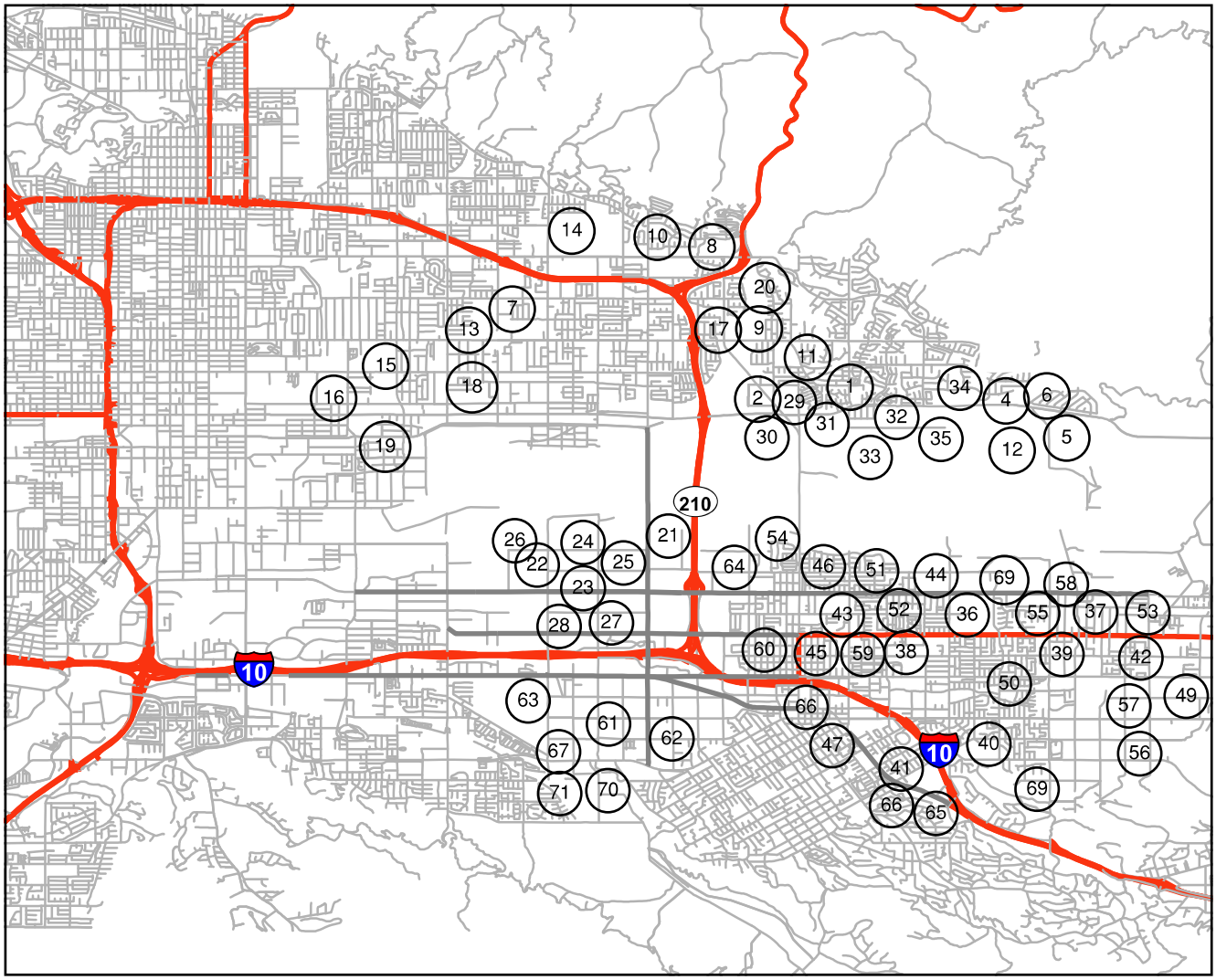


Table 4-3 – Cumulative Projects within the Study Area

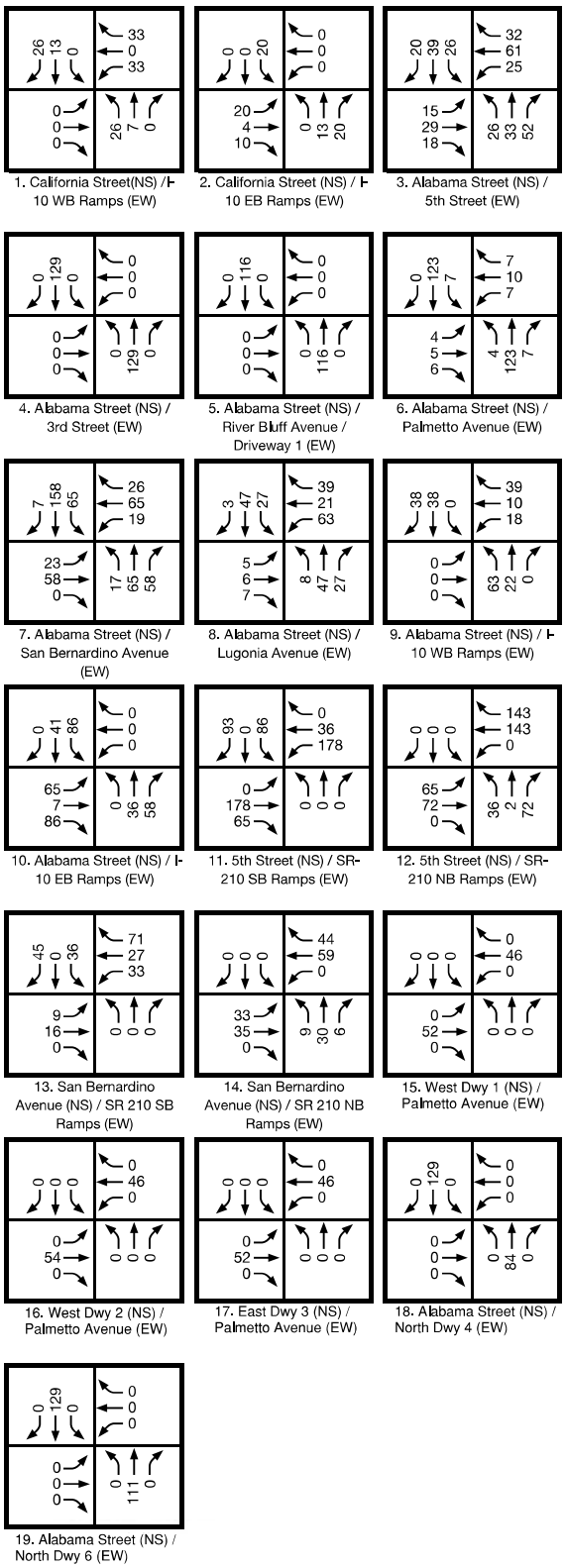
Project/Map ID	Land Use	Qty	Unit	AM Peak Hour	PM Peak Hour	Daily
City of Redlands, City of Highland and County of San Bernardino						
1. Blossom Trails	Residential Condominium/Townhouse	306	DU	135	159	1,778
2. Richmond American 121 SFD Gated Community	Single-Family Detached Housing	121	DU	90	120	1,142
3. Centerstone Single Family Homes	Single-Family Detached Housing	125	DU	93	124	1,180
4. Heather Glen TPM 17604 - South of Greenspot Rd, Between Merris & Weaver	Single-Family Detached Housing	215	DU	159	213	2,030
5. SWC Alta Vista and Santa Ana Canyon Road	Single-Family Detached Housing	56	DU	41	55	529
6. Mediterra Specific Plan	Single-Family Detached Housing	300	DU	222	297	2,832
7. Highland Park - Mastercraft Homes	Single-Family Detached Housing	46	DU	34	46	434
8. San Manuel Village	Fast-Food Restaurant with Drive-Through Window	3.5	TSF	141	114	1,648
	Pass by Trips (49% AM, 50% PM, Fast Food)			69	57	824
	Sub-Total Trip Gen			72	57	824
9. Other Partiall Built Restaurants	Fast-Food Restaurant with Drive-Through Window	2.7	TSF	109	88	1,272
	Pass by Trips (49% AM, 50% PM, Fast Food)			53	44	636
	Sub-Total Trip Gen			56	44	636
10. Highland Crossroads	Shopping Center	42.84	TSF	40	163	1,617
				4	16	162
	Pass by Trips				55	809
	Sub-Total Trip Gen			36	91	647
11. Boulder Avenue / Greenspot Road CUP-007-008 - Boulder Holdings	Fast-Food Restaurant with Drive-Through Window	14.38	TSF	578	470	6,772
	Pass by Trips(49% Am, 50% PM, Fast Food)			283	235	3,386
	Sub-Total Trip Gen			295	235	3,386
	Shopping Center	16.33	TSF	15	62	616
	Internal Trips (10%)			2	6	62
	Pass by Trips				21	308
	Sub-Total Trip Gen			14	35	246
12. Greenspot Village & Marketplace Other Commercial and Residential	Residential Condominium/Townhouse	*		2,453	2,624	28,361
13. NWC Seine / Base Line	Fast-Food Restaurant with Drive-Through Window	5.143	TSF	207	168	2,422
	Pass by Trips (49% AM, 50% PM, Fast Food)			101	84	1,211
	Sub-Total Trip Gen			106	84	1,211
14. Orange New Jersey Pro	Industrial Park	126.9	TSF	51	51	428

Project/Map ID	Land Use	Qty	Unit	AM Peak Hour	PM Peak Hour	Daily
15. Arco, Victoria / Highland Avenue - Gas Station	Convenience Market with Gasoline Pumps	2.4	TSF	98	122	2,029
	Motel	72	Rooms	27	27	241
	Total			125	149	2,270
	Internal Trips			13	15	227
	Pass by Trips			61	72	1,015
	Sub-Total Trip Gen			52	62	1,029
16. Transition Properties	Warehousing	117.9	TSF	20	22	205
	Passenger Cars (PCE = 1.0)			25	29	289
	Trucks (2 Axle, PCE = 1.5)			2	3	41
	Trucks (3 Axle, PCE = 2.0)			6	6	73
	Trucks (4+ Axle, PCE = 3.0)			20	10	202
	Total			53	48	605
17. Keven Chong - Northwest Corner of Base Line and Boulder	Drive-in Bank	5.2	TSF	49	106	520
18. Pepito's	High-Turnover (Sit-Down) Restaurant	7.5	TSF	75	73	841
	Pass by Trips (43% PM, High-Turnover Restaurant)				31	421
	Sub-Total Trip Gen			75	42	421
19. Arco Addition of Car Wash and QSR	Gasoline/Service Station with Convenience Market	15.2	TSF	1,248	1,482	2,474
	Pass by Trips			749	874	1,237
	Sub-Total Trip Gen			499	608	1,237
20. Highland Park - Mastercraft Homes	Single-Family Detached Housing	46	DU	34	46	434
21. 27573 River Bluff Road	Warehousing	289.3	TSF	49	55	503
	Passenger Cars (PCE = 1.0)			61	73	709
	Trucks (2 Axle, PCE = 1.5)			6	7	100
	Trucks (3 Axle, PCE = 2.0)			6	13	179
	Trucks (4+ Axle, PCE = 3.0)			49	26	494
	Total			122	119	1,483
22. KTR Property Trust, at Nevada Street and Pioneer Avenue , Northeast Corner	Warehousing	206.7	TSF	35	39	360
	Passenger Cars (PCE = 1.0)			44	52	506
	Trucks (2 Axle, PCE = 1.5)			4	5	72
	Trucks (3 Axle, PCE = 2.0)			6	9	128
	Trucks (4+ Axle, PCE = 3.0)			35	18	353
	Total			89	84	1,059
23. Prologis L P at Alabama St, West Side; San Bernardino Ave, North Side	Warehousing	166	TSF	28	32	289
	Passenger Cars (PCE = 1.0)			35	41	407
	Trucks (2 Axle, PCE = 1.5)			4	4	58
	Trucks (3 Axle, PCE = 2.0)			6	8	103
	Trucks (4+ Axle, PCE = 3.0)			28	15	284
	Total			73	68	851

Project/Map ID	Land Use	Qty	Unit	AM Peak Hour	PM Peak Hour	Daily
24. Jackson Smith-Newcastle Partners, San Bernardino Ave. North Side; Alabama St., Approx 630'	Warehousing	190.1	TSF	32	36	331
	Passenger Cars (PCE = 1.0)			40	48	466
	Trucks (2 Axle, PCE = 1.5)			4	5	66
	Trucks (3 Axle, PCE = 2.0)			6	9	118
	Trucks (4+ Axle, PCE = 3.0)			32	17	325
	Total			82	79	975
25. Stone Creek Company at Alabama Street and Almond Avenue, Nothwest Corner	Single-Family Detached Housing	17	DU	13	17	160
	Hotel	180	Rooms	85	108	1,505
26. Prologis L P Almond Avenue and Nevada Street Southeast Corner	Warehousing	425	TSF	72	81	740
	Passenger Cars (PCE = 1.0)			90	107	1,041
	Trucks (2 Axle, PCE = 1.5)			9	10	148
	Trucks (3 Axle, PCE = 2.0)			6	19	263
	Trucks (4+ Axle, PCE = 3.0)			72	38	726
	Total			177	174	2,178
27. Prokos, at Lugonia Ave., Approx 171' North of; Citrus Plaza Drive, Approx, 372'	High-Turnover (Sit-Down) Restaurant	7	TSF	70	68	785
	Pass by Trips (43% PM, High-Turnover Restaurant)				29	393
	Total Trip Gen			70	39	393
28. St. Adelaide Expansion - New Ministry Offices - Phase I of II Built	General Office Building	9	TSF	14	13	99
29. Blossom Trails	Single-Family Detached Housing	14	DU	10	14	132
30. Chong Homes	Single-Family Detached Housing	5	DU	4	5	43
31. Peter Le	Single-Family Detached Housing	8	DU	6	8	76
32. Hispano Investors Residential	Single-Family Detached Housing	17	DU	13	17	160
33. Golden Security Bank	Single-Family Detached Housing	9	DU	7	9	85
34. Ross Jones (Residential)	Single-Family Detached Housing	4	DU	3	4	38
35. South Terminus of Lillian Lane	Single-Family Detached Housing	13	DU	10	13	123
36. Tract 18988 Pioneed/ Texas	Single-Family Detached Housing	82	DU	61	81	774
37. Tract 18979	Single-Family Detached Housing	55	DU	41	54	519
38. Tract 18762	Single-Family Detached Housing	228	DU	169	226	2,152

Project/Map ID	Land Use	Qty	Unit	AM Peak Hour	PM Peak Hour	Daily
39. Tract 18845	Single-Family Detached Housing	24	DU	18	24	61
40. Tract 16915	Single-Family Detached Housing	6	DU	4	6	15
41. Tract 16586	Single-Family Detached Housing	76	DU	56	75	717
42. Tract 16878	Single-Family Detached Housing	67	DU	50	66	632
43. Tract 19975	Single-Family Detached Housing	67	DU	50	66	632
44. Tract 17022	Single-Family Detached Housing	12	DU	9	12	113
45. CUP 1045 Libert Lane	Single-Family Detached Housing	80	DU	59	79	755
46. Tract 17265	Single-Family Detached Housing	24	DU	18	24	227
47. Tract 17675	Single-Family Detached Housing	11	DU	8	11	104
48. Tract Parcel Map 17548	Single-Family Detached Housing	3	Per	1	1	8
49. Tract 16402	Single-Family Detached Housing	26	DU	19	26	245
50. Tract 16816	Single-Family Detached Housing	10	DU	7	10	94
51. Tract 16287	Single-Family Detached Housing	12	DU	9	12	113
52. Tract 18182	Single-Family Detached Housing	27	DU	20	27	255
53. Tract 17080	Single-Family Detached Housing	8	DU	6	8	76
54. Tract 18952	Single-Family Detached Housing	131	DU	97	130	1,237
55. Tract 18979	Single-Family Detached Housing	55	DU	41	54	519
56. Tract 19956	Single-Family Detached Housing	40	DU	30	40	378
57. Tract 19942	Single-Family Detached Housing	34	DU	25	34	321
58. Tract 19975	Single-Family Detached Housing	67	DU	50	66	632
59. Tract 20079	Single-Family Detached Housing	14	DU	10	14	132
60. CUP 1102 & Zone	Single-Family Detached Housing	96	DU	71	95	906
61. CRA 893 Apt Bldg	Single-Family Detached Housing	8	DU	6	8	76
62. CUP 1096 Casa Loma	Single-Family Detached Housing	120	DU	89	119	1,133
63. Tract 20126	Single-Family Detached Housing	103	DU	76	102	972
64. Redlands Crossing W/Walmart	Shopping Center	256.6	46	241	978	9,687
65. CUP 905 Revision 3	Shopping Center	88.08	TSF	83	336	3,325
66. CUP 335 Redlands	Hospital	8.53	TSF	10	10	141
67. CRA 889 5000sf	Shopping Center	28.49	TSF	27	109	1,075
68. Hotel	Hotel	77	Rooms	36	46	644
69. MOD Packinghouse	Quality Restaurant	14	TSF	11	105	1,259
70. CRA 890 Parkford Shopping Center Expansion	Shopping Center	15	TSF	14	57	566
71. CUP 1076 123 Hotel	Hotel	123	Rooms	58	74	1,028
Total				6,500	8,584	84,993

Figure 16 – Cumulative Projects Only AM Peak Hour Intersection Volumes



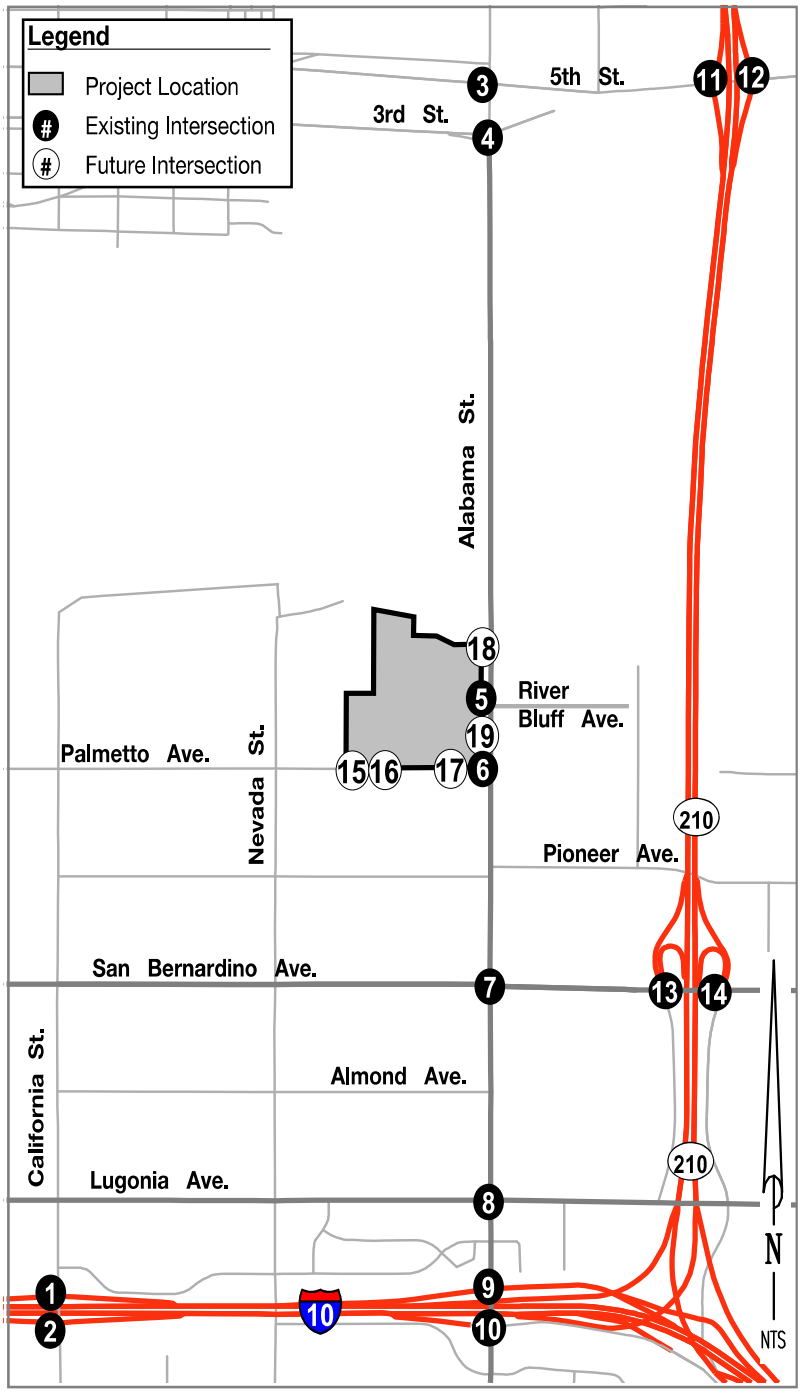
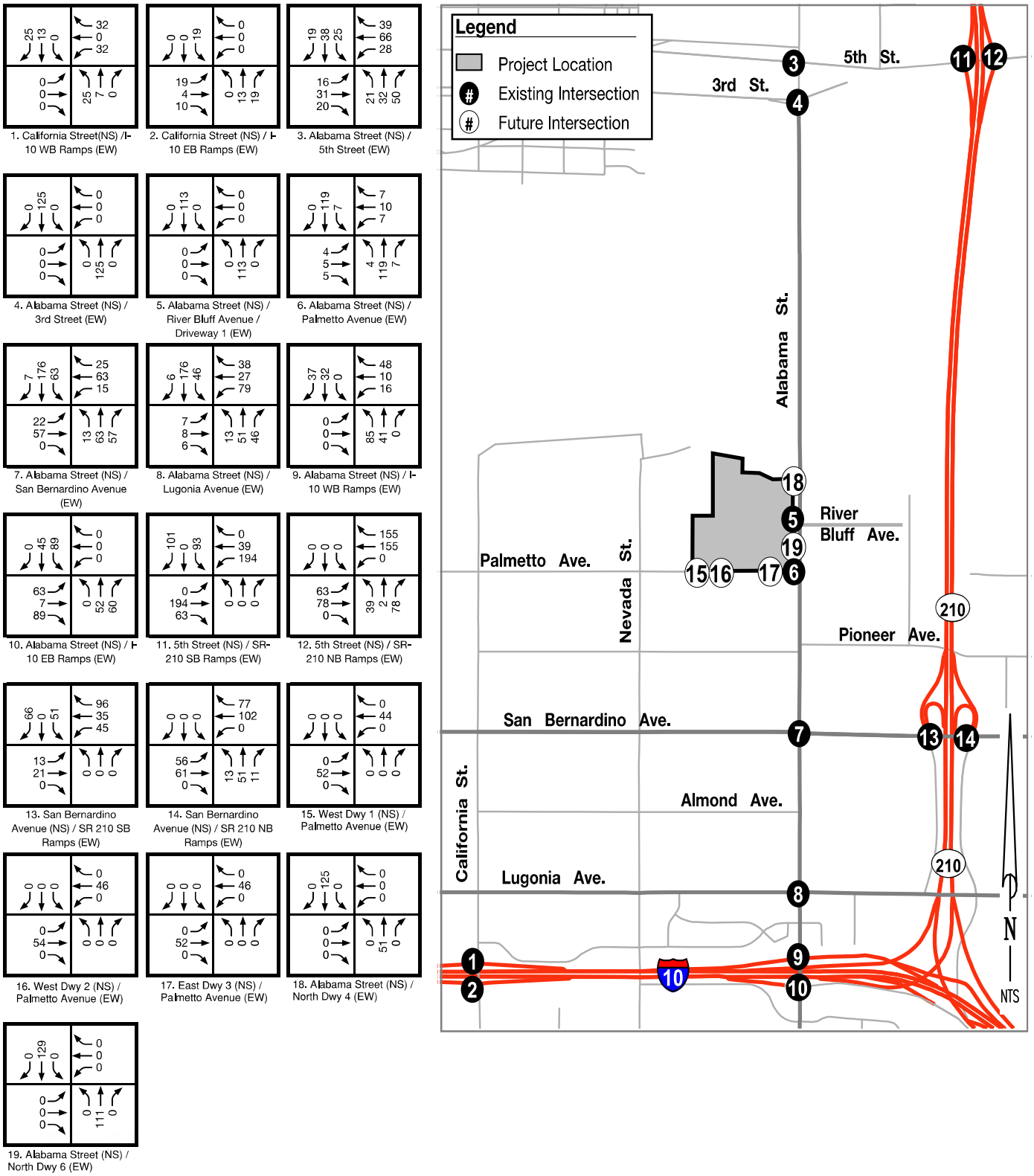


Figure 17 – Cumulative Projects Only PM Peak Hour Intersection Volumes



4.4 Ambient Growth

In order to evaluate traffic conditions for the opening year, area wide growth on existing roadways must be projected. The majority of the anticipated growth within the study area is accounted for with other cumulative project traffic. The ambient traffic growth factor is intended to include unknown and future cumulative projects in the study area, as well as account for regular growth in traffic volumes due to the development of projects outside the study area. Per discussion with San Bernardino County Traffic Division staff, this study will utilize a 2 percent per year growth rate. The AM and PM peak hour intersection turning movement volumes for ambient growth only are shown on **Figure 18** and **Figure 19**, respectively.

The AM and PM peak hour intersection turning movement volumes for ambient growth plus cumulative project trips are shown on **Figure 20** and **Figure 21**, respectively

Figure 18 – Ambient Growth Only AM Peak Hour Intersection Volumes

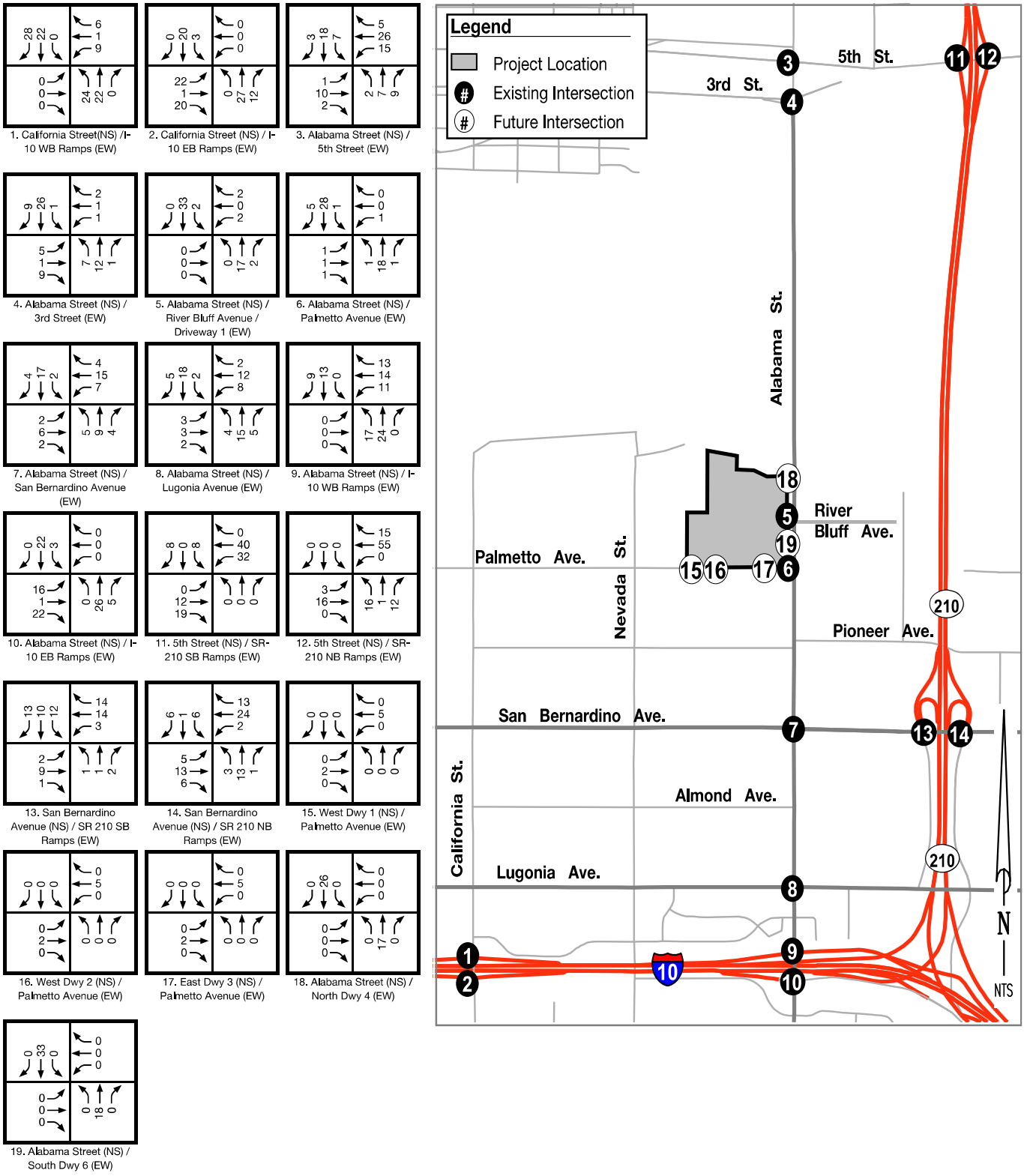
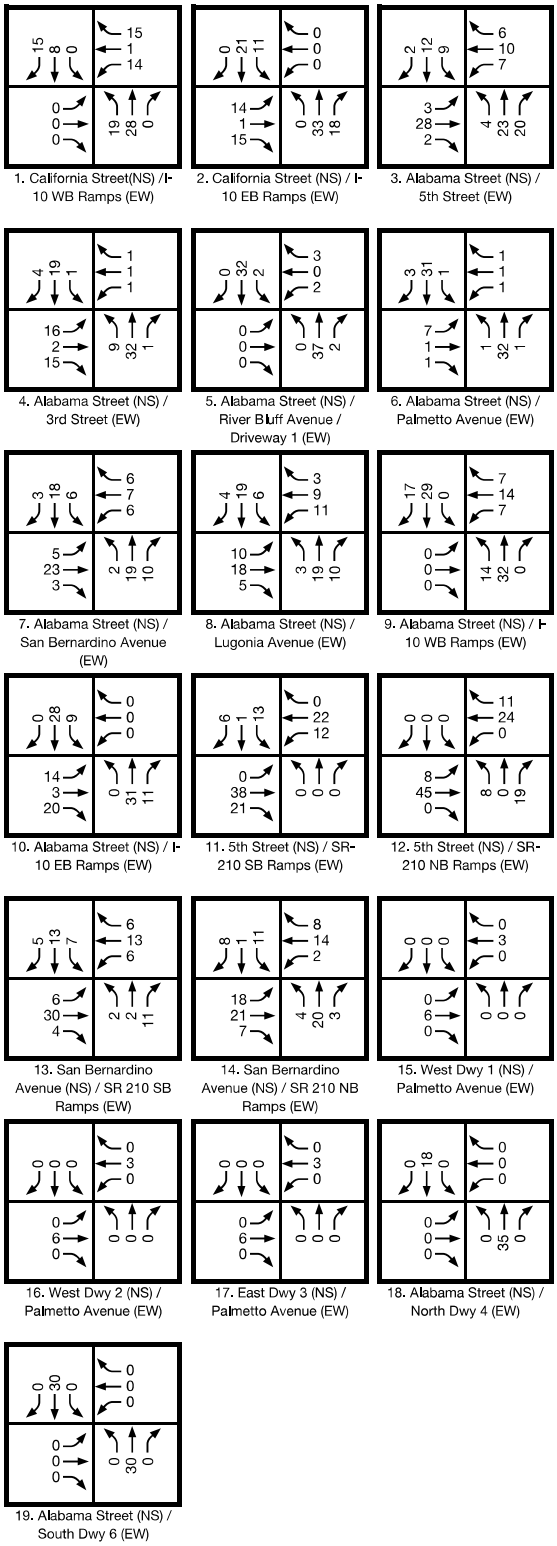


Figure 19– Ambient Growth Only PM Peak Hour Intersection Volumes



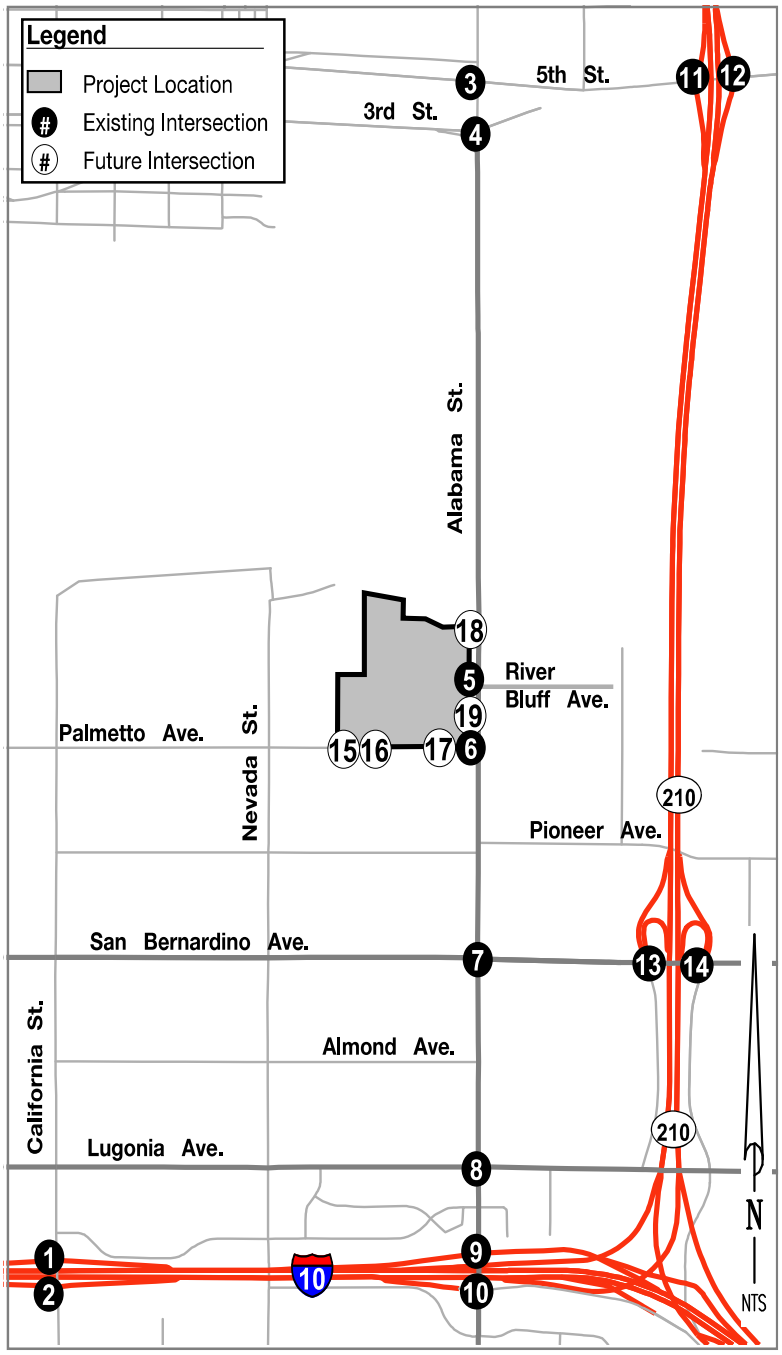


Figure 20 – Ambient Growth Plus Cumulative Projects AM Peak Hour Intersection Volumes

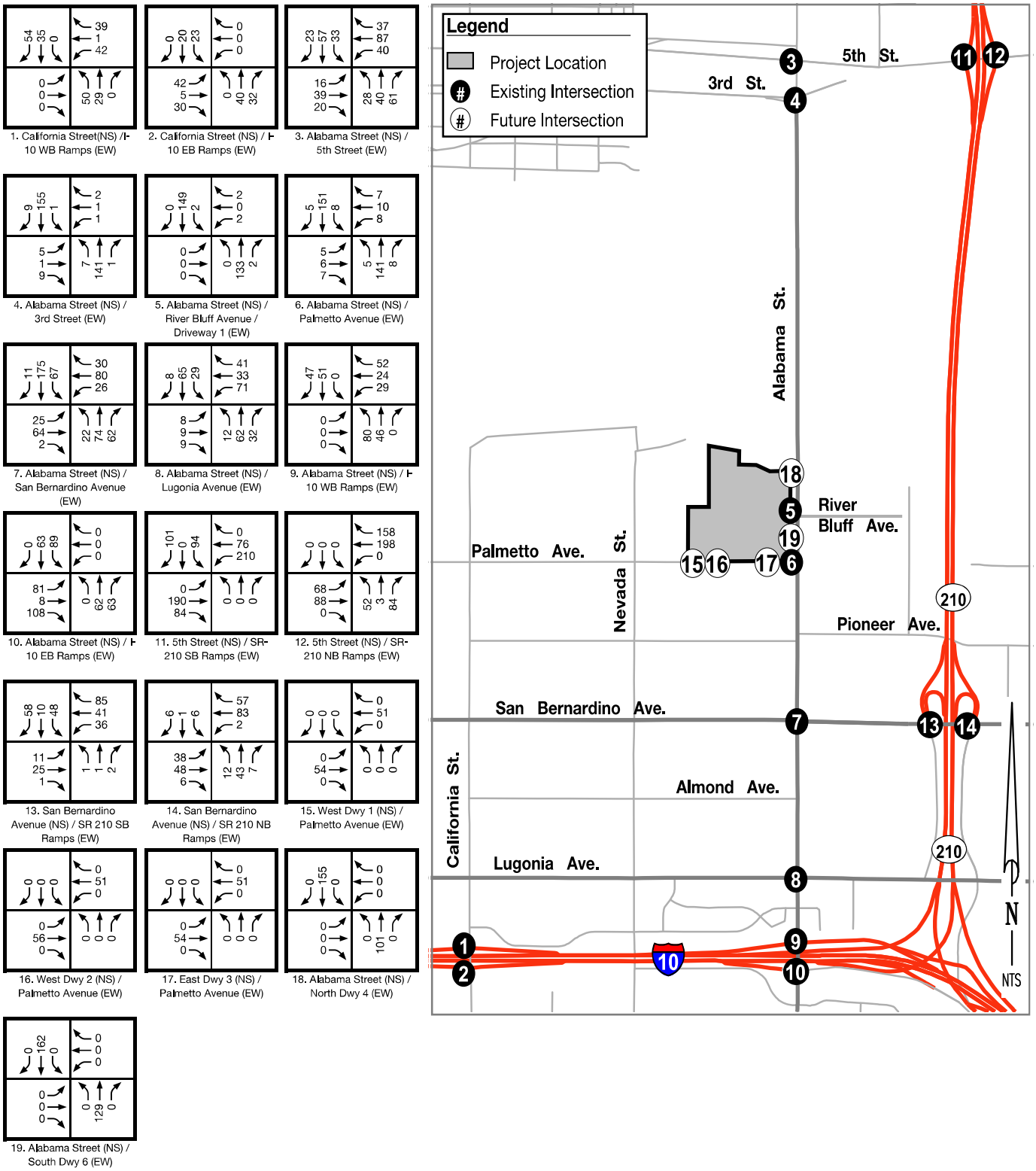
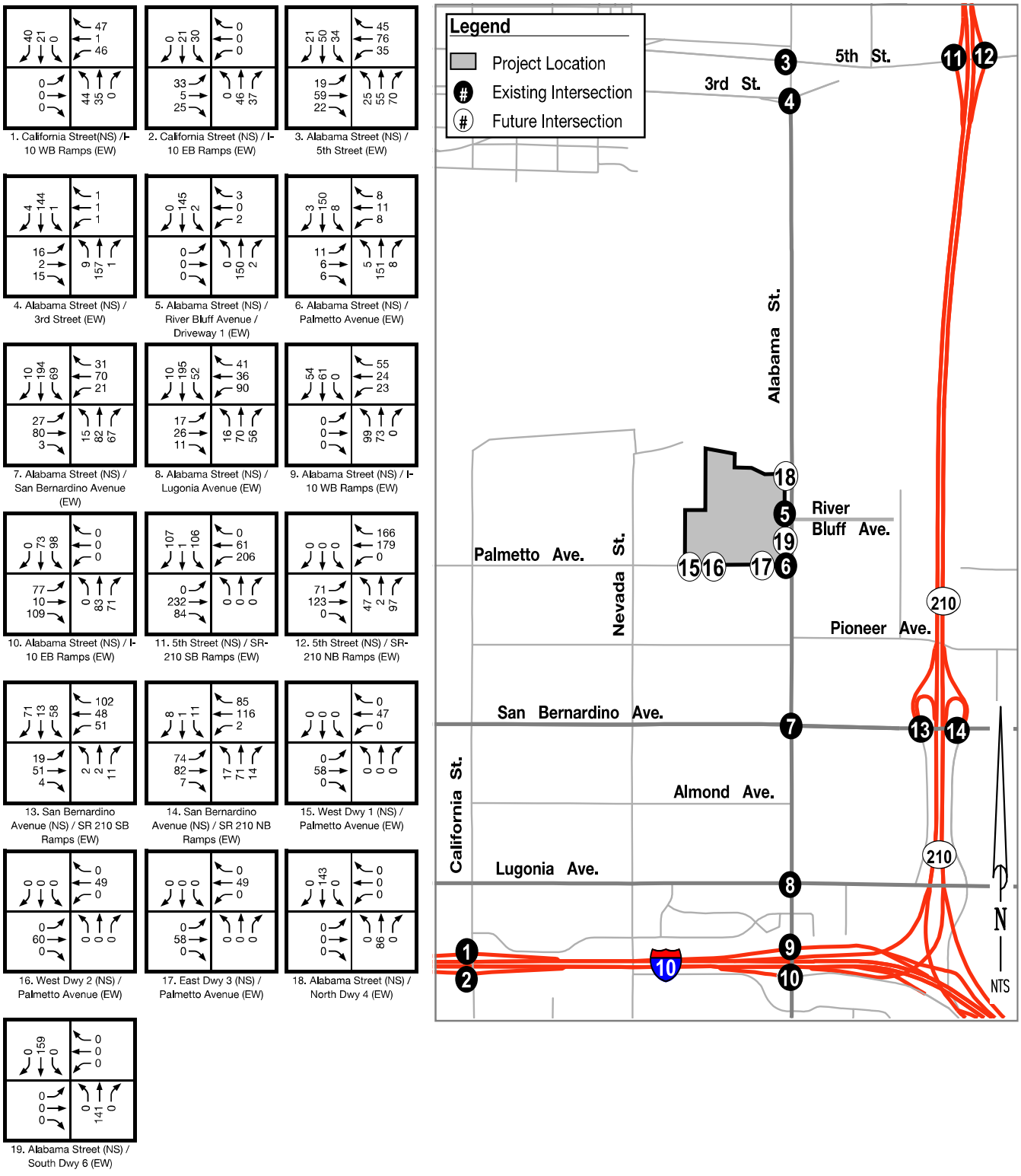


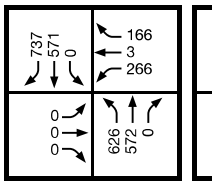
Figure 21 – Ambient Growth Plus Cumulative Projects PM Peak Hour Intersection Volumes



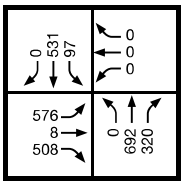
4.5 Total Traffic (2020)

Traffic conditions for the opening year include existing traffic, ambient growth, cumulative project trips, and the proposed Project trips. All of the types of trips are included in the analysis to result in forecasted intersection LOS for the opening year (2020). The AM and PM peak hour intersection turning movement volumes for existing plus ambient plus cumulative plus Project are shown on **Figure 22** and **Figure 23**, respectively.

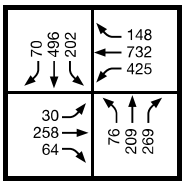
Figure 22 – Existing Plus Ambient Growth Plus Cumulative Projects Plus Project AM Peak Hour Intersection Volumes



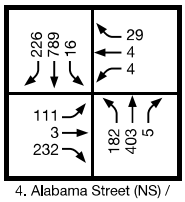
1. California Street(NS) /I-10 WB Ramps (EW)



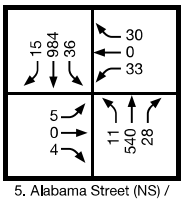
2. California Street (NS) / I-10 EB Ramps (EW)



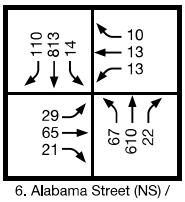
3. Alabama Street (NS) / 5th Street (EW)



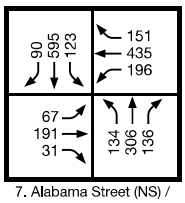
4. Alabama Street (NS) / 3rd Street (EW)



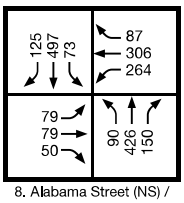
5. Alabama Street (NS) / River Bluff Avenue / Driveway 1 (EW)



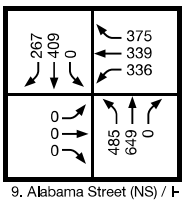
6. Alabama Street (NS) / Palmetto Avenue (EW)



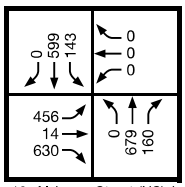
7. Alabama Street (NS) / San Bernardino Avenue (EW)



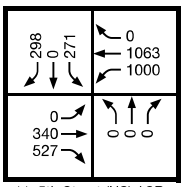
8. Alabama Street (NS) / Lugonia Avenue (EW)



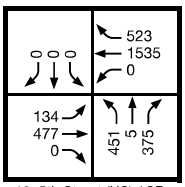
9. Alabama Street (NS) / I-10 WB Ramps (EW)



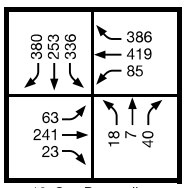
10. Alabama Street (NS) / I-10 EB Ramps (EW)



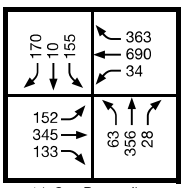
11. 5th Street (NS) / SR-210 SB Ramps (EW)



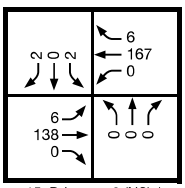
12. 5th Street (NS) / SR-210 NB Ramps (EW)



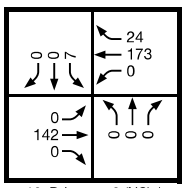
13. San Bernardino Avenue (NS) / SR 210 SB Ramps (EW)



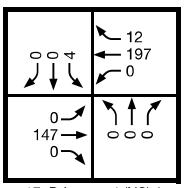
14. San Bernardino Avenue (NS) / SR 210 NB Ramps (EW)



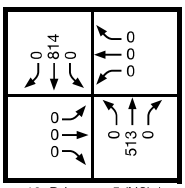
15. Driveway 2 (NS) / Palmetto Avenue (EW)



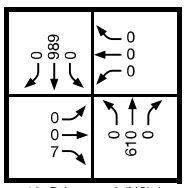
16. Driveway 3 (NS) / Palmetto Avenue (EW)



17. Driveway 4 (NS) / Palmetto Avenue (EW)



18. Driveway 5 (NS) / Palmetto Avenue (EW)



19. Driveway 6 (NS) / Palmetto Avenue (EW)

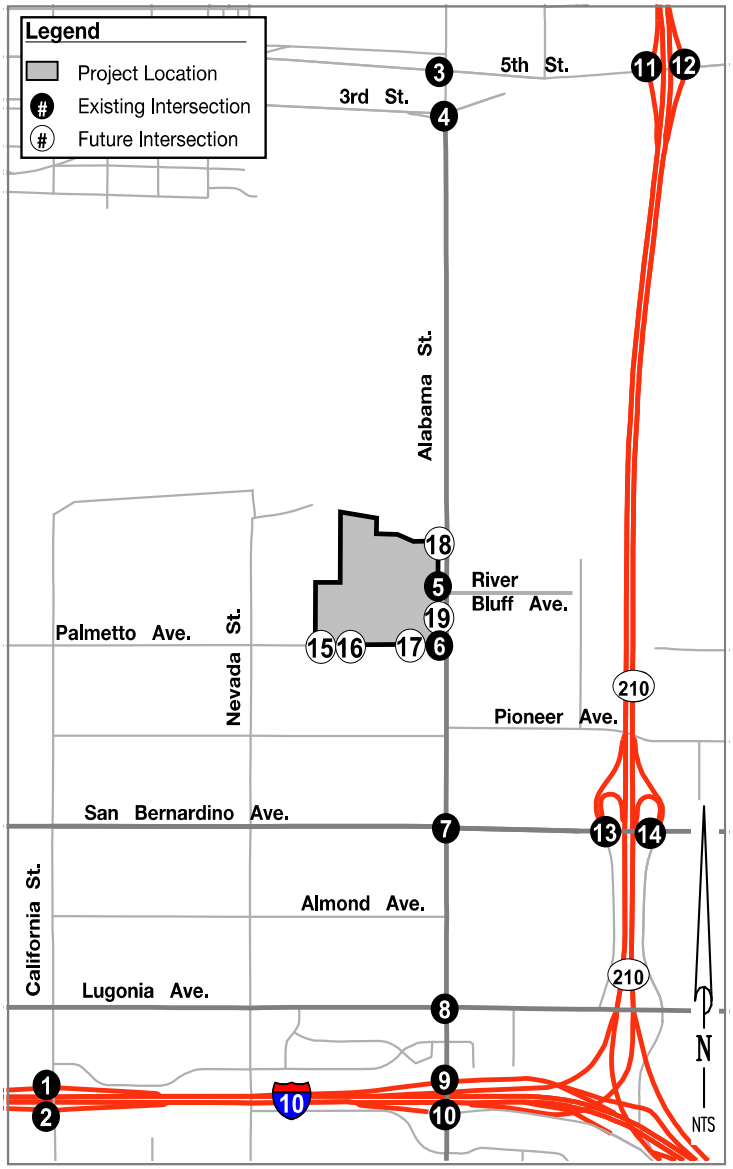
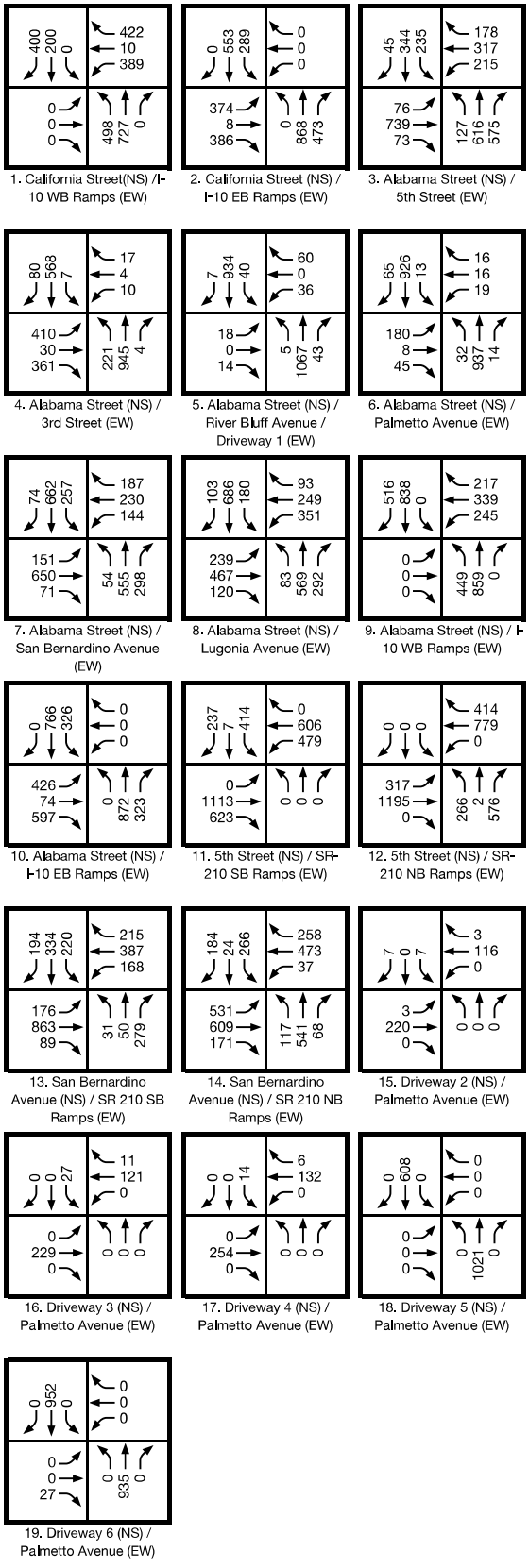


Figure 23 – Existing Plus Ambient Growth Plus Cumulative Projects Plus Project PM Peak Hour Intersection Volumes



4.6 Build Out Year (2040) Trip Generation

The San Bernardino County Guidelines require examination of traffic impacts under build-out year 2040 conditions. The San Bernardino County TIA procedures require that an analysis be conducted utilizing year 2040 traffic data from an approved local or regional traffic model provided by San Bernardino County Transportation Authority (SBCTA). SBCTA developed year 2040 traffic volumes using future traffic Projections from the East Valley Traffic Model (EVTM), maintained by the City of San Bernardino.

The following describes in detail the methodology employed for passenger vehicles to determine the a.m. and p.m. peak hour intersection turn movements for year 2040 conditions. Volume development sheets are included in Appendix G. The methodology used is consistent with San Bernardino Associated Governments (SANBAG) procedures for post-processing of modeled traffic volumes. The base year for the passenger vehicle model is 2000 and the forecast year is 2040.

1. The modeled build out (year 2040) peak period directional arterial traffic volumes include the traffic volumes from the traffic analysis zones (TAZs) containing the proposed Project. Build out peak period directional traffic volumes were subtracted from the modeled year 2040 peak period traffic volumes to obtain the adjusted year 2040 modeled peak period volumes.
2. The difference between the modeled base year and adjusted year 2040 peak period directional arterial traffic volumes (for each intersection approach and departure) was identified from loaded network model plots. This difference defines the growth in traffic from current conditions to year 2040 conditions.
3. The incremental growth in peak period approach and departure volumes was factored to develop the incremental change in peak hour volumes. The EVTM uses a three-hour a.m. peak period and a four-hour p.m. peak period. The Southern California Association of Governments (SCAG) has established that the a.m. peak hour comprises 38 percent of the peak period and that the p.m. peak hour comprises 28 percent of the peak period. Therefore, the incremental changes in peak period volumes were multiplied by the appropriate factors to develop incremental changes in peak hour volumes.
4. The incremental growth in approach and departure volumes between 2012 and 2040 was factored to reflect the forecast growth between the year of the collected counts (2018) and 2040. For this purpose, linear growth between the 2012 base condition and the forecast 2040 condition was assumed. Since the increment between 2018 and 2040 is 22 years of the 28-year time span, a factor of 0.79 (i.e., 22/28) was used.
5. The forecast growth in approach and departure volumes through year 2040 conditions was added to the 2010 collected counts, resulting in “post-processed” forecast year 2040 link volumes.
6. Forecast year 2040 turn volumes were developed using existing turn volumes and the future approach and departure volumes, based on the methodologies contained in the National Cooperative Highway Research Program Report (NCHRP) 255: Highway Traffic Data for Urbanized Area Project Planning and Design (Transportation Research Board, December 1982).
7. The Project only traffic forecasts have been generated by applying the trip generation, distribution and traffic assignment calculations. Project traffic volumes were then subtracted from the refined future year EVTM traffic model volumes to determine build-out Year (2040) without Project traffic conditions. The initial estimate of the build-out year (2040) peak hour turning movements was then reviewed by Webb for reasonableness at intersections where model results showed unreasonable turning movements. The initial raw model estimates were adjusted to achieve flow conservation, reasonable growth, and reasonable diversion between parallel routes.

The post-processing worksheets for the build-out year (2040) trip generation and model plots are provided in the Appendix G.

5.0 TRAFFIC ANALYSIS

5.1 Level of Service Methodology

The San Bernardino County Transportation Division requires that the most recent release of the Transportation Research Board Highway Capacity Manual (HCM) be used to analyze Level of Service (LOS). The Highway Capacity Manual 6th Edition (HCM6) was used for the analysis.

Quality of service describes how well a transportation facility or service operates from the traveler's perspective. Level of service (LOS) is a quantitative stratification of a performance measure or measures that represent quality of service. LOS is measured on a familiar A to F scale where LOS A represents the best conditions from a traveler's perspective and LOS F the worst. A simple LOS letter system is used to hide much of the complexity of transportation facility performance in order to simplify decision making on whether facility performance is generally acceptable and whether a future change in performance is likely to be perceived as significant by the general public. One reason for the widespread adoption of the LOS concept by agencies is the concept's ability to communicate roadway performance to nontechnical decision makers.

The HCM6 evaluates the LOS of intersections based upon the control delay per vehicle. Control delay is defined as the delay associated with vehicles slowing in advance of an intersection, the time spent stopped on an intersection approach, the time spent as vehicles move up in the queue, and the time needed for vehicles to accelerate to their desired speed. The methodology used to evaluate the intersection level of service differs on whether the intersection is signalized or unsignalized. Levels of service at signalized and unsignalized intersections have been evaluated using Synchro Version 10, which is based upon HCM6 methodologies.

Delays and queue lengths were analyzed using Synchro Version 10.0. Synchro is a computerized micro-simulation modeling software program that analyzes traffic models by simulating the behavior of individual vehicles within the traffic circulation network.

5.1.1 Signalized Intersections

Signalized intersections have been evaluated using the Operational Method as described in Chapter 16, Section II of the HCM6. According to this methodology, the level of service for signalized intersections is based upon the weighted average control delay, in seconds per vehicle, of all vehicles passing through the intersection. **Table 5-1** shows the criteria used to determine the level of service for signalized intersections.

Table 5-1 – Level of Service for Signalized Intersections

Level of Service	Control Delay (sec/vehicle)	Description
A	≤ 10	Minimal delay and primarily free-flow operation. Most vehicles do not stop because they arrive during the green indication or only stop for a brief amount of time as the signal changes.
B	> 10 – 20	Short delay and reasonably unimpeded operation. Many vehicles do not stop because they arrive during the green indication or only stop for a short amount of time as the signal changes. More vehicles stop than with LOS A.
C	> 20 – 35	Moderate delay and stable operation. Individual cycle failures (i.e. when queued vehicles do not clear the signal during the next green indication) may begin to appear. The number of vehicles stopping is significant, although many vehicles still pass through the intersection without stopping.
D	> 35 – 55	Less stable operation in which small increases in vehicles may cause substantial increases in delay. Many vehicles stop and individual cycle failures are noticeable.
E	> 55 – 80	Significant delay and unstable operation. Most vehicles stop and individual cycle failures are frequent.
F	> 80	Considerable delay and extensive queuing. Almost all vehicles stop and most cycles fail to clear the queue.

Source: Transportation Research Board Highway Capacity Manual 6

5.1.2 Unsignalized Intersections

Unsignalized intersections were evaluated using Chapter 19-20 of the HCM 6. According to this methodology, the level of service for all-way stop intersections is based upon the weighted average control delay, in seconds per vehicle, of all vehicles passing through the intersection. For two-way stop controlled intersections, the level of service is based on the highest control delay of all controlled movements for the intersection. **Table 5-2** shows the criteria used to determine the level of service for unsignalized intersections.

Table 5-2 – Level of Service for Unsignalized Intersections

Level of Service	Control Delay (sec/vehicle)	Description
A	≤ 10	Minimal delay. Usually no conflicting traffic.
B	> 10 – 15	Short delay. Occasionally some conflicting traffic.
C	> 15 – 25	Noticeable delay, but not inconveniencing. Usually some conflicting traffic.
D	> 25 – 35	Noticeable delay and irritating. A significant amount of conflicting traffic. Increased likelihood of risk taking.
E	> 35 – 50	Significant delay approaching tolerance level. Lots of conflicting traffic, but with some gaps of suitable size. Risk taking behavior likely.
F	> 50	Considerable delay exceeding tolerance level. Lots of conflicting traffic, with not enough gaps of suitable size. High likelihood of risk taking.

Source: Transportation Research Board Highway Capacity Manual 6

5.2 Acceptable Level of Service

5.2.1 County of San Bernardino

The acceptable Level of Service (LOS) for the unincorporated County of San Bernardino is LOS D and it should be maintained during the peak commute hours.

5.2.2 City of Highland

The acceptable LOS for the City of Highland is based on the City of Highland General Plan, Chapter 3:

> *The Circulation Element establishes that the LOS should be LOS D or better for major intersections in the City. For peak operating periods LOS D is considered acceptable. Therefore, any City of Highland intersection operating at LOS "E" or "F" is considered deficient.*

5.2.3 City of Redlands

The acceptable LOS for the City of Redlands is based on the City of Redlands General Plan, Policy 5.20c:

> *Where the current level of service at a location within the City of Redlands is below the Level of Service (LOS) C standard, no development project shall be approved that cannot be mitigated so that it does not reduce the existing level of service at that location except as provided in Section 5.20b.*

5.2.4 Caltrans

The acceptable LOS for Caltrans facilities is based on the Caltrans' *Guide for the Preparation of Traffic Impact Studies* Section II:

> *Caltrans endeavors to maintain a target LOS at the transition between LOS "C" and LOS "D" on State highway facilities, however, Caltrans acknowledges that this may not always be feasible and recommends that the lead agency consult with Caltrans to determine the*

appropriate target LOS. If an existing State highway facility is operating at less than the appropriate target LOS, the existing measures of effectiveness (MOE) should be maintained.

Per discussion with Mark Roberts, Caltrans District 8 Office Chief, Intergovernmental Review, Community and Regional Planning, the region-wide goal for acceptable LOS on all freeways, roadway segments, and intersections is LOS D.

5.3 Determination of Significant Impact

The determination of significant impacts used in this study is based on the County of San Bernardino Traffic Impact Analysis Guidelines, Sections 10.8.1 and 10.8.2, with modifications to accommodate the varying acceptable LOS standards in different jurisdictions:

5.3.1 Signalized intersections

Any study intersection that is operating at a LOS 'A', 'B', 'C' or 'D' for any study scenario without project traffic in which the addition of project traffic causes the intersection to degrade to a LOS 'E' or 'F' shall mitigate the impact to bring the intersection back to at least LOS 'D'.

Any study intersection that is operating at a LOS 'E' or 'F' for any study scenario without project traffic shall mitigate any impacts so as to bring the intersection back to the overall level of delay established prior to project traffic being added.

For scenarios which include the addition of Cumulative Project Traffic (i.e. shared impacts), study intersections shall be mitigated to LOS 'D' or better in the Valley and Mountain regions and LOS 'C' or better in the Desert regions of the County.

5.3.2 Unsignalized intersections

An impact is considered significant if the study determines that either section a) or both sections b) and c) occur.

a) The addition of project related traffic causes the intersection to move from a LOS 'D' or better to a LOS 'E' or worse

OR

b) The project contributes additional traffic to an intersection that is already projected to operate at an LOS 'E' or 'F' with background traffic (per Section 10.5.2b)

AND

c) One or both of the following conditions are met:
1) The project adds ten (10) or more trips to any approach
2) The intersection meets the peak hour traffic signal warrant after the addition of project traffic (per Section 10.5.2 c)).

Once a significant impact has been identified, mitigation shall be provided as follows:
1. For scenarios involving project traffic but not Cumulative Project Traffic, the LOS shall be mitigated to either LOS 'D' or better for case a) above or to pre-project LOS and delay for case b) above.
2. For scenarios that include Cumulative Project Traffic study intersections shall be mitigated to LOS 'D' or better in the Valley and Mountain regions and LOS 'C' or better in the Desert regions of the County.

5.4 Capacity and Level of Service and Improvement Analysis

5.4.1 Levels of Service – Existing Plus Project (2018) Conditions

The Existing Plus Project (2018) scenario includes existing traffic and project traffic. **Table 5-3** provides the projected delay and levels of service at the study intersections under Existing Plus Project conditions without off-site improvements. These levels of service vary from LOS A to E. The Existing Plus Project AM and PM peak hour intersection turning movement volumes are shown on **Figure 24** and **Figure 25**, respectively. The levels of service are based upon the existing geometrics for the study area intersections. The level of service calculation worksheets are provided in Appendix E. The following study intersections are expected to operate at an unacceptable level of service:

1. California Street (NS)/ I-10 WB Ramps
2. California Street (NS) / I-10 EB Ramps

Table 5-3 – Intersection Levels of Service – Existing Plus Project (2018) Conditions

Intersection	Peak Hour	Traffic Control	Delay (sec)	LOS
1. California Street (NS) / I-10 WB Ramps (EW)	AM	Signal	**72.2**	**E**
	PM		32.9	C
2. California Street (NS) / I-10 EB Ramps (EW)	AM	Signal	**61.0**	**E**
	PM		**57.3**	**E**
3. Alabama Street (NS) / 5th Street (EW)	AM	Signal	35.4	D
	PM		51.2	D
4. Alabama Street (NS) / 3rd Street (EW)	AM	Signal	26.2	C
	PM		28.9	C
5. Alabama Street (NS) / Dwy 5-River Bluff Avenue (EW)	AM	Signal	9.2	A
	PM		8.5	A
6. Alabama Street (NS) / Palmetto Avenue (EW)	AM	Signal	7.7	A
	PM		13.4	B
7. Alabama Street (NS) / San Bernardino Avenue (EW)	AM	Signal	26.8	C
	PM		32.1	C
8. Alabama Street (NS) / Lugonia Avenue (EW)	AM	Signal	25.6	C
	PM		34.6	C
9. Alabama Street (NS) / I-10 WB Ramps (EW)	AM	Signal	33.7	C
	PM		29.2	C
10. Alabama Street (NS) / I-10 EB Ramps (EW)	AM	Signal	21.3	D
	PM		27.9	C
11. SR-210 SB Ramps (NS) / 5th Street (EW)	AM	Signal	32.8	C
	PM		14.5	B
12. SR-210 NB Ramps (NS) / 5th Street (EW)	AM	Signal	7.9	B
	PM		12.5	B
13. SR-210 SB Ramps (NS) / San Bernardino Avenue (EW)	AM	Signal	28.5	C
	PM		28.0	C
14. SR-210 NB Ramps (NS) / San Bernardino Avenue (EW)	AM	Signal	30.1	C
	PM		34.3	C
15. West Dwy 1 (NS) / Palmetto Avenue (EW)	AM	OWSS	0.4	A
	PM		7.0	A
16. West Dwy 2 (NS) / Palmetto Avenue (EW)	AM	OWSS	0.3	A
	PM		1.0	A
17. East Dwy 3 (NS) / Palmetto Avenue (EW)	AM	OWSS	0.2	A
	PM		0.5	A
18. Alabama Street (NS) / North Dwy 4 (EW)	AM	OWSS	0.0	A
	PM		0.0	A
19. Alabama Street (EW) / South Dwy 6 (EW)	AM	OWSS	0.1	A
	PM		0.3	A

Figure 24 – Existing Plus Project (2018) AM Peak Hour Intersection Volumes

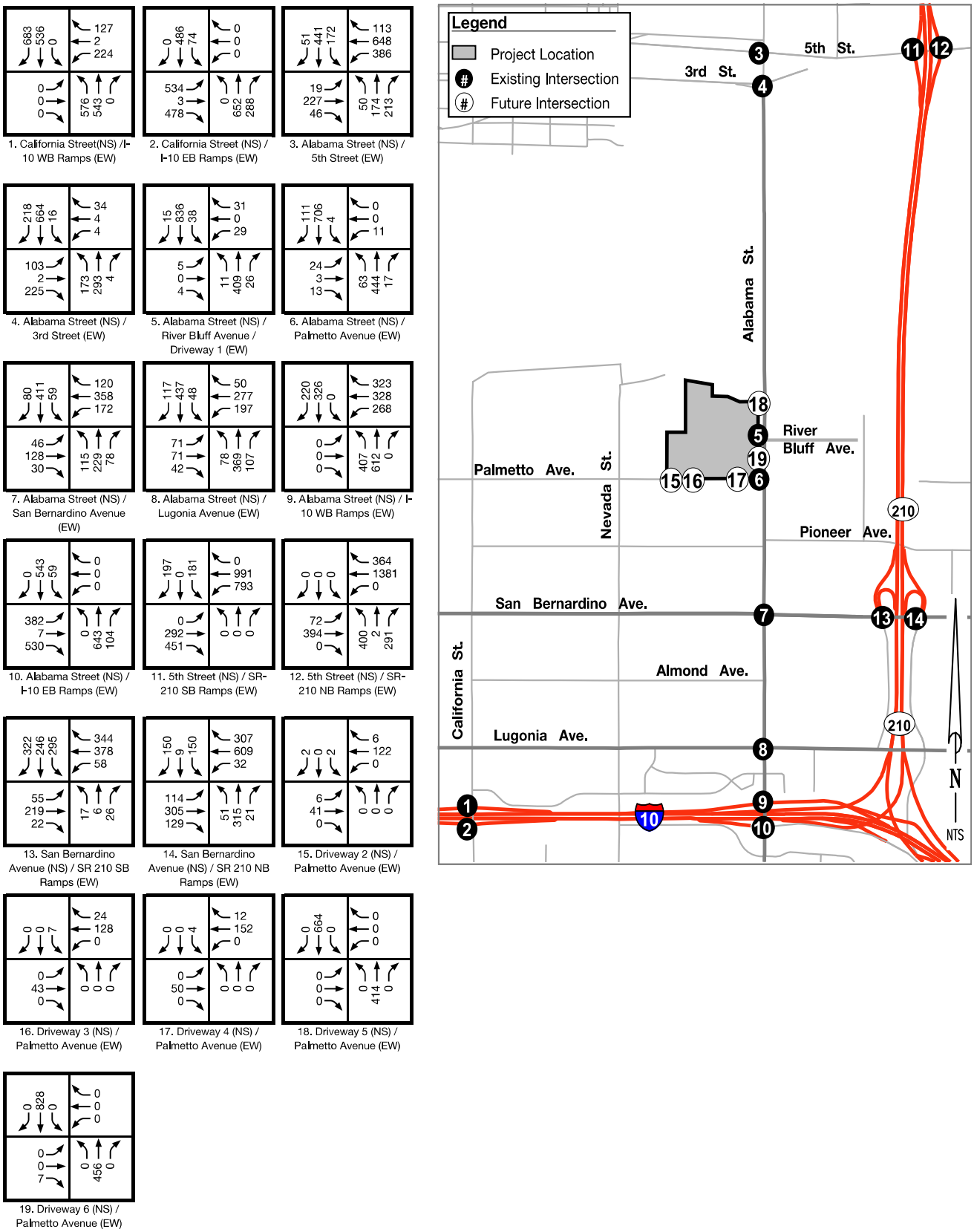
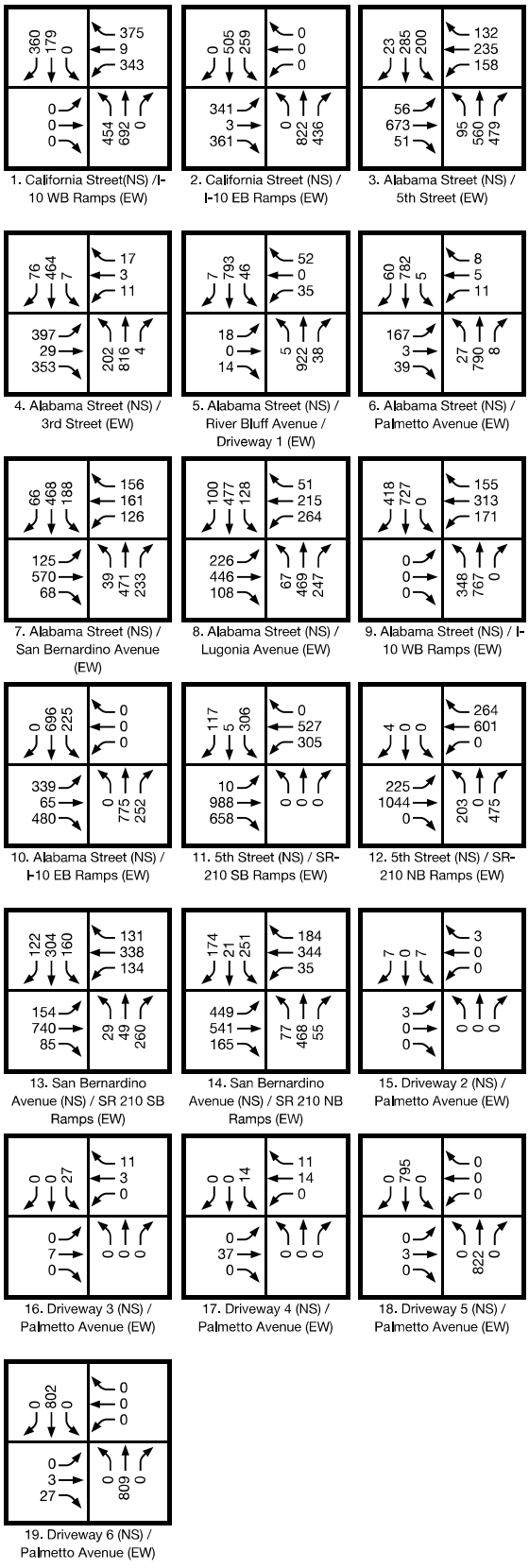


Figure 25 – Existing Plus Project (2018) PM Peak Hour Intersection Volumes



5.4.2 Levels of Service – Existing Plus Ambient Growth Plus Project (2020) Conditions

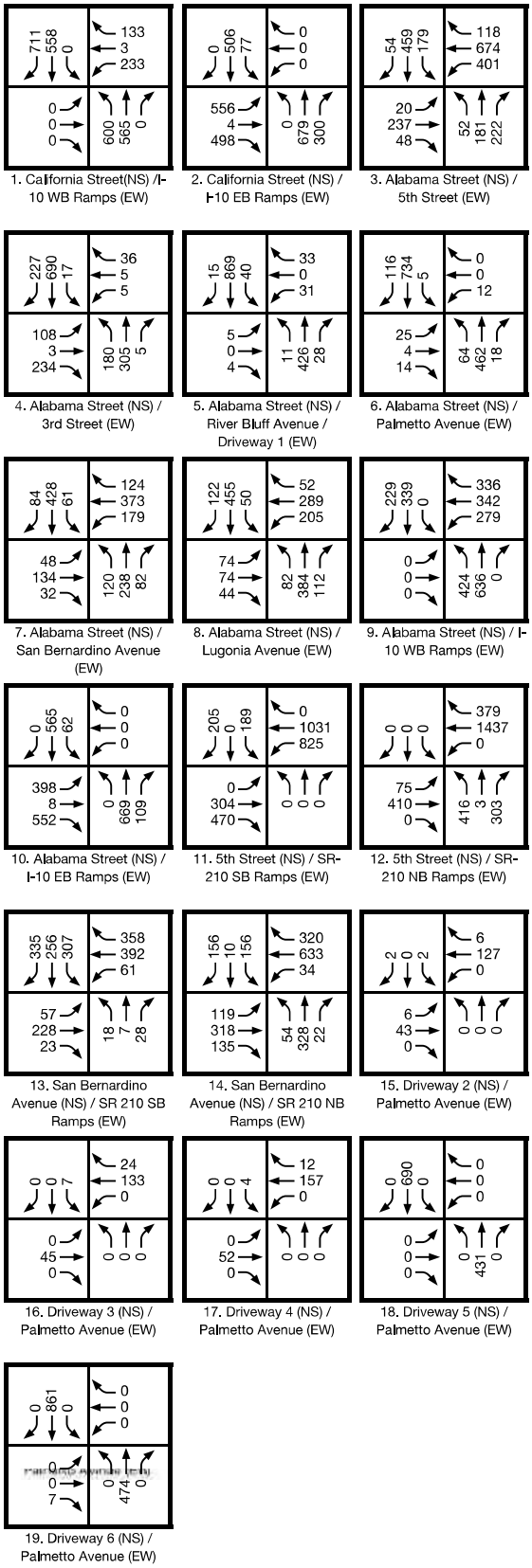
The Existing Plus Ambient Growth Plus Project (2020) scenario includes existing traffic, an ambient growth of two percent per year for two years to 2020 (four percent total ambient growth) and project traffic. **Table 5-4** provides the projected delay and levels of service at the study intersections under Existing Plus Ambient Growth Plus Project conditions without off-site improvements. These levels of service vary from LOS A to E. The Existing Plus Ambient Growth Plus Project AM and PM peak hour intersection turning movement volumes are shown on **Figure 26** and **Figure 27**, respectively. The levels of service are based upon the existing geometrics for the study intersections. The level of service calculation worksheets are provided in Appendix E. The following study intersections are expected to operate at an unacceptable level of service:

1. California Street (NS)/ I-10 WB Ramps
2. California Street (NS) / I-10 EB Ramps
3. Alabama Street (NS) / 5th Street (EW)
8. Alabama Street (NS) / Lugonia Avenue (EW)

Table 5-4 – Intersection Levels of Service – Existing Plus Ambient Growth Plus Project (2020) Conditions

Intersection	Peak Hour	Traffic Control	Delay (sec)	LOS
1. California Street (NS) / I-10 WB Ramps (EW)	AM	Signal	**69.3**	**E**
	PM		36.9	D
2. California Street (NS) / I-10 EB Ramps (EW)	AM	Signal	**62.1**	**E**
	PM		**77.9**	**E**
3. Alabama Street (NS) / 5th Street (EW)	AM	Signal	35.1	D
	PM		**61.6**	**E**
4. Alabama Street (NS) / 3rd Street (EW)	AM	Signal	17.7	B
	PM		29.6	C
5. Alabama Street (NS) / Dwy 5-River Bluff Avenue (EW)	AM	Signal	7.2	A
	PM		8.3	A
6. Alabama Street (NS) / Palmetto Avenue (EW)	AM	Signal	7.5	A
	PM		14.4	B
7. Alabama Street (NS) / San Bernardino Avenue (EW)	AM	Signal	24.4	C
	PM		36.2	D
8. Alabama Street (NS) / Lugonia Avenue (EW)	AM	Signal	22.3	C
	PM		**41.4**	**D**
9. Alabama Street (NS) / I-10 WB Ramps (EW)	AM	Signal	32.7	C
	PM		27.2	C
10. Alabama Street (NS) / I-10 EB Ramps (EW)	AM	Signal	24.6	C
	PM		36.7	D
11. SR-210 SB Ramps (NS) / 5th Street (EW)	AM	Signal	21.5	C
	PM		25.6	C
12. SR-210 NB Ramps (NS) / 5th Street (EW)	AM	Signal	7.9	B
	PM		21.3	C
13. SR-210 SB Ramps (NS) / San Bernardino Avenue (EW)	AM	Signal	38.1	D
	PM		40.2	D
14. SR-210 NB Ramps (NS) / San Bernardino Avenue (EW)	AM	Signal	30.9	C
	PM		46.7	D
15. West Dwy 1 (NS) / Palmetto Avenue (EW)	AM	OWSS	0.4	A
	PM		0.6	A
16. West Dwy 2 (NS) / Palmetto Avenue (EW)	AM	OWSS	0.3	A
	PM		1.0	A
17. East Dwy 3 (NS) / Palmetto Avenue (EW)	AM	OWSS	0.2	A
	PM		0.5	A
18. Alabama Street (NS) / North Dwy 4 (EW)	AM	OWSS	0.1	A
	PM		0.1	A
19. Alabama Street (EW) / South Dwy 6 (EW)	AM	OWSS	0.1	A
	PM		0.3	A

Figure 26 – Existing Plus Ambient Growth Plus Project (2020) AM Peak Hour Intersection Volumes



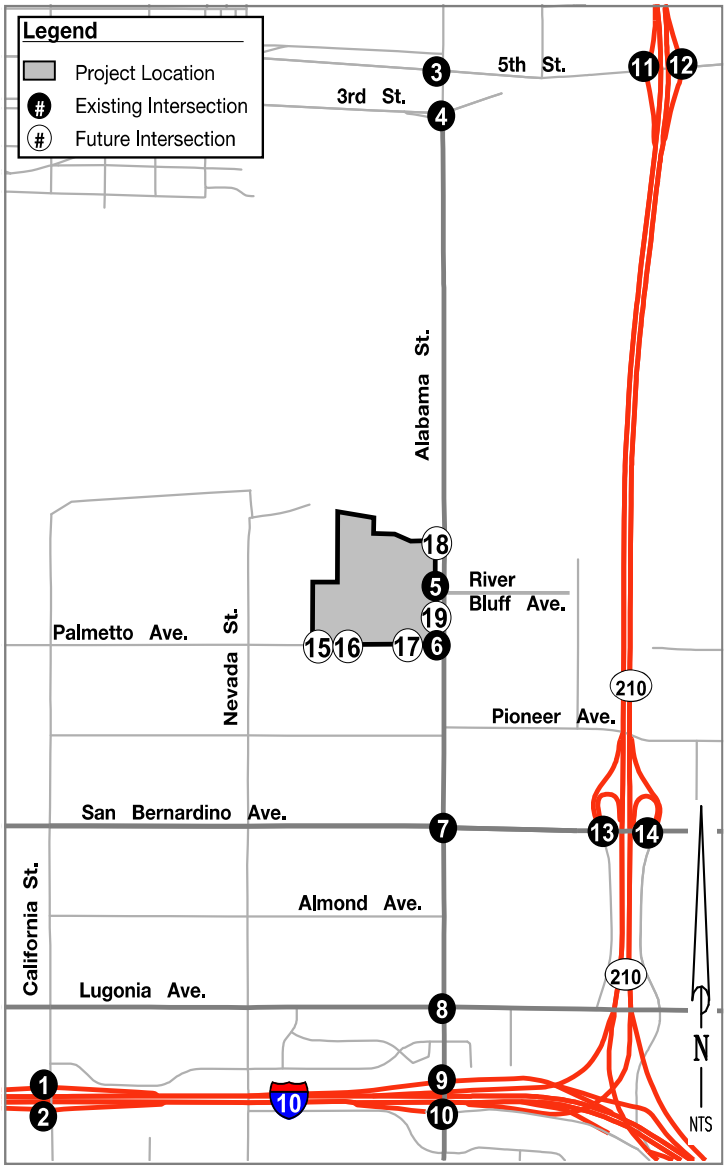
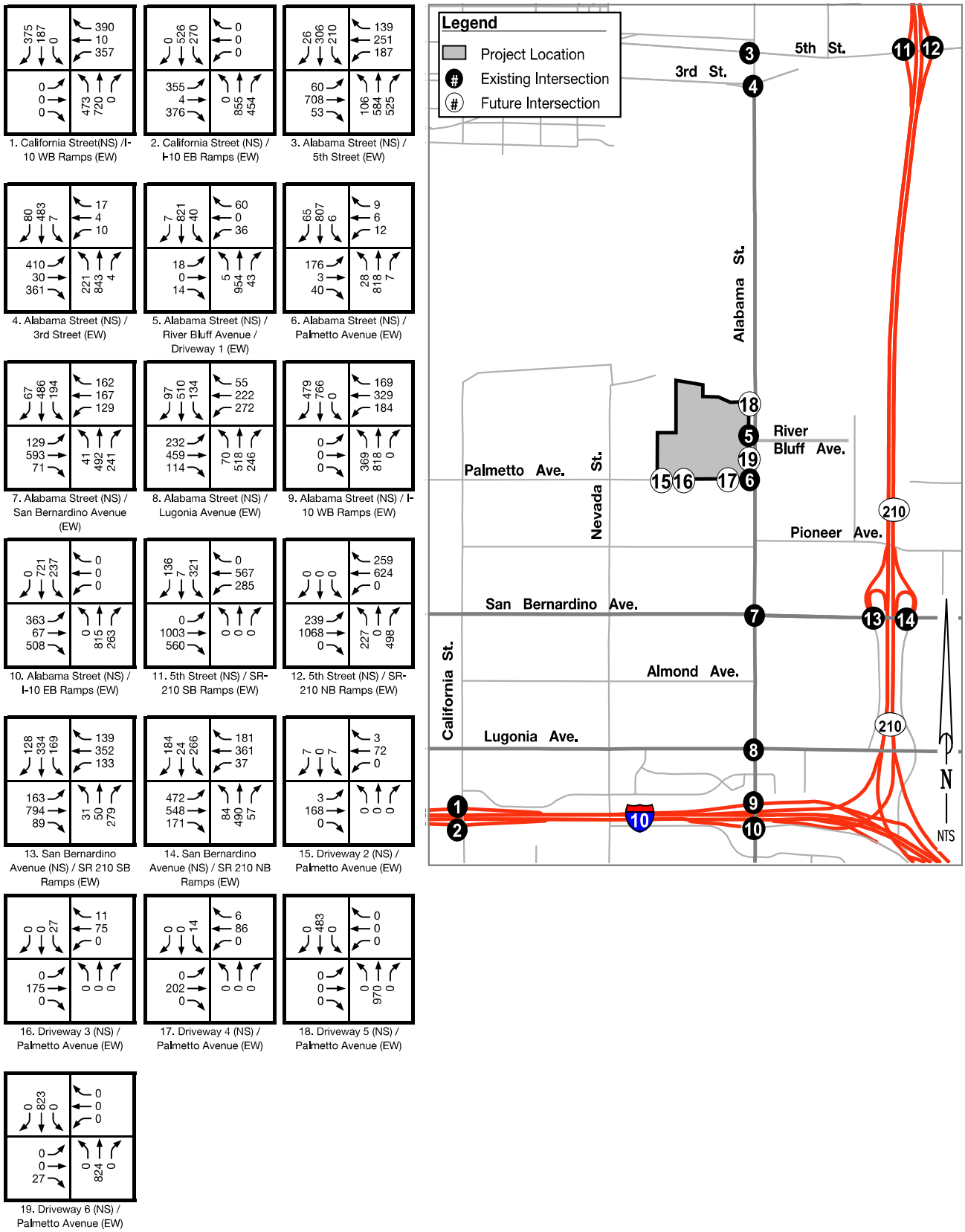


Figure 27 – Existing Plus Ambient Growth Plus Project (2020) PM Peak Hour Intersection Volumes



5.4.3 Levels of Service – Existing Plus Ambient Growth Plus Cumulative Plus Project (2020) Conditions

The Existing Plus Ambient Growth Plus Cumulative Plus Project (2020) scenario includes existing traffic, an ambient growth of two percent per year for two years to 2020 (four percent total ambient growth), other projects in the project area provided by the County of San Bernardino, City of Highland, and City of Redlands, and project traffic. **Table 5-5** provides the projected delay and levels of service at the study intersections under Existing Plus Ambient Growth Plus Cumulative Plus Project conditions without off-site improvements. These levels of service vary from LOS A to F. The Existing Plus Ambient Growth Plus Cumulative Projects Plus Project AM and PM peak hour intersection turning movement volumes are shown on **Figure 28** and **Figure 29**, respectively. The levels of service are based upon the existing geometrics for the study intersections. The level of service calculation worksheets are provided in Appendix E. The following study intersections are expected to operate at an unacceptable level of service:

1. California Street (NS)/ I-10 WB Ramps
2. California Street (NS) / I-10 EB Ramps
3. Alabama Street (NS) / 5th Street (EW)
8. Alabama Street (NS) / Lugonia Avenue (EW)

Table 5-5 – Intersection Levels of Service – Existing Plus Ambient Growth Plus Cumulative Plus Project (2020) Conditions

Intersection	Peak Hour	Traffic Control	Delay (sec)	LOS
1. California Street (NS) / I-10 WB Ramps (EW)	AM	Signal	***91.1***	**F**
	PM		54.0	D
2. California Street (NS) / I-10 EB Ramps (EW)	AM	Signal	**75.5**	**E**
	PM		***95.4***	**F**
3. Alabama Street (NS) / 5th Street (EW)	AM	Signal	39.5	D
	PM		**58.1**	**E**
4. Alabama Street (NS) / 3rd Street (EW)	AM	Signal	22.5	C
	PM		28.9	C
5. Alabama Street (NS) / Dwy 5-River Bluff Avenue (EW)	AM	Signal	6.1	A
	PM		9.4	A
6. Alabama Street (NS) / Palmetto Avenue (EW)	AM	Signal	8.4	A
	PM		18.0	B
7. Alabama Street (NS) / San Bernardino Avenue (EW)	AM	Signal	32.5	C
	PM		44.8	D
8. Alabama Street (NS) / Lugonia Avenue (EW)	AM	Signal	28.5	C
	PM		**56.8**	**E**
9. Alabama Street (NS) / I-10 WB Ramps (EW)	AM	Signal	36.0	D
	PM		39.9	D
10. Alabama Street (NS) / I-10 EB Ramps (EW)	AM	Signal	41.9	D
	PM		54.9	D
11. SR-210 SB Ramps (NS) / 5th Street (EW)	AM	Signal	22.0	B
	PM		34.7	C
12. SR-210 NB Ramps (NS) / 5th Street (EW)	AM	Signal	16.9	B
	PM		19.2	B
13. SR-210 SB Ramps (NS) / San Bernardino Avenue (EW)	AM	Signal	34.6	C
	PM		42.4	D
14. SR-210 NB Ramps (NS) / San Bernardino Avenue (EW)	AM	Signal	29.3	C
	PM		43.7	D
15. West Dwy 1 (NS) / Palmetto Avenue (EW)	AM	OWSS	0.3	A
	PM		0.4	A
16. West Dwy 2 (NS) / Palmetto Avenue (EW)	AM	OWSS	0.2	A
	PM		0.8	A
17. East Dwy 3 (NS) / Palmetto Avenue (EW)	AM	OWSS	0.1	A
	PM		0.4	A
18. Alabama Street (NS) / North Dwy 4 (EW)	AM	OWSS	0.1	A
	PM		0.1	A
19. Alabama Street (EW) / South Dwy 6 (EW)	AM	OWSS	0.1	A
	PM		0.3	A

5.4.4 Levels of Service – Existing Plus Ambient Growth Plus Cumulative Plus Project (2020) with Improvements

Table 5-6 provides the projected delay and levels of service at the study intersections under Existing Plus Ambient Growth Plus Cumulative Plus Project (2020) conditions with off-site improvements. With the recommended off-site improvements, the study area intersections would operate at an acceptable LOS C/D or better. The level of service calculation worksheets are provided in Appendix E.

Table 5-6 – Intersection Levels of Service – Existing Plus Ambient Growth Plus Cumulative Plus Project (2020) with Improvements

Intersection	Peak Hour	Traffic Control	Without Mitigation		With Mitigation	
			Delay (sec)	LOS	Delay (sec)	LOS
1. California Street (NS) / I-10 WB Ramps (EW)	AM	Signal	***91.1***	***F***	50.4	D
	PM		54.8	D	49.5	D
2. California Street (NS) / I-10 EB Ramps (EW)	AM	Signal	**75.5**	**E**	23.7	C
	PM		***95.4***	***F***	22.5	C
3. Alabama Street (NS) / 5th Street (EW)	AM	Signal	39.4	D	37.0	D
	PM		**58.1**	**E**	53.9	D
8. Alabama Street (NS) / Lugonia Avenue (EW)	AM	Signal	28.5	C	19.4	C
	PM		**57.9**	**E**	34.5	C

Figure 28-Existing Plus Ambient Growth Plus Cumulative Plus Project AM Peak Hour Intersection Volumes

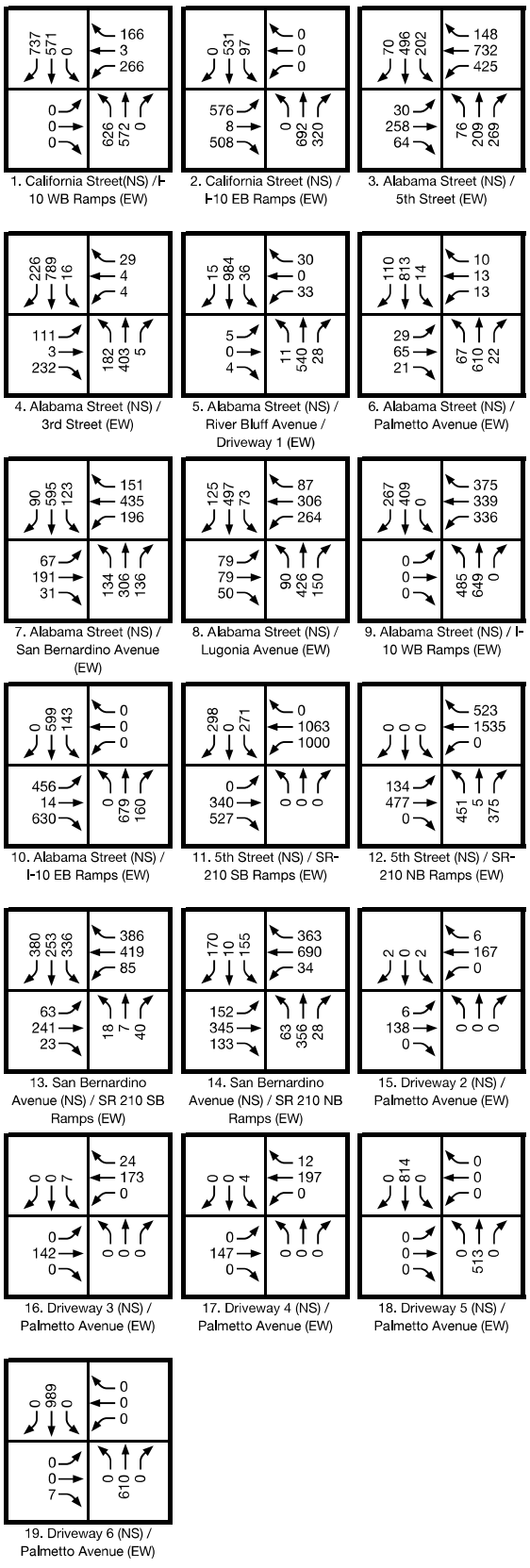
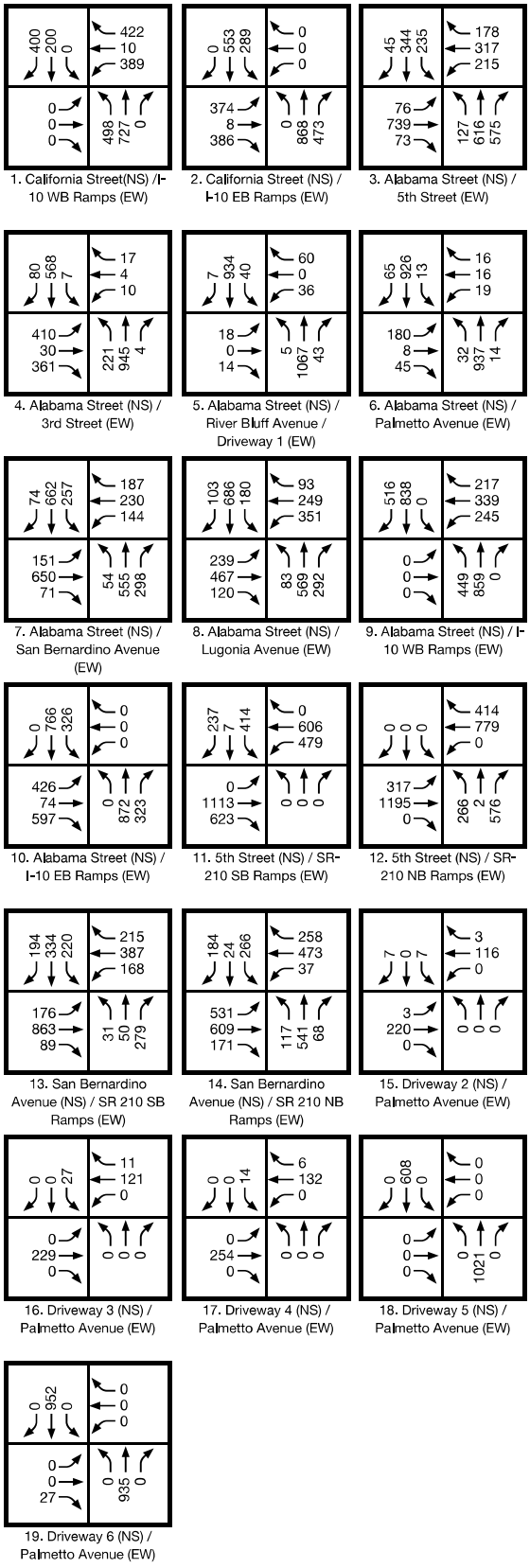


Figure 29-Existing Plus Ambient Growth Plus Cumulative Plus Project PM Peak Hour Intersection Volumes



5.4.5 Levels of Service – Build-Out Year Plus Cumulative Projects (2040) Conditions

The Build-Out Year Plus Cumulative Projects (2040) scenario includes forecasted traffic volumes at expected area build-out and other projects in the project area provided by the County of San Bernardino, City of Highland, and City of Redlands. **Table 5-7** provides the projected delay and levels of service at the study intersections under Build-Out Year Plus Cumulative Projects conditions without off-site improvements. These levels of service vary from LOS A to F. The Build-Out Year Plus Cumulative Projects AM and PM peak hour intersection turning movement volumes are shown on **Figure 30** and **Figure 31**, respectively. The levels of service are based upon the existing geometrics for the study intersections. The level of service calculation worksheets are provided in Appendix E. The following study intersections are expected to operate at an unacceptable level of service:

1. California Street (NS) / I-10 WB Ramps (EW)
2. California Street (NS) / I-10 EB Ramps (EW)
3. Alabama Street (NS) / 5th Street (EW)
4. Alabama Street (NS)/ 3rd Street (EW)
8. Alabama Street (NS) / Lugonia Avenue (EW)
9. Alabama Street (NS) / I-10 WB Ramps (EW)
10. Alabama Street (NS) / I-10 EB Ramps (EW)
14. SR-210 NB Ramps (NS) / San Bernardino Avenue (EW)

Table 5-7 – Intersection Levels of Service – Build-Out Year Plus Cumulative Projects (2040) Conditions

Intersection	Peak Hour	Traffic Control	Delay (sec)	LOS
1. California Street (NS) / I-10 WB Ramps (EW)	AM	Signal	53.0	D
	PM		**101.6**	**F**
2. California Street (NS) / I-10 EB Ramps (EW)	AM	Signal	**78.9**	**E**
	PM		**125.5**	**F**
3. Alabama Street (NS) / 5th Street (EW)	AM	Signal	53.2	D
	PM		**86.2**	**F**
4. Alabama Street (NS) / 3rd Street (EW)	AM	Signal	**62.0**	**E**
	PM		32.7	C
5. Alabama Street (NS) / Dwy 5-River-Bluff Avenue (EW)	AM	Signal	5.2	A
	PM		8.4	A
6. Alabama Street (NS) / Palmetto Avenue (EW)	AM	Signal	5.4	A
	PM		10.3	B
7. Alabama Street (NS) / San Bernardino Avenue (EW)	AM	Signal	30.5	C
	PM		33.3	C
8. Alabama Street (NS) / Lugonia Avenue (EW)	AM	Signal	28.9	C
	PM		**61.4**	**E**
9. Alabama Street (NS) / I-10 WB Ramps (EW)	AM	Signal	**94.8**	**F**
	PM		**112.3**	**F**
10. Alabama Street (NS) / I-10 EB Ramps (EW)	AM	Signal	43.8	D
	PM		**69.8**	**E**
11. SR-210 SB Ramps (NS) / 5th Street (EW)	AM	Signal	29.2	C
	PM		37.9	D
12. SR-210 NB Ramps (NS) / 5th Street (EW)	AM	Signal	23.0	C
	PM		25.8	C
13. SR-210 SB Ramps (NS) / San Bernardino Avenue (EW)	AM	Signal	36.1	D
	PM		49.8	D
14. SR-210 NB Ramps (NS) / San Bernardino Avenue (EW)	AM	Signal	34.9	C
	PM		**129.3**	**F**
15. West Dwy 1 (NS) / Palmetto Avenue (EW)	AM	**Does Not Exist**		
	PM			
16. West Dwy 2 (NS) / Palmetto Avenue (EW)	AM	**Does Not Exist**		
	PM			
17. East Dwy 3 (NS) / Palmetto Avenue (EW)	AM	**Does Not Exist**		
	PM			
18. Alabama Street (NS) / North Dwy 4 (EW)	AM	**Does Not Exist**		
	PM			
19. Alabama Street (EW) / South Dwy 6 (EW)	AM	**Does Not Exist**		
	PM			

5.4.6 Levels of Service – Build-Out Year Plus Cumulative Projects (2040) with Improvements

Table 5-8 provides the projected delay and levels of service at the study intersections under Build-Out Year Plus Cumulative Projects (2040) conditions with off-site improvements. With the recommended off-site improvements, the study area intersections would operate at an acceptable LOS C/D or better. The level of service calculation worksheets are provided in Appendix E.

Table 5-8 – Intersection Levels of Service – Build-Out Year Plus Cumulative Plus Project (2040) with Improvements

Intersection	Peak Hour	Traffic Control	Without Mitigation		With Mitigation	
			Delay (sec)	LOS	Delay (sec)	LOS
1. California Street (NS) / I-10 WB Ramps (EW)	AM	Signal	53.0	D	47.8	D
	PM		**101.6**	**F**	36.6	D
2. California Street (NS) / I-10 EB Ramps (EW)	AM	Signal	**78.9**	**E**	22.2	C
	PM		**125.5**	**F**	52.6	D
3. Alabama Street (NS) / 5th Street (EW)	AM	Signal	53.2	D	43.3	D
	PM		**86.2**	**F**	54.5	D
4. Alabama Street (NS) / 3rd Street (EW)	AM	Signal	**62.0**	**E**	51.0	D
	PM		32.7	C	32.7	C
8. Alabama Street (NS) / Lugonia Avenue (EW)	AM	Signal	28.9	C	32.9	C
	PM		**61.4**	**E**	34.7	C
9. Alabama Street (NS) / I-10 WB Ramps (EW)	AM	Signal	**94.8**	**F**	41.1	D
	PM		**112.3**	**F**	39.5	D
10. Alabama Street (NS) / I-10 EB Ramps (EW)	AM	Signal	43.8	D	41.6	D
	PM		**69.8**	**E**	48.3	D
14. SR-210 NB Ramps (NS) / San Bernardino Avenue (EW)	AM	Signal	34.9	C	42.0	D
	PM		**129.3**	**F**	48.6	D

Figure 30 - Build-Out Year 2040 Cumulative Projects AM Peak Hours Intersection Volumes

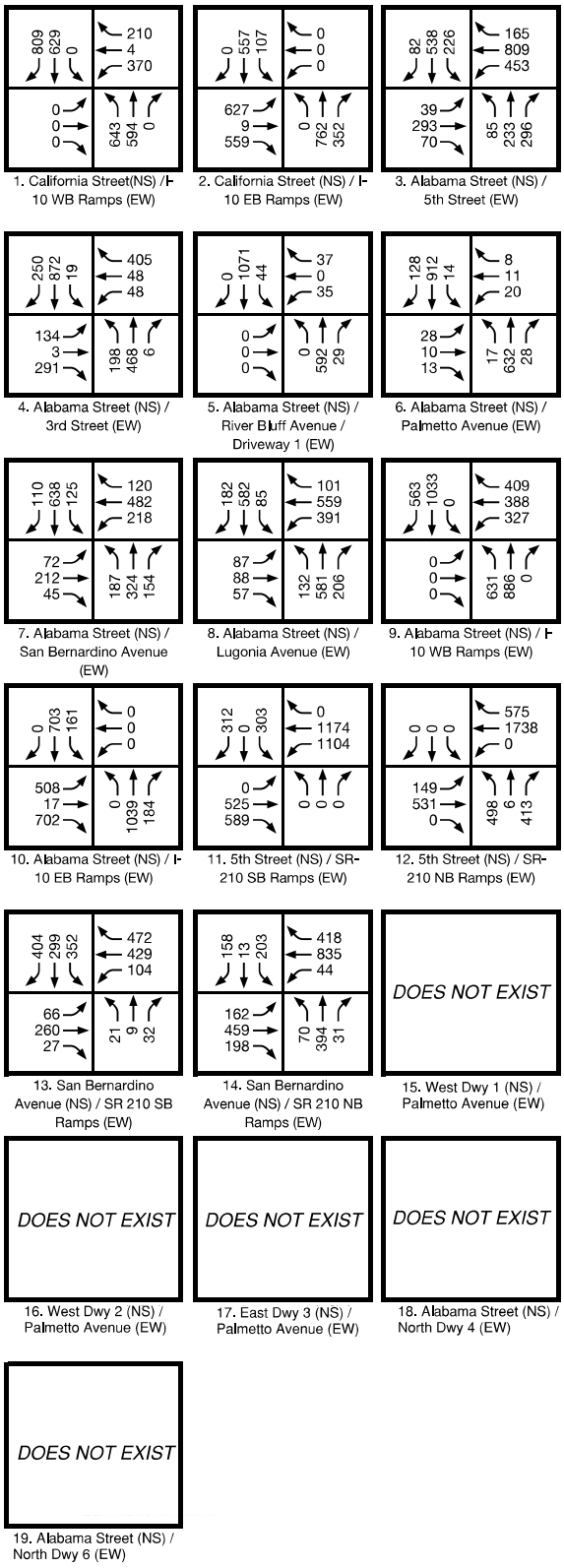
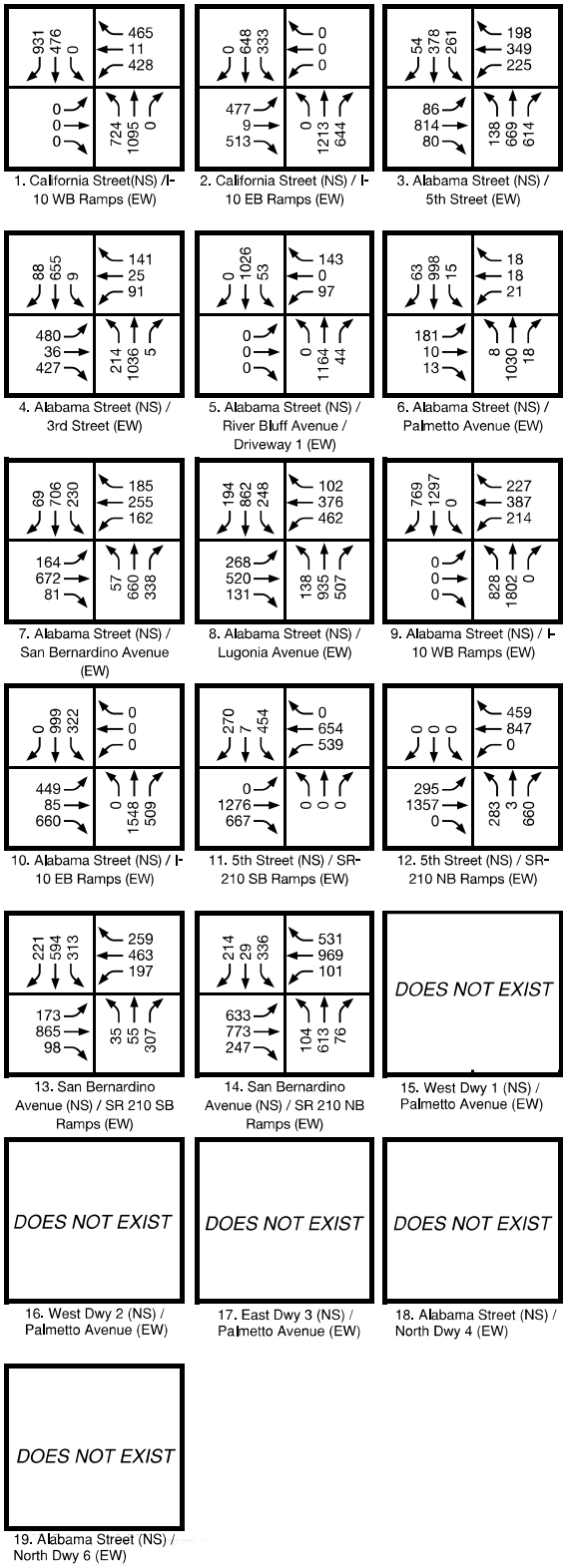
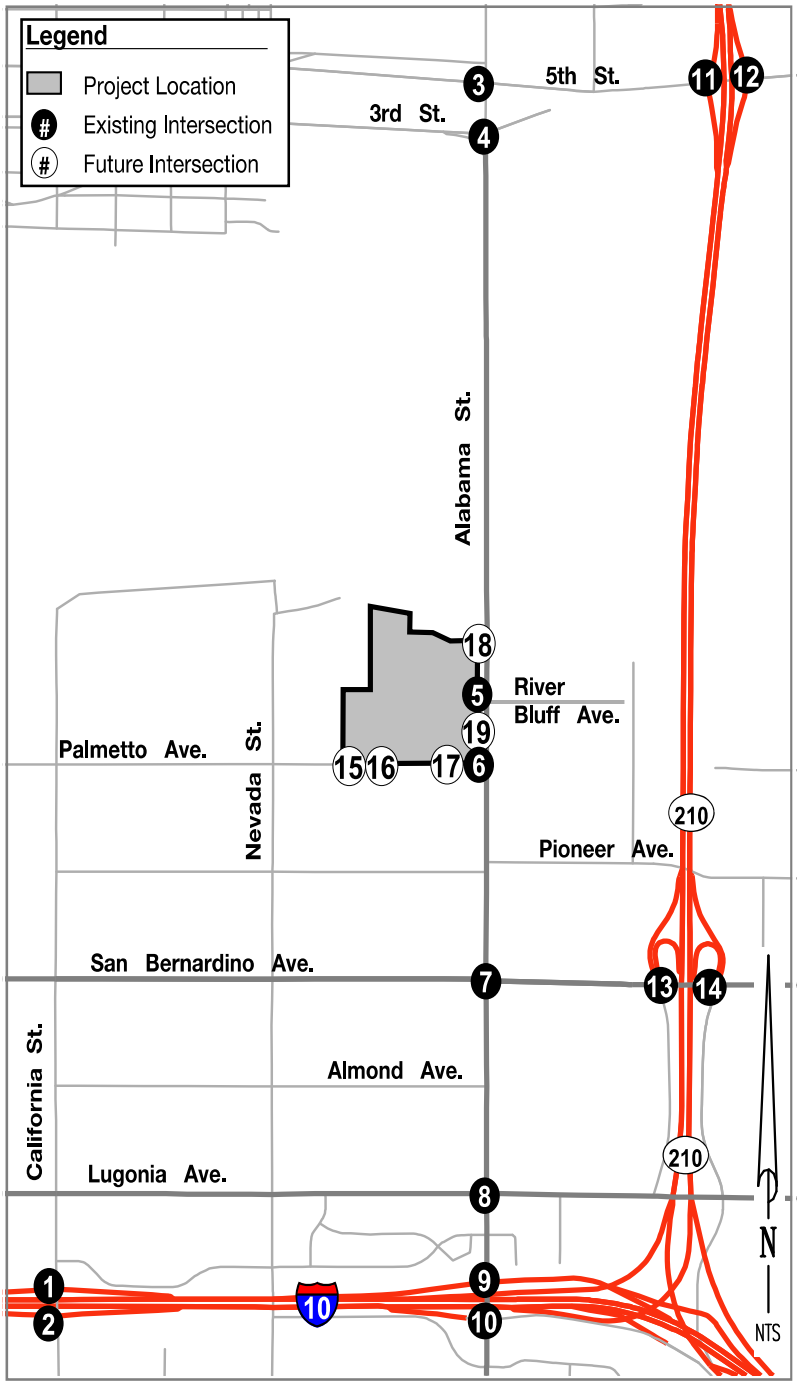


Figure 31 - Build Out Year 2040 Cumulative Projects PM Peak Hour Intersection Volumes





5.4.7 Levels of Service – Build-Out Year Plus Cumulative Projects Plus Project (2040) Conditions

The Build-Out Year Plus Cumulative Projects Plus Project (2040) scenario includes forecasted traffic volumes at expected area build-out and other Projects in the Project area provided by the County of San Bernardino, City of Highland, and City of Redlands, and the Project. **Table 5-9** provides the Projected delay and levels of service at the study intersections under Build-Out Year Plus Cumulative Projects Plus Project conditions.These levels of service vary from LOS A to F. The Build-Out Year Plus Cumulative Projects Plus Project AM and PM peak hour intersection turning movement volumes are shown on **Figure 32** and **Figure 33**, respectively. The levels of service are based upon the build out year geometries for the study area intersections. The level of service calculation worksheets are provided in Appendix E. The following study intersections are expected to operate at an unacceptable level of service:

1. California Street (NS) / I-10 WB Ramps (EW)
2. California Street (NS) / I-10 EB Ramps (EW)
3. Alabama Street (NS) / 5th Street (EW)
4. Alabama Street (NS)/ 3rd Street (EW)
8. Alabama Street (NS) / Lugonia Avenue (EW)
9. Alabama Street (NS) / I-10 WB Ramps (EW)
10. Alabama Street (NS) / I-10 EB Ramps (EW)
14. SR-210 NB Ramps (NS) / San Bernardino Avenue (EW)

Table 5-9 – Intersection Levels of Service – Build-Out Year Plus Cumulative Projects Plus Project (2040) Conditions

Intersection	Peak Hour	Traffic Control	Delay (sec)	LOS
1. California Street (NS) / I-10 WB Ramps (EW)	AM	Signal	50.2	D
	PM		**112.9**	**F**
2. California Street (NS) / I-10 EB Ramps (EW)	AM	Signal	**77.0**	**E**
	PM		**113.1**	**F**
3. Alabama Street (NS) / 5th Street (EW)	AM	Signal	**98.5**	**F**
	PM		**90.2**	**F**
4. Alabama Street (NS) / 3rd Street (EW)	AM	Signal	**69.2**	**E**
	PM		33.4	C
5. Alabama Street (NS) / Dwy 5-River-Bluff Avenue (EW)	AM	Signal	5.8	A
	PM		12.9	B
6. Alabama Street (NS) / Palmetto Avenue (EW)	AM	Signal	7.4	A
	PM		10.6	B
7. Alabama Street (NS) / San Bernardino Avenue (EW)	AM	Signal	26.9	C
	PM		35.7	D
8. Alabama Street (NS) / Lugonia Avenue (EW)	AM	Signal	27.2	C
	PM		**60.4**	**E**
9. Alabama Street (NS) / I-10 WB Ramps (EW)	AM	Signal	**98.7**	**F**
	PM		**111.9**	**F**
10. Alabama Street (NS) / I-10 EB Ramps (EW)	AM	Signal	38.9	D
	PM		**71.7**	**E**
11. SR-210 SB Ramps (NS) / 5th Street (EW)	AM	Signal	23.6	C
	PM		38.1	D
12. SR-210 NB Ramps (NS) / 5th Street (EW)	AM	Signal	13.7	B
	PM		30.8	C
13. SR-210 SB Ramps (NS) / San Bernardino Avenue (EW)	AM	Signal	33.9	C
	PM		40.5	D
14. SR-210 NB Ramps (NS) / San Bernardino Avenue (EW)	AM	Signal	34.1	C
	PM		**116.6**	**F**
15. West Dwy 1 (NS) / Palmetto Avenue (EW)	AM	OWSS	0.1	A
	PM		0.4	A
16. West Dwy 2 (NS) / Palmetto Avenue (EW)	AM	OWSS	0.1	A
	PM		0.7	A
17. East Dwy 3 (NS) / Palmetto Avenue (EW)	AM	OWSS	0.1	A
	PM		0.4	A
18. Alabama Street (NS) / North Dwy 4 (EW)	AM	OWSS	0.1	A
	PM		0.3	A
19. Alabama Street (EW) / South Dwy 6 (EW)	AM	OWSS	0.1	A
	PM		0.1	A

5.4.8 Levels of Service – Build-Out Year Plus Cumulative Projects Plus Project (2040) with Improvements

Table 5-10 provides the projected delay and levels of service at the study intersections under Build-Out Year Plus Cumulative Projects Plus Project (2040) conditions with off-site improvements. With the recommended off-site improvements, the study area intersections would operate at an acceptable LOS C/D or better. The level of service calculation worksheets are provided in Appendix E.

Table 5-10 – Intersection Levels of Service – Build Out Year Plus Cumulative Plus Project (2040) Conditions with Improvements

Intersection	Peak Hour	Traffic Control	Without Mitigation		With Mitigation	
			Delay (sec)	LOS	Delay (sec)	LOS
1. California Street (NS) / I-10 WB Ramps (EW)	AM	Signal	50.2	D	53.8	D
	PM		**112.9**	**F**	37.3	D
2. California Street (NS) / I-10 EB Ramps (EW)	AM	Signal	**77.0**	**E**	22.8	C
	PM		**113.1**	**F**	49.5	D
3. Alabama Street (NS) / 5th Street (EW)	AM	Signal	**98.5**	**F**	53.6	D
	PM		**90.2**	**F**	54.1	D
4. Alabama Street (NS) / 3rd Street (EW)	AM	Signal	**67.5**	**E**	49.2	D
	PM		36.6	D	28.3	C
8. Alabama Street (NS) / Lugonia Avenue (EW)	AM	Signal	27.1	C	25.9	C
	PM		**60.6**	**E**	33.3	C
9. Alabama Street (NS) / I-10 WB Ramps (EW)	AM	Signal	**106.5**	**F**	42.1	D
	PM		**125.2**	**F**	33.8	C
10. Alabama Street (NS) / I-10 EB Ramps (EW)	AM	Signal	38.9	D	32.6	C
	PM		**71.7**	**E**	45.0	D
14. SR-210 NB Ramps (NS) / San Bernardino Avenue (EW)	AM	Signal	34.1	C	28.2	C
	PM		**116.6**	**F**	49.9	D

Figure 32-Build-Out Year Plus Cumulative Projects Plus Projects (2040) Condition AM Peak Hour Intersection Volumes

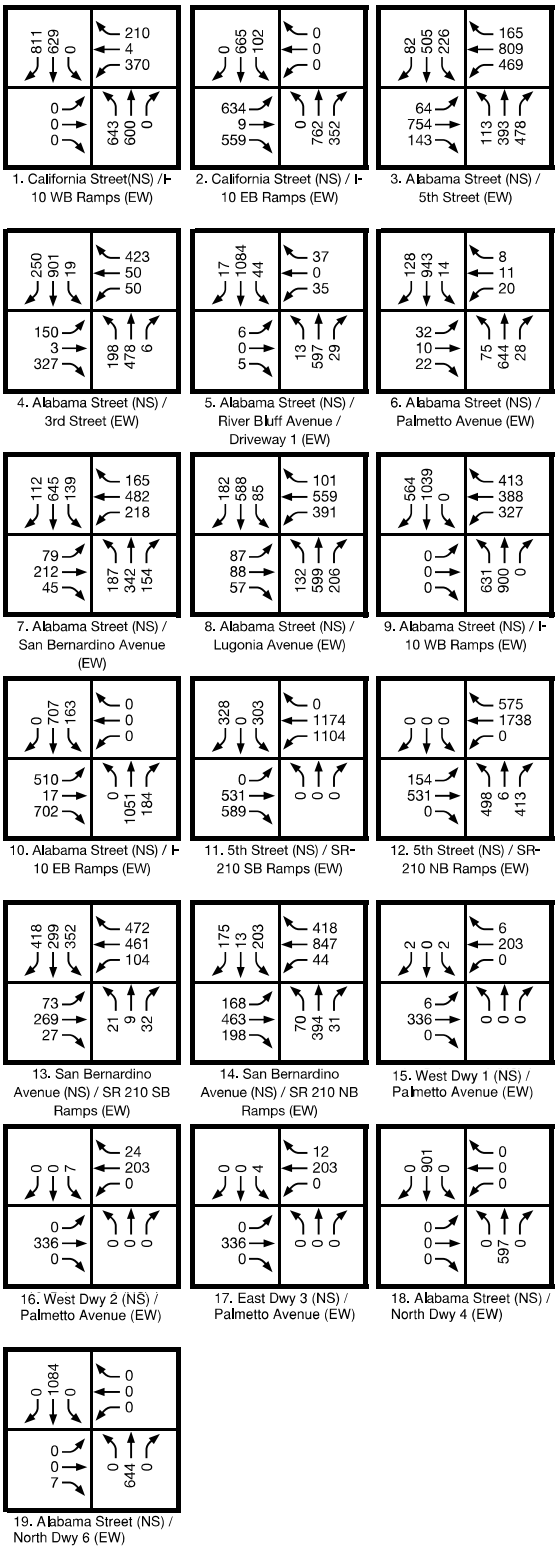
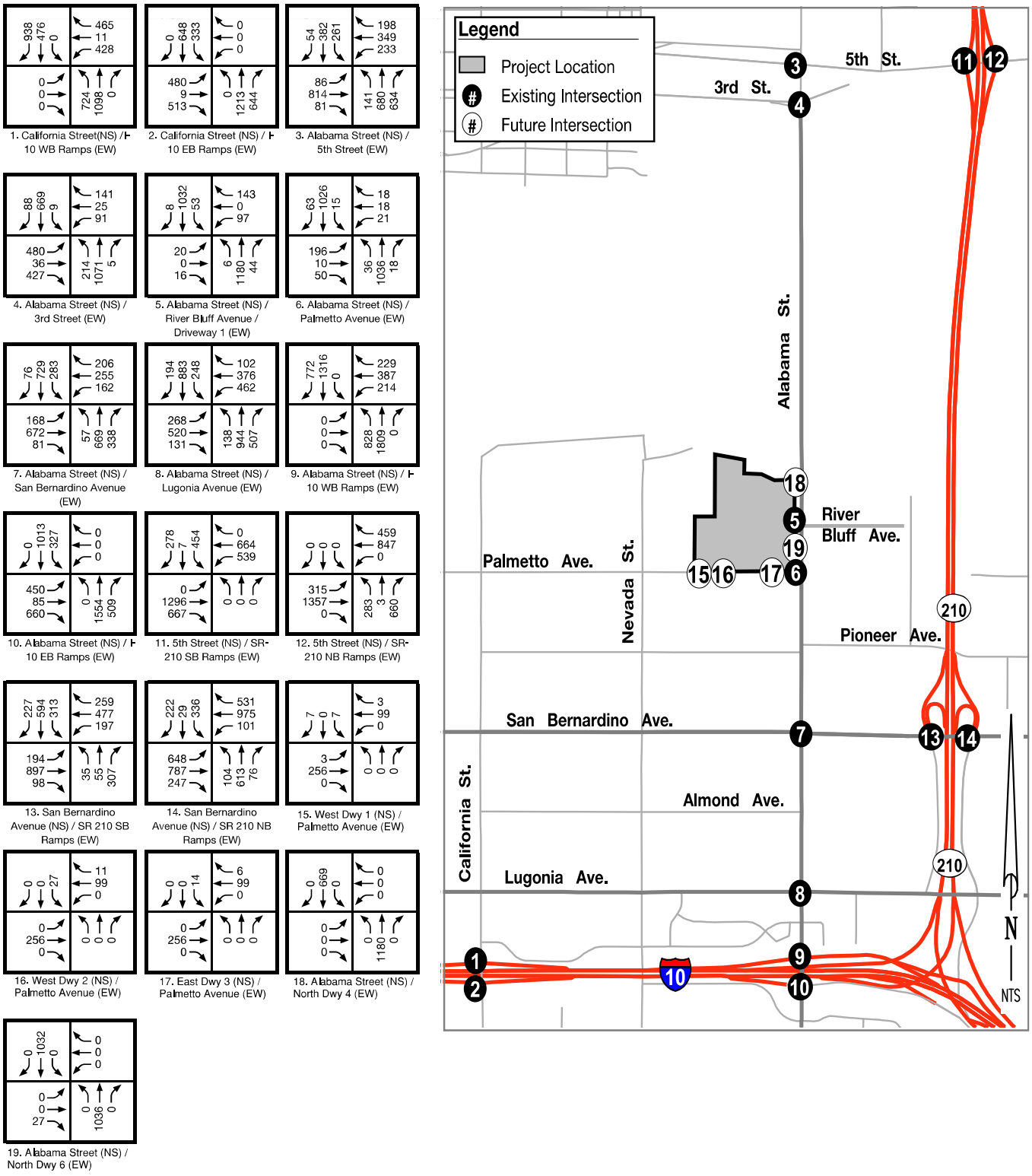


Figure 33-Build-Out Year Plus Cumulative Projects Plus Project (2040) Conditions PM Peak Hour Intersection Volumes



6.0 MITIGATIONS AND RECOMMENDATIONS

6.1 Traffic Impacts and Level of Service Analysis

6.3.1 Proposed Improvements and Mitigation Measures – Existing Plus Project (2018) Conditions

Table 6-1 and **Figure 34** present the proposed improvement and mitigation measures in order to achieve a satisfactory level of service at the study intersections in Existing Plus Project (2018) conditions. The proposed improvement and mitigation measures are as follows:

Improvements

5. **Alabama Street (NS) / Dwy-5-River-Bluff Avenue (EW):** Add one left turn lane for northbound approach, one shared right turn lane for southbound approach and eastbound left turn lane and one through-right turn lane.
15. **West Dwy 1 (NS) / Palmetto Avenue (EW):** Add one shared left-right turn lane for southbound approach, one shared left turn lane for eastbound approach and add a shared right turn lane to the westbound approach.
16. **West Dwy 2 (NS) / Palmetto Avenue (EW):** Add one shared left-right turn lane for southbound approach, one shared left turn lane for eastbound approach and add one shared right turn lane for westbound approach.
17. **East Dwy 3 (NS) / Palmetto Avenue (EW):** Add one shared left-right turn lane for southbound approach, one shared left turn lane for eastbound approach and add one shared right turn lane for westbound approach.
18. **Alabama Street (NS) / North Dwy 4 (EW):** Add one shared through-right turn lane for southbound approach and add one right turn lane for westbound approach.
19. **Alabama Street (EW) / South Dwy 6 (EW):** Add one shared right turn lane for southbound approach and a right turn lane for westbound approach.

Mitigations

1. **California Street (NS) / I-10 Westbound Ramps (EW):** Add one left turn lane for northbound approach. There is an LOS deficiency in the existing without Project condition, so this improvement should be borne through payment of fees or fair-share contribution.

2. **California Street (NS) / I-10 Eastbound Ramps (EW)**: Add one left turn lane for southbound approach. Restripe eastbound approach to include 1 left turn lane, one shared through-right turn lane. There is an LOS deficiency in the existing without Project condition, so this improvement should be borne through payment of fees or fair-share contribution.

The Project will construct half-width improvements along its frontage on Alabama Street and Palmetto Avenue prior to opening. However, due to restrictive existing roadway geometrics on Alabama Street to the north and south of the Project, striping of additional through travel lanes along the Project frontage is not possible until the adjacent non-Project segments are completed. It is assumed that the adjacent non-Project roadway

segments will not be constructed by Project completion, so the roadway geometries analyzed in this scenario are assumed to be less than ultimate conditions.

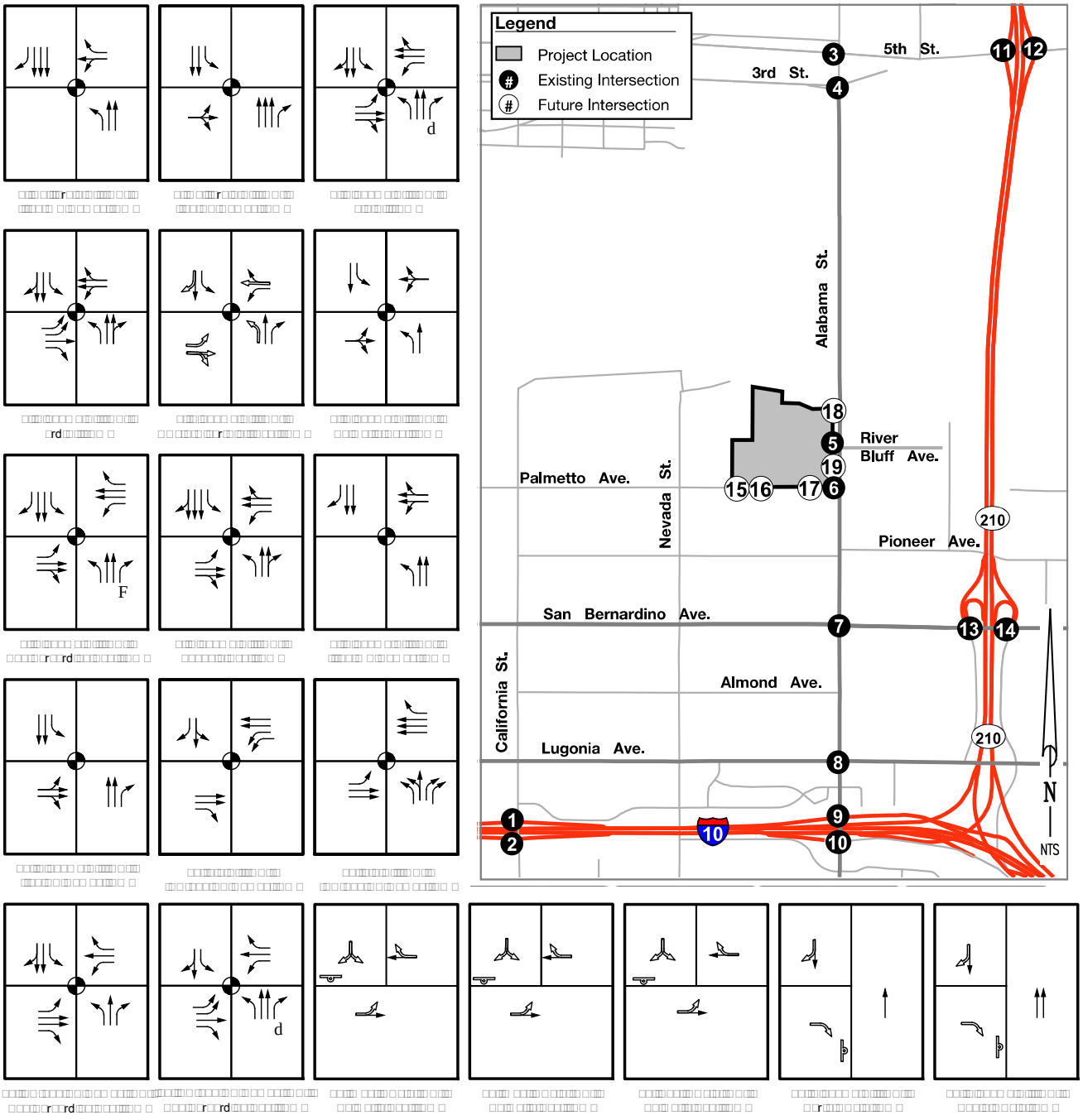
Table 6-1 – Summary of Intersection Improvements for Existing Plus Project (2018) Conditions

	Intersection	Scenario	Northbound			Southbound			Eastbound			Westbound			Traffic Control
			L	T	R	L	T	R	L	T	R	L	T	R	
1.	California Street (NS) / I-10 WB Ramps (EW)	Existing	1	2	NA	NA	3	1	NA	NA	NA	S	1	1	Signal
		EP Improvements													
		EP Mitigations	**2**	2	NA	NA	3	1	NA	NA	NA	S	1	1	
2	California Street (NS) / I-10 EB Ramps (EW)	Existing	NA	3	1	1	2	NA	S	1	S	NA	NA	NA	Signal
		EP Improvements													
		EP Mitigations	NA	3	1	1	2	NA	**1**	1	S	NA	NA	NA	
3.	Alabama Street (NS) / 5th Street (EW)	Existing	1	2	1D	1	2	S	1	2	1	1	2	S	Signal
		EP Improvements													
		EP Mitigations	1	2	**1OL**	1	2	S	1	2	S	1	2	S	
4.	Alabama Street (NS) / 3rd Street (EW)	Existing	1	2	S	1	2	S	2	1	1	S	2	S	Signal
		EP Improvements													
		EP Mitigations													
5.	Alabama Street (NS) / Dwy 5-River Bluff Avenue (EW)	Existing	NA	1	1	1	1	NA	NA	NA	NA	1	NA	1	
		EP Improvements	**1**	1	1	1	1	**S**	**1**	**1**	**S**	1	**1**	**S**	Signal
		EP Mitigations													
6.	Alabama Street (NS) / Palmetto Avenue (EW)	Existing	1	1	NA	1	1	NA	S	1	S	S	1	S	Signal
		EP Improvements													
		EP Mitigations													
7.	Alabama Street (NS) / San Bernardino Avenue (EW)	Existing	1	2	1	1	2	1	1	2	S	1	2	1	Signal
		EP Improvements													
		EP Mitigations													
8.	Alabama Street (NS) / Lugonia Avenue (EW)	Existing	1	3	S	1	3	S	1	2	S	1	2	S	Signal
		EP Improvements													
		EP Mitigations													
9.	Alabama Street (NS) / I-10 WB Ramps (EW)	Existing	1	2	NA	NA	2	1	NA	NA	NA	S	2	S	Signal
		EP Improvements													
		EP Mitigations													
10.	Alabama Street (NS) / I-10 EB Ramps (EW)	Existing	NA	2	1	1	2	NA	S	2	S	NA	NA	NA	Signal
		EP Improvements													
		EP Mitigations													
11.	SR-210 SB Ramps (NS) / 5th Street (EW)	Existing	NA	NA	NA	S	1	1	NA	2	1	2	2	NA	Signal
		EP Improvements													
		EP Mitigations													
12.	SR-210 NB Ramps (NS) / 5th Street (EW)	Existing	1S	1	2	NA	NA	NA	1	2	NA	NA	3	1	Signal
		EP Improvements													
		EP Mitigations													
13.	SR-210 SB Ramps (NS) / San Bernardino Avenue (EW)	Existing	1	1	1	1	1	1	1	2	1	1	1	1	Signal
		EP Improvements													
		EP Mitigations													
14.	SR-210 NB Ramps (NS) / San Bernardino Avenue (EW)	Existing	1	2	1	1	1	S	2	1	1	1	1	1	Signal
		EP Improvements													
		EP Mitigations													
15.	West Dwy 1 (NS) / Palmetto Avenue (EW)	Existing	NA	NA	NA	NA	NA	NA	NA	1	NA	NA	1	NA	
		EP Improvements				**S**	NA	**1**	**S**	**1**	NA	NA	**1**	**S**	OWSC
		EP Mitigations													
16.	West Dwy 2 (NS) / Palmetto Avenue (EW)	Existing	NA	NA	NA	NA	NA	NA	NA	1	NA	NA	1	NA	
		EP Improvements				**S**	NA	**1**	**S**	**1**	NA	NA	**1**	**S**	OWSC
		EP Mitigations													
17.	East Dwy 3 (NS) / Palmetto Avenue (EW)	Existing	NA	NA	NA	NA	NA	NA	NA	1	NA	NA	1	NA	
		EP Improvements				**S**	NA	**1**	**S**	**1**	NA	NA	**1**	**S**	OWSC
		EP Mitigations													
18.	Alabama Street (NS) / North Dwy 4 (EW)	Existing	NA	1	NA	NA	1	NA	NA	NA	NA	NA	NA	NA	
		EP Improvements	NA	**1**	NA	NA	**1**	**S**	NA	NA	NA	NA	NA	**1**	OWSC
		EP Mitigations													
19.	Alabama Street (EW) / South Dwy 6 (EW)	Existing	NA	1	NA	NA	1	NA	NA	NA	NA	NA	NA	NA	
		EP Improvements	NA	**1**	NA	NA	**1**	**S**	NA	NA	NA	NA	NA	**1**	OWSC
		EP Mitigations													

Notes* EP- Existing Plus Project, NA-Not Available, S-Shared,L-Left,T-Through,R-Right,OL-Overlap,1D-Defacto

#-Improvement

#-Mitigation



County of San Bernardino
Duke Realty – Alabama Street and Palmetto Avenue High-Cube Transload and Short-Term Storage Warehouse

Figure 34 – Summary of Intersection Improvements for Existing Plus Project (2018) Conditions

1 r . NS)
10 Ramps)
2 r
I- 0 EB amps EW)
3 .)
. ( )
d
4 . NS)
3rd . EW)
5 Al bama
Dwy r Ave ( )
6 .)
ve)
l bama NS /
San r rd ve. EW)
F
8. A bama
Lugon Ave ( )
9 .)
10 Ramps ( )
10 . NS)
0 Ram ( )
11 5th
SR 210 Ramps)
12. . ( )
SR- 10 NB amps ( )
13 10 amps ( )
San r rd Ave ( )
4. SR 210 amps NS /
San r rd ve EW)
d
15 wy (
)
16 wy (
Pa etto Ave. (
17. ast wy
EW)
18 A bama
r wy 4 EW)
19 . ( )
Sout wy ( )
Legend
Project Location
Existing Intersection
Future Intersection
3
4
5th St.
3rd St.
11
12
Alabama St.
18
5
19
15
16
17
6
River Bluff Ave.
Palmetto Ave.
Nevada St.
210
Pioneer Ave.
San Bernardino Ave.
7
13
14
California St.
Almond Ave.
210
Lugonia Ave.
8
N
1
2
10
9
10
NTS
LEGEND
Exi t ng r Signal
Exi t ng S op S gn
E ist g Lane Geome r cs
d E ist g Defact Righ Tu rn
F Exis g r R ght Tu rn Lane
Propose d raffic S gnal
Propose d ign
Propos d M Lan Geome r cs
Propose d m rovemen Lane Geom t i s
ropose d Imp rovement Sto Sign
OL Propos d r Righ Tu rn

6-4

6.3.2 Proposed Improvements and Mitigation Measures – Existing Plus Ambient Growth Plus Project (2020) Conditions

Table 6-2 and **Figure 35** present the proposed improvement and mitigation measures in order to achieve a satisfactory level of service at the study intersections in Existing Plus Ambient Growth Plus Project (2020) conditions. Following improvements and mitigations are proposed for existing plus ambient growth plus Project conditions.

Improvements

5. **Alabama Street (NS) / Dwy-5-River-Bluff Avenue (EW):** Add two through lanes for southbound approach.
6. **Alabama Street (NS) / Palmetto Avenue (EW):** Add one right turn lane for northbound approach.

18. Alabama Street (NS) / North Dwy 4 (EW): Add two through lanes for southbound approach.

19. Alabama Street (NS) / South Dwy 6 (EW): Add two through lanes for southbound approach.

Mitigations

3. Alabama Street (NS) / 5th Street (EW): Add one overlapping northbound right turn lane.

8. Alabama Street (NS) / Lugonia Avenue (EW): Add one northbound right turn lane.

The Project will construct half-width improvements along its frontage on Alabama Street and Palmetto Avenue prior to opening. However, due to restrictive existing roadway geometrics on Alabama Street to the north and south of the Project, striping of additional through travel lanes along the Project frontage is not possible until the adjacent non-Project segments are completed. It is assumed that the adjacent non-Project roadway segments will not be constructed by Project completion, so the roadway geometries analyzed in this scenario are assumed to be less than ultimate conditions.

Table 6-2 – Summary of Intersection Improvements for Existing Plus Ambient Growth Plus Project (2020) Conditions

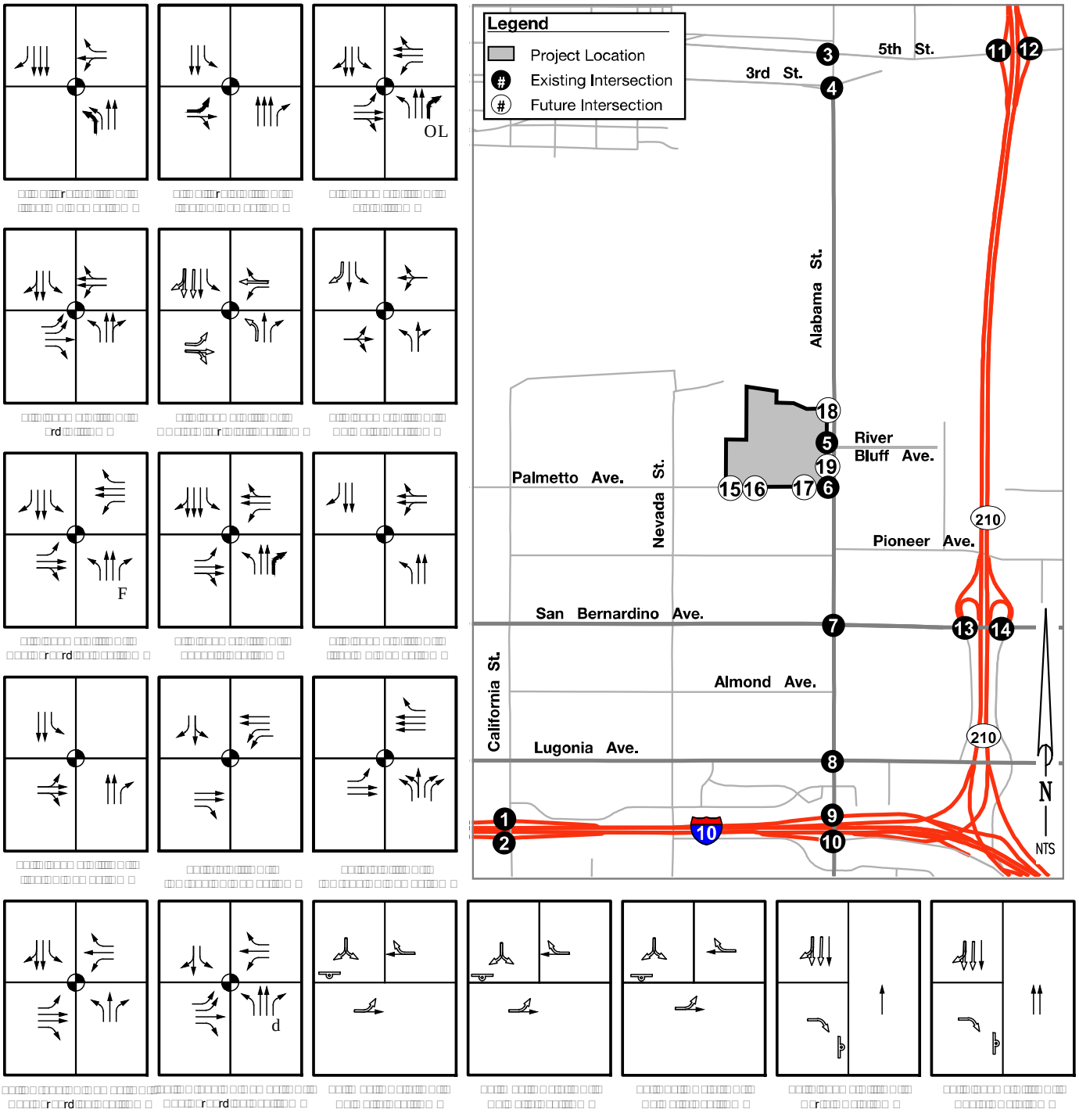
	Intersection	Scenario	Northbound			Southbound			Eastbound			Westbound			Traffic Control
			L	T	R	L	T	R	L	T	R	L	T	R	
1.	California Street (NS) / I-10 WB Ramps (EW)	Existing	1	2	NA	NA	3	1	NA	NA	NA	S	1	1	
		EAP Improvements													Signal
		EAP Mitigations	**2**	2	NA	NA	3	1	NA	NA	NA	S	1	1	
2	California Street (NS) / I-10 EB Ramps (EW)	Existing	NA	3	1	1	2	NA	S	1	S	NA	NA	NA	
		EAP Improvements													Signal
		EAP Mitigations	NA	3	1	1	2	NA	**1**	1	S	NA	NA	NA	
3.	Alabama Street (NS) / 5th Street (EW)	Existing	1	2	1D	1	2	S	1	2	1	1	2	S	
		EAP Improvements													Signal
		EAP Mitigations	1	2	**1OL**	1	2	S	1	2	S	1	2	S	
4.	Alabama Street (NS) / 3rd Street (EW)	Existing	1	2	S	1	2	S	2	1	1	S	2	S	
		EAP Improvements													Signal
		EAP Mitigations													
5.	Alabama Street (NS) / Dwy 5-River Bluff Avenue (EW)	Existing	NA	1	1	1	1	NA	S	1	S	1	NA	1	
		EAP Improvements	**1**	**1**	1	1	**3**	S	**1**	1	S	1	**1**	**S**	Signal
		EAP Mitigations													
6.	Alabama Street (NS) / Palmetto Avenue (EW)	Existing	1	1	NA	1	1	NA	S	1	S	S	1	S	
		EAP Improvements	1	**2**	S	1	**2**	S	S	**2**	S	S	**2**	S	Signal
		EAP Mitigations													
7.	Alabama Street (NS) / San Bernardino Avenue (EW)	Existing	1	2	1	1	2	S	1	2	S	1	2	1	
		EAP Improvements													Signal
		EAP Mitigations													
8.	Alabama Street (NS) / Lugonia Avenue (EW)	Existing	1	3	S	1	3	S	1	2	S	1	2	S	
		EAP Improvements													Signal
		EAP Mitigations	1	3	**1**	1	3	S	1	2	S	1	2	S	
9.	Alabama Street (NS) / I-10 WB Ramps (EW)	Existing	1	2	NA	NA	2	1	NA	NA	NA	S	2	S	
		EAP Improvements													Signal
		EAP Mitigations													
10.	Alabama Street (NS) / I-10 EB Ramps (EW)	Existing	NA	2	1	1	2	NA	S	2	S	NA	NA	NA	
		EAP Improvements													Signal
		EAP Mitigations													
11.	SR-210 SB Ramps (NS) / 5th Street (EW)	Existing	NA	NA	NA	S	1	1	NA	2	1	2	2	NA	
		EAP Improvements													Signal
		EAP Mitigations													
12.	SR-210 NB Ramps (NS) / 5th Street (EW)	Existing	1S	1	2	NA	NA	NA	1	2	NA	NA	3	1	
		EAP Improvements													Signal
		EAP Mitigations													
13.	SR-210 SB Ramps (NS) / San Bernardino Avenue (EW)	Existing	1	1	1	1	1	1	1	2	1	1	1	1	
		EAP Improvements													Signal
		EAP Mitigations													
14.	SR-210 NB Ramps (NS) / San Bernardino Avenue (EW)	Existing	1	2	1	1	1	S	2	1	1	1	1	1	
		EAP Improvements													Signal
		EAP Mitigations													
15.	West Dwy 1 (NS) / Palmetto Avenue (EW)	Existing	NA	NA	NA	NA	NA	NA	NA	1	NA	NA	1	NA	
		EAP Improvements				**S**	NA	**1**	**S**	**1**	NA	NA	**1**	**S**	OWSC
		EAP Mitigations													
16.	West Dwy 2 (NS) / Palmetto Avenue (EW)	Existing	NA	NA	NA	NA	NA	NA	NA	1	NA	NA	1	NA	
		EAP Improvements				**S**	NA	**1**	**S**	**1**	NA	NA	**1**	**S**	OWSC
		EAP Mitigations													
17.	East Dwy 3 (NS) / Palmetto Avenue (EW)	Existing	NA	NA	NA	NA	NA	NA	NA	1	NA	NA	1	NA	
		EAP Improvements				**S**	NA	**1**	**S**	**1**	NA	NA	**1**	**S**	OWSC
		EAP Mitigations													
18.	Alabama Street (NS) / North Dwy 4 (EW)	Existing	NA	1	NA	NA	1	NA	NA	NA	NA	NA	NA	NA	
		EAP Improvements	NA	**1**	NA	NA	**3**	**S**	NA	NA	NA	NA	NA	**1**	OWSC
		EAP Mitigations													
19.	Alabama Street (EW) / South Dwy 6 (EW)	Existing	NA	1	NA	NA	1	NA	NA	NA	NA	NA	NA	NA	
		EAP Improvements	NA	**2**	NA	NA	**3**	**S**	NA	NA	NA	NA	NA	**1**	OWSC
		EAP Mitigations													

Notes* EAP- Existing Plus Ambient Growth Plus Project, NA-Not Available, S-Shared,L-Left,T-Through,R-Right,OL-Overlap,1D-Defacto

#-Improvement

#-Mitigation

Figure 35 – Summary of Intersection Improvements for Existing Plus Ambient Growth Plus Project (2020) Conditions



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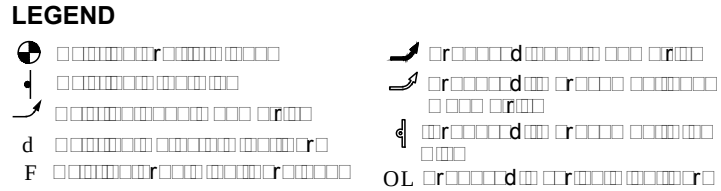


6.3.3 Proposed Improvement and Mitigation Measures – Existing Plus Ambient Growth Plus Cumulative Plus Project (2020) Conditions

Table 6-3 and **Figure 36** present the proposed improvement and mitigation measures in order to achieve a satisfactory level of service at the study intersections in Existing Plus Ambient Growth Plus Cumulative Plus Project (2020) conditions. In addition to existing plus Project improvements, no improvement and mitigation measures are proposed,

The Project will construct half-width improvements along its frontage on Alabama Street and Palmetto Avenue prior to opening. However, due to restrictive existing roadway geometrics on Alabama Street to the north and south of the Project, striping of additional through travel lanes along the Project frontage is not possible until the adjacent non-Project segments are completed. It is assumed that the adjacent non-Project roadway segments will not be constructed by Project completion, so the roadway geometries analyzed in this scenario are assumed to be less than ultimate conditions.

Table 6-3 – Summary of Intersection Improvements for Existing Plus Ambient Growth Plus Cumulative Plus Project (2020) Conditions

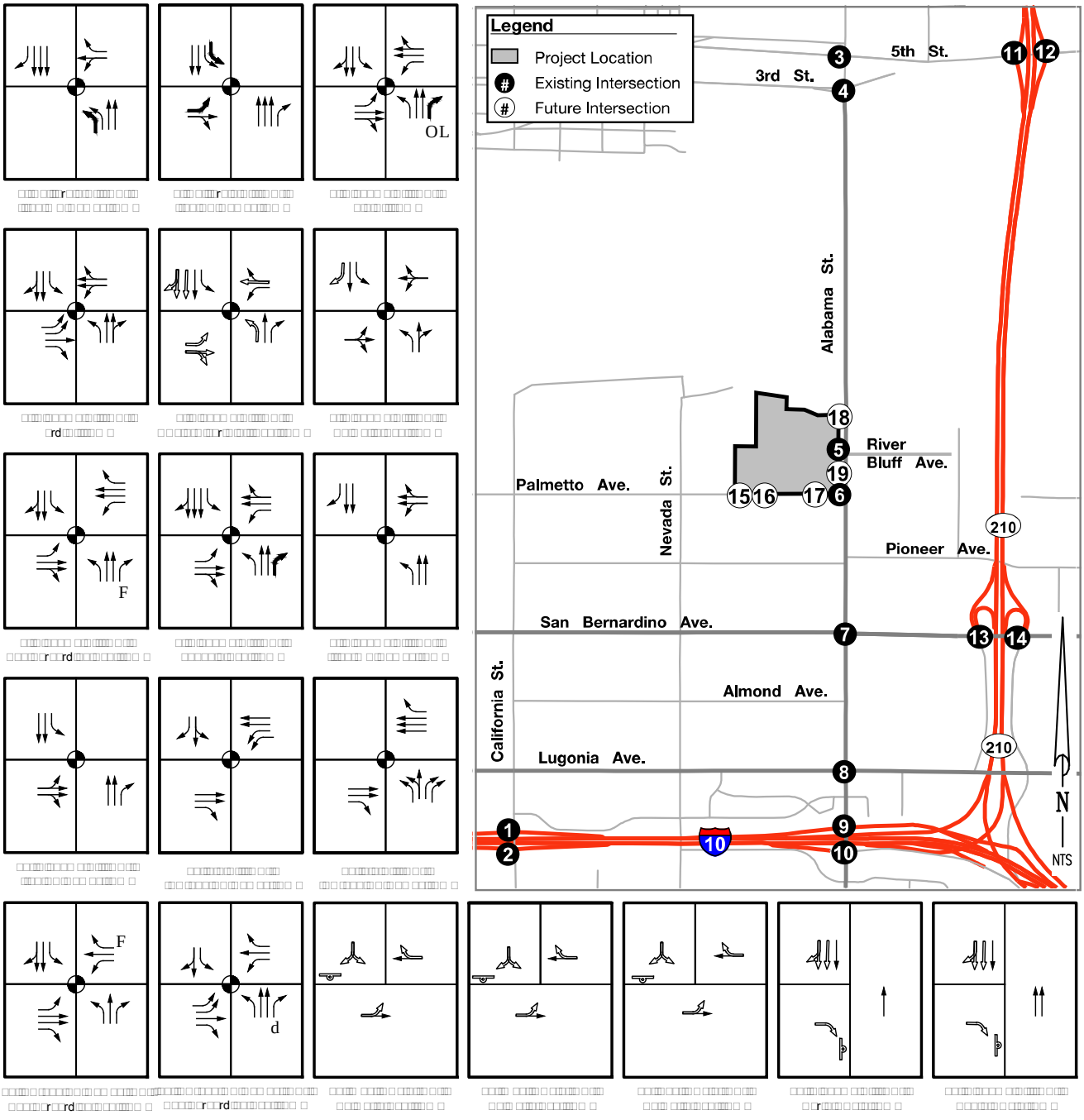
	Intersection	Scenario	Northbound			Southbound			Eastbound			Westbound			Traffic Control
			L	T	R	L	T	R	L	T	R	L	T	R	
1.	California Street (NS) / I-10 WB Ramps (EW)	Existing	*1*	*2*	*NA*	*NA*	*3*	*1*	*NA*	*NA*	*NA*	*S*	*1*	*1*	Signal
		EACP Improvements													
		EACP Mitigations	***2***	*2*	*NA*	*NA*	*3*	*1*	*NA*	*NA*	*NA*	*S*	*1*	*1*	
2	California Street (NS) / I-10 EB Ramps (EW)	Existing	*NA*	*3*	*1*	*1*	*2*	*NA*	*S*	*1*	*S*	*NA*	*NA*	*NA*	Signal
		EACP Improvements													
		EACP Mitigations	*NA*	*3*	*1*	***2***	*2*	*NA*	*S*	*1*	*S*	*NA*	*NA*	*NA*	
3.	Alabama Street (NS) / 5th Street (EW)	Existing	*1*	*2*	*1D*	*1*	*2*	*S*	*1*	*2*	*S*	*1*	*2*	*S*	Signal
		EACP Improvements													
		EACP Mitigations	*1*	*2*	***1OL***	*1*	*2*	*S*	*1*	*2*	*S*	*1*	*2*	*S*	
4.	Alabama Street (NS) / 3rd Street (EW)	Existing	*1*	*2*	*S*	*1*	*2*	*S*	*2*	*1*	*1*	*S*	*2*	*S*	Signal
		EACP Improvements													
		EACP Mitigations													
5.	Alabama Street (NS) / Dwy 5-River Bluff Avenue (EW)	Existing	*NA*	*1*	*1*	*1*	*1*	*NA*	*S*	*1*	*S*	*1*	*NA*	*1*	Signal
		EACP Improvements	*1*	*1*	*1*	*1*	***3***	*S*	***1***	*1*	*S*	*1*	***1***	***S***	
		EACP Mitigations													
6.	Alabama Street (NS) / Palmetto Avenue (EW)	Existing	*1*	*1*	*S*	*1*	*1*	*NA*	*S*	*1*	*S*	*S*	*1*	*S*	Signal
		EACP Improvements	*1*	*1*	*S*	*1*	*1*	***1***	*S*	*1*	*S*	*S*	*1*	*S*	
		EACP Mitigations													
7.	Alabama Street (NS) / San Bernardino Avenue (EW)	Existing	*1*	*2*	*1*	*1*	*2*	*1*	*1*	*2*	*S*	*1*	*2*	*1*	Signal
		EACP Improvements													
		EACP Mitigations													
8.	Alabama Street (NS) / Lugonia Avenue (EW)	Existing	*1*	*3*	*S*	*1*	*3*	*S*	*1*	*2*	*S*	*1*	*2*	*S*	Signal
		EACP Improvements													
		EACP Mitigations	*1*	*3*	***1***	*1*	*3*	*S*	*1*	*2*	*S*	*1*	*2*	*S*	
9.	Alabama Street (NS) / I-10 WB Ramps (EW)	Existing	*1*	*2*	*NA*	*NA*	*2*	*1*	*NA*	*NA*	*NA*	*S*	*2*	*S*	Signal
		EACP Improvements													
		EACP Mitigations													
10.	Alabama Street (NS) / I-10 EB Ramps (EW)	Existing	*NA*	*2*	*1*	*1*	*2*	*NA*	*S*	*2*	*S*	*NA*	*NA*	*NA*	Signal
		EACP Improvements													
		EACP Mitigations													
11.	SR-210 SB Ramps (NS) / 5th Street (EW)	Existing	*NA*	*NA*	*NA*	*S*	*1*	*1*	*NA*	*2*	*1*	*2*	*2*	*NA*	Signal
		EACP Improvements													
		EACP Mitigations													
12.	SR-210 NB Ramps (NS) / 5th Street (EW)	Existing	*1S*	*1*	*2*	*NA*	*NA*	*NA*	*1*	*2*	*NA*	*NA*	*3*	*1*	Signal
		EACP Improvements													
		EACP Mitigations													
13.	SR-210 SB Ramps (NS) / San Bernardino Avenue (EW)	Existing	*1*	*1*	*1*	*1*	*1*	*1*	*1*	*2*	*1*	*1*	*1*	*1*	Signal
		EACP Improvements													
		EACP Mitigations													
14.	SR-210 NB Ramps (NS) / San Bernardino Avenue (EW)	Existing	*1*	*2*	*1*	*1*	*1*	*S*	*2*	*1*	*1*	*1*	*1*	*1*	Signal
		EACP Improvements													
		EACP Mitigations													
15.	West Dwy 1 (NS) / Palmetto Avenue (EW)	Existing	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*1*	*NA*	*NA*	*1*	*NA*	OWSC
		EACP Improvements				***S***	*NA*	***1***	***S***	***1***	*NA*	*NA*	***1***	***S***	
		EACP Mitigations													
16.	West Dwy 2 (NS) / Palmetto Avenue (EW)	Existing	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*1*	*NA*	*NA*	*1*	*NA*	OWSC
		EACP Improvements				***S***	*NA*	***1***	***S***	***1***	*NA*	*NA*	***1***	***S***	
		EACP Mitigations													
17.	East Dwy 3 (NS) / Palmetto Avenue (EW)	Existing	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*1*	*NA*	*NA*	*1*	*NA*	OWSC
		EACP Improvements				***S***	*NA*	***1***	***S***	***1***	*NA*	*NA*	***1***	***S***	
		EACP Mitigations													
18.	Alabama Street (NS) / North Dwy 4 (EW)	Existing	*NA*	*1*	*NA*	*NA*	*1*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	OWSC
		EACP Improvements	*NA*	***1***	*NA*	*NA*	***3***	***S***	*NA*	*NA*	*NA*	*NA*	*NA*	***1***	
		EACP Mitigations													
19.	Alabama Street (EW) / South Dwy 6 (EW)	Existing	*NA*	*1*	*NA*	*NA*	*1*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	OWSC
		EACP Improvements	*NA*	***2***	*NA*	*NA*	***3***	***S***	*NA*	*NA*	*NA*	*NA*	*NA*	***1***	
		EACP Mitigations													

Notes* EACP- Existing Plus Ambient Growth Plus Cumulative Plus Project, NA-Not Available, S-Shared,L-Left,T-Through,R-Right,OL-Overlap,1D-Defacto

#-Improvement

#-Mitigation

Figure 36 – Summary of Intersection Improvements for Existing Plus Ambient Growth Plus Cumulative Plus Project (2020) Conditions



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6.3.4 Proposed Improvement and Mitigation Measures – Build-Out Year Plus Cumulative Projects (2040) Conditions

Table 6-4 and **Figure 37** present the proposed improvement and mitigation measures in order to achieve a satisfactory level of service at the study intersections in Build-Out Year Plus Cumulative Projects (2040) conditions. The proposed improvement and mitigation measures are as follows:

Improvements

1. **California Street (NS) / I-10 WB Ramps (EW**): Add one left turn lane for northbound approach.
2. **California Street (NS) / I-10 EB Ramps (EW)**: Add one left lane for southbound approach.
3. **Alabama Street (NS) / River-Bluff Avenue (EW)**: Add two through lanes for northbound approach.
6. **Alabama Street (NS) / Palmetto Avenue (EW)**: Add one through lane for eastbound approach and one through lane for westbound approach. Add one through lane for northbound approach and southbound approach.
7. **Alabama Street (NS) / San Bernardino Avenue (EW)**: Add one through lane and one right turn lane for eastbound approach and one left turn lane for westbound approach.
8. **Alabama Street (NS) / Lugonia Avenue (EW)**: Add one northbound right turn lane and one westbound left turn lane.

Mitigations

4. **Alabama Street (NS) / 5th Street (EW)**: Add one overlapping northbound right turn lane.
5. **Alabama Street (NS) / 3rd Street (EW)**: Add one westbound left turn lane and one westbound right-turn lane.
6. **Alabama Street (NS) /Lugonia Avenue (EW)**: Add one eastbound right turn lane and westbound right turn lane.
9. **Alabama Street (NS) / I-10 WB Ramps (EW**): Add one left turn lane for northbound approach and one right turn lane for southbound approach.
10. **Alabama Street (NS)/ I-10 EB Ramps (EW):** Add one through lane for northbound approach.
14. **SR-210 NB Ramps (NS) / San Bernardino Avenue (EW**): Convert geometry of eastbound right turn lane to eastbound through-right lane. Add one through lane for the westbound approach.

Note*: Intersection mitigations from existing conditions included in the General Plan are shown as improvements in for Build-Out Year 2040 conditions. Additional improvements beyond General Plan improvements are shown as Mitigations.

Table 6-4 – Summary of Intersection Improvements for Build-Out Year Plus Cumulative Projects (2040) Conditions

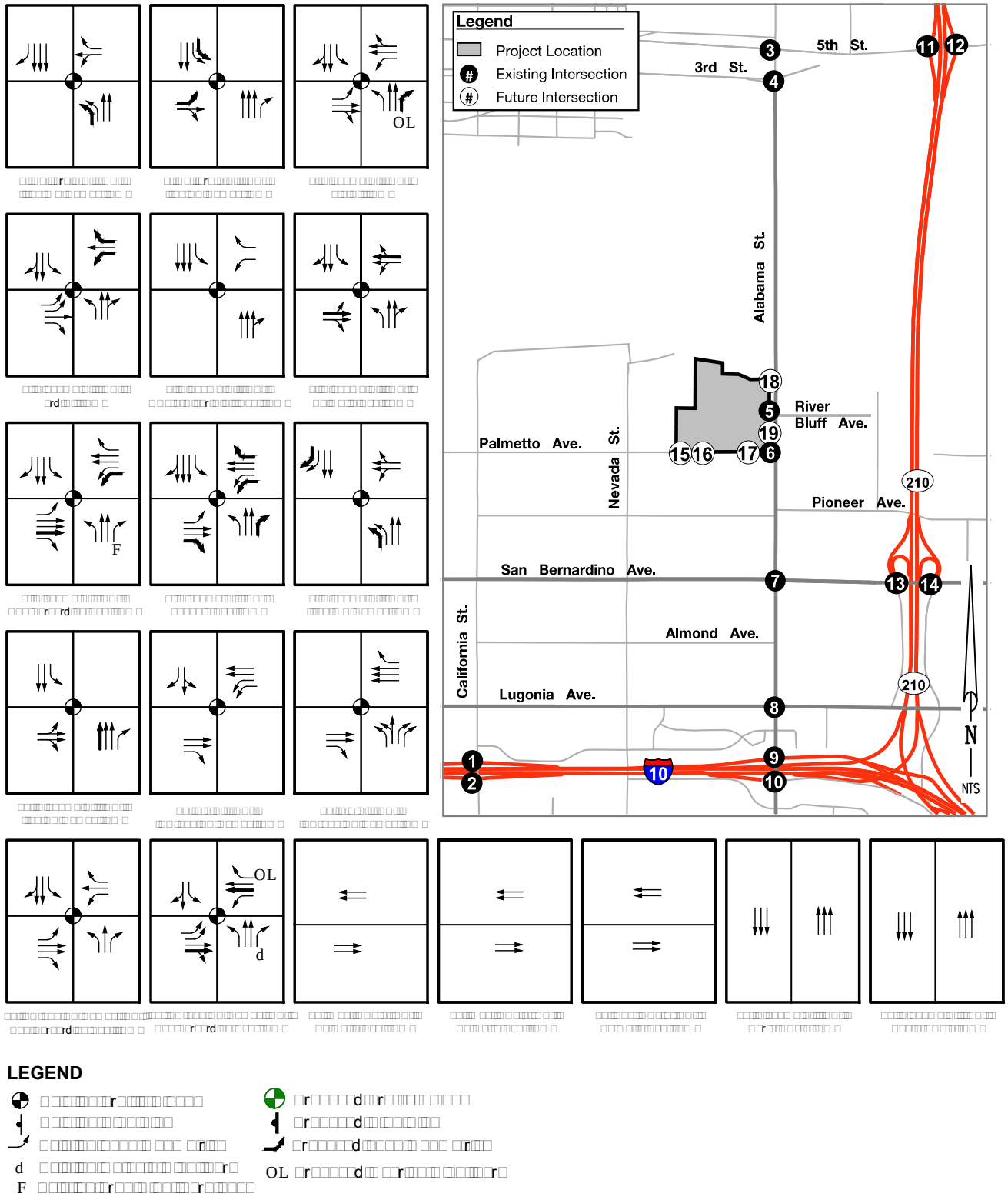
	Intersection	Scenario	Northbound			Southbound			Eastbound			Westbound			Traffic Control
			L	T	R	L	T	R	L	T	R	L	T	R	
1.	California Street (NS) / I-10 WB Ramps (EW)	Existing	*1*	*2*	*NA*	*NA*	*3*	*1*	*NA*	*NA*	*NA*	*S*	*1*	*1*	
		2040 Improvements	***2***	*2*	*NA*	*NA*	*3*	*1*	*NA*	*NA*	*NA*	*S*	*1*	*1*	Signal
		2040 Mitigations													
2.	California Street (NS) / I-10 EB Ramps (EW)	Existing	*NA*	*3*	*1*	*1*	*2*	*NA*	*S*	*1*	*S*	*NA*	*NA*	*NA*	
		2040 Improvements	*NA*	*3*	*1*	***2***	*2*	*NA*	*S*	*1*	*S*	*NA*	*NA*	*NA*	Signal
		2040 Mitigations	*NA*	*3*	*1*	*2*	*2*	*NA*	***1***	*1*	*S*	*NA*	*NA*	*NA*	
3.	Alabama Street (NS) / 5th Street (EW)	Existing	*1*	*2*	*1D*	*1*	*2*	*S*	*1*	*2*	*S*	*1*	*2*	*S*	
		2040 Improvements													Signal
		2040 Mitigations	*1*	*2*	***1OL***	*1*	*2*	*S*	*1*	*2*	*S*	*1*	*2*	*S*	
4.	Alabama Street (NS) / 3rd Street (EW)	Existing	*1*	*2*	*S*	*1*	*2*	*S*	*2*	*1*	*1*	*S*	*2*	*S*	
		2040 Improvements													Signal
		2040 Mitigations	*1*	*2*	*S*	*1*	*2*	*S*	*2*	*1*	*1*	***1***	***1***	***1***	
5.	Alabama Street (NS) / Dwy 5-River Bluff Avenue (EW)	Existing	*NA*	*1*	*1*	*1*	*1*	*NA*	*S*	*1*	*S*	*1*	*NA*	*1*	
		2040 Improvements	*NA*	***3***	*S*	*1*	***3***	*NA*	*NA*	*NA*	*NA*	*1*	*NA*	*1*	Signal
		2040 Mitigations													
6.	Alabama Street (NS) / Palmetto Avenue (EW)	Existing	*1*	*1*	*NA*	*1*	*1*	*NA*	*S*	*1*	*S*	*S*	*1*	*S*	
		2040 Improvements	*1*	***2***	*S*	*1*	***2***	*S*	*S*	***2***	*S*	*S*	***2***	*S*	Signal
		2040 Mitigations													
7.	Alabama Street (NS) / San Bernardino Avenue (EW)	Existing	*1*	*2*	*1*	*1*	*2*	*1*	*1*	*2*	*S*	*1*	*2*	*1*	
		2040 Improvements	*1*	*2*	*1*	*1*	*2*	*1*	*1*	***3***	*S*	***2***	*2*	*1*	Signal
		2040 Mitigations													
8.	Alabama Street (NS) / Lugonia Avenue (EW)	Existing	*1*	*3*	*S*	*1*	*3*	*S*	*1*	*2*	*S*	*1*	*2*	*S*	
		2040 Improvements	*1*	*3*	***1***	*1*	*3*	*S*	*1*	*2*	*S*	***2***	*2*	*S*	Signal
		2040 Mitigations	*1*	*3*	*1*	*1*	*3*	*S*	*1*	*2*	***1***	*2*	*2*	***1***	
9.	Alabama Street (NS) / I-10 WB Ramps (EW)	Existing	*1*	*2*	*NA*	*NA*	*2*	*1*	*NA*	*NA*	*NA*	*S*	*2*	*S*	
		2040 Improvements													Signal
		2040 Mitigations	***2***	*2*	*NA*	*NA*	*2*	***2***	*NA*	*NA*	*NA*	*S*	*2*	*S*	
10.	Alabama Street (NS) / I-10 EB Ramps (EW)	Existing	*NA*	*2*	*1*	*1*	*2*	*NA*	*S*	*2*	*S*	*NA*	*NA*	*NA*	
		2040 Improvements													Signal
		2040 Mitigations	*NA*	***3***	*1*	*1*	*2*	*NA*	*S*	*2*	*S*	*NA*	*NA*	*NA*	
11.	SR-210 SB Ramps (NS) / 5th Street (EW)	Existing	*NA*	*NA*	*NA*	*S*	*1*	*1*	*NA*	*2*	*1*	*2*	*2*	*NA*	
		2040 Improvements													Signal
		2040 Mitigations													
12.	SR-210 NB Ramps (NS) / 5th Street (EW)	Existing	*1S*	*1*	*2*	*NA*	*NA*	*NA*	*1*	*2*	*NA*	*NA*	*3*	*1*	
		2040 Improvements													Signal
		2040 Mitigations													
13.	SR-210 SB Ramps (NS) / San Bernardino Avenue (EW)	Existing	*1*	*1*	*1*	*1*	*1*	*1*	*1*	*2*	*1*	*1*	*1*	*1*	
		2040 Improvements													Signal
		2040 Mitigations													
14.	SR-210 NB Ramps (NS) / San Bernardino Avenue (EW)	Existing	*1*	*2*	*1*	*1*	*1*	*S*	*2*	*1*	*1*	*1*	*1*	*1*	
		2040 Improvements													Signal
		2040 Mitigations	*1*	*2*	*1*	*1*	*1*	*S*	*2*	***2***	***S***	*1*	***2***	***1OL***	
15.	West Dwy 1 (NS) / Palmetto Avenue (EW)	Existing													
		2040 Improvements													**Does Not Exist**
		2040 Mitigations													
16.	West Dwy 2 (NS) / Palmetto Avenue (EW)	Existing													
		2040 Improvements													**Does Not Exist**
		2040 Mitigations													
17.	East Dwy 3 (NS) / Palmetto Avenue (EW)	Existing													
		2040 Improvements													**Does Not Exist**
		2040 Mitigations													
18.	Alabama Street (NS) / North Dwy 4 (EW)	Existing													
		2040 Improvements													**Does Not Exit**
		2040 Mitigations													
19.	Alabama Street (EW) / South Dwy 6 (EW)	Existing													
		2040 Improvements													**Does Not Exist**
		2040 Mitigations													

Notes*NA-Not Available, S-Shared,L-Left,T-Through,R-Right,OL:Overlap,1D-Defacto

#-Improvement

#-Mitigation

Figure 37 – Summary of Intersection Improvements for Build-Out Year Plus Cumulative Projects (2040) Conditions



6.3.5 Proposed Improvement and Mitigation Measures – Build-Out Year Plus Cumulative Plus Project (2040) Conditions

Table 6-5 and **Figure 38** present the proposed improvement and mitigation measures in order to achieve a satisfactory level of service at the study intersections in Build-Out Year Plus Cumulative Plus Project (2040) conditions. In addition to 2040 cumulative project improvements and mitigations, following improvement and mitigation measures are proposed,

Improvements

5. **Alabama Street (NS) / Dwy-5-River-Bluff Avenue (EW):** Add one left turn lane for northbound approach, one shared through-right turn lane for southbound approach and eastbound left and through-right turn lane.
15. **West Dwy 1 (NS) / Palmetto Avenue (EW):** Add one shared left-right turn lane for southbound approach, one shared left turn lane for eastbound approach and add a shared right turn lane to the westbound approach.
16. **West Dwy 2 (NS) / Palmetto Avenue (EW):** Add one shared left-right turn lane for southbound approach, one shared left turn lane for eastbound approach and add one shared right turn lane for westbound approach.
17. **West Dwy 3 (NS) / Palmetto Avenue (EW):** Add one shared left-right turn lane for southbound approach, one shared left turn lane for eastbound approach and add one shared right turn lane for westbound approach.
18. **Alabama Street (NS) / North Dwy 4 (EW):** Add one shared right turn lane for southbound approach and add one right turn lane for westbound approach.
19. **Alabama Street (EW) / South Dwy 6 (EW):** Add one shared right turn lane for southbound approach and a right turn lane for westbound approach.

Table 6-5 – Summary of Intersection Improvements for Build-Out Year Plus Cumulative Plus Project (2040) Conditions

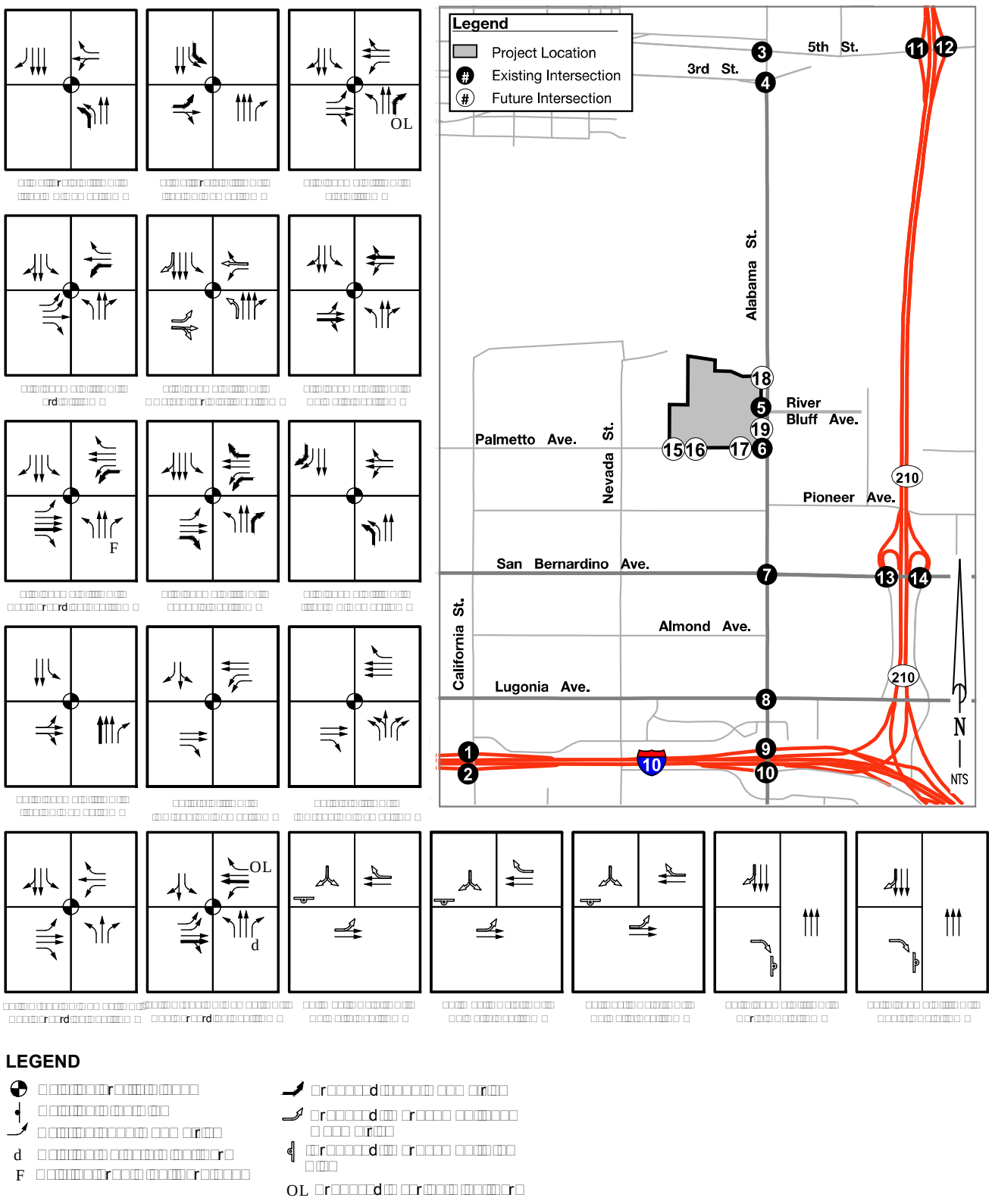
Intersection	Scenario	Northbound			Southbound			Eastbound			Westbound			Traffic Control
		L	T	R	L	T	R	L	T	R	L	T	R	
1. California Street (NS) / I-10 WB Ramps (EW)	Existing	1	2	NA	NA	3	1	NA	NA	NA	S	1	1	
	2040 Improvements	**2**	2	NA	NA	3	1	NA	NA	NA	S	1	1	Signal
	2040 Mitigations													
2. California Street (NS) / I-10 EB Ramps (EW)	Existing	NA	3	1	1	2	NA	S	1	S	NA	NA	NA	
	2040 Improvements	NA	3	1	**2**	2	NA	S	1	S	NA	NA	NA	Signal
	2040 Mitigations	NA	3	1	2	2	NA	**1**	1	S	NA	NA	NA	
3. Alabama Street (NS) / 5th Street (EW)	Existing	1	2	1D	1	2	S	1	2	1	1	2	S	
	2040 Improvements													Signal
	2040 Mitigations	1	2	**1OL**	1	2	S	1	2	S	1	2	S	
4. Alabama Street (NS) / 3rd Street (EW)	Existing	1	2	S	1	2	S	2	1	1	S	2	S	
	2040 Improvements													Signal
	2040 Mitigations													
5. Alabama Street (NS) / Dwy 5-River Bluff Avenue (EW)	Existing	NA	1	1	1	1	NA	S	1	S	1	NA	1	
	2040 Improvements	1	**3**	S	1	**3**	S	**1**	1	S	1	**1**	S	Signal
	2040 Mitigations													
6. Alabama Street (NS) / Palmetto Avenue (EW)	Existing	1	1	NA	1	1	NA	S	1	S	S	1	S	
	2040 Improvements	1	**2**	S	1	**2**	S	S	**2**	S	S	**2**	S	Signal
	2040 Mitigations													
7. Alabama Street (NS) / San Bernardino Avenue (EW)	Existing	1	2	1	1	2	1	1	2	S	1	2	1	
	2040 Improvements	1	2	1	1	2	1	1	**3**	S	**2**	2	1	Signal
	2040 Mitigations													
8. Alabama Street (NS) / Lugonia Avenue (EW)	Existing	1	3	S	1	3	S	1	2	S	1	2	S	
	2040 Improvements	1	3	**1**	1	3	S	1	2	S	**2**	2	S	Signal
	2040 Mitigations	1	3	1	1	3	S	1	2	**1**	2	2	**1**	
9. Alabama Street (NS) / I-10 WB Ramps (EW)	Existing	1	2	NA	NA	2	1	NA	NA	NA	S	2	S	
	2040 Improvements													Signal
	2040 Mitigations	**2**	2	NA	NA	2	**2**	NA	NA	NA	S	2	S	
10. Alabama Street (NS) / I-10 EB Ramps (EW)	Existing	NA	2	1	1	2	NA	S	2	S	NA	NA	NA	
	2040 Improvements													Signal
	2040 Mitigations	NA	**3**	1	1	2	NA	S	2	S	NA	NA	NA	
11. SR-210 SB Ramps (NS) / 5th Street (EW)	Existing	NA	NA	NA	S	1	1	NA	2	1	2	2	NA	
	2040 Improvements													Signal
	2040 Mitigations													
12. SR-210 NB Ramps (NS) / 5th Street (EW)	Existing	1S	1	2	NA	NA	NA	1	2	NA	NA	3	1	
	2040 Improvements													Signal
	2040 Mitigations													
13. SR-210 SB Ramps (NS) / San Bernardino Avenue (EW)	Existing	1	1	1	1	1	1	1	2	1	1	1	1	
	2040 Improvements													Signal
	2040 Mitigations													
14. SR-210 NB Ramps (NS) / San Bernardino Avenue (EW)	Existing	1	2	1	1	1	S	2	1	1	1	1	1	
	2040 Improvements													Signal
	2040 Mitigations	1	2	1	1	1	S	2	**2**	**S**	1	**2**	**1OL**	
15. West Dwy 1 (NS) / Palmetto Avenue (EW)	Existing	NA	NA	NA	NA	NA	NA	NA	1	NA	NA	1	NA	
	2040 Improvements				**1**	NA	**1**	**S**	**2**	NA	NA	**2**	**S**	OWSC
	2040 Mitigations													
16. West Dwy 2 (NS) / Palmetto Avenue (EW)	Existing	NA	NA	NA	NA	NA	NA	NA	1	NA	NA	1	NA	
	2040 Improvements				**S**	NA	**1**	**S**	**2**	NA	NA	**2**	**S**	OWSC
	2040 Mitigations													
17. East Dwy 3 (NS) / Palmetto Avenue (EW)	Existing	NA	NA	NA	NA	NA	NA	NA	1	NA	NA	1	NA	
	2040 Improvements				**1**	NA	**1**	**S**	**2**	NA	NA	**2**	**S**	OWSC
	2040 Mitigations													
18. Alabama Street (NS) / North Dwy 4 (EW)	Existing	NA	1	NA	NA	1	NA	NA	NA	NA	NA	NA	NA	
	2040 Improvements	NA	3	NA	NA	**3**	**S**	NA	NA	NA	NA	NA	**1**	OWSC
	2040 Mitigations													
19. Alabama Street (EW) / South Dwy 6 (EW)	Existing	NA	1	NA	NA	1	NA	NA	NA	NA	NA	NA	NA	
	2040 Improvements	NA	3	NA	NA	**3**	**S**	NA	NA	NA	NA	NA	**1**	OWSC
	2040 Mitigations													

Notes*NA-Not Available, S-Shared,L-Left,T-Through,R-Right,OL:Overlap,1D-Defacto

#-Improvement

#-Mitigation

Figure 38– Summary of Intersection Improvements for Build-Out Year Plus Cumulative Plus Project (2040) Conditions



6.2 Traffic Signal Warrants

Conducting traffic signal warrants is a method of determining whether or not an unsignalized intersection needs to install a traffic signal. Traffic conditions that satisfy a traffic signal warrant are more likely to require the installation of a traffic signal. However, the California Manual on Uniform Traffic Control Devices (MUTCD) states that the satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal. Peak hour traffic signal warrant analysis should only be considered as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal. Intersections that exceed the peak hour warrant are more likely to meet one or more of the other volume based signal warrants. The MUTCD also advises that a traffic control signal should not be installed unless:

- One or more of the traffic signal warrants is satisfied;
- An engineering study indicates that installing a traffic control signal will improve the overall safety and/or operation of the intersection; and
- It will not seriously disrupt progressive traffic flow.

For Existing (2018) traffic conditions, the peak hour traffic control signal warrant is not satisfied for any of the study area unsignalized intersections (see Appendix D for technical calculations).

For Existing Plus Project (2018) traffic conditions, the peak hour traffic control signal warrant is not satisfied for any of the study area unsignalized intersections (see Appendix D for technical calculations).

For Existing Plus Ambient Growth Plus Project (2020) traffic conditions, the peak hour traffic control signal warrant is not satisfied for any of the study area unsignalized intersections (see Appendix D for technical calculations).

For Existing Plus Ambient Growth Plus Cumulative Plus Project (2020) traffic conditions, the peak hour traffic control signal warrant is not satisfied for any of the study area unsignalized intersections (see Appendix D for technical calculations).

For Buildout Year Plus Cumulative Projects (2040) traffic conditions, the peak hour traffic control signal warrant is not satisfied for any of the study area unsignalized intersections (see Appendix D for technical calculations).

For Buildout Year Plus Cumulative Projects Plus Project (2040) traffic conditions, the peak hour traffic control signal warrant is not satisfied for any of the study area unsignalized intersections (see Appendix D for technical calculations).

6.3 Circulation Recommendations

This traffic impact analysis demonstrates that the direct traffic impacts generated by the project can be mitigated to meet the required level of service if the following recommended improvements are adopted.

6.3.1 Roadway and Safety Improvements

- Construct full width improvements on all internal roadways.

- Construct partial width improvements on the northerly side of Palmetto Avenue at its ultimate cross-section as a collector street adjacent to Project boundary line.
- Construct partial width improvements on the westerly side of Alabama Street at its ultimate cross-section as a major arterial adjacent to Project boundary line.
- Modify the existing traffic signal at intersection of Alabama Street and River Bluff Avenue / Driveway 5 to provide full access for all movements at the intersection.
- Signing/striping should be implemented in conjunction with detailed construction plans for The Project site.
- Sight distance at The Project entrance roadway will be reviewed with respect to standard County of San Bernardino sight distance standards at the time of preparation of final grading, landscape, site development, and street improvement plans.

6.3.2 Project Design Features – Intersection Improvements

- Construct the intersection of West Driveway 1 and Palmetto Avenue (Int. 15) to include the following geometrics.
  Northbound: Does not exist.
  Southbound: Shared left-right turn lane.
  Eastbound: Convert through lane to shared left-through lane.
  Westbound: Convert through lane to shared through-right turn lane.

- Construct the intersection of West Driveway 2 and Palmetto Avenue (Int. 16) to include the following geometrics.
  Northbound: Does not exist.
  Southbound: Shared left-right turn lane.
  Eastbound: Convert through lane to shared left-through lane.
  Westbound: Convert through lane to shared through-right turn lane.

- Construct the intersection of East Driveway 3 and Palmetto Avenue (Int. 17) to include the following geometrics.
  Northbound: Does not exist.
  Southbound: Shared left-right turn lane.
  Eastbound: Convert through lane to shared left-through lane.
  Westbound: Convert through lane to shared through-right turn lane.

- Construct the intersection of Alabama Street and North Driveway 4 (Int. 18) to restrict the movements for right in right out only.
  Northbound: One through lane.
  Southbound: Convert through lane to shared through-right turn lane. Add two through lanes.
  Eastbound: Add a right turn lane.
  Westbound: Does not exist.

- Modify traffic signal and construct the intersection of River-Bluff Avenue / Driveway 5 and Alabama Street to include the following geometries.

Northbound: One left turn lane. One through lane. One right turn lane.
Southbound: One left turn lane. Two through lanes. One through-right turn lane.
Eastbound: One left turn lane. One lane shared by through-right turn movements.
Westbound: One left turn lane. One lane shared by through-right turn movements.

- Construct the intersection of Alabama Street and South Driveway 6 (Int. 19) to restrict the movements for right in right out only.
  Northbound: Two through lanes.
  Southbound: Convert through lane to shared through-right turn lane.
  Eastbound: Add a right turn lane.
  Westbound: Does not exist.

The I-10 Alabama Street Interchange Project (EA IH160) will widen the I-10 Eastbound on-ramp and I-10 Westbound off-ramp at Alabama Street. Completion of the Project is expected to improve traffic operations at the I-10 Alabama Street Interchange. Timeline for construction is not known at time of report preparation, so the existing lane geometrics were used in this analysis.

6.4 Queuing Analysis

Queuing analysis was performed on Caltrans ramp intersections for 2040 Build-Out Year without Project and 2040 Build-Out Year with Project AM peak hour and PM peak hour scenarios to evaluate the lengths of vehicle queues due to Project traffic. 95th percentile queue lengths were output from Synchro and used for analysis. Intersection movements with queues that exceed the existing storage are the same for both analysis scenarios with the exception of two movements (Intersections 11 and 13). These two movements had acceptable queueing in the 2040 Build-Out Year with Project condition due to improvements in signal optimization for that scenario. The results are provided in **Table 6-6** and **Table 6-7.**

Table 6-6 – 2040 Build-Out Year Without Project Queuing Analysis

Intersection	Peak Hour	Traffic Control	NBL	NBR	SBL	SBR	WBL	WBR	EBL	EBR
1. California Street (NS) / I-10 WB Ramps (EW)	Storage Length	Signal	400 (2x 200')			600 (2x 300')	600			
	AM Peak Hour Queue		350	-	-	476	446	-	-	-
	PM Peak Hour Queue		345	-	-	***621***	461	-	-	-
2. California Street (NS) / I-10 EB Ramps (EW)	Storage Length	Signal	-	400	400 (2x 200')	-	-	-	800	
	AM Peak Hour Queue		-	92	102	-	-	-	***1404***	-
	PM Peak Hour Queue		-	109	207	-	-	-	***997***	-
9. Alabama Street (NS) / I-10 WB Ramps (EW)	Storage Length	Signal	300 (2x 150')			600 (2x 300')	1300	1300		
	AM Peak Hour Queue		***881***	-	-	***668***	602	602	-	-
	PM Peak Hour Queue		***1435***	-	-	***1222***	657	657	-	-
10. Alabama Street (NS) / I-10 EB Ramps (EW)	Storage Length	Signal			150				600	600
	AM Peak Hour Queue		-	-	***202***	-	-	-	489	489
	PM Peak Hour Queue		-	-	***533***	-	-	-	***753***	***753***
11. SR-210 SB Ramps (NS) / 5th Street (EW)	Storage Length	Signal	-	-	160	160	550 (2x lanes)	-	-	200
	AM Peak Hour Queue		-	-	***197***	***246***	460	-	-	***339***
	PM Peak Hour Queue		-	-	***524***	78	275	-	-	***299***
12. SR-210 NB Ramps (NS) / 5th Street (EW)	Storage Length	Signal	500 (2x 250')	500 (2x 250')	-	-	-	350	100	
	AM Peak Hour Queue		202	36	-	-	-	58	***151***	-
	PM Peak Hour Queue		135	319	-	-	-	70	***229***	-
13. SR-210 SB Ramps (NS) / San Bernardino Avenue (EW)	Storage Length	Signal	225	150	100	-	200	120	250	200
	AM Peak Hour Queue		45	-	***373***	-	*140*	79	102	-
	PM Peak Hour Queue		69	108	***394***	-	***287***	*78*	***258***	29
14. SR-210 NB Ramps (NS) / San Bernardino Avenue (EW)	Storage Length	Signal	200	-	100	-	150	160	500 (2x lanes)	450
	AM Peak Hour Queue		86	-	***282***	-	65	95	115	40
	PM Peak Hour Queue		173	-	***636***	-	***204***	***390***	***577***	107

Queuing results are obtained for 2040 Build-Out Year Scenario

XX 95th percentile queue exceeds the capacity of storage lane.

**XX Volume for 95th percentile queue is metered by upstream signal*

Table 6-7 – 2040 Build-Out Year With Project Queuing Analysis

Intersection	Peak Hour	Traffic Control	NBL	NBR	SBL	SBR	WBL	WBR	EBL	EBR
1. California Street (NS) / I-10 WB Ramps (EW)	Storage Length	Signal	400 (2x 200')			600 (2x 300')	600			
	AM Peak Hour Queue		*282	-	-	442	446	-	-	-
	PM Peak Hour Queue		345	-	-	***628***	455	-	-	-
2. California Street (NS) / I-10 EB Ramps (EW)	Storage Length	Signal	-	400	400 (2x 200')	-	-	-	800	
	AM Peak Hour Queue		-	90	*72	-	-	-	***1335***	-
	PM Peak Hour Queue		-	100	217	-	-	-	***1038***	-
9. Alabama Street (NS) / I-10 WB Ramps (EW)	Storage Length	Signal	300 (2x 150')			600 (2x 300')	1300	1300		
	AM Peak Hour Queue		***937***	-	-	***709***	662	662	-	-
	PM Peak Hour Queue		****1063***	-	-	***1114***	527	527	-	-
10. Alabama Street (NS) / I-10 EB Ramps (EW)	Storage Length	Signal			150				600	600
	AM Peak Hour Queue		-	-	***199***	-	-	-	484	484
	PM Peak Hour Queue		-	-	****282***	-	-	-	***711***	***711***
11. SR-210 SB Ramps (NS) / 5th Street (EW)	Storage Length	Signal	-	-	160	160	550 (2x lanes)	-	-	200
	AM Peak Hour Queue		-	-	***307***	***270***	433	-	-	***364***
	PM Peak Hour Queue		-	-	***486***	77	242	-	-	183
12. SR-210 NB Ramps (NS) / 5th Street (EW)	Storage Length	Signal	500 (2x 250')	500 (2x 250')	-	-	-	350	100	-
	AM Peak Hour Queue		200	36	-	-	-	52	***186***	-
	PM Peak Hour Queue		136	322	-	-	-	71	****205***	-
13. SR-210 SB Ramps (NS) / San Bernardino Avenue (EW)	Storage Length	Signal	225	150	100	-	200	120	250	200
	AM Peak Hour Queue		36	-	***351***	-	111	73	112	-
	PM Peak Hour Queue		52	94	***347***	-	***255***	57	*241	*31
14. SR-210 NB Ramps (NS) / San Bernardino Avenue (EW)	Storage Length	Signal	200	-	100	-	150	160	500 (2x lanes)	450
	AM Peak Hour Queue		85	-	***275***	-	65	91	128	39
	PM Peak Hour Queue		174	-	***589***	-	***203***	***342***	***514***	86

Queuing results are obtained for 2040 Build-Out Year With Project Scenario

XX 95th percentile queue exceeds the capacity of storage lane.

**XX Volume for 95th percentile queue is metered by upstream signal*

6.5 Regional Funding Mechanisms

Table 6-8 summarizes the proposed mitigation measure and associated funding mechanism for the Project as a result of the traffic study. The Project will participate in the cost of off-site improvements through the payment of "fair share" mitigation fees, including the following:

- San Bernardino Associated Governments (SANBAG) Congestion Management Program

Program improvements: SANBAG congestion management program provides funding for the 2040 improvements mentioned in the Table 1-1. The fee of $0.73 per square foot is charged for every high –cube warehouse Project developed in the Redlands Donut Hole under the SANBAG congestion management program. These fees will be collected and utilized as needed by the County of San Bernardino to construct the improvements necessary to assist in maintaining the required level of service.

Non Program Improvements: The non-program improvements are the improvements which are not funded by any program in County of San Bernardino or Caltrans. The Project has one non-program improvement. As the impact is generated in 2040 Cumulative Plus Project Condition the fair share towards the improvement is calculated based on the number of Project trips and total number of cumulative trips.

The estimated fair share amount provided in the table is a rough estimate for informational purposes only and should not be considered final or binding. A thorough analysis of the necessary improvements and existing constraints should be completed in an engineering cost estimate.

Table 6-8– Project Improvements and Mitigation Summary

No.	Intersection	Jurisidiction	Recommended Improvement	EP & EAP Improvements	EAPC (2020) Improvements		Build-Out Year (2040) Cumulative Plus Projects Improvements		Payment System	Fair Share Percentage	Estimated Fair Share Amount
				Project Improvements	Program [1] Improvements	Non Program Improvements	Program[1] Improvements	Non Program Improvements			
1	California Street (NS) / I-10 WB Ramps (EW)	Caltrans	1. One NBL Turn Lane		1. One NBL Turn Lane		1. One NBL Turn Lane		City of Redlands	2.87%	$287,000
2	California Street (NS) / I-10 EB Ramps (EW)	Caltrans	1. One SBL Turn Lane 2. One EBL Turn Lane		1. One SBL Turn Lane 2. One EBL Turn Lane		1. One SBL Turn Lane		City of Redlands	3.00%	$318,000
3	Alabama Street (NS) /5th Street (EW)	City of Highland	1. One Overlapping NBR Turn Lane	1. One Overlapping NBR Turn Lane					Project Improvement**		
5	Alabama Street (NS)/Dwy-5-Riverbluff Ave)EW)	Unincorporated/ Donut Hole	1. One EB Left Turn Lane and Shared Through- Right Turn Lane. 2. One NBLTurn Lane. 3. One WB Shared Through-Right Turn Lane 4. Restripe SB to One SB Shared Through- Right Turn Lane and Add Two Through Lanes and a Left Turn Lane.	1. One EB Left Turn Lane and Shared Through- Right Turn Lane. 2. One NBLTurn Lane. 3. One WB Shared Through-Right Turn Lane 4. Restripe SB to One SB Shared Through- Right Turn Lane and Add Two Through Lanes and a Left Turn Lane.					Project Improvement		
6	Alabama Street (NS) / Palmetto Avenue (EW)	Unincorporated / Donut Hole	1. One WBT Lane 2. One EBT Lane 3. Add One SB Left Turn Lane, Add Two Through Lane and Restripe SB Through to Shared SB Through- Right Lane	3. Add One SB Left Turn Lane, Add Two Through Lane and Restripe SB Through to Shared SB Through- Right Lane			1. One WBT Lane 2. One EBT Lane		Project Improvement/Program Improvement*		
8	Alabama Street (NS) / Lugonia Avenue (EW)	Unincorporated / Donut Hole / City of Redlands	1. One NBR Turn Lane 2. One WBL Turn Lane 3. One EBR Turn Lane 4. One WBR Turn Lane	1. One NBR Turn Lane			2. One WBL Turn Lane	3. One EBR Turn Lane 4. One WBR Turn Lane	Fair Share/Project Improvement**/ Program Improvement	13.29%	$106,320
9	Alabama Street (NS) / I-10 WB Ramps (EW)	Caltrans	1. One NBL Turn Lane 2. One SBR Turn Lane				1. One NBL Turn Lane 2. One SBR Turn Lane		Program Improvement*	6.00%	$49,500
10	Alabama Street (NS) / I-10 EB Ramps (EW)	Caltrans	1. One NBT Lane				1. One NBT Lane		Program Improvement*	4.52%	$13,108
14	SR 210 NB Ramps (NS) / San Bernardino Avenue (EW)	Caltrans	1. One WBT Lane 2.Restripe EB Lanes				1. One WBT Lane 2.Restripe EB Lanes		County of San Bernardino	10.00%	$82,500

[1]Per Section 9 of the County of San Bernardino Regional Transportation Development Mitigation Fee Plan - Program improvements constructed by project may be eligible for fee credit. In lieu fee payment is at discretion of County.

***Improvements already planned in San Bernardino Congestion Management Program. Fair share percentage and estimated cost for informational purposes only.**

****Project improvements are located outside of County of San Bernardino.**

Fair Share at an Intersection: Project Volume / (EACP Volume - Existing Volume)

APPENDIX A:
APPROVED SCOPE FOR TRAFFIC STUDY

SCOPE FOR TRAFFIC STUDY

Project Name:	Duke Realty – Alabama St and Palmetto Ave High-Cube Transload and Short-Term Storage Warehouse

This Scope for Traffic Study acknowledges San Bernardino County Department of Public Works, Traffic Division requirements of traffic impact analysis for the project and is subject to change:

Project Address:	Northwest corner of Alabama Street and Palmetto Avenue		
Project Description:	1,200,000 Square Feet of High-Cube Transload and Short-Term Storage Warehouse		
City:	Unincorporated San Bernardino County, within the Donut Hole		
Project Buildout Year:	2020	**Ambient Growth Rate per Year:**	2%
Closest Intersection (Xtn) to the Project			
Xtn N/S Street Name:	Alabama Street		
Xtn E/W Street Name:	Palmetto Avenue		
Thomas Guide Pg+Grid:		**County Supervisorial District:**	

	Engineer	**Developer**
Company:	Albert A. Webb Associates	Duke Realty Corporation
Name:	Nancy Velgara	Adam Schmid
Address:	3788 McCray Street	300 Spectrum Center Drive, Suite 1450
City, State, Zip Code:	Riverside, CA, 92506	Irvine, CA, 91780
Phone #:	951.686.1070	949.797.7050
Fax #:		
Email:	Nancy.velgara@webbassociates.com	adam.schmid@duke realty.com

By:		**Reviewed By:**	
Print Name: Nancy Velgara	2/16/18	**Print Name:**	
Consultant/Developer's Representative	**Date**	**Traffic Divsion Representative**	**Date**

SCOPE FOR TRAFFIC STUDY

Project Name:	Duke Realty – Alabama St and Palmetto Ave High-Cube Transload and Short-Term Storage Warehouse

1. Traffic Distribution: Please insert or attach Figure(s) illustrating project trip distribution in percentages and volumes at the study intersections analyzed. See Attached Figure 1 – Figure 5.

2. Trip Credit: Exact amount of credit subject to approval by Traffic Division.

Transportation Demand Management (TDM)	No	
Existing Active Land Use	No	
Previous Land Use	No	
Internal Trip Reduction	No	
Pass-by Trip Reduction	No	

3. Related Projects: Consultant should check with Planning in the San Bernardino County Department of Land Use Services and planning departments of adjoining Cities. Documentation of the consultation from these agencies shall be included in the traffic study. Related projects list shall be submitted to Traffic Division for our review and approval before being incorporated in the study.

4. Freeway Analysis: The potential traffic impact on the following Freeway(s) must be considered.

_____

_____

_____

The applicant shall consult with the State of California Department of Transportation (Caltrans) to determine the California Environmental Quality Act levels of significance with regard to traffic impacts on Caltrans' freeway facilities. This consultation shall also include a determination of Caltrans requirements for the study of traffic impacts to its facilities and the mitigation of any such impacts. This analysis must follow the most current Caltrans' Guide for the Preparation of Traffic Impact Studies (December 2002) and can be obtained from http://www.dot.ca.gov/hq/traffops/developserv/operationalsystems/reports/tiguide.pdf. If Caltrans finds that the project has a significant impact on the freeway, Caltrans shall be requested to include the basis for this finding in their response. If fees are proposed to mitigate the freeway impact, Caltrans shall be requested to identify the specific project to which the fees will apply. These written comments from Caltrans shall be included with the traffic study and submitted to Public Works for review and approval. If a documented good faith effort is made to consult with Caltrans and written comments cannot be obtained from within a reasonable amount of time, an analysis of the freeway impact shall be made using HCM procedures. Appendix A of the SANBAG CMP outlines allowable modifications to these procedures. The SANBAG CMP can be viewed online at:
http://www.sanbag.ca.gov/planning/subr_congestion.html

SCOPE FOR TRAFFIC STUDY

Project Name:	Duke Realty – Alabama St and Palmetto Ave High-Cube Transload and Short-Term Storage Warehouse

5. Trip Generation - See attached Table 1-A, Table 1-B and Table 1-C

Trip Generation Rate(s) Source: ITE Trip Generation	**I – Institute of Transportation Engineers; S – San Diego Traffic Generators; C – County; O – Other: Passenger car / 2 axle / 3 axle / 4+ axle truck split from Truck Trip Generation Study by the City of Fontana, 2003.**	**Edition:**	10th

Land Use Code	**Land Use**	**Rate Based on**	**Qty**	***AVTE vs**	**ADT**	Weekday a.m. peak		Weekday p.m. peak		Weekend peak hour	
						In	Out	In	Out	In	Out
154	High-Cube Transload and Short-Term Storage Warehouse	**I+O**	1,200 TSF		2,202	97	29	46	112		

* - Average Vehicle Trip Ends.
For ITE Land Uses provide number and name of Land Use. e.g. LU 814 - Variety Store

Analysis Scenarios

1. Existing (2018) Traffic Conditions
2. Project Opening Year (2020) Plus Ambient Growth Traffic Conditions
3. Project Opening Year (2020) Plus Ambient Growth Plus Project Traffic Conditions
4. Project Opening Year (2020) Plus Ambient Traffic Plus Cumulative Projects Plus Project Traffic Conditions
5. Project Opening Year (2020) Plus Ambient Traffic Plus Cumulative Projects Plus Project Traffic Conditions with Mitigation (if required)
6. Build-out Year (2040) Plus Cumulative Projects Traffic Conditions
7. Build-out Year (2040) Plus Cumulative Projects Plus Project Traffic Conditions
8. Build-out Year with Ambient Traffic, Cumulative Project Traffic and Proposed Project Traffic Conditions with Mitigation (if required)

6. Study Intersections: At minimum, the study shall include the following intersections. The list is subject to change after related projects, trip generation and distribution are determined. Consultant should check with adjoining Cities regarding their requirements in addition to the following County/City intersections. Documentation of the consultation from these agencies shall be included in the traffic study.

See Figure Existing (2018) Traffic Conditions

SCOPE FOR TRAFFIC STUDY

Project Name:	Duke Realty – Alabama St and Palmetto Ave High-Cube Transload and Short-Term Storage Warehouse

Xtn #	% County	Thomas Guide Page+Grid	N⎕ S/E⎕W Street Name	City	Signalized	CMP
1			California St. (NS) / I-10 WB Ramps (EW)	Caltrans	Yes	Yes
2			California St. (NS) / I-10 EB Ramps (EW)	Caltrans	Yes	Yes
3			Alabama St. (NS) / 5th St. (EW)	City of Highland	Yes	Yes
4			Alabama St. (NS) / 3rd St. (EW)	City of Highland	Yes	Yes
5	SB		Alabama St. (NS) / Dwy 5-River Bluff Ave. (EW)	Unincorporated/ Donut Hole	Yes	No
6	SB		Alabama St. (NS) / Palmetto Ave. (EW)	Unincorporated/ Donut Hole	Yes	No
7	SB		Alabama St. (NS) / San Bernardino Ave. (EW)	Unincorporated/ Donut Hole	Yes	Yes
8	SB		Alabama St. (NS) / Lugonia Ave. (EW)	Unincorporated/ Donut Hole/City of Redlands	Yes	No
9			Alabama St. (NS) / I-10 WB Ramps (EW)	Caltrans	Yes	No
10			Alabama St. (NS) / I-10 EB Ramps (EW)	Caltrans	Yes	No
11			SR-210 SB Ramps (NS) / 5th St. (EW)	Caltrans	Yes	No
12			SR-210 NB Ramps (NS) / 5th St. (EW)	Caltrans	Yes	
13			SR-210 SB Ramps (NS) / San Bernardino Ave. (EW)	Caltrans	Yes	No
14			SR-210 NB Ramps (NS) / San Bernardino Ave. (EW)	Caltrans	Yes	

SCOPE FOR TRAFFIC STUDY

Project Name:	Duke Realty – Alabama St and Palmetto Ave High-Cube Transload and Short-Term Storage Warehouse

15	SB		West Dwy 1 (NS) / Palmetto Ave. (EW)	Unincorporated/ Donut Hole	No	No
16	SB		West Dwy 2 (NS) / Palmetto Ave. (EW)	Unincorporated/ Donut Hole	No	No
17	SB		East Dwy 3 (NS) / Palmetto Ave. (EW)	Unincorporated/ Donut Hole	No	No
18	SB		Alabama St. (NS) / North Dwy 4 (EW)	Unincorporated/ Donut Hole	No	No
19	SB		Alabama St. (NS) / South Dwy 6 (EW)	Unincorporated/ Donut Hole	No	No

Cities/Agencies to be consulted: City of Redlands and City of Highland and Caltrans

7. Other:

Traffic counts may be conducted immediately per the following:
• Must be taken on Tuesdays, Wednesdays or Thursdays.
• Must exclude holidays, and the first weekdays before and after the holiday.
• Must be taken on days when local schools or colleges are in session.
• Must be taken on days of good weather, and avoid atypical conditions (e.g., road construction, detours, or major traffic incidents).
• Traffic counts used for other traffic studies in the area shall **NOT** be reused again, unless 25% of the counts conducted for that particular traffic study are validated with new counts. The difference in volumes between the old and new counts at each corresponding movement should not be more than 10%.
• New traffic counts shall be checked to ensure the difference in volumes at corresponding approaches, if applicable, between two adjacent intersections is no more than 10% unless the difference can be justified.
• For all proposed mitigation measures, a conceptual plan for the improvements shall be submitted to our Traffic Studies section for review and approval prior to the approval of the Traffic Impact Analysis. All proposed improvements shall be within the right-of-way.
• For all cumulative mitigation measures, a cost estimate for the improvement shall be submitted.

This analysis must follow the most current Traffic Impact Study Guidelines for the County as stated in the County's Road Planning and Design Standards.

8. Fees

The County charges on an actual cost basis for review of traffic studies. An initial deposit of $3400 is required at the time that a land use application is filed with the Department of Land Use Services If the review costs exceed the initial deposit, the applicant will be expected to provide additional funds and the review will be suspended until the additional funds are deposited.

9. Contact Information:

Please submit a signed copy of this scope for approval by the Traffic Division. Draft scopes may be sent electronically. Final scope with signature should be submitted in person or by US Mail to:

County of San Bernardino
Dept. of Public Works, Traffic Division
825 E. 3rd Street, Rm 115
San Bernardino, CA 92415-0835

Phone: 909-387-8186
Fax: 909-387-7809
Email: Anthony.Pham@dpw.sbcounty.gov

Project Name:	Duke Realty – Alabama St and Palmetto Ave High-Cube Transload and Short-Term Storage Warehouse

Attachments:

Feedback from Neighboring Jurisdictions:

- City of Redlands
- City of Highland
- Caltrans

Table 1 – Trip Generation Rates
Table 2 – Trip Generation (non-PCE)
Table 3 – Trip Generation (in PCE)
Exhibit 1 – Directional Distribution for Project Traffic (Trucks)
Exhibit 2 – Directional Distribution for Project Traffic (Passenger Cars)
Exhibit 3 – Project AM Peak Hour and PM Peak Hour Intersection Volumes (Trucks Only)
Exhibit 4 – Project AM Peak Hour and PM Peak Hour Intersection Volumes (Passenger Cars Only)
Exhibit 5 – Project AM Peak Hour and PM Peak Hour Intersection Volumes (Trucks + Passenger Cars)
Exhibit 6 – Intersections and Roadway Segment Data to be Collected

Nancy Velgara

From: Johnson, Jeremy - DPW <Jeremy.Johnson@dpw.sbcounty.gov>
Sent: Wednesday, February 14, 2018 11:10 AM
To: Nancy Velgara
Cc: Pham, Anthony - DPW; Dilesh Sheth
Subject: RE: Duke - Alabama St and Palmetto Ave. Traffic Impact Study

Follow Up Flag: Follow up
Flag Status: Flagged

Nancy,

I spoke with Nancy at HKA. We have a consensus that 40% is acceptable at SR-210/5th St, 40% is acceptable at San Bernardino and SR-210; 15% is acceptable at California (to honor City of Redlands request), and the remaining 5% allocated to Alabama at I-10.

Does this help?

Jeremy Johnson
Department of Public Works
Phone: 909-387-8186
Fax: 909-387-7809
825 E. Third Street
San Bernardino, CA 92415

Our job is to create a county in which those who reside and invest can prosper and achieve well-being.
www.SBCounty.gov

County of San Bernardino Confidentiality Notice: This communication contains confidential information sent solely for the use of the intended recipient. If you are not the intended recipient of this communication, you are not authorized to use it in any manner, except to immediately destroy it and notify the sender.

Nancy Velgara

From: Don Young <dyoung@cityofredlands.org>
Sent: Monday, February 12, 2018 7:52 PM
To: Nancy Velgara
Subject: RE: Alabama St and Palmetto Ave. Traffic Impact Analysis

Nancy

My only comment is in regards to trip distribution

I believe a good portion of the west bound I-10 traffic exiting the site will use Palmetto, Almond, and /or San Bernardino to access the 10 freeway at California in order to avoid the I-10/Alabama interchange (potentially 15%??)

Please send a copy of the traffic study and proposed mitigations/recommendations when you have completed the writeup.

Donald Young
Manager - One Stop Permit Center
City of Redlands
909-798-7585 x6
dyoung@cityofredlands.org

From: Nancy Velgara [mailto:nancy.velgara@webbassociates.com]
Sent: Monday, February 05, 2018 7:11 PM
To: Don Young; Aaron Flores
Cc: Brian Foote
Subject: Alabama St and Palmetto Ave. Traffic Impact Analysis

Hi Don,

Below is the link to proposed scoping agreement prepared for the Duke Realty High-Cube Warehouse for your review. Please let me know if you have any questions.

https://file.ac/5t_uJ7C2ekc/

thank you,

Nancy

Nancy Velgara, EIT - Assistant Engineer
Albert A. Webb Associates
3788 McCray Street, Riverside, CA 92506
t: 951.320.6081

Nancy Velgara

From: Nancy Holland <nancyc@hkagroup.com>
Sent: Tuesday, February 13, 2018 3:28 PM
To: Nancy Velgara
Cc: Ernest Wong; slatino@erscinc.com; jtuttle@erscinc.com
Subject: COMMERCIAL: RE: Duke - Alabama St and Palmetto Ave. Traffic Impact Study

Nancy,

Thank you for letting us know that 2040 LOS analyses will be completed on the intersections.

While we were on the phone, I recommended more truck trips be distributed north to SR-210 / 5th Street – Greenspot Road Interchange. You said that truck trips were being moved from Alabama / I-10 to California / I-10.

As half of the HKA staff lives east of the City of San Bernardino, we regularly see both of those interchanges backed up, even during non-peak hours. We do not think that most drivers will use either Alabama / I-10 or California / I-10.

We recommend that 60% of the truck traffic be distributed north to the SR-210 / 5th Street – Greenspot Road Interchange and that the intersections to be studied be changed accordingly as you will probably need to add Palm / 3rd, and the intersections at the SR-210 / 5th Street – Greenspot Road Interchange.

Please call if you have any questions.

Nancy J. Holland, PE, QSD
Hernandez, Kroone & Associates, Inc.
234 East Drake Drive
San Bernardino, CA 92408
(909) 884-3222
http://webdefence.global.blackspider.com/urlwrap/?q=AXicHcpBCsIwEAXQD95n2iDduFJwLYhuXMk0hLSaZuokdui1PKHQ7eNhh88TeGVA07rvIhVdaOIxeclVJZGXCebOl9v1dG9d51qHzNmvtIQUWflooe-5FPEj11C2P9Q6H5zpsDvwfwB1JCJZ4&Z

From: Nancy Velgara [mailto:nancy.velgara@webbassociates.com]
Sent: Monday, February 5, 2018 7:15 PM
To: jtuttle@erscinc.com
Cc: Nancy Holland <nancyc@hkagroup.com>; Tom Thornsley <tthornsley@cityofhighland.org>
Subject: RE: Duke - Alabama St and Palmetto Ave. Traffic Impact Study

Hi Jay,

Nancy Velgara

From: MATHEW, JACOB K@DOT <Jacob.MATHEW@dot.ca.gov>
Sent: Monday, February 12, 2018 9:41 AM
To: Nancy Velgara
Cc: Mark Roberts
Subject: Duke Realty High Cube Warehouse!

Hi,
Thank you for providing the California Department of Transportation (Caltrans) the opportunity to review and comment on the Scoping Agreement for Traffic Impact Analysis (TIA) for the Duke Realty High Cube Warehouse (Project), located at the northwest corner of Alabama Street and Palmetto Avenue in the County of San Bernardino. The project proposes a 1,200,000 square feet of high-cube transload and short-term storage warehouse. The presented scope appears to be appropriate and adequate, however the following comments to be considered:

1) The analysis should consider HCM 6 methodology.
2) The forecast data used in the TIA shall be based on the Southern California Association of Governments 2016 Regional Transportation Plan Model.
3) Fair share calculation methodology should be included in the TIA.
4) Include 5th Street/SR-210 for the intersection study.
5) Trip distribution is inconsistent with intersection bubbles. Please verify and revise.
6) Other special issues such as Truck Turns and Site Access Evaluation (if needed) should be addressed as part of the TIA.

If you have any questions regarding this email, please do not hesitate to contact us.

Jacob K. Mathew
Caltrans - District 8
IGR, Community & Regional Planning
909-806-3928

Click here to report this email as spam.

SCOPE FOR TRAFFIC STUDY

Project Name:	Duke Realty – Alabama St and Palmetto Ave High-Cube Transload and Short-Term Storage Warehouse

Table 1 – Trip Generation Rates

TRIP GENERATION RATES								
Land Use	Units[1]	AM Peak Hour			PM Peak Hour			Daily
		Total	In	Out	Total	In	Out	
High-Cube Transload and Short-Term Storage Warehouse	TSF	--	--	--	--	--	--	--
Trip Generation Rates[2]		0.080	0.062	0.018	0.100	0.028	0.072	1.40
PCE Inbound/Outbound Splits[3]		100%	77%	23%	100%	28%	72%	--
PASSENGER CAR EQUIVALENT RATES CALCULATIONS								
Land Use	Unit	AM Peak Hour			PM Peak Hour			Daily
		Total	In	Out	Total	In	Out	
Passenger Cars								
Recommended Mix (%)[4]		*79.57%*	*79.57%*	*79.57%*	*79.57%*	*79.57%*	*79.57%*	*79.57%*
PCE Factor[5]		*1.0*	*1.0*	*1.0*	*1.0*	*1.0*	*1.0*	*1.0*
PCE Rates		*0.064*	*0.049*	*0.015*	*0.080*	*0.022*	*0.057*	*1.114*
2-Axle Trucks								
Recommended Mix (%)[4]		*3.46%*	*3.46%*	*3.46%*	*3.46%*	*3.46%*	*3.46%*	*3.46%*
PCE Factor[5]		*1.5*	*1.5*	*1.5*	*1.5*	*1.5*	*1.5*	*1.5*
PCE Rates		*0.004*	*0.003*	*0.001*	*0.005*	*0.001*	*0.004*	*0.073*
3-Axle Trucks								
Recommended Mix (%)[4]		*4.64%*	*4.64%*	*4.64%*	*4.64%*	*4.64%*	*4.64%*	*4.64%*
PCE Factor[5]		*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*
PCE Rates		*0.008*	*0.006*	*0.002*	*0.009*	*0.003*	*0.007*	*0.130*
4-Axle Trucks								
Recommended Mix (%)[4]		*12.33%*	*12.33%*	*12.33%*	*12.33%*	*12.33%*	*12.33%*	*12.33%*
PCE Factor[5]		*3.0*	*3.0*	*3.0*	*3.0*	*3.0*	*3.0*	*3.0*
PCE Rates		*0.030*	*0.023*	*0.007*	*0.037*	*0.010*	*0.027*	*0.518*
Final Rates (PCE)								
Passenger Cars		*0.064*	*0.049*	*0.015*	*0.080*	*0.022*	*0.057*	*1.114*
Trucks (2 Axle)		*0.004*	*0.003*	*0.001*	*0.005*	*0.001*	*0.004*	*0.073*
Trucks (3 Axle)		*0.008*	*0.006*	*0.002*	*0.009*	*0.003*	*0.007*	*0.130*
Trucks (4+ Axle)		*0.030*	*0.023*	*0.007*	*0.037*	*0.010*	*0.027*	*0.518*

[1] TSF = 1,000 Square Feet Gross Floor Area.

[2] Average trip generation rates from Trip Generation Manual, ITE, 10th Edition (2017).

[3] Inbound/Outbound Splits per ITE Trip Generation, 10th Ed., 2017.

[4] Passenger car / 2 axle / 3 axle / 4+ axle truck split from Truck Trip Generation Study by the City of Fontana, 2003.

[5] PCE Factor per San Bernardino County CMP, 2005 Update are used.

Project Name:	Duke Realty – Alabama St and Palmetto Ave High-Cube Transload and Short-Term Storage Warehouse

Table 2 – Trip Generation (non-PCE)

Land Use	Qty	Unit	AM Peak Hour			PM Peak Hour			Daily
			Total	In	Out	Total	In	Out	
High-Cube Transload and Short-Term Storage Warehouse	1200	TSF							
Passenger Cars			*76*	*59*	*18*	*95*	*27*	*68*	*1,337*
Trucks (2 Axle)			*3*	*3*	*1*	*4*	*1*	*3*	*58*
Trucks (3 Axle)			*4*	*3*	*1*	*6*	*2*	*4*	*78*
Trucks (4+ Axle)			*12*	*9*	*3*	*15*	*4*	*11*	*207*
PROJECT TOTAL			96	74	22	120	34	86	1,680

TSF = 1,000 Square Feet Gross Floor Area.

Table 3 – Trip Generation (in PCE)

Land Use	Qty	Unit	AM Peak Hour			PM Peak Hour			Daily
			Total	In	Out	Total	In	Out	
High-Cube Transload and Short-Term Storage Warehouse	1200	TSF							
Passenger Cars (PCE = 1.0)			*77*	*59*	*18*	*96*	*28*	*68*	*1,337*
Trucks (2 Axle, PCE = 1.5)			*5*	*4*	*1*	*6*	*2*	*4*	*87*
Trucks (3 Axle, PCE = 2.0)			*9*	*7*	*2*	*11*	*3*	*8*	*156*
Trucks (4+ Axle, PCE = 3.0)			*36*	*27*	*8*	*45*	*13*	*32*	*621*
PROJECT TOTAL (IN PCE)			127	97	29	158	46	112	2,202

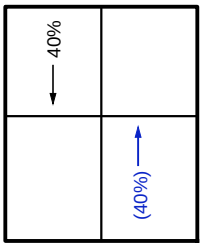
TSF = 1,000 Square Feet Gross Floor Area.

Exhibit 1 – Directional Distribution for Project Traffic (Trucks)

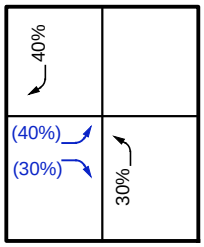
1. California St. (NS) / I-10 WB Ramps (EW)

2. California St. (NS) / I-10 EB Ramps (EW)

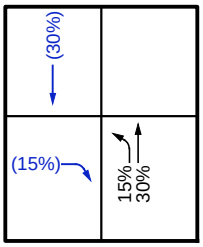
3. Alabama St. (NS) / 5th St. (EW)



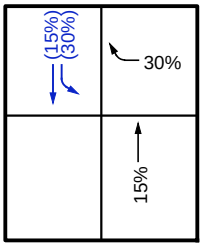
4. Alabama St. (NS) / 3rd St. (EW)



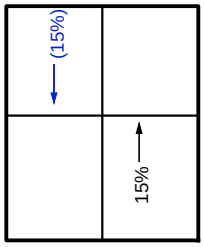
5. Alabama St. (NS) / Dwy 5-River Bluff Ave. (EW)



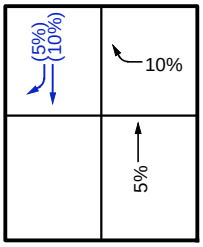
6. Alabama St. (NS) / Palmetto Ave. (EW)



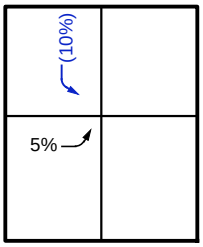
7. Alabama St. (NS) / San Bernardino Ave. (EW)



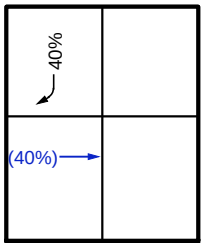
8. Alabama St. (NS) / Lugonia Ave. (EW)



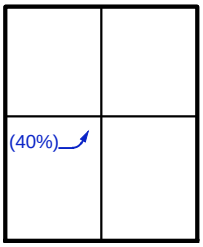
9. Alabama St. (NS) / I-10 WB Ramps (EW)



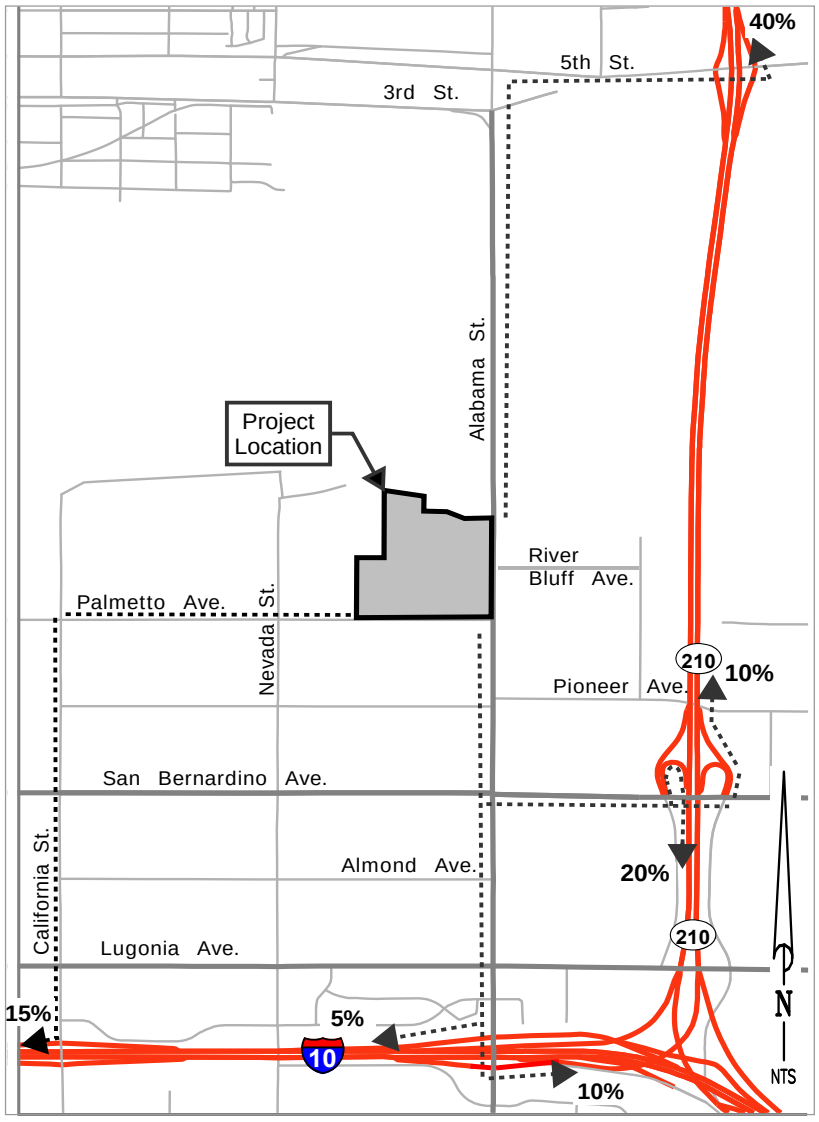
10. Alabama St. (NS) / I-10 EB Ramps (EW)



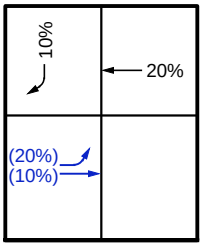
11. 5th St. (NS) / SR-210 SB Ramps (EW)



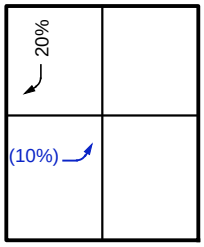
12. 5th St. (NS) / SR-210 SB Ramps (EW)



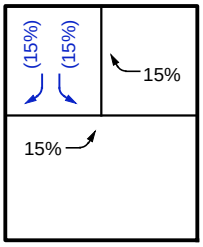
Project Directional Distribution
XX% (YY%) - Inbound% (Outbound%)



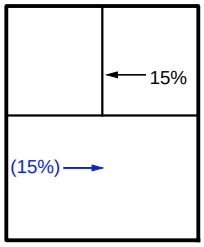
13. SR-210 SB Ramps (NS) / San Bernardino Ave. (EW)



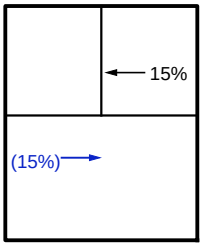
14. SR-210 NB Ramps (NS) / San Bernardino Ave. (EW)



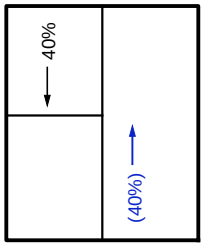
15. West Dwy 1 (NS) / Palmetto Ave. (EW)



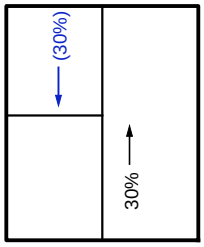
16. West Dwy 2 (NS) / Palmetto Ave. (EW)



17. East Dwy 3 (NS) / Palmetto Ave. (EW)



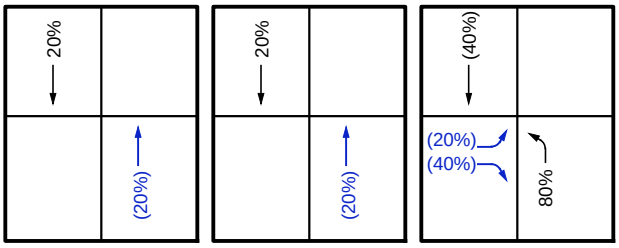
18. Alabama St. (NS) / North Dwy 4 (EW)



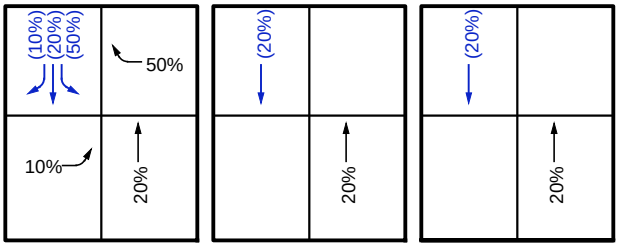
19. Alabama St. (NS) / South Dwy 6 (EW)

Exhibit 2 – Directional Distribution for Project Traffic (Passenger Cars)

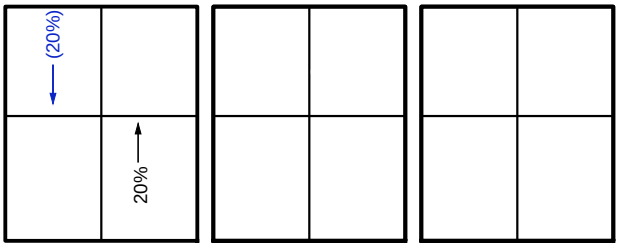
1. California St. (NS) / I-10 WB Ramps (EW)
2. California St. (NS) / I-10 EB Ramps (EW)
3. Alabama St. (NS) / 5th St. (EW)



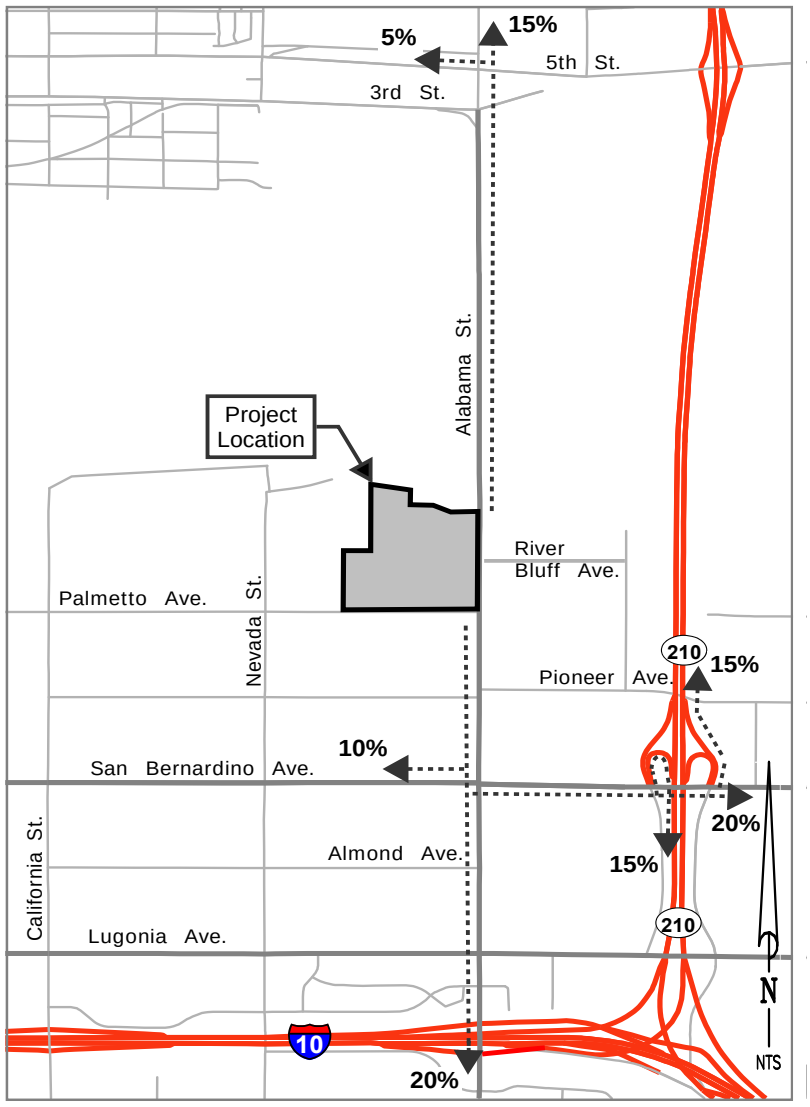
4. Alabama St. (NS) / 3rd St. (EW)
5. Alabama St. (NS) / Dwy 5-River Bluff Ave. (EW)
6. Alabama St. (NS) / Palmetto Ave. (EW)



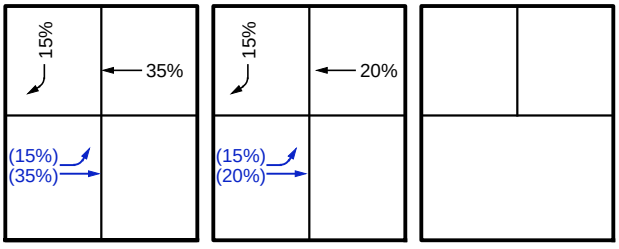
7. Alabama St. (NS) / San Bernardino Ave. (EW)
8. Alabama St. (NS) / Lugonia Ave. (EW)
9. Alabama St. (NS) / I-10 WB Ramps (EW)



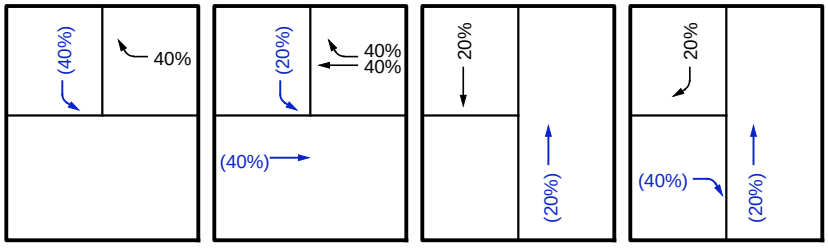
10. Alabama St. (NS) / I-10 EB Ramps (EW)
11. 5th St. (NS) / SR-210 SB Ramps (EW)
12. 5th St. (NS) / SR-210 SB Ramps (EW)



Project Directional Distribution
XX% (YY%) - Inbound% (Outbound%)

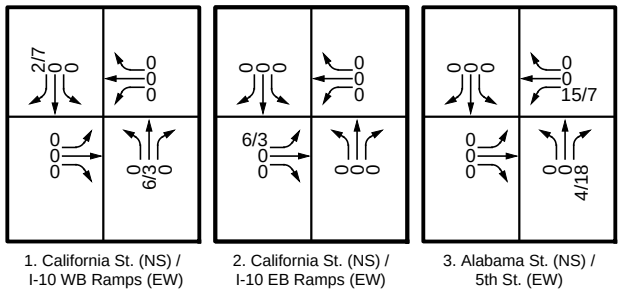


13. SR-210 SB Ramps (NS) / San Bernardino Ave. (EW)
14. SR-210 NB Ramps (NS) / San Bernardino Ave. (EW)
15. West Dwy 1 (NS) / Palmetto Ave. (EW)



16. West Dwy 2 (NS) / Palmetto Ave. (EW)
17. East Dwy 3 (NS) / Palmetto Ave. (EW)
18. Alabama St. (NS) / North Dwy 4 (EW)
19. Alabama St. (NS) / South Dwy 6 (EW)

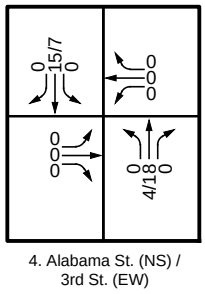
Exhibit 3 – Project AM Peak Hour and PM Peak Hour Intersection Volumes (Trucks Only)



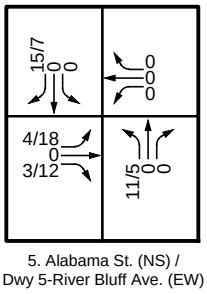
1. California St. (NS) / I-10 WB Ramps (EW)

2. California St. (NS) / I-10 EB Ramps (EW)

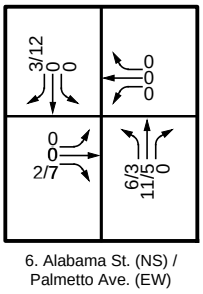
3. Alabama St. (NS) / 5th St. (EW)



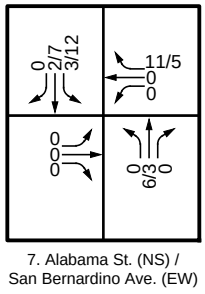
4. Alabama St. (NS) / 3rd St. (EW)



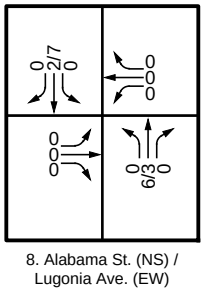
5. Alabama St. (NS) / Dwy 5-River Bluff Ave. (EW)



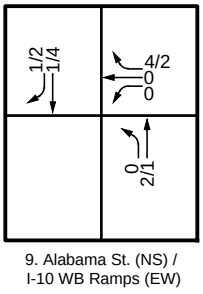
6. Alabama St. (NS) / Palmetto Ave. (EW)



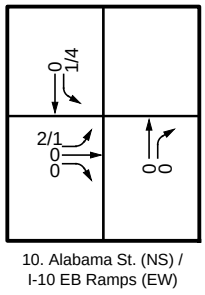
7. Alabama St. (NS) / San Bernardino Ave. (EW)



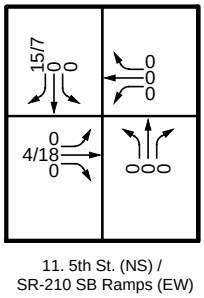
8. Alabama St. (NS) / Lugonia Ave. (EW)



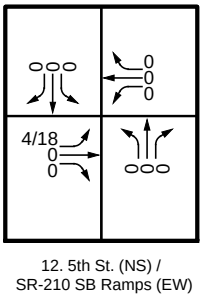
9. Alabama St. (NS) / I-10 WB Ramps (EW)



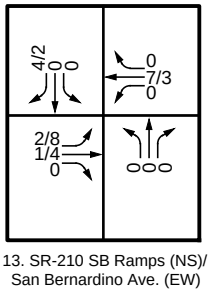
10. Alabama St. (NS) / I-10 EB Ramps (EW)



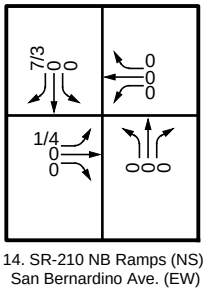
11. 5th St. (NS) / SR-210 SB Ramps (EW)



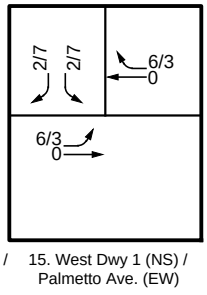
12. 5th St. (NS) / SR-210 SB Ramps (EW)



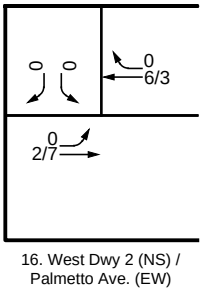
13. SR-210 SB Ramps (NS)/ San Bernardino Ave. (EW)



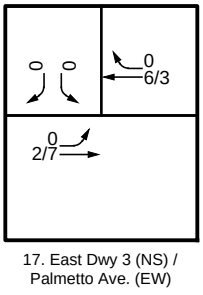
14. SR-210 NB Ramps (NS) / San Bernardino Ave. (EW)



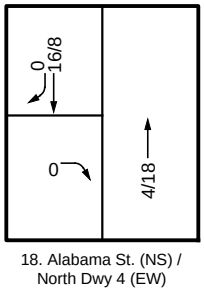
15. West Dwy 1 (NS) / Palmetto Ave. (EW)



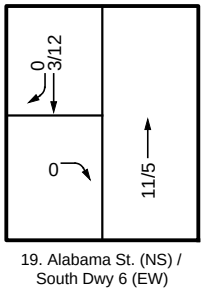
16. West Dwy 2 (NS) / Palmetto Ave. (EW)



17. East Dwy 3 (NS) / Palmetto Ave. (EW)



18. Alabama St. (NS) / North Dwy 4 (EW)



19. Alabama St. (NS) / South Dwy 6 (EW)

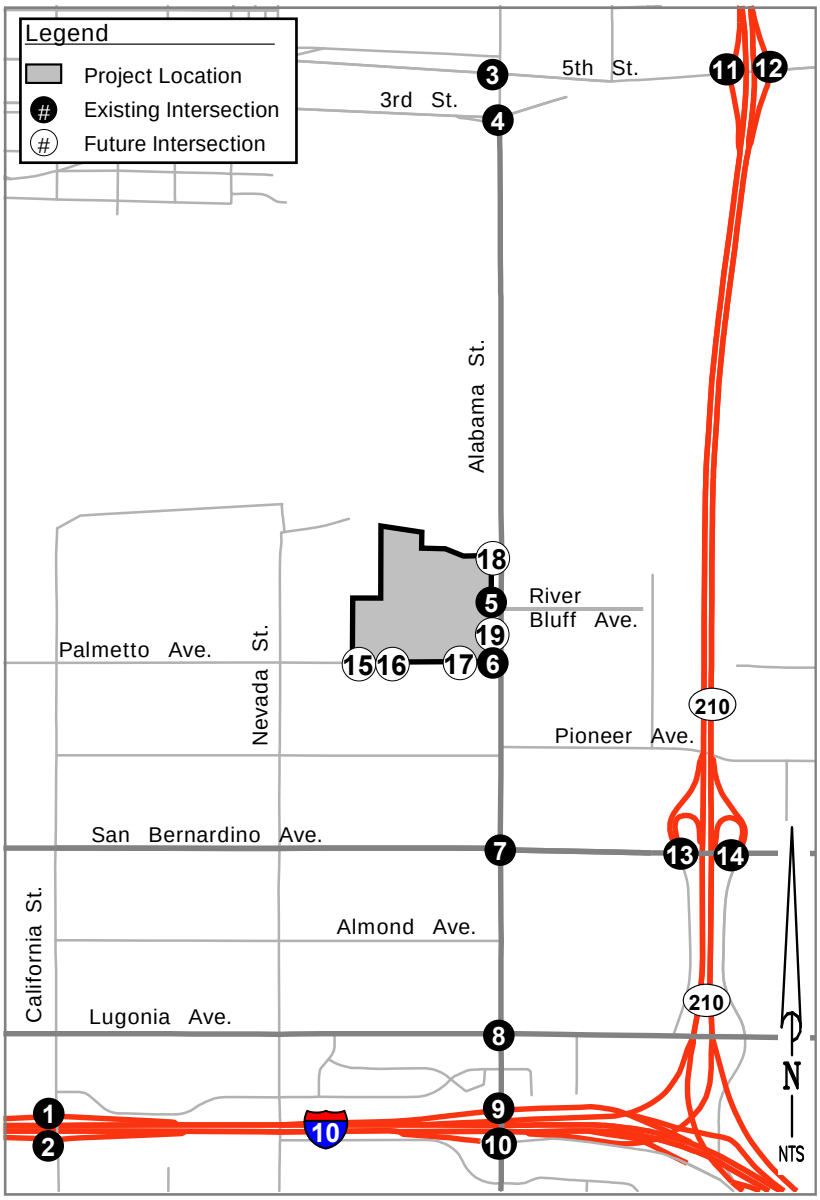
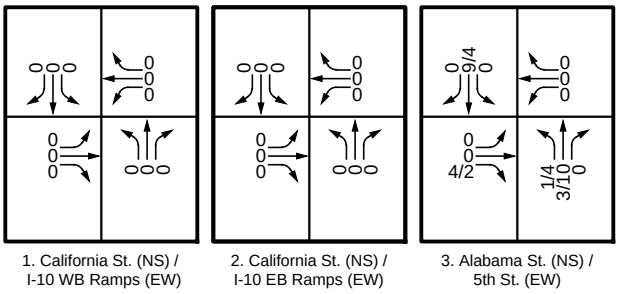


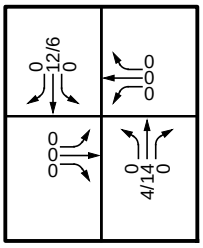
Exhibit 4 – Project AM Peak Hour and PM Peak Hour Intersection Volumes (Passenger Cars Only)



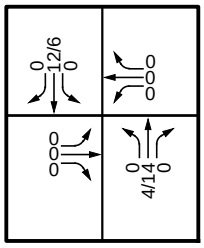
1. California St. (NS) / I-10 WB Ramps (EW)

2. California St. (NS) / I-10 EB Ramps (EW)

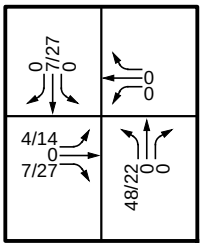
3. Alabama St. (NS) / 5th St. (EW)



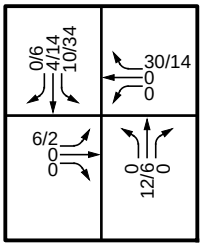
4. Alabama St. (NS) / 3rd St. (EW)



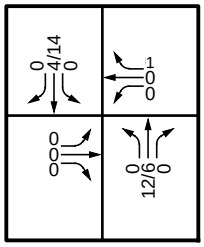
5. Alabama St. (NS) / Dwy 5-River Bluff Ave. (EW)



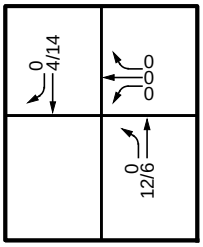
6. Alabama St. (NS) / Palmetto Ave. (EW)



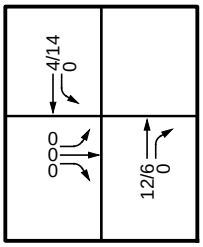
7. Alabama St. (NS) / San Bernardino Ave. (EW)



8. Alabama St. (NS) / Lugonia Ave. (EW)



9. Alabama St. (NS) / I-10 WB Ramps (EW)



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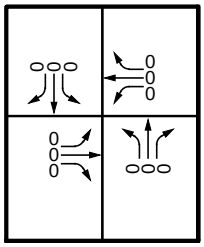

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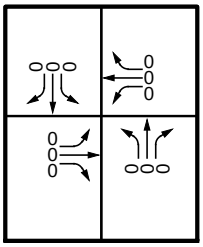

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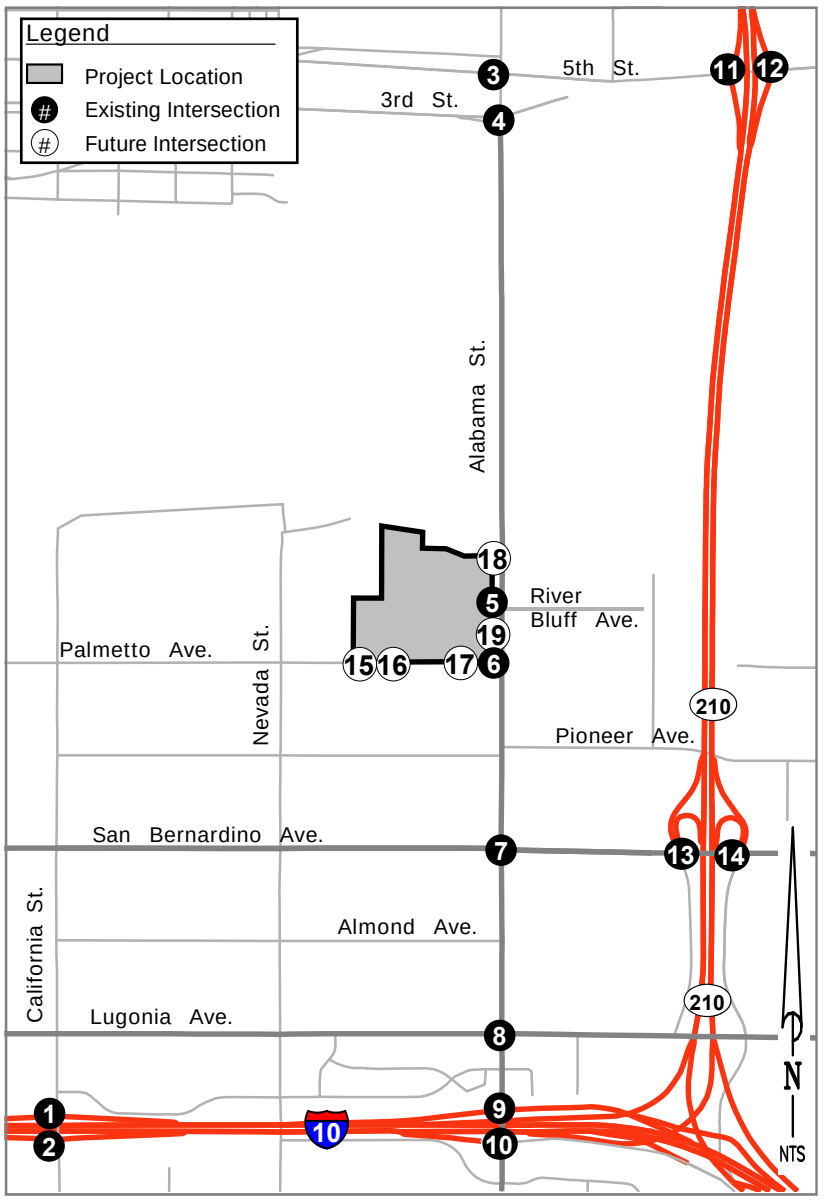
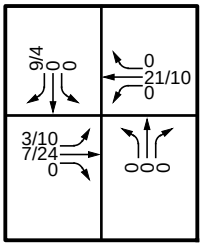
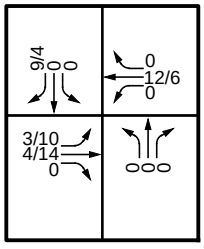




13. SR-210 SB Ramps (NS) / San Bernardino Ave. (EW)



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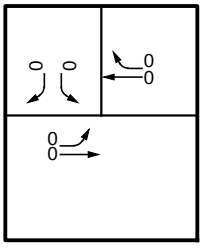
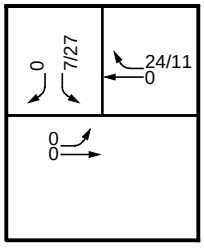


15. West Dwy 1 (NS) / Palmetto Ave. (EW)



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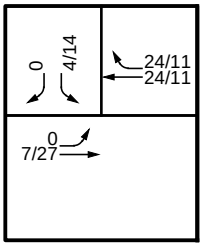

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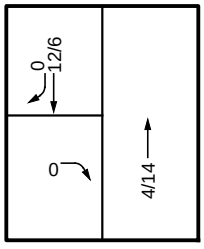
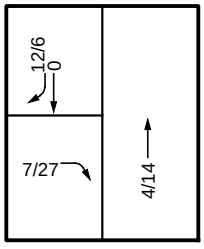
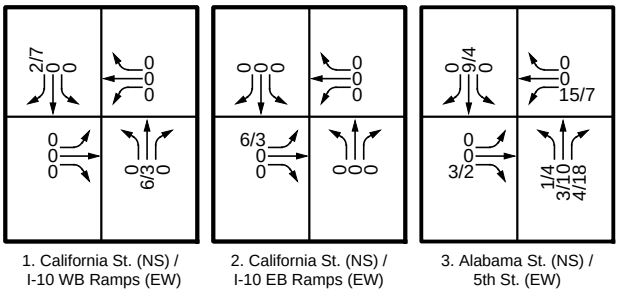


18. Alabama St. (NS) / North Dwy 4 (EW)



19. Alabama St. (NS) / South Dwy 6 (EW)

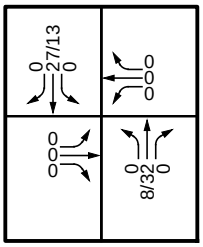
Exhibit 5 – Project AM Peak Hour and PM Peak Hour Intersection Volumes (Trucks + Passenger Cars)



1. California St. (NS) / I-10 WB Ramps (EW)

2. California St. (NS) / I-10 EB Ramps (EW)

3. Alabama St. (NS) / 5th St. (EW)



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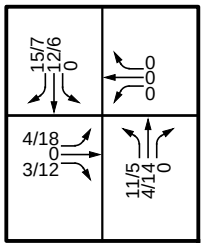
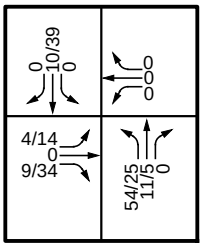


5. Alabama St. (NS) / Dwy 5-River Bluff Ave. (EW)



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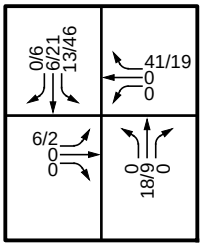
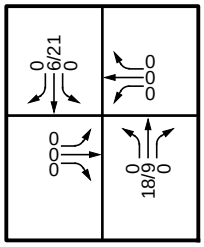
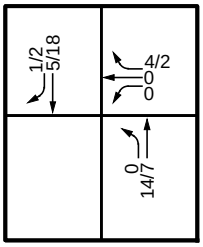


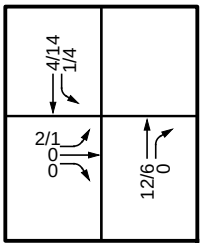
7. Alabama St. (NS) / San Bernardino Ave. (EW)



8. Alabama St. (NS) / Lugonia Ave. (EW)



9. Alabama St. (NS) / I-10 WB Ramps (EW)



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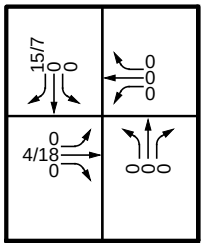

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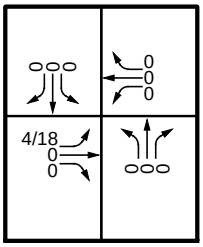

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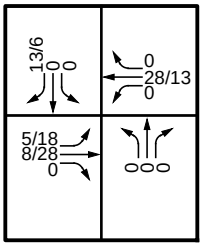

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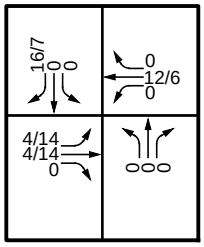

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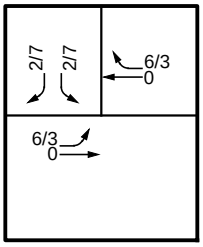

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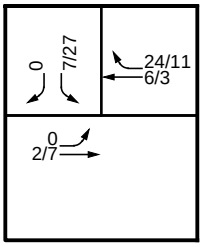

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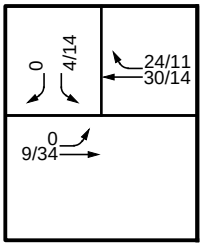

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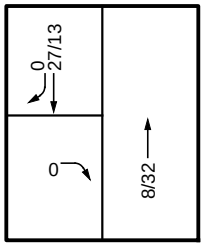
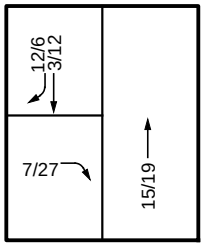


18. Alabama St. (NS) / North Dwy 4 (EW)



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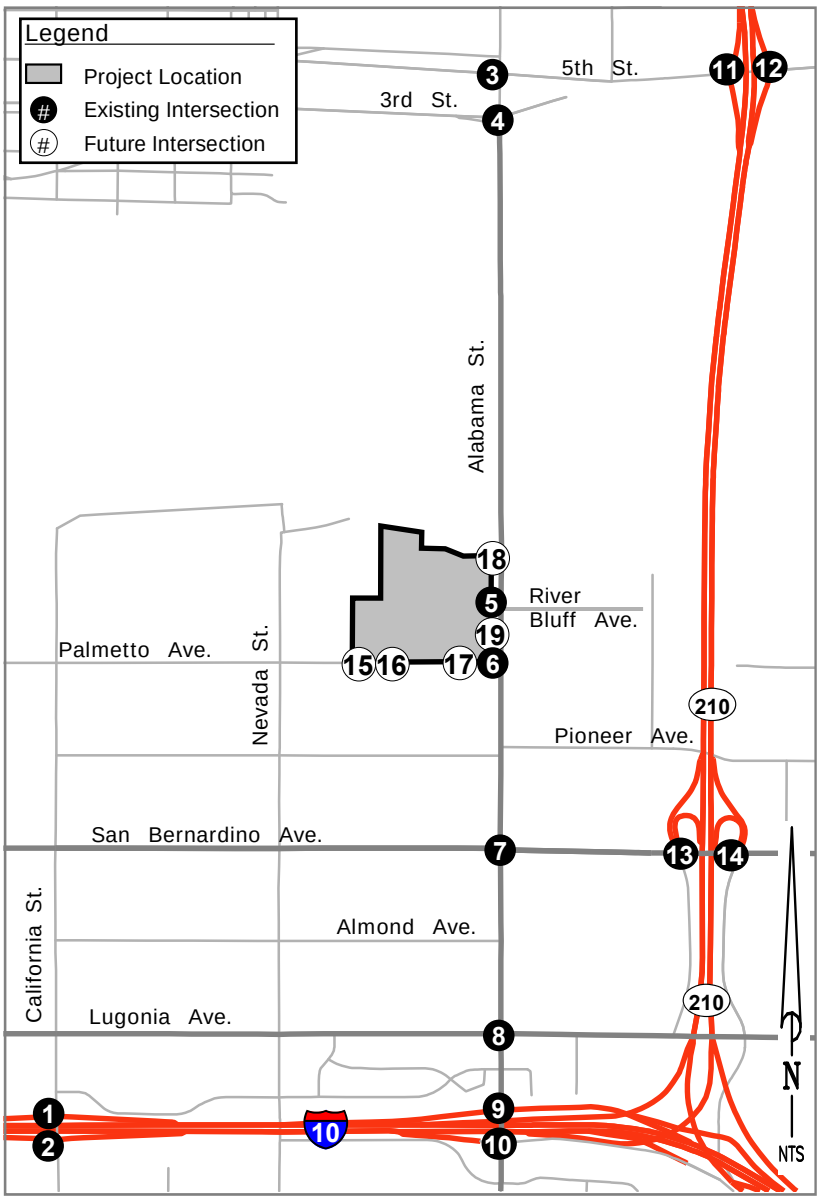
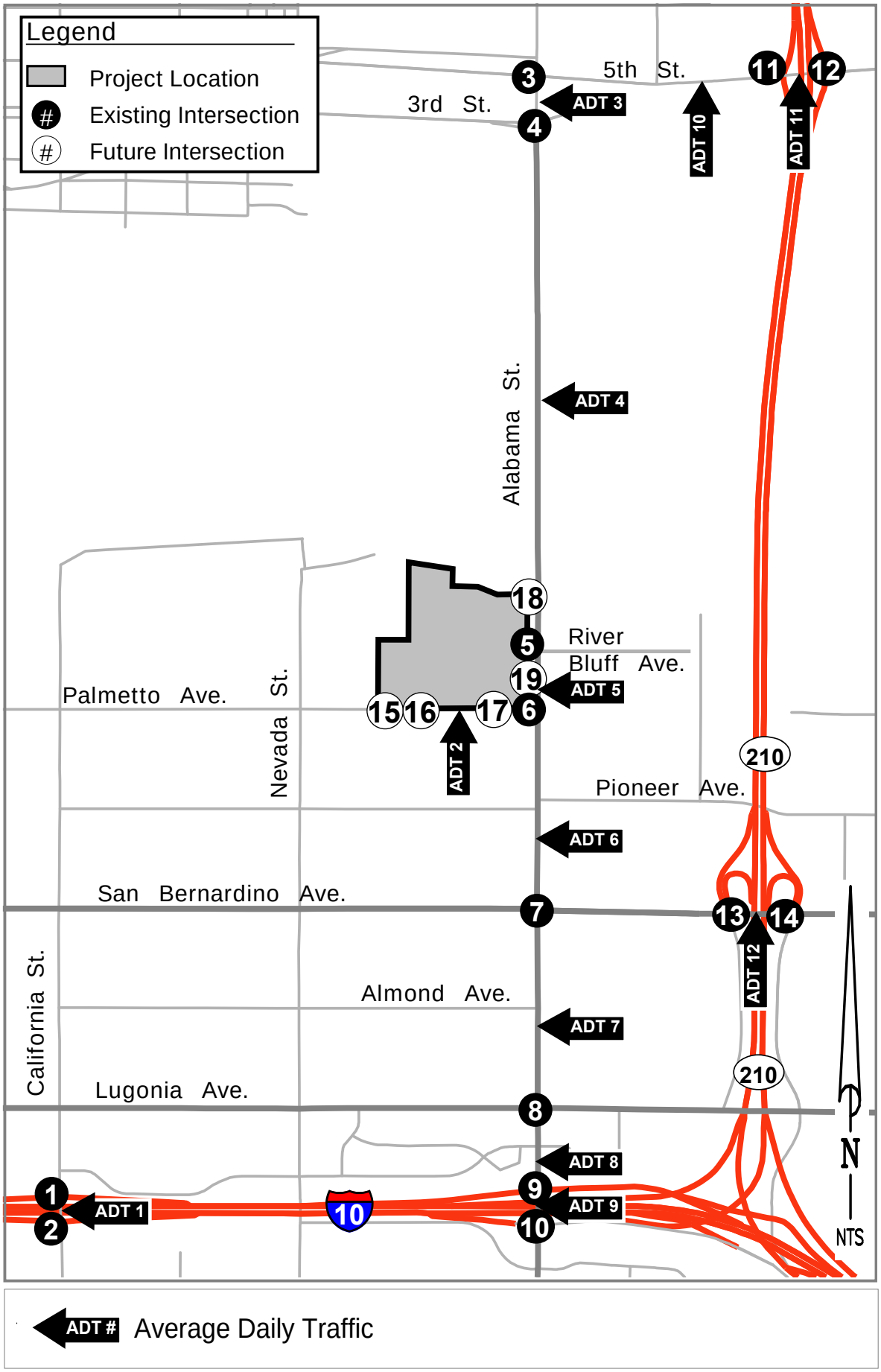
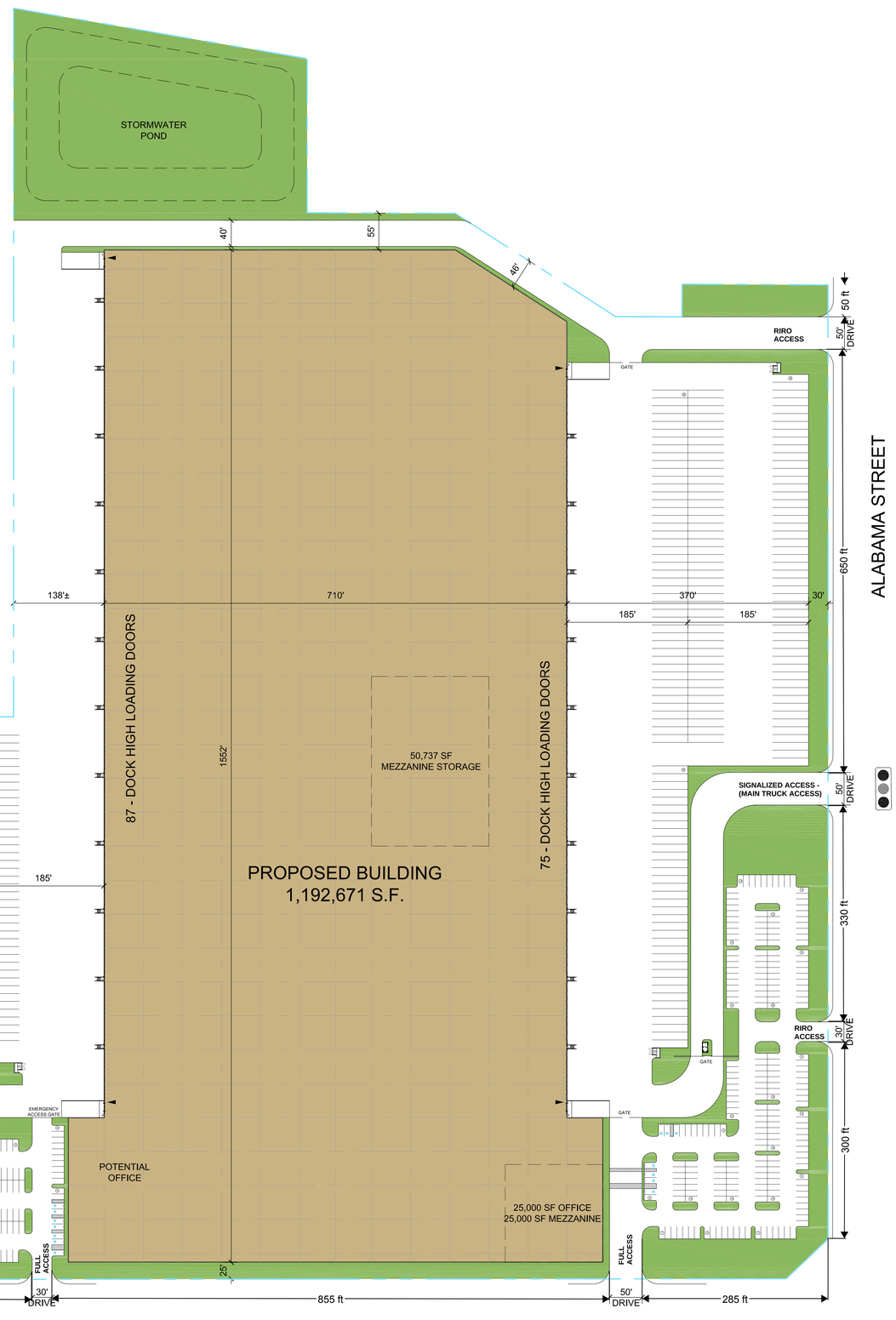


Exhibit 6 – Figure Intersections and Roadway Segment Data to be Collected





A CONCEPTUAL SITE PLAN
SCALE: 1" = 80'

PROJECT INFORMATION - SCHEME 5			1/11/2018
GROSS SITE AREA	54.76 AC	**2,385,342 SF**	
TOTAL BUILDING AREA		**1,192,671 SF**	
FOOTPRINT		1,116,934 SF	
WAREHOUSE		1,091,934	
OFFICE		25,000	
MEZZANINE		75,737	
OFFICE		25,000	
STORAGE		50,737	
NET COVERAGE		50.00%	
LANDSCAPE PROVIDED		15.1%	360,887
LANDSCAPE REQUIRED		15.0%	357,801
PARKING REQUIRED			
WAREHOUSE @ 1/1,000 <40K		40	
WAREHOUSE @ 1/4,000 >40K		276	
OFFICE @ 1/250		200	
TOTAL REQUIRED		516	
PARKING PROVIDED		725	
STANDARD		711	
ADA		14	
TRAILER		215	

PROJECT
DUKE REALTY
CITY OF REDLANDS
SAN BERNARDINO COUNTY

SCHEME 5
SITE PLAN

HERDMAN
ARCHITECTURE + DESIGN
16201 Scientific Way
Irvine, CA 92618
www.Herdman-AD.com
714.389.2800
info@Herdman-AD.com

A17-2112
01/11/2018

NORTH

CONCEPTUAL SITE PLAN

APPENDIX B:
CUMULATIVE PROJECT INFORMATION

City of Highland

List of Cumulative Projects

Project 1

TRAFFIC STUDY

UPPER SANTA ANA RIVER WASH

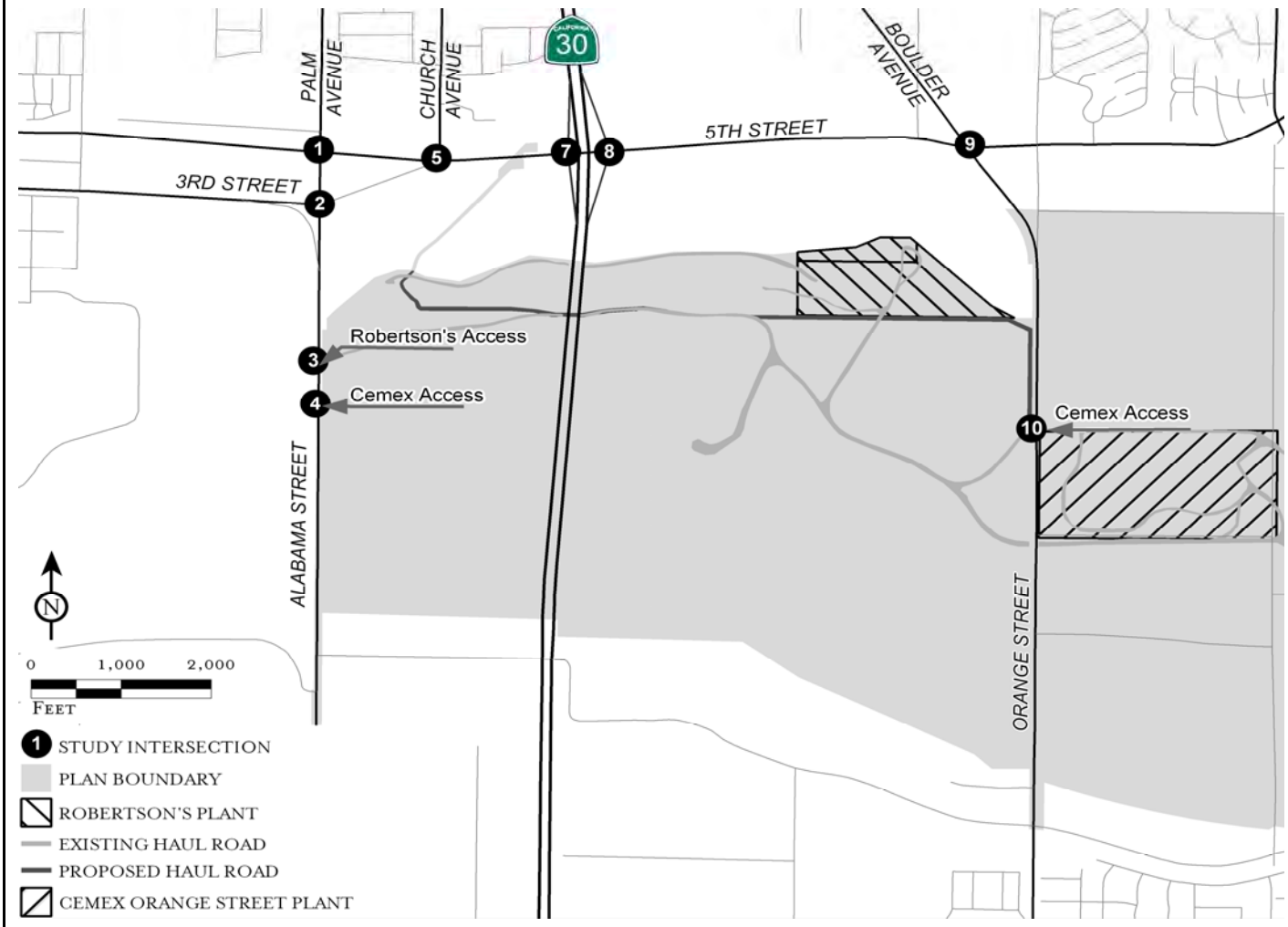
SAN BERNARDINO COUNTY, CALIFORNIA

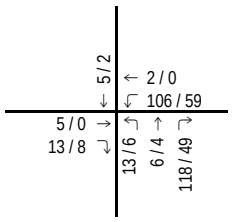
This Traffic Study
has been prepared under the supervision of
Leslie E. Card, P.E.

Signed Leslie E. Card

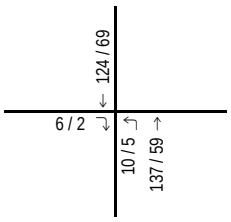
LSA

January 26, 2007

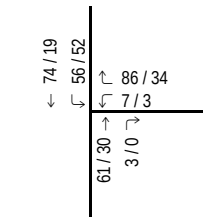




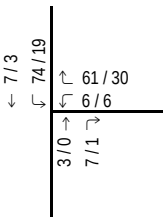
1 Palm Avenue/5th Street



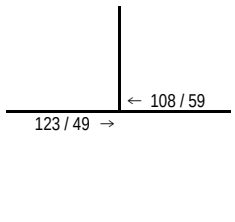
2 Palm Avenue/3rd Street



3 Alabama Street/Robertson's Access



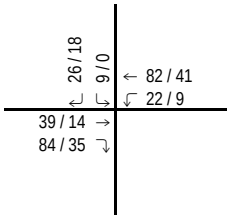
4 Alabama Street/Cemex Access



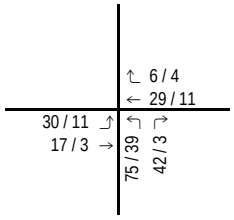
5 Church Avenue/5th Street

Access Alternatives A and D Only

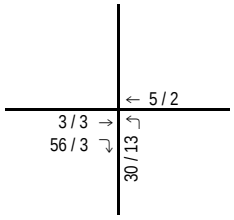
6 Truck Access/5th Street



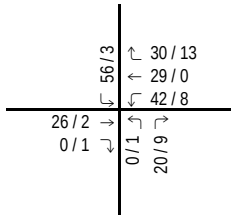
7 SR-30 SB Ramps/5th Street



8 SR-30 NB Ramps/5th Street



9 Boulder Avenue/5th Street



10 Orange Street/Cemex Access

LSA

FIGURE 5

123 / 456 AM / PM Volume

Upper Santa Ana River Wash

Total Plant Traffic (in PCEs)

R:\SBW330\Traffic\Formatted To EIR\January 2007\g30_05_Existing Plant Trips (1/25/2007)

Table E - Project New Trip Generation - Aggregate Trucks
Land Use Alternative 1

Land Use	A.M. Peak Hour In	A.M. Peak Hour Out	A.M. Peak Hour Total	P.M. Peak Hour In	P.M. Peak Hour Out	P.M. Peak Hour Total	Daily[5]
Robertson Plunge Creek [1]							
Existing Trucks At 1.81 MPTY Baseline	11	10	21	6	6	12	384
Proposed Trucks at 3.00 MTPY [2]	11	10	21	6	6	12	640
Net New Trucks	0	0	0	0	0	0	256
Net New PCE Trips [3]	0	0	0	0	0	0	768
Cemex Orange Street Plant [4]							
Existing Trucks At 2.53 MPTY Baseline	38	39	77	10	7	17	762
Proposed Trucks at 3.00 MTPY	44	46	90	12	8	20	910
Net New Trucks	6	7	13	2	1	3	148
Net New PCE Trips [3]	18	21	39	6	3	9	444
Total New PCE Trips	**18**	**21**	**39**	**6**	**3**	**9**	**1,212**

Note:

These are ship numbers that reflect waste and stock piling

MTPY=Million Tons Per Year.

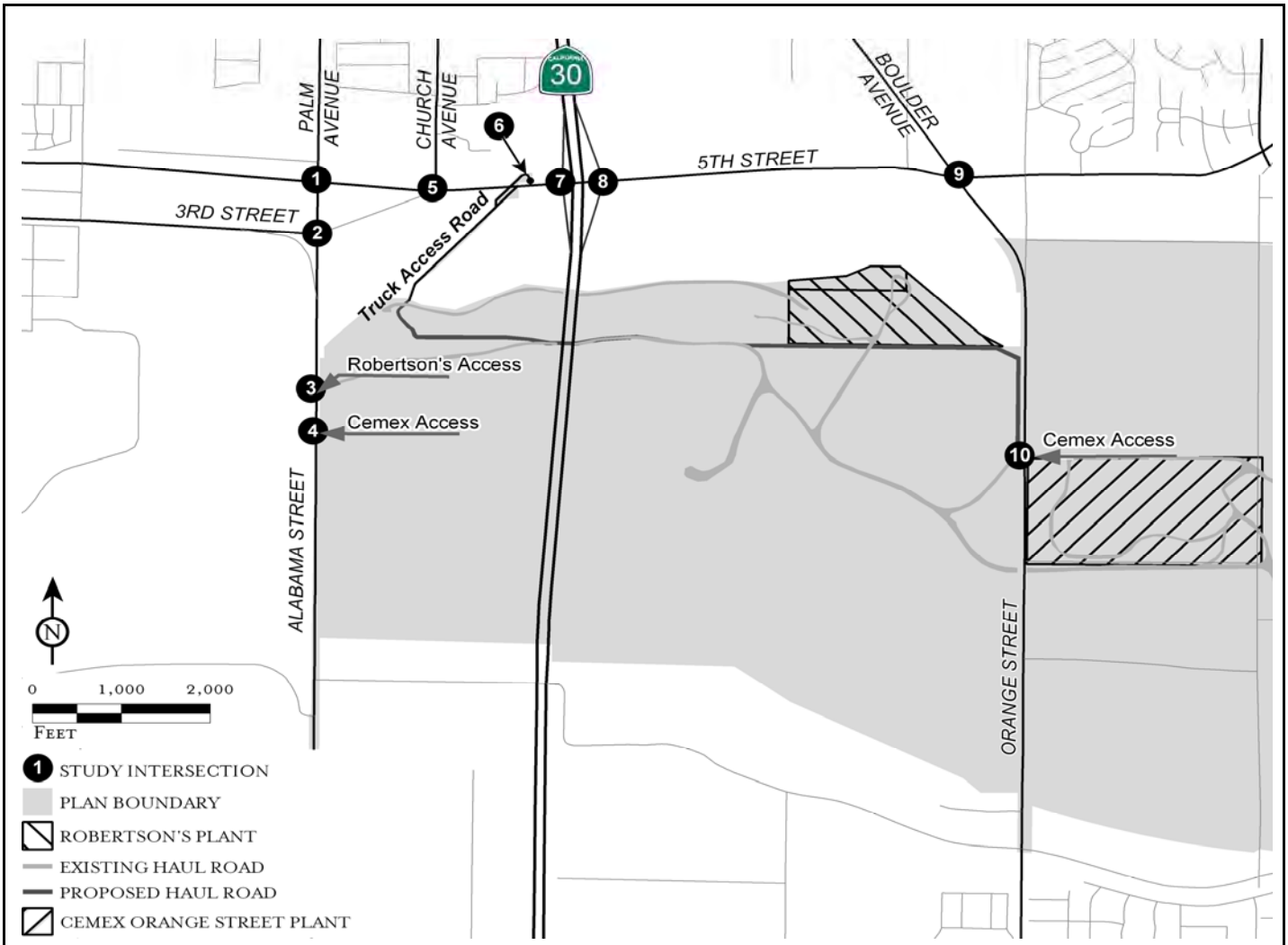
[1] Based on Robertson's memo updated February 24, 2006 (3 years of truck data from 2003 to 2005)

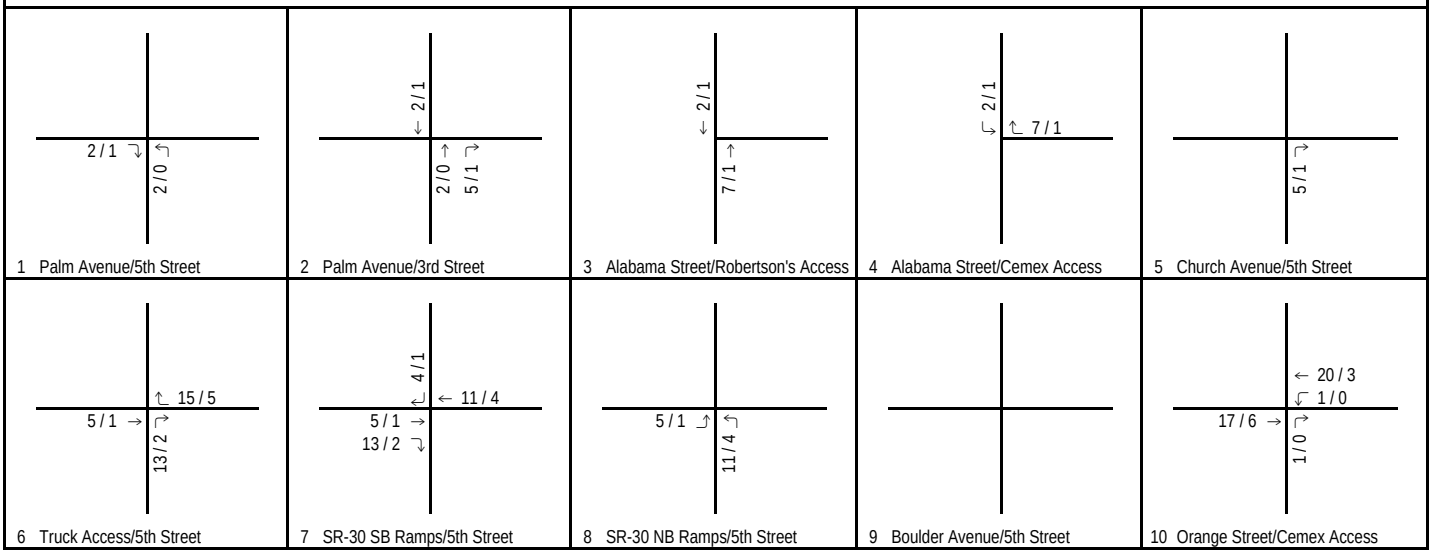
[2] Robertson's has the ability to limit shipments during local peak traffic hours, so that NO net change from baseline conditions would occur during these hours.

[3] All values given are in Passenger Car Equivalency (PCE). PCE of 3 has been used for all aggregate trucks

[4] Based on Lilburn Corporation and Cemex memo updated June 16, 2006 (3 years of truck data from 2003 to 2005)

[5] Based on Robertson's memo updated February 24, 2006 and Cemex memo updated June 16, 2006





LSA

FIGURE 17

123 / 456 AM / PM Volume

Upper Santa Ana River Wash

New Cemex Aggregate Trips (in PCEs)

Land Use Alternative 1, Access Alternative D

R:\SBW330\Traffic\Formatted To EIR\January 2007\g30_17_New Cemex Trips Alt 1D (1/25/2007)

Project 2

URBAN
CROSSROADS

41 Corporate Park, Suite 300
Irvine, CA 92606

Prepared by:

Carleton Waters, P.E.
Raul Armenta, E.I.T.
Domingo Maclang

Prepared for:

Mr. Camille Bahri
SPRING PACIFIC PROPERTIES, LLC
31866 Camino Capistrano
San Juan Capistrano, CA 92675

BLOSSOM TRAILS
SITE ACCESS EVALUATION
CITY OF HIGHLAND, CALIFORNIA

January 27, 2006

JN: 03524-02
CW:RA:DM:mg

TABLE 2

TRIP GENERATION SUMMARY

BLOSSOM TRAILS

LAND USE	QUANTITY	UNITS[1]	PEAK HOUR						DAILY
			AM			PM			
			IN	OUT	TOTAL	IN	OUT	TOTAL	
Single Family Detached	14	DU	3	8	11	9	5	14	134
Residential Condo/Townhouse	306	DU	21	113	134	107	52	159	1,793
Total			**24**	**121**	**145**	**116**	**57**	**173**	**1,927**

ADJACENT PARCEL

LAND USE	QUANTITY	UNITS[1]	PEAK HOUR						DAILY
			AM			PM			
			IN	OUT	TOTAL	IN	OUT	TOTAL	
Residential Condo/Townhouse	252 [2]	DU	18	93	111	88	43	131	1,477
Total			**18**	**93**	**111**	**88**	**43**	**131**	**1,477**

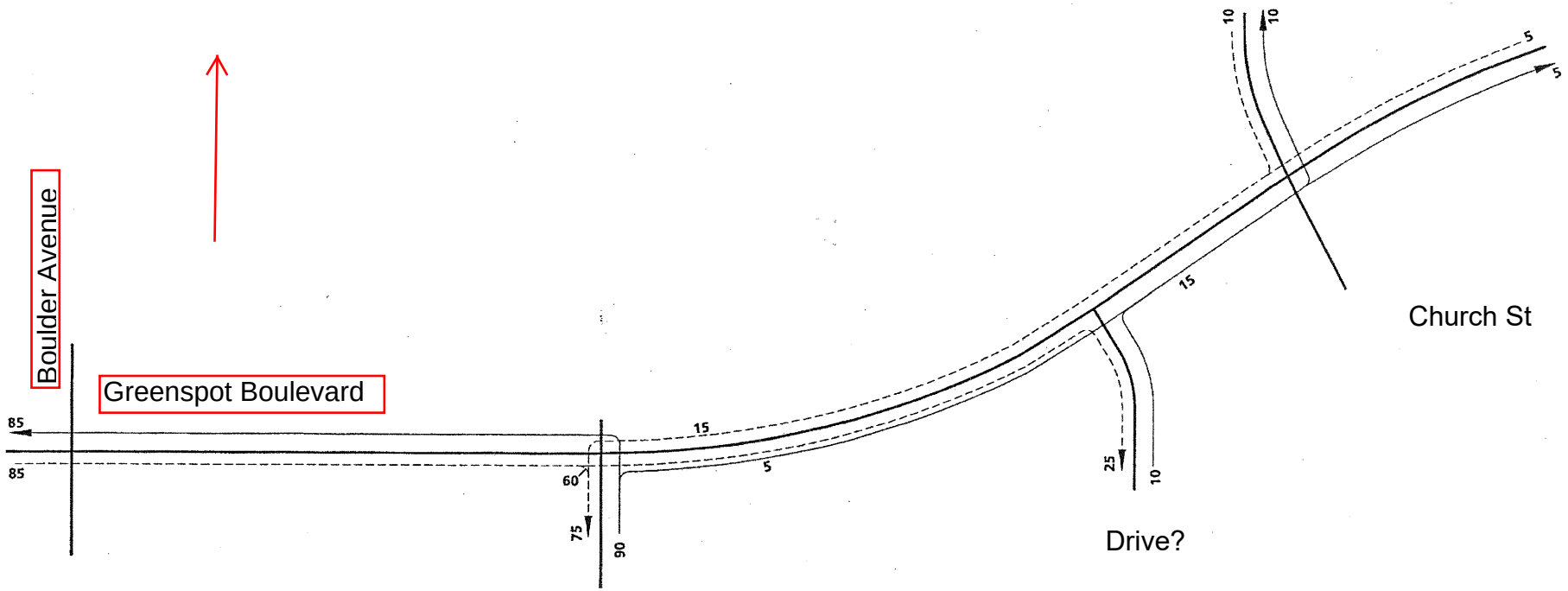
[1] DU = Dwelling Units

[2] Property is zoned for 12 units/acre and is approximately 21 acres

U:\UcJobs_03500\03524\Excel\[03524-02.xls]T 2

EXHIBIT C

BLOSSOM TRAILS SOUTH TRIP DISTRIBUTION WITHOUT ADJACENT PROJECT (FULL ACCESS)



G-63

LEGEND:

= EGRESS

= INGRESS

N

BLOSSOM TRAILS ACCESS EVALUATION, Highland, California - 03524: 05.dwg

URBAN CROSSROADS

Project 3

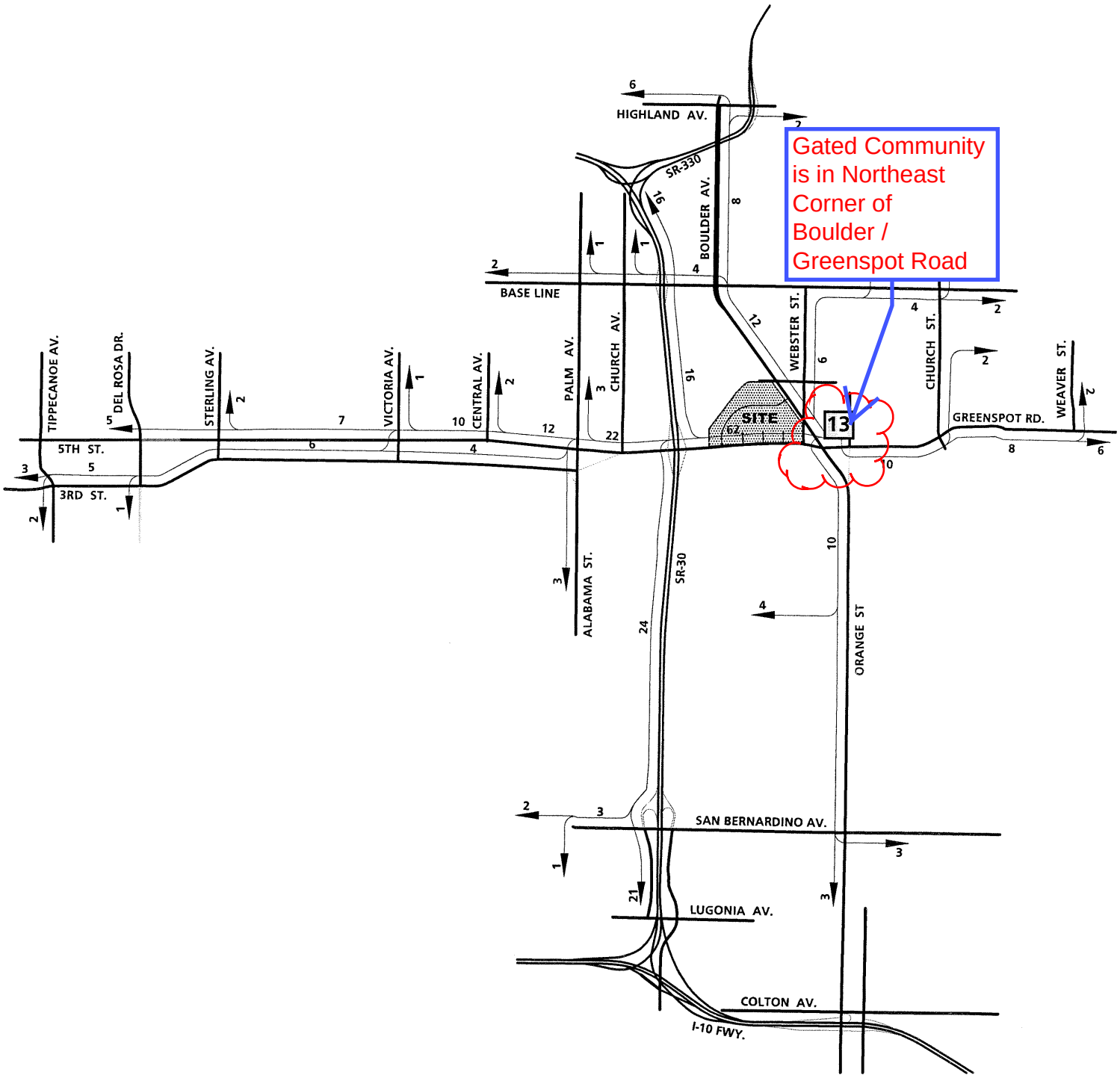
121 DU
2/2/09

7th Ed ITE - Weekday rates

Page No.	Category	Unit	Ave Trip Rate per Unit	Total Trips	In		Out	
					%	Trips	%	Trips
	210 - SFH	121						
269	ADT		9.57	1158.0	50	579	50	579
270	AM Peak Hour of Adjacent Traffic		0.75	90.8	25	23	75	68
271	PM Peak Hour of Adjacent Traffic		1.01	122.2	63	77	37	45

EXHIBIT D-3

121 DU SFD GATED COMMUNITY TRIP DISTRIBUTION



LEGEND:

10 = PERCENT TO/FROM PROJECT

13 = 121 DU SINGLE FAMILY DETACHED HOUSING GATED COMMUNITY

N

SOURCE: RECENT SUBMITTED DEVELOPMENT

Project 4

San Manuel

San Manuel Village
Traffic Impact Analysis
(TIA)

Final

Prepared by:

Transportation Engineering and Planning, Inc.
P.O. Box 18355
Irvine, CA 92623
Contact: Craig S. Neustaedter,
California Registered Traffic Engineer, License #: TR 1433
Phone: 909 263 0383

Prepared for:

Mooney-Jones & Stokes
Attention: Daniel A. Serrano
9903 Business Park Avenue
San Diego, CA 92131
Phone: 858-578-8964

June 1, 2006

Table 1
San Manuel Village TIA (February 2006)
Site Land-Use Assumptions for Trip Generation Estimation

ITE	Site Plan Land Use	ITE Use	Quantity (trip generation parameter)
934	Pad 1: restaurant with drive-through	Fast food restaurant with a drive-through window	3500 SF
814	Pad 2: retail	Specialty retail center	6000 SF
932	Pad 3: restaurant	High turnover (sit down) restaurant	5800 SF
912	Pad 4: commercial	Drive-in bank	5200 SF
934	Pad 5: restaurant with drive-through	Fast food restaurant with drive-through	5000 SF
932	Pad 6: restaurant and retail	High turnover (sit down) restaurant and specialty retail center	13,000 SF
710	Office	General office building	68,500 SF
310	Hotel	All suites hotel	110 rooms

FIGURE 6

SAN MANUEL VILLAGE TIA

PROJECT AM AND PM PEAK HOUR TURNING MOVEMENTS

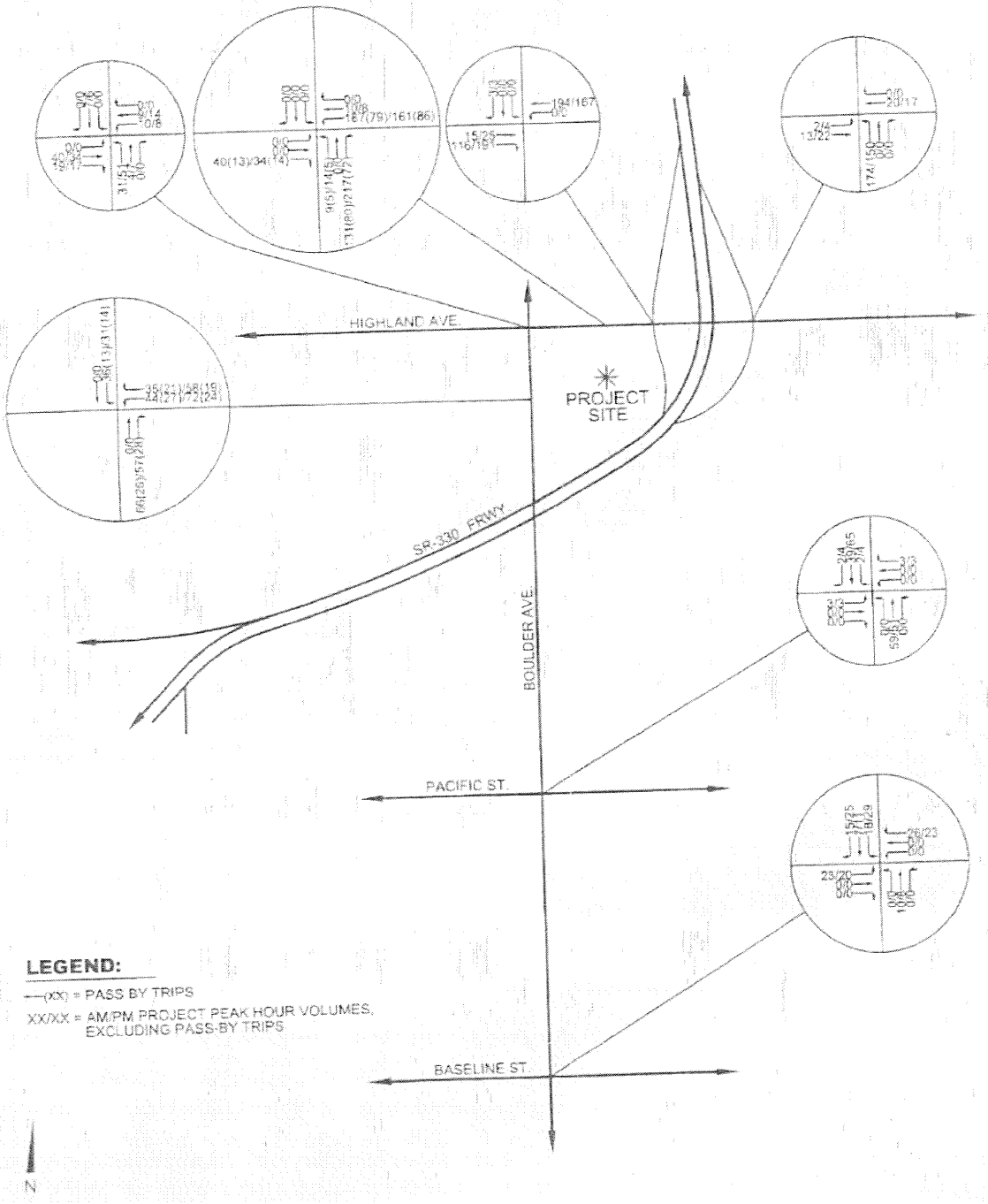
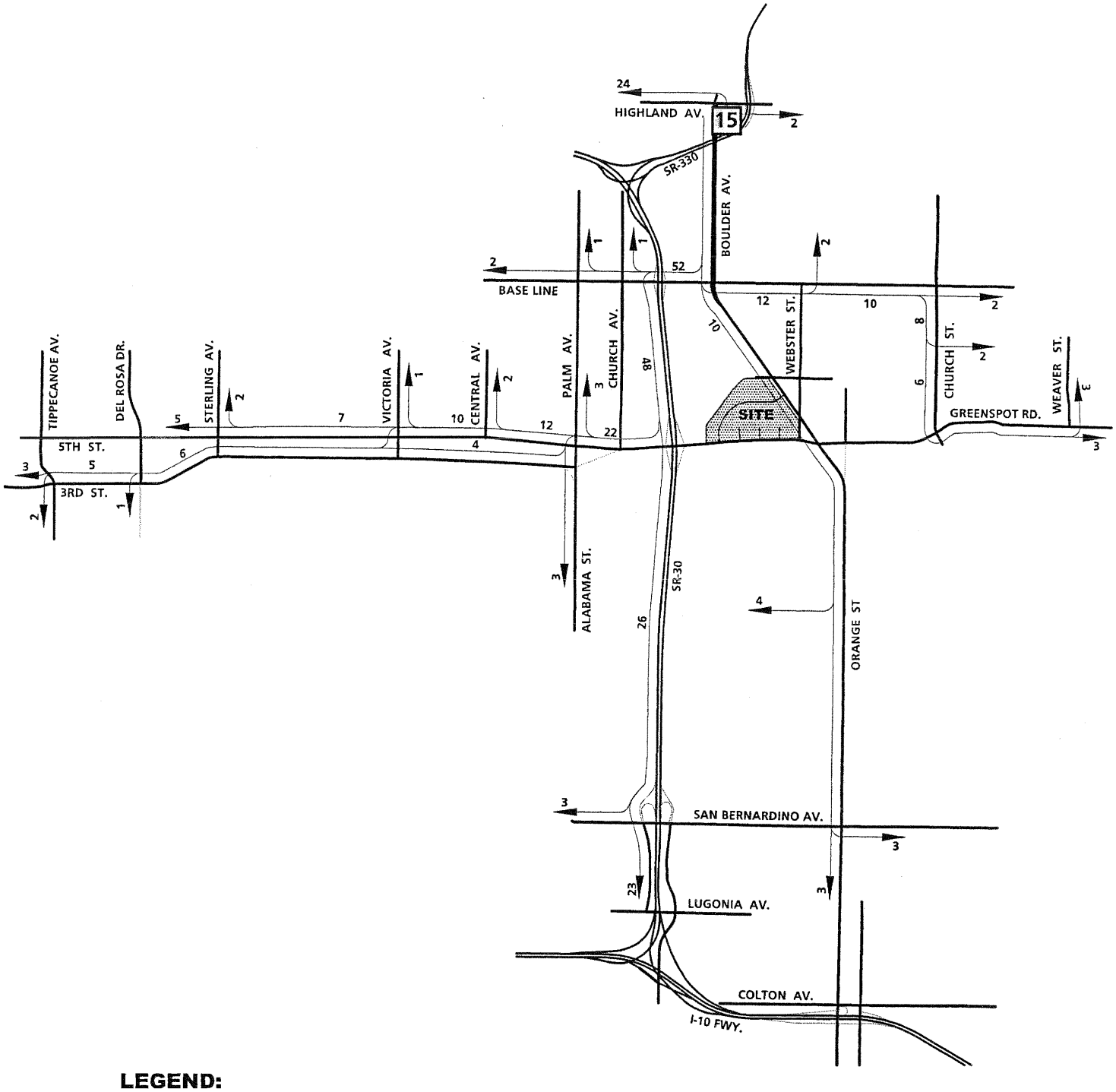


EXHIBIT D-5

SAN MANUEL VILLAGE (RETAIL CENTER & HOTEL/CONVENTION) TRIP DISTRIBUTION



LEGEND:

10 = PERCENT TO/FROM PROJECT

15 = SAN MANUEL VILLAGE (RETAIL CENTER & HOTEL/CONVENTION)

N

SOURCE: RECENT SUBMITTED DEVELOPMENT

URBAN CROSSROADS

TABLE 1

SAN MANUEL TRIP GENERATION RATES[1]

PAD	LAND USE	ITE CODE	QUANTITY	UNITS[2]	PEAK HOUR AM IN	PEAK HOUR AM OUT	PEAK HOUR AM TOTAL	PEAK HOUR PM IN	PEAK HOUR PM OUT	PEAK HOUR PM TOTAL	DAILY
1	Restaurant W/Drive Thru	934	3.5	TSF	27.09	26.02	53.11	18.01	16.63	34.64	496.12
2	Specialty Retail	814	6.0	TSF	NOM	NOM	NOM	1.19	1.52	2.71	44.32
3	Restaurant (High Turnover)	932	5.8	TSF	5.99	5.53	11.52	6.66	4.26	10.92	127.15
4	Bank w/ Drive Thru	912	5.2	TSF	11.24	8.14	19.38	25.54	25.54	51.08	411.17
5	Restaurant W/Drive Thru	934	5.0	TSF	27.09	26.02	53.11	18.01	16.63	34.64	496.12
6	Restaurant (High Turnover) W/Specialty Retail[3]	932	13.0	TSF	5.99	5.53	11.52	6.66	4.26	10.92	127.15
7	Office	710	68.5	TSF	1.78	0.24	2.02	0.39	1.88	2.27	14.55
8	Hotel	310	110	RM	0.34	0.22	0.56	0.31	0.27	0.58	8.17

SAN MANUEL TRIP GENERATION SUMMARY

PAD	LAND USE	QUANTITY	UNITS	PEAK HOUR AM IN	PEAK HOUR AM OUT	PEAK HOUR AM TOTAL	PEAK HOUR PM IN	PEAK HOUR PM OUT	PEAK HOUR PM TOTAL	DAILY
1	Restaurant W/Drive Thru	3.5	TSF	95	91	186	63	58	121	1,736
2	Specialty Retail	6.0	TSF	NOM	NOM	NOM	7	9	16	266
3	Restaurant (High Turnover)	5.8	TSF	35	32	67	39	25	64	737
4	Bank w/ Drive Thru	5.2	TSF	58	42	100	133	133	266	2,138
5	Restaurant W/Drive Thru	5.0	TSF	135	130	265	90	83	173	2,481
6	Restaurant (High Turnover) W/Specialty Retail[3]	13.0	TSF	78	72	150	87	55	142	1,653
	Subtotal			401	367	768	419	363	782	9,011
	-Commercial 25% Pass By Reduction [4]			*-100*	*-92*	*-192*	*-105*	*-91*	*-196*	*-2,253*
	Net Commercial Trips			**301**	**275**	**576**	**314**	**272**	**586**	**6,758**
7	Office	68.5	TSF	122	16	138	27	129	156	997
8	Hotel	110.0	RM	37	24	61	34	30	64	899
	Net Trips			**460**	**315**	**775**	**375**	**431**	**806**	**8,654**

[1] Source: ITE (Institute of Transportation Engineers) Trip Generation Manual, 7th Edition, 2003.

[2] TSF = thousand square feet, DU = dwelling units, RM = rooms

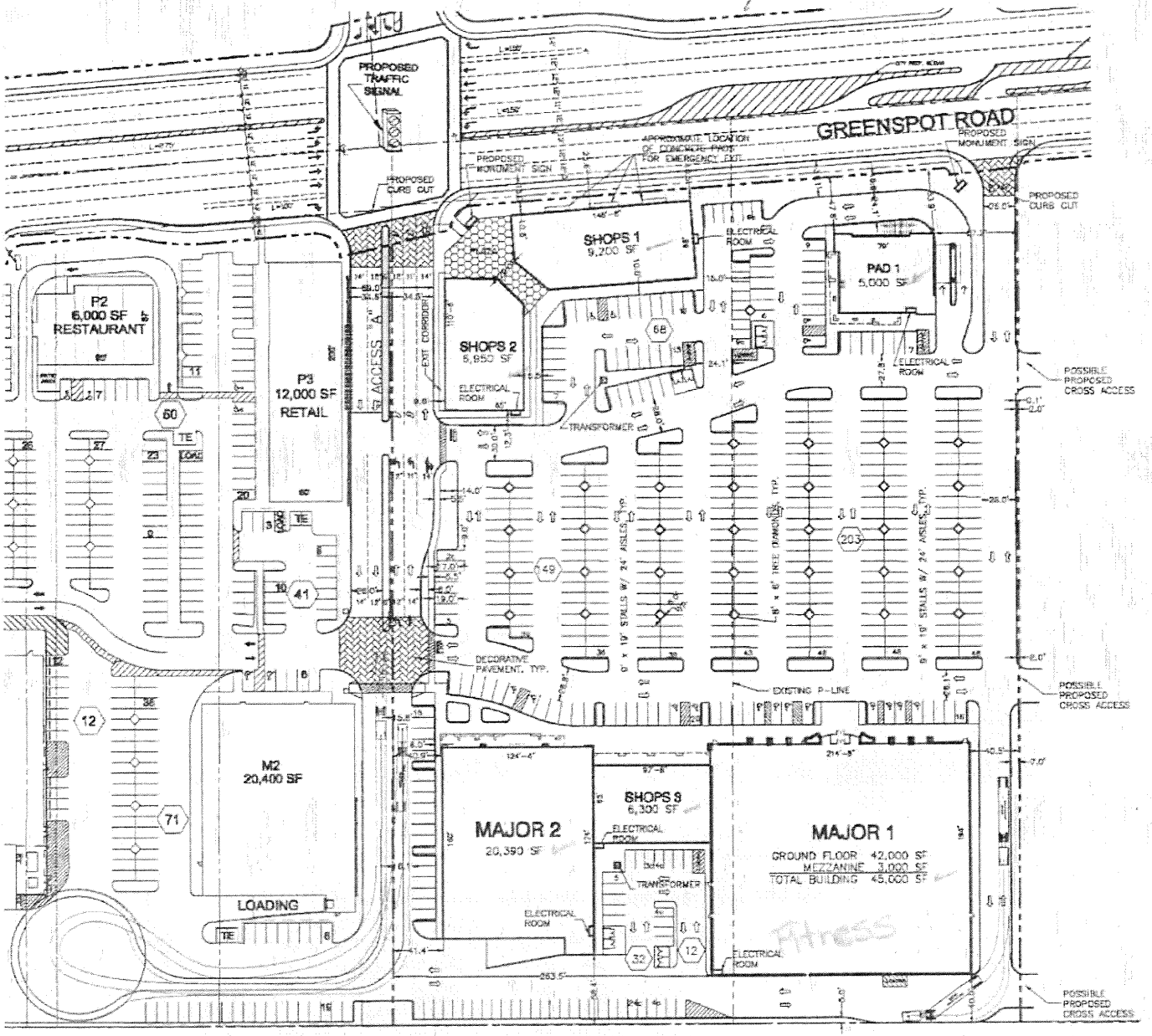
[3] ITE Code 932 has been used for this cumulative project to be more conservative

[4] Not all of the trips generated by this project are 'NEW' trips. A 25% Pass-By reduction has been considered for trip generation purposes.

NO NAME:[San Manuel Village TG.xls]TGinputarea

Project 5

#21 2nd Submittal 07-1032

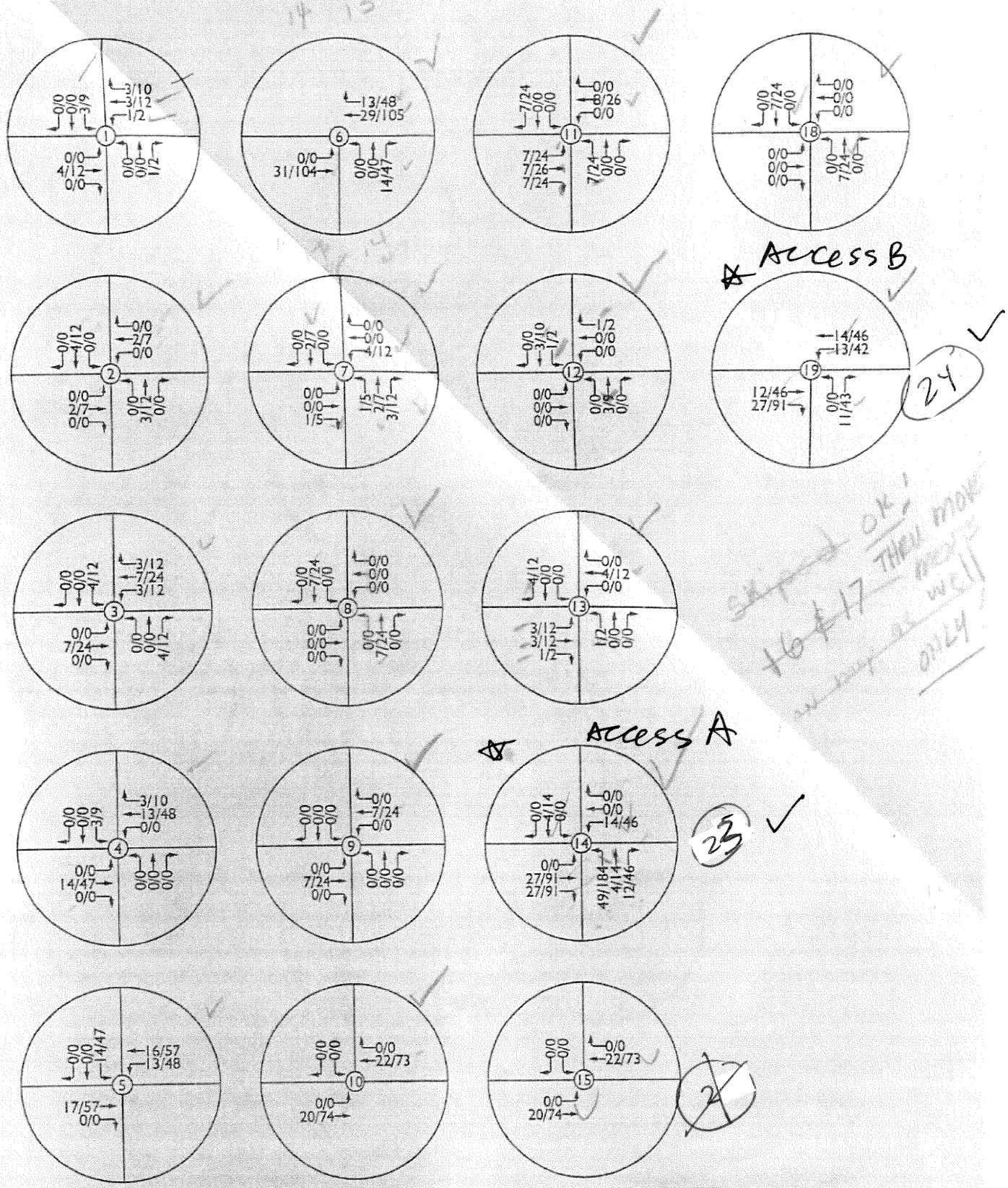


42,840 Retail
45000 Fitness

1958-07-01 (ExF)
REGENCY CENTERS TRAFFIC IMPACT STUDY, City of Highland, California

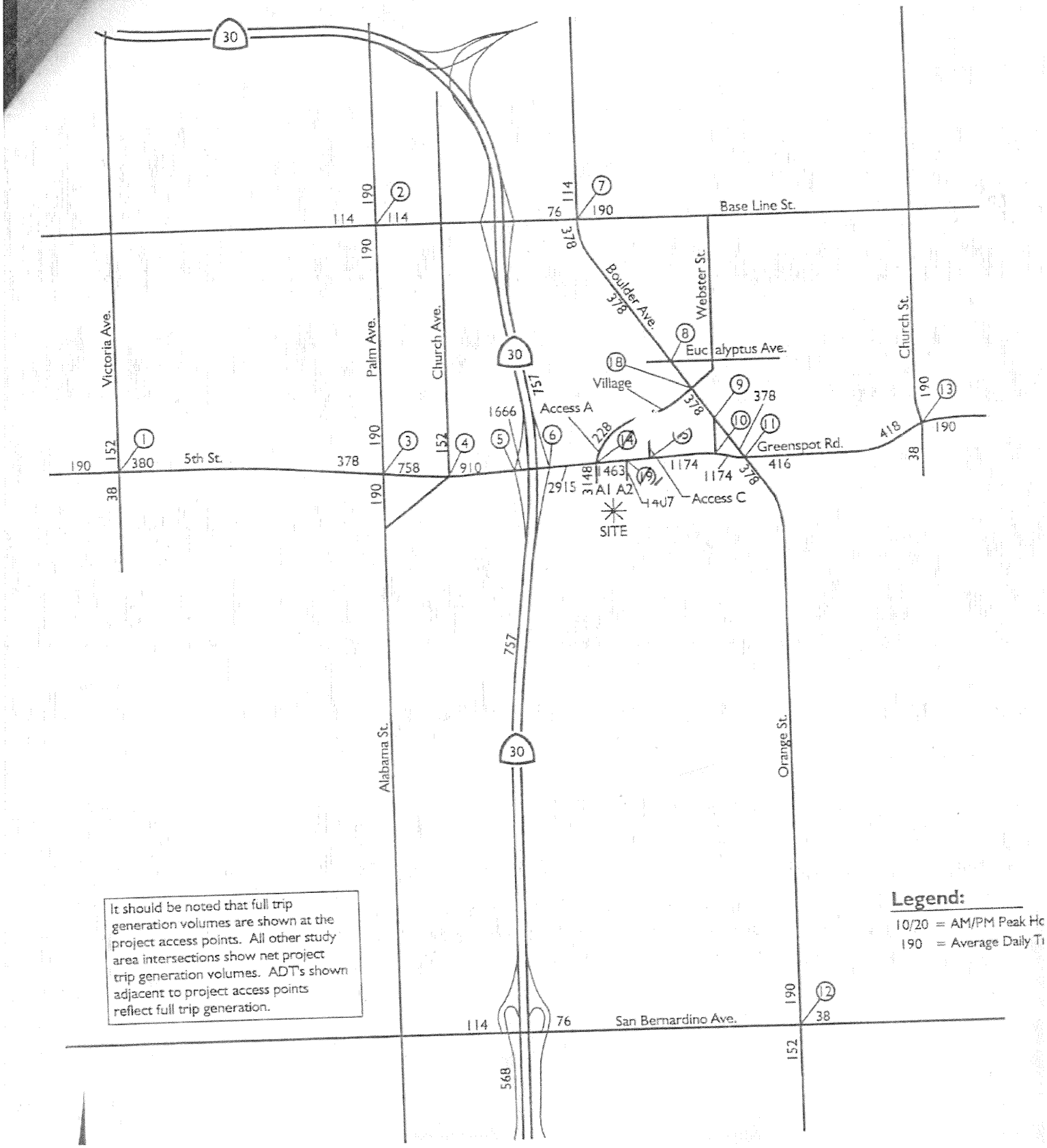
Exhibit H

Project Peak Hour Intersection Volumes



ur Volumes
afic

RK engineering group, inc.



1958-07-01 (ExH)
REGENCY CENTERS TRAFFIC IMPACT STUDY, City of Highland, California

TABLE 3

Trip Generation[1]

Land Use	ITE Code	Quantity	Units[2]	Peak Hour						Daily
				AM			PM			
				In	Out	Total	In	Out	Total	
Bank w/ Drive-Thru	912	5.000	TSF	35	27	62	114	114	229	1,232
Less Pass-by Trips (25%)				-9	-7	-16	-29	-29	-57	-308
Net Trip Generation (Bank)				26	20	46	86	86	172	924
Retail	820	42.840	TSF	27	17	44	77	84	161	1,840
Less Pass-by Trips (25%)				-7	-4	-11	-19	-21	-40	-460
Net Trip Generation (Retail)				20	13	33	58	63	121	1,380
Health / Fitness Club	492	45.000	TSF	23	32	54	93	89	182	1,482
Gross Total Trip Generation				85	76	160	284	287	572	4,554
Net Total Trip Generation				70	65	133	236	238	475	3,786

[1] TSF = Thousand Square Feet

[2] Full Trip Generation Without Pass-by Trips; Utilized for Analysis at Project Access Points

Project 6

Retail Center -
SWC Boulder - Greenspot Road
CUP 007-008

Traffic Study for a Retail Project in the City of Highland

February 17, 2009

Prepared for:

Boulder Holdings, LLC
Thatcher Engineering & Associates
345 5th Street, Suite B
Redlands, California 92374
(909) 748-7777

Prepared by:

KOA CORPORATION
PLANNING & ENGINEERING
3190 C Shelby Street
Ontario, CA 91764
(909) 890-9693

Job No: JA84062

KOA CORPORATION
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3190 C Shelby Street
Ontario, CA 91764
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www.koacorporation.com

February 17, 2009

Boulder Holdings, LLC
c/o Thatcher Engineering & Associates
345 5th Street, Suite B
Redlands, California 92374
Attn: Vicky Valenzuela-Gilliland

SUBJECT: Traffic Study for a Retail Project in the City of Highland

Dear Ms. Gilliland:

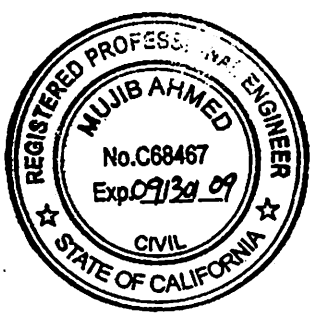
KOA Corporation is pleased to present the attached traffic study for a Retail Project in the City of Highland. The project consists of 6,019 square feet of fast food restaurants with drive thru windows, 8,356 square feet of fast food restaurants without drive thru window and 16,332 square foot retail building located on the southwest corner of Boulder Avenue at Greenspot Road. The traffic study has been prepared to meet the traffic study requirements of the City of Highland and revised per their request.

The report is being submitted to you for review and processing. Please contact our office if you have any questions about the report, or if you need additional information to complete your submittal. If there are any comments that require response or revisions, please notify our office as soon as possible for prompt revision.

It has been a pleasure to prepare this study for you and the City of Highland.

Sincerely,

Mujib Ahmed, P.E.
Vice President



6. Project Trips

Project-related traffic consists of trips on any portion of the street system that will begin or end on the project site as a result of the development of the proposed project. Project-related traffic is a function of the extent and type of development proposed for the site. This information is used to establish traffic generation for the site.

The proposed project will consist of 6,019 square feet of fast food restaurants with drive thru windows, 8,356 square feet of fast food restaurants without drive thru windows, and 16,332 square feet of retail buildings.

Existing Land Use Traffic

The project site is currently vacant. No traffic is currently generated from the site; therefore, the current trip generation for the project site is zero.

Project Trip Generation

Trip generation is a measure or forecast of the number of trips that will be made to or from the project. It is generally equal to the traffic volume expected at the project entrance.

Trip generation characteristics for projects are normally estimated based on rates published in *Trip Generation, Seventh Edition*, published by the Institute of Transportation Engineers (ITE). This document is widely used in Southern California and indicates the probable traffic generation rates for various land uses based upon studies of existing developments in comparable settings. The *Trip Generation Manual* indicates a daily and a PM peak hour for Specialty Retail; however, it does not indicate an AM peak hour rate. For the purpose of this traffic study report we used a rate that is 25% of the PM peak hour rate since the stores will be closed during the AM peak generally. The report includes trip generation information for the project uses, as shown in Table 6.

Table 6
Trip Generation Rates

Land Use	Units		AM Peak Hour			PM Peak Hour		
		Daily	Total	In	Out	Total	In	Out
Fast Food w/ Drive Thru ITE (934)	KSF	496.12	53.11	27.09	26.02	34.64	18.01	16.63
Fast Food w/o Drive Thru ITE (933)	KSF	260.0*	43.87	26.32	17.55	26.15	13.34	12.81
Specialty Retail** ITE (814)	KSF	44.32	0.68	0.30	0.38	2.71	1.19	1.52

Note: KSF = 1000 square feet. * 10 times the PM rate ** AM peak hour is 25% of the PM rate

Table 7 summarizes the traffic generation expected from project, based on the generation rates shown in Table 6.

Due to the retail nature of the project, it will attract "passby" trips. According to the *ITE Trip Generation Handbook* the retail uses will normally attract passby trips of 20% and the fast food uses will attract a passby of 40%.

Table 7
Project Traffic Generation

Land Use	Daily	AM Peak Hour			PM Peak Hour		
		Total	In	Out	Total	In	Out
6,019 sq.ft. Fast Food w/ Drive Thru	2,986	320	163	157	208	108	100
8,356 sq.ft. Fast Food w/o Drive Thru	2,173	367	220	147	219	112	107
Subtotal Fast food	5,159	687	383	304	427	220	207
-40% passby trips	*-2,064*	*-276*	*-138*	*-138*	*-172*	*-86*	*-86*
Total Fast Food	***3,095***	***411***	***245***	***166***	***255***	***134***	***121***
16,332 sq.ft. Retail	724	11	5	6	44	19	25
-20% passby trips	*-145*	*-2*	*-1*	*-1*	*-10*	*-5*	*-5*
Total Retail	***579***	***9***	***4***	***5***	***34***	***14***	***20***
Total Project Trips	**3,674**	**420**	**249**	**171**	**289**	**148**	**141**

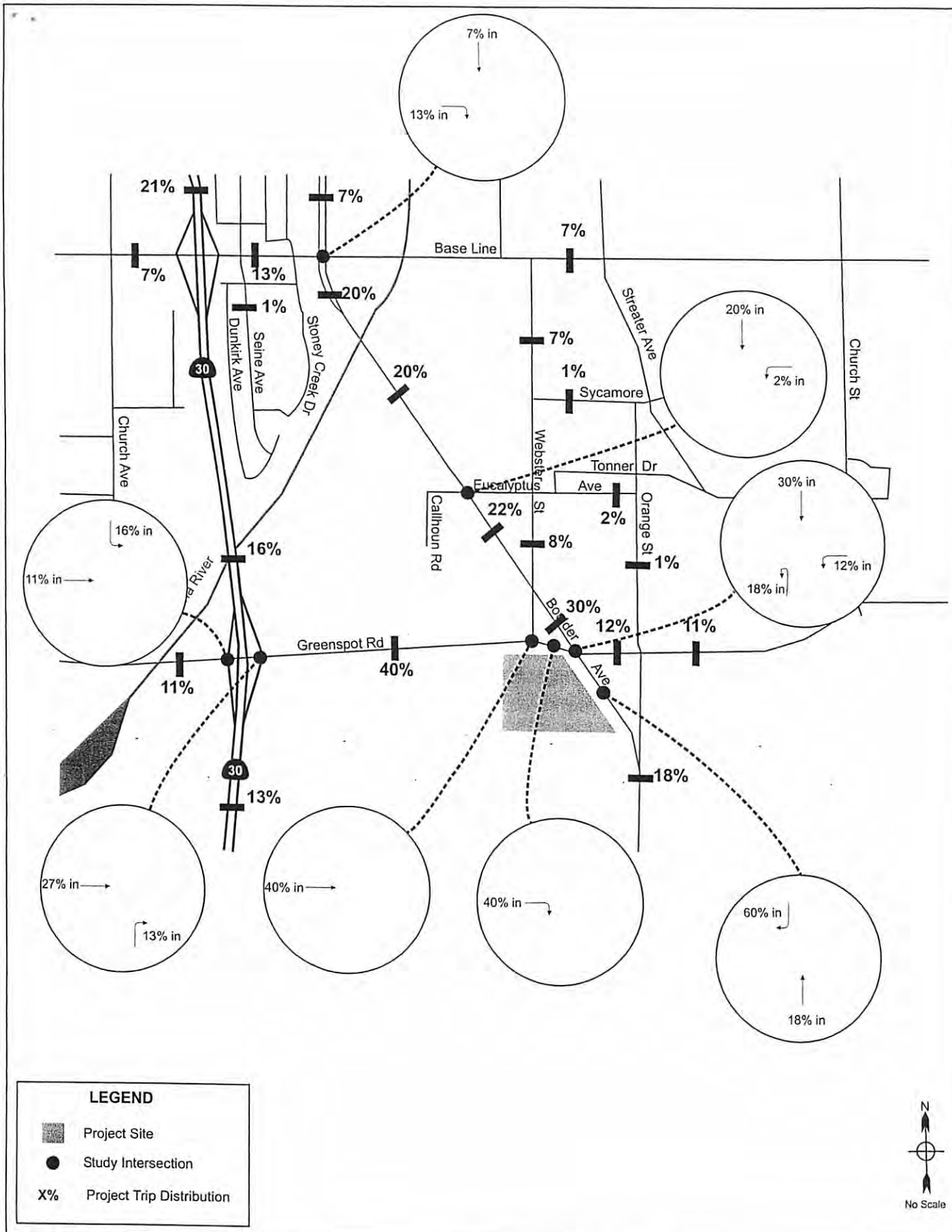
The project will generate a total 3,674 daily trips including, 420 trips during the AM peak hour and 289 trips during the PM peak hour.

Project Trip Distribution

Trip distribution is the process of identifying the probable destinations, directions or traffic routes that will be utilized by project traffic. The potential interaction between the proposed land use and surrounding regional access routes are considered to identify the route where the project traffic will distribute.

The Traffic Model was used to develop this trip distribution for this project. For SANBAG CMP level traffic studies, model "runs" are used to develop the project distribution, as prepared by City of San Bernardino and furnished to KOA Corporation for further analysis. The City furnished a traffic model select zone analysis with project traffic only. The select zone run shows the total volume assigned to all roadways from project traffic analysis zones. The total volume on each roadway is divided by the total site traffic generation to indicate the percentage of project traffic that will use each component of the regional roadway system in each relevant direction.

The anticipated trip distribution for the proposed development is presented on Figures 11A, 11B, 11C, and 11D. This figure indicates the proportion of project traffic that will use the street segments and turning movements indicated. Also, the project trip distribution assumes U-turns at the intersection of Greenspot Road at Boulder Avenue, as the City has indicated that they will be allowed at all movements at this intersection and current signage will be replaced with standard U-turn allowed signs.

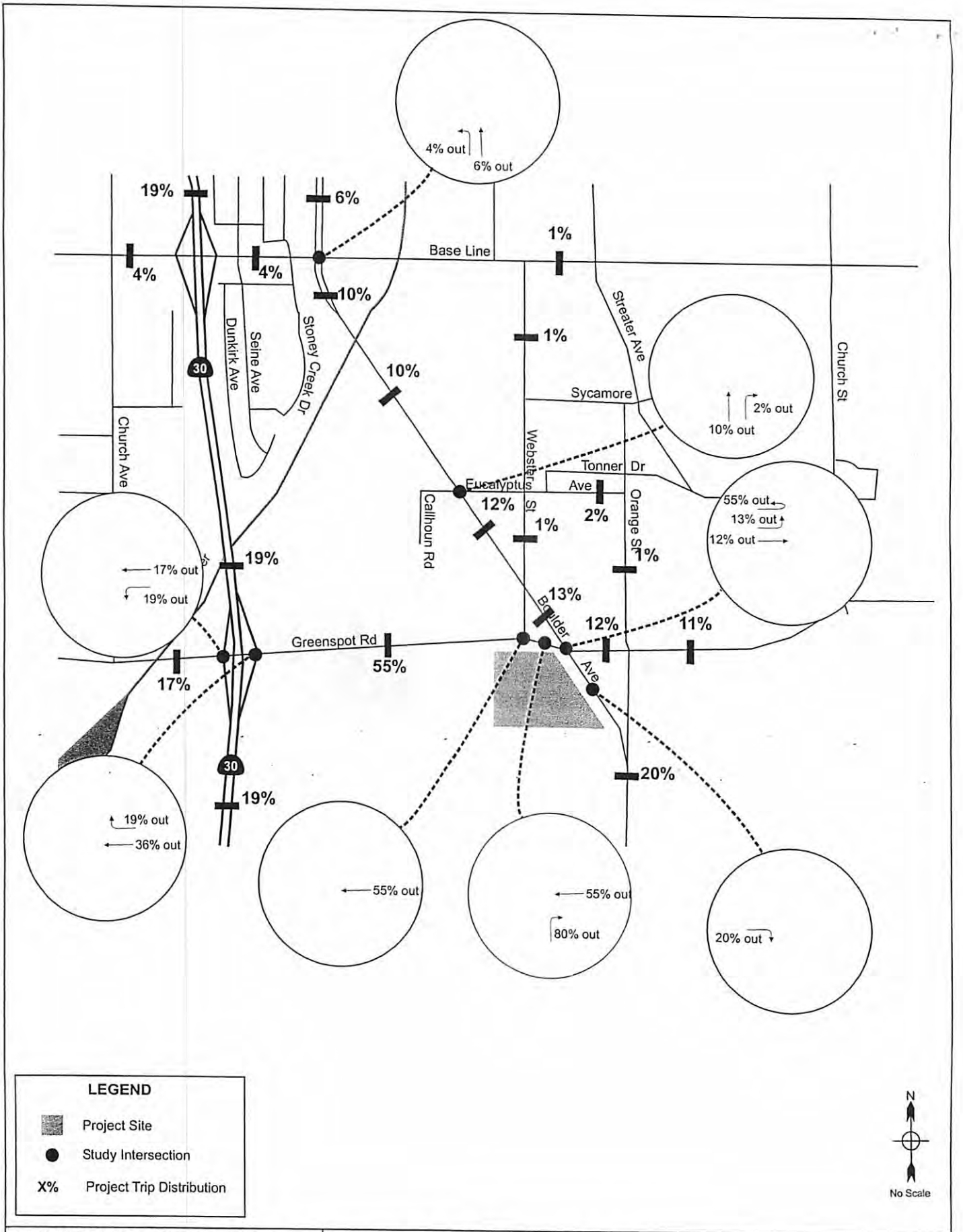


KOA CORPORATION
PLANNING & ENGINEERING

Highland Retail - Traffic Impact Study

Figure 11A

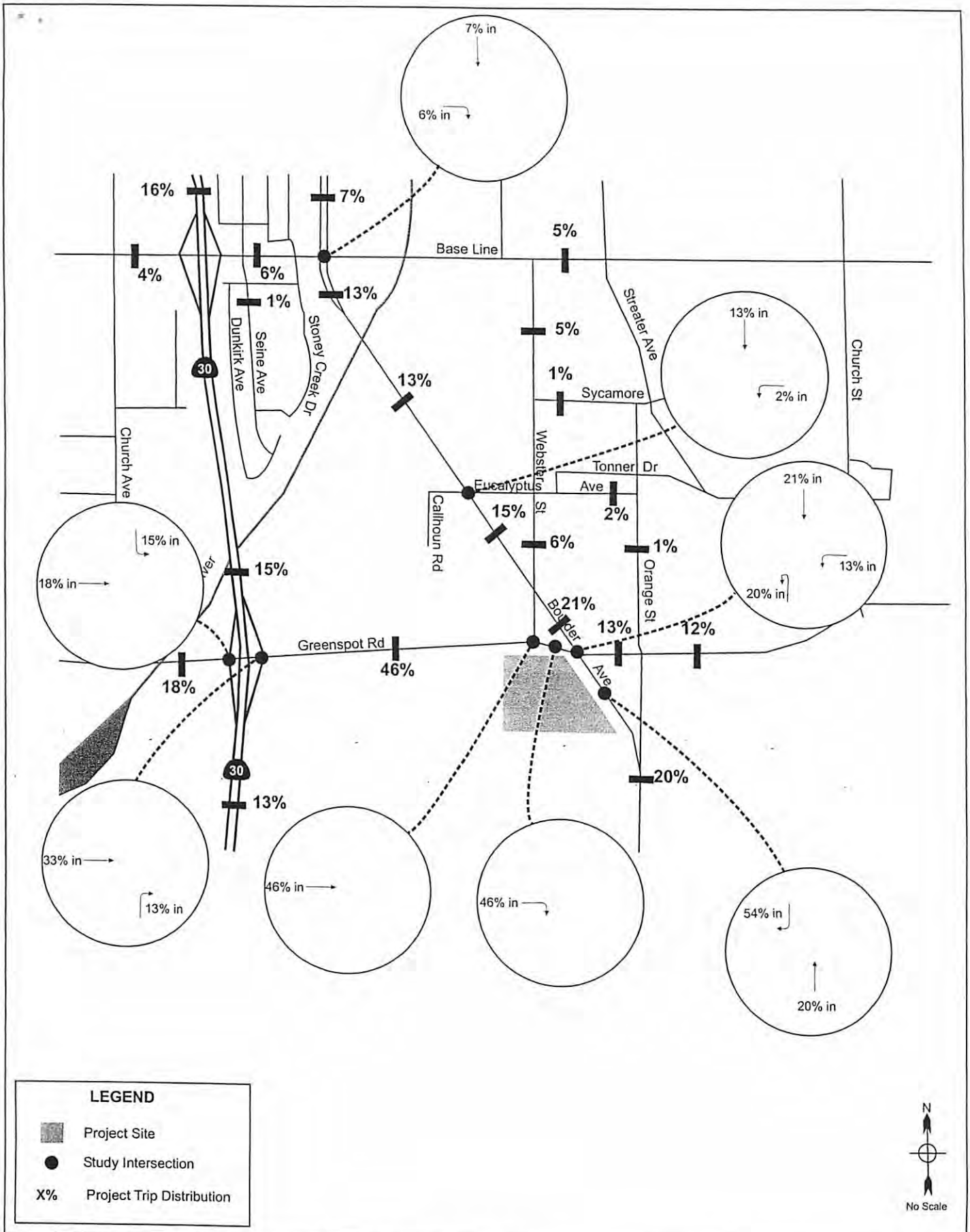
Project Trip Distribution - AM Peak Hour (Inbound)



KOA CORPORATION
PLANNING & ENGINEERING

Highland Retail - Traffic Impact Study — Figure 11B

Project Trip Distribution - AM Peak Hour (Outbound)



KOA CORPORATION
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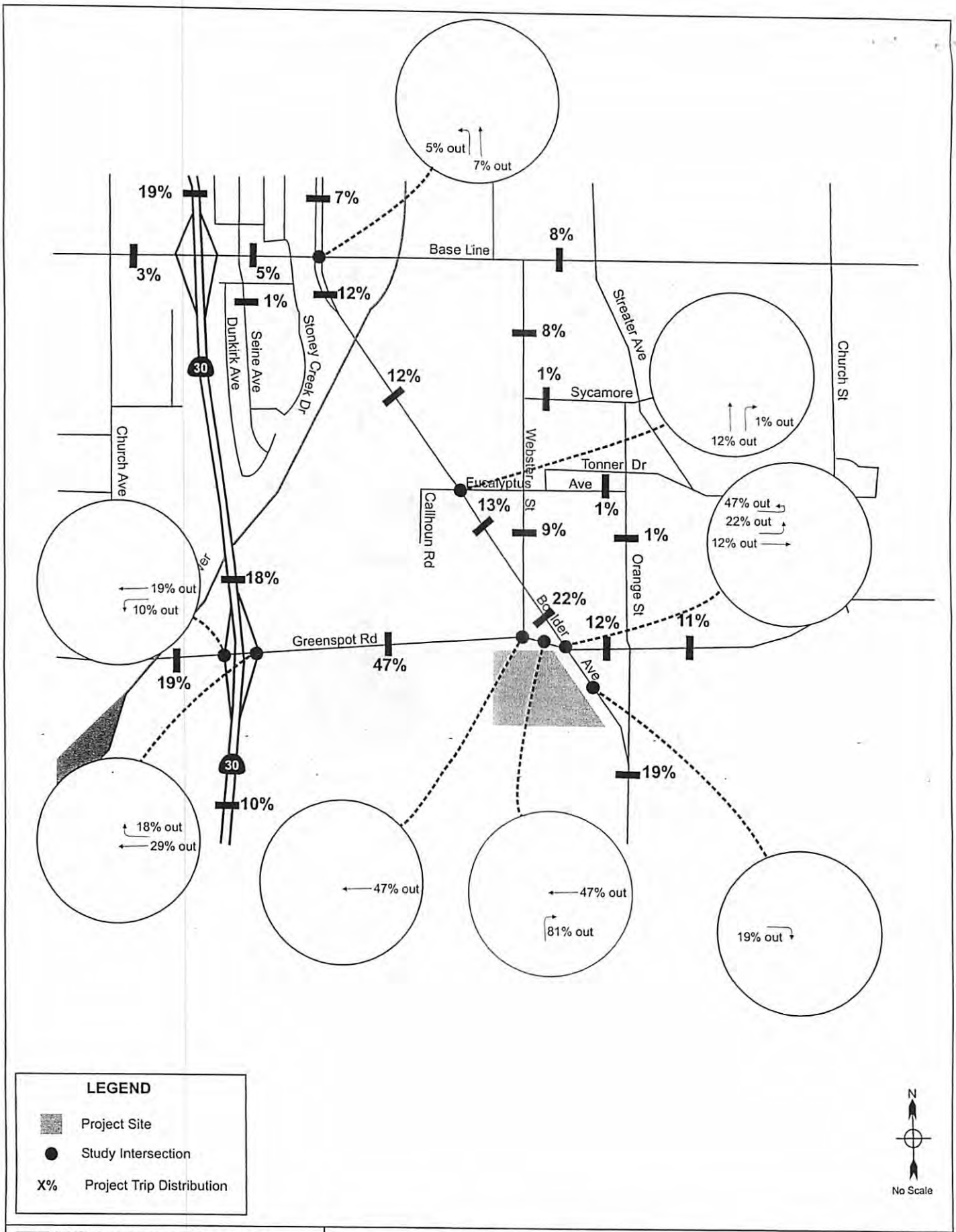
Highland Retail - Traffic Impact Study

Figure 11C

Project Trip Distribution - PM Peak Hour (Inbound)



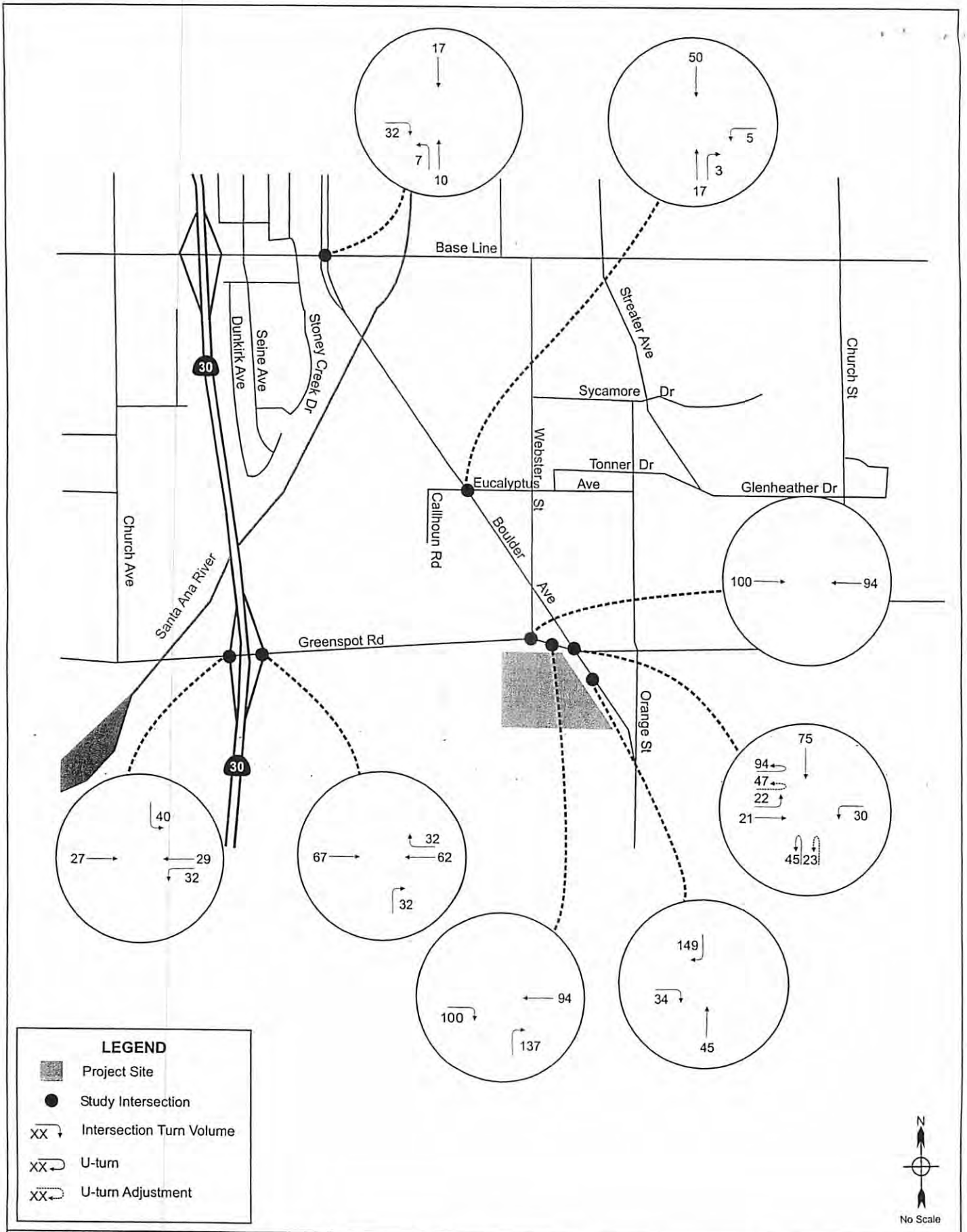
KOA CORPORATION
PLANNING & ENGINEERING

Highland Retail - Traffic Impact Study

Figure 11D

Project Trip Distribution - PM Peak Hour (Outbound)

Figures 12 and 13 indicate the near-term volume of project related traffic increases. Figures 14 and 15 show the future diverted trips at the driveways and nearby intersections for pass-by trips. Figures 16 and 17 indicate the total volume of future project related traffic increases. Future traffic levels in the project vicinity are expected to be changed by the amounts shown on these figures.



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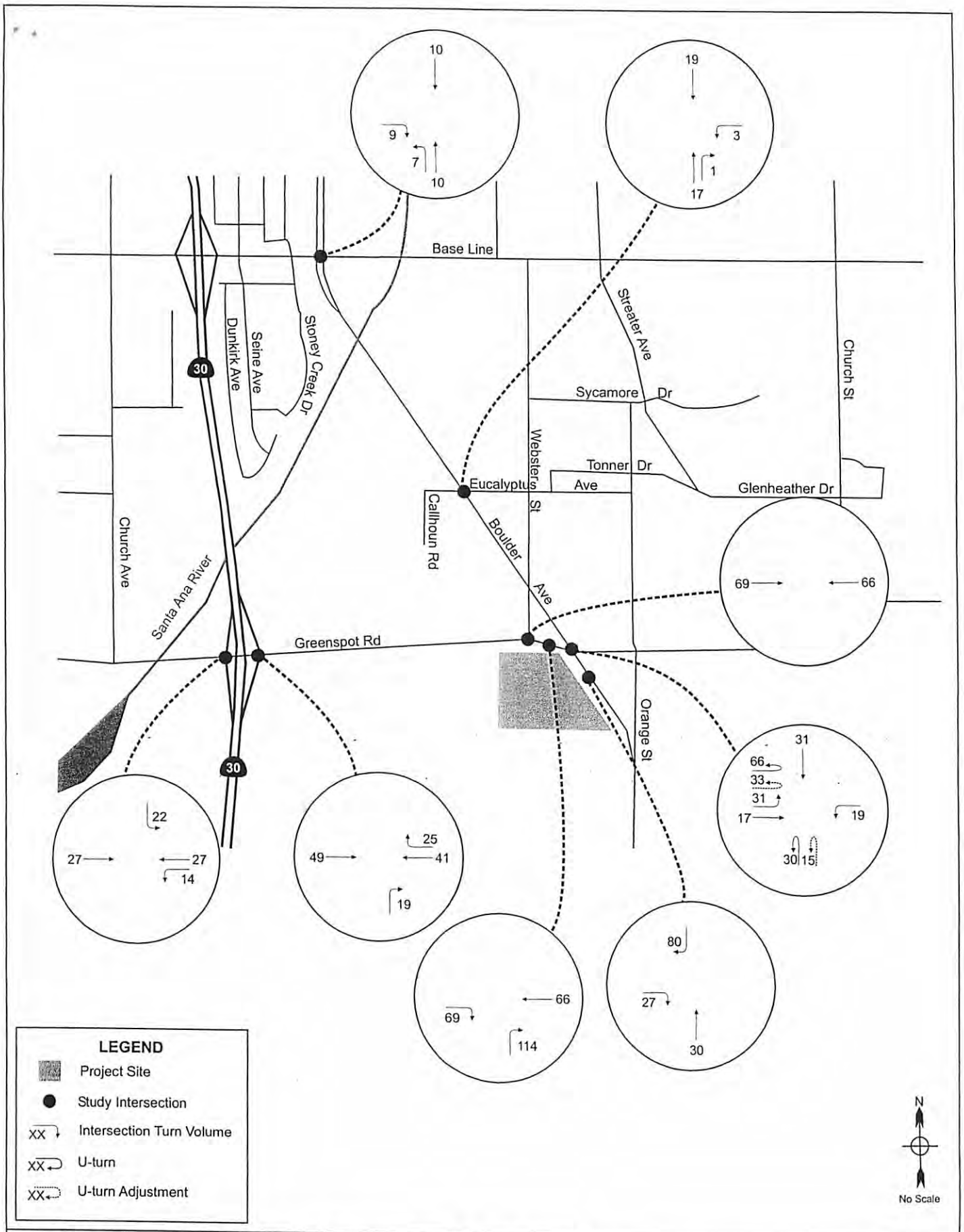
Highland Retail - Traffic Impact Study

Figure 12

Added Traffic Volumes - AM Peak Hour



KOA CORPORATION
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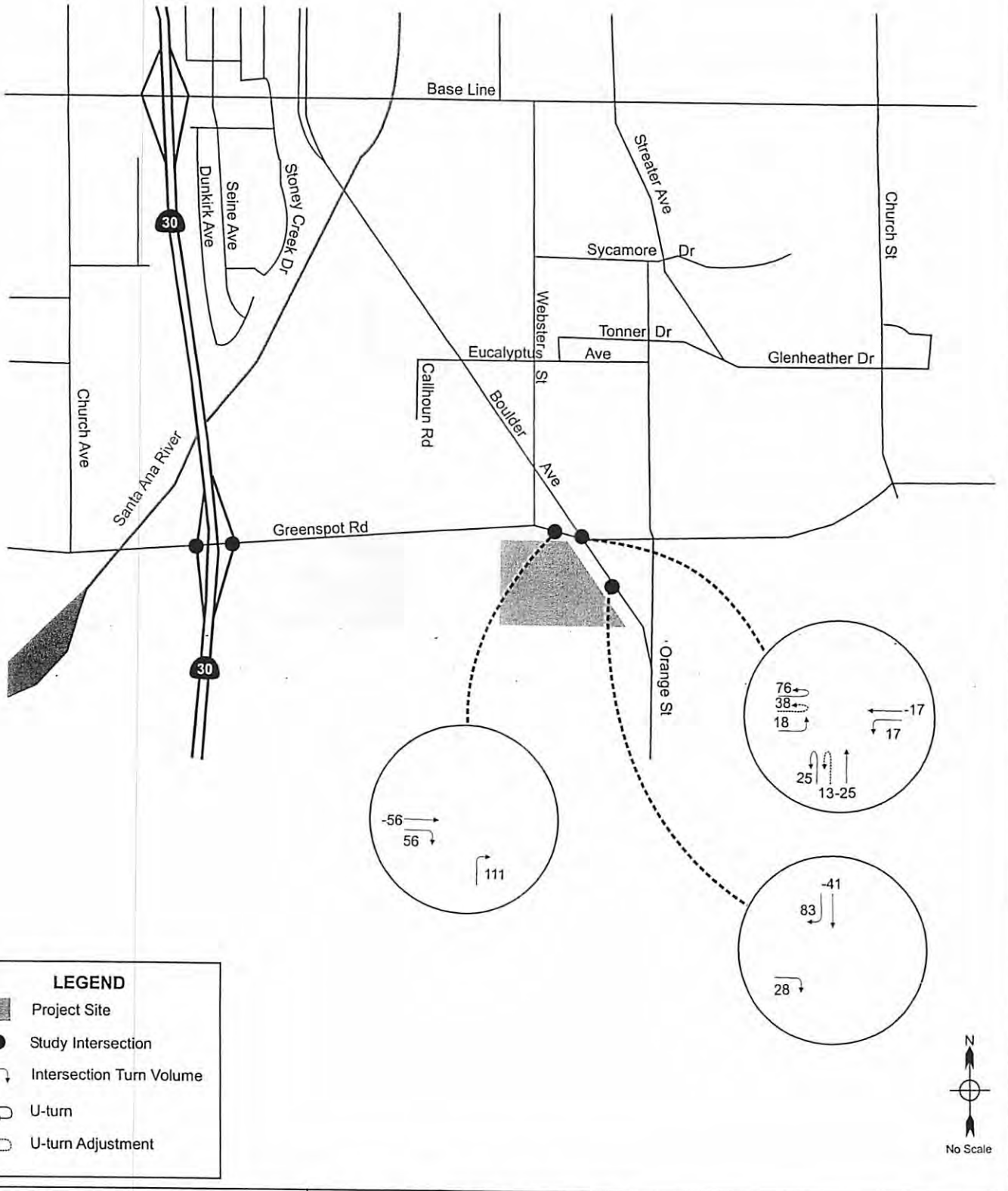
Highland Retail - Traffic Impact Study

Figure 13

Added Traffic Volumes - PM Peak Hour



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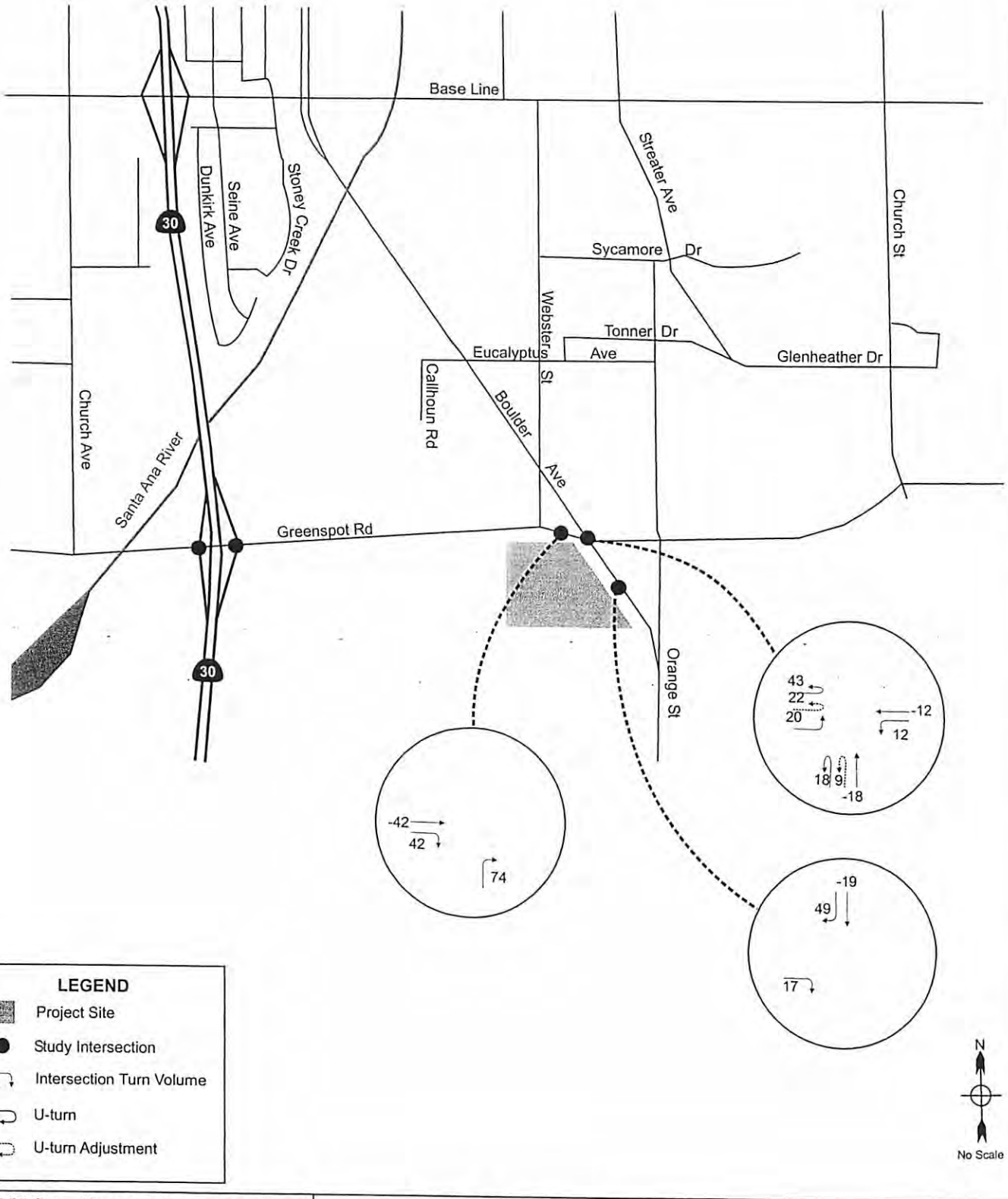
Highland Retail - Traffic Impact Study

Figure 14

Passby Traffic Volumes - AM Peak Hour

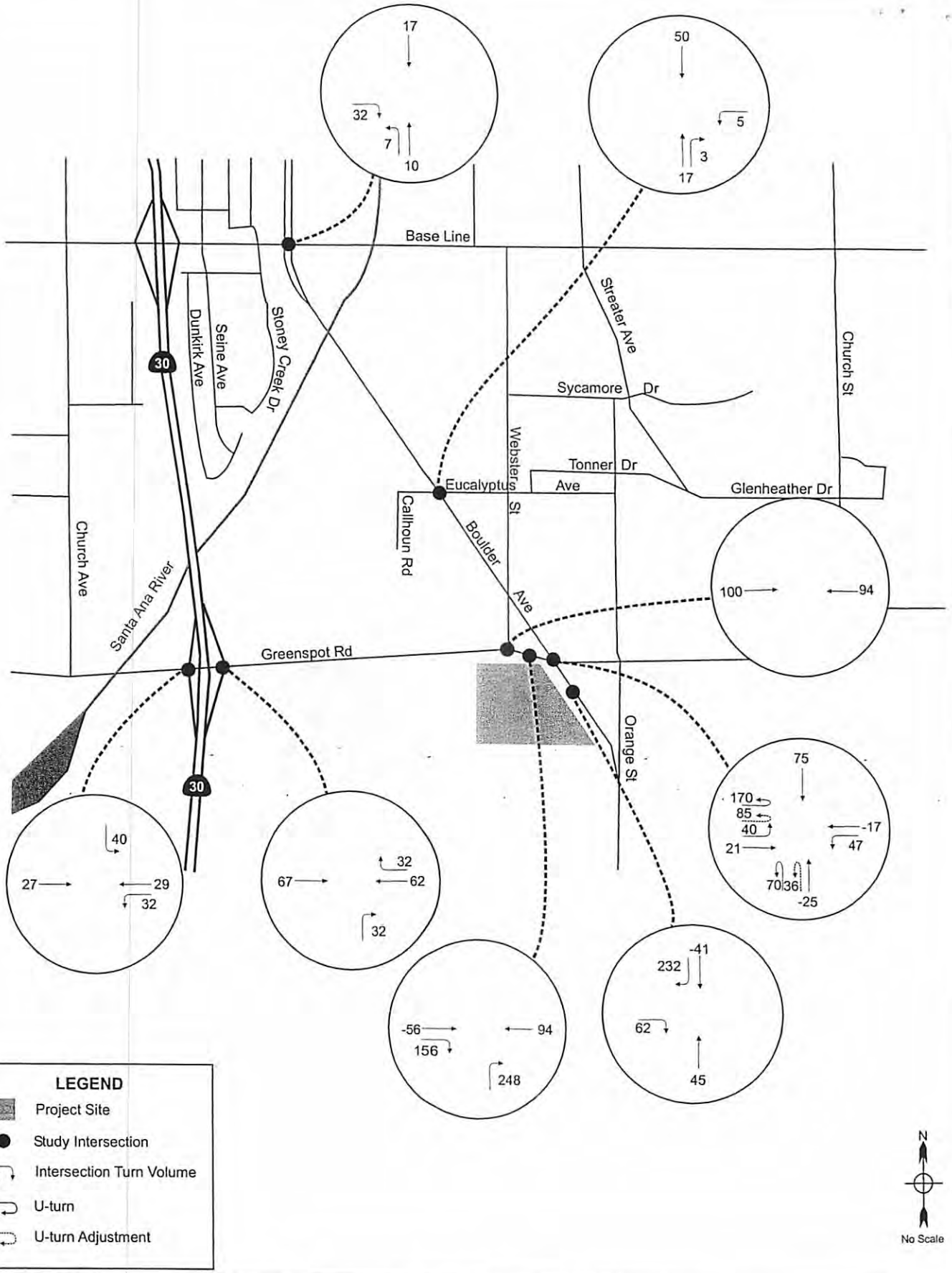


KOA CORPORATION
PLANNING & ENGINEERING

Highland Retail - Traffic Impact Study

Figure 15

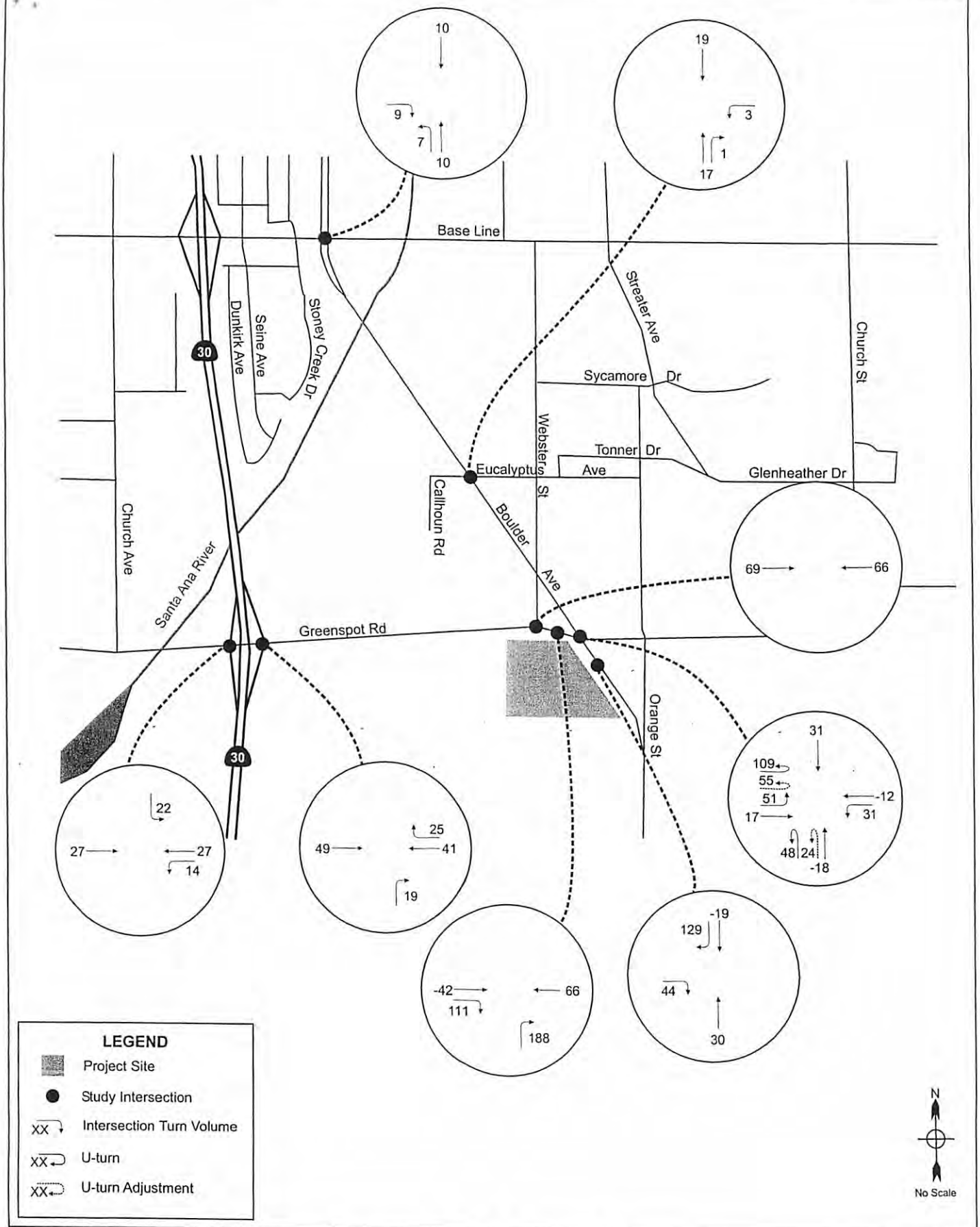
Passby Traffic Volumes - PM Peak Hour



KOA CORPORATION
PLANNING & ENGINEERING

Highland Retail - Traffic Impact Study — Figure 16

Total Project Related Traffic Volumes - AM Peak Hour



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Highland Retail - Traffic Impact Study — Figure 17

Total Project - Related Traffic Volumes - PM Peak Hour

8. Near Term WITH Project Conditions (Year 2012)

This section documents the near term (Year 2012) traffic conditions with the addition of total project-related traffic to the surrounding street system.

Near Term Peak Hour Intersection Level of Service

The near term "WITH Project" traffic volumes were derived by adding the total project trips shown in Figures 16 and 17 to the future traffic volumes for the year 2012. Table 9 summarizes the results of the level of service analysis for the future "WITH Project" conditions.

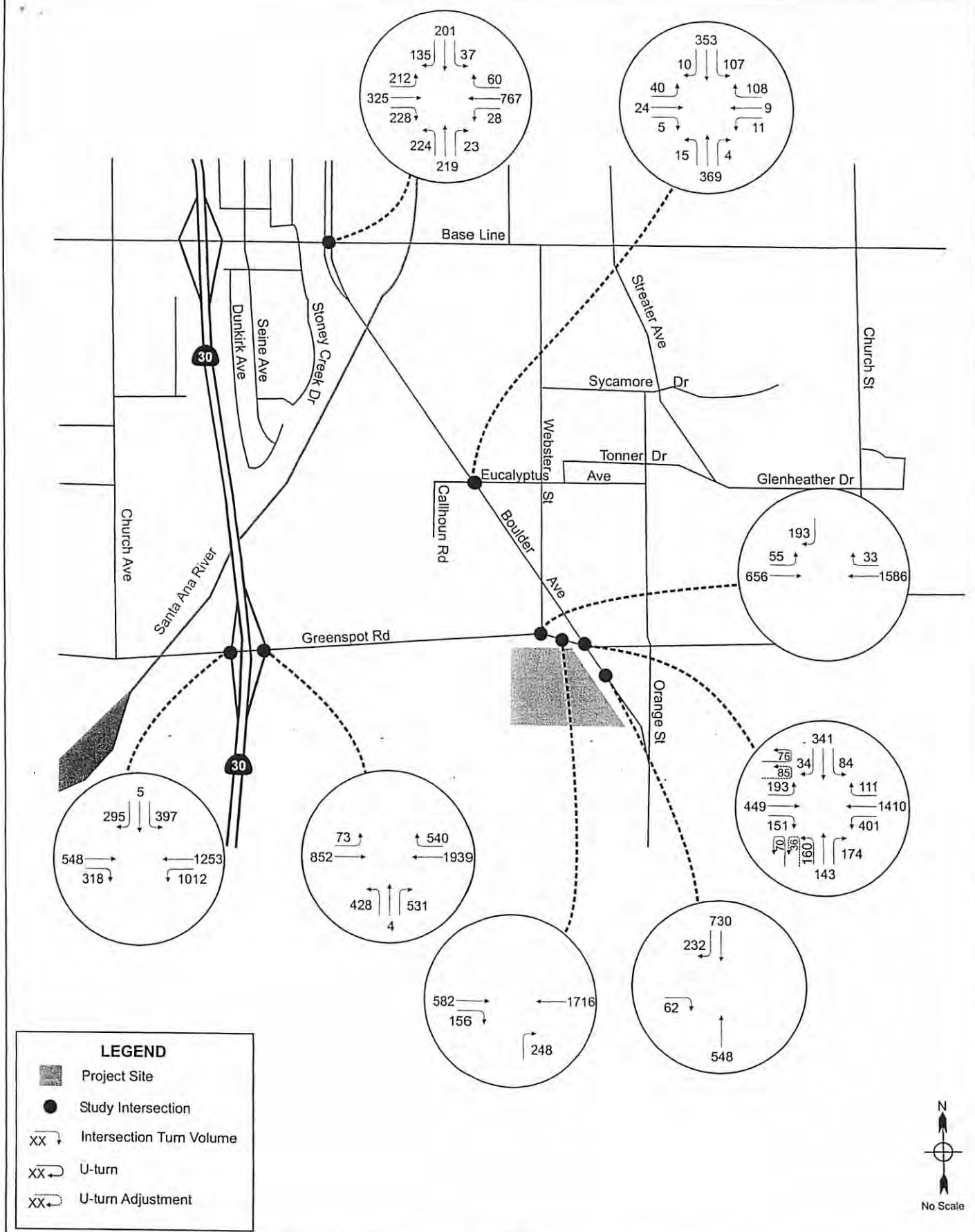
Table 9
AM/PM Peak Hour Intersection Performance
Near Term WITH Project Conditions (Year 2012)

Intersection	AM Peak Hour				PM Peak Hour			
	Delay (sec)		Level of Service		Delay (sec)		Level of Service	
	Average	Poorest Movement	Average	Poorest Movement	Average	Poorest Movement	Average	Poorest Movement
Unsignalized Intersections								
Project Driveway at Greenspot Rd.	1.2	12.9	A	B	1.3	22.9	A	C
Project Driveway at Boulder Ave.	0.5	11.5	A	B	0.5	9.3	A	A
Greenspot Rd. at Webster Ave.	5.1	63.6	A	F	2.7	20.0	A	C
Eucalyptus Ave. at Boulder Ave.	10.4	84.1	B	F	>120.0	>120.0	F	F
Signalized Intersections								
	Delay (sec)		Level of Service		Delay (sec)		Level of Service	
	Average		LOS		Average		LOS	
Greenspot Rd. at Boulder Ave.	99.5		F		72.6		E	
Greenspot Rd. at SR-30 NB Ramps	43.4		D		>120.0		F	
Greenspot Rd. at SR-30 SB Ramps	31.4		C		>120.0		F	
Base Line St. at Boulder Ave.	33.2		C		40.1		D	

Note: Delay based on seconds per vehicle average. LOS = Level of Service.

As shown in Table 9, the intersections are forecast to operate at Level of Service D or better during the AM or PM peak hour except the following:

- Greenspot Road at Webster Street for the poorest movement (AM peak hour)
- Eucalyptus Avenue at Boulder Avenue (AM and PM peak hours)
- Greenspot Road at Boulder Avenue (AM and PM peak hours)
- Greenspot Road at SR-30 Northbound Ramp (PM peak hour)
- Greenspot Road at SR-30 Southbound Ramp (PM peak hour)



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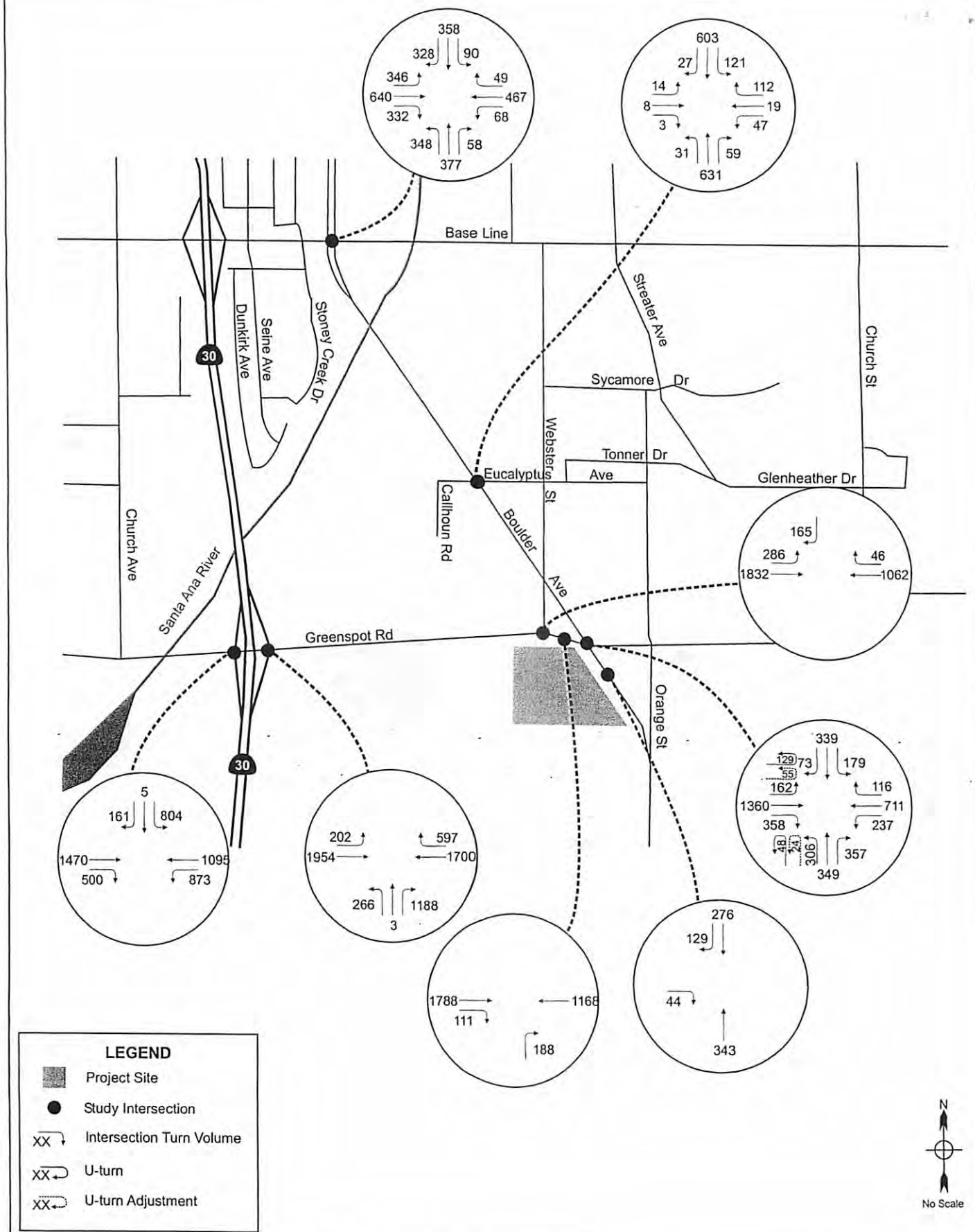
Highland Retail - Traffic Impact Study

Figure 18

Near Term (Year 2012) Traffic Volumes with Project Traffic - AM Peak Hour



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Highland Retail - Traffic Impact Study — Figure 19

Near Term (Year 2012)Traffic Volumes with Project Traffic - PM Peak Hour

Project 7

TRAFFIC IMPACT STUDY

Centerstone Subdivision

City of Highland, California

Prepared for:

City of Highland
27215 Base Line
Highland, CA 92346
(909) 864-8732

Prepared by:

Hernandez, Kroone & Associates
234 East Drake Drive
San Bernardino, CA 92408
(909) 884-3222

September 2009

INTRODUCTION

This analysis was prepared to determine the potential traffic impacts of the Centerstone Subdivision, a housing development proposed at the southeast corner of the Greenspot Road / Orange Street intersection. The project will provide 133 units of single family detached housing. The 21 acre site is located approximately 800 feet east of the intersection of Boulder Avenue / Greenspot Road in the City of Highland, California. (See Vicinity Map)

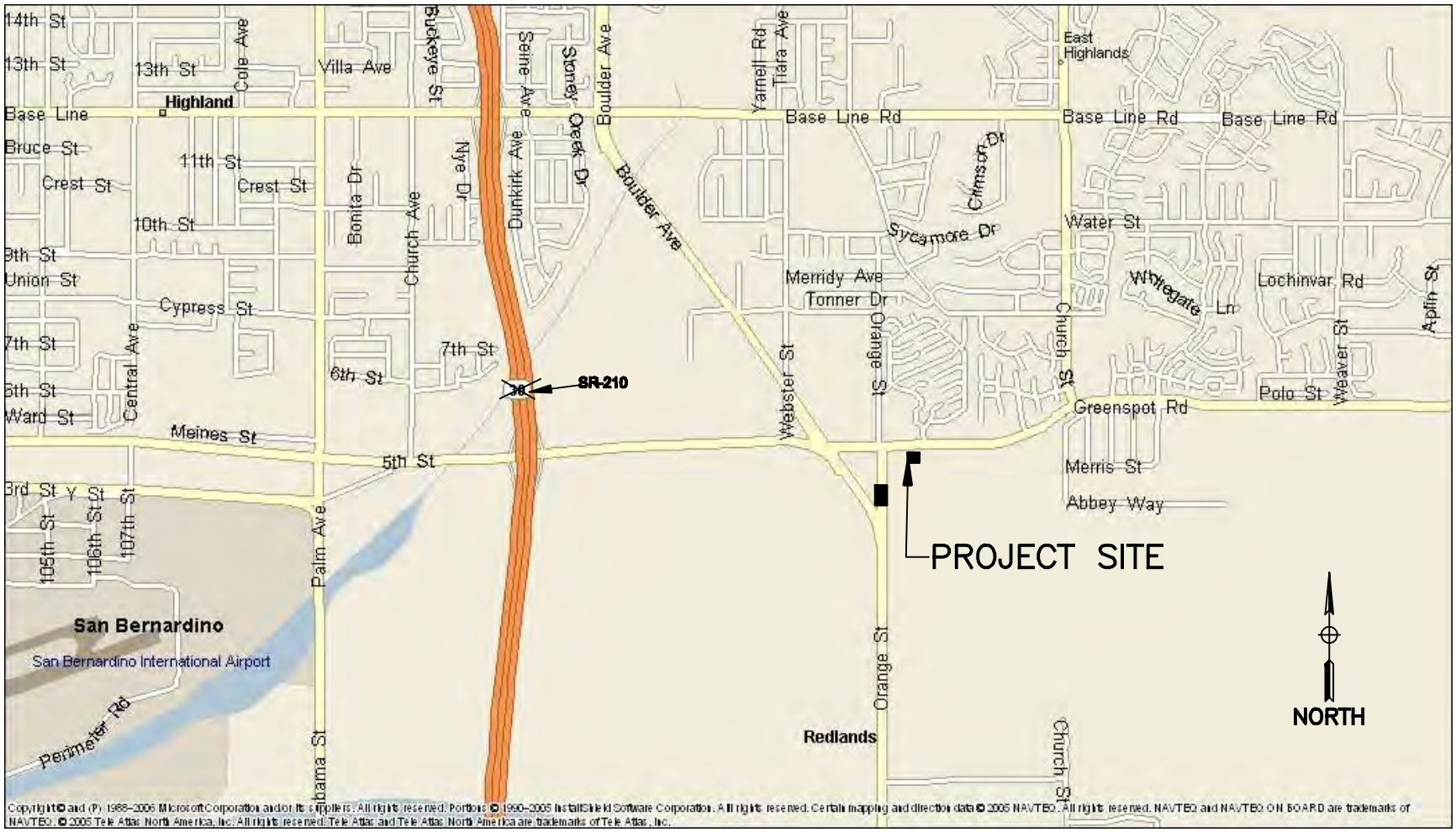
The site is currently undeveloped land. There is a mobile home park west of the project at the southwest corner of the Greenspot Road / Orange Street intersection. The property directly north of the site is developed as single family homes, with two operating schools and a post office under construction nearby. The property south of the project includes the easement for the Metropolitan Water District of Southern California Inland Feeder Pipeline, the Santa Ana River Wash and two land leases to gravel mining companies.

The land immediately to the east of the project is vacant. The site is proposed to be developed as Blossom Trails Subdivision consisting of 14 single family homes and 306 condos / town homes. The 14 single family homes will be north of Greenspot Road and the 306 condos / town homes will be south of Greenspot Road. Urban Crossroads completed a traffic study for the Blossom Trails project on January 27, 2006.

In the January 2006 traffic study the Blossom Trails Subdivision and the Centerstone Subdivision were anticipated to share an access to Greenspot Road about 1,320 feet east of Orange Street. Since that access was on the west side of the Blossom Trails project, it was called the "West Access Driveway". This access will be called the "West Access Driveway" in this traffic study as well even though it is on the east side of the development. (See Site Plan)

Centerstone Subdivision's other access will be at Orange Street / Greenspot Road. The main thrust of the study will be to analyze the West Access Driveway in the absence of the Blossom Trails development. This traffic study is a revision of the one completed December 2008. The number of dwelling units was changed from 120 to 133. This is an increase of 13 trips during the PM Peak Period. The exhibits, tables, analysis and conclusions have been revised to reflect this change.

This traffic study was completed with generally accepted procedures and reflects the opinions of Hernandez, Kroone & Associates.



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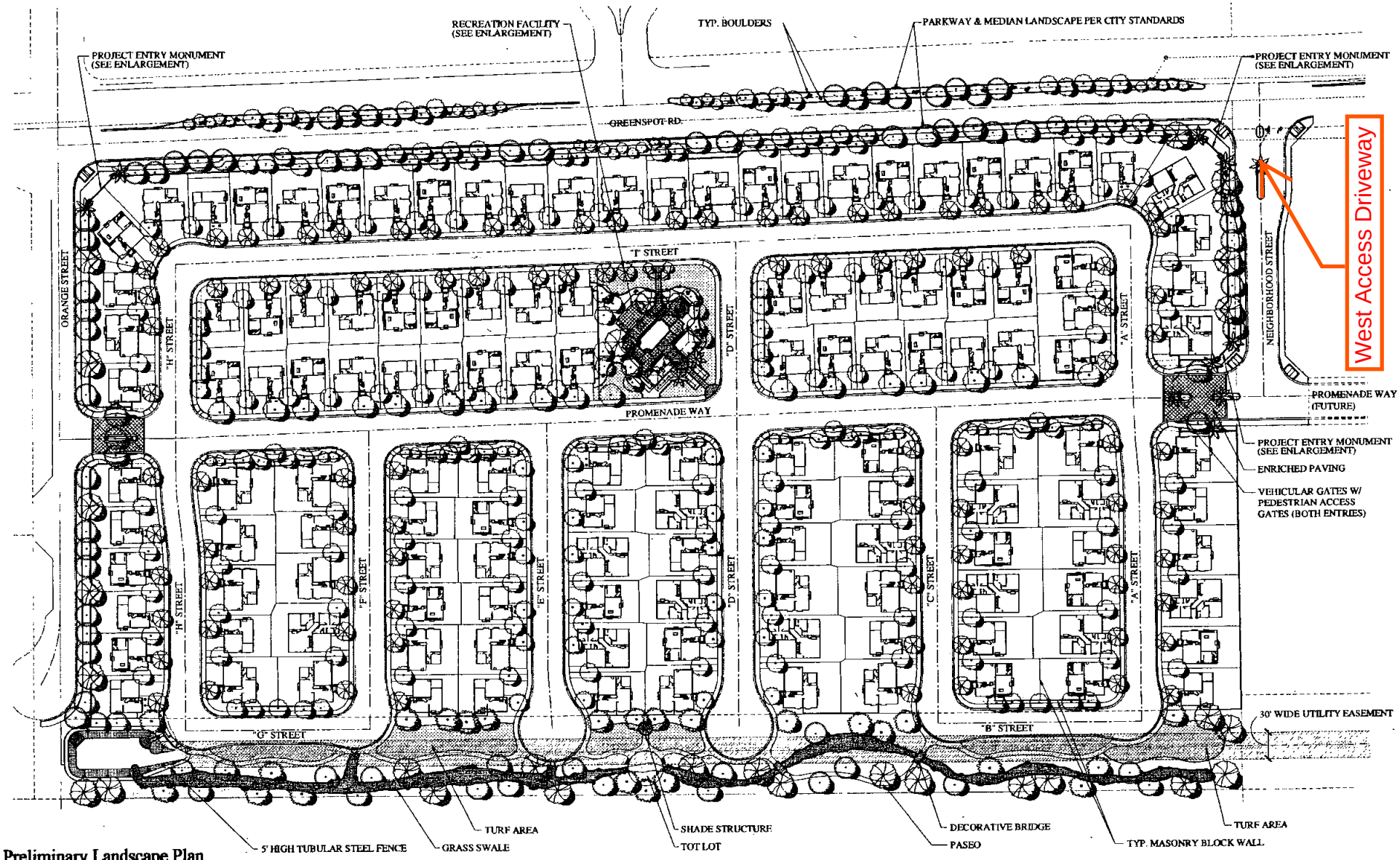
Hernandez, Kroone & Associates, Inc
— CONSULTING ENGINEERS —
PLANNING - DESIGN - SURVEYING
HKA
234 EAST DRAKE DRIVE
SAN BERNARDINO, CA 92408
(909) 884-3222 FAX (909) 383-1577
E-MAIL

OWNER	CENTERSTONE SUBDIVISION	08–1030
DESCRIPTION	VICINITY MAP	DATE 12/08/08



Preliminary Landscape Plan

Centerstone @ Woodbridge Trails

Highland, California

Centerstone Communities, Inc.

SCALE: 1" = 40'-0"

NUVIS
LANDSCAPE ARCHITECTURE AND PLANNING

SHT 1 OF 3

The Single Family-Detached Housing category was used to approximate the number of AM and PM Peak Period trips in and out of the proposed 133 units housing development. These trips are summarized in Table 2 below. The detailed calculations can be found in Appendix C.

Table 2: Project Trip Summary Table

Development Type	AM Peak Period			PM Peak Period			ADT[1]
	Total	In	Out	Total	In	Out	
Single Family-Detached Housing	100	25	75	134	84	50	1,273

[1]*ADT (Average Daily Trips) is the average number of vehicles expected to enter or leave the site during one day.*

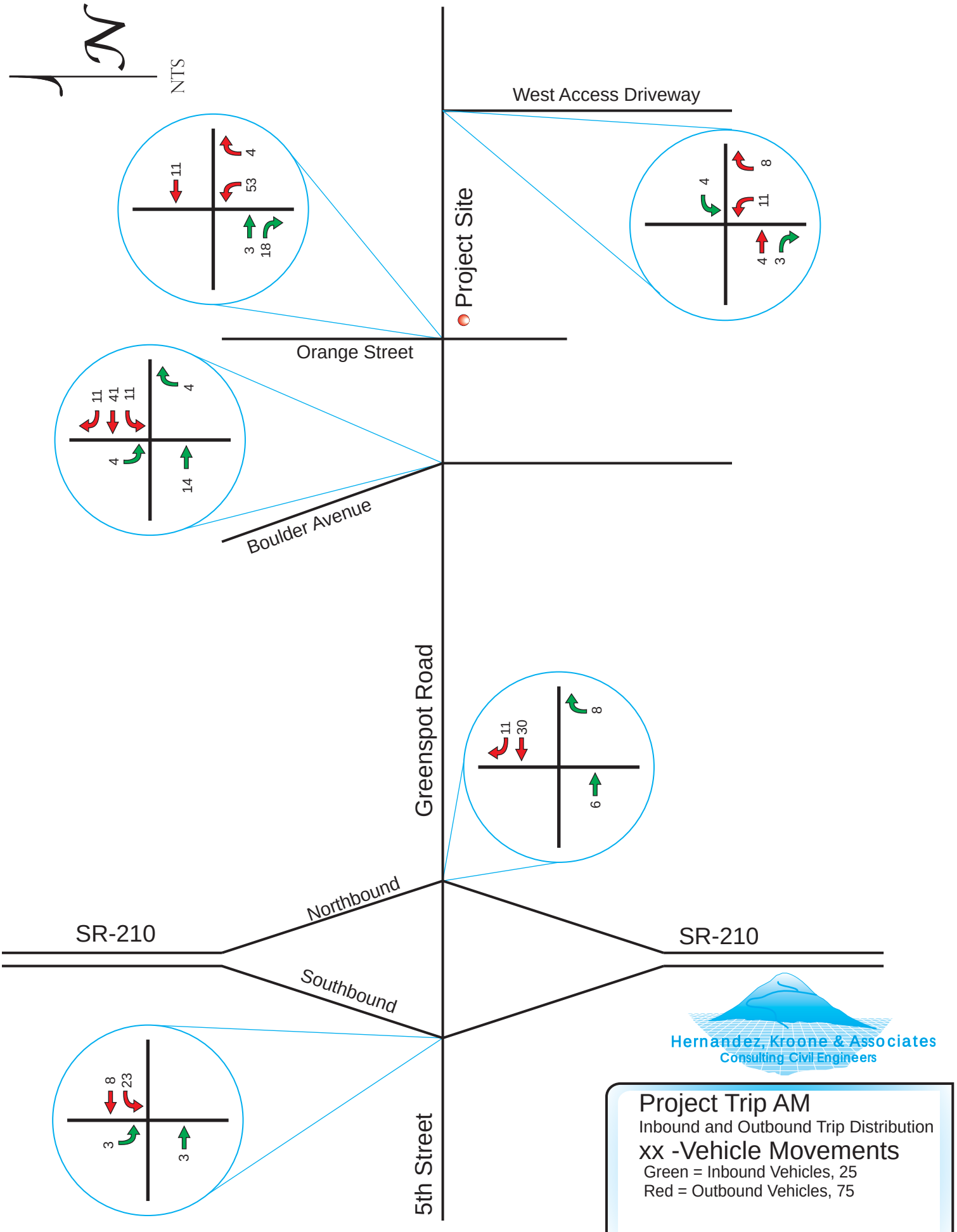
PROJECT TRIP DISTRIBUTION

To the west of the Centerstone Subdivision is access to the Cities of Highland, San Bernardino, Redlands, schools, post office, or shopping via Boulder Avenue and SR-210 to Interstate 10 (I-10) or Interstate 215 (I-215). The Golden Triangle area west of Centerstone will be developing in the next few years and will provide a major attraction for shopping, entertainment, work and dining. To the east of the site are smaller shopping centers, subdivisions and indirect rural access to the unincorporated area of Mentone and the mountains. The Urban Crossroads study anticipated that 85% of the project traffic would leave to the west or arrive from the west. This distribution will be used for this analysis of the Centerstone development. The project's trip distribution is shown in Appendix C.

BACKGROUND TRAFFIC GROWTH

Growth Rate

In order to accurately model the traffic conditions for future scenarios, it is necessary to increase the background (existing) traffic in addition to adding in the cumulative project trips. A 2% growth rate per year will be assumed to the Opening Year for this analysis. Opening Year is assumed to be 2011. This will result in an overall increase of 6% to the existing counts at the study intersections.



Hernandez, Kroone & Associates
Consulting Civil Engineers

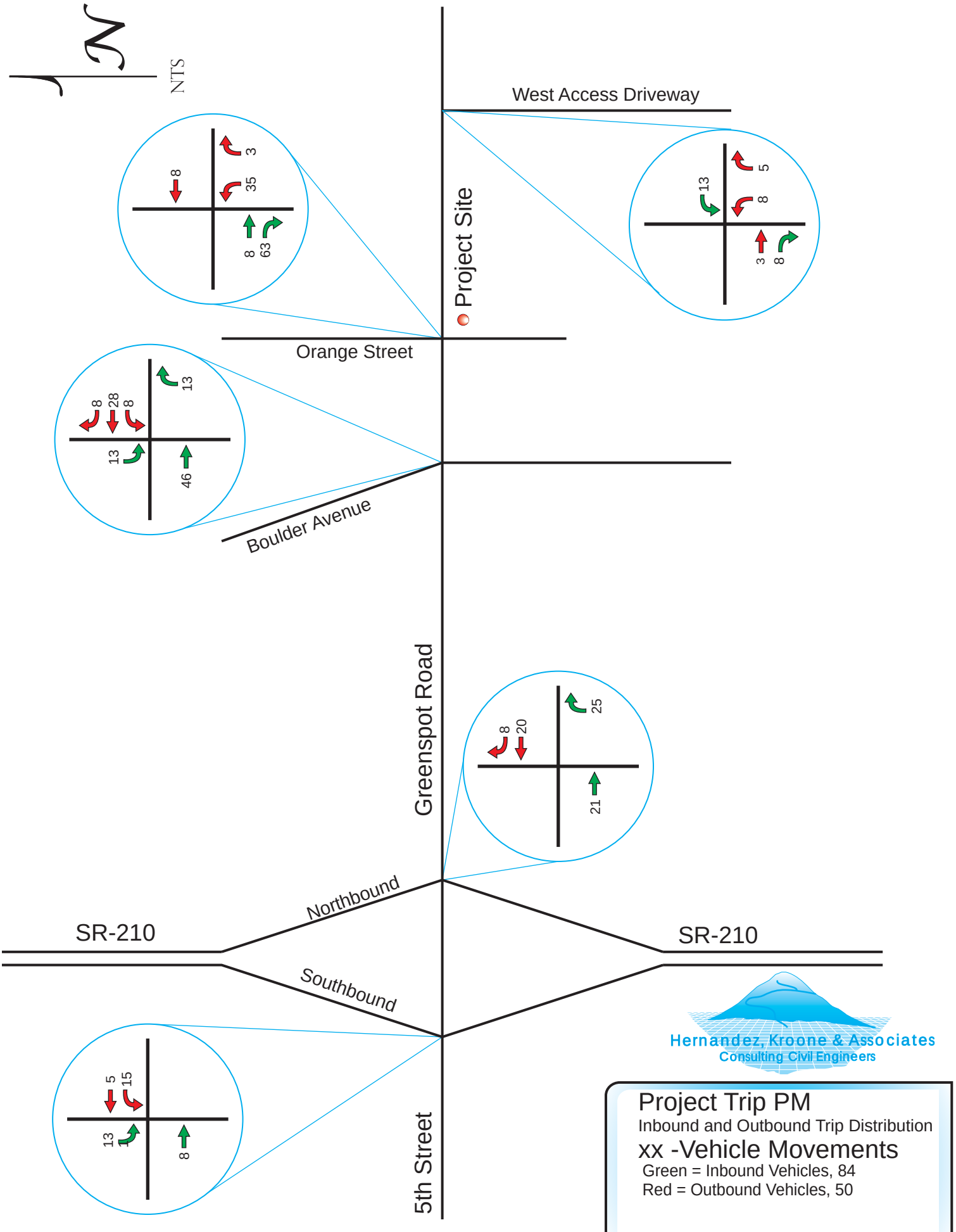
Project Trip AM

Inbound and Outbound Trip Distribution

xx -Vehicle Movements

Green = Inbound Vehicles, 25

Red = Outbound Vehicles, 75


N
NTS
West Access Driveway
Project Site
Orange Street
Boulder Avenue
Greenspot Road
Northbound
Southbound
SR-210
SR-210
5th Street
8
3
35
8
63
13
5
8
3
8
8
28
8
13
13
46
8
20
25
21
5
15
13
1
8
Hernandez, Kroone & Associates
Consulting Civil Engineers
Project Trip PM
Inbound and Outbound Trip Distribution
xx -Vehicle Movements
Green = Inbound Vehicles, 84
Red = Outbound Vehicles, 50

Project 8

TABLE 1

PROJECT TRIP GENERATION RATES[1]

Land Use[1]	ITE LU Code	Quantity	Units[2]	AM Peak Hour			PM Peak Hour			Daily
				In	Out	Total	In	Out	Total	
PLANNING AREA 1 (COMMERCIAL)										
Phase 1:										
Shopping Center	820	588	TSF	0.45	0.29	0.74	1.74	1.81	3.55	36.53
Phase 2:										
Fast Food w/ Drive Thru	934	4	TSF	25.17	24.18	49.35	17.60	16.24	33.84	496.12
Gasoline/Service Station w/Conven. Mkt.[3]	945	3.6	TSF	40.44	38.86	79.30	48.54	48.54	97.08	1064.40
PLANNING AREA 2 (RESIDENTIAL):										
Apartment	220	546	Occupied DU	0.10	0.41	0.51	0.40	0.22	0.62	6.65
PLANNING AREA 3 (VILLAGE CENTER - MIXED USE):										
Shopping Center	820	91	TSF	0.98	0.62	1.60	3.22	3.35	6.57	70.19
Fast Food w/ Drive Thru	934	7.2	TSF	25.17	24.18	49.35	17.60	16.24	33.84	496.12
Drive-in Bank	912	10	TSF	6.92	5.43	12.35	12.91	12.91	25.82	148.15
Apartment	220	150	DU	0.10	0.41	0.51	0.40	0.22	0.62	6.65
Senior Adult Housing - Attached	252	104	Occupied DU	0.05	0.08	0.13	0.10	0.06	0.16	3.48
Hotel	310	240	Occupied RM	0.39	0.28	0.67	0.34	0.36	0.70	8.92

[1] Trip Generation Source: Institute of Transportation Engineers (ITE), Trip Generation Manual, Eighth Edition (2008).

[2] TSF = Thousand Square Feet; DU = Dwelling Unit; RM = Room

[3] The daily trip rate is based on PM Peak Hour to Daily Trip Ratio for ITE Code 946 (Service Station with Conv. Market and Car Wash)

TABLE 2 (PAGE 1 OF 2)

PROJECT TRIP GENERATION SUMMARY

Land Use	Quantity	Units[1]	AM Peak Hour In	AM Peak Hour Out	AM Peak Hour Total	PM Peak Hour In	PM Peak Hour Out	PM Peak Hour Total	Daily
TAZ 1 (COMMERCIAL)									
Phase 1									
Shopping Center	588	TSF	265	171	436	1,023	1,064	2,087	21,480
Phase 1 Subtotal			265	171	436	1,023	1,064	2,087	21,480
"Pass-By" Trips (25% Commercial Only)[2]			*-55*	*-55*	*-109*	*-261*	*-261*	*-522*	*-5,370*
Phase 1 Subtotal (less "Pass-By")			210	116	326	762	803	1,565	16,110
Phase 2									
Fast Food w/ Drive Thru	4	TSF	101	97	198	70	65	135	1,984
Gasoline/Service Station w/Conven. Mkt.	3.6	TSF	146	140	286	175	175	350	3,832
Phase 2 Subtotal			247	237	484	245	240	485	5,816
"Pass-By" Trips (25% Commercial Only)[2]			*-61*	*-61*	*-121*	*-61*	*-61*	*-121*	*-1,454*
Phase 2 Subtotal (less "Pass-By")			186	176	362	184	179	363	4,362
TOTAL PLANNING AREA 1 (without "pass-by" reduction)			512	408	920	1,268	1,304	2,572	27,296
TOTAL PLANNING AREA 1 (less "pass-by")			396	292	688	946	982	1,928	20,472
TAZ 2 (RESIDENTIAL)									
Apartment	546	DU	55	224	279	218	120	338	3,631
TOTAL PLANNING AREA 2			55	224	279	218	120	338	3,631
TAZ 3 (MIXED USE)									
Shopping Center	91	TSF	89	56	145	293	305	598	6,387
Fast Food w/ Drive Thru	7.2	TSF	181	174	355	127	117	244	3,572
Drive-in Bank	10	TSF	69	54	123	129	129	258	1,482
Subtotal for Commercial Uses			339	284	623	549	551	1,100	11,441
Apartment	150	DU	15	62	77	60	33	93	998
Senior Adult Housing - Attached	104	Occupied DU	5	8	13	10	6	16	362
Hotel	240	Occupied RM	94	67	161	82	86	168	2,141
Subtotal for Residential Uses			114	137	251	152	125	277	3,501
TOTAL PLANNING AREA 3			453	421	874	701	676	1,377	14,942

STUDY AREA PROJECT TRIP GENERATION							
Gross Total Commercial	*851*	*692*	*1,543*	*1,817*	*1,855*	*3,672*	*38,737*
Internal Capture with residential Uses[3]	*-43*	*-48*	*-91*	*-130*	*-115*	*-245*	*-2,532*
TOTAL COMMERCIAL *(with Internal Capture)*	808	644	1,452	1,687	1,740	3,427	36,205
Gross Total Residential	*169*	*361*	*530*	*370*	*245*	*615*	*7,132*
Internal Capture with Commercial Uses[3]	*-48*	*-43*	*-91*	*-115*	*-130*	*-245*	*-2,532*
TOTAL RESIDENTIAL *(with Internal Capture)*	121	318	439	255	115	370	4,600
TOTAL PROJECT TRIPS *(with Intenal Capture)*	929	962	1,891	1,942	1,855	3,797	40,805

TABLE 2 (PAGE 2 OF 2)

PROJECT TRIP GENERATION SUMMARY

EXTERNAL TRIPS PROJECT TRIP GENERATION							
	AM Peak Hour			PM Peak Hour			
	In	Out	Total	In	Out	Total	Daily
Total Commercial (with Internal Capture)[4]	*808*	*644*	*1,452*	*1,687*	*1,740*	*3,427*	*36,205*
"Pass-By" Trips Total (25% Commercial Only)[2]	*-182*	*-182*	*-363*	*-429*	*-429*	*-857*	*-9,051*
TOTAL PROJECT COMMERCIAL *(less internal capture, less "pass-by")*	626	462	1,088	1,258	1,311	2,569	27,154
TOTAL RESIDENTIAL *(less internal capture)*	121	318	439	255	115	370	4,600
NET PROJECT EXTERNAL TRIPS	747	780	1,527	1,513	1,426	2,939	31,754
USED IN SUBSEQUENT ANALYSIS	793	838	1,631	1,524	1,427	2,951	32,765
DIFFERENCE	46	58	104	11	1	12	1,011
% DIFFERENCE	6.2%	7.4%	6.8%	0.7%	0.1%	0.4%	3.2%

[1] TSF = Thousand Square Feet; DU = Dwelling Unit; RM = Room

[2] Pass-by trips are made as intermediate stops on the way from an origin to a primary trip destination without route diversion. It should be noted that the pass-by reductions are applied after the internal capture reductions are taken. Pass-By reduction will not be applied to the project driveways and the intersections adjacent to the project site.

[3] Internal capture reductions include interactions between commercial, office, and residential uses. The internal capture rates are based upon data collected by the Institute of Transportation Engineers (ITE) and included in the Trip Generation Handbook, Chapter 7, Multi-Use Development.

[4] As mentioned previously, Pass-By trips are not applied at the project driveways and intersections adjacent to the site. Therefore, the following trip generation is utilized at the following intersections only: 1.) All Project Access points 2.) SR-210 NB Ramps/Greenspot Rd. 3.)Webster St./Greenspot Rd. 4.) Webster St./Boulder Ave.

PROJECT ONLY PEAK HOUR INTERSECTION VOLUMES

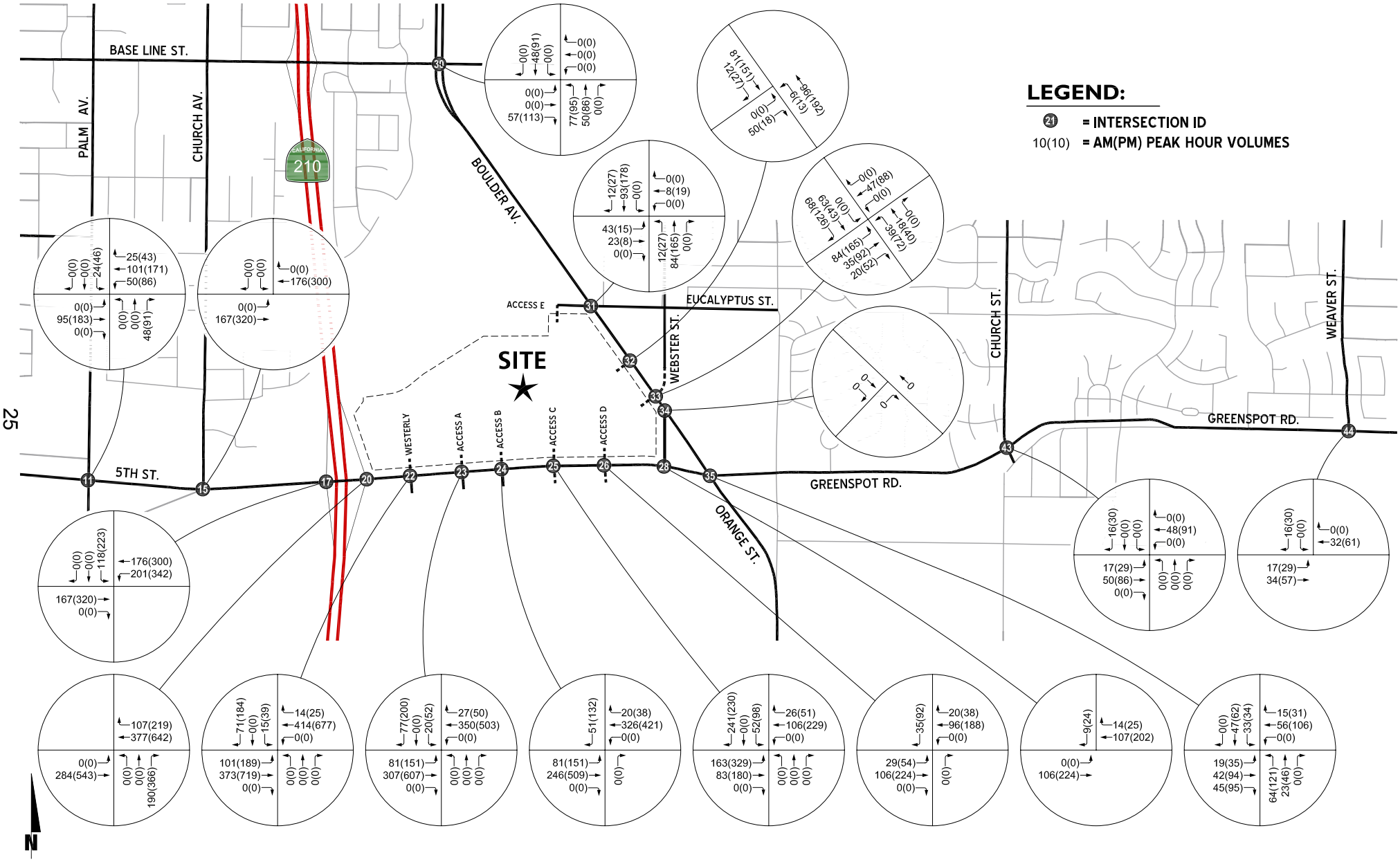
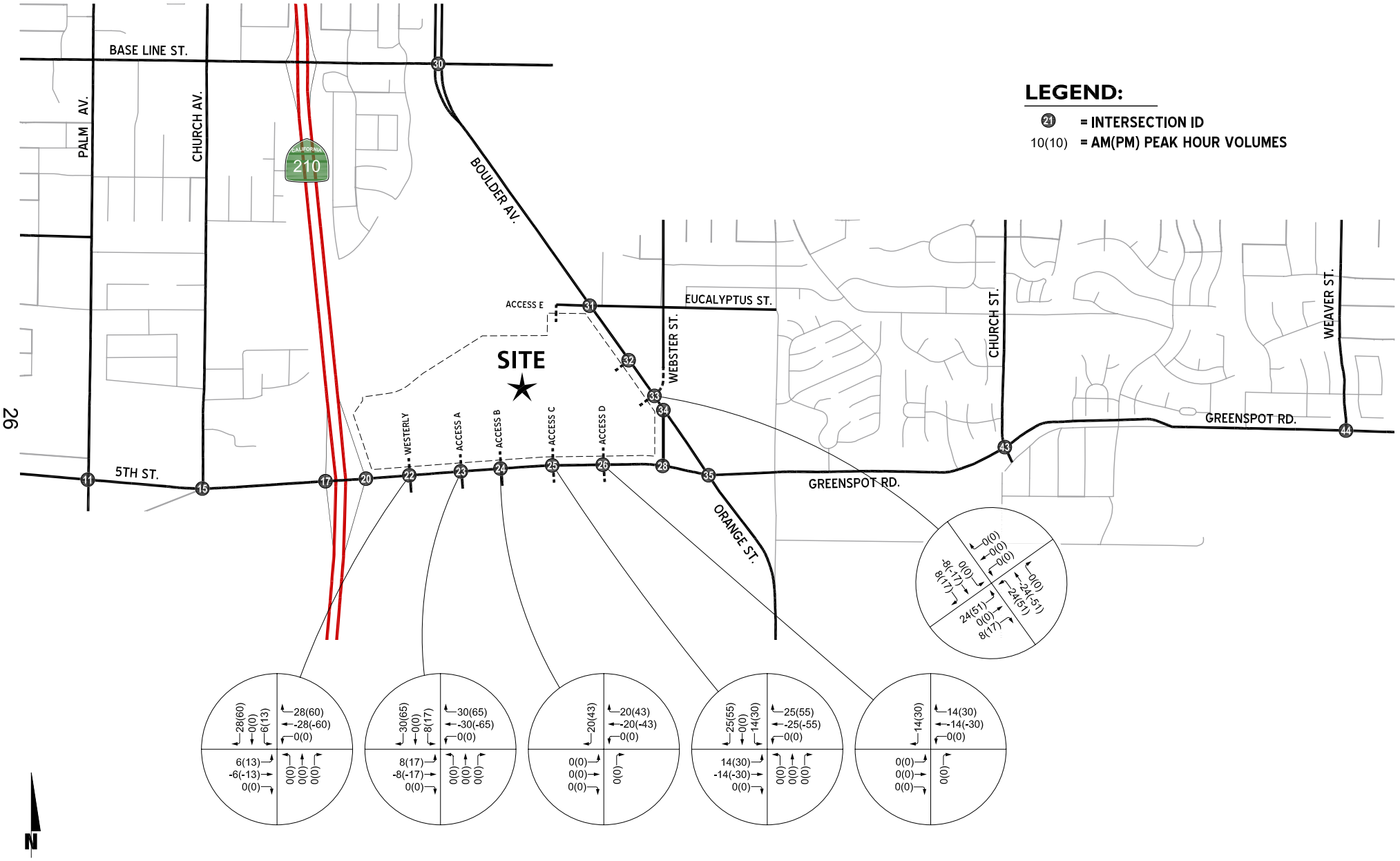


EXHIBIT E

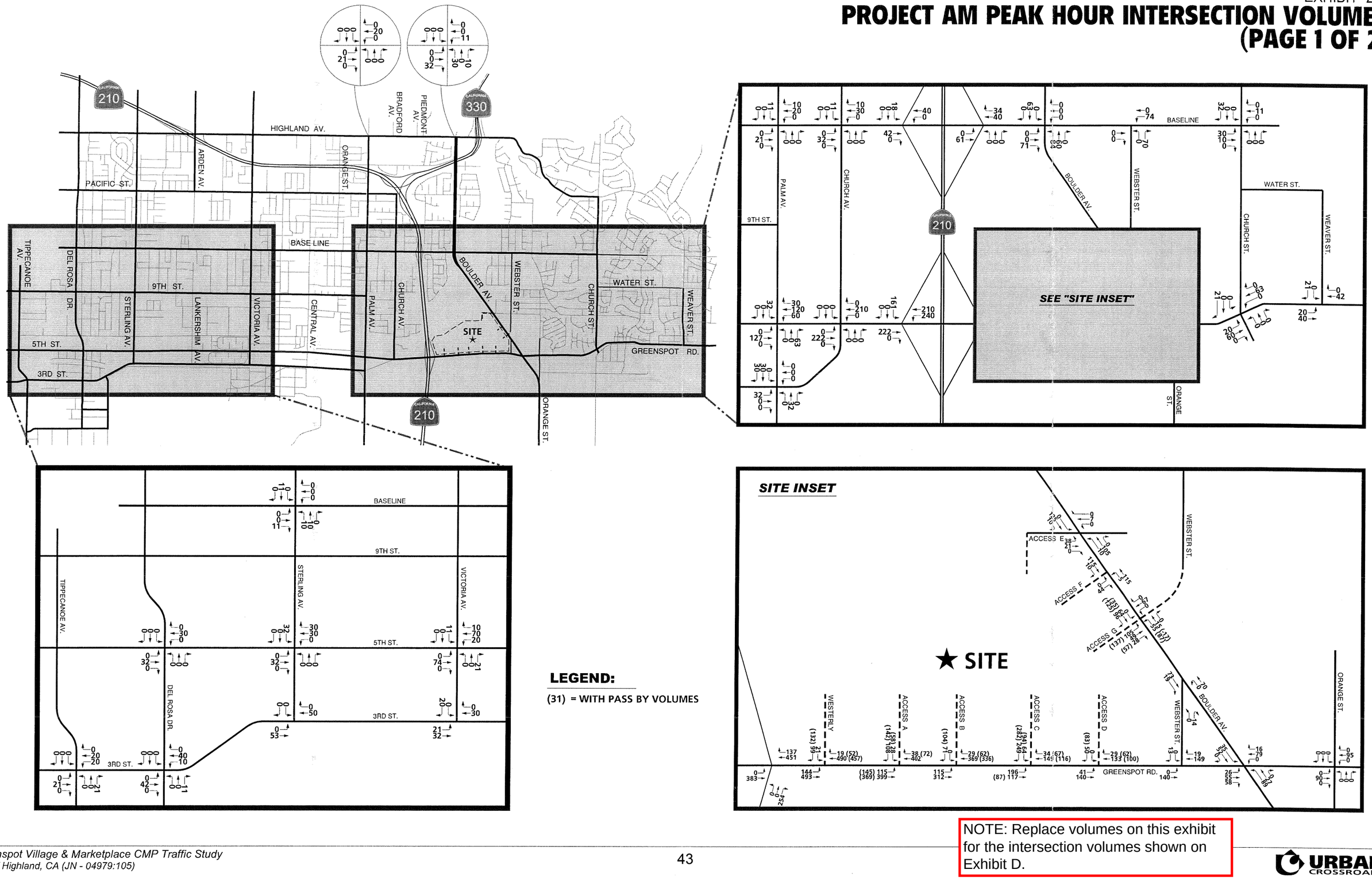
PROJECT PASS-BY ONLY PEAK HOUR INTERSECTION VOLUMES



URBAN CROSSROADS

EXHIBIT 2-D

PROJECT AM PEAK HOUR INTERSECTION VOLUMES (PAGE 1 OF 2)



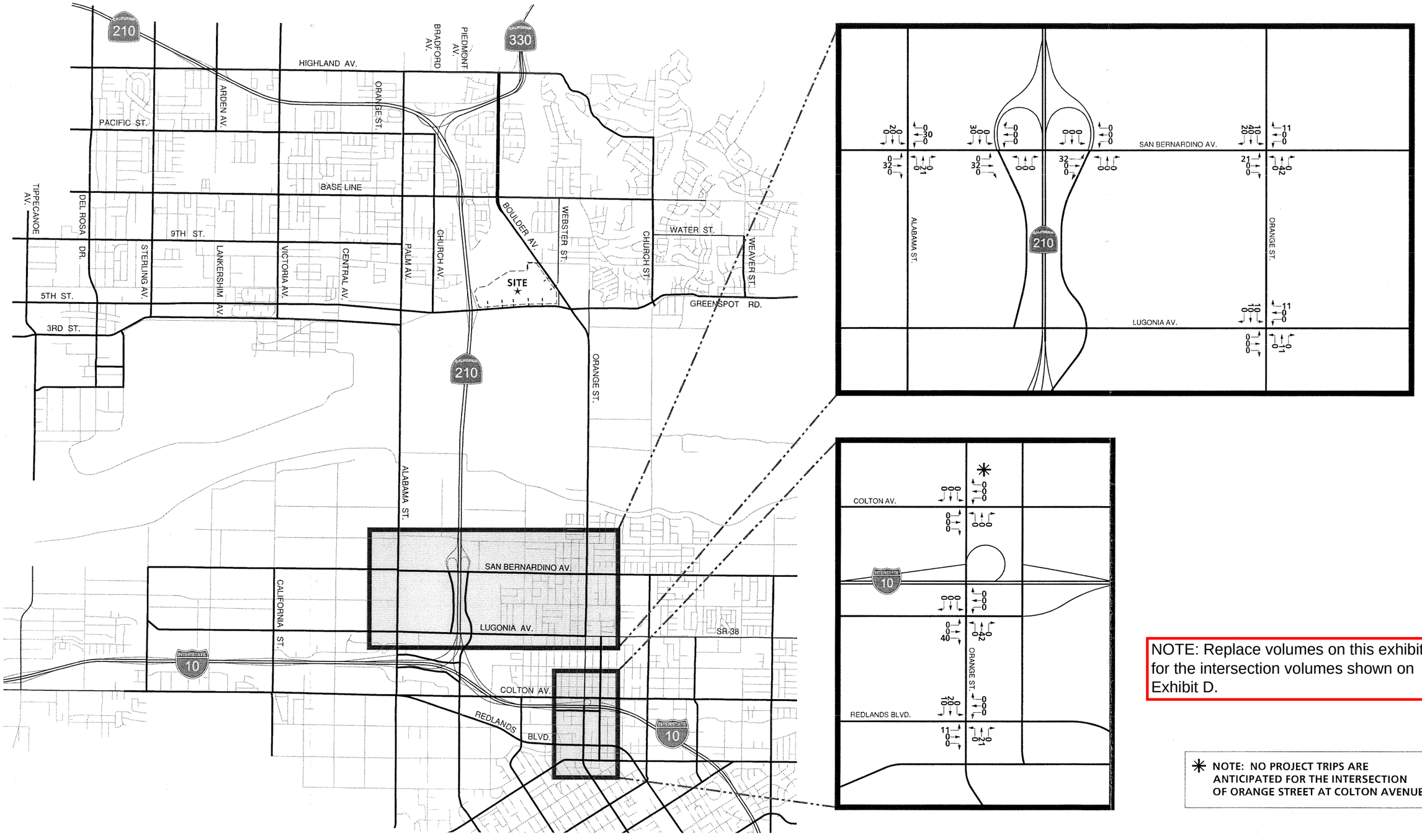
LEGEND:

(31) = WITH PASS BY VOLUMES

NOTE: Replace volumes on this exhibit for the intersection volumes shown on Exhibit D.

EXHIBIT 2-D

PROJECT AM PEAK HOUR INTERSECTION VOLUMES (PAGE 2 OF 2)

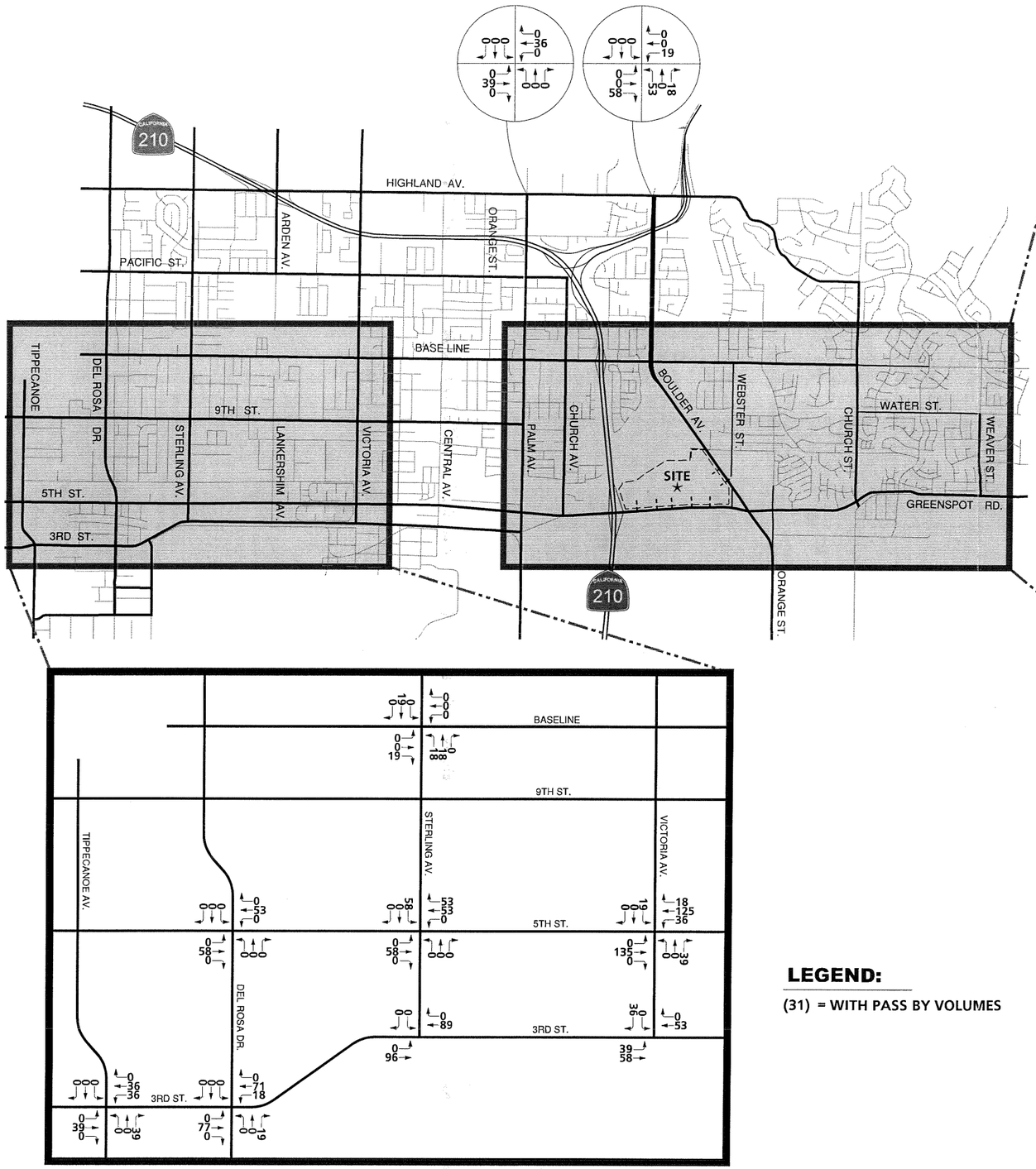


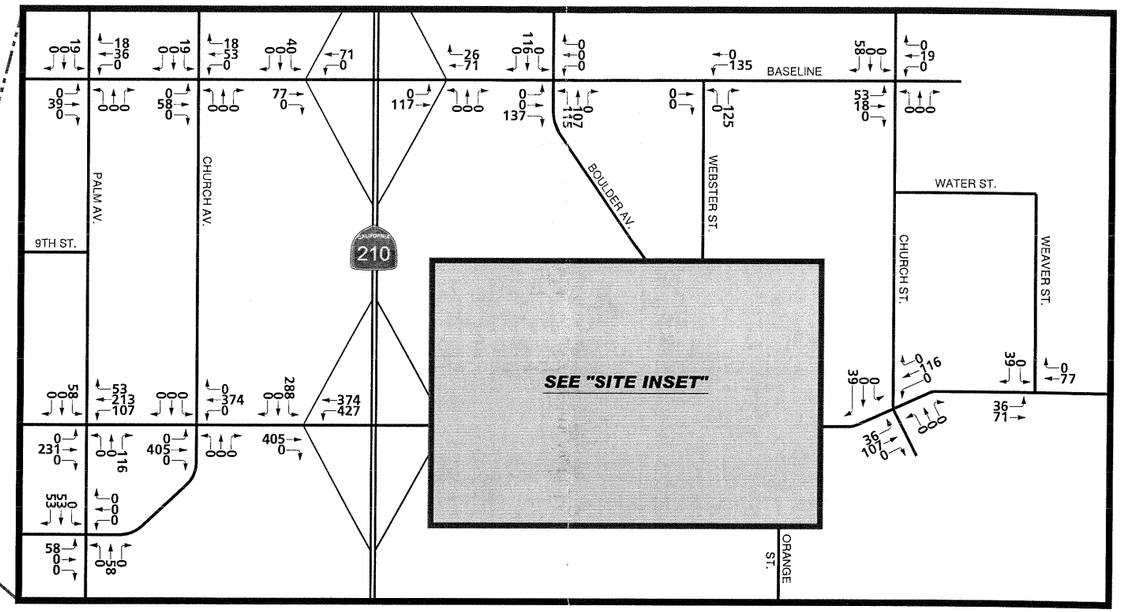
NOTE: Replace volumes on this exhibit for the intersection volumes shown on Exhibit D.

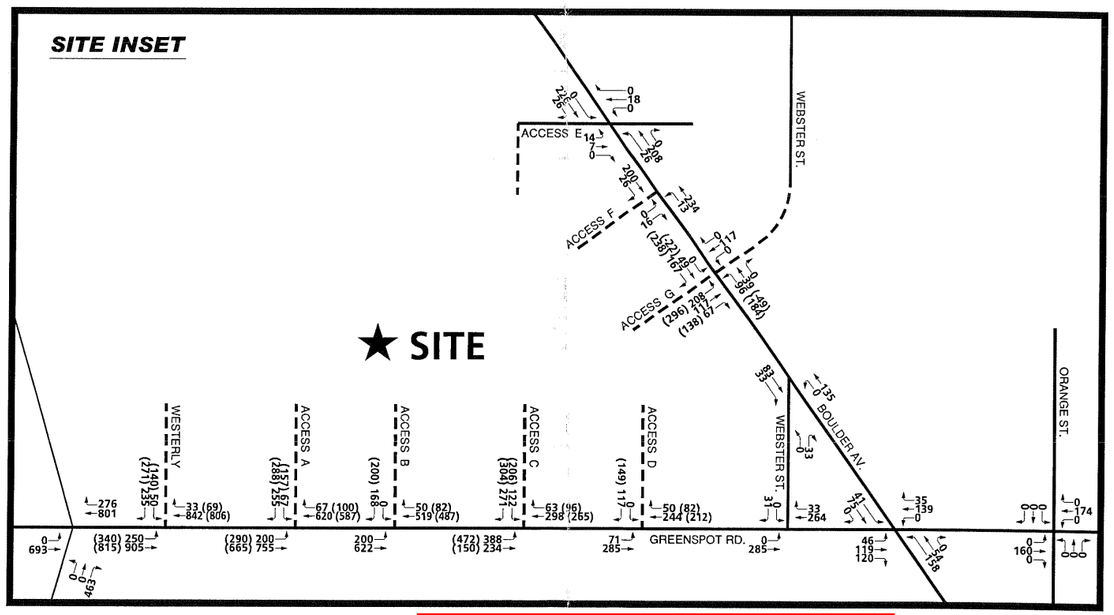
✳ NOTE: NO PROJECT TRIPS ARE ANTICIPATED FOR THE INTERSECTION OF ORANGE STREET AT COLTON AVENUE

EXHIBIT 2-E

PROJECT PM PEAK HOUR INTERSECTION VOLUMES (PAGE 1 OF 2)







LEGEND:

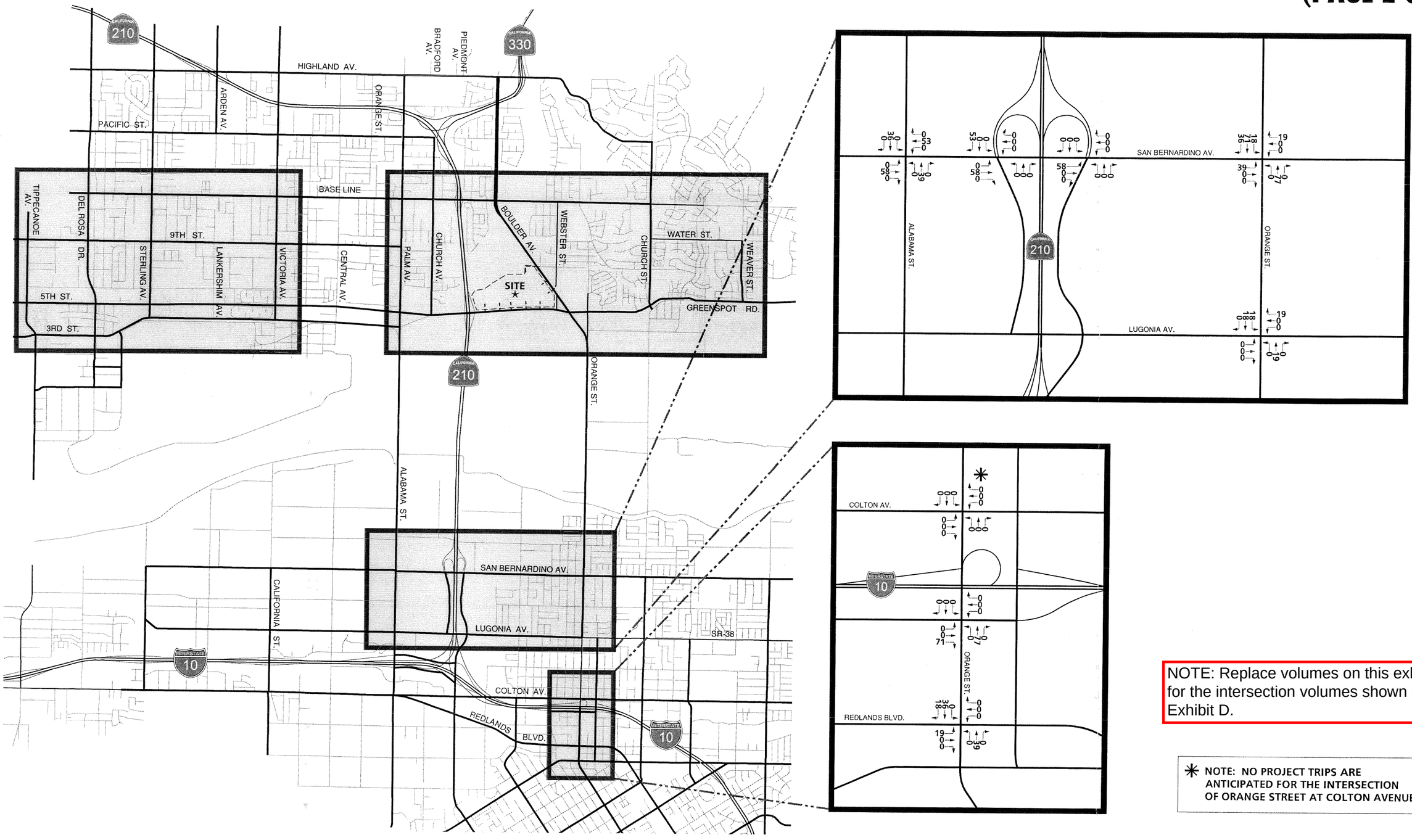
(31) = WITH PASS BY VOLUMES

N

NOTE: Replace volumes on this exhibit for the intersection volumes shown on Exhibit D.

EXHIBIT 2-E

PROJECT PM PEAK HOUR INTERSECTION VOLUMES (PAGE 2 OF 2)



Project 9

David Chong
5 Lot SFD, North of Highland

The eastern site boundary abuts a new single-family residential development in the City of Highland. Building pads of the adjacent development are elevated above the project site. The southern site boundary is adjacent to two single-family residences in the City of Highland located off of Applewood Street, one single-family residence off of Orange Blossom Drive, one single-family residence located at the intersection of Summit Avenue and Live Oak Road, and the Sycamore Heights Hydro-Pneumatic Pump Plant, operated by the East Valley Water District (EVWD). The single-family residential homes surrounding the site vary from one to two stories with most being two stories in height. Two single-family homes on the southeastern border of the site, east of Applewood Street, are separated from the project site by a block masonry wall.

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1.3 PROJECT DESCRIPTION

1.3.1 LAFCO Process

The project proposes a municipal reorganization of the City of San Bernardino and the City of Highland for annexation of the 3.62-acre site into the City of Highland due to the physical location of the project adjacent to the City of Highland and separated from the City of San Bernardino by Cook Canyon. The Local Agency Formation Commission (LAFCO) is the authority for local boundary changes and municipal reorganizations. Municipal reorganization for the project would include detachment of the 3.62-acre parcel from the City of San Bernardino, annexation of the parcel into the City of Highland Sphere of Influence (SOI) area, pre-zoning (ZC 006-002) of the parcel by the City of Highland to Low Density Residential (LDR), and annexation of the parcel into the City of Highland. The project would also be annexed into the Consolidated Landscape and Lighting District 96-1 and zoned within the Fire Safety Overlay District (FR 1).These actions would require a General Plan amendment (GPA 006-002) for both the City of Highland and the City of San Bernardino. Detachment of the parcel from the City of San Bernardino requires a Resolution from the City of San Bernardino City Council accepting the proposed action.

1.3.2 Proposed Land Use

Upon annexation into the City of Highland, the project applicant proposes to develop the 3.62-acre site for a five-lot residential subdivision as Tentative Tract Map No. 16636. Lot sizes would range from approximately 24,000 square feet to 42,700 square feet. Proposed structures would range in height from one to two stories. Figure 6, *Conceptual Site Plan*, shows the proposed layout of the five residential lots on the 3.62-acre site.

The project involves modifications to the existing landform and topography and removal of the irrigation canals (zanjas) along the northern and western property line. To create level residential pads, elevations in the northern portions of the site would be lowered while elevations in the southwestern portion of the site would be raised. As a result of the landform modifications, Lot 1 would be situated at an elevation of 1,880 feet, Lots 2 and 3 would be situated at an elevation of 1,885 feet, Lot 4 would be situated at an elevation of 1,850 feet, and Lot 5 at an elevation of 1,838 feet. Because of the difference in elevations on the southwestern end of the site, as a result of the existing 20-foot utility easement, a retaining wall with a height of approximately four feet would be required along the southern side of the proposed driveway to the Lot 5 pad. A retaining wall, measuring approximately five feet in height, would also be required between Lots 3 and 4 as a result of the difference in elevations.

The northerly end of Applewood Street, within the project site, would be a cul-de-sac with a curb radius of 40 feet for adequate space for maneuvering emergency vehicles. To accommodate the grade difference between the residential pads and the existing street elevation of Applewood Street, driveways to Lots 1, 2, and 3 would have a slope of 18 percent from the end cul-de-sac of Applewood Street leading up toward the residential pads, while the driveway to Lot 4 would have a slope of 14 percent downward towards the residential pad.

The project would be connected to existing utility connections in the right-of-way of Applewood Street. Electricity to the project site would be provided by Southern California Edison, gas service would be provided by the Southern California Gas Company (Sempra Utilities), and water and sewer service would be provided by EVWD. The EVWD also maintains an easement immediately north of the southwestern property line, near the Sycamore Heights Hydro-Pneumatic Pump Plant.

1.3.3 Project Phasing

The project would be completed in two phases. The first phase encompasses the three-part municipal reorganization for the parcel, which includes: (1) detachment of the 3.62-acre site from the City of San Bernardino, (2) sphere of influence (SOI) change for the parcel from the City of San Bernardino to the City of Highland by LAFCO, the City of San Bernardino, and the City of Highland, and (3) subsequent annexation of this parcel into the City of Highland. The second phase includes development and operation of the 3.62-acre site for the five single-family residential lots.

Tentative Construction Schedule

Construction is estimated to begin in 2007 and includes grading for development of individual building pads on the five single-family residential lots. Construction of the single-family residential homes would occur later as individual lots may be sold separately. Site grading is estimated to take approximately one and a half months. Site grading would require 5,398 cubic yards (cy) of cut and 1,614 cy of fill, resulting in the export of 3,784 cy of soil exported offsite.

1.4 EXISTING ZONING AND GENERAL PLAN

The project site is located in an area of the City of San Bernardino currently designated by the General Plan as Residential Low (RL), which permits 3.1 single-family detached dwelling units per acre and a 10,800-square-foot minimum lot size. The City of San Bernardino General Plan also designates the project site as within the Highlands Specific Plan area.

1.5 CITY/AGENCY ACTION REQUESTED

- LAFCO-sponsored application for detachment of the parcel from the City of San Bernardino, inclusion of the parcel into the City of Highland SOI, and annexation to the City of Highland.
- City of San Bernardino Resolution accepting the detachment of the parcel from the City
- General Plan Amendment, SOI area exchange, annexation and prezone application to designate the parcel as Low Density Residential (LDR) within the Fire Safety Overlay District (FR 1) and Consolidated Landscape and Lighting District 96-1 in the City of Highland.
- Development Plan Review, Approval of Tentative Tract Map No. 16636, and approval of the Initial Study/Mitigated Negative Declaration by Planning Commission and City Council.
- Review and approval of the project development plans and fuel management zone by the California Department of Forestry and Fire (CDF).
- Approval of a variance for driveways that exceed 12 percent slope required by the City engineer.

b) Does the project include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment?

No Impact. The project would not construct any recreational facilities on the project site. No impact would occur and no mitigation measures are required.

3.15 TRANSPORTATION/TRAFFIC

a) Cause an increase in traffic, which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?

Less Than Significant Impact. The project site is accessed at the north terminus of Applewood Street in the City of Highland. Urban Crossroads prepared the traffic analysis for the proposed project (dated August 2006), which is included in Appendix H.

Project trip generation has been calculated in accordance with the Institute of Transportation Engineers' (ITE) manual, *Trip Generation* (2003). As shown in Table 15, the project is anticipated to generate 48 average daily trips, with four trips during the morning peak hour and five trips during the evening peak hour.

Table 15
Project-Generated Traffic

Time Period	*Trip Generation Rate (trips per dwelling unit)*	*Generated Traffic Volume*
AM Peak Hour (7:00-8:00 a.m.)		
In	0.19	1
Out	0.56	3
Total	**0.75**	**4**
PM Peak Hour (3:00-4:00 p.m.)		
In	0.64	3
Out	0.37	2
Total	**1.01**	**5**
Total Daily Traffic	**9.57**	**48**

Project traffic was distributed over local roadways. It was assumed that project traffic would utilize Highland Avenue and Base Line via Church Street to reach destinations within the City and outlying areas. The regional plan for the area was examined for purposes of assessing project plus cumulative project growth within the vicinity of the project. As shown in the subregional Comprehensive Transportation Plan (CTP) Traffic Analysis Zone (TAZ) map, the project is located within TAZ 290800. The 2020 forecast for TAZ 290800 includes significant increases of single-family housing, multifamily housing, and retail and service uses. Consequently, the regional model has accounted for the amount of trips that the project would generate.

Roadways within the vicinity of the project have sufficient capacity to accommodate the 48 additional daily trips generated by the project. Intersections along the primary project access route were analyzed in the context of the recent City of Highland General Plan Update. Level of Service (LOS) is a measure of traffic operating conditions that based on prevailing traffic volumes (Average Daily Traffic [ADT]) in relation to the roadway capacity. The City of Highland has established an LOS D as the lowest acceptable level of service for peak hour intersection volumes. All streets within the vicinity of the project currently operate at LOS C or better during both the morning and evening peak hours and would continue to do so with implementation of

the proposed project. The addition of four morning and five evening peak-hour trips would not adversely affect the level of service on the roadway system that would serve project-related traffic.

b) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?

No Impact. The 2003 update to the Congestion Management Program (CMP) for San Bernardino County, defines a network of state highways and arterials in addition to level of service standards for roadways and intersections within the CMP network. The project site is not located adjacent to nor would it impact a roadway or intersection that is a part of the San Bernardino County CMP. Therefore, no impact to roadways or intersections within the County of San Bernardino CMP network would occur.

c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?

No Impact. The project involves annexation and subsequent development of a 3.62-acre site for residential development. The project would not result in changes of air traffic patterns, as the project would not result in increases in safety risks or air traffic levels. No impact would occur.

d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

No Impact. A cul-de-sac with a minimum 40-foot diameter would be constructed at the north terminus of Applewood Street. Each of the five lots would have access to Applewood Street by means of a private driveway. The project would not create any design hazards (e.g., sharp curves or dangerous intersections) or incompatible uses. No impact would occur. No mitigation measures are required.

e) Result in inadequate emergency access?

No Impact. The project would have one access point located at current north terminus of Applewood Street. The cul-de-sac would be designed with a minimum 40-foot-diameter turnaround for emergency vehicle access and to allow for sufficient turnaround radius by emergency vehicles. Furthermore, emergency access for the project would be review by the City of Engineer to ensure adequate access for emergency vehicles; therefore, no impact would occur.

f) Result in inadequate parking capacity?

No Impact. The City of Highland requires two spaces per single-family unit (Municipal Code Section 16.52.030) within an enclosed garage area. Single-family residential homes would be required to show that homes include two-car garages on building plans. New construction on the residential lots would be required to adhere to the parking requirements of the City of Highland Municipal code; therefore, no impact would occur.

g) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?

No Impact. The project is located adjacent to single-family residential neighborhoods within the City of Highland. The project is not located within close proximity to designated bus routes or bicycle routes. Development of the project would not conflict with policies, plans, or programs of the City of Highland which support alternative transportation. No impact would occur.

Project 10

Table D - Harmony Trip Generation (with Commercial Overlay)

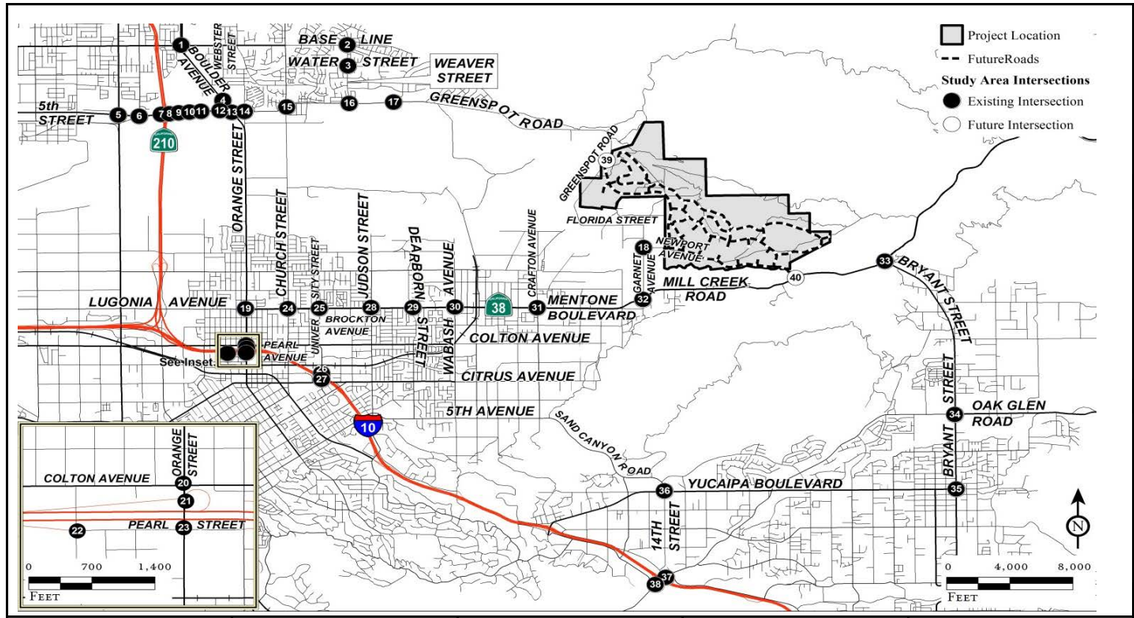
Land Use		Units	A.M. Peak Hour In	A.M. Peak Hour Out	A.M. Peak Hour Total	P.M. Peak Hour In	P.M. Peak Hour Out	P.M. Peak Hour Total	Daily
PA 1	Single Family Residential	46 DU	9	26	35	29	17	46	438
PA 2	Single Family Residential	104 DU	20	58	78	66	38	104	990
PA 3	Single Family Residential	141 DU	27	79	106	89	52	141	1342
PA 4	Single Family Residential	51 DU	10	28	38	32	19	51	486
PA 5	Single Family Residential	36 DU	7	20	27	23	13	36	343
PA 6	Single Family Residential	36 DU	7	20	27	23	13	36	343
PA 7	Single Family Residential	133 DU	25	75	100	84	49	133	1266
PA 8	Single Family Residential	47 DU	9	26	35	30	17	47	447
PA 9	Single Family Residential	13 DU	2	8	10	8	5	13	124
PA 10	Single Family Residential	84 DU	16	47	63	53	31	84	800
PA 11	Single Family Residential	19 DU	4	10	14	12	7	19	181
PA 12	Single Family Residential	27 DU	5	15	20	17	10	27	257
PA 13	Single Family Residential	63 DU	12	35	47	40	23	63	600
PA 14	Single Family Residential	94 DU	18	53	71	59	35	94	895
PA 18	Recreation Center	16.0 TSF	22	11	33	22	22	44	541
PA 45	Single Family Residential	15 DU	3	8	11	9	6	15	143
PA 48	City Park	2.9 Acres	0	0	0	0	0	0	5
PA 49	City Park	4.3 Acres	0	0	0	0	0	0	8
PA 15	Single Family Residential	208 DU	40	116	156	131	77	208	1980
PA 16	Single Family Residential	39 DU	7	22	29	25	14	39	371
PA 19A	Elementary School	832 Students	209	165	374	59	67	126	1072
PA 19B	City Park	5.3 Acres	0	0	0	0	0	0	10

Table D - Harmony Trip Generation (with Commercial Overlay)

Land Use		Units	A.M. Peak Hour In	A.M. Peak Hour Out	A.M. Peak Hour Total	P.M. Peak Hour In	P.M. Peak Hour Out	P.M. Peak Hour Total	Daily
PA 20D	Single Family Residential	53 DU	10	30	40	33	20	53	505
PA 21	Single Family Residential	115 DU	22	64	86	72	43	115	1095
PA 22	Single Family Residential	47 DU	9	26	35	30	17	47	447
PA 26	Condominium/Townhomes	173 DU	12	64	76	61	29	90	1005
PA 27	Single Family Residential	62 DU	12	35	47	39	23	62	590
PA 29A	Single Family Residential	45 DU	9	25	34	28	17	45	428
PA 29B	Single Family Residential	52 DU	10	29	39	33	19	52	495
PA 44	Sports Complex	4.0 Fields	3	1	4	47	24	71	285
PA 46	Single Family Residential	15 DU	3	8	11	9	6	15	143
PA 50	City Park	0.7 Acres	0	0	0	0	0	0	1
PA 51	City Park	0.8 Acres	0	0	0	0	0	0	2
PA 52	City Park	0.7 Acres	0	0	0	0	0	0	1
PA 17	Single Family Residential	157 DU	30	88	118	99	58	157	1,495
PA 20A/C	Commercial (NC Overlay)	141.6 TSF	85	51	136	252	273	525	6,045
PA 20B	Commercial	62.1 TSF	37	23	60	110	120	230	2,651
PA 23	Single Family Residential	77 DU	15	43	58	49	28	77	733
PA 24	Single Family Residential	56 DU	11	31	42	35	21	56	533
PA 25	Single Family Residential	110 DU	21	62	83	69	41	110	1047
PA 28	Single Family Residential	31 DU	6	17	23	20	11	31	295
PA 30	Single Family Residential	31 DU	6	17	23	20	11	31	295
PA 31A	Single Family Residential	52 DU	10	29	39	33	19	52	495
PA 31B	Single Family Residential	63 DU	12	35	47	40	23	63	600
PA 32A	Single Family Residential	63 DU	12	35	47	40	23	63	600
PA 32B	Single Family Residential	54 DU	10	31	41	34	20	54	514
PA 43A	Single Family Residential	130 DU	25	73	98	82	48	130	1238
PA 43B	Single Family Residential	99 DU	19	55	74	62	37	99	942

Table D - Harmony Trip Generation (with Commercial Overlay)

Land Use		Units	A.M. Peak Hour In	A.M. Peak Hour Out	A.M. Peak Hour Total	P.M. Peak Hour In	P.M. Peak Hour Out	P.M. Peak Hour Total	Daily
PA 53	City Park	0.9 Acres	0	0	0	0	0	0	2
PA 54	City Park	0.8 Acres	0	0	0	0	0	0	2
PA 55	City Park	0.6 Acres	0	0	0	0	0	0	1
PA 56	City Park	1.0 Acres	0	0	0	0	0	0	2
PA 57	City Park	0.8 Acres	0	0	0	0	0	0	2
PA 33	Single Family Residential	105 DU	20	59	79	66	39	105	1000
PA 34	Single Family Residential	52 DU	10	29	39	33	19	52	495
PA 35	Single Family Residential	25 DU	5	14	19	16	9	25	238
	Commercial (NC Overlay)	10.9 TSF	7	3	10	19	21	40	465
PA 36	Single Family Residential	45 DU	9	25	34	28	17	45	428
PA 37	Single Family Residential	28 DU	5	16	21	18	10	28	267
PA 38	Single Family Residential	23 DU	4	13	17	14	9	23	219
PA 58	City Park	1.0 Acres	0	0	0	0	0	0	2
PA 59	City Park	0.8 Acres	0	0	0	0	0	0	2
PA 39	Single Family Residential	119 DU	23	66	89	75	44	119	1133
PA 40	Single Family Residential	195 DU	37	109	146	123	72	195	1856
	Commercial (NC Overlay)	10.9 TSF	7	3	10	19	21	40	465
PA 41	Single Family Residential	81 DU	15	46	61	51	30	81	771
PA 42	Single Family Residential	152 DU	29	85	114	96	56	152	1447
PA 47	City Park	6.5 Acres	0	0	0	0	0	0	12
Phase V Completion Trip Generation Summary									
	Gross Trip Generation		**1,012**	**2,162**	**3,174**	**2,666**	**1,793**	**4,459**	**43,931**
	Internal Trips:								
	Residential		**(175)**	**(237)**	**(412)**	**(197)**	**(181)**	**(378)**	**(4107)**
	City Park		**0**	**0**	**0**	**0**	**0**	**0**	**(52)**
	Recreation Center		**(22)**	**(11)**	**(33)**	**(22)**	**(22)**	**(44)**	**(541)**
	Elementary School		**(178)**	**(142)**	**(320)**	**(51)**	**(57)**	**(108)**	**(914)**
	Commercial		**(37)**	**(22)**	**(59)**	**(108)**	**(118)**	**(226)**	**(2600)**
	Pass By Trips		**0**	**0**	**0**	**(104)**	**(104)**	**(207)**	**(1968)**
	Net Trip Generation		**600**	**1,750**	**2,350**	**2,185**	**1,312**	**3,496**	**33,749**



1 Boulder Avenue/Base Line	2 Highland Avenue-Weaver Street/Base Line	3 Weaver Street/Water Street	4 Boulder Avenue/Webster Street	5 Palm Avenue/5th Street
6 Church Avenue/5th Street	7 SR-210 Eastbound Ramps/5th Street-Greenspot Road	8 SR-210 Westbound Ramps/Greenspot Road	9 Lowe's Center/Greenspot Road	10 Access A/Greenspot Road
11 Access C/Greenspot Road	12 Webster Street/Greenspot Road	13 Boulder Avenue/Greenspot Road	14 Orange Street/Greenspot Road	15 Church Street/Greenspot Road
16 Weaver Street/Greenspot Road	17 Alta Vista/Greenspot Road	18 Greenspot Road-Garnet Street/Newport Avenue	19 Orange Street/SR-38	20 Orange Street/Colton Avenue
21 Orange Street/I-10 Westbound Ramps	22 Eureka Street/I-10 Eastbound Off-Ramp - Pearl Avenue	23 Orange Street/Pearl Avenue	24 Church Street/SR-38	25 University Street/SR-38
26 University Street/I-10 Westbound On-Ramp - Central Avenue	27 University Street/I-10 Eastbound Off-Ramp	28 Judson Street/SR-38	29 Dearborn Street/SR-38	30 Wabash Avenue/SR-38
31 Crafton Avenue/SR-38	32 Garnet Street/SR-38	33 Bryant Street/SR-38	34 Bryant Street/Oak Glen Road	35 Bryant Street/Yucaipa Boulevard
36 Sand Canyon Road – 14th Street/Yucaipa Boulevard	37 Live Oak Canyon Road/I-10 Westbound Ramps	38 Live Oak Canyon Road/I-10 Eastbound Ramps	39 New Greenspot Road/Old Greenspot Road	40 Newport Avenue/SR-38

LSA

FIGURE 15

XXX/YYY AM/PM Peak Hour Trips

Harmony Specific Plan
Traffic Impact Analysis
Phase V Project Trip Assignment
(with Newport Avenue/SR-38 Connection)

R:\LEW1003\Traffic\09_2013\z60-Assn_Phase V_Alt (9/27/2013)

Project 11

FIGURE 1
VICINITY MAP

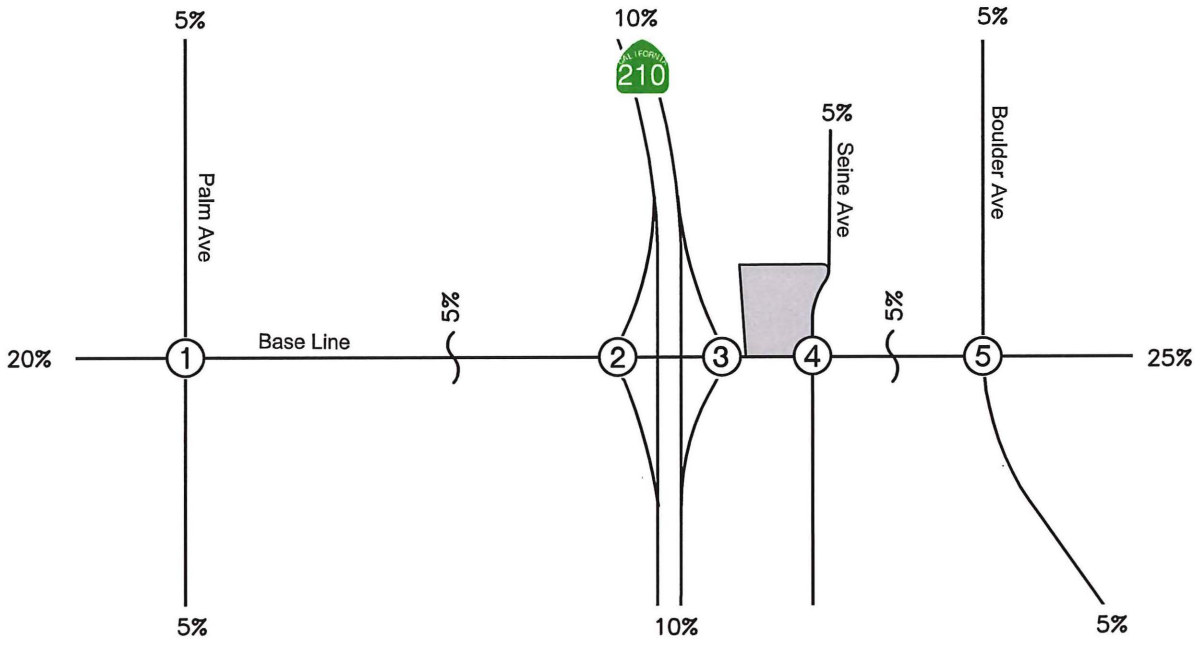
TABLE 2
SUMMARY OF PROJECT TRIP GENERATION

Land Use	ITE Code	Unit	Trip Generation Rates [1]						
			Daily	AM Peak Hour			PM Peak Hour		
				In	Out	Total	In	Out	Total
Fast-Food Restaurant w/ Drive-Through	934	KSF	496.120	23.164	22.256	45.420	16.978	15.672	32.650

Land Use	Quantity	Unit	Trip Generation Estimates						
			Daily [2]	AM Peak Hour			PM Peak Hour		
				In	Out	Total	In	Out	Total
Pad A - Jack-in-The Box DT Restaurant	2.543	KSF	1,262	59	57	116	43	40	83
Pad B - Panda Express DT Restaurant	2.600	KSF	1,290	60	58	118	44	41	85
Pass-by Trips			-101	-30	-29	-59	-22	-20	-42
Total Project Trips			**2,451**	**89**	**86**	**175**	**65**	**61**	**126**

[1] Source: Institute of Transportation Engineers (ITE) Trip Generation Manual, 9th Edition

[2] For a more conservative estimate, the pass-by assumption for daily trips is shown as only the sum of the AM and PM pass-by trips.

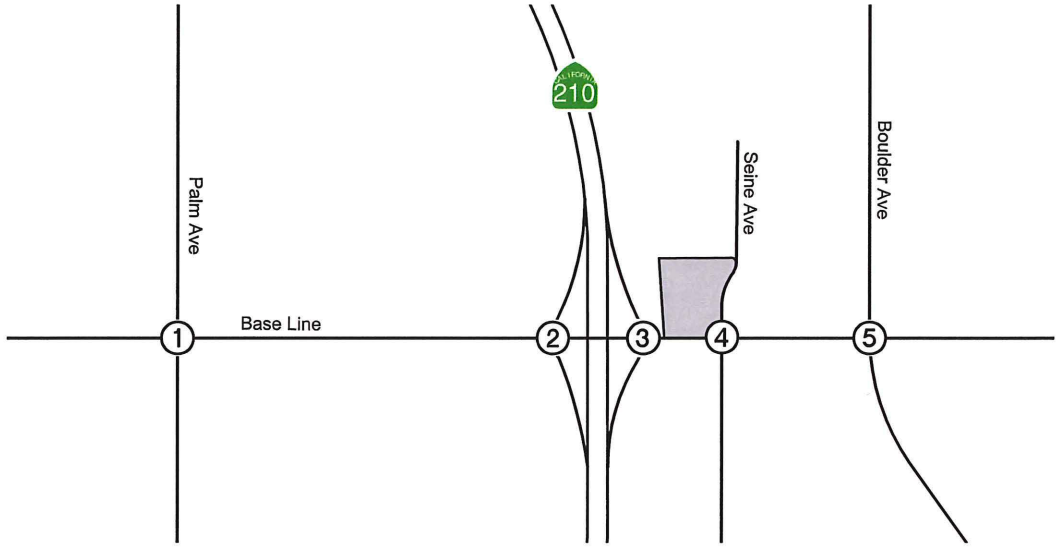


LEGEND:
= Project Site
= Study Intersection
XX% = Distribution Percentage

FIGURE 5
PROJECT TRIP DISTRIBUTION ASSUMPTIONS

Kimley»Horn

NOT TO SCALE



1.Base Line at Palm Ave	2. Base Line at SR-210 EB Ramps	3. Base Line at SR-210 WB Ramps	4. Base Line at Seine Ave	5. Base Line at Boulder Ave
4/3 4/3 17/12 4/3 18/13 4/3	9/7 29/21 9/6 30/22	9/6 38/27 39/29 9/7	63/44 48/34 48/35 -14/-10 64/48 -16/-12	4/3 22/16 4/3 23/16 4/3 4/3

LEGEND:

= Project Site

= Study Intersection

XX/YY = AM/PM Peak Hour Turning Movement Volumes

-XX/-YY = Redirected Pass-by Trips

FIGURE 6
PROJECT-RELATED
PEAK HOUR TRAFFIC VOLUMES

Kimley»Horn

Project 12

CITY OF HIGHLAND

27215 Base Line, Highland, CA 92346
Telephone (909) 864-8732 FAX: (909) 862-3180

NOTICE OF DETERMINATION

CLERK OF THE BOARD
JAN 17 2008
COUNTY OF
SAN BERNARDINO

TO: ___ Office of Planning & Research
1400 Tenth St., Room 121
Sacramento, CA 95814

_X_ Clerk of the Board
385 N. Arrowhead Ave., Second Floor
San Bernardino, CA 92411

FROM: City of Highland
Community Development Dept.
27215 Base Line
Highland, CA 92346

Documentary Handling Fee ($35.00)
Receipt Number 371546

SUBJECT: Filing of Notice of Determination in compliance with Section 21108 or 21152 of the Public Resources Code.

PROJECT TITLE: Design Review Application (DRB-007-020)

STATE CLEARINGHOUSE NUMBER: NA

CONTACT PERSON AND TELEPHONE: Pat Meyer (909) 798-4446

LEAD AGENCY CONTACT PERSON AND TELEPHONE: Sean Kelleher, Assistant Planner (909) 864-8732, ext. 210

PROJECT LOCATION: An approximate 8.01 acre parcel of land located at the northeast corner of the intersection of Del Rosa Drive and Fifth Street (APN: 0279-211-25 and 26)

PROJECT DESCRIPTION: Design Review Application (DRB 007-020) which proposes the construction eight (8) Business Park Buildings - each with attached associated business offices. The Buildings will range in size from 10,550 square feet to 23,620 square feet for a total of 126,913 square feet of business park space.

APPLICANT: Orange-New Jersey Property
731 Wimbleton Drive
Redlands, CA 92373

This is to advise that the City of Highland (Lead Agency) has approved the above described project on September 6, 2005 and has made the following determinations regarding the above described project:

1. The project ___ will, _X_ will not, have a significant effect on the environment.
2. ___ An Environmental Impact Report was prepared for this pursuant to the provisions of CEQA.

   _X_ A Negative Declaration was prepared for this project pursuant to the provisions of CEQA.
3. Mitigation measures _X_ were, ___ were not, made a condition of the approval of the project by reference to umbrella approved projects.
4. This project ___ has, _X_ has no, potential (*de minimis*) impact for any adverse effect, either individually or cumulatively on wildlife resources or wildlife habitat.
5. A statement of Overriding Considerations ___ was, _X_ was not, adopted for this project.
6. Findings _X_ were, ___ were not made pursuant to the provisions of CEQA.

This is to certify that the Mitigated Negative Declaration with comments and responses and record of project approval is available to the General Public at City of Highland, Community Development Department, 27215 Base Line, Highland, CA 92346.

Signature (Public Agency) 11/16/08 Date — Community Development Director Title

Date received for filing at OPR:_____

DATE FILED & POSTED

CLERK OF THE BOARD
DEC 0 3 2007
COUNTY OF
SAN BERNARDINO

CITY OF HIGHLAND

27215 Base Line, Highland, CA 92346
Telephone (909) 864-8732 FAX: (909) 862-3180

DATE FILED & POSTED

NOTICE OF INTENT TO ADOPT A NEGATIVE DECLARATION

PUBLICATION OF THIS NOTICE DOES NOT IMPLY THE REVIEWING AUTHORITY (CITY OF HIGHLAND) HAS MADE A FINAL DECISION TO ADOPT THE NEGATIVE DECLARATION

Lead Agency:
City of Highland
Planning Division
27215 Base Line
Highland, CA 92346

Contact:
Sean Kelleher
Assistant Planner
(909) 864-8732, Ext. 210

The City of Highland, in its capacity as the Lead Agency for this project, evaluated the potential environmental impacts of the project in accordance with the California Environmental Quality Act (CEQA). The City has determined through the preparation of an Initial Study the project will not result in any significant environmental impacts, and therefore will prepare a Mitigated Negative Declaration for the project identified below. The Initial Study meets the requirements of CEQA, and the City of Highland Guidelines for the implementation of CEQA.

We need to know your views as to the scope and contents of the environmental information, which has been included in the Initial Study. If you represent a responsible or trustee agency, we are particularly interested in information germane to your statutory responsibilities. If you are a public agency, you will need to use the Initial Study prepared by our Agency when considering your permit or other approval for the project.

Due to the time limits mandated by State Law, your response must be sent at the earliest possible date, but no later than the ending date specified below.

Project Title: Design Review Board Application (DRB-007-020)
Del Rosa Drive Business Park

Project Location: The northeast corner of the intersection of Del Rosa Drive and Fifth Street (APN: 0279-211-25 and 26)

City: Highland County: San Bernardino

Project Description: The Applicant is proposing the Construction of eight (8) Business Park Buildings each with attached associated business offices.

The Buildings will range in size from 10,550 square feet to 23,620 square feet. A total of 126,913 square feet of building is proposed for the eight (8) acre parcel of Land. The Applicant has also proposed as part of the project a Parcel Map to allow each of the building to be located on its own lot, separated from the Parking Lot.

The Site has a total of 299 parking stalls proposed, which is consistent with the Highland Municipal Code

The Highland Municipal Code requires a development of this nature to be processed as a Major Design Review Application subject to a Public Meeting before the Design Review Board.

Public Review: Design Review Board (DRB-007-020) Initial Study/Mitigated Negative Declaration, and related documents are available for public review daily during normal business hours. Members of the public may view these documents at City Hall Planning Division, located at 27215 Base Line, Highland and submit comment at or prior to the Design Review Board Public Meeting.

An opportunity will be given at said hearing for all interested persons to be heard.

Public Review Period: Begins: December 3, 2007 Ends: December 24, 2007

Public Hearing(s): Tentative Date: January 15, 2008

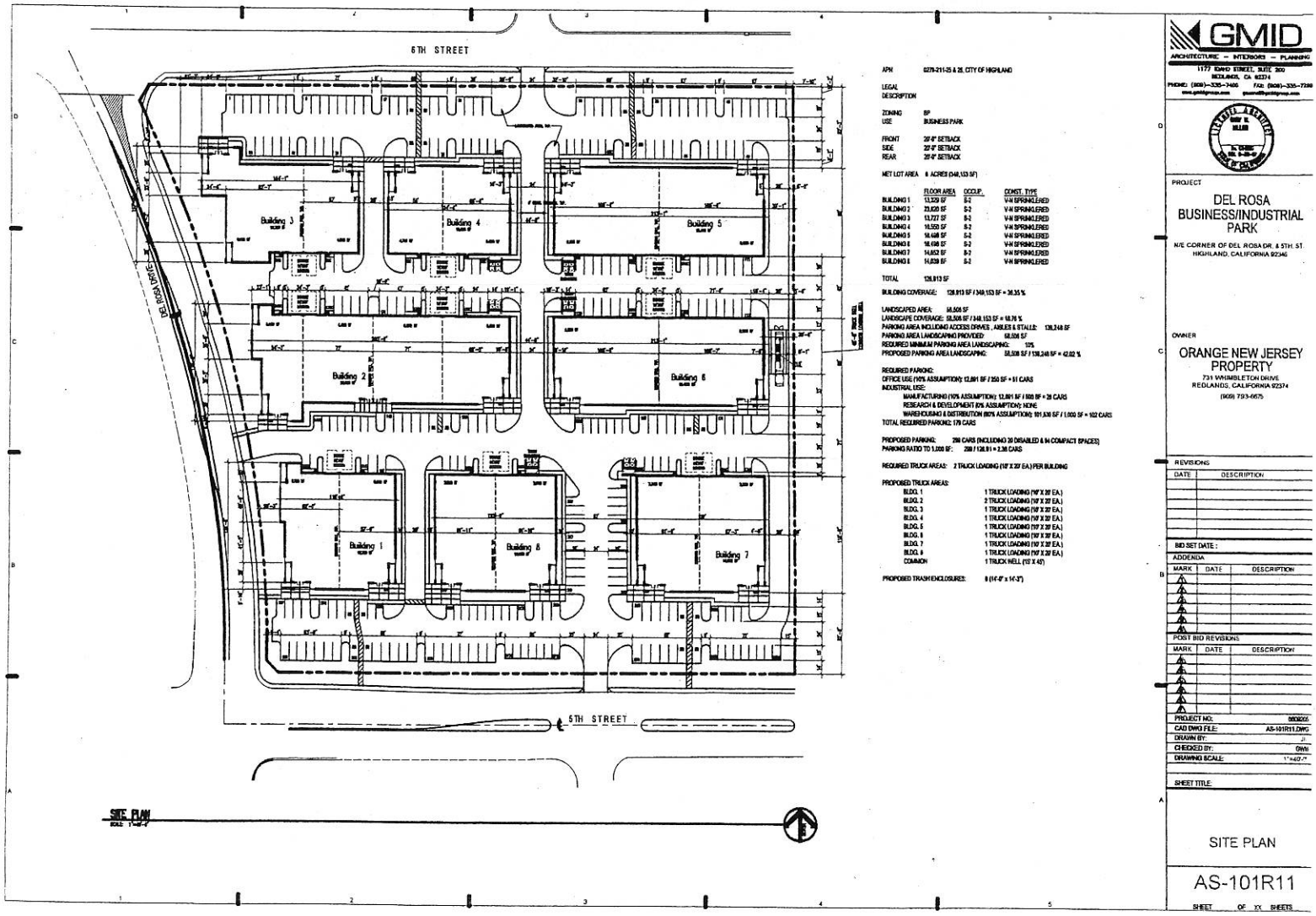
Time: 5:00 p.m. or soon thereafter
Location: Leo Donahue Council Chambers
27215 Base Line

Comments: All comments and questions should be in writing and directed to:

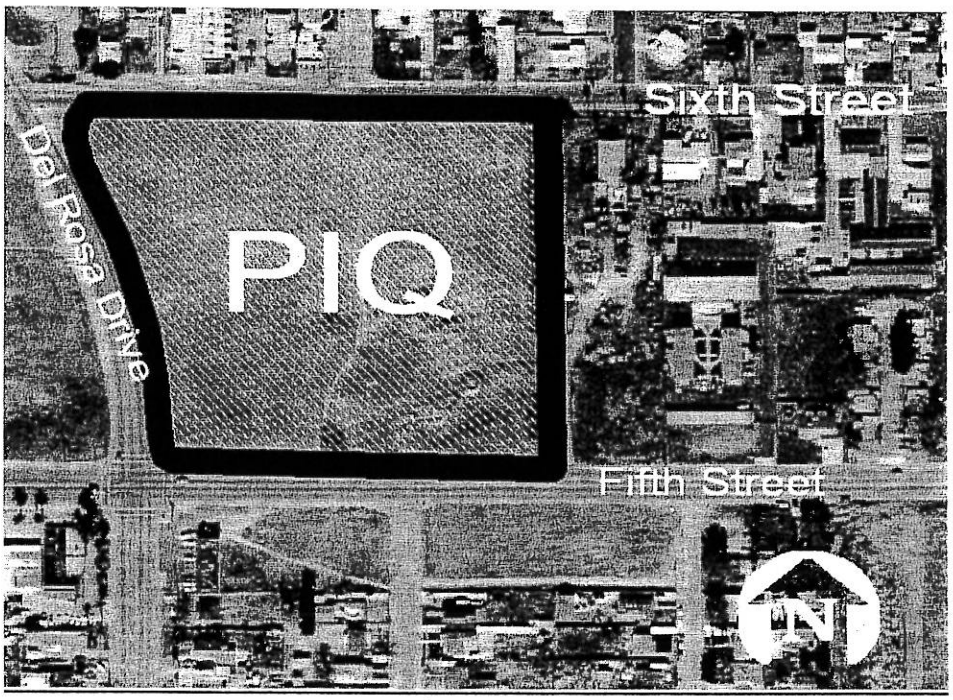
City of Highland
Attention: Sean Kelleher, Assistant Planner
27215 Base Line
Highland, CA 92346

C:\environmental\notice of intent

Site Plan (Exhibit 1)



Aerial Photo (Exhibit 2)



14. RECREATION	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☐	☑
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment?	☐	☐	☐	☑

Explanation:

14ab No Impact: The proposed use as a Business Park Center. The proposed Project will not result in the direct addition of new residents to the City of Highland. Therefore there is no additional service is generated by this Project, no mitigation measures are required.

Mitigation Measures: Not Required

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
15. TRANSPORTATION/TRAFFIC -- Would the project:				
a) Cause an increase in traffic, which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?	☐	☐	☐	☑
b) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?	☐	☐	☐	☑
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	☐	☐	☐	☑
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☐	☑
e) Result in inadequate emergency access?	☐	☐	☐	☑
f) Result in inadequate parking capacity?	☐	☐	☐	☑
g) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?	☐	☐	☐	☑

Explanation:

15a No Impact: The Proposed Project is anticipated to generate 851 Passenger car equivalent (PCE) trips on a daily basis. Pursuant to the Traffic Study prepared by Alan Kashefi, T.E.; Michael Lloyd, P.E.; and Jason Stack; the project will not substantially increase the existing volume of traffic in the studied intersections. No mitigation measures are required.

15b. No Impact: Based on the Traffic Study mentioned in 15a the proposed Project will not substantial increase peak traffic causing the Level of Service standard to be exceeded. Therefore, impacts to roadway segments are not considered significant. No mitigation is required.

15c No Impact: The proposed Project would not result in a change in air traffic patterns although the San Bernardino International Airport and the Redlands Municipal Airport are located approximately .5 miles and approximately 6 miles

respectively from the project site. No mitigation measures are required.

15d No Impact: The proposed Project will be required to install street improvements Along Sixth Street, Del Rosa Drive, and Fifth Street. The Street improvements proposed will not substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections). No incompatible uses (i.e. farm equipment is anticipated to utilize the roadways around the site. Therefore, no mitigation measures are required.

15e No Impact: The proposed Project utilizes Sixth Street, Del Rosa Drive, and Fifth Street as the primary points of access. No mitigation measures are required.

15f No Impact: The proposed Project provides two hundred and ninety-nine (299) parking stalls to be utilized by both employees and patrons to the site. The Parking count is consistent with the requirements of the Highland Municipal Code. Therefore, no mitigation measures are required.

15g No Impact: The Project site is bounded by Sixth Street (classified as a Collector Street), Del Rosa Drive (classified as a Secondary Highway), and Fifth Street (classified as a Major Highway). No bus turnouts are proposed for the Project; however, it will comply with the City's Municipal Code Chapter 16.40.470, Transportation Control Measures. Therefore, no mitigation measures are required.

Mitigation Measures: Not Required

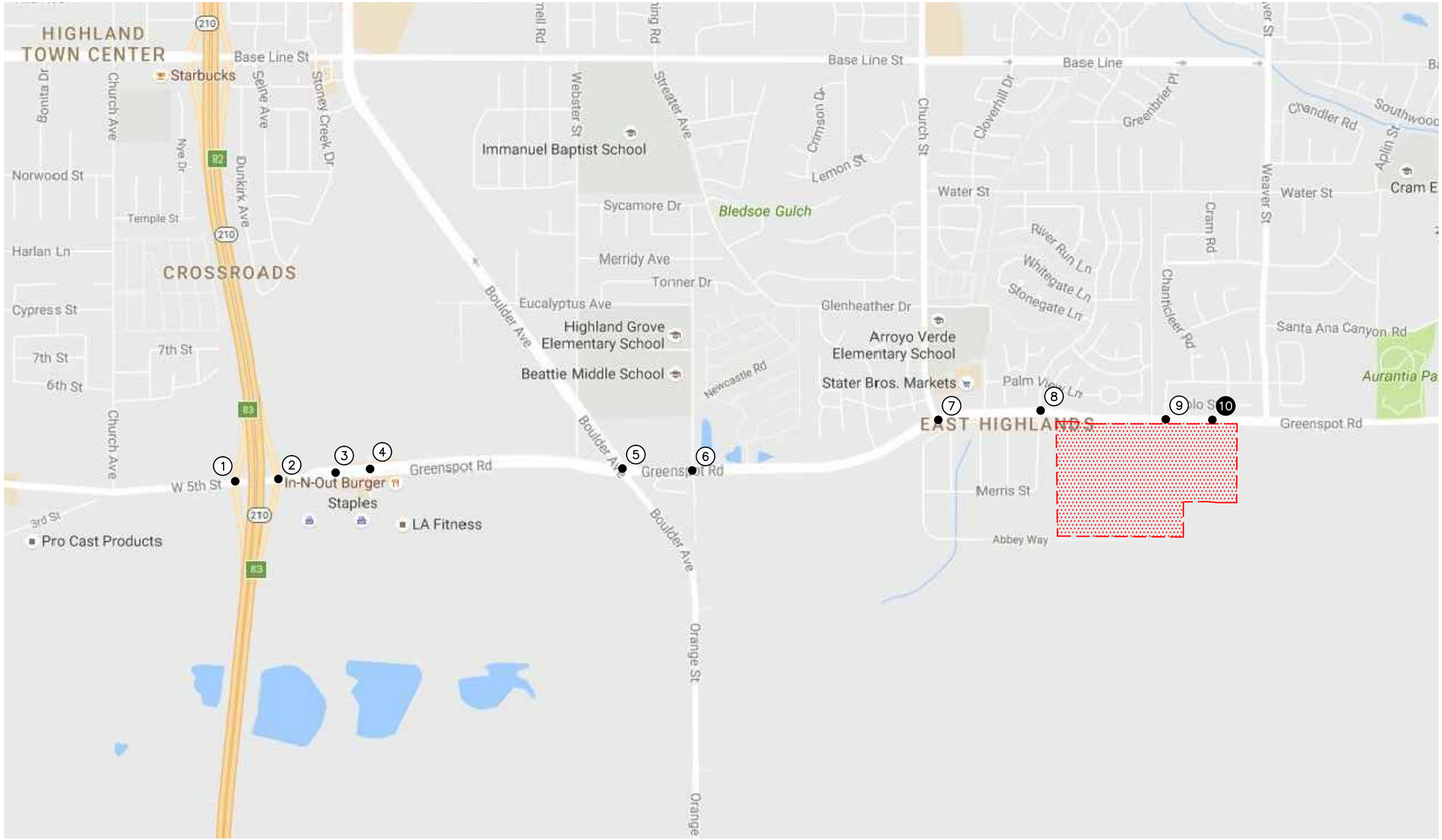
	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
16. UTILITIES AND SERVICE SYSTEMS – Would the project:				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☐	☐	☑	☐
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☑	☐
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☑	☐
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	☐	☐	☑	☐
e) Result in a determination by the wastewater treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☑	☐
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	☑	☐
g) Comply with federal, state, and local statutes and regulations related to solid waste?	☐	☐	☑	☐

Explanation:

16a Less Than Significant Impact: The proposed Project would construct 126,913 square feet of Business Park buildings with 299 associated parking stalls, drive lanes, and landscaping. According to EVWD, the sewerage system has adequate capacity to serve the development. Therefore, operation of the site as a Business Park development would not result in an accedence of wastewater treatment requirements of the SARWQCB. No mitigation measures are required.

16b Less Than Significant Impact: The proposed Project would construct 126,913 square feet of Business Park buildings with 299 associated parking stalls, drive lanes, and landscaping. According to EVWD, the wastewater service provider has adequate capacity to serve the development. No additional facilities would

Project 13



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LINSCOTT LAW & GREENSPAN engineers

N NO SCALE

SOURCE: GOOGLE

KEY

(#) = EXISTING STUDY INTERSECTION

(#) = FUTURE STUDY INTERSECTION

= PROJECT SITE

FIGURE 1-1

VICINITY MAP

HEATHERGLEN RESIDENTIAL PROJECT, HIGHLAND

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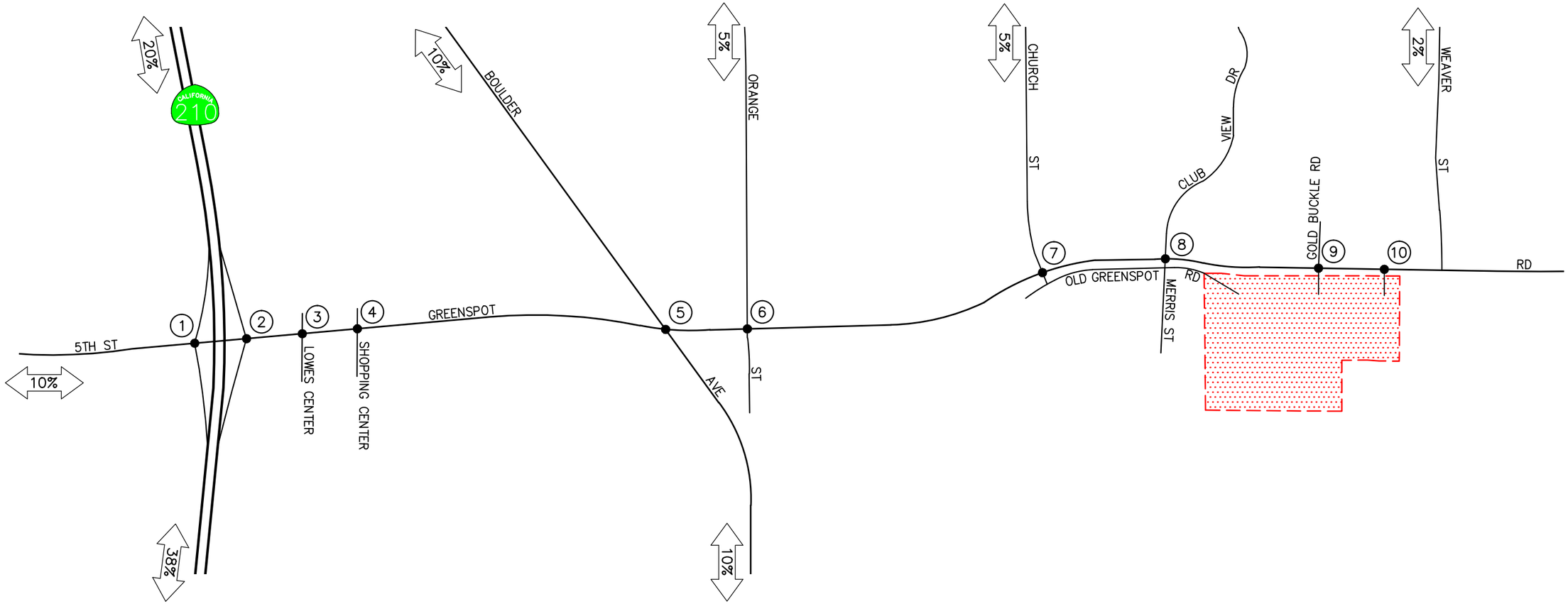
LINSCOTT LAW & GREENSPAN engineers

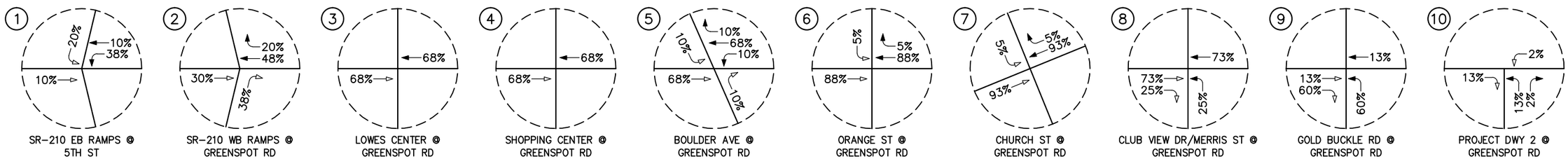
N NO SCALE

SOURCE: ALBERT A. WEBB ASSOCIATES

FIGURE 2-2

PROPOSED SITE PLAN
HEATHERGLEN RESIDENTIAL PROJECT, HIGHLAND





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LINSCOTT LAW & GREENSPAN engineers

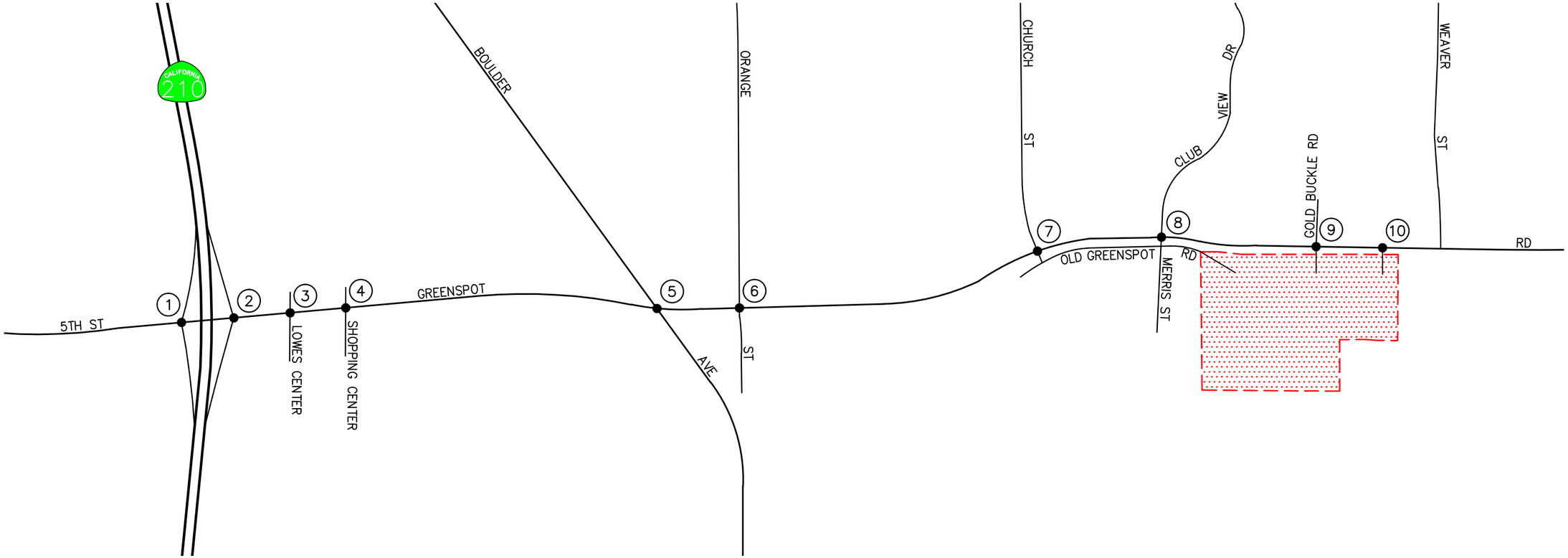
N NO SCALE

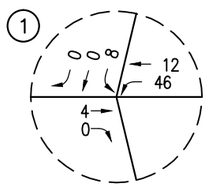
KEY
⇦ = INBOUND PERCENTAGE
⇦ = OUTBOUND PERCENTAGE
▭ = PROJECT SITE

FIGURE 5-1

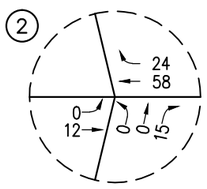
PROJECT TRIP DISTRIBUTION PATTERN

HEATHERGLEN RESIDENTIAL PROJECT, HIGHLAND

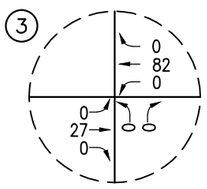




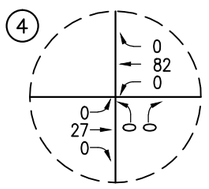
SR-210 EB RAMPS @
5TH ST



SR-210 WB RAMPS @
GREENSPOT RD



LOWES CENTER @
GREENSPOT RD



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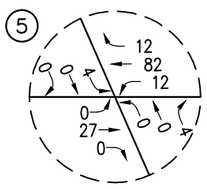
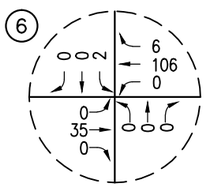


BOULDER AVE @
GREENSPOT RD



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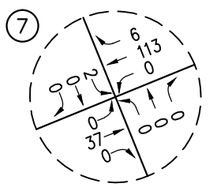
GREENSPOT RD



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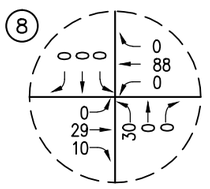
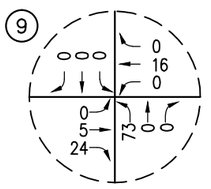
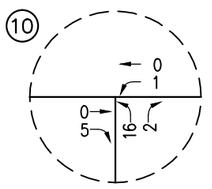
GREENSPOT RD



CLUB VIEW DR/MERRIS ST @
GREENSPOT RD



GOLD BUCKLE RD @
GREENSPOT RD



PROJECT DWY NO. 2 @
GREENSPOT RD

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LINSCOTT LAW & GREENSPAN engineers

N NO SCALE

KEY

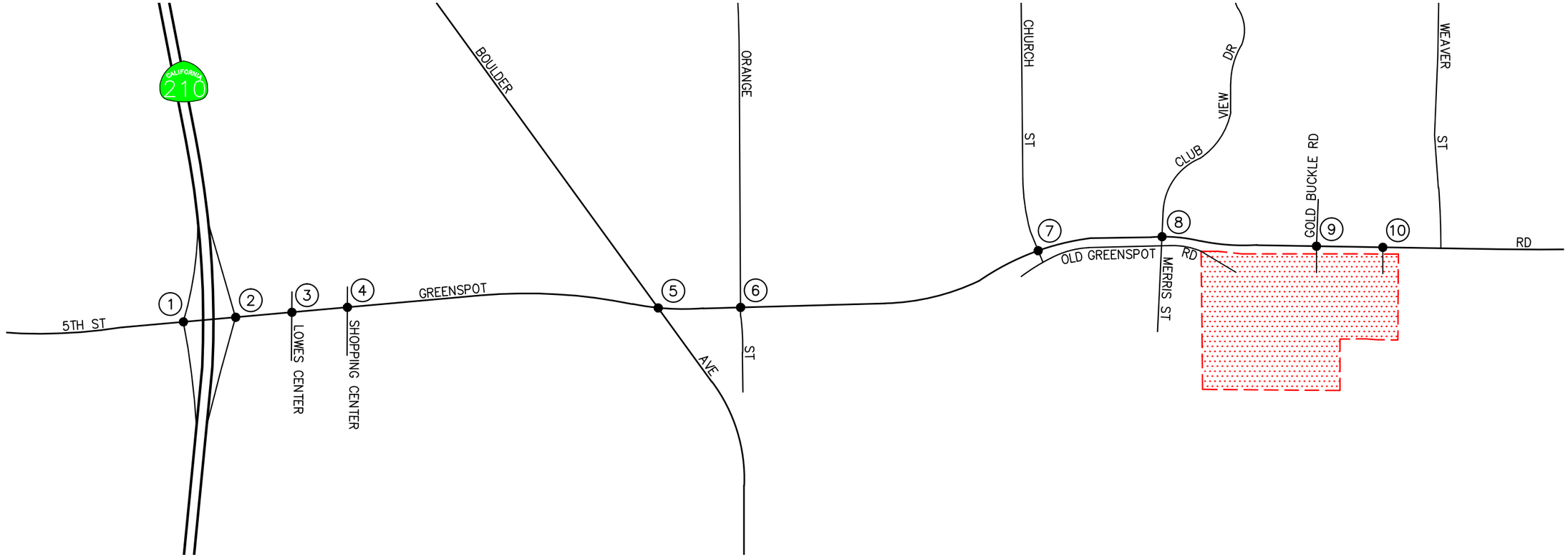
(#) = STUDY INTERSECTION

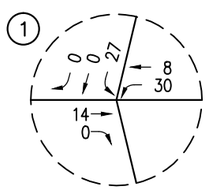
= PROJECT SITE

FIGURE 5-2

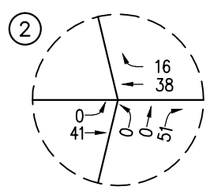
AM PEAK HOUR PROJECT TRAFFIC VOLUMES

HEATHERGLEN RESIDENTIAL PROJECT, HIGHLAND

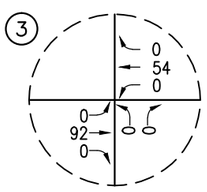




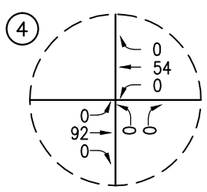
SR-210 EB RAMPS @
5TH ST



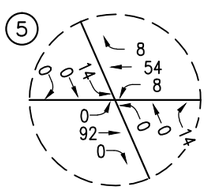
SR-210 WB RAMPS @
GREENSPOT RD



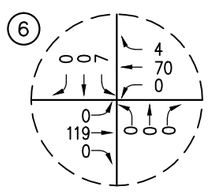
LOWES CENTER @
GREENSPOT RD



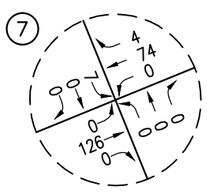
SHOPPING CENTER @
GREENSPOT RD



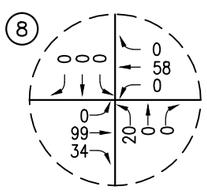
BOULDER AVE @
GREENSPOT RD



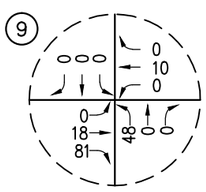
ORANGE ST @
GREENSPOT RD



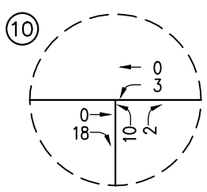
CHURCH ST @
GREENSPOT RD



CLUB VIEW DR/MERRIS ST @
GREENSPOT RD



GOLD BUCKLE RD @
GREENSPOT RD



PROJECT DWY NO. 2 @
GREENSPOT RD

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LINSCOTT LAW & GREENSPAN engineers

N NO SCALE

KEY

(#) = STUDY INTERSECTION

= PROJECT SITE

FIGURE 5-3

PM PEAK HOUR PROJECT TRAFFIC VOLUMES

HEATHERGLEN RESIDENTIAL PROJECT, HIGHLAND

TABLE 5-1
PROJECT TRIP GENERATION FORECAST[5]

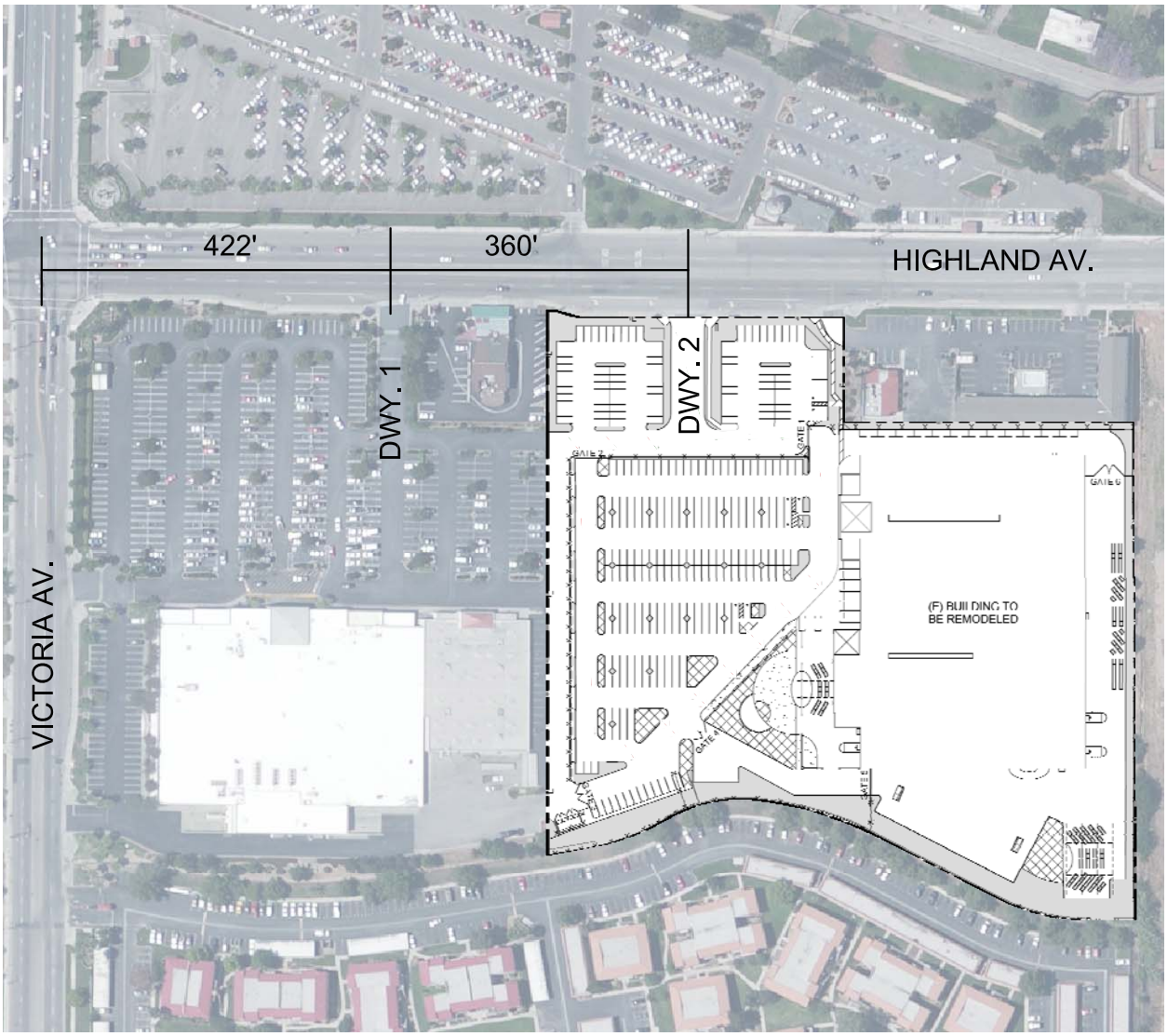
ITE Land Use Code / Project Description	Daily 2-Way	AM Peak Hour			PM Peak Hour		
		Enter	Exit	Total	Enter	Exit	Total
Trip Generation Rates:							
▪ 210: Single-Family Detached Housing (TE/DU)	9.52	25%	75%	0.75	63%	37%	1.00
Trip Generation Forecast:							
▪ 210: Single-Family Detached Housing (215 DU)	2,047	40	121	161	135	80	215

Notes:
- TE/DU = Trip Ends per Dwelling Unit

[5] Source*: Trip Generation, 9th Edition,* Institute of Transportation Engineers, (ITE) [Washington, D.C. (2012)]. Average rates used.

Project 15

EXHIBIT 1-1: PRELIMINARY SITE PLAN



10872 - siteplan.dwg

Table 4-1

Project Trip Generation Summary

Land Use	ITE Code	Units[2]	Weekday AM Peak Hour			Weekday PM Peak Hour[3]			Daily
			In	Out	Total	In	Out	Total	
Trip Generation Rates[1]									
Middle School	522	STU	0.30	0.24	0.54	0.14	0.16	0.30	1.62
High School	530	STU	0.29	0.14	0.43	0.10	0.19	0.29	1.71

Land Use	Quantity[2]	Weekday AM Peak Hour			Weekday PM Peak Hour			Daily
		In	Out	Total	In	Out	Total	
Project Trip Generation Summary								
Middle School	400 STU	120	96	216	56	64	120	648
High School	800 STU	232	112	344	80	152	232	1,368
Total		**352**	**208**	**560**	**136**	**216**	**352**	**2,016**

[1] Source: Institute of Transportation Engineers (ITE), Trip Generation, Ninth Edition, 2012.

[2] STU = Students

[3] PM peak hour of the generator trip generation rates utilized for both middle school and high school uses.

EXHIBIT 4-1: PROJECT TRIP DISTRIBUTION

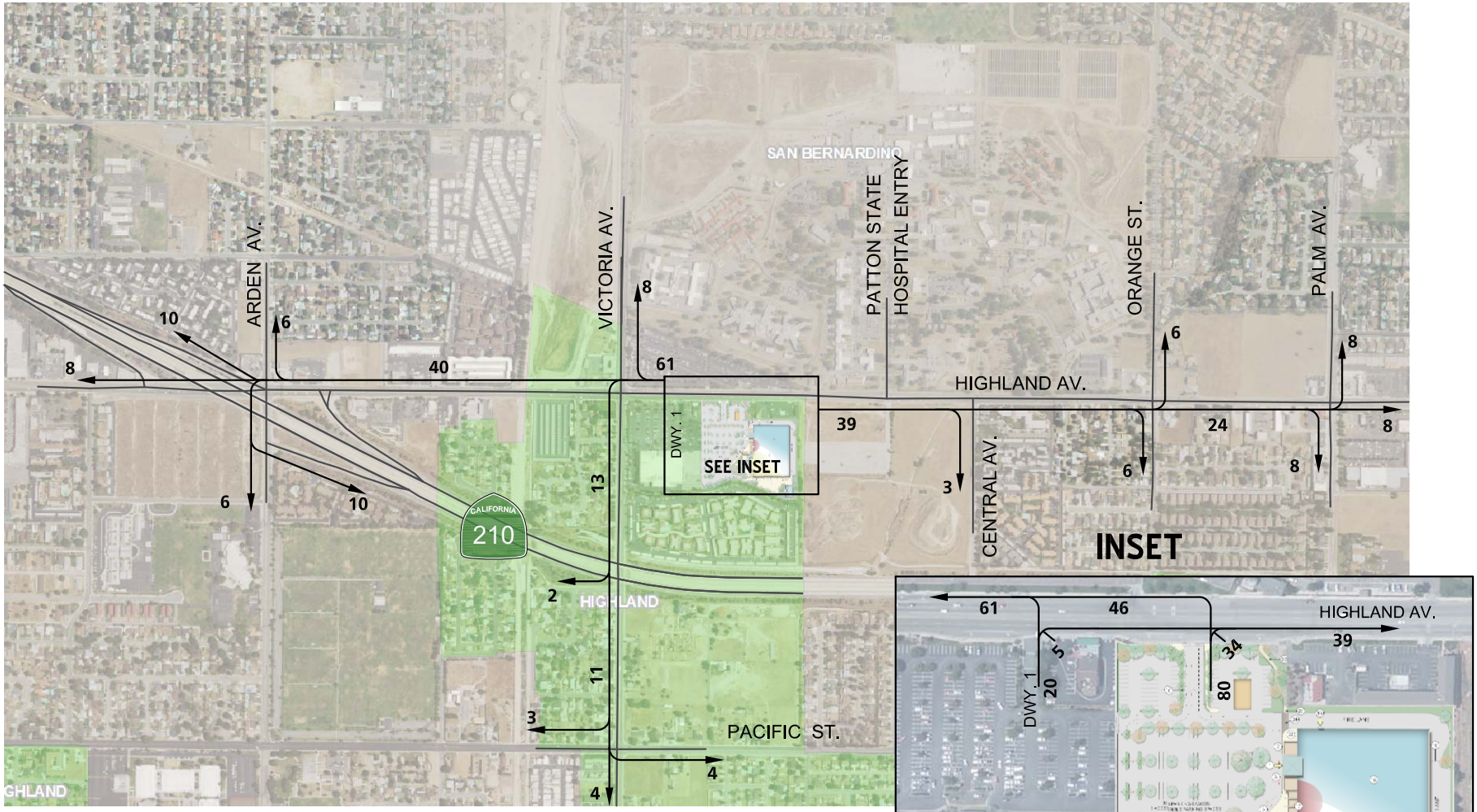
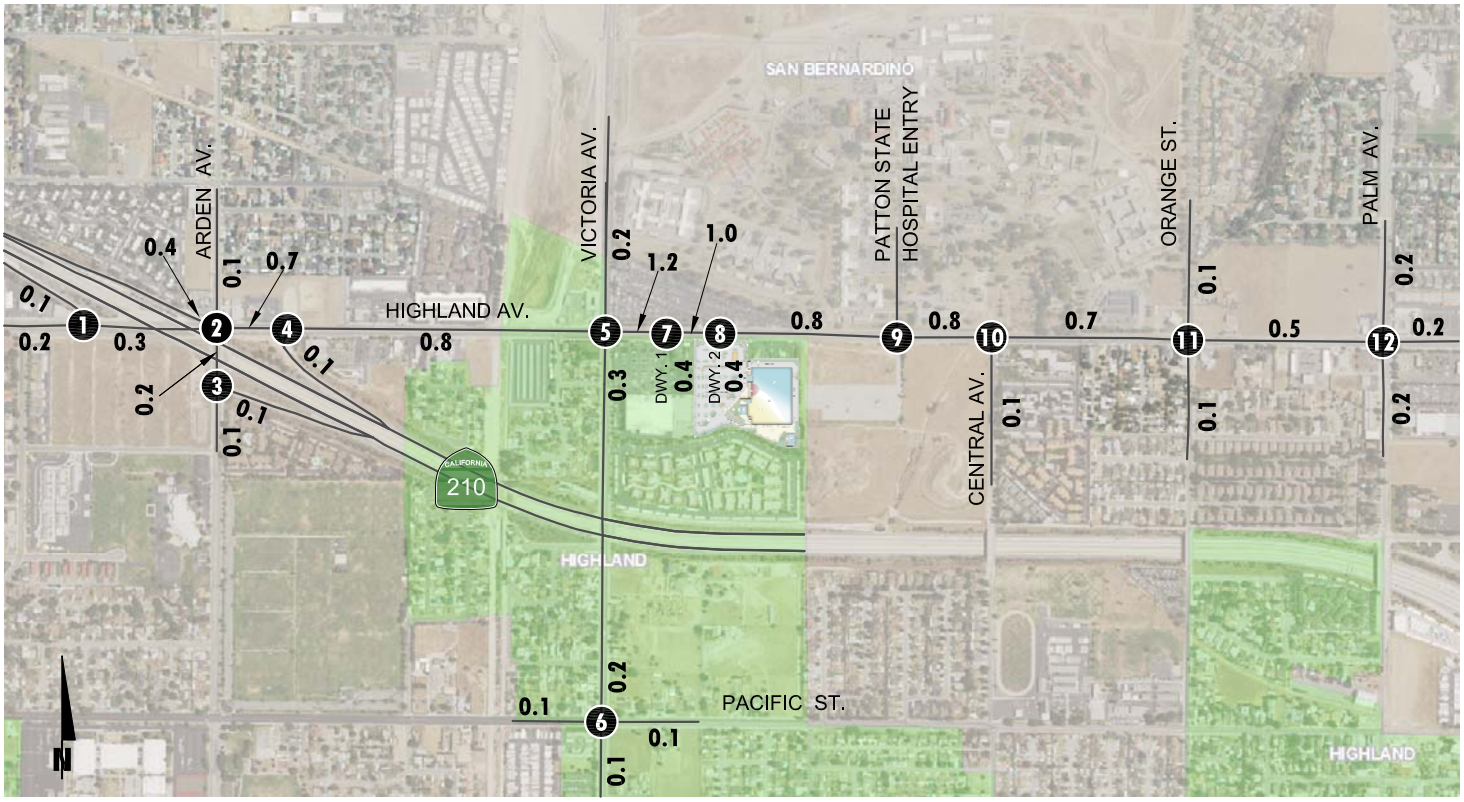


EXHIBIT 4-2: PROJECT ONLY TRAFFIC VOLUMES



1 SR 210 EB Off Ramp & Highland Av.	2 Arden Av. & Highland Av.	3 Arden Av. & SR 210 EB On Ramp	4 SR 210 WB Off Ramp & Highland Av.	5 Victoria Av. & Highland Av.	6 Victoria Av. & Pacific St.
0(0) 35(13) ←17(17)	0(0) 0(0) 21(8) →12(13) ←37(39) ←33(35)	12(13) 21(22)	0(0) 0(0) →0(0) ←83(86)	0(0) 0(0) 28(11) →17(17) ←83(86) ←27(28)	6(6) 8(9) 8(9) →14(5) ←0(0) ←0(0)
28(11)→	0(0)→ 63(24)→ 0(0)→ 0(0) 0(0) 21(8)	21(8) 0(0)	0(0)→ 106(40)→ 0(0) 0(0) 35(13)	0(0)→ 141(54)→ 0(0)→ 0(0) 0(0) 46(17)	11(4)→ 0(0)→ 0(0)→ 0(0) 14(5) 0(0)

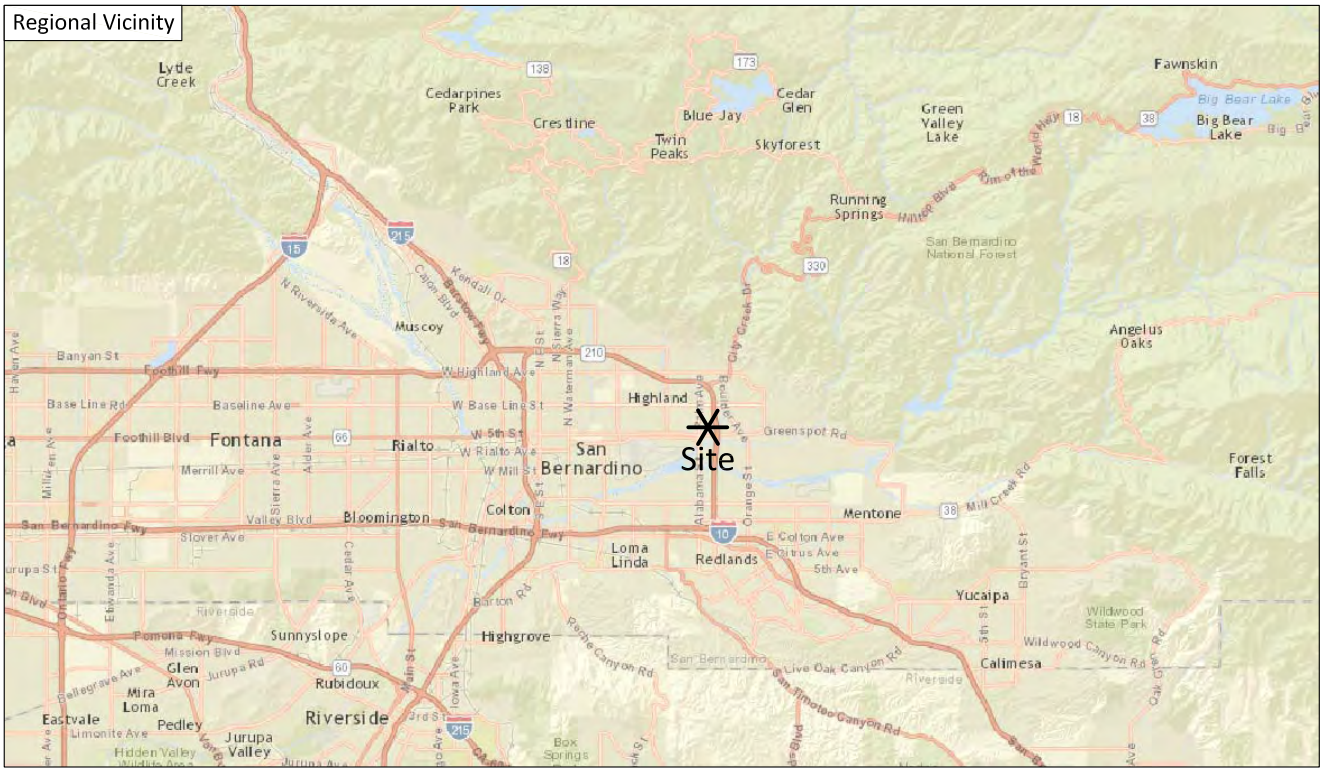
7 Dwy. 1 & Highland Av.	8 Dwy. 2 & Highland Av.	9 Patton State Hospital Entry & Highland Av.	10 Central Av. & Highland Av.	11 Orange St. & Highland Av.	12 Palm Av. & Highland Av.
←96(99) ←18(7)	←18(7) ←120(46)	0(0) 0(0) 0(0) →0(0) ←137(52) ←0(0)	←127(48) ←0(0)	21(8) 0(0) 0(0) →0(0) ←84(32) ←0(0)	28(11) 0(0) 0(0) →0(0) ←28(11) ←0(0)
162(62)→ 53(20)→ 31(32) 10(11)	10(11)→ 162(62)→ 96(99) 71(73)	0(0)→ 81(84)→ 0(0)→ 0(0) 0(0) 0(0)	75(78)→ 6(6)→ 11(4) 0(0)	12(13)→ 50(52)→ 12(13)→ 21(8) 0(0) 0(0)	17(17)→ 17(17)→ 17(17)→ 28(11) 0(0) 0(0)

LEGEND:

10(10) = AM(PM) PEAK HOUR INTERSECTION VOLUMES
10.0 = VEHICLES PER DAY (1000'S)

Project 19

Figure 1
Project Location Map



KUNZMAN ASSOCIATES, INC.

OVER 40 YEARS OF EXCELLENT SERVICE

JN 6703

Table 2

Project Trip Generation

Land Use	Source[1]	Quantity	Units[2]	PCE Factor[3]	Vehicle Percent[4]	Trip Generation Rates & Trips Generated						
						Morning Peak Hour			Evening Peak Hour			
						Inbound	Outbound	Total	Inbound	Outbound	Total	Daily
Trip Generation Rates												
General Light Industrial	ITE 110	1.000	TSF	-	-	0.81	0.11	0.92	0.12	0.85	0.97	6.97
Vehicle Trips Generated												
General Light Industrial		153.860	TSF	-	-	125	17	142	18	131	149	1,072
PCE Trips Generated												
Cars				1.0	78.6%	98	13	111	14	103	117	843
2-Axle Trucks				1.5	8.0%	15	2	17	2	16	18	129
3-Axle Trucks				2.0	3.9%	10	1	11	1	10	11	84
4+ Axle Trucks				3.0	9.5%	36	5	41	5	37	42	306
Trucks Subtotal				-	21.4%	61	8	69	8	63	71	519
General Light Industrial PCEs		**153.860**	**TSF**	**-**	**-**	**159**	**21**	**180**	**22**	**166**	**188**	**1,362**

[1] Source: Institute of Transportation Engineers (ITE), Trip Generation Manual, 9th Edition, 2012.

[2] TSF = Thousand Square Feet

[3] Passenger Car Equivalent (PCE) factors are recommended by San Bernardino Associated Governments.

[4] Source: City of Fontana, Truck Trip Generation Study, August 2003.

Figure 13
Project Trip Distribution - Cars

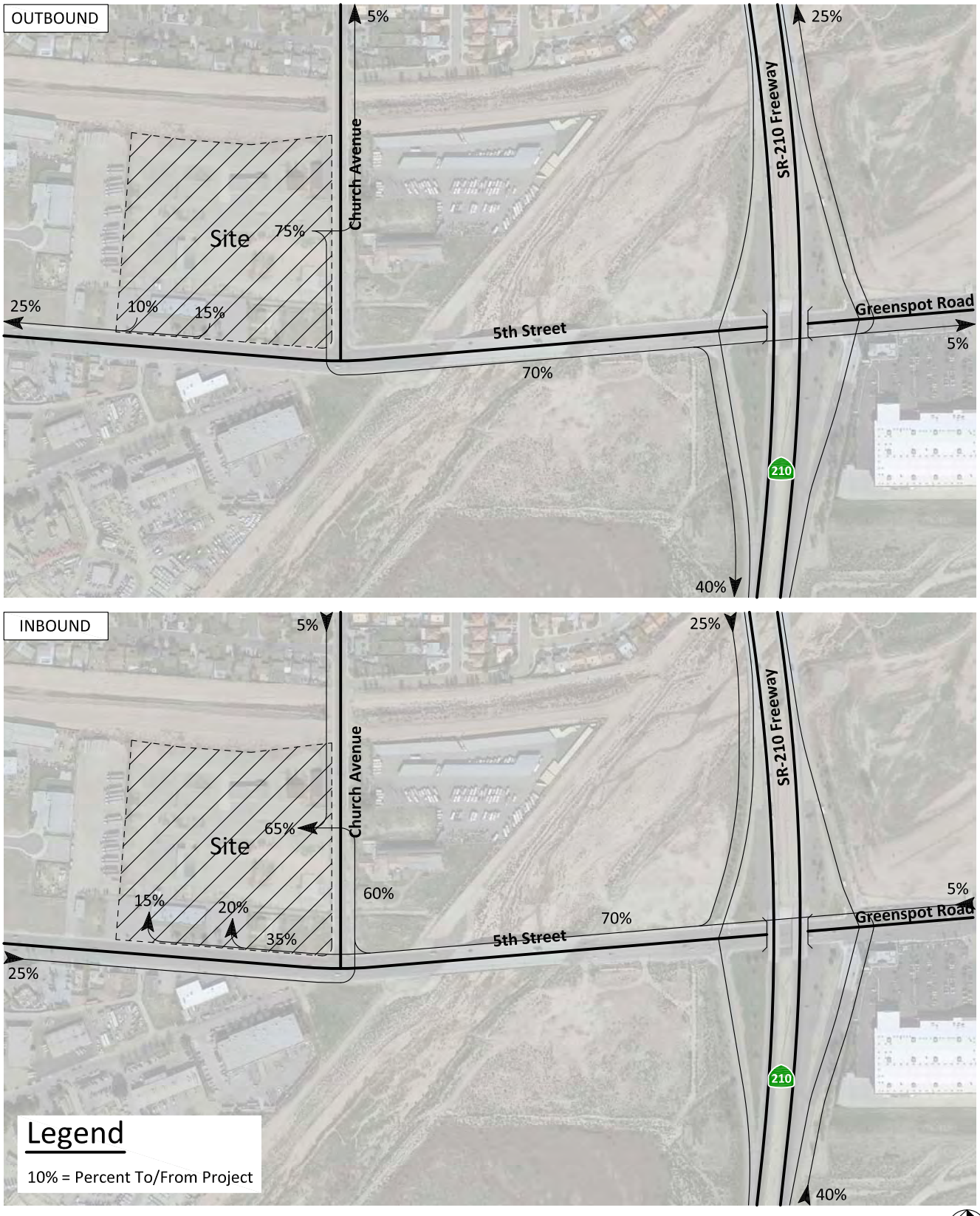


Figure 14
Project Trip Distribution - Trucks

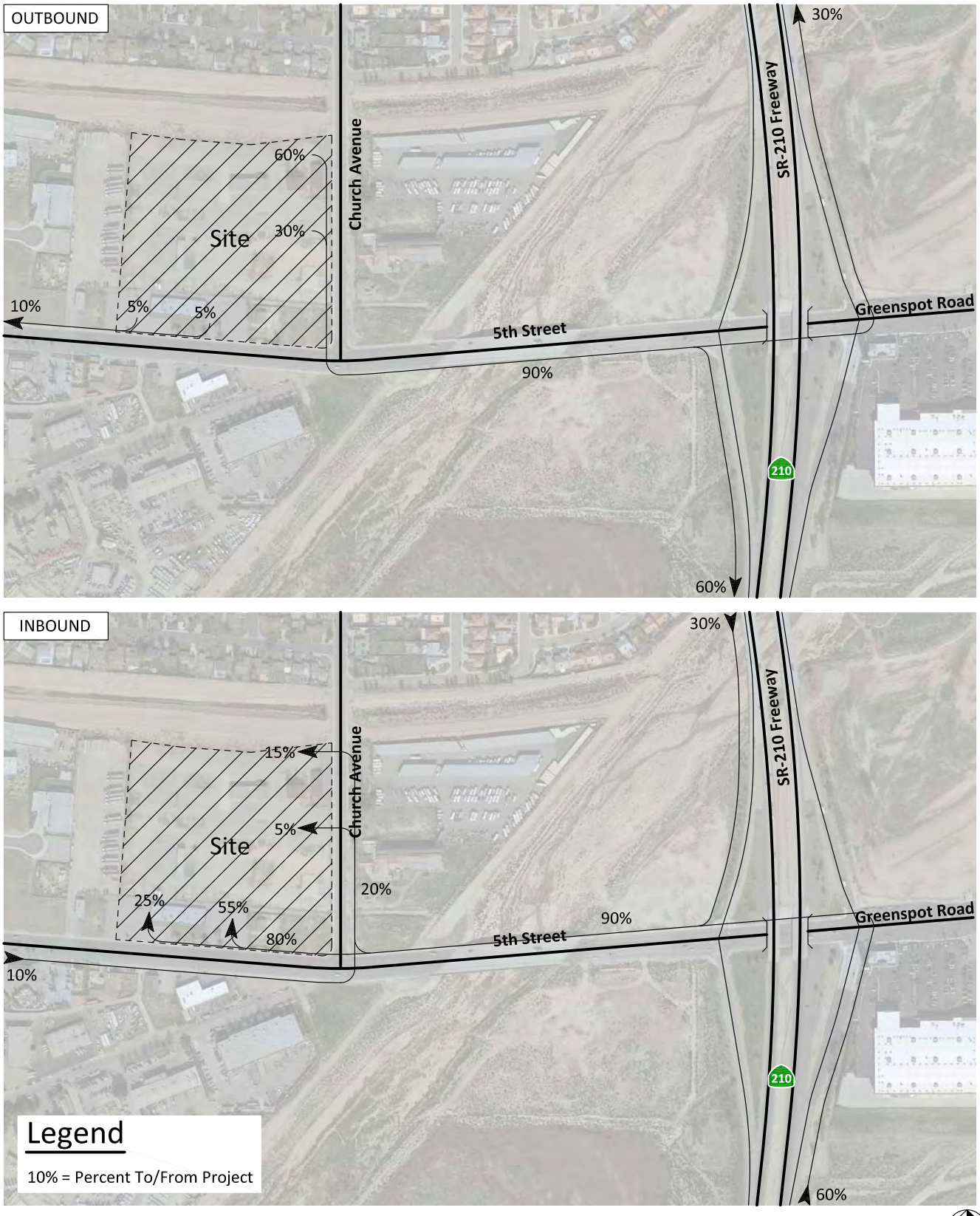


Figure 15
Project Average Daily Traffic Volumes

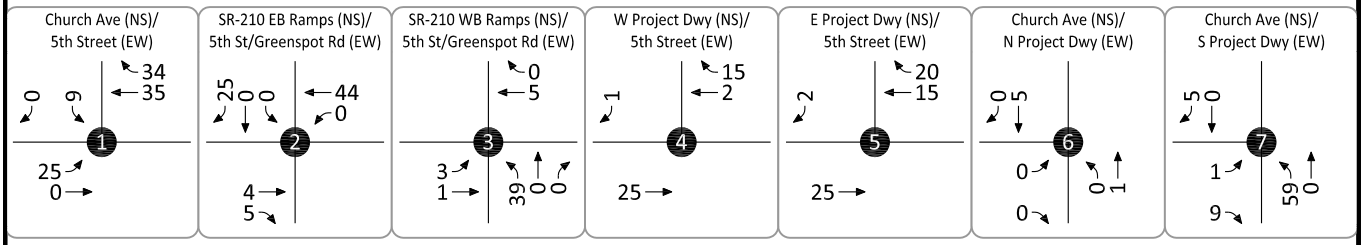
KUNZMAN ASSOCIATES, INC.

OVER 40 YEARS OF EXCELLENT SERVICE

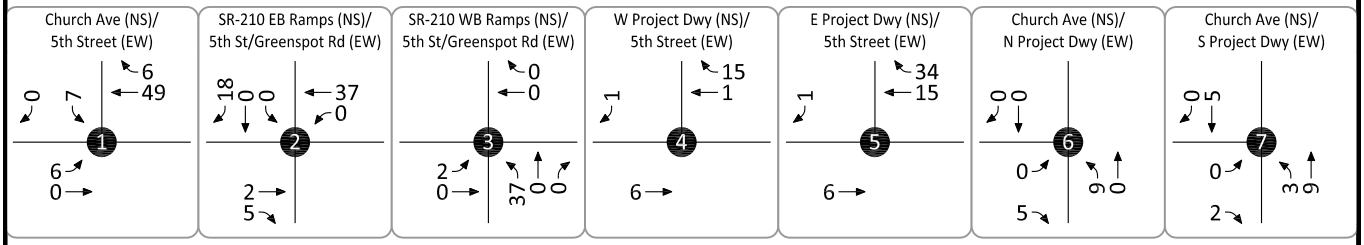
JN 6703

Figure 16
Project Morning Peak Hour Intersection Turning Movement Volumes

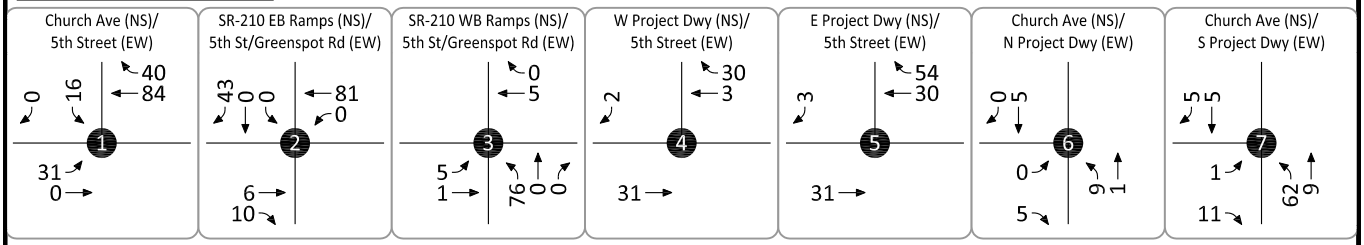
Cars Only



Trucks Only (in PCE)



Total Project Trips (in PCE)



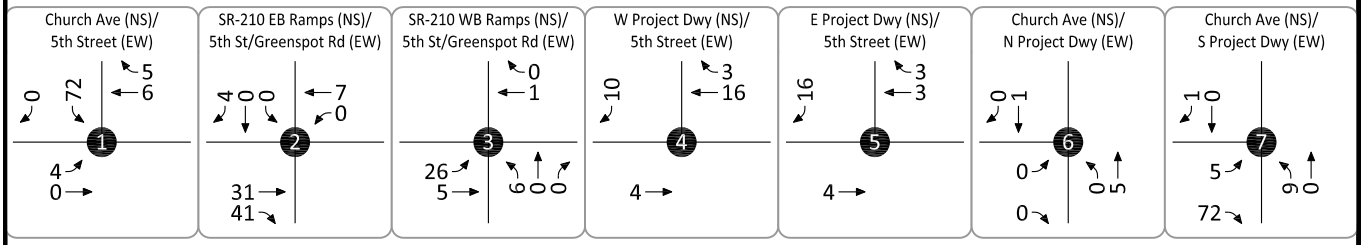
KUNZMAN ASSOCIATES, INC.

OVER 40 YEARS OF EXCELLENT SERVICE

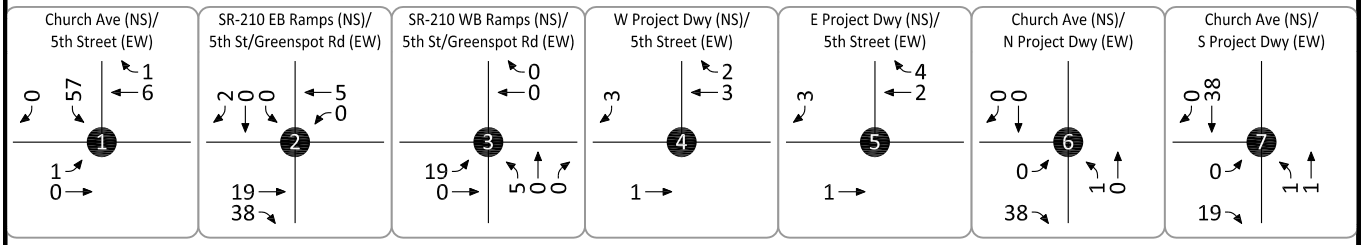
JN 6703

Figure 17
Project Evening Peak Hour Intersection Turning Movement Volumes

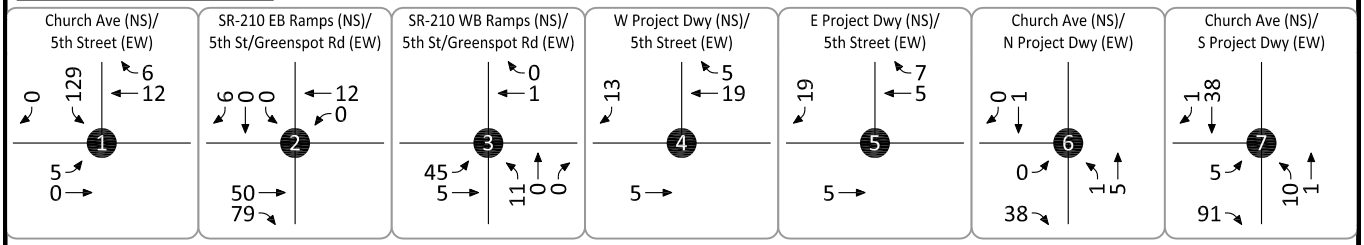
Cars Only



Trucks Only (in PCE)



Total Project Trips (in PCE)



KUNZMAN ASSOCIATES, INC.

OVER 40 YEARS OF EXCELLENT SERVICE

JN 6703

Project 32

EXHIBIT 1-2: LOCATION MAP

LEGEND:

⓪ = EXISTING INTERSECTION ANALYSIS LOCATION

(0) = FUTURE INTERSECTION ANALYSIS LOCATION

N

4 PROJECTED FUTURE TRAFFIC

This section presents the traffic volumes estimated to be generated by the Project, as well as the Project's trip assignment onto the study area roadway network. .

Exhibit 1-1 illustrates the preliminary site plan. The Project is proposed to consist of 277 single family detached residential dwelling units, and is located north of Greenspot Road. For the purposes of this analysis, the Project opening year (i.e., the year when the Project is expected to be built out and occupied) is assumed to be 2018.

Vehicular access to and from the Project site is assumed to be provided via Driveway 1 and Driveway 2 on Greenspot Road. Both Driveway 1 and Driveway 2 are proposed to allow for full access.

4.1 PROJECT TRIP GENERATION

Trip generation represents the amount of traffic which is both attracted to and produced by a development. Determining traffic generation for a specific project is therefore based upon forecasting the amount of traffic that is expected to be both attracted to and produced by the specific land uses being proposed for a given development.

The ITE Trip Generation manual is a nationally recognized source for estimating site specific trip generation. ITE recently released an updated edition of the Trip Generation manual (9th Edition) in 2012. (4) Trip generation rates used to estimate Project traffic are shown in Table 4-1 and a summary of the Project's trip generation is shown in Table 4-2. The trip generation rates are based upon data collected by the Institute of Transportation Engineers (ITE) for Single-Family Detached Residential (ITE Land Use Code 210). The Project is anticipated to generate 2,637 trip-ends per day, with 208 vehicles per hour (VPH) during the AM peak hour and 277 VPH in the PM peak hour.

TABLE 4-1: PROJECT TRIP GENERATION RATES

Land Use[1]	Units[2]	ITE LU Code	AM Peak Hour			PM Peak Hour			Daily
			Inbound	Outbound	Total	Inbound	Outbound	Total	
Single Family Detached Res.	DU	210	0.19	0.56	0.75	0.63	0.37	1.00	9.52

[1] Trip Generation Source: Institute of Transportation Engineers (ITE), Trip Generation Manual, Ninth Edition (2012).
[2] DU = Dwelling Units

TABLE 4-2: PROJECT TRIP GENERATION SUMMARY

Land Use	Quantity	Units[1]	AM Peak Hour			PM Peak Hour			Daily
			Inbound	Outbound	Total	Inbound	Outbound	Total	
Single Family Detached Res.	277	DU	53	155	208	175	102	277	2,637

[1] DU = Dwelling Units

4.2 PROJECT TRIP DISTRIBUTION

The Project trip distribution and assignment process represents the directional orientation of traffic to and from the Project site. The potential interaction between the planned land uses and surrounding regional access routes are considered, to identify the routes where Project traffic would distribute. The Project trip distribution was developed based on anticipated travel patterns to and from the Project site.

The trip distribution pattern of passenger cars is heavily influenced by the geographical location of the site, the location of surrounding uses, and the proximity to the regional freeway system. Surrounding uses considered in developing the Project trip distribution include shopping opportunities, employment opportunities, and the location of local schools.

Exhibit 4-1 illustrates the Project trip distribution for outbound trips during the AM peak hour. Exhibit 4-2 illustrates the Project trip distribution for inbound trips during the AM peak hour and both outbound and inbound trips during the PM peak hour. The trip distribution is primarily based on the existing roadway system. The Project trip distribution patterns are also greatly affected by existing / near-term development patterns in the vicinity of the Project site, and have been reviewed by City staff as part of the scoping process.

4.3 MODAL SPLIT

The traffic reducing potential of public transit, walking or bicycling have not been considered in this TIA. Essentially, the traffic projections are "conservative" in that these alternative travel modes might be able to reduce the forecasted traffic volumes.

4.4 PROJECT TRIP ASSIGNMENT

The assignment of traffic from the Project area to the adjoining roadway system is based upon the Project trip generation, trip distribution, and the arterial highway and local street system improvements that would be in place by the time of initial occupancy of the Project. Based on the identified Project traffic generation and trip distribution patterns, Project average daily traffic (ADT), AM and PM peak hour intersection turning movement volumes are shown on Exhibit 4-3.

EXHIBIT 4-1: PROJECT TRIP DISTRIBUTION (AM PEAK-OUTBOUND)

LEGEND:

10 = PERCENT FROM PROJECT

N

EXHIBIT 4-2: PROJECT TRIP DISTRIBUTION (AM PEAK INBOUND, PM PEAK)

LEGEND:

10 = PERCENT TO/FROM PROJECT

N

URBAN CROSSROADS

EXHIBIT 4-3: PROJECT ONLY TRAFFIC VOLUMES

1 SR-210 EB Ramps & 5th St.	2 SR-210 WB Ramps & Greenspot Rd.	3 Boulder Av. & Greenspot Rd.	4 Orange St. & Pioneer Av.
0(0) 0(0) 8(26) → 23(15) ← 23(26) 8(26) → 0(0) ↓	23(15) ← 47(41) 0(0) → 16(53) → 0(0) 0(0) 13(44) ↑	0(0) 0(0) 8(26) → 23(15) ← 70(56) ← 39(15) 0(0) → 29(96) → 0(0) ↓ 0(0) 0(0) 8(26) ↑	16(0) 23(15) ↓ 0(0) → 0(0) ← 0(0) 0(0) → 0(0) → 0(0) ↓ 0(0) 8(26) 0(0) ↑
5 Church St. & Greenspot Rd.	**6 Weaver St. & Greenspot Rd.**	**7 Driveway 1 & Greenspot Rd.**	**8 Driveway 2 & Greenspot Rd.**
0(0) 0(0) 3(9) → 8(5) ← 132(87) ← 0(0) 0(0) → 45(149) → 0(0) ↓ 0(0) 0(0) 0(0) ↑	0(0) 3(9) → 8(5) ← 140(92) 0(0) → 48(158) →	74(48) 4(2) ↓ 1(4) ← 74(49) 25(83) → 25(84) →	74(49) 4(3) ↓ 2(5) ← 1(4) 25(84) → 4(2) →

LEGEND:

10.0 = VEHICLES PER DAY (1000'S)

10(10) = AM(PM) PEAK HOUR VOLUMES

N

Project 37

SEP 21 2011

STATE OF CALIFORNIA - THE RESOURCES AGENCY
DEPARTMENT OF FISH AND GAME
ENVIRONMENTAL FILING FEE CASH RECI
DFG 753.5a (8-03)

2 8030

Lead Agency: City of Highland Date: 9/12/06

County / State Agency of Filing: Co. San Bernardino Document No.:

Project Title: DR13 006-014

Project Applicant Name: City of Highland Phone Number: 9096488732

Project Applicant Address: 27215 Baseline, Highland, CA 92346

Project Applicant *(check appropriate box)*: Local Public Agency ☒ School District ☐ Other Special District ☐
State Agency ☐ Private Entity ☐

CHECK APPLICABLE FEES: CASH

( ) Environmental Impact Report	$850.00	$
( ) Negative Declaration	$1,250.00	$
( ) Application Fee Water Diversion *(State Water Resources Control Board Only)*	$850.00	$
( ) Projects Subject to Certified Regulatory Programs	$850.00	$
(X) County Administrative Fee	$25.00	$ 25.00
( ) Project that is exempt from fees		
TOTAL RECEIVED		$ 25.00

Signature and title of person receiving payment: Jemina Ramos, Deputy Clerk

WHITE-PROJECT APPLICANT YELLOW-DFG/FASB PINK-LEAD AGENCY GOLDENROD-STATE AGENCY OF FILING

STATE OF CALIFORNIA - THE RESOURCE... GENCY
DEPARTMENT OF FISH AND GAME
ENVIRONMENTAL FILING FEE CASH RECE
DFG 753.5a (8-03)

27030

Lead Agency: City of Highland Date: 9/12/06

County / State Agency of Filing: Co. San Bernardino Document No.:

Project Title: DR13 006-014

Project Applicant Name: City of Highland Phone Number: 9096488732

Project Applicant Address: 27215 Baseline Highland, CA 92346

Project Applicant *(check appropriate box)*: Local Public Agency ☒ School District ☐ Other Special District ☐
State Agency ☐ Private Entity ☐

CHECK APPLICABLE FEES: CASH

( ) Environmental Impact Report	$850.00	$
( ) Negative Declaration	$1,250.00	$
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( ) Projects Subject to Certified Regulatory Programs	$850.00	$
(X) County Administrative Fee	$25.00	$ 25.00
( ) Project that is exempt from fees		
TOTAL RECEIVED		$ 25.00

Signature and title of person receiving payment: Jemina Ramos, Deputy Clerk

WHITE-PROJECT APPLICANT YELLOW-DFG/FASB PINK-LEAD AGENCY GOLDENROD-STATE AGENCY OF FILING

DATE FILED & POSTED

CITY OF HIGHLAND Ref # 278030

27215 Base Line, Highland, CA 92346
Telephone (909) 864-8732 FAX: (909) 862-3180

CLERK OF THE BOARD
SEP 12 2006
COUNTY OF
SAN BERNARDINO

NOTICE OF EXEMPTION

TO: Clerk of the Board
385 N. Arrowhead Ave.
Second Floor
San Bernardino, CA 92411

FROM: City of Highland
Community Development Department
27215 Base Line
Highland, CA 92346

PROJECT TITLE: DRB 006-014

PROJECT LOCATION - SPECIFIC: The 1.43 acre Site is located at the north-west corner of Palm Avenue and Fifth Street. Assessor Parcel Number: 1192-621-01-0-000

PROJECT LOCATION - CITY: Highland

PROJECT LOCATION - COUNTY: San Bernardino

DESCRIPTION OF THE NATURE, PURPOSES, AND BENEFICIARIES OF THE PROJECT:

An Application, for a Farmer Boys Restaurant drive-thru facility and associate speculative retail building with drive-thru restaurant building attached consisting of two (2) buildings totaling 7,160 square feet.

NAME OF PUBLIC AGENCIES INVOLVED: Planning Division, City of Highland

NAME OF PERSON OF AGENCY CARRYING OUT PROJECT: City of Highland

REASON WHY PROJECT IS EXEMPT: City Staff has undertaken and completed a preliminary review of this project. In accordance with the California Environmental Quality Act, as amended, this project is exempt from CEQA.

EXEMPT STATUS: (Check One)

___Ministerial (Section 21080 (b)(1) ; 15268)
___Declared Emergency (Section 21080 (b)(3);15269(a))
___Emergency Protection (Section 21080 (b)(4); 15269 (b), (c))
_X_Categorical Exemptions. Article XIX, Section 15332

CONTACT PERSON: Sean Kelleher

TELEPHONE NUMBER: (909)864-8732 ext. 210

IF FILED BY APPLICANT

1. Attach certified document of exemption findings.
2. Has a Notice of Exemption been filed by the public agency approving the project? Yes __ No__.

Responsible Official Signature — Assistant Planner (Title) — 9/12/06 (Date)

c:\Myfiles\Seankelleher\Ceqa Projects\drb006014.wpd

Project 38

KUNZMAN ASSOCIATES, INC.

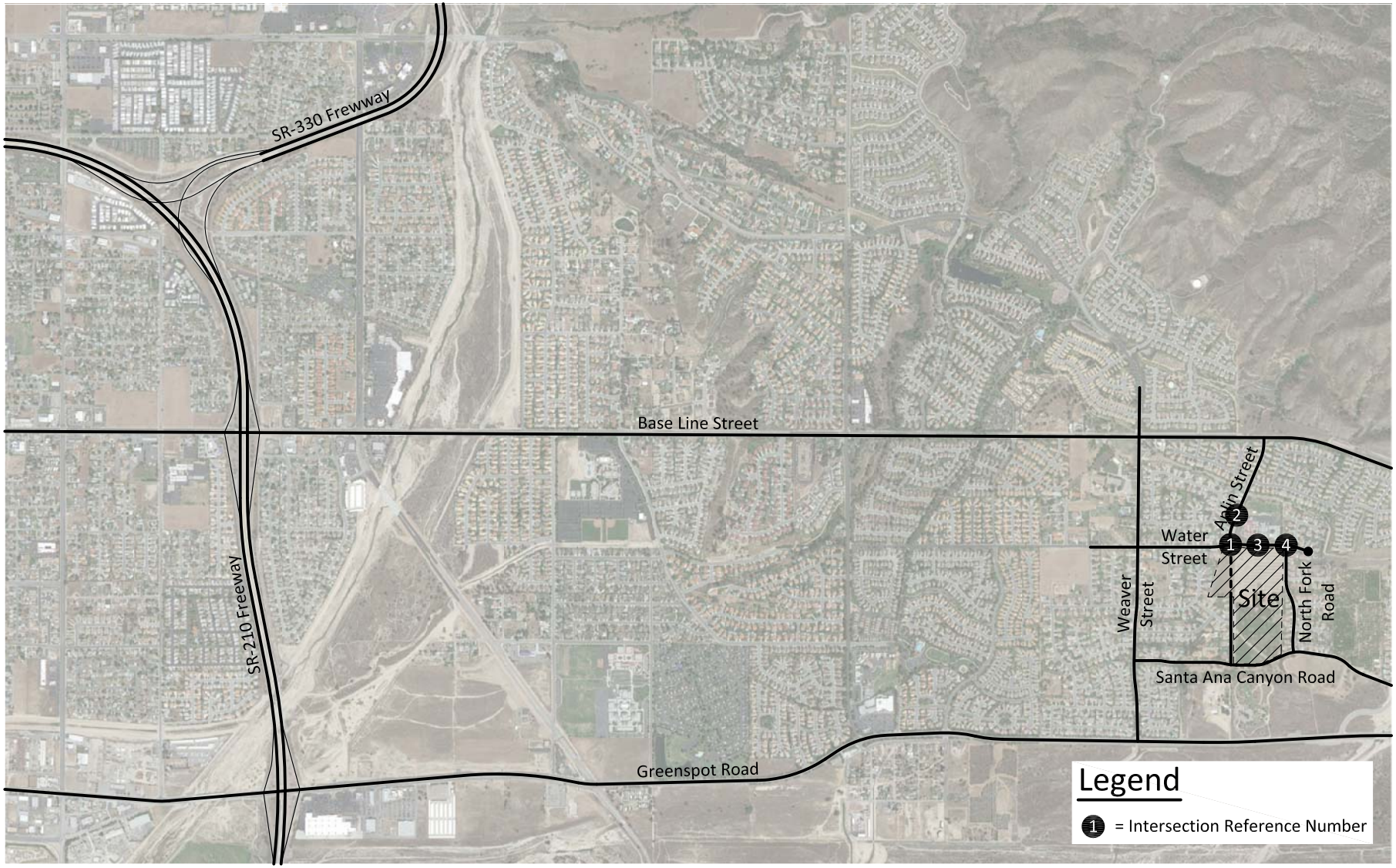
TENTATIVE TRACT MAP NO. 18935

TRAFFIC IMPACT ANALYSIS (REVISED)

April 2, 2015

Traffic Engineering | Transportation Planning | Parking | Noise/Vibration | Expert Witness
Air Quality | Global Climate Change | Health Risk Assessment

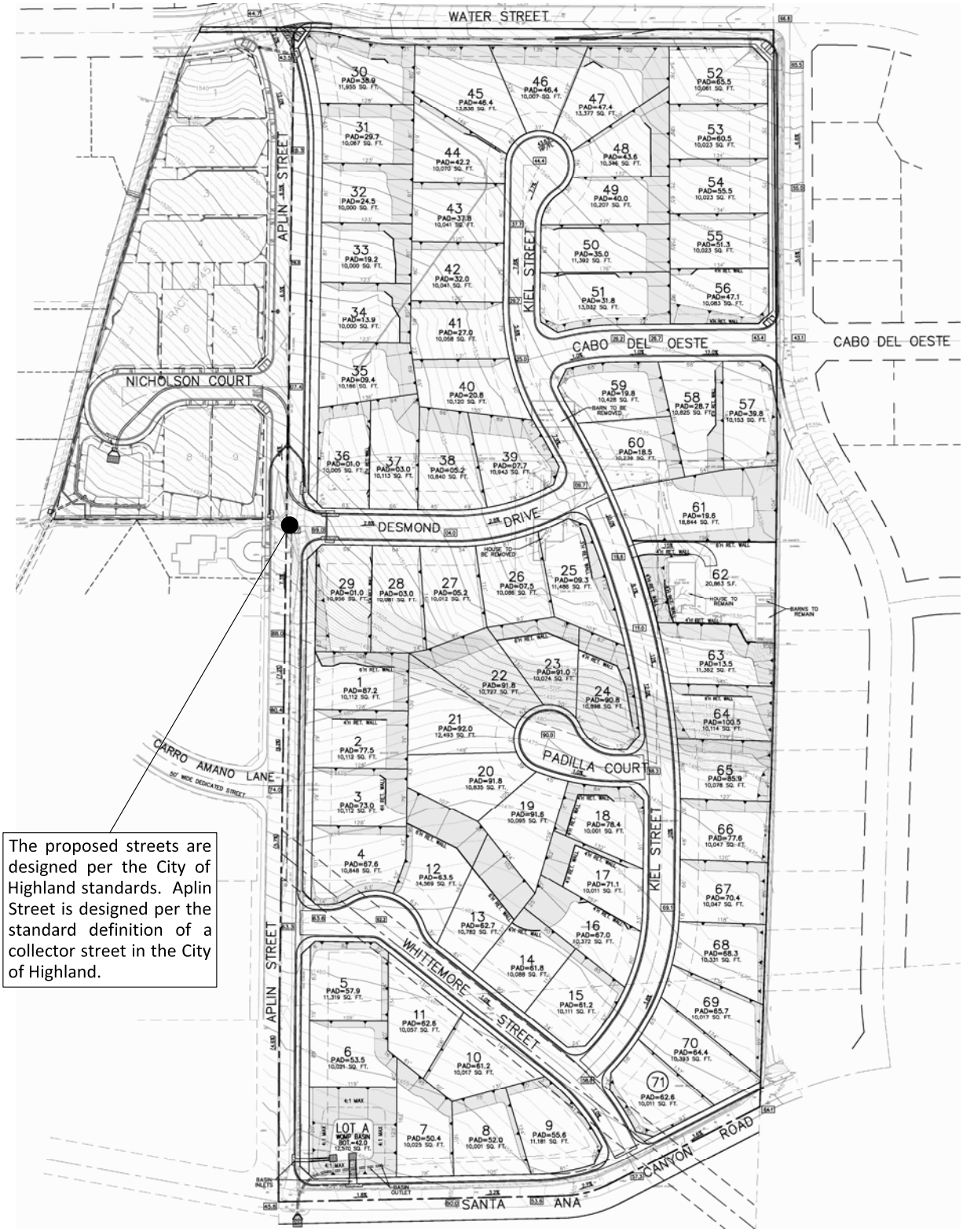
Figure 1
Project Location Map



5799/1

KUNZMAN ASSOCIATES, INC.
OVER 35 YEARS OF EXCELLENT SERVICE

Figure 2
Site Plan



The proposed streets are designed per the City of Highland standards. Aplin Street is designed per the standard definition of a collector street in the City of Highland.

5799/2

Table 2

Project Trip Generation[1]

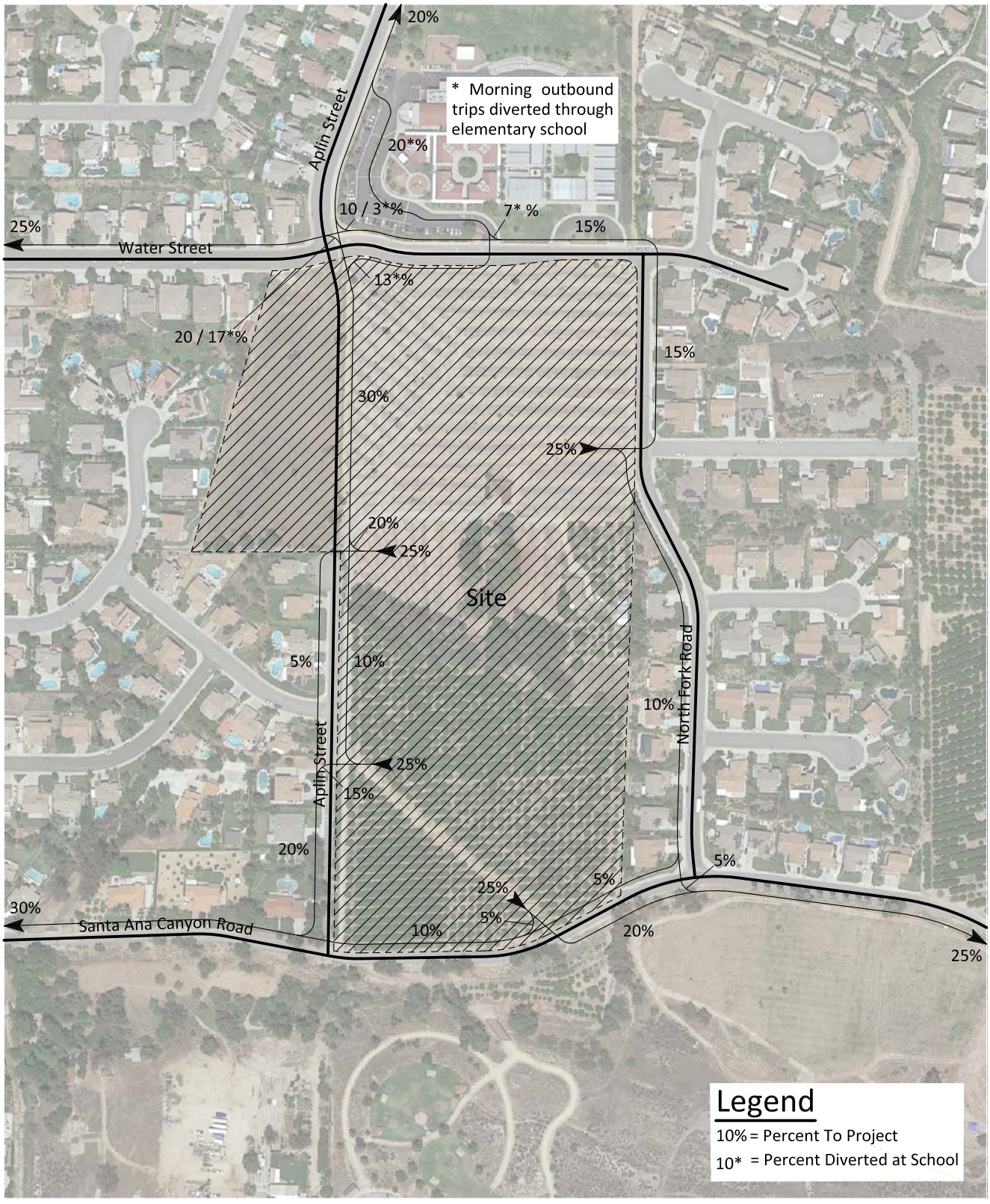
Land Use	Quantity	Units[3]	Peak Hour						Daily
			Morning			Afternoon[2]			
			Inbound	Outbound	Total	Inbound	Outbound	Total	
Trip Generation Rates									
Single-Family Detached Residential		DU	0.19	0.56	0.75	0.63	0.37	1.00	9.52
Trips Generated									
Single-Family Detached Residential	80	DU	15	45	60	50	30	80	762

[1] Source: Institute of Transportation Engineers, Trip Generation, 9th Edition, 2012, Land Use Category 210.

[2] Because of the proximity to the adjacent school the morning and afternoon peak periods counted were to capture the morning arrival and afternoon dismissal period of the school. In order to provide a "conservative" analysis, the evening peak hour trip generation was used for the afternoon peak hour.

[3] DU = Dwelling Units

Figure 9
Project Outbound Trip Distribution

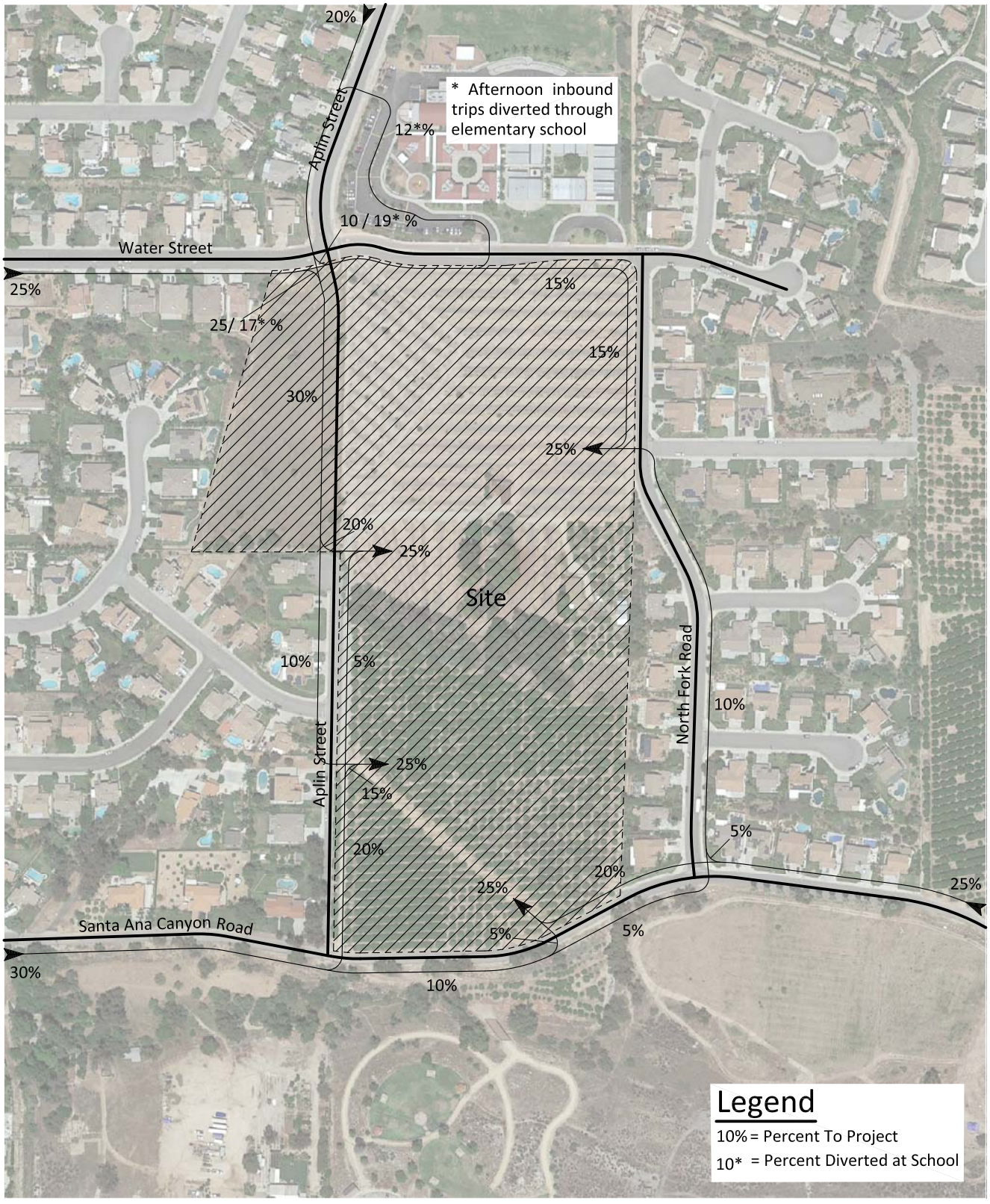


5799/9

KUNZMAN ASSOCIATES, INC.

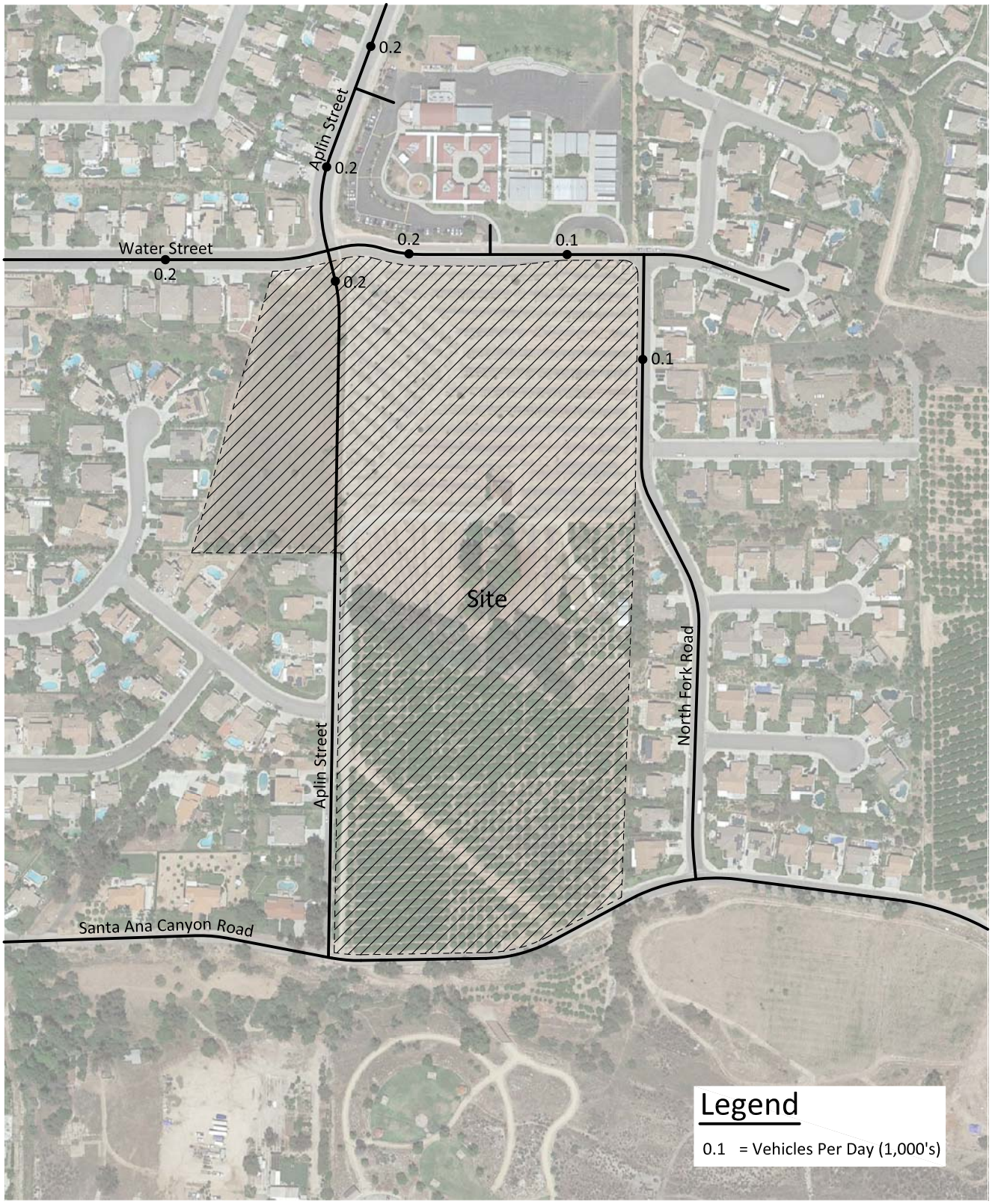
OVER 35 YEARS OF EXCELLENT SERVICE

Figure 10
Project Inbound Trip Distribution



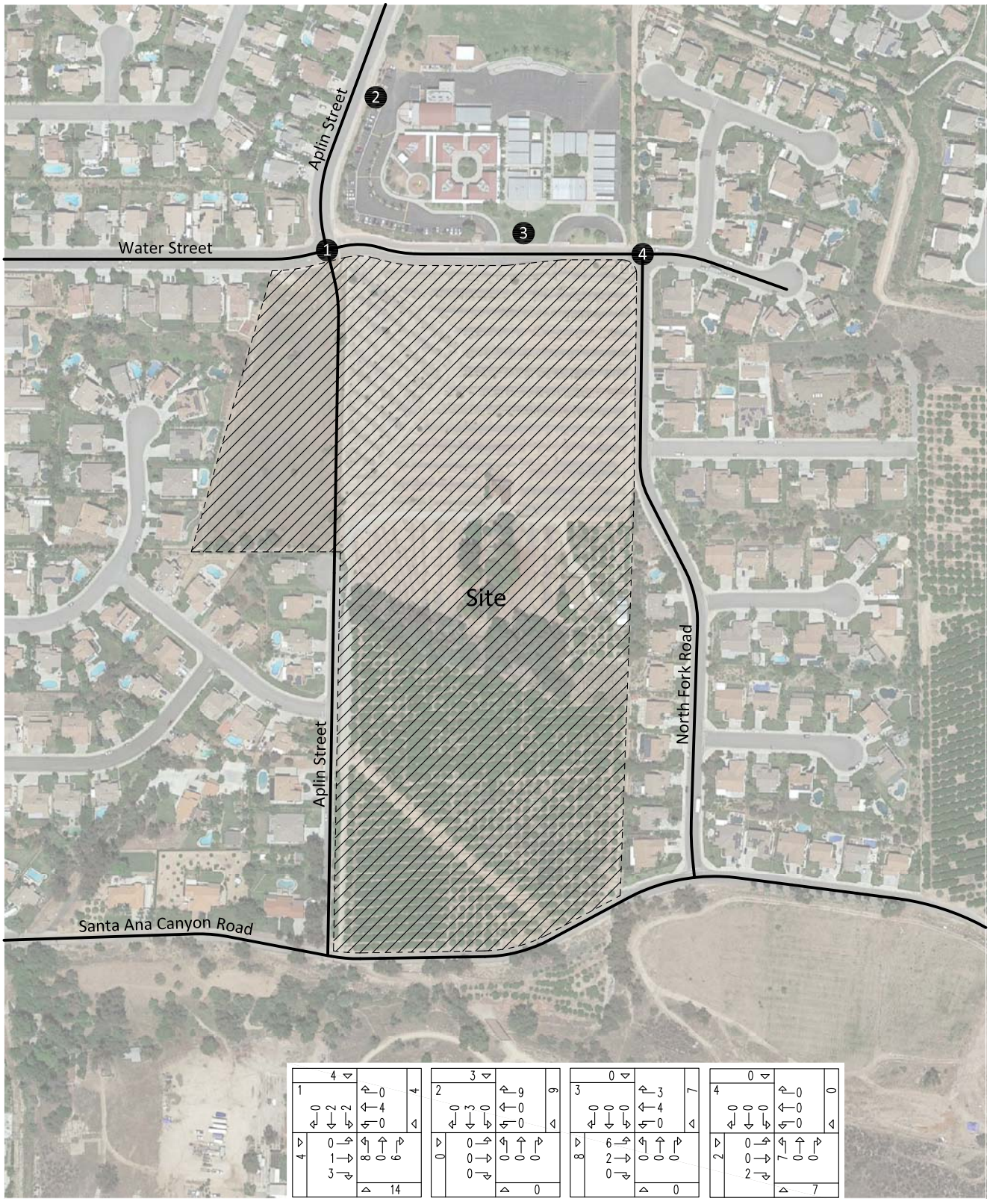
5799/10

Figure 11
Project Average Daily Traffic Volumes



5799/11

Figure 12
Project Morning Peak Hour Intersection Turning Movement Volumes

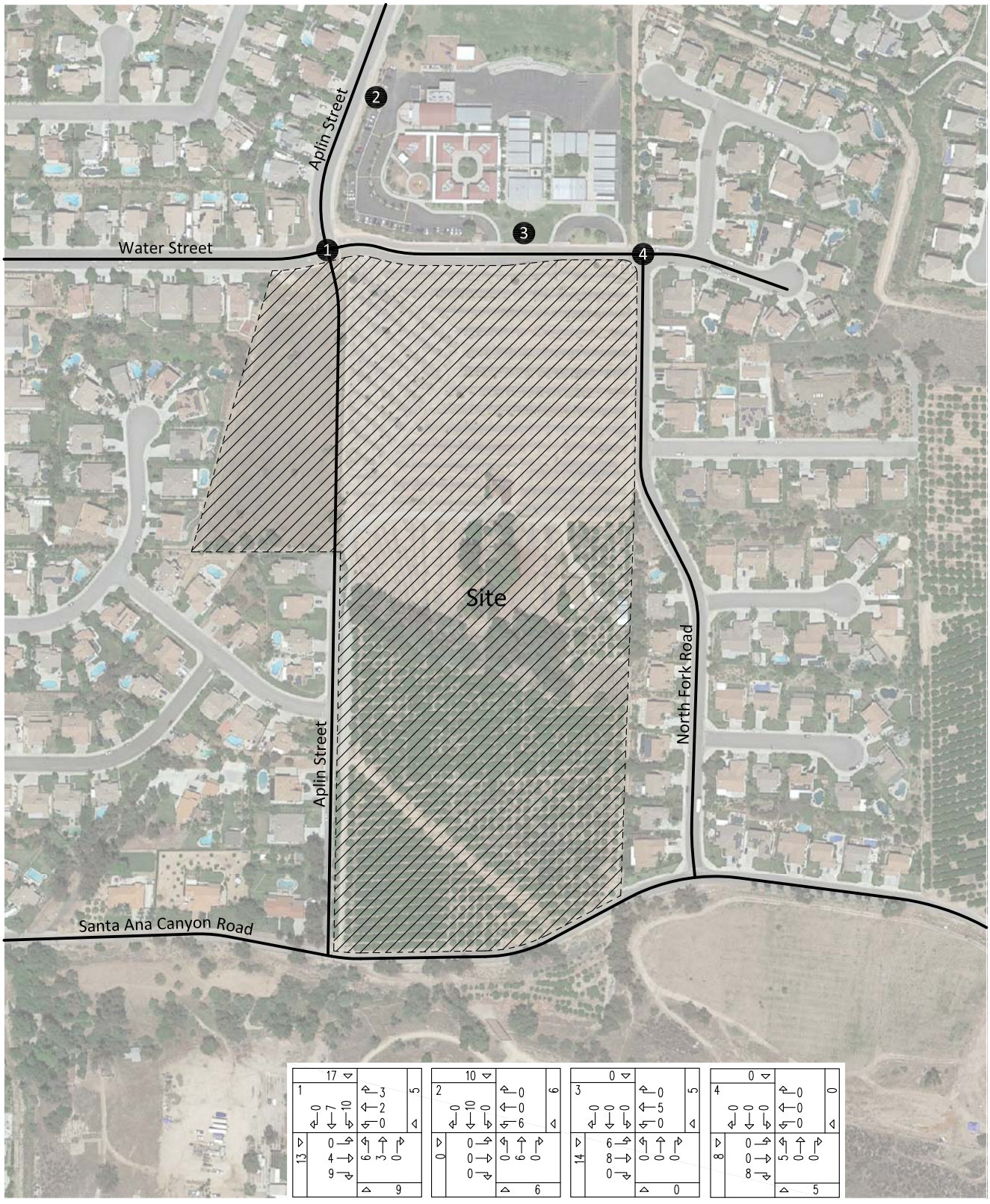


5799/12

KUNZMAN ASSOCIATES, INC. Intersection reference numbers are in upper left corner of turning movement boxes.

OVER 35 YEARS OF EXCELLENT SERVICE

Figure 13
Project Afternoon Peak Hour Intersection Turning Movement Volumes



5799/13

KUNZMAN ASSOCIATES, INC. Intersection reference numbers are in upper left corner of turning movement boxes.

OVER 35 YEARS OF EXCELLENT SERVICE

No.	Title	Land Use	No. of Units	Unit
1	Santa Ana River Wash - See Attached	Cement Plant		
2	Blossom Trails - See Attached	Single Family Residential	14	DU
		Residential Condominium	306	DU
3	Richmond American 121 SFD Gated Community - See Attached	Single Family Residential **Under Construction**	121	DU
4	San Manuel Village - See Attached	Restaurant with Drive Through	3.50	TSF
	Partially Built - items remaining include	Restaurant	5.80	TSF
5	Highland Crossroads - See Attached (Formerly	Retail	42.84	TSF
	Regency Center) Partially Occupied - items remaining	Retail w/ Drive Through	5	TSF
6	Retail Center - See Attached	Fast Food	14.38	TSF
	Boulder Avenue / Greenspot Road CUP-007-008 - Boulder Holdings	Retail	16.33	TSF
7	Centerstone Single Family Homes - See Attached	Residential	125	DU
8	Greenspot Village & Marketplace - See Attached	Residential / Retail		
9	Chong Homes - See Attached	Residential	5	DU
10	Harmony Development - See Attached	Residential / Retail		
11	NWC Seine / Base Line	Fast Food Restaurants	5.143	TSF
12	Orange New Jersey Pro - See Attached	Industrial Park **Entitled**	126.9	TSF
13	Heather Glen TPM 17604 - South of Greenspot Rd, Between Merris & Weaver	Single Family Residential	215.0	DU
14	St. Adelaide Expansion - New Ministry Offices - Phase I of II Built	General Office Building	9.0	TSF
15	REAL Academies School	26655 Highland Ave		
16	Number available for assignment to new project			
17	Immanuel Baptist Church	28355 Base line - Addition	90.00	TSF
18	Arco, Victoria / Highland Avenue - Gas	Convenience Store	2.4	TSF
	Station and Motel Expansion	Motel	72	Units
19	Transition Properties	Warehouses	117,860	TSF
20	Number available for assignment to new project			
21	Peter Le (Residential)	Single Family-Detached	8	DU
22	Hispano Investors Residential	Single Family-Detached	17	DU

No.	Title	Land Use	No. of Units	Unit
23	Golden Security Bank	Single Family-Detached **Under Construction**	9	DU
24	Ross Jones (Residential)	Single Family-Detached	4	DU
25	South Terminus of Lillian Lane	Single Family-Detached	13	DU
26	Number available for assignment to new project			
27	SWC Alta Vista and Santa Ana Canyon Road	Single Family-Detached	56	DU
28	Southeast Corner of Base Line and Seine Avenue	Retail	23.5	TSF
29	Keven Chong - Northwest Corner of Base Line and Boulder	Bank	5.2	TSF
30	Pepito's	Restaurant/Commercial	Remodel	
31	26459 Base Line	Commercial	Remodel	
32	Mediterra Specific Plan - See Attached North of Greenspot Road, East of Santa Paula	Residential	300	DU
33	Arco Addition of Car Wash and QSR SWC of Base Line / Seine		4	TSF
34	Number available for assignment to new project			
35	Highland Park - Mastercraft Homes North of Base Line, West of Weaver	Residential **Entitled**	46	DU
36	Number available for assignment to new project			
37	Farmer Boys - See Attached NWC Palm / 5th - Partially Built	Retail w/ Drive through		
38	TTP 18935 & Adjacent Tract - See Attached South of Waters, Along Aplin	Single Family Detached	80	DU

City of Redlands

List of Cumulative Projects

City of Redlands

New Development (Under Development, Entitled, and in Planning)

January, 2018

Residential

Project	Project Type	Cross Streets	Total Units	Single Family	Multi-Family	Status
Tract 18988	Single Family	Pioneer/Texas	82	82		Under Development
Tract 18979	Single Family	Lucas/San Bernardino	55	55		Under Development
Tract 18762 (Mixed Income)	SFR/MFR	Orange/Lugonia	228	39	189	Under Development
Tract 18845	Single Family	S/O Highview/ E/O South Ln	24	24		Entitled
Tract 16915	Single Family	Highland/Redlands St	6	6		Under Development
Tract 16586	Single Family	N/O Reservoir Rd/Wabash	76	76		Entitled
Tract 16878	Single Family	SWC San Bernardino/Wabash	76	76		Entitled
Tract 19975	Single Family	San Bernardino/Pennsylvania	67	67		Entitled
Tract 17022	Single Family	Texas/Pioneer	12	12		Entitled
CUP 1045 - Liberty Lane Apts	Multi-Family	SWC Lugonia/Texas	80		80	Entitled
Tract 17265	Single Family	Live Oak Canyon	24	24		Entitled
Tract 17675	Single Family	Sunnyside/Linda Vista	11	11		Entitled
Parcel Map 17548	Single Family	Edgemont/Sunset	3	3		Entitled
Tract 16402 (Annexation)	Single Family	Madeira Ave	26	26		Entitled
Tract 16816	Single Family	Alessandro/ S/O Sunset	10	10		Entitled
Tract 16287	Single Family	Occidental	12	12		Entitled
Tract 18182	Single Family	San Bernardino/ E/O Church	27	27		Entitled
Tract 17080	Single Family	Wabash/Sunset	8	8		Entitled
Tract 18952 (In County/Sphere of Influence)	Single Family	Colton/Opal	131	131		Entitled
Tract 18979	Single Family	NEC San Bernardino/Judson	55	55		Entitled
Tract 19956	Single Family	Wabash/Highland	40	40		Entitled
Tract 19942	Single Family	Wabash/Sylvan	34	34		Entitled
Tract 19975	Single Family	SEC San Bernardino/Judson	67	67		Entitled
Tract 20079	Single Family	NEC San Bernardino/Judson	14	14		Entitled
CUP 1102 & Zone Change - Apt Bldgs	Multi-Family	Judson/Grove	96		96	In Planning
CRA 893 - Apt Bldg	Multi-Family	317 Brookside	8		8	In Planning
CUP 1096 - Casa Loma Apts	Multi-Family	SWC Lugonia/University St.	120		120	In Planning
Tract 20126	Single Family	NEC Lugonia/Judson	103	103		In Planning
Total			**1,495**	**1,002**	**493**	

Commercial/Industrial/Other

Project	Project Type	Cross Streets	SQ FT	Status
CRA 879 - 2 Industrial Buildings	Warehouse	Iowa St/Park Ave	78,565	Entitled
CRA 880 - 3 Industrial Buildings	Warehouse	Alabama/Park	170,443	Under Development
CUP 945 - Redlands Crossing w/ Walmart	Shopping Center	SEC San Bernardino/Tennessee	256,614	Entitled
CUP 29 (Revision 3) - Valley Prep	Carports for School	1605 Ford St	3,266	In Planning
CUP 1052 - City of Redlands	Non-Potable Reservoir	Texas/Pennsylvania	0	Entitled
CUP 905 (Revision 3)- Packing House District	Shopping Center	Eureka/Stuart	88,075	Under Development
CUP 1065 - RV Storage Expansion - 204 spaces	Carports for RV Storage	Wabash/Nice	127,746 unenclosed	Under Development
CUP 114 (Revision 3) - Expansion of Existing Church/Preschool	Education Building at Church	1505 Ford St	4,300	Entitled
CUP 335 (Revision 14) Redlands Community Hospital	Hospital Expansion	350 Terracina Blvd	8,530	Entitled
CRA 889 - 88 Room Hotel	Hotel	Lugonia/ E/O Nevada	55,465	In Planning
CRA 753 - Addition to Private School	School Addition	130 Tennessee	1,200	Entitled
CRA 887 - Building Addition to Dentist Office	Dentist Office	219 Cajon Street	363	Entitled
CUP 616 Revision 2 - Addition to Private School	Student Services Building	1890 Orange Ave	1,952	Under Development
CUP 343 Revision 1 - Addition to Private School	Classroom Building	168 Bellevue Ave	1,800	Entitled
CUP 1061, CRA 889 (5000sf Retail/Rest/Drivethru, 23,490 sf Daycare)	Multi-tenant commercial, daycare, and drive-thru	1035 Parkford Dr	28,490	In Planning
CUP 1056 - 77 room hotel	Hotel	Industrial Park Ave/Colton	44,000	In Planning
CUP - MOD Packinghouse	Multi-tenant restaurant/retail food hall	330 3rd St	14,000	In Planning
CRA 890 - Parkford Shopping Center Expansion	Shopping Center	Ford St/Parkford Dr	15,000	Entitled
CRA 891 - Industrial Building	Multi-tenant light industrial	614, 624, 634 Nevada	16,676	Entitled
CUP 1076 - 123 room hotel	Hotel	1700 Orange Tree Ln	48,224	In Planning
Total			**836,963**	

County of San Bernardino

List of Cumulative Projects

APN	NUMBER_KEY	TYPE_TITLE	DATA_STATUS	APPLICANT_NAME	Community	LOCATION	TEXT_021	REPRESENTATIVE_NAME	SUB_TYPE	DESCRIPTION
029112101	PH0628489A	Planning DATES History	UNKNOWN	ROBERTSON'S READY MIX		ALABAMA ST EAST OF FIFTH ST SOUTH OF SANTA ANA RIVER NOR			SAMR	MINE/BATCH PLNT/ROAD
029112202	PH0628489A	Planning DATES History	UNKNOWN	ROBERTSON'S READY MIX		ALABAMA ST EAST OF FIFTH ST SOUTH OF SANTA ANA RIVER NOR			SAMR	MINE/BATCH PLNT/ROAD
029112203	PH0628489A	Planning DATES History	UNKNOWN	ROBERTSON'S READY MIX		ALABAMA ST EAST OF FIFTH ST SOUTH OF SANTA ANA RIVER NOR			SAMR	MINE/BATCH PLNT/ROAD
029114101	PH0628489A	Planning DATES History	UNKNOWN	ROBERTSON'S READY MIX		ALABAMA ST EAST OF FIFTH ST SOUTH OF SANTA ANA RIVER NOR			SAMR	MINE/BATCH PLNT/ROAD
029114104	PH0628489A	Planning DATES History	UNKNOWN	ROBERTSON'S READY MIX		ALABAMA ST EAST OF FIFTH ST SOUTH OF SANTA ANA RIVER NOR			SAMR	MINE/BATCH PLNT/ROAD
029114107	PH0628489A	Planning DATES History	UNKNOWN	ROBERTSON'S READY MIX		ALABAMA ST EAST OF FIFTH ST SOUTH OF SANTA ANA RIVER NOR			SAMR	MINE/BATCH PLNT/ROAD
029114108	PH0425688B	Planning DATES History	UNKNOWN						SAMR	SAMR/343 ACRES
029114109	PH0628489A	Planning DATES History	UNKNOWN	ROBERTSON'S READY MIX		ALABAMA ST EAST OF FIFTH ST SOUTH OF SANTA ANA RIVER NOR			SAMR	MINE/BATCH PLNT/ROAD
029114110	PH0628489A	Planning DATES History	UNKNOWN	ROBERTSON'S READY MIX		ALABAMA ST EAST OF FIFTH ST SOUTH OF SANTA ANA RIVER NOR			SAMR	MINE/BATCH PLNT/ROAD
029204207	P200500630	Concurrent Filing Dev	Approved	TC LIT PALMS LLC	REDLANDS/3RD SUPERVISORIAL DISTRICT	PALMETTO AVENUE, NEVADA STREET, OLIVE STREET AND CALIFORNIA STREET, BOUNDED BY	HEIDI DURON		CF	A) GENERAL PLAN AMENDMENT TO CHANGE THE HIGHWAY DESIGNATION OF PALMETTO AVENUE FROM A MAJOR HIGHWAY TO A COLLECTOR STREET, AND CALIFORNIA STREET FROM A MAJOR ARTERIAL TO A SECONDARY HIGHWAY B) DEVELOPMENT CODE AMENDMENT TO CHANGE THE CIRCULATION DESIGN GUIDELINES REGARDING PALMETTO AVENUE AND CALIFORNIA STREET WITHIN THE EC/PD LAND USE DISTRICT C) CONDITIONAL USE PERMIT TO ESTABLISH A 54,005 SF, A 146,440 SF, A 585,221, AND A 784,200 SF SPECULATIVE INDUSTRIAL BUILDINGS ON 73.7 ACRES.
029204307	P201300599	Concurrent Filing Dev	Cond Apr	KTR PROPERTY TRUST I	REDLANDS/3RD SUPERVISORIAL DISTRICT	NEVADA STREET AND PIONEER AVENUE, NORTHEAST CORNER	CHRIS WARRICK	PATRICK J MEYER-URBAN ENVI	CF	MAJOR REVISION TO APPROVED ACTION FOR THE CONSTRUCTION OF A 206,700 SQUARE FOOT ADDITION TO AN EXISTING 390,780 SQUARE FOOT HIGH CUBE WAREHOUSE FOR A TOTAL BUILDING AREA OF 606,830 SQUARE FEET ON 27.83 ACRES
029204307	P201700441	Post Conditional Approva	Approved	SCOTT MULKAY - PROLOGIS	REDLANDS/3RD SUPERVISORIAL DISTRICT	27050 PIONEER AVE REDLANDS 92374	CHRIS WARRICK	SCOTT MULKAY	EXT	EXTENSION OF TIME - P201300599
029204307	P201700728	Land Use Projects	Filed	PROLOGIS USLV NEWCA 7, LLC C/O SCOTT MULKAY	SAN BERNARDINO/3RD SUPERVISORIAL DISTRICT	27050 PIONEER AVE REDLANDS 92374	JIM MORRISSEY	ALBERT A. WEBB ASSOCIATES (	CUP	SUBMITTED AS A CONDITIONAL USE PERMIT FOR A TRUCK TRAILER LOT. HOWEVER, THE TYPE OF APPLICATION MAY CHANGE BASED UPON AN UPCOMING MEETING WITH THE APPLICANT ON FEBRUARY 1, 2018.
029204312	P201300599	Concurrent Filing Dev	Cond Apr	KTR PROPERTY TRUST I	REDLANDS/3RD SUPERVISORIAL DISTRICT	NEVADA STREET AND PIONEER AVENUE, NORTHEAST CORNER	CHRIS WARRICK	PATRICK J MEYER-URBAN ENVI	CF	MAJOR REVISION TO APPROVED ACTION FOR THE CONSTRUCTION OF A 206,700 SQUARE FOOT ADDITION TO AN EXISTING 390,780 SQUARE FOOT HIGH CUBE WAREHOUSE FOR A TOTAL BUILDING AREA OF 606,830 SQUARE FEET ON 27.83 ACRES
029204312	P201300600	Land Division Projects	Incmplet	KTR CAPITAL PARTNERS	/3RD SUPERVISORIAL DISTRICT	NEVADA STREET AND PIONEER AVENUE, NORTHEAST CORNER	CHRIS WARRICK		MRG-CF	
029204312	P201700441	Post Conditional Approva	Approved	SCOTT MULKAY - PROLOGIS	REDLANDS/3RD SUPERVISORIAL DISTRICT	27050 PIONEER AVE REDLANDS 92374	CHRIS WARRICK	SCOTT MULKAY	EXT	EXTENSION OF TIME - P201300599
029205114	P201400078	Land Use Projects	Cond Apr	MANNY GONZALES ALBERT A WEBB ASSOCIATES	REDLANDS/3RD SUPERVISORIAL DISTRICT	ALABAMA ST, WEST SIDE; SAN BERNARDINO AVE, NORTH SIDE	Linda Mawby	DENNY BEAN	CUP	CONDITIONAL USE PERMIT FOR A 165,984 SQUARE FOOT HIGH CUBE WAREHOUSE DISTRIBUTION FACILITY WITH 10,000 SQUARE FEET OF OFFICE AREA ON 8.75 ACRES.
029205114	P201600451	Revision Activity	Cond Apr	ERIN PLOURDE- LIBERTY PROPERTY TRUST	REDLANDS/3RD SUPERVISORIAL DISTRICT	ALABAMA STREET AND SAN BERNARDINO AVE	ARON LIANG	BRIDGETT HERDMAN	RMC	MINOR REVISON TO APPROVED ACTION TO REDUCE BUILDING SIZE, SEPARATE AUTO PARKING FROM TRUCK CIRCULATION, ELIMINATE AUTO PARKING ALONG TRUCK ENTIRES, INCREASE BUILDING SETBACK AND INSTALL A SECOND DRIVEWAY ON SAN BERNARDINO AVENUE, LOCATED AT THE NORTHWEST CORNER OF ALABAMA STREET AND SAN BERNARDINO AVENUE. THIRD SUPERVISORIAL DISTRICT; PROJECT # P201600451
029205121	P201700142	Land Use Projects	Accepted	JACKSON SMITH - NEWCASTLE PARTNERS	REDLANDS/3RD SUPERVISORIAL DISTRICT	SAN BERNARDINO AVE. NORTH SIDE; ALABAMA ST., APPROX. 630' WEST OF	ARON LIANG	KIMLEY-HORN AND ASSOCIATE	CUP	CONDITIONAL USE PERMIT APPLICATION TO CONSTRUCT A 190,086-SQUARE FOOT WAREHOUSE BUILDING, LOCATED ON THE NORTH SIDE OF SAN BERNARDINO AVENUE, APPROXIMATELY 590 FEET WEST OF ALABAMA STREET, IN EAST VALLEY AREA PLAN, SPECIAL DEVELOPMENT (EV/SD) ZONING DISTRICT; 3RD SUPERVISORIAL DISTRICT; APN: 0292-051-21; PROJECT P201700142

029205312	P201300195	Revision Activity	Cond Apr	TRANSTECH-DAVID MLYNARSKI	REDLANDS/3RD SUPERVISORIAL DISTRICT	LUGONIA AVE. NORTH SIDE OF; NEVADA ST. APPROX. 635' EAST OF.	CHRIS WARRICK	TRANS TECH - DAVID MLYNARS	RMC	Revision to Approved Action for an off-site, 70,000 square foot, detention basin and storm drain facilities on a portion of a 9.1-acre site (APN: 0292-053-12) for the purpose of accommodating the drainage for the University Crossing Planned Residential Development (PRD) (APN: 0292-055-21 and 24)
029205312	P201700245	Planned Development	Accepted	CR THE REDLANDS LLC C/O TRANSTECH ENGINEERS INC	TWENTYNINE PALMS/3RD SUPERVISORIAL DISTRICT	10046 NEVADA ST REDLANDS 92374	CHRIS WARRICK	DAVID MLYNARSKI - TRANSTEC	PDP	PLANNED RESIDENTIAL DEVELOPMENT (PRD) THAT INCLUDES A PRELIMINARY AND FINAL DEVELOPMENT PLAN FOR A 353 UNIT MULTI-FAMILY RESIDENTIAL PROJECT WITH A TOTAL OF 5 STRUCTURES RANGING FROM TWO-STORIES TO FOUR STORIES IN HEIGHT AND A RECREATION CENTER ON 8.58 ACRES
029205313	P201300195	Revision Activity	Cond Apr	TRANSTECH-DAVID MLYNARSKI	REDLANDS/3RD SUPERVISORIAL DISTRICT	LUGONIA AVE. NORTH SIDE OF; NEVADA ST. APPROX. 635' EAST OF.	CHRIS WARRICK	TRANS TECH - DAVID MLYNARS	RMC	Revision to Approved Action for an off-site, 70,000 square foot, detention basin and storm drain facilities on a portion of a 9.1-acre site (APN: 0292-053-12) for the purpose of accommodating the drainage for the University Crossing Planned Residential Development (PRD) (APN: 0292-055-21 and 24)
029205407	P200800142	Concurrent Filing Dev	Cond Apr	STONE CREEK COMPANY	REDLANDS/3RD SUPERVISORIAL DISTRICT	ALABAMA STREET & ALMOND AVENUE, NORTHWEST CORNER	JOHN P MCGUCKIAN	URBAN ENVIRONS	CF	CONDITIONAL USE PERMIT FOR THE DEVELOPMENT OF A COMMERCIAL PROJECT THAT INCLUDES RETAIL, RESTAURANT AND OFFICE USES CONSISTING OF FIVE (5) TWO STORY BUILDINGS AND SEVEN (7) ONE STORY BUILDINGS WITH A MAXIMUM FLOOR AREA OF 216,500 SQUARE FEET AND A THREE STORY HOTEL WITH 180 ROOMS AND A FLOOR AREA OF 80,000 SQUARE FEET ON 19.03 NET ACRES, AND TENTATIVE TRACT MAP 18690 TO SUBDIVIDE 19.57 GROSS ACRES INTO 13 LOTS FOR COMMERCIAL DEVELOPMENT.
029205407	P200800150	Land Division Projects	Cond Apr	STONE CREEK COMPANY	REDLANDS/3RD SUPERVISORIAL DISTRICT	ALABAMA STREET & ALMOND AVENUE, NORTHWEST CORNER	JOHN P MCGUCKIAN	URBAN ENVIRONS	TT-CF	TENTATIVE TRACT MAP 18690 FOR A 14 LOT COMMERCIAL SUBDIVISION ON 19.60 ACRES
029205407	P200800151	Land Use Projects	Cond Apr	STONE CREEK COMPANY	REDLANDS/3RD SUPERVISORIAL DISTRICT	ALABAMA STREET & ALMOND AVENUE, NORTHWEST CORNER	JOHN P MCGUCKIAN	URBAN ENVIRONS	CUP-CF	CONDITIONAL USE PERMIT TO ESTABLISH A MAXIMUM 280,000 SF OFFICE/RETAIL COMPLEX WITH SIX 2- STORY BUILDINGS, SEVEN 1-STORY BUILDINGS AND A 180 ROOM HOTEL ON 19.60 ACRES
029205407	P201300529	Concurrent Filing Dev	Cond Apr	ALABAMA VENTURE I LP	REDLANDS/3RD SUPERVISORIAL DISTRICT	ALMOND AVENUE, NORTH SIDE; NEVADA STREET AND ALABAMA STREET, EXTENDING BETWEEN	Reuben Arceo	URBAN ENVIRONS- PATRICK J.	CF	Conditional Use Permit to construct a 611,908 square foot multi-use industrial and warehouse building. The project is also associated with a tentative parcel map, Case No. P201300539 to subdivide a 43 acre site into two parcels - with Parcel 1 containing 16.28 acres and Parcel 2, 30.01 acres, which is aslo the parcel intended to accommodate the 611,908 industrial warehouse facility.
029205407	P201300539	Land Division Projects	Approved	ALABAMA VENTURE I LP	/3RD SUPERVISORIAL DISTRICT	ALABAMA ST, WEST SIDE; SAN BERNARDINO AVE. APPROX. 200' SOUTH OF.	Reuben Arceo		TPM-CF	Tentative Parcel Map to subdivide forty-three acres into two parcels with Parcel 1 containing 16.28 acres and Parcel 27.85 acres for purposes of constructing future industrial/warehousing buildings.
029205407	P201300615	Land Use Projects	Cond Apr	ALABAMA VENTURE I LP	REDLANDS/3RD SUPERVISORIAL DISTRICT	NORTHWEST CORNER OF ALMOND AVENUE AND ALABAMA STREET	JIM MORRISSEY	URBAN ENVIRONS	CUP	CONDITIONAL USE PERMIT FOR THE CONSTRUCTION OF A 313,255 SQ. FT. WAREHOUSE BUILDING.
029205511	P201000096	Revision Activity	Closed	REDLANDS TOWN CENTER RETAIL III LLC	REDLANDS/3RD SUPERVISORIAL DISTRICT	LUGONIA AVE. NORTH SIDE; APPROX. 630' EAST OF NEVADA ST		STATHI MARCOPULOS	RMC	REVISION TO AN APPROVED ACTION TO MODIFY LANDSCAPE AND RELOCATE TRASH ENCLOSURE FOR AN EXISTING SHOPPING CENTER ON 9.21 ACRES
029205525	P201300104	Revision Activity	Finaled	PROLOGIS L P	REDLANDS/3RD SUPERVISORIAL DISTRICT	ALMOND AVENUE AND NEVADA STREET, SOUTHEAST CORNER	John Oquendo	MIG - HOGLE IRELAND	RMC	REVISION TO APPROVED ACTION TO PHASE THE ONSITE IMPROVEMENTS OF A 425,000 SQUARE FOOT WAREHOUSE DISTRIBUTION FACILITY ON 18.3 ACRES APPROVED ORIGNIALLY UNDER CONDITIONAL USE PERMIT NO. P201100383. PHASE ONE WILL INCLUDE THE CONSTRUCTION OF A 327,457 SQUARE FOOT WAREHOUSE BUILDING THAT INCLUDES 21,250 SQUARE FEET OF OFFICE AREA, AN 88 SQUARE FOOT GUARD SHACK, AND A 400 SQUARE FOOT FIRE PUMP HOUSE. PHASE TWO WILL CONSTRUCT THE REMAINING 97,055 SQUARE FOOT BUILDING AREA WHICH INCLUDES A 3,000 SQUARE FOOT MEZZANINE.
029205525	P201300292	Post Conditional Approva	Approved	PROLOGIS	/5TH SUPERVISORIAL DISTRICT	ALMOND AVENUE	John Oquendo		LND	Revised Landscape Plans

029207156	P201600335	Revision Activity	Cond Apr	PROLOGIS-JAMES JACHETTA	REDLANDS/3RD SUPERVISORIAL DISTRICT	27573 RIVER BLUFF AVE REDLANDS 92374	Reuben Arceo		RMC	REVISION TO AN APPROVED ACTION TO MODIYU A 289,327 SQUARE FOOT INDUSTRIAL BUILDING SITUATED ON A 13.29 ACRE SITE THAT APPROVED BY THE PLLANING COMMISSOIN ON NOVEMBER 21, 2013, REFERENCED AS PROJECT NO. P201300064. APPLICANT PROPOSES THE FOLLOWING REVISIONS:
029207158	P201300064	Land Use Projects	Cond Apr	PROLOGIS L P	REDLANDS/3RD SUPERVISORIAL DISTRICT	ALABAMA STREET AND RIVER BLUFF ROAD, SOUTHEAST CORNER	ROMO PLANNING GUS ROMO	MIG/HOGLE-IRELAND	CUP	CONDITIONAL USE PERMIT TO CONSTRUCT A 289,327 SF WAREHOUSE/DISTRIBUTION FACILITY ON A 13.29-ACRE SITE.
029207158	P201600430	Post Conditional Approva	Approved	PROLOGIS - JAMES JACHETTA	REDLANDS/3RD SUPERVISORIAL DISTRICT	ALABAMA STREET AND RIVER BLUFF ROAD, SOUTHEAST CORNER	Reuben Arceo	MIG/HOGLE IRELAND - DEIDRE	EXT	EXTENSION OF TIME FOR P201300064, CUP approved by the PC on November 21, 2013 to construct a 289,327 square foot industrial buiilding. The project's because effective on December 5, 2013 and the construction expiration terminates on December 5, 2016. The applicant is requesting a 36 month time extension.
29207218,19	P201700126	Revision Activity	Cond Apr	PLUG POWER - JACK LAKE	REDLANDS/3RD SUPERVISORIAL DISTRICT	27517 PIONEER AVE REDLANDS 92374	CHRIS WARRICK	TOM DONAHUE	RMC	REVISION TO APPROVED ACTION TO CONSTRUCT A HYDROGEN FUEL TANK FACILITY, AN EMPLOYEE CANOPY, ADDITIONAL SCE TRANSFORMERS ADJACENT TO PIONEER ST. AND ADD ADDITIONAL EMPLOYEE PARKING TO SERVE THE EXISTING 777, 620 SQUARE FOOT AMAZON FULLFILLMENT CENTER.
029208235	P201700660	Revision Activity	Accepted	SEAN C. VAN RYDER/ COMMERCE CONSTRUCTION CO. LP	REDLANDS/3RD SUPERVISORIAL DISTRICT	W SAN BERNARDINO AVE REDLANDS CA 92374	CHRIS WARRICK		RMC-CF	MINOR REVISION TO AN APPROVED ACTION TO AMEND THE FINAL DEVELOPMENT PLAN FOR PHASE 2 OF THE MOUNTAIN GROVE AT CITRUS PLAZA PLANNED DEVELOPMENT INVOLVING THE CONSOLIDATION OF TWO HOTELS WITH A TOTAL OF 129 ROOMS TO A SINGLE HOTEL WITH 104 ROOMS AND A RECONFIGURATION OF THE RETAIL/RESTRAUNT PADS IN THE NORTHWEST PORTION OF THE SITE AFFECTING APPROX. 6.25 ACRES
029208236	P201700660	Revision Activity	Accepted	SEAN C. VAN RYDER/ COMMERCE CONSTRUCTION CO. LP	REDLANDS/3RD SUPERVISORIAL DISTRICT	W SAN BERNARDINO AVE REDLANDS CA 92374	CHRIS WARRICK		RMC-CF	MINOR REVISION TO AN APPROVED ACTION TO AMEND THE FINAL DEVELOPMENT PLAN FOR PHASE 2 OF THE MOUNTAIN GROVE AT CITRUS PLAZA PLANNED DEVELOPMENT INVOLVING THE CONSOLIDATION OF TWO HOTELS WITH A TOTAL OF 129 ROOMS TO A SINGLE HOTEL WITH 104 ROOMS AND A RECONFIGURATION OF THE RETAIL/RESTRAUNT PADS IN THE NORTHWEST PORTION OF THE SITE AFFECTING APPROX. 6.25 ACRES
029208253	P201700660	Revision Activity	Accepted	SEAN C. VAN RYDER/ COMMERCE CONSTRUCTION CO. LP	REDLANDS/3RD SUPERVISORIAL DISTRICT	W SAN BERNARDINO AVE REDLANDS CA 92374	CHRIS WARRICK		RMC-CF	MINOR REVISION TO AN APPROVED ACTION TO AMEND THE FINAL DEVELOPMENT PLAN FOR PHASE 2 OF THE MOUNTAIN GROVE AT CITRUS PLAZA PLANNED DEVELOPMENT INVOLVING THE CONSOLIDATION OF TWO HOTELS WITH A TOTAL OF 129 ROOMS TO A SINGLE HOTEL WITH 104 ROOMS AND A RECONFIGURATION OF THE RETAIL/RESTRAUNT PADS IN THE NORTHWEST PORTION OF THE SITE AFFECTING APPROX. 6.25 ACRES
029208276	P201700660	Revision Activity	Accepted	SEAN C. VAN RYDER/ COMMERCE CONSTRUCTION CO. LP	REDLANDS/3RD SUPERVISORIAL DISTRICT	W SAN BERNARDINO AVE REDLANDS CA 92374	CHRIS WARRICK		RMC-CF	MINOR REVISION TO AN APPROVED ACTION TO AMEND THE FINAL DEVELOPMENT PLAN FOR PHASE 2 OF THE MOUNTAIN GROVE AT CITRUS PLAZA PLANNED DEVELOPMENT INVOLVING THE CONSOLIDATION OF TWO HOTELS WITH A TOTAL OF 129 ROOMS TO A SINGLE HOTEL WITH 104 ROOMS AND A RECONFIGURATION OF THE RETAIL/RESTRAUNT PADS IN THE NORTHWEST PORTION OF THE SITE AFFECTING APPROX. 6.25 ACRES
029208277	P201700660	Revision Activity	Accepted	SEAN C. VAN RYDER/ COMMERCE CONSTRUCTION CO. LP	REDLANDS/3RD SUPERVISORIAL DISTRICT	W SAN BERNARDINO AVE REDLANDS CA 92374	CHRIS WARRICK		RMC-CF	MINOR REVISION TO AN APPROVED ACTION TO AMEND THE FINAL DEVELOPMENT PLAN FOR PHASE 2 OF THE MOUNTAIN GROVE AT CITRUS PLAZA PLANNED DEVELOPMENT INVOLVING THE CONSOLIDATION OF TWO HOTELS WITH A TOTAL OF 129 ROOMS TO A SINGLE HOTEL WITH 104 ROOMS AND A RECONFIGURATION OF THE RETAIL/RESTRAUNT PADS IN THE NORTHWEST PORTION OF THE SITE AFFECTING APPROX. 6.25 ACRES

029208278	P201700660	Revision Activity	Accepted	SEAN C. VAN RYDER/ COMMERCE CONSTRUCTION CO. LP	REDLANDS/3RD SUPERVISORIAL DISTRICT	W SAN BERNARDINO AVE REDLANDS CA 92374	CHRIS WARRICK		RMC-CF	MINOR REVISION TO AN APPROVED ACTION TO AMEND THE FINAL DEVELOPMENT PLAN FOR PHASE 2 OF THE MOUNTAIN GROVE AT CITRUS PLAZA PLANNED DEVELOPMENT INVOLVING THE CONSOLIDATION OF TWO HOTELS WITH A TOTAL OF 129 ROOMS TO A SINGLE HOTEL WITH 104 ROOMS AND A RECONFIGURATION OF THE RETAIL/RESTRAUNT PADS IN THE NORTHWEST PORTION OF THE SITE AFFECTING APPROX. 6.25 ACRES
029208279	P201700660	Revision Activity	Accepted	SEAN C. VAN RYDER/ COMMERCE CONSTRUCTION CO. LP	REDLANDS/3RD SUPERVISORIAL DISTRICT	W SAN BERNARDINO AVE REDLANDS CA 92374	CHRIS WARRICK		RMC-CF	MINOR REVISION TO AN APPROVED ACTION TO AMEND THE FINAL DEVELOPMENT PLAN FOR PHASE 2 OF THE MOUNTAIN GROVE AT CITRUS PLAZA PLANNED DEVELOPMENT INVOLVING THE CONSOLIDATION OF TWO HOTELS WITH A TOTAL OF 129 ROOMS TO A SINGLE HOTEL WITH 104 ROOMS AND A RECONFIGURATION OF THE RETAIL/RESTRAUNT PADS IN THE NORTHWEST PORTION OF THE SITE AFFECTING APPROX. 6.25 ACRES
029215223	P200800461	Revision Activity	Cond Apr	LOMA LINDA INDONESIAN SDA CHURCH	LOMA LINDA/3RD SUPERVISORIAL DISTRICT	CALIFORNIA STREET, EAST SIDE; APPROXIMATELY 300' NORTH OF CITRUS AVENUE	OXSO SHAHRIARI	MADOLE & ASSOCIATES	RMC	REVISION TO AN APPROVED ACTION TO ADD A 22,000 SQUARE FEET SANCTUARY TO AN EXISTING CHURCH FACILITY WITH A MAXIMUM OF 66,000 SF AND A MAXIMUM OCCUPANCY OF 726 ON 4.93 ACRES
029215223	P201000650	Concurrent Filing Dev	Cond Apr	SOUTHEASTERN CALIF CONF/7TH DAY ADV	LOMA LINDA/3RD SUPERVISORIAL DISTRICT	CALIFORNIA STREET, EAST SIDE; APPROX. 340' NORTH OF CITRUS AVENUE	CHRIS WARRICK	DANIEL INJO	CF	A) MERGE 2 PARCELS ON 6.46 ACRES; B) REVISION TO AN APPROVED CHURCH TO INCREASE NUMBER OF PARKING STALLS FROM 245 TO 375, INCREASE SEATING FROM 750 TO 1,140 AND INCREASE SANCTUARY HEIGHT TO 46' ON 6.46 ACRES
029215223	P201100027	Revision Activity	Cond Apr	SOUTHEASTERN CALIF CONF/7TH DAY ADV	LOMA LINDA/3RD SUPERVISORIAL DISTRICT	CALIFORNIA STREET, EAST SIDE; APPROX. 390' NORTH OF CITURS AVENUE	CHRIS WARRICK	DR. DANIEL INJO	RMC-CF	REVISION TO AN APPROVED CHURCH TO INCREASE NUMBER OF PARKING STALLS FROM 245 TO 375, INCREASE SEATING FROM 750 TO 1,140 AND INCREASE SANCTUARY HEIGHT TO 46' ON 6.46 ACRES
029215223	PH0837492D	Planning DATES History	Approved	SOUTHERN CA ASSOC. OF SDA				LIGHTNER, GEORGE	EXT	36 MONTH EXT OF TIME
029215223	PH0837492E	Planning DATES History	UNKNOWN	SO CAL ASSN OF SEVENTY-DAY ADV		CALIFORNIA ST EAST SIDE CITRUS AVE 300' NORTH OF		LIGHTNER DEVELOPMENT INC.	RMC	CUB/91-0047/E265-108
029215232	PH0512888A	Planning DATES History	CLOSE	GD ASSOCIATES & JENKINS, ROBERT G					APPCM	IND PARK/APL CON #5
029215232	PH0512888B	Planning DATES History	CLOSE	JENKINS, ROBERT G		NEW JERSEY STREET 180' WEST OF PARK AVENUE SOUTH SIDE			SA	IND PARK/5.30 ACRES
029215234	P201000650	Concurrent Filing Dev	Cond Apr	SOUTHEASTERN CALIF CONF/7TH DAY ADV	LOMA LINDA/3RD SUPERVISORIAL DISTRICT	CALIFORNIA STREET, EAST SIDE; APPROX. 340' NORTH OF CITRUS AVENUE	CHRIS WARRICK	DANIEL INJO	CF	A) MERGE 2 PARCELS ON 6.46 ACRES; B) REVISION TO AN APPROVED CHURCH TO INCREASE NUMBER OF PARKING STALLS FROM 245 TO 375, INCREASE SEATING FROM 750 TO 1,140 AND INCREASE SANCTUARY HEIGHT TO 46' ON 6.46 ACRES
029215234	P201100027	Revision Activity	Cond Apr	SOUTHEASTERN CALIF CONF/7TH DAY ADV	LOMA LINDA/3RD SUPERVISORIAL DISTRICT	CALIFORNIA STREET, EAST SIDE; APPROX. 390' NORTH OF CITURS AVENUE	CHRIS WARRICK	DR. DANIEL INJO	RMC-CF	REVISION TO AN APPROVED CHURCH TO INCREASE NUMBER OF PARKING STALLS FROM 245 TO 375, INCREASE SEATING FROM 750 TO 1,140 AND INCREASE SANCTUARY HEIGHT TO 46' ON 6.46 ACRES
029216309	P200500152	Land Use Projects	Cond Apr	SOUTHEASTERN CALIF CONF 7TH DAY ADV	AGUA MANSA/3RD SUPERVISORIAL DISTRICT	NEW JERSEY STREET & ORANGE AVE., NORTHEAST CORNER	KEVIN WHITE		CUP	CONDITIONAL USE PERMIT FOR WORSHIP CENTER CONSISTING OF 3,610 SF OFFICE SAPCE, 14,323 SF SANCTUARY, 6,277 SF CHAPEL, 12,160 SF CLASSROOMS AND 29,350 SF RECREATIONAL CENTER ON 8.9 ACRES
029216309	P201000619	Post Conditional Approva	Approved	SOUTHEASTERN CALIF CONF 7TH DAY ADV	/3RD SUPERVISORIAL DISTRICT	NEW JERSEY ST AND ORANGE AVE NORTHEAST CORNER		DAVID ESTANQUE	EXT	EXTENSION OF TIME
029250107	P200900541	Revision Activity	Cond Apr	PROKOS, ANTHONY	REDLANDS/3RD SUPERVISORIAL DISTRICT	LUGONIA AVE., APPROX. 171' NORTH OF; CITRUS PLAZA DRIVE, APPROX, 372' WEST OF	CHRIS WARRICK	FRINK, DAVID	RMC	REVISION TO AN APPROVED ACTION TO ESTABLISH A 7,000 SQ.FT. RESTAURANT, THAT INCLUDES A 793 SQ.FT. OUTDOOR COVERED SEATING AREA & A 832 SQ.FT. ADDITION TO THE EXISTING STRUCTURE & THREE WALL SIGNS, A 49 SQ.FT. SIGN ON THE EAST BLDG. WALL, A 49 SQ.FT. SIGN ON THE NORTH BLDG. WALL & A 46 SQ.FT. SIGN ONTHE WEST BLDG. WALL ON .95 ACRES
029309105	P200500652	Land Use Projects	Cond Apr	ACE BUILDERS, INC.	REDLANDS/3RD SUPERVISORIAL DISTRICT	SAN TIMETEO ROAD AND BERMUDEZ STREET, SOUTHWEST CORNER	HEIDI DURON	SAME AS APPLICANT	CUP	CONDITIONAL USE PERMIT TO ESTABLISH A SOCIAL CARE FACILITY ON 2.5 ACRES
121020101	PH1042199B	Planning DATES History	UNKNOWN	ROBERTSON'S READY MIX		CONE CAMP/GREEN SPOT RDS EXT B GREEN SPOT/CONE CAMP RDS EXT B		PHILLIPS, GRAIG	SMB	MINING/RECLAMATION
29114101, 29114101,29114 109,29114110	PH0628489B	Planning DATES History	UNKNOWN	ROBERTSON'S READY MIX & TRI-CITY AGGREGATES, INC.				JCP ASSOCIATES	SAMR*	MINING/RECLAMATION

APPENDIX C:
EXISTING TRAFFIC COUNTS

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Redlands
N/S: California Street
E/W: I-10 Westbound Ramps
Weather: Clear

File Name : 01_RED_Cali_10W AM
Site Code : 06718128
Start Date : 2/21/2018
Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

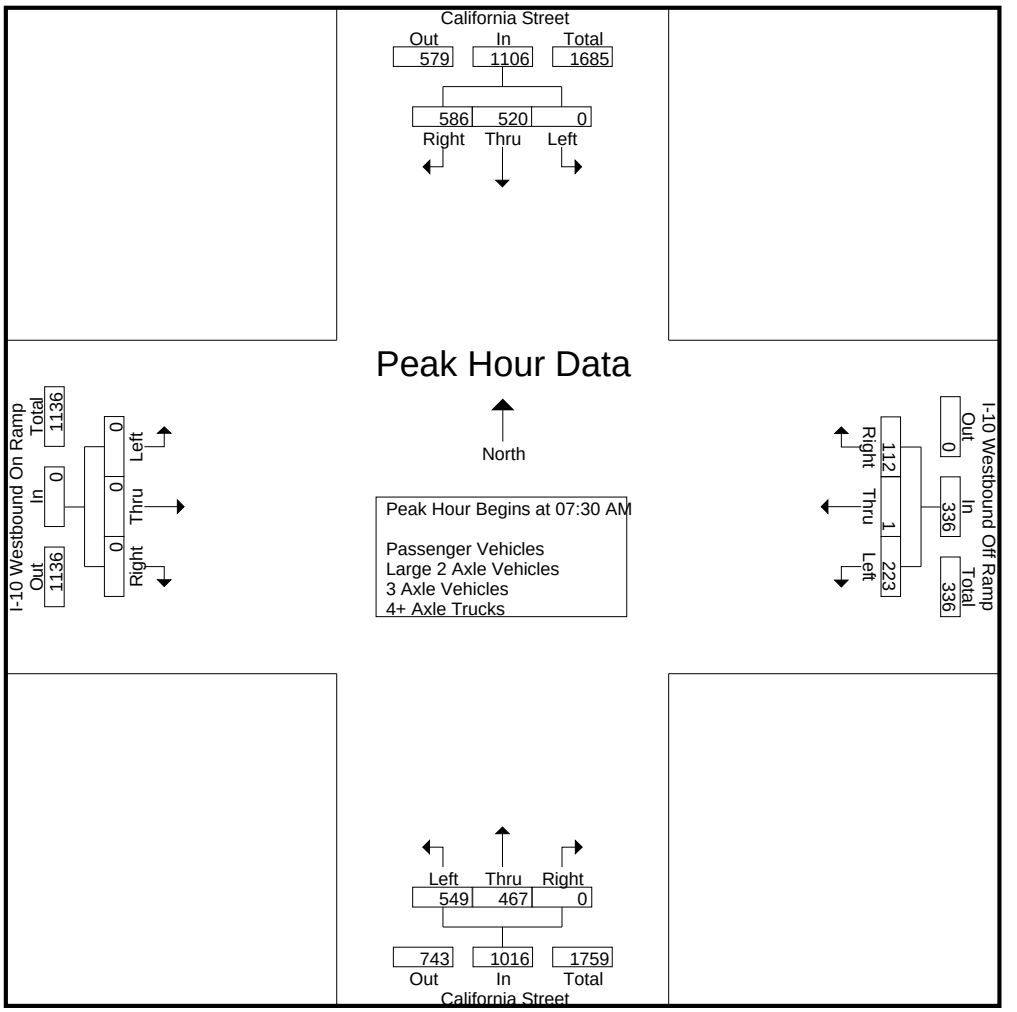
	California Street Southbound				I-10 Westbound Off Ramp Westbound				California Street Northbound				I-10 Westbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	122	141	263	63	0	36	99	140	139	0	279	0	0	0	0	641
07:15 AM	0	117	130	247	56	0	38	94	131	129	0	260	0	0	0	0	601
07:30 AM	0	123	144	267	54	1	25	80	135	109	0	244	0	0	0	0	591
07:45 AM	0	127	130	257	54	0	36	90	125	129	0	254	0	0	0	0	601
Total	0	489	545	1034	227	1	135	363	531	506	0	1037	0	0	0	0	2434
08:00 AM	0	156	184	340	54	0	23	77	135	112	0	247	0	0	0	0	664
08:15 AM	0	114	128	242	61	0	28	89	154	117	0	271	0	0	0	0	602
08:30 AM	0	115	124	239	53	0	26	79	111	104	0	215	0	0	0	0	533
08:45 AM	0	89	72	161	77	2	28	107	112	79	0	191	0	0	0	0	459
Total	0	474	508	982	245	2	105	352	512	412	0	924	0	0	0	0	2258
Grand Total	0	963	1053	2016	472	3	240	715	1043	918	0	1961	0	0	0	0	4692
Apprch %	0	47.8	52.2		66	0.4	33.6		53.2	46.8	0		0	0	0		
Total %	0	20.5	22.4	43	10.1	0.1	5.1	15.2	22.2	19.6	0	41.8	0	0	0	0	
Passenger Vehicles	0	941	956	1897	470	2	214	686	1003	832	0	1835	0	0	0	0	4418
% Passenger Vehicles	0	97.7	90.8	94.1	99.6	66.7	89.2	95.9	96.2	90.6	0	93.6	0	0	0	0	94.2
Large 2 Axle Vehicles	0	2	14	16	2	1	15	18	17	8	0	25	0	0	0	0	59
% Large 2 Axle Vehicles	0	0.2	1.3	0.8	0.4	33.3	6.2	2.5	1.6	0.9	0	1.3	0	0	0	0	1.3
3 Axle Vehicles	0	5	7	12	0	0	2	2	2	18	0	20	0	0	0	0	34
% 3 Axle Vehicles	0	0.5	0.7	0.6	0	0	0.8	0.3	0.2	2	0	1	0	0	0	0	0.7
4+ Axle Trucks	0	15	76	91	0	0	9	9	21	60	0	81	0	0	0	0	181
% 4+ Axle Trucks	0	1.6	7.2	4.5	0	0	3.8	1.3	2	6.5	0	4.1	0	0	0	0	3.9

	California Street Southbound				I-10 Westbound Off Ramp Westbound				California Street Northbound				I-10 Westbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	123	144	267	54	**1**	25	80	135	109	0	244	0	0	0	0	591
07:45 AM	0	127	130	257	54	0	**36**	**90**	125	**129**	0	254	0	0	0	0	601
08:00 AM	0	**156**	**184**	**340**	54	0	23	77	135	112	0	247	0	0	0	0	**664**
08:15 AM	0	114	128	242	**61**	0	28	89	**154**	117	0	**271**	0	0	0	0	602
Total Volume	0	520	586	1106	223	1	112	336	549	467	0	1016	0	0	0	0	2458
% App. Total	0	47	53		66.4	0.3	33.3		54	46	0		0	0	0		
PHF	.000	.833	.796	.813	.914	.250	.778	.933	.891	.905	.000	.937	.000	.000	.000	.000	.925

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Redlands
N/S: California Street
E/W: I-10 Westbound Ramps
Weather: Clear

File Name : 01_RED_Cali_10W AM
Site Code : 06718128
Start Date : 2/21/2018
Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:00 AM				07:00 AM				07:00 AM			
+0 mins.	0	117	130	247	**63**	0	36	**99**	**140**	**139**	0	**279**	0	0	0	0
+15 mins.	0	123	144	267	56	0	**38**	94	131	129	0	260	0	0	0	0
+30 mins.	0	127	130	257	54	**1**	25	80	135	109	0	244	0	0	0	0
+45 mins.	0	**156**	**184**	**340**	54	0	36	90	125	129	0	254	0	0	0	0
Total Volume	0	523	588	1111	227	1	135	363	531	506	0	1037	0	0	0	0
% App. Total	0	47.1	52.9		62.5	0.3	37.2		51.2	48.8	0		0	0	0	
PHF	.000	.838	.799	.817	.901	.250	.888	.917	.948	.910	.000	.929	.000	.000	.000	.000

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City of Redlands
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E/W: I-10 Westbound Ramps
Weather: Clear

File Name : 01_RED_Cali_10W AM
Site Code : 06718128
Start Date : 2/21/2018
Page No : 1

Groups Printed- Passenger Vehicles

	California Street Southbound				I-10 Westbound Off Ramp Westbound				California Street Northbound				I-10 Westbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	119	125	244	62	0	35	97	131	123	0	254	0	0	0	0	595
07:15 AM	0	112	118	230	56	0	32	88	125	120	0	245	0	0	0	0	563
07:30 AM	0	121	136	257	54	0	19	73	124	94	0	218	0	0	0	0	548
07:45 AM	0	127	111	238	53	0	31	84	121	120	0	241	0	0	0	0	563
Total	0	479	490	969	225	0	117	342	501	457	0	958	0	0	0	0	2269
08:00 AM	0	154	167	321	54	0	21	75	130	97	0	227	0	0	0	0	623
08:15 AM	0	108	117	225	61	0	25	86	151	113	0	264	0	0	0	0	575
08:30 AM	0	113	112	225	53	0	25	78	109	98	0	207	0	0	0	0	510
08:45 AM	0	87	70	157	77	2	26	105	112	67	0	179	0	0	0	0	441
Total	0	462	466	928	245	2	97	344	502	375	0	877	0	0	0	0	2149
Grand Total	0	941	956	1897	470	2	214	686	1003	832	0	1835	0	0	0	0	4418
Apprch %	0	49.6	50.4		68.5	0.3	31.2		54.7	45.3	0		0	0	0		
Total %	0	21.3	21.6	42.9	10.6	0	4.8	15.5	22.7	18.8	0	41.5	0	0	0	0	

	California Street Southbound				I-10 Westbound Off Ramp Westbound				California Street Northbound				I-10 Westbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	121	136	257	54	0	19	73	124	94	0	218	0	0	0	0	548
07:45 AM	0	127	111	238	53	0	**31**	84	121	**120**	0	241	0	0	0	0	563
08:00 AM	0	**154**	**167**	**321**	54	0	21	75	130	97	0	227	0	0	0	0	**623**
08:15 AM	0	108	117	225	**61**	0	25	**86**	**151**	113	0	**264**	0	0	0	0	575
Total Volume	0	510	531	1041	222	0	96	318	526	424	0	950	0	0	0	0	2309
% App. Total	0	49	51		69.8	0	30.2		55.4	44.6	0		0	0	0		
PHF	.000	.828	.795	.811	.910	.000	.774	.924	.871	.883	.000	.900	.000	.000	.000	.000	.927

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City of Redlands
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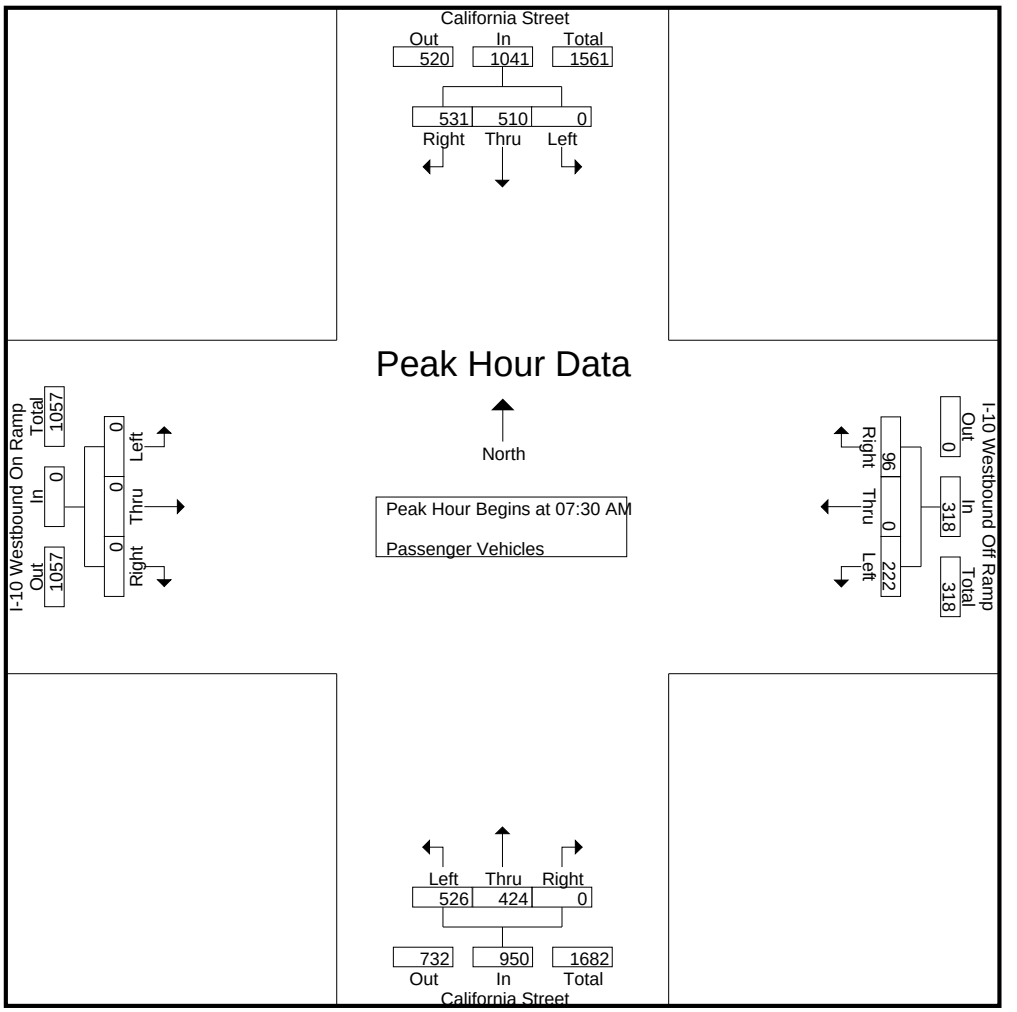

Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	0	121	136	257	54	0	19	73	124	94	0	218	0	0	0	0
+15 mins.	0	127	111	238	53	0	**31**	84	121	**120**	0	241	0	0	0	0
+30 mins.	0	**154**	**167**	**321**	54	0	21	75	130	97	0	227	0	0	0	0
+45 mins.	0	108	117	225	**61**	0	25	**86**	**151**	113	0	**264**	0	0	0	0
Total Volume	0	510	531	1041	222	0	96	318	526	424	0	950	0	0	0	0
% App. Total	0	49	51		69.8	0	30.2		55.4	44.6	0		0	0	0	
PHF	.000	.828	.795	.811	.910	.000	.774	.924	.871	.883	.000	.900	.000	.000	.000	.000

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City of Redlands
N/S: California Street
E/W: I-10 Westbound Ramps
Weather: Clear

File Name : 01_RED_Cali_10W AM
Site Code : 06718128
Start Date : 2/21/2018
Page No : 1

Groups Printed- Large 2 Axle Vehicles

	California Street Southbound				I-10 Westbound Off Ramp Westbound				California Street Northbound				I-10 Westbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	1	1	1	0	0	1	0	1	0	1	0	0	0	0	3
07:15 AM	0	0	0	0	0	0	3	3	5	2	0	7	0	0	0	0	10
07:30 AM	0	0	0	0	0	1	5	6	7	2	0	9	0	0	0	0	15
07:45 AM	0	0	3	3	1	0	4	5	2	1	0	3	0	0	0	0	11
Total	0	0	4	4	2	1	12	15	14	6	0	20	0	0	0	0	39
08:00 AM	0	0	5	5	0	0	1	1	2	2	0	4	0	0	0	0	10
08:15 AM	0	1	1	2	0	0	1	1	1	0	0	1	0	0	0	0	4
08:30 AM	0	1	4	5	0	0	0	0	0	0	0	0	0	0	0	0	5
08:45 AM	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1
Total	0	2	10	12	0	0	3	3	3	2	0	5	0	0	0	0	20
Grand Total	0	2	14	16	2	1	15	18	17	8	0	25	0	0	0	0	59
Apprch %	0	12.5	87.5		11.1	5.6	83.3		68	32	0		0	0	0		
Total %	0	3.4	23.7	27.1	3.4	1.7	25.4	30.5	28.8	13.6	0	42.4	0	0	0	0	

	California Street Southbound				I-10 Westbound Off Ramp Westbound				California Street Northbound				I-10 Westbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	0	0	0	0	**1**	**5**	**6**	**7**	**2**	0	**9**	0	0	0	0	**15**
07:45 AM	0	0	3	3	**1**	0	4	5	2	1	0	3	0	0	0	0	11
08:00 AM	0	0	**5**	**5**	0	0	1	1	2	2	0	4	0	0	0	0	10
08:15 AM	0	**1**	1	2	0	0	1	1	1	0	0	1	0	0	0	0	4
Total Volume	0	1	9	10	1	1	11	13	12	5	0	17	0	0	0	0	40
% App. Total	0	10	90		7.7	7.7	84.6		70.6	29.4	0		0	0	0		
PHF	.000	.250	.450	.500	.250	.250	.550	.542	.429	.625	.000	.472	.000	.000	.000	.000	.667

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Site Code : 06718128
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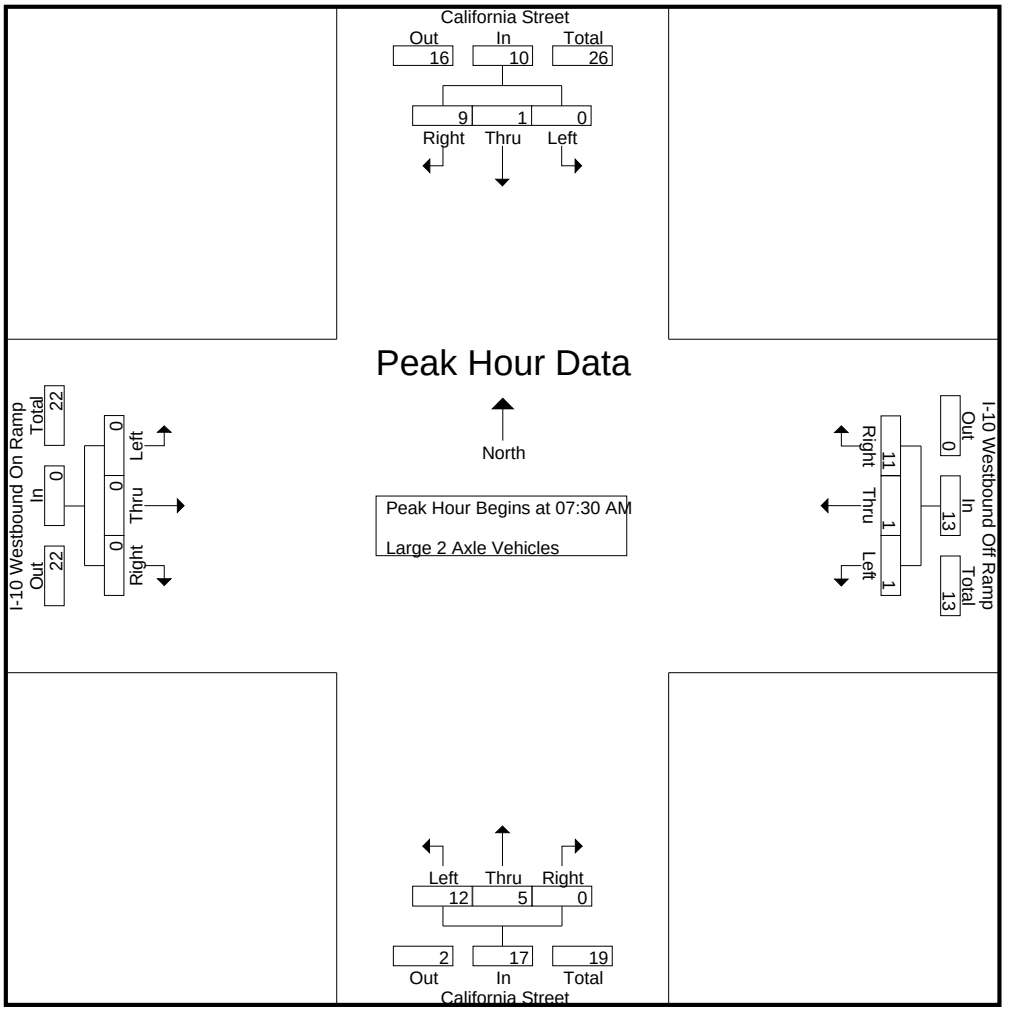

Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	0	0	0	0	0	**1**	**5**	**6**	**7**	**2**	0	**9**	0	0	0	0
+15 mins.	0	0	3	3	**1**	0	4	5	2	1	0	3	0	0	0	0
+30 mins.	0	0	**5**	**5**	0	0	1	1	2	2	0	4	0	0	0	0
+45 mins.	0	**1**	1	2	0	0	1	1	1	0	0	1	0	0	0	0
Total Volume	0	1	9	10	1	1	11	13	12	5	0	17	0	0	0	0
% App. Total	0	10	90		7.7	7.7	84.6		70.6	29.4	0		0	0	0	
PHF	.000	.250	.450	.500	.250	.250	.550	.542	.429	.625	.000	.472	.000	.000	.000	.000

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City of Redlands
N/S: California Street
E/W: I-10 Westbound Ramps
Weather: Clear

File Name : 01_RED_Cali_10W AM
Site Code : 06718128
Start Date : 2/21/2018
Page No : 1

Groups Printed- 3 Axle Vehicles

	California Street Southbound				I-10 Westbound Off Ramp Westbound				California Street Northbound				I-10 Westbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	1	3	4	0	0	0	0	0	5	0	5	0	0	0	0	9
07:15 AM	0	1	1	2	0	0	0	0	1	0	0	1	0	0	0	0	3
07:30 AM	0	0	0	0	0	0	0	0	1	3	0	4	0	0	0	0	4
07:45 AM	0	0	0	0	0	0	0	0	0	3	0	3	0	0	0	0	3
Total	0	2	4	6	0	0	0	0	2	11	0	13	0	0	0	0	19
08:00 AM	0	1	1	2	0	0	0	0	0	2	0	2	0	0	0	0	4
08:15 AM	0	2	1	3	0	0	1	1	0	1	0	1	0	0	0	0	5
08:30 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
08:45 AM	0	0	1	1	0	0	1	1	0	3	0	3	0	0	0	0	5
Total	0	3	3	6	0	0	2	2	0	7	0	7	0	0	0	0	15
Grand Total	0	5	7	12	0	0	2	2	2	18	0	20	0	0	0	0	34
Apprch %	0	41.7	58.3		0	0	100		10	90	0		0	0	0		
Total %	0	14.7	20.6	35.3	0	0	5.9	5.9	5.9	52.9	0	58.8	0	0	0	0	

	California Street Southbound				I-10 Westbound Off Ramp Westbound				California Street Northbound				I-10 Westbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	0	0	0	0	0	0	0	**1**	**3**	0	**4**	0	0	0	0	4
07:45 AM	0	0	0	0	0	0	0	0	0	3	0	3	0	0	0	0	3
08:00 AM	0	1	**1**	2	0	0	0	0	0	2	0	2	0	0	0	0	4
08:15 AM	0	**2**	1	**3**	0	0	**1**	**1**	0	1	0	1	0	0	0	0	**5**
Total Volume	0	3	2	5	0	0	1	1	1	9	0	10	0	0	0	0	16
% App. Total	0	60	40		0	0	100		10	90	0		0	0	0		
PHF	.000	.375	.500	.417	.000	.000	.250	.250	.250	.750	.000	.625	.000	.000	.000	.000	.800

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E/W: I-10 Westbound Ramps
Weather: Clear

File Name : 01_RED_Cali_10W AM
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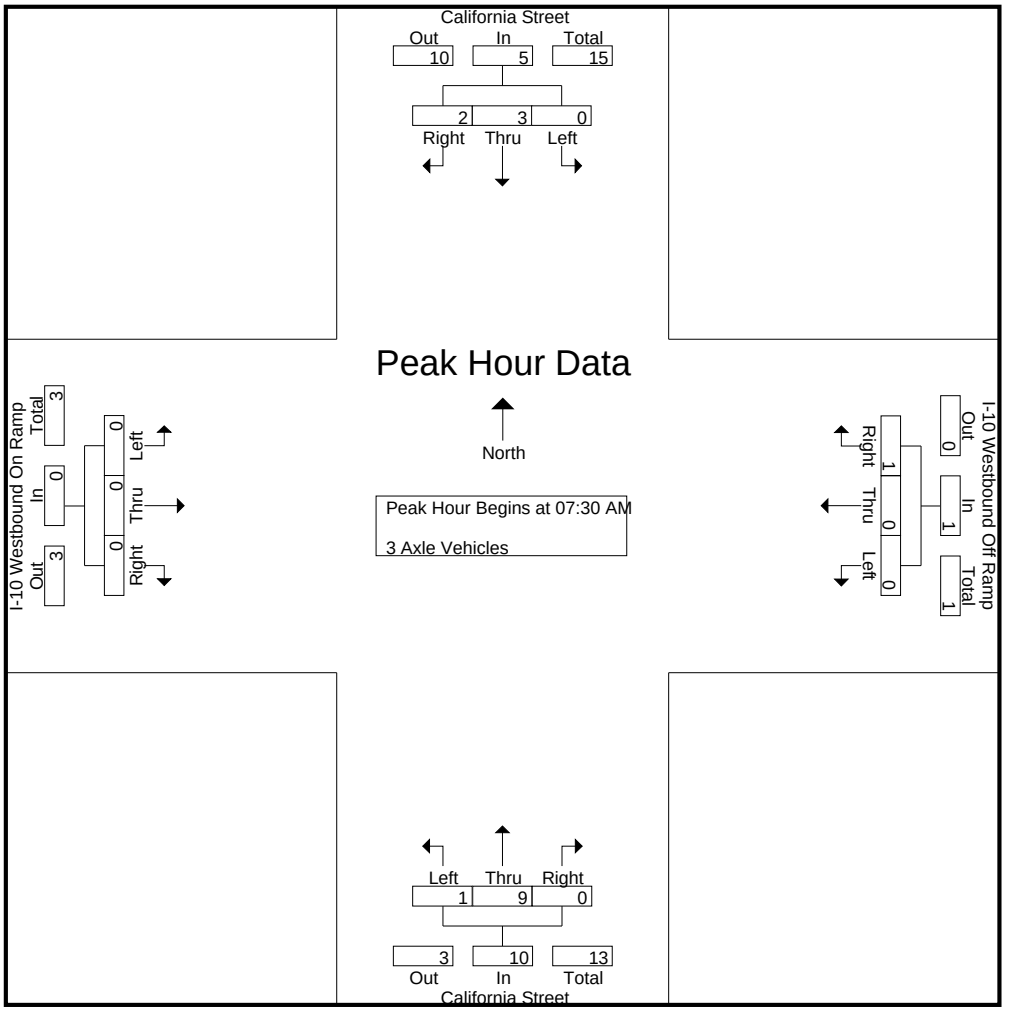

Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	0	0	0	0	0	0	0	0	**1**	**3**	0	**4**	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	3	0	3	0	0	0	0
+30 mins.	0	1	**1**	2	0	0	0	0	0	2	0	2	0	0	0	0
+45 mins.	0	**2**	1	**3**	0	0	**1**	**1**	0	1	0	1	0	0	0	0
Total Volume	0	3	2	5	0	0	1	1	1	9	0	10	0	0	0	0
% App. Total	0	60	40		0	0	100		10	90	0		0	0	0	
PHF	.000	.375	.500	.417	.000	.000	.250	.250	.250	.750	.000	.625	.000	.000	.000	.000

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Weather: Clear

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Groups Printed- 4+ Axle Trucks

	California Street Southbound				I-10 Westbound Off Ramp Westbound				California Street Northbound				I-10 Westbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	2	12	14	0	0	1	1	9	10	0	19	0	0	0	0	34
07:15 AM	0	4	11	15	0	0	3	3	0	7	0	7	0	0	0	0	25
07:30 AM	0	2	8	10	0	0	1	1	3	10	0	13	0	0	0	0	24
07:45 AM	0	0	16	16	0	0	1	1	2	5	0	7	0	0	0	0	24
Total	0	8	47	55	0	0	6	6	14	32	0	46	0	0	0	0	107
08:00 AM	0	1	11	12	0	0	1	1	3	11	0	14	0	0	0	0	27
08:15 AM	0	3	9	12	0	0	1	1	2	3	0	5	0	0	0	0	18
08:30 AM	0	1	8	9	0	0	1	1	2	5	0	7	0	0	0	0	17
08:45 AM	0	2	1	3	0	0	0	0	0	9	0	9	0	0	0	0	12
Total	0	7	29	36	0	0	3	3	7	28	0	35	0	0	0	0	74
Grand Total	0	15	76	91	0	0	9	9	21	60	0	81	0	0	0	0	181
Apprch %	0	16.5	83.5		0	0	100		25.9	74.1	0		0	0	0		
Total %	0	8.3	42	50.3	0	0	5	5	11.6	33.1	0	44.8	0	0	0	0	

	California Street Southbound				I-10 Westbound Off Ramp Westbound				California Street Northbound				I-10 Westbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	2	8	10	0	0	**1**	**1**	**3**	10	0	13	0	0	0	0	24
07:45 AM	0	0	**16**	**16**	0	0	1	1	2	5	0	7	0	0	0	0	24
08:00 AM	0	1	11	12	0	0	1	1	3	**11**	0	**14**	0	0	0	0	**27**
08:15 AM	0	**3**	9	12	0	0	1	1	2	3	0	5	0	0	0	0	18
Total Volume	0	6	44	50	0	0	4	4	10	29	0	39	0	0	0	0	93
% App. Total	0	12	88		0	0	100		25.6	74.4	0		0	0	0		
PHF	.000	.500	.688	.781	.000	.000	1.00	1.00	.833	.659	.000	.696	.000	.000	.000	.000	.861

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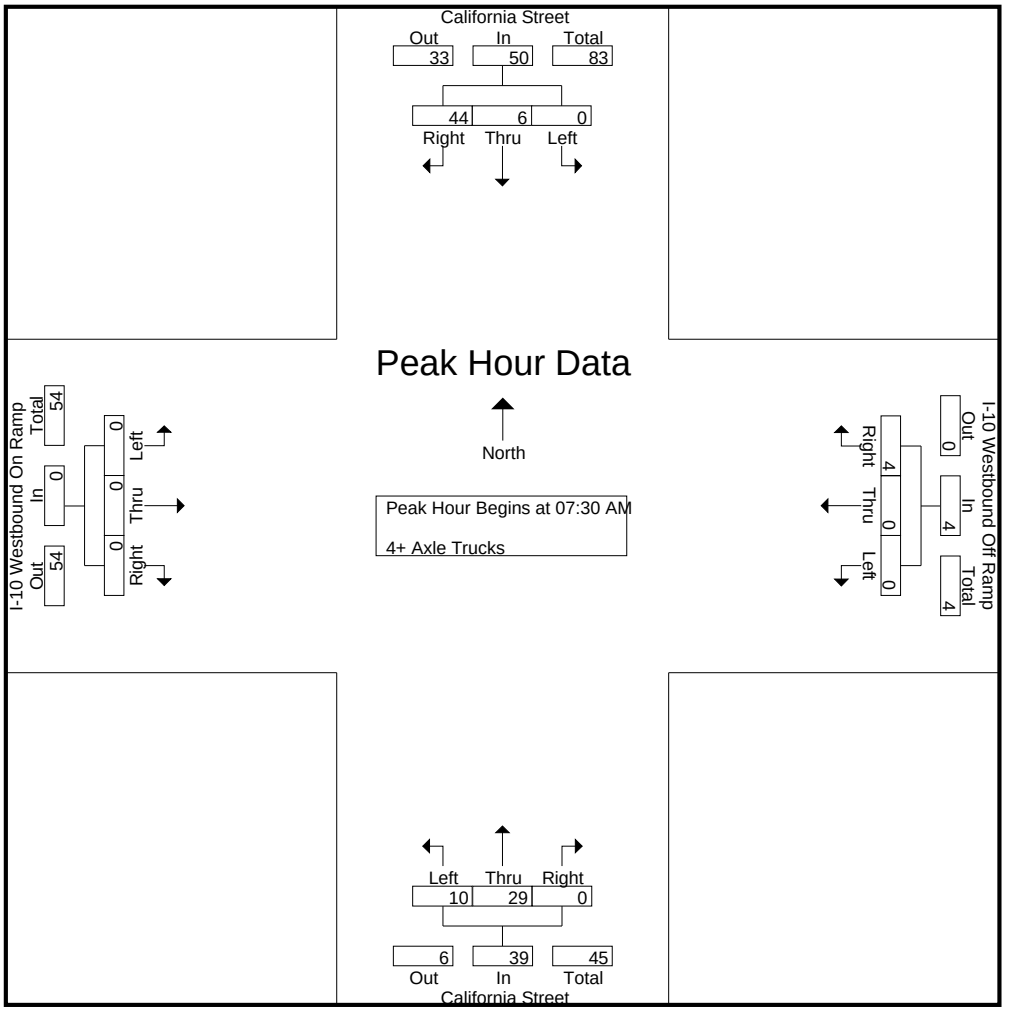

Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	0	2	8	10	0	0	**1**	**1**	**3**	10	0	13	0	0	0	0
+15 mins.	0	0	**16**	**16**	0	0	1	1	2	5	0	7	0	0	0	0
+30 mins.	0	1	11	12	0	0	1	1	3	**11**	0	**14**	0	0	0	0
+45 mins.	0	**3**	9	12	0	0	1	1	2	3	0	5	0	0	0	0
Total Volume	0	6	44	50	0	0	4	4	10	29	0	39	0	0	0	0
% App. Total	0	12	88		0	0	100		25.6	74.4	0		0	0	0	
PHF	.000	.500	.688	.781	.000	.000	1.000	1.000	.833	.659	.000	.696	.000	.000	.000	.000

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N/S: California Street
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Weather: Clear

File Name : 01_RED_Cali_10W PM
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Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	California Street Southbound				I-10 Westbound Off Ramp Westbound				California Street Northbound				I-10 Westbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	47	43	90	90	0	50	140	89	139	0	228	0	0	0	0	458
04:15 PM	0	39	57	96	97	5	84	186	71	125	0	196	0	0	0	0	478
04:30 PM	0	39	53	92	91	7	68	166	94	133	0	227	0	0	0	0	485
04:45 PM	0	33	62	95	100	4	99	203	101	154	0	255	0	0	0	0	553
Total	0	158	215	373	378	16	301	695	355	551	0	906	0	0	0	0	1974
05:00 PM	0	50	61	111	87	2	92	181	111	127	0	238	0	0	0	0	530
05:15 PM	0	32	50	82	82	2	88	172	89	147	0	236	0	0	0	0	490
05:30 PM	0	45	70	115	66	0	85	151	102	118	0	220	0	0	0	0	486
05:45 PM	0	56	51	107	68	1	68	137	100	145	0	245	0	0	0	0	489
Total	0	183	232	415	303	5	333	641	402	537	0	939	0	0	0	0	1995
Grand Total	0	341	447	788	681	21	634	1336	757	1088	0	1845	0	0	0	0	3969
Apprch %	0	43.3	56.7		51	1.6	47.5		41	59	0		0	0	0		
Total %	0	8.6	11.3	19.9	17.2	0.5	16	33.7	19.1	27.4	0	46.5	0	0	0	0	
Passenger Vehicles	0	315	326	641	669	19	615	1303	692	921	0	1613	0	0	0	0	3557
% Passenger Vehicles	0	92.4	72.9	81.3	98.2	90.5	97	97.5	91.4	84.7	0	87.4	0	0	0	0	89.6
Large 2 Axle Vehicles	0	9	17	26	7	2	9	18	25	29	0	54	0	0	0	0	98
% Large 2 Axle Vehicles	0	2.6	3.8	3.3	1	9.5	1.4	1.3	3.3	2.7	0	2.9	0	0	0	0	2.5
3 Axle Vehicles	0	5	12	17	0	0	1	1	7	12	0	19	0	0	0	0	37
% 3 Axle Vehicles	0	1.5	2.7	2.2	0	0	0.2	0.1	0.9	1.1	0	1	0	0	0	0	0.9
4+ Axle Trucks	0	12	92	104	5	0	9	14	33	126	0	159	0	0	0	0	277
% 4+ Axle Trucks	0	3.5	20.6	13.2	0.7	0	1.4	1	4.4	11.6	0	8.6	0	0	0	0	7

	California Street Southbound				I-10 Westbound Off Ramp Westbound				California Street Northbound				I-10 Westbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	33	62	95	**100**	**4**	**99**	**203**	101	**154**	0	**255**	0	0	0	0	**553**
05:00 PM	0	**50**	61	111	87	2	92	181	**111**	127	0	238	0	0	0	0	530
05:15 PM	0	32	50	82	82	2	88	172	89	147	0	236	0	0	0	0	490
05:30 PM	0	45	**70**	**115**	66	0	85	151	102	118	0	220	0	0	0	0	486
Total Volume	0	160	243	403	335	8	364	707	403	546	0	949	0	0	0	0	2059
% App. Total	0	39.7	60.3		47.4	1.1	51.5		42.5	57.5	0		0	0	0		
PHF	.000	.800	.868	.876	.838	.500	.919	.871	.908	.886	.000	.930	.000	.000	.000	.000	.931

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Site Code : 06718128
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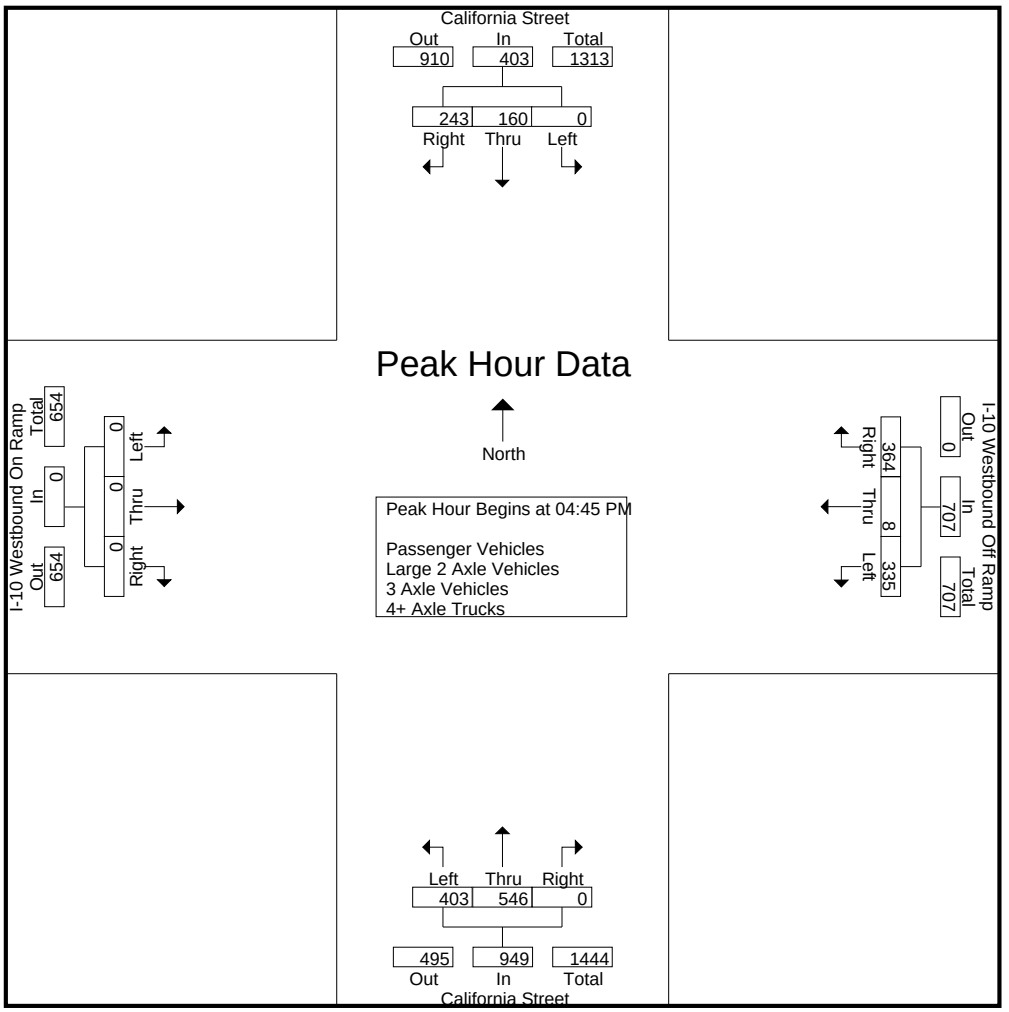

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	05:00 PM				04:15 PM				04:30 PM				04:00 PM			
+0 mins.	0	50	61	111	97	5	84	186	94	133	0	227	0	0	0	0
+15 mins.	0	32	50	82	91	**7**	68	166	101	**154**	0	**255**	0	0	0	0
+30 mins.	0	45	**70**	**115**	**100**	4	**99**	**203**	**111**	127	0	238	0	0	0	0
+45 mins.	0	**56**	51	107	87	2	92	181	89	147	0	236	0	0	0	0
Total Volume	0	183	232	415	375	18	343	736	395	561	0	956	0	0	0	0
% App. Total	0	44.1	55.9		51	2.4	46.6		41.3	58.7	0		0	0	0	
PHF	.000	.817	.829	.902	.938	.643	.866	.906	.890	.911	.000	.937	.000	.000	.000	.000

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Groups Printed- Passenger Vehicles

	California Street Southbound				I-10 Westbound Off Ramp Westbound				California Street Northbound				I-10 Westbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	43	32	75	88	0	47	135	85	112	0	197	0	0	0	0	407
04:15 PM	0	37	42	79	95	5	82	182	66	107	0	173	0	0	0	0	434
04:30 PM	0	34	39	73	91	7	66	164	88	117	0	205	0	0	0	0	442
04:45 PM	0	30	43	73	100	4	99	203	95	137	0	232	0	0	0	0	508
Total	0	144	156	300	374	16	294	684	334	473	0	807	0	0	0	0	1791
05:00 PM	0	46	44	90	82	2	86	170	102	105	0	207	0	0	0	0	467
05:15 PM	0	29	38	67	82	1	86	169	80	121	0	201	0	0	0	0	437
05:30 PM	0	42	50	92	65	0	84	149	88	99	0	187	0	0	0	0	428
05:45 PM	0	54	38	92	66	0	65	131	88	123	0	211	0	0	0	0	434
Total	0	171	170	341	295	3	321	619	358	448	0	806	0	0	0	0	1766
Grand Total	0	315	326	641	669	19	615	1303	692	921	0	1613	0	0	0	0	3557
Apprch %	0	49.1	50.9		51.3	1.5	47.2		42.9	57.1	0		0	0	0		
Total %	0	8.9	9.2	18	18.8	0.5	17.3	36.6	19.5	25.9	0	45.3	0	0	0	0	

	California Street Southbound				I-10 Westbound Off Ramp Westbound				California Street Northbound				I-10 Westbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	30	43	73	**100**	**4**	**99**	**203**	95	**137**	0	**232**	0	0	0	0	**508**
05:00 PM	0	**46**	44	90	82	2	86	170	**102**	105	0	207	0	0	0	0	467
05:15 PM	0	29	38	67	82	1	86	169	80	121	0	201	0	0	0	0	437
05:30 PM	0	42	**50**	**92**	65	0	84	149	88	99	0	187	0	0	0	0	428
Total Volume	0	147	175	322	329	7	355	691	365	462	0	827	0	0	0	0	1840
% App. Total	0	45.7	54.3		47.6	1	51.4		44.1	55.9	0		0	0	0		
PHF	.000	.799	.875	.875	.823	.438	.896	.851	.895	.843	.000	.891	.000	.000	.000	.000	.906

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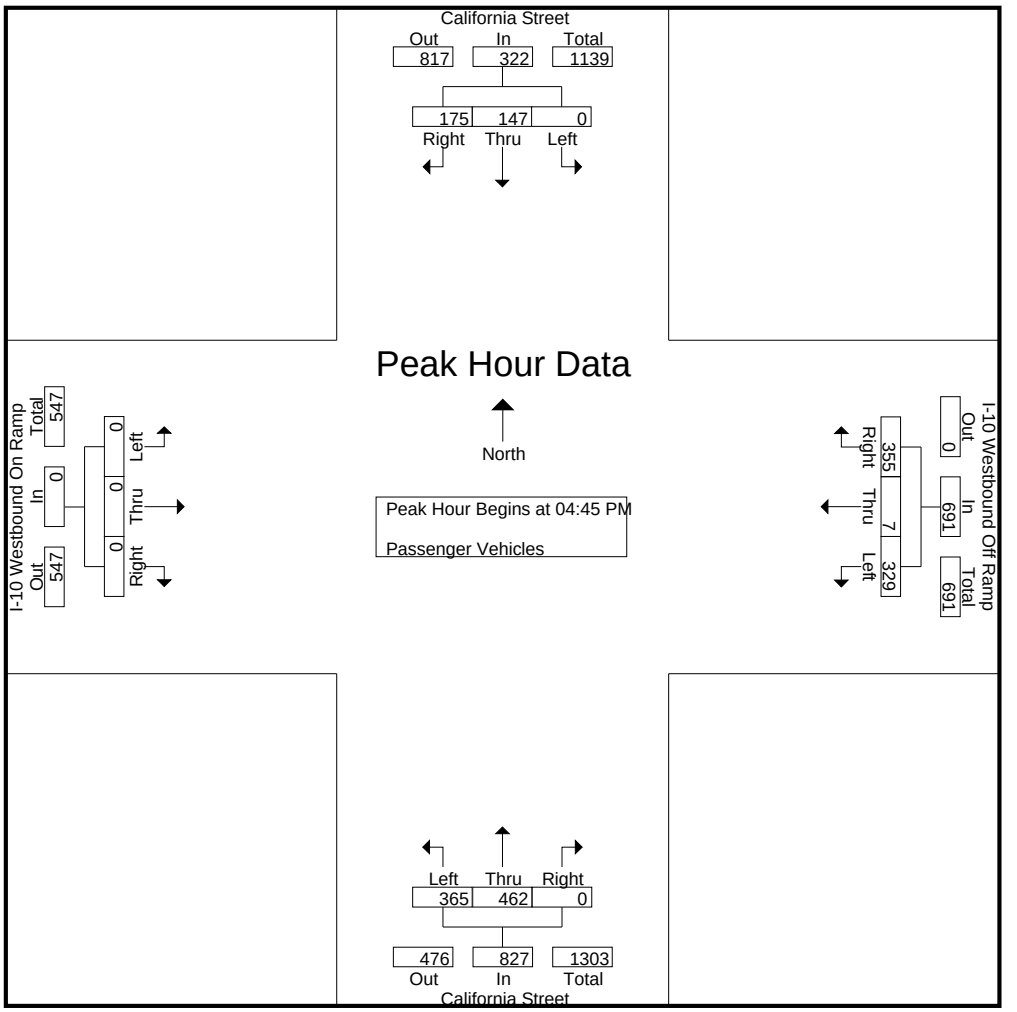

Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	0	30	43	73	**100**	**4**	**99**	**203**	95	**137**	0	**232**	0	0	0	0
+15 mins.	0	**46**	44	90	82	2	86	170	**102**	105	0	207	0	0	0	0
+30 mins.	0	29	38	67	82	1	86	169	80	121	0	201	0	0	0	0
+45 mins.	0	42	**50**	**92**	65	0	84	149	88	99	0	187	0	0	0	0
Total Volume	0	147	175	322	329	7	355	691	365	462	0	827	0	0	0	0
% App. Total	0	45.7	54.3		47.6	1	51.4		44.1	55.9	0		0	0	0	
PHF	.000	.799	.875	.875	.823	.438	.896	.851	.895	.843	.000	.891	.000	.000	.000	.000

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City of Redlands
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Groups Printed- Large 2 Axle Vehicles

	California Street Southbound				I-10 Westbound Off Ramp Westbound				California Street Northbound				I-10 Westbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	3	0	3	2	0	0	2	3	6	0	9	0	0	0	0	14
04:15 PM	0	1	1	2	1	0	0	1	1	3	0	4	0	0	0	0	7
04:30 PM	0	2	2	4	0	0	2	2	3	3	0	6	0	0	0	0	12
04:45 PM	0	1	3	4	0	0	0	0	3	2	0	5	0	0	0	0	9
Total	0	7	6	13	3	0	2	5	10	14	0	24	0	0	0	0	42
05:00 PM	0	1	3	4	2	0	2	4	5	3	0	8	0	0	0	0	16
05:15 PM	0	0	2	2	0	1	2	3	2	5	0	7	0	0	0	0	12
05:30 PM	0	0	5	5	1	0	1	2	2	3	0	5	0	0	0	0	12
05:45 PM	0	1	1	2	1	1	2	4	6	4	0	10	0	0	0	0	16
Total	0	2	11	13	4	2	7	13	15	15	0	30	0	0	0	0	56
Grand Total	0	9	17	26	7	2	9	18	25	29	0	54	0	0	0	0	98
Apprch %	0	34.6	65.4		38.9	11.1	50		46.3	53.7	0		0	0	0		
Total %	0	9.2	17.3	26.5	7.1	2	9.2	18.4	25.5	29.6	0	55.1	0	0	0	0	

	California Street Southbound				I-10 Westbound Off Ramp Westbound				California Street Northbound				I-10 Westbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	**1**	3	4	0	0	0	0	3	2	0	5	0	0	0	0	9
05:00 PM	0	1	3	4	**2**	0	**2**	**4**	**5**	3	0	**8**	0	0	0	0	**16**
05:15 PM	0	0	2	2	0	**1**	2	3	2	**5**	0	7	0	0	0	0	12
05:30 PM	0	0	**5**	**5**	1	0	1	2	2	3	0	5	0	0	0	0	12
Total Volume	0	2	13	15	3	1	5	9	12	13	0	25	0	0	0	0	49
% App. Total	0	13.3	86.7		33.3	11.1	55.6		48	52	0		0	0	0		
PHF	.000	.500	.650	.750	.375	.250	.625	.563	.600	.650	.000	.781	.000	.000	.000	.000	.766

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City of Redlands
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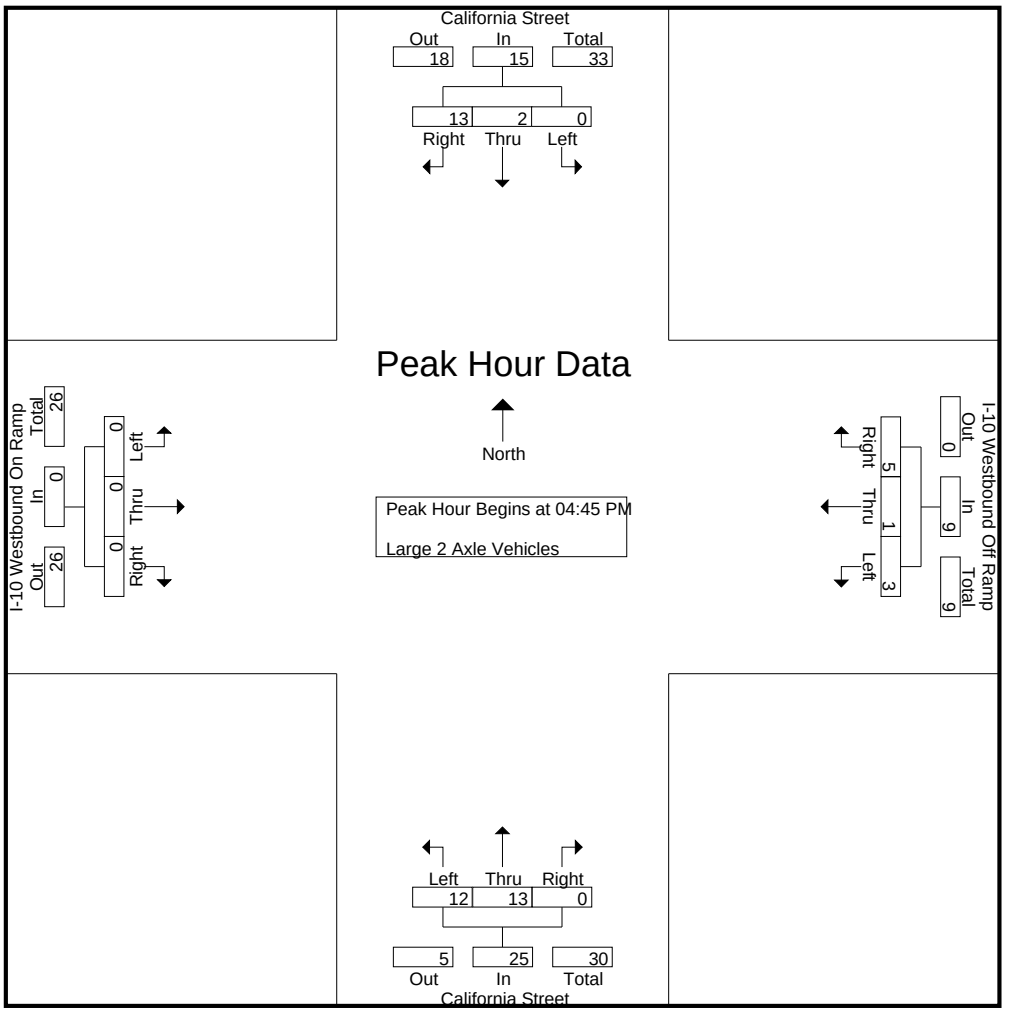

Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	0	**1**	3	4	0	0	0	0	3	2	0	5	0	0	0	0
+15 mins.	0	1	3	4	**2**	0	**2**	**4**	**5**	3	0	**8**	0	0	0	0
+30 mins.	0	0	2	2	0	**1**	2	3	2	**5**	0	7	0	0	0	0
+45 mins.	0	0	**5**	**5**	1	0	1	2	2	3	0	5	0	0	0	0
Total Volume	0	2	13	15	3	1	5	9	12	13	0	25	0	0	0	0
% App. Total	0	13.3	86.7		33.3	11.1	55.6		48	52	0		0	0	0	
PHF	.000	.500	.650	.750	.375	.250	.625	.563	.600	.650	.000	.781	.000	.000	.000	.000

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City of Redlands
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E/W: I-10 Westbound Ramps
Weather: Clear

File Name : 01_RED_Cali_10W PM
Site Code : 06718128
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Groups Printed- 3 Axle Vehicles

	California Street Southbound				I-10 Westbound Off Ramp Westbound				California Street Northbound				I-10 Westbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	2
04:15 PM	0	0	1	1	0	0	1	1	0	1	0	1	0	0	0	0	3
04:30 PM	0	0	2	2	0	0	0	0	0	1	0	1	0	0	0	0	3
04:45 PM	0	1	0	1	0	0	0	0	1	1	0	2	0	0	0	0	3
Total	0	1	3	4	0	0	1	1	1	5	0	6	0	0	0	0	11
05:00 PM	0	1	4	5	0	0	0	0	0	0	0	0	0	0	0	0	5
05:15 PM	0	1	1	2	0	0	0	0	2	3	0	5	0	0	0	0	7
05:30 PM	0	1	2	3	0	0	0	0	4	2	0	6	0	0	0	0	9
05:45 PM	0	1	2	3	0	0	0	0	0	2	0	2	0	0	0	0	5
Total	0	4	9	13	0	0	0	0	6	7	0	13	0	0	0	0	26
Grand Total	0	5	12	17	0	0	1	1	7	12	0	19	0	0	0	0	37
Apprch %	0	29.4	70.6		0	0	100		36.8	63.2	0		0	0	0		
Total %	0	13.5	32.4	45.9	0	0	2.7	2.7	18.9	32.4	0	51.4	0	0	0	0	

	California Street Southbound				I-10 Westbound Off Ramp Westbound				California Street Northbound				I-10 Westbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	**1**	0	1	0	0	0	0	1	1	0	2	0	0	0	0	3
05:00 PM	0	1	**4**	**5**	0	0	0	0	0	0	0	0	0	0	0	0	5
05:15 PM	0	1	1	2	0	0	0	0	2	**3**	0	5	0	0	0	0	7
05:30 PM	0	1	2	3	0	0	0	0	**4**	2	0	**6**	0	0	0	0	**9**
Total Volume	0	4	7	11	0	0	0	0	7	6	0	13	0	0	0	0	24
% App. Total	0	36.4	63.6		0	0	0		53.8	46.2	0		0	0	0		
PHF	.000	1.00	.438	.550	.000	.000	.000	.000	.438	.500	.000	.542	.000	.000	.000	.000	.667

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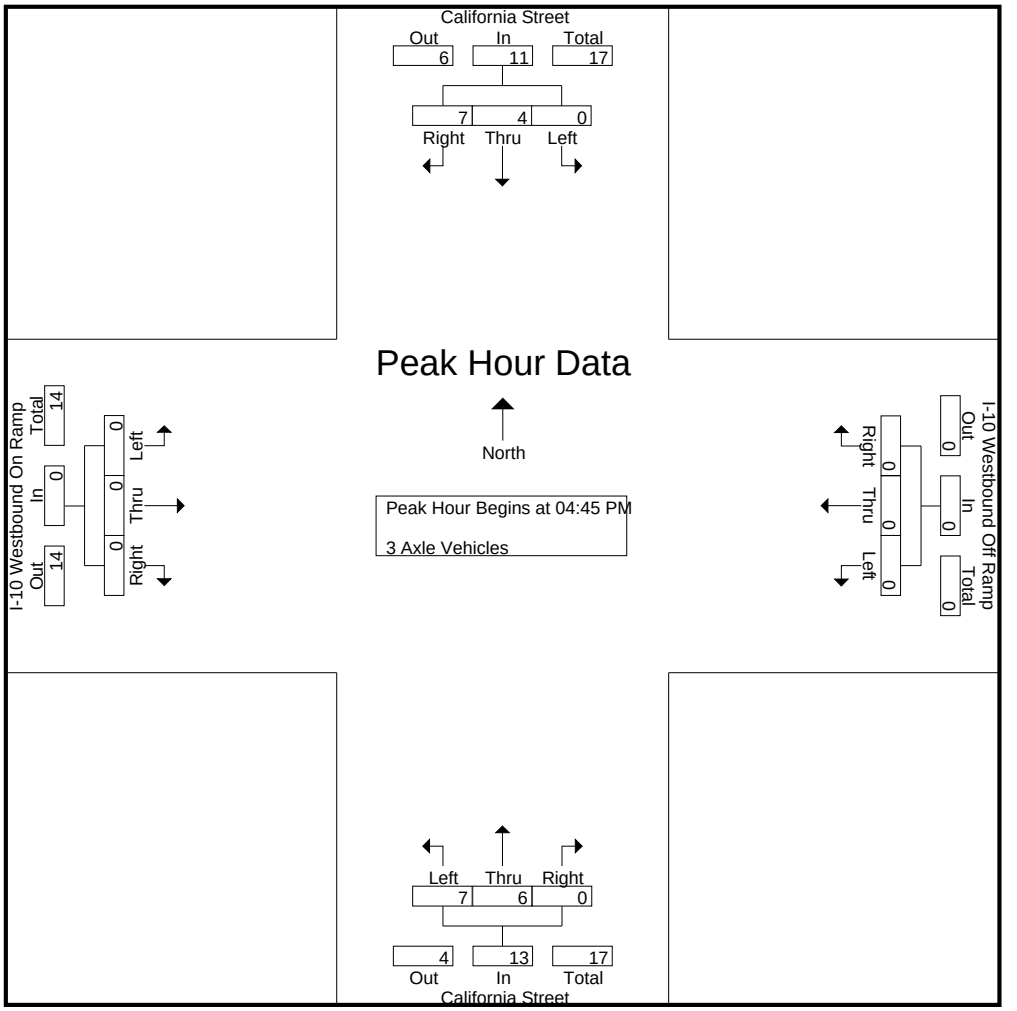

Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	0	**1**	0	1	0	0	0	0	1	1	0	2	0	0	0	0
+15 mins.	0	1	**4**	**5**	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	1	1	2	0	0	0	0	2	**3**	0	5	0	0	0	0
+45 mins.	0	1	2	3	0	0	0	0	**4**	2	0	**6**	0	0	0	0
Total Volume	0	4	7	11	0	0	0	0	7	6	0	13	0	0	0	0
% App. Total	0	36.4	63.6		0	0	0		53.8	46.2	0		0	0	0	
PHF	.000	1.000	.438	.550	.000	.000	.000	.000	.438	.500	.000	.542	.000	.000	.000	.000

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Groups Printed- 4+ Axle Trucks

	California Street Southbound				I-10 Westbound Off Ramp Westbound				California Street Northbound				I-10 Westbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	1	11	12	0	0	3	3	1	19	0	20	0	0	0	0	35
04:15 PM	0	1	13	14	1	0	1	2	4	14	0	18	0	0	0	0	34
04:30 PM	0	3	10	13	0	0	0	0	3	12	0	15	0	0	0	0	28
04:45 PM	0	1	16	17	0	0	0	0	2	14	0	16	0	0	0	0	33
Total	0	6	50	56	1	0	4	5	10	59	0	69	0	0	0	0	130
05:00 PM	0	2	10	12	3	0	4	7	4	19	0	23	0	0	0	0	42
05:15 PM	0	2	9	11	0	0	0	0	5	18	0	23	0	0	0	0	34
05:30 PM	0	2	13	15	0	0	0	0	8	14	0	22	0	0	0	0	37
05:45 PM	0	0	10	10	1	0	1	2	6	16	0	22	0	0	0	0	34
Total	0	6	42	48	4	0	5	9	23	67	0	90	0	0	0	0	147
Grand Total	0	12	92	104	5	0	9	14	33	126	0	159	0	0	0	0	277
Apprch %	0	11.5	88.5		35.7	0	64.3		20.8	79.2	0		0	0	0		
Total %	0	4.3	33.2	37.5	1.8	0	3.2	5.1	11.9	45.5	0	57.4	0	0	0	0	

	California Street Southbound				I-10 Westbound Off Ramp Westbound				California Street Northbound				I-10 Westbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	1	**16**	**17**	0	0	0	0	2	14	0	16	0	0	0	0	33
05:00 PM	0	**2**	10	12	**3**	0	**4**	**7**	4	**19**	0	**23**	0	0	0	0	**42**
05:15 PM	0	2	9	11	0	0	0	0	5	18	0	23	0	0	0	0	34
05:30 PM	0	2	13	15	0	0	0	0	**8**	14	0	22	0	0	0	0	37
Total Volume	0	7	48	55	3	0	4	7	19	65	0	84	0	0	0	0	146
% App. Total	0	12.7	87.3		42.9	0	57.1		22.6	77.4	0		0	0	0		
PHF	.000	.875	.750	.809	.250	.000	.250	.250	.594	.855	.000	.913	.000	.000	.000	.000	.869

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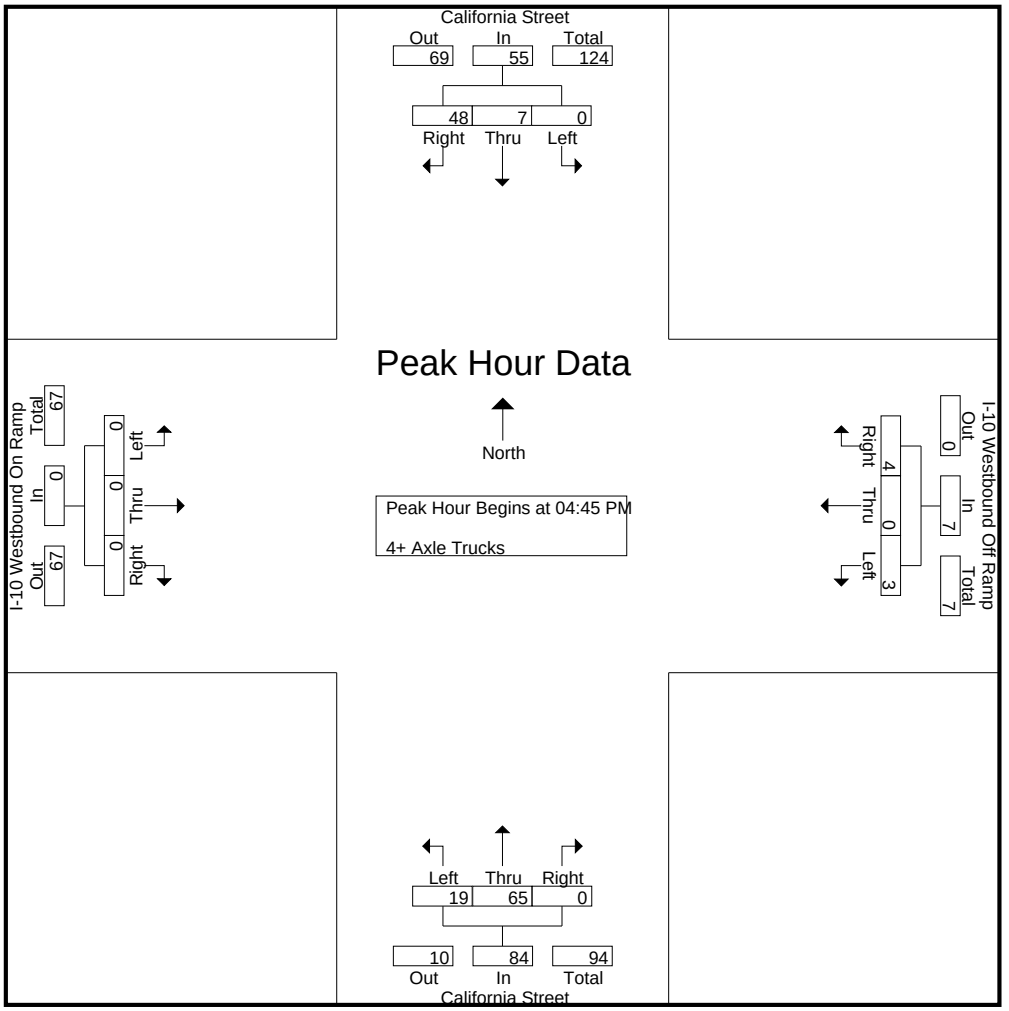

Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	0	1	**16**	**17**	0	0	0	0	2	14	0	16	0	0	0	0
+15 mins.	0	**2**	10	12	**3**	0	**4**	**7**	4	**19**	0	**23**	0	0	0	0
+30 mins.	0	2	9	11	0	0	0	0	5	18	0	23	0	0	0	0
+45 mins.	0	2	13	15	0	0	0	0	**8**	14	0	22	0	0	0	0
Total Volume	0	7	48	55	3	0	4	7	19	65	0	84	0	0	0	0
% App. Total	0	12.7	87.3		42.9	0	57.1		22.6	77.4	0		0	0	0	
PHF	.000	.875	.750	.809	.250	.000	.250	.250	.594	.855	.000	.913	.000	.000	.000	.000

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File Name : 02_RED_Cali_10E AM
Site Code : 06718128
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Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	California Street Southbound				I-10 Eastbound On Ramp Westbound				California Street Northbound				I-10 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	19	116	0	135	0	0	0	0	0	131	71	202	106	0	92	198	535
07:15 AM	20	118	0	138	0	0	0	0	0	103	51	154	96	0	96	192	484
07:30 AM	21	114	0	135	0	0	0	0	0	143	55	198	94	1	111	206	539
07:45 AM	10	130	0	140	0	0	0	0	0	167	80	247	103	0	111	214	601
Total	70	478	0	548	0	0	0	0	0	544	257	801	399	1	410	810	2159
08:00 AM	18	121	0	139	0	0	0	0	0	148	58	206	97	0	124	221	566
08:15 AM	12	105	0	117	0	0	0	0	0	148	73	221	102	2	90	194	532
08:30 AM	14	100	0	114	0	0	0	0	0	134	53	187	85	3	89	177	478
08:45 AM	29	94	0	123	0	0	0	0	0	146	51	197	102	0	113	215	535
Total	73	420	0	493	0	0	0	0	0	576	235	811	386	5	416	807	2111
Grand Total	143	898	0	1041	0	0	0	0	0	1120	492	1612	785	6	826	1617	4270
Apprch %	13.7	86.3	0		0	0	0		0	69.5	30.5		48.5	0.4	51.1		
Total %	3.3	21	0	24.4	0	0	0	0	0	26.2	11.5	37.8	18.4	0.1	19.3	37.9	
Passenger Vehicles	128	870	0	998	0	0	0	0	0	1031	457	1488	622	5	782	1409	3895
% Passenger Vehicles	89.5	96.9	0	95.9	0	0	0	0	0	92.1	92.9	92.3	79.2	83.3	94.7	87.1	91.2
Large 2 Axle Vehicles	6	15	0	21	0	0	0	0	0	44	18	62	28	1	16	45	128
% Large 2 Axle Vehicles	4.2	1.7	0	2	0	0	0	0	0	3.9	3.7	3.8	3.6	16.7	1.9	2.8	3
3 Axle Vehicles	1	4	0	5	0	0	0	0	0	8	1	9	14	0	3	17	31
% 3 Axle Vehicles	0.7	0.4	0	0.5	0	0	0	0	0	0.7	0.2	0.6	1.8	0	0.4	1.1	0.7
4+ Axle Trucks	8	9	0	17	0	0	0	0	0	37	16	53	121	0	25	146	216
% 4+ Axle Trucks	5.6	1	0	1.6	0	0	0	0	0	3.3	3.3	3.3	15.4	0	3	9	5.1

	California Street Southbound				I-10 Eastbound On Ramp Westbound				California Street Northbound				I-10 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	**21**	114	0	135	0	0	0	0	0	143	55	198	94	1	111	206	539
07:45 AM	10	**130**	0	**140**	0	0	0	0	0	**167**	**80**	**247**	**103**	0	111	214	**601**
08:00 AM	18	121	0	139	0	0	0	0	0	148	58	206	97	0	**124**	**221**	566
08:15 AM	12	105	0	117	0	0	0	0	0	148	73	221	102	**2**	90	194	532
Total Volume	61	470	0	531	0	0	0	0	0	606	266	872	396	3	436	835	2238
% App. Total	11.5	88.5	0		0	0	0		0	69.5	30.5		47.4	0.4	52.2		
PHF	.726	.904	.000	.948	.000	.000	.000	.000	.000	.907	.831	.883	.961	.375	.879	.945	.931

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Site Code : 06718128
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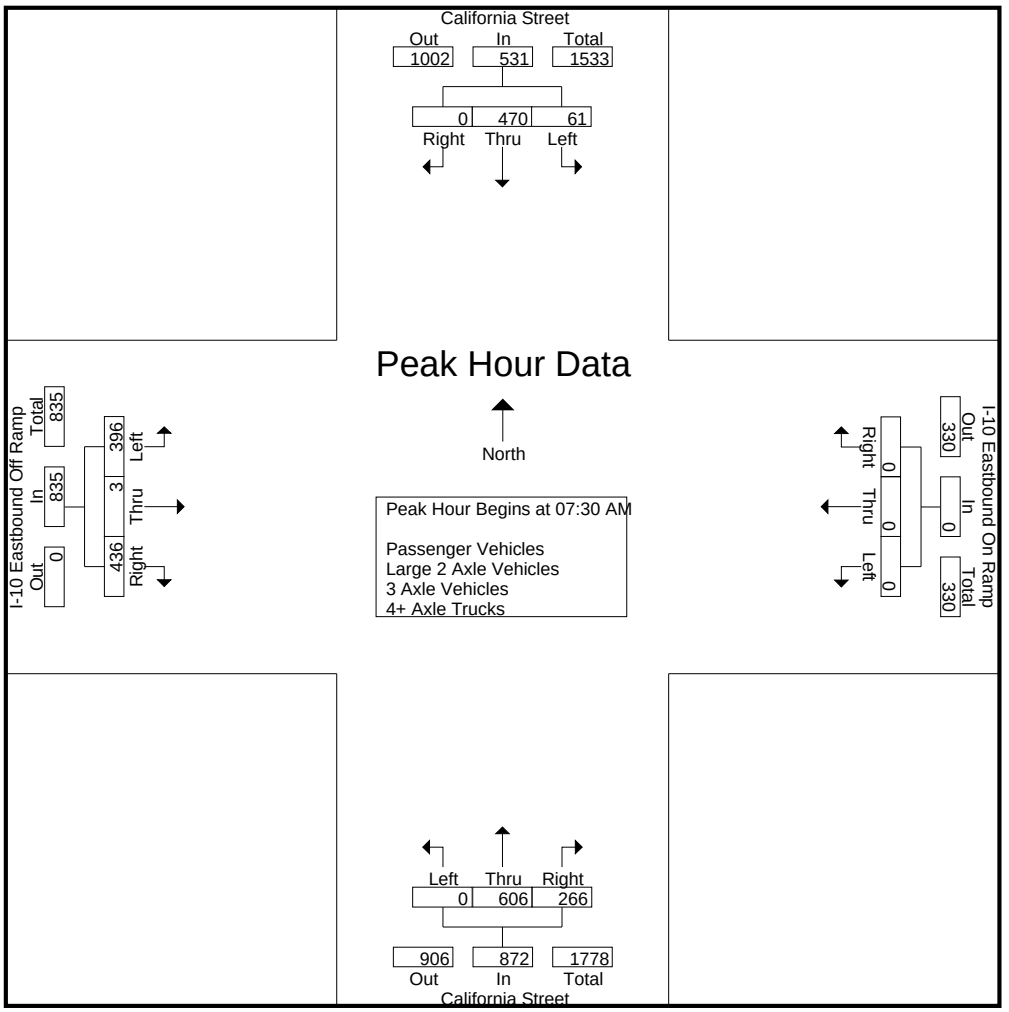

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:00 AM				07:30 AM				07:30 AM			
+0 mins.	20	118	0	138	0	0	0	0	0	143	55	198	94	1	111	206
+15 mins.	**21**	114	0	135	0	0	0	0	0	**167**	**80**	**247**	**103**	0	111	214
+30 mins.	10	**130**	0	**140**	0	0	0	0	0	148	58	206	97	0	**124**	**221**
+45 mins.	18	121	0	139	0	0	0	0	0	148	73	221	102	**2**	90	194
Total Volume	69	483	0	552	0	0	0	0	0	606	266	872	396	3	436	835
% App. Total	12.5	87.5	0		0	0	0		0	69.5	30.5		47.4	0.4	52.2	
PHF	.821	.929	.000	.986	.000	.000	.000	.000	.000	.907	.831	.883	.961	.375	.879	.945

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File Name : 02_RED_Cali_10E AM
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Groups Printed- Passenger Vehicles

	California Street Southbound				I-10 Eastbound On Ramp Westbound				California Street Northbound				I-10 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	17	110	0	127	0	0	0	0	0	123	67	190	80	0	88	168	485
07:15 AM	19	115	0	134	0	0	0	0	0	96	47	143	79	0	92	171	448
07:30 AM	16	112	0	128	0	0	0	0	0	134	50	184	79	1	102	182	494
07:45 AM	8	130	0	138	0	0	0	0	0	158	77	235	82	0	107	189	562
Total	60	467	0	527	0	0	0	0	0	511	241	752	320	1	389	710	1989
08:00 AM	18	114	0	132	0	0	0	0	0	139	54	193	77	0	119	196	521
08:15 AM	10	102	0	112	0	0	0	0	0	135	70	205	80	2	83	165	482
08:30 AM	14	97	0	111	0	0	0	0	0	113	48	161	66	2	83	151	423
08:45 AM	26	90	0	116	0	0	0	0	0	133	44	177	79	0	108	187	480
Total	68	403	0	471	0	0	0	0	0	520	216	736	302	4	393	699	1906
Grand Total	128	870	0	998	0	0	0	0	0	1031	457	1488	622	5	782	1409	3895
Apprch %	12.8	87.2	0		0	0	0		0	69.3	30.7		44.1	0.4	55.5		
Total %	3.3	22.3	0	25.6	0	0	0	0	0	26.5	11.7	38.2	16	0.1	20.1	36.2	

	California Street Southbound				I-10 Eastbound On Ramp Westbound				California Street Northbound				I-10 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	16	112	0	128	0	0	0	0	0	134	50	184	79	1	102	182	494
07:45 AM	8	**130**	0	**138**	0	0	0	0	0	**158**	**77**	**235**	**82**	0	107	189	**562**
08:00 AM	**18**	114	0	132	0	0	0	0	0	139	54	193	77	0	**119**	**196**	521
08:15 AM	10	102	0	112	0	0	0	0	0	135	70	205	80	**2**	83	165	482
Total Volume	52	458	0	510	0	0	0	0	0	566	251	817	318	3	411	732	2059
% App. Total	10.2	89.8	0		0	0	0		0	69.3	30.7		43.4	0.4	56.1		
PHF	.722	.881	.000	.924	.000	.000	.000	.000	.000	.896	.815	.869	.970	.375	.863	.934	.916

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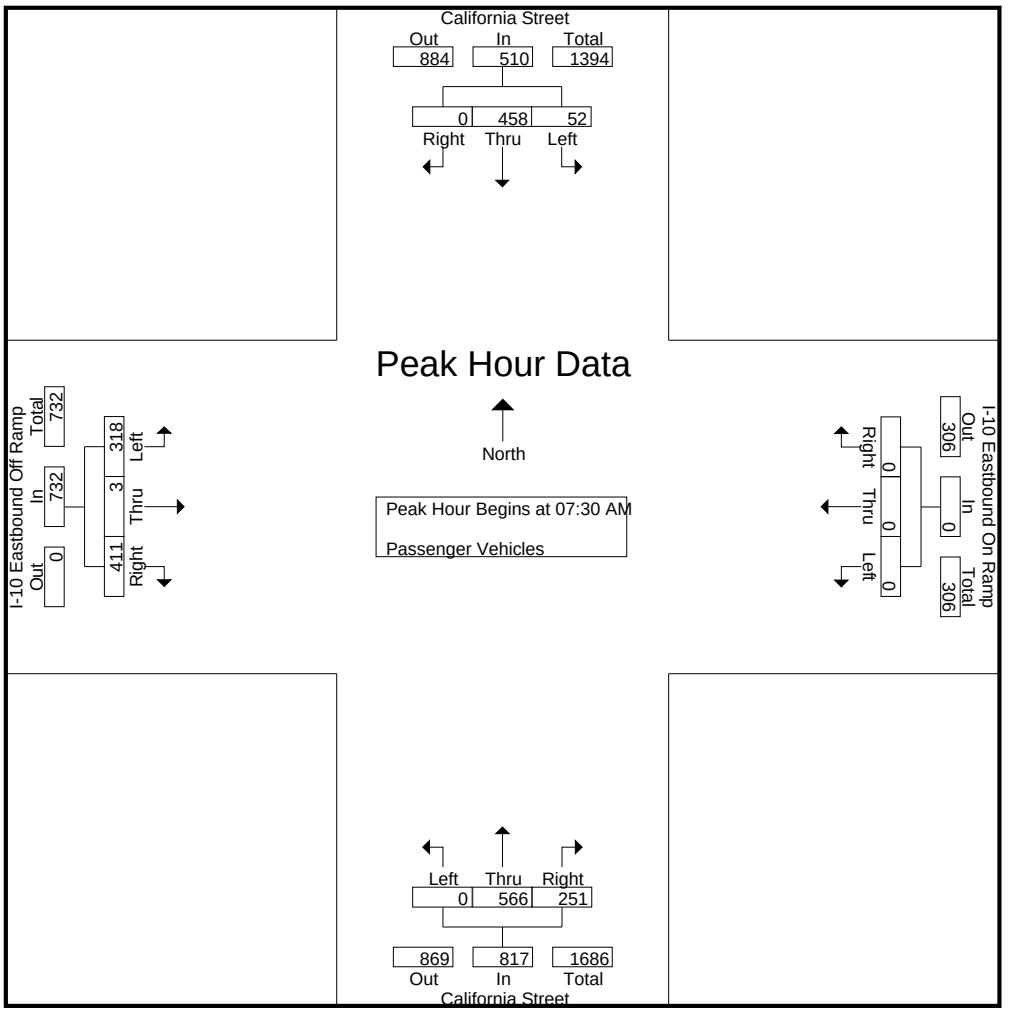

Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	16	112	0	128	0	0	0	0	0	134	50	184	79	1	102	182
+15 mins.	8	**130**	0	**138**	0	0	0	0	0	**158**	**77**	**235**	**82**	0	107	189
+30 mins.	**18**	114	0	132	0	0	0	0	0	139	54	193	77	0	**119**	**196**
+45 mins.	10	102	0	112	0	0	0	0	0	135	70	205	80	**2**	83	165
Total Volume	52	458	0	510	0	0	0	0	0	566	251	817	318	3	411	732
% App. Total	10.2	89.8	0		0	0	0		0	69.3	30.7		43.4	0.4	56.1	
PHF	.722	.881	.000	.924	.000	.000	.000	.000	.000	.896	.815	.869	.970	.375	.863	.934

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Groups Printed- Large 2 Axle Vehicles

	California Street Southbound				I-10 Eastbound On Ramp Westbound				California Street Northbound				I-10 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	1	6	0	7	0	0	0	0	0	5	3	8	6	0	2	8	23
07:15 AM	0	2	0	2	0	0	0	0	0	1	3	4	3	0	3	6	12
07:30 AM	3	1	0	4	0	0	0	0	0	5	1	6	3	0	2	5	15
07:45 AM	0	0	0	0	0	0	0	0	0	5	1	6	4	0	1	5	11
Total	4	9	0	13	0	0	0	0	0	16	8	24	16	0	8	24	61
08:00 AM	0	2	0	2	0	0	0	0	0	6	3	9	3	0	2	5	16
08:15 AM	0	1	0	1	0	0	0	0	0	5	0	5	3	0	0	3	9
08:30 AM	0	1	0	1	0	0	0	0	0	9	4	13	1	1	3	5	19
08:45 AM	2	2	0	4	0	0	0	0	0	8	3	11	5	0	3	8	23
Total	2	6	0	8	0	0	0	0	0	28	10	38	12	1	8	21	67
Grand Total	6	15	0	21	0	0	0	0	0	44	18	62	28	1	16	45	128
Apprch %	28.6	71.4	0		0	0	0		0	71	29		62.2	2.2	35.6		
Total %	4.7	11.7	0	16.4	0	0	0	0	0	34.4	14.1	48.4	21.9	0.8	12.5	35.2	

	California Street Southbound				I-10 Eastbound On Ramp Westbound				California Street Northbound				I-10 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	**3**	1	0	**4**	0	0	0	0	0	5	1	6	3	0	**2**	**5**	15
07:45 AM	0	0	0	0	0	0	0	0	0	5	1	6	**4**	0	1	5	11
08:00 AM	0	**2**	0	2	0	0	0	0	0	**6**	**3**	**9**	3	0	2	5	**16**
08:15 AM	0	1	0	1	0	0	0	0	0	5	0	5	3	0	0	3	9
Total Volume	3	4	0	7	0	0	0	0	0	21	5	26	13	0	5	18	51
% App. Total	42.9	57.1	0		0	0	0		0	80.8	19.2		72.2	0	27.8		
PHF	.250	.500	.000	.438	.000	.000	.000	.000	.000	.875	.417	.722	.813	.000	.625	.900	.797

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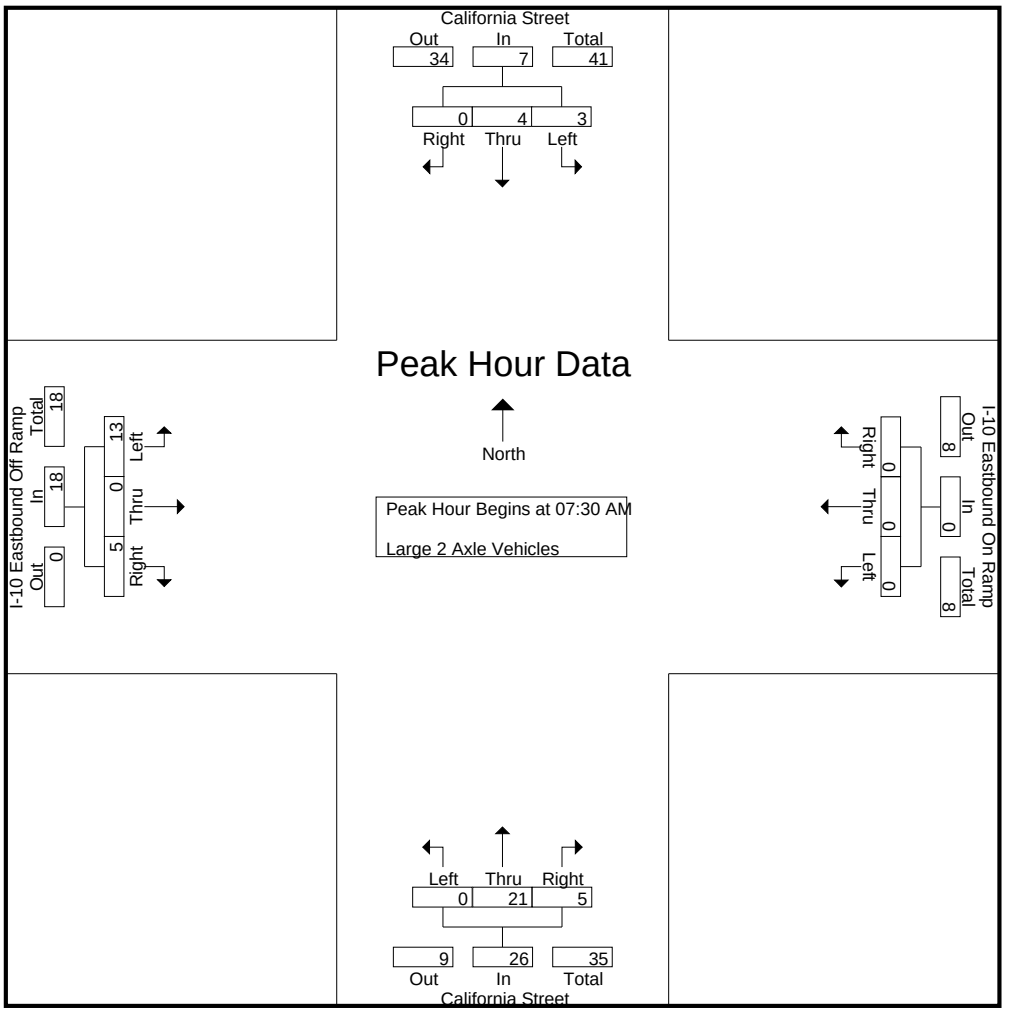

Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	**3**	1	0	**4**	0	0	0	0	0	5	1	6	3	0	**2**	**5**
+15 mins.	0	0	0	0	0	0	0	0	0	5	1	6	**4**	0	1	5
+30 mins.	0	**2**	0	2	0	0	0	0	0	**6**	**3**	**9**	3	0	2	5
+45 mins.	0	1	0	1	0	0	0	0	0	5	0	5	3	0	0	3
Total Volume	3	4	0	7	0	0	0	0	0	21	5	26	13	0	5	18
% App. Total	42.9	57.1	0		0	0	0		0	80.8	19.2		72.2	0	27.8	
PHF	.250	.500	.000	.438	.000	.000	.000	.000	.000	.875	.417	.722	.813	.000	.625	.900

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Groups Printed- 3 Axle Vehicles

	California Street Southbound				I-10 Eastbound On Ramp Westbound				California Street Northbound				I-10 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	1	0	1	2	0	1	3	4
07:15 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
07:30 AM	0	0	0	0	0	0	0	0	0	0	1	1	2	0	0	2	3
07:45 AM	1	0	0	1	0	0	0	0	0	1	0	1	1	0	0	1	3
Total	1	0	0	1	0	0	0	0	0	3	1	4	5	0	1	6	11
08:00 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
08:15 AM	0	1	0	1	0	0	0	0	0	2	0	2	2	0	1	3	6
08:30 AM	0	1	0	1	0	0	0	0	0	3	0	3	3	0	0	3	7
08:45 AM	0	1	0	1	0	0	0	0	0	0	0	0	4	0	1	5	6
Total	0	4	0	4	0	0	0	0	0	5	0	5	9	0	2	11	20
Grand Total	1	4	0	5	0	0	0	0	0	8	1	9	14	0	3	17	31
Apprch %	20	80	0		0	0	0		0	88.9	11.1		82.4	0	17.6		
Total %	3.2	12.9	0	16.1	0	0	0	0	0	25.8	3.2	29	45.2	0	9.7	54.8	

	California Street Southbound				I-10 Eastbound On Ramp Westbound				California Street Northbound				I-10 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	0	0	0	0	0	0	0	0	0	**1**	1	**2**	0	0	2	3
07:45 AM	**1**	0	0	**1**	0	0	0	0	0	1	0	1	1	0	0	1	3
08:00 AM	0	**1**	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
08:15 AM	0	1	0	1	0	0	0	0	0	**2**	0	**2**	2	0	**1**	**3**	**6**
Total Volume	1	2	0	3	0	0	0	0	0	3	1	4	5	0	1	6	13
% App. Total	33.3	66.7	0		0	0	0		0	75	25		83.3	0	16.7		
PHF	.250	.500	.000	.750	.000	.000	.000	.000	.000	.375	.250	.500	.625	.000	.250	.500	.542

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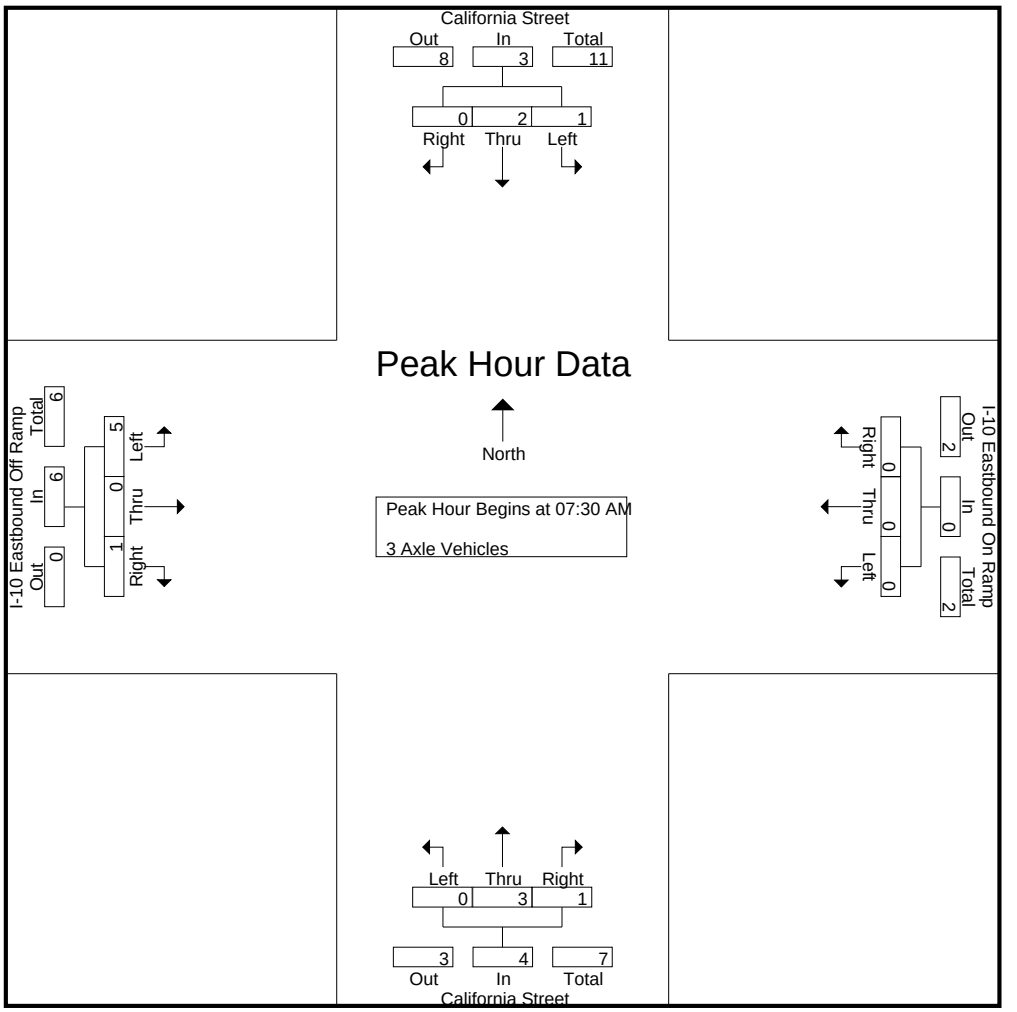

Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	**1**	1	**2**	0	0	2
+15 mins.	**1**	0	0	**1**	0	0	0	0	0	1	0	1	1	0	0	1
+30 mins.	0	**1**	0	1	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	1	0	1	0	0	0	0	0	**2**	0	**2**	2	0	**1**	**3**
Total Volume	1	2	0	3	0	0	0	0	0	3	1	4	5	0	1	6
% App. Total	33.3	66.7	0		0	0	0		0	75	25		83.3	0	16.7	
PHF	.250	.500	.000	.750	.000	.000	.000	.000	.000	.375	.250	.500	.625	.000	.250	.500

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Groups Printed- 4+ Axle Trucks

	California Street Southbound				I-10 Eastbound On Ramp Westbound				California Street Northbound				I-10 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	1	0	0	1	0	0	0	0	0	2	1	3	18	0	1	19	23
07:15 AM	1	1	0	2	0	0	0	0	0	5	1	6	14	0	1	15	23
07:30 AM	2	1	0	3	0	0	0	0	0	4	3	7	10	0	7	17	27
07:45 AM	1	0	0	1	0	0	0	0	0	3	2	5	16	0	3	19	25
Total	5	2	0	7	0	0	0	0	0	14	7	21	58	0	12	70	98
08:00 AM	0	4	0	4	0	0	0	0	0	3	1	4	17	0	3	20	28
08:15 AM	2	1	0	3	0	0	0	0	0	6	3	9	17	0	6	23	35
08:30 AM	0	1	0	1	0	0	0	0	0	9	1	10	15	0	3	18	29
08:45 AM	1	1	0	2	0	0	0	0	0	5	4	9	14	0	1	15	26
Total	3	7	0	10	0	0	0	0	0	23	9	32	63	0	13	76	118
Grand Total	8	9	0	17	0	0	0	0	0	37	16	53	121	0	25	146	216
Apprch %	47.1	52.9	0		0	0	0		0	69.8	30.2		82.9	0	17.1		
Total %	3.7	4.2	0	7.9	0	0	0	0	0	17.1	7.4	24.5	56	0	11.6	67.6	

	California Street Southbound				I-10 Eastbound On Ramp Westbound				California Street Northbound				I-10 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	**2**	1	0	3	0	0	0	0	0	4	**3**	7	10	0	**7**	17	27
07:45 AM	1	0	0	1	0	0	0	0	0	3	2	5	16	0	3	19	25
08:00 AM	0	**4**	0	**4**	0	0	0	0	0	3	1	4	**17**	0	3	20	28
08:15 AM	2	1	0	3	0	0	0	0	0	**6**	3	**9**	17	0	6	**23**	**35**
Total Volume	5	6	0	11	0	0	0	0	0	16	9	25	60	0	19	79	115
% App. Total	45.5	54.5	0		0	0	0		0	64	36		75.9	0	24.1		
PHF	.625	.375	.000	.688	.000	.000	.000	.000	.000	.667	.750	.694	.882	.000	.679	.859	.821

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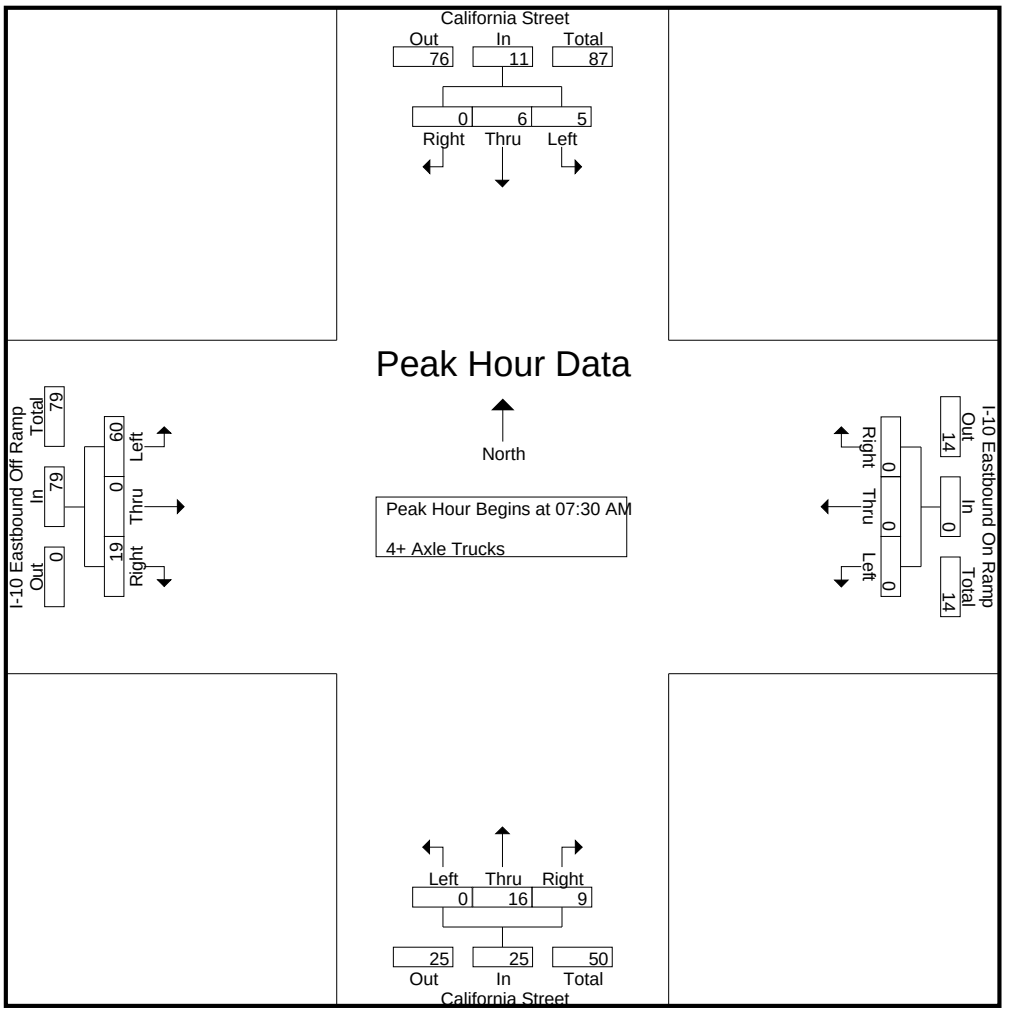

Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	**2**	1	0	3	0	0	0	0	0	4	**3**	7	10	0	**7**	17
+15 mins.	1	0	0	1	0	0	0	0	0	3	2	5	16	0	3	19
+30 mins.	0	**4**	0	**4**	0	0	0	0	0	3	1	4	**17**	0	3	20
+45 mins.	2	1	0	3	0	0	0	0	0	**6**	3	**9**	17	0	6	**23**
Total Volume	5	6	0	11	0	0	0	0	0	16	9	25	60	0	19	79
% App. Total	45.5	54.5	0		0	0	0		0	64	36		75.9	0	24.1	
PHF	.625	.375	.000	.688	.000	.000	.000	.000	.000	.667	.750	.694	.882	.000	.679	.859

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File Name : 02_RED_Cali_10E PM
Site Code : 06718128
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Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	California Street Southbound				I-10 Eastbound On Ramp Westbound				California Street Northbound				I-10 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	56	124	0	180	0	0	0	0	0	202	104	306	73	1	104	178	664
04:15 PM	58	127	0	185	0	0	0	0	0	192	111	303	70	1	88	159	647
04:30 PM	64	120	0	184	0	0	0	0	0	201	116	317	50	1	70	121	622
04:45 PM	62	129	0	191	0	0	0	0	0	183	90	273	70	0	89	159	623
Total	240	500	0	740	0	0	0	0	0	778	421	1199	263	3	351	617	2556
05:00 PM	73	136	0	209	0	0	0	0	0	188	117	305	55	0	95	150	664
05:15 PM	65	114	0	179	0	0	0	0	0	215	97	312	50	5	98	153	644
05:30 PM	52	120	0	172	0	0	0	0	0	149	92	241	58	2	101	161	574
05:45 PM	34	127	0	161	0	0	0	0	0	157	86	243	43	0	90	133	537
Total	224	497	0	721	0	0	0	0	0	709	392	1101	206	7	384	597	2419
Grand Total	464	997	0	1461	0	0	0	0	0	1487	813	2300	469	10	735	1214	4975
Apprch %	31.8	68.2	0		0	0	0		0	64.7	35.3		38.6	0.8	60.5		
Total %	9.3	20	0	29.4	0	0	0	0	0	29.9	16.3	46.2	9.4	0.2	14.8	24.4	
Passenger Vehicles	445	990	0	1435	0	0	0	0	0	1428	790	2218	392	9	715	1116	4769
% Passenger Vehicles	95.9	99.3	0	98.2	0	0	0	0	0	96	97.2	96.4	83.6	90	97.3	91.9	95.9
Large 2 Axle Vehicles	2	2	0	4	0	0	0	0	0	24	13	37	8	1	15	24	65
% Large 2 Axle Vehicles	0.4	0.2	0	0.3	0	0	0	0	0	1.6	1.6	1.6	1.7	10	2	2	1.3
3 Axle Vehicles	1	4	0	5	0	0	0	0	0	7	1	8	14	0	1	15	28
% 3 Axle Vehicles	0.2	0.4	0	0.3	0	0	0	0	0	0.5	0.1	0.3	3	0	0.1	1.2	0.6
4+ Axle Trucks	16	1	0	17	0	0	0	0	0	28	9	37	55	0	4	59	113
% 4+ Axle Trucks	3.4	0.1	0	1.2	0	0	0	0	0	1.9	1.1	1.6	11.7	0	0.5	4.9	2.3

	California Street Southbound				I-10 Eastbound On Ramp Westbound				California Street Northbound				I-10 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	56	124	0	180	0	0	0	0	0	**202**	104	306	**73**	**1**	**104**	**178**	**664**
04:15 PM	58	127	0	185	0	0	0	0	0	192	111	303	70	1	88	159	647
04:30 PM	**64**	120	0	184	0	0	0	0	0	201	**116**	**317**	50	1	70	121	622
04:45 PM	62	**129**	0	**191**	0	0	0	0	0	183	90	273	70	0	89	159	623
Total Volume	240	500	0	740	0	0	0	0	0	778	421	1199	263	3	351	617	2556
% App. Total	32.4	67.6	0		0	0	0		0	64.9	35.1		42.6	0.5	56.9		
PHF	.938	.969	.000	.969	.000	.000	.000	.000	.000	.963	.907	.946	.901	.750	.844	.867	.962

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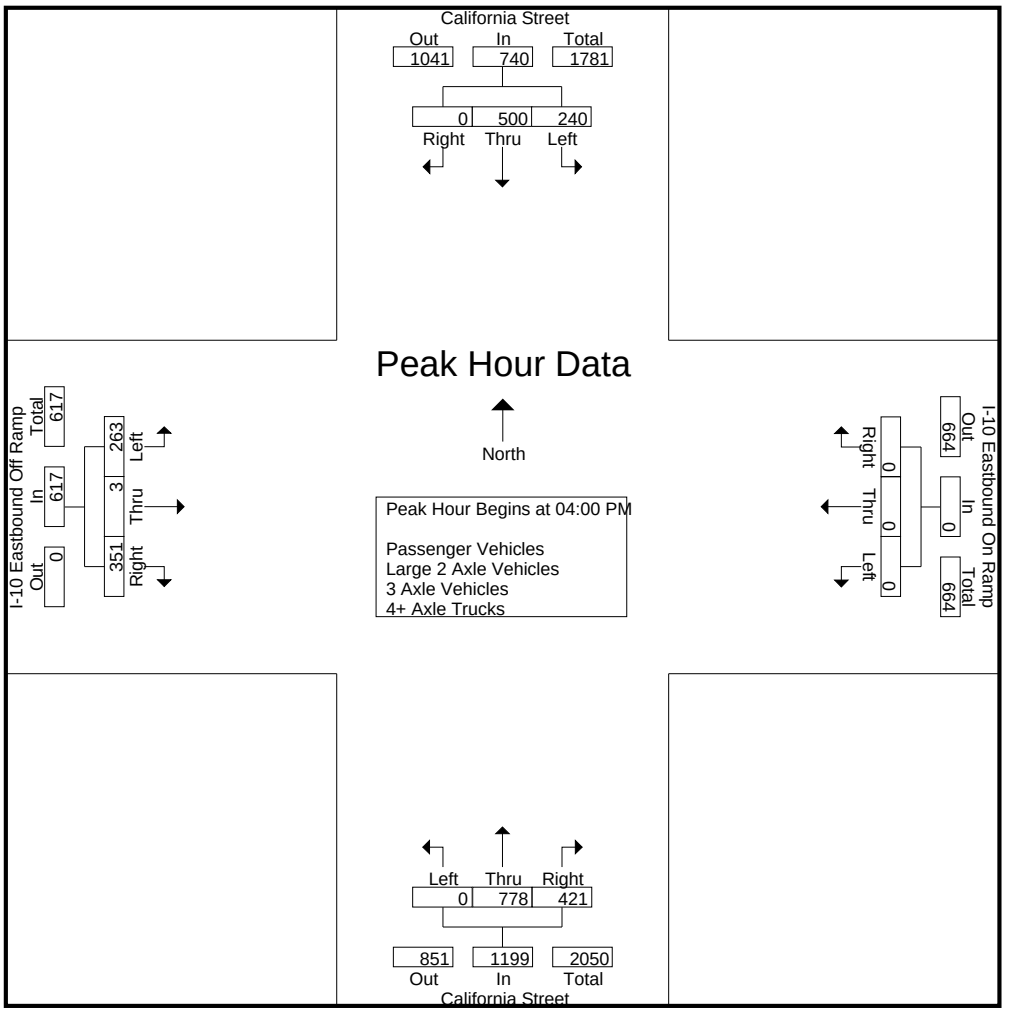

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:15 PM				04:00 PM				04:30 PM				04:45 PM			
+0 mins.	58	127	0	185	0	0	0	0	0	201	116	**317**	**70**	0	89	159
+15 mins.	64	120	0	184	0	0	0	0	0	183	90	273	55	0	95	150
+30 mins.	62	129	0	191	0	0	0	0	0	188	**117**	305	50	**5**	98	153
+45 mins.	**73**	**136**	0	**209**	0	0	0	0	0	**215**	97	312	58	2	**101**	**161**
Total Volume	257	512	0	769	0	0	0	0	0	787	420	1207	233	7	383	623
% App. Total	33.4	66.6	0		0	0	0		0	65.2	34.8		37.4	1.1	61.5	
PHF	.880	.941	.000	.920	.000	.000	.000	.000	.000	.915	.897	.952	.832	.350	.948	.967

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Groups Printed- Passenger Vehicles

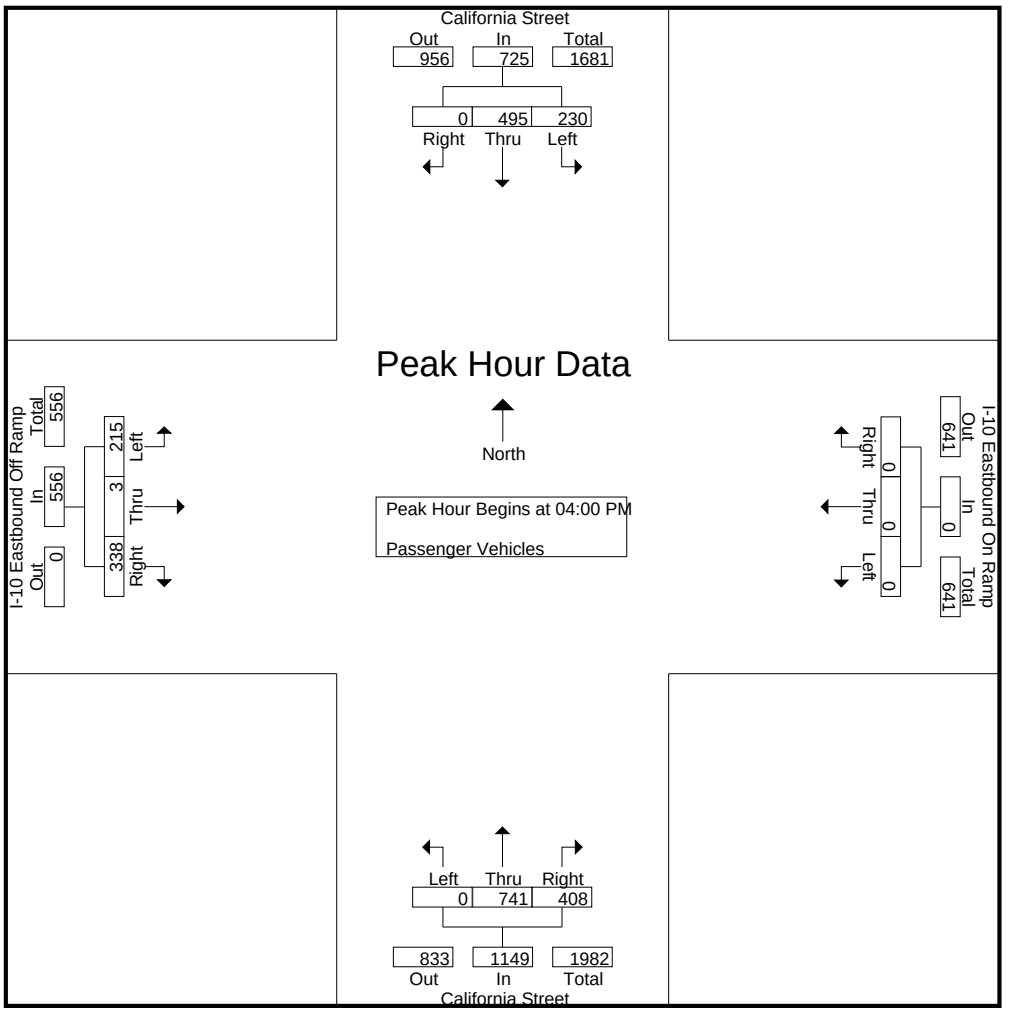
	California Street Southbound				I-10 Eastbound On Ramp Westbound				California Street Northbound				I-10 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	54	122	0	176	0	0	0	0	0	186	101	287	60	1	98	159	622
04:15 PM	53	125	0	178	0	0	0	0	0	187	104	291	60	1	86	147	616
04:30 PM	61	120	0	181	0	0	0	0	0	189	114	303	35	1	70	106	590
04:45 PM	62	128	0	190	0	0	0	0	0	179	89	268	60	0	84	144	602
Total	230	495	0	725	0	0	0	0	0	741	408	1149	215	3	338	556	2430
05:00 PM	72	135	0	207	0	0	0	0	0	177	111	288	44	0	94	138	633
05:15 PM	62	113	0	175	0	0	0	0	0	211	95	306	46	4	97	147	628
05:30 PM	49	120	0	169	0	0	0	0	0	144	90	234	54	2	98	154	557
05:45 PM	32	127	0	159	0	0	0	0	0	155	86	241	33	0	88	121	521
Total	215	495	0	710	0	0	0	0	0	687	382	1069	177	6	377	560	2339
Grand Total	445	990	0	1435	0	0	0	0	0	1428	790	2218	392	9	715	1116	4769
Apprch %	31	69	0		0	0	0		0	64.4	35.6		35.1	0.8	64.1		
Total %	9.3	20.8	0	30.1	0	0	0	0	0	29.9	16.6	46.5	8.2	0.2	15	23.4	

	California Street Southbound				I-10 Eastbound On Ramp Westbound				California Street Northbound				I-10 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	54	122	0	176	0	0	0	0	0	186	101	287	**60**	**1**	**98**	**159**	**622**
04:15 PM	53	125	0	178	0	0	0	0	0	187	104	291	60	1	86	147	616
04:30 PM	61	120	0	181	0	0	0	0	0	**189**	**114**	**303**	35	1	70	106	590
04:45 PM	**62**	**128**	0	**190**	0	0	0	0	0	179	89	268	60	0	84	144	602
Total Volume	230	495	0	725	0	0	0	0	0	741	408	1149	215	3	338	556	2430
% App. Total	31.7	68.3	0		0	0	0		0	64.5	35.5		38.7	0.5	60.8		
PHF	.927	.967	.000	.954	.000	.000	.000	.000	.000	.980	.895	.948	.896	.750	.862	.874	.977

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Redlands
N/S: California Street
E/W: I-10 Eastbound Ramps
Weather: Clear

File Name : 02_RED_Cali_10E PM
Site Code : 06718128
Start Date : 2/21/2018
Page No : 2



Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:00 PM				04:00 PM				04:00 PM				04:00 PM			
+0 mins.	54	122	0	176	0	0	0	0	0	186	101	287	**60**	**1**	**98**	**159**
+15 mins.	53	125	0	178	0	0	0	0	0	187	104	291	60	1	86	147
+30 mins.	61	120	0	181	0	0	0	0	0	**189**	**114**	**303**	35	1	70	106
+45 mins.	**62**	**128**	0	**190**	0	0	0	0	0	179	89	268	60	0	84	144
Total Volume	230	495	0	725	0	0	0	0	0	741	408	1149	215	3	338	556
% App. Total	31.7	68.3	0		0	0	0		0	64.5	35.5		38.7	0.5	60.8	
PHF	.927	.967	.000	.954	.000	.000	.000	.000	.000	.980	.895	.948	.896	.750	.862	.874

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City of Redlands
N/S: California Street
E/W: I-10 Eastbound Ramps
Weather: Clear

File Name : 02_RED_Cali_10E PM
Site Code : 06718128
Start Date : 2/21/2018
Page No : 1

Groups Printed- Large 2 Axle Vehicles

	California Street Southbound				I-10 Eastbound On Ramp Westbound				California Street Northbound				I-10 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	4	1	5	0	0	5	5	10
04:15 PM	0	1	0	1	0	0	0	0	0	4	4	8	3	0	2	5	14
04:30 PM	1	0	0	1	0	0	0	0	0	7	1	8	3	0	0	3	12
04:45 PM	0	1	0	1	0	0	0	0	0	2	1	3	2	0	3	5	9
Total	1	2	0	3	0	0	0	0	0	17	7	24	8	0	10	18	45
05:00 PM	0	0	0	0	0	0	0	0	0	4	3	7	0	0	0	0	7
05:15 PM	0	0	0	0	0	0	0	0	0	2	1	3	0	1	1	2	5
05:30 PM	1	0	0	1	0	0	0	0	0	1	2	3	0	0	3	3	7
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
Total	1	0	0	1	0	0	0	0	0	7	6	13	0	1	5	6	20
Grand Total	2	2	0	4	0	0	0	0	0	24	13	37	8	1	15	24	65
Apprch %	50	50	0		0	0	0		0	64.9	35.1		33.3	4.2	62.5		
Total %	3.1	3.1	0	6.2	0	0	0	0	0	36.9	20	56.9	12.3	1.5	23.1	36.9	

	California Street Southbound				I-10 Eastbound On Ramp Westbound				California Street Northbound				I-10 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	0	0	0	0	0	0	0	0	0	4	1	5	0	0	**5**	**5**	10
04:15 PM	0	**1**	0	**1**	0	0	0	0	0	4	**4**	**8**	**3**	0	2	5	**14**
04:30 PM	**1**	0	0	1	0	0	0	0	0	**7**	1	8	3	0	0	3	12
04:45 PM	0	1	0	1	0	0	0	0	0	2	1	3	2	0	3	5	9
Total Volume	1	2	0	3	0	0	0	0	0	17	7	24	8	0	10	18	45
% App. Total	33.3	66.7	0		0	0	0		0	70.8	29.2		44.4	0	55.6		
PHF	.250	.500	.000	.750	.000	.000	.000	.000	.000	.607	.438	.750	.667	.000	.500	.900	.804

Counts Unlimited
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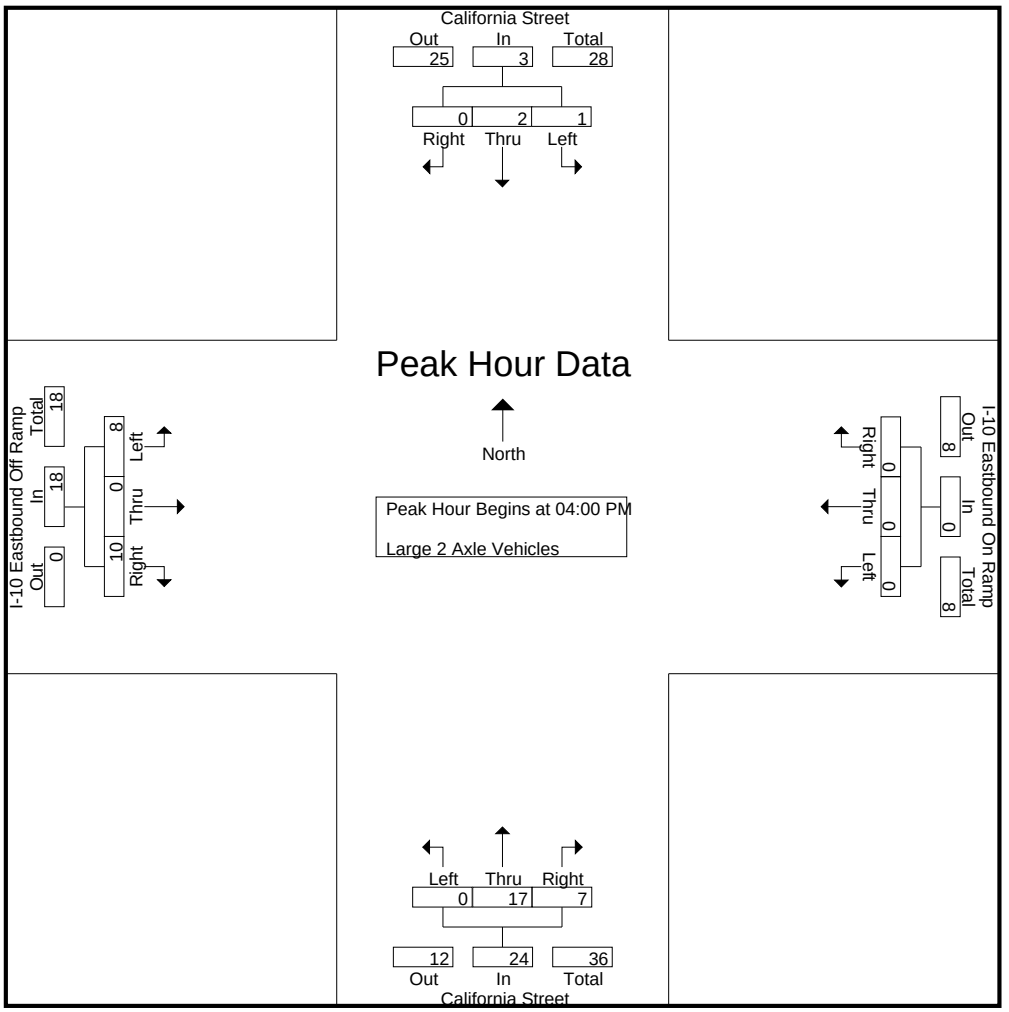
City of Redlands
N/S: California Street
E/W: I-10 Eastbound Ramps
Weather: Clear

File Name : 02_RED_Cali_10E PM
Site Code : 06718128
Start Date : 2/21/2018
Page No : 2



Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:00 PM				04:00 PM				04:00 PM				04:00 PM			
+0 mins.	0	0	0	0	0	0	0	0	0	4	1	5	0	0	**5**	**5**
+15 mins.	0	**1**	0	**1**	0	0	0	0	0	4	**4**	**8**	**3**	0	2	5
+30 mins.	**1**	0	0	1	0	0	0	0	0	**7**	1	8	3	0	0	3
+45 mins.	0	1	0	1	0	0	0	0	0	2	1	3	2	0	3	5
Total Volume	1	2	0	3	0	0	0	0	0	17	7	24	8	0	10	18
% App. Total	33.3	66.7	0		0	0	0		0	70.8	29.2		44.4	0	55.6	
PHF	.250	.500	.000	.750	.000	.000	.000	.000	.000	.607	.438	.750	.667	.000	.500	.900

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City of Redlands
N/S: California Street
E/W: I-10 Eastbound Ramps
Weather: Clear

File Name : 02_RED_Cali_10E PM
Site Code : 06718128
Start Date : 2/21/2018
Page No : 1

Groups Printed- 3 Axle Vehicles

	California Street Southbound				I-10 Eastbound On Ramp Westbound				California Street Northbound				I-10 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	1	0	1	0	0	0	0	0	2	0	2	3	0	0	3	6
04:15 PM	0	1	0	1	0	0	0	0	0	1	1	2	0	0	0	0	3
04:30 PM	0	0	0	0	0	0	0	0	0	2	0	2	3	0	0	3	5
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	3	0	1	4	4
Total	0	2	0	2	0	0	0	0	0	5	1	6	9	0	1	10	18
05:00 PM	0	1	0	1	0	0	0	0	0	0	0	0	2	0	0	2	3
05:15 PM	1	1	0	2	0	0	0	0	0	0	0	0	1	0	0	1	3
05:30 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
05:45 PM	0	0	0	0	0	0	0	0	0	1	0	1	2	0	0	2	3
Total	1	2	0	3	0	0	0	0	0	2	0	2	5	0	0	5	10
Grand Total	1	4	0	5	0	0	0	0	0	7	1	8	14	0	1	15	28
Apprch %	20	80	0		0	0	0		0	87.5	12.5		93.3	0	6.7		
Total %	3.6	14.3	0	17.9	0	0	0	0	0	25	3.6	28.6	50	0	3.6	53.6	

	California Street Southbound				I-10 Eastbound On Ramp Westbound				California Street Northbound				I-10 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	0	**1**	0	**1**	0	0	0	0	0	**2**	0	**2**	**3**	0	0	3	**6**
04:15 PM	0	1	0	1	0	0	0	0	0	1	**1**	2	0	0	0	0	3
04:30 PM	0	0	0	0	0	0	0	0	0	2	0	2	3	0	0	3	5
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	3	0	**1**	**4**	4
Total Volume	0	2	0	2	0	0	0	0	0	5	1	6	9	0	1	10	18
% App. Total	0	100	0		0	0	0		0	83.3	16.7		90	0	10		
PHF	.000	.500	.000	.500	.000	.000	.000	.000	.000	.625	.250	.750	.750	.000	.250	.625	.750

Counts Unlimited
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(951) 268-6268

City of Redlands
N/S: California Street
E/W: I-10 Eastbound Ramps
Weather: Clear

File Name : 02_RED_Cali_10E PM
Site Code : 06718128
Start Date : 2/21/2018
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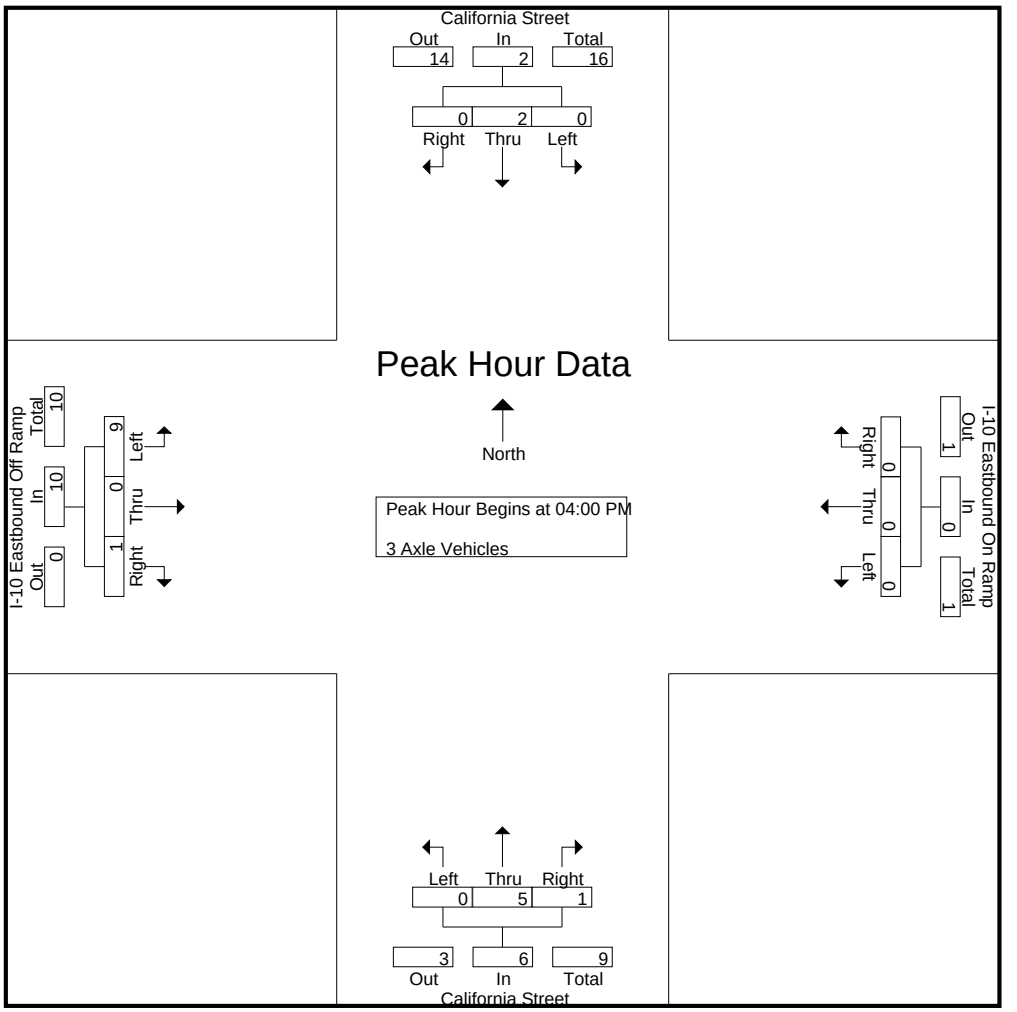

Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:00 PM				04:00 PM				04:00 PM				04:00 PM			
+0 mins.	0	**1**	0	**1**	0	0	0	0	0	**2**	0	**2**	**3**	0	0	3
+15 mins.	0	1	0	1	0	0	0	0	0	1	**1**	2	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	2	0	2	3	0	0	3
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	3	0	**1**	**4**
Total Volume	0	2	0	2	0	0	0	0	0	5	1	6	9	0	1	10
% App. Total	0	100	0		0	0	0		0	83.3	16.7		90	0	10	
PHF	.000	.500	.000	.500	.000	.000	.000	.000	.000	.625	.250	.750	.750	.000	.250	.625

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PO Box 1178
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City of Redlands
N/S: California Street
E/W: I-10 Eastbound Ramps
Weather: Clear

File Name : 02_RED_Cali_10E PM
Site Code : 06718128
Start Date : 2/21/2018
Page No : 1

Groups Printed- 4+ Axle Trucks

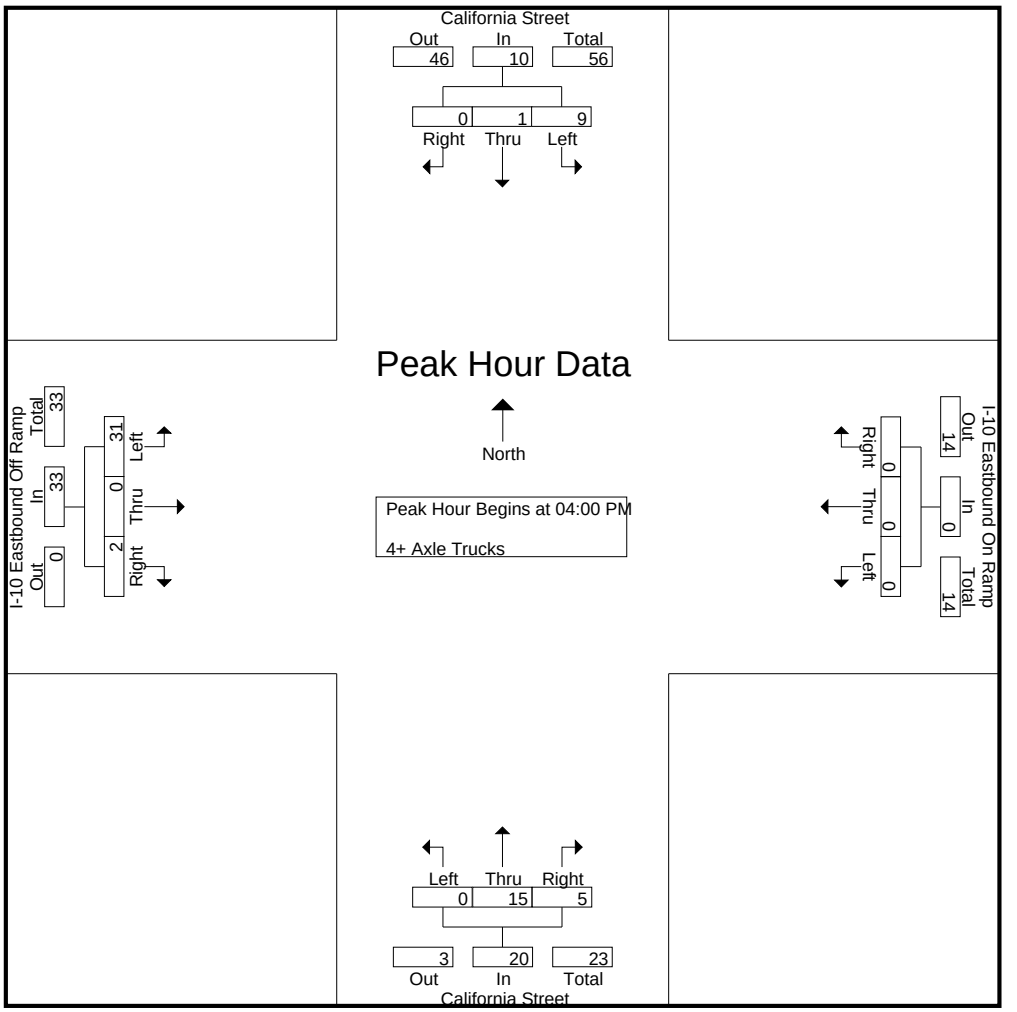
	California Street Southbound				I-10 Eastbound On Ramp Westbound				California Street Northbound				I-10 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	2	1	0	3	0	0	0	0	0	10	2	12	10	0	1	11	26
04:15 PM	5	0	0	5	0	0	0	0	0	0	2	2	7	0	0	7	14
04:30 PM	2	0	0	2	0	0	0	0	0	3	1	4	9	0	0	9	15
04:45 PM	0	0	0	0	0	0	0	0	0	2	0	2	5	0	1	6	8
Total	9	1	0	10	0	0	0	0	0	15	5	20	31	0	2	33	63
05:00 PM	1	0	0	1	0	0	0	0	0	7	3	10	9	0	1	10	21
05:15 PM	2	0	0	2	0	0	0	0	0	2	1	3	3	0	0	3	8
05:30 PM	2	0	0	2	0	0	0	0	0	3	0	3	4	0	0	4	9
05:45 PM	2	0	0	2	0	0	0	0	0	1	0	1	8	0	1	9	12
Total	7	0	0	7	0	0	0	0	0	13	4	17	24	0	2	26	50
Grand Total	16	1	0	17	0	0	0	0	0	28	9	37	55	0	4	59	113
Apprch %	94.1	5.9	0		0	0	0		0	75.7	24.3		93.2	0	6.8		
Total %	14.2	0.9	0	15	0	0	0	0	0	24.8	8	32.7	48.7	0	3.5	52.2	

	California Street Southbound				I-10 Eastbound On Ramp Westbound				California Street Northbound				I-10 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	2	**1**	0	3	0	0	0	0	0	**10**	**2**	**12**	**10**	0	**1**	**11**	**26**
04:15 PM	**5**	0	0	**5**	0	0	0	0	0	0	2	2	7	0	0	7	14
04:30 PM	2	0	0	2	0	0	0	0	0	3	1	4	9	0	0	9	15
04:45 PM	0	0	0	0	0	0	0	0	0	2	0	2	5	0	1	6	8
Total Volume	9	1	0	10	0	0	0	0	0	15	5	20	31	0	2	33	63
% App. Total	90	10	0		0	0	0		0	75	25		93.9	0	6.1		
PHF	.450	.250	.000	.500	.000	.000	.000	.000	.000	.375	.625	.417	.775	.000	.500	.750	.606

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Redlands
N/S: California Street
E/W: I-10 Eastbound Ramps
Weather: Clear

File Name : 02_RED_Cali_10E PM
Site Code : 06718128
Start Date : 2/21/2018
Page No : 2



Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:00 PM				04:00 PM				04:00 PM				04:00 PM			
+0 mins.	2	**1**	0	3	0	0	0	0	0	**10**	**2**	**12**	**10**	0	**1**	**11**
+15 mins.	**5**	0	0	**5**	0	0	0	0	0	0	2	2	7	0	0	7
+30 mins.	2	0	0	2	0	0	0	0	0	3	1	4	9	0	0	9
+45 mins.	0	0	0	0	0	0	0	0	0	2	0	2	5	0	1	6
Total Volume	9	1	0	10	0	0	0	0	0	15	5	20	31	0	2	33
% App. Total	90	10	0		0	0	0		0	75	25		93.9	0	6.1	
PHF	.450	.250	.000	.500	.000	.000	.000	.000	.000	.375	.625	.417	.775	.000	.500	.750

Counts Unlimited
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City of Highland
N/S: Palm Avenue
E/W: 5th Street
Weather: Clear

File Name : 03_HLD_Palm_5th AM
Site Code : 06718128
Start Date : 2/21/2018
Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Palm Avenue Southbound				5th Street Westbound				Palm Avenue Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	48	115	15	178	95	120	25	240	15	49	39	103	2	57	11	70	591
07:15 AM	33	117	10	160	87	187	20	294	11	44	32	87	2	50	9	61	602
07:30 AM	51	89	10	150	71	148	34	253	7	43	36	86	4	61	7	72	561
07:45 AM	32	106	11	149	88	185	29	302	13	27	29	69	3	38	11	52	572
Total	164	427	46	637	341	640	108	1089	46	163	136	345	11	206	38	255	2326
08:00 AM	23	46	16	85	52	121	24	197	11	32	25	68	3	53	8	64	414
08:15 AM	37	35	5	77	38	127	22	187	7	37	22	66	2	45	9	56	386
08:30 AM	51	72	10	133	43	75	23	141	12	40	24	76	6	65	7	78	428
08:45 AM	39	55	14	108	38	55	24	117	5	21	21	47	5	46	9	60	332
Total	150	208	45	403	171	378	93	642	35	130	92	257	16	209	33	258	1560
Grand Total	314	635	91	1040	512	1018	201	1731	81	293	228	602	27	415	71	513	3886
Apprch %	30.2	61.1	8.8		29.6	58.8	11.6		13.5	48.7	37.9		5.3	80.9	13.8		
Total %	8.1	16.3	2.3	26.8	13.2	26.2	5.2	44.5	2.1	7.5	5.9	15.5	0.7	10.7	1.8	13.2	
Passenger Vehicles	303	627	84	1014	461	1006	191	1658	76	285	144	505	20	389	66	475	3652
% Passenger Vehicles	96.5	98.7	92.3	97.5	90	98.8	95	95.8	93.8	97.3	63.2	83.9	74.1	93.7	93	92.6	94
Large 2 Axle Vehicles	8	6	5	19	11	7	6	24	5	7	15	27	7	11	2	20	90
% Large 2 Axle Vehicles	2.5	0.9	5.5	1.8	2.1	0.7	3	1.4	6.2	2.4	6.6	4.5	25.9	2.7	2.8	3.9	2.3
3 Axle Vehicles	1	1	1	3	14	3	1	18	0	1	25	26	0	9	3	12	59
% 3 Axle Vehicles	0.3	0.2	1.1	0.3	2.7	0.3	0.5	1	0	0.3	11	4.3	0	2.2	4.2	2.3	1.5
4+ Axle Trucks	2	1	1	4	26	2	3	31	0	0	44	44	0	6	0	6	85
% 4+ Axle Trucks	0.6	0.2	1.1	0.4	5.1	0.2	1.5	1.8	0	0	19.3	7.3	0	1.4	0	1.2	2.2

	Palm Avenue Southbound				5th Street Westbound				Palm Avenue Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	48	115	**15**	**178**	**95**	120	25	240	**15**	**49**	**39**	**103**	2	57	**11**	70	591
07:15 AM	33	**117**	10	160	87	**187**	20	294	11	44	32	87	2	50	9	61	**602**
07:30 AM	**51**	89	10	150	71	148	**34**	253	7	43	36	86	**4**	**61**	7	**72**	561
07:45 AM	32	106	11	149	88	185	29	**302**	13	27	29	69	3	38	11	52	572
Total Volume	164	427	46	637	341	640	108	1089	46	163	136	345	11	206	38	255	2326
% App. Total	25.7	67	7.2		31.3	58.8	9.9		13.3	47.2	39.4		4.3	80.8	14.9		
PHF	.804	.912	.767	.895	.897	.856	.794	.901	.767	.832	.872	.837	.688	.844	.864	.885	.966

Counts Unlimited
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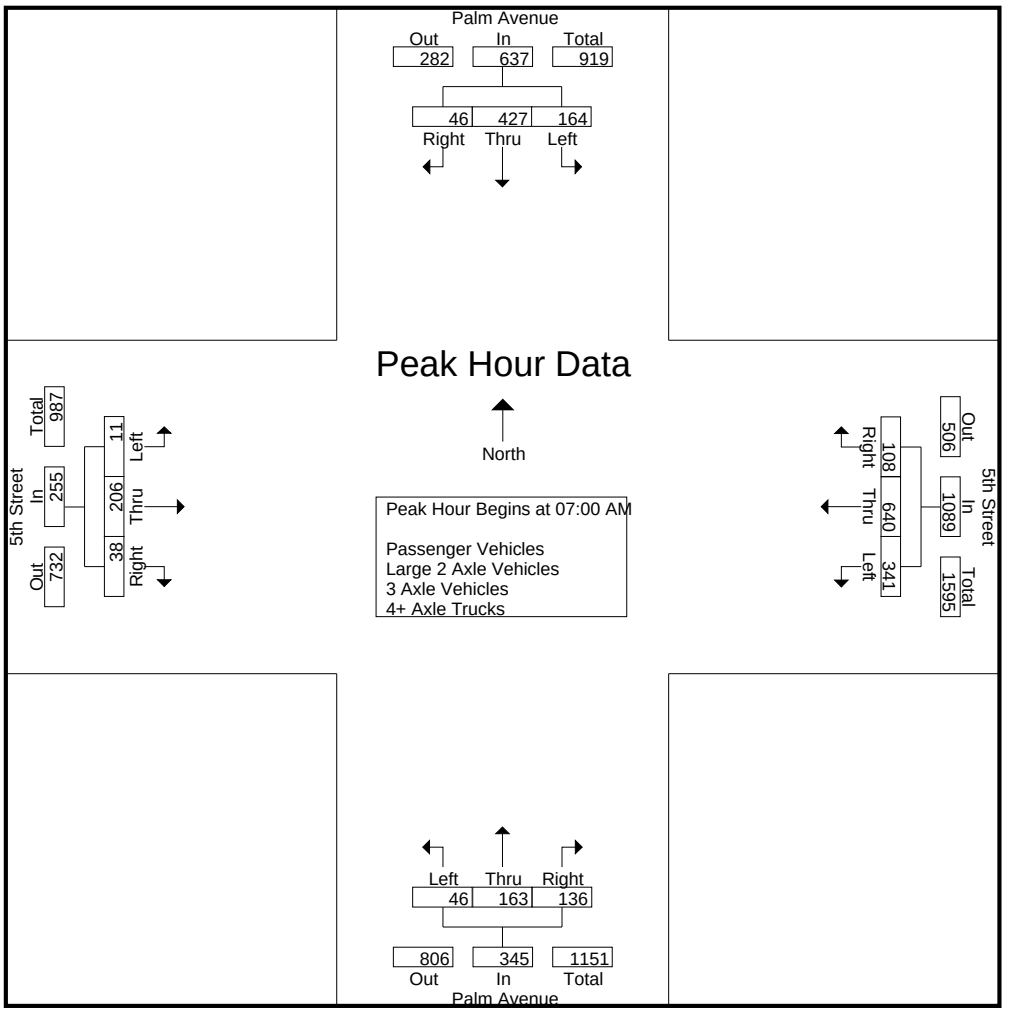
City of Highland
N/S: Palm Avenue
E/W: 5th Street
Weather: Clear

File Name : 03_HLD_Palm_5th AM
Site Code : 06718128
Start Date : 2/21/2018
Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM				07:00 AM				07:00 AM				08:00 AM			
+0 mins.	48	115	**15**	**178**	**95**	120	25	240	**15**	**49**	**39**	**103**	3	53	8	64
+15 mins.	33	**117**	10	160	87	**187**	20	294	11	44	32	87	2	45	**9**	56
+30 mins.	**51**	89	10	150	71	148	**34**	253	7	43	36	86	**6**	**65**	7	**78**
+45 mins.	32	106	11	149	88	185	29	**302**	13	27	29	69	5	46	9	60
Total Volume	164	427	46	637	341	640	108	1089	46	163	136	345	16	209	33	258
% App. Total	25.7	67	7.2		31.3	58.8	9.9		13.3	47.2	39.4		6.2	81	12.8	
PHF	.804	.912	.767	.895	.897	.856	.794	.901	.767	.832	.872	.837	.667	.804	.917	.827

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City of Highland
N/S: Palm Avenue
E/W: 5th Street
Weather: Clear

File Name : 03_HLD_Palm_5th AM
Site Code : 06718128
Start Date : 2/21/2018
Page No : 1

Groups Printed- Passenger Vehicles

	Palm Avenue Southbound				5th Street Westbound				Palm Avenue Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	46	114	13	173	93	119	24	236	14	46	25	85	1	54	10	65	559
07:15 AM	32	116	10	158	80	186	20	286	11	44	21	76	1	47	9	57	577
07:30 AM	51	88	9	148	67	147	34	248	7	41	28	76	3	55	7	65	537
07:45 AM	30	106	11	147	81	183	27	291	12	27	14	53	1	36	9	46	537
Total	159	424	43	626	321	635	105	1061	44	158	88	290	6	192	35	233	2210
08:00 AM	23	45	15	83	43	119	22	184	9	31	17	57	3	50	7	60	384
08:15 AM	34	34	5	73	33	124	21	178	7	36	14	57	1	43	9	53	361
08:30 AM	49	70	10	129	34	73	22	129	11	39	15	65	6	59	6	71	394
08:45 AM	38	54	11	103	30	55	21	106	5	21	10	36	4	45	9	58	303
Total	144	203	41	388	140	371	86	597	32	127	56	215	14	197	31	242	1442
Grand Total	303	627	84	1014	461	1006	191	1658	76	285	144	505	20	389	66	475	3652
Apprch %	29.9	61.8	8.3		27.8	60.7	11.5		15	56.4	28.5		4.2	81.9	13.9		
Total %	8.3	17.2	2.3	27.8	12.6	27.5	5.2	45.4	2.1	7.8	3.9	13.8	0.5	10.7	1.8	13	

	Palm Avenue Southbound				5th Street Westbound				Palm Avenue Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	46	114	**13**	**173**	**93**	119	24	236	**14**	**46**	25	**85**	1	54	**10**	**65**	559
07:15 AM	32	**116**	10	158	80	**186**	20	286	11	44	21	76	1	47	9	57	**577**
07:30 AM	**51**	88	9	148	67	147	**34**	248	7	41	**28**	76	**3**	**55**	7	65	537
07:45 AM	30	106	11	147	81	183	27	**291**	12	27	14	53	1	36	9	46	537
Total Volume	159	424	43	626	321	635	105	1061	44	158	88	290	6	192	35	233	2210
% App. Total	25.4	67.7	6.9		30.3	59.8	9.9		15.2	54.5	30.3		2.6	82.4	15		
PHF	.779	.914	.827	.905	.863	.853	.772	.912	.786	.859	.786	.853	.500	.873	.875	.896	.958

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City of Highland
N/S: Palm Avenue
E/W: 5th Street
Weather: Clear

File Name : 03_HLD_Palm_5th AM
Site Code : 06718128
Start Date : 2/21/2018
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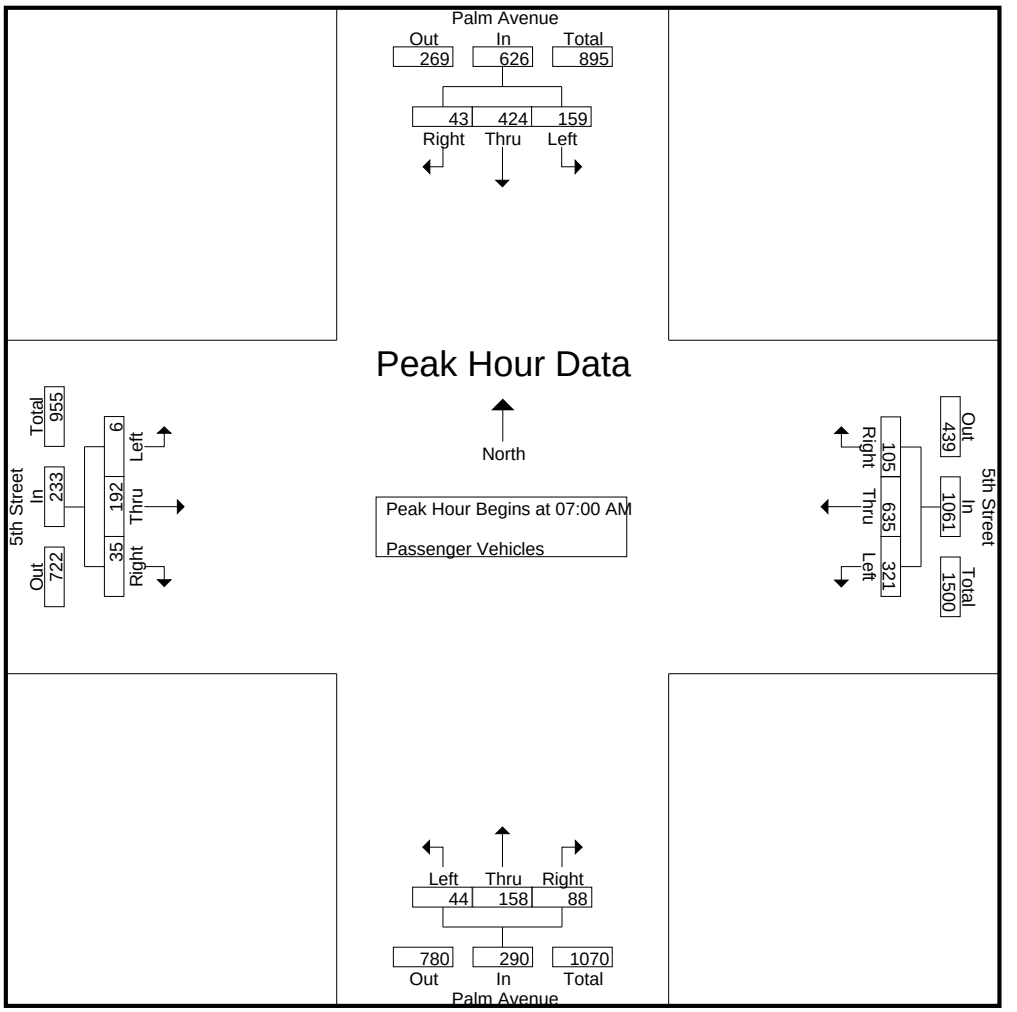

Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM				07:00 AM				07:00 AM				07:00 AM			
+0 mins.	46	114	**13**	**173**	**93**	119	24	236	**14**	**46**	25	**85**	1	54	**10**	**65**
+15 mins.	32	**116**	10	158	80	**186**	20	286	11	44	21	76	1	47	9	57
+30 mins.	**51**	88	9	148	67	147	**34**	248	7	41	**28**	76	**3**	**55**	7	65
+45 mins.	30	106	11	147	81	183	27	**291**	12	27	14	53	1	36	9	46
Total Volume	159	424	43	626	321	635	105	1061	44	158	88	290	6	192	35	233
% App. Total	25.4	67.7	6.9		30.3	59.8	9.9		15.2	54.5	30.3		2.6	82.4	15	
PHF	.779	.914	.827	.905	.863	.853	.772	.912	.786	.859	.786	.853	.500	.873	.875	.896

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City of Highland
N/S: Palm Avenue
E/W: 5th Street
Weather: Clear

File Name : 03_HLD_Palm_5th AM
Site Code : 06718128
Start Date : 2/21/2018
Page No : 1

Groups Printed- Large 2 Axle Vehicles

	Palm Avenue Southbound				5th Street Westbound				Palm Avenue Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	1	1	1	3	1	0	0	1	1	3	2	6	1	2	0	3	13
07:15 AM	0	1	0	1	1	0	0	1	0	0	5	5	1	2	0	3	10
07:30 AM	0	0	1	1	0	1	0	1	0	1	1	2	1	3	0	4	8
07:45 AM	2	0	0	2	2	1	2	5	1	0	1	2	2	1	1	4	13
Total	3	2	2	7	4	2	2	8	2	4	9	15	5	8	1	14	44
08:00 AM	0	1	1	2	2	1	1	4	2	1	2	5	0	1	1	2	13
08:15 AM	3	0	0	3	0	2	0	2	0	1	1	2	1	1	0	2	9
08:30 AM	2	2	0	4	2	2	1	5	1	1	2	4	0	1	0	1	14
08:45 AM	0	1	2	3	3	0	2	5	0	0	1	1	1	0	0	1	10
Total	5	4	3	12	7	5	4	16	3	3	6	12	2	3	1	6	46
Grand Total	8	6	5	19	11	7	6	24	5	7	15	27	7	11	2	20	90
Apprch %	42.1	31.6	26.3		45.8	29.2	25		18.5	25.9	55.6		35	55	10		
Total %	8.9	6.7	5.6	21.1	12.2	7.8	6.7	26.7	5.6	7.8	16.7	30	7.8	12.2	2.2	22.2	

	Palm Avenue Southbound				5th Street Westbound				Palm Avenue Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	1	**1**	**1**	**3**	1	0	0	1	**1**	**3**	2	**6**	1	2	0	3	**13**
07:15 AM	0	1	0	1	1	0	0	1	0	0	**5**	5	1	2	0	3	10
07:30 AM	0	0	1	1	0	**1**	0	1	0	1	1	2	1	**3**	0	**4**	8
07:45 AM	**2**	0	0	2	**2**	1	**2**	**5**	1	0	1	2	**2**	1	**1**	4	13
Total Volume	3	2	2	7	4	2	2	8	2	4	9	15	5	8	1	14	44
% App. Total	42.9	28.6	28.6		50	25	25		13.3	26.7	60		35.7	57.1	7.1		
PHF	.375	.500	.500	.583	.500	.500	.250	.400	.500	.333	.450	.625	.625	.667	.250	.875	.846

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City of Highland
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Weather: Clear

File Name : 03_HLD_Palm_5th AM
Site Code : 06718128
Start Date : 2/21/2018
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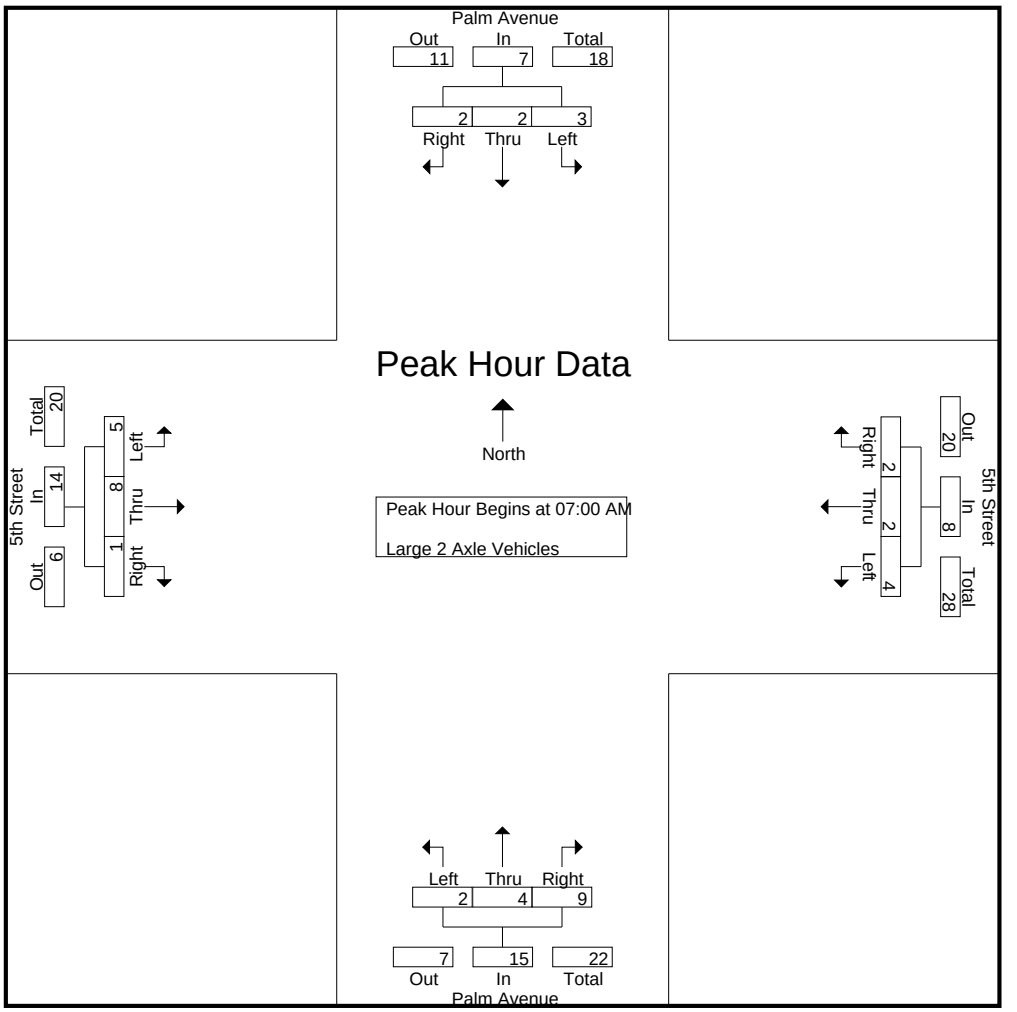

Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM				07:00 AM				07:00 AM				07:00 AM			
+0 mins.	1	**1**	**1**	**3**	1	0	0	1	**1**	**3**	2	**6**	1	2	0	3
+15 mins.	0	1	0	1	1	0	0	1	0	0	**5**	5	1	2	0	3
+30 mins.	0	0	1	1	0	**1**	0	1	0	1	1	2	1	**3**	0	**4**
+45 mins.	**2**	0	0	2	**2**	1	**2**	**5**	1	0	1	2	**2**	1	**1**	4
Total Volume	3	2	2	7	4	2	2	8	2	4	9	15	5	8	1	14
% App. Total	42.9	28.6	28.6		50	25	25		13.3	26.7	60		35.7	57.1	7.1	
PHF	.375	.500	.500	.583	.500	.500	.250	.400	.500	.333	.450	.625	.625	.667	.250	.875

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City of Highland
N/S: Palm Avenue
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Weather: Clear

File Name : 03_HLD_Palm_5th AM
Site Code : 06718128
Start Date : 2/21/2018
Page No : 1

Groups Printed- 3 Axle Vehicles

	Palm Avenue Southbound				5th Street Westbound				Palm Avenue Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	1	0	1	2	1	1	0	2	0	0	5	5	0	0	1	1	10
07:15 AM	0	0	0	0	1	1	0	2	0	0	1	1	0	0	0	0	3
07:30 AM	0	0	0	0	1	0	0	1	0	1	2	3	0	2	0	2	6
07:45 AM	0	0	0	0	2	0	0	2	0	0	8	8	0	0	1	1	11
Total	1	0	1	2	5	2	0	7	0	1	16	17	0	2	2	4	30
08:00 AM	0	0	0	0	6	0	1	7	0	0	2	2	0	1	0	1	10
08:15 AM	0	1	0	1	1	1	0	2	0	0	3	3	0	1	0	1	7
08:30 AM	0	0	0	0	2	0	0	2	0	0	2	2	0	4	1	5	9
08:45 AM	0	0	0	0	0	0	0	0	0	0	2	2	0	1	0	1	3
Total	0	1	0	1	9	1	1	11	0	0	9	9	0	7	1	8	29
Grand Total	1	1	1	3	14	3	1	18	0	1	25	26	0	9	3	12	59
Apprch %	33.3	33.3	33.3		77.8	16.7	5.6		0	3.8	96.2		0	75	25		
Total %	1.7	1.7	1.7	5.1	23.7	5.1	1.7	30.5	0	1.7	42.4	44.1	0	15.3	5.1	20.3	

	Palm Avenue Southbound				5th Street Westbound				Palm Avenue Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	**1**	0	**1**	**2**	1	**1**	0	**2**	0	0	5	5	0	0	**1**	1	10
07:15 AM	0	0	0	0	1	1	0	2	0	0	1	1	0	0	0	0	3
07:30 AM	0	0	0	0	1	0	0	1	0	**1**	2	3	0	**2**	0	**2**	6
07:45 AM	0	0	0	0	**2**	0	0	2	0	0	**8**	**8**	0	0	1	1	**11**
Total Volume	1	0	1	2	5	2	0	7	0	1	16	17	0	2	2	4	30
% App. Total	50	0	50		71.4	28.6	0		0	5.9	94.1		0	50	50		
PHF	.250	.000	.250	.250	.625	.500	.000	.875	.000	.250	.500	.531	.000	.250	.500	.500	.682

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City of Highland
N/S: Palm Avenue
E/W: 5th Street
Weather: Clear

File Name : 03_HLD_Palm_5th AM
Site Code : 06718128
Start Date : 2/21/2018
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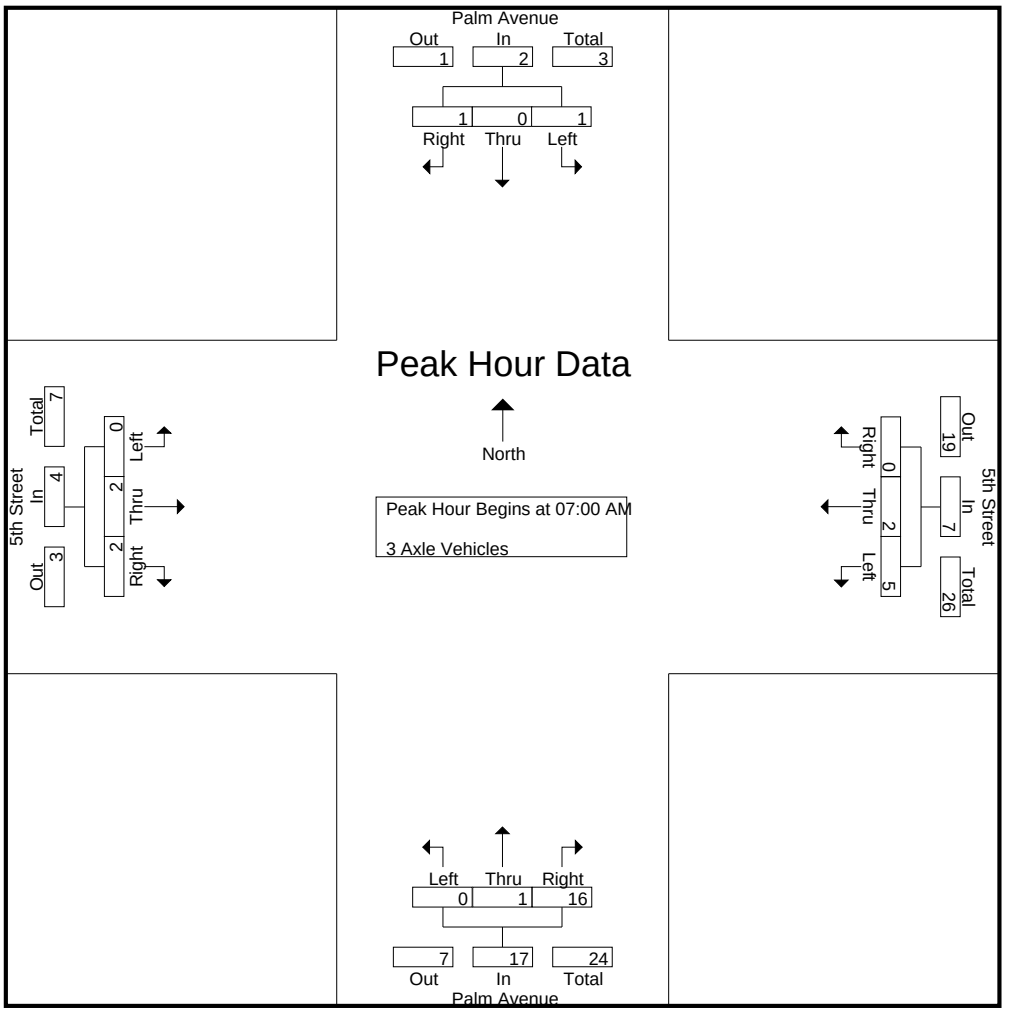

Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM				07:00 AM				07:00 AM				07:00 AM			
+0 mins.	**1**	0	**1**	**2**	1	**1**	0	**2**	0	0	5	5	0	0	**1**	1
+15 mins.	0	0	0	0	1	1	0	2	0	0	1	1	0	0	0	0
+30 mins.	0	0	0	0	1	0	0	1	0	**1**	2	3	0	**2**	0	**2**
+45 mins.	0	0	0	0	**2**	0	0	2	0	0	**8**	**8**	0	0	1	1
Total Volume	1	0	1	2	5	2	0	7	0	1	16	17	0	2	2	4
% App. Total	50	0	50		71.4	28.6	0		0	5.9	94.1		0	50	50	
PHF	.250	.000	.250	.250	.625	.500	.000	.875	.000	.250	.500	.531	.000	.250	.500	.500

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City of Highland
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Groups Printed- 4+ Axle Trucks

	Palm Avenue Southbound				5th Street Westbound				Palm Avenue Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	1	1	0	0	7	7	0	1	0	1	9
07:15 AM	1	0	0	1	5	0	0	5	0	0	5	5	0	1	0	1	12
07:30 AM	0	1	0	1	3	0	0	3	0	0	5	5	0	1	0	1	10
07:45 AM	0	0	0	0	3	1	0	4	0	0	6	6	0	1	0	1	11
Total	1	1	0	2	11	1	1	13	0	0	23	23	0	4	0	4	42
08:00 AM	0	0	0	0	1	1	0	2	0	0	4	4	0	1	0	1	7
08:15 AM	0	0	0	0	4	0	1	5	0	0	4	4	0	0	0	0	9
08:30 AM	0	0	0	0	5	0	0	5	0	0	5	5	0	1	0	1	11
08:45 AM	1	0	1	2	5	0	1	6	0	0	8	8	0	0	0	0	16
Total	1	0	1	2	15	1	2	18	0	0	21	21	0	2	0	2	43
Grand Total	2	1	1	4	26	2	3	31	0	0	44	44	0	6	0	6	85
Apprch %	50	25	25		83.9	6.5	9.7		0	0	100		0	100	0		
Total %	2.4	1.2	1.2	4.7	30.6	2.4	3.5	36.5	0	0	51.8	51.8	0	7.1	0	7.1	

	Palm Avenue Southbound				5th Street Westbound				Palm Avenue Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	0	0	0	0	0	**1**	1	0	0	**7**	**7**	0	**1**	0	**1**	9
07:15 AM	**1**	0	0	**1**	**5**	0	0	**5**	0	0	5	5	0	1	0	1	**12**
07:30 AM	0	**1**	0	1	3	0	0	3	0	0	5	5	0	1	0	1	10
07:45 AM	0	0	0	0	3	**1**	0	4	0	0	6	6	0	1	0	1	11
Total Volume	1	1	0	2	11	1	1	13	0	0	23	23	0	4	0	4	42
% App. Total	50	50	0		84.6	7.7	7.7		0	0	100		0	100	0		
PHF	.250	.250	.000	.500	.550	.250	.250	.650	.000	.000	.821	.821	.000	1.00	.000	1.00	.875

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City of Highland
N/S: Palm Avenue
E/W: 5th Street
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File Name : 03_HLD_Palm_5th AM
Site Code : 06718128
Start Date : 2/21/2018
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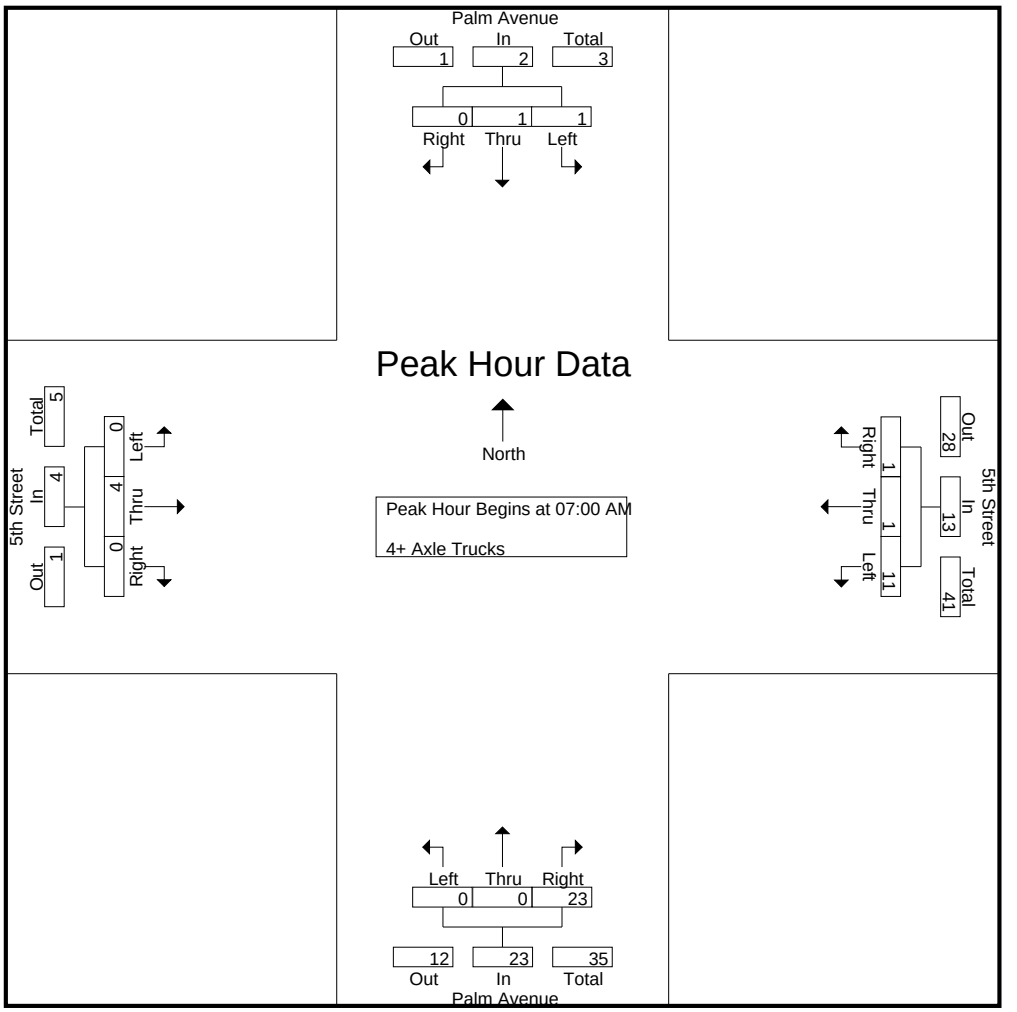

Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM				07:00 AM				07:00 AM				07:00 AM			
+0 mins.	0	0	0	0	0	0	**1**	1	0	0	**7**	**7**	0	**1**	0	**1**
+15 mins.	**1**	0	0	**1**	**5**	0	0	**5**	0	0	5	5	0	1	0	1
+30 mins.	0	**1**	0	1	3	0	0	3	0	0	5	5	0	1	0	1
+45 mins.	0	0	0	0	3	**1**	0	4	0	0	6	6	0	1	0	1
Total Volume	1	1	0	2	11	1	1	13	0	0	23	23	0	4	0	4
% App. Total	50	50	0		84.6	7.7	7.7		0	0	100		0	100	0	
PHF	.250	.250	.000	.500	.550	.250	.250	.650	.000	.000	.821	.821	.000	1.000	.000	1.000

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Highland
N/S: Palm Avenue
E/W: 5th Street
Weather: Clear

File Name : 03_HLD_Palm_5th PM
Site Code : 06718128
Start Date : 2/21/2018
Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Palm Avenue Southbound				5th Street Westbound				Palm Avenue Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	41	45	7	93	45	68	36	149	16	126	93	235	9	112	12	133	610
04:15 PM	40	53	5	98	32	52	25	109	21	116	99	236	11	133	14	158	601
04:30 PM	38	69	3	110	45	81	39	165	22	126	113	261	13	143	15	171	707
04:45 PM	56	74	6	136	40	47	35	122	22	147	110	279	17	145	10	172	709
Total	175	241	21	437	162	248	135	545	81	515	415	1011	50	533	51	634	2627
05:00 PM	42	73	9	124	33	58	40	131	19	120	117	256	10	156	15	181	692
05:15 PM	46	68	7	121	44	59	24	127	23	140	131	294	19	224	10	253	795
05:30 PM	56	66	1	123	34	71	33	138	28	143	103	274	10	148	15	173	708
05:45 PM	43	69	7	119	47	51	37	135	25	154	98	277	10	119	19	148	679
Total	187	276	24	487	158	239	134	531	95	557	449	1101	49	647	59	755	2874
Grand Total	362	517	45	924	320	487	269	1076	176	1072	864	2112	99	1180	110	1389	5501
Apprch %	39.2	56	4.9		29.7	45.3	25		8.3	50.8	40.9		7.1	85	7.9		
Total %	6.6	9.4	0.8	16.8	5.8	8.9	4.9	19.6	3.2	19.5	15.7	38.4	1.8	21.5	2	25.2	
Passenger Vehicles	360	507	40	907	282	474	263	1019	170	1068	819	2057	95	1173	108	1376	5359
% Passenger Vehicles	99.4	98.1	88.9	98.2	88.1	97.3	97.8	94.7	96.6	99.6	94.8	97.4	96	99.4	98.2	99.1	97.4
Large 2 Axle Vehicles	2	6	5	13	2	6	4	12	3	3	6	12	4	3	1	8	45
% Large 2 Axle Vehicles	0.6	1.2	11.1	1.4	0.6	1.2	1.5	1.1	1.7	0.3	0.7	0.6	4	0.3	0.9	0.6	0.8
3 Axle Vehicles	0	1	0	1	7	3	0	10	0	1	9	10	0	1	1	2	23
% 3 Axle Vehicles	0	0.2	0	0.1	2.2	0.6	0	0.9	0	0.1	1	0.5	0	0.1	0.9	0.1	0.4
4+ Axle Trucks	0	3	0	3	29	4	2	35	3	0	30	33	0	3	0	3	74
% 4+ Axle Trucks	0	0.6	0	0.3	9.1	0.8	0.7	3.3	1.7	0	3.5	1.6	0	0.3	0	0.2	1.3

	Palm Avenue Southbound				5th Street Westbound				Palm Avenue Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	**56**	**74**	6	**136**	40	47	35	122	22	**147**	110	279	17	145	10	172	709
05:00 PM	42	73	**9**	124	33	58	**40**	131	19	120	117	256	10	156	**15**	181	692
05:15 PM	46	68	7	121	**44**	59	24	127	23	140	**131**	**294**	**19**	**224**	10	**253**	**795**
05:30 PM	56	66	1	123	34	**71**	33	**138**	**28**	143	103	274	10	148	15	173	708
Total Volume	200	281	23	504	151	235	132	518	92	550	461	1103	56	673	50	779	2904
% App. Total	39.7	55.8	4.6		29.2	45.4	25.5		8.3	49.9	41.8		7.2	86.4	6.4		
PHF	.893	.949	.639	.926	.858	.827	.825	.938	.821	.935	.880	.938	.737	.751	.833	.770	.913

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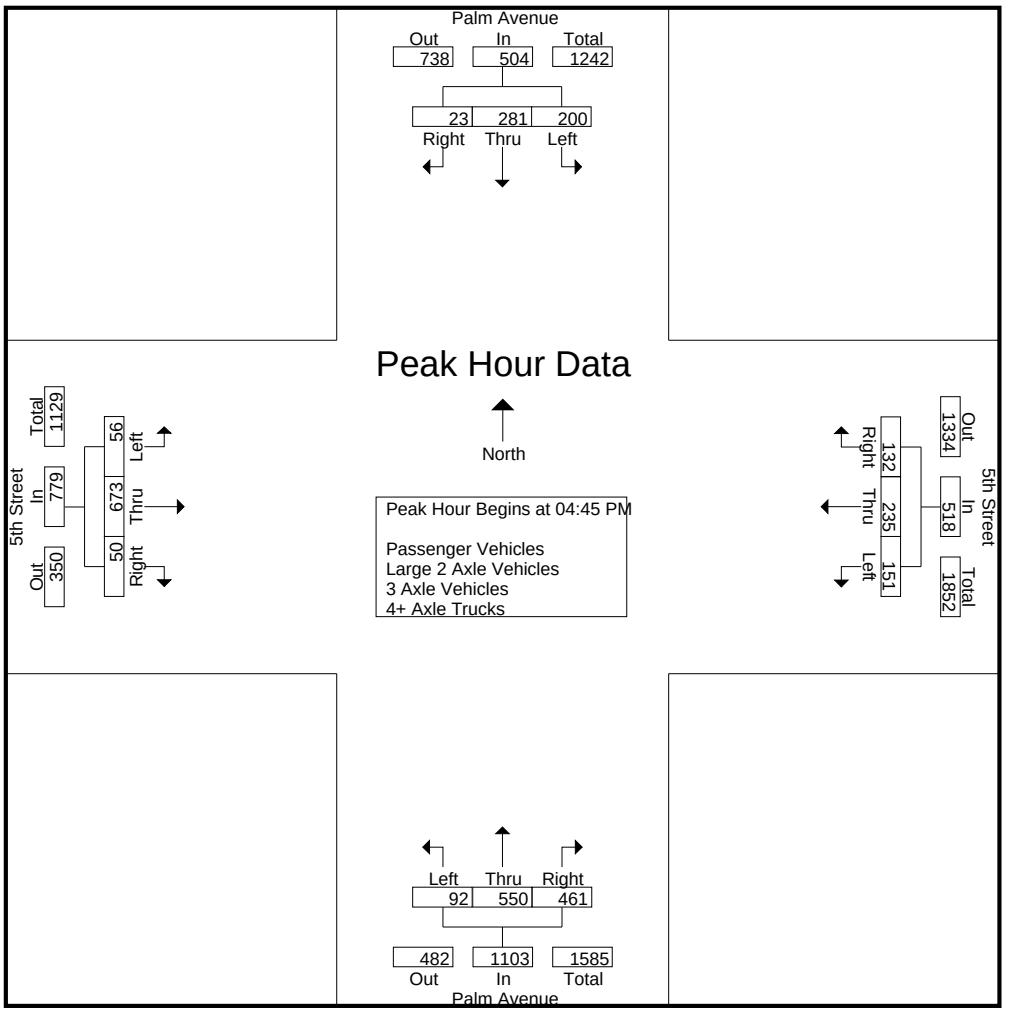

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:00 PM				04:45 PM				04:45 PM			
+0 mins.	**56**	**74**	6	**136**	**45**	68	36	149	22	**147**	110	279	17	145	10	172
+15 mins.	42	73	**9**	124	32	52	25	109	19	120	117	256	10	156	**15**	181
+30 mins.	46	68	7	121	45	**81**	**39**	**165**	23	140	**131**	**294**	**19**	**224**	10	**253**
+45 mins.	56	66	1	123	40	47	35	122	**28**	143	103	274	10	148	15	173
Total Volume	200	281	23	504	162	248	135	545	92	550	461	1103	56	673	50	779
% App. Total	39.7	55.8	4.6		29.7	45.5	24.8		8.3	49.9	41.8		7.2	86.4	6.4	
PHF	.893	.949	.639	.926	.900	.765	.865	.826	.821	.935	.880	.938	.737	.751	.833	.770

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Groups Printed- Passenger Vehicles

	Palm Avenue Southbound				5th Street Westbound				Palm Avenue Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	41	44	7	92	36	65	36	137	15	125	86	226	9	110	12	131	586
04:15 PM	40	53	4	97	23	50	24	97	21	116	89	226	11	133	12	156	576
04:30 PM	38	69	3	110	40	77	37	154	22	125	106	253	12	143	15	170	687
04:45 PM	55	70	5	130	36	45	35	116	21	146	103	270	16	144	10	170	686
Total	174	236	19	429	135	237	132	504	79	512	384	975	48	530	49	627	2535
05:00 PM	42	73	8	123	29	57	38	124	16	120	111	247	10	155	15	180	674
05:15 PM	46	67	6	119	43	59	24	126	22	139	128	289	18	222	10	250	784
05:30 PM	55	63	1	119	31	70	33	134	28	143	101	272	10	147	15	172	697
05:45 PM	43	68	6	117	44	51	36	131	25	154	95	274	9	119	19	147	669
Total	186	271	21	478	147	237	131	515	91	556	435	1082	47	643	59	749	2824
Grand Total	360	507	40	907	282	474	263	1019	170	1068	819	2057	95	1173	108	1376	5359
Apprch %	39.7	55.9	4.4		27.7	46.5	25.8		8.3	51.9	39.8		6.9	85.2	7.8		
Total %	6.7	9.5	0.7	16.9	5.3	8.8	4.9	19	3.2	19.9	15.3	38.4	1.8	21.9	2	25.7	

	Palm Avenue Southbound				5th Street Westbound				Palm Avenue Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	**55**	70	5	**130**	36	45	35	116	21	**146**	103	270	16	144	10	170	686
05:00 PM	42	**73**	**8**	123	29	57	**38**	124	16	120	111	247	10	155	**15**	180	674
05:15 PM	46	67	6	119	**43**	59	24	126	22	139	**128**	**289**	**18**	**222**	10	**250**	**784**
05:30 PM	55	63	1	119	31	**70**	33	**134**	**28**	143	101	272	10	147	15	172	697
Total Volume	198	273	20	491	139	231	130	500	87	548	443	1078	54	668	50	772	2841
% App. Total	40.3	55.6	4.1		27.8	46.2	26		8.1	50.8	41.1		7	86.5	6.5		
PHF	.900	.935	.625	.944	.808	.825	.855	.933	.777	.938	.865	.933	.750	.752	.833	.772	.906

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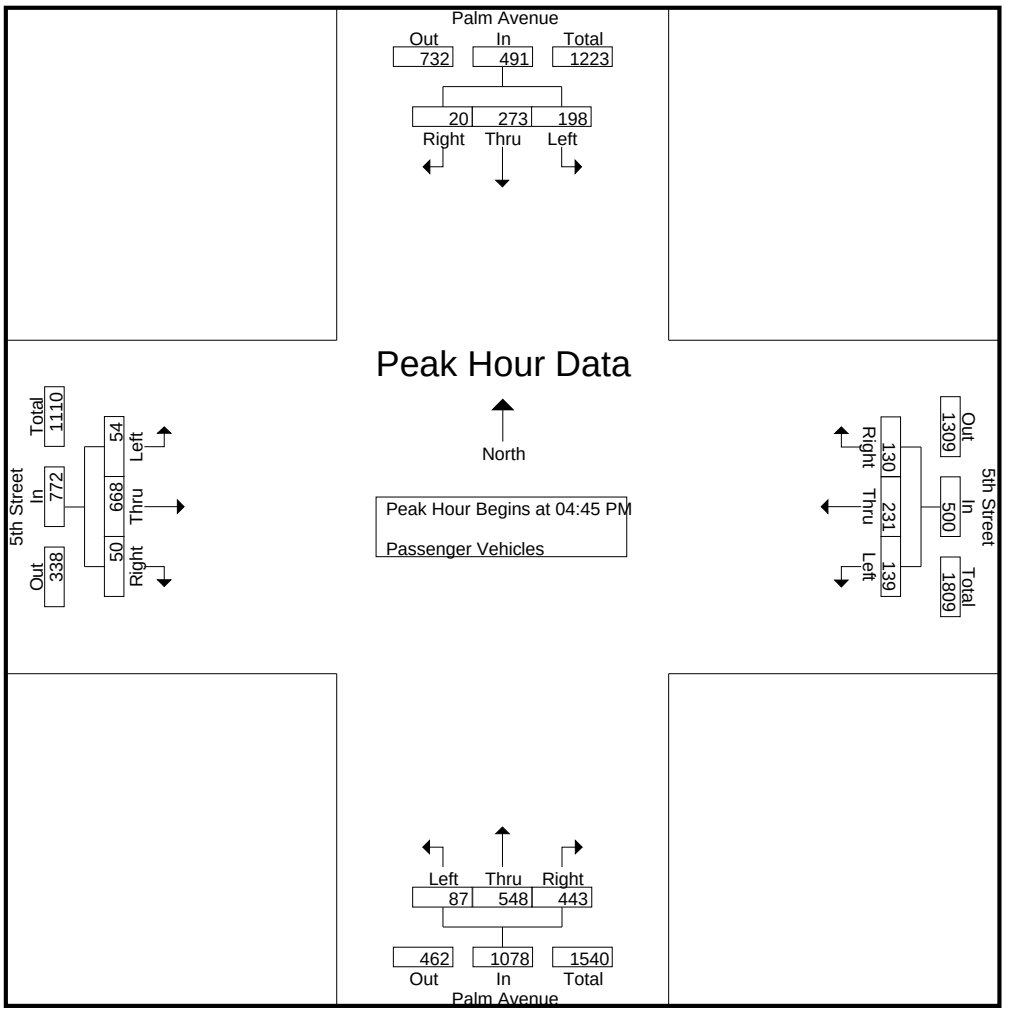

Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	**55**	70	5	**130**	36	45	35	116	21	**146**	103	270	16	144	10	170
+15 mins.	42	**73**	**8**	123	29	57	**38**	124	16	120	111	247	10	155	**15**	180
+30 mins.	46	67	6	119	**43**	59	24	126	22	139	**128**	**289**	**18**	**222**	10	**250**
+45 mins.	55	63	1	119	31	**70**	33	**134**	**28**	143	101	272	10	147	15	172
Total Volume	198	273	20	491	139	231	130	500	87	548	443	1078	54	668	50	772
% App. Total	40.3	55.6	4.1		27.8	46.2	26		8.1	50.8	41.1		7	86.5	6.5	
PHF	.900	.935	.625	.944	.808	.825	.855	.933	.777	.938	.865	.933	.750	.752	.833	.772

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Page No : 1

Groups Printed- Large 2 Axle Vehicles

	Palm Avenue Southbound				5th Street Westbound				Palm Avenue Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	1	0	1	1	2	0	3	1	0	1	2	0	1	0	1	7
04:15 PM	0	0	1	1	0	1	1	2	0	0	0	0	0	0	1	1	4
04:30 PM	0	0	0	0	0	2	1	3	0	1	1	2	1	0	0	1	6
04:45 PM	1	2	1	4	0	0	0	0	1	1	0	2	1	0	0	1	7
Total	1	3	2	6	1	5	2	8	2	2	2	6	2	1	1	4	24
05:00 PM	0	0	1	1	0	0	2	2	1	0	2	3	0	1	0	1	7
05:15 PM	0	0	1	1	0	0	0	0	0	1	1	2	1	0	0	1	4
05:30 PM	1	2	0	3	0	1	0	1	0	0	1	1	0	1	0	1	6
05:45 PM	0	1	1	2	1	0	0	1	0	0	0	0	1	0	0	1	4
Total	1	3	3	7	1	1	2	4	1	1	4	6	2	2	0	4	21
Grand Total	2	6	5	13	2	6	4	12	3	3	6	12	4	3	1	8	45
Apprch %	15.4	46.2	38.5		16.7	50	33.3		25	25	50		50	37.5	12.5		
Total %	4.4	13.3	11.1	28.9	4.4	13.3	8.9	26.7	6.7	6.7	13.3	26.7	8.9	6.7	2.2	17.8	

	Palm Avenue Southbound				5th Street Westbound				Palm Avenue Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	**1**	**2**	**1**	**4**	0	0	0	0	**1**	**1**	0	2	**1**	0	0	**1**	**7**
05:00 PM	0	0	1	1	0	0	**2**	**2**	1	0	**2**	**3**	0	**1**	0	1	7
05:15 PM	0	0	1	1	0	0	0	0	0	1	1	2	1	0	0	1	4
05:30 PM	1	2	0	3	0	**1**	0	1	0	0	1	1	0	1	0	1	6
Total Volume	2	4	3	9	0	1	2	3	2	2	4	8	2	2	0	4	24
% App. Total	22.2	44.4	33.3		0	33.3	66.7		25	25	50		50	50	0		
PHF	.500	.500	.750	.563	.000	.250	.250	.375	.500	.500	.500	.667	.500	.500	.000	1.00	.857

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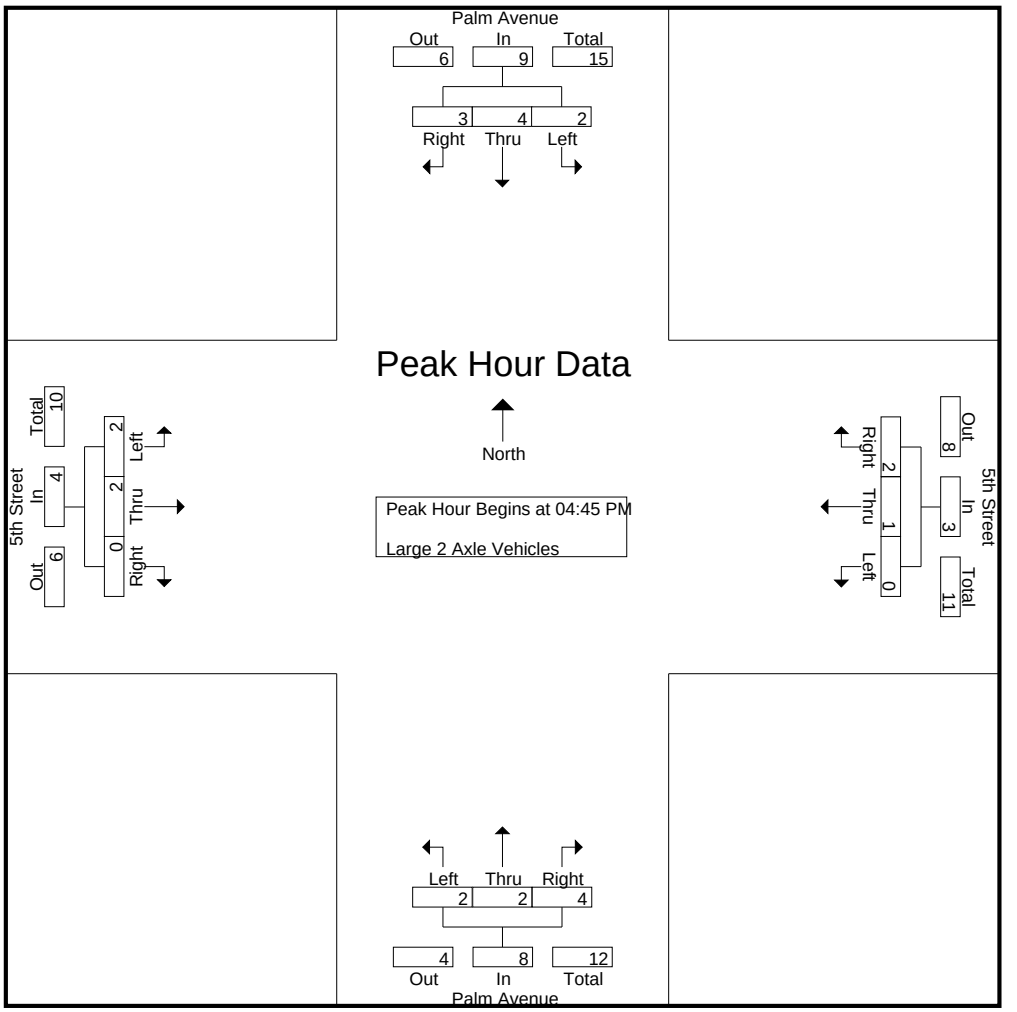

Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	**1**	**2**	**1**	**4**	0	0	0	0	**1**	**1**	0	2	**1**	0	0	**1**
+15 mins.	0	0	1	1	0	0	**2**	**2**	1	0	**2**	**3**	0	**1**	0	1
+30 mins.	0	0	1	1	0	0	0	0	0	1	1	2	1	0	0	1
+45 mins.	1	2	0	3	0	**1**	0	1	0	0	1	1	0	1	0	1
Total Volume	2	4	3	9	0	1	2	3	2	2	4	8	2	2	0	4
% App. Total	22.2	44.4	33.3		0	33.3	66.7		25	25	50		50	50	0	
PHF	.500	.500	.750	.563	.000	.250	.250	.375	.500	.500	.500	.667	.500	.500	.000	1.000

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Groups Printed- 3 Axle Vehicles

	Palm Avenue Southbound				5th Street Westbound				Palm Avenue Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	1	1	0	2	0	1	3	4	0	1	0	1	7
04:15 PM	0	0	0	0	2	0	0	2	0	0	1	1	0	0	1	1	4
04:30 PM	0	0	0	0	2	1	0	3	0	0	1	1	0	0	0	0	4
04:45 PM	0	0	0	0	1	1	0	2	0	0	2	2	0	0	0	0	4
Total	0	0	0	0	6	3	0	9	0	1	7	8	0	1	1	2	19
05:00 PM	0	0	0	0	1	0	0	1	0	0	1	1	0	0	0	0	2
05:15 PM	0	1	0	1	0	0	0	0	0	0	1	1	0	0	0	0	2
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	1	1	0	0	1	0	0	2	2	0	0	0	0	4
Grand Total	0	1	0	1	7	3	0	10	0	1	9	10	0	1	1	2	23
Apprch %	0	100	0		70	30	0		0	10	90		0	50	50		
Total %	0	4.3	0	4.3	30.4	13	0	43.5	0	4.3	39.1	43.5	0	4.3	4.3	8.7	

	Palm Avenue Southbound				5th Street Westbound				Palm Avenue Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	0	0	0	**1**	**1**	0	**2**	0	0	**2**	**2**	0	0	0	0	**4**
05:00 PM	0	0	0	0	1	0	0	1	0	0	1	1	0	0	0	0	2
05:15 PM	0	**1**	0	**1**	0	0	0	0	0	0	1	1	0	0	0	0	2
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	1	0	1	2	1	0	3	0	0	4	4	0	0	0	0	8
% App. Total	0	100	0		66.7	33.3	0		0	0	100		0	0	0		
PHF	.000	.250	.000	.250	.500	.250	.000	.375	.000	.000	.500	.500	.000	.000	.000	.000	.500

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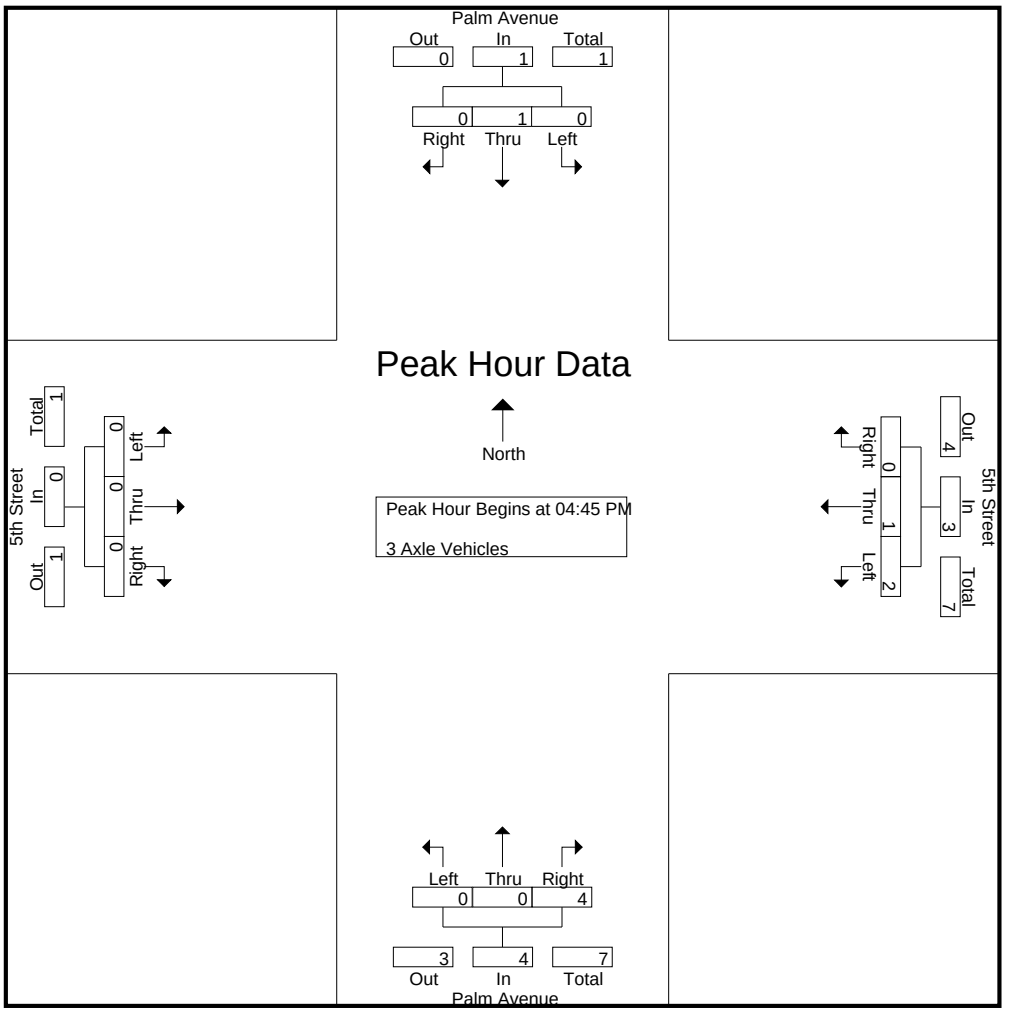

Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	0	0	0	0	**1**	**1**	0	**2**	0	0	**2**	**2**	0	0	0	0
+15 mins.	0	0	0	0	1	0	0	1	0	0	1	1	0	0	0	0
+30 mins.	0	**1**	0	**1**	0	0	0	0	0	0	1	1	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	1	0	1	2	1	0	3	0	0	4	4	0	0	0	0
% App. Total	0	100	0		66.7	33.3	0		0	0	100		0	0	0	
PHF	.000	.250	.000	.250	.500	.250	.000	.375	.000	.000	.500	.500	.000	.000	.000	.000

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Groups Printed- 4+ Axle Trucks

	Palm Avenue Southbound				5th Street Westbound				Palm Avenue Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	7	0	0	7	0	0	3	3	0	0	0	0	10
04:15 PM	0	0	0	0	7	1	0	8	0	0	9	9	0	0	0	0	17
04:30 PM	0	0	0	0	3	1	1	5	0	0	5	5	0	0	0	0	10
04:45 PM	0	2	0	2	3	1	0	4	0	0	5	5	0	1	0	1	12
Total	0	2	0	2	20	3	1	24	0	0	22	22	0	1	0	1	49
05:00 PM	0	0	0	0	3	1	0	4	2	0	3	5	0	0	0	0	9
05:15 PM	0	0	0	0	1	0	0	1	1	0	1	2	0	2	0	2	5
05:30 PM	0	1	0	1	3	0	0	3	0	0	1	1	0	0	0	0	5
05:45 PM	0	0	0	0	2	0	1	3	0	0	3	3	0	0	0	0	6
Total	0	1	0	1	9	1	1	11	3	0	8	11	0	2	0	2	25
Grand Total	0	3	0	3	29	4	2	35	3	0	30	33	0	3	0	3	74
Apprch %	0	100	0		82.9	11.4	5.7		9.1	0	90.9		0	100	0		
Total %	0	4.1	0	4.1	39.2	5.4	2.7	47.3	4.1	0	40.5	44.6	0	4.1	0	4.1	

	Palm Avenue Southbound				5th Street Westbound				Palm Avenue Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	**2**	0	**2**	**3**	**1**	0	**4**	0	0	**5**	**5**	0	1	0	1	**12**
05:00 PM	0	0	0	0	3	1	0	4	**2**	0	3	5	0	0	0	0	9
05:15 PM	0	0	0	0	1	0	0	1	1	0	1	2	0	**2**	0	**2**	5
05:30 PM	0	1	0	1	3	0	0	3	0	0	1	1	0	0	0	0	5
Total Volume	0	3	0	3	10	2	0	12	3	0	10	13	0	3	0	3	31
% App. Total	0	100	0		83.3	16.7	0		23.1	0	76.9		0	100	0		
PHF	.000	.375	.000	.375	.833	.500	.000	.750	.375	.000	.500	.650	.000	.375	.000	.375	.646

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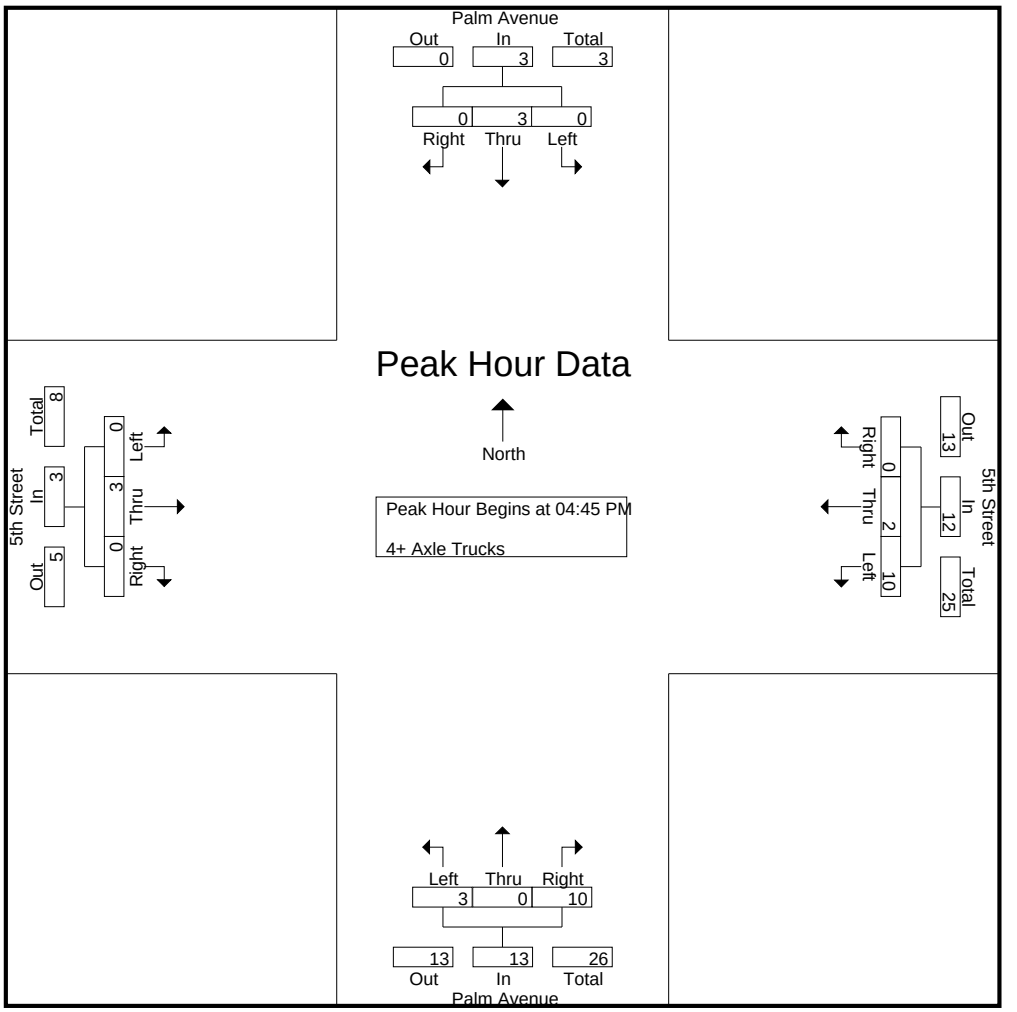
City of Highland
N/S: Palm Avenue
E/W: 5th Street
Weather: Clear

File Name : 03_HLD_Palm_5th PM
Site Code : 06718128
Start Date : 2/21/2018
Page No : 2



Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	0	**2**	0	**2**	**3**	**1**	0	**4**	0	0	**5**	**5**	0	1	0	1
+15 mins.	0	0	0	0	3	1	0	4	**2**	0	3	5	0	0	0	0
+30 mins.	0	0	0	0	1	0	0	1	1	0	1	2	0	**2**	0	**2**
+45 mins.	0	1	0	1	3	0	0	3	0	0	1	1	0	0	0	0
Total Volume	0	3	0	3	10	2	0	12	3	0	10	13	0	3	0	3
% App. Total	0	100	0		83.3	16.7	0		23.1	0	76.9		0	100	0	
PHF	.000	.375	.000	.375	.833	.500	.000	.750	.375	.000	.500	.650	.000	.375	.000	.375

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County of San Bernardino
N/S: Alabama Street
E/W: River Bluff Avenue
Weather: Clear

File Name : 04_CSB_Alabama_Riv Bluff AM
Site Code : 06718128
Start Date : 2/21/2018
Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Alabama Street Southbound			River Bluff Avenue Westbound			Alabama Street Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
07:00 AM	3	183	186	4	3	7	96	6	102	295
07:15 AM	5	240	245	5	4	9	106	5	111	365
07:30 AM	2	150	152	3	4	7	93	1	94	253
07:45 AM	11	194	205	2	3	5	77	5	82	292
Total	21	767	788	14	14	28	372	17	389	1205
08:00 AM	4	90	94	3	8	11	61	5	66	171
08:15 AM	3	83	86	3	10	13	74	4	78	177
08:30 AM	6	113	119	3	7	10	53	5	58	187
08:45 AM	6	130	136	2	1	3	40	4	44	183
Total	19	416	435	11	26	37	228	18	246	718
Grand Total	40	1183	1223	25	40	65	600	35	635	1923
Apprch %	3.3	96.7		38.5	61.5		94.5	5.5		
Total %	2.1	61.5	63.6	1.3	2.1	3.4	31.2	1.8	33	
Passenger Vehicles	17	1106	1123	8	14	22	553	19	572	1717
% Passenger Vehicles	42.5	93.5	91.8	32	35	33.8	92.2	54.3	90.1	89.3
Large 2 Axle Vehicles	2	16	18	2	0	2	10	3	13	33
% Large 2 Axle Vehicles	5	1.4	1.5	8	0	3.1	1.7	8.6	2	1.7
3 Axle Vehicles	13	23	36	3	20	23	13	4	17	76
% 3 Axle Vehicles	32.5	1.9	2.9	12	50	35.4	2.2	11.4	2.7	4
4+ Axle Trucks	8	38	46	12	6	18	24	9	33	97
% 4+ Axle Trucks	20	3.2	3.8	48	15	27.7	4	25.7	5.2	5

	Alabama Street Southbound			River Bluff Avenue Westbound			Alabama Street Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:00 AM										
07:00 AM	3	183	186	4	3	7	96	**6**	102	295
07:15 AM	5	**240**	**245**	**5**	**4**	**9**	**106**	5	**111**	**365**
07:30 AM	2	150	152	3	4	7	93	1	94	253
07:45 AM	**11**	194	205	2	3	5	77	5	82	292
Total Volume	21	767	788	14	14	28	372	17	389	1205
% App. Total	2.7	97.3		50	50		95.6	4.4		
PHF	.477	.799	.804	.700	.875	.778	.877	.708	.876	.825

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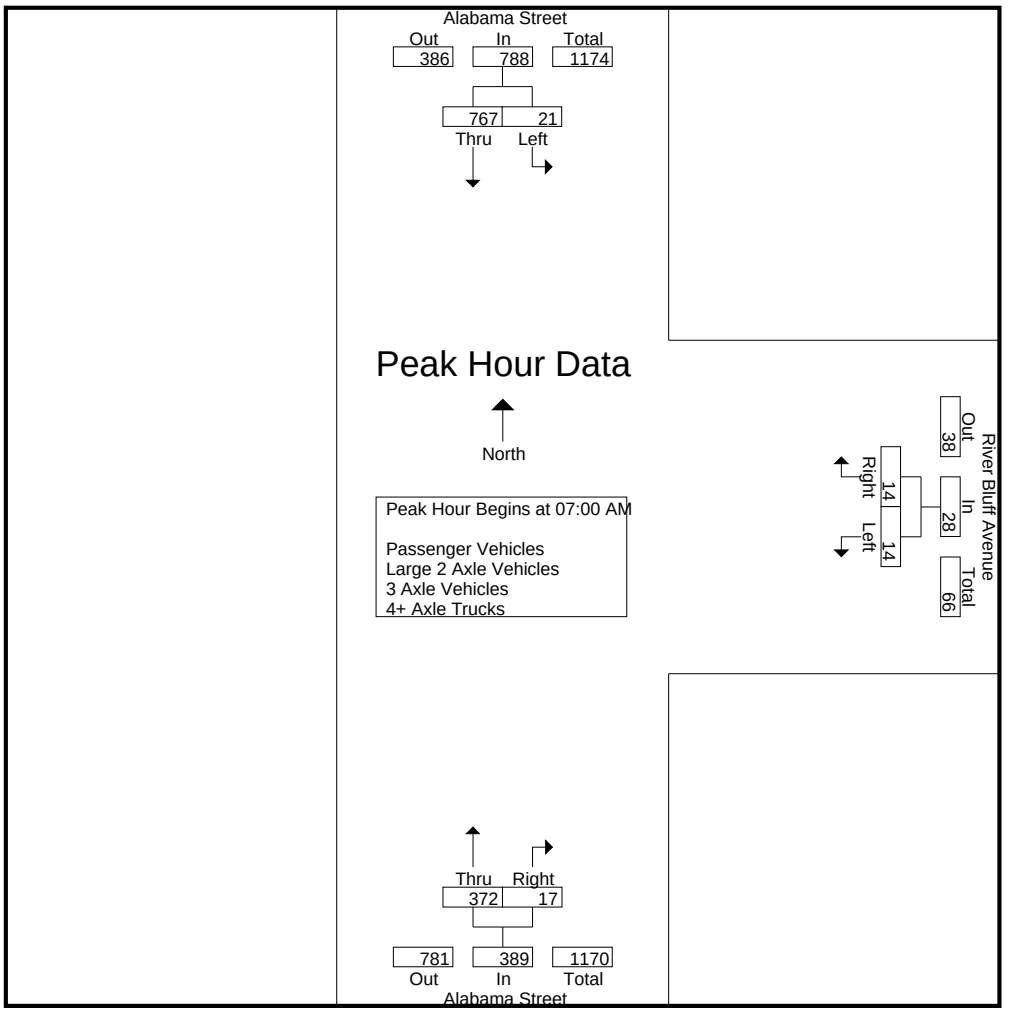
County of San Bernardino
N/S: Alabama Street
E/W: River Bluff Avenue
Weather: Clear

File Name : 04_CSB_Alabama_Riv Bluff AM
Site Code : 06718128
Start Date : 2/21/2018
Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM			07:45 AM			07:00 AM		
+0 mins.	3	183	186	2	3	5	96	**6**	102
+15 mins.	5	**240**	**245**	**3**	8	11	**106**	5	**111**
+30 mins.	2	150	152	3	**10**	**13**	93	1	94
+45 mins.	**11**	194	205	3	7	10	77	5	82
Total Volume	21	767	788	11	28	39	372	17	389
% App. Total	2.7	97.3		28.2	71.8		95.6	4.4	
PHF	.477	.799	.804	.917	.700	.750	.877	.708	.876

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County of San Bernardino
N/S: Alabama Street
E/W: River Bluff Avenue
Weather: Clear

File Name : 04_CSB_Alabama_Riv Bluff AM
Site Code : 06718128
Start Date : 2/21/2018
Page No : 1

Groups Printed- Passenger Vehicles

	Alabama Street Southbound			River Bluff Avenue Westbound			Alabama Street Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
07:00 AM	1	178	179	1	0	1	87	3	90	270
07:15 AM	3	227	230	1	1	2	101	4	105	337
07:30 AM	1	140	141	2	0	2	89	1	90	233
07:45 AM	5	184	189	0	2	2	73	3	76	267
Total	10	729	739	4	3	7	350	11	361	1107
08:00 AM	0	78	78	1	2	3	55	3	58	139
08:15 AM	1	78	79	1	6	7	65	1	66	152
08:30 AM	3	106	109	1	3	4	47	4	51	164
08:45 AM	3	115	118	1	0	1	36	0	36	155
Total	7	377	384	4	11	15	203	8	211	610
Grand Total	17	1106	1123	8	14	22	553	19	572	1717
Apprch %	1.5	98.5		36.4	63.6		96.7	3.3		
Total %	1	64.4	65.4	0.5	0.8	1.3	32.2	1.1	33.3	

	Alabama Street Southbound			River Bluff Avenue Westbound			Alabama Street Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:00 AM										
07:00 AM	1	178	179	1	0	1	87	3	90	270
07:15 AM	3	**227**	**230**	1	1	**2**	**101**	**4**	**105**	**337**
07:30 AM	1	140	141	**2**	0	2	89	1	90	233
07:45 AM	**5**	184	189	0	**2**	2	73	3	76	267
Total Volume	10	729	739	4	3	7	350	11	361	1107
% App. Total	1.4	98.6		57.1	42.9		97	3		
PHF	.500	.803	.803	.500	.375	.875	.866	.688	.860	.821

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County of San Bernardino
N/S: Alabama Street
E/W: River Bluff Avenue
Weather: Clear

File Name : 04_CSB_Alabama_Riv Bluff AM
Site Code : 06718128
Start Date : 2/21/2018
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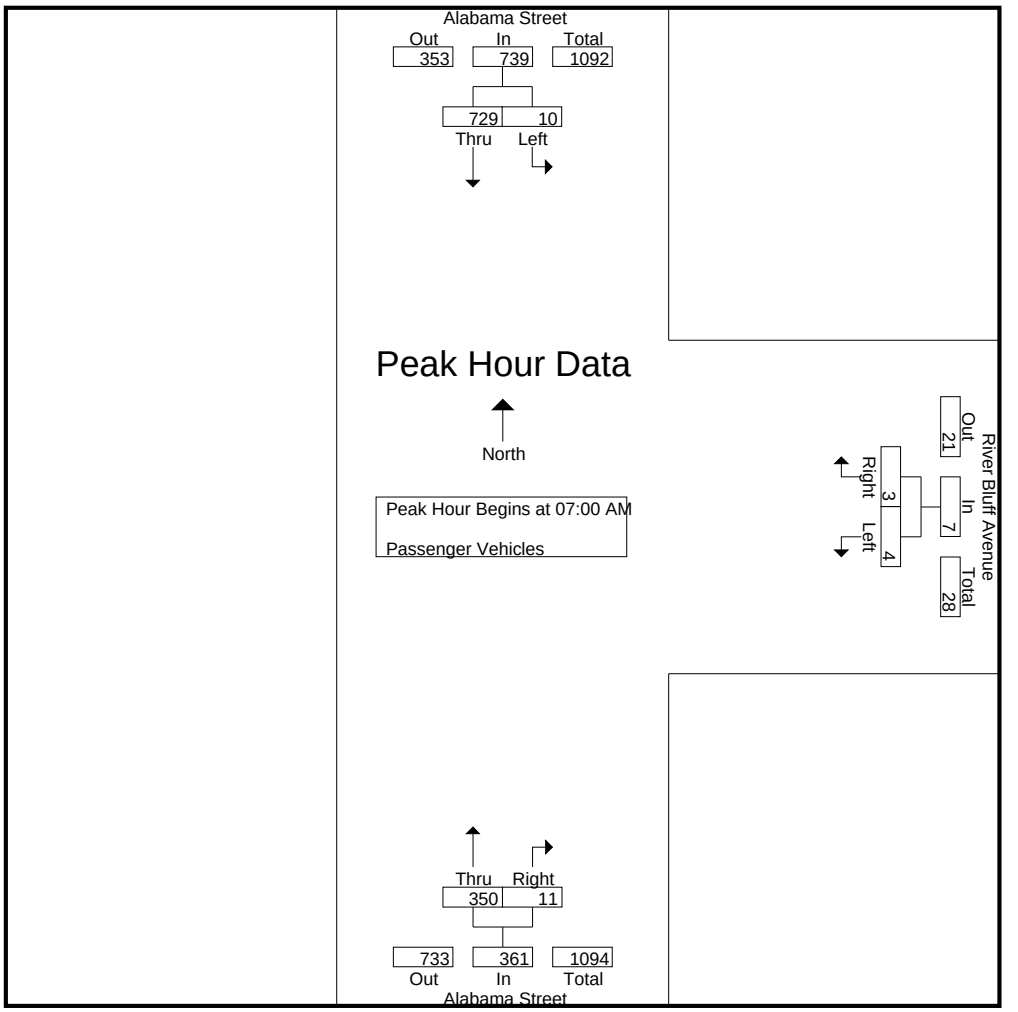

Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM			07:00 AM			07:00 AM		
+0 mins.	1	178	179	1	0	1	87	3	90
+15 mins.	3	**227**	**230**	1	1	**2**	**101**	**4**	**105**
+30 mins.	1	140	141	**2**	0	2	89	1	90
+45 mins.	**5**	184	189	0	**2**	2	73	3	76
Total Volume	10	729	739	4	3	7	350	11	361
% App. Total	1.4	98.6		57.1	42.9		97	3	
PHF	.500	.803	.803	.500	.375	.875	.866	.688	.860

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County of San Bernardino
N/S: Alabama Street
E/W: River Bluff Avenue
Weather: Clear

File Name : 04_CSB_Alabama_Riv Bluff AM
Site Code : 06718128
Start Date : 2/21/2018
Page No : 1

Groups Printed- Large 2 Axle Vehicles

	Alabama Street Southbound			River Bluff Avenue Westbound			Alabama Street Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
07:00 AM	1	1	2	1	0	1	4	1	5	8
07:15 AM	0	2	2	0	0	0	1	0	1	3
07:30 AM	0	1	1	0	0	0	1	0	1	2
07:45 AM	1	3	4	0	0	0	0	0	0	4
Total	2	7	9	1	0	1	6	1	7	17
08:00 AM	0	5	5	1	0	1	2	0	2	8
08:15 AM	0	1	1	0	0	0	1	0	1	2
08:30 AM	0	0	0	0	0	0	1	0	1	1
08:45 AM	0	3	3	0	0	0	0	2	2	5
Total	0	9	9	1	0	1	4	2	6	16
Grand Total	2	16	18	2	0	2	10	3	13	33
Apprch %	11.1	88.9		100	0		76.9	23.1		
Total %	6.1	48.5	54.5	6.1	0	6.1	30.3	9.1	39.4	

	Alabama Street Southbound			River Bluff Avenue Westbound			Alabama Street Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:00 AM										
07:00 AM	**1**	1	2	**1**	0	**1**	**4**	**1**	**5**	**8**
07:15 AM	0	2	2	0	0	0	1	0	1	3
07:30 AM	0	1	1	0	0	0	1	0	1	2
07:45 AM	1	**3**	**4**	0	0	0	0	0	0	4
Total Volume	2	7	9	1	0	1	6	1	7	17
% App. Total	22.2	77.8		100	0		85.7	14.3		
PHF	.500	.583	.563	.250	.000	.250	.375	.250	.350	.531

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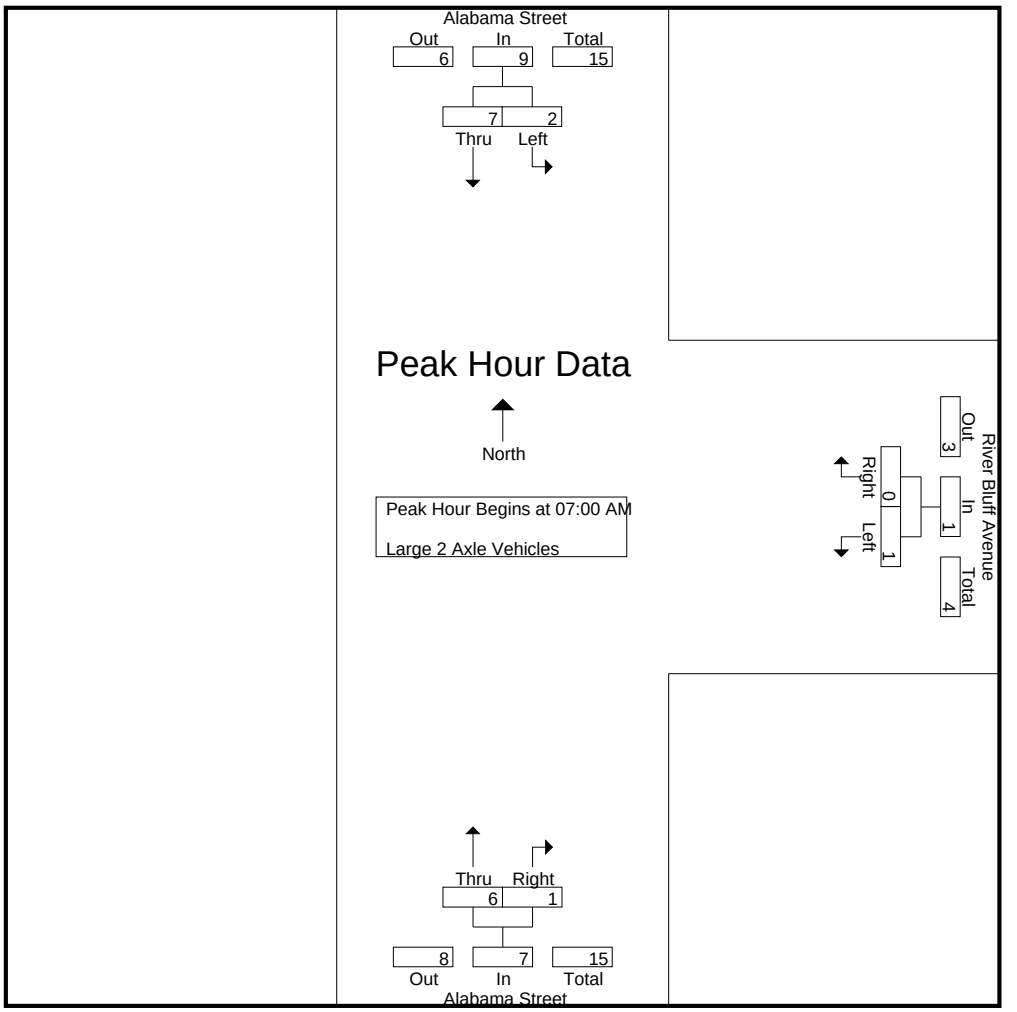
County of San Bernardino
N/S: Alabama Street
E/W: River Bluff Avenue
Weather: Clear

File Name : 04_CSB_Alabama_Riv Bluff AM
Site Code : 06718128
Start Date : 2/21/2018
Page No : 2



Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM			07:00 AM			07:00 AM		
+0 mins.	**1**	1	2	**1**	0	**1**	**4**	**1**	**5**
+15 mins.	0	2	2	0	0	0	1	0	1
+30 mins.	0	1	1	0	0	0	1	0	1
+45 mins.	1	**3**	**4**	0	0	0	0	0	0
Total Volume	2	7	9	1	0	1	6	1	7
% App. Total	22.2	77.8		100	0		85.7	14.3	
PHF	.500	.583	.563	.250	.000	.250	.375	.250	.350

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County of San Bernardino
N/S: Alabama Street
E/W: River Bluff Avenue
Weather: Clear

File Name : 04_CSB_Alabama_Riv Bluff AM
Site Code : 06718128
Start Date : 2/21/2018
Page No : 1

Groups Printed- 3 Axle Vehicles

	Alabama Street Southbound			River Bluff Avenue Westbound			Alabama Street Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
07:00 AM	0	1	1	0	2	2	2	1	3	6
07:15 AM	2	4	6	1	2	3	0	0	0	9
07:30 AM	0	3	3	1	3	4	1	0	1	8
07:45 AM	4	2	6	0	1	1	1	1	2	9
Total	6	10	16	2	8	10	4	2	6	32
08:00 AM	2	3	5	0	4	4	1	1	2	11
08:15 AM	2	2	4	0	4	4	3	1	4	12
08:30 AM	1	2	3	1	3	4	3	0	3	10
08:45 AM	2	6	8	0	1	1	2	0	2	11
Total	7	13	20	1	12	13	9	2	11	44
Grand Total	13	23	36	3	20	23	13	4	17	76
Apprch %	36.1	63.9		13	87		76.5	23.5		
Total %	17.1	30.3	47.4	3.9	26.3	30.3	17.1	5.3	22.4	

	Alabama Street Southbound			River Bluff Avenue Westbound			Alabama Street Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:00 AM										
07:00 AM	0	1	1	0	2	2	**2**	**1**	**3**	6
07:15 AM	2	**4**	**6**	**1**	2	3	0	0	0	**9**
07:30 AM	0	3	3	1	**3**	**4**	1	0	1	8
07:45 AM	**4**	2	6	0	1	1	1	1	2	9
Total Volume	6	10	16	2	8	10	4	2	6	32
% App. Total	37.5	62.5		20	80		66.7	33.3		
PHF	.375	.625	.667	.500	.667	.625	.500	.500	.500	.889

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County of San Bernardino
N/S: Alabama Street
E/W: River Bluff Avenue
Weather: Clear

File Name : 04_CSB_Alabama_Riv Bluff AM
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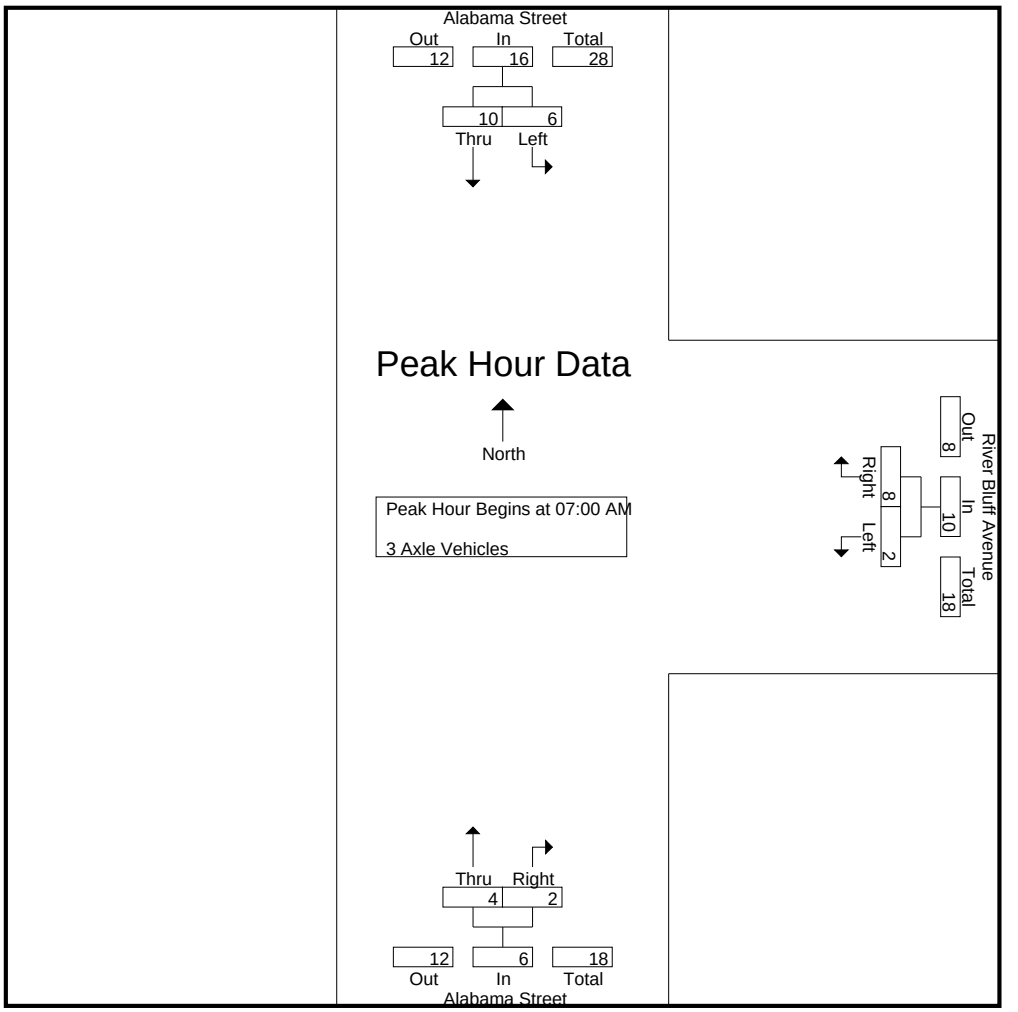

Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM			07:00 AM			07:00 AM		
+0 mins.	0	1	1	0	2	2	**2**	**1**	**3**
+15 mins.	2	**4**	**6**	**1**	2	3	0	0	0
+30 mins.	0	3	3	1	**3**	**4**	1	0	1
+45 mins.	**4**	2	6	0	1	1	1	1	2
Total Volume	6	10	16	2	8	10	4	2	6
% App. Total	37.5	62.5		20	80		66.7	33.3	
PHF	.375	.625	.667	.500	.667	.625	.500	.500	.500

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County of San Bernardino
N/S: Alabama Street
E/W: River Bluff Avenue
Weather: Clear

File Name : 04_CSB_Alabama_Riv Bluff AM
Site Code : 06718128
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Groups Printed- 4+ Axle Trucks

	Alabama Street Southbound			River Bluff Avenue Westbound			Alabama Street Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
07:00 AM	1	3	4	2	1	3	3	1	4	11
07:15 AM	0	7	7	3	1	4	4	1	5	16
07:30 AM	1	6	7	0	1	1	2	0	2	10
07:45 AM	1	5	6	2	0	2	3	1	4	12
Total	3	21	24	7	3	10	12	3	15	49
08:00 AM	2	4	6	1	2	3	3	1	4	13
08:15 AM	0	2	2	2	0	2	5	2	7	11
08:30 AM	2	5	7	1	1	2	2	1	3	12
08:45 AM	1	6	7	1	0	1	2	2	4	12
Total	5	17	22	5	3	8	12	6	18	48
Grand Total	8	38	46	12	6	18	24	9	33	97
Apprch %	17.4	82.6		66.7	33.3		72.7	27.3		
Total %	8.2	39.2	47.4	12.4	6.2	18.6	24.7	9.3	34	

	Alabama Street Southbound			River Bluff Avenue Westbound			Alabama Street Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:00 AM										
07:00 AM	**1**	3	4	2	**1**	3	3	**1**	4	11
07:15 AM	0	**7**	**7**	**3**	1	**4**	**4**	1	**5**	**16**
07:30 AM	1	6	7	0	1	1	2	0	2	10
07:45 AM	1	5	6	2	0	2	3	1	4	12
Total Volume	3	21	24	7	3	10	12	3	15	49
% App. Total	12.5	87.5		70	30		80	20		
PHF	.750	.750	.857	.583	.750	.625	.750	.750	.750	.766

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County of San Bernardino
N/S: Alabama Street
E/W: River Bluff Avenue
Weather: Clear

File Name : 04_CSB_Alabama_Riv Bluff AM
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Start Date : 2/21/2018
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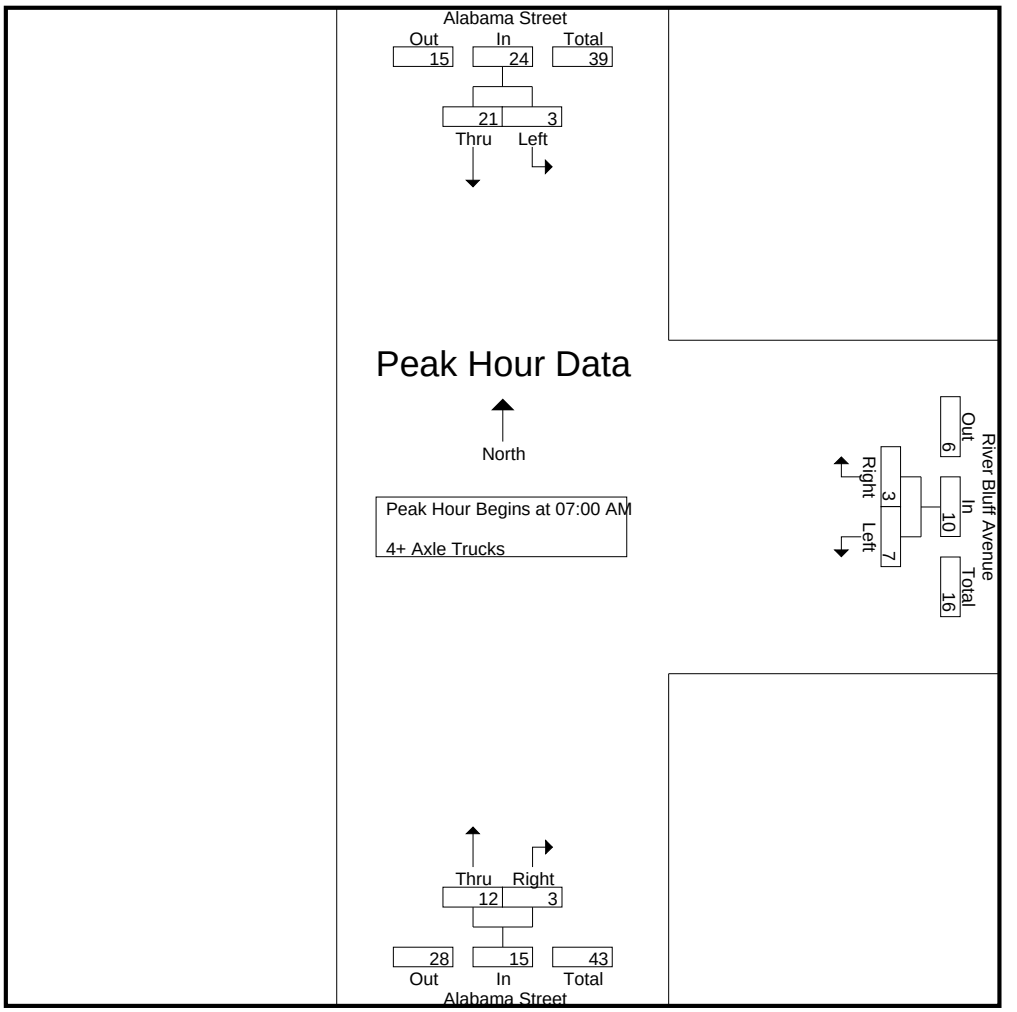

Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM			07:00 AM			07:00 AM		
+0 mins.	**1**	3	4	2	**1**	3	3	**1**	4
+15 mins.	0	**7**	**7**	**3**	1	**4**	**4**	1	**5**
+30 mins.	1	6	7	0	1	1	2	0	2
+45 mins.	1	5	6	2	0	2	3	1	4
Total Volume	3	21	24	7	3	10	12	3	15
% App. Total	12.5	87.5		70	30		80	20	
PHF	.750	.750	.857	.583	.750	.625	.750	.750	.750

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County of San Bernardino
N/S: Alabama Street
E/W: River Bluff Avenue
Weather: Clear

File Name : 04_CSB_Alabama_Riv Bluff PM
Site Code : 06718128
Start Date : 2/21/2018
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Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Alabama Street Southbound			River Bluff Avenue Westbound			Alabama Street Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
04:00 PM	4	134	138	12	16	28	177	8	185	351
04:15 PM	9	141	150	11	3	14	165	6	171	335
04:30 PM	2	155	157	13	9	22	205	10	215	394
04:45 PM	7	186	193	4	6	10	216	4	220	423
Total	22	616	638	40	34	74	763	28	791	1503
05:00 PM	6	183	189	2	4	6	196	5	201	396
05:15 PM	4	198	202	10	2	12	222	6	228	442
05:30 PM	3	181	184	8	17	25	235	3	238	447
05:45 PM	3	179	182	5	6	11	202	6	208	401
Total	16	741	757	25	29	54	855	20	875	1686
Grand Total	38	1357	1395	65	63	128	1618	48	1666	3189
Apprch %	2.7	97.3		50.8	49.2		97.1	2.9		
Total %	1.2	42.6	43.7	2	2	4	50.7	1.5	52.2	
Passenger Vehicles	10	1316	1326	50	31	81	1566	11	1577	2984
% Passenger Vehicles	26.3	97	95.1	76.9	49.2	63.3	96.8	22.9	94.7	93.6
Large 2 Axle Vehicles	0	15	15	0	0	0	21	2	23	38
% Large 2 Axle Vehicles	0	1.1	1.1	0	0	0	1.3	4.2	1.4	1.2
3 Axle Vehicles	22	5	27	6	6	12	5	5	10	49
% 3 Axle Vehicles	57.9	0.4	1.9	9.2	9.5	9.4	0.3	10.4	0.6	1.5
4+ Axle Trucks	6	21	27	9	26	35	26	30	56	118
% 4+ Axle Trucks	15.8	1.5	1.9	13.8	41.3	27.3	1.6	62.5	3.4	3.7

	Alabama Street Southbound			River Bluff Avenue Westbound			Alabama Street Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:45 PM										
04:45 PM	**7**	186	193	4	6	10	216	4	220	423
05:00 PM	6	183	189	2	4	6	196	5	201	396
05:15 PM	4	**198**	**202**	**10**	2	12	222	**6**	228	442
05:30 PM	3	181	184	8	**17**	**25**	**235**	3	**238**	**447**
Total Volume	20	748	768	24	29	53	869	18	887	1708
% App. Total	2.6	97.4		45.3	54.7		98	2		
PHF	.714	.944	.950	.600	.426	.530	.924	.750	.932	.955

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County of San Bernardino
N/S: Alabama Street
E/W: River Bluff Avenue
Weather: Clear

File Name : 04_CSB_Alabama_Riv Bluff PM
Site Code : 06718128
Start Date : 2/21/2018
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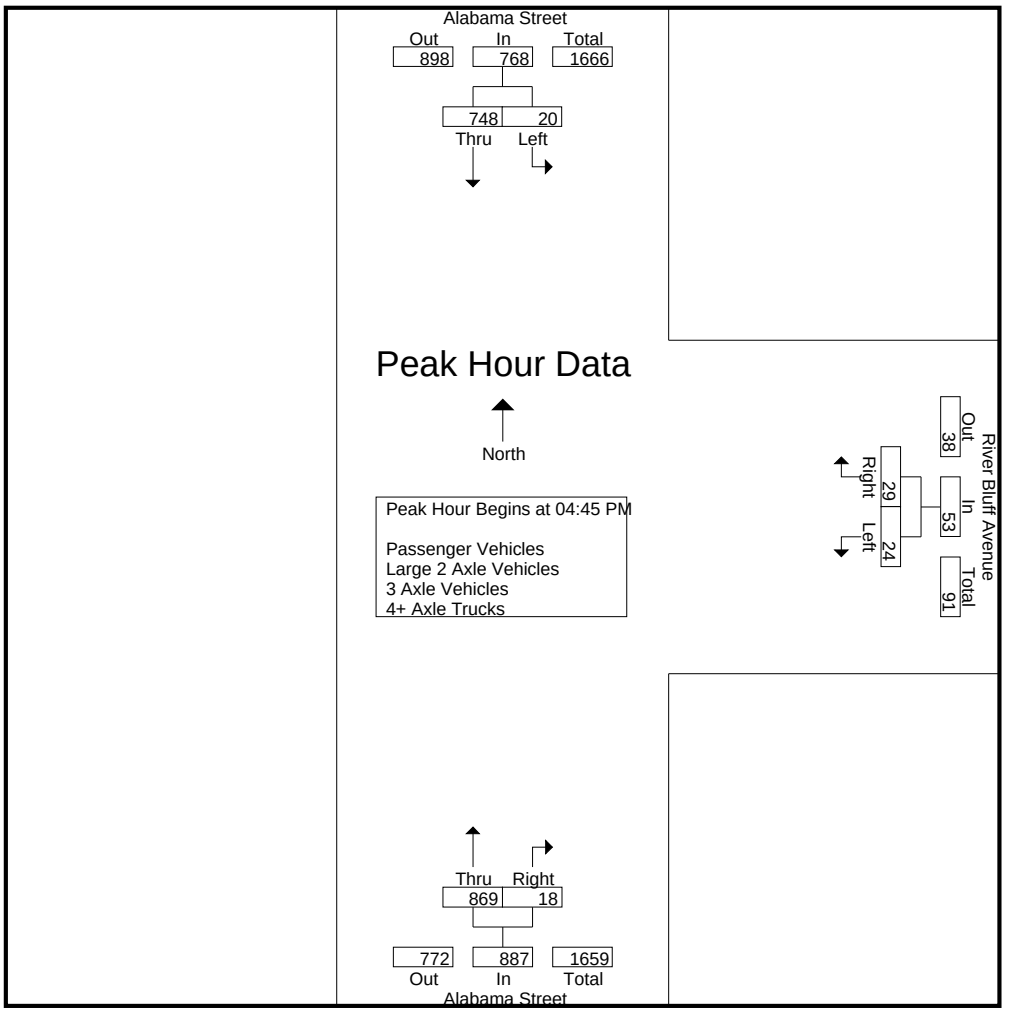

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM			04:00 PM			04:45 PM		
+0 mins.	**7**	186	193	12	**16**	**28**	216	4	220
+15 mins.	6	183	189	11	3	14	196	5	201
+30 mins.	4	**198**	**202**	**13**	9	22	222	**6**	228
+45 mins.	3	181	184	4	6	10	**235**	3	**238**
Total Volume	20	748	768	40	34	74	869	18	887
% App. Total	2.6	97.4		54.1	45.9		98	2	
PHF	.714	.944	.950	.769	.531	.661	.924	.750	.932

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County of San Bernardino
N/S: Alabama Street
E/W: River Bluff Avenue
Weather: Clear

File Name : 04_CSB_Alabama_Riv Bluff PM
Site Code : 06718128
Start Date : 2/21/2018
Page No : 1

Groups Printed- Passenger Vehicles

	Alabama Street Southbound			River Bluff Avenue Westbound			Alabama Street Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
04:00 PM	2	132	134	10	9	19	169	4	173	326
04:15 PM	3	139	142	11	2	13	160	0	160	315
04:30 PM	1	153	154	8	2	10	196	2	198	362
04:45 PM	1	180	181	2	1	3	214	1	215	399
Total	7	604	611	31	14	45	739	7	746	1402
05:00 PM	0	178	178	2	2	4	185	0	185	367
05:15 PM	1	189	190	8	0	8	215	2	217	415
05:30 PM	1	175	176	5	11	16	229	2	231	423
05:45 PM	1	170	171	4	4	8	198	0	198	377
Total	3	712	715	19	17	36	827	4	831	1582
Grand Total	10	1316	1326	50	31	81	1566	11	1577	2984
Apprch %	0.8	99.2		61.7	38.3		99.3	0.7		
Total %	0.3	44.1	44.4	1.7	1	2.7	52.5	0.4	52.8	

	Alabama Street Southbound			River Bluff Avenue Westbound			Alabama Street Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:45 PM										
04:45 PM	**1**	180	181	2	1	3	214	1	215	399
05:00 PM	0	178	178	2	2	4	185	0	185	367
05:15 PM	1	**189**	**190**	**8**	0	8	215	**2**	217	415
05:30 PM	1	175	176	5	**11**	**16**	**229**	2	**231**	**423**
Total Volume	3	722	725	17	14	31	843	5	848	1604
% App. Total	0.4	99.6		54.8	45.2		99.4	0.6		
PHF	.750	.955	.954	.531	.318	.484	.920	.625	.918	.948

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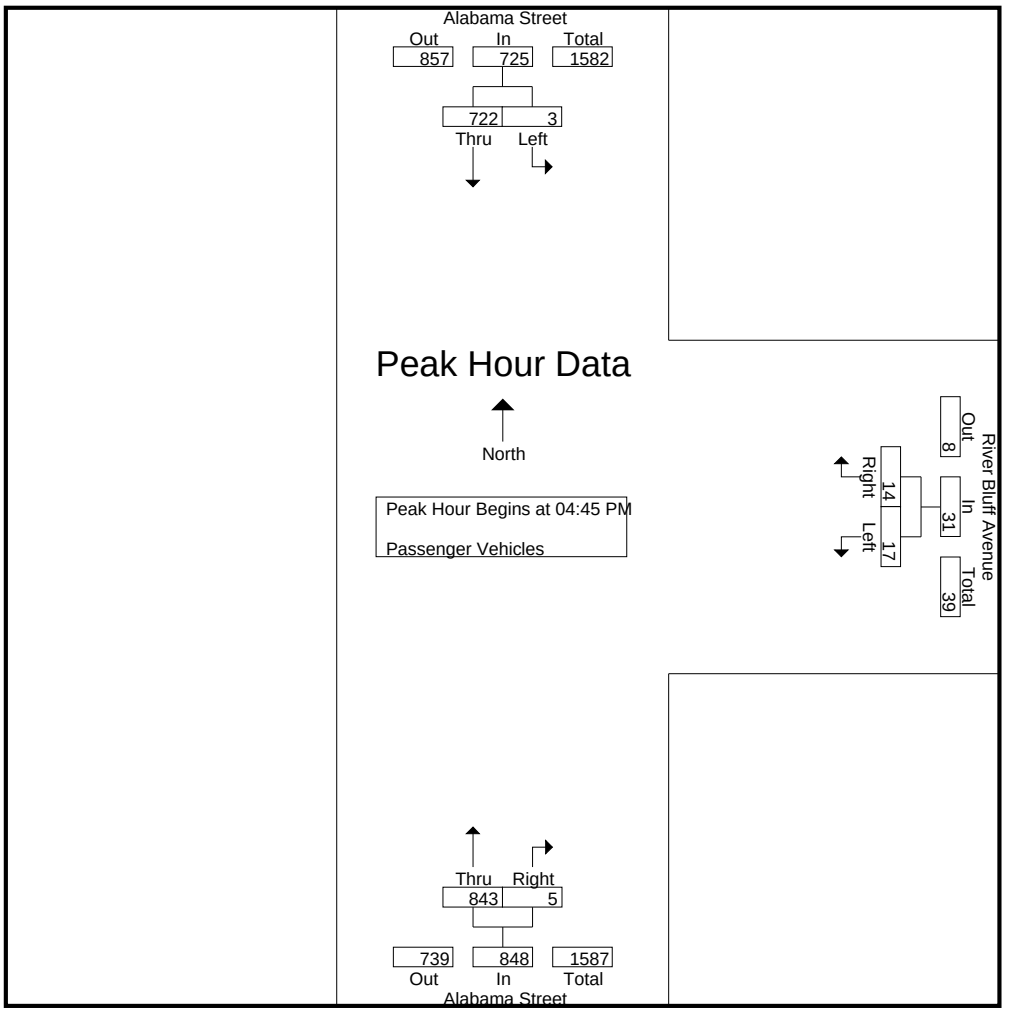
County of San Bernardino
N/S: Alabama Street
E/W: River Bluff Avenue
Weather: Clear

File Name : 04_CSB_Alabama_Riv Bluff PM
Site Code : 06718128
Start Date : 2/21/2018
Page No : 2



Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM			04:45 PM			04:45 PM		
+0 mins.	**1**	180	181	2	1	3	214	1	215
+15 mins.	0	178	178	2	2	4	185	0	185
+30 mins.	1	**189**	**190**	**8**	0	8	215	**2**	217
+45 mins.	1	175	176	5	**11**	**16**	**229**	2	**231**
Total Volume	3	722	725	17	14	31	843	5	848
% App. Total	0.4	99.6		54.8	45.2		99.4	0.6	
PHF	.750	.955	.954	.531	.318	.484	.920	.625	.918

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County of San Bernardino
N/S: Alabama Street
E/W: River Bluff Avenue
Weather: Clear

File Name : 04_CSB_Alabama_Riv Bluff PM
Site Code : 06718128
Start Date : 2/21/2018
Page No : 1

Groups Printed- Large 2 Axle Vehicles

	Alabama Street Southbound			River Bluff Avenue Westbound			Alabama Street Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
04:00 PM	0	2	2	0	0	0	4	0	4	6
04:15 PM	0	1	1	0	0	0	2	0	2	3
04:30 PM	0	0	0	0	0	0	4	1	5	5
04:45 PM	0	2	2	0	0	0	1	0	1	3
Total	0	5	5	0	0	0	11	1	12	17
05:00 PM	0	2	2	0	0	0	4	1	5	7
05:15 PM	0	3	3	0	0	0	4	0	4	7
05:30 PM	0	2	2	0	0	0	2	0	2	4
05:45 PM	0	3	3	0	0	0	0	0	0	3
Total	0	10	10	0	0	0	10	1	11	21
Grand Total	0	15	15	0	0	0	21	2	23	38
Apprch %	0	100		0	0		91.3	8.7		
Total %	0	39.5	39.5	0	0	0	55.3	5.3	60.5	

	Alabama Street Southbound			River Bluff Avenue Westbound			Alabama Street Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:45 PM										
04:45 PM	0	2	2	0	0	0	1	0	1	3
05:00 PM	0	2	2	0	0	0	**4**	**1**	**5**	**7**
05:15 PM	0	**3**	**3**	0	0	0	4	0	4	7
05:30 PM	0	2	2	0	0	0	2	0	2	4
Total Volume	0	9	9	0	0	0	11	1	12	21
% App. Total	0	100		0	0		91.7	8.3		
PHF	.000	.750	.750	.000	.000	.000	.688	.250	.600	.750

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County of San Bernardino
N/S: Alabama Street
E/W: River Bluff Avenue
Weather: Clear

File Name : 04_CSB_Alabama_Riv Bluff PM
Site Code : 06718128
Start Date : 2/21/2018
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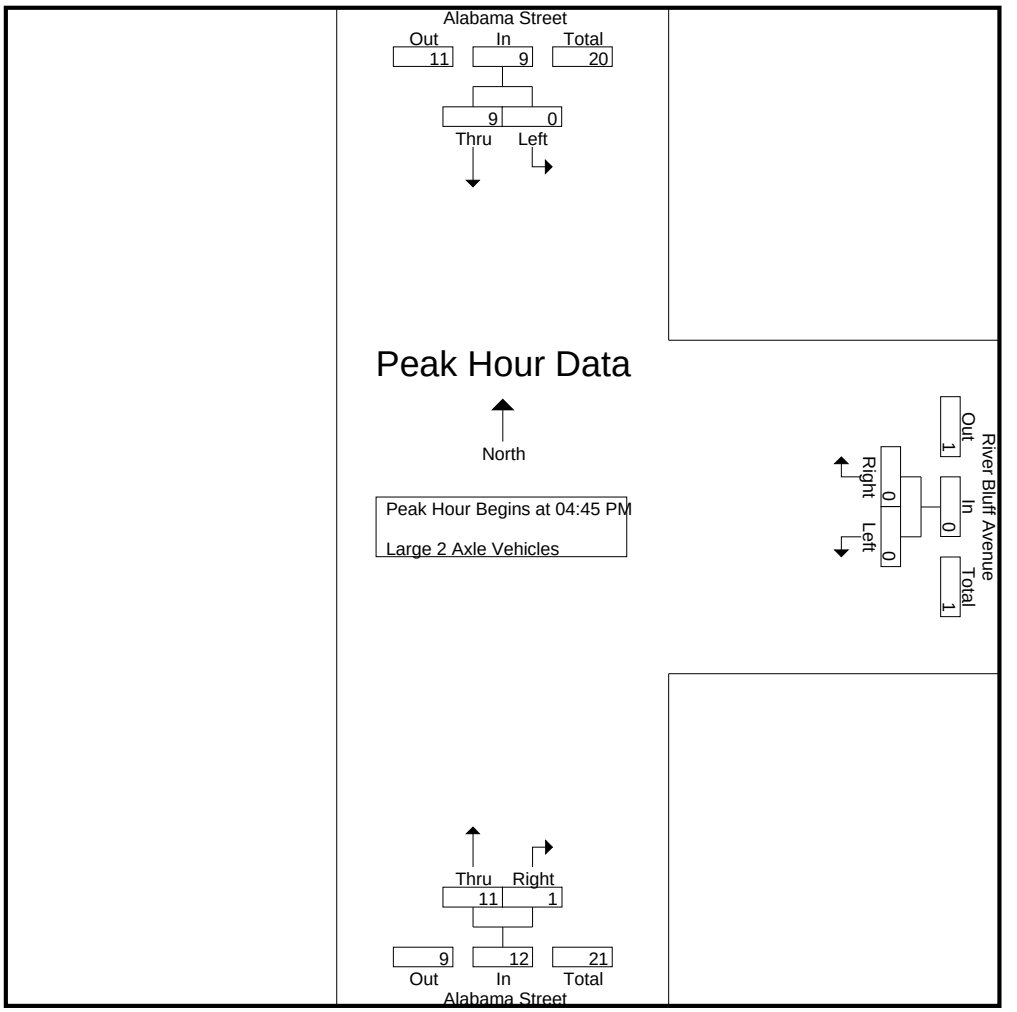

Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM			04:45 PM			04:45 PM		
+0 mins.	0	2	2	0	0	0	1	0	1
+15 mins.	0	2	2	0	0	0	**4**	**1**	**5**
+30 mins.	0	**3**	**3**	0	0	0	4	0	4
+45 mins.	0	2	2	0	0	0	2	0	2
Total Volume	0	9	9	0	0	0	11	1	12
% App. Total	0	100		0	0		91.7	8.3	
PHF	.000	.750	.750	.000	.000	.000	.688	.250	.600

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County of San Bernardino
N/S: Alabama Street
E/W: River Bluff Avenue
Weather: Clear

File Name : 04_CSB_Alabama_Riv Bluff PM
Site Code : 06718128
Start Date : 2/21/2018
Page No : 1

Groups Printed- 3 Axle Vehicles

	Alabama Street Southbound			River Bluff Avenue Westbound			Alabama Street Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
04:00 PM	1	0	1	0	2	2	2	0	2	5
04:15 PM	3	0	3	0	0	0	0	0	0	3
04:30 PM	0	1	1	1	1	2	1	1	2	5
04:45 PM	5	1	6	1	1	2	1	0	1	9
Total	9	2	11	2	4	6	4	1	5	22
05:00 PM	6	0	6	0	0	0	0	1	1	7
05:15 PM	3	2	5	1	0	1	1	1	2	8
05:30 PM	2	1	3	2	1	3	0	0	0	6
05:45 PM	2	0	2	1	1	2	0	2	2	6
Total	13	3	16	4	2	6	1	4	5	27
Grand Total	22	5	27	6	6	12	5	5	10	49
Apprch %	81.5	18.5		50	50		50	50		
Total %	44.9	10.2	55.1	12.2	12.2	24.5	10.2	10.2	20.4	

	Alabama Street Southbound			River Bluff Avenue Westbound			Alabama Street Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:45 PM										
04:45 PM	5	1	**6**	1	**1**	2	**1**	0	1	**9**
05:00 PM	**6**	0	6	0	0	0	0	**1**	1	7
05:15 PM	3	**2**	5	1	0	1	1	1	**2**	8
05:30 PM	2	1	3	**2**	1	**3**	0	0	0	6
Total Volume	16	4	20	4	2	6	2	2	4	30
% App. Total	80	20		66.7	33.3		50	50		
PHF	.667	.500	.833	.500	.500	.500	.500	.500	.500	.833

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County of San Bernardino
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Weather: Clear

File Name : 04_CSB_Alabama_Riv Bluff PM
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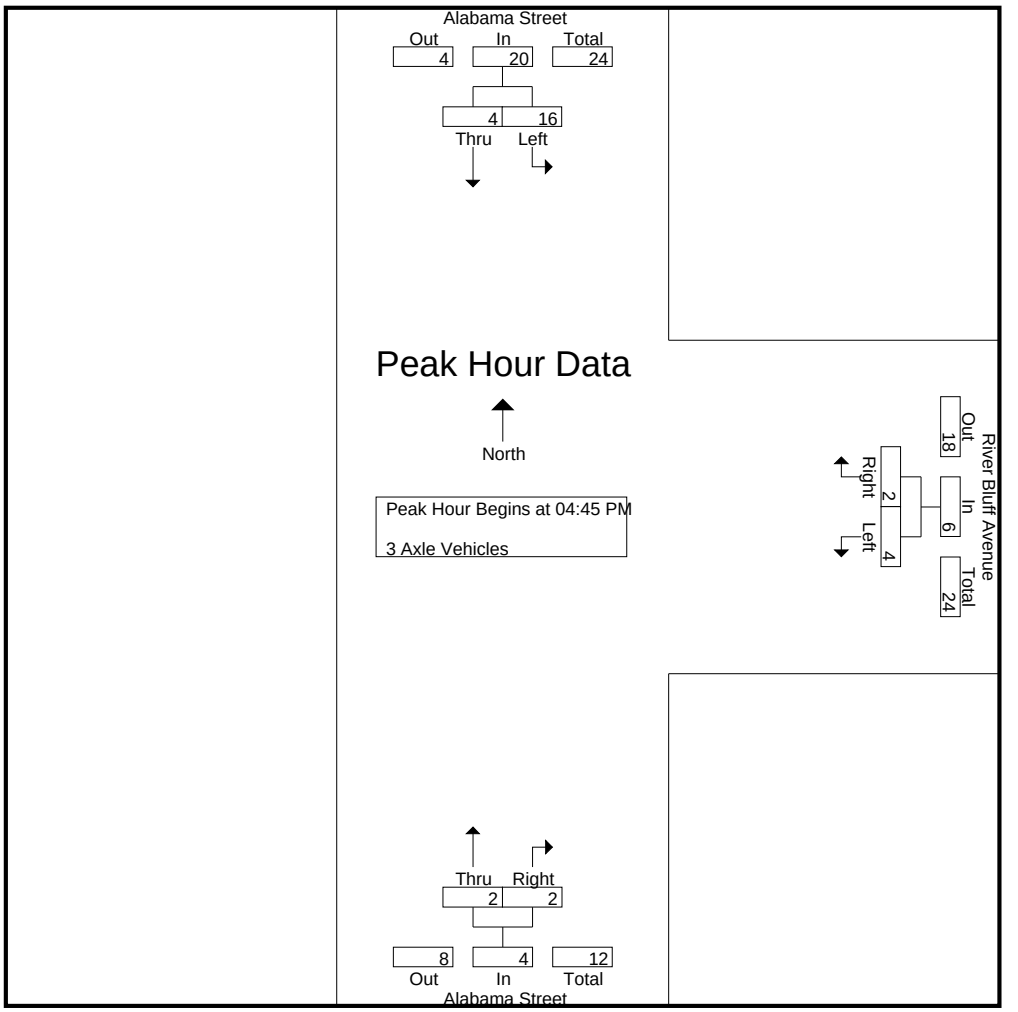

Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM			04:45 PM			04:45 PM		
+0 mins.	5	1	**6**	1	**1**	2	**1**	0	1
+15 mins.	**6**	0	6	0	0	0	0	**1**	1
+30 mins.	3	**2**	5	1	0	1	1	1	**2**
+45 mins.	2	1	3	**2**	1	**3**	0	0	0
Total Volume	16	4	20	4	2	6	2	2	4
% App. Total	80	20		66.7	33.3		50	50	
PHF	.667	.500	.833	.500	.500	.500	.500	.500	.500

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County of San Bernardino
N/S: Alabama Street
E/W: River Bluff Avenue
Weather: Clear

File Name : 04_CSB_Alabama_Riv Bluff PM
Site Code : 06718128
Start Date : 2/21/2018
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Groups Printed- 4+ Axle Trucks

	Alabama Street Southbound			River Bluff Avenue Westbound			Alabama Street Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
04:00 PM	1	0	1	2	5	7	2	4	6	14
04:15 PM	3	1	4	0	1	1	3	6	9	14
04:30 PM	1	1	2	4	6	10	4	6	10	22
04:45 PM	1	3	4	1	4	5	0	3	3	12
Total	6	5	11	7	16	23	9	19	28	62
05:00 PM	0	3	3	0	2	2	7	3	10	15
05:15 PM	0	4	4	1	2	3	2	3	5	12
05:30 PM	0	3	3	1	5	6	4	1	5	14
05:45 PM	0	6	6	0	1	1	4	4	8	15
Total	0	16	16	2	10	12	17	11	28	56
Grand Total	6	21	27	9	26	35	26	30	56	118
Apprch %	22.2	77.8		25.7	74.3		46.4	53.6		
Total %	5.1	17.8	22.9	7.6	22	29.7	22	25.4	47.5	

	Alabama Street Southbound			River Bluff Avenue Westbound			Alabama Street Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:45 PM										
04:45 PM	**1**	3	**4**	**1**	4	5	0	**3**	3	12
05:00 PM	0	3	3	0	2	2	**7**	3	**10**	**15**
05:15 PM	0	**4**	4	1	2	3	2	3	5	12
05:30 PM	0	3	3	1	**5**	**6**	4	1	5	14
Total Volume	1	13	14	3	13	16	13	10	23	53
% App. Total	7.1	92.9		18.8	81.2		56.5	43.5		
PHF	.250	.813	.875	.750	.650	.667	.464	.833	.575	.883

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County of San Bernardino
N/S: Alabama Street
E/W: River Bluff Avenue
Weather: Clear

File Name : 04_CSB_Alabama_Riv Bluff PM
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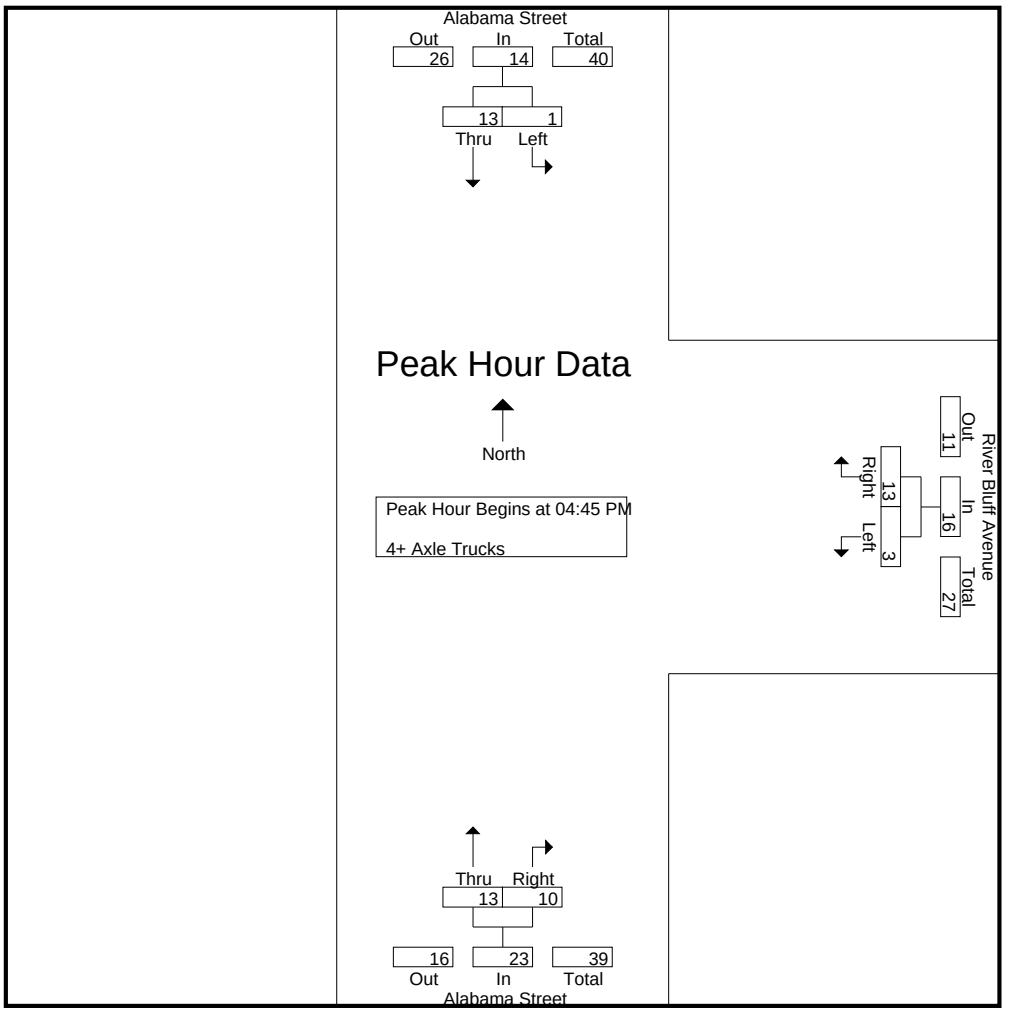

Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM			04:45 PM			04:45 PM		
+0 mins.	**1**	3	**4**	**1**	4	5	0	**3**	3
+15 mins.	0	3	3	0	2	2	**7**	3	**10**
+30 mins.	0	**4**	4	1	2	3	2	3	5
+45 mins.	0	3	3	1	**5**	**6**	4	1	5
Total Volume	1	13	14	3	13	16	13	10	23
% App. Total	7.1	92.9		18.8	81.2		56.5	43.5	
PHF	.250	.813	.875	.750	.650	.667	.464	.833	.575

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County of San Bernardino
N/S: Alabama Street
E/W: Palmetto Avenue
Weather: Clear

File Name : 05_CSB_Alabama_Palmetto AM
Site Code : 06718128
Start Date : 2/21/2018
Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

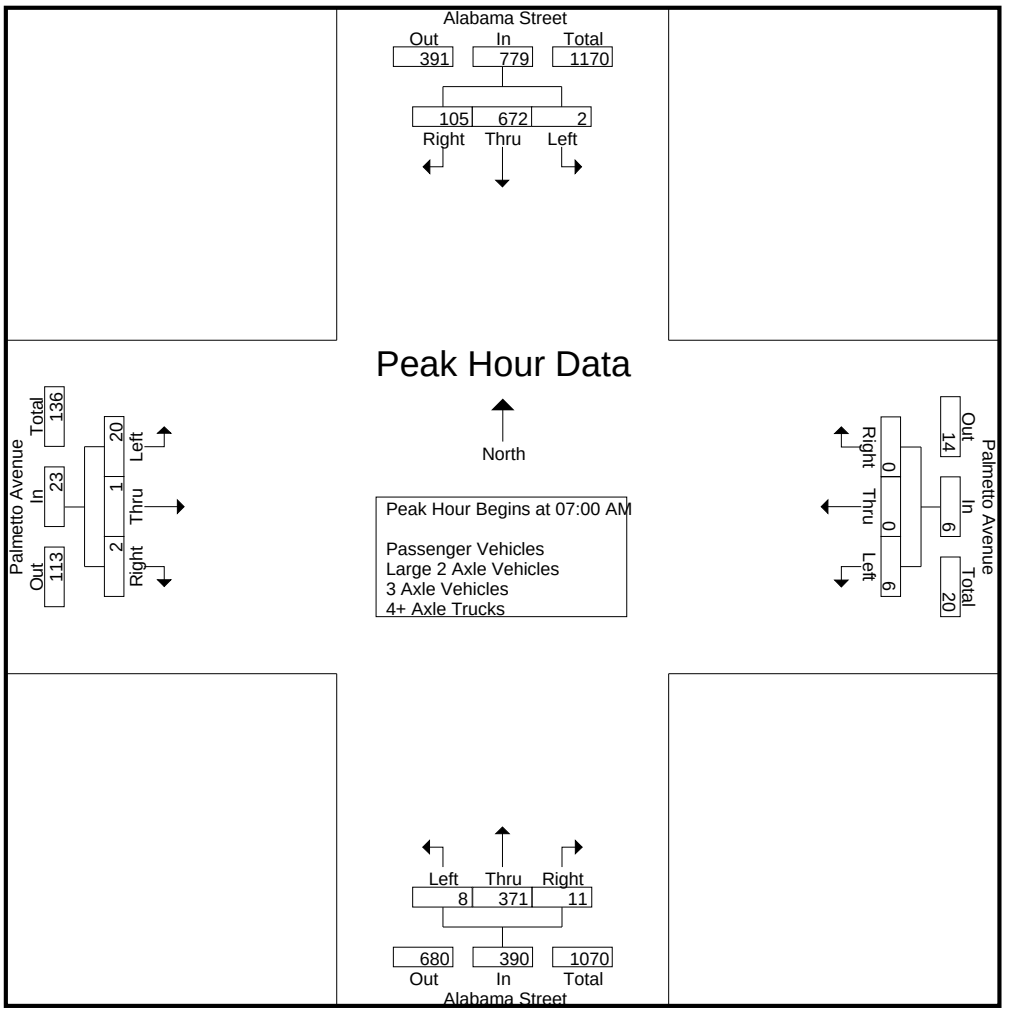
	Alabama Street Southbound				Palmetto Avenue Westbound				Alabama Street Northbound				Palmetto Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	1	167	18	186	3	0	0	3	4	98	3	105	7	0	1	8	302
07:15 AM	0	220	24	244	2	0	0	2	0	108	1	109	3	0	0	3	358
07:30 AM	0	128	25	153	0	0	0	0	1	88	5	94	4	0	0	4	251
07:45 AM	1	157	38	196	1	0	0	1	3	77	2	82	6	1	1	8	287
Total	2	672	105	779	6	0	0	6	8	371	11	390	20	1	2	23	1198
08:00 AM	2	78	12	92	1	1	2	4	1	61	4	66	4	3	0	7	169
08:15 AM	0	73	11	84	16	0	9	25	2	63	3	68	3	0	0	3	180
08:30 AM	2	103	10	115	2	0	1	3	1	59	13	73	2	1	0	3	194
08:45 AM	6	113	12	131	1	0	2	3	1	37	14	52	2	0	1	3	189
Total	10	367	45	422	20	1	14	35	5	220	34	259	11	4	1	16	732
Grand Total	12	1039	150	1201	26	1	14	41	13	591	45	649	31	5	3	39	1930
Apprch %	1	86.5	12.5		63.4	2.4	34.1		2	91.1	6.9		79.5	12.8	7.7		
Total %	0.6	53.8	7.8	62.2	1.3	0.1	0.7	2.1	0.7	30.6	2.3	33.6	1.6	0.3	0.2	2	
Passenger Vehicles	10	956	141	1107	22	0	12	34	11	534	29	574	30	1	2	33	1748
% Passenger Vehicles	83.3	92	94	92.2	84.6	0	85.7	82.9	84.6	90.4	64.4	88.4	96.8	20	66.7	84.6	90.6
Large 2 Axle Vehicles	0	12	7	19	2	0	0	2	1	9	2	12	1	0	0	1	34
% Large 2 Axle Vehicles	0	1.2	4.7	1.6	7.7	0	0	4.9	7.7	1.5	4.4	1.8	3.2	0	0	2.6	1.8
3 Axle Vehicles	1	22	2	25	2	1	0	3	0	17	5	22	0	1	1	2	52
% 3 Axle Vehicles	8.3	2.1	1.3	2.1	7.7	100	0	7.3	0	2.9	11.1	3.4	0	20	33.3	5.1	2.7
4+ Axle Trucks	1	49	0	50	0	0	2	2	1	31	9	41	0	3	0	3	96
% 4+ Axle Trucks	8.3	4.7	0	4.2	0	0	14.3	4.9	7.7	5.2	20	6.3	0	60	0	7.7	5

	Alabama Street Southbound				Palmetto Avenue Westbound				Alabama Street Northbound				Palmetto Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	**1**	167	18	186	**3**	0	0	**3**	**4**	98	3	105	**7**	0	**1**	**8**	302
07:15 AM	0	**220**	24	**244**	2	0	0	2	0	**108**	1	**109**	3	0	0	3	**358**
07:30 AM	0	128	25	153	0	0	0	0	1	88	**5**	94	4	0	0	4	251
07:45 AM	1	157	**38**	196	1	0	0	1	3	77	2	82	6	**1**	1	8	287
Total Volume	2	672	105	779	6	0	0	6	8	371	11	390	20	1	2	23	1198
% App. Total	0.3	86.3	13.5		100	0	0		2.1	95.1	2.8		87	4.3	8.7		
PHF	.500	.764	.691	.798	.500	.000	.000	.500	.500	.859	.550	.894	.714	.250	.500	.719	.837

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

County of San Bernardino
N/S: Alabama Street
E/W: Palmetto Avenue
Weather: Clear

File Name : 05_CSB_Alabama_Palmetto AM
Site Code : 06718128
Start Date : 2/21/2018



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM				08:00 AM				07:00 AM				07:00 AM			
+0 mins.	**1**	167	18	186	1	**1**	2	4	**4**	98	3	105	**7**	0	**1**	**8**
+15 mins.	0	**220**	24	**244**	**16**	0	**9**	**25**	0	**108**	1	**109**	3	0	0	3
+30 mins.	0	128	25	153	2	0	1	3	1	88	**5**	94	4	0	0	4
+45 mins.	1	157	**38**	196	1	0	2	3	3	77	2	82	6	**1**	1	8
Total Volume	2	672	105	779	20	1	14	35	8	371	11	390	20	1	2	23
% App. Total	0.3	86.3	13.5		57.1	2.9	40		2.1	95.1	2.8		87	4.3	8.7	
PHF	.500	.764	.691	.798	.313	.250	.389	.350	.500	.859	.550	.894	.714	.250	.500	.719

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County of San Bernardino
N/S: Alabama Street
E/W: Palmetto Avenue
Weather: Clear

File Name : 05_CSB_Alabama_Palmetto AM
Site Code : 06718128
Start Date : 2/21/2018
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Groups Printed- Passenger Vehicles

	Alabama Street Southbound				Palmetto Avenue Westbound				Alabama Street Northbound				Palmetto Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	1	161	17	179	1	0	0	1	3	88	3	94	7	0	1	8	282
07:15 AM	0	204	22	226	0	0	0	0	0	101	0	101	3	0	0	3	330
07:30 AM	0	117	25	142	0	0	0	0	1	84	3	88	4	0	0	4	234
07:45 AM	1	148	35	184	1	0	0	1	3	72	1	76	6	0	0	6	267
Total	2	630	99	731	2	0	0	2	7	345	7	359	20	0	1	21	1113
08:00 AM	1	67	10	78	1	0	2	3	1	54	2	57	4	0	0	4	142
08:15 AM	0	66	11	77	16	0	8	24	2	51	2	55	3	0	0	3	159
08:30 AM	2	93	10	105	2	0	1	3	0	53	9	62	2	1	0	3	173
08:45 AM	5	100	11	116	1	0	1	2	1	31	9	41	1	0	1	2	161
Total	8	326	42	376	20	0	12	32	4	189	22	215	10	1	1	12	635
Grand Total	10	956	141	1107	22	0	12	34	11	534	29	574	30	1	2	33	1748
Apprch %	0.9	86.4	12.7		64.7	0	35.3		1.9	93	5.1		90.9	3	6.1		
Total %	0.6	54.7	8.1	63.3	1.3	0	0.7	1.9	0.6	30.5	1.7	32.8	1.7	0.1	0.1	1.9	

	Alabama Street Southbound				Palmetto Avenue Westbound				Alabama Street Northbound				Palmetto Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	**1**	161	17	179	**1**	0	0	**1**	**3**	88	**3**	94	**7**	0	**1**	**8**	282
07:15 AM	0	**204**	22	**226**	0	0	0	0	0	**101**	0	**101**	3	0	0	3	**330**
07:30 AM	0	117	25	142	0	0	0	0	1	84	3	88	4	0	0	4	234
07:45 AM	1	148	**35**	184	1	0	0	1	3	72	1	76	6	0	0	6	267
Total Volume	2	630	99	731	2	0	0	2	7	345	7	359	20	0	1	21	1113
% App. Total	0.3	86.2	13.5		100	0	0		1.9	96.1	1.9		95.2	0	4.8		
PHF	.500	.772	.707	.809	.500	.000	.000	.500	.583	.854	.583	.889	.714	.000	.250	.656	.843

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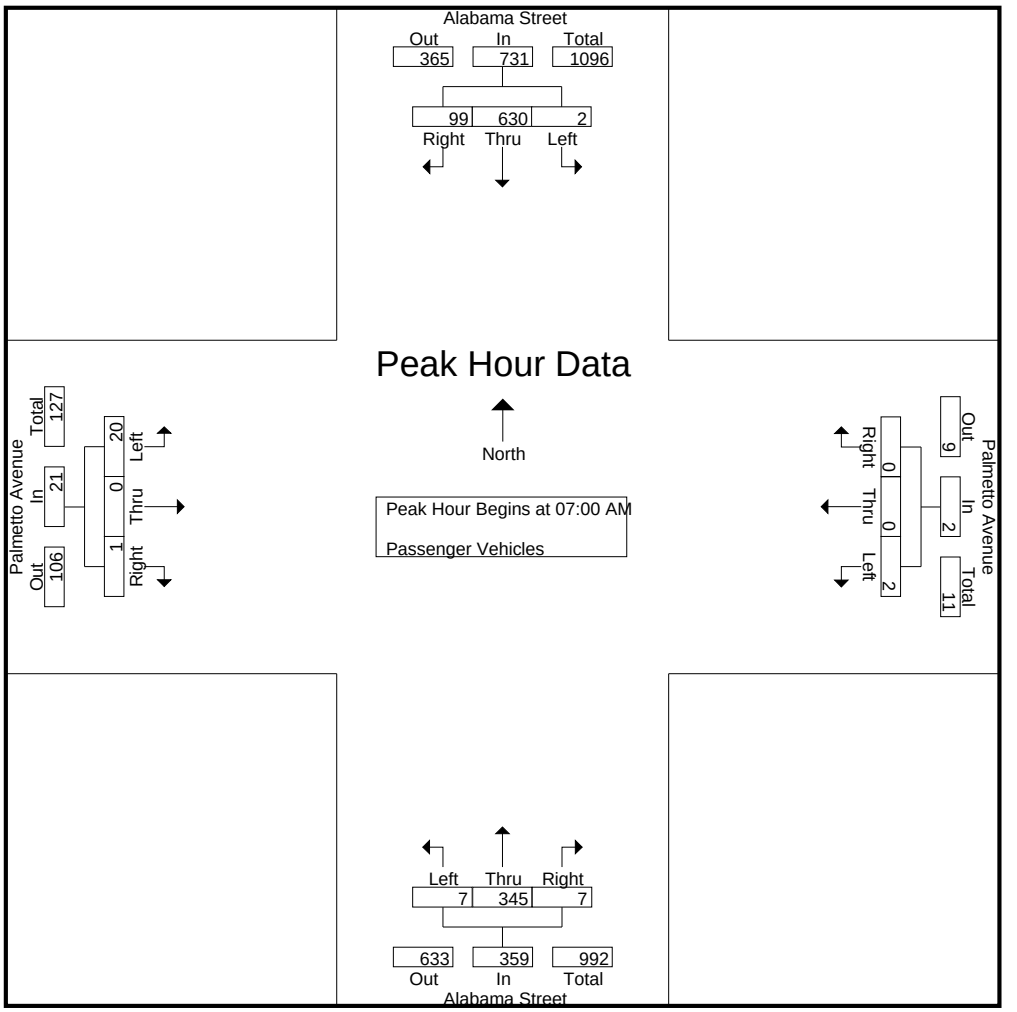
County of San Bernardino
N/S: Alabama Street
E/W: Palmetto Avenue
Weather: Clear

File Name : 05_CSB_Alabama_Palmetto AM
Site Code : 06718128
Start Date : 2/21/2018
Page No : 2



Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM				07:00 AM				07:00 AM				07:00 AM			
+0 mins.	**1**	161	17	179	**1**	0	0	**1**	**3**	88	**3**	94	**7**	0	**1**	**8**
+15 mins.	0	**204**	22	**226**	0	0	0	0	0	**101**	0	**101**	3	0	0	3
+30 mins.	0	117	25	142	0	0	0	0	1	84	3	88	4	0	0	4
+45 mins.	1	148	**35**	184	1	0	0	1	3	72	1	76	6	0	0	6
Total Volume	2	630	99	731	2	0	0	2	7	345	7	359	20	0	1	21
% App. Total	0.3	86.2	13.5		100	0	0		1.9	96.1	1.9		95.2	0	4.8	
PHF	.500	.772	.707	.809	.500	.000	.000	.500	.583	.854	.583	.889	.714	.000	.250	.656

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County of San Bernardino
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E/W: Palmetto Avenue
Weather: Clear

File Name : 05_CSB_Alabama_Palmetto AM
Site Code : 06718128
Start Date : 2/21/2018
Page No : 1

Groups Printed- Large 2 Axle Vehicles

	Alabama Street Southbound				Palmetto Avenue Westbound				Alabama Street Northbound				Palmetto Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	1	1	1	0	0	1	1	3	0	4	0	0	0	0	6
07:15 AM	0	2	1	3	1	0	0	1	0	2	0	2	0	0	0	0	6
07:30 AM	0	1	0	1	0	0	0	0	0	0	1	1	0	0	0	0	2
07:45 AM	0	1	2	3	0	0	0	0	0	0	1	1	0	0	0	0	4
Total	0	4	4	8	2	0	0	2	1	5	2	8	0	0	0	0	18
08:00 AM	0	4	2	6	0	0	0	0	0	1	0	1	0	0	0	0	7
08:15 AM	0	1	0	1	0	0	0	0	0	2	0	2	0	0	0	0	3
08:30 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
08:45 AM	0	2	1	3	0	0	0	0	0	1	0	1	1	0	0	1	5
Total	0	8	3	11	0	0	0	0	0	4	0	4	1	0	0	1	16
Grand Total	0	12	7	19	2	0	0	2	1	9	2	12	1	0	0	1	34
Apprch %	0	63.2	36.8		100	0	0		8.3	75	16.7		100	0	0		
Total %	0	35.3	20.6	55.9	5.9	0	0	5.9	2.9	26.5	5.9	35.3	2.9	0	0	2.9	

	Alabama Street Southbound				Palmetto Avenue Westbound				Alabama Street Northbound				Palmetto Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	0	1	1	**1**	0	0	**1**	**1**	**3**	0	**4**	0	0	0	0	**6**
07:15 AM	0	**2**	1	**3**	1	0	0	1	0	2	0	2	0	0	0	0	6
07:30 AM	0	1	0	1	0	0	0	0	0	0	**1**	1	0	0	0	0	2
07:45 AM	0	1	**2**	3	0	0	0	0	0	0	1	1	0	0	0	0	4
Total Volume	0	4	4	8	2	0	0	2	1	5	2	8	0	0	0	0	18
% App. Total	0	50	50		100	0	0		12.5	62.5	25		0	0	0		
PHF	.000	.500	.500	.667	.500	.000	.000	.500	.250	.417	.500	.500	.000	.000	.000	.000	.750

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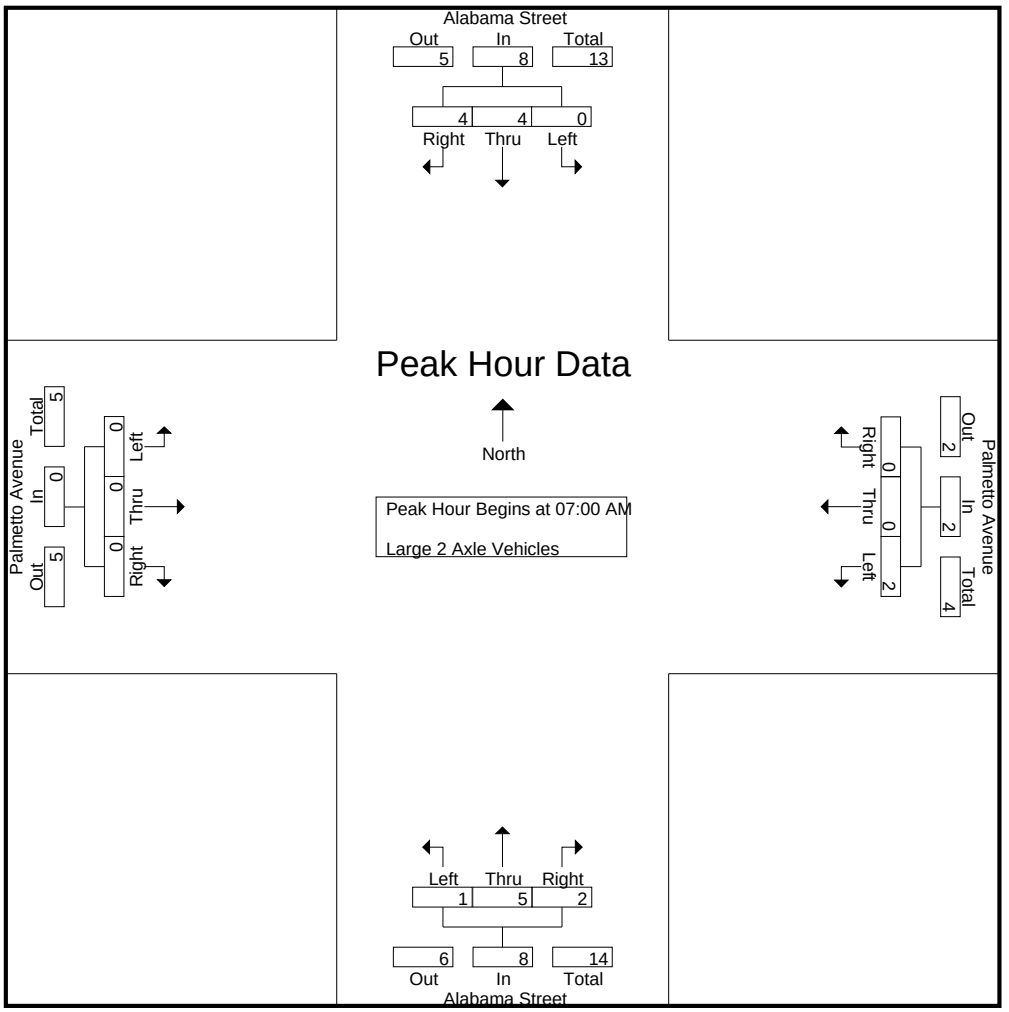
County of San Bernardino
N/S: Alabama Street
E/W: Palmetto Avenue
Weather: Clear

File Name : 05_CSB_Alabama_Palmetto AM
Site Code : 06718128
Start Date : 2/21/2018
Page No : 2



Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM				07:00 AM				07:00 AM				07:00 AM			
+0 mins.	0	0	1	1	**1**	0	0	**1**	**1**	**3**	0	**4**	0	0	0	0
+15 mins.	0	**2**	1	**3**	1	0	0	1	0	2	0	2	0	0	0	0
+30 mins.	0	1	0	1	0	0	0	0	0	0	**1**	1	0	0	0	0
+45 mins.	0	1	**2**	3	0	0	0	0	0	0	1	1	0	0	0	0
Total Volume	0	4	4	8	2	0	0	2	1	5	2	8	0	0	0	0
% App. Total	0	50	50		100	0	0		12.5	62.5	25		0	0	0	
PHF	.000	.500	.500	.667	.500	.000	.000	.500	.250	.417	.500	.500	.000	.000	.000	.000

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County of San Bernardino
N/S: Alabama Street
E/W: Palmetto Avenue
Weather: Clear

File Name : 05_CSB_Alabama_Palmetto AM
Site Code : 06718128
Start Date : 2/21/2018
Page No : 1

Groups Printed- 3 Axle Vehicles

	Alabama Street Southbound				Palmetto Avenue Westbound				Alabama Street Northbound				Palmetto Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	1	0	1	1	0	0	1	0	3	0	3	0	0	0	0	5
07:15 AM	0	4	1	5	1	0	0	1	0	0	1	1	0	0	0	0	7
07:30 AM	0	4	0	4	0	0	0	0	0	1	1	2	0	0	0	0	6
07:45 AM	0	1	1	2	0	0	0	0	0	2	0	2	0	1	1	2	6
Total	0	10	2	12	2	0	0	2	0	6	2	8	0	1	1	2	24
08:00 AM	1	2	0	3	0	1	0	1	0	2	1	3	0	0	0	0	7
08:15 AM	0	2	0	2	0	0	0	0	0	4	0	4	0	0	0	0	6
08:30 AM	0	3	0	3	0	0	0	0	0	3	1	4	0	0	0	0	7
08:45 AM	0	5	0	5	0	0	0	0	0	2	1	3	0	0	0	0	8
Total	1	12	0	13	0	1	0	1	0	11	3	14	0	0	0	0	28
Grand Total	1	22	2	25	2	1	0	3	0	17	5	22	0	1	1	2	52
Apprch %	4	88	8		66.7	33.3	0		0	77.3	22.7		0	50	50		
Total %	1.9	42.3	3.8	48.1	3.8	1.9	0	5.8	0	32.7	9.6	42.3	0	1.9	1.9	3.8	

	Alabama Street Southbound				Palmetto Avenue Westbound				Alabama Street Northbound				Palmetto Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	1	0	1	**1**	0	0	**1**	0	**3**	0	**3**	0	0	0	0	5
07:15 AM	0	**4**	**1**	**5**	1	0	0	1	0	0	**1**	1	0	0	0	0	**7**
07:30 AM	0	4	0	4	0	0	0	0	0	1	1	2	0	0	0	0	6
07:45 AM	0	1	1	2	0	0	0	0	0	2	0	2	0	**1**	**1**	**2**	6
Total Volume	0	10	2	12	2	0	0	2	0	6	2	8	0	1	1	2	24
% App. Total	0	83.3	16.7		100	0	0		0	75	25		0	50	50		
PHF	.000	.625	.500	.600	.500	.000	.000	.500	.000	.500	.500	.667	.000	.250	.250	.250	.857

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County of San Bernardino
N/S: Alabama Street
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Weather: Clear

File Name : 05_CSB_Alabama_Palmetto AM
Site Code : 06718128
Start Date : 2/21/2018
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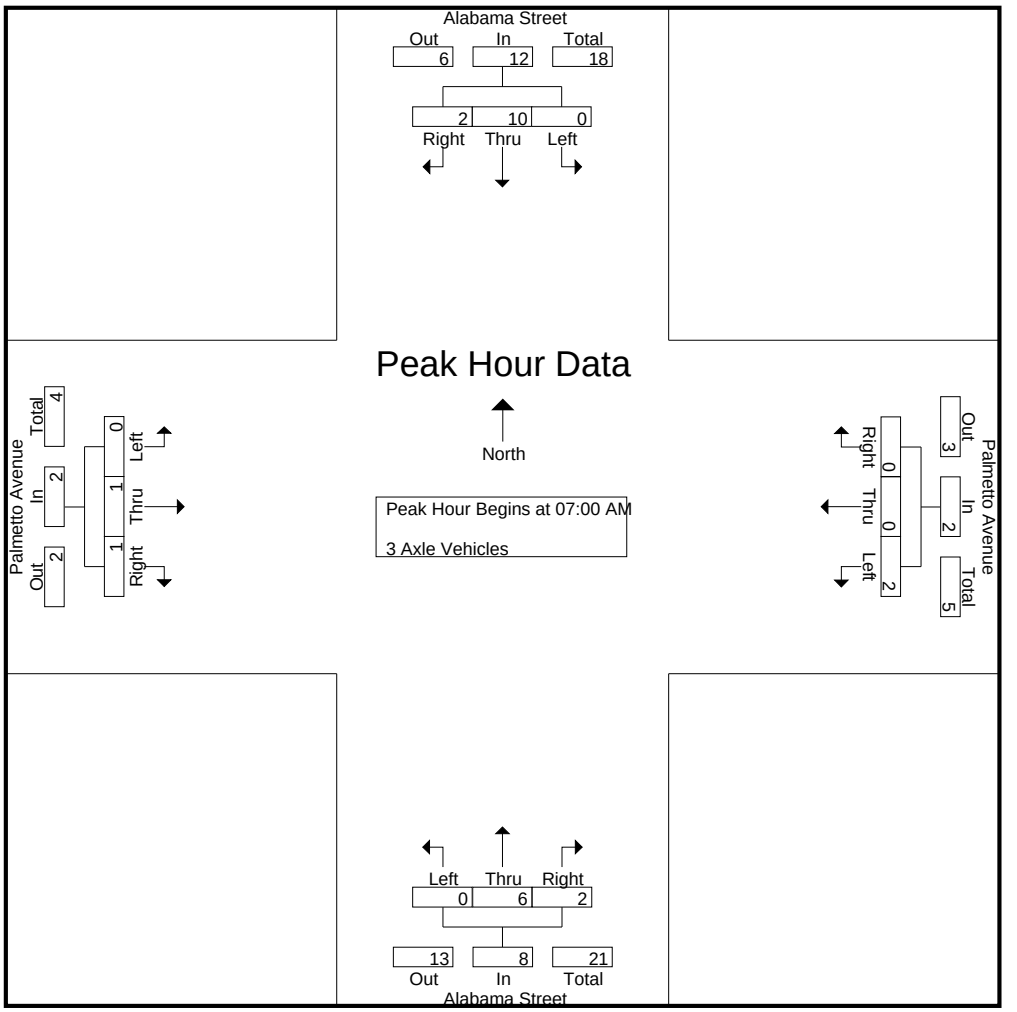

Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM				07:00 AM				07:00 AM				07:00 AM			
+0 mins.	0	1	0	1	**1**	0	0	**1**	0	**3**	0	**3**	0	0	0	0
+15 mins.	0	**4**	**1**	**5**	1	0	0	1	0	0	**1**	1	0	0	0	0
+30 mins.	0	4	0	4	0	0	0	0	0	1	1	2	0	0	0	0
+45 mins.	0	1	1	2	0	0	0	0	0	2	0	2	0	**1**	**1**	**2**
Total Volume	0	10	2	12	2	0	0	2	0	6	2	8	0	1	1	2
% App. Total	0	83.3	16.7		100	0	0		0	75	25		0	50	50	
PHF	.000	.625	.500	.600	.500	.000	.000	.500	.000	.500	.500	.667	.000	.250	.250	.250

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County of San Bernardino
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Weather: Clear

File Name : 05_CSB_Alabama_Palmetto AM
Site Code : 06718128
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Groups Printed- 4+ Axle Trucks

	Alabama Street Southbound				Palmetto Avenue Westbound				Alabama Street Northbound				Palmetto Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	5	0	5	0	0	0	0	0	4	0	4	0	0	0	0	9
07:15 AM	0	10	0	10	0	0	0	0	0	5	0	5	0	0	0	0	15
07:30 AM	0	6	0	6	0	0	0	0	0	3	0	3	0	0	0	0	9
07:45 AM	0	7	0	7	0	0	0	0	0	3	0	3	0	0	0	0	10
Total	0	28	0	28	0	0	0	0	0	15	0	15	0	0	0	0	43
08:00 AM	0	5	0	5	0	0	0	0	0	4	1	5	0	3	0	3	13
08:15 AM	0	4	0	4	0	0	1	1	0	6	1	7	0	0	0	0	12
08:30 AM	0	6	0	6	0	0	0	0	1	3	3	7	0	0	0	0	13
08:45 AM	1	6	0	7	0	0	1	1	0	3	4	7	0	0	0	0	15
Total	1	21	0	22	0	0	2	2	1	16	9	26	0	3	0	3	53
Grand Total	1	49	0	50	0	0	2	2	1	31	9	41	0	3	0	3	96
Apprch %	2	98	0		0	0	100		2.4	75.6	22		0	100	0		
Total %	1	51	0	52.1	0	0	2.1	2.1	1	32.3	9.4	42.7	0	3.1	0	3.1	

	Alabama Street Southbound				Palmetto Avenue Westbound				Alabama Street Northbound				Palmetto Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	5	0	5	0	0	0	0	0	4	0	4	0	0	0	0	9
07:15 AM	0	**10**	0	**10**	0	0	0	0	0	**5**	0	**5**	0	0	0	0	**15**
07:30 AM	0	6	0	6	0	0	0	0	0	3	0	3	0	0	0	0	9
07:45 AM	0	7	0	7	0	0	0	0	0	3	0	3	0	0	0	0	10
Total Volume	0	28	0	28	0	0	0	0	0	15	0	15	0	0	0	0	43
% App. Total	0	100	0		0	0	0		0	100	0		0	0	0		
PHF	.000	.700	.000	.700	.000	.000	.000	.000	.000	.750	.000	.750	.000	.000	.000	.000	.717

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County of San Bernardino
N/S: Alabama Street
E/W: Palmetto Avenue
Weather: Clear

File Name : 05_CSB_Alabama_Palmetto AM
Site Code : 06718128
Start Date : 2/21/2018
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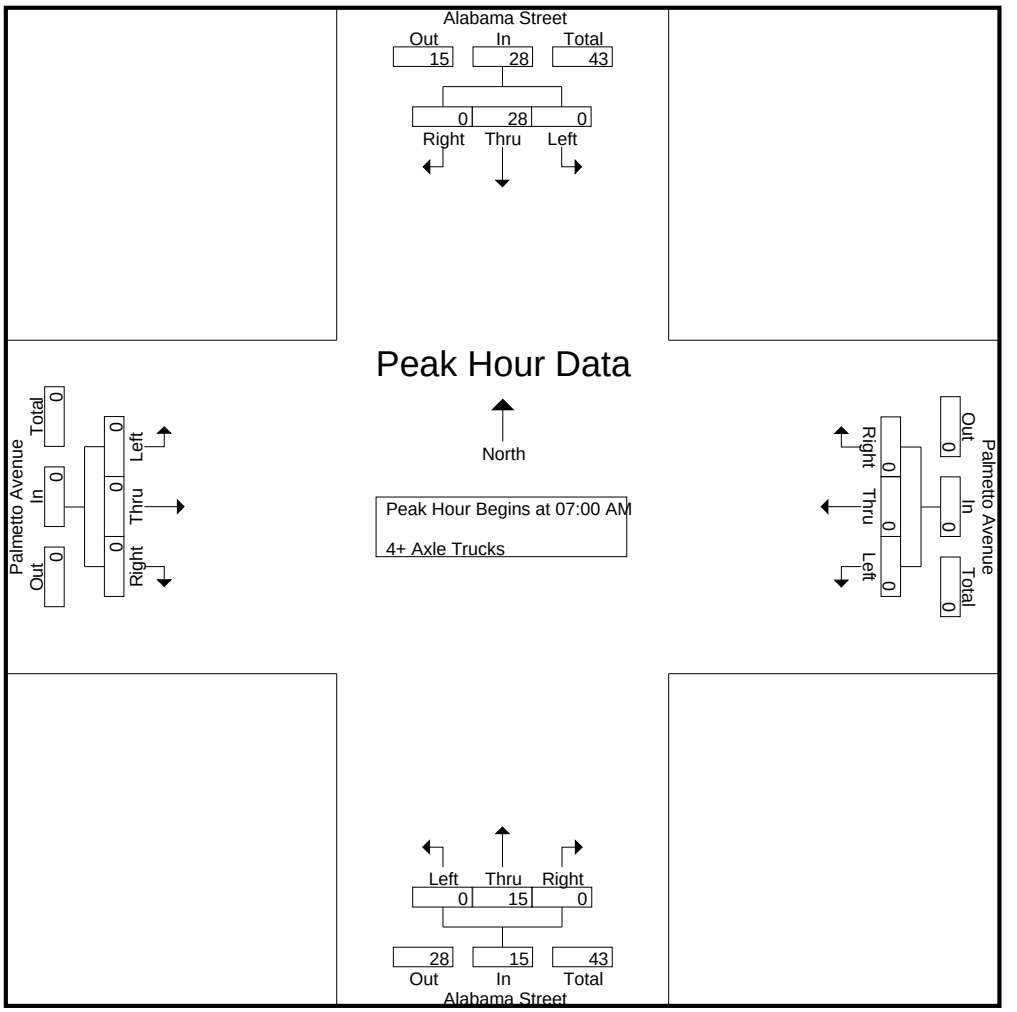

Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM				07:00 AM				07:00 AM				07:00 AM			
+0 mins.	0	5	0	5	0	0	0	0	0	4	0	4	0	0	0	0
+15 mins.	0	**10**	0	**10**	0	0	0	0	0	**5**	0	**5**	0	0	0	0
+30 mins.	0	6	0	6	0	0	0	0	0	3	0	3	0	0	0	0
+45 mins.	0	7	0	7	0	0	0	0	0	3	0	3	0	0	0	0
Total Volume	0	28	0	28	0	0	0	0	0	15	0	15	0	0	0	0
% App. Total	0	100	0		0	0	0		0	100	0		0	0	0	
PHF	.000	.700	.000	.700	.000	.000	.000	.000	.000	.750	.000	.750	.000	.000	.000	.000

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E/W: Palmetto Avenue
Weather: Clear

File Name : 05_CSB_Alabama_Palmetto PM
Site Code : 06718128
Start Date : 2/21/2018
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Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Alabama Street Southbound				Palmetto Avenue Westbound				Alabama Street Northbound				Palmetto Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	3	140	4	147	0	1	0	1	1	165	4	170	21	1	2	24	342
04:15 PM	0	141	6	147	1	0	0	1	0	143	3	146	30	0	1	31	325
04:30 PM	0	151	17	168	9	1	2	12	1	165	7	173	48	1	2	51	404
04:45 PM	0	175	15	190	2	2	2	6	0	182	0	182	35	0	0	35	413
Total	3	607	42	652	12	4	4	20	2	655	14	671	134	2	5	141	1484
05:00 PM	0	175	14	189	0	0	0	0	1	160	2	163	44	0	2	46	398
05:15 PM	3	188	12	203	1	1	1	3	0	189	1	190	27	1	2	30	426
05:30 PM	2	178	10	190	8	2	5	15	1	210	0	211	32	0	1	33	449
05:45 PM	0	162	18	180	1	1	1	3	0	173	6	179	30	1	0	31	393
Total	5	703	54	762	10	4	7	21	2	732	9	743	133	2	5	140	1666
Grand Total	8	1310	96	1414	22	8	11	41	4	1387	23	1414	267	4	10	281	3150
Apprch %	0.6	92.6	6.8		53.7	19.5	26.8		0.3	98.1	1.6		95	1.4	3.6		
Total %	0.3	41.6	3	44.9	0.7	0.3	0.3	1.3	0.1	44	0.7	44.9	8.5	0.1	0.3	8.9	
Passenger Vehicles	8	1265	85	1358	22	6	11	39	3	1315	11	1329	250	1	10	261	2987
% Passenger Vehicles	100	96.6	88.5	96	100	75	100	95.1	75	94.8	47.8	94	93.6	25	100	92.9	94.8
Large 2 Axle Vehicles	0	15	0	15	0	0	0	0	0	20	0	20	2	1	0	3	38
% Large 2 Axle Vehicles	0	1.1	0	1.1	0	0	0	0	0	1.4	0	1.4	0.7	25	0	1.1	1.2
3 Axle Vehicles	0	8	2	10	0	0	0	0	0	8	8	16	2	0	0	2	28
% 3 Axle Vehicles	0	0.6	2.1	0.7	0	0	0	0	0	0.6	34.8	1.1	0.7	0	0	0.7	0.9
4+ Axle Trucks	0	22	9	31	0	2	0	2	1	44	4	49	13	2	0	15	97
% 4+ Axle Trucks	0	1.7	9.4	2.2	0	25	0	4.9	25	3.2	17.4	3.5	4.9	50	0	5.3	3.1

	Alabama Street Southbound				Palmetto Avenue Westbound				Alabama Street Northbound				Palmetto Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	175	**15**	190	2	**2**	2	6	0	182	0	182	35	0	0	35	413
05:00 PM	0	175	14	189	0	0	0	0	**1**	160	**2**	163	**44**	0	**2**	**46**	398
05:15 PM	**3**	**188**	12	**203**	1	1	1	3	0	189	1	190	27	**1**	2	30	426
05:30 PM	2	178	10	190	**8**	2	**5**	**15**	1	**210**	0	**211**	32	0	1	33	**449**
Total Volume	5	716	51	772	11	5	8	24	2	741	3	746	138	1	5	144	1686
% App. Total	0.6	92.7	6.6		45.8	20.8	33.3		0.3	99.3	0.4		95.8	0.7	3.5		
PHF	.417	.952	.850	.951	.344	.625	.400	.400	.500	.882	.375	.884	.784	.250	.625	.783	.939

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Weather: Clear

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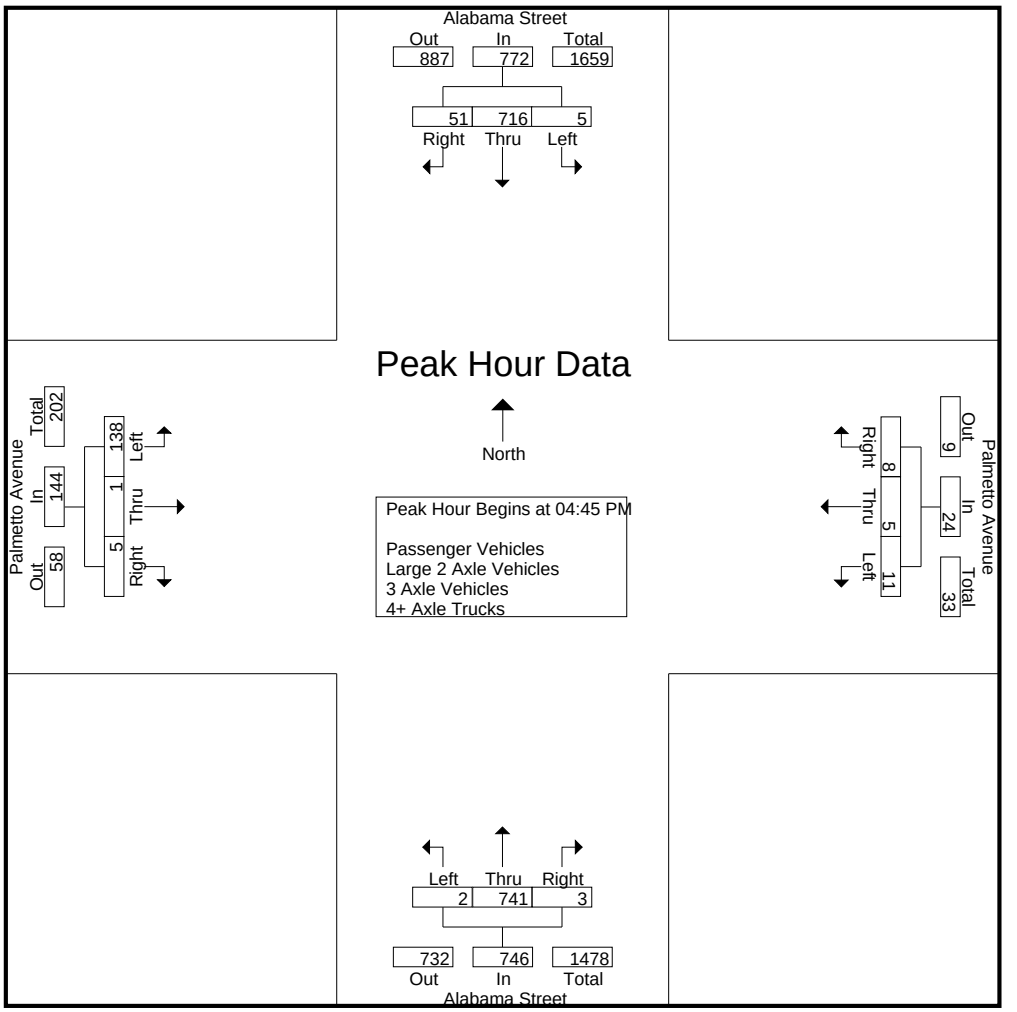

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM				04:15 PM			
+0 mins.	0	175	**15**	190	2	**2**	2	6	0	182	0	182	30	0	1	31
+15 mins.	0	175	14	189	0	0	0	0	**1**	160	**2**	163	**48**	**1**	**2**	**51**
+30 mins.	**3**	**188**	12	**203**	1	1	1	3	0	189	1	190	35	0	0	35
+45 mins.	2	178	10	190	**8**	2	**5**	**15**	1	**210**	0	**211**	44	0	2	46
Total Volume	5	716	51	772	11	5	8	24	2	741	3	746	157	1	5	163
% App. Total	0.6	92.7	6.6		45.8	20.8	33.3		0.3	99.3	0.4		96.3	0.6	3.1	
PHF	.417	.952	.850	.951	.344	.625	.400	.400	.500	.882	.375	.884	.818	.250	.625	.799

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Groups Printed- Passenger Vehicles

	Alabama Street Southbound				Palmetto Avenue Westbound				Alabama Street Northbound				Palmetto Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	3	135	4	142	0	0	0	0	1	155	2	158	19	0	2	21	321
04:15 PM	0	140	5	145	1	0	0	1	0	132	0	132	29	0	1	30	308
04:30 PM	0	145	17	162	9	1	2	12	0	151	3	154	46	0	2	48	376
04:45 PM	0	169	14	183	2	2	2	6	0	178	0	178	34	0	0	34	401
Total	3	589	40	632	12	3	4	19	1	616	5	622	128	0	5	133	1406
05:00 PM	0	171	12	183	0	0	0	0	1	148	0	149	40	0	2	42	374
05:15 PM	3	180	11	194	1	1	1	3	0	181	0	181	23	0	2	25	403
05:30 PM	2	169	8	179	8	2	5	15	1	205	0	206	31	0	1	32	432
05:45 PM	0	156	14	170	1	0	1	2	0	165	6	171	28	1	0	29	372
Total	5	676	45	726	10	3	7	20	2	699	6	707	122	1	5	128	1581
Grand Total	8	1265	85	1358	22	6	11	39	3	1315	11	1329	250	1	10	261	2987
Apprch %	0.6	93.2	6.3		56.4	15.4	28.2		0.2	98.9	0.8		95.8	0.4	3.8		
Total %	0.3	42.4	2.8	45.5	0.7	0.2	0.4	1.3	0.1	44	0.4	44.5	8.4	0	0.3	8.7	

	Alabama Street Southbound				Palmetto Avenue Westbound				Alabama Street Northbound				Palmetto Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	169	**14**	183	2	**2**	2	6	0	178	0	178	34	0	0	34	401
05:00 PM	0	171	12	183	0	0	0	0	**1**	148	0	149	**40**	0	**2**	**42**	374
05:15 PM	**3**	**180**	11	**194**	1	1	1	3	0	181	0	181	23	0	2	25	403
05:30 PM	2	169	8	179	**8**	2	**5**	**15**	1	**205**	0	**206**	31	0	1	32	**432**
Total Volume	5	689	45	739	11	5	8	24	2	712	0	714	128	0	5	133	1610
% App. Total	0.7	93.2	6.1		45.8	20.8	33.3		0.3	99.7	0		96.2	0	3.8		
PHF	.417	.957	.804	.952	.344	.625	.400	.400	.500	.868	.000	.867	.800	.000	.625	.792	.932

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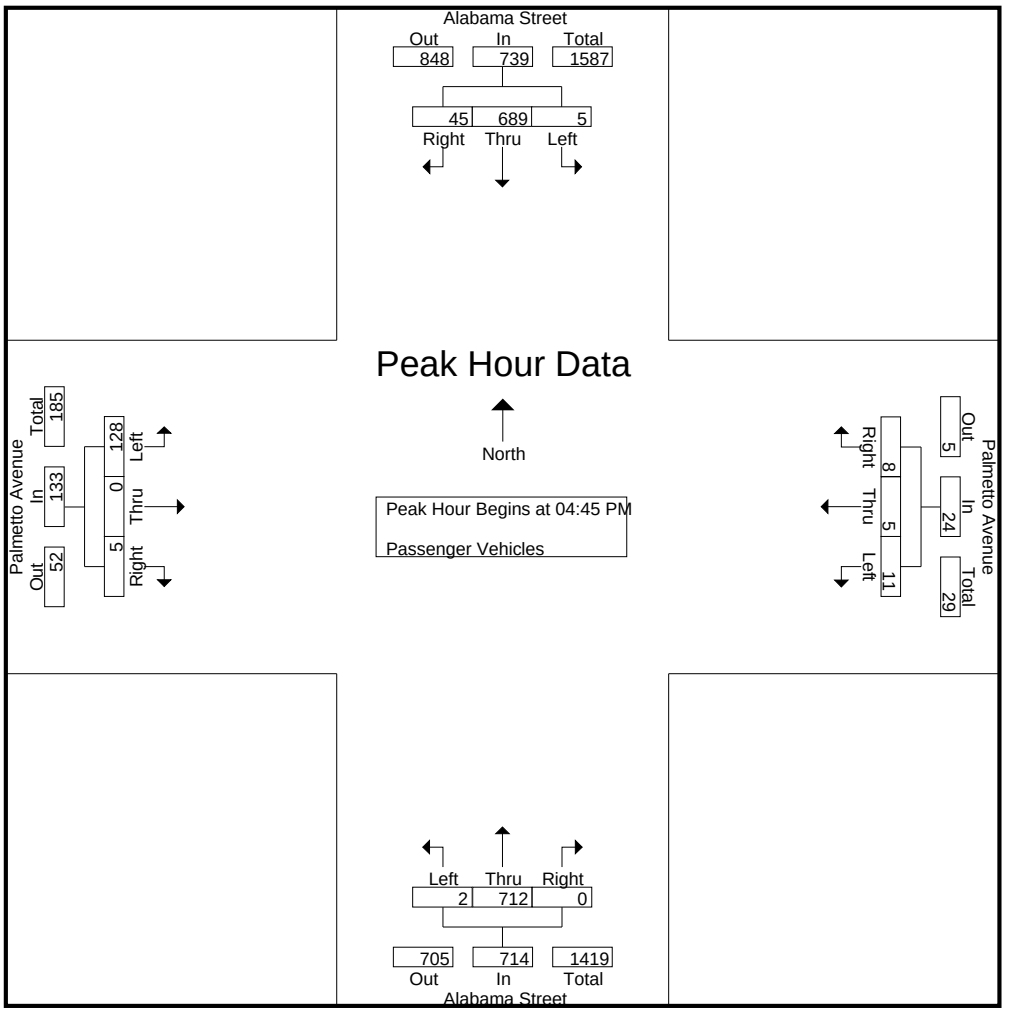

Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	0	169	**14**	183	2	**2**	2	6	0	178	0	178	34	0	0	34
+15 mins.	0	171	12	183	0	0	0	0	**1**	148	0	149	**40**	0	**2**	**42**
+30 mins.	**3**	**180**	11	**194**	1	1	1	3	0	181	0	181	23	0	2	25
+45 mins.	2	169	8	179	**8**	2	**5**	**15**	1	**205**	0	**206**	31	0	1	32
Total Volume	5	689	45	739	11	5	8	24	2	712	0	714	128	0	5	133
% App. Total	0.7	93.2	6.1		45.8	20.8	33.3		0.3	99.7	0		96.2	0	3.8	
PHF	.417	.957	.804	.952	.344	.625	.400	.400	.500	.868	.000	.867	.800	.000	.625	.792

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Weather: Clear

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Groups Printed- Large 2 Axle Vehicles

	Alabama Street Southbound				Palmetto Avenue Westbound				Alabama Street Northbound				Palmetto Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	2	0	2	0	0	0	0	0	3	0	3	1	0	0	1	6
04:15 PM	0	1	0	1	0	0	0	0	0	2	0	2	0	0	0	0	3
04:30 PM	0	0	0	0	0	0	0	0	0	4	0	4	0	0	0	0	4
04:45 PM	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
Total	0	4	0	4	0	0	0	0	0	10	0	10	1	0	0	1	15
05:00 PM	0	3	0	3	0	0	0	0	0	4	0	4	1	0	0	1	8
05:15 PM	0	3	0	3	0	0	0	0	0	4	0	4	0	1	0	1	8
05:30 PM	0	2	0	2	0	0	0	0	0	2	0	2	0	0	0	0	4
05:45 PM	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0	3
Total	0	11	0	11	0	0	0	0	0	10	0	10	1	1	0	2	23
Grand Total	0	15	0	15	0	0	0	0	0	20	0	20	2	1	0	3	38
Apprch %	0	100	0		0	0	0		0	100	0		66.7	33.3	0		
Total %	0	39.5	0	39.5	0	0	0	0	0	52.6	0	52.6	5.3	2.6	0	7.9	

	Alabama Street Southbound				Palmetto Avenue Westbound				Alabama Street Northbound				Palmetto Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
05:00 PM	0	**3**	0	**3**	0	0	0	0	0	**4**	0	**4**	**1**	0	0	**1**	**8**
05:15 PM	0	3	0	3	0	0	0	0	0	4	0	4	0	**1**	0	1	8
05:30 PM	0	2	0	2	0	0	0	0	0	2	0	2	0	0	0	0	4
Total Volume	0	9	0	9	0	0	0	0	0	11	0	11	1	1	0	2	22
% App. Total	0	100	0		0	0	0		0	100	0		50	50	0		
PHF	.000	.750	.000	.750	.000	.000	.000	.000	.000	.688	.000	.688	.250	.250	.000	.500	.688

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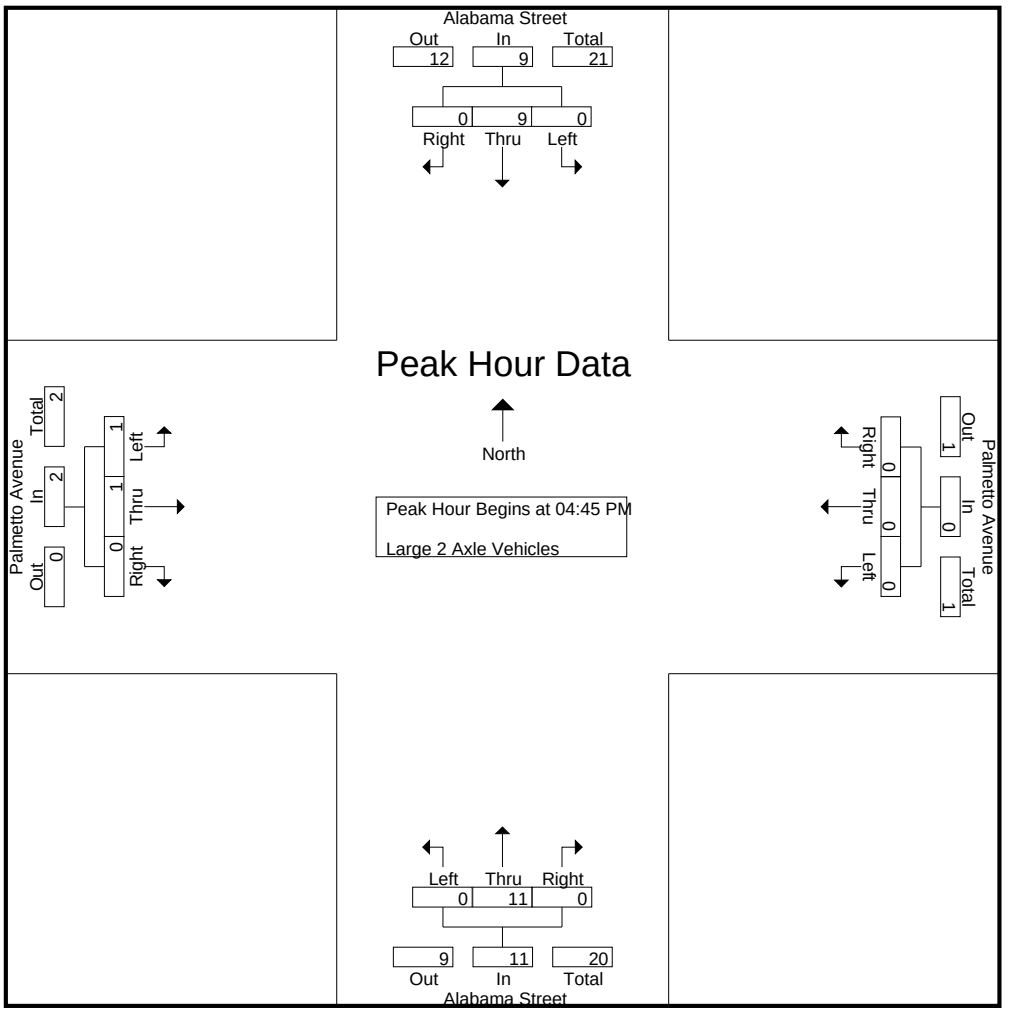

Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0
+15 mins.	0	**3**	0	**3**	0	0	0	0	0	**4**	0	**4**	**1**	0	0	**1**
+30 mins.	0	3	0	3	0	0	0	0	0	4	0	4	0	**1**	0	1
+45 mins.	0	2	0	2	0	0	0	0	0	2	0	2	0	0	0	0
Total Volume	0	9	0	9	0	0	0	0	0	11	0	11	1	1	0	2
% App. Total	0	100	0		0	0	0		0	100	0		50	50	0	
PHF	.000	.750	.000	.750	.000	.000	.000	.000	.000	.688	.000	.688	.250	.250	.000	.500

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Groups Printed- 3 Axle Vehicles

	Alabama Street Southbound				Palmetto Avenue Westbound				Alabama Street Northbound				Palmetto Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	2	1	3	0	0	0	0	3
04:15 PM	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	2
04:30 PM	0	2	0	2	0	0	0	0	0	2	2	4	0	0	0	0	6
04:45 PM	0	1	0	1	0	0	0	0	0	0	0	0	1	0	0	1	2
Total	0	3	0	3	0	0	0	0	0	4	5	9	1	0	0	1	13
05:00 PM	0	0	0	0	0	0	0	0	0	1	2	3	0	0	0	0	3
05:15 PM	0	2	0	2	0	0	0	0	0	1	1	2	1	0	0	1	5
05:30 PM	0	3	1	4	0	0	0	0	0	0	0	0	0	0	0	0	4
05:45 PM	0	0	1	1	0	0	0	0	0	2	0	2	0	0	0	0	3
Total	0	5	2	7	0	0	0	0	0	4	3	7	1	0	0	1	15
Grand Total	0	8	2	10	0	0	0	0	0	8	8	16	2	0	0	2	28
Apprch %	0	80	20		0	0	0		0	50	50		100	0	0		
Total %	0	28.6	7.1	35.7	0	0	0	0	0	28.6	28.6	57.1	7.1	0	0	7.1	

	Alabama Street Southbound				Palmetto Avenue Westbound				Alabama Street Northbound				Palmetto Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	1	0	1	0	0	0	0	0	0	0	0	**1**	0	0	**1**	2
05:00 PM	0	0	0	0	0	0	0	0	0	**1**	**2**	**3**	0	0	0	0	3
05:15 PM	0	2	0	2	0	0	0	0	0	1	1	2	1	0	0	1	**5**
05:30 PM	0	**3**	**1**	**4**	0	0	0	0	0	0	0	0	0	0	0	0	4
Total Volume	0	6	1	7	0	0	0	0	0	2	3	5	2	0	0	2	14
% App. Total	0	85.7	14.3		0	0	0		0	40	60		100	0	0		
PHF	.000	.500	.250	.438	.000	.000	.000	.000	.000	.500	.375	.417	.500	.000	.000	.500	.700

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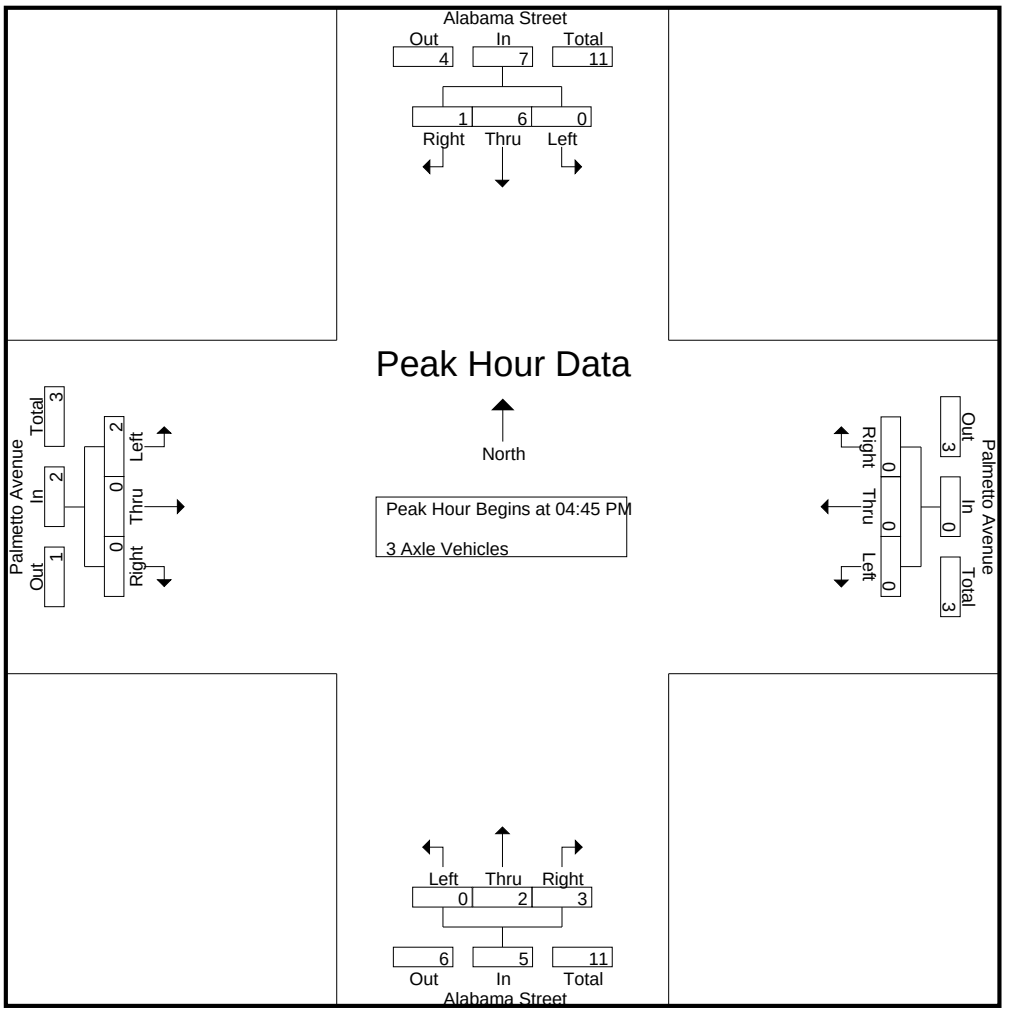

Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	0	1	0	1	0	0	0	0	0	0	0	0	**1**	0	0	**1**
+15 mins.	0	0	0	0	0	0	0	0	0	**1**	**2**	**3**	0	0	0	0
+30 mins.	0	2	0	2	0	0	0	0	0	1	1	2	1	0	0	1
+45 mins.	0	**3**	**1**	**4**	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	6	1	7	0	0	0	0	0	2	3	5	2	0	0	2
% App. Total	0	85.7	14.3		0	0	0		0	40	60		100	0	0	
PHF	.000	.500	.250	.438	.000	.000	.000	.000	.000	.500	.375	.417	.500	.000	.000	.500

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County of San Bernardino
N/S: Alabama Street
E/W: Palmetto Avenue
Weather: Clear

File Name : 05_CSB_Alabama_Palmetto PM
Site Code : 06718128
Start Date : 2/21/2018
Page No : 1

Groups Printed- 4+ Axle Trucks

	Alabama Street Southbound				Palmetto Avenue Westbound				Alabama Street Northbound				Palmetto Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	3	0	3	0	1	0	1	0	5	1	6	1	1	0	2	12
04:15 PM	0	0	1	1	0	0	0	0	0	9	1	10	1	0	0	1	12
04:30 PM	0	4	0	4	0	0	0	0	1	8	2	11	2	1	0	3	18
04:45 PM	0	4	1	5	0	0	0	0	0	3	0	3	0	0	0	0	8
Total	0	11	2	13	0	1	0	1	1	25	4	30	4	2	0	6	50
05:00 PM	0	1	2	3	0	0	0	0	0	7	0	7	3	0	0	3	13
05:15 PM	0	3	1	4	0	0	0	0	0	3	0	3	3	0	0	3	10
05:30 PM	0	4	1	5	0	0	0	0	0	3	0	3	1	0	0	1	9
05:45 PM	0	3	3	6	0	1	0	1	0	6	0	6	2	0	0	2	15
Total	0	11	7	18	0	1	0	1	0	19	0	19	9	0	0	9	47
Grand Total	0	22	9	31	0	2	0	2	1	44	4	49	13	2	0	15	97
Apprch %	0	71	29		0	100	0		2	89.8	8.2		86.7	13.3	0		
Total %	0	22.7	9.3	32	0	2.1	0	2.1	1	45.4	4.1	50.5	13.4	2.1	0	15.5	

	Alabama Street Southbound				Palmetto Avenue Westbound				Alabama Street Northbound				Palmetto Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	**4**	1	**5**	0	0	0	0	0	3	0	3	0	0	0	0	8
05:00 PM	0	1	**2**	3	0	0	0	0	0	**7**	0	**7**	**3**	0	0	**3**	**13**
05:15 PM	0	3	1	4	0	0	0	0	0	3	0	3	3	0	0	3	10
05:30 PM	0	4	1	5	0	0	0	0	0	3	0	3	1	0	0	1	9
Total Volume	0	12	5	17	0	0	0	0	0	16	0	16	7	0	0	7	40
% App. Total	0	70.6	29.4		0	0	0		0	100	0		100	0	0		
PHF	.000	.750	.625	.850	.000	.000	.000	.000	.000	.571	.000	.571	.583	.000	.000	.583	.769

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County of San Bernardino
N/S: Alabama Street
E/W: Palmetto Avenue
Weather: Clear

File Name : 05_CSB_Alabama_Palmetto PM
Site Code : 06718128
Start Date : 2/21/2018
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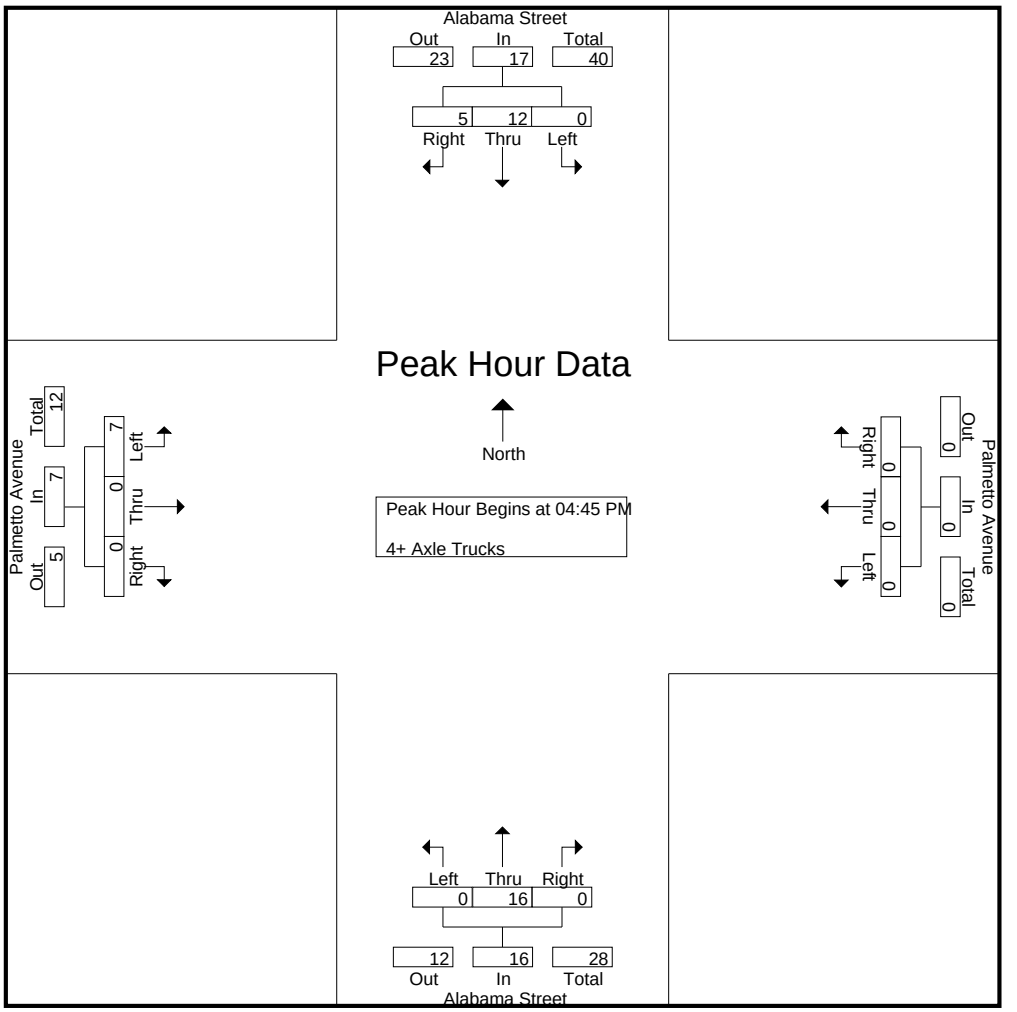

Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	0	**4**	1	**5**	0	0	0	0	0	3	0	3	0	0	0	0
+15 mins.	0	1	**2**	3	0	0	0	0	0	**7**	0	**7**	**3**	0	0	**3**
+30 mins.	0	3	1	4	0	0	0	0	0	3	0	3	3	0	0	3
+45 mins.	0	4	1	5	0	0	0	0	0	3	0	3	1	0	0	1
Total Volume	0	12	5	17	0	0	0	0	0	16	0	16	7	0	0	7
% App. Total	0	70.6	29.4		0	0	0		0	100	0		100	0	0	
PHF	.000	.750	.625	.850	.000	.000	.000	.000	.000	.571	.000	.571	.583	.000	.000	.583

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County of San Bernardino
N/S: Alabama Street
E/W: San Bernardino Avenue
Weather: Clear

File Name : 06_CSB_Alabama_San Bern AM
Site Code : 06718128
Start Date : 2/21/2018
Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Alabama Street Southbound				San Bernardino Avenue Westbound				Alabama Street Northbound				San Bernardino Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	19	48	11	78	24	79	47	150	25	42	21	88	11	21	7	39	355
07:15 AM	10	80	18	108	27	77	36	140	34	57	19	110	7	15	2	24	382
07:30 AM	17	89	18	124	43	78	15	136	16	34	9	59	6	37	9	52	371
07:45 AM	8	99	18	125	53	112	8	173	26	43	19	88	9	31	5	45	431
Total	54	316	65	435	147	346	106	599	101	176	68	345	33	104	23	160	1539
08:00 AM	6	72	15	93	43	77	12	132	30	44	26	100	10	36	12	58	383
08:15 AM	5	68	15	88	44	71	12	127	17	42	18	77	7	34	14	55	347
08:30 AM	6	81	8	95	37	55	8	100	5	43	16	64	4	31	14	49	308
08:45 AM	16	81	10	107	57	62	6	125	9	36	13	58	3	16	5	24	314
Total	33	302	48	383	181	265	38	484	61	165	73	299	24	117	45	186	1352
Grand Total	87	618	113	818	328	611	144	1083	162	341	141	644	57	221	68	346	2891
Apprch %	10.6	75.6	13.8		30.3	56.4	13.3		25.2	53	21.9		16.5	63.9	19.7		
Total %	3	21.4	3.9	28.3	11.3	21.1	5	37.5	5.6	11.8	4.9	22.3	2	7.6	2.4	12	
Passenger Vehicles	81	539	105	725	316	592	132	1040	151	288	134	573	50	208	65	323	2661
% Passenger Vehicles	93.1	87.2	92.9	88.6	96.3	96.9	91.7	96	93.2	84.5	95	89	87.7	94.1	95.6	93.4	92
Large 2 Axle Vehicles	3	7	1	11	8	7	1	16	8	6	6	20	3	7	2	12	59
% Large 2 Axle Vehicles	3.4	1.1	0.9	1.3	2.4	1.1	0.7	1.5	4.9	1.8	4.3	3.1	5.3	3.2	2.9	3.5	2
3 Axle Vehicles	3	18	4	25	2	3	3	8	0	11	0	11	4	1	0	5	49
% 3 Axle Vehicles	3.4	2.9	3.5	3.1	0.6	0.5	2.1	0.7	0	3.2	0	1.7	7	0.5	0	1.4	1.7
4+ Axle Trucks	0	54	3	57	2	9	8	19	3	36	1	40	0	5	1	6	122
% 4+ Axle Trucks	0	8.7	2.7	7	0.6	1.5	5.6	1.8	1.9	10.6	0.7	6.2	0	2.3	1.5	1.7	4.2

	Alabama Street Southbound				San Bernardino Avenue Westbound				Alabama Street Northbound				San Bernardino Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	10	80	**18**	108	27	77	**36**	140	**34**	**57**	19	**110**	7	15	2	24	382
07:30 AM	**17**	89	18	124	43	78	15	136	16	34	9	59	6	**37**	9	52	371
07:45 AM	8	**99**	18	**125**	**53**	**112**	8	**173**	26	43	19	88	9	31	5	45	**431**
08:00 AM	6	72	15	93	43	77	12	132	30	44	**26**	100	**10**	36	**12**	**58**	383
Total Volume	41	340	69	450	166	344	71	581	106	178	73	357	32	119	28	179	1567
% App. Total	9.1	75.6	15.3		28.6	59.2	12.2		29.7	49.9	20.4		17.9	66.5	15.6		
PHF	.603	.859	.958	.900	.783	.768	.493	.840	.779	.781	.702	.811	.800	.804	.583	.772	.909

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Site Code : 06718128
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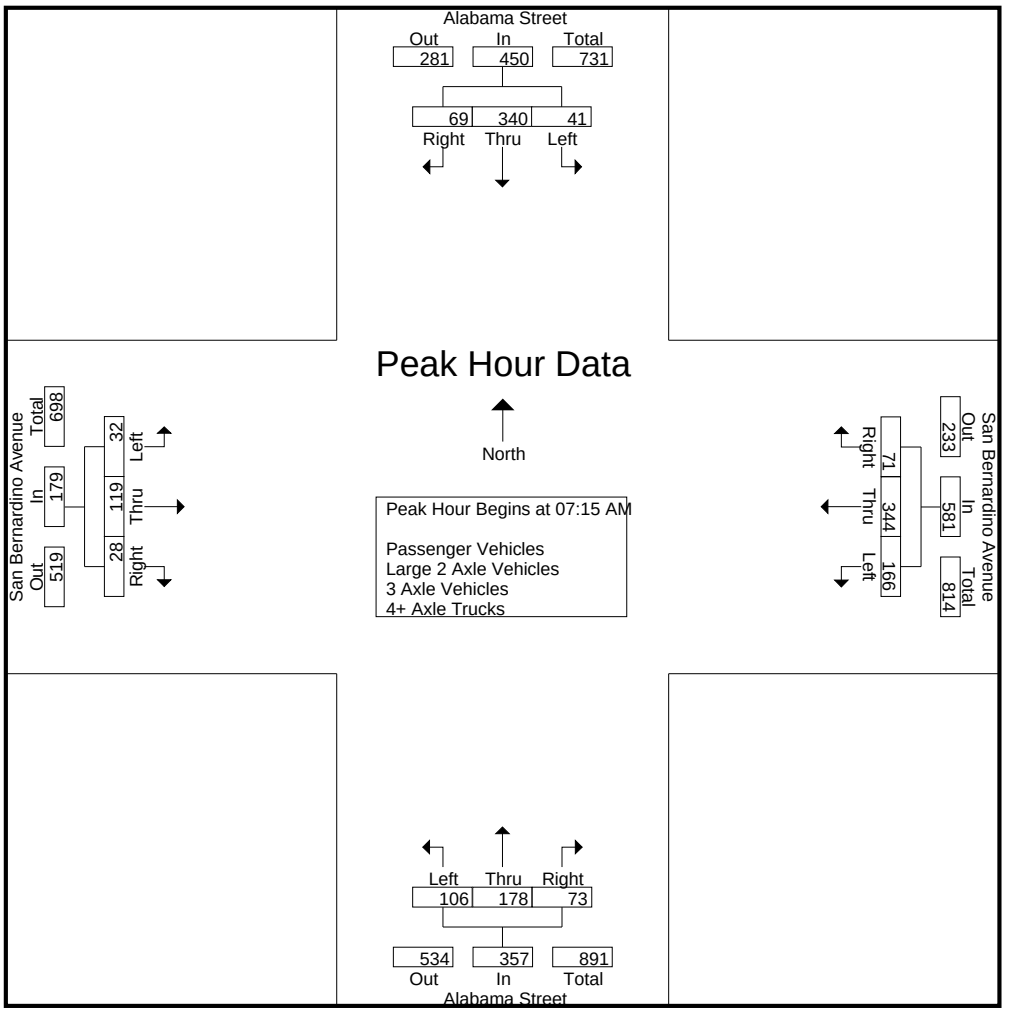

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:00 AM				07:15 AM				07:30 AM			
+0 mins.	10	80	**18**	108	24	79	**47**	150	**34**	**57**	19	**110**	6	**37**	9	52
+15 mins.	**17**	89	18	124	27	77	36	140	16	34	9	59	9	31	5	45
+30 mins.	8	**99**	18	**125**	43	78	15	136	26	43	19	88	**10**	36	12	**58**
+45 mins.	6	72	15	93	**53**	**112**	8	**173**	30	44	**26**	100	7	34	**14**	55
Total Volume	41	340	69	450	147	346	106	599	106	178	73	357	32	138	40	210
% App. Total	9.1	75.6	15.3		24.5	57.8	17.7		29.7	49.9	20.4		15.2	65.7	19	
PHF	.603	.859	.958	.900	.693	.772	.564	.866	.779	.781	.702	.811	.800	.932	.714	.905

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File Name : 06_CSB_Alabama_San Bern AM
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Groups Printed- Passenger Vehicles

	Alabama Street Southbound				San Bernardino Avenue Westbound				Alabama Street Northbound				San Bernardino Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	17	41	11	69	23	78	47	148	21	34	21	76	11	20	7	38	331
07:15 AM	9	71	15	95	26	74	36	136	32	49	18	99	5	13	2	20	350
07:30 AM	16	76	16	108	42	76	13	131	16	31	9	56	5	34	9	48	343
07:45 AM	8	90	18	116	52	110	8	170	25	38	17	80	8	30	5	43	409
Total	50	278	60	388	143	338	104	585	94	152	65	311	29	97	23	149	1433
08:00 AM	5	60	14	79	42	75	9	126	27	38	26	91	9	36	11	56	352
08:15 AM	5	61	13	79	39	67	8	114	17	36	16	69	7	32	13	52	314
08:30 AM	5	71	8	84	36	53	7	96	5	33	15	53	3	29	13	45	278
08:45 AM	16	69	10	95	56	59	4	119	8	29	12	49	2	14	5	21	284
Total	31	261	45	337	173	254	28	455	57	136	69	262	21	111	42	174	1228
Grand Total	81	539	105	725	316	592	132	1040	151	288	134	573	50	208	65	323	2661
Apprch %	11.2	74.3	14.5		30.4	56.9	12.7		26.4	50.3	23.4		15.5	64.4	20.1		
Total %	3	20.3	3.9	27.2	11.9	22.2	5	39.1	5.7	10.8	5	21.5	1.9	7.8	2.4	12.1	

	Alabama Street Southbound				San Bernardino Avenue Westbound				Alabama Street Northbound				San Bernardino Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	9	71	15	95	26	74	**36**	136	**32**	**49**	18	**99**	5	13	2	20	350
07:30 AM	**16**	76	16	108	42	76	13	131	16	31	9	56	5	34	9	48	343
07:45 AM	8	**90**	**18**	**116**	**52**	**110**	8	**170**	25	38	17	80	8	30	5	43	**409**
08:00 AM	5	60	14	79	42	75	9	126	27	38	**26**	91	**9**	**36**	**11**	**56**	352
Total Volume	38	297	63	398	162	335	66	563	100	156	70	326	27	113	27	167	1454
% App. Total	9.5	74.6	15.8		28.8	59.5	11.7		30.7	47.9	21.5		16.2	67.7	16.2		
PHF	.594	.825	.875	.858	.779	.761	.458	.828	.781	.796	.673	.823	.750	.785	.614	.746	.889

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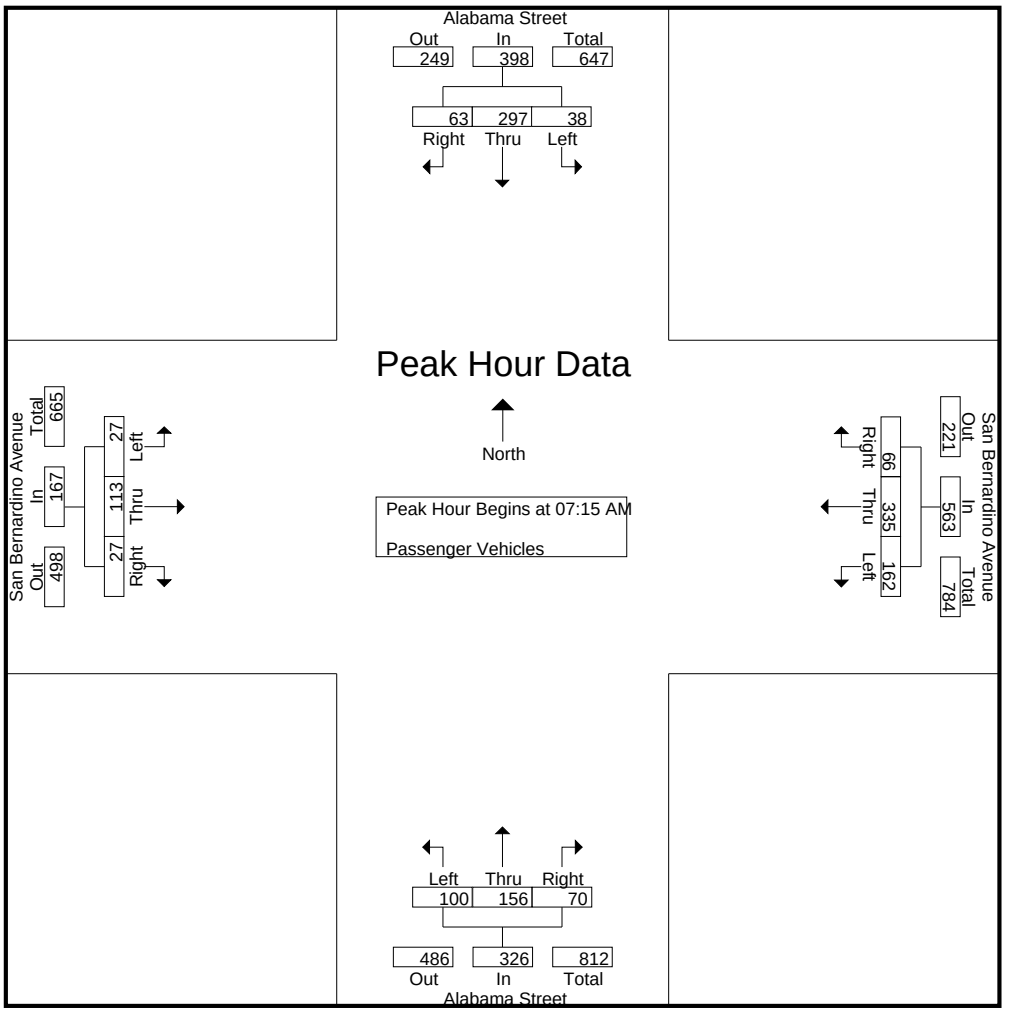

Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	9	71	15	95	26	74	**36**	136	**32**	**49**	18	**99**	5	13	2	20
+15 mins.	**16**	76	16	108	42	76	13	131	16	31	9	56	5	34	9	48
+30 mins.	8	**90**	**18**	**116**	**52**	**110**	8	**170**	25	38	17	80	8	30	5	43
+45 mins.	5	60	14	79	42	75	9	126	27	38	**26**	91	**9**	**36**	**11**	**56**
Total Volume	38	297	63	398	162	335	66	563	100	156	70	326	27	113	27	167
% App. Total	9.5	74.6	15.8		28.8	59.5	11.7		30.7	47.9	21.5		16.2	67.7	16.2	
PHF	.594	.825	.875	.858	.779	.761	.458	.828	.781	.796	.673	.823	.750	.785	.614	.746

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County of San Bernardino
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Weather: Clear

File Name : 06_CSB_Alabama_San Bern AM
Site Code : 06718128
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Groups Printed- Large 2 Axle Vehicles

	Alabama Street Southbound				San Bernardino Avenue Westbound				Alabama Street Northbound				San Bernardino Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	1	0	1	1	1	0	2	3	1	0	4	0	0	0	0	7
07:15 AM	1	0	1	2	1	1	0	2	1	2	1	4	1	0	0	1	9
07:30 AM	1	1	0	2	1	2	0	3	0	0	0	0	1	2	0	3	8
07:45 AM	0	0	0	0	0	0	0	0	1	1	2	4	0	1	0	1	5
Total	2	2	1	5	3	4	0	7	5	4	3	12	2	3	0	5	29
08:00 AM	1	2	0	3	1	1	0	2	2	0	0	2	0	0	1	1	8
08:15 AM	0	2	0	2	3	1	1	5	0	2	1	3	0	2	0	2	12
08:30 AM	0	0	0	0	1	1	0	2	0	0	1	1	0	2	1	3	6
08:45 AM	0	1	0	1	0	0	0	0	1	0	1	2	1	0	0	1	4
Total	1	5	0	6	5	3	1	9	3	2	3	8	1	4	2	7	30
Grand Total	3	7	1	11	8	7	1	16	8	6	6	20	3	7	2	12	59
Apprch %	27.3	63.6	9.1		50	43.8	6.2		40	30	30		25	58.3	16.7		
Total %	5.1	11.9	1.7	18.6	13.6	11.9	1.7	27.1	13.6	10.2	10.2	33.9	5.1	11.9	3.4	20.3	

	Alabama Street Southbound				San Bernardino Avenue Westbound				Alabama Street Northbound				San Bernardino Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	**1**	0	**1**	2	**1**	1	0	2	1	**2**	1	**4**	**1**	0	0	1	**9**
07:30 AM	1	1	0	2	1	**2**	0	**3**	0	0	0	0	1	**2**	0	**3**	8
07:45 AM	0	0	0	0	0	0	0	0	1	1	**2**	4	0	1	0	1	5
08:00 AM	1	**2**	0	**3**	1	1	0	2	**2**	0	0	2	0	0	**1**	1	8
Total Volume	3	3	1	7	3	4	0	7	4	3	3	10	2	3	1	6	30
% App. Total	42.9	42.9	14.3		42.9	57.1	0		40	30	30		33.3	50	16.7		
PHF	.750	.375	.250	.583	.750	.500	.000	.583	.500	.375	.375	.625	.500	.375	.250	.500	.833

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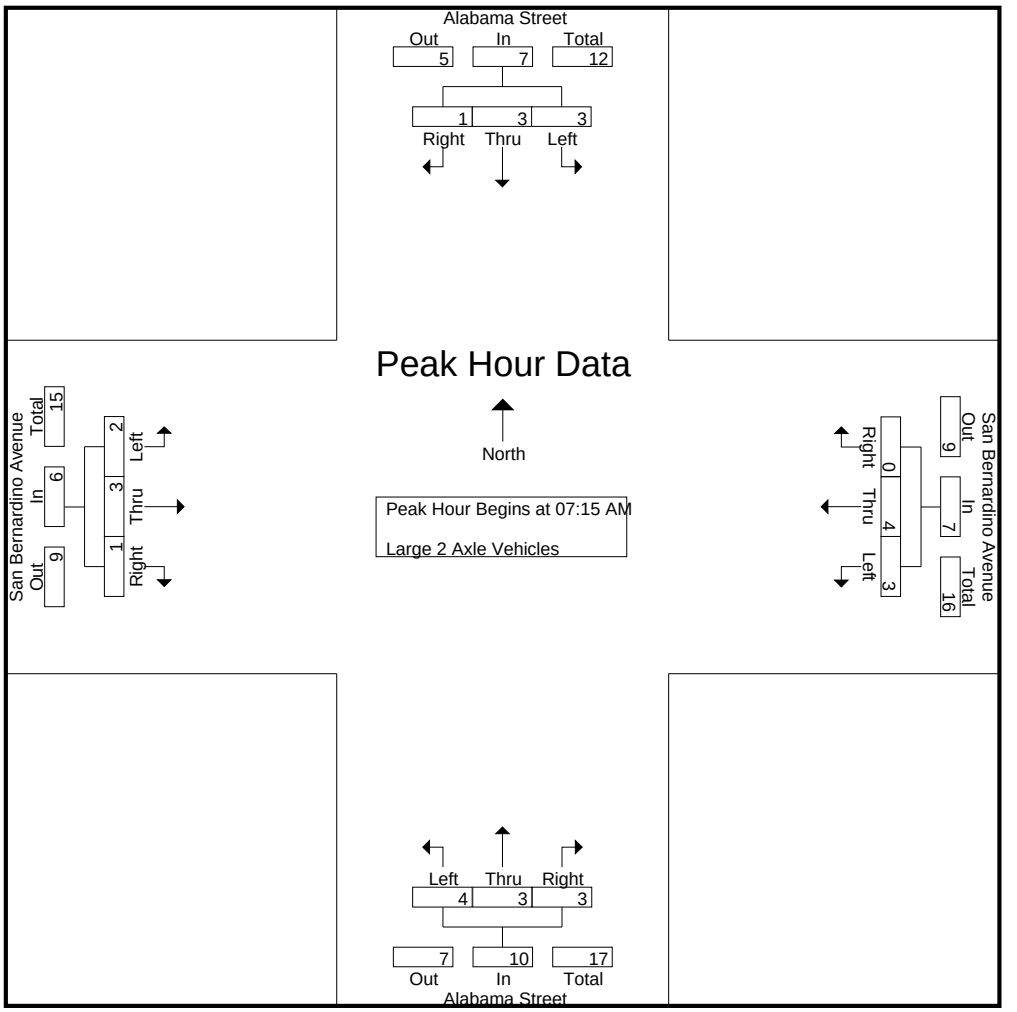

Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	**1**	0	**1**	2	**1**	1	0	2	1	**2**	1	**4**	**1**	0	0	1
+15 mins.	1	1	0	2	1	**2**	0	**3**	0	0	0	0	1	**2**	0	**3**
+30 mins.	0	0	0	0	0	0	0	0	1	1	**2**	4	0	1	0	1
+45 mins.	1	**2**	0	**3**	1	1	0	2	**2**	0	0	2	0	0	**1**	1
Total Volume	3	3	1	7	3	4	0	7	4	3	3	10	2	3	1	6
% App. Total	42.9	42.9	14.3		42.9	57.1	0		40	30	30		33.3	50	16.7	
PHF	.750	.375	.250	.583	.750	.500	.000	.583	.500	.375	.375	.625	.500	.375	.250	.500

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File Name : 06_CSB_Alabama_San Bern AM
Site Code : 06718128
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Groups Printed- 3 Axle Vehicles

	Alabama Street Southbound				San Bernardino Avenue Westbound				Alabama Street Northbound				San Bernardino Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	2	1	0	3	0	0	0	0	0	3	0	3	0	0	0	0	6
07:15 AM	0	3	0	3	0	0	0	0	0	1	0	1	1	0	0	1	5
07:30 AM	0	2	2	4	0	0	1	1	0	0	0	0	0	0	0	0	5
07:45 AM	0	1	0	1	0	1	0	1	0	1	0	1	1	0	0	1	4
Total	2	7	2	11	0	1	1	2	0	5	0	5	2	0	0	2	20
08:00 AM	0	2	1	3	0	0	0	0	0	2	0	2	1	0	0	1	6
08:15 AM	0	2	1	3	1	2	2	5	0	0	0	0	0	0	0	0	8
08:30 AM	1	2	0	3	0	0	0	0	0	3	0	3	1	0	0	1	7
08:45 AM	0	5	0	5	1	0	0	1	0	1	0	1	0	1	0	1	8
Total	1	11	2	14	2	2	2	6	0	6	0	6	2	1	0	3	29
Grand Total	3	18	4	25	2	3	3	8	0	11	0	11	4	1	0	5	49
Apprch %	12	72	16		25	37.5	37.5		0	100	0		80	20	0		
Total %	6.1	36.7	8.2	51	4.1	6.1	6.1	16.3	0	22.4	0	22.4	8.2	2	0	10.2	

	Alabama Street Southbound				San Bernardino Avenue Westbound				Alabama Street Northbound				San Bernardino Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	**3**	0	3	0	0	0	0	0	1	0	1	**1**	0	0	**1**	5
07:30 AM	0	2	**2**	**4**	0	0	**1**	**1**	0	0	0	0	0	0	0	0	5
07:45 AM	0	1	0	1	0	**1**	0	1	0	1	0	1	1	0	0	1	4
08:00 AM	0	2	1	3	0	0	0	0	0	**2**	0	**2**	1	0	0	1	**6**
Total Volume	0	8	3	11	0	1	1	2	0	4	0	4	3	0	0	3	20
% App. Total	0	72.7	27.3		0	50	50		0	100	0		100	0	0		
PHF	.000	.667	.375	.688	.000	.250	.250	.500	.000	.500	.000	.500	.750	.000	.000	.750	.833

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County of San Bernardino
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E/W: San Bernardino Avenue
Weather: Clear

File Name : 06_CSB_Alabama_San Bern AM
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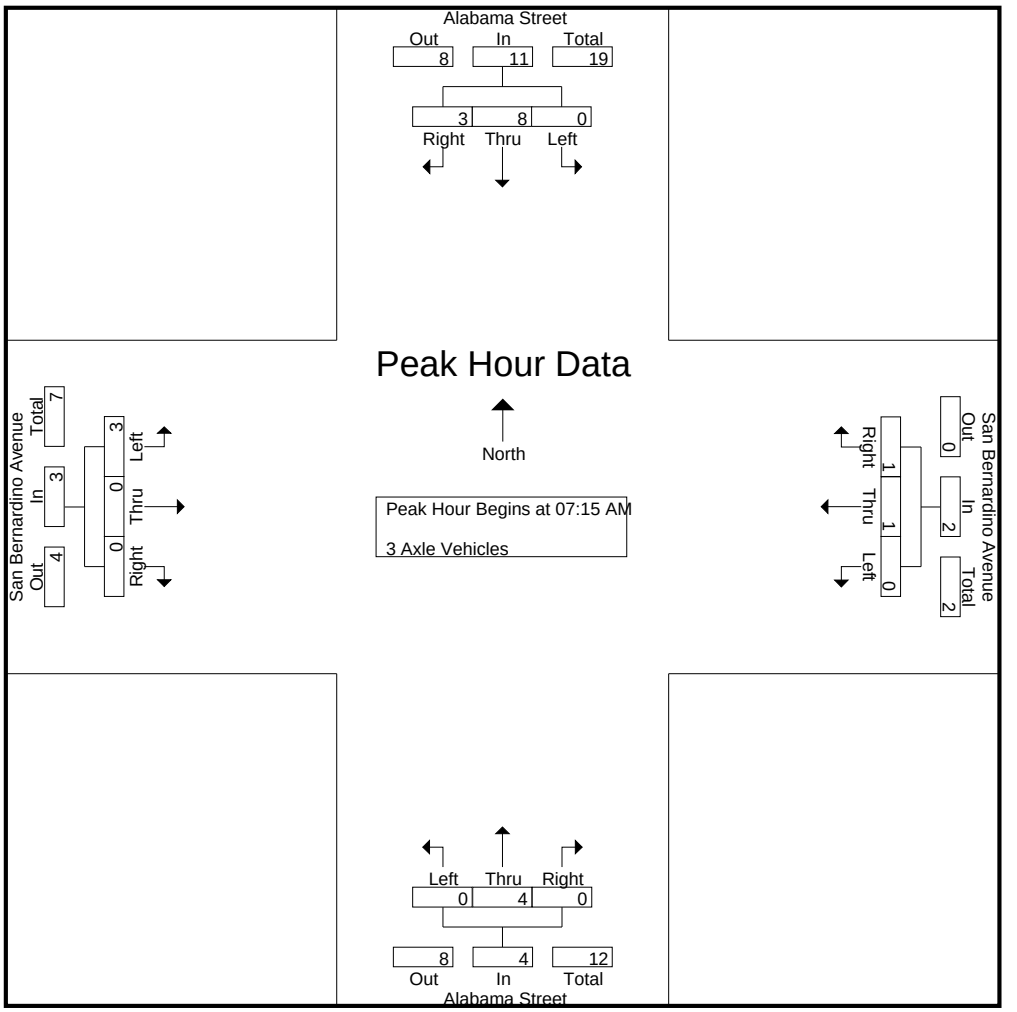

Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	0	**3**	0	3	0	0	0	0	0	1	0	1	**1**	0	0	**1**
+15 mins.	0	2	**2**	**4**	0	0	**1**	**1**	0	0	0	0	0	0	0	0
+30 mins.	0	1	0	1	0	**1**	0	1	0	1	0	1	1	0	0	1
+45 mins.	0	2	1	3	0	0	0	0	0	**2**	0	**2**	1	0	0	1
Total Volume	0	8	3	11	0	1	1	2	0	4	0	4	3	0	0	3
% App. Total	0	72.7	27.3		0	50	50		0	100	0		100	0	0	
PHF	.000	.667	.375	.688	.000	.250	.250	.500	.000	.500	.000	.500	.750	.000	.000	.750

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Groups Printed- 4+ Axle Trucks

	Alabama Street Southbound				San Bernardino Avenue Westbound				Alabama Street Northbound				San Bernardino Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	5	0	5	0	0	0	0	1	4	0	5	0	1	0	1	11
07:15 AM	0	6	2	8	0	2	0	2	1	5	0	6	0	2	0	2	18
07:30 AM	0	10	0	10	0	0	1	1	0	3	0	3	0	1	0	1	15
07:45 AM	0	8	0	8	1	1	0	2	0	3	0	3	0	0	0	0	13
Total	0	29	2	31	1	3	1	5	2	15	0	17	0	4	0	4	57
08:00 AM	0	8	0	8	0	1	3	4	1	4	0	5	0	0	0	0	17
08:15 AM	0	3	1	4	1	1	1	3	0	4	1	5	0	0	1	1	13
08:30 AM	0	8	0	8	0	1	1	2	0	7	0	7	0	0	0	0	17
08:45 AM	0	6	0	6	0	3	2	5	0	6	0	6	0	1	0	1	18
Total	0	25	1	26	1	6	7	14	1	21	1	23	0	1	1	2	65
Grand Total	0	54	3	57	2	9	8	19	3	36	1	40	0	5	1	6	122
Apprch %	0	94.7	5.3		10.5	47.4	42.1		7.5	90	2.5		0	83.3	16.7		
Total %	0	44.3	2.5	46.7	1.6	7.4	6.6	15.6	2.5	29.5	0.8	32.8	0	4.1	0.8	4.9	

	Alabama Street Southbound				San Bernardino Avenue Westbound				Alabama Street Northbound				San Bernardino Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	6	**2**	8	0	**2**	0	2	**1**	**5**	0	**6**	0	**2**	0	**2**	**18**
07:30 AM	0	**10**	0	**10**	0	0	1	1	0	3	0	3	0	1	0	1	15
07:45 AM	0	8	0	8	**1**	1	0	2	0	3	0	3	0	0	0	0	13
08:00 AM	0	8	0	8	0	1	**3**	**4**	1	4	0	5	0	0	0	0	17
Total Volume	0	32	2	34	1	4	4	9	2	15	0	17	0	3	0	3	63
% App. Total	0	94.1	5.9		11.1	44.4	44.4		11.8	88.2	0		0	100	0		
PHF	.000	.800	.250	.850	.250	.500	.333	.563	.500	.750	.000	.708	.000	.375	.000	.375	.875

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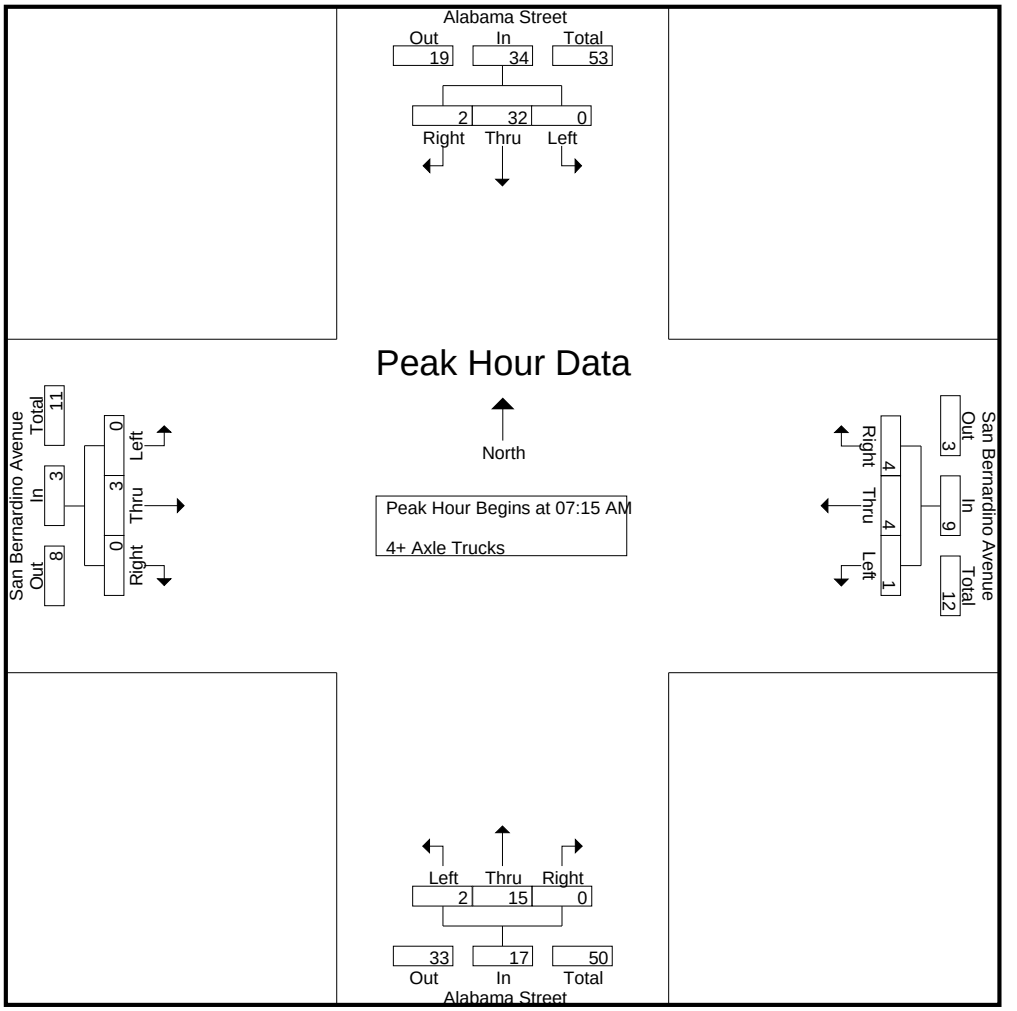

Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	0	6	**2**	8	0	**2**	0	2	**1**	**5**	0	**6**	0	**2**	0	**2**
+15 mins.	0	**10**	0	**10**	0	0	1	1	0	3	0	3	0	1	0	1
+30 mins.	0	8	0	8	**1**	1	0	2	0	3	0	3	0	0	0	0
+45 mins.	0	8	0	8	0	1	**3**	**4**	1	4	0	5	0	0	0	0
Total Volume	0	32	2	34	1	4	4	9	2	15	0	17	0	3	0	3
% App. Total	0	94.1	5.9		11.1	44.4	44.4		11.8	88.2	0		0	100	0	
PHF	.000	.800	.250	.850	.250	.500	.333	.563	.500	.750	.000	.708	.000	.375	.000	.375

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Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Alabama Street Southbound				San Bernardino Avenue Westbound				Alabama Street Northbound				San Bernardino Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	27	73	7	107	35	40	30	105	11	112	49	172	15	98	19	132	516
04:15 PM	29	102	6	137	34	20	23	77	14	81	31	126	29	110	13	152	492
04:30 PM	36	81	12	129	35	35	29	99	7	106	58	171	25	123	18	166	565
04:45 PM	35	105	15	155	29	38	41	108	11	79	53	143	20	118	21	159	565
Total	127	361	40	528	133	133	123	389	43	378	191	612	89	449	71	609	2138
05:00 PM	24	86	8	118	34	34	24	92	6	117	74	197	31	135	21	187	594
05:15 PM	47	109	14	170	23	32	36	91	10	102	55	167	33	156	11	200	628
05:30 PM	36	115	13	164	28	47	36	111	13	98	46	157	24	156	18	198	630
05:45 PM	28	93	15	136	35	42	38	115	7	110	55	172	28	120	16	164	587
Total	135	403	50	588	120	155	134	409	36	427	230	693	116	567	66	749	2439
Grand Total	262	764	90	1116	253	288	257	798	79	805	421	1305	205	1016	137	1358	4577
Apprch %	23.5	68.5	8.1		31.7	36.1	32.2		6.1	61.7	32.3		15.1	74.8	10.1		
Total %	5.7	16.7	2	24.4	5.5	6.3	5.6	17.4	1.7	17.6	9.2	28.5	4.5	22.2	3	29.7	
Passenger Vehicles	255	714	79	1048	248	275	244	767	76	754	416	1246	194	1007	135	1336	4397
% Passenger Vehicles	97.3	93.5	87.8	93.9	98	95.5	94.9	96.1	96.2	93.7	98.8	95.5	94.6	99.1	98.5	98.4	96.1
Large 2 Axle Vehicles	0	10	6	16	4	8	4	16	1	8	5	14	2	4	1	7	53
% Large 2 Axle Vehicles	0	1.3	6.7	1.4	1.6	2.8	1.6	2	1.3	1	1.2	1.1	1	0.4	0.7	0.5	1.2
3 Axle Vehicles	1	9	2	12	0	0	1	1	0	5	0	5	4	1	0	5	23
% 3 Axle Vehicles	0.4	1.2	2.2	1.1	0	0	0.4	0.1	0	0.6	0	0.4	2	0.1	0	0.4	0.5
4+ Axle Trucks	6	31	3	40	1	5	8	14	2	38	0	40	5	4	1	10	104
% 4+ Axle Trucks	2.3	4.1	3.3	3.6	0.4	1.7	3.1	1.8	2.5	4.7	0	3.1	2.4	0.4	0.7	0.7	2.3

	Alabama Street Southbound				San Bernardino Avenue Westbound				Alabama Street Northbound				San Bernardino Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	24	86	8	118	34	34	24	92	6	**117**	**74**	**197**	31	135	**21**	187	594
05:15 PM	**47**	109	14	**170**	23	32	36	91	10	102	55	167	**33**	**156**	11	**200**	628
05:30 PM	36	**115**	13	164	28	**47**	36	111	**13**	98	46	157	24	156	18	198	**630**
05:45 PM	28	93	**15**	136	**35**	42	**38**	**115**	7	110	55	172	28	120	16	164	587
Total Volume	135	403	50	588	120	155	134	409	36	427	230	693	116	567	66	749	2439
% App. Total	23	68.5	8.5		29.3	37.9	32.8		5.2	61.6	33.2		15.5	75.7	8.8		
PHF	.718	.876	.833	.865	.857	.824	.882	.889	.692	.912	.777	.879	.879	.909	.786	.936	.968

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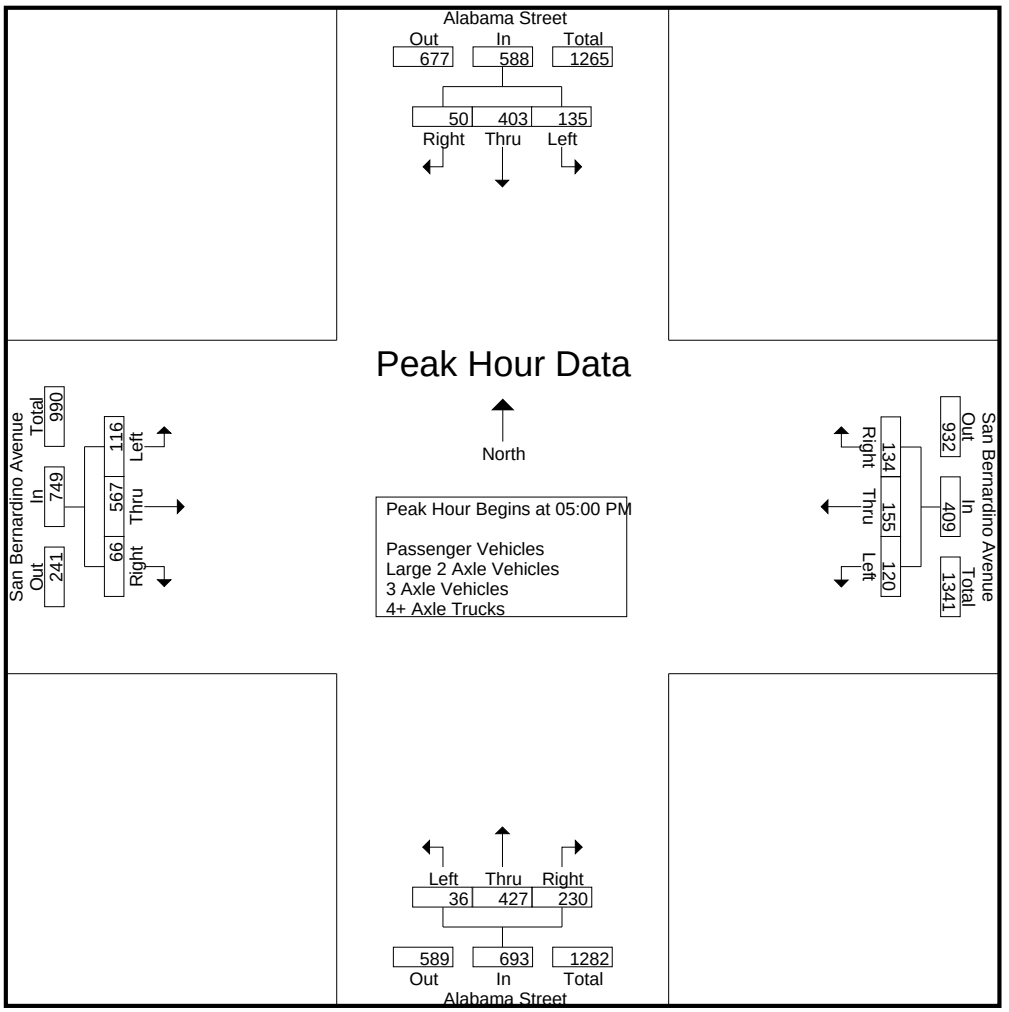
Site Code : 06718128
Start Date : 2/21/2018



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				05:00 PM				05:00 PM				05:00 PM			
+0 mins.	35	105	**15**	155	34	34	24	92	6	**117**	**74**	**197**	31	135	**21**	187
+15 mins.	24	86	8	118	23	32	36	91	10	102	55	167	**33**	**156**	11	**200**
+30 mins.	**47**	109	14	**170**	28	**47**	36	111	**13**	98	46	157	24	156	18	198
+45 mins.	36	**115**	13	164	**35**	42	**38**	**115**	7	110	55	172	28	120	16	164
Total Volume	142	415	50	607	120	155	134	409	36	427	230	693	116	567	66	749
% App. Total	23.4	68.4	8.2		29.3	37.9	32.8		5.2	61.6	33.2		15.5	75.7	8.8	
PHF	.755	.902	.833	.893	.857	.824	.882	.889	.692	.912	.777	.879	.879	.909	.786	.936

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Groups Printed- Passenger Vehicles

	Alabama Street Southbound				San Bernardino Avenue Westbound				Alabama Street Northbound				San Bernardino Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	27	66	5	98	34	36	27	97	11	103	48	162	14	96	18	128	485
04:15 PM	29	99	6	134	34	19	21	74	13	74	31	118	26	108	13	147	473
04:30 PM	35	75	11	121	35	33	25	93	7	98	57	162	24	122	18	164	540
04:45 PM	32	100	13	145	29	36	39	104	11	75	52	138	18	116	21	155	542
Total	123	340	35	498	132	124	112	368	42	350	188	580	82	442	70	594	2040
05:00 PM	22	81	7	110	32	34	23	89	5	111	74	190	28	135	20	183	572
05:15 PM	46	98	11	155	22	31	36	89	10	97	55	162	32	156	11	199	605
05:30 PM	36	105	11	152	28	45	36	109	13	94	45	152	24	155	18	197	610
05:45 PM	28	90	15	133	34	41	37	112	6	102	54	162	28	119	16	163	570
Total	132	374	44	550	116	151	132	399	34	404	228	666	112	565	65	742	2357
Grand Total	255	714	79	1048	248	275	244	767	76	754	416	1246	194	1007	135	1336	4397
Apprch %	24.3	68.1	7.5		32.3	35.9	31.8		6.1	60.5	33.4		14.5	75.4	10.1		
Total %	5.8	16.2	1.8	23.8	5.6	6.3	5.5	17.4	1.7	17.1	9.5	28.3	4.4	22.9	3.1	30.4	

	Alabama Street Southbound				San Bernardino Avenue Westbound				Alabama Street Northbound				San Bernardino Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	22	81	7	110	32	34	23	89	5	**111**	**74**	**190**	28	135	**20**	183	572
05:15 PM	**46**	98	11	**155**	22	31	36	89	10	97	55	162	**32**	**156**	11	**199**	605
05:30 PM	36	**105**	11	152	28	**45**	36	109	**13**	94	45	152	24	155	18	197	**610**
05:45 PM	28	90	**15**	133	**34**	41	**37**	**112**	6	102	54	162	28	119	16	163	570
Total Volume	132	374	44	550	116	151	132	399	34	404	228	666	112	565	65	742	2357
% App. Total	24	68	8		29.1	37.8	33.1		5.1	60.7	34.2		15.1	76.1	8.8		
PHF	.717	.890	.733	.887	.853	.839	.892	.891	.654	.910	.770	.876	.875	.905	.813	.932	.966

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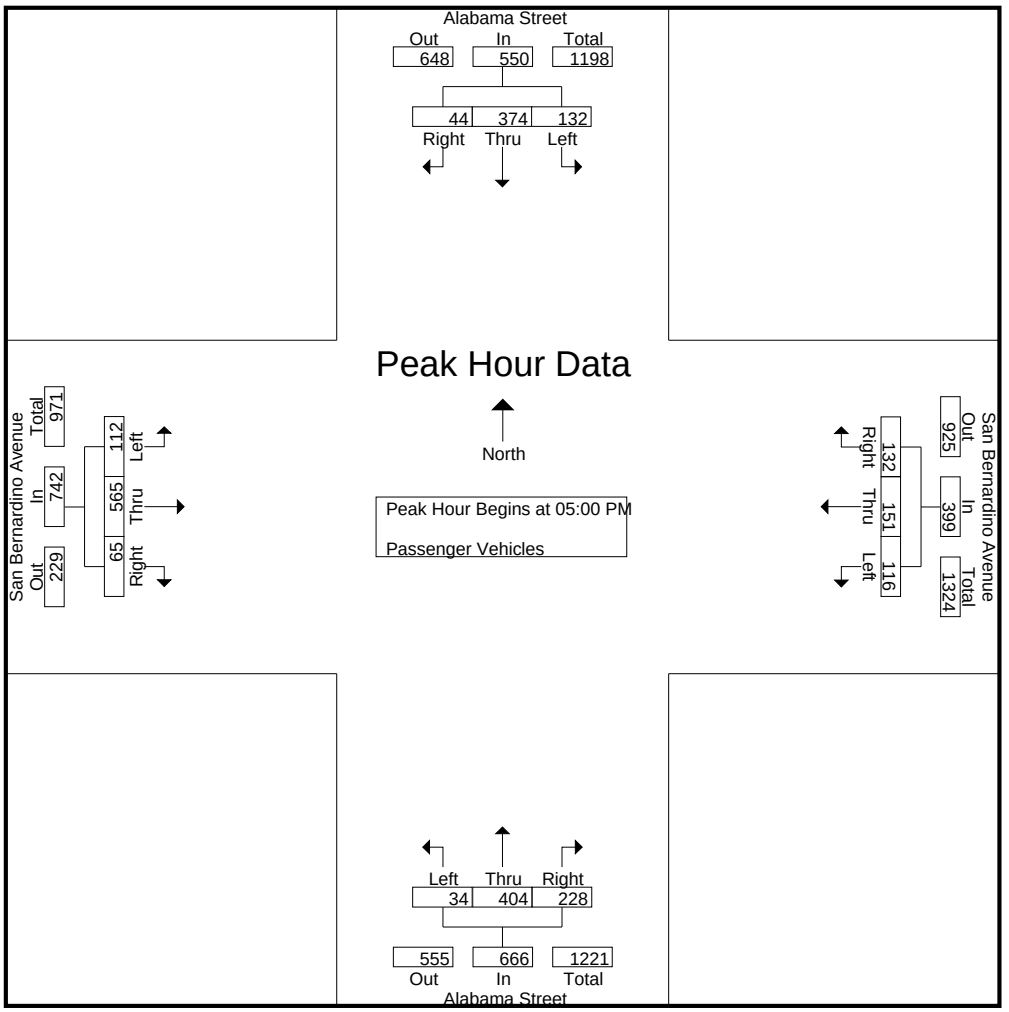

Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	05:00 PM				05:00 PM				05:00 PM				05:00 PM			
+0 mins.	22	81	7	110	32	34	23	89	5	**111**	**74**	**190**	28	135	**20**	183
+15 mins.	**46**	98	11	**155**	22	31	36	89	10	97	55	162	**32**	**156**	11	**199**
+30 mins.	36	**105**	11	152	28	**45**	36	109	**13**	94	45	152	24	155	18	197
+45 mins.	28	90	**15**	133	**34**	41	**37**	**112**	6	102	54	162	28	119	16	163
Total Volume	132	374	44	550	116	151	132	399	34	404	228	666	112	565	65	742
% App. Total	24	68	8		29.1	37.8	33.1		5.1	60.7	34.2		15.1	76.1	8.8	
PHF	.717	.890	.733	.887	.853	.839	.892	.891	.654	.910	.770	.876	.875	.905	.813	.932

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Weather: Clear

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Groups Printed- Large 2 Axle Vehicles

	Alabama Street Southbound				San Bernardino Avenue Westbound				Alabama Street Northbound				San Bernardino Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	1	2	3	1	3	2	6	0	2	1	3	0	2	1	3	15
04:15 PM	0	2	0	2	0	0	0	0	0	0	0	0	1	1	0	2	4
04:30 PM	0	0	0	0	0	2	0	2	0	1	1	2	0	0	0	0	4
04:45 PM	0	1	1	2	0	1	1	2	0	1	1	2	0	0	0	0	6
Total	0	4	3	7	1	6	3	10	0	4	3	7	1	3	1	5	29
05:00 PM	0	1	0	1	1	0	1	2	0	1	0	1	1	0	0	1	5
05:15 PM	0	2	2	4	1	0	0	1	0	1	0	1	0	0	0	0	6
05:30 PM	0	2	1	3	0	1	0	1	0	1	1	2	0	0	0	0	6
05:45 PM	0	1	0	1	1	1	0	2	1	1	1	3	0	1	0	1	7
Total	0	6	3	9	3	2	1	6	1	4	2	7	1	1	0	2	24
Grand Total	0	10	6	16	4	8	4	16	1	8	5	14	2	4	1	7	53
Apprch %	0	62.5	37.5		25	50	25		7.1	57.1	35.7		28.6	57.1	14.3		
Total %	0	18.9	11.3	30.2	7.5	15.1	7.5	30.2	1.9	15.1	9.4	26.4	3.8	7.5	1.9	13.2	

	Alabama Street Southbound				San Bernardino Avenue Westbound				Alabama Street Northbound				San Bernardino Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	0	1	0	1	**1**	0	**1**	**2**	0	**1**	0	1	**1**	0	0	**1**	5
05:15 PM	0	**2**	**2**	**4**	1	0	0	1	0	1	0	1	0	0	0	0	6
05:30 PM	0	2	1	3	0	**1**	0	1	0	1	**1**	2	0	0	0	0	6
05:45 PM	0	1	0	1	1	1	0	2	**1**	1	1	**3**	0	**1**	0	1	**7**
Total Volume	0	6	3	9	3	2	1	6	1	4	2	7	1	1	0	2	24
% App. Total	0	66.7	33.3		50	33.3	16.7		14.3	57.1	28.6		50	50	0		
PHF	.000	.750	.375	.563	.750	.500	.250	.750	.250	1.00	.500	.583	.250	.250	.000	.500	.857

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County of San Bernardino
N/S: Alabama Street
E/W: San Bernardino Avenue
Weather: Clear

File Name : 06_CSB_Alabama_San Bern PM
Site Code : 06718128
Start Date : 2/21/2018
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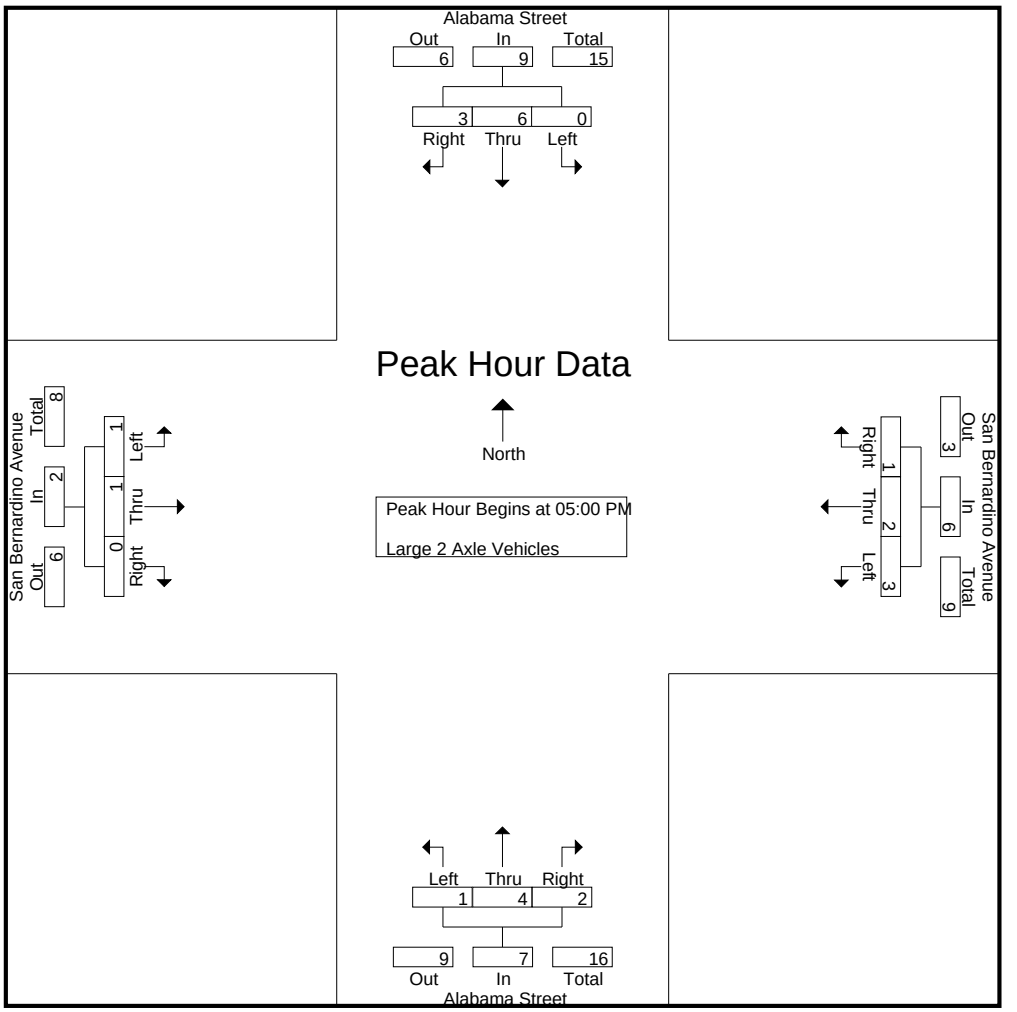

Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	05:00 PM				05:00 PM				05:00 PM				05:00 PM			
+0 mins.	0	1	0	1	**1**	0	**1**	**2**	0	**1**	0	1	**1**	0	0	**1**
+15 mins.	0	**2**	**2**	**4**	1	0	0	1	0	1	0	1	0	0	0	0
+30 mins.	0	2	1	3	0	**1**	0	1	0	1	**1**	2	0	0	0	0
+45 mins.	0	1	0	1	1	1	0	2	**1**	1	1	**3**	0	**1**	0	1
Total Volume	0	6	3	9	3	2	1	6	1	4	2	7	1	1	0	2
% App. Total	0	66.7	33.3		50	33.3	16.7		14.3	57.1	28.6		50	50	0	
PHF	.000	.750	.375	.563	.750	.500	.250	.750	.250	1.000	.500	.583	.250	.250	.000	.500

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Groups Printed- 3 Axle Vehicles

	Alabama Street Southbound				San Bernardino Avenue Westbound				Alabama Street Northbound				San Bernardino Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	1	0	1	0	0	0	0	0	2	0	2	0	0	0	0	3
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
04:30 PM	0	2	0	2	0	0	1	1	0	0	0	0	1	0	0	1	4
04:45 PM	0	1	1	2	0	0	0	0	0	0	0	0	1	0	0	1	3
Total	0	4	1	5	0	0	1	1	0	2	0	2	2	1	0	3	11
05:00 PM	1	0	0	1	0	0	0	0	0	0	0	0	1	0	0	1	2
05:15 PM	0	2	0	2	0	0	0	0	0	2	0	2	1	0	0	1	5
05:30 PM	0	3	1	4	0	0	0	0	0	0	0	0	0	0	0	0	4
05:45 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
Total	1	5	1	7	0	0	0	0	0	3	0	3	2	0	0	2	12
Grand Total	1	9	2	12	0	0	1	1	0	5	0	5	4	1	0	5	23
Apprch %	8.3	75	16.7		0	0	100		0	100	0		80	20	0		
Total %	4.3	39.1	8.7	52.2	0	0	4.3	4.3	0	21.7	0	21.7	17.4	4.3	0	21.7	

	Alabama Street Southbound				San Bernardino Avenue Westbound				Alabama Street Northbound				San Bernardino Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	**1**	0	0	1	0	0	0	0	0	0	0	0	**1**	0	0	**1**	2
05:15 PM	0	2	0	2	0	0	0	0	0	**2**	0	**2**	1	0	0	1	**5**
05:30 PM	0	**3**	**1**	**4**	0	0	0	0	0	0	0	0	0	0	0	0	4
05:45 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
Total Volume	1	5	1	7	0	0	0	0	0	3	0	3	2	0	0	2	12
% App. Total	14.3	71.4	14.3		0	0	0		0	100	0		100	0	0		
PHF	.250	.417	.250	.438	.000	.000	.000	.000	.000	.375	.000	.375	.500	.000	.000	.500	.600

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File Name : 06_CSB_Alabama_San Bern PM
Site Code : 06718128
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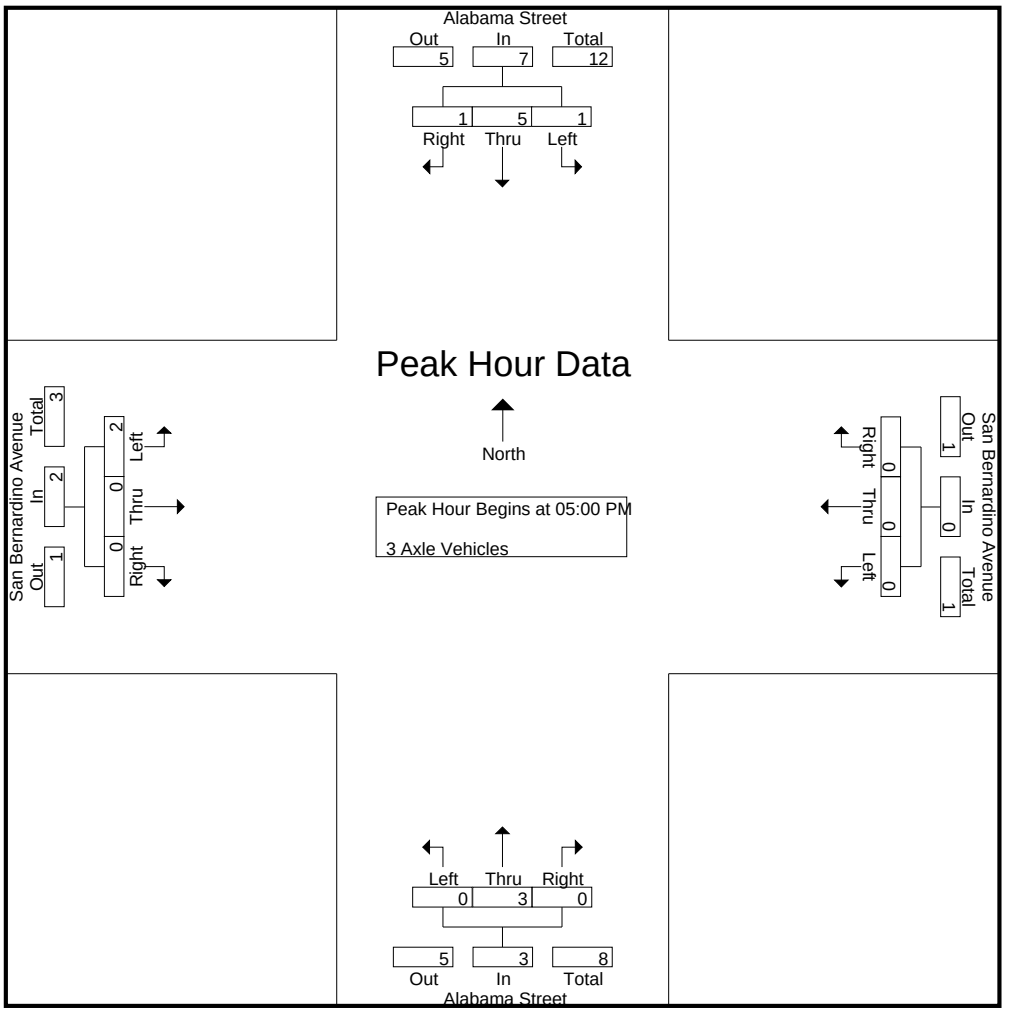

Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	05:00 PM				05:00 PM				05:00 PM				05:00 PM			
+0 mins.	**1**	0	0	1	0	0	0	0	0	0	0	0	**1**	0	0	**1**
+15 mins.	0	2	0	2	0	0	0	0	0	**2**	0	**2**	1	0	0	1
+30 mins.	0	**3**	**1**	**4**	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0
Total Volume	1	5	1	7	0	0	0	0	0	3	0	3	2	0	0	2
% App. Total	14.3	71.4	14.3		0	0	0		0	100	0		100	0	0	
PHF	.250	.417	.250	.438	.000	.000	.000	.000	.000	.375	.000	.375	.500	.000	.000	.500

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Groups Printed- 4+ Axle Trucks

	Alabama Street Southbound				San Bernardino Avenue Westbound				Alabama Street Northbound				San Bernardino Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	5	0	5	0	1	1	2	0	5	0	5	1	0	0	1	13
04:15 PM	0	1	0	1	0	1	2	3	1	7	0	8	2	0	0	2	14
04:30 PM	1	4	1	6	0	0	3	3	0	7	0	7	0	1	0	1	17
04:45 PM	3	3	0	6	0	1	1	2	0	3	0	3	1	2	0	3	14
Total	4	13	1	18	0	3	7	10	1	22	0	23	4	3	0	7	58
05:00 PM	1	4	1	6	1	0	0	1	1	5	0	6	1	0	1	2	15
05:15 PM	1	7	1	9	0	1	0	1	0	2	0	2	0	0	0	0	12
05:30 PM	0	5	0	5	0	1	0	1	0	3	0	3	0	1	0	1	10
05:45 PM	0	2	0	2	0	0	1	1	0	6	0	6	0	0	0	0	9
Total	2	18	2	22	1	2	1	4	1	16	0	17	1	1	1	3	46
Grand Total	6	31	3	40	1	5	8	14	2	38	0	40	5	4	1	10	104
Apprch %	15	77.5	7.5		7.1	35.7	57.1		5	95	0		50	40	10		
Total %	5.8	29.8	2.9	38.5	1	4.8	7.7	13.5	1.9	36.5	0	38.5	4.8	3.8	1	9.6	

	Alabama Street Southbound				San Bernardino Avenue Westbound				Alabama Street Northbound				San Bernardino Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	**1**	4	**1**	6	**1**	0	0	**1**	**1**	5	0	**6**	**1**	0	**1**	**2**	**15**
05:15 PM	1	**7**	1	**9**	0	**1**	0	1	0	2	0	2	0	0	0	0	12
05:30 PM	0	5	0	5	0	1	0	1	0	3	0	3	0	**1**	0	1	10
05:45 PM	0	2	0	2	0	0	**1**	1	0	**6**	0	6	0	0	0	0	9
Total Volume	2	18	2	22	1	2	1	4	1	16	0	17	1	1	1	3	46
% App. Total	9.1	81.8	9.1		25	50	25		5.9	94.1	0		33.3	33.3	33.3		
PHF	.500	.643	.500	.611	.250	.500	.250	1.00	.250	.667	.000	.708	.250	.250	.250	.375	.767

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Site Code : 06718128
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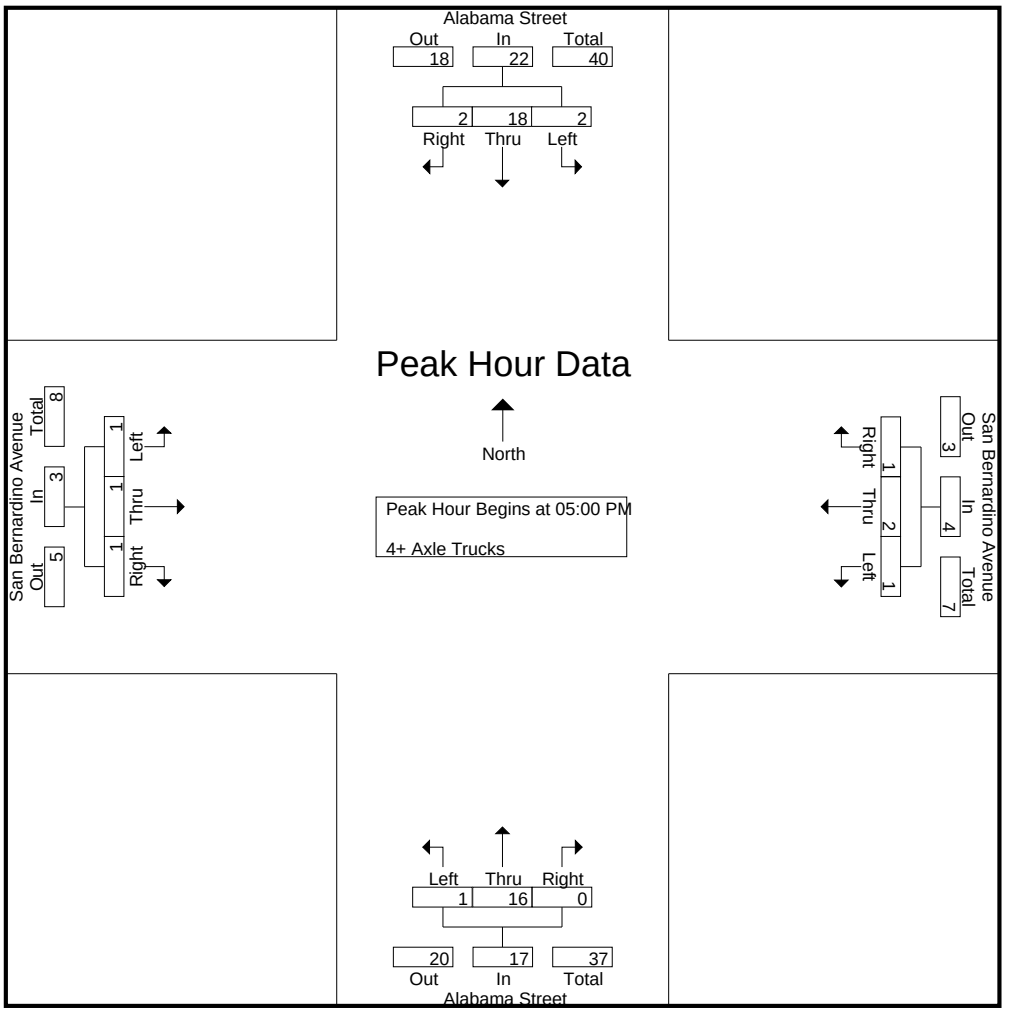

Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	05:00 PM				05:00 PM				05:00 PM				05:00 PM			
+0 mins.	**1**	4	**1**	6	**1**	0	0	**1**	**1**	5	0	**6**	**1**	0	**1**	**2**
+15 mins.	1	**7**	1	**9**	0	**1**	0	1	0	2	0	2	0	0	0	0
+30 mins.	0	5	0	5	0	1	0	1	0	3	0	3	0	**1**	0	1
+45 mins.	0	2	0	2	0	0	**1**	1	0	**6**	0	6	0	0	0	0
Total Volume	2	18	2	22	1	2	1	4	1	16	0	17	1	1	1	3
% App. Total	9.1	81.8	9.1		25	50	25		5.9	94.1	0		33.3	33.3	33.3	
PHF	.500	.643	.500	.611	.250	.500	.250	1.000	.250	.667	.000	.708	.250	.250	.250	.375

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City of Redlands
N/S: Alabama Street
E/W: Lugonia Avenue
Weather: Clear

File Name : 07_RED_Alabama_Lugonia AM
Site Code : 06718128
Start Date : 2/21/2018
Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Alabama Street Southbound				Lugonia Avenue Westbound				Alabama Street Northbound				Lugonia Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	7	63	14	84	30	55	23	108	15	72	18	105	15	15	7	37	334
07:15 AM	2	69	16	87	39	65	19	123	14	67	20	101	24	13	4	41	352
07:30 AM	7	100	20	127	52	70	11	133	18	62	15	95	11	12	9	32	387
07:45 AM	7	95	36	138	42	89	16	147	22	81	27	130	19	19	12	50	465
Total	23	327	86	436	163	279	69	511	69	282	80	431	69	59	32	160	1538
08:00 AM	11	88	34	133	45	57	11	113	21	98	26	145	17	20	9	46	437
08:15 AM	15	80	22	117	50	53	6	109	12	72	34	118	22	18	10	50	394
08:30 AM	14	71	25	110	42	39	7	88	17	65	27	109	12	29	6	47	354
08:45 AM	12	106	32	150	44	43	7	94	21	84	22	127	17	33	7	57	428
Total	52	345	113	510	181	192	31	404	71	319	109	499	68	100	32	200	1613
Grand Total	75	672	199	946	344	471	100	915	140	601	189	930	137	159	64	360	3151
Apprch %	7.9	71	21		37.6	51.5	10.9		15.1	64.6	20.3		38.1	44.2	17.8		
Total %	2.4	21.3	6.3	30	10.9	14.9	3.2	29	4.4	19.1	6	29.5	4.3	5	2	11.4	
Passenger Vehicles	66	590	193	849	334	461	92	887	135	544	179	858	132	155	61	348	2942
% Passenger Vehicles	88	87.8	97	89.7	97.1	97.9	92	96.9	96.4	90.5	94.7	92.3	96.4	97.5	95.3	96.7	93.4
Large 2 Axle Vehicles	7	23	0	30	7	7	8	22	2	15	7	24	2	2	2	6	82
% Large 2 Axle Vehicles	9.3	3.4	0	3.2	2	1.5	8	2.4	1.4	2.5	3.7	2.6	1.5	1.3	3.1	1.7	2.6
3 Axle Vehicles	1	20	4	25	1	2	0	3	1	11	0	12	2	2	1	5	45
% 3 Axle Vehicles	1.3	3	2	2.6	0.3	0.4	0	0.3	0.7	1.8	0	1.3	1.5	1.3	1.6	1.4	1.4
4+ Axle Trucks	1	39	2	42	2	1	0	3	2	31	3	36	1	0	0	1	82
% 4+ Axle Trucks	1.3	5.8	1	4.4	0.6	0.2	0	0.3	1.4	5.2	1.6	3.9	0.7	0	0	0.3	2.6

	Alabama Street Southbound				Lugonia Avenue Westbound				Alabama Street Northbound				Lugonia Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	7	**100**	20	127	**52**	70	11	133	18	62	15	95	11	12	9	32	387
07:45 AM	7	95	**36**	**138**	42	**89**	**16**	**147**	**22**	81	27	130	19	19	**12**	**50**	**465**
08:00 AM	11	88	34	133	45	57	11	113	21	**98**	26	**145**	17	**20**	9	46	437
08:15 AM	**15**	80	22	117	50	53	6	109	12	72	**34**	118	**22**	18	10	50	394
Total Volume	40	363	112	515	189	269	44	502	73	313	102	488	69	69	40	178	1683
% App. Total	7.8	70.5	21.7		37.6	53.6	8.8		15	64.1	20.9		38.8	38.8	22.5		
PHF	.667	.908	.778	.933	.909	.756	.688	.854	.830	.798	.750	.841	.784	.863	.833	.890	.905

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Weather: Clear

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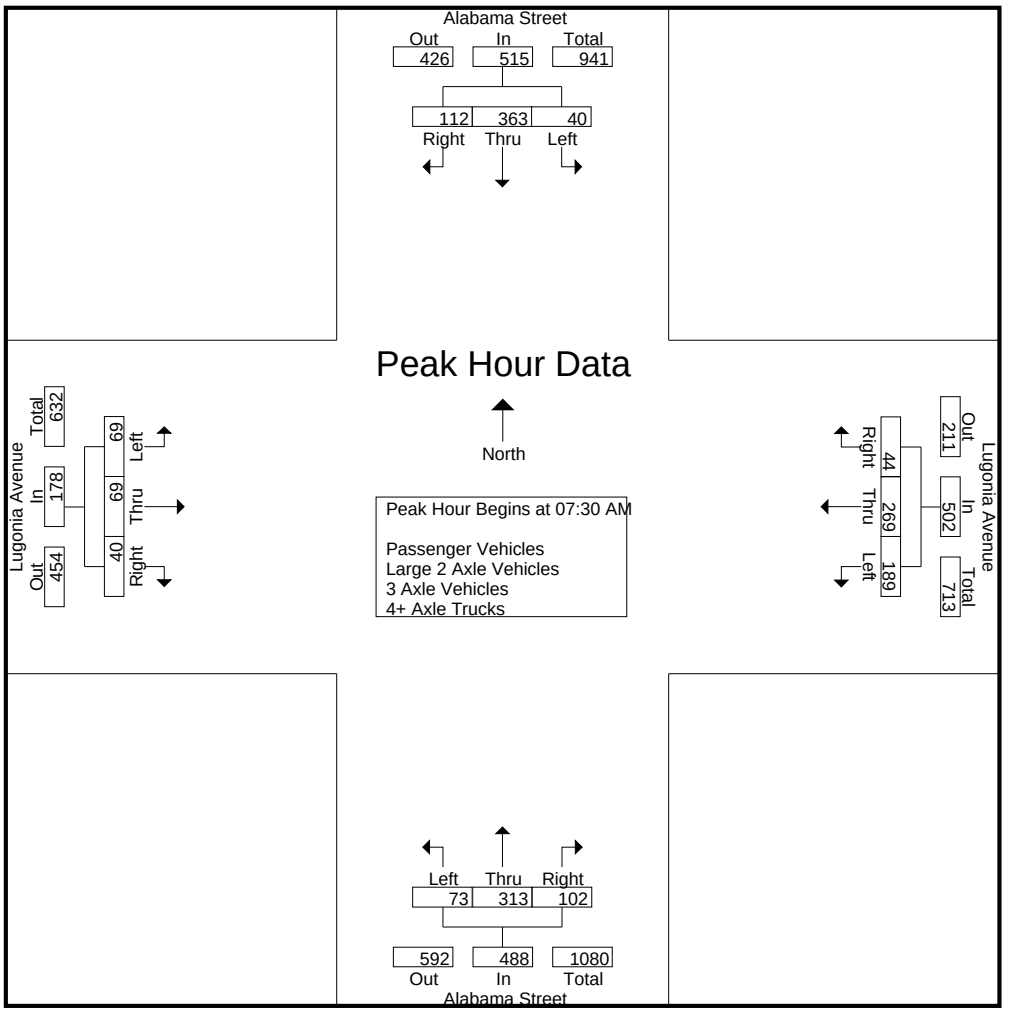
Start Date : 2/21/2018



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:15 AM				07:45 AM				08:00 AM			
+0 mins.	7	**100**	20	127	39	65	**19**	123	**22**	81	27	130	17	20	9	46
+15 mins.	7	95	**36**	**138**	**52**	70	11	133	21	**98**	26	**145**	**22**	18	**10**	50
+30 mins.	11	88	34	133	42	**89**	16	**147**	12	72	**34**	118	12	29	6	47
+45 mins.	**15**	80	22	117	45	57	11	113	17	65	27	109	17	**33**	7	**57**
Total Volume	40	363	112	515	178	281	57	516	72	316	114	502	68	100	32	200
% App. Total	7.8	70.5	21.7		34.5	54.5	11		14.3	62.9	22.7		34	50	16	
PHF	.667	.908	.778	.933	.856	.789	.750	.878	.818	.806	.838	.866	.773	.758	.800	.877

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City of Redlands
N/S: Alabama Street
E/W: Lugonia Avenue
Weather: Clear

File Name : 07_RED_Alabama_Lugonia AM
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Groups Printed- Passenger Vehicles

	Alabama Street Southbound				Lugonia Avenue Westbound				Alabama Street Northbound				Lugonia Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	4	54	13	71	28	54	21	103	14	64	16	94	15	14	6	35	303
07:15 AM	2	62	15	79	37	65	18	120	13	60	17	90	22	12	4	38	327
07:30 AM	7	89	20	116	50	68	11	129	17	60	15	92	11	12	9	32	369
07:45 AM	6	87	33	126	42	88	14	144	22	74	25	121	19	19	11	49	440
Total	19	292	81	392	157	275	64	496	66	258	73	397	67	57	30	154	1439
08:00 AM	9	77	34	120	45	57	11	113	19	88	26	133	16	20	9	45	411
08:15 AM	13	65	22	100	47	51	4	102	12	66	33	111	22	17	10	49	362
08:30 AM	13	62	24	99	41	38	7	86	17	56	25	98	11	28	5	44	327
08:45 AM	12	94	32	138	44	40	6	90	21	76	22	119	16	33	7	56	403
Total	47	298	112	457	177	186	28	391	69	286	106	461	65	98	31	194	1503
Grand Total	66	590	193	849	334	461	92	887	135	544	179	858	132	155	61	348	2942
Apprch %	7.8	69.5	22.7		37.7	52	10.4		15.7	63.4	20.9		37.9	44.5	17.5		
Total %	2.2	20.1	6.6	28.9	11.4	15.7	3.1	30.1	4.6	18.5	6.1	29.2	4.5	5.3	2.1	11.8	

	Alabama Street Southbound				Lugonia Avenue Westbound				Alabama Street Northbound				Lugonia Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	7	**89**	20	116	**50**	68	11	129	17	60	15	92	11	12	9	32	369
07:45 AM	6	87	33	**126**	42	**88**	**14**	**144**	**22**	74	25	121	19	19	**11**	**49**	**440**
08:00 AM	9	77	**34**	120	45	57	11	113	19	**88**	26	**133**	16	**20**	9	45	411
08:15 AM	**13**	65	22	100	47	51	4	102	12	66	**33**	111	**22**	17	10	49	362
Total Volume	35	318	109	462	184	264	40	488	70	288	99	457	68	68	39	175	1582
% App. Total	7.6	68.8	23.6		37.7	54.1	8.2		15.3	63	21.7		38.9	38.9	22.3		
PHF	.673	.893	.801	.917	.920	.750	.714	.847	.795	.818	.750	.859	.773	.850	.886	.893	.899

Counts Unlimited
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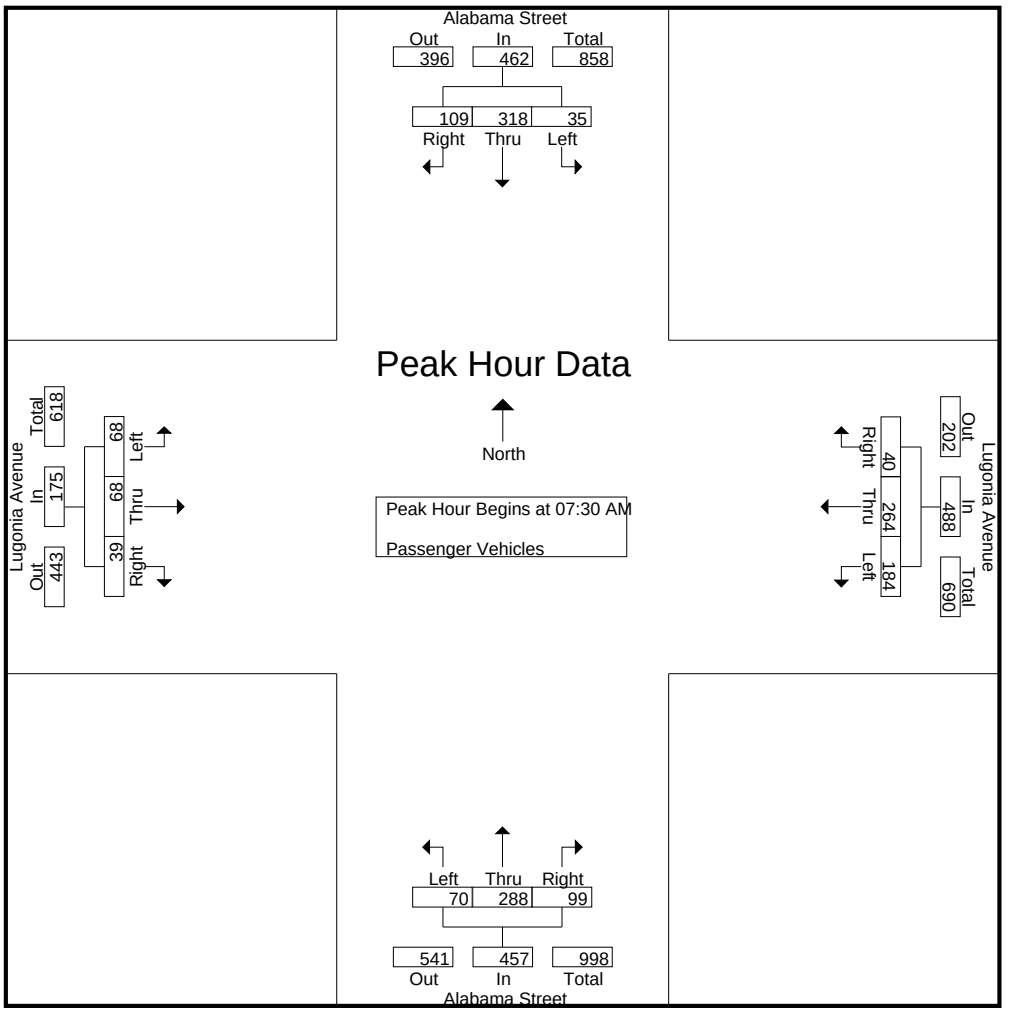
City of Redlands
N/S: Alabama Street
E/W: Lugonia Avenue
Weather: Clear

File Name : 07_RED_Alabama_Lugonia AM
Site Code : 06718128
Start Date : 2/21/2018



Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	7	**89**	20	116	**50**	68	11	129	17	60	15	92	11	12	9	32
+15 mins.	6	87	33	**126**	42	**88**	**14**	**144**	**22**	74	25	121	19	19	**11**	**49**
+30 mins.	9	77	**34**	120	45	57	11	113	19	**88**	26	**133**	16	**20**	9	45
+45 mins.	**13**	65	22	100	47	51	4	102	12	66	**33**	111	**22**	17	10	49
Total Volume	35	318	109	462	184	264	40	488	70	288	99	457	68	68	39	175
% App. Total	7.6	68.8	23.6		37.7	54.1	8.2		15.3	63	21.7		38.9	38.9	22.3	
PHF	.673	.893	.801	.917	.920	.750	.714	.847	.795	.818	.750	.859	.773	.850	.886	.893

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City of Redlands
N/S: Alabama Street
E/W: Lugonia Avenue
Weather: Clear

File Name : 07_RED_Alabama_Lugonia AM
Site Code : 06718128
Start Date : 2/21/2018
Page No : 1

Groups Printed- Large 2 Axle Vehicles

	Alabama Street Southbound				Lugonia Avenue Westbound				Alabama Street Northbound				Lugonia Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	2	4	0	6	1	1	2	4	1	2	2	5	0	0	0	0	15
07:15 AM	0	1	0	1	1	0	1	2	0	3	1	4	0	1	0	1	8
07:30 AM	0	3	0	3	1	1	0	2	1	1	0	2	0	0	0	0	7
07:45 AM	1	1	0	2	0	1	2	3	0	3	2	5	0	0	1	1	11
Total	3	9	0	12	3	3	5	11	2	9	5	16	0	1	1	2	41
08:00 AM	1	3	0	4	0	0	0	0	0	2	0	2	0	0	0	0	6
08:15 AM	2	5	0	7	3	0	2	5	0	2	0	2	0	0	0	0	14
08:30 AM	1	2	0	3	1	1	0	2	0	1	2	3	1	1	1	3	11
08:45 AM	0	4	0	4	0	3	1	4	0	1	0	1	1	0	0	1	10
Total	4	14	0	18	4	4	3	11	0	6	2	8	2	1	1	4	41
Grand Total	7	23	0	30	7	7	8	22	2	15	7	24	2	2	2	6	82
Apprch %	23.3	76.7	0		31.8	31.8	36.4		8.3	62.5	29.2		33.3	33.3	33.3		
Total %	8.5	28	0	36.6	8.5	8.5	9.8	26.8	2.4	18.3	8.5	29.3	2.4	2.4	2.4	7.3	

	Alabama Street Southbound				Lugonia Avenue Westbound				Alabama Street Northbound				Lugonia Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	3	0	3	1	**1**	0	2	**1**	1	0	2	0	0	0	0	7
07:45 AM	1	1	0	2	0	1	**2**	3	0	**3**	**2**	**5**	0	0	**1**	**1**	11
08:00 AM	1	3	0	4	0	0	0	0	0	2	0	2	0	0	0	0	6
08:15 AM	**2**	**5**	0	**7**	**3**	0	2	**5**	0	2	0	2	0	0	0	0	**14**
Total Volume	4	12	0	16	4	2	4	10	1	8	2	11	0	0	1	1	38
% App. Total	25	75	0		40	20	40		9.1	72.7	18.2		0	0	100		
PHF	.500	.600	.000	.571	.333	.500	.500	.500	.250	.667	.250	.550	.000	.000	.250	.250	.679

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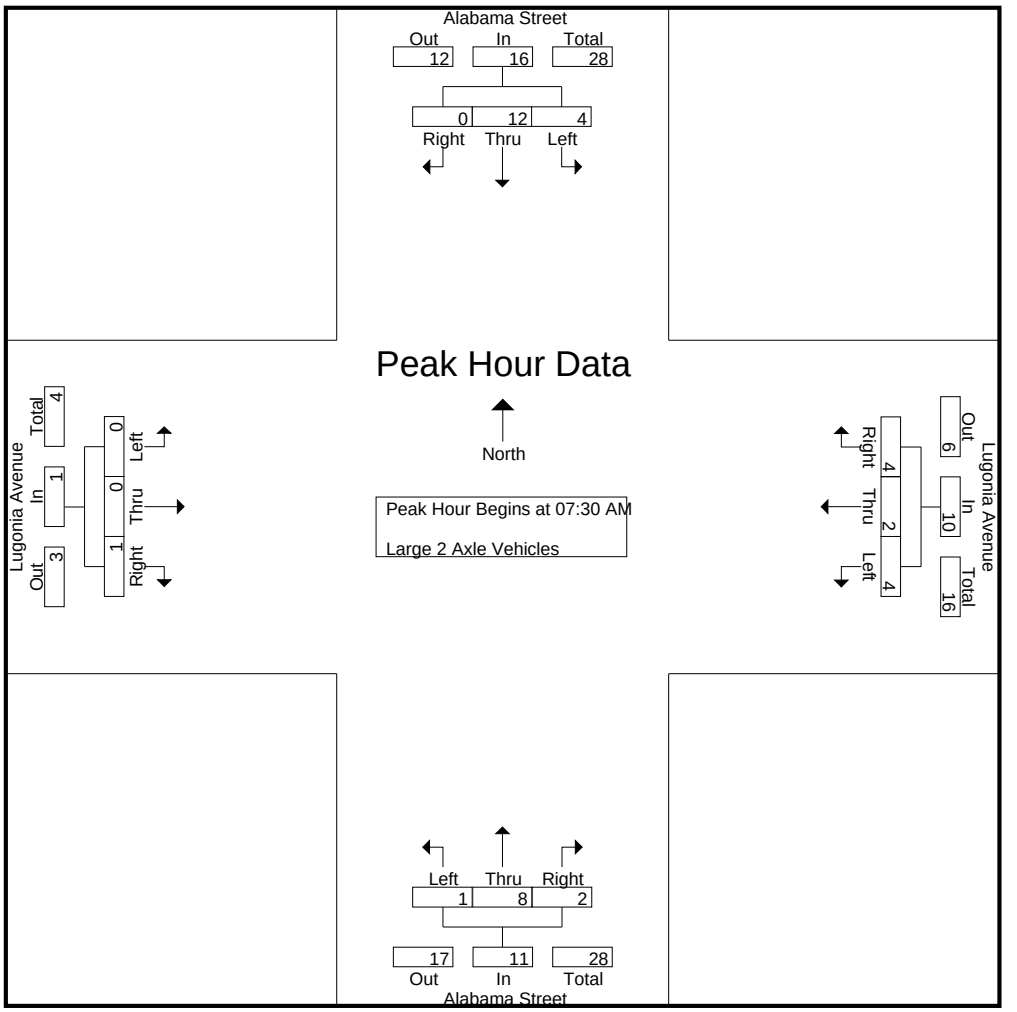
City of Redlands
N/S: Alabama Street
E/W: Lugonia Avenue
Weather: Clear

File Name : 07_RED_Alabama_Lugonia AM
Site Code : 06718128
Start Date : 2/21/2018



Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	0	3	0	3	1	**1**	0	2	**1**	1	0	2	0	0	0	0
+15 mins.	1	1	0	2	0	1	**2**	3	0	**3**	**2**	**5**	0	0	**1**	**1**
+30 mins.	1	3	0	4	0	0	0	0	0	2	0	2	0	0	0	0
+45 mins.	**2**	**5**	0	**7**	**3**	0	2	**5**	0	2	0	2	0	0	0	0
Total Volume	4	12	0	16	4	2	4	10	1	8	2	11	0	0	1	1
% App. Total	25	75	0		40	20	40		9.1	72.7	18.2		0	0	100	
PHF	.500	.600	.000	.571	.333	.500	.500	.500	.250	.667	.250	.550	.000	.000	.250	.250

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City of Redlands
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Weather: Clear

File Name : 07_RED_Alabama_Lugonia AM
Site Code : 06718128
Start Date : 2/21/2018
Page No : 1

Groups Printed- 3 Axle Vehicles

	Alabama Street Southbound				Lugonia Avenue Westbound				Alabama Street Northbound				Lugonia Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	1	2	1	4	1	0	0	1	0	3	0	3	0	1	1	2	10
07:15 AM	0	3	1	4	0	0	0	0	1	1	0	2	2	0	0	2	8
07:30 AM	0	2	0	2	0	1	0	1	0	0	0	0	0	0	0	0	3
07:45 AM	0	2	1	3	0	0	0	0	0	0	0	0	0	0	0	0	3
Total	1	9	3	13	1	1	0	2	1	4	0	5	2	1	1	4	24
08:00 AM	0	2	0	2	0	0	0	0	0	3	0	3	0	0	0	0	5
08:15 AM	0	3	0	3	0	1	0	1	0	1	0	1	0	1	0	1	6
08:30 AM	0	1	1	2	0	0	0	0	0	2	0	2	0	0	0	0	4
08:45 AM	0	5	0	5	0	0	0	0	0	1	0	1	0	0	0	0	6
Total	0	11	1	12	0	1	0	1	0	7	0	7	0	1	0	1	21
Grand Total	1	20	4	25	1	2	0	3	1	11	0	12	2	2	1	5	45
Apprch %	4	80	16		33.3	66.7	0		8.3	91.7	0		40	40	20		
Total %	2.2	44.4	8.9	55.6	2.2	4.4	0	6.7	2.2	24.4	0	26.7	4.4	4.4	2.2	11.1	

	Alabama Street Southbound				Lugonia Avenue Westbound				Alabama Street Northbound				Lugonia Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	2	0	2	0	**1**	0	**1**	0	0	0	0	0	0	0	0	3
07:45 AM	0	2	**1**	**3**	0	0	0	0	0	0	0	0	0	0	0	0	3
08:00 AM	0	2	0	2	0	0	0	0	0	**3**	0	**3**	0	0	0	0	5
08:15 AM	0	**3**	0	3	0	1	0	1	0	1	0	1	0	**1**	0	**1**	**6**
Total Volume	0	9	1	10	0	2	0	2	0	4	0	4	0	1	0	1	17
% App. Total	0	90	10		0	100	0		0	100	0		0	100	0		
PHF	.000	.750	.250	.833	.000	.500	.000	.500	.000	.333	.000	.333	.000	.250	.000	.250	.708

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City of Redlands
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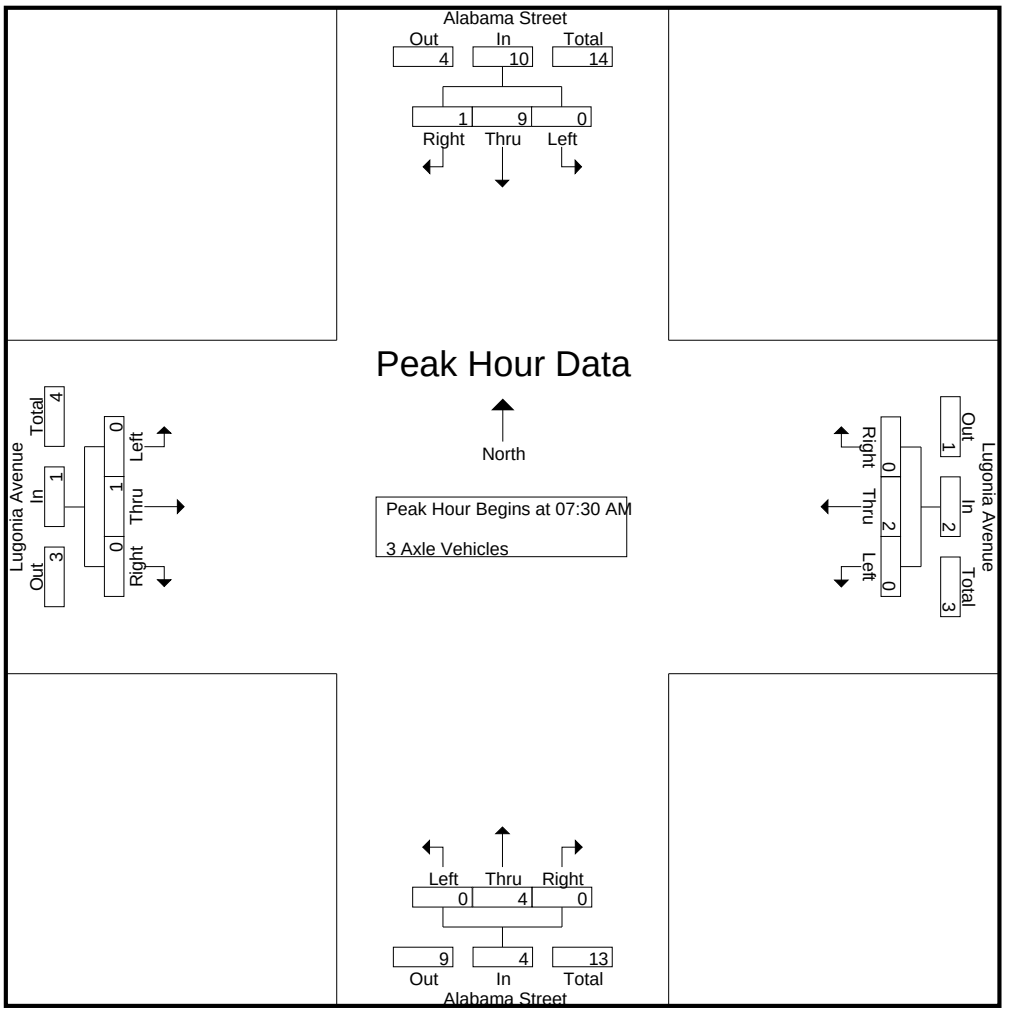
E/W: Lugonia Avenue
Weather: Clear

File Name : 07_RED_Alabama_Lugonia AM
Site Code : 06718128
Start Date : 2/21/2018



Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	0	2	0	2	0	**1**	0	**1**	0	0	0	0	0	0	0	0
+15 mins.	0	2	**1**	**3**	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	2	0	2	0	0	0	0	0	**3**	0	**3**	0	0	0	0
+45 mins.	0	**3**	0	3	0	1	0	1	0	1	0	1	0	**1**	0	**1**
Total Volume	0	9	1	10	0	2	0	2	0	4	0	4	0	1	0	1
% App. Total	0	90	10		0	100	0		0	100	0		0	100	0	
PHF	.000	.750	.250	.833	.000	.500	.000	.500	.000	.333	.000	.333	.000	.250	.000	.250

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City of Redlands
N/S: Alabama Street
E/W: Lugonia Avenue
Weather: Clear

File Name : 07_RED_Alabama_Lugonia AM
Site Code : 06718128
Start Date : 2/21/2018
Page No : 1

Groups Printed- 4+ Axle Trucks

	Alabama Street Southbound				Lugonia Avenue Westbound				Alabama Street Northbound				Lugonia Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	3	0	3	0	0	0	0	0	3	0	3	0	0	0	0	6
07:15 AM	0	3	0	3	1	0	0	1	0	3	2	5	0	0	0	0	9
07:30 AM	0	6	0	6	1	0	0	1	0	1	0	1	0	0	0	0	8
07:45 AM	0	5	2	7	0	0	0	0	0	4	0	4	0	0	0	0	11
Total	0	17	2	19	2	0	0	2	0	11	2	13	0	0	0	0	34
08:00 AM	1	6	0	7	0	0	0	0	2	5	0	7	1	0	0	1	15
08:15 AM	0	7	0	7	0	1	0	1	0	3	1	4	0	0	0	0	12
08:30 AM	0	6	0	6	0	0	0	0	0	6	0	6	0	0	0	0	12
08:45 AM	0	3	0	3	0	0	0	0	0	6	0	6	0	0	0	0	9
Total	1	22	0	23	0	1	0	1	2	20	1	23	1	0	0	1	48
Grand Total	1	39	2	42	2	1	0	3	2	31	3	36	1	0	0	1	82
Apprch %	2.4	92.9	4.8		66.7	33.3	0		5.6	86.1	8.3		100	0	0		
Total %	1.2	47.6	2.4	51.2	2.4	1.2	0	3.7	2.4	37.8	3.7	43.9	1.2	0	0	1.2	

	Alabama Street Southbound				Lugonia Avenue Westbound				Alabama Street Northbound				Lugonia Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	6	0	6	**1**	0	0	**1**	0	1	0	1	0	0	0	0	8
07:45 AM	0	5	**2**	**7**	0	0	0	0	0	4	0	4	0	0	0	0	11
08:00 AM	**1**	6	0	7	0	0	0	0	**2**	**5**	0	**7**	**1**	0	0	**1**	**15**
08:15 AM	0	**7**	0	7	0	**1**	0	1	0	3	**1**	4	0	0	0	0	12
Total Volume	1	24	2	27	1	1	0	2	2	13	1	16	1	0	0	1	46
% App. Total	3.7	88.9	7.4		50	50	0		12.5	81.2	6.2		100	0	0		
PHF	.250	.857	.250	.964	.250	.250	.000	.500	.250	.650	.250	.571	.250	.000	.000	.250	.767

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City of Redlands
N/S: Alabama Street
E/W: Lugonia Avenue
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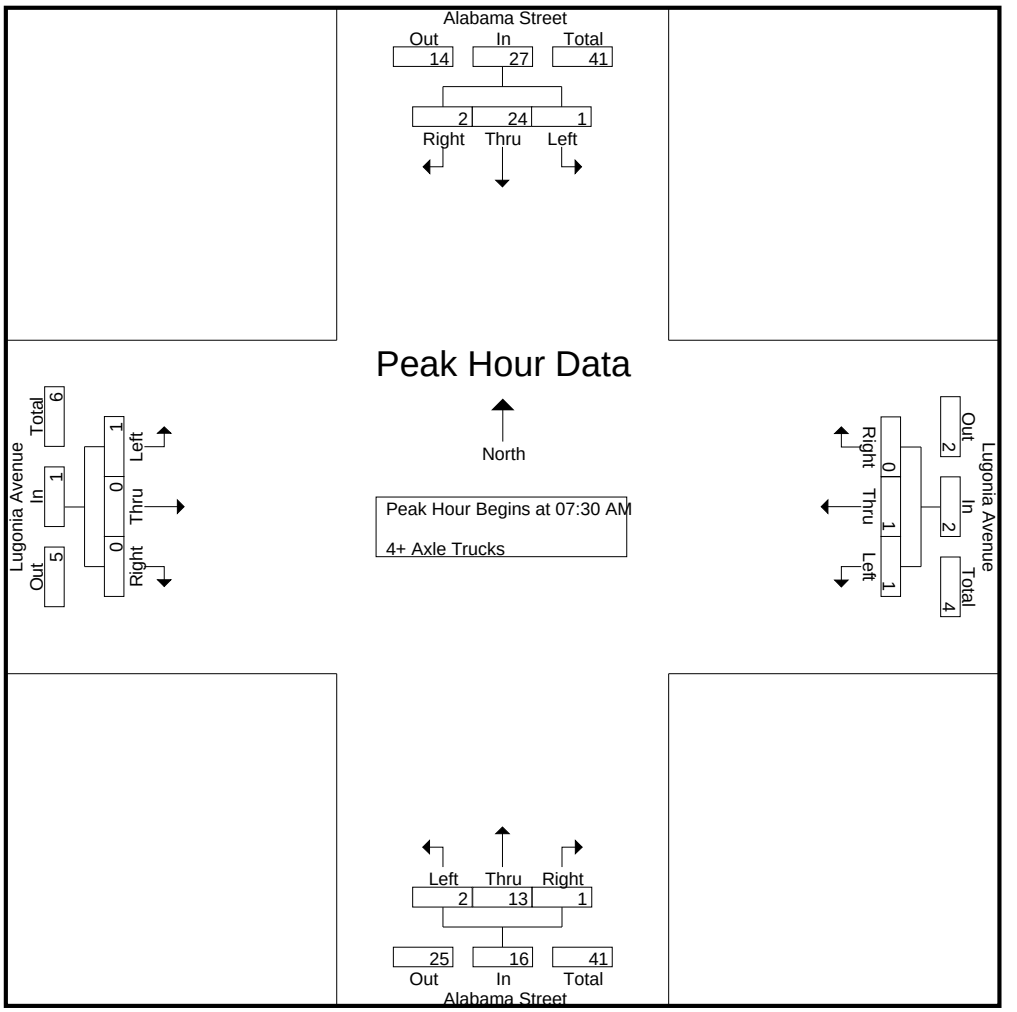
File Name : 07_RED_Alabama_Lugonia AM
Site Code : 06718128
Start Date : 2/21/2018



Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	0	6	0	6	**1**	0	0	**1**	0	1	0	1	0	0	0	0
+15 mins.	0	5	**2**	**7**	0	0	0	0	0	4	0	4	0	0	0	0
+30 mins.	**1**	6	0	7	0	0	0	0	**2**	**5**	0	**7**	**1**	0	0	**1**
+45 mins.	0	**7**	0	7	0	**1**	0	1	0	3	**1**	4	0	0	0	0
Total Volume	1	24	2	27	1	1	0	2	2	13	1	16	1	0	0	1
% App. Total	3.7	88.9	7.4		50	50	0		12.5	81.2	6.2		100	0	0	
PHF	.250	.857	.250	.964	.250	.250	.000	.500	.250	.650	.250	.571	.250	.000	.000	.250

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City of Redlands
N/S: Alabama Street
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Weather: Clear

File Name : 07_RED_Alabama_Lugonia PM
Site Code : 06718128
Start Date : 2/21/2018
Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Alabama Street Southbound				Lugonia Avenue Westbound				Alabama Street Northbound				Lugonia Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	25	95	27	147	72	57	15	144	24	123	73	220	54	81	22	157	668
04:15 PM	28	113	30	171	68	64	15	147	29	118	69	216	47	81	28	156	690
04:30 PM	31	107	20	158	60	52	10	122	18	115	58	191	58	111	34	203	674
04:45 PM	26	106	22	154	62	59	9	130	16	114	56	186	57	88	30	175	645
Total	110	421	99	630	262	232	49	543	87	470	256	813	216	361	114	691	2677
05:00 PM	29	107	22	158	67	61	22	150	16	111	60	187	53	124	21	198	693
05:15 PM	40	115	28	183	71	41	10	122	17	120	60	197	54	117	23	194	696
05:30 PM	23	123	25	171	62	56	15	133	26	123	75	224	44	82	20	146	674
05:45 PM	27	121	21	169	74	54	15	143	22	103	61	186	62	67	16	145	643
Total	119	466	96	681	274	212	62	548	81	457	256	794	213	390	80	683	2706
Grand Total	229	887	195	1311	536	444	111	1091	168	927	512	1607	429	751	194	1374	5383
Apprch %	17.5	67.7	14.9		49.1	40.7	10.2		10.5	57.7	31.9		31.2	54.7	14.1		
Total %	4.3	16.5	3.6	24.4	10	8.2	2.1	20.3	3.1	17.2	9.5	29.9	8	14	3.6	25.5	
Passenger Vehicles	223	834	193	1250	533	442	106	1081	167	888	508	1563	423	750	193	1366	5260
% Passenger Vehicles	97.4	94	99	95.3	99.4	99.5	95.5	99.1	99.4	95.8	99.2	97.3	98.6	99.9	99.5	99.4	97.7
Large 2 Axle Vehicles	6	15	0	21	2	2	5	9	1	9	4	14	5	1	1	7	51
% Large 2 Axle Vehicles	2.6	1.7	0	1.6	0.4	0.5	4.5	0.8	0.6	1	0.8	0.9	1.2	0.1	0.5	0.5	0.9
3 Axle Vehicles	0	11	2	13	1	0	0	1	0	2	0	2	1	0	0	1	17
% 3 Axle Vehicles	0	1.2	1	1	0.2	0	0	0.1	0	0.2	0	0.1	0.2	0	0	0.1	0.3
4+ Axle Trucks	0	27	0	27	0	0	0	0	0	28	0	28	0	0	0	0	55
% 4+ Axle Trucks	0	3	0	2.1	0	0	0	0	0	3	0	1.7	0	0	0	0	1

	Alabama Street Southbound				Lugonia Avenue Westbound				Alabama Street Northbound				Lugonia Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	31	107	20	158	60	52	10	122	**18**	115	58	191	**58**	111	**34**	**203**	674
04:45 PM	26	106	22	154	62	59	9	130	16	114	56	186	57	88	30	175	645
05:00 PM	29	107	22	158	67	**61**	**22**	**150**	16	111	**60**	187	53	**124**	21	198	693
05:15 PM	**40**	**115**	**28**	**183**	**71**	41	10	122	17	**120**	60	**197**	54	117	23	194	**696**
Total Volume	126	435	92	653	260	213	51	524	67	460	234	761	222	440	108	770	2708
% App. Total	19.3	66.6	14.1		49.6	40.6	9.7		8.8	60.4	30.7		28.8	57.1	14		
PHF	.788	.946	.821	.892	.915	.873	.580	.873	.931	.958	.975	.966	.957	.887	.794	.948	.973

Counts Unlimited
PO Box 1178
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City of Redlands
N/S: Alabama Street
E/W: Lugonia Avenue
Weather: Clear

File Name : 07_RED_Alabama_Lugonia PM
Site Code : 06718128
Start Date : 2/21/2018
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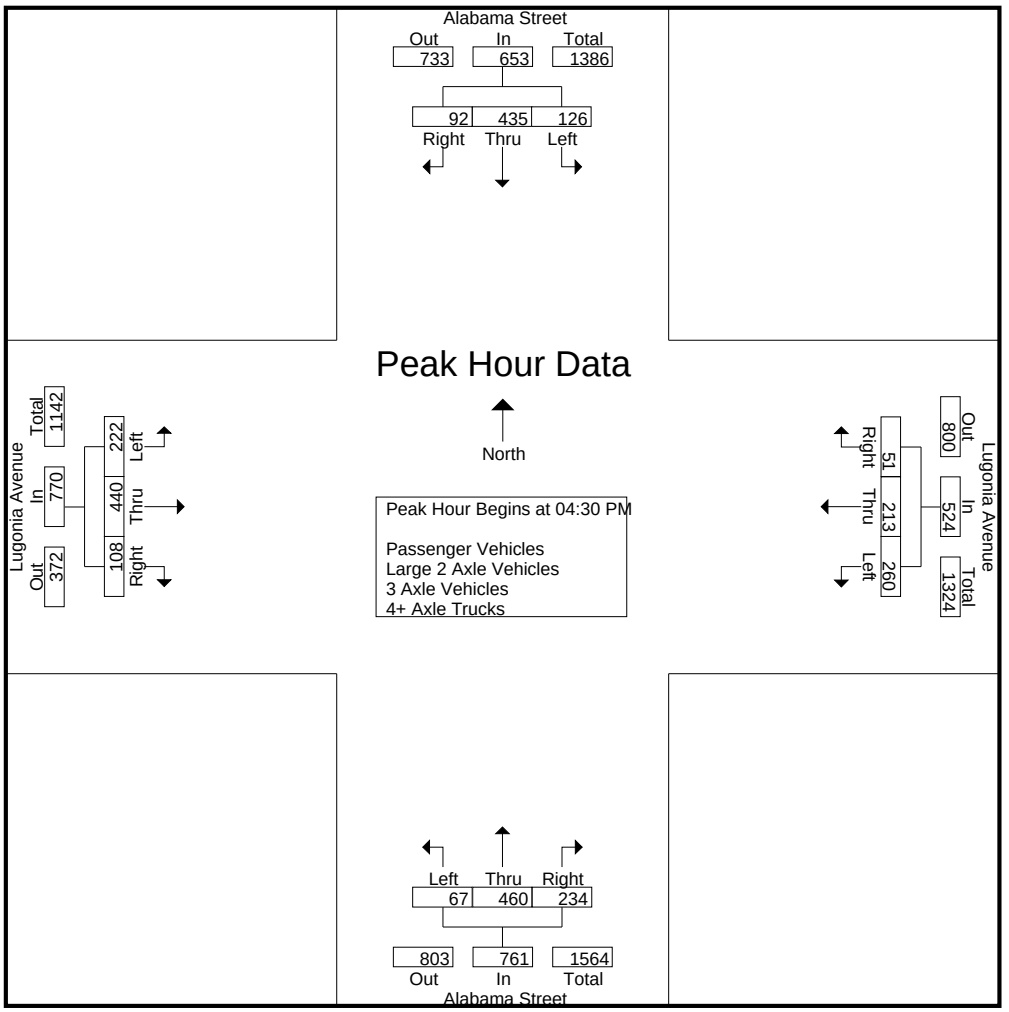

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	05:00 PM				04:15 PM				04:00 PM				04:30 PM			
+0 mins.	29	107	22	158	**68**	**64**	15	147	24	**123**	**73**	**220**	**58**	111	**34**	**203**
+15 mins.	**40**	115	**28**	**183**	60	52	10	122	**29**	118	69	216	57	88	30	175
+30 mins.	23	**123**	25	171	62	59	9	130	18	115	58	191	53	**124**	21	198
+45 mins.	27	121	21	169	67	61	**22**	**150**	16	114	56	186	54	117	23	194
Total Volume	119	466	96	681	257	236	56	549	87	470	256	813	222	440	108	770
% App. Total	17.5	68.4	14.1		46.8	43	10.2		10.7	57.8	31.5		28.8	57.1	14	
PHF	.744	.947	.857	.930	.945	.922	.636	.915	.750	.955	.877	.924	.957	.887	.794	.948

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City of Redlands
N/S: Alabama Street
E/W: Lugonia Avenue
Weather: Clear

File Name : 07_RED_Alabama_Lugonia PM
Site Code : 06718128
Start Date : 2/21/2018
Page No : 1

Groups Printed- Passenger Vehicles

	Alabama Street Southbound				Lugonia Avenue Westbound				Alabama Street Northbound				Lugonia Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	25	87	26	138	71	57	15	143	24	117	73	214	51	81	22	154	649
04:15 PM	27	108	30	165	68	63	14	145	28	111	69	208	46	81	28	155	673
04:30 PM	29	102	20	151	60	52	10	122	18	108	58	184	57	110	34	201	658
04:45 PM	26	105	22	153	62	59	8	129	16	112	55	183	56	88	29	173	638
Total	107	402	98	607	261	231	47	539	86	448	255	789	210	360	113	683	2618
05:00 PM	28	97	21	146	67	61	21	149	16	107	58	181	53	124	21	198	674
05:15 PM	39	107	28	174	69	41	10	120	17	116	60	193	54	117	23	194	681
05:30 PM	23	110	25	158	62	56	14	132	26	118	74	218	44	82	20	146	654
05:45 PM	26	118	21	165	74	53	14	141	22	99	61	182	62	67	16	145	633
Total	116	432	95	643	272	211	59	542	81	440	253	774	213	390	80	683	2642
Grand Total	223	834	193	1250	533	442	106	1081	167	888	508	1563	423	750	193	1366	5260
Apprch %	17.8	66.7	15.4		49.3	40.9	9.8		10.7	56.8	32.5		31	54.9	14.1		
Total %	4.2	15.9	3.7	23.8	10.1	8.4	2	20.6	3.2	16.9	9.7	29.7	8	14.3	3.7	26	

	Alabama Street Southbound				Lugonia Avenue Westbound				Alabama Street Northbound				Lugonia Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	29	102	20	151	60	52	10	122	**18**	108	58	184	**57**	110	**34**	**201**	658
04:45 PM	26	105	22	153	62	59	8	129	16	112	55	183	56	88	29	173	638
05:00 PM	28	97	21	146	67	**61**	**21**	**149**	16	107	58	181	53	**124**	21	198	674
05:15 PM	**39**	**107**	**28**	**174**	**69**	41	10	120	17	**116**	**60**	**193**	54	117	23	194	**681**
Total Volume	122	411	91	624	258	213	49	520	67	443	231	741	220	439	107	766	2651
% App. Total	19.6	65.9	14.6		49.6	41	9.4		9	59.8	31.2		28.7	57.3	14		
PHF	.782	.960	.813	.897	.935	.873	.583	.872	.931	.955	.963	.960	.965	.885	.787	.953	.973

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City of Redlands
N/S: Alabama Street
E/W: Lugonia Avenue
Weather: Clear

File Name : 07_RED_Alabama_Lugonia PM
Site Code : 06718128
Start Date : 2/21/2018
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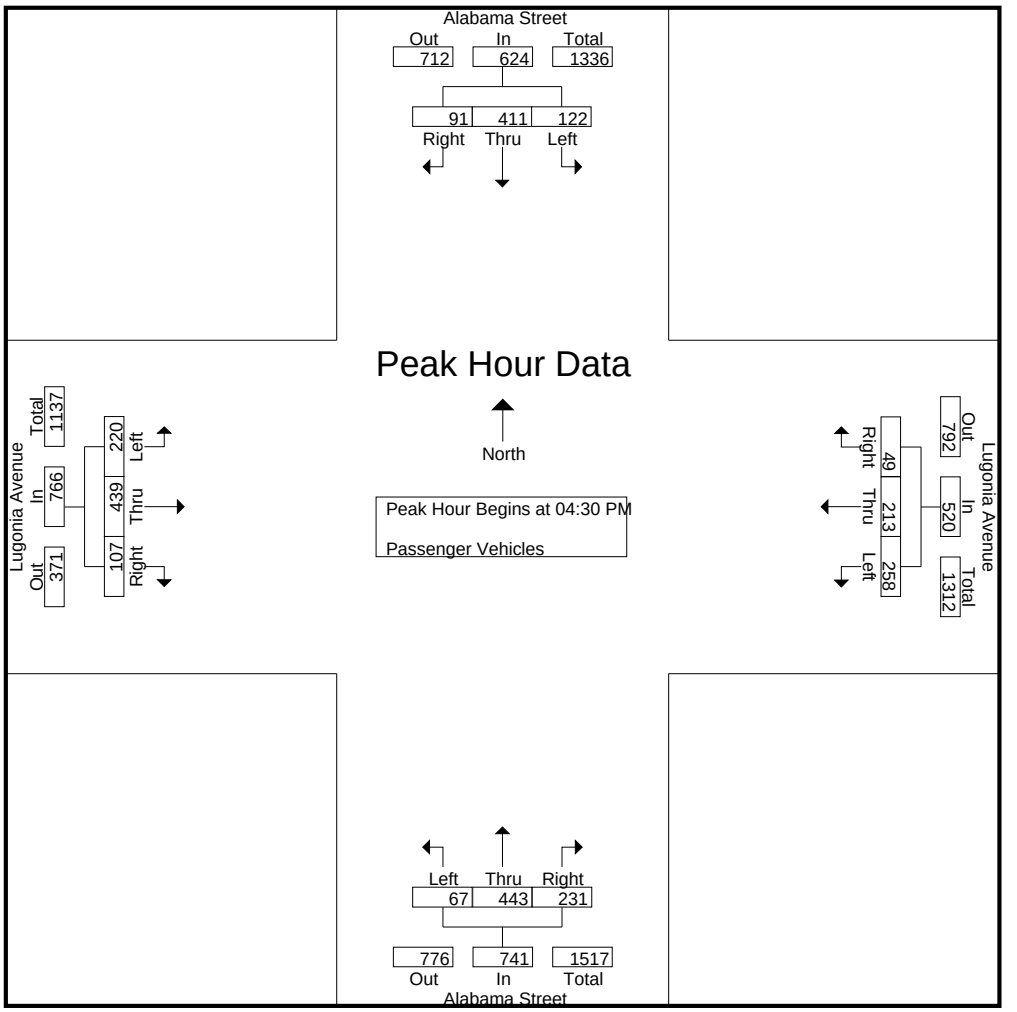

Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				04:30 PM				04:30 PM				04:30 PM			
+0 mins.	29	102	20	151	60	52	10	122	**18**	108	58	184	**57**	110	**34**	**201**
+15 mins.	26	105	22	153	62	59	8	129	16	112	55	183	56	88	29	173
+30 mins.	28	97	21	146	67	**61**	**21**	**149**	16	107	58	181	53	**124**	21	198
+45 mins.	**39**	**107**	**28**	**174**	**69**	41	10	120	17	**116**	**60**	**193**	54	117	23	194
Total Volume	122	411	91	624	258	213	49	520	67	443	231	741	220	439	107	766
% App. Total	19.6	65.9	14.6		49.6	41	9.4		9	59.8	31.2		28.7	57.3	14	
PHF	.782	.960	.813	.897	.935	.873	.583	.872	.931	.955	.963	.960	.965	.885	.787	.953

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City of Redlands
N/S: Alabama Street
E/W: Lugonia Avenue
Weather: Clear

File Name : 07_RED_Alabama_Lugonia PM
Site Code : 06718128
Start Date : 2/21/2018
Page No : 1

Groups Printed- Large 2 Axle Vehicles

	Alabama Street Southbound				Lugonia Avenue Westbound				Alabama Street Northbound				Lugonia Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	2	0	2	0	0	0	0	0	2	0	2	2	0	0	2	6
04:15 PM	1	3	0	4	0	1	1	2	1	0	0	1	1	0	0	1	8
04:30 PM	2	1	0	3	0	0	0	0	0	1	0	1	1	1	0	2	6
04:45 PM	0	0	0	0	0	0	1	1	0	0	1	1	1	0	1	2	4
Total	3	6	0	9	0	1	2	3	1	3	1	5	5	1	1	7	24
05:00 PM	1	3	0	4	0	0	1	1	0	0	2	2	0	0	0	0	7
05:15 PM	1	1	0	2	2	0	0	2	0	2	0	2	0	0	0	0	6
05:30 PM	0	4	0	4	0	0	1	1	0	3	1	4	0	0	0	0	9
05:45 PM	1	1	0	2	0	1	1	2	0	1	0	1	0	0	0	0	5
Total	3	9	0	12	2	1	3	6	0	6	3	9	0	0	0	0	27
Grand Total	6	15	0	21	2	2	5	9	1	9	4	14	5	1	1	7	51
Apprch %	28.6	71.4	0		22.2	22.2	55.6		7.1	64.3	28.6		71.4	14.3	14.3		
Total %	11.8	29.4	0	41.2	3.9	3.9	9.8	17.6	2	17.6	7.8	27.5	9.8	2	2	13.7	

	Alabama Street Southbound				Lugonia Avenue Westbound				Alabama Street Northbound				Lugonia Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	**2**	1	0	3	0	0	0	0	0	1	0	1	**1**	**1**	0	**2**	6
04:45 PM	0	0	0	0	0	0	**1**	1	0	0	1	1	1	0	**1**	2	4
05:00 PM	1	**3**	0	**4**	0	0	1	1	0	0	**2**	**2**	0	0	0	0	**7**
05:15 PM	1	1	0	2	**2**	0	0	**2**	0	**2**	0	2	0	0	0	0	6
Total Volume	4	5	0	9	2	0	2	4	0	3	3	6	2	1	1	4	23
% App. Total	44.4	55.6	0		50	0	50		0	50	50		50	25	25		
PHF	.500	.417	.000	.563	.250	.000	.500	.500	.000	.375	.375	.750	.500	.250	.250	.500	.821

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City of Redlands
N/S: Alabama Street
E/W: Lugonia Avenue
Weather: Clear

File Name : 07_RED_Alabama_Lugonia PM
Site Code : 06718128
Start Date : 2/21/2018
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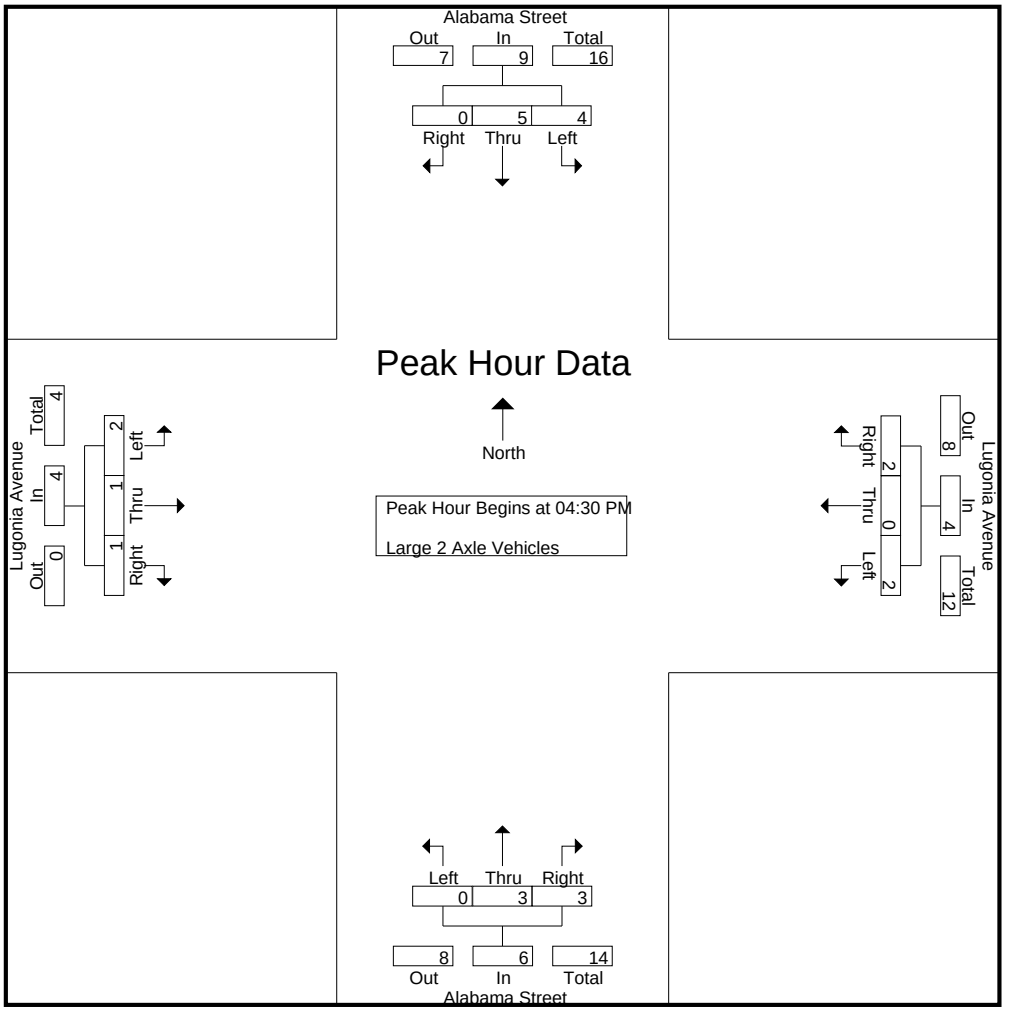

Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				04:30 PM				04:30 PM				04:30 PM			
+0 mins.	**2**	1	0	3	0	0	0	0	0	1	0	1	**1**	**1**	0	**2**
+15 mins.	0	0	0	0	0	0	**1**	1	0	0	1	1	1	0	**1**	2
+30 mins.	1	**3**	0	**4**	0	0	1	1	0	0	**2**	**2**	0	0	0	0
+45 mins.	1	1	0	2	**2**	0	0	**2**	0	**2**	0	2	0	0	0	0
Total Volume	4	5	0	9	2	0	2	4	0	3	3	6	2	1	1	4
% App. Total	44.4	55.6	0		50	0	50		0	50	50		50	25	25	
PHF	.500	.417	.000	.563	.250	.000	.500	.500	.000	.375	.375	.750	.500	.250	.250	.500

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City of Redlands
N/S: Alabama Street
E/W: Lugonia Avenue
Weather: Clear

File Name : 07_RED_Alabama_Lugonia PM
Site Code : 06718128
Start Date : 2/21/2018
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Groups Printed- 3 Axle Vehicles

	Alabama Street Southbound				Lugonia Avenue Westbound				Alabama Street Northbound				Lugonia Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	1	1	2	1	0	0	1	0	0	0	0	1	0	0	1	4
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	2	1	3	1	0	0	1	0	0	0	0	1	0	0	1	5
05:00 PM	0	2	1	3	0	0	0	0	0	1	0	1	0	0	0	0	4
05:15 PM	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0	3
05:30 PM	0	2	0	2	0	0	0	0	0	1	0	1	0	0	0	0	3
05:45 PM	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
Total	0	9	1	10	0	0	0	0	0	2	0	2	0	0	0	0	12
Grand Total	0	11	2	13	1	0	0	1	0	2	0	2	1	0	0	1	17
Apprch %	0	84.6	15.4		100	0	0		0	100	0		100	0	0		
Total %	0	64.7	11.8	76.5	5.9	0	0	5.9	0	11.8	0	11.8	5.9	0	0	5.9	

	Alabama Street Southbound				Lugonia Avenue Westbound				Alabama Street Northbound				Lugonia Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	2	**1**	**3**	0	0	0	0	0	**1**	0	**1**	0	0	0	0	**4**
05:15 PM	0	**3**	0	3	0	0	0	0	0	0	0	0	0	0	0	0	3
Total Volume	0	6	1	7	0	0	0	0	0	1	0	1	0	0	0	0	8
% App. Total	0	85.7	14.3		0	0	0		0	100	0		0	0	0		
PHF	.000	.500	.250	.583	.000	.000	.000	.000	.000	.250	.000	.250	.000	.000	.000	.000	.500

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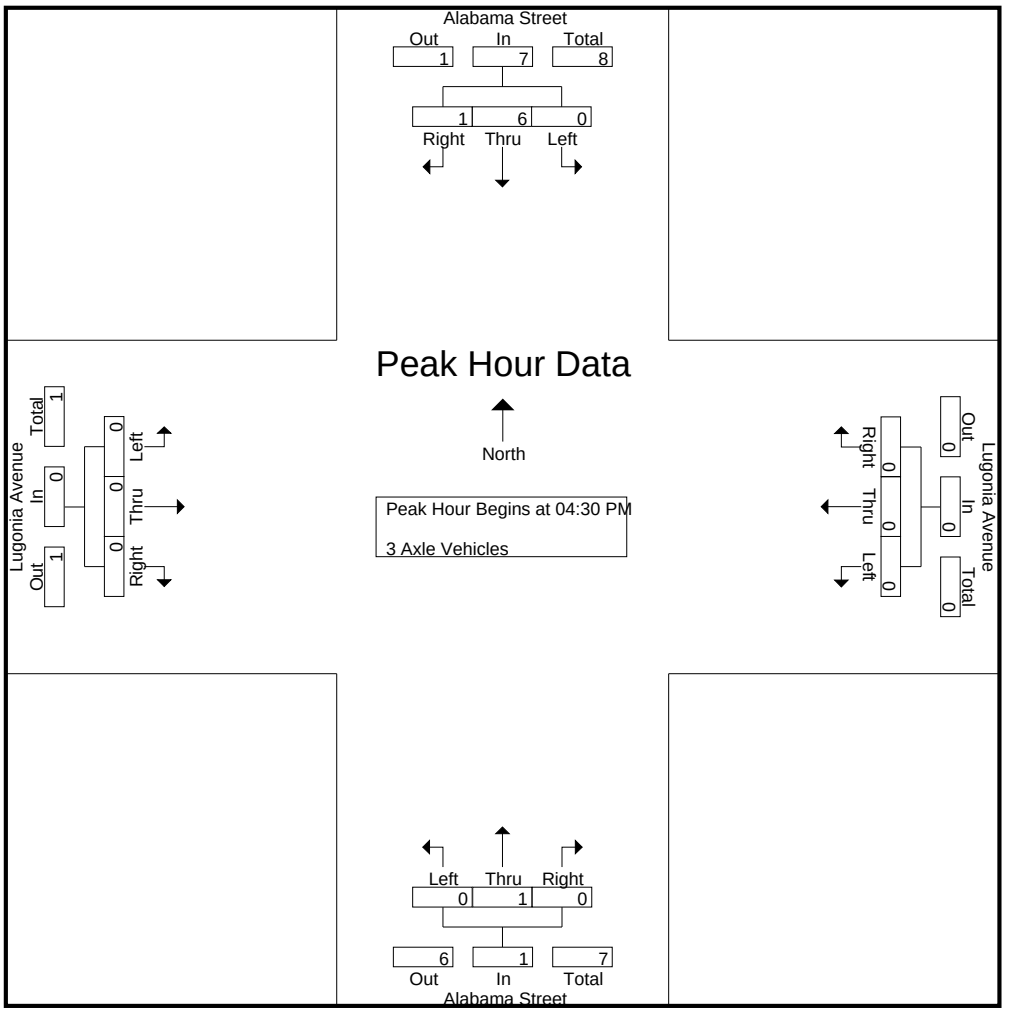
City of Redlands
N/S: Alabama Street
E/W: Lugonia Avenue
Weather: Clear

File Name : 07_RED_Alabama_Lugonia PM
Site Code : 06718128
Start Date : 2/21/2018



Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				04:30 PM				04:30 PM				04:30 PM			
+0 mins.	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	2	**1**	**3**	0	0	0	0	0	**1**	0	**1**	0	0	0	0
+45 mins.	0	**3**	0	3	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	6	1	7	0	0	0	0	0	1	0	1	0	0	0	0
% App. Total	0	85.7	14.3		0	0	0		0	100	0		0	0	0	
PHF	.000	.500	.250	.583	.000	.000	.000	.000	.000	.250	.000	.250	.000	.000	.000	.000

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City of Redlands
N/S: Alabama Street
E/W: Lugonia Avenue
Weather: Clear

File Name : 07_RED_Alabama_Lugonia PM
Site Code : 06718128
Start Date : 2/21/2018
Page No : 1

Groups Printed- 4+ Axle Trucks

	Alabama Street Southbound				Lugonia Avenue Westbound				Alabama Street Northbound				Lugonia Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	5	0	5	0	0	0	0	0	4	0	4	0	0	0	0	9
04:15 PM	0	2	0	2	0	0	0	0	0	7	0	7	0	0	0	0	9
04:30 PM	0	3	0	3	0	0	0	0	0	6	0	6	0	0	0	0	9
04:45 PM	0	1	0	1	0	0	0	0	0	2	0	2	0	0	0	0	3
Total	0	11	0	11	0	0	0	0	0	19	0	19	0	0	0	0	30
05:00 PM	0	5	0	5	0	0	0	0	0	3	0	3	0	0	0	0	8
05:15 PM	0	4	0	4	0	0	0	0	0	2	0	2	0	0	0	0	6
05:30 PM	0	7	0	7	0	0	0	0	0	1	0	1	0	0	0	0	8
05:45 PM	0	0	0	0	0	0	0	0	0	3	0	3	0	0	0	0	3
Total	0	16	0	16	0	0	0	0	0	9	0	9	0	0	0	0	25
Grand Total	0	27	0	27	0	0	0	0	0	28	0	28	0	0	0	0	55
Apprch %	0	100	0		0	0	0		0	100	0		0	0	0		
Total %	0	49.1	0	49.1	0	0	0	0	0	50.9	0	50.9	0	0	0	0	

	Alabama Street Southbound				Lugonia Avenue Westbound				Alabama Street Northbound				Lugonia Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	3	0	3	0	0	0	0	0	**6**	0	**6**	0	0	0	0	**9**
04:45 PM	0	1	0	1	0	0	0	0	0	2	0	2	0	0	0	0	3
05:00 PM	0	**5**	0	**5**	0	0	0	0	0	3	0	3	0	0	0	0	8
05:15 PM	0	4	0	4	0	0	0	0	0	2	0	2	0	0	0	0	6
Total Volume	0	13	0	13	0	0	0	0	0	13	0	13	0	0	0	0	26
% App. Total	0	100	0		0	0	0		0	100	0		0	0	0		
PHF	.000	.650	.000	.650	.000	.000	.000	.000	.000	.542	.000	.542	.000	.000	.000	.000	.722

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City of Redlands
N/S: Alabama Street
E/W: Lugonia Avenue
Weather: Clear

File Name : 07_RED_Alabama_Lugonia PM
Site Code : 06718128
Start Date : 2/21/2018
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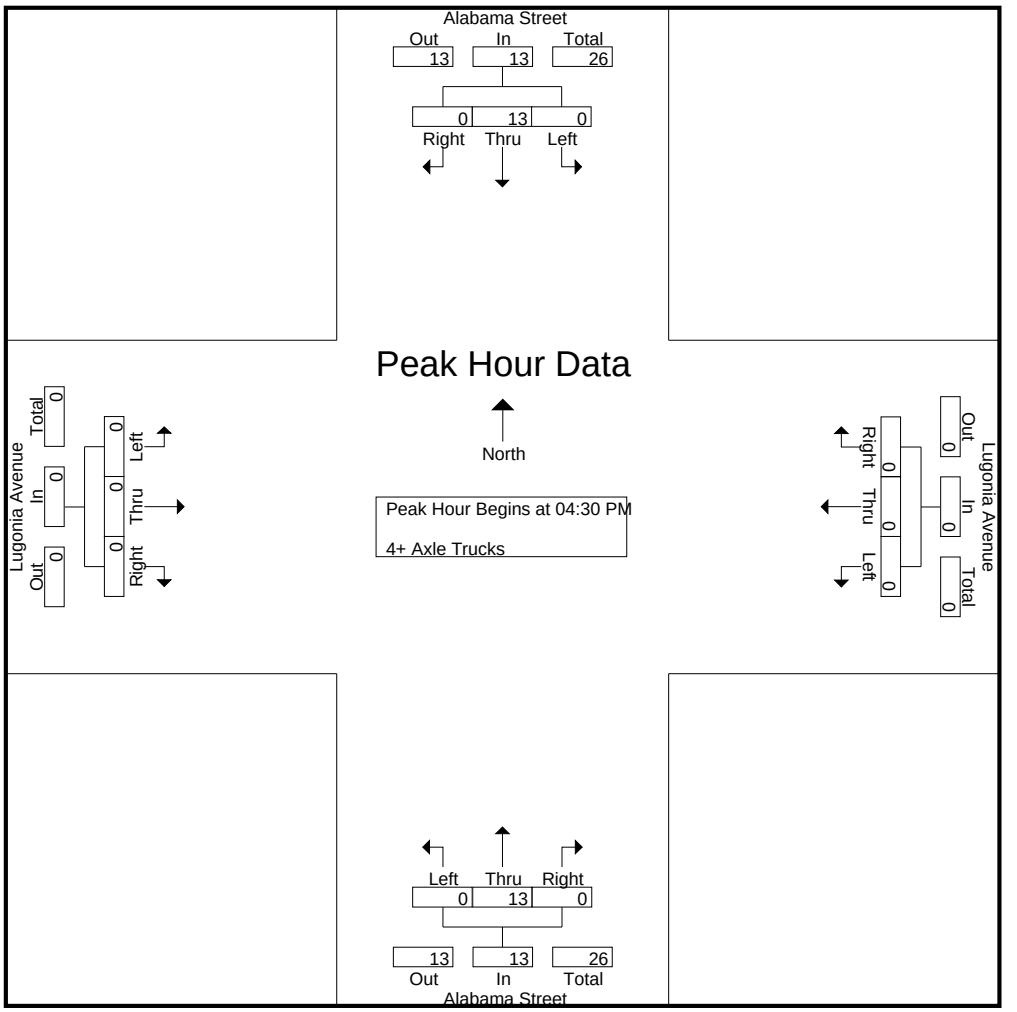

Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				04:30 PM				04:30 PM				04:30 PM			
+0 mins.	0	3	0	3	0	0	0	0	0	**6**	0	**6**	0	0	0	0
+15 mins.	0	1	0	1	0	0	0	0	0	2	0	2	0	0	0	0
+30 mins.	0	**5**	0	**5**	0	0	0	0	0	3	0	3	0	0	0	0
+45 mins.	0	4	0	4	0	0	0	0	0	2	0	2	0	0	0	0
Total Volume	0	13	0	13	0	0	0	0	0	13	0	13	0	0	0	0
% App. Total	0	100	0		0	0	0		0	100	0		0	0	0	
PHF	.000	.650	.000	.650	.000	.000	.000	.000	.000	.542	.000	.542	.000	.000	.000	.000

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City of Redlands
N/S: Alabama Street
E/W: I-10 Westbound Ramps
Weather: Clear

File Name : 08_RED_Alabama_10W AM
Site Code : 06718128
Start Date : 2/21/2018
Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Alabama Street Southbound				I-10 Westbound Off Ramp Westbound				Alabama Street Northbound				I-10 Westbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	52	35	87	41	56	54	151	82	102	0	184	0	0	0	0	422
07:15 AM	0	55	35	90	45	71	50	166	84	114	0	198	0	0	0	0	454
07:30 AM	0	76	51	127	42	83	82	207	96	98	0	194	0	0	0	0	528
07:45 AM	0	84	34	118	60	72	85	217	104	163	0	267	0	0	0	0	602
Total	0	267	155	422	188	282	271	741	366	477	0	843	0	0	0	0	2006
08:00 AM	0	55	48	103	49	77	67	193	97	151	0	248	0	0	0	0	544
08:15 AM	0	78	42	120	72	85	74	231	89	113	0	202	0	0	0	0	553
08:30 AM	0	89	42	131	76	74	64	214	91	117	0	208	0	0	0	0	553
08:45 AM	0	104	46	150	78	62	56	196	74	133	0	207	0	0	0	0	553
Total	0	326	178	504	275	298	261	834	351	514	0	865	0	0	0	0	2203
Grand Total	0	593	333	926	463	580	532	1575	717	991	0	1708	0	0	0	0	4209
Apprch %	0	64	36		29.4	36.8	33.8		42	58	0		0	0	0		
Total %	0	14.1	7.9	22	11	13.8	12.6	37.4	17	23.5	0	40.6	0	0	0	0	
Passenger Vehicles	0	572	265	837	452	560	509	1521	685	924	0	1609	0	0	0	0	3967
% Passenger Vehicles	0	96.5	79.6	90.4	97.6	96.6	95.7	96.6	95.5	93.2	0	94.2	0	0	0	0	94.3
Large 2 Axle Vehicles	0	17	11	28	7	15	7	29	14	27	0	41	0	0	0	0	98
% Large 2 Axle Vehicles	0	2.9	3.3	3	1.5	2.6	1.3	1.8	2	2.7	0	2.4	0	0	0	0	2.3
3 Axle Vehicles	0	1	17	18	0	3	0	3	3	10	0	13	0	0	0	0	34
% 3 Axle Vehicles	0	0.2	5.1	1.9	0	0.5	0	0.2	0.4	1	0	0.8	0	0	0	0	0.8
4+ Axle Trucks	0	3	40	43	4	2	16	22	15	30	0	45	0	0	0	0	110
% 4+ Axle Trucks	0	0.5	12	4.6	0.9	0.3	3	1.4	2.1	3	0	2.6	0	0	0	0	2.6

	Alabama Street Southbound				I-10 Westbound Off Ramp Westbound				Alabama Street Northbound				I-10 Westbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	0	84	34	118	60	72	**85**	217	**104**	**163**	0	**267**	0	0	0	0	**602**
08:00 AM	0	55	**48**	103	49	77	67	193	97	151	0	248	0	0	0	0	544
08:15 AM	0	78	42	120	72	**85**	74	**231**	89	113	0	202	0	0	0	0	553
08:30 AM	0	**89**	42	**131**	**76**	74	64	214	91	117	0	208	0	0	0	0	553
Total Volume	0	306	166	472	257	308	290	855	381	544	0	925	0	0	0	0	2252
% App. Total	0	64.8	35.2		30.1	36	33.9		41.2	58.8	0		0	0	0		
PHF	.000	.860	.865	.901	.845	.906	.853	.925	.916	.834	.000	.866	.000	.000	.000	.000	.935

Counts Unlimited
PO Box 1178
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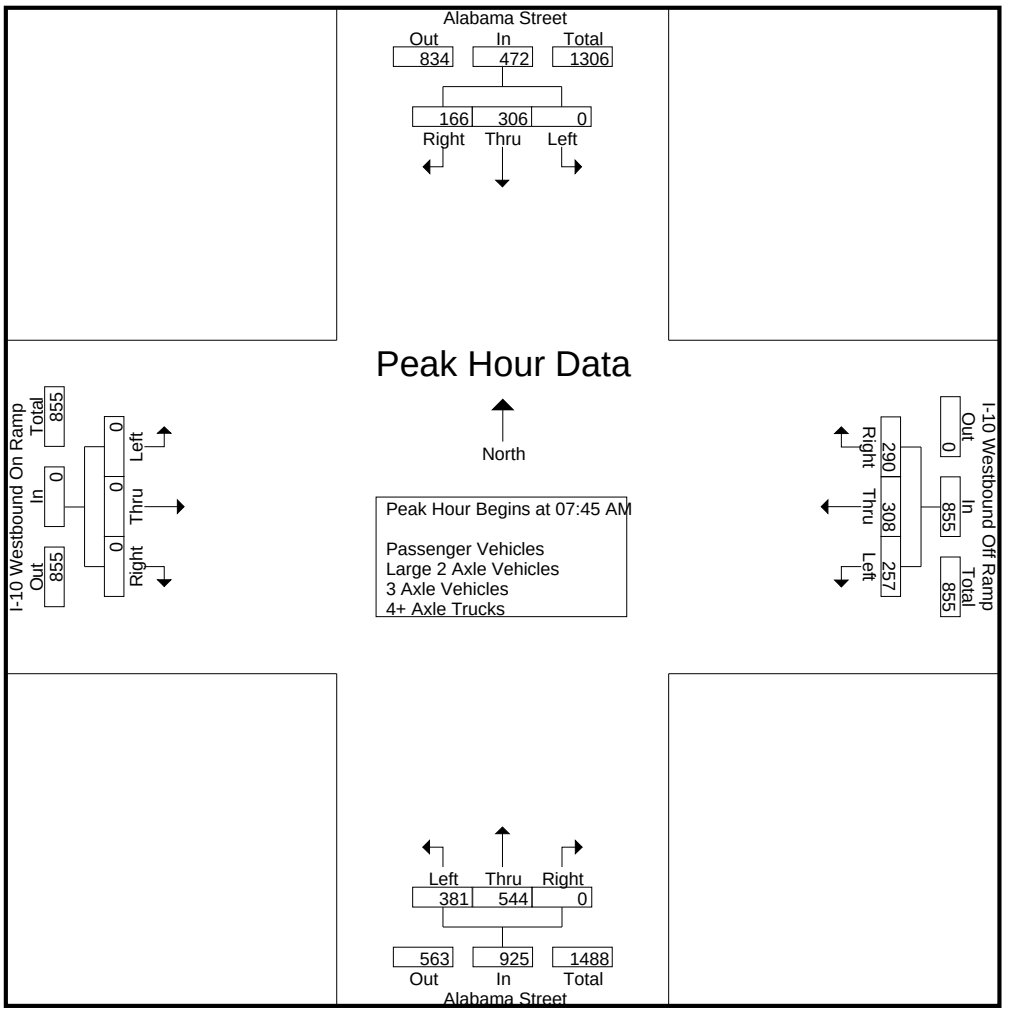
City of Redlands
N/S: Alabama Street
E/W: I-10 Westbound Ramps
Weather: Clear

File Name : 08_RED_Alabama_10W AM
Site Code : 06718128
Start Date : 2/21/2018
Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	08:00 AM				07:45 AM				07:45 AM				07:00 AM			
+0 mins.	0	55	**48**	103	60	72	**85**	217	**104**	**163**	0	**267**	0	0	0	0
+15 mins.	0	78	42	120	49	77	67	193	97	151	0	248	0	0	0	0
+30 mins.	0	89	42	131	72	**85**	74	**231**	89	113	0	202	0	0	0	0
+45 mins.	0	**104**	46	**150**	**76**	74	64	214	91	117	0	208	0	0	0	0
Total Volume	0	326	178	504	257	308	290	855	381	544	0	925	0	0	0	0
% App. Total	0	64.7	35.3		30.1	36	33.9		41.2	58.8	0		0	0	0	
PHF	.000	.784	.927	.840	.845	.906	.853	.925	.916	.834	.000	.866	.000	.000	.000	.000

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City of Redlands
N/S: Alabama Street
E/W: I-10 Westbound Ramps
Weather: Clear

File Name : 08_RED_Alabama_10W AM
Site Code : 06718128
Start Date : 2/21/2018
Page No : 1

Groups Printed- Passenger Vehicles

	Alabama Street Southbound				I-10 Westbound Off Ramp Westbound				Alabama Street Northbound				I-10 Westbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	50	28	78	40	56	52	148	78	93	0	171	0	0	0	0	397
07:15 AM	0	53	29	82	43	69	48	160	80	105	0	185	0	0	0	0	427
07:30 AM	0	73	40	113	42	78	82	202	94	93	0	187	0	0	0	0	502
07:45 AM	0	82	28	110	58	67	78	203	102	154	0	256	0	0	0	0	569
Total	0	258	125	383	183	270	260	713	354	445	0	799	0	0	0	0	1895
08:00 AM	0	54	38	92	47	72	62	181	91	140	0	231	0	0	0	0	504
08:15 AM	0	74	32	106	70	83	71	224	86	106	0	192	0	0	0	0	522
08:30 AM	0	87	33	120	75	73	60	208	85	108	0	193	0	0	0	0	521
08:45 AM	0	99	37	136	77	62	56	195	69	125	0	194	0	0	0	0	525
Total	0	314	140	454	269	290	249	808	331	479	0	810	0	0	0	0	2072
Grand Total	0	572	265	837	452	560	509	1521	685	924	0	1609	0	0	0	0	3967
Apprch %	0	68.3	31.7		29.7	36.8	33.5		42.6	57.4	0		0	0	0		
Total %	0	14.4	6.7	21.1	11.4	14.1	12.8	38.3	17.3	23.3	0	40.6	0	0	0	0	

	Alabama Street Southbound				I-10 Westbound Off Ramp Westbound				Alabama Street Northbound				I-10 Westbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:45 AM to 08:30 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	0	82	28	110	58	67	**78**	203	**102**	**154**	0	**256**	0	0	0	0	**569**
08:00 AM	0	54	**38**	92	47	72	62	181	91	140	0	231	0	0	0	0	504
08:15 AM	0	74	32	106	70	**83**	71	**224**	86	106	0	192	0	0	0	0	522
08:30 AM	0	**87**	33	**120**	**75**	73	60	208	85	108	0	193	0	0	0	0	521
Total Volume	0	297	131	428	250	295	271	816	364	508	0	872	0	0	0	0	2116
% App. Total	0	69.4	30.6		30.6	36.2	33.2		41.7	58.3	0		0	0	0		
PHF	.000	.853	.862	.892	.833	.889	.869	.911	.892	.825	.000	.852	.000	.000	.000	.000	.930

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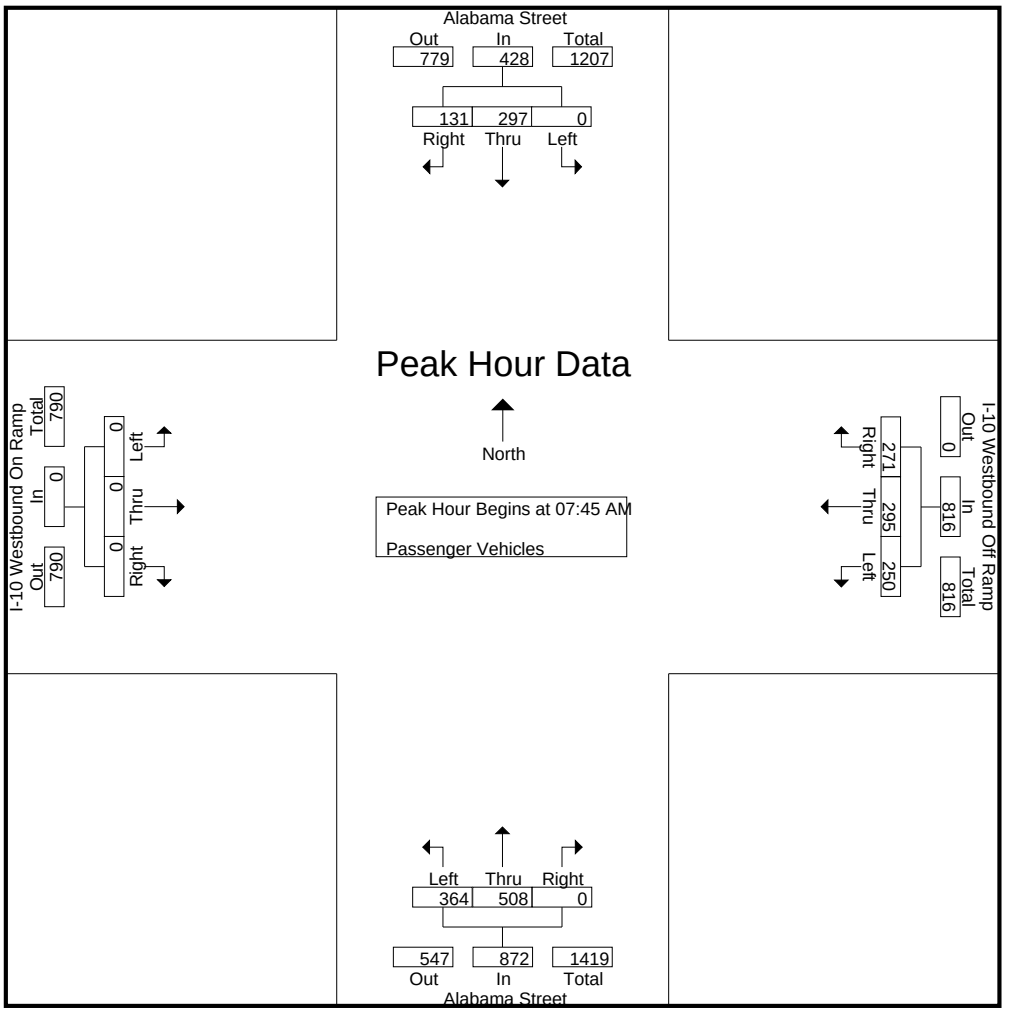
City of Redlands
N/S: Alabama Street
E/W: I-10 Westbound Ramps
Weather: Clear

File Name : 08_RED_Alabama_10W AM
Site Code : 06718128
Start Date : 2/21/2018
Page No : 2



Peak Hour Analysis From 07:45 AM to 08:30 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:45 AM				07:45 AM				07:45 AM				07:45 AM			
+0 mins.	0	82	28	110	58	67	**78**	203	**102**	**154**	0	**256**	0	0	0	0
+15 mins.	0	54	**38**	92	47	72	62	181	91	140	0	231	0	0	0	0
+30 mins.	0	74	32	106	70	**83**	71	**224**	86	106	0	192	0	0	0	0
+45 mins.	0	**87**	33	**120**	**75**	73	60	208	85	108	0	193	0	0	0	0
Total Volume	0	297	131	428	250	295	271	816	364	508	0	872	0	0	0	0
% App. Total	0	69.4	30.6		30.6	36.2	33.2		41.7	58.3	0		0	0	0	
PHF	.000	.853	.862	.892	.833	.889	.869	.911	.892	.825	.000	.852	.000	.000	.000	.000

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City of Redlands
N/S: Alabama Street
E/W: I-10 Westbound Ramps
Weather: Clear

File Name : 08_RED_Alabama_10W AM
Site Code : 06718128
Start Date : 2/21/2018
Page No : 1

Groups Printed- Large 2 Axle Vehicles

	Alabama Street Southbound				I-10 Westbound Off Ramp Westbound				Alabama Street Northbound				I-10 Westbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	2	0	2	1	0	0	1	1	4	0	5	0	0	0	0	8
07:15 AM	0	1	1	2	2	2	1	5	1	4	0	5	0	0	0	0	12
07:30 AM	0	2	2	4	0	3	0	3	2	3	0	5	0	0	0	0	12
07:45 AM	0	2	0	2	2	4	1	7	1	6	0	7	0	0	0	0	16
Total	0	7	3	10	5	9	2	16	5	17	0	22	0	0	0	0	48
08:00 AM	0	1	2	3	0	3	2	5	4	4	0	8	0	0	0	0	16
08:15 AM	0	2	3	5	1	2	1	4	0	2	0	2	0	0	0	0	11
08:30 AM	0	2	2	4	0	1	2	3	2	3	0	5	0	0	0	0	12
08:45 AM	0	5	1	6	1	0	0	1	3	1	0	4	0	0	0	0	11
Total	0	10	8	18	2	6	5	13	9	10	0	19	0	0	0	0	50
Grand Total	0	17	11	28	7	15	7	29	14	27	0	41	0	0	0	0	98
Apprch %	0	60.7	39.3		24.1	51.7	24.1		34.1	65.9	0		0	0	0		
Total %	0	17.3	11.2	28.6	7.1	15.3	7.1	29.6	14.3	27.6	0	41.8	0	0	0	0	

	Alabama Street Southbound				I-10 Westbound Off Ramp Westbound				Alabama Street Northbound				I-10 Westbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:45 AM to 08:30 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	0	**2**	0	2	**2**	**4**	1	**7**	1	**6**	0	7	0	0	0	0	**16**
08:00 AM	0	1	2	3	0	3	**2**	5	**4**	4	0	**8**	0	0	0	0	16
08:15 AM	0	2	**3**	**5**	1	2	1	4	0	2	0	2	0	0	0	0	11
08:30 AM	0	2	2	4	0	1	2	3	2	3	0	5	0	0	0	0	12
Total Volume	0	7	7	14	3	10	6	19	7	15	0	22	0	0	0	0	55
% App. Total	0	50	50		15.8	52.6	31.6		31.8	68.2	0		0	0	0		
PHF	.000	.875	.583	.700	.375	.625	.750	.679	.438	.625	.000	.688	.000	.000	.000	.000	.859

Counts Unlimited
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City of Redlands
N/S: Alabama Street
E/W: I-10 Westbound Ramps
Weather: Clear

File Name : 08_RED_Alabama_10W AM
Site Code : 06718128
Start Date : 2/21/2018
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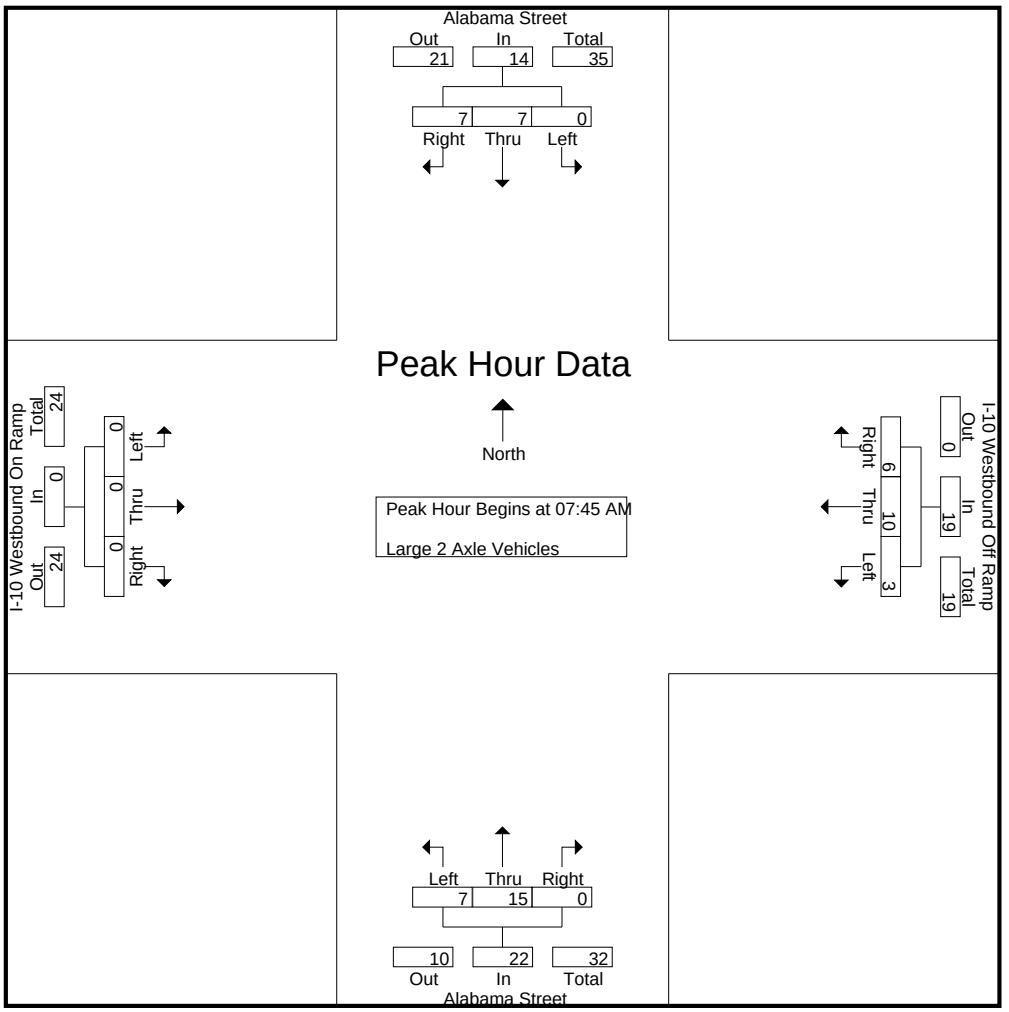

Peak Hour Analysis From 07:45 AM to 08:30 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:45 AM				07:45 AM				07:45 AM				07:45 AM			
+0 mins.	0	**2**	0	2	**2**	**4**	1	**7**	1	**6**	0	7	0	0	0	0
+15 mins.	0	1	2	3	0	3	**2**	5	**4**	4	0	**8**	0	0	0	0
+30 mins.	0	2	**3**	**5**	1	2	1	4	0	2	0	2	0	0	0	0
+45 mins.	0	2	2	4	0	1	2	3	2	3	0	5	0	0	0	0
Total Volume	0	7	7	14	3	10	6	19	7	15	0	22	0	0	0	0
% App. Total	0	50	50		15.8	52.6	31.6		31.8	68.2	0		0	0	0	
PHF	.000	.875	.583	.700	.375	.625	.750	.679	.438	.625	.000	.688	.000	.000	.000	.000

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City of Redlands
N/S: Alabama Street
E/W: I-10 Westbound Ramps
Weather: Clear

File Name : 08_RED_Alabama_10W AM
Site Code : 06718128
Start Date : 2/21/2018
Page No : 1

Groups Printed- 3 Axle Vehicles

	Alabama Street Southbound				I-10 Westbound Off Ramp Westbound				Alabama Street Northbound				I-10 Westbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	1	1	0	0	0	0	1	3	0	4	0	0	0	0	5
07:15 AM	0	0	3	3	0	0	0	0	1	1	0	2	0	0	0	0	5
07:30 AM	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	2
07:45 AM	0	0	2	2	0	1	0	1	0	0	0	0	0	0	0	0	3
Total	0	0	8	8	0	1	0	1	2	4	0	6	0	0	0	0	15
08:00 AM	0	0	2	2	0	2	0	2	0	2	0	2	0	0	0	0	6
08:15 AM	0	1	2	3	0	0	0	0	1	1	0	2	0	0	0	0	5
08:30 AM	0	0	1	1	0	0	0	0	0	2	0	2	0	0	0	0	3
08:45 AM	0	0	4	4	0	0	0	0	0	1	0	1	0	0	0	0	5
Total	0	1	9	10	0	2	0	2	1	6	0	7	0	0	0	0	19
Grand Total	0	1	17	18	0	3	0	3	3	10	0	13	0	0	0	0	34
Apprch %	0	5.6	94.4		0	100	0		23.1	76.9	0		0	0	0		
Total %	0	2.9	50	52.9	0	8.8	0	8.8	8.8	29.4	0	38.2	0	0	0	0	

	Alabama Street Southbound				I-10 Westbound Off Ramp Westbound				Alabama Street Northbound				I-10 Westbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:45 AM to 08:30 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	0	0	**2**	2	0	1	0	1	0	0	0	0	0	0	0	0	3
08:00 AM	0	0	2	2	0	**2**	0	**2**	0	**2**	0	**2**	0	0	0	0	**6**
08:15 AM	0	**1**	2	**3**	0	0	0	0	**1**	1	0	2	0	0	0	0	5
08:30 AM	0	0	1	1	0	0	0	0	0	2	0	2	0	0	0	0	3
Total Volume	0	1	7	8	0	3	0	3	1	5	0	6	0	0	0	0	17
% App. Total	0	12.5	87.5		0	100	0		16.7	83.3	0		0	0	0		
PHF	.000	.250	.875	.667	.000	.375	.000	.375	.250	.625	.000	.750	.000	.000	.000	.000	.708

Counts Unlimited
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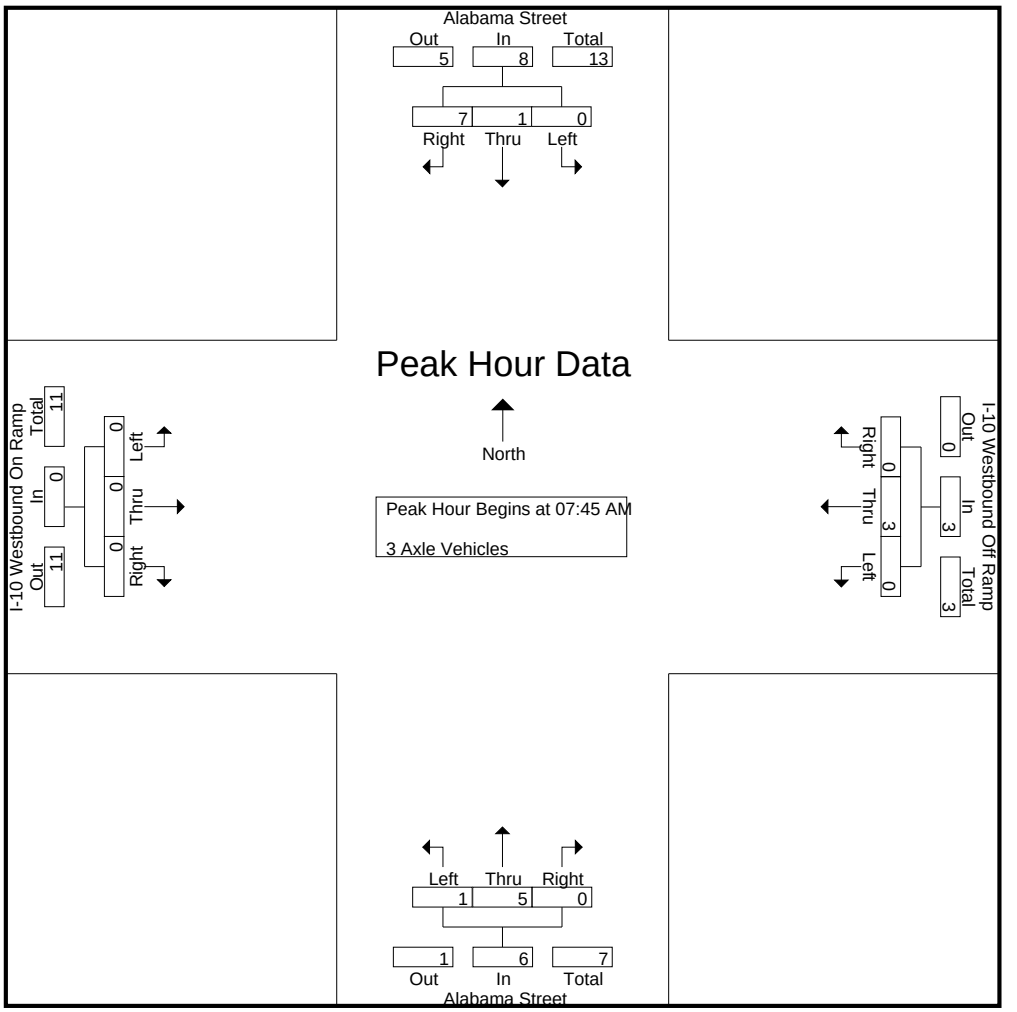
City of Redlands
N/S: Alabama Street
E/W: I-10 Westbound Ramps
Weather: Clear

File Name : 08_RED_Alabama_10W AM
Site Code : 06718128
Start Date : 2/21/2018
Page No : 2



Peak Hour Analysis From 07:45 AM to 08:30 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:45 AM				07:45 AM				07:45 AM				07:45 AM			
+0 mins.	0	0	**2**	2	0	1	0	1	0	0	0	0	0	0	0	0
+15 mins.	0	0	2	2	0	**2**	0	**2**	0	**2**	0	**2**	0	0	0	0
+30 mins.	0	**1**	2	**3**	0	0	0	0	**1**	1	0	2	0	0	0	0
+45 mins.	0	0	1	1	0	0	0	0	0	2	0	2	0	0	0	0
Total Volume	0	1	7	8	0	3	0	3	1	5	0	6	0	0	0	0
% App. Total	0	12.5	87.5		0	100	0		16.7	83.3	0		0	0	0	
PHF	.000	.250	.875	.667	.000	.375	.000	.375	.250	.625	.000	.750	.000	.000	.000	.000

Counts Unlimited
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City of Redlands
N/S: Alabama Street
E/W: I-10 Westbound Ramps
Weather: Clear

File Name : 08_RED_Alabama_10W AM
Site Code : 06718128
Start Date : 2/21/2018
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Groups Printed- 4+ Axle Trucks

	Alabama Street Southbound				I-10 Westbound Off Ramp Westbound				Alabama Street Northbound				I-10 Westbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	6	6	0	0	2	2	2	2	0	4	0	0	0	0	12
07:15 AM	0	1	2	3	0	0	1	1	2	4	0	6	0	0	0	0	10
07:30 AM	0	1	7	8	0	2	0	2	0	2	0	2	0	0	0	0	12
07:45 AM	0	0	4	4	0	0	6	6	1	3	0	4	0	0	0	0	14
Total	0	2	19	21	0	2	9	11	5	11	0	16	0	0	0	0	48
08:00 AM	0	0	6	6	2	0	3	5	2	5	0	7	0	0	0	0	18
08:15 AM	0	1	5	6	1	0	2	3	2	4	0	6	0	0	0	0	15
08:30 AM	0	0	6	6	1	0	2	3	4	4	0	8	0	0	0	0	17
08:45 AM	0	0	4	4	0	0	0	0	2	6	0	8	0	0	0	0	12
Total	0	1	21	22	4	0	7	11	10	19	0	29	0	0	0	0	62
Grand Total	0	3	40	43	4	2	16	22	15	30	0	45	0	0	0	0	110
Apprch %	0	7	93		18.2	9.1	72.7		33.3	66.7	0		0	0	0		
Total %	0	2.7	36.4	39.1	3.6	1.8	14.5	20	13.6	27.3	0	40.9	0	0	0	0	

	Alabama Street Southbound				I-10 Westbound Off Ramp Westbound				Alabama Street Northbound				I-10 Westbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:45 AM to 08:30 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	0	0	4	4	0	0	**6**	**6**	1	3	0	4	0	0	0	0	14
08:00 AM	0	0	**6**	**6**	**2**	0	3	5	2	**5**	0	7	0	0	0	0	**18**
08:15 AM	0	**1**	5	6	1	0	2	3	2	4	0	6	0	0	0	0	15
08:30 AM	0	0	6	6	1	0	2	3	**4**	4	0	**8**	0	0	0	0	17
Total Volume	0	1	21	22	4	0	13	17	9	16	0	25	0	0	0	0	64
% App. Total	0	4.5	95.5		23.5	0	76.5		36	64	0		0	0	0		
PHF	.000	.250	.875	.917	.500	.000	.542	.708	.563	.800	.000	.781	.000	.000	.000	.000	.889

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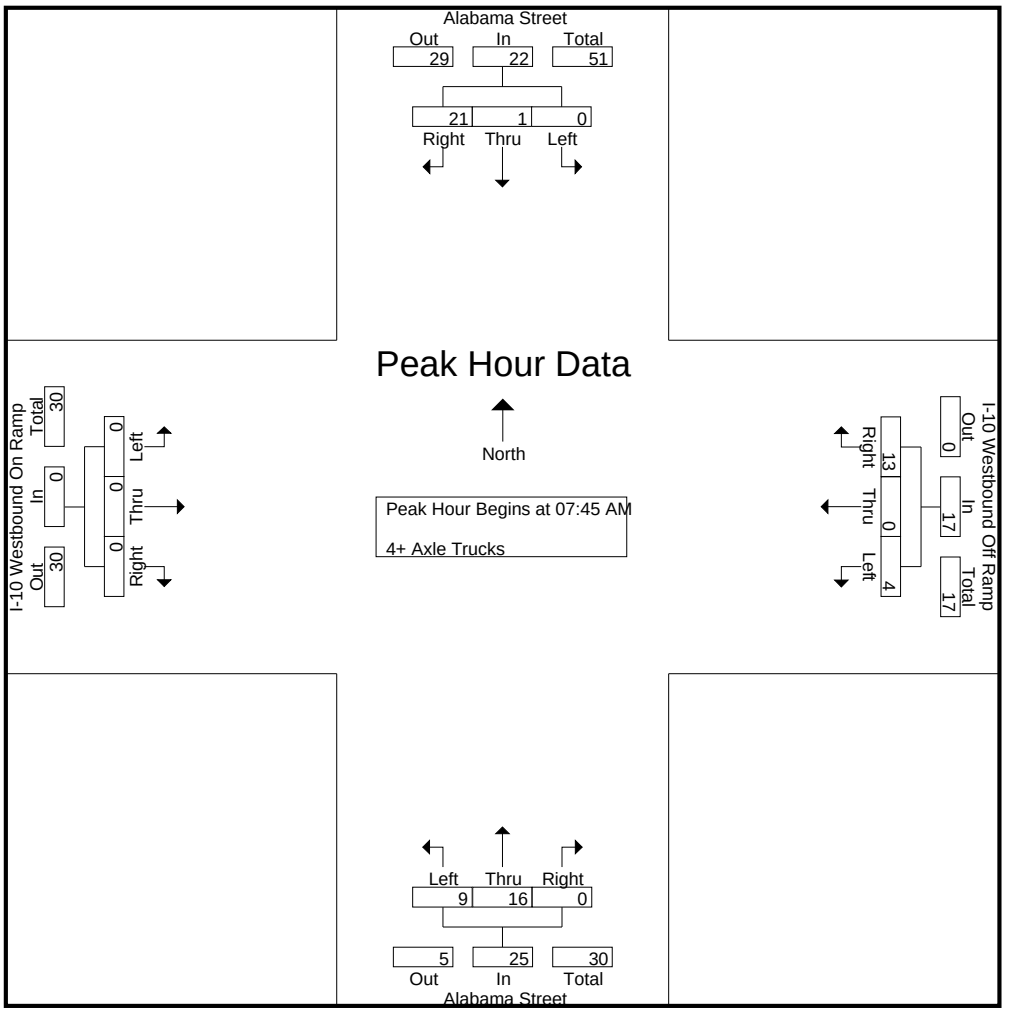
City of Redlands
N/S: Alabama Street
E/W: I-10 Westbound Ramps
Weather: Clear

File Name : 08_RED_Alabama_10W AM
Site Code : 06718128
Start Date : 2/21/2018
Page No : 2



Peak Hour Analysis From 07:45 AM to 08:30 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:45 AM				07:45 AM				07:45 AM				07:45 AM			
+0 mins.	0	0	4	4	0	0	**6**	**6**	1	3	0	4	0	0	0	0
+15 mins.	0	0	**6**	**6**	**2**	0	3	5	2	**5**	0	7	0	0	0	0
+30 mins.	0	**1**	5	6	1	0	2	3	2	4	0	6	0	0	0	0
+45 mins.	0	0	6	6	1	0	2	3	**4**	4	0	**8**	0	0	0	0
Total Volume	0	1	21	22	4	0	13	17	9	16	0	25	0	0	0	0
% App. Total	0	4.5	95.5		23.5	0	76.5		36	64	0		0	0	0	
PHF	.000	.250	.875	.917	.500	.000	.542	.708	.563	.800	.000	.781	.000	.000	.000	.000

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File Name : 08_RED_Alabama_10W PM
Site Code : 06718128
Start Date : 2/21/2018
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Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Alabama Street Southbound				I-10 Westbound Off Ramp Westbound				Alabama Street Northbound				I-10 Westbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	154	93	247	34	80	44	158	117	195	0	312	0	0	0	0	717
04:15 PM	0	142	109	251	35	77	46	158	86	201	0	287	0	0	0	0	696
04:30 PM	0	180	117	297	36	66	30	132	104	174	0	278	0	0	0	0	707
04:45 PM	0	176	106	282	54	82	39	175	86	176	0	262	0	0	0	0	719
Total	0	652	425	1077	159	305	159	623	393	746	0	1139	0	0	0	0	2839
05:00 PM	0	181	95	276	45	76	35	156	91	171	0	262	0	0	0	0	694
05:15 PM	0	183	102	285	37	79	36	152	84	208	0	292	0	0	0	0	729
05:30 PM	0	168	112	280	35	76	37	148	87	205	0	292	0	0	0	0	720
05:45 PM	0	153	95	248	46	72	41	159	78	183	0	261	0	0	0	0	668
Total	0	685	404	1089	163	303	149	615	340	767	0	1107	0	0	0	0	2811
Grand Total	0	1337	829	2166	322	608	308	1238	733	1513	0	2246	0	0	0	0	5650
Apprch %	0	61.7	38.3		26	49.1	24.9		32.6	67.4	0		0	0	0		
Total %	0	23.7	14.7	38.3	5.7	10.8	5.5	21.9	13	26.8	0	39.8	0	0	0	0	
Passenger Vehicles	0	1324	786	2110	313	597	297	1207	719	1472	0	2191	0	0	0	0	5508
% Passenger Vehicles	0	99	94.8	97.4	97.2	98.2	96.4	97.5	98.1	97.3	0	97.6	0	0	0	0	97.5
Large 2 Axle Vehicles	0	8	8	16	6	9	1	16	11	14	0	25	0	0	0	0	57
% Large 2 Axle Vehicles	0	0.6	1	0.7	1.9	1.5	0.3	1.3	1.5	0.9	0	1.1	0	0	0	0	1
3 Axle Vehicles	0	2	9	11	2	0	0	2	2	2	0	4	0	0	0	0	17
% 3 Axle Vehicles	0	0.1	1.1	0.5	0.6	0	0	0.2	0.3	0.1	0	0.2	0	0	0	0	0.3
4+ Axle Trucks	0	3	26	29	1	2	10	13	1	25	0	26	0	0	0	0	68
% 4+ Axle Trucks	0	0.2	3.1	1.3	0.3	0.3	3.2	1.1	0.1	1.7	0	1.2	0	0	0	0	1.2

	Alabama Street Southbound				I-10 Westbound Off Ramp Westbound				Alabama Street Northbound				I-10 Westbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	176	106	282	**54**	**82**	**39**	**175**	86	176	0	262	0	0	0	0	719
05:00 PM	0	181	95	276	45	76	35	156	**91**	171	0	262	0	0	0	0	694
05:15 PM	0	**183**	102	**285**	37	79	36	152	84	**208**	0	**292**	0	0	0	0	**729**
05:30 PM	0	168	**112**	280	35	76	37	148	87	205	0	292	0	0	0	0	720
Total Volume	0	708	415	1123	171	313	147	631	348	760	0	1108	0	0	0	0	2862
% App. Total	0	63	37		27.1	49.6	23.3		31.4	68.6	0		0	0	0		
PHF	.000	.967	.926	.985	.792	.954	.942	.901	.956	.913	.000	.949	.000	.000	.000	.000	.981

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Weather: Clear

File Name : 08_RED_Alabama_10W PM
Site Code : 06718128
Start Date : 2/21/2018
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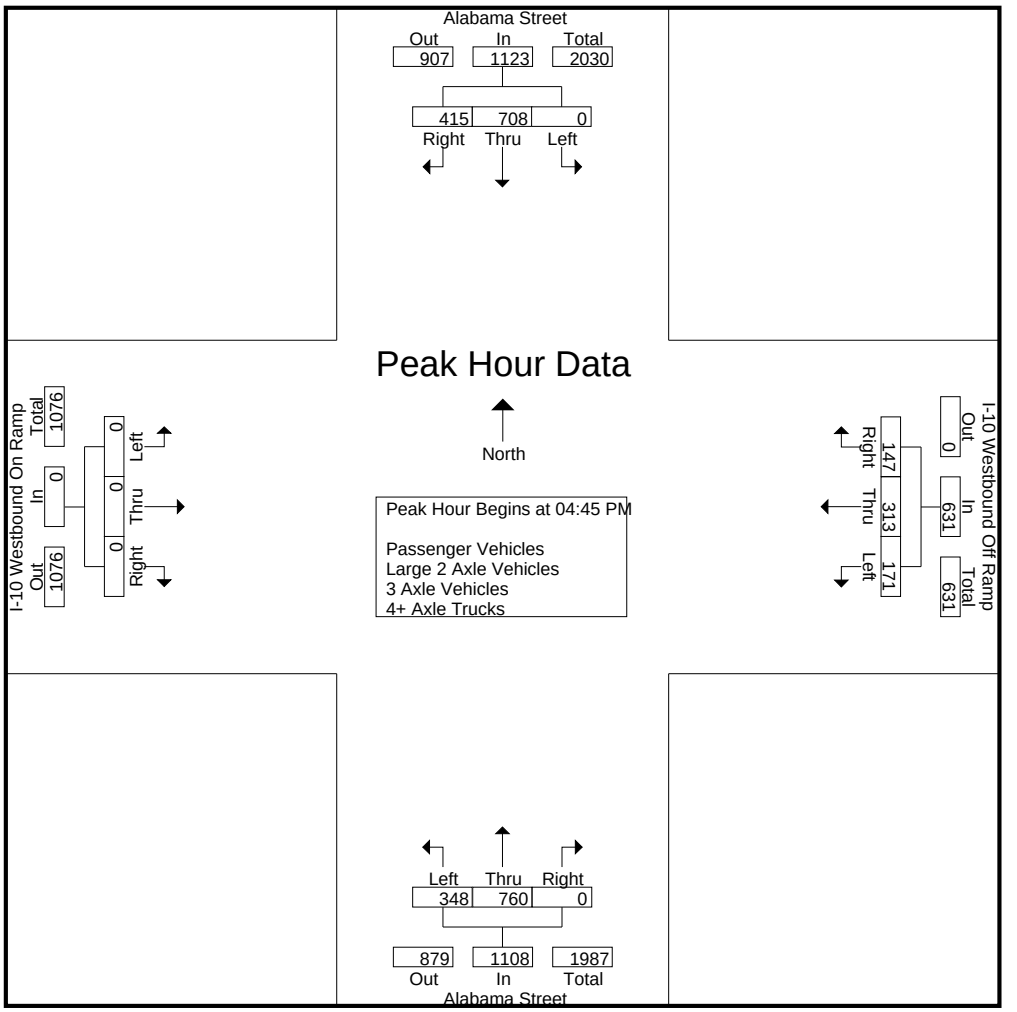

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				04:45 PM				04:00 PM				04:00 PM			
+0 mins.	0	180	**117**	**297**	**54**	**82**	**39**	**175**	**117**	195	0	**312**	0	0	0	0
+15 mins.	0	176	106	282	45	76	35	156	86	**201**	0	287	0	0	0	0
+30 mins.	0	181	95	276	37	79	36	152	104	174	0	278	0	0	0	0
+45 mins.	0	**183**	102	285	35	76	37	148	86	176	0	262	0	0	0	0
Total Volume	0	720	420	1140	171	313	147	631	393	746	0	1139	0	0	0	0
% App. Total	0	63.2	36.8		27.1	49.6	23.3		34.5	65.5	0		0	0	0	
PHF	.000	.984	.897	.960	.792	.954	.942	.901	.840	.928	.000	.913	.000	.000	.000	.000

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Groups Printed- Passenger Vehicles

	Alabama Street Southbound				I-10 Westbound Off Ramp Westbound				Alabama Street Northbound				I-10 Westbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	153	85	238	33	78	44	155	115	190	0	305	0	0	0	0	698
04:15 PM	0	141	105	246	33	76	45	154	85	193	0	278	0	0	0	0	678
04:30 PM	0	180	115	295	35	65	28	128	101	167	0	268	0	0	0	0	691
04:45 PM	0	174	103	277	54	76	36	166	83	172	0	255	0	0	0	0	698
Total	0	648	408	1056	155	295	153	603	384	722	0	1106	0	0	0	0	2765
05:00 PM	0	178	90	268	42	76	32	150	89	167	0	256	0	0	0	0	674
05:15 PM	0	182	94	276	35	79	35	149	84	203	0	287	0	0	0	0	712
05:30 PM	0	165	101	266	35	76	37	148	85	201	0	286	0	0	0	0	700
05:45 PM	0	151	93	244	46	71	40	157	77	179	0	256	0	0	0	0	657
Total	0	676	378	1054	158	302	144	604	335	750	0	1085	0	0	0	0	2743
Grand Total	0	1324	786	2110	313	597	297	1207	719	1472	0	2191	0	0	0	0	5508
Apprch %	0	62.7	37.3		25.9	49.5	24.6		32.8	67.2	0		0	0	0		
Total %	0	24	14.3	38.3	5.7	10.8	5.4	21.9	13.1	26.7	0	39.8	0	0	0	0	

	Alabama Street Southbound				I-10 Westbound Off Ramp Westbound				Alabama Street Northbound				I-10 Westbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	174	**103**	**277**	**54**	76	36	**166**	83	172	0	255	0	0	0	0	698
05:00 PM	0	178	90	268	42	76	32	150	**89**	167	0	256	0	0	0	0	674
05:15 PM	0	**182**	94	276	35	**79**	35	149	84	**203**	0	**287**	0	0	0	0	**712**
05:30 PM	0	165	101	266	35	76	**37**	148	85	201	0	286	0	0	0	0	700
Total Volume	0	699	388	1087	166	307	140	613	341	743	0	1084	0	0	0	0	2784
% App. Total	0	64.3	35.7		27.1	50.1	22.8		31.5	68.5	0		0	0	0		
PHF	.000	.960	.942	.981	.769	.972	.946	.923	.958	.915	.000	.944	.000	.000	.000	.000	.978

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City of Redlands
N/S: Alabama Street
E/W: I-10 Westbound Ramps
Weather: Clear

File Name : 08_RED_Alabama_10W PM
Site Code : 06718128
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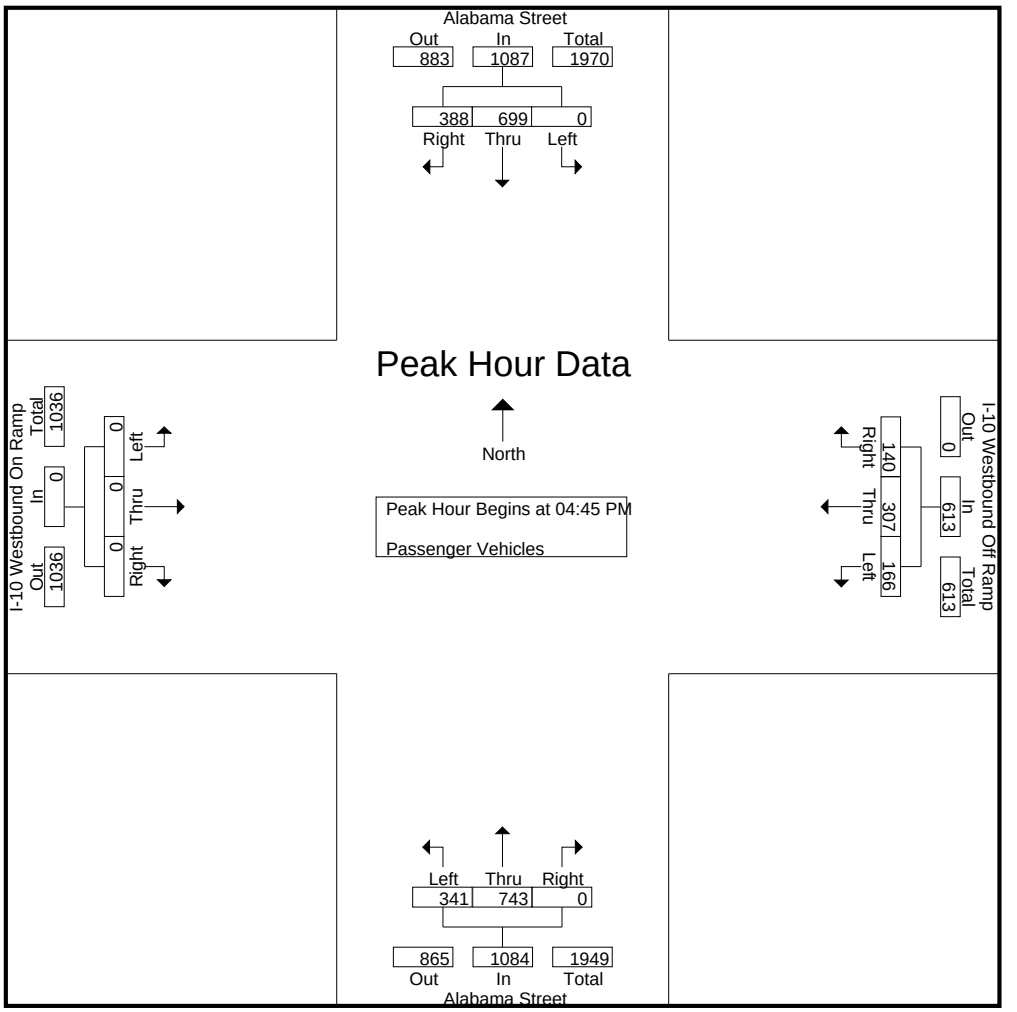

Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	0	174	**103**	**277**	**54**	76	36	**166**	83	172	0	255	0	0	0	0
+15 mins.	0	178	90	268	42	76	32	150	**89**	167	0	256	0	0	0	0
+30 mins.	0	**182**	94	276	35	**79**	35	149	84	**203**	0	**287**	0	0	0	0
+45 mins.	0	165	101	266	35	76	**37**	148	85	201	0	286	0	0	0	0
Total Volume	0	699	388	1087	166	307	140	613	341	743	0	1084	0	0	0	0
% App. Total	0	64.3	35.7		27.1	50.1	22.8		31.5	68.5	0		0	0	0	
PHF	.000	.960	.942	.981	.769	.972	.946	.923	.958	.915	.000	.944	.000	.000	.000	.000

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City of Redlands
N/S: Alabama Street
E/W: I-10 Westbound Ramps
Weather: Clear

File Name : 08_RED_Alabama_10W PM
Site Code : 06718128
Start Date : 2/21/2018

Groups Printed- Large 2 Axle Vehicles

	Alabama Street Southbound				I-10 Westbound Off Ramp Westbound				Alabama Street Northbound				I-10 Westbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	1	2	3	0	1	0	1	2	1	0	3	0	0	0	0	7
04:15 PM	0	1	1	2	2	1	0	3	1	2	0	3	0	0	0	0	8
04:30 PM	0	0	0	0	1	0	0	1	2	1	0	3	0	0	0	0	4
04:45 PM	0	1	1	2	0	6	0	6	2	1	0	3	0	0	0	0	11
Total	0	3	4	7	3	8	0	11	7	5	0	12	0	0	0	0	30
05:00 PM	0	0	0	0	2	0	0	2	2	2	0	4	0	0	0	0	6
05:15 PM	0	1	1	2	1	0	1	2	0	3	0	3	0	0	0	0	7
05:30 PM	0	2	3	5	0	0	0	0	1	3	0	4	0	0	0	0	9
05:45 PM	0	2	0	2	0	1	0	1	1	1	0	2	0	0	0	0	5
Total	0	5	4	9	3	1	1	5	4	9	0	13	0	0	0	0	27
Grand Total	0	8	8	16	6	9	1	16	11	14	0	25	0	0	0	0	57
Apprch %	0	50	50		37.5	56.2	6.2		44	56	0		0	0	0		
Total %	0	14	14	28.1	10.5	15.8	1.8	28.1	19.3	24.6	0	43.9	0	0	0	0	

	Alabama Street Southbound				I-10 Westbound Off Ramp Westbound				Alabama Street Northbound				I-10 Westbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	1	1	2	0	**6**	0	**6**	**2**	1	0	3	0	0	0	0	**11**
05:00 PM	0	0	0	0	**2**	0	0	2	2	2	0	**4**	0	0	0	0	6
05:15 PM	0	1	1	2	1	0	**1**	2	0	**3**	0	3	0	0	0	0	7
05:30 PM	0	**2**	**3**	**5**	0	0	0	0	1	3	0	4	0	0	0	0	9
Total Volume	0	4	5	9	3	6	1	10	5	9	0	14	0	0	0	0	33
% App. Total	0	44.4	55.6		30	60	10		35.7	64.3	0		0	0	0		
PHF	.000	.500	.417	.450	.375	.250	.250	.417	.625	.750	.000	.875	.000	.000	.000	.000	.750

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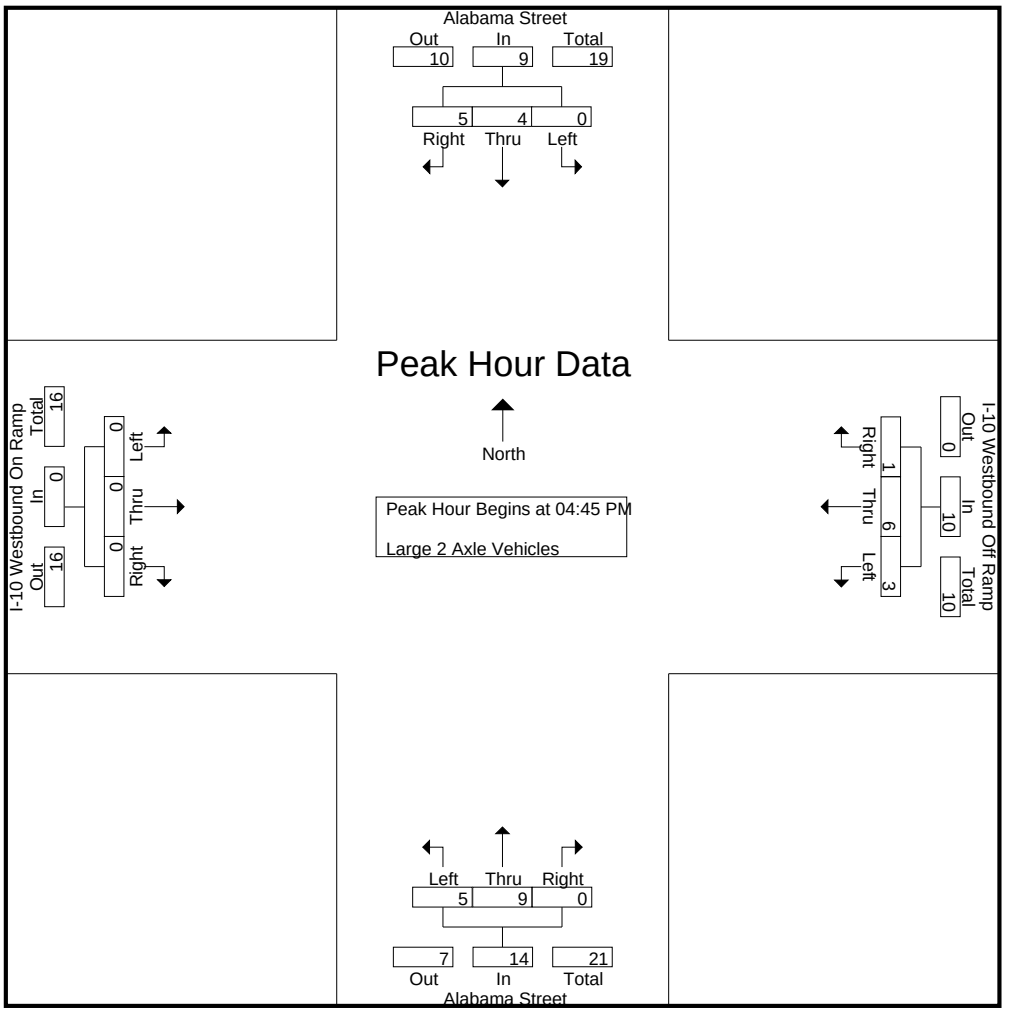
Site Code : 06718128
Start Date : 2/21/2018



Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	0	1	1	2	0	**6**	0	**6**	**2**	1	0	3	0	0	0	0
+15 mins.	0	0	0	0	**2**	0	0	2	2	2	0	**4**	0	0	0	0
+30 mins.	0	1	1	2	1	0	**1**	2	0	**3**	0	3	0	0	0	0
+45 mins.	0	**2**	**3**	**5**	0	0	0	0	1	3	0	4	0	0	0	0
Total Volume	0	4	5	9	3	6	1	10	5	9	0	14	0	0	0	0
% App. Total	0	44.4	55.6		30	60	10		35.7	64.3	0		0	0	0	
PHF	.000	.500	.417	.450	.375	.250	.250	.417	.625	.750	.000	.875	.000	.000	.000	.000

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Weather: Clear

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Groups Printed- 3 Axle Vehicles

	Alabama Street Southbound				I-10 Westbound Off Ramp Westbound				Alabama Street Northbound				I-10 Westbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	1	1	1	0	0	1	0	0	0	0	0	0	0	0	2
04:15 PM	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1
04:30 PM	0	0	1	1	0	0	0	0	1	0	0	1	0	0	0	0	2
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	3	3	1	0	0	1	1	0	0	1	0	0	0	0	5
05:00 PM	0	1	1	2	1	0	0	1	0	1	0	1	0	0	0	0	4
05:15 PM	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	2
05:30 PM	0	1	2	3	0	0	0	0	1	1	0	2	0	0	0	0	5
05:45 PM	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	2	6	8	1	0	0	1	1	2	0	3	0	0	0	0	12
Grand Total	0	2	9	11	2	0	0	2	2	2	0	4	0	0	0	0	17
Apprch %	0	18.2	81.8		100	0	0		50	50	0		0	0	0		
Total %	0	11.8	52.9	64.7	11.8	0	0	11.8	11.8	11.8	0	23.5	0	0	0	0	

	Alabama Street Southbound				I-10 Westbound Off Ramp Westbound				Alabama Street Northbound				I-10 Westbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	**1**	1	2	**1**	0	0	**1**	0	**1**	0	1	0	0	0	0	4
05:15 PM	0	0	**2**	2	0	0	0	0	0	0	0	0	0	0	0	0	2
05:30 PM	0	1	2	**3**	0	0	0	0	**1**	1	0	**2**	0	0	0	0	**5**
Total Volume	0	2	5	7	1	0	0	1	1	2	0	3	0	0	0	0	11
% App. Total	0	28.6	71.4		100	0	0		33.3	66.7	0		0	0	0		
PHF	.000	.500	.625	.583	.250	.000	.000	.250	.250	.500	.000	.375	.000	.000	.000	.000	.550

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City of Redlands
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E/W: I-10 Westbound Ramps
Weather: Clear

File Name : 08_RED_Alabama_10W PM
Site Code : 06718128
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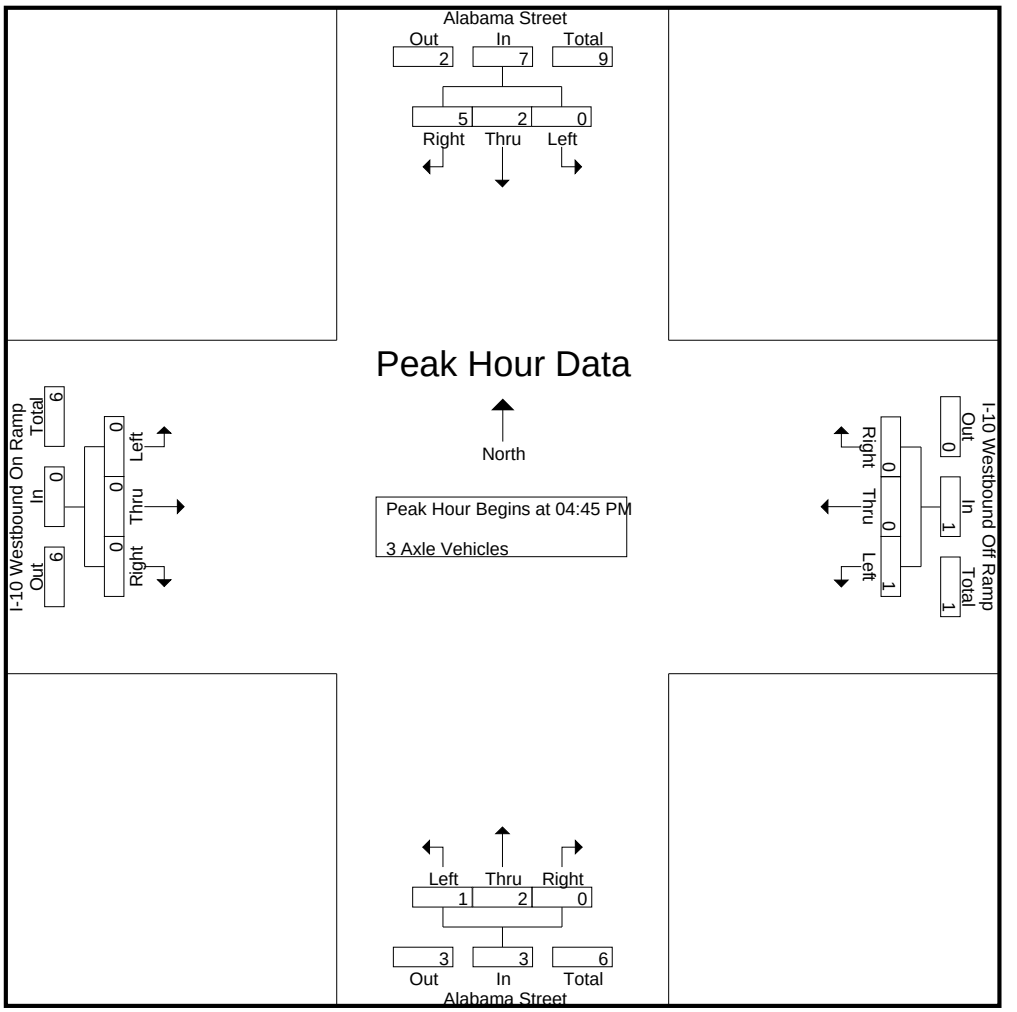

Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	**1**	1	2	**1**	0	0	**1**	0	**1**	0	1	0	0	0	0
+30 mins.	0	0	**2**	2	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	1	2	**3**	0	0	0	0	**1**	1	0	**2**	0	0	0	0
Total Volume	0	2	5	7	1	0	0	1	1	2	0	3	0	0	0	0
% App. Total	0	28.6	71.4		100	0	0		33.3	66.7	0		0	0	0	
PHF	.000	.500	.625	.583	.250	.000	.000	.250	.250	.500	.000	.375	.000	.000	.000	.000

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City of Redlands
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Groups Printed- 4+ Axle Trucks

	Alabama Street Southbound				I-10 Westbound Off Ramp Westbound				Alabama Street Northbound				I-10 Westbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	5	5	0	1	0	1	0	4	0	4	0	0	0	0	10
04:15 PM	0	0	2	2	0	0	1	1	0	6	0	6	0	0	0	0	9
04:30 PM	0	0	1	1	0	1	2	3	0	6	0	6	0	0	0	0	10
04:45 PM	0	1	2	3	0	0	3	3	1	3	0	4	0	0	0	0	10
Total	0	1	10	11	0	2	6	8	1	19	0	20	0	0	0	0	39
05:00 PM	0	2	4	6	0	0	3	3	0	1	0	1	0	0	0	0	10
05:15 PM	0	0	5	5	1	0	0	1	0	2	0	2	0	0	0	0	8
05:30 PM	0	0	6	6	0	0	0	0	0	0	0	0	0	0	0	0	6
05:45 PM	0	0	1	1	0	0	1	1	0	3	0	3	0	0	0	0	5
Total	0	2	16	18	1	0	4	5	0	6	0	6	0	0	0	0	29
Grand Total	0	3	26	29	1	2	10	13	1	25	0	26	0	0	0	0	68
Apprch %	0	10.3	89.7		7.7	15.4	76.9		3.8	96.2	0		0	0	0		
Total %	0	4.4	38.2	42.6	1.5	2.9	14.7	19.1	1.5	36.8	0	38.2	0	0	0	0	

	Alabama Street Southbound				I-10 Westbound Off Ramp Westbound				Alabama Street Northbound				I-10 Westbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	1	2	3	0	0	**3**	**3**	**1**	**3**	0	**4**	0	0	0	0	**10**
05:00 PM	0	**2**	4	**6**	0	0	3	3	0	1	0	1	0	0	0	0	10
05:15 PM	0	0	5	5	**1**	0	0	1	0	2	0	2	0	0	0	0	8
05:30 PM	0	0	**6**	6	0	0	0	0	0	0	0	0	0	0	0	0	6
Total Volume	0	3	17	20	1	0	6	7	1	6	0	7	0	0	0	0	34
% App. Total	0	15	85		14.3	0	85.7		14.3	85.7	0		0	0	0		
PHF	.000	.375	.708	.833	.250	.000	.500	.583	.250	.500	.000	.438	.000	.000	.000	.000	.850

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Weather: Clear

File Name : 08_RED_Alabama_10W PM
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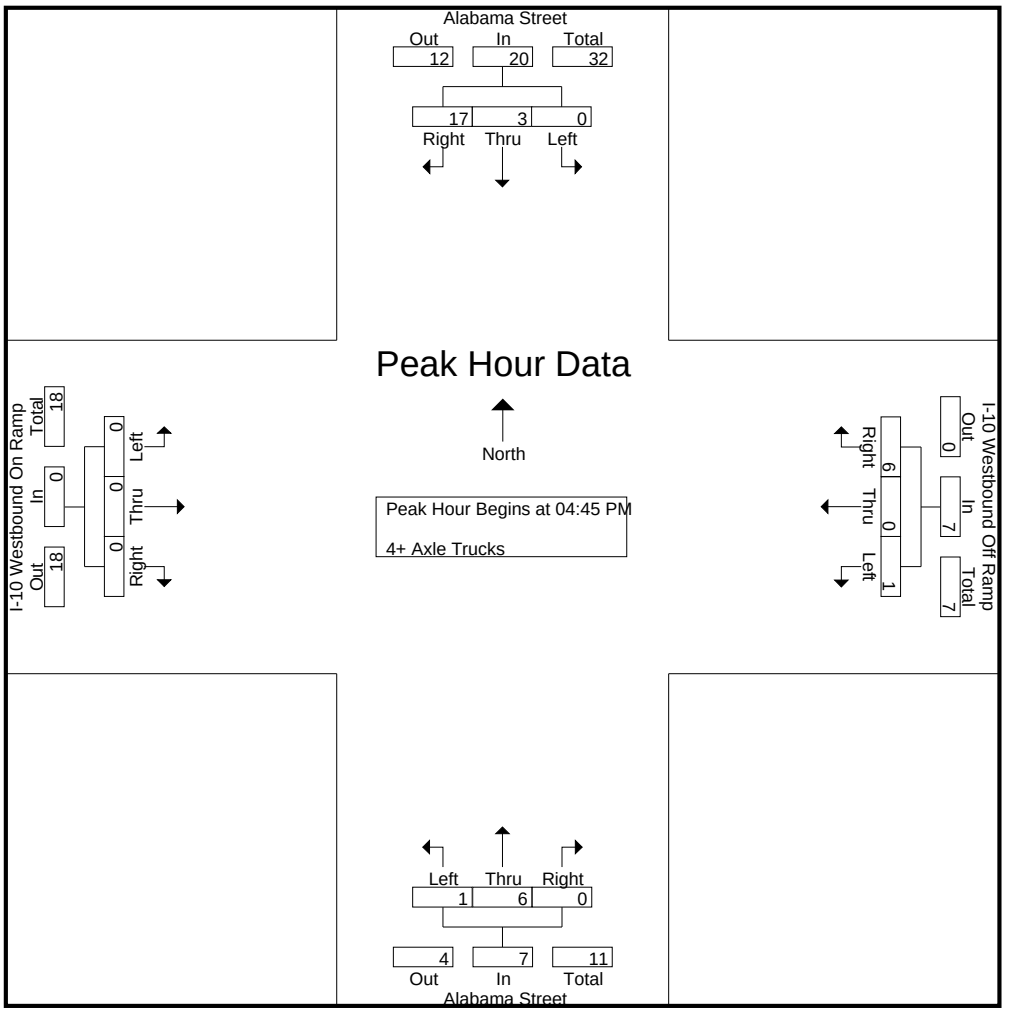

Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	0	1	2	3	0	0	**3**	**3**	**1**	**3**	0	**4**	0	0	0	0
+15 mins.	0	**2**	4	**6**	0	0	3	3	0	1	0	1	0	0	0	0
+30 mins.	0	0	5	5	**1**	0	0	1	0	2	0	2	0	0	0	0
+45 mins.	0	0	**6**	6	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	3	17	20	1	0	6	7	1	6	0	7	0	0	0	0
% App. Total	0	15	85		14.3	0	85.7		14.3	85.7	0		0	0	0	
PHF	.000	.375	.708	.833	.250	.000	.500	.583	.250	.500	.000	.438	.000	.000	.000	.000

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N/S: Alabama Street
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Weather: Clear

File Name : 09_RED_Alabama_10E AM
Site Code : 06718128
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Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Alabama Street Southbound				I-10 Eastbound On Ramp Westbound				Alabama Street Northbound				I-10 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	11	82	0	93	0	0	0	0	0	138	16	154	54	0	91	145	392
07:15 AM	9	89	0	98	0	0	0	0	0	122	22	144	73	0	76	149	391
07:30 AM	14	106	0	120	0	0	0	0	0	123	29	152	62	1	111	174	446
07:45 AM	12	132	0	144	0	0	0	0	0	171	23	194	103	3	146	252	590
Total	46	409	0	455	0	0	0	0	0	554	90	644	292	4	424	720	1819
08:00 AM	13	92	0	105	0	0	0	0	0	157	20	177	92	1	123	216	498
08:15 AM	12	136	0	148	0	0	0	0	0	136	28	164	57	0	117	174	486
08:30 AM	12	156	0	168	0	0	0	0	0	129	22	151	84	1	111	196	515
08:45 AM	23	160	0	183	0	0	0	0	0	124	23	147	78	0	147	225	555
Total	60	544	0	604	0	0	0	0	0	546	93	639	311	2	498	811	2054
Grand Total	106	953	0	1059	0	0	0	0	0	1100	183	1283	603	6	922	1531	3873
Apprch %	10	90	0		0	0	0		0	85.7	14.3		39.4	0.4	60.2		
Total %	2.7	24.6	0	27.3	0	0	0	0	0	28.4	4.7	33.1	15.6	0.2	23.8	39.5	
Passenger Vehicles	97	925	0	1022	0	0	0	0	0	1053	168	1221	545	4	881	1430	3673
% Passenger Vehicles	91.5	97.1	0	96.5	0	0	0	0	0	95.7	91.8	95.2	90.4	66.7	95.6	93.4	94.8
Large 2 Axle Vehicles	8	21	0	29	0	0	0	0	0	27	11	38	18	2	24	44	111
% Large 2 Axle Vehicles	7.5	2.2	0	2.7	0	0	0	0	0	2.5	6	3	3	33.3	2.6	2.9	2.9
3 Axle Vehicles	0	1	0	1	0	0	0	0	0	3	0	3	11	0	4	15	19
% 3 Axle Vehicles	0	0.1	0	0.1	0	0	0	0	0	0.3	0	0.2	1.8	0	0.4	1	0.5
4+ Axle Trucks	1	6	0	7	0	0	0	0	0	17	4	21	29	0	13	42	70
% 4+ Axle Trucks	0.9	0.6	0	0.7	0	0	0	0	0	1.5	2.2	1.6	4.8	0	1.4	2.7	1.8

	Alabama Street Southbound				I-10 Eastbound On Ramp Westbound				Alabama Street Northbound				I-10 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	12	132	0	144	0	0	0	0	0	**171**	23	**194**	**103**	**3**	**146**	**252**	**590**
08:00 AM	**13**	92	0	105	0	0	0	0	0	157	20	177	92	1	123	216	498
08:15 AM	12	136	0	148	0	0	0	0	0	136	**28**	164	57	0	117	174	486
08:30 AM	12	**156**	0	**168**	0	0	0	0	0	129	22	151	84	1	111	196	515
Total Volume	49	516	0	565	0	0	0	0	0	593	93	686	336	5	497	838	2089
% App. Total	8.7	91.3	0		0	0	0		0	86.4	13.6		40.1	0.6	59.3		
PHF	.942	.827	.000	.841	.000	.000	.000	.000	.000	.867	.830	.884	.816	.417	.851	.831	.885

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Weather: Clear

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Site Code : 06718128
Start Date : 2/21/2018
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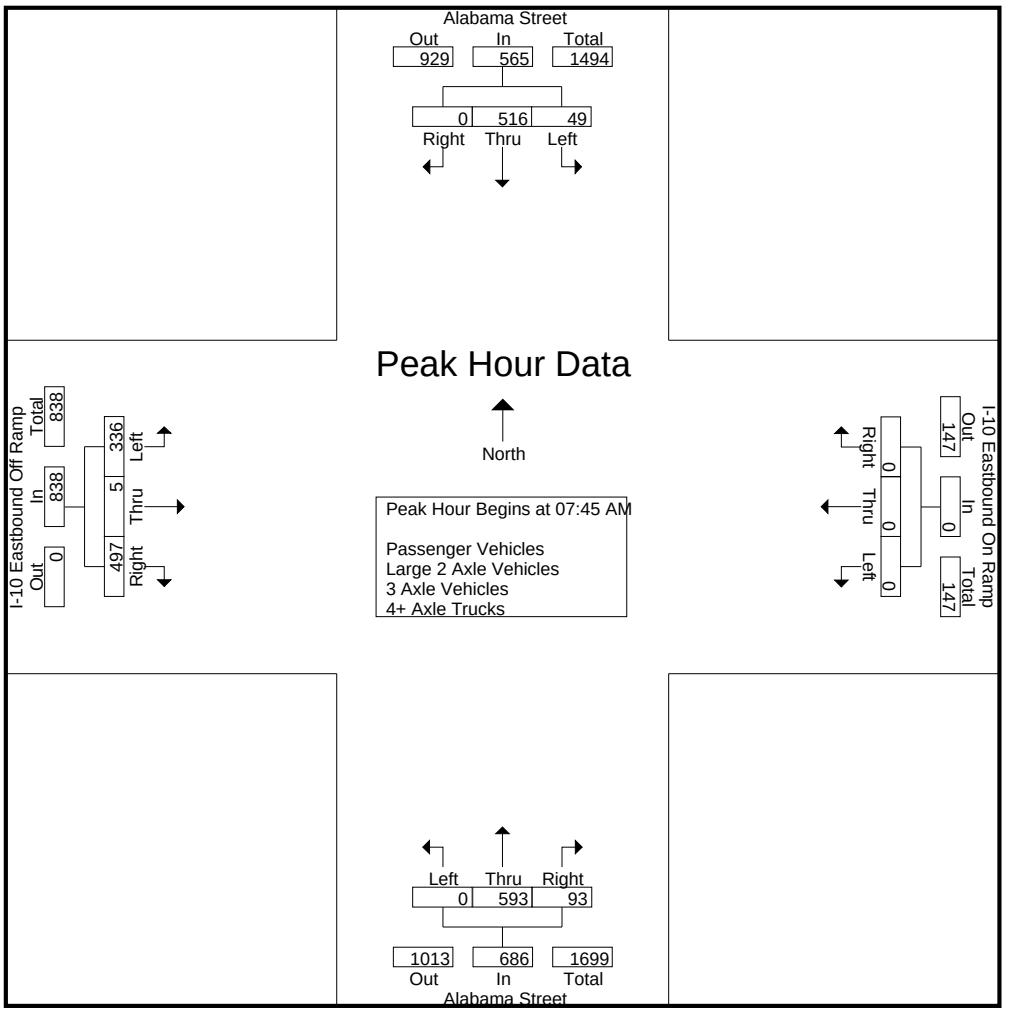

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	08:00 AM				07:00 AM				07:30 AM				07:45 AM			
+0 mins.	13	92	0	105	0	0	0	0	0	123	**29**	152	**103**	**3**	**146**	**252**
+15 mins.	12	136	0	148	0	0	0	0	0	**171**	23	**194**	92	1	123	216
+30 mins.	12	156	0	168	0	0	0	0	0	157	20	177	57	0	117	174
+45 mins.	**23**	**160**	0	**183**	0	0	0	0	0	136	28	164	84	1	111	196
Total Volume	60	544	0	604	0	0	0	0	0	587	100	687	336	5	497	838
% App. Total	9.9	90.1	0		0	0	0		0	85.4	14.6		40.1	0.6	59.3	
PHF	.652	.850	.000	.825	.000	.000	.000	.000	.000	.858	.862	.885	.816	.417	.851	.831

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Site Code : 06718128
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Groups Printed- Passenger Vehicles

	Alabama Street Southbound				I-10 Eastbound On Ramp Westbound				Alabama Street Northbound				I-10 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	11	78	0	89	0	0	0	0	0	133	15	148	47	0	88	135	372
07:15 AM	9	86	0	95	0	0	0	0	0	115	18	133	67	0	74	141	369
07:30 AM	13	103	0	116	0	0	0	0	0	120	28	148	56	0	108	164	428
07:45 AM	10	129	0	139	0	0	0	0	0	166	23	189	98	3	140	241	569
Total	43	396	0	439	0	0	0	0	0	534	84	618	268	3	410	681	1738
08:00 AM	12	90	0	102	0	0	0	0	0	149	18	167	83	1	116	200	469
08:15 AM	11	129	0	140	0	0	0	0	0	131	26	157	51	0	114	165	462
08:30 AM	11	153	0	164	0	0	0	0	0	122	19	141	75	0	105	180	485
08:45 AM	20	157	0	177	0	0	0	0	0	117	21	138	68	0	136	204	519
Total	54	529	0	583	0	0	0	0	0	519	84	603	277	1	471	749	1935
Grand Total	97	925	0	1022	0	0	0	0	0	1053	168	1221	545	4	881	1430	3673
Apprch %	9.5	90.5	0		0	0	0		0	86.2	13.8		38.1	0.3	61.6		
Total %	2.6	25.2	0	27.8	0	0	0	0	0	28.7	4.6	33.2	14.8	0.1	24	38.9	

	Alabama Street Southbound				I-10 Eastbound On Ramp Westbound				Alabama Street Northbound				I-10 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:45 AM to 08:30 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	10	129	0	139	0	0	0	0	0	**166**	23	**189**	**98**	**3**	**140**	**241**	**569**
08:00 AM	**12**	90	0	102	0	0	0	0	0	149	18	167	83	1	116	200	469
08:15 AM	11	129	0	140	0	0	0	0	0	131	**26**	157	51	0	114	165	462
08:30 AM	11	**153**	0	**164**	0	0	0	0	0	122	19	141	75	0	105	180	485
Total Volume	44	501	0	545	0	0	0	0	0	568	86	654	307	4	475	786	1985
% App. Total	8.1	91.9	0		0	0	0		0	86.9	13.1		39.1	0.5	60.4		
PHF	.917	.819	.000	.831	.000	.000	.000	.000	.000	.855	.827	.865	.783	.333	.848	.815	.872

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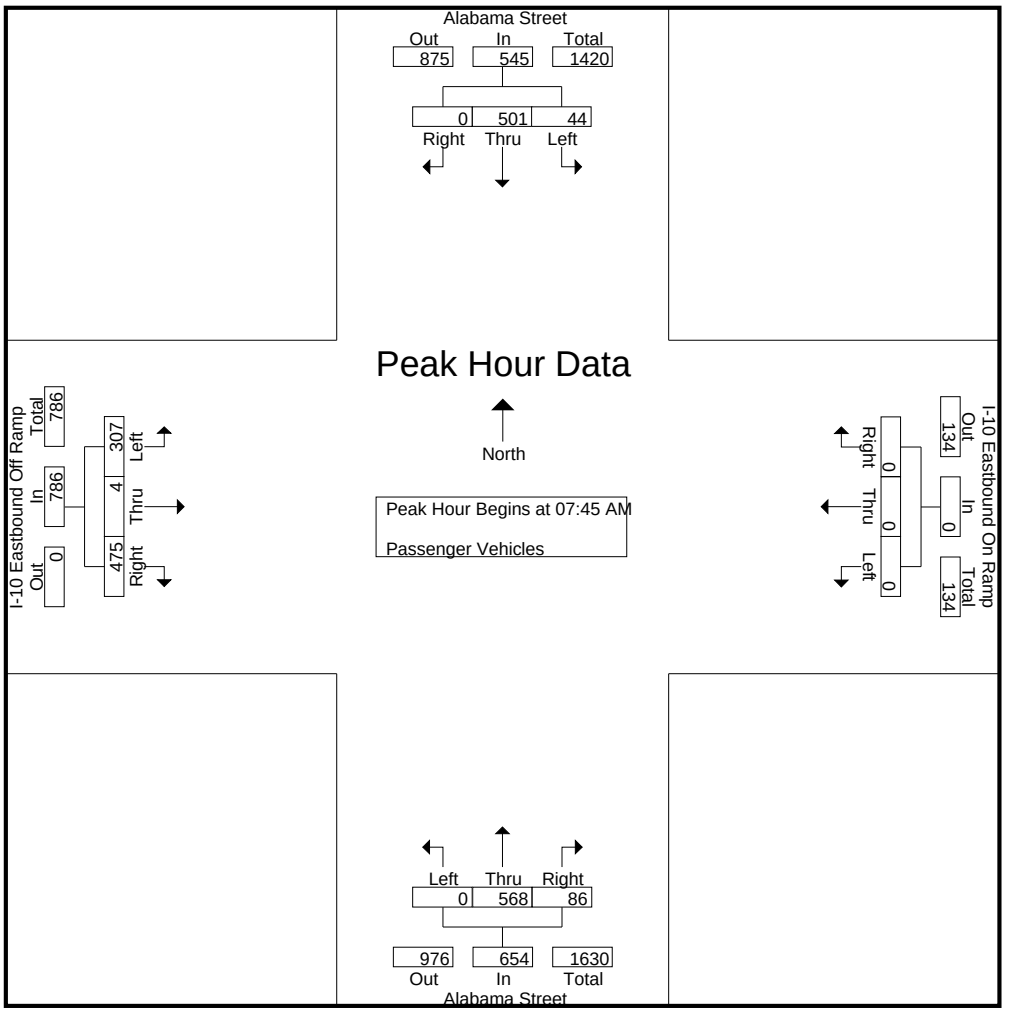

Peak Hour Analysis From 07:45 AM to 08:30 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:45 AM				07:45 AM				07:45 AM				07:45 AM			
+0 mins.	10	129	0	139	0	0	0	0	0	**166**	23	**189**	**98**	**3**	**140**	**241**
+15 mins.	**12**	90	0	102	0	0	0	0	0	149	18	167	83	1	116	200
+30 mins.	11	129	0	140	0	0	0	0	0	131	**26**	157	51	0	114	165
+45 mins.	11	**153**	0	**164**	0	0	0	0	0	122	19	141	75	0	105	180
Total Volume	44	501	0	545	0	0	0	0	0	568	86	654	307	4	475	786
% App. Total	8.1	91.9	0		0	0	0		0	86.9	13.1		39.1	0.5	60.4	
PHF	.917	.819	.000	.831	.000	.000	.000	.000	.000	.855	.827	.865	.783	.333	.848	.815

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Groups Printed- Large 2 Axle Vehicles

	Alabama Street Southbound				I-10 Eastbound On Ramp Westbound				Alabama Street Northbound				I-10 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	4	0	4	0	0	0	0	0	2	1	3	2	0	1	3	10
07:15 AM	0	2	0	2	0	0	0	0	0	2	3	5	3	0	2	5	12
07:30 AM	0	3	0	3	0	0	0	0	0	3	1	4	3	1	3	7	14
07:45 AM	2	3	0	5	0	0	0	0	0	4	0	4	3	0	1	4	13
Total	2	12	0	14	0	0	0	0	0	11	5	16	11	1	7	19	49
08:00 AM	1	0	0	1	0	0	0	0	0	6	1	7	2	0	5	7	15
08:15 AM	1	4	0	5	0	0	0	0	0	2	2	4	1	0	0	1	10
08:30 AM	1	2	0	3	0	0	0	0	0	3	3	6	4	1	4	9	18
08:45 AM	3	3	0	6	0	0	0	0	0	5	0	5	0	0	8	8	19
Total	6	9	0	15	0	0	0	0	0	16	6	22	7	1	17	25	62
Grand Total	8	21	0	29	0	0	0	0	0	27	11	38	18	2	24	44	111
Apprch %	27.6	72.4	0		0	0	0		0	71.1	28.9		40.9	4.5	54.5		
Total %	7.2	18.9	0	26.1	0	0	0	0	0	24.3	9.9	34.2	16.2	1.8	21.6	39.6	

	Alabama Street Southbound				I-10 Eastbound On Ramp Westbound				Alabama Street Northbound				I-10 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:45 AM to 08:30 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	**2**	3	0	**5**	0	0	0	0	0	4	0	4	3	0	1	4	13
08:00 AM	1	0	0	1	0	0	0	0	0	**6**	1	**7**	2	0	**5**	7	15
08:15 AM	1	**4**	0	5	0	0	0	0	0	2	2	4	1	0	0	1	10
08:30 AM	1	2	0	3	0	0	0	0	0	3	**3**	6	**4**	**1**	4	**9**	**18**
Total Volume	5	9	0	14	0	0	0	0	0	15	6	21	10	1	10	21	56
% App. Total	35.7	64.3	0		0	0	0		0	71.4	28.6		47.6	4.8	47.6		
PHF	.625	.563	.000	.700	.000	.000	.000	.000	.000	.625	.500	.750	.625	.250	.500	.583	.778

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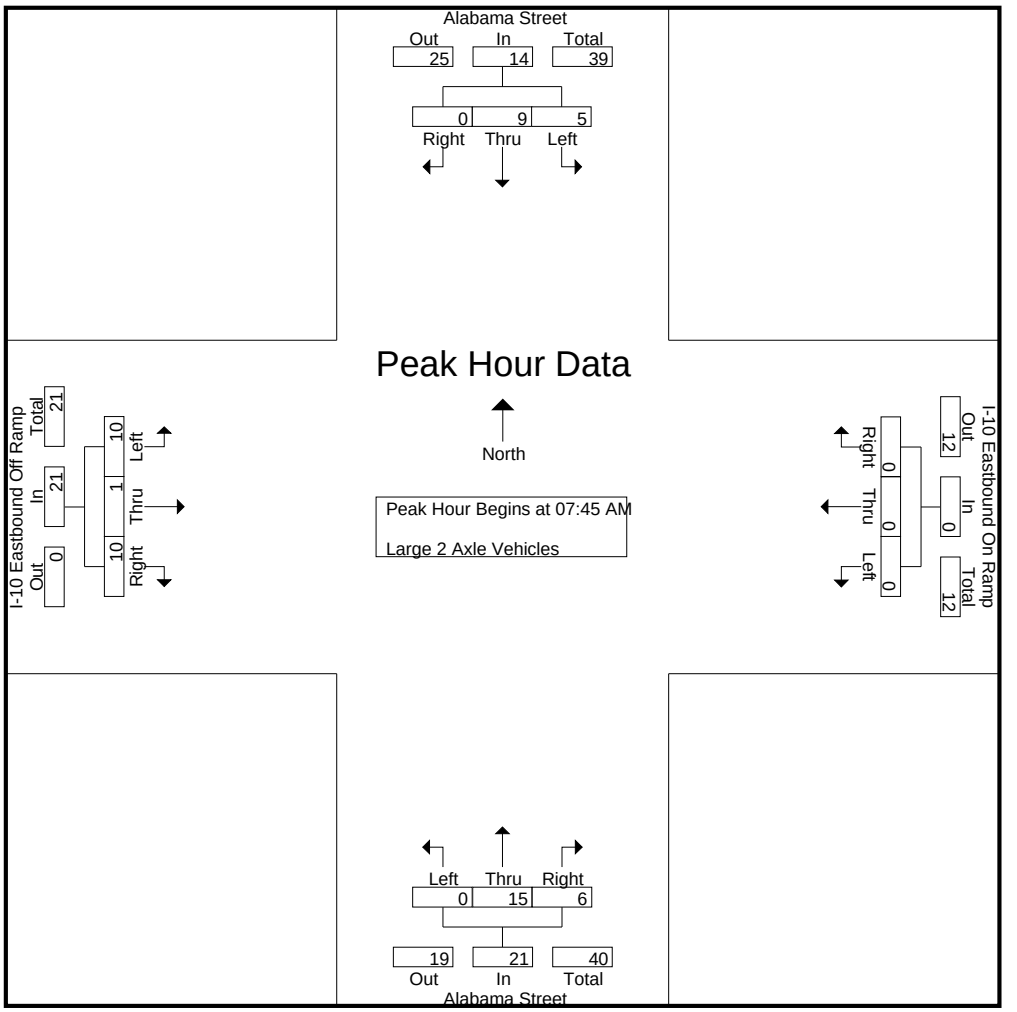

Peak Hour Analysis From 07:45 AM to 08:30 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:45 AM				07:45 AM				07:45 AM				07:45 AM			
+0 mins.	**2**	3	0	**5**	0	0	0	0	0	4	0	4	3	0	1	4
+15 mins.	1	0	0	1	0	0	0	0	0	**6**	1	**7**	2	0	**5**	7
+30 mins.	1	**4**	0	5	0	0	0	0	0	2	2	4	1	0	0	1
+45 mins.	1	2	0	3	0	0	0	0	0	3	**3**	6	**4**	**1**	4	**9**
Total Volume	5	9	0	14	0	0	0	0	0	15	6	21	10	1	10	21
% App. Total	35.7	64.3	0		0	0	0		0	71.4	28.6		47.6	4.8	47.6	
PHF	.625	.563	.000	.700	.000	.000	.000	.000	.000	.625	.500	.750	.625	.250	.500	.583

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City of Redlands
N/S: Alabama Street
E/W: I-10 Eastbound Ramps
Weather: Clear

File Name : 09_RED_Alabama_10E AM
Site Code : 06718128
Start Date : 2/21/2018
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Groups Printed- 3 Axle Vehicles

	Alabama Street Southbound				I-10 Eastbound On Ramp Westbound				Alabama Street Northbound				I-10 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	1	0	1	3	0	0	3	4
07:15 AM	0	0	0	0	0	0	0	0	0	1	0	1	1	0	0	1	2
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	2
Total	0	0	0	0	0	0	0	0	0	2	0	2	4	0	2	6	8
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	2
08:15 AM	0	1	0	1	0	0	0	0	0	1	0	1	1	0	1	2	4
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	2
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	2	0	1	3	3
Total	0	1	0	1	0	0	0	0	0	1	0	1	7	0	2	9	11
Grand Total	0	1	0	1	0	0	0	0	0	3	0	3	11	0	4	15	19
Apprch %	0	100	0		0	0	0		0	100	0		73.3	0	26.7		
Total %	0	5.3	0	5.3	0	0	0	0	0	15.8	0	15.8	57.9	0	21.1	78.9	

	Alabama Street Southbound				I-10 Eastbound On Ramp Westbound				Alabama Street Northbound				I-10 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:45 AM to 08:30 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**2**	**2**	2
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	**2**	0	0	2	2
08:15 AM	0	**1**	0	**1**	0	0	0	0	0	**1**	0	**1**	1	0	1	2	**4**
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	2
Total Volume	0	1	0	1	0	0	0	0	0	1	0	1	5	0	3	8	10
% App. Total	0	100	0		0	0	0		0	100	0		62.5	0	37.5		
PHF	.000	.250	.000	.250	.000	.000	.000	.000	.000	.250	.000	.250	.625	.000	.375	1.00	.625

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City of Redlands
N/S: Alabama Street
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Weather: Clear

File Name : 09_RED_Alabama_10E AM
Site Code : 06718128
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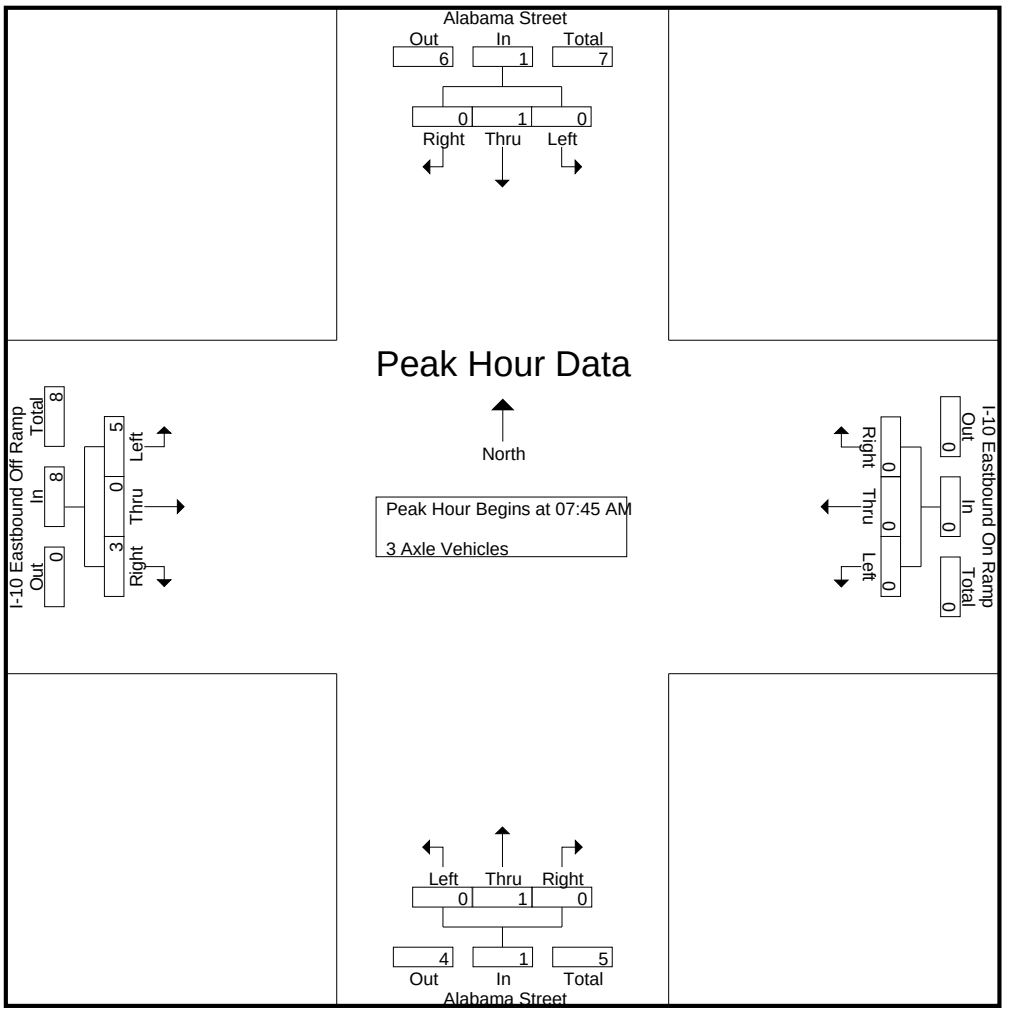

Peak Hour Analysis From 07:45 AM to 08:30 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:45 AM				07:45 AM				07:45 AM				07:45 AM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**2**	**2**
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	**2**	0	0	2
+30 mins.	0	**1**	0	**1**	0	0	0	0	0	**1**	0	**1**	1	0	1	2
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2
Total Volume	0	1	0	1	0	0	0	0	0	1	0	1	5	0	3	8
% App. Total	0	100	0		0	0	0		0	100	0		62.5	0	37.5	
PHF	.000	.250	.000	.250	.000	.000	.000	.000	.000	.250	.000	.250	.625	.000	.375	1.000

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City of Redlands
N/S: Alabama Street
E/W: I-10 Eastbound Ramps
Weather: Clear

File Name : 09_RED_Alabama_10E AM
Site Code : 06718128
Start Date : 2/21/2018
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Groups Printed- 4+ Axle Trucks

	Alabama Street Southbound				I-10 Eastbound On Ramp Westbound				Alabama Street Northbound				I-10 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	2	0	2	2	0	2	4	6
07:15 AM	0	1	0	1	0	0	0	0	0	4	1	5	2	0	0	2	8
07:30 AM	1	0	0	1	0	0	0	0	0	0	0	0	3	0	0	3	4
07:45 AM	0	0	0	0	0	0	0	0	0	1	0	1	2	0	3	5	6
Total	1	1	0	2	0	0	0	0	0	7	1	8	9	0	5	14	24
08:00 AM	0	2	0	2	0	0	0	0	0	2	1	3	5	0	2	7	12
08:15 AM	0	2	0	2	0	0	0	0	0	2	0	2	4	0	2	6	10
08:30 AM	0	1	0	1	0	0	0	0	0	4	0	4	3	0	2	5	10
08:45 AM	0	0	0	0	0	0	0	0	0	2	2	4	8	0	2	10	14
Total	0	5	0	5	0	0	0	0	0	10	3	13	20	0	8	28	46
Grand Total	1	6	0	7	0	0	0	0	0	17	4	21	29	0	13	42	70
Apprch %	14.3	85.7	0		0	0	0		0	81	19		69	0	31		
Total %	1.4	8.6	0	10	0	0	0	0	0	24.3	5.7	30	41.4	0	18.6	60	

	Alabama Street Southbound				I-10 Eastbound On Ramp Westbound				Alabama Street Northbound				I-10 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:45 AM to 08:30 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	0	0	0	0	0	0	0	0	0	1	0	1	2	0	**3**	5	6
08:00 AM	0	**2**	0	**2**	0	0	0	0	0	2	**1**	3	**5**	0	2	**7**	**12**
08:15 AM	0	2	0	2	0	0	0	0	0	2	0	2	4	0	2	6	10
08:30 AM	0	1	0	1	0	0	0	0	0	**4**	0	**4**	3	0	2	5	10
Total Volume	0	5	0	5	0	0	0	0	0	9	1	10	14	0	9	23	38
% App. Total	0	100	0		0	0	0		0	90	10		60.9	0	39.1		
PHF	.000	.625	.000	.625	.000	.000	.000	.000	.000	.563	.250	.625	.700	.000	.750	.821	.792

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N/S: Alabama Street
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Weather: Clear

File Name : 09_RED_Alabama_10E AM
Site Code : 06718128
Start Date : 2/21/2018
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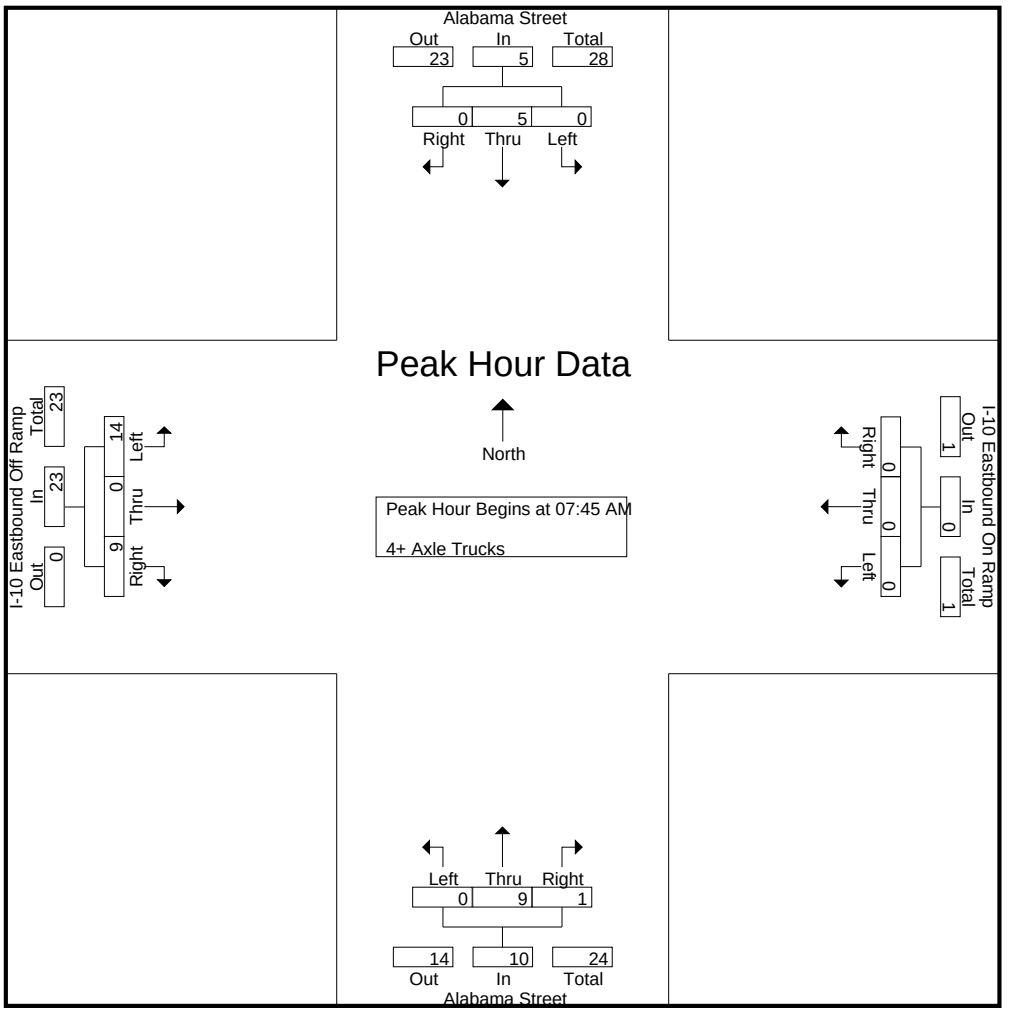

Peak Hour Analysis From 07:45 AM to 08:30 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:45 AM				07:45 AM				07:45 AM				07:45 AM			
+0 mins.	0	0	0	0	0	0	0	0	0	1	0	1	2	0	**3**	5
+15 mins.	0	**2**	0	**2**	0	0	0	0	0	2	**1**	3	**5**	0	2	**7**
+30 mins.	0	2	0	2	0	0	0	0	0	2	0	2	4	0	2	6
+45 mins.	0	1	0	1	0	0	0	0	0	**4**	0	**4**	3	0	2	5
Total Volume	0	5	0	5	0	0	0	0	0	9	1	10	14	0	9	23
% App. Total	0	100	0		0	0	0		0	90	10		60.9	0	39.1	
PHF	.000	.625	.000	.625	.000	.000	.000	.000	.000	.563	.250	.625	.700	.000	.750	.821

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City of Redlands
N/S: Alabama Street
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File Name : 09_RED_Alabama_10E PM
Site Code : 06718128
Start Date : 2/21/2018
Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Alabama Street Southbound				I-10 Eastbound On Ramp Westbound				Alabama Street Northbound				I-10 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	46	143	0	189	0	0	0	0	0	227	59	286	86	4	123	213	688
04:15 PM	47	136	0	183	0	0	0	0	0	187	66	253	101	3	88	192	628
04:30 PM	64	151	0	215	0	0	0	0	0	190	75	265	86	6	87	179	659
04:45 PM	51	182	0	233	0	0	0	0	0	181	68	249	82	15	123	220	702
Total	208	612	0	820	0	0	0	0	0	785	268	1053	355	28	421	804	2677
05:00 PM	62	158	0	220	0	0	0	0	0	191	62	253	69	8	118	195	668
05:15 PM	55	171	0	226	0	0	0	0	0	196	45	241	90	17	107	214	681
05:30 PM	52	157	0	209	0	0	0	0	0	201	77	278	90	23	132	245	732
05:45 PM	36	160	0	196	0	0	0	0	0	188	44	232	77	8	101	186	614
Total	205	646	0	851	0	0	0	0	0	776	228	1004	326	56	458	840	2695
Grand Total	413	1258	0	1671	0	0	0	0	0	1561	496	2057	681	84	879	1644	5372
Apprch %	24.7	75.3	0		0	0	0		0	75.9	24.1		41.4	5.1	53.5		
Total %	7.7	23.4	0	31.1	0	0	0	0	0	29.1	9.2	38.3	12.7	1.6	16.4	30.6	
Passenger Vehicles	405	1242	0	1647	0	0	0	0	0	1540	494	2034	645	83	859	1587	5268
% Passenger Vehicles	98.1	98.7	0	98.6	0	0	0	0	0	98.7	99.6	98.9	94.7	98.8	97.7	96.5	98.1
Large 2 Axle Vehicles	7	10	0	17	0	0	0	0	0	17	1	18	10	1	16	27	62
% Large 2 Axle Vehicles	1.7	0.8	0	1	0	0	0	0	0	1.1	0.2	0.9	1.5	1.2	1.8	1.6	1.2
3 Axle Vehicles	0	4	0	4	0	0	0	0	0	3	0	3	1	0	1	2	9
% 3 Axle Vehicles	0	0.3	0	0.2	0	0	0	0	0	0.2	0	0.1	0.1	0	0.1	0.1	0.2
4+ Axle Trucks	1	2	0	3	0	0	0	0	0	1	1	2	25	0	3	28	33
% 4+ Axle Trucks	0.2	0.2	0	0.2	0	0	0	0	0	0.1	0.2	0.1	3.7	0	0.3	1.7	0.6

	Alabama Street Southbound				I-10 Eastbound On Ramp Westbound				Alabama Street Northbound				I-10 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	51	**182**	0	**233**	0	0	0	0	0	181	68	249	82	15	123	220	702
05:00 PM	**62**	158	0	220	0	0	0	0	0	191	62	253	69	8	118	195	668
05:15 PM	55	171	0	226	0	0	0	0	0	196	45	241	**90**	17	107	214	681
05:30 PM	52	157	0	209	0	0	0	0	0	**201**	**77**	**278**	90	**23**	**132**	**245**	**732**
Total Volume	220	668	0	888	0	0	0	0	0	769	252	1021	331	63	480	874	2783
% App. Total	24.8	75.2	0		0	0	0		0	75.3	24.7		37.9	7.2	54.9		
PHF	.887	.918	.000	.953	.000	.000	.000	.000	.000	.956	.818	.918	.919	.685	.909	.892	.950

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City of Redlands
N/S: Alabama Street
E/W: I-10 Eastbound Ramps
Weather: Clear

File Name : 09_RED_Alabama_10E PM
Site Code : 06718128
Start Date : 2/21/2018
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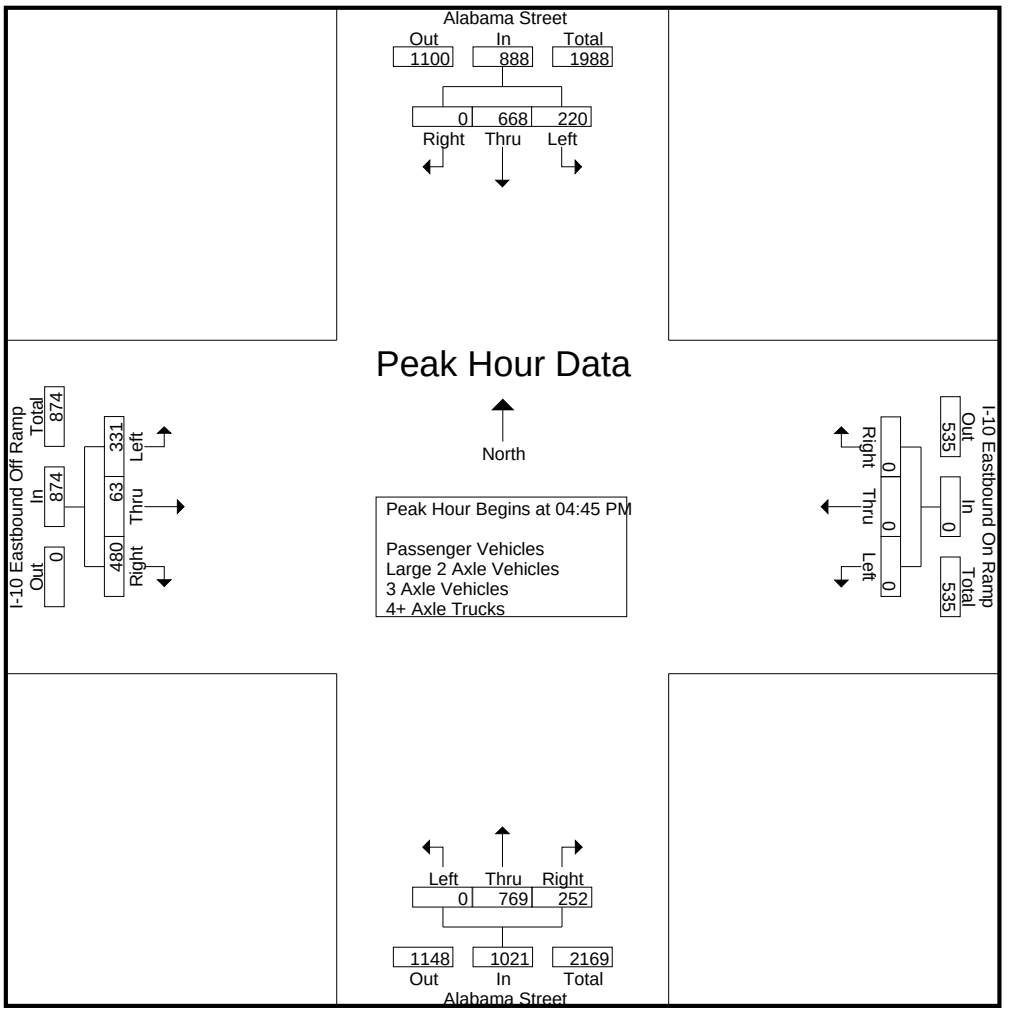

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				04:00 PM				04:00 PM				04:45 PM			
+0 mins.	**64**	151	0	215	0	0	0	0	0	**227**	59	**286**	82	15	123	220
+15 mins.	51	**182**	0	**233**	0	0	0	0	0	187	66	253	69	8	118	195
+30 mins.	62	158	0	220	0	0	0	0	0	190	**75**	265	**90**	17	107	214
+45 mins.	55	171	0	226	0	0	0	0	0	181	68	249	90	**23**	**132**	**245**
Total Volume	232	662	0	894	0	0	0	0	0	785	268	1053	331	63	480	874
% App. Total	26	74	0		0	0	0		0	74.5	25.5		37.9	7.2	54.9	
PHF	.906	.909	.000	.959	.000	.000	.000	.000	.000	.865	.893	.920	.919	.685	.909	.892

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File Name : 09_RED_Alabama_10E PM
Site Code : 06718128
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Groups Printed- Passenger Vehicles

	Alabama Street Southbound				I-10 Eastbound On Ramp Westbound				Alabama Street Northbound				I-10 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	44	142	0	186	0	0	0	0	0	224	59	283	80	4	119	203	672
04:15 PM	45	135	0	180	0	0	0	0	0	185	64	249	95	3	85	183	612
04:30 PM	64	150	0	214	0	0	0	0	0	187	75	262	79	6	85	170	646
04:45 PM	50	180	0	230	0	0	0	0	0	178	68	246	78	15	121	214	690
Total	203	607	0	810	0	0	0	0	0	774	266	1040	332	28	410	770	2620
05:00 PM	62	154	0	216	0	0	0	0	0	187	62	249	65	8	115	188	653
05:15 PM	55	166	0	221	0	0	0	0	0	196	45	241	86	16	104	206	668
05:30 PM	50	156	0	206	0	0	0	0	0	197	77	274	88	23	130	241	721
05:45 PM	35	159	0	194	0	0	0	0	0	186	44	230	74	8	100	182	606
Total	202	635	0	837	0	0	0	0	0	766	228	994	313	55	449	817	2648
Grand Total	405	1242	0	1647	0	0	0	0	0	1540	494	2034	645	83	859	1587	5268
Apprch %	24.6	75.4	0		0	0	0		0	75.7	24.3		40.6	5.2	54.1		
Total %	7.7	23.6	0	31.3	0	0	0	0	0	29.2	9.4	38.6	12.2	1.6	16.3	30.1	

	Alabama Street Southbound				I-10 Eastbound On Ramp Westbound				Alabama Street Northbound				I-10 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	50	**180**	0	**230**	0	0	0	0	0	178	68	246	78	15	121	214	690
05:00 PM	**62**	154	0	216	0	0	0	0	0	187	62	249	65	8	115	188	653
05:15 PM	55	166	0	221	0	0	0	0	0	196	45	241	86	16	104	206	668
05:30 PM	50	156	0	206	0	0	0	0	0	**197**	**77**	**274**	**88**	**23**	**130**	**241**	**721**
Total Volume	217	656	0	873	0	0	0	0	0	758	252	1010	317	62	470	849	2732
% App. Total	24.9	75.1	0		0	0	0		0	75	25		37.3	7.3	55.4		
PHF	.875	.911	.000	.949	.000	.000	.000	.000	.000	.962	.818	.922	.901	.674	.904	.881	.947

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File Name : 09_RED_Alabama_10E PM
Site Code : 06718128
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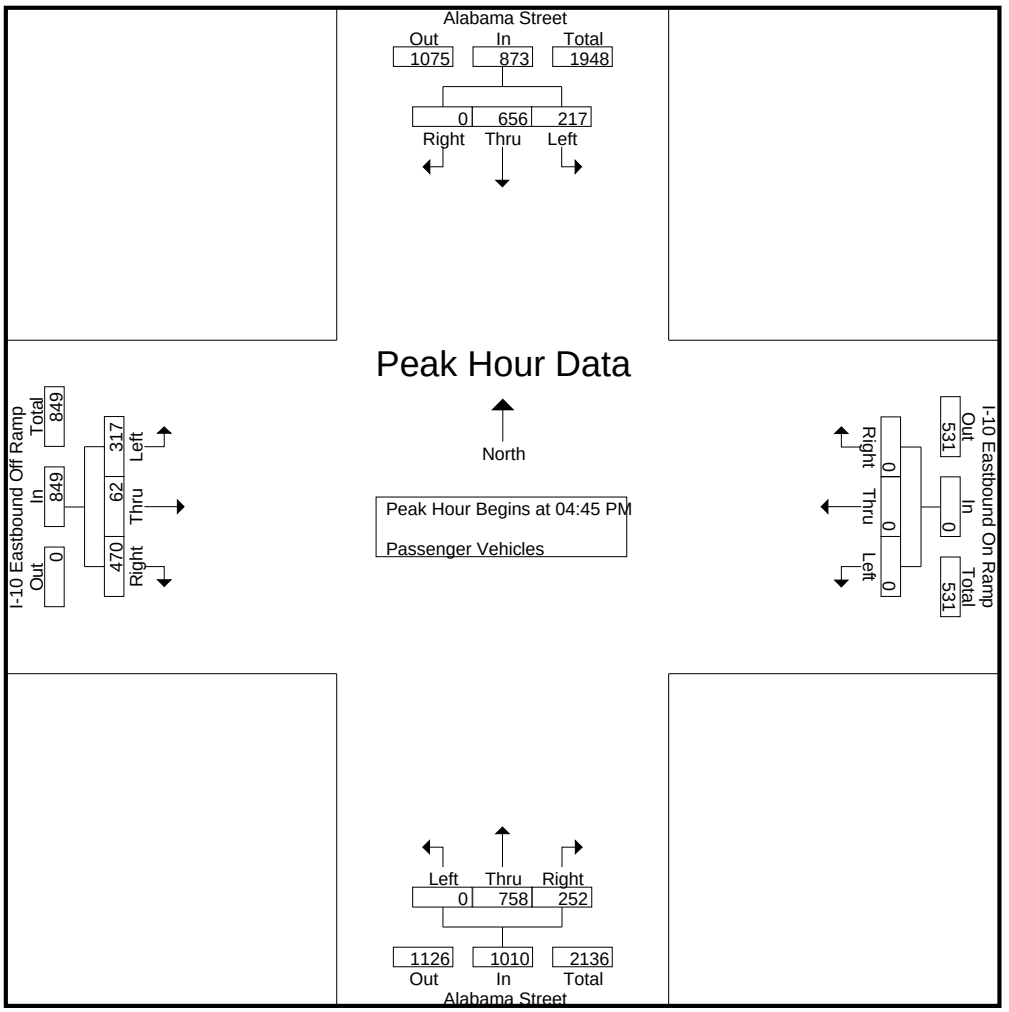

Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	50	**180**	0	**230**	0	0	0	0	0	178	68	246	78	15	121	214
+15 mins.	**62**	154	0	216	0	0	0	0	0	187	62	249	65	8	115	188
+30 mins.	55	166	0	221	0	0	0	0	0	196	45	241	86	16	104	206
+45 mins.	50	156	0	206	0	0	0	0	0	**197**	**77**	**274**	**88**	**23**	**130**	**241**
Total Volume	217	656	0	873	0	0	0	0	0	758	252	1010	317	62	470	849
% App. Total	24.9	75.1	0		0	0	0		0	75	25		37.3	7.3	55.4	
PHF	.875	.911	.000	.949	.000	.000	.000	.000	.000	.962	.818	.922	.901	.674	.904	.881

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Redlands
N/S: Alabama Street
E/W: I-10 Eastbound Ramps
Weather: Clear

File Name : 09_RED_Alabama_10E PM
Site Code : 06718128
Start Date : 2/21/2018
Page No : 1

Groups Printed- Large 2 Axle Vehicles

	Alabama Street Southbound				I-10 Eastbound On Ramp Westbound				Alabama Street Northbound				I-10 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	2	0	0	2	0	0	0	0	0	3	0	3	0	0	3	3	8
04:15 PM	2	1	0	3	0	0	0	0	0	2	1	3	2	0	3	5	11
04:30 PM	0	1	0	1	0	0	0	0	0	2	0	2	1	0	2	3	6
04:45 PM	0	2	0	2	0	0	0	0	0	2	0	2	1	0	2	3	7
Total	4	4	0	8	0	0	0	0	0	9	1	10	4	0	10	14	32
05:00 PM	0	1	0	1	0	0	0	0	0	3	0	3	2	0	2	4	8
05:15 PM	0	4	0	4	0	0	0	0	0	0	0	0	3	1	3	7	11
05:30 PM	2	0	0	2	0	0	0	0	0	3	0	3	1	0	1	2	7
05:45 PM	1	1	0	2	0	0	0	0	0	2	0	2	0	0	0	0	4
Total	3	6	0	9	0	0	0	0	0	8	0	8	6	1	6	13	30
Grand Total	7	10	0	17	0	0	0	0	0	17	1	18	10	1	16	27	62
Apprch %	41.2	58.8	0		0	0	0		0	94.4	5.6		37	3.7	59.3		
Total %	11.3	16.1	0	27.4	0	0	0	0	0	27.4	1.6	29	16.1	1.6	25.8	43.5	

	Alabama Street Southbound				I-10 Eastbound On Ramp Westbound				Alabama Street Northbound				I-10 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	2	0	2	0	0	0	0	0	2	0	2	1	0	2	3	7
05:00 PM	0	1	0	1	0	0	0	0	0	**3**	0	**3**	2	0	2	4	8
05:15 PM	0	**4**	0	**4**	0	0	0	0	0	0	0	0	**3**	**1**	**3**	**7**	**11**
05:30 PM	**2**	0	0	2	0	0	0	0	0	3	0	3	1	0	1	2	7
Total Volume	2	7	0	9	0	0	0	0	0	8	0	8	7	1	8	16	33
% App. Total	22.2	77.8	0		0	0	0		0	100	0		43.8	6.2	50		
PHF	.250	.438	.000	.563	.000	.000	.000	.000	.000	.667	.000	.667	.583	.250	.667	.571	.750

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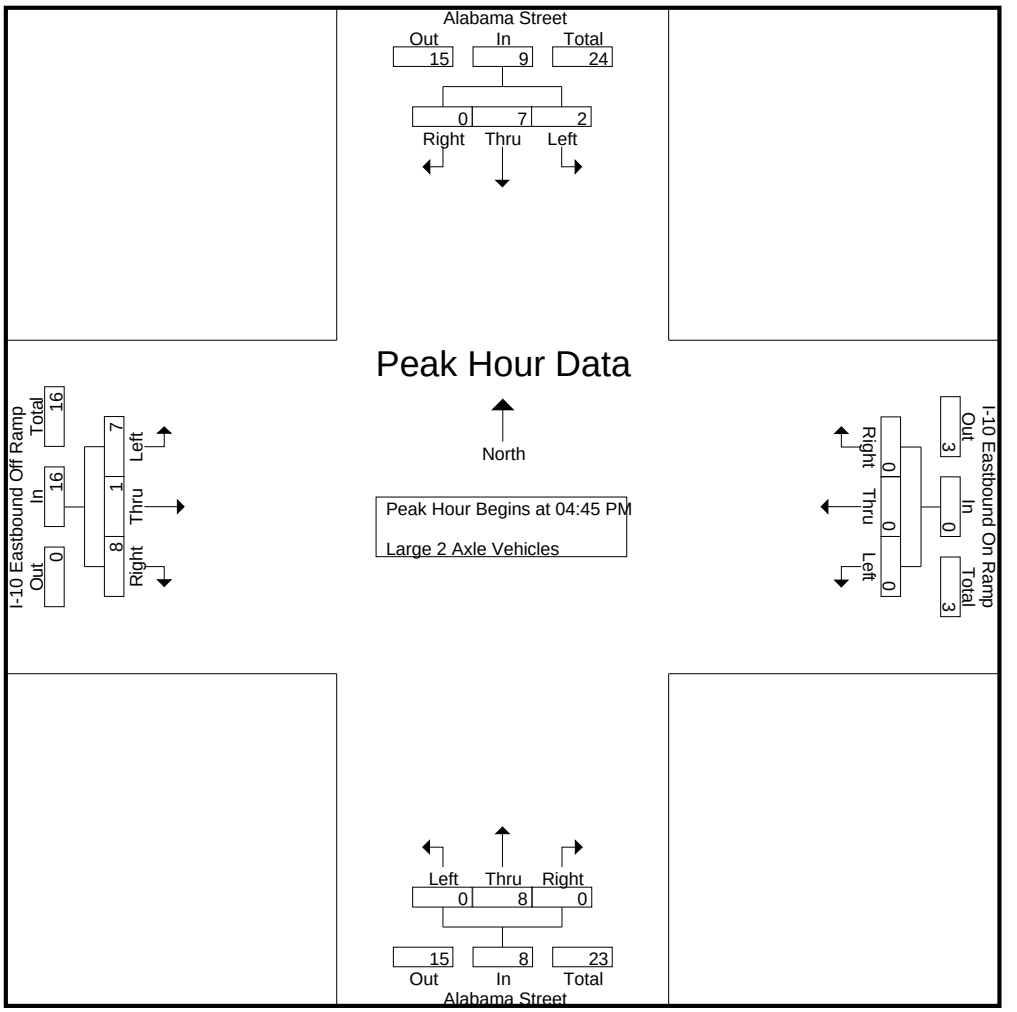
City of Redlands
N/S: Alabama Street
E/W: I-10 Eastbound Ramps
Weather: Clear

File Name : 09_RED_Alabama_10E PM
Site Code : 06718128
Start Date : 2/21/2018
Page No : 2



Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	0	2	0	2	0	0	0	0	0	2	0	2	1	0	2	3
+15 mins.	0	1	0	1	0	0	0	0	0	**3**	0	**3**	2	0	2	4
+30 mins.	0	**4**	0	**4**	0	0	0	0	0	0	0	0	**3**	**1**	**3**	**7**
+45 mins.	**2**	0	0	2	0	0	0	0	0	3	0	3	1	0	1	2
Total Volume	2	7	0	9	0	0	0	0	0	8	0	8	7	1	8	16
% App. Total	22.2	77.8	0		0	0	0		0	100	0		43.8	6.2	50	
PHF	.250	.438	.000	.563	.000	.000	.000	.000	.000	.667	.000	.667	.583	.250	.667	.571

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City of Redlands
N/S: Alabama Street
E/W: I-10 Eastbound Ramps
Weather: Clear

File Name : 09_RED_Alabama_10E PM
Site Code : 06718128
Start Date : 2/21/2018
Page No : 1

Groups Printed- 3 Axle Vehicles

	Alabama Street Southbound				I-10 Eastbound On Ramp Westbound				Alabama Street Northbound				I-10 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
05:00 PM	0	2	0	2	0	0	0	0	0	1	0	1	0	0	0	0	3
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	1	0	1	0	0	0	0	0	1	0	1	1	0	0	1	3
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
Total	0	3	0	3	0	0	0	0	0	2	0	2	1	0	1	2	7
Grand Total	0	4	0	4	0	0	0	0	0	3	0	3	1	0	1	2	9
Apprch %	0	100	0		0	0	0		0	100	0		50	0	50		
Total %	0	44.4	0	44.4	0	0	0	0	0	33.3	0	33.3	11.1	0	11.1	22.2	

	Alabama Street Southbound				I-10 Eastbound On Ramp Westbound				Alabama Street Northbound				I-10 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	**2**	0	**2**	0	0	0	0	0	**1**	0	**1**	0	0	0	0	**3**
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	1	0	1	0	0	0	0	0	1	0	1	**1**	0	0	**1**	3
Total Volume	0	3	0	3	0	0	0	0	0	2	0	2	1	0	0	1	6
% App. Total	0	100	0		0	0	0		0	100	0		100	0	0		
PHF	.000	.375	.000	.375	.000	.000	.000	.000	.000	.500	.000	.500	.250	.000	.000	.250	.500

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City of Redlands
N/S: Alabama Street
E/W: I-10 Eastbound Ramps
Weather: Clear

File Name : 09_RED_Alabama_10E PM
Site Code : 06718128
Start Date : 2/21/2018
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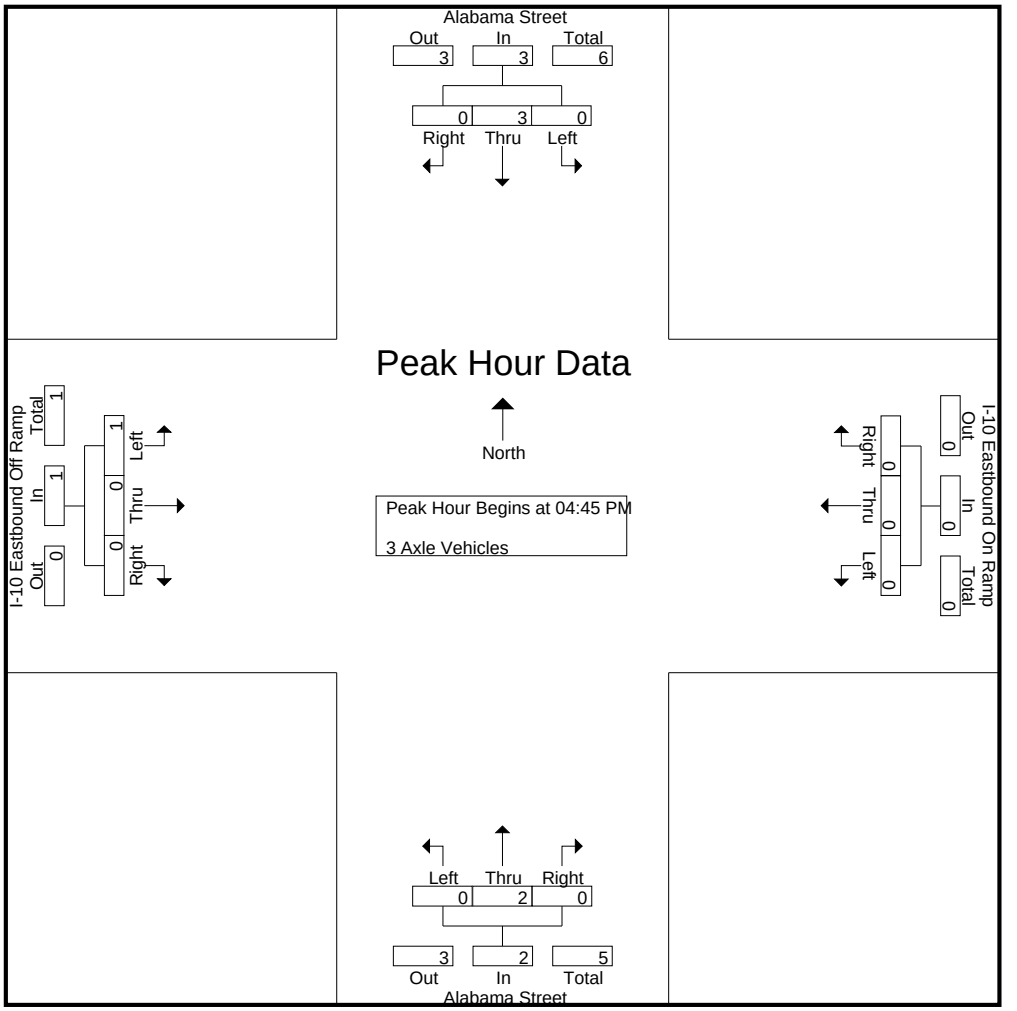

Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	**2**	0	**2**	0	0	0	0	0	**1**	0	**1**	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	1	0	1	0	0	0	0	0	1	0	1	**1**	0	0	**1**
Total Volume	0	3	0	3	0	0	0	0	0	2	0	2	1	0	0	1
% App. Total	0	100	0		0	0	0		0	100	0		100	0	0	
PHF	.000	.375	.000	.375	.000	.000	.000	.000	.000	.500	.000	.500	.250	.000	.000	.250

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City of Redlands
N/S: Alabama Street
E/W: I-10 Eastbound Ramps
Weather: Clear

File Name : 09_RED_Alabama_10E PM
Site Code : 06718128
Start Date : 2/21/2018
Page No : 1

Groups Printed- 4+ Axle Trucks

	Alabama Street Southbound				I-10 Eastbound On Ramp Westbound				Alabama Street Northbound				I-10 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	6	0	1	7	7
04:15 PM	0	0	0	0	0	0	0	0	0	0	1	1	4	0	0	4	5
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0	6	6
04:45 PM	1	0	0	1	0	0	0	0	0	1	0	1	3	0	0	3	5
Total	1	0	0	1	0	0	0	0	0	1	1	2	19	0	1	20	23
05:00 PM	0	1	0	1	0	0	0	0	0	0	0	0	2	0	1	3	4
05:15 PM	0	1	0	1	0	0	0	0	0	0	0	0	1	0	0	1	2
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	3
Total	0	2	0	2	0	0	0	0	0	0	0	0	6	0	2	8	10
Grand Total	1	2	0	3	0	0	0	0	0	1	1	2	25	0	3	28	33
Apprch %	33.3	66.7	0		0	0	0		0	50	50		89.3	0	10.7		
Total %	3	6.1	0	9.1	0	0	0	0	0	3	3	6.1	75.8	0	9.1	84.8	

	Alabama Street Southbound				I-10 Eastbound On Ramp Westbound				Alabama Street Northbound				I-10 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	**1**	0	0	**1**	0	0	0	0	0	**1**	0	**1**	**3**	0	0	**3**	**5**
05:00 PM	0	**1**	0	1	0	0	0	0	0	0	0	0	2	0	**1**	3	4
05:15 PM	0	1	0	1	0	0	0	0	0	0	0	0	1	0	0	1	2
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
Total Volume	1	2	0	3	0	0	0	0	0	1	0	1	6	0	2	8	12
% App. Total	33.3	66.7	0		0	0	0		0	100	0		75	0	25		
PHF	.250	.500	.000	.750	.000	.000	.000	.000	.000	.250	.000	.250	.500	.000	.500	.667	.600

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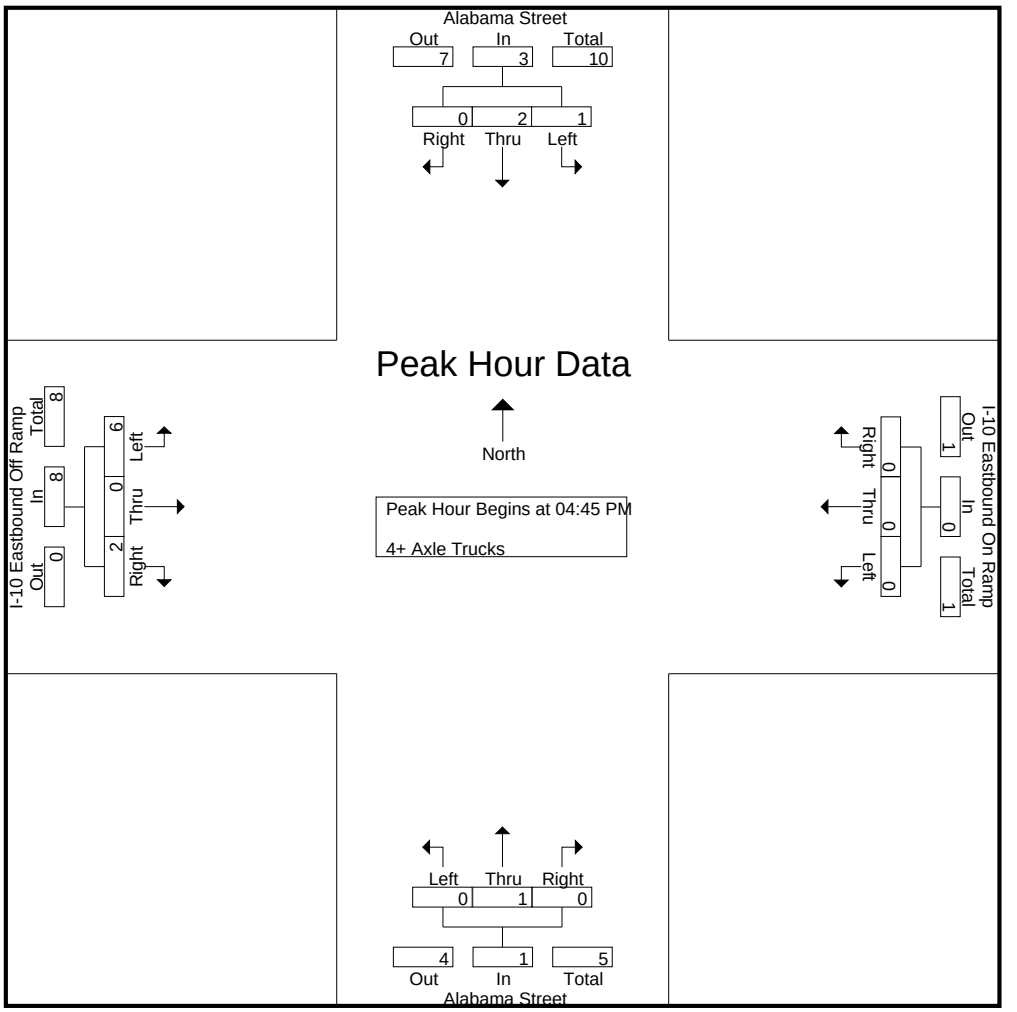
City of Redlands
N/S: Alabama Street
E/W: I-10 Eastbound Ramps
Weather: Clear

File Name : 09_RED_Alabama_10E PM
Site Code : 06718128
Start Date : 2/21/2018
Page No : 2



Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	**1**	0	0	**1**	0	0	0	0	0	**1**	0	**1**	**3**	0	0	**3**
+15 mins.	0	**1**	0	1	0	0	0	0	0	0	0	0	2	0	**1**	3
+30 mins.	0	1	0	1	0	0	0	0	0	0	0	0	1	0	0	1
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
Total Volume	1	2	0	3	0	0	0	0	0	1	0	1	6	0	2	8
% App. Total	33.3	66.7	0		0	0	0		0	100	0		75	0	25	
PHF	.250	.500	.000	.750	.000	.000	.000	.000	.000	.250	.000	.250	.500	.000	.500	.667

Counts Unlimited
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City of Highlands
N/S: I-210 Southbound Ramps
E/W: 5th Street
Weather: Clear

File Name : 10_HLD_210S_5th AM
Site Code : 06718128
Start Date : 2/21/2018
Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	I-210 Southbound Off Ramp Southbound				5th Street Westbound				I-210 Southbound On Ramp Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	29	0	35	64	185	205	0	390	0	0	0	0	0	59	109	168	622
07:15 AM	36	0	47	83	185	243	0	428	0	0	0	0	0	56	105	161	672
07:30 AM	47	0	42	89	207	244	0	451	0	0	0	0	0	86	81	167	707
07:45 AM	54	0	46	100	192	263	0	455	0	0	0	0	0	50	87	137	692
Total	166	0	170	336	769	955	0	1724	0	0	0	0	0	251	382	633	2693
08:00 AM	31	0	20	51	123	190	0	313	0	0	0	0	0	68	62	130	494
08:15 AM	30	1	26	57	123	196	0	319	0	0	0	0	0	53	60	113	489
08:30 AM	40	0	26	66	161	134	0	295	0	0	0	0	0	72	81	153	514
08:45 AM	37	0	19	56	116	104	0	220	0	0	0	0	0	59	81	140	416
Total	138	1	91	230	523	624	0	1147	0	0	0	0	0	252	284	536	1913
Grand Total	304	1	261	566	1292	1579	0	2871	0	0	0	0	0	503	666	1169	4606
Apprch %	53.7	0.2	46.1		45	55	0		0	0	0		0	43	57		
Total %	6.6	0	5.7	12.3	28.1	34.3	0	62.3	0	0	0	0	0	10.9	14.5	25.4	
Passenger Vehicles	289	1	243	533	1259	1505	0	2764	0	0	0	0	0	450	590	1040	4337
% Passenger Vehicles	95.1	100	93.1	94.2	97.4	95.3	0	96.3	0	0	0	0	0	89.5	88.6	89	94.2
Large 2 Axle Vehicles	9	0	3	12	13	26	0	39	0	0	0	0	0	17	24	41	92
% Large 2 Axle Vehicles	3	0	1.1	2.1	1	1.6	0	1.4	0	0	0	0	0	3.4	3.6	3.5	2
3 Axle Vehicles	3	0	1	4	3	17	0	20	0	0	0	0	0	18	18	36	60
% 3 Axle Vehicles	1	0	0.4	0.7	0.2	1.1	0	0.7	0	0	0	0	0	3.6	2.7	3.1	1.3
4+ Axle Trucks	3	0	14	17	17	31	0	48	0	0	0	0	0	18	34	52	117
% 4+ Axle Trucks	1	0	5.4	3	1.3	2	0	1.7	0	0	0	0	0	3.6	5.1	4.4	2.5

	I-210 Southbound Off Ramp Southbound				5th Street Westbound				I-210 Southbound On Ramp Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	29	0	35	64	185	205	0	390	0	0	0	0	0	59	**109**	**168**	622
07:15 AM	36	0	**47**	83	185	243	0	428	0	0	0	0	0	56	105	161	672
07:30 AM	47	0	42	89	**207**	244	0	451	0	0	0	0	0	**86**	81	167	**707**
07:45 AM	**54**	0	46	**100**	192	**263**	0	**455**	0	0	0	0	0	50	87	137	692
Total Volume	166	0	170	336	769	955	0	1724	0	0	0	0	0	251	382	633	2693
% App. Total	49.4	0	50.6		44.6	55.4	0		0	0	0		0	39.7	60.3		
PHF	.769	.000	.904	.840	.929	.908	.000	.947	.000	.000	.000	.000	.000	.730	.876	.942	.952

Counts Unlimited
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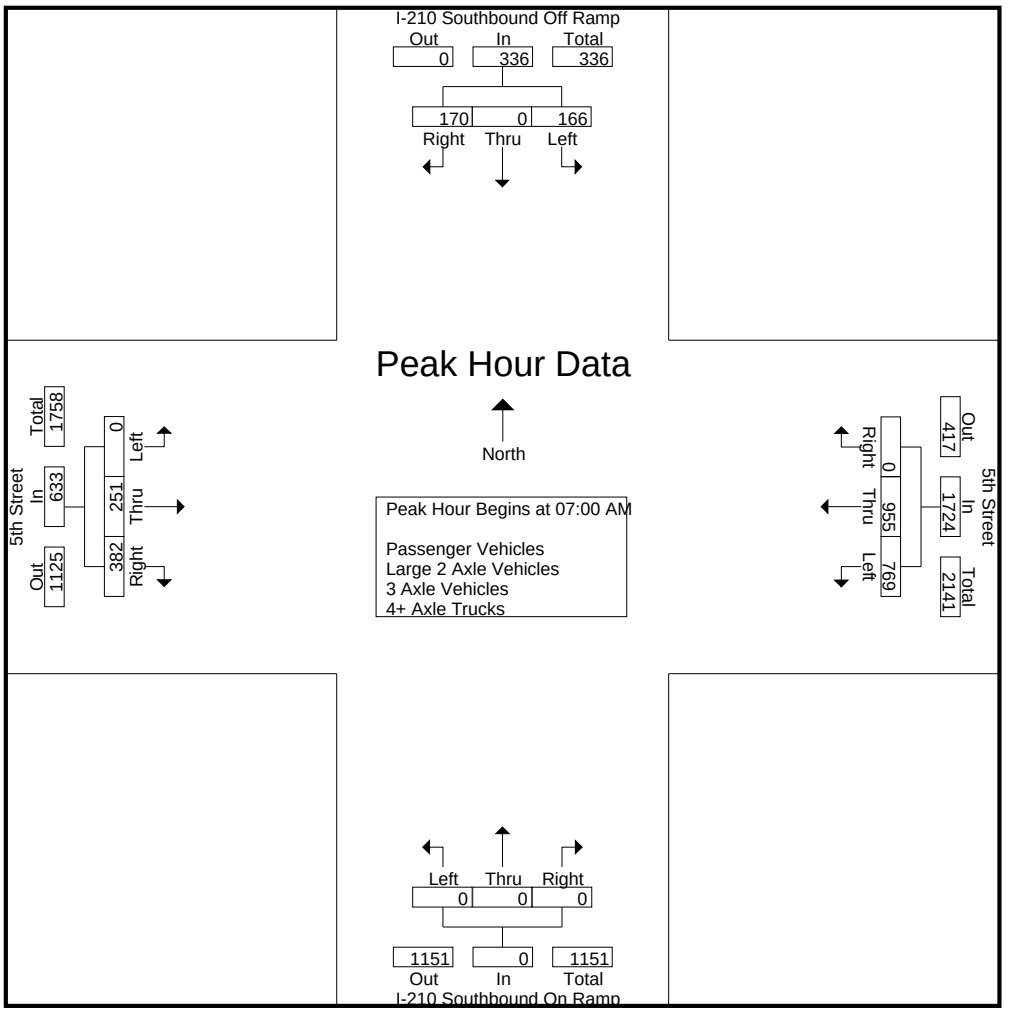
City of Highlands
N/S: I-210 Southbound Ramps
E/W: 5th Street
Weather: Clear

File Name : 10_HLD_210S_5th AM
Site Code : 06718128
Start Date : 2/21/2018
Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM				07:00 AM				07:00 AM				07:00 AM			
+0 mins.	29	0	35	64	185	205	0	390	0	0	0	0	0	59	**109**	**168**
+15 mins.	36	0	**47**	83	185	243	0	428	0	0	0	0	0	56	105	161
+30 mins.	47	0	42	89	**207**	244	0	451	0	0	0	0	0	**86**	81	167
+45 mins.	**54**	0	46	**100**	192	**263**	0	**455**	0	0	0	0	0	50	87	137
Total Volume	166	0	170	336	769	955	0	1724	0	0	0	0	0	251	382	633
% App. Total	49.4	0	50.6		44.6	55.4	0		0	0	0		0	39.7	60.3	
PHF	.769	.000	.904	.840	.929	.908	.000	.947	.000	.000	.000	.000	.000	.730	.876	.942

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City of Highlands
N/S: I-210 Southbound Ramps
E/W: 5th Street
Weather: Clear

File Name : 10_HLD_210S_5th AM
Site Code : 06718128
Start Date : 2/21/2018
Page No : 1

Groups Printed- Passenger Vehicles

	I-210 Southbound Off Ramp Southbound				5th Street Westbound				I-210 Southbound On Ramp Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	25	0	33	58	178	202	0	380	0	0	0	0	0	55	95	150	588
07:15 AM	35	0	46	81	183	235	0	418	0	0	0	0	0	50	94	144	643
07:30 AM	44	0	40	84	202	237	0	439	0	0	0	0	0	79	70	149	672
07:45 AM	52	0	43	95	190	257	0	447	0	0	0	0	0	43	77	120	662
Total	156	0	162	318	753	931	0	1684	0	0	0	0	0	227	336	563	2565
08:00 AM	29	0	19	48	121	178	0	299	0	0	0	0	0	59	56	115	462
08:15 AM	28	1	26	55	115	183	0	298	0	0	0	0	0	47	56	103	456
08:30 AM	39	0	21	60	157	123	0	280	0	0	0	0	0	64	71	135	475
08:45 AM	37	0	15	52	113	90	0	203	0	0	0	0	0	53	71	124	379
Total	133	1	81	215	506	574	0	1080	0	0	0	0	0	223	254	477	1772
Grand Total	289	1	243	533	1259	1505	0	2764	0	0	0	0	0	450	590	1040	4337
Apprch %	54.2	0.2	45.6		45.5	54.5	0		0	0	0		0	43.3	56.7		
Total %	6.7	0	5.6	12.3	29	34.7	0	63.7	0	0	0	0	0	10.4	13.6	24	

	I-210 Southbound Off Ramp Southbound				5th Street Westbound				I-210 Southbound On Ramp Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	25	0	33	58	178	202	0	380	0	0	0	0	0	55	**95**	**150**	588
07:15 AM	35	0	**46**	81	183	235	0	418	0	0	0	0	0	50	94	144	643
07:30 AM	44	0	40	84	**202**	237	0	439	0	0	0	0	0	**79**	70	149	**672**
07:45 AM	**52**	0	43	**95**	190	**257**	0	**447**	0	0	0	0	0	43	77	120	662
Total Volume	156	0	162	318	753	931	0	1684	0	0	0	0	0	227	336	563	2565
% App. Total	49.1	0	50.9		44.7	55.3	0		0	0	0		0	40.3	59.7		
PHF	.750	.000	.880	.837	.932	.906	.000	.942	.000	.000	.000	.000	.000	.718	.884	.938	.954

Counts Unlimited
PO Box 1178
Corona, CA 92878
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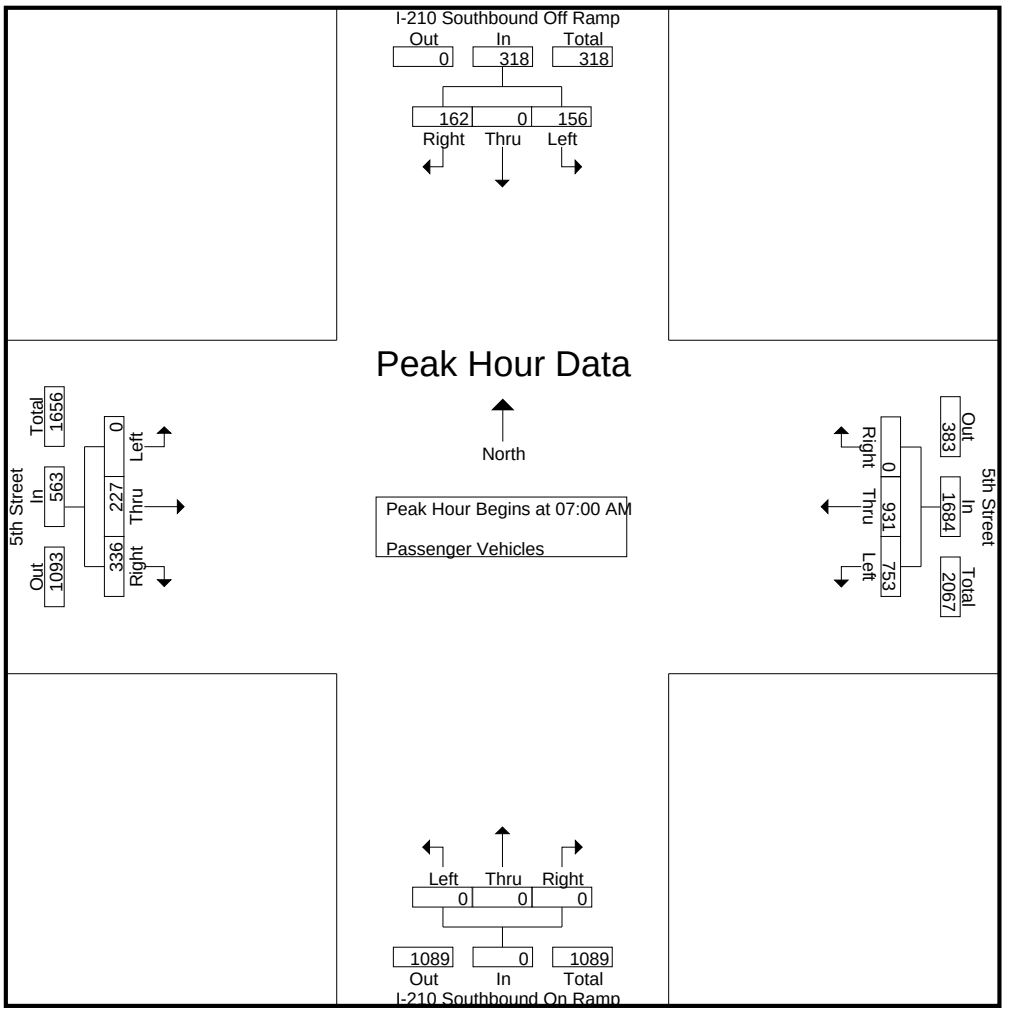
City of Highlands
N/S: I-210 Southbound Ramps
E/W: 5th Street
Weather: Clear

File Name : 10_HLD_210S_5th AM
Site Code : 06718128
Start Date : 2/21/2018
Page No : 2



Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM				07:00 AM				07:00 AM				07:00 AM			
+0 mins.	25	0	33	58	178	202	0	380	0	0	0	0	0	55	**95**	**150**
+15 mins.	35	0	**46**	81	183	235	0	418	0	0	0	0	0	50	94	144
+30 mins.	44	0	40	84	**202**	237	0	439	0	0	0	0	0	**79**	70	149
+45 mins.	**52**	0	43	**95**	190	**257**	0	**447**	0	0	0	0	0	43	77	120
Total Volume	156	0	162	318	753	931	0	1684	0	0	0	0	0	227	336	563
% App. Total	49.1	0	50.9		44.7	55.3	0		0	0	0		0	40.3	59.7	
PHF	.750	.000	.880	.837	.932	.906	.000	.942	.000	.000	.000	.000	.000	.718	.884	.938

Counts Unlimited
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City of Highlands
N/S: I-210 Southbound Ramps
E/W: 5th Street
Weather: Clear

File Name : 10_HLD_210S_5th AM
Site Code : 06718128
Start Date : 2/21/2018
Page No : 1

Groups Printed- Large 2 Axle Vehicles

	I-210 Southbound Off Ramp Southbound				5th Street Westbound				I-210 Southbound On Ramp Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	2	0	0	2	3	1	0	4	0	0	0	0	0	0	4	4	10
07:15 AM	1	0	1	2	1	1	0	2	0	0	0	0	0	5	5	10	14
07:30 AM	1	0	0	1	1	3	0	4	0	0	0	0	0	5	2	7	12
07:45 AM	0	0	1	1	2	2	0	4	0	0	0	0	0	2	2	4	9
Total	4	0	2	6	7	7	0	14	0	0	0	0	0	12	13	25	45
08:00 AM	2	0	0	2	1	3	0	4	0	0	0	0	0	2	2	4	10
08:15 AM	2	0	0	2	2	4	0	6	0	0	0	0	0	0	3	3	11
08:30 AM	1	0	1	2	2	4	0	6	0	0	0	0	0	3	3	6	14
08:45 AM	0	0	0	0	1	8	0	9	0	0	0	0	0	0	3	3	12
Total	5	0	1	6	6	19	0	25	0	0	0	0	0	5	11	16	47
Grand Total	9	0	3	12	13	26	0	39	0	0	0	0	0	17	24	41	92
Apprch %	75	0	25		33.3	66.7	0		0	0	0		0	41.5	58.5		
Total %	9.8	0	3.3	13	14.1	28.3	0	42.4	0	0	0	0	0	18.5	26.1	44.6	

	I-210 Southbound Off Ramp Southbound				5th Street Westbound				I-210 Southbound On Ramp Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	**2**	0	0	**2**	**3**	1	0	**4**	0	0	0	0	0	0	4	4	10
07:15 AM	1	0	**1**	2	1	1	0	2	0	0	0	0	0	**5**	**5**	**10**	**14**
07:30 AM	1	0	0	1	1	**3**	0	4	0	0	0	0	0	5	2	7	12
07:45 AM	0	0	1	1	2	2	0	4	0	0	0	0	0	2	2	4	9
Total Volume	4	0	2	6	7	7	0	14	0	0	0	0	0	12	13	25	45
% App. Total	66.7	0	33.3		50	50	0		0	0	0		0	48	52		
PHF	.500	.000	.500	.750	.583	.583	.000	.875	.000	.000	.000	.000	.000	.600	.650	.625	.804

Counts Unlimited
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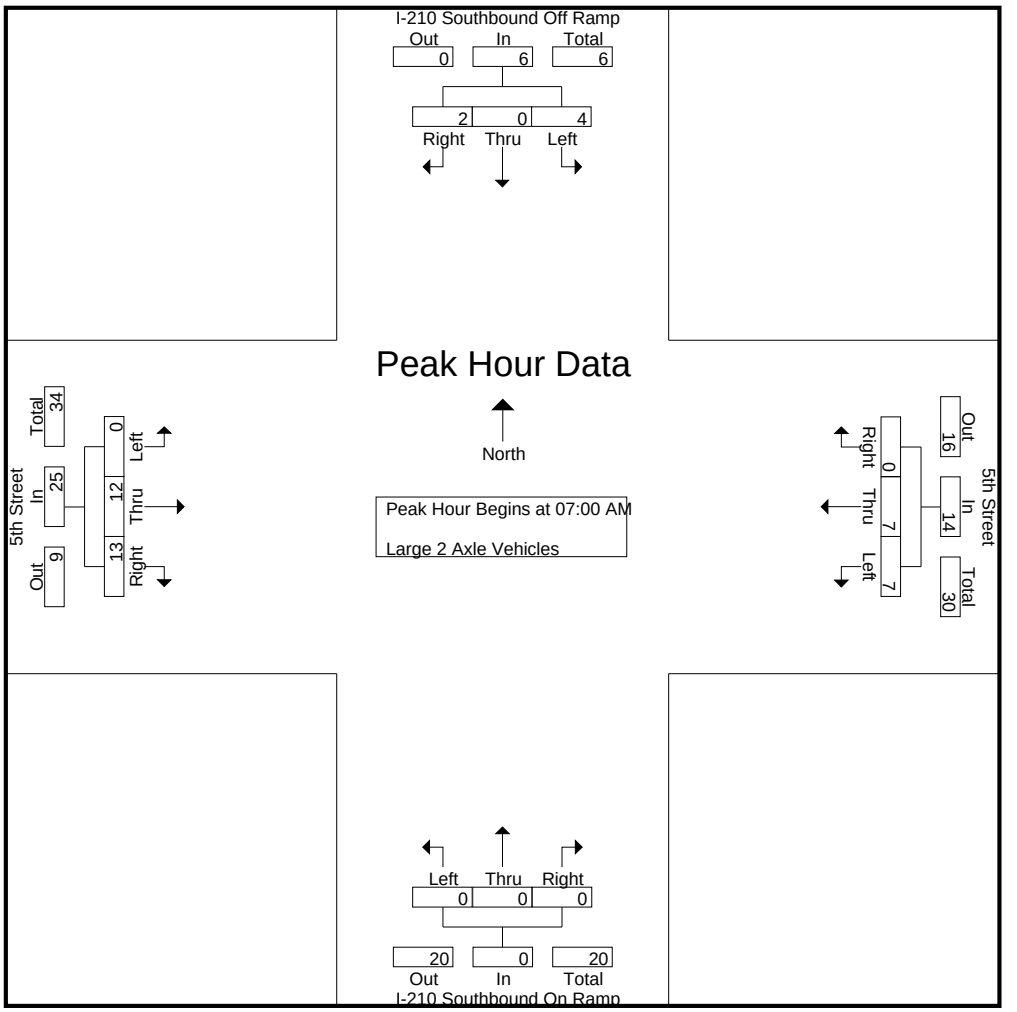
City of Highlands
N/S: I-210 Southbound Ramps
E/W: 5th Street
Weather: Clear

File Name : 10_HLD_210S_5th AM
Site Code : 06718128
Start Date : 2/21/2018
Page No : 2



Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM				07:00 AM				07:00 AM				07:00 AM			
+0 mins.	**2**	0	0	**2**	**3**	1	0	**4**	0	0	0	0	0	0	4	4
+15 mins.	1	0	**1**	2	1	1	0	2	0	0	0	0	0	**5**	**5**	**10**
+30 mins.	1	0	0	1	1	**3**	0	4	0	0	0	0	0	5	2	7
+45 mins.	0	0	1	1	2	2	0	4	0	0	0	0	0	2	2	4
Total Volume	4	0	2	6	7	7	0	14	0	0	0	0	0	12	13	25
% App. Total	66.7	0	33.3		50	50	0		0	0	0		0	48	52	
PHF	.500	.000	.500	.750	.583	.583	.000	.875	.000	.000	.000	.000	.000	.600	.650	.625

Counts Unlimited
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City of Highlands
N/S: I-210 Southbound Ramps
E/W: 5th Street
Weather: Clear

File Name : 10_HLD_210S_5th AM
Site Code : 06718128
Start Date : 2/21/2018
Page No : 1

Groups Printed- 3 Axle Vehicles

	I-210 Southbound Off Ramp Southbound				5th Street Westbound				I-210 Southbound On Ramp Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	2	0	1	3	1	1	0	2	0	0	0	0	0	2	5	7	12
07:15 AM	0	0	0	0	0	3	0	3	0	0	0	0	0	1	0	1	4
07:30 AM	1	0	0	1	0	1	0	1	0	0	0	0	0	1	3	4	6
07:45 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	4	3	7	8
Total	3	0	1	4	1	6	0	7	0	0	0	0	0	8	11	19	30
08:00 AM	0	0	0	0	0	7	0	7	0	0	0	0	0	3	0	3	10
08:15 AM	0	0	0	0	2	2	0	4	0	0	0	0	0	3	1	4	8
08:30 AM	0	0	0	0	0	2	0	2	0	0	0	0	0	2	4	6	8
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	4	4
Total	0	0	0	0	2	11	0	13	0	0	0	0	0	10	7	17	30
Grand Total	3	0	1	4	3	17	0	20	0	0	0	0	0	18	18	36	60
Apprch %	75	0	25		15	85	0		0	0	0		0	50	50		
Total %	5	0	1.7	6.7	5	28.3	0	33.3	0	0	0	0	0	30	30	60	

	I-210 Southbound Off Ramp Southbound				5th Street Westbound				I-210 Southbound On Ramp Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	**2**	0	**1**	**3**	**1**	1	0	2	0	0	0	0	0	2	**5**	**7**	**12**
07:15 AM	0	0	0	0	0	**3**	0	**3**	0	0	0	0	0	1	0	1	4
07:30 AM	1	0	0	1	0	1	0	1	0	0	0	0	0	1	3	4	6
07:45 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	**4**	3	7	8
Total Volume	3	0	1	4	1	6	0	7	0	0	0	0	0	8	11	19	30
% App. Total	75	0	25		14.3	85.7	0		0	0	0		0	42.1	57.9		
PHF	.375	.000	.250	.333	.250	.500	.000	.583	.000	.000	.000	.000	.000	.500	.550	.679	.625

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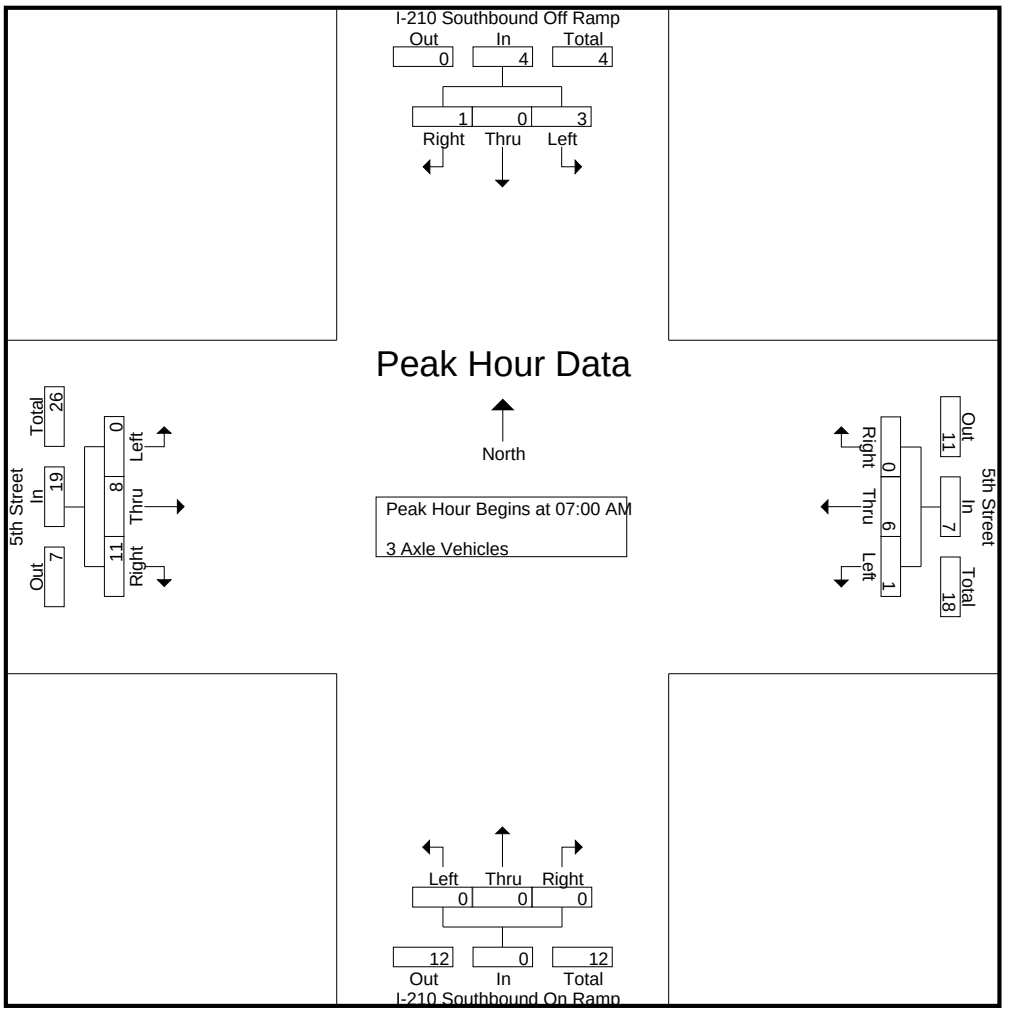
City of Highlands
N/S: I-210 Southbound Ramps
E/W: 5th Street
Weather: Clear

File Name : 10_HLD_210S_5th AM
Site Code : 06718128
Start Date : 2/21/2018
Page No : 2



Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM				07:00 AM				07:00 AM				07:00 AM			
+0 mins.	**2**	0	**1**	**3**	**1**	1	0	2	0	0	0	0	0	2	**5**	**7**
+15 mins.	0	0	0	0	0	**3**	0	**3**	0	0	0	0	0	1	0	1
+30 mins.	1	0	0	1	0	1	0	1	0	0	0	0	0	1	3	4
+45 mins.	0	0	0	0	0	1	0	1	0	0	0	0	0	**4**	3	7
Total Volume	3	0	1	4	1	6	0	7	0	0	0	0	0	8	11	19
% App. Total	75	0	25		14.3	85.7	0		0	0	0		0	42.1	57.9	
PHF	.375	.000	.250	.333	.250	.500	.000	.583	.000	.000	.000	.000	.000	.500	.550	.679

Counts Unlimited
PO Box 1178
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City of Highlands
N/S: I-210 Southbound Ramps
E/W: 5th Street
Weather: Clear

File Name : 10_HLD_210S_5th AM
Site Code : 06718128
Start Date : 2/21/2018
Page No : 1

Groups Printed- 4+ Axle Trucks

	I-210 Southbound Off Ramp Southbound				5th Street Westbound				I-210 Southbound On Ramp Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	1	1	3	1	0	4	0	0	0	0	0	2	5	7	12
07:15 AM	0	0	0	0	1	4	0	5	0	0	0	0	0	0	6	6	11
07:30 AM	1	0	2	3	4	3	0	7	0	0	0	0	0	1	6	7	17
07:45 AM	2	0	2	4	0	3	0	3	0	0	0	0	0	1	5	6	13
Total	3	0	5	8	8	11	0	19	0	0	0	0	0	4	22	26	53
08:00 AM	0	0	1	1	1	2	0	3	0	0	0	0	0	4	4	8	12
08:15 AM	0	0	0	0	4	7	0	11	0	0	0	0	0	3	0	3	14
08:30 AM	0	0	4	4	2	5	0	7	0	0	0	0	0	3	3	6	17
08:45 AM	0	0	4	4	2	6	0	8	0	0	0	0	0	4	5	9	21
Total	0	0	9	9	9	20	0	29	0	0	0	0	0	14	12	26	64
Grand Total	3	0	14	17	17	31	0	48	0	0	0	0	0	18	34	52	117
Apprch %	17.6	0	82.4		35.4	64.6	0		0	0	0		0	34.6	65.4		
Total %	2.6	0	12	14.5	14.5	26.5	0	41	0	0	0	0	0	15.4	29.1	44.4	

	I-210 Southbound Off Ramp Southbound				5th Street Westbound				I-210 Southbound On Ramp Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	0	1	1	3	1	0	4	0	0	0	0	0	**2**	5	**7**	12
07:15 AM	0	0	0	0	1	**4**	0	5	0	0	0	0	0	0	**6**	6	11
07:30 AM	1	0	**2**	3	**4**	3	0	**7**	0	0	0	0	0	1	6	7	**17**
07:45 AM	**2**	0	2	**4**	0	3	0	3	0	0	0	0	0	1	5	6	13
Total Volume	3	0	5	8	8	11	0	19	0	0	0	0	0	4	22	26	53
% App. Total	37.5	0	62.5		42.1	57.9	0		0	0	0		0	15.4	84.6		
PHF	.375	.000	.625	.500	.500	.688	.000	.679	.000	.000	.000	.000	.000	.500	.917	.929	.779

Counts Unlimited
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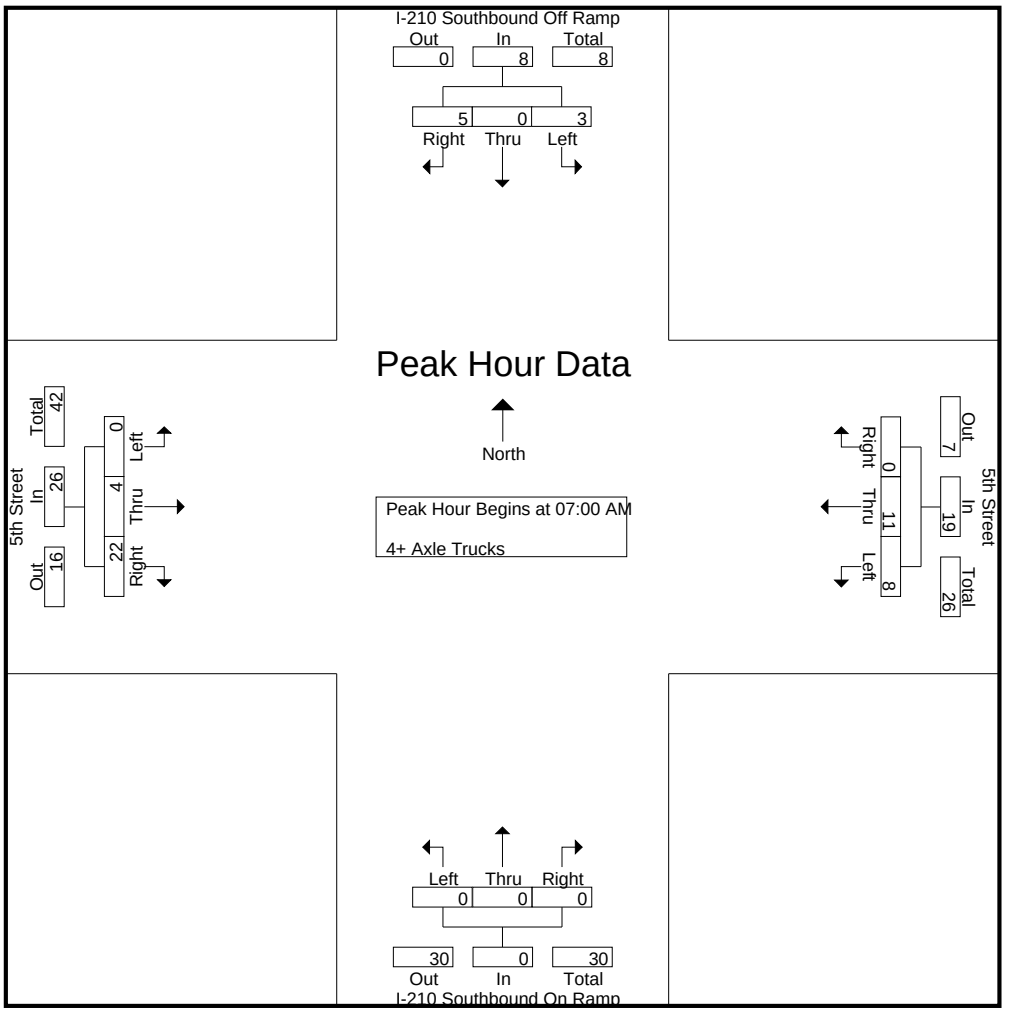
City of Highlands
N/S: I-210 Southbound Ramps
E/W: 5th Street
Weather: Clear

File Name : 10_HLD_210S_5th AM
Site Code : 06718128
Start Date : 2/21/2018
Page No : 2



Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM				07:00 AM				07:00 AM				07:00 AM			
+0 mins.	0	0	1	1	3	1	0	4	0	0	0	0	0	**2**	5	**7**
+15 mins.	0	0	0	0	1	**4**	0	5	0	0	0	0	0	0	**6**	6
+30 mins.	1	0	**2**	3	**4**	3	0	**7**	0	0	0	0	0	1	6	7
+45 mins.	**2**	0	2	**4**	0	3	0	3	0	0	0	0	0	1	5	6
Total Volume	3	0	5	8	8	11	0	19	0	0	0	0	0	4	22	26
% App. Total	37.5	0	62.5		42.1	57.9	0		0	0	0		0	15.4	84.6	
PHF	.375	.000	.625	.500	.500	.688	.000	.679	.000	.000	.000	.000	.000	.500	.917	.929

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City of Highlands
N/S: I-210 Southbound Ramps
E/W: 5th Street
Weather: Clear

File Name : 10_HLD_210S_5th PM
Site Code : 06718128
Start Date : 2/21/2018
Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	I-210 Southbound Off Ramp Southbound				5th Street Westbound				I-210 Southbound On Ramp Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	85	1	37	123	89	117	0	206	0	0	0	0	0	147	112	259	588
04:15 PM	92	2	27	121	76	93	0	169	0	0	0	0	0	195	117	312	602
04:30 PM	69	2	37	108	68	158	0	226	0	0	0	0	0	202	108	310	644
04:45 PM	74	3	20	97	55	125	0	180	0	0	0	0	0	224	109	333	610
Total	320	8	121	449	288	493	0	781	0	0	0	0	0	768	446	1214	2444
05:00 PM	74	0	28	102	72	130	0	202	0	0	0	0	0	214	133	347	651
05:15 PM	89	0	21	110	72	104	0	176	0	0	0	0	0	288	156	444	730
05:30 PM	71	2	28	101	74	106	0	180	0	0	0	0	0	208	112	320	601
05:45 PM	82	3	18	103	90	126	0	216	0	0	0	0	0	195	84	279	598
Total	316	5	95	416	308	466	0	774	0	0	0	0	0	905	485	1390	2580
Grand Total	636	13	216	865	596	959	0	1555	0	0	0	0	0	1673	931	2604	5024
Apprch %	73.5	1.5	25		38.3	61.7	0		0	0	0		0	64.2	35.8		
Total %	12.7	0.3	4.3	17.2	11.9	19.1	0	31	0	0	0	0	0	33.3	18.5	51.8	
Passenger Vehicles	630	12	183	825	582	928	0	1510	0	0	0	0	0	1639	892	2531	4866
% Passenger Vehicles	99.1	92.3	84.7	95.4	97.7	96.8	0	97.1	0	0	0	0	0	98	95.8	97.2	96.9
Large 2 Axle Vehicles	6	1	5	12	12	11	0	23	0	0	0	0	0	17	12	29	64
% Large 2 Axle Vehicles	0.9	7.7	2.3	1.4	2	1.1	0	1.5	0	0	0	0	0	1	1.3	1.1	1.3
3 Axle Vehicles	0	0	5	5	0	5	0	5	0	0	0	0	0	6	5	11	21
% 3 Axle Vehicles	0	0	2.3	0.6	0	0.5	0	0.3	0	0	0	0	0	0.4	0.5	0.4	0.4
4+ Axle Trucks	0	0	23	23	2	15	0	17	0	0	0	0	0	11	22	33	73
% 4+ Axle Trucks	0	0	10.6	2.7	0.3	1.6	0	1.1	0	0	0	0	0	0.7	2.4	1.3	1.5

	I-210 Southbound Off Ramp Southbound				5th Street Westbound				I-210 Southbound On Ramp Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	69	2	**37**	108	68	**158**	0	**226**	0	0	0	0	0	202	108	310	644
04:45 PM	74	**3**	20	97	55	125	0	180	0	0	0	0	0	224	109	333	610
05:00 PM	74	0	28	102	**72**	130	0	202	0	0	0	0	0	214	133	347	651
05:15 PM	**89**	0	21	**110**	72	104	0	176	0	0	0	0	0	**288**	**156**	**444**	**730**
Total Volume	306	5	106	417	267	517	0	784	0	0	0	0	0	928	506	1434	2635
% App. Total	73.4	1.2	25.4		34.1	65.9	0		0	0	0		0	64.7	35.3		
PHF	.860	.417	.716	.948	.927	.818	.000	.867	.000	.000	.000	.000	.000	.806	.811	.807	.902

Counts Unlimited
PO Box 1178
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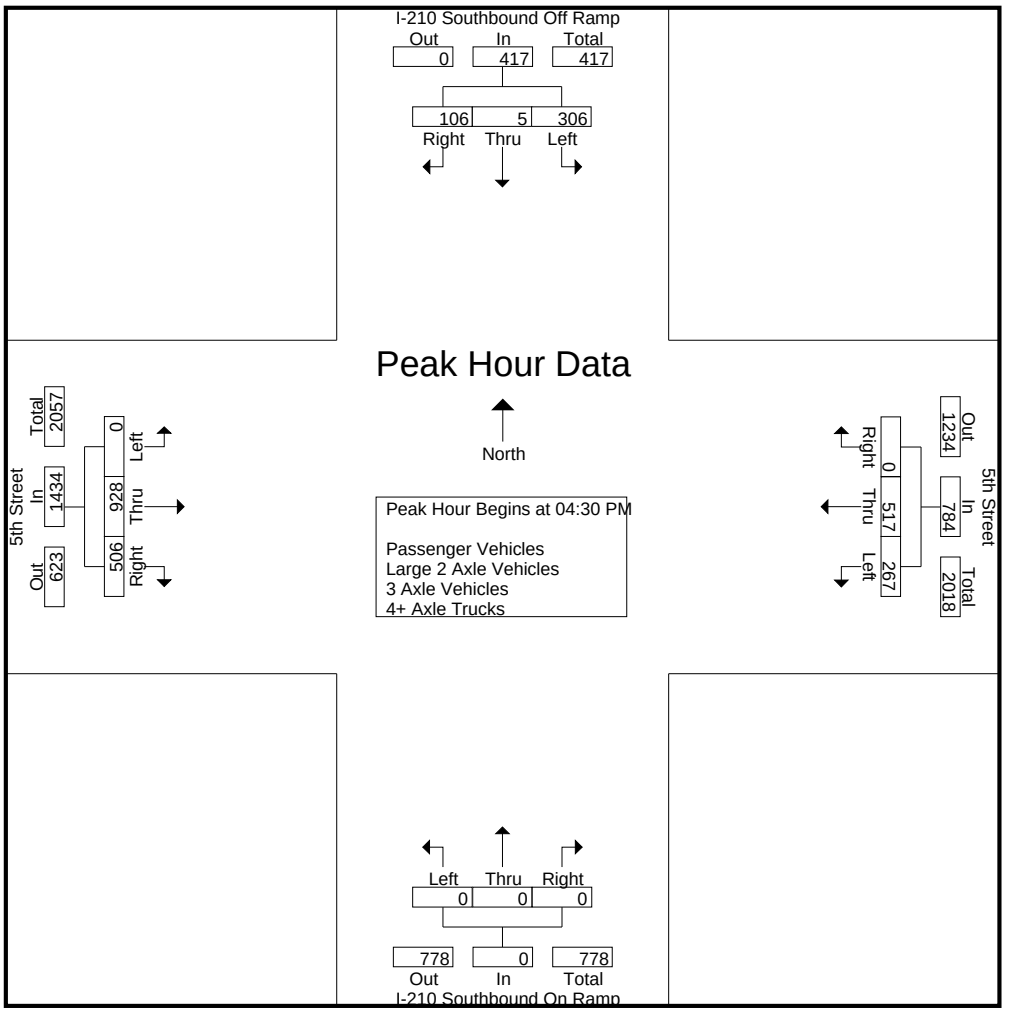
(951) 268-6268

City of Highlands
N/S: I-210 Southbound Ramps
E/W: 5th Street
Weather: Clear

File Name : 10_HLD_210S_5th PM
Site Code : 06718128
Start Date : 2/21/2018
Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:00 PM				04:30 PM				04:00 PM				04:45 PM			
+0 mins.	85	1	**37**	**123**	68	**158**	0	**226**	0	0	0	0	0	224	109	333
+15 mins.	**92**	2	27	121	55	125	0	180	0	0	0	0	0	214	133	347
+30 mins.	69	2	37	108	**72**	130	0	202	0	0	0	0	0	**288**	**156**	**444**
+45 mins.	74	**3**	20	97	72	104	0	176	0	0	0	0	0	208	112	320
Total Volume	320	8	121	449	267	517	0	784	0	0	0	0	0	934	510	1444
% App. Total	71.3	1.8	26.9		34.1	65.9	0		0	0	0		0	64.7	35.3	
PHF	.870	.667	.818	.913	.927	.818	.000	.867	.000	.000	.000	.000	.000	.811	.817	.813

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City of Highlands
N/S: I-210 Southbound Ramps
E/W: 5th Street
Weather: Clear

File Name : 10_HLD_210S_5th PM
Site Code : 06718128
Start Date : 2/21/2018
Page No : 1

Groups Printed- Passenger Vehicles

	I-210 Southbound Off Ramp Southbound				5th Street Westbound				I-210 Southbound On Ramp Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	85	1	28	114	87	113	0	200	0	0	0	0	0	145	105	250	564
04:15 PM	90	2	19	111	76	90	0	166	0	0	0	0	0	188	110	298	575
04:30 PM	68	1	33	102	63	148	0	211	0	0	0	0	0	197	104	301	614
04:45 PM	73	3	18	94	53	121	0	174	0	0	0	0	0	217	104	321	589
Total	316	7	98	421	279	472	0	751	0	0	0	0	0	747	423	1170	2342
05:00 PM	73	0	24	97	69	125	0	194	0	0	0	0	0	210	125	335	626
05:15 PM	88	0	21	109	72	102	0	174	0	0	0	0	0	285	152	437	720
05:30 PM	71	2	24	97	73	105	0	178	0	0	0	0	0	205	110	315	590
05:45 PM	82	3	16	101	89	124	0	213	0	0	0	0	0	192	82	274	588
Total	314	5	85	404	303	456	0	759	0	0	0	0	0	892	469	1361	2524
Grand Total	630	12	183	825	582	928	0	1510	0	0	0	0	0	1639	892	2531	4866
Apprch %	76.4	1.5	22.2		38.5	61.5	0		0	0	0		0	64.8	35.2		
Total %	12.9	0.2	3.8	17	12	19.1	0	31	0	0	0	0	0	33.7	18.3	52	

	I-210 Southbound Off Ramp Southbound				5th Street Westbound				I-210 Southbound On Ramp Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	68	1	**33**	102	63	**148**	0	**211**	0	0	0	0	0	197	104	301	614
04:45 PM	73	**3**	18	94	53	121	0	174	0	0	0	0	0	217	104	321	589
05:00 PM	73	0	24	97	69	125	0	194	0	0	0	0	0	210	125	335	626
05:15 PM	**88**	0	21	**109**	**72**	102	0	174	0	0	0	0	0	**285**	**152**	**437**	**720**
Total Volume	302	4	96	402	257	496	0	753	0	0	0	0	0	909	485	1394	2549
% App. Total	75.1	1	23.9		34.1	65.9	0		0	0	0		0	65.2	34.8		
PHF	.858	.333	.727	.922	.892	.838	.000	.892	.000	.000	.000	.000	.000	.797	.798	.797	.885

Counts Unlimited
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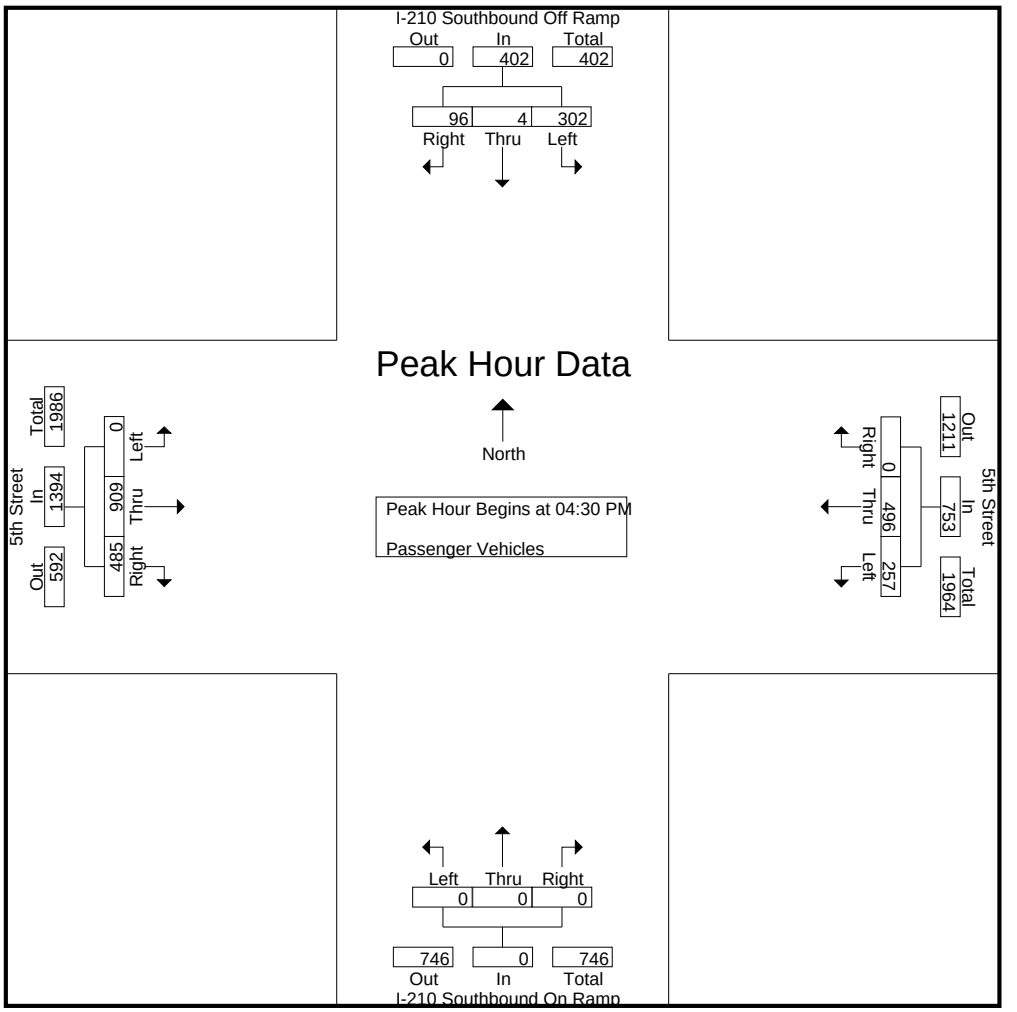
City of Highlands
N/S: I-210 Southbound Ramps
E/W: 5th Street
Weather: Clear

File Name : 10_HLD_210S_5th PM
Site Code : 06718128
Start Date : 2/21/2018
Page No : 2



Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				04:30 PM				04:30 PM				04:30 PM			
+0 mins.	68	1	**33**	102	63	**148**	0	**211**	0	0	0	0	0	197	104	301
+15 mins.	73	**3**	18	94	53	121	0	174	0	0	0	0	0	217	104	321
+30 mins.	73	0	24	97	69	125	0	194	0	0	0	0	0	210	125	335
+45 mins.	**88**	0	21	**109**	**72**	102	0	174	0	0	0	0	0	**285**	**152**	**437**
Total Volume	302	4	96	402	257	496	0	753	0	0	0	0	0	909	485	1394
% App. Total	75.1	1	23.9		34.1	65.9	0		0	0	0		0	65.2	34.8	
PHF	.858	.333	.727	.922	.892	.838	.000	.892	.000	.000	.000	.000	.000	.797	.798	.797

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City of Highlands
N/S: I-210 Southbound Ramps
E/W: 5th Street
Weather: Clear

File Name : 10_HLD_210S_5th PM
Site Code : 06718128
Start Date : 2/21/2018
Page No : 1

Groups Printed- Large 2 Axle Vehicles

	I-210 Southbound Off Ramp Southbound				5th Street Westbound				I-210 Southbound On Ramp Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	1	1	2	2	0	4	0	0	0	0	0	0	4	4	9
04:15 PM	2	0	1	3	0	2	0	2	0	0	0	0	0	3	1	4	9
04:30 PM	1	1	0	2	4	4	0	8	0	0	0	0	0	2	0	2	12
04:45 PM	1	0	0	1	2	0	0	2	0	0	0	0	0	4	1	5	8
Total	4	1	2	7	8	8	0	16	0	0	0	0	0	9	6	15	38
05:00 PM	1	0	1	2	3	2	0	5	0	0	0	0	0	3	4	7	14
05:15 PM	1	0	0	1	0	0	0	0	0	0	0	0	0	2	0	2	3
05:30 PM	0	0	1	1	0	1	0	1	0	0	0	0	0	2	2	4	6
05:45 PM	0	0	1	1	1	0	0	1	0	0	0	0	0	1	0	1	3
Total	2	0	3	5	4	3	0	7	0	0	0	0	0	8	6	14	26
Grand Total	6	1	5	12	12	11	0	23	0	0	0	0	0	17	12	29	64
Apprch %	50	8.3	41.7		52.2	47.8	0		0	0	0		0	58.6	41.4		
Total %	9.4	1.6	7.8	18.8	18.8	17.2	0	35.9	0	0	0	0	0	26.6	18.8	45.3	

	I-210 Southbound Off Ramp Southbound				5th Street Westbound				I-210 Southbound On Ramp Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	**1**	**1**	0	**2**	**4**	**4**	0	**8**	0	0	0	0	0	2	0	2	12
04:45 PM	1	0	0	1	2	0	0	2	0	0	0	0	0	**4**	1	5	8
05:00 PM	1	0	**1**	2	3	2	0	5	0	0	0	0	0	3	**4**	**7**	**14**
05:15 PM	1	0	0	1	0	0	0	0	0	0	0	0	0	2	0	2	3
Total Volume	4	1	1	6	9	6	0	15	0	0	0	0	0	11	5	16	37
% App. Total	66.7	16.7	16.7		60	40	0		0	0	0		0	68.8	31.2		
PHF	1.00	.250	.250	.750	.563	.375	.000	.469	.000	.000	.000	.000	.000	.688	.313	.571	.661

Counts Unlimited
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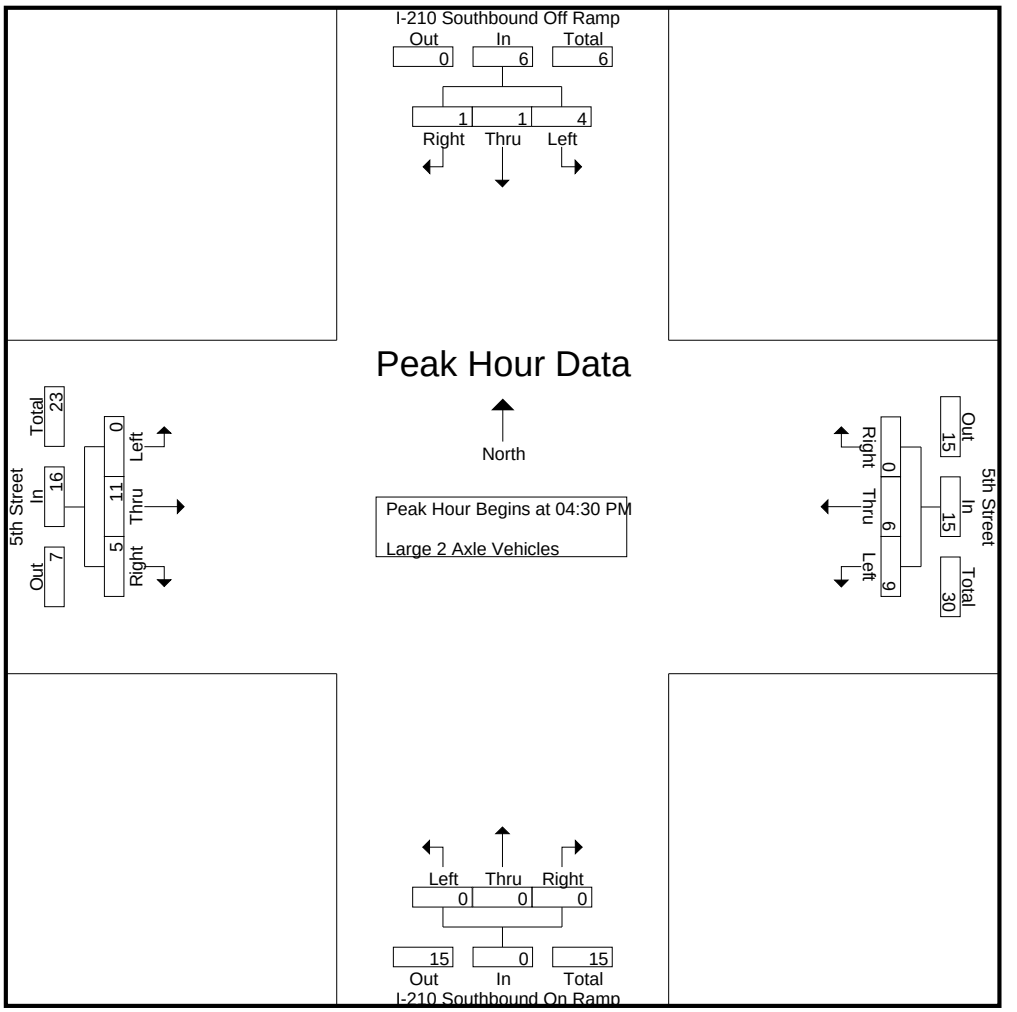
City of Highlands
N/S: I-210 Southbound Ramps
E/W: 5th Street
Weather: Clear

File Name : 10_HLD_210S_5th PM
Site Code : 06718128
Start Date : 2/21/2018
Page No : 2



Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				04:30 PM				04:30 PM				04:30 PM			
+0 mins.	**1**	**1**	0	**2**	**4**	**4**	0	**8**	0	0	0	0	0	2	0	2
+15 mins.	1	0	0	1	2	0	0	2	0	0	0	0	0	**4**	1	5
+30 mins.	1	0	**1**	2	3	2	0	5	0	0	0	0	0	3	**4**	**7**
+45 mins.	1	0	0	1	0	0	0	0	0	0	0	0	0	2	0	2
Total Volume	4	1	1	6	9	6	0	15	0	0	0	0	0	11	5	16
% App. Total	66.7	16.7	16.7		60	40	0		0	0	0		0	68.8	31.2	
PHF	1.000	.250	.250	.750	.563	.375	.000	.469	.000	.000	.000	.000	.000	.688	.313	.571

Counts Unlimited
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City of Highlands
N/S: I-210 Southbound Ramps
E/W: 5th Street
Weather: Clear

File Name : 10_HLD_210S_5th PM
Site Code : 06718128
Start Date : 2/21/2018

Groups Printed- 3 Axle Vehicles

	I-210 Southbound Off Ramp Southbound				5th Street Westbound				I-210 Southbound On Ramp Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	2	2	0	0	0	0	0	0	0	0	0	2	0	2	4
04:15 PM	0	0	1	1	0	0	0	0	0	0	0	0	0	1	1	2	3
04:30 PM	0	0	1	1	0	3	0	3	0	0	0	0	0	1	1	2	6
04:45 PM	0	0	0	0	0	2	0	2	0	0	0	0	0	2	0	2	4
Total	0	0	4	4	0	5	0	5	0	0	0	0	0	6	2	8	17
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
05:30 PM	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
Total	0	0	1	1	0	0	0	0	0	0	0	0	0	0	3	3	4
Grand Total	0	0	5	5	0	5	0	5	0	0	0	0	0	6	5	11	21
Apprch %	0	0	100		0	100	0		0	0	0		0	54.5	45.5		
Total %	0	0	23.8	23.8	0	23.8	0	23.8	0	0	0	0	0	28.6	23.8	52.4	

	I-210 Southbound Off Ramp Southbound				5th Street Westbound				I-210 Southbound On Ramp Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	0	**1**	**1**	0	**3**	0	**3**	0	0	0	0	0	1	**1**	**2**	**6**
04:45 PM	0	0	0	0	0	2	0	2	0	0	0	0	0	**2**	0	2	4
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
Total Volume	0	0	1	1	0	5	0	5	0	0	0	0	0	3	3	6	12
% App. Total	0	0	100		0	100	0		0	0	0		0	50	50		
PHF	.000	.000	.250	.250	.000	.417	.000	.417	.000	.000	.000	.000	.000	.375	.750	.750	.500

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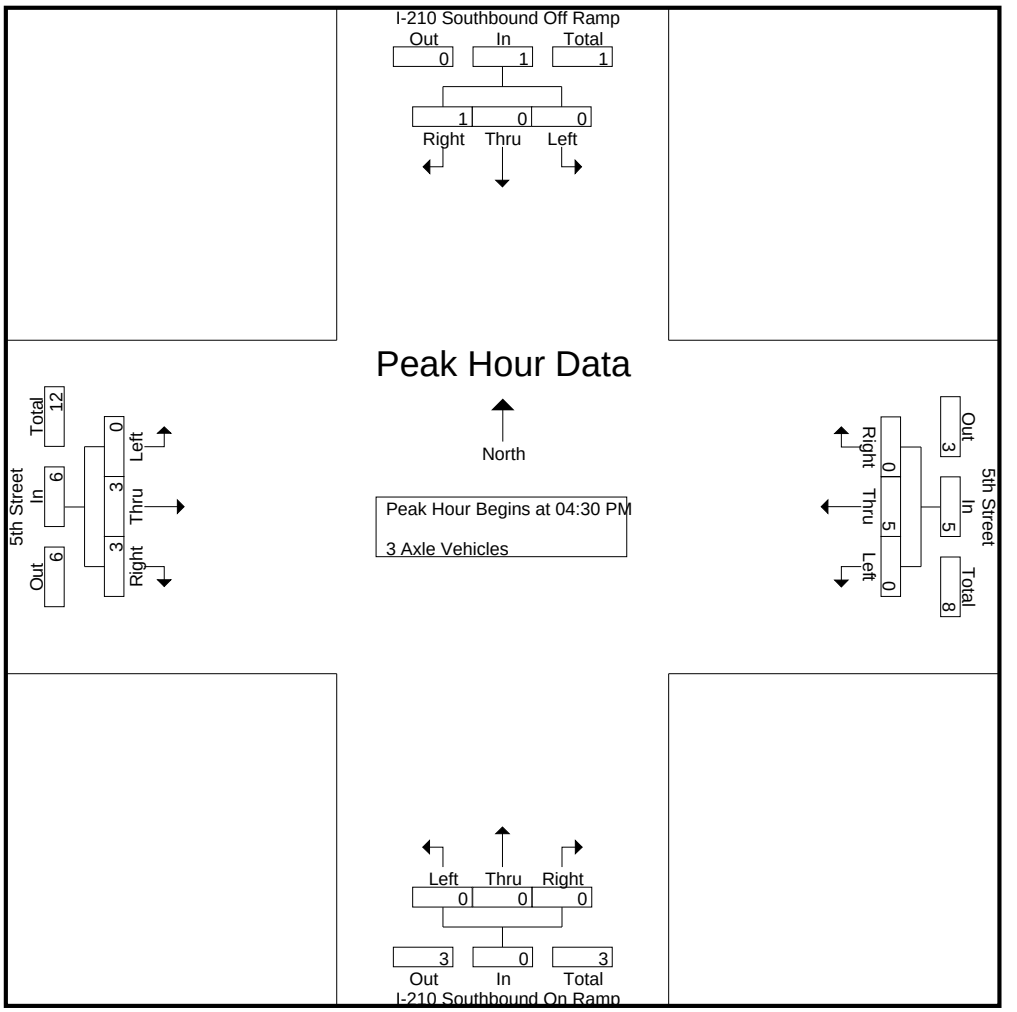
City of Highlands
N/S: I-210 Southbound Ramps
E/W: 5th Street
Weather: Clear

File Name : 10_HLD_210S_5th PM
Site Code : 06718128
Start Date : 2/21/2018
Page No : 2



Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				04:30 PM				04:30 PM				04:30 PM			
+0 mins.	0	0	**1**	**1**	0	**3**	0	**3**	0	0	0	0	0	1	**1**	**2**
+15 mins.	0	0	0	0	0	2	0	2	0	0	0	0	0	**2**	0	2
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
Total Volume	0	0	1	1	0	5	0	5	0	0	0	0	0	3	3	6
% App. Total	0	0	100		0	100	0		0	0	0		0	50	50	
PHF	.000	.000	.250	.250	.000	.417	.000	.417	.000	.000	.000	.000	.000	.375	.750	.750

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City of Highlands
N/S: I-210 Southbound Ramps
E/W: 5th Street
Weather: Clear

File Name : 10_HLD_210S_5th PM
Site Code : 06718128
Start Date : 2/21/2018
Page No : 1

Groups Printed- 4+ Axle Trucks

	I-210 Southbound Off Ramp Southbound				5th Street Westbound				I-210 Southbound On Ramp Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	6	6	0	2	0	2	0	0	0	0	0	0	3	3	11
04:15 PM	0	0	6	6	0	1	0	1	0	0	0	0	0	3	5	8	15
04:30 PM	0	0	3	3	1	3	0	4	0	0	0	0	0	2	3	5	12
04:45 PM	0	0	2	2	0	2	0	2	0	0	0	0	0	1	4	5	9
Total	0	0	17	17	1	8	0	9	0	0	0	0	0	6	15	21	47
05:00 PM	0	0	3	3	0	3	0	3	0	0	0	0	0	1	3	4	10
05:15 PM	0	0	0	0	0	2	0	2	0	0	0	0	0	1	3	4	6
05:30 PM	0	0	2	2	1	0	0	1	0	0	0	0	0	1	0	1	4
05:45 PM	0	0	1	1	0	2	0	2	0	0	0	0	0	2	1	3	6
Total	0	0	6	6	1	7	0	8	0	0	0	0	0	5	7	12	26
Grand Total	0	0	23	23	2	15	0	17	0	0	0	0	0	11	22	33	73
Apprch %	0	0	100		11.8	88.2	0		0	0	0		0	33.3	66.7		
Total %	0	0	31.5	31.5	2.7	20.5	0	23.3	0	0	0	0	0	15.1	30.1	45.2	

	I-210 Southbound Off Ramp Southbound				5th Street Westbound				I-210 Southbound On Ramp Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	0	**3**	**3**	**1**	**3**	0	**4**	0	0	0	0	0	**2**	3	**5**	**12**
04:45 PM	0	0	2	2	0	2	0	2	0	0	0	0	0	1	**4**	5	9
05:00 PM	0	0	3	3	0	3	0	3	0	0	0	0	0	1	3	4	10
05:15 PM	0	0	0	0	0	2	0	2	0	0	0	0	0	1	3	4	6
Total Volume	0	0	8	8	1	10	0	11	0	0	0	0	0	5	13	18	37
% App. Total	0	0	100		9.1	90.9	0		0	0	0		0	27.8	72.2		
PHF	.000	.000	.667	.667	.250	.833	.000	.688	.000	.000	.000	.000	.000	.625	.813	.900	.771

Counts Unlimited
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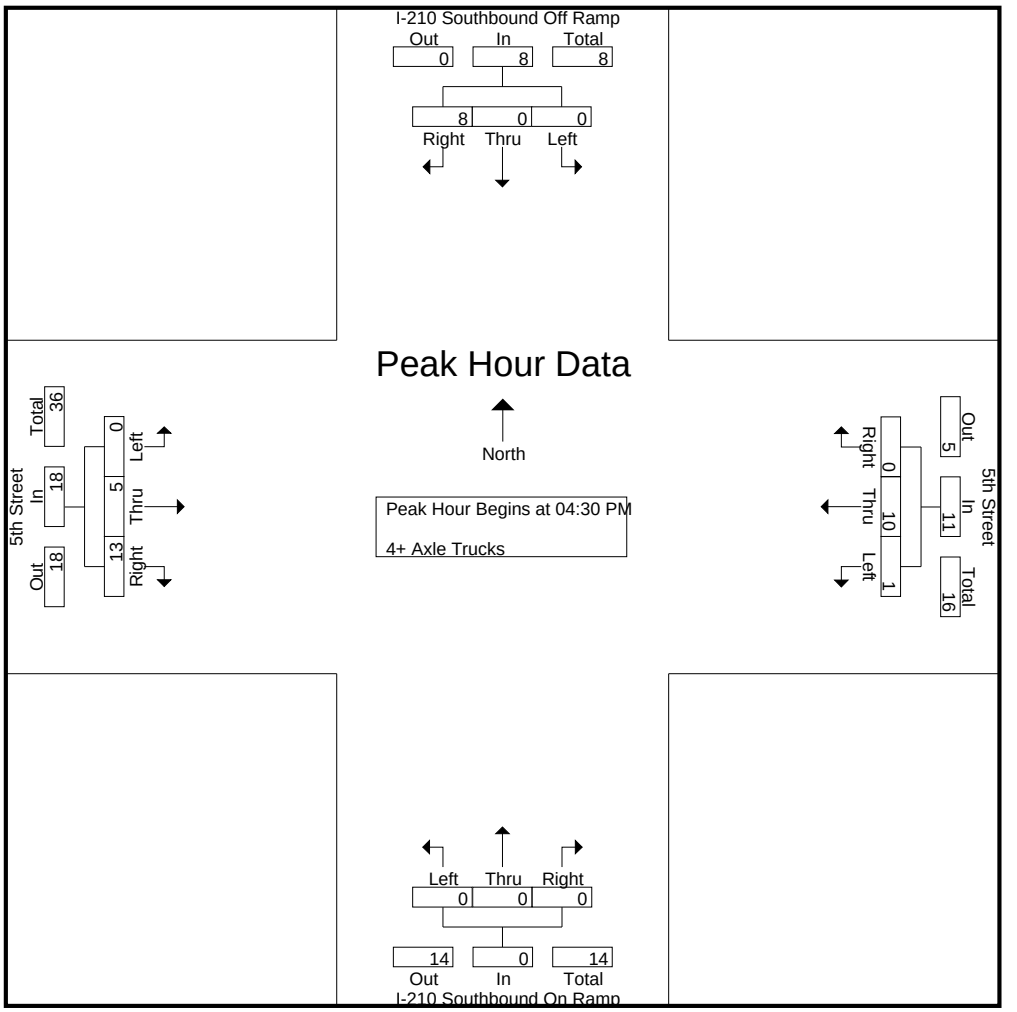
City of Highlands
N/S: I-210 Southbound Ramps
E/W: 5th Street
Weather: Clear

File Name : 10_HLD_210S_5th PM
Site Code : 06718128
Start Date : 2/21/2018
Page No : 2



Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				04:30 PM				04:30 PM				04:30 PM			
+0 mins.	0	0	**3**	**3**	**1**	**3**	0	**4**	0	0	0	0	0	**2**	3	**5**
+15 mins.	0	0	2	2	0	2	0	2	0	0	0	0	0	1	**4**	5
+30 mins.	0	0	3	3	0	3	0	3	0	0	0	0	0	1	3	4
+45 mins.	0	0	0	0	0	2	0	2	0	0	0	0	0	1	3	4
Total Volume	0	0	8	8	1	10	0	11	0	0	0	0	0	5	13	18
% App. Total	0	0	100		9.1	90.9	0		0	0	0		0	27.8	72.2	
PHF	.000	.000	.667	.667	.250	.833	.000	.688	.000	.000	.000	.000	.000	.625	.813	.900

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Corona, CA 92878
(951) 268-6268

City of Highlands
N/S: I-210 Northbound Ramps
E/W: 5th Street/Greenspot Road
Weather: Clear

File Name : 11_HLD_210N_5th_Green AM
Site Code : 06718128
Start Date : 2/21/2018
Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	I-210 Northbound On Ramp Southbound				Greenspot Road Westbound				I-210 Northbound Off Ramp Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	302	82	384	89	1	47	137	11	80	0	91	612
07:15 AM	0	0	0	0	0	330	86	416	98	1	70	169	14	81	0	95	680
07:30 AM	0	0	0	0	0	355	98	453	94	0	80	174	11	119	0	130	757
07:45 AM	0	0	0	0	0	353	93	446	99	0	79	178	11	93	0	104	728
Total	0	0	0	0	0	1340	359	1699	380	2	276	658	47	373	0	420	2777
08:00 AM	0	0	0	0	0	227	86	313	85	0	74	159	20	79	0	99	571
08:15 AM	0	0	0	0	0	222	72	294	93	0	76	169	13	69	0	82	545
08:30 AM	0	0	0	0	0	225	97	322	62	2	66	130	9	96	0	105	557
08:45 AM	0	0	0	0	0	162	54	216	47	1	65	113	19	79	0	98	427
Total	0	0	0	0	0	836	309	1145	287	3	281	571	61	323	0	384	2100
Grand Total	0	0	0	0	0	2176	668	2844	667	5	557	1229	108	696	0	804	4877
Apprch %	0	0	0		0	76.5	23.5		54.3	0.4	45.3		13.4	86.6	0		
Total %	0	0	0	0	0	44.6	13.7	58.3	13.7	0.1	11.4	25.2	2.2	14.3	0	16.5	
Passenger Vehicles	0	0	0	0	0	2121	659	2780	618	5	525	1148	75	670	0	745	4673
% Passenger Vehicles	0	0	0	0	0	97.5	98.7	97.7	92.7	100	94.3	93.4	69.4	96.3	0	92.7	95.8
Large 2 Axle Vehicles	0	0	0	0	0	16	2	18	19	0	11	30	8	9	0	17	65
% Large 2 Axle Vehicles	0	0	0	0	0	0.7	0.3	0.6	2.8	0	2	2.4	7.4	1.3	0	2.1	1.3
3 Axle Vehicles	0	0	0	0	0	14	0	14	7	0	1	8	12	9	0	21	43
% 3 Axle Vehicles	0	0	0	0	0	0.6	0	0.5	1	0	0.2	0.7	11.1	1.3	0	2.6	0.9
4+ Axle Trucks	0	0	0	0	0	25	7	32	23	0	20	43	13	8	0	21	96
% 4+ Axle Trucks	0	0	0	0	0	1.1	1	1.1	3.4	0	3.6	3.5	12	1.1	0	2.6	2

	I-210 Northbound On Ramp Southbound				Greenspot Road Westbound				I-210 Northbound Off Ramp Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	0	0	0	0	302	82	384	89	**1**	47	137	11	80	0	91	612
07:15 AM	0	0	0	0	0	330	86	416	98	1	70	169	**14**	81	0	95	680
07:30 AM	0	0	0	0	0	**355**	**98**	**453**	94	0	**80**	174	11	**119**	0	**130**	**757**
07:45 AM	0	0	0	0	0	353	93	446	**99**	0	79	**178**	11	93	0	104	728
Total Volume	0	0	0	0	0	1340	359	1699	380	2	276	658	47	373	0	420	2777
% App. Total	0	0	0		0	78.9	21.1		57.8	0.3	41.9		11.2	88.8	0		
PHF	.000	.000	.000	.000	.000	.944	.916	.938	.960	.500	.863	.924	.839	.784	.000	.808	.917

Counts Unlimited
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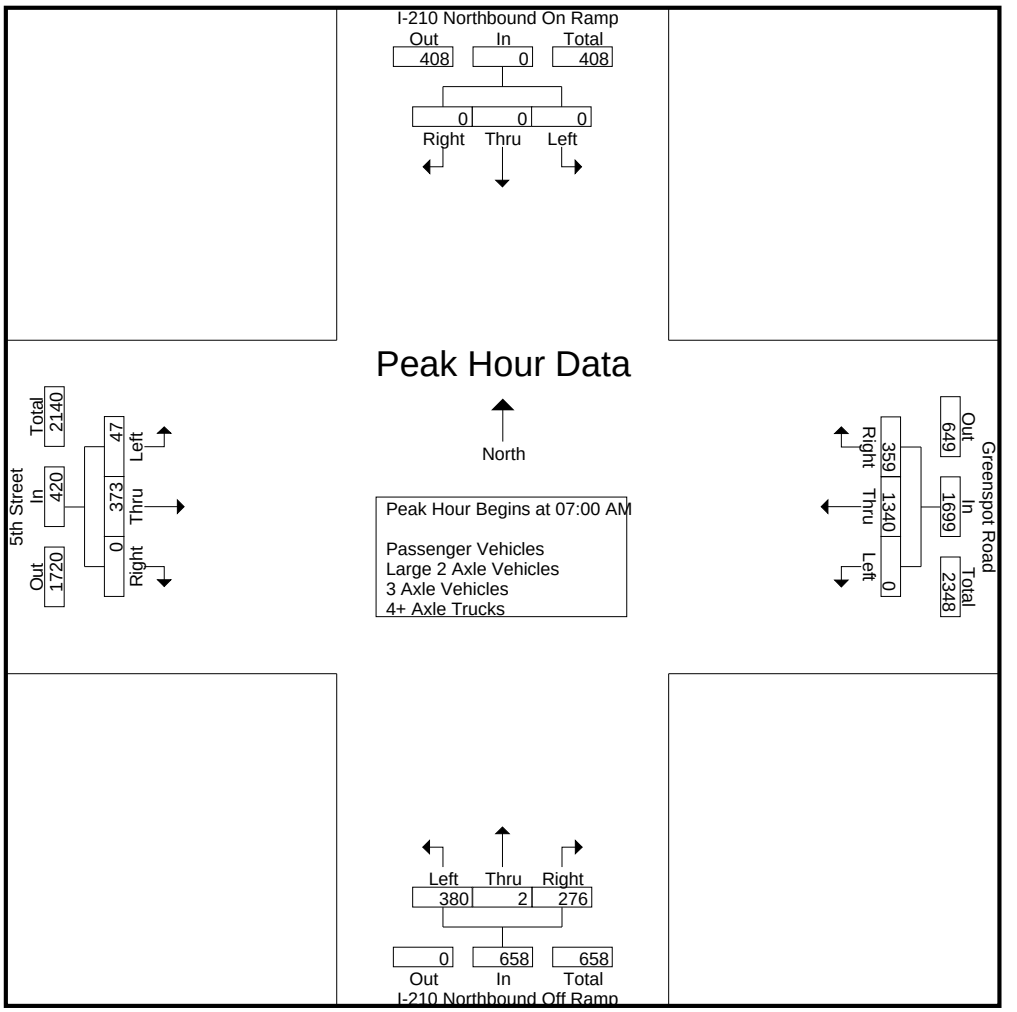
(951) 268-6268

City of Highlands
N/S: I-210 Northbound Ramps
E/W: 5th Street/Greenspot Road
Weather: Clear

File Name : 11_HLD_210N_5th_Green AM
Site Code : 06718128
Start Date : 2/21/2018
Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM				07:00 AM				07:15 AM				07:15 AM			
+0 mins.	0	0	0	0	0	302	82	384	98	**1**	70	169	14	81	0	95
+15 mins.	0	0	0	0	0	330	86	416	94	0	**80**	174	11	**119**	0	**130**
+30 mins.	0	0	0	0	0	**355**	**98**	**453**	**99**	0	79	**178**	11	93	0	104
+45 mins.	0	0	0	0	0	353	93	446	85	0	74	159	**20**	79	0	99
Total Volume	0	0	0	0	0	1340	359	1699	376	1	303	680	56	372	0	428
% App. Total	0	0	0		0	78.9	21.1		55.3	0.1	44.6		13.1	86.9	0	
PHF	.000	.000	.000	.000	.000	.944	.916	.938	.949	.250	.947	.955	.700	.782	.000	.823

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Weather: Clear

File Name : 11_HLD_210N_5th_Green AM
Site Code : 06718128
Start Date : 2/21/2018
Page No : 1

Groups Printed- Passenger Vehicles

	I-210 Northbound On Ramp Southbound				Greenspot Road Westbound				I-210 Northbound Off Ramp Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	295	82	377	88	1	44	133	8	77	0	85	595
07:15 AM	0	0	0	0	0	324	84	408	94	1	66	161	11	78	0	89	658
07:30 AM	0	0	0	0	0	347	97	444	89	0	79	168	9	114	0	123	735
07:45 AM	0	0	0	0	0	347	93	440	96	0	77	173	6	90	0	96	709
Total	0	0	0	0	0	1313	356	1669	367	2	266	635	34	359	0	393	2697
08:00 AM	0	0	0	0	0	223	84	307	77	0	64	141	14	75	0	89	537
08:15 AM	0	0	0	0	0	209	68	277	84	0	69	153	9	67	0	76	506
08:30 AM	0	0	0	0	0	219	97	316	52	2	61	115	3	93	0	96	527
08:45 AM	0	0	0	0	0	157	54	211	38	1	65	104	15	76	0	91	406
Total	0	0	0	0	0	808	303	1111	251	3	259	513	41	311	0	352	1976
Grand Total	0	0	0	0	0	2121	659	2780	618	5	525	1148	75	670	0	745	4673
Apprch %	0	0	0		0	76.3	23.7		53.8	0.4	45.7		10.1	89.9	0		
Total %	0	0	0	0	0	45.4	14.1	59.5	13.2	0.1	11.2	24.6	1.6	14.3	0	15.9	

	I-210 Northbound On Ramp Southbound				Greenspot Road Westbound				I-210 Northbound Off Ramp Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	0	0	0	0	295	82	377	88	**1**	44	133	8	77	0	85	595
07:15 AM	0	0	0	0	0	324	84	408	94	1	66	161	**11**	78	0	89	658
07:30 AM	0	0	0	0	0	**347**	**97**	**444**	89	0	**79**	168	9	**114**	0	**123**	**735**
07:45 AM	0	0	0	0	0	347	93	440	**96**	0	77	**173**	6	90	0	96	709
Total Volume	0	0	0	0	0	1313	356	1669	367	2	266	635	34	359	0	393	2697
% App. Total	0	0	0		0	78.7	21.3		57.8	0.3	41.9		8.7	91.3	0		
PHF	.000	.000	.000	.000	.000	.946	.918	.940	.956	.500	.842	.918	.773	.787	.000	.799	.917

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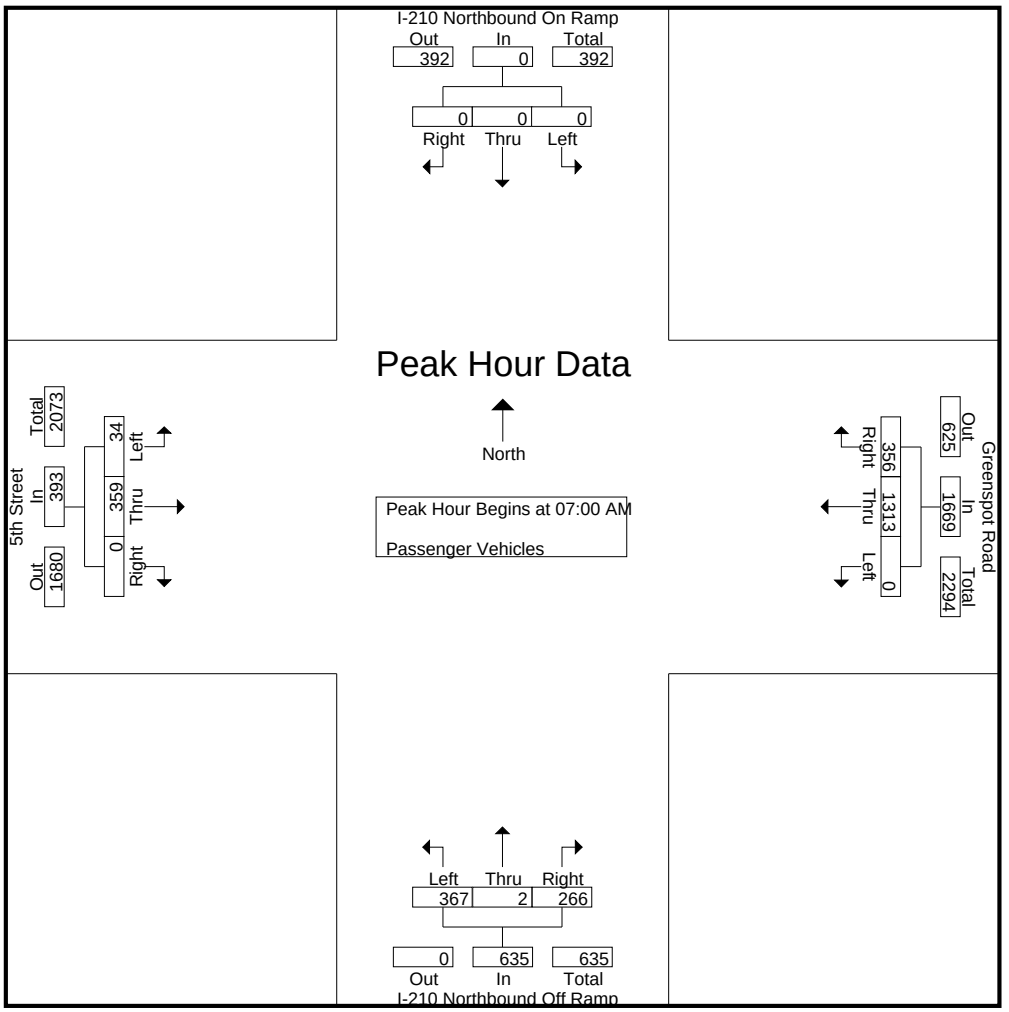
City of Highlands
N/S: I-210 Northbound Ramps
E/W: 5th Street/Greenspot Road
Weather: Clear

File Name : 11_HLD_210N_5th_Green AM
Site Code : 06718128
Start Date : 2/21/2018
Page No : 2



Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM				07:00 AM				07:00 AM				07:00 AM			
+0 mins.	0	0	0	0	0	295	82	377	88	**1**	44	133	8	77	0	85
+15 mins.	0	0	0	0	0	324	84	408	94	1	66	161	**11**	78	0	89
+30 mins.	0	0	0	0	0	**347**	**97**	**444**	89	0	**79**	168	9	**114**	0	**123**
+45 mins.	0	0	0	0	0	347	93	440	**96**	0	77	**173**	6	90	0	96
Total Volume	0	0	0	0	0	1313	356	1669	367	2	266	635	34	359	0	393
% App. Total	0	0	0		0	78.7	21.3		57.8	0.3	41.9		8.7	91.3	0	
PHF	.000	.000	.000	.000	.000	.946	.918	.940	.956	.500	.842	.918	.773	.787	.000	.799

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City of Highlands
N/S: I-210 Northbound Ramps
E/W: 5th Street/Greenspot Road
Weather: Clear

File Name : 11_HLD_210N_5th_Green AM
Site Code : 06718128
Start Date : 2/21/2018
Page No : 1

Groups Printed- Large 2 Axle Vehicles

	I-210 Northbound On Ramp Southbound				Greenspot Road Westbound				I-210 Northbound Off Ramp Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	1	0	1	1	0	0	1	0	0	0	0	2
07:15 AM	0	0	0	0	0	1	0	1	1	0	1	2	3	2	0	5	8
07:30 AM	0	0	0	0	0	2	0	2	2	0	1	3	2	1	0	3	8
07:45 AM	0	0	0	0	0	4	0	4	0	0	1	1	0	1	0	1	6
Total	0	0	0	0	0	8	0	8	4	0	3	7	5	4	0	9	24
08:00 AM	0	0	0	0	0	1	1	2	2	0	1	3	1	2	0	3	8
08:15 AM	0	0	0	0	0	3	1	4	4	0	5	9	0	1	0	1	14
08:30 AM	0	0	0	0	0	2	0	2	5	0	2	7	2	2	0	4	13
08:45 AM	0	0	0	0	0	2	0	2	4	0	0	4	0	0	0	0	6
Total	0	0	0	0	0	8	2	10	15	0	8	23	3	5	0	8	41
Grand Total	0	0	0	0	0	16	2	18	19	0	11	30	8	9	0	17	65
Apprch %	0	0	0		0	88.9	11.1		63.3	0	36.7		47.1	52.9	0		
Total %	0	0	0	0	0	24.6	3.1	27.7	29.2	0	16.9	46.2	12.3	13.8	0	26.2	

	I-210 Northbound On Ramp Southbound				Greenspot Road Westbound				I-210 Northbound Off Ramp Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	0	0	0	0	1	0	1	1	0	0	1	0	0	0	0	2
07:15 AM	0	0	0	0	0	1	0	1	1	0	**1**	2	**3**	**2**	0	**5**	**8**
07:30 AM	0	0	0	0	0	2	0	2	**2**	0	1	**3**	2	1	0	3	8
07:45 AM	0	0	0	0	0	**4**	0	**4**	0	0	1	1	0	1	0	1	6
Total Volume	0	0	0	0	0	8	0	8	4	0	3	7	5	4	0	9	24
% App. Total	0	0	0		0	100	0		57.1	0	42.9		55.6	44.4	0		
PHF	.000	.000	.000	.000	.000	.500	.000	.500	.500	.000	.750	.583	.417	.500	.000	.450	.750

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City of Highlands
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E/W: 5th Street/Greenspot Road
Weather: Clear

File Name : 11_HLD_210N_5th_Green AM
Site Code : 06718128
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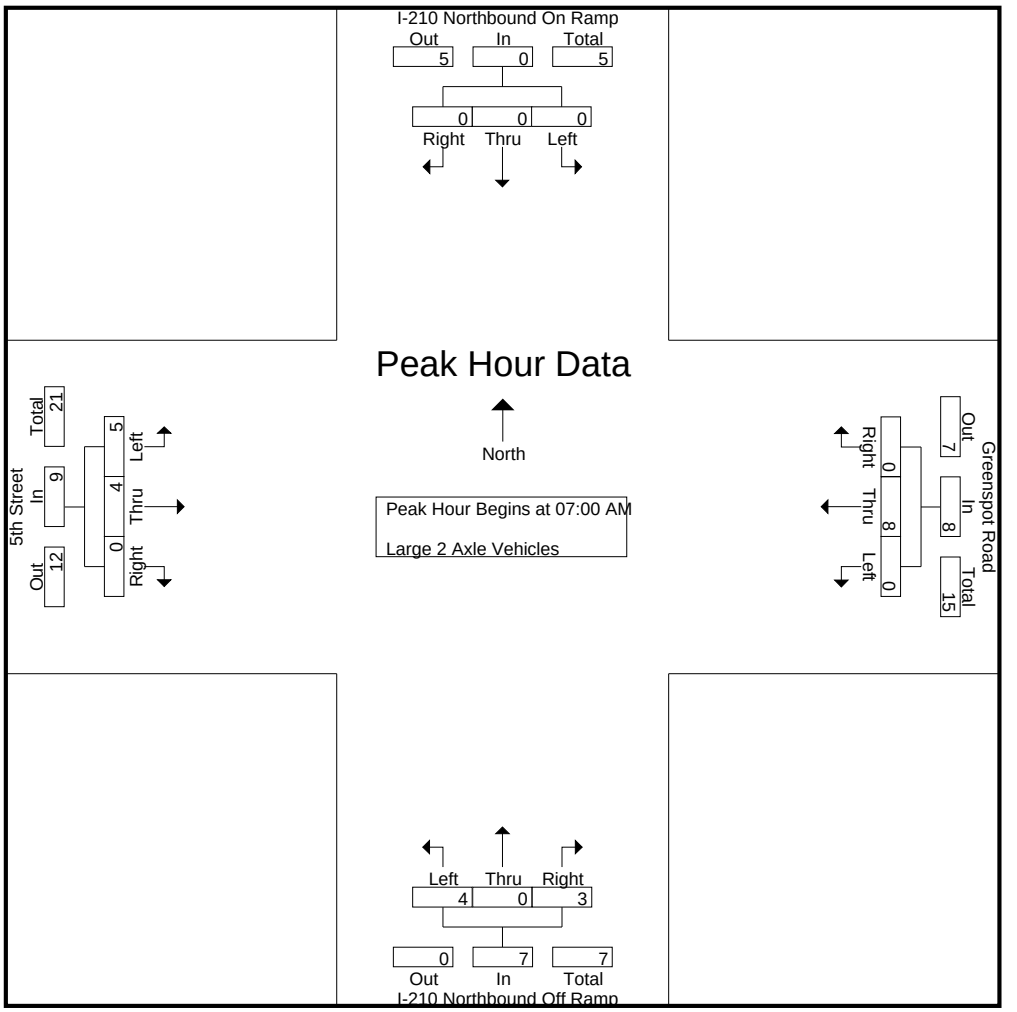

Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM				07:00 AM				07:00 AM				07:00 AM			
+0 mins.	0	0	0	0	0	1	0	1	1	0	0	1	0	0	0	0
+15 mins.	0	0	0	0	0	1	0	1	1	0	**1**	2	**3**	**2**	0	**5**
+30 mins.	0	0	0	0	0	2	0	2	**2**	0	1	**3**	2	1	0	3
+45 mins.	0	0	0	0	0	**4**	0	**4**	0	0	1	1	0	1	0	1
Total Volume	0	0	0	0	0	8	0	8	4	0	3	7	5	4	0	9
% App. Total	0	0	0		0	100	0		57.1	0	42.9		55.6	44.4	0	
PHF	.000	.000	.000	.000	.000	.500	.000	.500	.500	.000	.750	.583	.417	.500	.000	.450

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City of Highlands
N/S: I-210 Northbound Ramps
E/W: 5th Street/Greenspot Road
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File Name : 11_HLD_210N_5th_Green AM
Site Code : 06718128
Start Date : 2/21/2018
Page No : 1

Groups Printed- 3 Axle Vehicles

	I-210 Northbound On Ramp Southbound				Greenspot Road Westbound				I-210 Northbound Off Ramp Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	2	0	2	0	0	1	1	1	3	0	4	7
07:15 AM	0	0	0	0	0	3	0	3	0	0	0	0	0	1	0	1	4
07:30 AM	0	0	0	0	0	2	0	2	0	0	0	0	0	2	0	2	4
07:45 AM	0	0	0	0	0	0	0	0	1	0	0	1	4	0	0	4	5
Total	0	0	0	0	0	7	0	7	1	0	1	2	5	6	0	11	20
08:00 AM	0	0	0	0	0	3	0	3	4	0	0	4	3	0	0	3	10
08:15 AM	0	0	0	0	0	3	0	3	1	0	0	1	2	1	0	3	7
08:30 AM	0	0	0	0	0	1	0	1	1	0	0	1	1	0	0	1	3
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0	3	3
Total	0	0	0	0	0	7	0	7	6	0	0	6	7	3	0	10	23
Grand Total	0	0	0	0	0	14	0	14	7	0	1	8	12	9	0	21	43
Apprch %	0	0	0		0	100	0		87.5	0	12.5		57.1	42.9	0		
Total %	0	0	0	0	0	32.6	0	32.6	16.3	0	2.3	18.6	27.9	20.9	0	48.8	

	I-210 Northbound On Ramp Southbound				Greenspot Road Westbound				I-210 Northbound Off Ramp Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	0	0	0	0	2	0	2	0	0	**1**	**1**	1	**3**	0	**4**	**7**
07:15 AM	0	0	0	0	0	**3**	0	**3**	0	0	0	0	0	1	0	1	4
07:30 AM	0	0	0	0	0	2	0	2	0	0	0	0	0	2	0	2	4
07:45 AM	0	0	0	0	0	0	0	0	**1**	0	0	1	**4**	0	0	4	5
Total Volume	0	0	0	0	0	7	0	7	1	0	1	2	5	6	0	11	20
% App. Total	0	0	0		0	100	0		50	0	50		45.5	54.5	0		
PHF	.000	.000	.000	.000	.000	.583	.000	.583	.250	.000	.250	.500	.313	.500	.000	.688	.714

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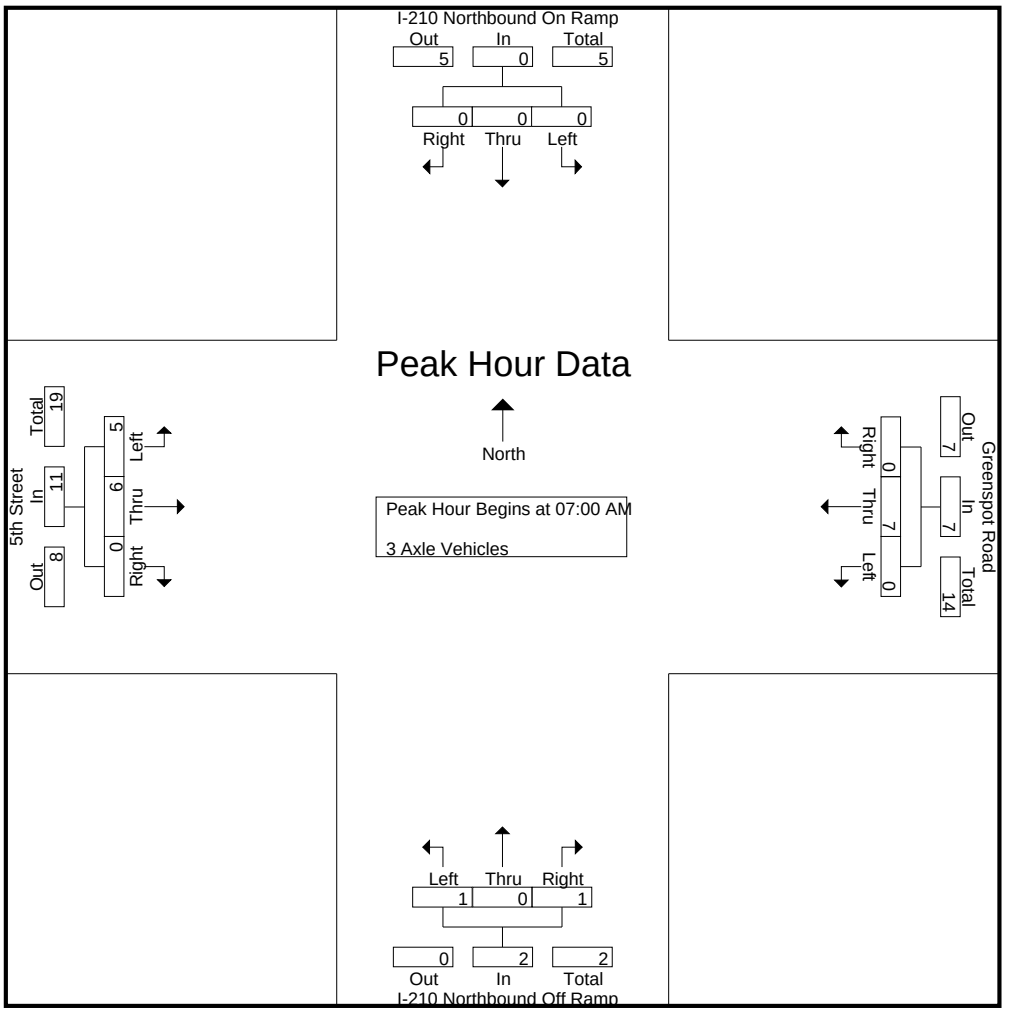

Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM				07:00 AM				07:00 AM				07:00 AM			
+0 mins.	0	0	0	0	0	2	0	2	0	0	**1**	**1**	1	**3**	0	**4**
+15 mins.	0	0	0	0	0	**3**	0	**3**	0	0	0	0	0	1	0	1
+30 mins.	0	0	0	0	0	2	0	2	0	0	0	0	0	2	0	2
+45 mins.	0	0	0	0	0	0	0	0	**1**	0	0	1	**4**	0	0	4
Total Volume	0	0	0	0	0	7	0	7	1	0	1	2	5	6	0	11
% App. Total	0	0	0		0	100	0		50	0	50		45.5	54.5	0	
PHF	.000	.000	.000	.000	.000	.583	.000	.583	.250	.000	.250	.500	.313	.500	.000	.688

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Groups Printed- 4+ Axle Trucks

	I-210 Northbound On Ramp Southbound				Greenspot Road Westbound				I-210 Northbound Off Ramp Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	4	0	4	0	0	2	2	2	0	0	2	8
07:15 AM	0	0	0	0	0	2	2	4	3	0	3	6	0	0	0	0	10
07:30 AM	0	0	0	0	0	4	1	5	3	0	0	3	0	2	0	2	10
07:45 AM	0	0	0	0	0	2	0	2	2	0	1	3	1	2	0	3	8
Total	0	0	0	0	0	12	3	15	8	0	6	14	3	4	0	7	36
08:00 AM	0	0	0	0	0	0	1	1	2	0	9	11	2	2	0	4	16
08:15 AM	0	0	0	0	0	7	3	10	4	0	2	6	2	0	0	2	18
08:30 AM	0	0	0	0	0	3	0	3	4	0	3	7	3	1	0	4	14
08:45 AM	0	0	0	0	0	3	0	3	5	0	0	5	3	1	0	4	12
Total	0	0	0	0	0	13	4	17	15	0	14	29	10	4	0	14	60
Grand Total	0	0	0	0	0	25	7	32	23	0	20	43	13	8	0	21	96
Apprch %	0	0	0		0	78.1	21.9		53.5	0	46.5		61.9	38.1	0		
Total %	0	0	0	0	0	26	7.3	33.3	24	0	20.8	44.8	13.5	8.3	0	21.9	

	I-210 Northbound On Ramp Southbound				Greenspot Road Westbound				I-210 Northbound Off Ramp Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	0	0	0	0	**4**	0	4	0	0	2	2	**2**	0	0	2	8
07:15 AM	0	0	0	0	0	2	**2**	4	**3**	0	**3**	**6**	0	0	0	0	**10**
07:30 AM	0	0	0	0	0	4	1	**5**	3	0	0	3	0	**2**	0	2	10
07:45 AM	0	0	0	0	0	2	0	2	2	0	1	3	1	2	0	**3**	8
Total Volume	0	0	0	0	0	12	3	15	8	0	6	14	3	4	0	7	36
% App. Total	0	0	0		0	80	20		57.1	0	42.9		42.9	57.1	0		
PHF	.000	.000	.000	.000	.000	.750	.375	.750	.667	.000	.500	.583	.375	.500	.000	.583	.900

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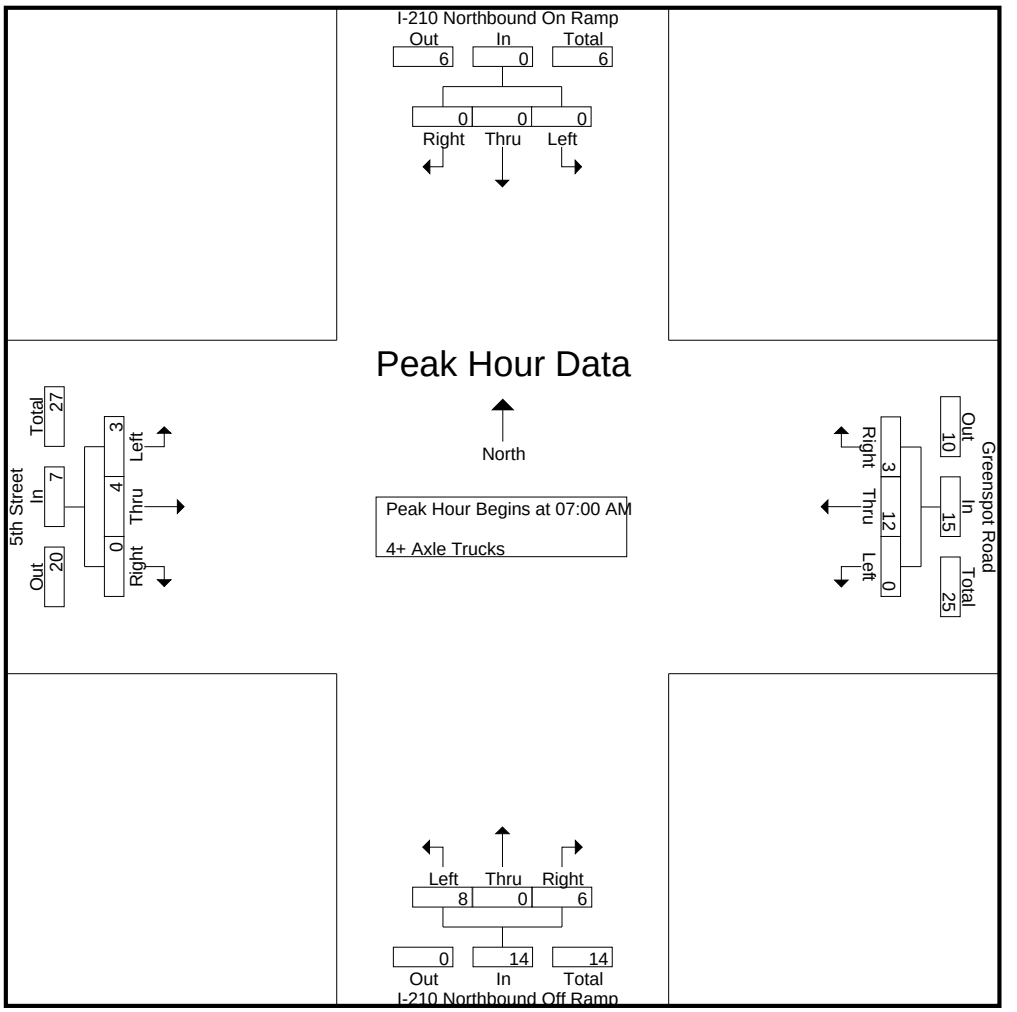
City of Highlands
N/S: I-210 Northbound Ramps
E/W: 5th Street/Greenspot Road
Weather: Clear

File Name : 11_HLD_210N_5th_Green AM
Site Code : 06718128
Start Date : 2/21/2018
Page No : 2



Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM				07:00 AM				07:00 AM				07:00 AM			
+0 mins.	0	0	0	0	0	**4**	0	4	0	0	2	2	**2**	0	0	2
+15 mins.	0	0	0	0	0	2	**2**	4	**3**	0	**3**	**6**	0	0	0	0
+30 mins.	0	0	0	0	0	4	1	**5**	3	0	0	3	0	**2**	0	2
+45 mins.	0	0	0	0	0	2	0	2	2	0	1	3	1	2	0	**3**
Total Volume	0	0	0	0	0	12	3	15	8	0	6	14	3	4	0	7
% App. Total	0	0	0		0	80	20		57.1	0	42.9		42.9	57.1	0	
PHF	.000	.000	.000	.000	.000	.750	.375	.750	.667	.000	.500	.583	.375	.500	.000	.583

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City of Highlands
N/S: I-210 Northbound Ramps
E/W: 5th Street/Greenspot Road
Weather: Clear

File Name : 11_HLD_210N_5th_Green PM
Site Code : 06718128
Start Date : 2/21/2018
Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	I-210 Northbound On Ramp Southbound				Greenspot Road Westbound				I-210 Northbound Off Ramp Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	0	160	70	230	46	1	97	144	37	191	0	228	602
04:15 PM	0	0	0	0	0	136	74	210	36	0	116	152	34	251	0	285	647
04:30 PM	0	0	0	0	0	156	64	220	66	0	118	184	51	216	0	267	671
04:45 PM	0	0	0	0	0	145	50	195	42	0	136	178	44	255	0	299	672
Total	0	0	0	0	0	597	258	855	190	1	467	658	166	913	0	1079	2592
05:00 PM	0	0	0	0	0	149	66	215	50	0	113	163	46	235	0	281	659
05:15 PM	0	0	0	0	0	141	64	205	36	0	108	144	56	318	0	374	723
05:30 PM	0	0	0	0	0	148	86	234	31	0	112	143	37	237	0	274	651
05:45 PM	0	0	0	0	0	162	72	234	55	1	114	170	46	222	0	268	672
Total	0	0	0	0	0	600	288	888	172	1	447	620	185	1012	0	1197	2705
Grand Total	0	0	0	0	0	1197	546	1743	362	2	914	1278	351	1925	0	2276	5297
Apprch %	0	0	0		0	68.7	31.3		28.3	0.2	71.5		15.4	84.6	0		
Total %	0	0	0	0	0	22.6	10.3	32.9	6.8	0	17.3	24.1	6.6	36.3	0	43	
Passenger Vehicles	0	0	0	0	0	1181	537	1718	335	2	910	1247	330	1918	0	2248	5213
% Passenger Vehicles	0	0	0	0	0	98.7	98.4	98.6	92.5	100	99.6	97.6	94	99.6	0	98.8	98.4
Large 2 Axle Vehicles	0	0	0	0	0	12	7	19	9	0	2	11	5	6	0	11	41
% Large 2 Axle Vehicles	0	0	0	0	0	1	1.3	1.1	2.5	0	0.2	0.9	1.4	0.3	0	0.5	0.8
3 Axle Vehicles	0	0	0	0	0	1	1	2	4	0	1	5	5	1	0	6	13
% 3 Axle Vehicles	0	0	0	0	0	0.1	0.2	0.1	1.1	0	0.1	0.4	1.4	0.1	0	0.3	0.2
4+ Axle Trucks	0	0	0	0	0	3	1	4	14	0	1	15	11	0	0	11	30
% 4+ Axle Trucks	0	0	0	0	0	0.3	0.2	0.2	3.9	0	0.1	1.2	3.1	0	0	0.5	0.6

	I-210 Northbound On Ramp Southbound				Greenspot Road Westbound				I-210 Northbound Off Ramp Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	0	0	0	0	**156**	64	**220**	**66**	0	118	**184**	51	216	0	267	671
04:45 PM	0	0	0	0	0	145	50	195	42	0	**136**	178	44	255	0	299	672
05:00 PM	0	0	0	0	0	149	**66**	215	50	0	113	163	46	235	0	281	659
05:15 PM	0	0	0	0	0	141	64	205	36	0	108	144	**56**	**318**	0	**374**	**723**
Total Volume	0	0	0	0	0	591	244	835	194	0	475	669	197	1024	0	1221	2725
% App. Total	0	0	0		0	70.8	29.2		29	0	71		16.1	83.9	0		
PHF	.000	.000	.000	.000	.000	.947	.924	.949	.735	.000	.873	.909	.879	.805	.000	.816	.942

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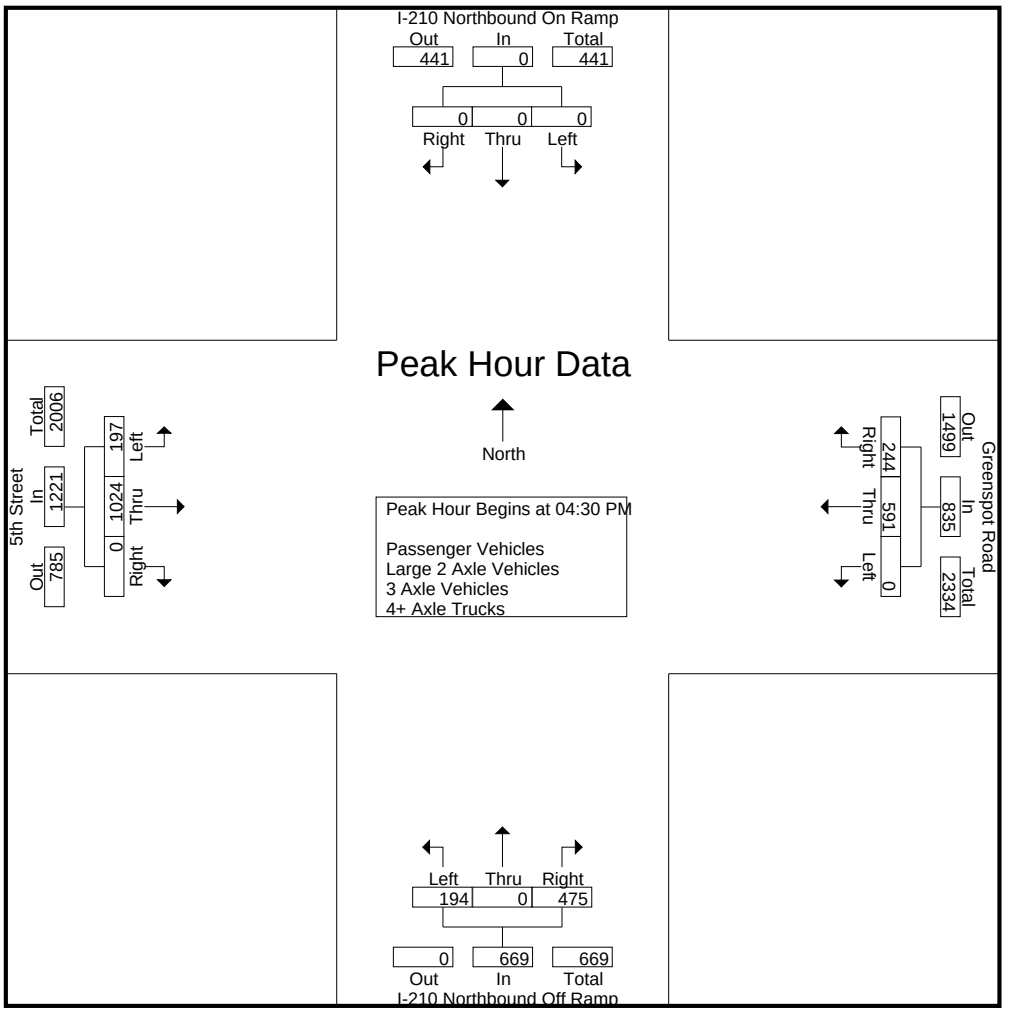
City of Highlands
N/S: I-210 Northbound Ramps
E/W: 5th Street/Greenspot Road
Weather: Clear

File Name : 11_HLD_210N_5th_Green PM
Site Code : 06718128
Start Date : 2/21/2018
Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:00 PM				05:00 PM				04:15 PM				04:45 PM			
+0 mins.	0	0	0	0	0	149	66	215	36	0	116	152	44	255	0	299
+15 mins.	0	0	0	0	0	141	64	205	**66**	0	118	**184**	46	235	0	281
+30 mins.	0	0	0	0	0	148	**86**	**234**	42	0	**136**	178	**56**	**318**	0	**374**
+45 mins.	0	0	0	0	0	**162**	72	234	50	0	113	163	37	237	0	274
Total Volume	0	0	0	0	0	600	288	888	194	0	483	677	183	1045	0	1228
% App. Total	0	0	0		0	67.6	32.4		28.7	0	71.3		14.9	85.1	0	
PHF	.000	.000	.000	.000	.000	.926	.837	.949	.735	.000	.888	.920	.817	.822	.000	.821

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City of Highlands
N/S: I-210 Northbound Ramps
E/W: 5th Street/Greenspot Road
Weather: Clear

File Name : 11_HLD_210N_5th_Green PM
Site Code : 06718128
Start Date : 2/21/2018
Page No : 1

Groups Printed- Passenger Vehicles

	I-210 Northbound On Ramp Southbound				Greenspot Road Westbound				I-210 Northbound Off Ramp Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	0	158	69	227	42	1	95	138	35	190	0	225	590
04:15 PM	0	0	0	0	0	135	73	208	33	0	116	149	29	249	0	278	635
04:30 PM	0	0	0	0	0	151	61	212	58	0	117	175	46	216	0	262	649
04:45 PM	0	0	0	0	0	143	48	191	40	0	135	175	41	254	0	295	661
Total	0	0	0	0	0	587	251	838	173	1	463	637	151	909	0	1060	2535
05:00 PM	0	0	0	0	0	145	66	211	45	0	113	158	45	234	0	279	648
05:15 PM	0	0	0	0	0	141	63	204	34	0	108	142	54	317	0	371	717
05:30 PM	0	0	0	0	0	147	86	233	30	0	112	142	37	237	0	274	649
05:45 PM	0	0	0	0	0	161	71	232	53	1	114	168	43	221	0	264	664
Total	0	0	0	0	0	594	286	880	162	1	447	610	179	1009	0	1188	2678
Grand Total	0	0	0	0	0	1181	537	1718	335	2	910	1247	330	1918	0	2248	5213
Apprch %	0	0	0		0	68.7	31.3		26.9	0.2	73		14.7	85.3	0		
Total %	0	0	0	0	0	22.7	10.3	33	6.4	0	17.5	23.9	6.3	36.8	0	43.1	

	I-210 Northbound On Ramp Southbound				Greenspot Road Westbound				I-210 Northbound Off Ramp Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	0	0	0	0	**151**	61	**212**	**58**	0	117	**175**	46	216	0	262	649
04:45 PM	0	0	0	0	0	143	48	191	40	0	**135**	175	41	254	0	295	661
05:00 PM	0	0	0	0	0	145	**66**	211	45	0	113	158	45	234	0	279	648
05:15 PM	0	0	0	0	0	141	63	204	34	0	108	142	**54**	**317**	0	**371**	**717**
Total Volume	0	0	0	0	0	580	238	818	177	0	473	650	186	1021	0	1207	2675
% App. Total	0	0	0		0	70.9	29.1		27.2	0	72.8		15.4	84.6	0		
PHF	.000	.000	.000	.000	.000	.960	.902	.965	.763	.000	.876	.929	.861	.805	.000	.813	.933

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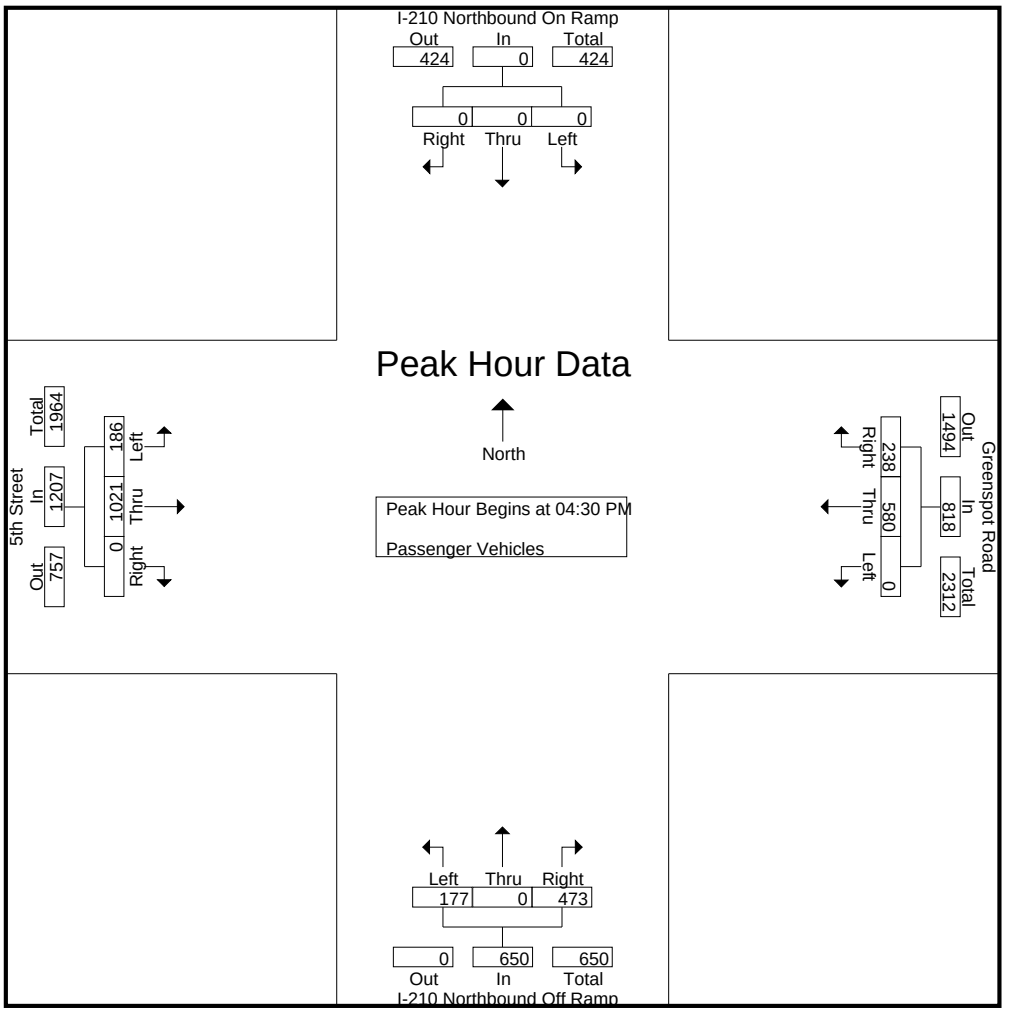
City of Highlands
N/S: I-210 Northbound Ramps
E/W: 5th Street/Greenspot Road
Weather: Clear

File Name : 11_HLD_210N_5th_Green PM
Site Code : 06718128
Start Date : 2/21/2018
Page No : 2



Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				04:30 PM				04:30 PM				04:30 PM			
+0 mins.	0	0	0	0	0	**151**	61	**212**	**58**	0	117	**175**	46	216	0	262
+15 mins.	0	0	0	0	0	143	48	191	40	0	**135**	175	41	254	0	295
+30 mins.	0	0	0	0	0	145	**66**	211	45	0	113	158	45	234	0	279
+45 mins.	0	0	0	0	0	141	63	204	34	0	108	142	**54**	**317**	0	**371**
Total Volume	0	0	0	0	0	580	238	818	177	0	473	650	186	1021	0	1207
% App. Total	0	0	0		0	70.9	29.1		27.2	0	72.8		15.4	84.6	0	
PHF	.000	.000	.000	.000	.000	.960	.902	.965	.763	.000	.876	.929	.861	.805	.000	.813

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City of Highlands
N/S: I-210 Northbound Ramps
E/W: 5th Street/Greenspot Road
Weather: Clear

File Name : 11_HLD_210N_5th_Green PM
Site Code : 06718128
Start Date : 2/21/2018
Page No : 1

Groups Printed- Large 2 Axle Vehicles

	I-210 Northbound On Ramp Southbound				Greenspot Road Westbound				I-210 Northbound Off Ramp Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	0	2	1	3	2	0	1	3	0	0	0	0	6
04:15 PM	0	0	0	0	0	1	1	2	2	0	0	2	1	2	0	3	7
04:30 PM	0	0	0	0	0	3	2	5	3	0	1	4	2	0	0	2	11
04:45 PM	0	0	0	0	0	1	2	3	0	0	0	0	0	1	0	1	4
Total	0	0	0	0	0	7	6	13	7	0	2	9	3	3	0	6	28
05:00 PM	0	0	0	0	0	4	0	4	1	0	0	1	0	1	0	1	6
05:15 PM	0	0	0	0	0	0	1	1	0	0	0	0	1	1	0	2	3
05:30 PM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	1
05:45 PM	0	0	0	0	0	1	0	1	0	0	0	0	1	1	0	2	3
Total	0	0	0	0	0	5	1	6	2	0	0	2	2	3	0	5	13
Grand Total	0	0	0	0	0	12	7	19	9	0	2	11	5	6	0	11	41
Apprch %	0	0	0		0	63.2	36.8		81.8	0	18.2		45.5	54.5	0		
Total %	0	0	0	0	0	29.3	17.1	46.3	22	0	4.9	26.8	12.2	14.6	0	26.8	

	I-210 Northbound On Ramp Southbound				Greenspot Road Westbound				I-210 Northbound Off Ramp Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	0	0	0	0	3	**2**	**5**	**3**	0	**1**	**4**	**2**	0	0	**2**	**11**
04:45 PM	0	0	0	0	0	1	2	3	0	0	0	0	0	**1**	0	1	4
05:00 PM	0	0	0	0	0	**4**	0	4	1	0	0	1	0	1	0	1	6
05:15 PM	0	0	0	0	0	0	1	1	0	0	0	0	1	1	0	2	3
Total Volume	0	0	0	0	0	8	5	13	4	0	1	5	3	3	0	6	24
% App. Total	0	0	0		0	61.5	38.5		80	0	20		50	50	0		
PHF	.000	.000	.000	.000	.000	.500	.625	.650	.333	.000	.250	.313	.375	.750	.000	.750	.545

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City of Highlands
N/S: I-210 Northbound Ramps
E/W: 5th Street/Greenspot Road
Weather: Clear

File Name : 11_HLD_210N_5th_Green PM
Site Code : 06718128
Start Date : 2/21/2018
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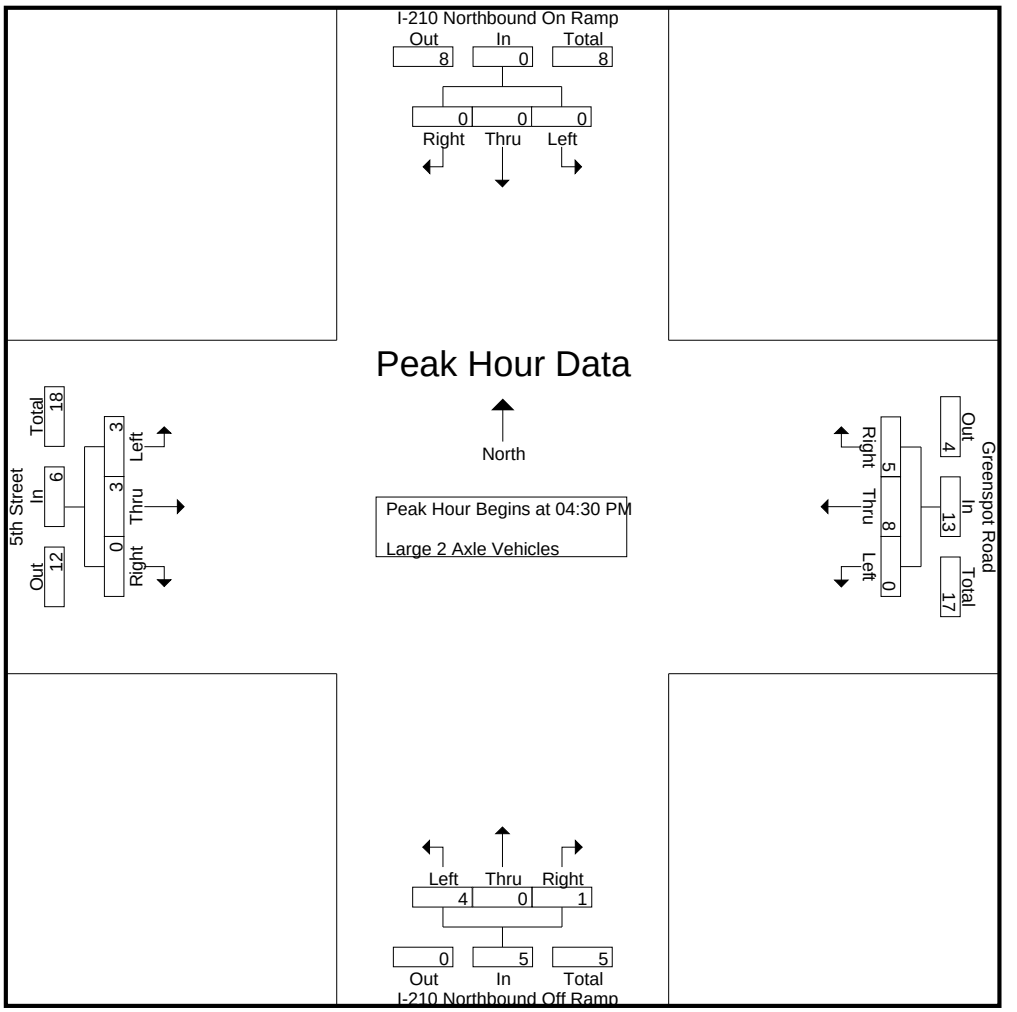

Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				04:30 PM				04:30 PM				04:30 PM			
+0 mins.	0	0	0	0	0	3	**2**	**5**	**3**	0	**1**	**4**	**2**	0	0	**2**
+15 mins.	0	0	0	0	0	1	2	3	0	0	0	0	0	**1**	0	1
+30 mins.	0	0	0	0	0	**4**	0	4	1	0	0	1	0	1	0	1
+45 mins.	0	0	0	0	0	0	1	1	0	0	0	0	1	1	0	2
Total Volume	0	0	0	0	0	8	5	13	4	0	1	5	3	3	0	6
% App. Total	0	0	0		0	61.5	38.5		80	0	20		50	50	0	
PHF	.000	.000	.000	.000	.000	.500	.625	.650	.333	.000	.250	.313	.375	.750	.000	.750

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City of Highlands
N/S: I-210 Northbound Ramps
E/W: 5th Street/Greenspot Road
Weather: Clear

File Name : 11_HLD_210N_5th_Green PM
Site Code : 06718128
Start Date : 2/21/2018
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Groups Printed- 3 Axle Vehicles

	I-210 Northbound On Ramp Southbound				Greenspot Road Westbound				I-210 Northbound Off Ramp Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0	2	3
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
04:30 PM	0	0	0	0	0	1	0	1	2	0	0	2	1	0	0	1	4
04:45 PM	0	0	0	0	0	0	0	0	1	0	0	1	2	0	0	2	3
Total	0	0	0	0	0	1	0	1	3	0	1	4	5	1	0	6	11
05:00 PM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	1
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1
Total	0	0	0	0	0	0	1	1	1	0	0	1	0	0	0	0	2
Grand Total	0	0	0	0	0	1	1	2	4	0	1	5	5	1	0	6	13
Apprch %	0	0	0		0	50	50		80	0	20		83.3	16.7	0		
Total %	0	0	0	0	0	7.7	7.7	15.4	30.8	0	7.7	38.5	38.5	7.7	0	46.2	

	I-210 Northbound On Ramp Southbound				Greenspot Road Westbound				I-210 Northbound Off Ramp Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	0	0	0	0	**1**	0	**1**	**2**	0	0	**2**	1	0	0	1	**4**
04:45 PM	0	0	0	0	0	0	0	0	1	0	0	1	**2**	0	0	**2**	3
05:00 PM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	1
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	1	0	1	4	0	0	4	3	0	0	3	8
% App. Total	0	0	0		0	100	0		100	0	0		100	0	0		
PHF	.000	.000	.000	.000	.000	.250	.000	.250	.500	.000	.000	.500	.375	.000	.000	.375	.500

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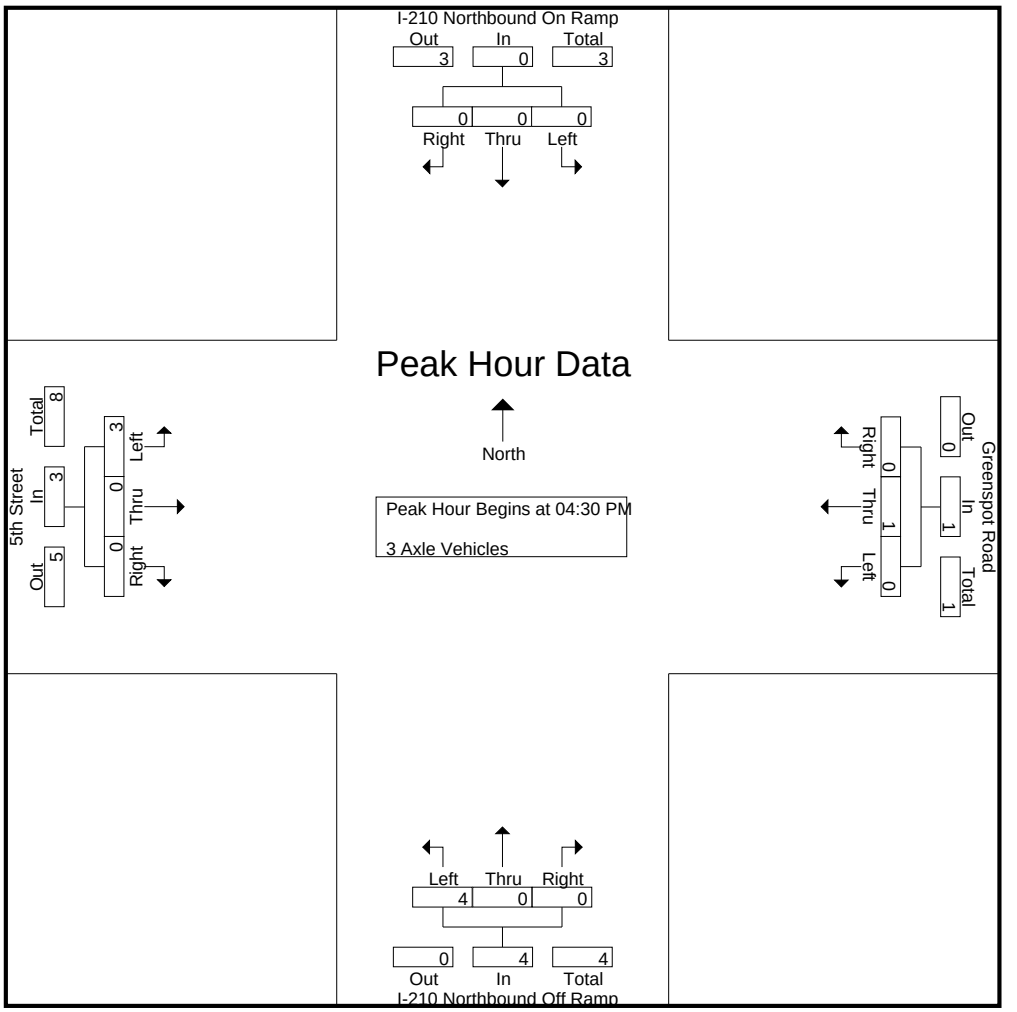
City of Highlands
N/S: I-210 Northbound Ramps
E/W: 5th Street/Greenspot Road
Weather: Clear

File Name : 11_HLD_210N_5th_Green PM
Site Code : 06718128
Start Date : 2/21/2018
Page No : 2



Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				04:30 PM				04:30 PM				04:30 PM			
+0 mins.	0	0	0	0	0	**1**	0	**1**	**2**	0	0	**2**	1	0	0	1
+15 mins.	0	0	0	0	0	0	0	0	1	0	0	1	**2**	0	0	**2**
+30 mins.	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	1	0	1	4	0	0	4	3	0	0	3
% App. Total	0	0	0		0	100	0		100	0	0		100	0	0	
PHF	.000	.000	.000	.000	.000	.250	.000	.250	.500	.000	.000	.500	.375	.000	.000	.375

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City of Highlands
N/S: I-210 Northbound Ramps
E/W: 5th Street/Greenspot Road
Weather: Clear

File Name : 11_HLD_210N_5th_Green PM
Site Code : 06718128
Start Date : 2/21/2018
Page No : 1

Groups Printed- 4+ Axle Trucks

	I-210 Northbound On Ramp Southbound				Greenspot Road Westbound				I-210 Northbound Off Ramp Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	2	0	0	2	1	0	0	1	3
04:15 PM	0	0	0	0	0	0	0	0	1	0	0	1	3	0	0	3	4
04:30 PM	0	0	0	0	0	1	1	2	3	0	0	3	2	0	0	2	7
04:45 PM	0	0	0	0	0	1	0	1	1	0	1	2	1	0	0	1	4
Total	0	0	0	0	0	2	1	3	7	0	1	8	7	0	0	7	18
05:00 PM	0	0	0	0	0	0	0	0	3	0	0	3	1	0	0	1	4
05:15 PM	0	0	0	0	0	0	0	0	2	0	0	2	1	0	0	1	3
05:30 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
05:45 PM	0	0	0	0	0	0	0	0	2	0	0	2	2	0	0	2	4
Total	0	0	0	0	0	1	0	1	7	0	0	7	4	0	0	4	12
Grand Total	0	0	0	0	0	3	1	4	14	0	1	15	11	0	0	11	30
Apprch %	0	0	0		0	75	25		93.3	0	6.7		100	0	0		
Total %	0	0	0	0	0	10	3.3	13.3	46.7	0	3.3	50	36.7	0	0	36.7	

	I-210 Northbound On Ramp Southbound				Greenspot Road Westbound				I-210 Northbound Off Ramp Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	0	0	0	0	**1**	**1**	**2**	**3**	0	0	**3**	**2**	0	0	**2**	**7**
04:45 PM	0	0	0	0	0	1	0	1	1	0	**1**	2	1	0	0	1	4
05:00 PM	0	0	0	0	0	0	0	0	3	0	0	3	1	0	0	1	4
05:15 PM	0	0	0	0	0	0	0	0	2	0	0	2	1	0	0	1	3
Total Volume	0	0	0	0	0	2	1	3	9	0	1	10	5	0	0	5	18
% App. Total	0	0	0		0	66.7	33.3		90	0	10		100	0	0		
PHF	.000	.000	.000	.000	.000	.500	.250	.375	.750	.000	.250	.833	.625	.000	.000	.625	.643

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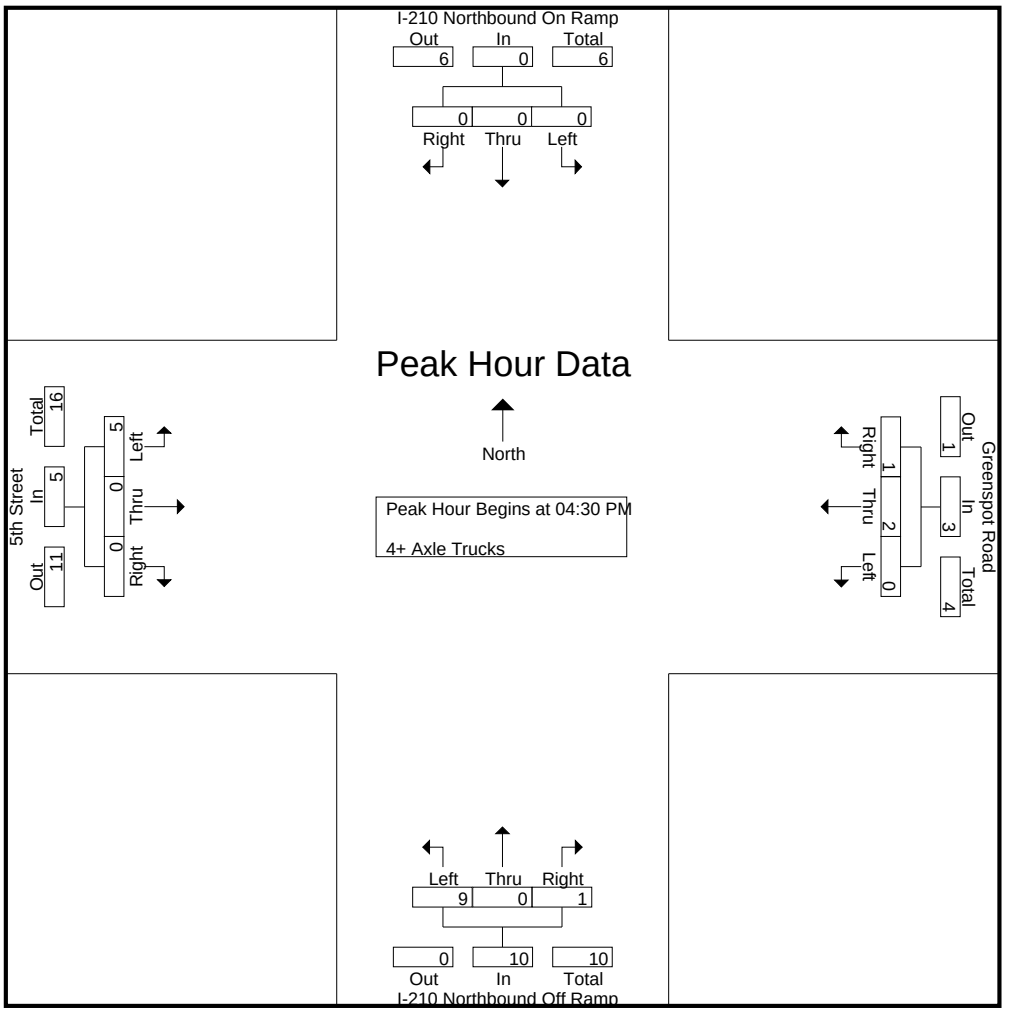
City of Highlands
N/S: I-210 Northbound Ramps
E/W: 5th Street/Greenspot Road
Weather: Clear

File Name : 11_HLD_210N_5th_Green PM
Site Code : 06718128
Start Date : 2/21/2018
Page No : 2



Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				04:30 PM				04:30 PM				04:30 PM			
+0 mins.	0	0	0	0	0	**1**	**1**	**2**	**3**	0	0	**3**	**2**	0	0	**2**
+15 mins.	0	0	0	0	0	1	0	1	1	0	**1**	2	1	0	0	1
+30 mins.	0	0	0	0	0	0	0	0	3	0	0	3	1	0	0	1
+45 mins.	0	0	0	0	0	0	0	0	2	0	0	2	1	0	0	1
Total Volume	0	0	0	0	0	2	1	3	9	0	1	10	5	0	0	5
% App. Total	0	0	0		0	66.7	33.3		90	0	10		100	0	0	
PHF	.000	.000	.000	.000	.000	.500	.250	.375	.750	.000	.250	.833	.625	.000	.000	.625

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City of Highlands
N/S: I-210 SB Ramps/Citrus Plaza Drive
E/W: San Bernardino Avenue
Weather: Clear

File Name : 12_HLD_210S_Citrus_San Bern AM
Site Code : 06718128
Start Date : 2/21/2018
Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	I-210 Southbound Ramps Southbound				San Bernardino Avenue Westbound				Citrus Plaza Drive Northbound				San Bernardino Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	104	51	88	243	9	72	92	173	4	1	3	8	14	48	7	69	493
07:15 AM	85	52	65	202	12	92	88	192	6	3	9	18	9	36	5	50	462
07:30 AM	49	66	63	178	12	81	80	173	2	0	6	8	14	57	4	75	434
07:45 AM	46	72	84	202	23	99	75	197	3	2	5	10	6	52	6	64	473
Total	284	241	300	825	56	344	335	735	15	6	23	44	43	193	22	258	1862
08:00 AM	43	60	69	172	17	68	61	146	0	2	3	5	9	46	7	62	385
08:15 AM	49	64	63	176	27	50	53	130	4	1	7	12	9	57	2	68	386
08:30 AM	40	71	61	172	20	51	58	129	0	1	17	18	11	44	5	60	379
08:45 AM	48	89	71	208	18	45	50	113	0	4	10	14	4	41	4	49	384
Total	180	284	264	728	82	214	222	518	4	8	37	49	33	188	18	239	1534
Grand Total	464	525	564	1553	138	558	557	1253	19	14	60	93	76	381	40	497	3396
Apprch %	29.9	33.8	36.3		11	44.5	44.5		20.4	15.1	64.5		15.3	76.7	8		
Total %	13.7	15.5	16.6	45.7	4.1	16.4	16.4	36.9	0.6	0.4	1.8	2.7	2.2	11.2	1.2	14.6	
Passenger Vehicles	452	519	548	1519	136	535	544	1215	17	13	57	87	69	361	38	468	3289
% Passenger Vehicles	97.4	98.9	97.2	97.8	98.6	95.9	97.7	97	89.5	92.9	95	93.5	90.8	94.8	95	94.2	96.8
Large 2 Axle Vehicles	12	4	4	20	2	11	8	21	0	0	3	3	4	12	2	18	62
% Large 2 Axle Vehicles	2.6	0.8	0.7	1.3	1.4	2	1.4	1.7	0	0	5	3.2	5.3	3.1	5	3.6	1.8
3 Axle Vehicles	0	0	4	4	0	3	1	4	0	1	0	1	2	1	0	3	12
% 3 Axle Vehicles	0	0	0.7	0.3	0	0.5	0.2	0.3	0	7.1	0	1.1	2.6	0.3	0	0.6	0.4
4+ Axle Trucks	0	2	8	10	0	9	4	13	2	0	0	2	1	7	0	8	33
% 4+ Axle Trucks	0	0.4	1.4	0.6	0	1.6	0.7	1	10.5	0	0	2.2	1.3	1.8	0	1.6	1

	I-210 Southbound Ramps Southbound				San Bernardino Avenue Westbound				Citrus Plaza Drive Northbound				San Bernardino Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	**104**	51	**88**	**243**	9	72	**92**	173	4	1	3	8	**14**	48	**7**	69	**493**
07:15 AM	85	52	65	202	12	92	88	192	**6**	**3**	**9**	**18**	9	36	5	50	462
07:30 AM	49	66	63	178	12	81	80	173	2	0	6	8	14	**57**	4	**75**	434
07:45 AM	46	**72**	84	202	**23**	**99**	75	**197**	3	2	5	10	6	52	6	64	473
Total Volume	284	241	300	825	56	344	335	735	15	6	23	44	43	193	22	258	1862
% App. Total	34.4	29.2	36.4		7.6	46.8	45.6		34.1	13.6	52.3		16.7	74.8	8.5		
PHF	.683	.837	.852	.849	.609	.869	.910	.933	.625	.500	.639	.611	.768	.846	.786	.860	.944

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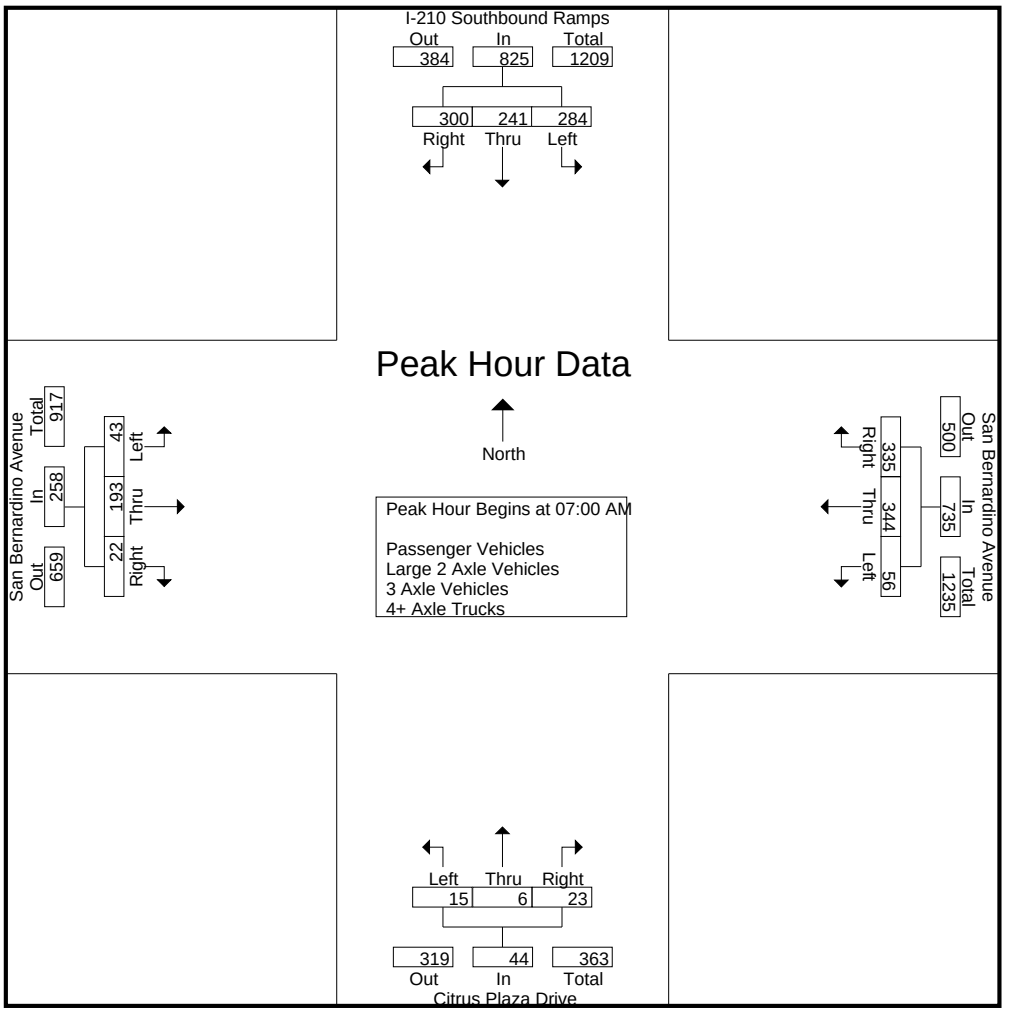
City of Highlands
N/S: I-210 SB Ramps/Citrus Plaza Drive
E/W: San Bernardino Avenue
Weather: Clear

File Name : 12_HLD_210S_Citrus_San Bern AM
Site Code : 06718128
Start Date : 2/21/2018
Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM				07:00 AM				08:00 AM				07:30 AM			
+0 mins.	**104**	51	**88**	**243**	9	72	**92**	173	0	2	3	5	**14**	**57**	4	**75**
+15 mins.	85	52	65	202	12	92	88	192	**4**	1	7	12	6	52	6	64
+30 mins.	49	66	63	178	12	81	80	173	0	1	**17**	**18**	9	46	**7**	62
+45 mins.	46	**72**	84	202	**23**	**99**	75	**197**	0	**4**	10	14	9	57	2	68
Total Volume	284	241	300	825	56	344	335	735	4	8	37	49	38	212	19	269
% App. Total	34.4	29.2	36.4		7.6	46.8	45.6		8.2	16.3	75.5		14.1	78.8	7.1	
PHF	.683	.837	.852	.849	.609	.869	.910	.933	.250	.500	.544	.681	.679	.930	.679	.897

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City of Highlands
N/S: I-210 SB Ramps/Citrus Plaza Drive
E/W: San Bernardino Avenue
Weather: Clear

File Name : 12_HLD_210S_Citrus_San Bern AM
Site Code : 06718128
Start Date : 2/21/2018
Page No : 1

Groups Printed- Passenger Vehicles

	I-210 Southbound Ramps Southbound				San Bernardino Avenue Westbound				Citrus Plaza Drive Northbound				San Bernardino Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	103	50	88	241	9	72	90	171	4	1	3	8	12	45	7	64	484
07:15 AM	84	51	63	198	12	92	87	191	5	3	7	15	8	31	5	44	448
07:30 AM	45	65	61	171	12	79	77	168	2	0	6	8	13	53	4	70	417
07:45 AM	45	72	82	199	22	98	75	195	3	2	5	10	6	52	6	64	468
Total	277	238	294	809	55	341	329	725	14	6	21	41	39	181	22	242	1817
08:00 AM	40	58	67	165	17	60	60	137	0	2	3	5	9	46	6	61	368
08:15 AM	49	64	59	172	27	45	51	123	3	1	7	11	8	54	2	64	370
08:30 AM	40	71	59	170	19	48	55	122	0	1	16	17	11	42	5	58	367
08:45 AM	46	88	69	203	18	41	49	108	0	3	10	13	2	38	3	43	367
Total	175	281	254	710	81	194	215	490	3	7	36	46	30	180	16	226	1472
Grand Total	452	519	548	1519	136	535	544	1215	17	13	57	87	69	361	38	468	3289
Apprch %	29.8	34.2	36.1		11.2	44	44.8		19.5	14.9	65.5		14.7	77.1	8.1		
Total %	13.7	15.8	16.7	46.2	4.1	16.3	16.5	36.9	0.5	0.4	1.7	2.6	2.1	11	1.2	14.2	

	I-210 Southbound Ramps Southbound				San Bernardino Avenue Westbound				Citrus Plaza Drive Northbound				San Bernardino Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	**103**	50	**88**	**241**	9	72	**90**	171	4	1	3	8	12	45	**7**	64	**484**
07:15 AM	84	51	63	198	12	92	87	191	**5**	**3**	**7**	**15**	8	31	5	44	448
07:30 AM	45	65	61	171	12	79	77	168	2	0	6	8	**13**	**53**	4	**70**	417
07:45 AM	45	**72**	82	199	**22**	**98**	75	**195**	3	2	5	10	6	52	6	64	468
Total Volume	277	238	294	809	55	341	329	725	14	6	21	41	39	181	22	242	1817
% App. Total	34.2	29.4	36.3		7.6	47	45.4		34.1	14.6	51.2		16.1	74.8	9.1		
PHF	.672	.826	.835	.839	.625	.870	.914	.929	.700	.500	.750	.683	.750	.854	.786	.864	.939

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City of Highlands
N/S: I-210 SB Ramps/Citrus Plaza Drive
E/W: San Bernardino Avenue
Weather: Clear

File Name : 12_HLD_210S_Citrus_San Bern AM
Site Code : 06718128
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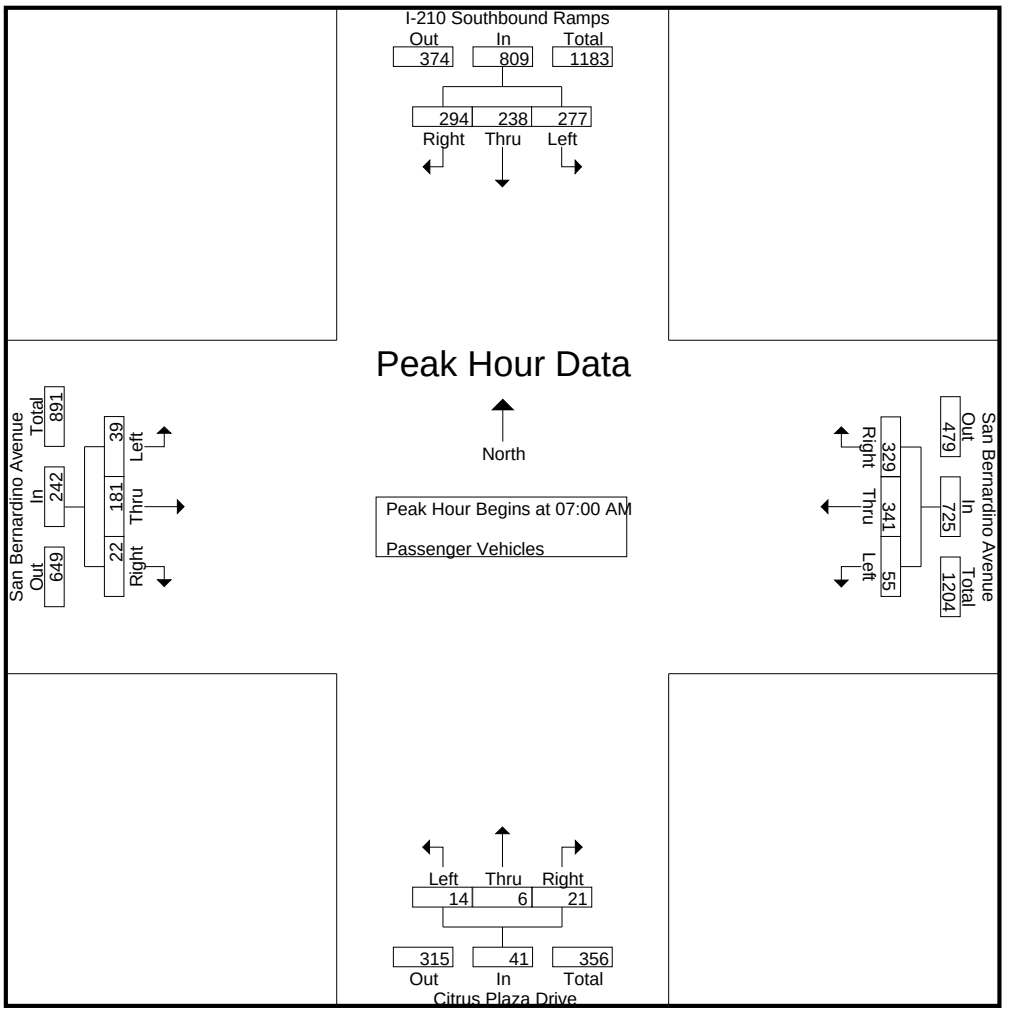

Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM				07:00 AM				07:00 AM				07:00 AM			
+0 mins.	**103**	50	**88**	**241**	9	72	**90**	171	4	1	3	8	12	45	**7**	64
+15 mins.	84	51	63	198	12	92	87	191	**5**	**3**	**7**	**15**	8	31	5	44
+30 mins.	45	65	61	171	12	79	77	168	2	0	6	8	**13**	**53**	4	**70**
+45 mins.	45	**72**	82	199	**22**	**98**	75	**195**	3	2	5	10	6	52	6	64
Total Volume	277	238	294	809	55	341	329	725	14	6	21	41	39	181	22	242
% App. Total	34.2	29.4	36.3		7.6	47	45.4		34.1	14.6	51.2		16.1	74.8	9.1	
PHF	.672	.826	.835	.839	.625	.870	.914	.929	.700	.500	.750	.683	.750	.854	.786	.864

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City of Highlands
N/S: I-210 SB Ramps/Citrus Plaza Drive
E/W: San Bernardino Avenue
Weather: Clear

File Name : 12_HLD_210S_Citrus_San Bern AM
Site Code : 06718128
Start Date : 2/21/2018
Page No : 1

Groups Printed- Large 2 Axle Vehicles

	I-210 Southbound Ramps Southbound				San Bernardino Avenue Westbound				Citrus Plaza Drive Northbound				San Bernardino Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	1	1	0	2	0	0	1	1	0	0	0	0	0	0	0	0	3
07:15 AM	1	1	1	3	0	0	0	0	0	0	2	2	1	3	0	4	9
07:30 AM	4	1	0	5	0	1	3	4	0	0	0	0	1	3	0	4	13
07:45 AM	1	0	0	1	1	0	0	1	0	0	0	0	0	0	0	0	2
Total	7	3	1	11	1	1	4	6	0	0	2	2	2	6	0	8	27
08:00 AM	3	0	1	4	0	5	0	5	0	0	0	0	0	0	1	1	10
08:15 AM	0	0	1	1	0	1	1	2	0	0	0	0	1	2	0	3	6
08:30 AM	0	0	0	0	1	2	2	5	0	0	1	1	0	2	0	2	8
08:45 AM	2	1	1	4	0	2	1	3	0	0	0	0	1	2	1	4	11
Total	5	1	3	9	1	10	4	15	0	0	1	1	2	6	2	10	35
Grand Total	12	4	4	20	2	11	8	21	0	0	3	3	4	12	2	18	62
Apprch %	60	20	20		9.5	52.4	38.1		0	0	100		22.2	66.7	11.1		
Total %	19.4	6.5	6.5	32.3	3.2	17.7	12.9	33.9	0	0	4.8	4.8	6.5	19.4	3.2	29	

	I-210 Southbound Ramps Southbound				San Bernardino Avenue Westbound				Citrus Plaza Drive Northbound				San Bernardino Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	1	**1**	0	2	0	0	1	1	0	0	0	0	0	0	0	0	3
07:15 AM	1	1	**1**	3	0	0	0	0	0	0	**2**	**2**	**1**	**3**	0	**4**	9
07:30 AM	**4**	1	0	**5**	0	**1**	**3**	**4**	0	0	0	0	1	3	0	4	**13**
07:45 AM	1	0	0	1	**1**	0	0	1	0	0	0	0	0	0	0	0	2
Total Volume	7	3	1	11	1	1	4	6	0	0	2	2	2	6	0	8	27
% App. Total	63.6	27.3	9.1		16.7	16.7	66.7		0	0	100		25	75	0		
PHF	.438	.750	.250	.550	.250	.250	.333	.375	.000	.000	.250	.250	.500	.500	.000	.500	.519

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City of Highlands
N/S: I-210 SB Ramps/Citrus Plaza Drive
E/W: San Bernardino Avenue
Weather: Clear

File Name : 12_HLD_210S_Citrus_San Bern AM
Site Code : 06718128
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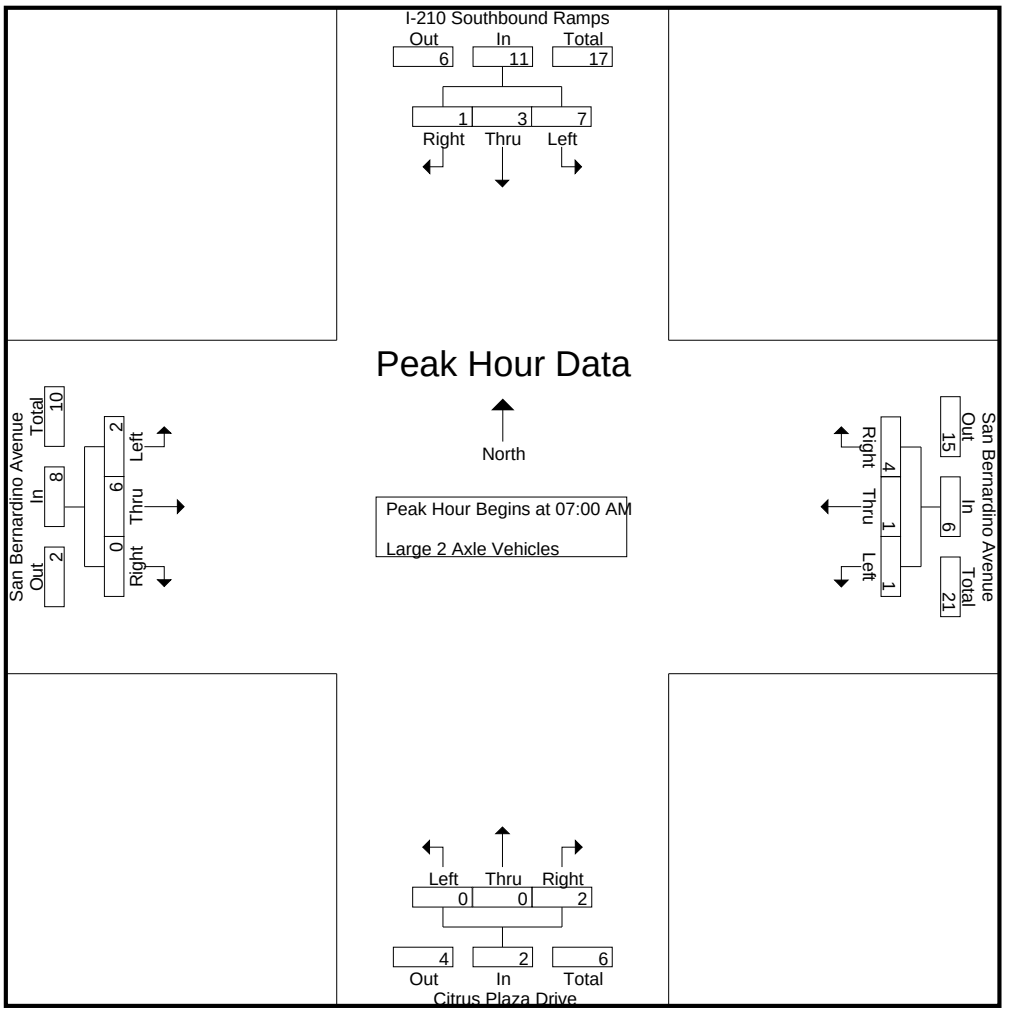

Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM				07:00 AM				07:00 AM				07:00 AM			
+0 mins.	1	**1**	0	2	0	0	1	1	0	0	0	0	0	0	0	0
+15 mins.	1	1	**1**	3	0	0	0	0	0	0	**2**	**2**	**1**	**3**	0	**4**
+30 mins.	**4**	1	0	**5**	0	**1**	**3**	**4**	0	0	0	0	1	3	0	4
+45 mins.	1	0	0	1	**1**	0	0	1	0	0	0	0	0	0	0	0
Total Volume	7	3	1	11	1	1	4	6	0	0	2	2	2	6	0	8
% App. Total	63.6	27.3	9.1		16.7	16.7	66.7		0	0	100		25	75	0	
PHF	.438	.750	.250	.550	.250	.250	.333	.375	.000	.000	.250	.250	.500	.500	.000	.500

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City of Highlands
N/S: I-210 SB Ramps/Citrus Plaza Drive
E/W: San Bernardino Avenue
Weather: Clear

File Name : 12_HLD_210S_Citrus_San Bern AM
Site Code : 06718128
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Groups Printed- 3 Axle Vehicles

	I-210 Southbound Ramps Southbound				San Bernardino Avenue Westbound				Citrus Plaza Drive Northbound				San Bernardino Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	2
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1
07:45 AM	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	0	2	2	0	0	0	0	0	0	0	0	2	0	0	2	4
08:00 AM	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1
08:15 AM	0	0	2	2	0	3	0	3	0	0	0	0	0	0	0	0	5
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0	1	2
Total	0	0	2	2	0	3	1	4	0	1	0	1	0	1	0	1	8
Grand Total	0	0	4	4	0	3	1	4	0	1	0	1	2	1	0	3	12
Apprch %	0	0	100		0	75	25		0	100	0		66.7	33.3	0		
Total %	0	0	33.3	33.3	0	25	8.3	33.3	0	8.3	0	8.3	16.7	8.3	0	25	

	I-210 Southbound Ramps Southbound				San Bernardino Avenue Westbound				Citrus Plaza Drive Northbound				San Bernardino Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	**2**	0	0	**2**	**2**
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	**1**	**1**	0	0	0	0	0	0	0	0	0	0	0	0	1
07:45 AM	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Total Volume	0	0	2	2	0	0	0	0	0	0	0	0	2	0	0	2	4
% App. Total	0	0	100		0	0	0		0	0	0		100	0	0		
PHF	.000	.000	.500	.500	.000	.000	.000	.000	.000	.000	.000	.000	.250	.000	.000	.250	.500

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City of Highlands
N/S: I-210 SB Ramps/Citrus Plaza Drive
E/W: San Bernardino Avenue
Weather: Clear

File Name : 12_HLD_210S_Citrus_San Bern AM
Site Code : 06718128
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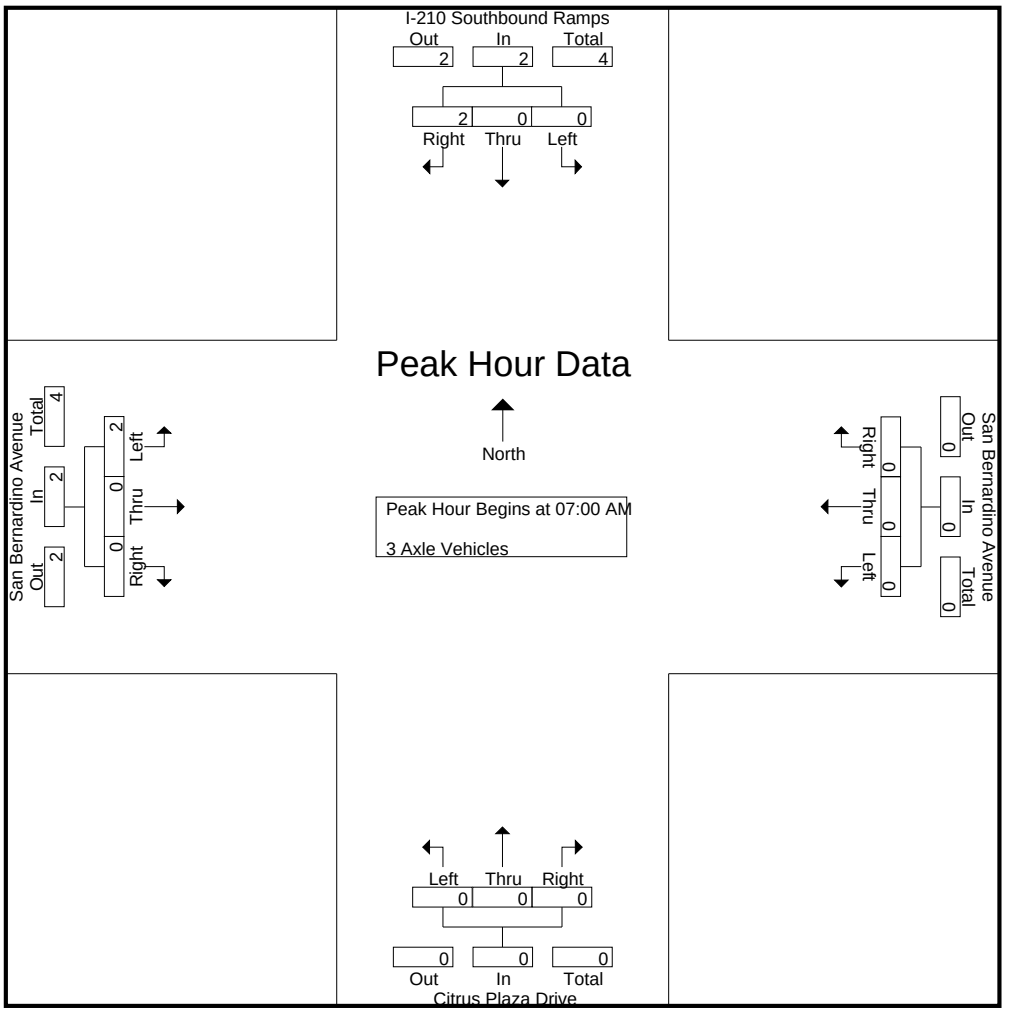

Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM				07:00 AM				07:00 AM				07:00 AM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	**2**	0	0	**2**
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	**1**	**1**	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	2	2	0	0	0	0	0	0	0	0	2	0	0	2
% App. Total	0	0	100		0	0	0		0	0	0		100	0	0	
PHF	.000	.000	.500	.500	.000	.000	.000	.000	.000	.000	.000	.000	.250	.000	.000	.250

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City of Highlands
N/S: I-210 SB Ramps/Citrus Plaza Drive
E/W: San Bernardino Avenue
Weather: Clear

File Name : 12_HLD_210S_Citrus_San Bern AM
Site Code : 06718128
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Groups Printed- 4+ Axle Trucks

	I-210 Southbound Ramps Southbound				San Bernardino Avenue Westbound				Citrus Plaza Drive Northbound				San Bernardino Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	1	1	0	0	0	0	0	3	0	3	4
07:15 AM	0	0	1	1	0	0	1	1	1	0	0	1	0	2	0	2	5
07:30 AM	0	0	1	1	0	1	0	1	0	0	0	0	0	1	0	1	3
07:45 AM	0	0	1	1	0	1	0	1	0	0	0	0	0	0	0	0	2
Total	0	0	3	3	0	2	2	4	1	0	0	1	0	6	0	6	14
08:00 AM	0	2	1	3	0	3	0	3	0	0	0	0	0	0	0	0	6
08:15 AM	0	0	1	1	0	1	1	2	1	0	0	1	0	1	0	1	5
08:30 AM	0	0	2	2	0	1	1	2	0	0	0	0	0	0	0	0	4
08:45 AM	0	0	1	1	0	2	0	2	0	0	0	0	1	0	0	1	4
Total	0	2	5	7	0	7	2	9	1	0	0	1	1	1	0	2	19
Grand Total	0	2	8	10	0	9	4	13	2	0	0	2	1	7	0	8	33
Apprch %	0	20	80		0	69.2	30.8		100	0	0		12.5	87.5	0		
Total %	0	6.1	24.2	30.3	0	27.3	12.1	39.4	6.1	0	0	6.1	3	21.2	0	24.2	

	I-210 Southbound Ramps Southbound				San Bernardino Avenue Westbound				Citrus Plaza Drive Northbound				San Bernardino Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	0	0	0	0	0	**1**	**1**	0	0	0	0	0	**3**	0	**3**	4
07:15 AM	0	0	**1**	**1**	0	0	1	1	**1**	0	0	**1**	0	2	0	2	**5**
07:30 AM	0	0	1	1	0	**1**	0	1	0	0	0	0	0	1	0	1	3
07:45 AM	0	0	1	1	0	1	0	1	0	0	0	0	0	0	0	0	2
Total Volume	0	0	3	3	0	2	2	4	1	0	0	1	0	6	0	6	14
% App. Total	0	0	100		0	50	50		100	0	0		0	100	0		
PHF	.000	.000	.750	.750	.000	.500	.500	1.00	.250	.000	.000	.250	.000	.500	.000	.500	.700

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City of Highlands
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File Name : 12_HLD_210S_Citrus_San Bern AM
Site Code : 06718128
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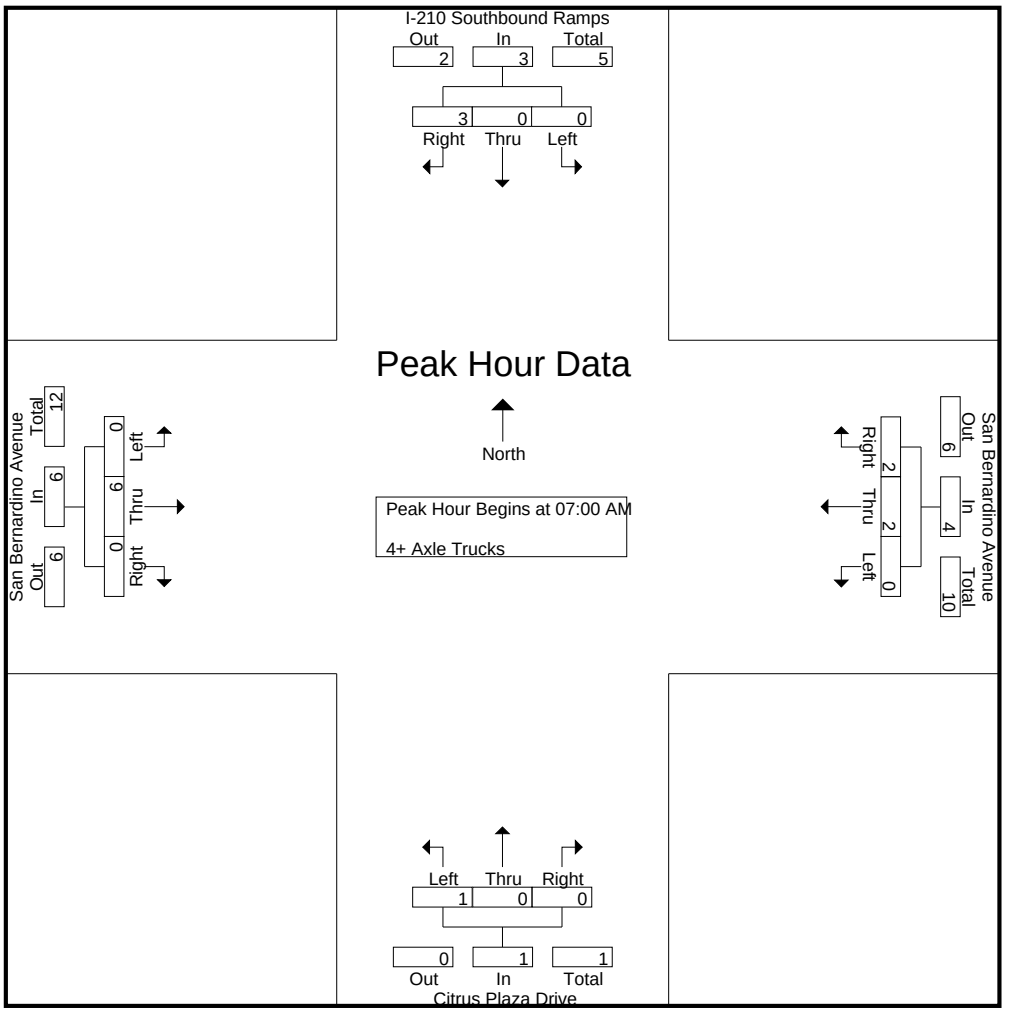

Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM				07:00 AM				07:00 AM				07:00 AM			
+0 mins.	0	0	0	0	0	0	**1**	**1**	0	0	0	0	0	**3**	0	**3**
+15 mins.	0	0	**1**	**1**	0	0	1	1	**1**	0	0	**1**	0	2	0	2
+30 mins.	0	0	1	1	0	**1**	0	1	0	0	0	0	0	1	0	1
+45 mins.	0	0	1	1	0	1	0	1	0	0	0	0	0	0	0	0
Total Volume	0	0	3	3	0	2	2	4	1	0	0	1	0	6	0	6
% App. Total	0	0	100		0	50	50		100	0	0		0	100	0	
PHF	.000	.000	.750	.750	.000	.500	.500	1.000	.250	.000	.000	.250	.000	.500	.000	.500

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City of Highlands
N/S: I-210 SB Ramps/Citrus Plaza Drive
E/W: San Bernardino Avenue
Weather: Clear

File Name : 12_HLD_210S_Citrus_San Bern PM
Site Code : 06718128
Start Date : 2/21/2018
Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	I-210 Southbound Ramps Southbound				San Bernardino Avenue Westbound				Citrus Plaza Drive Northbound				San Bernardino Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	53	66	42	161	40	60	33	133	5	10	63	78	25	137	10	172	544
04:15 PM	49	79	29	157	31	37	24	92	5	21	71	97	23	149	20	192	538
04:30 PM	53	57	26	136	31	75	38	144	4	17	73	94	32	167	24	223	597
04:45 PM	34	45	39	118	28	65	31	124	6	16	70	92	30	171	14	215	549
Total	189	247	136	572	130	237	126	493	20	64	277	361	110	624	68	802	2228
05:00 PM	35	75	31	141	31	65	36	132	7	7	65	79	24	196	18	238	590
05:15 PM	38	89	32	159	27	75	32	134	9	15	67	91	49	173	21	243	627
05:30 PM	46	67	19	132	34	90	36	160	3	18	69	90	31	177	22	230	612
05:45 PM	41	73	34	148	35	91	24	150	10	8	59	77	31	143	23	197	572
Total	160	304	116	580	127	321	128	576	29	48	260	337	135	689	84	908	2401
Grand Total	349	551	252	1152	257	558	254	1069	49	112	537	698	245	1313	152	1710	4629
Apprch %	30.3	47.8	21.9		24	52.2	23.8		7	16	76.9		14.3	76.8	8.9		
Total %	7.5	11.9	5.4	24.9	5.6	12.1	5.5	23.1	1.1	2.4	11.6	15.1	5.3	28.4	3.3	36.9	
Passenger Vehicles	337	546	244	1127	255	531	245	1031	49	111	533	693	233	1296	152	1681	4532
% Passenger Vehicles	96.6	99.1	96.8	97.8	99.2	95.2	96.5	96.4	100	99.1	99.3	99.3	95.1	98.7	100	98.3	97.9
Large 2 Axle Vehicles	7	4	6	17	0	14	7	21	0	0	3	3	2	14	0	16	57
% Large 2 Axle Vehicles	2	0.7	2.4	1.5	0	2.5	2.8	2	0	0	0.6	0.4	0.8	1.1	0	0.9	1.2
3 Axle Vehicles	4	1	0	5	1	2	0	3	0	1	1	2	2	0	0	2	12
% 3 Axle Vehicles	1.1	0.2	0	0.4	0.4	0.4	0	0.3	0	0.9	0.2	0.3	0.8	0	0	0.1	0.3
4+ Axle Trucks	1	0	2	3	1	11	2	14	0	0	0	0	8	3	0	11	28
% 4+ Axle Trucks	0.3	0	0.8	0.3	0.4	2	0.8	1.3	0	0	0	0	3.3	0.2	0	0.6	0.6

	I-210 Southbound Ramps Southbound				San Bernardino Avenue Westbound				Citrus Plaza Drive Northbound				San Bernardino Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	35	75	31	141	31	65	**36**	132	7	7	65	79	24	**196**	18	238	590
05:15 PM	38	**89**	32	**159**	27	75	32	134	9	15	67	**91**	**49**	173	21	**243**	**627**
05:30 PM	**46**	67	19	132	34	90	36	**160**	3	**18**	**69**	90	31	177	22	230	612
05:45 PM	41	73	**34**	148	**35**	**91**	24	150	**10**	8	59	77	31	143	**23**	197	572
Total Volume	160	304	116	580	127	321	128	576	29	48	260	337	135	689	84	908	2401
% App. Total	27.6	52.4	20		22	55.7	22.2		8.6	14.2	77.2		14.9	75.9	9.3		
PHF	.870	.854	.853	.912	.907	.882	.889	.900	.725	.667	.942	.926	.689	.879	.913	.934	.957

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City of Highlands
N/S: I-210 SB Ramps/Citrus Plaza Drive
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File Name : 12_HLD_210S_Citrus_San Bern PM
Site Code : 06718128
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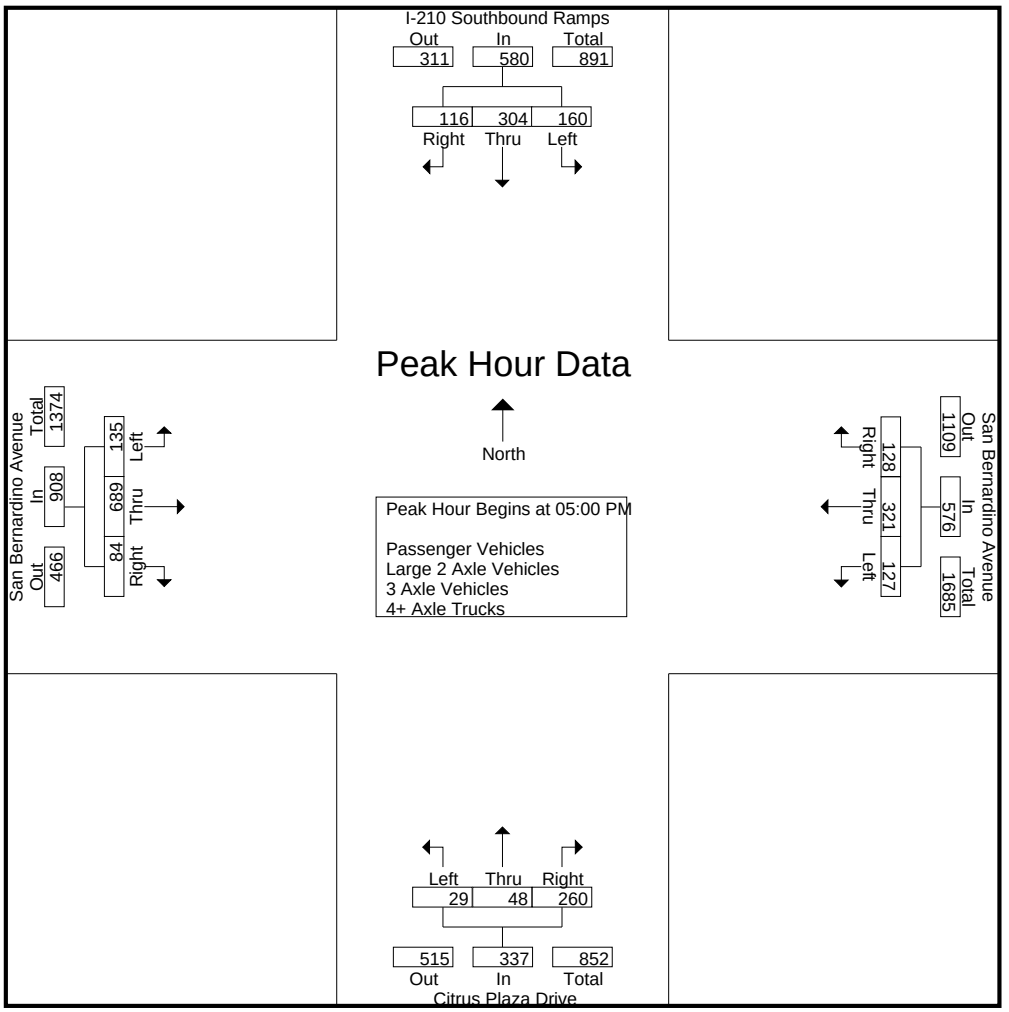

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	05:00 PM				05:00 PM				04:15 PM				04:45 PM			
+0 mins.	35	75	31	141	31	65	**36**	132	5	**21**	71	**97**	30	171	14	215
+15 mins.	38	**89**	32	**159**	27	75	32	134	4	17	**73**	94	24	**196**	18	238
+30 mins.	**46**	67	19	132	34	90	36	**160**	6	16	70	92	**49**	173	21	**243**
+45 mins.	41	73	**34**	148	**35**	**91**	24	150	**7**	7	65	79	31	177	**22**	230
Total Volume	160	304	116	580	127	321	128	576	22	61	279	362	134	717	75	926
% App. Total	27.6	52.4	20		22	55.7	22.2		6.1	16.9	77.1		14.5	77.4	8.1	
PHF	.870	.854	.853	.912	.907	.882	.889	.900	.786	.726	.955	.933	.684	.915	.852	.953

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City of Highlands
N/S: I-210 SB Ramps/Citrus Plaza Drive
E/W: San Bernardino Avenue
Weather: Clear

File Name : 12_HLD_210S_Citrus_San Bern PM
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Groups Printed- Passenger Vehicles

	I-210 Southbound Ramps Southbound				San Bernardino Avenue Westbound				Citrus Plaza Drive Northbound				San Bernardino Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	50	66	39	155	39	52	30	121	5	10	61	76	25	131	10	166	518
04:15 PM	49	76	29	154	31	35	24	90	5	21	71	97	21	148	20	189	530
04:30 PM	51	57	26	134	31	68	36	135	4	17	73	94	30	165	24	219	582
04:45 PM	33	45	36	114	28	63	31	122	6	16	70	92	28	169	14	211	539
Total	183	244	130	557	129	218	121	468	20	64	275	359	104	613	68	785	2169
05:00 PM	35	75	31	141	30	64	36	130	7	7	64	78	21	195	18	234	583
05:15 PM	36	88	32	156	27	73	30	130	9	15	66	90	48	172	21	241	617
05:30 PM	46	66	19	131	34	87	34	155	3	17	69	89	29	175	22	226	601
05:45 PM	37	73	32	142	35	89	24	148	10	8	59	77	31	141	23	195	562
Total	154	302	114	570	126	313	124	563	29	47	258	334	129	683	84	896	2363
Grand Total	337	546	244	1127	255	531	245	1031	49	111	533	693	233	1296	152	1681	4532
Apprch %	29.9	48.4	21.7		24.7	51.5	23.8		7.1	16	76.9		13.9	77.1	9		
Total %	7.4	12	5.4	24.9	5.6	11.7	5.4	22.7	1.1	2.4	11.8	15.3	5.1	28.6	3.4	37.1	

	I-210 Southbound Ramps Southbound				San Bernardino Avenue Westbound				Citrus Plaza Drive Northbound				San Bernardino Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	35	75	31	141	30	64	**36**	130	7	7	64	78	21	**195**	18	234	583
05:15 PM	36	**88**	**32**	**156**	27	73	30	130	9	15	66	**90**	**48**	172	21	**241**	**617**
05:30 PM	**46**	66	19	131	34	87	34	**155**	3	**17**	**69**	89	29	175	22	226	601
05:45 PM	37	73	32	142	**35**	**89**	24	148	**10**	8	59	77	31	141	**23**	195	562
Total Volume	154	302	114	570	126	313	124	563	29	47	258	334	129	683	84	896	2363
% App. Total	27	53	20		22.4	55.6	22		8.7	14.1	77.2		14.4	76.2	9.4		
PHF	.837	.858	.891	.913	.900	.879	.861	.908	.725	.691	.935	.928	.672	.876	.913	.929	.957

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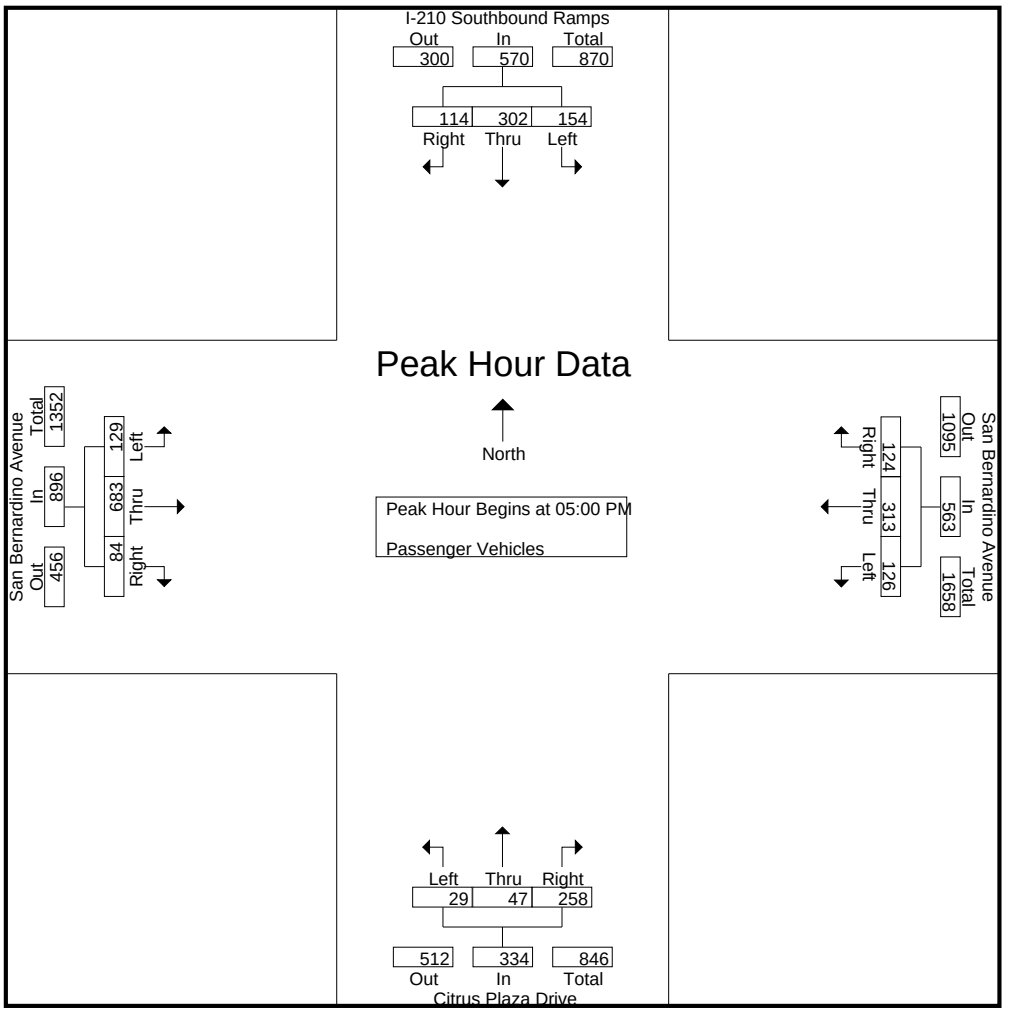
City of Highlands
N/S: I-210 SB Ramps/Citrus Plaza Drive
E/W: San Bernardino Avenue
Weather: Clear

File Name : 12_HLD_210S_Citrus_San Bern PM
Site Code : 06718128
Start Date : 2/21/2018
Page No : 2



Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	05:00 PM				05:00 PM				05:00 PM				05:00 PM			
+0 mins.	35	75	31	141	30	64	**36**	130	7	7	64	78	21	**195**	18	234
+15 mins.	36	**88**	**32**	**156**	27	73	30	130	9	15	66	**90**	**48**	172	21	**241**
+30 mins.	**46**	66	19	131	34	87	34	**155**	3	**17**	**69**	89	29	175	22	226
+45 mins.	37	73	32	142	**35**	**89**	24	148	**10**	8	59	77	31	141	**23**	195
Total Volume	154	302	114	570	126	313	124	563	29	47	258	334	129	683	84	896
% App. Total	27	53	20		22.4	55.6	22		8.7	14.1	77.2		14.4	76.2	9.4	
PHF	.837	.858	.891	.913	.900	.879	.861	.908	.725	.691	.935	.928	.672	.876	.913	.929

Counts Unlimited
PO Box 1178
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City of Highlands
N/S: I-210 SB Ramps/Citrus Plaza Drive
E/W: San Bernardino Avenue
Weather: Clear

File Name : 12_HLD_210S_Citrus_San Bern PM
Site Code : 06718128
Start Date : 2/21/2018
Page No : 1

Groups Printed- Large 2 Axle Vehicles

	I-210 Southbound Ramps Southbound				San Bernardino Avenue Westbound				Citrus Plaza Drive Northbound				San Bernardino Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	1	0	2	3	0	5	3	8	0	0	1	1	0	6	0	6	18
04:15 PM	0	3	0	3	0	0	0	0	0	0	0	0	1	1	0	2	5
04:30 PM	2	0	0	2	0	2	2	4	0	0	0	0	0	2	0	2	8
04:45 PM	1	0	2	3	0	1	0	1	0	0	0	0	0	1	0	1	5
Total	4	3	4	11	0	8	5	13	0	0	1	1	1	10	0	11	36
05:00 PM	0	0	0	0	0	1	0	1	0	0	1	1	0	0	0	0	2
05:15 PM	0	1	0	1	0	1	1	2	0	0	1	1	0	0	0	0	4
05:30 PM	0	0	0	0	0	3	1	4	0	0	0	0	1	2	0	3	7
05:45 PM	3	0	2	5	0	1	0	1	0	0	0	0	0	2	0	2	8
Total	3	1	2	6	0	6	2	8	0	0	2	2	1	4	0	5	21
Grand Total	7	4	6	17	0	14	7	21	0	0	3	3	2	14	0	16	57
Apprch %	41.2	23.5	35.3		0	66.7	33.3		0	0	100		12.5	87.5	0		
Total %	12.3	7	10.5	29.8	0	24.6	12.3	36.8	0	0	5.3	5.3	3.5	24.6	0	28.1	

	I-210 Southbound Ramps Southbound				San Bernardino Avenue Westbound				Citrus Plaza Drive Northbound				San Bernardino Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	0	0	0	0	0	1	0	1	0	0	**1**	**1**	0	0	0	0	2
05:15 PM	0	**1**	0	1	0	1	**1**	2	0	0	1	1	0	0	0	0	4
05:30 PM	0	0	0	0	0	**3**	1	**4**	0	0	0	0	**1**	**2**	0	**3**	7
05:45 PM	**3**	0	**2**	**5**	0	1	0	1	0	0	0	0	0	2	0	2	**8**
Total Volume	3	1	2	6	0	6	2	8	0	0	2	2	1	4	0	5	21
% App. Total	50	16.7	33.3		0	75	25		0	0	100		20	80	0		
PHF	.250	.250	.250	.300	.000	.500	.500	.500	.000	.000	.500	.500	.250	.500	.000	.417	.656

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City of Highlands
N/S: I-210 SB Ramps/Citrus Plaza Drive
E/W: San Bernardino Avenue
Weather: Clear

File Name : 12_HLD_210S_Citrus_San Bern PM
Site Code : 06718128
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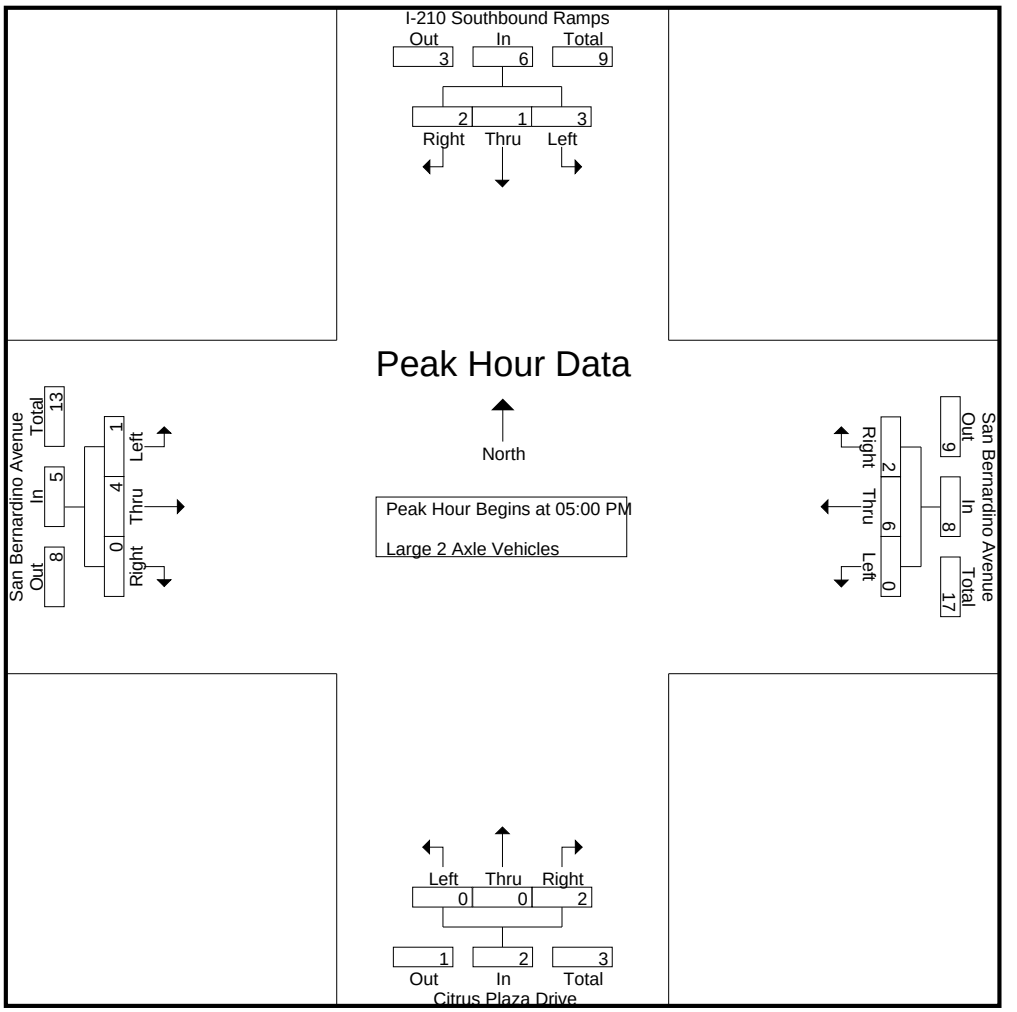

Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	05:00 PM				05:00 PM				05:00 PM				05:00 PM			
+0 mins.	0	0	0	0	0	1	0	1	0	0	**1**	**1**	0	0	0	0
+15 mins.	0	**1**	0	1	0	1	**1**	2	0	0	1	1	0	0	0	0
+30 mins.	0	0	0	0	0	**3**	1	**4**	0	0	0	0	**1**	**2**	0	**3**
+45 mins.	**3**	0	**2**	**5**	0	1	0	1	0	0	0	0	0	2	0	2
Total Volume	3	1	2	6	0	6	2	8	0	0	2	2	1	4	0	5
% App. Total	50	16.7	33.3		0	75	25		0	0	100		20	80	0	
PHF	.250	.250	.250	.300	.000	.500	.500	.500	.000	.000	.500	.500	.250	.500	.000	.417

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City of Highlands
N/S: I-210 SB Ramps/Citrus Plaza Drive
E/W: San Bernardino Avenue
Weather: Clear

File Name : 12_HLD_210S_Citrus_San Bern PM
Site Code : 06718128
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Groups Printed- 3 Axle Vehicles

	I-210 Southbound Ramps Southbound				San Bernardino Avenue Westbound				Citrus Plaza Drive Northbound				San Bernardino Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	1	0	0	1	1	1	0	2	0	0	1	1	0	0	0	0	4
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
04:30 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	1	0	0	1	1	2	0	3	0	0	1	1	1	0	0	1	6
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
05:15 PM	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
05:30 PM	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
05:45 PM	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	3	1	0	4	0	0	0	0	0	1	0	1	1	0	0	1	6
Grand Total	4	1	0	5	1	2	0	3	0	1	1	2	2	0	0	2	12
Apprch %	80	20	0		33.3	66.7	0		0	50	50		100	0	0		
Total %	33.3	8.3	0	41.7	8.3	16.7	0	25	0	8.3	8.3	16.7	16.7	0	0	16.7	

	I-210 Southbound Ramps Southbound				San Bernardino Avenue Westbound				Citrus Plaza Drive Northbound				San Bernardino Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	**1**	0	0	**1**	1
05:15 PM	**2**	0	0	**2**	0	0	0	0	0	0	0	0	0	0	0	0	**2**
05:30 PM	0	**1**	0	1	0	0	0	0	0	**1**	0	**1**	0	0	0	0	2
05:45 PM	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Total Volume	3	1	0	4	0	0	0	0	0	1	0	1	1	0	0	1	6
% App. Total	75	25	0		0	0	0		0	100	0		100	0	0		
PHF	.375	.250	.000	.500	.000	.000	.000	.000	.000	.250	.000	.250	.250	.000	.000	.250	.750

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City of Highlands
N/S: I-210 SB Ramps/Citrus Plaza Drive
E/W: San Bernardino Avenue
Weather: Clear

File Name : 12_HLD_210S_Citrus_San Bern PM
Site Code : 06718128
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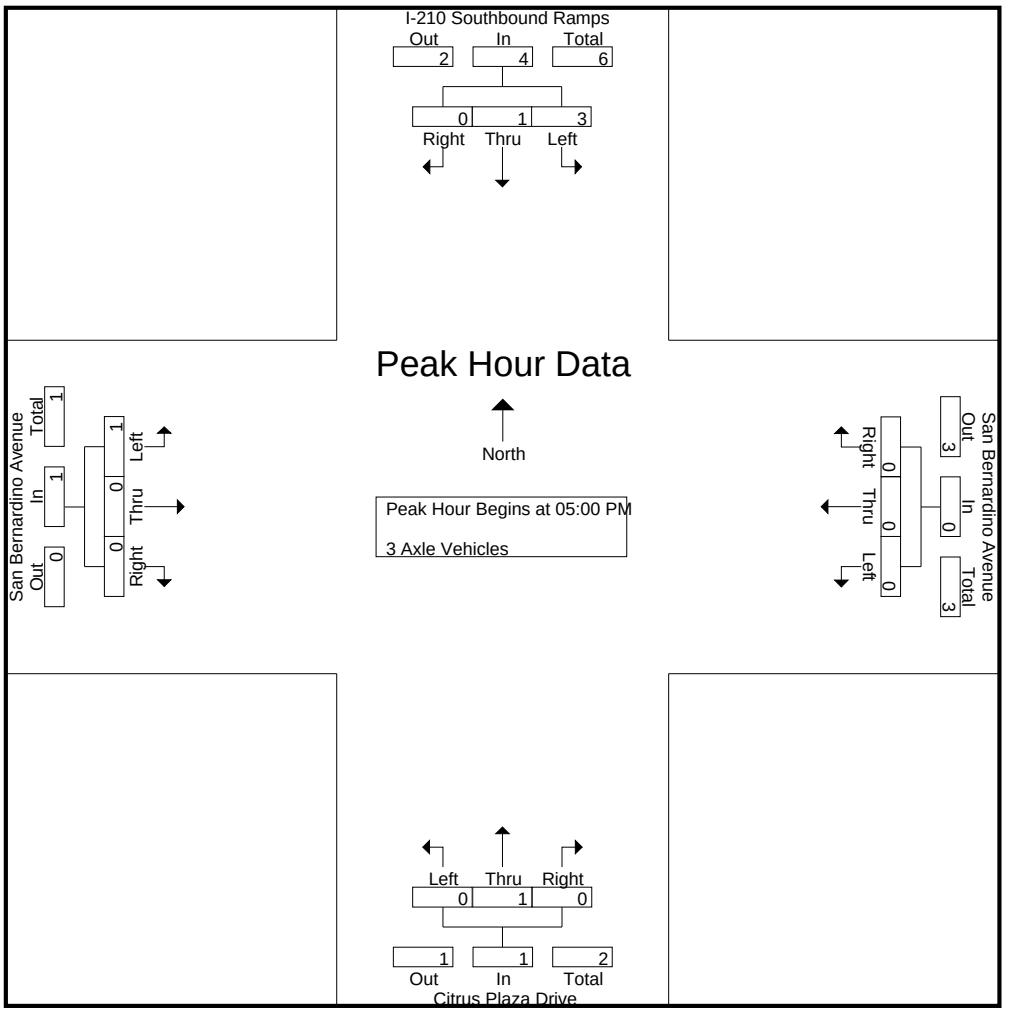

Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	05:00 PM				05:00 PM				05:00 PM				05:00 PM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	**1**	0	0	**1**
+15 mins.	**2**	0	0	**2**	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	**1**	0	1	0	0	0	0	0	**1**	0	**1**	0	0	0	0
+45 mins.	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	3	1	0	4	0	0	0	0	0	1	0	1	1	0	0	1
% App. Total	75	25	0		0	0	0		0	100	0		100	0	0	
PHF	.375	.250	.000	.500	.000	.000	.000	.000	.000	.250	.000	.250	.250	.000	.000	.250

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City of Highlands
N/S: I-210 SB Ramps/Citrus Plaza Drive
E/W: San Bernardino Avenue
Weather: Clear

File Name : 12_HLD_210S_Citrus_San Bern PM
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Groups Printed- 4+ Axle Trucks

	I-210 Southbound Ramps Southbound				San Bernardino Avenue Westbound				Citrus Plaza Drive Northbound				San Bernardino Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	1	0	1	2	0	2	0	2	0	0	0	0	0	0	0	0	4
04:15 PM	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	2
04:30 PM	0	0	0	0	0	4	0	4	0	0	0	0	2	0	0	2	6
04:45 PM	0	0	1	1	0	1	0	1	0	0	0	0	2	1	0	3	5
Total	1	0	2	3	0	9	0	9	0	0	0	0	4	1	0	5	17
05:00 PM	0	0	0	0	1	0	0	1	0	0	0	0	2	1	0	3	4
05:15 PM	0	0	0	0	0	1	1	2	0	0	0	0	1	1	0	2	4
05:30 PM	0	0	0	0	0	0	1	1	0	0	0	0	1	0	0	1	2
05:45 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
Total	0	0	0	0	1	2	2	5	0	0	0	0	4	2	0	6	11
Grand Total	1	0	2	3	1	11	2	14	0	0	0	0	8	3	0	11	28
Apprch %	33.3	0	66.7		7.1	78.6	14.3		0	0	0		72.7	27.3	0		
Total %	3.6	0	7.1	10.7	3.6	39.3	7.1	50	0	0	0	0	28.6	10.7	0	39.3	

	I-210 Southbound Ramps Southbound				San Bernardino Avenue Westbound				Citrus Plaza Drive Northbound				San Bernardino Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	0	0	0	0	**1**	0	0	1	0	0	0	0	**2**	**1**	0	**3**	**4**
05:15 PM	0	0	0	0	0	**1**	**1**	**2**	0	0	0	0	1	1	0	2	4
05:30 PM	0	0	0	0	0	0	1	1	0	0	0	0	1	0	0	1	2
05:45 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
Total Volume	0	0	0	0	1	2	2	5	0	0	0	0	4	2	0	6	11
% App. Total	0	0	0		20	40	40		0	0	0		66.7	33.3	0		
PHF	.000	.000	.000	.000	.250	.500	.500	.625	.000	.000	.000	.000	.500	.500	.000	.500	.688

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City of Highlands
N/S: I-210 SB Ramps/Citrus Plaza Drive
E/W: San Bernardino Avenue
Weather: Clear

File Name : 12_HLD_210S_Citrus_San Bern PM
Site Code : 06718128
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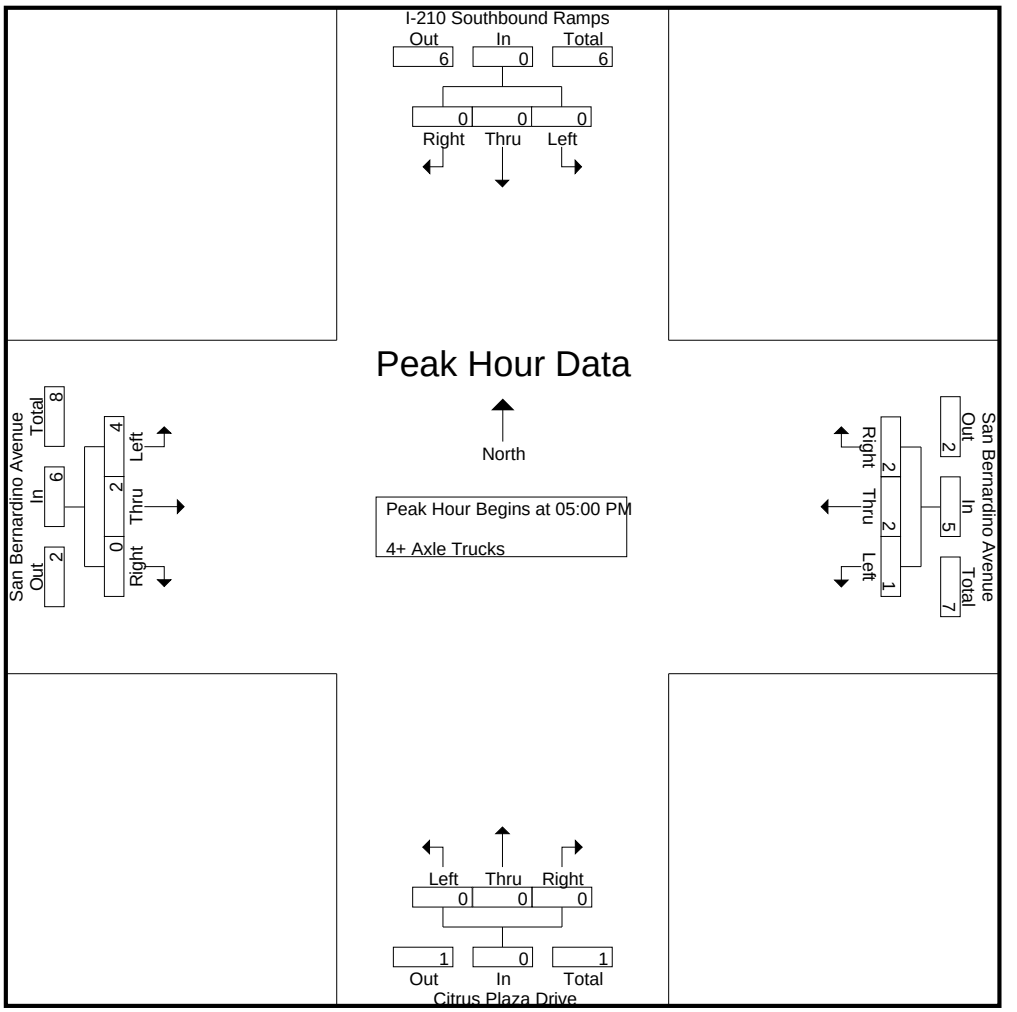

Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	05:00 PM				05:00 PM				05:00 PM				05:00 PM			
+0 mins.	0	0	0	0	**1**	0	0	1	0	0	0	0	**2**	**1**	0	**3**
+15 mins.	0	0	0	0	0	**1**	**1**	**2**	0	0	0	0	1	1	0	2
+30 mins.	0	0	0	0	0	0	1	1	0	0	0	0	1	0	0	1
+45 mins.	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	1	2	2	5	0	0	0	0	4	2	0	6
% App. Total	0	0	0		20	40	40		0	0	0		66.7	33.3	0	
PHF	.000	.000	.000	.000	.250	.500	.500	.625	.000	.000	.000	.000	.500	.500	.000	.500

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City of Highlands
N/S: I-210 NB Ramps/Tennessee Street
E/W: San Bernardino Avenue
Weather: Clear

File Name : 13_HLD_210N_Tenn_San Bern AM
Site Code : 06718128
Start Date : 2/21/2018
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Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	I-210 Northbound Ramps Southbound				San Bernardino Avenue Westbound				Tennessee Street Northbound				San Bernardino Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	52	1	27	80	5	153	69	227	8	68	9	85	23	113	18	154	546
07:15 AM	29	3	40	72	11	145	84	240	14	78	6	98	20	88	28	136	546
07:30 AM	29	1	28	58	9	148	73	230	13	77	1	91	24	52	32	108	487
07:45 AM	34	4	29	67	7	145	78	230	14	86	5	105	28	37	48	113	515
Total	144	9	124	277	32	591	304	927	49	309	21	379	95	290	126	511	2094
08:00 AM	17	2	24	43	3	116	65	184	8	90	2	100	30	35	26	91	418
08:15 AM	26	6	23	55	2	101	46	149	5	90	5	100	26	53	24	103	407
08:30 AM	25	6	25	56	3	104	58	165	8	55	5	68	30	42	33	105	394
08:45 AM	17	4	16	37	10	87	31	128	7	79	4	90	31	38	37	106	361
Total	85	18	88	191	18	408	200	626	28	314	16	358	117	168	120	405	1580
Grand Total	229	27	212	468	50	999	504	1553	77	623	37	737	212	458	246	916	3674
Apprch %	48.9	5.8	45.3		3.2	64.3	32.5		10.4	84.5	5		23.1	50	26.9		
Total %	6.2	0.7	5.8	12.7	1.4	27.2	13.7	42.3	2.1	17	1	20.1	5.8	12.5	6.7	24.9	
Passenger Vehicles	218	25	193	436	50	986	499	1535	75	605	36	716	200	446	242	888	3575
% Passenger Vehicles	95.2	92.6	91	93.2	100	98.7	99	98.8	97.4	97.1	97.3	97.2	94.3	97.4	98.4	96.9	97.3
Large 2 Axle Vehicles	5	1	8	14	0	8	4	12	0	15	1	16	4	12	4	20	62
% Large 2 Axle Vehicles	2.2	3.7	3.8	3	0	0.8	0.8	0.8	0	2.4	2.7	2.2	1.9	2.6	1.6	2.2	1.7
3 Axle Vehicles	1	0	3	4	0	1	1	2	0	1	0	1	1	0	0	1	8
% 3 Axle Vehicles	0.4	0	1.4	0.9	0	0.1	0.2	0.1	0	0.2	0	0.1	0.5	0	0	0.1	0.2
4+ Axle Trucks	5	1	8	14	0	4	0	4	2	2	0	4	7	0	0	7	29
% 4+ Axle Trucks	2.2	3.7	3.8	3	0	0.4	0	0.3	2.6	0.3	0	0.5	3.3	0	0	0.8	0.8

	I-210 Northbound Ramps Southbound				San Bernardino Avenue Westbound				Tennessee Street Northbound				San Bernardino Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	**52**	1	27	**80**	5	**153**	69	227	8	68	**9**	85	23	**113**	18	**154**	**546**
07:15 AM	29	3	**40**	72	**11**	145	**84**	**240**	**14**	78	6	98	20	88	28	136	546
07:30 AM	29	1	28	58	9	148	73	230	13	77	1	91	24	52	32	108	487
07:45 AM	34	**4**	29	67	7	145	78	230	14	**86**	5	**105**	**28**	37	**48**	113	515
Total Volume	144	9	124	277	32	591	304	927	49	309	21	379	95	290	126	511	2094
% App. Total	52	3.2	44.8		3.5	63.8	32.8		12.9	81.5	5.5		18.6	56.8	24.7		
PHF	.692	.563	.775	.866	.727	.966	.905	.966	.875	.898	.583	.902	.848	.642	.656	.830	.959

Counts Unlimited
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City of Highlands
N/S: I-210 NB Ramps/Tennessee Street
E/W: San Bernardino Avenue
Weather: Clear

File Name : 13_HLD_210N_Tenn_San Bern AM
Site Code : 06718128
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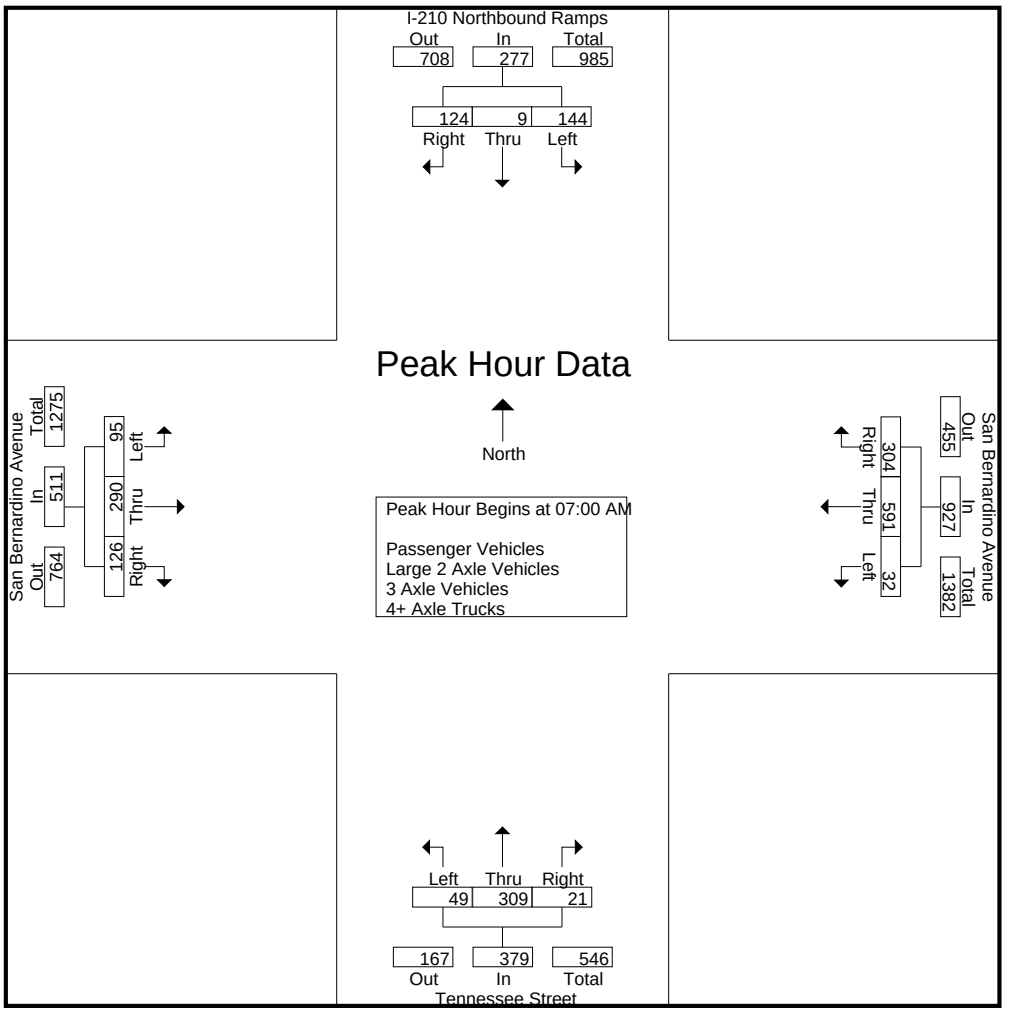

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM				07:00 AM				07:30 AM				07:00 AM			
+0 mins.	**52**	1	27	**80**	5	**153**	69	227	13	77	1	91	23	**113**	18	**154**
+15 mins.	29	3	**40**	72	**11**	145	**84**	**240**	**14**	86	**5**	**105**	20	88	28	136
+30 mins.	29	1	28	58	9	148	73	230	8	**90**	2	100	24	52	32	108
+45 mins.	34	**4**	29	67	7	145	78	230	5	90	5	100	**28**	37	**48**	113
Total Volume	144	9	124	277	32	591	304	927	40	343	13	396	95	290	126	511
% App. Total	52	3.2	44.8		3.5	63.8	32.8		10.1	86.6	3.3		18.6	56.8	24.7	
PHF	.692	.563	.775	.866	.727	.966	.905	.966	.714	.953	.650	.943	.848	.642	.656	.830

Counts Unlimited
PO Box 1178
Corona, CA 92878
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City of Highlands
N/S: I-210 NB Ramps/Tennessee Street
E/W: San Bernardino Avenue
Weather: Clear

File Name : 13_HLD_210N_Tenn_San Bern AM
Site Code : 06718128
Start Date : 2/21/2018
Page No : 1

Groups Printed- Passenger Vehicles

	I-210 Northbound Ramps Southbound				San Bernardino Avenue Westbound				Tennessee Street Northbound				San Bernardino Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	48	1	26	75	5	152	69	226	7	68	9	84	20	112	18	150	535
07:15 AM	29	3	40	72	11	144	84	239	14	77	6	97	17	86	27	130	538
07:30 AM	29	1	26	56	9	146	71	226	13	75	1	89	22	50	32	104	475
07:45 AM	34	4	26	64	7	145	78	230	14	85	5	104	27	35	47	109	507
Total	140	9	118	267	32	587	302	921	48	305	21	374	86	283	124	493	2055
08:00 AM	17	2	21	40	3	114	64	181	7	87	2	96	30	34	25	89	406
08:15 AM	25	5	18	48	2	98	44	144	5	84	5	94	26	52	24	102	388
08:30 AM	22	5	22	49	3	102	58	163	8	51	5	64	28	40	32	100	376
08:45 AM	14	4	14	32	10	85	31	126	7	78	3	88	30	37	37	104	350
Total	78	16	75	169	18	399	197	614	27	300	15	342	114	163	118	395	1520
Grand Total	218	25	193	436	50	986	499	1535	75	605	36	716	200	446	242	888	3575
Apprch %	50	5.7	44.3		3.3	64.2	32.5		10.5	84.5	5		22.5	50.2	27.3		
Total %	6.1	0.7	5.4	12.2	1.4	27.6	14	42.9	2.1	16.9	1	20	5.6	12.5	6.8	24.8	

	I-210 Northbound Ramps Southbound				San Bernardino Avenue Westbound				Tennessee Street Northbound				San Bernardino Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	**48**	1	26	**75**	5	**152**	69	226	7	68	**9**	84	20	**112**	18	**150**	535
07:15 AM	29	3	**40**	72	**11**	144	**84**	**239**	**14**	77	6	97	17	86	27	130	**538**
07:30 AM	29	1	26	56	9	146	71	226	13	75	1	89	22	50	32	104	475
07:45 AM	34	**4**	26	64	7	145	78	230	14	**85**	5	**104**	**27**	35	**47**	109	507
Total Volume	140	9	118	267	32	587	302	921	48	305	21	374	86	283	124	493	2055
% App. Total	52.4	3.4	44.2		3.5	63.7	32.8		12.8	81.6	5.6		17.4	57.4	25.2		
PHF	.729	.563	.738	.890	.727	.965	.899	.963	.857	.897	.583	.899	.796	.632	.660	.822	.955

Counts Unlimited
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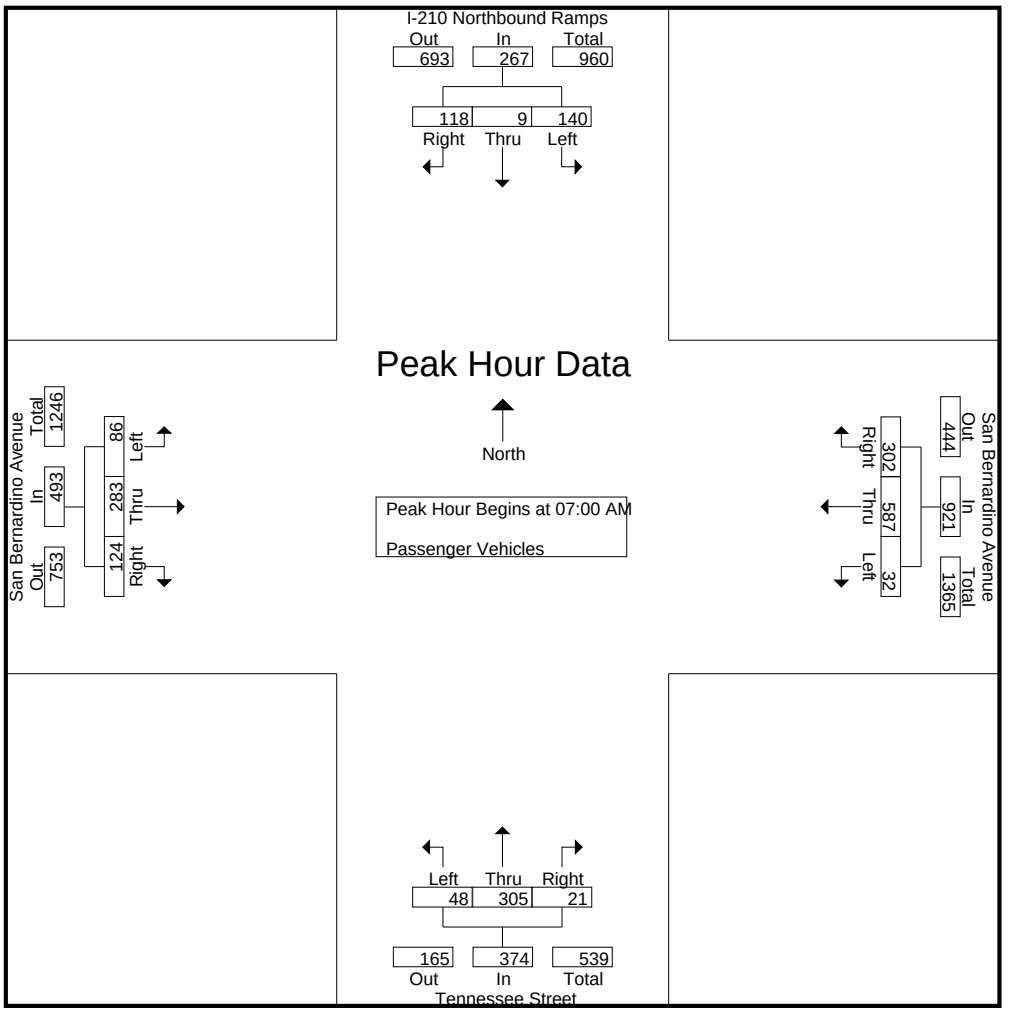
City of Highlands
N/S: I-210 NB Ramps/Tennessee Street
E/W: San Bernardino Avenue
Weather: Clear

File Name : 13_HLD_210N_Tenn_San Bern AM
Site Code : 06718128
Start Date : 2/21/2018
Page No : 2



Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM				07:00 AM				07:00 AM				07:00 AM			
+0 mins.	**48**	1	26	**75**	5	**152**	69	226	7	68	**9**	84	20	**112**	18	**150**
+15 mins.	29	3	**40**	72	**11**	144	**84**	**239**	**14**	77	6	97	17	86	27	130
+30 mins.	29	1	26	56	9	146	71	226	13	75	1	89	22	50	32	104
+45 mins.	34	**4**	26	64	7	145	78	230	14	**85**	5	**104**	**27**	35	**47**	109
Total Volume	140	9	118	267	32	587	302	921	48	305	21	374	86	283	124	493
% App. Total	52.4	3.4	44.2		3.5	63.7	32.8		12.8	81.6	5.6		17.4	57.4	25.2	
PHF	.729	.563	.738	.890	.727	.965	.899	.963	.857	.897	.583	.899	.796	.632	.660	.822

Counts Unlimited
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City of Highlands
N/S: I-210 NB Ramps/Tennessee Street
E/W: San Bernardino Avenue
Weather: Clear

File Name : 13_HLD_210N_Tenn_San Bern AM
Site Code : 06718128
Start Date : 2/21/2018
Page No : 1

Groups Printed- Large 2 Axle Vehicles

	I-210 Northbound Ramps Southbound				San Bernardino Avenue Westbound				Tennessee Street Northbound				San Bernardino Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	2	0	1	3	0	1	0	1	0	0	0	0	0	1	0	1	5
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	2	1	4	4
07:30 AM	0	0	1	1	0	2	1	3	0	2	0	2	1	2	0	3	9
07:45 AM	0	0	1	1	0	0	0	0	0	1	0	1	1	2	1	4	6
Total	2	0	3	5	0	3	1	4	0	3	0	3	3	7	2	12	24
08:00 AM	0	0	1	1	0	1	1	2	0	2	0	2	0	1	1	2	7
08:15 AM	0	0	1	1	0	2	2	4	0	6	0	6	0	1	0	1	12
08:30 AM	2	1	2	5	0	1	0	1	0	3	0	3	1	2	1	4	13
08:45 AM	1	0	1	2	0	1	0	1	0	1	1	2	0	1	0	1	6
Total	3	1	5	9	0	5	3	8	0	12	1	13	1	5	2	8	38
Grand Total	5	1	8	14	0	8	4	12	0	15	1	16	4	12	4	20	62
Apprch %	35.7	7.1	57.1		0	66.7	33.3		0	93.8	6.2		20	60	20		
Total %	8.1	1.6	12.9	22.6	0	12.9	6.5	19.4	0	24.2	1.6	25.8	6.5	19.4	6.5	32.3	

	I-210 Northbound Ramps Southbound				San Bernardino Avenue Westbound				Tennessee Street Northbound				San Bernardino Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	**2**	0	**1**	**3**	0	1	0	1	0	0	0	0	0	1	0	1	5
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	**1**	**2**	**1**	**4**	4
07:30 AM	0	0	1	1	0	**2**	**1**	**3**	0	**2**	0	**2**	1	2	0	3	**9**
07:45 AM	0	0	1	1	0	0	0	0	0	1	0	1	1	2	1	4	6
Total Volume	2	0	3	5	0	3	1	4	0	3	0	3	3	7	2	12	24
% App. Total	40	0	60		0	75	25		0	100	0		25	58.3	16.7		
PHF	.250	.000	.750	.417	.000	.375	.250	.333	.000	.375	.000	.375	.750	.875	.500	.750	.667

Counts Unlimited
PO Box 1178
Corona, CA 92878
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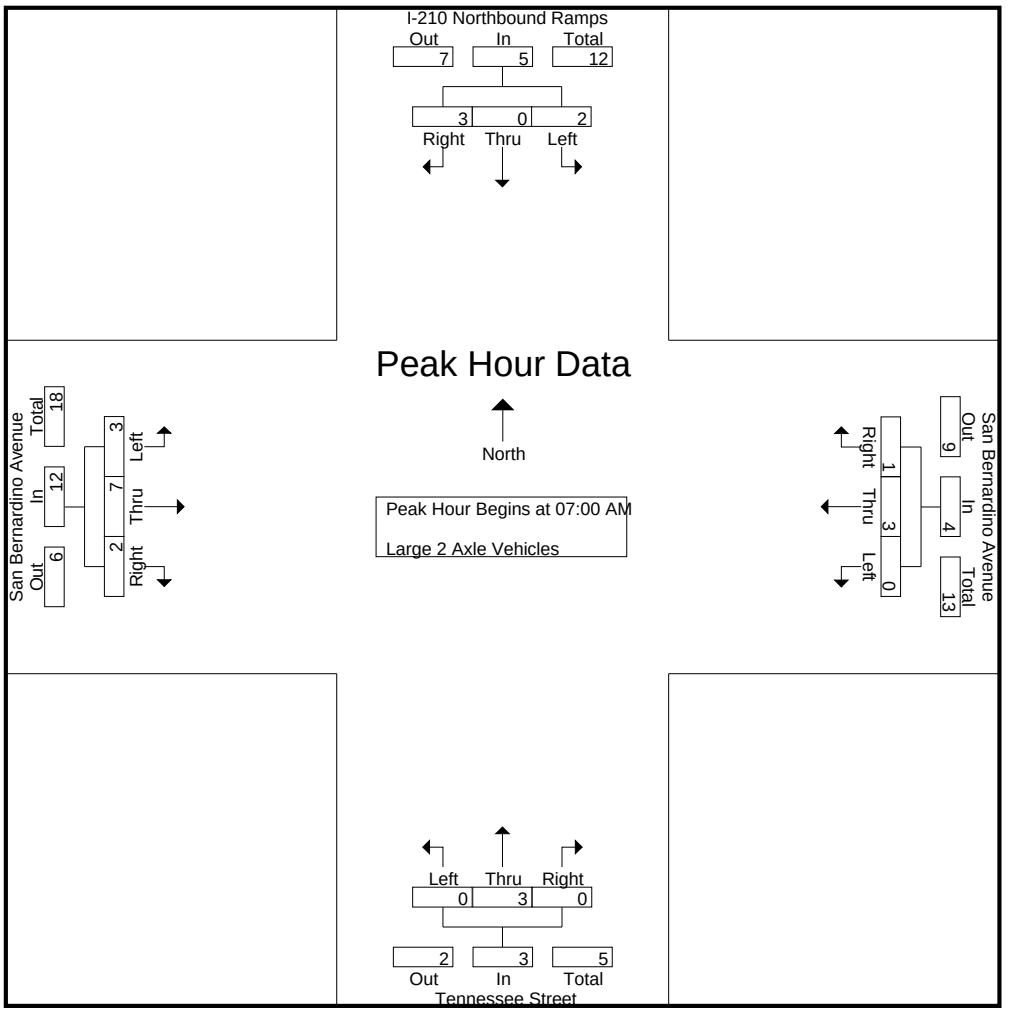
City of Highlands
N/S: I-210 NB Ramps/Tennessee Street
E/W: San Bernardino Avenue
Weather: Clear

File Name : 13_HLD_210N_Tenn_San Bern AM
Site Code : 06718128
Start Date : 2/21/2018
Page No : 2



Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM				07:00 AM				07:00 AM				07:00 AM			
+0 mins.	**2**	0	**1**	**3**	0	1	0	1	0	0	0	0	0	1	0	1
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	**1**	**2**	**1**	**4**
+30 mins.	0	0	1	1	0	**2**	**1**	**3**	0	**2**	0	**2**	1	2	0	3
+45 mins.	0	0	1	1	0	0	0	0	0	1	0	1	1	2	1	4
Total Volume	2	0	3	5	0	3	1	4	0	3	0	3	3	7	2	12
% App. Total	40	0	60		0	75	25		0	100	0		25	58.3	16.7	
PHF	.250	.000	.750	.417	.000	.375	.250	.333	.000	.375	.000	.375	.750	.875	.500	.750

Counts Unlimited
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City of Highlands
N/S: I-210 NB Ramps/Tennessee Street
E/W: San Bernardino Avenue
Weather: Clear

File Name : 13_HLD_210N_Tenn_San Bern AM
Site Code : 06718128
Start Date : 2/21/2018

Groups Printed- 3 Axle Vehicles

	I-210 Northbound Ramps Southbound				San Bernardino Avenue Westbound				Tennessee Street Northbound				San Bernardino Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1
08:00 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
08:15 AM	0	0	3	3	0	0	0	0	0	0	0	0	0	0	0	0	3
08:30 AM	1	0	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
Total	1	0	3	4	0	1	0	1	0	1	0	1	1	0	0	1	7
Grand Total	1	0	3	4	0	1	1	2	0	1	0	1	1	0	0	1	8
Apprch %	25	0	75		0	50	50		0	100	0		100	0	0		
Total %	12.5	0	37.5	50	0	12.5	12.5	25	0	12.5	0	12.5	12.5	0	0	12.5	

	I-210 Northbound Ramps Southbound				San Bernardino Avenue Westbound				Tennessee Street Northbound				San Bernardino Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	**1**	**1**	0	0	0	0	0	0	0	0	**1**
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1
% App. Total	0	0	0		0	0	100		0	0	0		0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.250	.250	.000	.000	.000	.000	.000	.000	.000	.000	.250

Counts Unlimited
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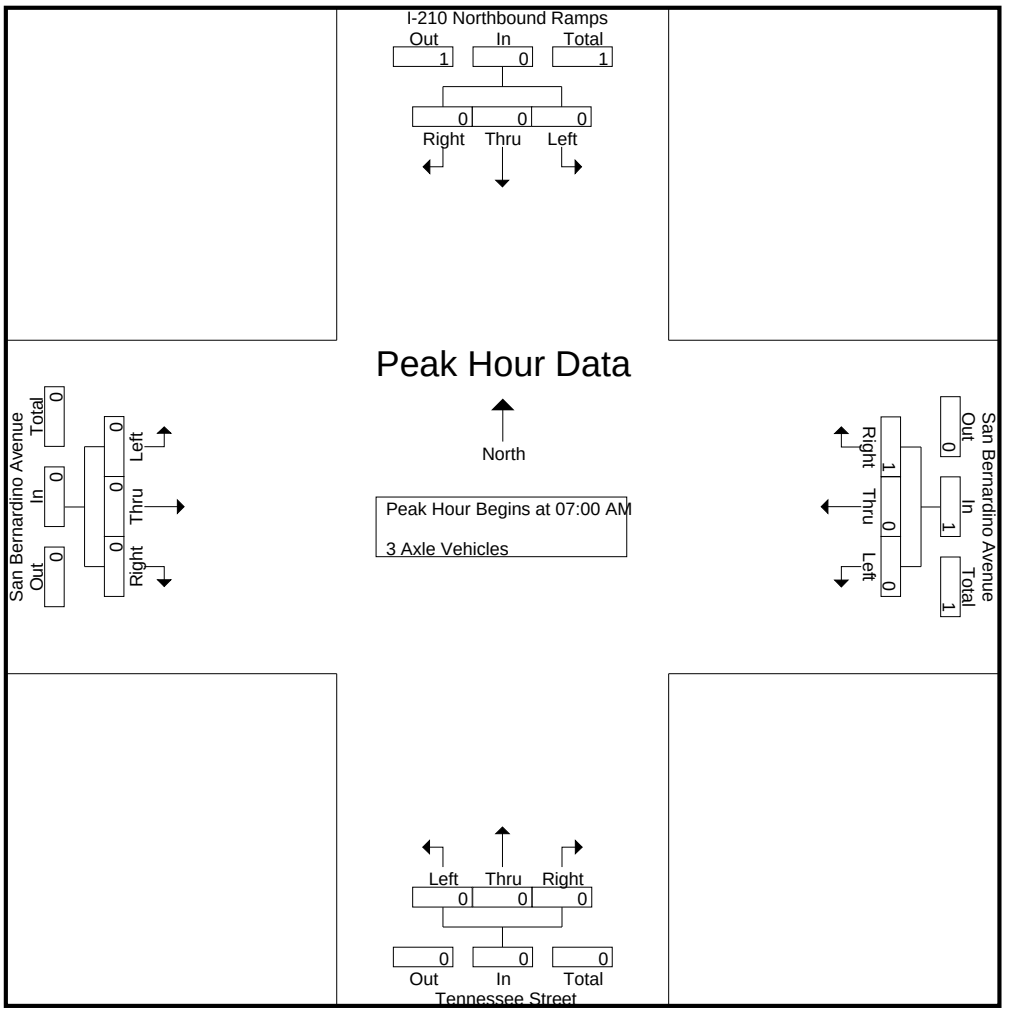
City of Highlands
N/S: I-210 NB Ramps/Tennessee Street
E/W: San Bernardino Avenue
Weather: Clear

File Name : 13_HLD_210N_Tenn_San Bern AM
Site Code : 06718128
Start Date : 2/21/2018
Page No : 2



Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM				07:00 AM				07:00 AM				07:00 AM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	**1**	**1**	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0
% App. Total	0	0	0		0	0	100		0	0	0		0	0	0	
PHF	.000	.000	.000	.000	.000	.000	.250	.250	.000	.000	.000	.000	.000	.000	.000	.000

Counts Unlimited
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City of Highlands
N/S: I-210 NB Ramps/Tennessee Street
E/W: San Bernardino Avenue
Weather: Clear

File Name : 13_HLD_210N_Tenn_San Bern AM
Site Code : 06718128
Start Date : 2/21/2018
Page No : 1

Groups Printed- 4+ Axle Trucks

	I-210 Northbound Ramps Southbound				San Bernardino Avenue Westbound				Tennessee Street Northbound				San Bernardino Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	2	0	0	2	0	0	0	0	1	0	0	1	3	0	0	3	6
07:15 AM	0	0	0	0	0	1	0	1	0	1	0	1	2	0	0	2	4
07:30 AM	0	0	1	1	0	0	0	0	0	0	0	0	1	0	0	1	2
07:45 AM	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	2
Total	2	0	3	5	0	1	0	1	1	1	0	2	6	0	0	6	14
08:00 AM	0	0	2	2	0	0	0	0	1	1	0	2	0	0	0	0	4
08:15 AM	1	1	1	3	0	1	0	1	0	0	0	0	0	0	0	0	4
08:30 AM	0	0	1	1	0	1	0	1	0	0	0	0	1	0	0	1	3
08:45 AM	2	0	1	3	0	1	0	1	0	0	0	0	0	0	0	0	4
Total	3	1	5	9	0	3	0	3	1	1	0	2	1	0	0	1	15
Grand Total	5	1	8	14	0	4	0	4	2	2	0	4	7	0	0	7	29
Apprch %	35.7	7.1	57.1		0	100	0		50	50	0		100	0	0		
Total %	17.2	3.4	27.6	48.3	0	13.8	0	13.8	6.9	6.9	0	13.8	24.1	0	0	24.1	

	I-210 Northbound Ramps Southbound				San Bernardino Avenue Westbound				Tennessee Street Northbound				San Bernardino Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	**2**	0	0	**2**	0	0	0	0	**1**	0	0	**1**	**3**	0	0	**3**	**6**
07:15 AM	0	0	0	0	0	**1**	0	**1**	0	**1**	0	1	2	0	0	2	4
07:30 AM	0	0	1	1	0	0	0	0	0	0	0	0	1	0	0	1	2
07:45 AM	0	0	**2**	2	0	0	0	0	0	0	0	0	0	0	0	0	2
Total Volume	2	0	3	5	0	1	0	1	1	1	0	2	6	0	0	6	14
% App. Total	40	0	60		0	100	0		50	50	0		100	0	0		
PHF	.250	.000	.375	.625	.000	.250	.000	.250	.250	.250	.000	.500	.500	.000	.000	.500	.583

Counts Unlimited
PO Box 1178
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City of Highlands
N/S: I-210 NB Ramps/Tennessee Street
E/W: San Bernardino Avenue
Weather: Clear

File Name : 13_HLD_210N_Tenn_San Bern AM
Site Code : 06718128
Start Date : 2/21/2018
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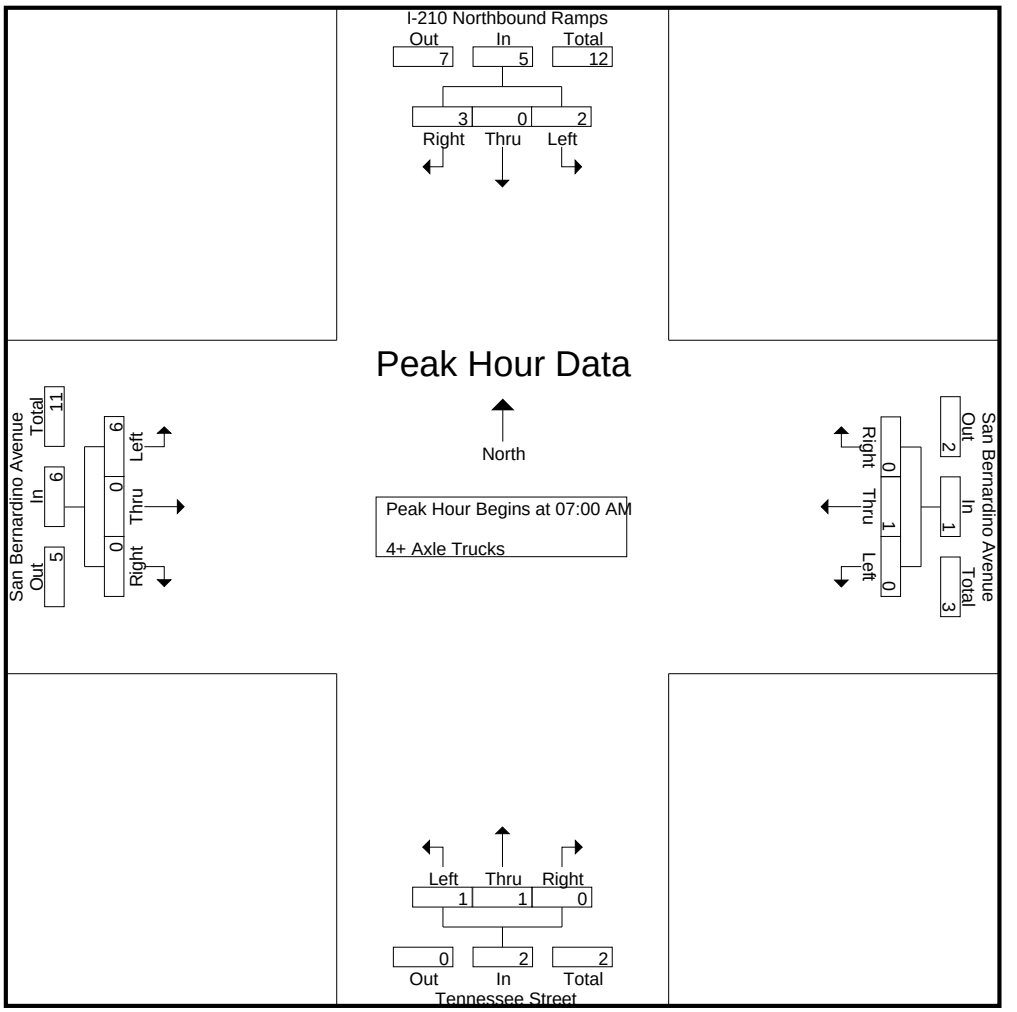

Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM				07:00 AM				07:00 AM				07:00 AM			
+0 mins.	**2**	0	0	**2**	0	0	0	0	**1**	0	0	**1**	**3**	0	0	**3**
+15 mins.	0	0	0	0	0	**1**	0	**1**	0	**1**	0	1	2	0	0	2
+30 mins.	0	0	1	1	0	0	0	0	0	0	0	0	1	0	0	1
+45 mins.	0	0	**2**	2	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	2	0	3	5	0	1	0	1	1	1	0	2	6	0	0	6
% App. Total	40	0	60		0	100	0		50	50	0		100	0	0	
PHF	.250	.000	.375	.625	.000	.250	.000	.250	.250	.250	.000	.500	.500	.000	.000	.500

Counts Unlimited
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City of Highlands
N/S: I-210 NB Ramps/Tennessee Street
E/W: San Bernardino Avenue
Weather: Clear

File Name : 13_HLD_210N_Tenn_San Bern PM
Site Code : 06718128
Start Date : 2/21/2018
Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

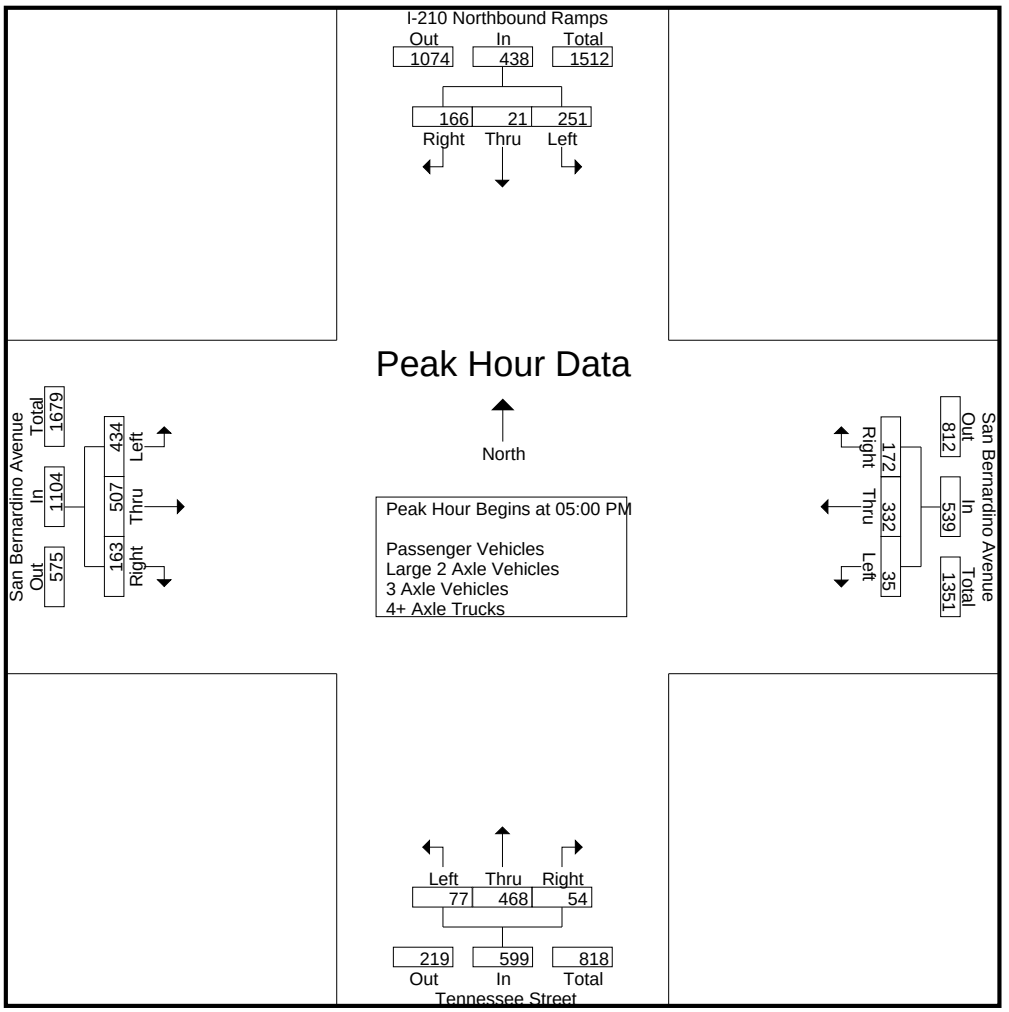
	I-210 Northbound Ramps Southbound				San Bernardino Avenue Westbound				Tennessee Street Northbound				San Bernardino Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	44	6	42	92	6	80	40	126	11	122	7	140	90	116	46	252	610
04:15 PM	65	7	29	101	8	48	34	90	15	101	11	127	106	122	35	263	581
04:30 PM	50	2	42	94	7	98	52	157	11	100	15	126	124	139	36	299	676
04:45 PM	56	1	40	97	5	77	29	111	10	99	12	121	97	141	35	273	602
Total	215	16	153	384	26	303	155	484	47	422	45	514	417	518	152	1087	2469
05:00 PM	66	4	38	108	8	87	43	138	15	105	10	130	114	138	39	291	667
05:15 PM	46	4	42	92	4	72	33	109	19	148	14	181	111	132	38	281	663
05:30 PM	67	5	36	108	10	98	45	153	19	112	11	142	111	130	49	290	693
05:45 PM	72	8	50	130	13	75	51	139	24	103	19	146	98	107	37	242	657
Total	251	21	166	438	35	332	172	539	77	468	54	599	434	507	163	1104	2680
Grand Total	466	37	319	822	61	635	327	1023	124	890	99	1113	851	1025	315	2191	5149
Apprch %	56.7	4.5	38.8		6	62.1	32		11.1	80	8.9		38.8	46.8	14.4		
Total %	9.1	0.7	6.2	16	1.2	12.3	6.4	19.9	2.4	17.3	1.9	21.6	16.5	19.9	6.1	42.6	
Passenger Vehicles	459	36	304	799	61	622	324	1007	119	875	97	1091	846	1014	310	2170	5067
% Passenger Vehicles	98.5	97.3	95.3	97.2	100	98	99.1	98.4	96	98.3	98	98	99.4	98.9	98.4	99	98.4
Large 2 Axle Vehicles	4	0	4	8	0	10	3	13	3	7	2	12	3	8	3	14	47
% Large 2 Axle Vehicles	0.9	0	1.3	1	0	1.6	0.9	1.3	2.4	0.8	2	1.1	0.4	0.8	1	0.6	0.9
3 Axle Vehicles	1	0	2	3	0	0	0	0	0	7	0	7	0	1	1	2	12
% 3 Axle Vehicles	0.2	0	0.6	0.4	0	0	0	0	0	0.8	0	0.6	0	0.1	0.3	0.1	0.2
4+ Axle Trucks	2	1	9	12	0	3	0	3	2	1	0	3	2	2	1	5	23
% 4+ Axle Trucks	0.4	2.7	2.8	1.5	0	0.5	0	0.3	1.6	0.1	0	0.3	0.2	0.2	0.3	0.2	0.4

	I-210 Northbound Ramps Southbound				San Bernardino Avenue Westbound				Tennessee Street Northbound				San Bernardino Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	66	4	38	108	8	87	43	138	15	105	10	130	**114**	**138**	39	**291**	667
05:15 PM	46	4	42	92	4	72	33	109	19	**148**	14	**181**	111	132	38	281	663
05:30 PM	67	5	36	108	10	**98**	45	**153**	19	112	11	142	111	130	**49**	290	**693**
05:45 PM	**72**	**8**	**50**	**130**	**13**	75	**51**	139	**24**	103	**19**	146	98	107	37	242	657
Total Volume	251	21	166	438	35	332	172	539	77	468	54	599	434	507	163	1104	2680
% App. Total	57.3	4.8	37.9		6.5	61.6	31.9		12.9	78.1	9		39.3	45.9	14.8		
PHF	.872	.656	.830	.842	.673	.847	.843	.881	.802	.791	.711	.827	.952	.918	.832	.948	.967

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Highlands
N/S: I-210 NB Ramps/Tennessee Street
E/W: San Bernardino Avenue
Weather: Clear

File Name : 13_HLD_210N_Tenn_San Bern PM
Site Code : 06718128
Start Date : 2/21/2018
Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	05:00 PM				05:00 PM				05:00 PM				04:30 PM			
+0 mins.	66	4	38	108	8	87	43	138	15	105	10	130	**124**	139	36	**299**
+15 mins.	46	4	42	92	4	72	33	109	19	**148**	14	**181**	97	**141**	35	273
+30 mins.	67	5	36	108	10	**98**	45	**153**	19	112	11	142	114	138	**39**	291
+45 mins.	**72**	**8**	**50**	**130**	**13**	75	**51**	139	**24**	103	**19**	146	111	132	38	281
Total Volume	251	21	166	438	35	332	172	539	77	468	54	599	446	550	148	1144
% App. Total	57.3	4.8	37.9		6.5	61.6	31.9		12.9	78.1	9		39	48.1	12.9	
PHF	.872	.656	.830	.842	.673	.847	.843	.881	.802	.791	.711	.827	.899	.975	.949	.957

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City of Highlands
N/S: I-210 NB Ramps/Tennessee Street
E/W: San Bernardino Avenue
Weather: Clear

File Name : 13_HLD_210N_Tenn_San Bern PM
Site Code : 06718128
Start Date : 2/21/2018
Page No : 1

Groups Printed- Passenger Vehicles

	I-210 Northbound Ramps Southbound				San Bernardino Avenue Westbound				Tennessee Street Northbound				San Bernardino Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	43	6	38	87	6	77	40	123	9	118	7	134	88	114	43	245	589
04:15 PM	64	7	26	97	8	48	34	90	15	100	11	126	106	121	35	262	575
04:30 PM	50	2	37	89	7	96	52	155	10	97	13	120	124	138	35	297	661
04:45 PM	54	1	39	94	5	77	29	111	10	95	12	117	97	139	35	271	593
Total	211	16	140	367	26	298	155	479	44	410	43	497	415	512	148	1075	2418
05:00 PM	64	4	38	106	8	85	43	136	14	104	10	128	112	137	39	288	658
05:15 PM	46	4	42	92	4	69	30	103	18	148	14	180	110	130	38	278	653
05:30 PM	67	5	36	108	10	95	45	150	19	110	11	140	111	129	49	289	687
05:45 PM	71	7	48	126	13	75	51	139	24	103	19	146	98	106	36	240	651
Total	248	20	164	432	35	324	169	528	75	465	54	594	431	502	162	1095	2649
Grand Total	459	36	304	799	61	622	324	1007	119	875	97	1091	846	1014	310	2170	5067
Apprch %	57.4	4.5	38		6.1	61.8	32.2		10.9	80.2	8.9		39	46.7	14.3		
Total %	9.1	0.7	6	15.8	1.2	12.3	6.4	19.9	2.3	17.3	1.9	21.5	16.7	20	6.1	42.8	

	I-210 Northbound Ramps Southbound				San Bernardino Avenue Westbound				Tennessee Street Northbound				San Bernardino Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	64	4	38	106	8	85	43	136	14	104	10	128	**112**	**137**	39	288	658
05:15 PM	46	4	42	92	4	69	30	103	18	**148**	14	**180**	110	130	38	278	653
05:30 PM	67	5	36	108	10	**95**	45	**150**	19	110	11	140	111	129	**49**	**289**	**687**
05:45 PM	**71**	**7**	**48**	**126**	**13**	75	**51**	139	**24**	103	**19**	146	98	106	36	240	651
Total Volume	248	20	164	432	35	324	169	528	75	465	54	594	431	502	162	1095	2649
% App. Total	57.4	4.6	38		6.6	61.4	32		12.6	78.3	9.1		39.4	45.8	14.8		
PHF	.873	.714	.854	.857	.673	.853	.828	.880	.781	.785	.711	.825	.962	.916	.827	.947	.964

Counts Unlimited
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City of Highlands
N/S: I-210 NB Ramps/Tennessee Street
E/W: San Bernardino Avenue
Weather: Clear

File Name : 13_HLD_210N_Tenn_San Bern PM
Site Code : 06718128
Start Date : 2/21/2018
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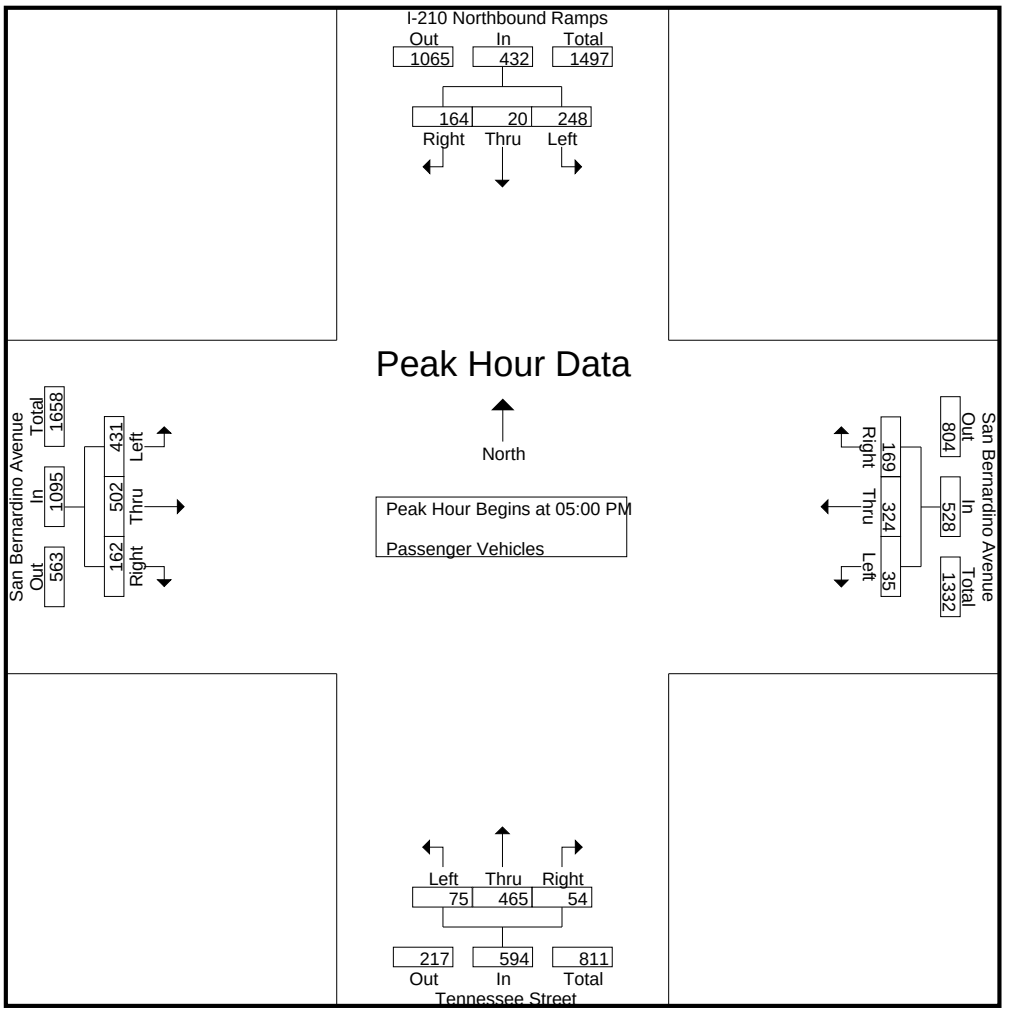

Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	05:00 PM				05:00 PM				05:00 PM				05:00 PM			
+0 mins.	64	4	38	106	8	85	43	136	14	104	10	128	**112**	**137**	39	288
+15 mins.	46	4	42	92	4	69	30	103	18	**148**	14	**180**	110	130	38	278
+30 mins.	67	5	36	108	10	**95**	45	**150**	19	110	11	140	111	129	**49**	**289**
+45 mins.	**71**	**7**	**48**	**126**	**13**	75	**51**	139	**24**	103	**19**	146	98	106	36	240
Total Volume	248	20	164	432	35	324	169	528	75	465	54	594	431	502	162	1095
% App. Total	57.4	4.6	38		6.6	61.4	32		12.6	78.3	9.1		39.4	45.8	14.8	
PHF	.873	.714	.854	.857	.673	.853	.828	.880	.781	.785	.711	.825	.962	.916	.827	.947

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City of Highlands
N/S: I-210 NB Ramps/Tennessee Street
E/W: San Bernardino Avenue
Weather: Clear

File Name : 13_HLD_210N_Tenn_San Bern PM
Site Code : 06718128
Start Date : 2/21/2018
Page No : 1

Groups Printed- Large 2 Axle Vehicles

	I-210 Northbound Ramps Southbound				San Bernardino Avenue Westbound				Tennessee Street Northbound				San Bernardino Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	1	0	3	4	0	3	0	3	1	1	0	2	2	2	1	5	14
04:15 PM	1	0	0	1	0	0	0	0	0	1	0	1	0	1	0	1	3
04:30 PM	0	0	0	0	0	2	0	2	1	1	2	4	0	1	1	2	8
04:45 PM	1	0	0	1	0	0	0	0	0	2	0	2	0	2	0	2	5
Total	3	0	3	6	0	5	0	5	2	5	2	9	2	6	2	10	30
05:00 PM	0	0	0	0	0	1	0	1	1	1	0	2	0	1	0	1	4
05:15 PM	0	0	0	0	0	2	3	5	0	0	0	0	1	0	0	1	6
05:30 PM	0	0	0	0	0	2	0	2	0	1	0	1	0	1	0	1	4
05:45 PM	1	0	1	2	0	0	0	0	0	0	0	0	0	0	1	1	3
Total	1	0	1	2	0	5	3	8	1	2	0	3	1	2	1	4	17
Grand Total	4	0	4	8	0	10	3	13	3	7	2	12	3	8	3	14	47
Apprch %	50	0	50		0	76.9	23.1		25	58.3	16.7		21.4	57.1	21.4		
Total %	8.5	0	8.5	17	0	21.3	6.4	27.7	6.4	14.9	4.3	25.5	6.4	17	6.4	29.8	

	I-210 Northbound Ramps Southbound				San Bernardino Avenue Westbound				Tennessee Street Northbound				San Bernardino Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	0	0	0	0	0	1	0	1	**1**	**1**	0	**2**	0	**1**	0	**1**	4
05:15 PM	0	0	0	0	0	**2**	**3**	**5**	0	0	0	0	**1**	0	0	1	**6**
05:30 PM	0	0	0	0	0	2	0	2	0	1	0	1	0	1	0	1	4
05:45 PM	**1**	0	**1**	**2**	0	0	0	0	0	0	0	0	0	0	**1**	1	3
Total Volume	1	0	1	2	0	5	3	8	1	2	0	3	1	2	1	4	17
% App. Total	50	0	50		0	62.5	37.5		33.3	66.7	0		25	50	25		
PHF	.250	.000	.250	.250	.000	.625	.250	.400	.250	.500	.000	.375	.250	.500	.250	1.00	.708

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City of Highlands
N/S: I-210 NB Ramps/Tennessee Street
E/W: San Bernardino Avenue
Weather: Clear

File Name : 13_HLD_210N_Tenn_San Bern PM
Site Code : 06718128
Start Date : 2/21/2018
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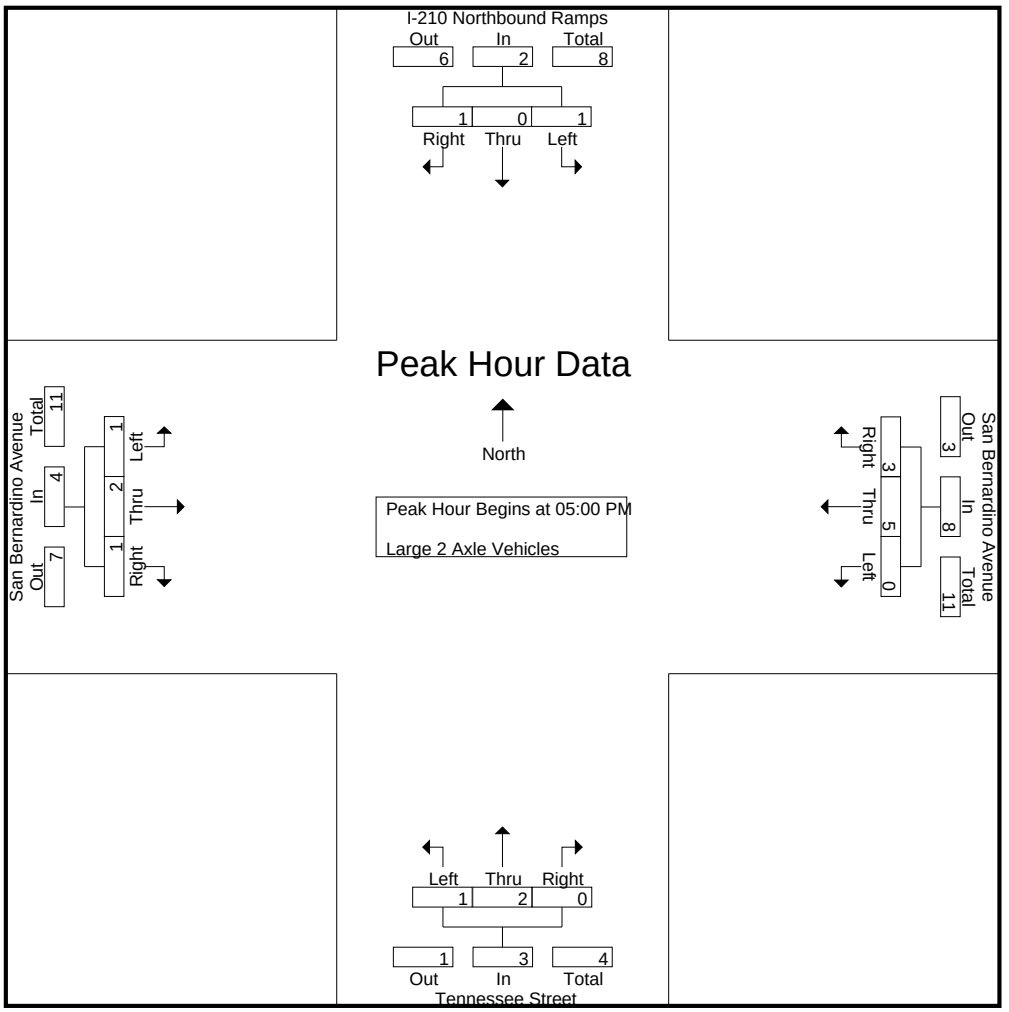

Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	05:00 PM				05:00 PM				05:00 PM				05:00 PM			
+0 mins.	0	0	0	0	0	1	0	1	**1**	**1**	0	**2**	0	**1**	0	**1**
+15 mins.	0	0	0	0	0	**2**	**3**	**5**	0	0	0	0	**1**	0	0	1
+30 mins.	0	0	0	0	0	2	0	2	0	1	0	1	0	1	0	1
+45 mins.	**1**	0	**1**	**2**	0	0	0	0	0	0	0	0	0	0	**1**	1
Total Volume	1	0	1	2	0	5	3	8	1	2	0	3	1	2	1	4
% App. Total	50	0	50		0	62.5	37.5		33.3	66.7	0		25	50	25	
PHF	.250	.000	.250	.250	.000	.625	.250	.400	.250	.500	.000	.375	.250	.500	.250	1.000

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City of Highlands
N/S: I-210 NB Ramps/Tennessee Street
E/W: San Bernardino Avenue
Weather: Clear

File Name : 13_HLD_210N_Tenn_San Bern PM
Site Code : 06718128
Start Date : 2/21/2018
Page No : 1

Groups Printed- 3 Axle Vehicles

	I-210 Northbound Ramps Southbound				San Bernardino Avenue Westbound				Tennessee Street Northbound				San Bernardino Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	1	1	0	0	0	0	0	3	0	3	0	0	1	1	5
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	1	1	0	0	0	0	0	2	0	2	0	0	0	0	3
04:45 PM	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	2
Total	0	0	2	2	0	0	0	0	0	7	0	7	0	0	1	1	10
05:00 PM	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
Total	1	0	0	1	0	0	0	0	0	0	0	0	0	1	0	1	2
Grand Total	1	0	2	3	0	0	0	0	0	7	0	7	0	1	1	2	12
Apprch %	33.3	0	66.7		0	0	0		0	100	0		0	50	50		
Total %	8.3	0	16.7	25	0	0	0	0	0	58.3	0	58.3	0	8.3	8.3	16.7	

	I-210 Northbound Ramps Southbound				San Bernardino Avenue Westbound				Tennessee Street Northbound				San Bernardino Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	**1**	0	0	**1**	0	0	0	0	0	0	0	0	0	0	0	0	**1**
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**	0	**1**	1
Total Volume	1	0	0	1	0	0	0	0	0	0	0	0	0	1	0	1	2
% App. Total	100	0	0		0	0	0		0	0	0		0	100	0		
PHF	.250	.000	.000	.250	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250	.000	.250	.500

Counts Unlimited
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City of Highlands
N/S: I-210 NB Ramps/Tennessee Street
E/W: San Bernardino Avenue
Weather: Clear

File Name : 13_HLD_210N_Tenn_San Bern PM
Site Code : 06718128
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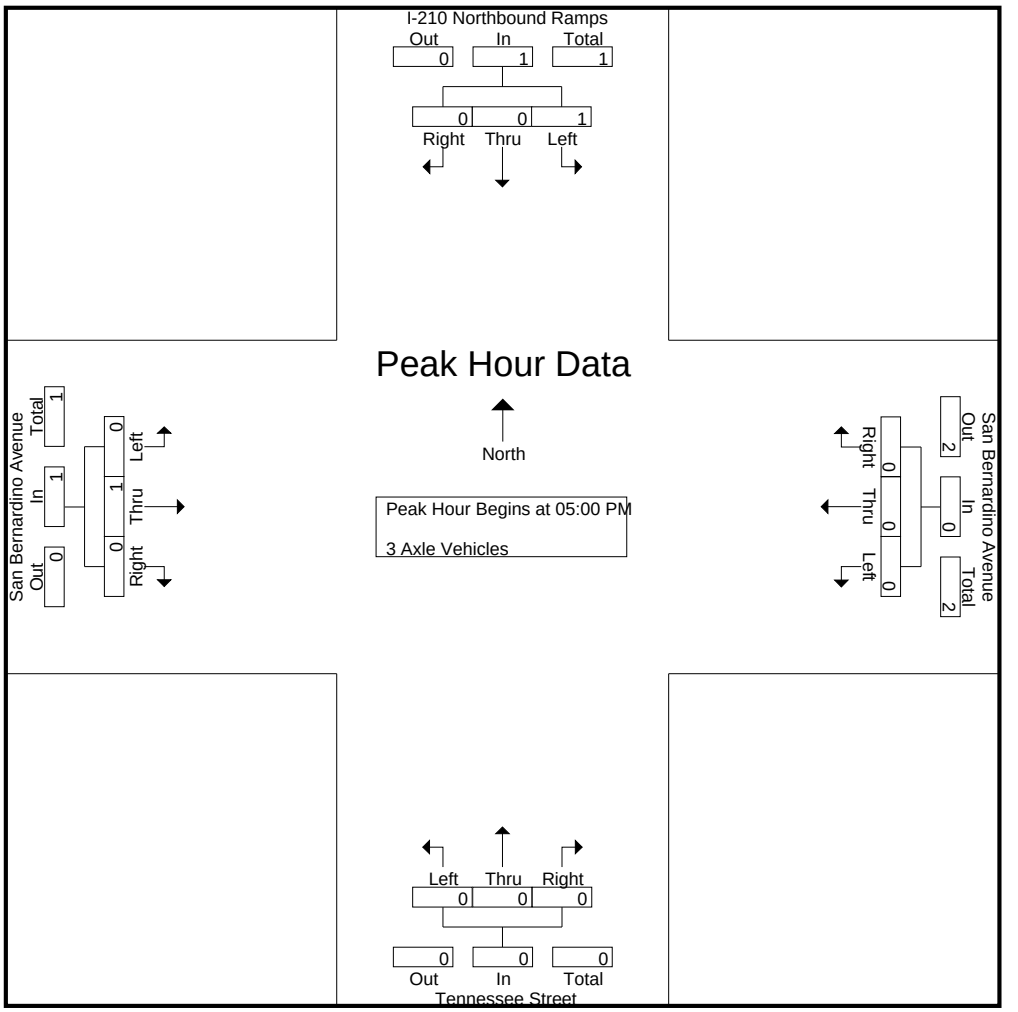

Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	05:00 PM				05:00 PM				05:00 PM				05:00 PM			
+0 mins.	**1**	0	0	**1**	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**	0	**1**
Total Volume	1	0	0	1	0	0	0	0	0	0	0	0	0	1	0	1
% App. Total	100	0	0		0	0	0		0	0	0		0	100	0	
PHF	.250	.000	.000	.250	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250	.000	.250

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City of Highlands
N/S: I-210 NB Ramps/Tennessee Street
E/W: San Bernardino Avenue
Weather: Clear

File Name : 13_HLD_210N_Tenn_San Bern PM
Site Code : 06718128
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Groups Printed- 4+ Axle Trucks

	I-210 Northbound Ramps Southbound				San Bernardino Avenue Westbound				Tennessee Street Northbound				San Bernardino Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	1	1	2
04:15 PM	0	0	3	3	0	0	0	0	0	0	0	0	0	0	0	0	3
04:30 PM	0	0	4	4	0	0	0	0	0	0	0	0	0	0	0	0	4
04:45 PM	1	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	2
Total	1	0	8	9	0	0	0	0	1	0	0	1	0	0	1	1	11
05:00 PM	1	0	0	1	0	1	0	1	0	0	0	0	2	0	0	2	4
05:15 PM	0	0	0	0	0	1	0	1	1	0	0	1	0	2	0	2	4
05:30 PM	0	0	0	0	0	1	0	1	0	1	0	1	0	0	0	0	2
05:45 PM	0	1	1	2	0	0	0	0	0	0	0	0	0	0	0	0	2
Total	1	1	1	3	0	3	0	3	1	1	0	2	2	2	0	4	12
Grand Total	2	1	9	12	0	3	0	3	2	1	0	3	2	2	1	5	23
Apprch %	16.7	8.3	75		0	100	0		66.7	33.3	0		40	40	20		
Total %	8.7	4.3	39.1	52.2	0	13	0	13	8.7	4.3	0	13	8.7	8.7	4.3	21.7	

	I-210 Northbound Ramps Southbound				San Bernardino Avenue Westbound				Tennessee Street Northbound				San Bernardino Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	**1**	0	0	1	0	**1**	0	**1**	0	0	0	0	**2**	0	0	**2**	**4**
05:15 PM	0	0	0	0	0	1	0	1	**1**	0	0	**1**	0	**2**	0	2	4
05:30 PM	0	0	0	0	0	1	0	1	0	**1**	0	1	0	0	0	0	2
05:45 PM	0	**1**	**1**	**2**	0	0	0	0	0	0	0	0	0	0	0	0	2
Total Volume	1	1	1	3	0	3	0	3	1	1	0	2	2	2	0	4	12
% App. Total	33.3	33.3	33.3		0	100	0		50	50	0		50	50	0		
PHF	.250	.250	.250	.375	.000	.750	.000	.750	.250	.250	.000	.500	.250	.250	.000	.500	.750

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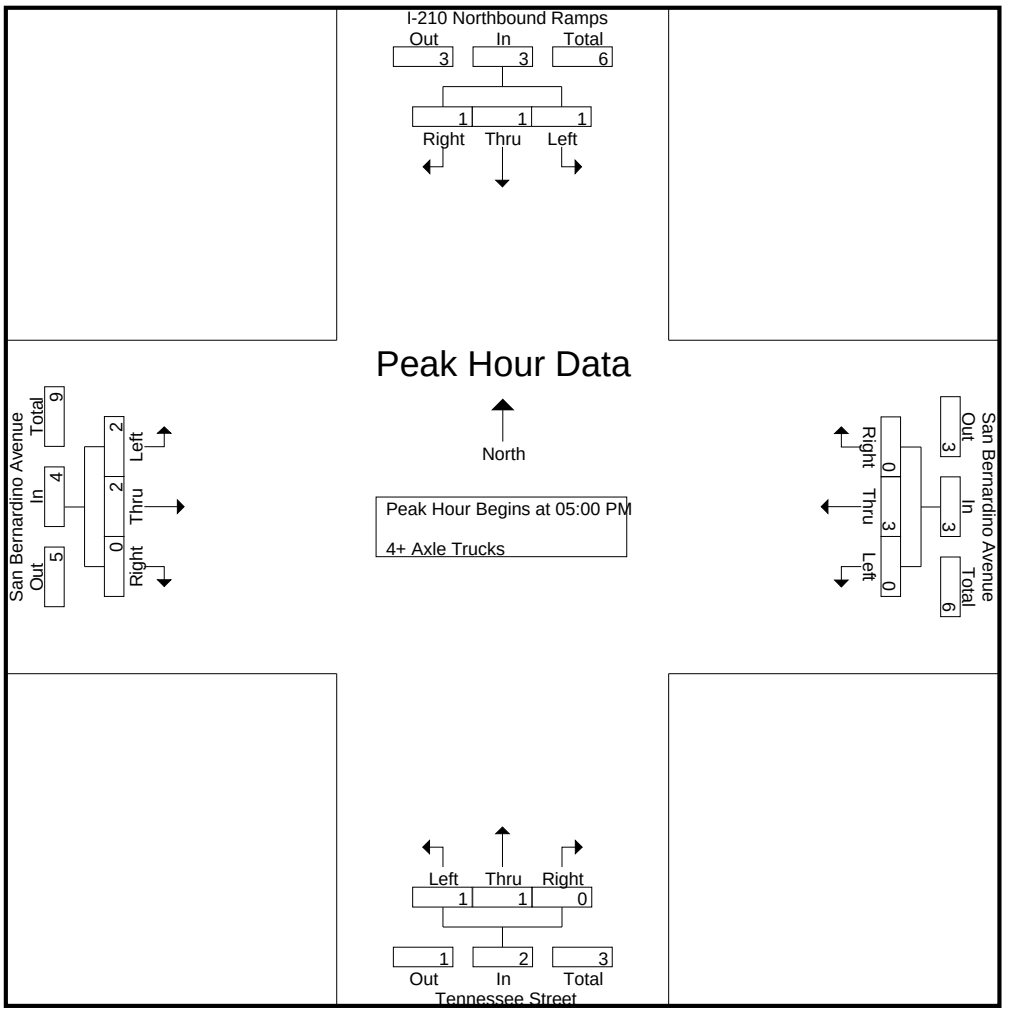
City of Highlands
N/S: I-210 NB Ramps/Tennessee Street
E/W: San Bernardino Avenue
Weather: Clear

File Name : 13_HLD_210N_Tenn_San Bern PM
Site Code : 06718128
Start Date : 2/21/2018
Page No : 2



Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	05:00 PM				05:00 PM				05:00 PM				05:00 PM			
+0 mins.	**1**	0	0	1	0	**1**	0	**1**	0	0	0	0	**2**	0	0	**2**
+15 mins.	0	0	0	0	0	1	0	1	**1**	0	0	**1**	0	**2**	0	2
+30 mins.	0	0	0	0	0	1	0	1	0	**1**	0	1	0	0	0	0
+45 mins.	0	**1**	**1**	**2**	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	1	1	1	3	0	3	0	3	1	1	0	2	2	2	0	4
% App. Total	33.3	33.3	33.3		0	100	0		50	50	0		50	50	0	
PHF	.250	.250	.250	.375	.000	.750	.000	.750	.250	.250	.000	.500	.250	.250	.000	.500

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City of Redlands
N/S: Alabama Street
E/W: East 3rd Street
Weather: Clear

File Name : 19_RED_Alabama_3rd AM
Site Code : 06718128
Start Date : 2/21/2018
Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Alabama Street Southbound				East 3rd Street Westbound				Alabama Street Northbound				East 3rd Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	3	171	46	220	0	1	4	5	24	73	1	98	22	1	28	51	374
07:15 AM	2	181	39	222	0	0	6	6	42	68	1	111	15	0	60	75	414
07:30 AM	1	114	53	168	0	0	2	2	33	61	0	94	18	0	38	56	320
07:45 AM	5	138	72	215	2	1	5	8	47	41	2	90	22	1	55	78	391
Total	11	604	210	825	2	2	17	21	146	243	4	393	77	2	181	260	1499
08:00 AM	1	63	38	102	1	1	3	5	30	46	0	76	18	0	27	45	228
08:15 AM	1	61	25	87	0	1	0	1	20	55	1	76	14	0	26	40	204
08:30 AM	5	88	32	125	0	1	2	3	29	47	0	76	20	3	41	64	268
08:45 AM	4	84	20	108	0	0	3	3	11	30	0	41	19	2	42	63	215
Total	11	296	115	422	1	3	8	12	90	178	1	269	71	5	136	212	915
Grand Total	22	900	325	1247	3	5	25	33	236	421	5	662	148	7	317	472	2414
Apprch %	1.8	72.2	26.1		9.1	15.2	75.8		35.6	63.6	0.8		31.4	1.5	67.2		
Total %	0.9	37.3	13.5	51.7	0.1	0.2	1	1.4	9.8	17.4	0.2	27.4	6.1	0.3	13.1	19.6	
Passenger Vehicles	14	856	310	1180	1	3	10	14	189	374	5	568	115	7	264	386	2148
% Passenger Vehicles	63.6	95.1	95.4	94.6	33.3	60	40	42.4	80.1	88.8	100	85.8	77.7	100	83.3	81.8	89
Large 2 Axle Vehicles	3	12	7	22	2	1	9	12	2	10	0	12	7	0	9	16	62
% Large 2 Axle Vehicles	13.6	1.3	2.2	1.8	66.7	20	36	36.4	0.8	2.4	0	1.8	4.7	0	2.8	3.4	2.6
3 Axle Vehicles	2	12	4	18	0	1	5	6	23	19	0	42	2	0	17	19	85
% 3 Axle Vehicles	9.1	1.3	1.2	1.4	0	20	20	18.2	9.7	4.5	0	6.3	1.4	0	5.4	4	3.5
4+ Axle Trucks	3	20	4	27	0	0	1	1	22	18	0	40	24	0	27	51	119
% 4+ Axle Trucks	13.6	2.2	1.2	2.2	0	0	4	3	9.3	4.3	0	6	16.2	0	8.5	10.8	4.9

	Alabama Street Southbound				East 3rd Street Westbound				Alabama Street Northbound				East 3rd Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	3	171	46	220	0	**1**	4	5	24	**73**	1	98	**22**	**1**	28	51	374
07:15 AM	2	**181**	39	**222**	0	0	**6**	6	42	68	1	**111**	15	0	**60**	75	**414**
07:30 AM	1	114	53	168	0	0	2	2	33	61	0	94	18	0	38	56	320
07:45 AM	**5**	138	**72**	215	**2**	1	5	**8**	**47**	41	**2**	90	22	1	55	**78**	391
Total Volume	11	604	210	825	2	2	17	21	146	243	4	393	77	2	181	260	1499
% App. Total	1.3	73.2	25.5		9.5	9.5	81		37.2	61.8	1		29.6	0.8	69.6		
PHF	.550	.834	.729	.929	.250	.500	.708	.656	.777	.832	.500	.885	.875	.500	.754	.833	.905

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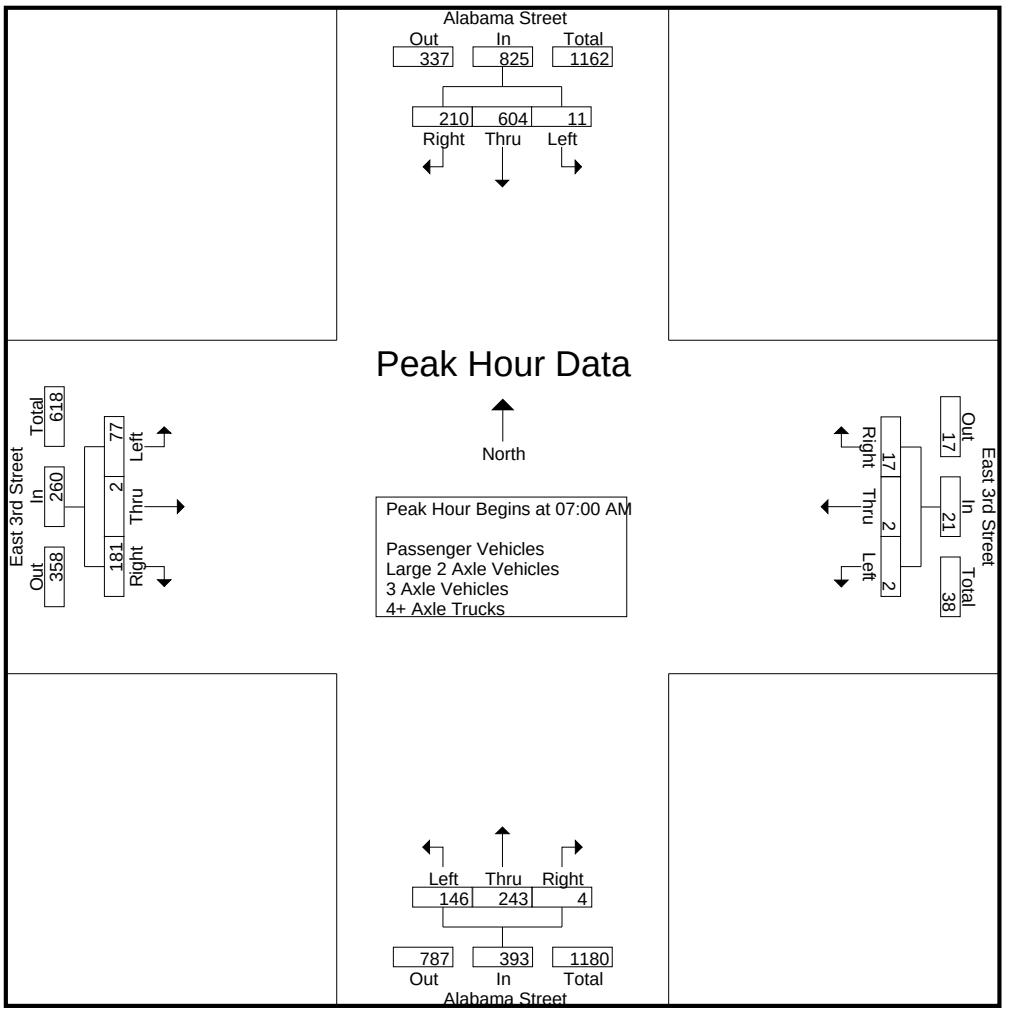
City of Redlands
N/S: Alabama Street
E/W: East 3rd Street
Weather: Clear

File Name : 19_RED_Alabama_3rd AM
Site Code : 06718128
Start Date : 2/21/2018
Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM				07:00 AM				07:00 AM				07:00 AM			
+0 mins.	3	171	46	220	0	**1**	4	5	24	**73**	1	98	**22**	**1**	28	51
+15 mins.	2	**181**	39	**222**	0	0	**6**	6	42	68	1	**111**	15	0	**60**	75
+30 mins.	1	114	53	168	0	0	2	2	33	61	0	94	18	0	38	56
+45 mins.	**5**	138	**72**	215	**2**	1	5	**8**	**47**	41	**2**	90	22	1	55	**78**
Total Volume	11	604	210	825	2	2	17	21	146	243	4	393	77	2	181	260
% App. Total	1.3	73.2	25.5		9.5	9.5	81		37.2	61.8	1		29.6	0.8	69.6	
PHF	.550	.834	.729	.929	.250	.500	.708	.656	.777	.832	.500	.885	.875	.500	.754	.833

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City of Redlands
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Weather: Clear

File Name : 19_RED_Alabama_3rd AM
Site Code : 06718128
Start Date : 2/21/2018
Page No : 1

Groups Printed- Passenger Vehicles

	Alabama Street Southbound				East 3rd Street Westbound				Alabama Street Northbound				East 3rd Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	3	165	44	212	0	1	1	2	18	64	1	83	17	1	25	43	340
07:15 AM	0	175	38	213	0	0	4	4	37	64	1	102	9	0	50	59	378
07:30 AM	1	110	53	164	0	0	0	0	28	57	0	85	14	0	31	45	294
07:45 AM	4	132	70	206	1	0	1	2	45	31	2	78	20	1	46	67	353
Total	8	582	205	795	1	1	6	8	128	216	4	348	60	2	152	214	1365
08:00 AM	0	57	36	93	0	0	0	0	21	39	0	60	16	0	22	38	191
08:15 AM	0	55	24	79	0	1	0	1	12	51	1	64	8	0	22	30	174
08:30 AM	3	83	26	112	0	1	2	3	19	43	0	62	15	3	34	52	229
08:45 AM	3	79	19	101	0	0	2	2	9	25	0	34	16	2	34	52	189
Total	6	274	105	385	0	2	4	6	61	158	1	220	55	5	112	172	783
Grand Total	14	856	310	1180	1	3	10	14	189	374	5	568	115	7	264	386	2148
Apprch %	1.2	72.5	26.3		7.1	21.4	71.4		33.3	65.8	0.9		29.8	1.8	68.4		
Total %	0.7	39.9	14.4	54.9	0	0.1	0.5	0.7	8.8	17.4	0.2	26.4	5.4	0.3	12.3	18	

	Alabama Street Southbound				East 3rd Street Westbound				Alabama Street Northbound				East 3rd Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	3	165	44	212	0	**1**	1	2	18	**64**	1	83	17	**1**	25	43	340
07:15 AM	0	**175**	38	**213**	0	0	**4**	**4**	37	64	1	**102**	9	0	**50**	59	**378**
07:30 AM	1	110	53	164	0	0	0	0	28	57	0	85	14	0	31	45	294
07:45 AM	**4**	132	**70**	206	**1**	0	1	2	**45**	31	**2**	78	**20**	1	46	**67**	353
Total Volume	8	582	205	795	1	1	6	8	128	216	4	348	60	2	152	214	1365
% App. Total	1	73.2	25.8		12.5	12.5	75		36.8	62.1	1.1		28	0.9	71		
PHF	.500	.831	.732	.933	.250	.250	.375	.500	.711	.844	.500	.853	.750	.500	.760	.799	.903

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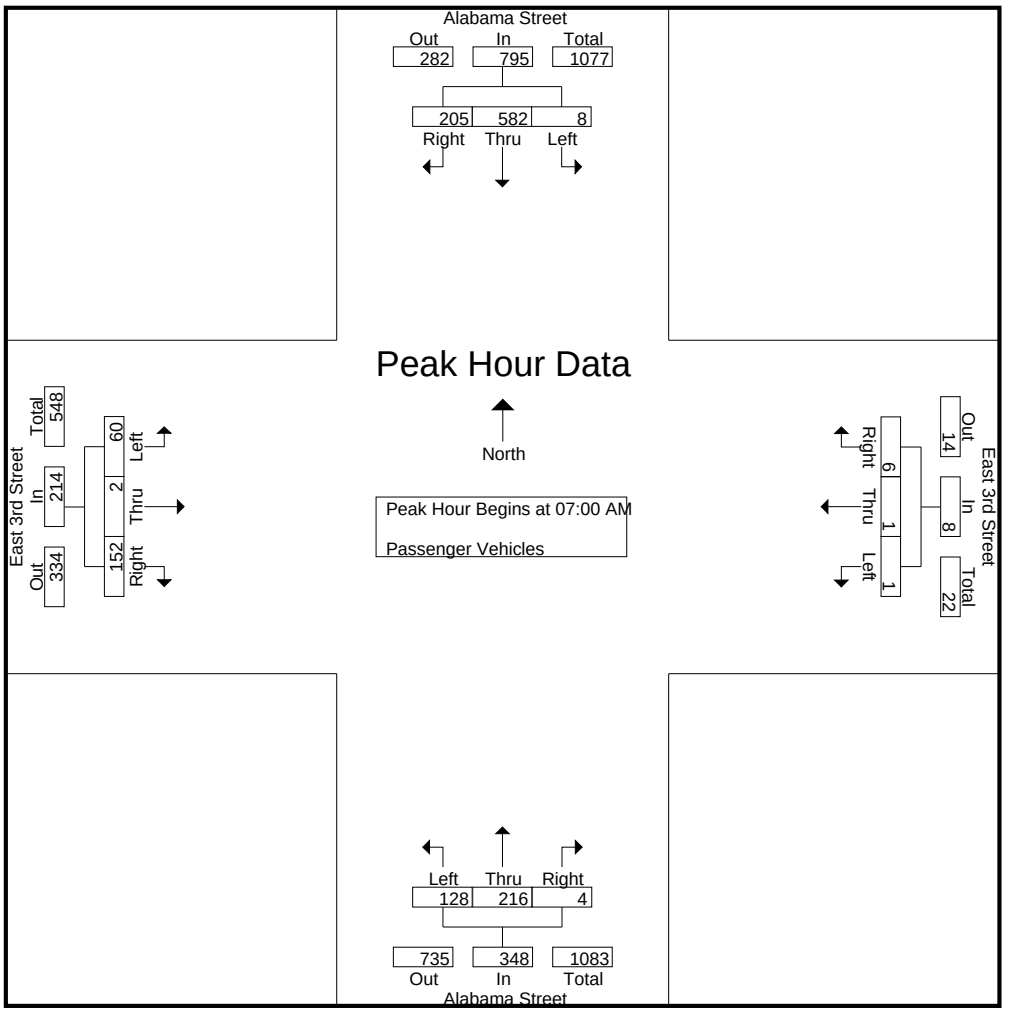
City of Redlands
N/S: Alabama Street
E/W: East 3rd Street
Weather: Clear

File Name : 19_RED_Alabama_3rd AM
Site Code : 06718128
Start Date : 2/21/2018
Page No : 2



Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM				07:00 AM				07:00 AM				07:00 AM			
+0 mins.	3	165	44	212	0	**1**	1	2	18	**64**	1	83	17	**1**	25	43
+15 mins.	0	**175**	38	**213**	0	0	**4**	**4**	37	64	1	**102**	9	0	**50**	59
+30 mins.	1	110	53	164	0	0	0	0	28	57	0	85	14	0	31	45
+45 mins.	**4**	132	**70**	206	**1**	0	1	2	**45**	31	**2**	78	**20**	1	46	**67**
Total Volume	8	582	205	795	1	1	6	8	128	216	4	348	60	2	152	214
% App. Total	1	73.2	25.8		12.5	12.5	75		36.8	62.1	1.1		28	0.9	71	
PHF	.500	.831	.732	.933	.250	.250	.375	.500	.711	.844	.500	.853	.750	.500	.760	.799

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City of Redlands
N/S: Alabama Street
E/W: East 3rd Street
Weather: Clear

File Name : 19_RED_Alabama_3rd AM
Site Code : 06718128
Start Date : 2/21/2018
Page No : 1

Groups Printed- Large 2 Axle Vehicles

	Alabama Street Southbound				East 3rd Street Westbound				Alabama Street Northbound				East 3rd Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	3	1	4	0	0	1	1	0	3	0	3	0	0	1	1	9
07:15 AM	1	3	0	4	0	0	2	2	0	2	0	2	3	0	2	5	13
07:30 AM	0	0	0	0	0	0	1	1	0	1	0	1	0	0	1	1	3
07:45 AM	0	2	0	2	1	0	1	2	0	1	0	1	0	0	1	1	6
Total	1	8	1	10	1	0	5	6	0	7	0	7	3	0	5	8	31
08:00 AM	1	1	1	3	1	1	3	5	0	2	0	2	0	0	2	2	12
08:15 AM	0	2	0	2	0	0	0	0	0	1	0	1	2	0	0	2	5
08:30 AM	0	0	4	4	0	0	0	0	2	0	0	2	2	0	0	2	8
08:45 AM	1	1	1	3	0	0	1	1	0	0	0	0	0	0	2	2	6
Total	2	4	6	12	1	1	4	6	2	3	0	5	4	0	4	8	31
Grand Total	3	12	7	22	2	1	9	12	2	10	0	12	7	0	9	16	62
Apprch %	13.6	54.5	31.8		16.7	8.3	75		16.7	83.3	0		43.8	0	56.2		
Total %	4.8	19.4	11.3	35.5	3.2	1.6	14.5	19.4	3.2	16.1	0	19.4	11.3	0	14.5	25.8	

	Alabama Street Southbound				East 3rd Street Westbound				Alabama Street Northbound				East 3rd Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	**3**	**1**	**4**	0	0	1	1	0	**3**	0	**3**	0	0	1	1	9
07:15 AM	**1**	3	0	4	0	0	**2**	**2**	0	2	0	2	**3**	0	**2**	**5**	**13**
07:30 AM	0	0	0	0	0	0	1	1	0	1	0	1	0	0	1	1	3
07:45 AM	0	2	0	2	**1**	0	1	2	0	1	0	1	0	0	1	1	6
Total Volume	1	8	1	10	1	0	5	6	0	7	0	7	3	0	5	8	31
% App. Total	10	80	10		16.7	0	83.3		0	100	0		37.5	0	62.5		
PHF	.250	.667	.250	.625	.250	.000	.625	.750	.000	.583	.000	.583	.250	.000	.625	.400	.596

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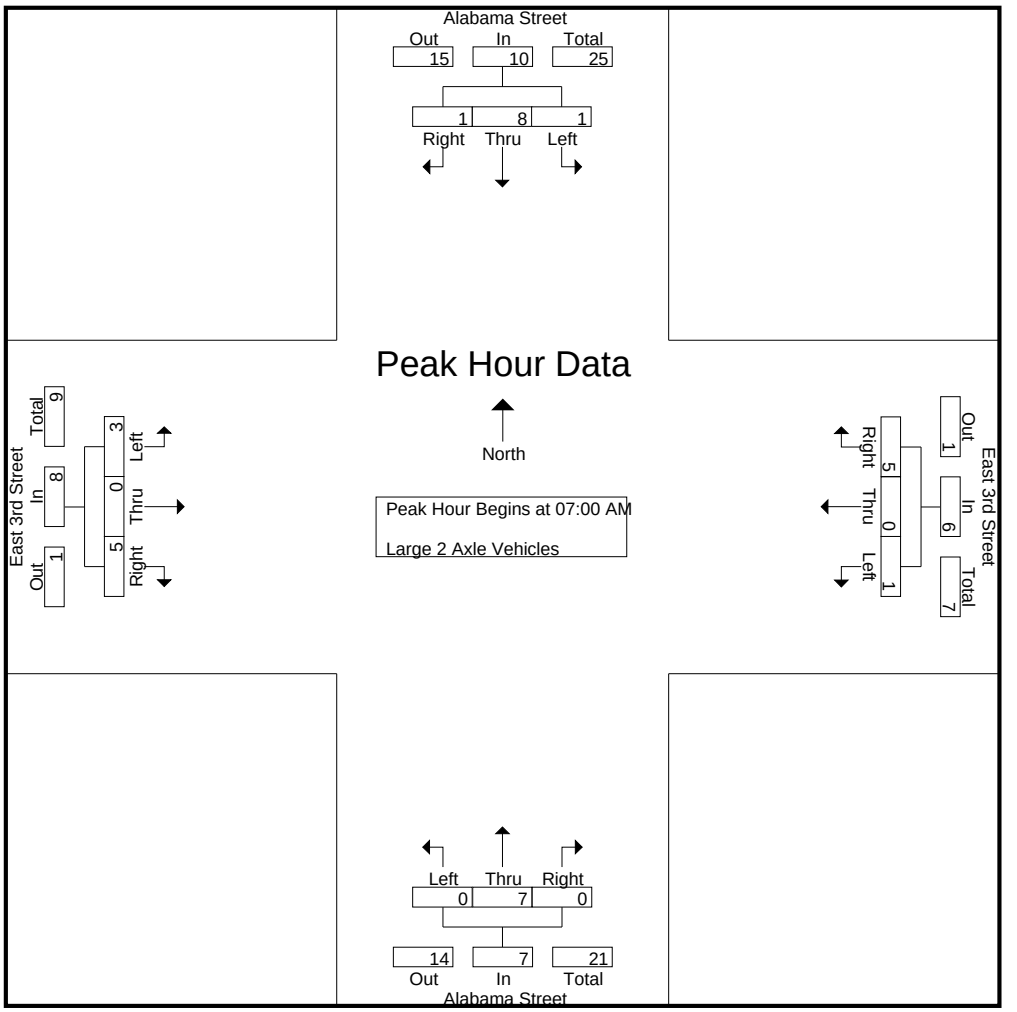
City of Redlands
N/S: Alabama Street
E/W: East 3rd Street
Weather: Clear

File Name : 19_RED_Alabama_3rd AM
Site Code : 06718128
Start Date : 2/21/2018
Page No : 2



Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM				07:00 AM				07:00 AM				07:00 AM			
+0 mins.	0	**3**	**1**	**4**	0	0	1	1	0	**3**	0	**3**	0	0	1	1
+15 mins.	**1**	3	0	4	0	0	**2**	**2**	0	2	0	2	**3**	0	**2**	**5**
+30 mins.	0	0	0	0	0	0	1	1	0	1	0	1	0	0	1	1
+45 mins.	0	2	0	2	**1**	0	1	2	0	1	0	1	0	0	1	1
Total Volume	1	8	1	10	1	0	5	6	0	7	0	7	3	0	5	8
% App. Total	10	80	10		16.7	0	83.3		0	100	0		37.5	0	62.5	
PHF	.250	.667	.250	.625	.250	.000	.625	.750	.000	.583	.000	.583	.250	.000	.625	.400

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City of Redlands
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E/W: East 3rd Street
Weather: Clear

File Name : 19_RED_Alabama_3rd AM
Site Code : 06718128
Start Date : 2/21/2018
Page No : 1

Groups Printed- 3 Axle Vehicles

	Alabama Street Southbound				East 3rd Street Westbound				Alabama Street Northbound				East 3rd Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	2	0	2	0	0	2	2	2	4	0	6	0	0	0	0	10
07:15 AM	0	0	1	1	0	0	0	0	1	1	0	2	0	0	4	4	7
07:30 AM	0	1	0	1	0	0	1	1	3	2	0	5	0	0	1	1	8
07:45 AM	1	1	1	3	0	1	2	3	1	5	0	6	1	0	4	5	17
Total	1	4	2	7	0	1	5	6	7	12	0	19	1	0	9	10	42
08:00 AM	0	4	1	5	0	0	0	0	4	2	0	6	0	0	1	1	12
08:15 AM	0	1	1	2	0	0	0	0	5	2	0	7	1	0	3	4	13
08:30 AM	1	2	0	3	0	0	0	0	6	2	0	8	0	0	2	2	13
08:45 AM	0	1	0	1	0	0	0	0	1	1	0	2	0	0	2	2	5
Total	1	8	2	11	0	0	0	0	16	7	0	23	1	0	8	9	43
Grand Total	2	12	4	18	0	1	5	6	23	19	0	42	2	0	17	19	85
Apprch %	11.1	66.7	22.2		0	16.7	83.3		54.8	45.2	0		10.5	0	89.5		
Total %	2.4	14.1	4.7	21.2	0	1.2	5.9	7.1	27.1	22.4	0	49.4	2.4	0	20	22.4	

	Alabama Street Southbound				East 3rd Street Westbound				Alabama Street Northbound				East 3rd Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	**2**	0	2	0	0	**2**	2	2	4	0	**6**	0	0	0	0	10
07:15 AM	0	0	**1**	1	0	0	0	0	1	1	0	2	0	0	**4**	4	7
07:30 AM	0	1	0	1	0	0	1	1	**3**	2	0	5	0	0	1	1	8
07:45 AM	**1**	1	1	**3**	0	**1**	2	**3**	1	**5**	0	6	**1**	0	4	**5**	**17**
Total Volume	1	4	2	7	0	1	5	6	7	12	0	19	1	0	9	10	42
% App. Total	14.3	57.1	28.6		0	16.7	83.3		36.8	63.2	0		10	0	90		
PHF	.250	.500	.500	.583	.000	.250	.625	.500	.583	.600	.000	.792	.250	.000	.563	.500	.618

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City of Redlands
N/S: Alabama Street
E/W: East 3rd Street
Weather: Clear

File Name : 19_RED_Alabama_3rd AM
Site Code : 06718128
Start Date : 2/21/2018
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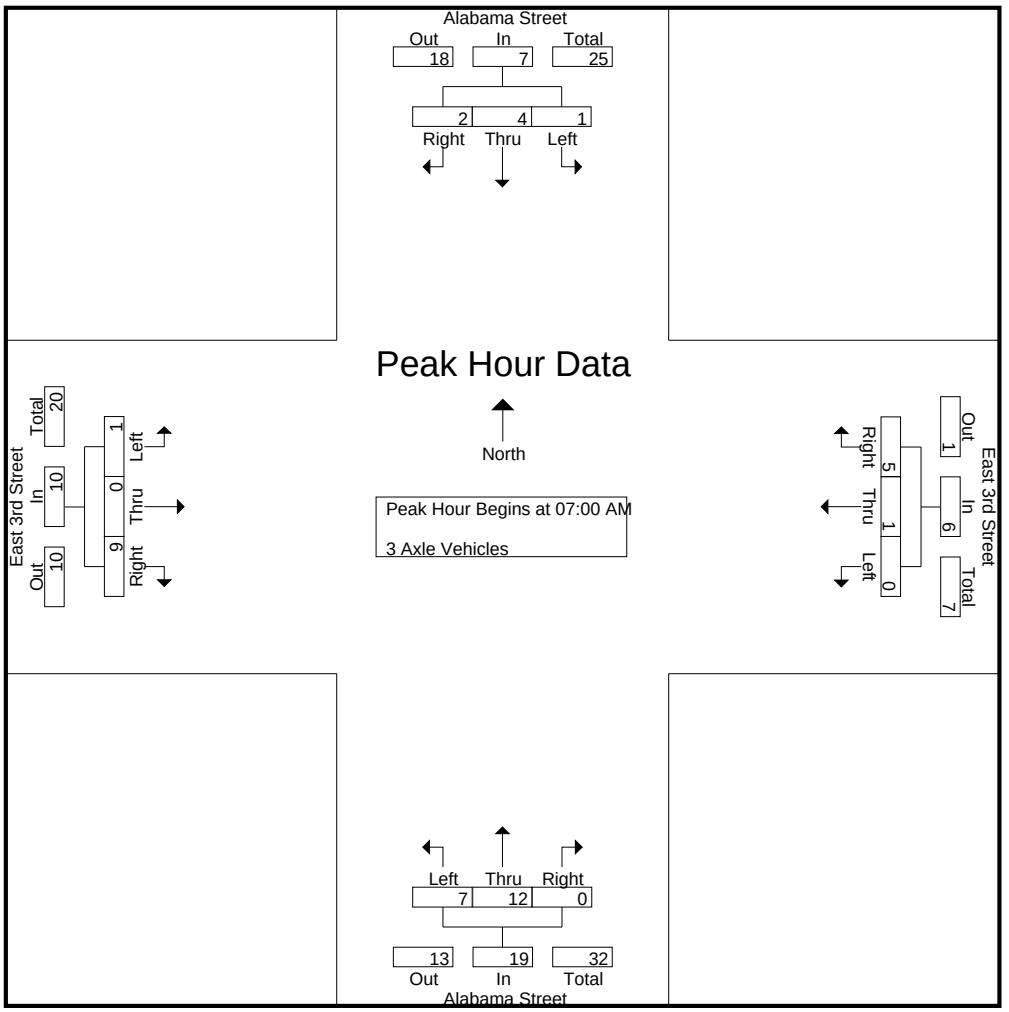

Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM				07:00 AM				07:00 AM				07:00 AM			
+0 mins.	0	**2**	0	2	0	0	**2**	2	2	4	0	**6**	0	0	0	0
+15 mins.	0	0	**1**	1	0	0	0	0	1	1	0	2	0	0	**4**	4
+30 mins.	0	1	0	1	0	0	1	1	**3**	2	0	5	0	0	1	1
+45 mins.	**1**	1	1	**3**	0	**1**	2	**3**	1	**5**	0	6	**1**	0	4	**5**
Total Volume	1	4	2	7	0	1	5	6	7	12	0	19	1	0	9	10
% App. Total	14.3	57.1	28.6		0	16.7	83.3		36.8	63.2	0		10	0	90	
PHF	.250	.500	.500	.583	.000	.250	.625	.500	.583	.600	.000	.792	.250	.000	.563	.500

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Groups Printed- 4+ Axle Trucks

	Alabama Street Southbound				East 3rd Street Westbound				Alabama Street Northbound				East 3rd Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	1	1	2	0	0	0	0	4	2	0	6	5	0	2	7	15
07:15 AM	1	3	0	4	0	0	0	0	4	1	0	5	3	0	4	7	16
07:30 AM	0	3	0	3	0	0	0	0	2	1	0	3	4	0	5	9	15
07:45 AM	0	3	1	4	0	0	1	1	1	4	0	5	1	0	4	5	15
Total	1	10	2	13	0	0	1	1	11	8	0	19	13	0	15	28	61
08:00 AM	0	1	0	1	0	0	0	0	5	3	0	8	2	0	2	4	13
08:15 AM	1	3	0	4	0	0	0	0	3	1	0	4	3	0	1	4	12
08:30 AM	1	3	2	6	0	0	0	0	2	2	0	4	3	0	5	8	18
08:45 AM	0	3	0	3	0	0	0	0	1	4	0	5	3	0	4	7	15
Total	2	10	2	14	0	0	0	0	11	10	0	21	11	0	12	23	58
Grand Total	3	20	4	27	0	0	1	1	22	18	0	40	24	0	27	51	119
Apprch %	11.1	74.1	14.8		0	0	100		55	45	0		47.1	0	52.9		
Total %	2.5	16.8	3.4	22.7	0	0	0.8	0.8	18.5	15.1	0	33.6	20.2	0	22.7	42.9	

	Alabama Street Southbound				East 3rd Street Westbound				Alabama Street Northbound				East 3rd Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	1	**1**	2	0	0	0	0	**4**	2	0	**6**	**5**	0	2	7	15
07:15 AM	**1**	**3**	0	**4**	0	0	0	0	4	1	0	5	3	0	4	7	**16**
07:30 AM	0	3	0	3	0	0	0	0	2	1	0	3	4	0	**5**	**9**	15
07:45 AM	0	3	1	4	0	0	**1**	**1**	1	**4**	0	5	1	0	4	5	15
Total Volume	1	10	2	13	0	0	1	1	11	8	0	19	13	0	15	28	61
% App. Total	7.7	76.9	15.4		0	0	100		57.9	42.1	0		46.4	0	53.6		
PHF	.250	.833	.500	.813	.000	.000	.250	.250	.688	.500	.000	.792	.650	.000	.750	.778	.953

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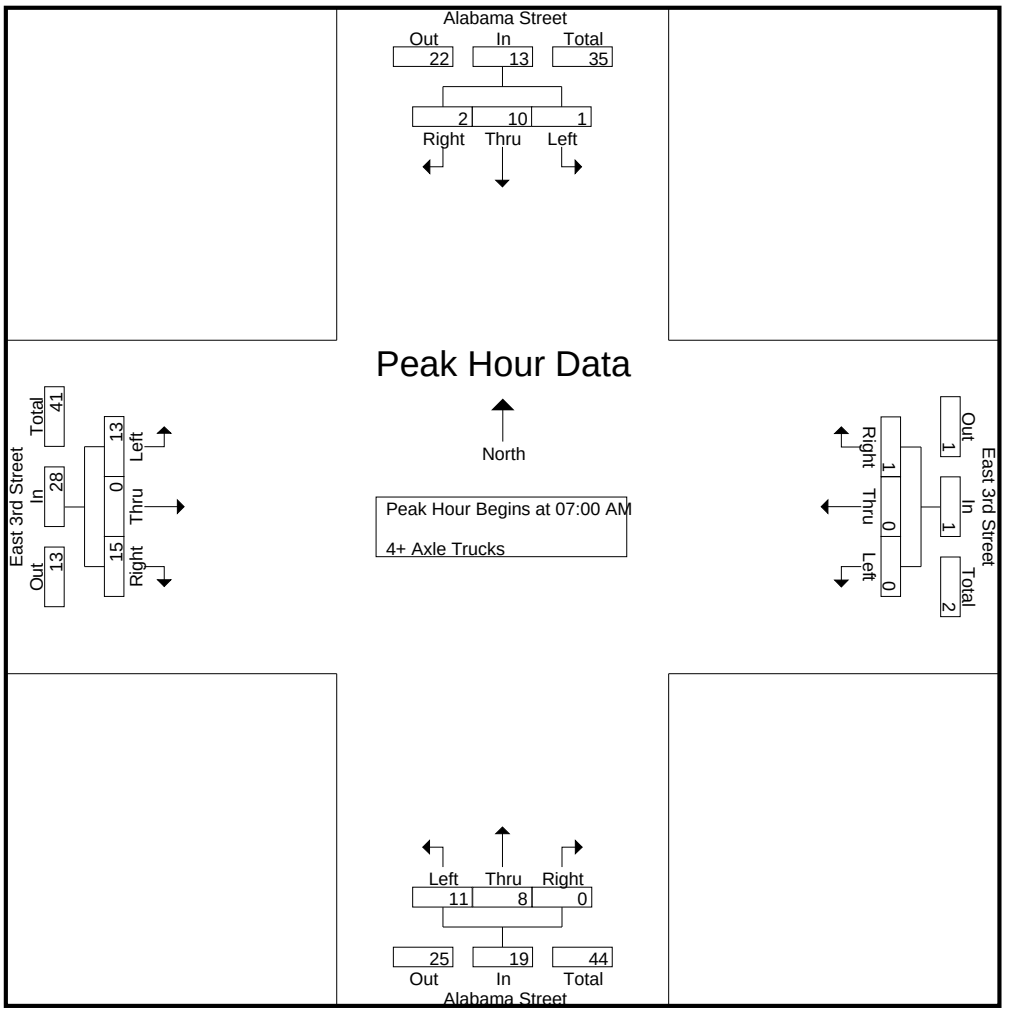

Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM				07:00 AM				07:00 AM				07:00 AM			
+0 mins.	0	1	**1**	2	0	0	0	0	**4**	2	0	**6**	**5**	0	2	7
+15 mins.	**1**	**3**	0	**4**	0	0	0	0	4	1	0	5	3	0	4	7
+30 mins.	0	3	0	3	0	0	0	0	2	1	0	3	4	0	**5**	**9**
+45 mins.	0	3	1	4	0	0	**1**	**1**	1	**4**	0	5	1	0	4	5
Total Volume	1	10	2	13	0	0	1	1	11	8	0	19	13	0	15	28
% App. Total	7.7	76.9	15.4		0	0	100		57.9	42.1	0		46.4	0	53.6	
PHF	.250	.833	.500	.813	.000	.000	.250	.250	.688	.500	.000	.792	.650	.000	.750	.778

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Site Code : 06718128
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Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Alabama Street Southbound				East 3rd Street Westbound				Alabama Street Northbound				East 3rd Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	2	85	18	105	0	2	4	6	35	153	2	190	79	2	55	136	437
04:15 PM	1	85	18	104	0	1	2	3	26	149	2	177	74	3	61	138	422
04:30 PM	1	101	20	122	0	2	6	8	25	168	0	193	93	8	60	161	484
04:45 PM	1	103	26	130	4	2	4	10	50	201	1	252	90	4	72	166	558
Total	5	374	82	461	4	7	16	27	136	671	5	812	336	17	248	601	1901
05:00 PM	1	106	12	119	1	0	6	7	32	158	1	191	99	11	80	190	507
05:15 PM	0	107	14	121	1	1	2	4	32	193	0	225	108	10	98	216	566
05:30 PM	2	111	13	126	2	0	3	5	40	197	0	237	92	2	58	152	520
05:45 PM	0	125	11	136	0	0	4	4	27	198	3	228	91	2	59	152	520
Total	3	449	50	502	4	1	15	20	131	746	4	881	390	25	295	710	2113
Grand Total	8	823	132	963	8	8	31	47	267	1417	9	1693	726	42	543	1311	4014
Apprch %	0.8	85.5	13.7		17	17	66		15.8	83.7	0.5		55.4	3.2	41.4		
Total %	0.2	20.5	3.3	24	0.2	0.2	0.8	1.2	6.7	35.3	0.2	42.2	18.1	1	13.5	32.7	
Passenger Vehicles	4	786	116	906	6	8	26	40	213	1367	6	1586	716	39	498	1253	3785
% Passenger Vehicles	50	95.5	87.9	94.1	75	100	83.9	85.1	79.8	96.5	66.7	93.7	98.6	92.9	91.7	95.6	94.3
Large 2 Axle Vehicles	1	10	4	15	2	0	2	4	4	17	3	24	3	2	3	8	51
% Large 2 Axle Vehicles	12.5	1.2	3	1.6	25	0	6.5	8.5	1.5	1.2	33.3	1.4	0.4	4.8	0.6	0.6	1.3
3 Axle Vehicles	3	2	5	10	0	0	2	2	7	3	0	10	5	1	25	31	53
% 3 Axle Vehicles	37.5	0.2	3.8	1	0	0	6.5	4.3	2.6	0.2	0	0.6	0.7	2.4	4.6	2.4	1.3
4+ Axle Trucks	0	25	7	32	0	0	1	1	43	30	0	73	2	0	17	19	125
% 4+ Axle Trucks	0	3	5.3	3.3	0	0	3.2	2.1	16.1	2.1	0	4.3	0.3	0	3.1	1.4	3.1

	Alabama Street Southbound				East 3rd Street Westbound				Alabama Street Northbound				East 3rd Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	1	103	**26**	**130**	**4**	**2**	4	**10**	**50**	**201**	**1**	**252**	90	4	72	166	558
05:00 PM	1	106	12	119	1	0	**6**	7	32	158	1	191	99	**11**	80	190	507
05:15 PM	0	107	14	121	1	1	2	4	32	193	0	225	**108**	10	**98**	**216**	**566**
05:30 PM	**2**	**111**	13	126	2	0	3	5	40	197	0	237	92	2	58	152	520
Total Volume	4	427	65	496	8	3	15	26	154	749	2	905	389	27	308	724	2151
% App. Total	0.8	86.1	13.1		30.8	11.5	57.7		17	82.8	0.2		53.7	3.7	42.5		
PHF	.500	.962	.625	.954	.500	.375	.625	.650	.770	.932	.500	.898	.900	.614	.786	.838	.950

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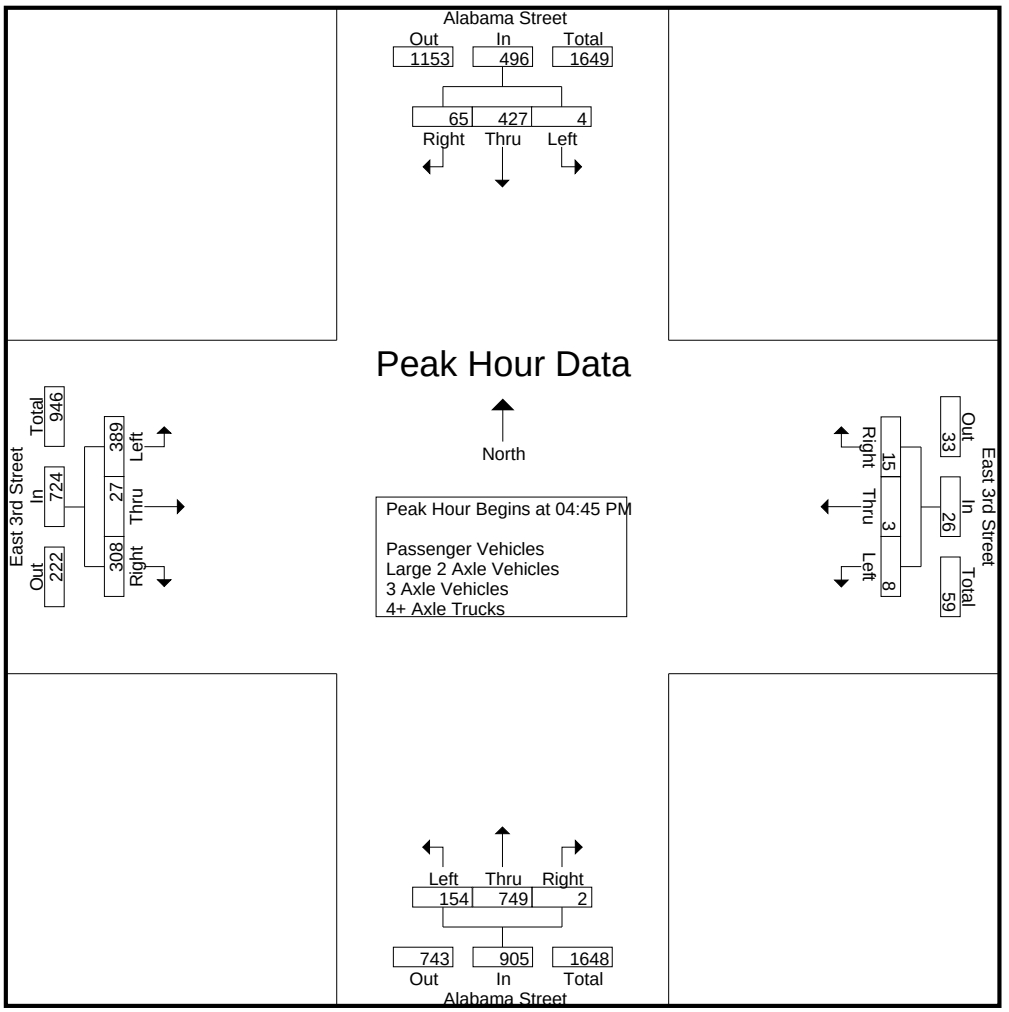

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	05:00 PM				04:30 PM				04:45 PM				04:30 PM			
+0 mins.	1	106	12	119	0	**2**	**6**	8	**50**	**201**	**1**	**252**	93	8	60	161
+15 mins.	0	107	**14**	121	**4**	2	4	**10**	32	158	1	191	90	4	72	166
+30 mins.	**2**	111	13	126	1	0	6	7	32	193	0	225	99	**11**	80	190
+45 mins.	0	**125**	11	**136**	1	1	2	4	40	197	0	237	**108**	10	**98**	**216**
Total Volume	3	449	50	502	6	5	18	29	154	749	2	905	390	33	310	733
% App. Total	0.6	89.4	10		20.7	17.2	62.1		17	82.8	0.2		53.2	4.5	42.3	
PHF	.375	.898	.893	.923	.375	.625	.750	.725	.770	.932	.500	.898	.903	.750	.791	.848

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Groups Printed- Passenger Vehicles

	Alabama Street Southbound				East 3rd Street Westbound				Alabama Street Northbound				East 3rd Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	1	79	16	96	0	2	1	3	28	149	0	177	76	1	55	132	408
04:15 PM	1	76	13	90	0	1	2	3	22	138	2	162	72	3	55	130	385
04:30 PM	0	99	19	118	0	2	5	7	18	159	0	177	93	7	60	160	462
04:45 PM	1	98	22	121	3	2	3	8	40	193	1	234	90	4	61	155	518
Total	3	352	70	425	3	7	11	21	108	639	3	750	331	15	231	577	1773
05:00 PM	0	102	10	112	1	0	6	7	22	151	0	173	96	11	70	177	469
05:15 PM	0	106	13	119	1	1	2	4	28	188	0	216	107	10	91	208	547
05:30 PM	1	105	13	119	1	0	3	4	32	194	0	226	91	1	56	148	497
05:45 PM	0	121	10	131	0	0	4	4	23	195	3	221	91	2	50	143	499
Total	1	434	46	481	3	1	15	19	105	728	3	836	385	24	267	676	2012
Grand Total	4	786	116	906	6	8	26	40	213	1367	6	1586	716	39	498	1253	3785
Apprch %	0.4	86.8	12.8		15	20	65		13.4	86.2	0.4		57.1	3.1	39.7		
Total %	0.1	20.8	3.1	23.9	0.2	0.2	0.7	1.1	5.6	36.1	0.2	41.9	18.9	1	13.2	33.1	

	Alabama Street Southbound				East 3rd Street Westbound				Alabama Street Northbound				East 3rd Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	**1**	98	**22**	**121**	**3**	**2**	3	**8**	**40**	193	**1**	**234**	90	4	61	155	518
05:00 PM	0	102	10	112	1	0	**6**	7	22	151	0	173	96	**11**	70	177	469
05:15 PM	0	**106**	13	119	1	1	2	4	28	188	0	216	**107**	10	**91**	**208**	**547**
05:30 PM	1	105	13	119	1	0	3	4	32	**194**	0	226	91	1	56	148	497
Total Volume	2	411	58	471	6	3	14	23	122	726	1	849	384	26	278	688	2031
% App. Total	0.4	87.3	12.3		26.1	13	60.9		14.4	85.5	0.1		55.8	3.8	40.4		
PHF	.500	.969	.659	.973	.500	.375	.583	.719	.763	.936	.250	.907	.897	.591	.764	.827	.928

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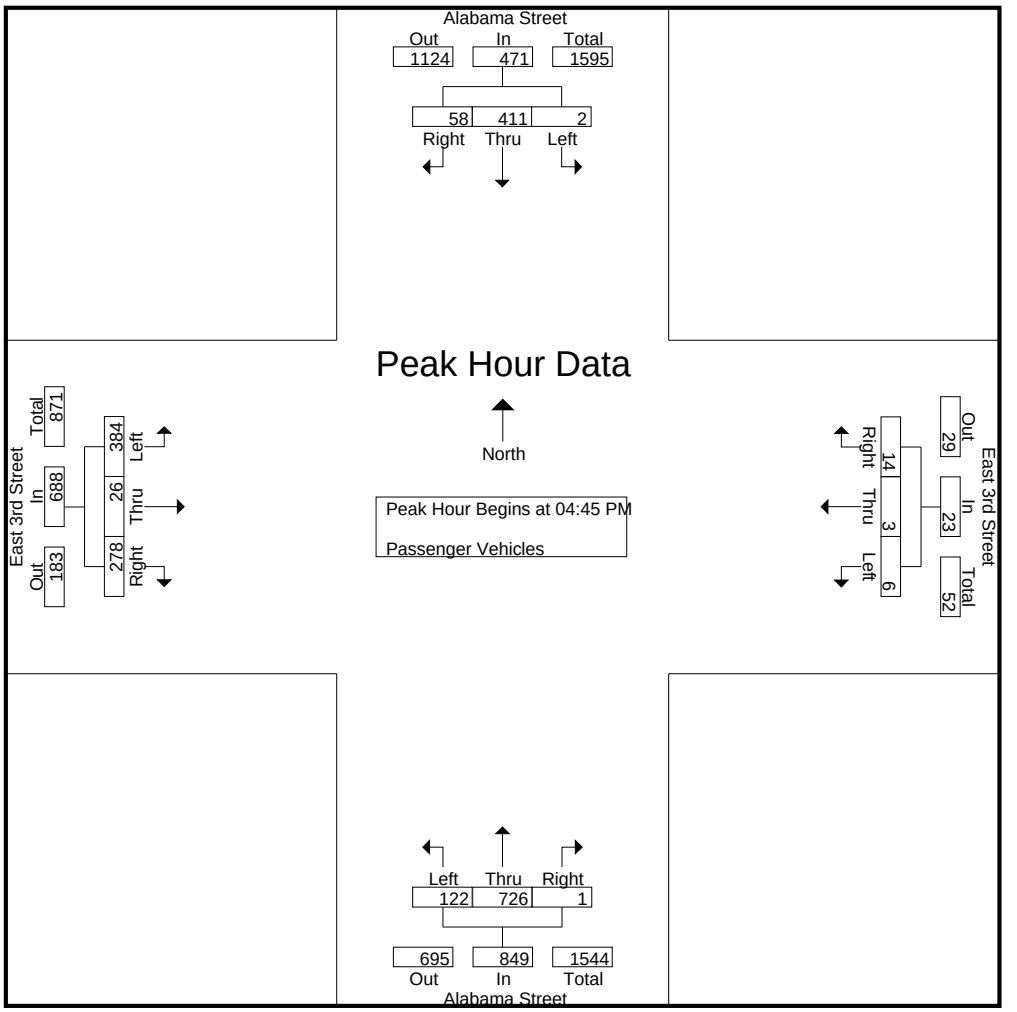

Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	**1**	98	**22**	**121**	**3**	**2**	3	**8**	**40**	193	**1**	**234**	90	4	61	155
+15 mins.	0	102	10	112	1	0	**6**	7	22	151	0	173	96	**11**	70	177
+30 mins.	0	**106**	13	119	1	1	2	4	28	188	0	216	**107**	10	**91**	**208**
+45 mins.	1	105	13	119	1	0	3	4	32	**194**	0	226	91	1	56	148
Total Volume	2	411	58	471	6	3	14	23	122	726	1	849	384	26	278	688
% App. Total	0.4	87.3	12.3		26.1	13	60.9		14.4	85.5	0.1		55.8	3.8	40.4	
PHF	.500	.969	.659	.973	.500	.375	.583	.719	.763	.936	.250	.907	.897	.591	.764	.827

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Groups Printed- Large 2 Axle Vehicles

	Alabama Street Southbound				East 3rd Street Westbound				Alabama Street Northbound				East 3rd Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	2	1	3	0	0	2	2	1	1	2	4	0	0	0	0	9
04:15 PM	0	0	2	2	0	0	0	0	0	2	0	2	1	0	1	2	6
04:30 PM	0	0	0	0	0	0	0	0	1	4	0	5	0	1	0	1	6
04:45 PM	0	1	0	1	1	0	0	1	0	2	0	2	0	0	0	0	4
Total	0	3	3	6	1	0	2	3	2	9	2	13	1	1	1	3	25
05:00 PM	0	2	1	3	0	0	0	0	2	3	1	6	1	0	1	2	11
05:15 PM	0	1	0	1	0	0	0	0	0	3	0	3	0	0	1	1	5
05:30 PM	1	1	0	2	1	0	0	1	0	2	0	2	1	1	0	2	7
05:45 PM	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0	3
Total	1	7	1	9	1	0	0	1	2	8	1	11	2	1	2	5	26
Grand Total	1	10	4	15	2	0	2	4	4	17	3	24	3	2	3	8	51
Apprch %	6.7	66.7	26.7		50	0	50		16.7	70.8	12.5		37.5	25	37.5		
Total %	2	19.6	7.8	29.4	3.9	0	3.9	7.8	7.8	33.3	5.9	47.1	5.9	3.9	5.9	15.7	

	Alabama Street Southbound				East 3rd Street Westbound				Alabama Street Northbound				East 3rd Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	1	0	1	**1**	0	0	**1**	0	2	0	2	0	0	0	0	4
05:00 PM	0	**2**	**1**	**3**	0	0	0	0	**2**	**3**	**1**	**6**	**1**	0	**1**	**2**	**11**
05:15 PM	0	1	0	1	0	0	0	0	0	3	0	3	0	0	1	1	5
05:30 PM	**1**	1	0	2	1	0	0	1	0	2	0	2	1	**1**	0	2	7
Total Volume	1	5	1	7	2	0	0	2	2	10	1	13	2	1	2	5	27
% App. Total	14.3	71.4	14.3		100	0	0		15.4	76.9	7.7		40	20	40		
PHF	.250	.625	.250	.583	.500	.000	.000	.500	.250	.833	.250	.542	.500	.250	.500	.625	.614

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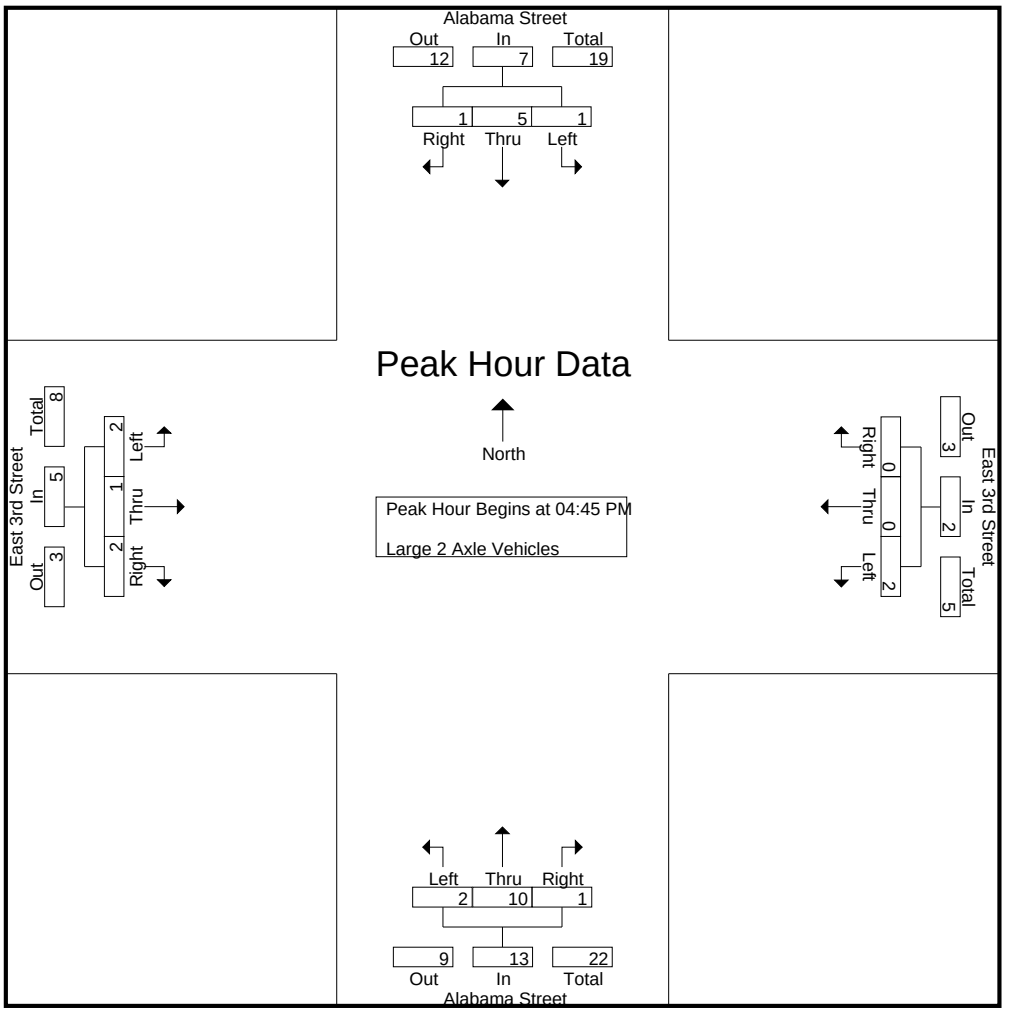

Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	0	1	0	1	**1**	0	0	**1**	0	2	0	2	0	0	0	0
+15 mins.	0	**2**	**1**	**3**	0	0	0	0	**2**	**3**	**1**	**6**	**1**	0	**1**	**2**
+30 mins.	0	1	0	1	0	0	0	0	0	3	0	3	0	0	1	1
+45 mins.	**1**	1	0	2	1	0	0	1	0	2	0	2	1	**1**	0	2
Total Volume	1	5	1	7	2	0	0	2	2	10	1	13	2	1	2	5
% App. Total	14.3	71.4	14.3		100	0	0		15.4	76.9	7.7		40	20	40	
PHF	.250	.625	.250	.583	.500	.000	.000	.500	.250	.833	.250	.542	.500	.250	.500	.625

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Redlands
N/S: Alabama Street
E/W: East 3rd Street
Weather: Clear

File Name : 19_RED_Alabama_3rd PM
Site Code : 06718128
Start Date : 2/21/2018
Page No : 1

Groups Printed- 3 Axle Vehicles

	Alabama Street Southbound				East 3rd Street Westbound				Alabama Street Northbound				East 3rd Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	1	0	0	1	0	0	0	0	2	2	0	4	2	1	0	3	8
04:15 PM	0	1	2	3	0	0	0	0	0	0	0	0	1	0	4	5	8
04:30 PM	1	0	1	2	0	0	1	1	1	0	0	1	0	0	0	0	4
04:45 PM	0	0	2	2	0	0	1	1	1	1	0	2	0	0	8	8	13
Total	2	1	5	8	0	0	2	2	4	3	0	7	3	1	12	16	33
05:00 PM	1	0	0	1	0	0	0	0	0	0	0	0	1	0	6	7	8
05:15 PM	0	0	0	0	0	0	0	0	1	0	0	1	1	0	3	4	5
05:30 PM	0	1	0	1	0	0	0	0	1	0	0	1	0	0	1	1	3
05:45 PM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	3	3	4
Total	1	1	0	2	0	0	0	0	3	0	0	3	2	0	13	15	20
Grand Total	3	2	5	10	0	0	2	2	7	3	0	10	5	1	25	31	53
Apprch %	30	20	50		0	0	100		70	30	0		16.1	3.2	80.6		
Total %	5.7	3.8	9.4	18.9	0	0	3.8	3.8	13.2	5.7	0	18.9	9.4	1.9	47.2	58.5	

	Alabama Street Southbound				East 3rd Street Westbound				Alabama Street Northbound				East 3rd Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	0	**2**	**2**	0	0	**1**	**1**	**1**	**1**	0	**2**	0	0	**8**	**8**	**13**
05:00 PM	**1**	0	0	1	0	0	0	0	0	0	0	0	**1**	0	6	7	8
05:15 PM	0	0	0	0	0	0	0	0	1	0	0	1	1	0	3	4	5
05:30 PM	0	**1**	0	1	0	0	0	0	1	0	0	1	0	0	1	1	3
Total Volume	1	1	2	4	0	0	1	1	3	1	0	4	2	0	18	20	29
% App. Total	25	25	50		0	0	100		75	25	0		10	0	90		
PHF	.250	.250	.250	.500	.000	.000	.250	.250	.750	.250	.000	.500	.500	.000	.563	.625	.558

Counts Unlimited
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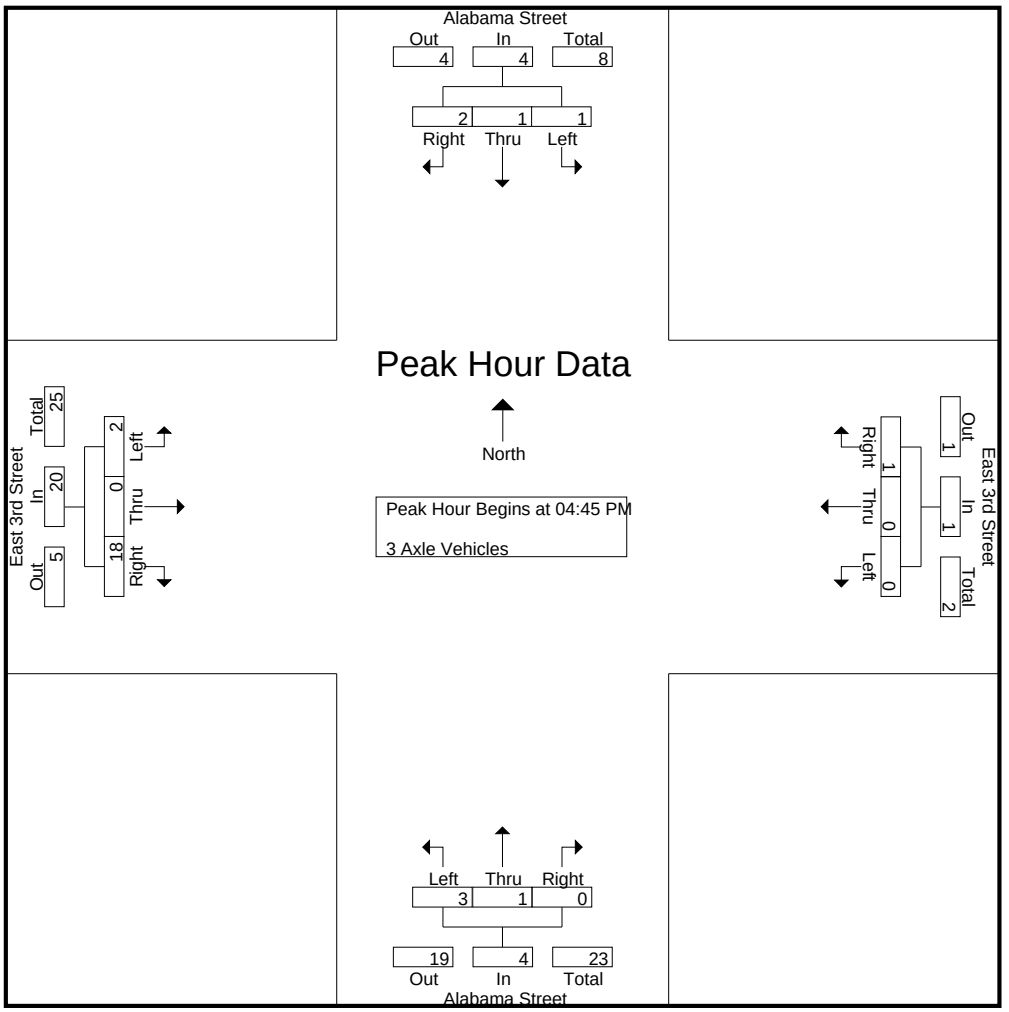
City of Redlands
N/S: Alabama Street
E/W: East 3rd Street
Weather: Clear

File Name : 19_RED_Alabama_3rd PM
Site Code : 06718128
Start Date : 2/21/2018
Page No : 2



Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	0	0	**2**	**2**	0	0	**1**	**1**	**1**	**1**	0	**2**	0	0	**8**	**8**
+15 mins.	**1**	0	0	1	0	0	0	0	0	0	0	0	**1**	0	6	7
+30 mins.	0	0	0	0	0	0	0	0	1	0	0	1	1	0	3	4
+45 mins.	0	**1**	0	1	0	0	0	0	1	0	0	1	0	0	1	1
Total Volume	1	1	2	4	0	0	1	1	3	1	0	4	2	0	18	20
% App. Total	25	25	50		0	0	100		75	25	0		10	0	90	
PHF	.250	.250	.250	.500	.000	.000	.250	.250	.750	.250	.000	.500	.500	.000	.563	.625

Counts Unlimited
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City of Redlands
N/S: Alabama Street
E/W: East 3rd Street
Weather: Clear

File Name : 19_RED_Alabama_3rd PM
Site Code : 06718128
Start Date : 2/21/2018
Page No : 1

Groups Printed- 4+ Axle Trucks

	Alabama Street Southbound				East 3rd Street Westbound				Alabama Street Northbound				East 3rd Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	4	1	5	0	0	1	1	4	1	0	5	1	0	0	1	12
04:15 PM	0	8	1	9	0	0	0	0	4	9	0	13	0	0	1	1	23
04:30 PM	0	2	0	2	0	0	0	0	5	5	0	10	0	0	0	0	12
04:45 PM	0	4	2	6	0	0	0	0	9	5	0	14	0	0	3	3	23
Total	0	18	4	22	0	0	1	1	22	20	0	42	1	0	4	5	70
05:00 PM	0	2	1	3	0	0	0	0	8	4	0	12	1	0	3	4	19
05:15 PM	0	0	1	1	0	0	0	0	3	2	0	5	0	0	3	3	9
05:30 PM	0	4	0	4	0	0	0	0	7	1	0	8	0	0	1	1	13
05:45 PM	0	1	1	2	0	0	0	0	3	3	0	6	0	0	6	6	14
Total	0	7	3	10	0	0	0	0	21	10	0	31	1	0	13	14	55
Grand Total	0	25	7	32	0	0	1	1	43	30	0	73	2	0	17	19	125
Apprch %	0	78.1	21.9		0	0	100		58.9	41.1	0		10.5	0	89.5		
Total %	0	20	5.6	25.6	0	0	0.8	0.8	34.4	24	0	58.4	1.6	0	13.6	15.2	

	Alabama Street Southbound				East 3rd Street Westbound				Alabama Street Northbound				East 3rd Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	**4**	**2**	**6**	0	0	0	0	**9**	**5**	0	**14**	0	0	**3**	3	**23**
05:00 PM	0	2	1	3	0	0	0	0	8	4	0	12	**1**	0	3	**4**	19
05:15 PM	0	0	1	1	0	0	0	0	3	2	0	5	0	0	3	3	9
05:30 PM	0	4	0	4	0	0	0	0	7	1	0	8	0	0	1	1	13
Total Volume	0	10	4	14	0	0	0	0	27	12	0	39	1	0	10	11	64
% App. Total	0	71.4	28.6		0	0	0		69.2	30.8	0		9.1	0	90.9		
PHF	.000	.625	.500	.583	.000	.000	.000	.000	.750	.600	.000	.696	.250	.000	.833	.688	.696

Counts Unlimited
PO Box 1178
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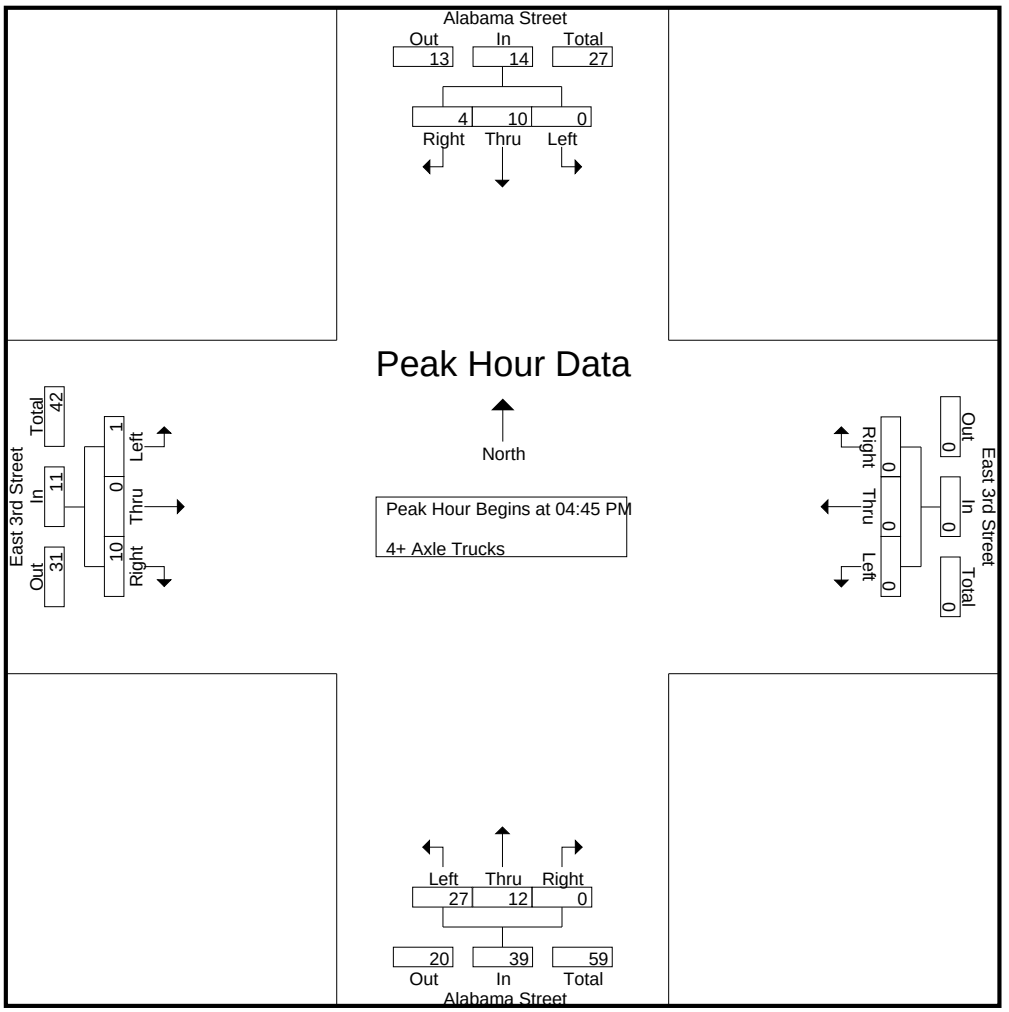
City of Redlands
N/S: Alabama Street
E/W: East 3rd Street
Weather: Clear

File Name : 19_RED_Alabama_3rd PM
Site Code : 06718128
Start Date : 2/21/2018
Page No : 2



Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	0	**4**	**2**	**6**	0	0	0	0	**9**	**5**	0	**14**	0	0	**3**	3
+15 mins.	0	2	1	3	0	0	0	0	8	4	0	12	**1**	0	3	**4**
+30 mins.	0	0	1	1	0	0	0	0	3	2	0	5	0	0	3	3
+45 mins.	0	4	0	4	0	0	0	0	7	1	0	8	0	0	1	1
Total Volume	0	10	4	14	0	0	0	0	27	12	0	39	1	0	10	11
% App. Total	0	71.4	28.6		0	0	0		69.2	30.8	0		9.1	0	90.9	
PHF	.000	.625	.500	.583	.000	.000	.000	.000	.750	.600	.000	.696	.250	.000	.833	.688

APPENDIX D:
SIGNAL WARRANT WORKSHEETS

Warrants Summary Report

15: West Driveway 1 & Palmetto Avenue

Intersection Information

	Major Street	Minor Street
Street Name	-	West Driveway 1
Direction		EB/WB/SB
Number of Lanes	1	2
Approach Speed	-	30

Warrant	Met?	Notes
Warrant 1, Eight-Hour Vehicular Volume		
	No	
Condition A or B Met	No	0 Hours met (8 required)
Condition A and B M	No	0 Hours met (8 required)
Warrant 2, Four-Hour Vehicular Volume		
	No	0 Hours met (4 required)
Warrant 3, Peak Hour		
	No	
Condition A Met?	No	0 Hours met (1 required)
Condition B Met?	No	0 Hours met (1 required)
Warrant 4, Pedestrian Volume		
	No	
Peds > 100 Conditio	No	0 Hours met (4 required)
Peds > 190 Conditio	No	0 Hours met (1 required)
Warrant 5, School Crossing		
	No	

Warrant 6, Coordinated Signal System

No

Warrant 7, Crash Experience

No

Traffic Volume Condi	No	0 Hours met (8 required)
Ped Condition?	No	0 Hours met (8 required)

Warrant 8, Roadway Network

No

Warrant 1, Eight-Hour Vehicular Volume

No

Condition A or B Met	No	0 Hours met (8 required)
Condition A and B M	No	0 Hours met (8 required)

Warrant 2, Four-Hour Vehicular Volume

No 0 Hours met (4 required)

Warrant 3, Peak Hour

No

Condition A Met?	No	0 Hours met (1 required)
Condition B Met?	No	0 Hours met (1 required)

Warrant 4, Pedestrian Volume

No

Peds > 100 Conditio	No	0 Hours met (4 required)
Peds > 190 Conditio	No	0 Hours met (1 required)

Warrant 5, School Crossing

No

Warrant 6, Coordinated Signal System

No

Warrant 7, Crash Experience

No

Traffic Volume Condi	No	0 Hours met (8 required)
Ped Condition?	No	0 Hours met (8 required)

Warrant 8, Roadway Network

No

Warrant 1, Eight-Hour Vehicular Volume

No

Condition A or B Met	No	0 Hours met (8 required)
Condition A and B M	No	0 Hours met (8 required)

Warrant 2, Four-Hour Vehicular Volume

	No	0 Hours met (4 required)

Warrant 3, Peak Hour

	No	
Condition A Met?	No	0 Hours met (1 required)
Condition B Met?	No	0 Hours met (1 required)

Warrant 4, Pedestrian Volume

	No	
Peds > 100 Conditio	No	0 Hours met (4 required)
Peds > 190 Conditio	No	0 Hours met (1 required)

Warrant 5, School Crossing

	No	

Warrant 6, Coordinated Signal System

	No	

Warrant 7, Crash Experience

	No	
Traffic Volume Condi	No	0 Hours met (8 required)
Ped Condition?	No	0 Hours met (8 required)

Warrant 8, Roadway Network

No

Warrant 1, Eight-Hour Vehicular Volume

No

Condition A or B Met	No	0 Hours met (8 required)
Condition A and B M	No	0 Hours met (8 required)

Warrant 2, Four-Hour Vehicular Volume

No 0 Hours met (4 required)

Warrant 3, Peak Hour

No

Condition A Met?	No	0 Hours met (1 required)
Condition B Met?	No	0 Hours met (1 required)

Warrant 4, Pedestrian Volume

No

Peds > 100 Conditio	No	0 Hours met (4 required)
Peds > 190 Conditio	No	0 Hours met (1 required)

Warrant 5, School Crossing

No

Warrant 6, Coordinated Signal System

No

Warrant 7, Crash Experience

No

Traffic Volume Condi	No	0 Hours met (8 required)
Ped Condition?	No	0 Hours met (8 required)

Warrant 8, Roadway Network

No

Warrant 1, Eight-Hour Vehicular Volume

No

Condition A or B Met	No	0 Hours met (8 required)
Condition A and B M	No	0 Hours met (8 required)

Warrant 2, Four-Hour Vehicular Volume

No 0 Hours met (4 required)

Warrant 3, Peak Hour

No

Condition A Met?	No	0 Hours met (1 required)
Condition B Met?	No	0 Hours met (1 required)

Warrant 4, Pedestrian Volume

	No	
Peds > 100 Conditio	No	0 Hours met (4 required)
Peds > 190 Conditio	No	0 Hours met (1 required)

Warrant 5, School Crossing

No

Warrant 6, Coordinated Signal System

No

Warrant 7, Crash Experience

	No	
Traffic Volume Condi	No	0 Hours met (8 required)
Ped Condition?	No	0 Hours met (8 required)

Warrant 8, Roadway Network

No

Warrants Summary Report

15: West Driveway 1 & Palmetto Avenue

Intersection Information

	Major Street	Minor Street
Street Name	-	West Driveway 1
Direction		EB/WB/SB
Number of Lane	1	2
Approach Speed	-	30

Warrant	Met?	Notes
Warrant 1, Eight-Hour Vehicular Volume		
	No	
Condition A or B Met	No	0 Hours met (8 required)
Condition A and B M	No	0 Hours met (8 required)
Warrant 2, Four-Hour Vehicular Volume		
	No	0 Hours met (4 required)
Warrant 3, Peak Hour		
	No	
Condition A Met?	No	0 Hours met (1 required)
Condition B Met?	No	0 Hours met (1 required)
Warrant 4, Pedestrian Volume		
	No	
Peds > 100 Conditio	No	0 Hours met (4 required)
Peds > 190 Conditio	No	0 Hours met (1 required)
Warrant 5, School Crossing		
	No	

Warrant 6, Coordinated Signal System

No

Warrant 7, Crash Experience

No

Traffic Volume Condi	No	0 Hours met (8 required)
Ped Condition?	No	0 Hours met (8 required)

Warrant 8, Roadway Network

No

Warrant 1, Eight-Hour Vehicular Volume

No

Condition A or B Met	No	0 Hours met (8 required)
Condition A and B M	No	0 Hours met (8 required)

Warrant 2, Four-Hour Vehicular Volume

No 0 Hours met (4 required)

Warrant 3, Peak Hour

No

Condition A Met?	No	0 Hours met (1 required)
Condition B Met?	No	0 Hours met (1 required)

Warrant 4, Pedestrian Volume

No

Peds > 100 Conditio	No	0 Hours met (4 required)
Peds > 190 Conditio	No	0 Hours met (1 required)

Warrant 5, School Crossing

No

Warrant 6, Coordinated Signal System

No

Warrant 7, Crash Experience

No

Traffic Volume Condi	No	0 Hours met (8 required)
Ped Condition?	No	0 Hours met (8 required)

Warrant 8, Roadway Network

No

Warrant 1, Eight-Hour Vehicular Volume

No

Condition A or B Met	No	0 Hours met (8 required)
Condition A and B M	No	0 Hours met (8 required)

Warrant 2, Four-Hour Vehicular Volume

	No	0 Hours met (4 required)

Warrant 3, Peak Hour

	No	
Condition A Met?	No	0 Hours met (1 required)
Condition B Met?	No	0 Hours met (1 required)

Warrant 4, Pedestrian Volume

	No	
Peds > 100 Conditio	No	0 Hours met (4 required)
Peds > 190 Conditio	No	0 Hours met (1 required)

Warrant 5, School Crossing

	No	

Warrant 6, Coordinated Signal System

	No	

Warrant 7, Crash Experience

	No	
Traffic Volume Condi	No	0 Hours met (8 required)
Ped Condition?	No	0 Hours met (8 required)

Warrant 8, Roadway Network

No

Warrant 1, Eight-Hour Vehicular Volume

No

Condition A or B Met	No	0 Hours met (8 required)
Condition A and B M	No	0 Hours met (8 required)

Warrant 2, Four-Hour Vehicular Volume

No 0 Hours met (4 required)

Warrant 3, Peak Hour

No

Condition A Met?	No	0 Hours met (1 required)
Condition B Met?	No	0 Hours met (1 required)

Warrant 4, Pedestrian Volume

No

Peds > 100 Conditio	No	0 Hours met (4 required)
Peds > 190 Conditio	No	0 Hours met (1 required)

Warrant 5, School Crossing

No

Warrant 6, Coordinated Signal System

No

Warrant 7, Crash Experience

No

Traffic Volume Condi	No	0 Hours met (8 required)
Ped Condition?	No	0 Hours met (8 required)

Warrant 8, Roadway Network

No

Warrant 1, Eight-Hour Vehicular Volume

No

Condition A or B Met	No	0 Hours met (8 required)
Condition A and B M	No	0 Hours met (8 required)

Warrant 2, Four-Hour Vehicular Volume

No 0 Hours met (4 required)

Warrant 3, Peak Hour

No

Condition A Met?	No	0 Hours met (1 required)
Condition B Met?	No	0 Hours met (1 required)

Warrant 4, Pedestrian Volume

No

Peds > 100 Conditio	No	0 Hours met (4 required)
Peds > 190 Conditio	No	0 Hours met (1 required)

Warrant 5, School Crossing

No

Warrant 6, Coordinated Signal System

No

Warrant 7, Crash Experience

No

Traffic Volume Condi	No	0 Hours met (8 required)
Ped Condition?	No	0 Hours met (8 required)

Warrant 8, Roadway Network

No

Warrants Summary Report

15: West Driveway 1 & Palmetto Avenue

Intersection Information

	Major Street	Minor Street
Street Name	-	West Driveway 1
Direction		EB/WB/SB
Number of Lane	1	2
Approach Speed	-	30

Warrant	Met?	Notes
Warrant 1, Eight-Hour Vehicular Volume		
	No	
Condition A or B Met	No	0 Hours met (8 required)
Condition A and B M	No	0 Hours met (8 required)
Warrant 2, Four-Hour Vehicular Volume		
	No	0 Hours met (4 required)
Warrant 3, Peak Hour		
	No	
Condition A Met?	No	0 Hours met (1 required)
Condition B Met?	No	0 Hours met (1 required)
Warrant 4, Pedestrian Volume		
	No	
Peds > 100 Conditio	No	0 Hours met (4 required)
Peds > 190 Conditio	No	0 Hours met (1 required)
Warrant 5, School Crossing		
	No	

Warrant 6, Coordinated Signal System

No

Warrant 7, Crash Experience

No

Traffic Volume Condi	No	0 Hours met (8 required)
Ped Condition?	No	0 Hours met (8 required)

Warrant 8, Roadway Network

No

Warrant 1, Eight-Hour Vehicular Volume

No

Condition A or B Met	No	0 Hours met (8 required)
Condition A and B M	No	0 Hours met (8 required)

Warrant 2, Four-Hour Vehicular Volume

No 0 Hours met (4 required)

Warrant 3, Peak Hour

No

Condition A Met?	No	0 Hours met (1 required)
Condition B Met?	No	0 Hours met (1 required)

Warrant 4, Pedestrian Volume

No

Peds > 100 Conditio	No	0 Hours met (4 required)
Peds > 190 Conditio	No	0 Hours met (1 required)

Warrant 5, School Crossing

No

Warrant 6, Coordinated Signal System

No

Warrant 7, Crash Experience

No

Traffic Volume Condi	No	0 Hours met (8 required)
Ped Condition?	No	0 Hours met (8 required)

Warrant 8, Roadway Network

No

Warrant 1, Eight-Hour Vehicular Volume

No

Condition A or B Met	No	0 Hours met (8 required)
Condition A and B M	No	0 Hours met (8 required)

Warrant 2, Four-Hour Vehicular Volume

	No	0 Hours met (4 required)

Warrant 3, Peak Hour

	No	
Condition A Met?	No	0 Hours met (1 required)
Condition B Met?	No	0 Hours met (1 required)

Warrant 4, Pedestrian Volume

	No	
Peds > 100 Conditio	No	0 Hours met (4 required)
Peds > 190 Conditio	No	0 Hours met (1 required)

Warrant 5, School Crossing

	No	

Warrant 6, Coordinated Signal System

	No	

Warrant 7, Crash Experience

	No	
Traffic Volume Condi	No	0 Hours met (8 required)
Ped Condition?	No	0 Hours met (8 required)

Warrant 8, Roadway Network

No

Warrant 1, Eight-Hour Vehicular Volume

No

Condition A or B Met	No	0 Hours met (8 required)
Condition A and B M	No	0 Hours met (8 required)

Warrant 2, Four-Hour Vehicular Volume

No 0 Hours met (4 required)

Warrant 3, Peak Hour

No

Condition A Met?	No	0 Hours met (1 required)
Condition B Met?	No	0 Hours met (1 required)

Warrant 4, Pedestrian Volume

No

Peds > 100 Conditio	No	0 Hours met (4 required)
Peds > 190 Conditio	No	0 Hours met (1 required)

Warrant 5, School Crossing

No

Warrant 6, Coordinated Signal System

No

Warrant 7, Crash Experience

No

Traffic Volume Condi	No	0 Hours met (8 required)
Ped Condition?	No	0 Hours met (8 required)

Warrant 8, Roadway Network

No

Warrant 1, Eight-Hour Vehicular Volume

No

Condition A or B Met	No	0 Hours met (8 required)
Condition A and B M	No	0 Hours met (8 required)

Warrant 2, Four-Hour Vehicular Volume

No 0 Hours met (4 required)

Warrant 3, Peak Hour

No

Condition A Met?	No	0 Hours met (1 required)
Condition B Met?	No	0 Hours met (1 required)

Warrant 4, Pedestrian Volume

No

Peds > 100 Conditio	No	0 Hours met (4 required)
Peds > 190 Conditio	No	0 Hours met (1 required)

Warrant 5, School Crossing

No

Warrant 6, Coordinated Signal System

No

Warrant 7, Crash Experience

No

Traffic Volume Condi	No	0 Hours met (8 required)
Ped Condition?	No	0 Hours met (8 required)

Warrant 8, Roadway Network

No

Warrants Summary Report

15: West Driveway 1 & Palmetto Avenue

Intersection Information

	Major Street	Minor Street
Street Name	-	West Driveway 1
Direction		EB/WB/SB
Number of Lane	1	2
Approach Speed	-	30

Warrant	Met?	Notes
Warrant 1, Eight-Hour Vehicular Volume		
	No	
Condition A or B Met	No	0 Hours met (8 required)
Condition A and B M	No	0 Hours met (8 required)
Warrant 2, Four-Hour Vehicular Volume		
	No	0 Hours met (4 required)
Warrant 3, Peak Hour		
	No	
Condition A Met?	No	0 Hours met (1 required)
Condition B Met?	No	0 Hours met (1 required)
Warrant 4, Pedestrian Volume		
	No	
Peds > 100 Conditio	No	0 Hours met (4 required)
Peds > 190 Conditio	No	0 Hours met (1 required)
Warrant 5, School Crossing		
	No	

Warrant 6, Coordinated Signal System

No

Warrant 7, Crash Experience

No

Traffic Volume Condi	No	0 Hours met (8 required)
Ped Condition?	No	0 Hours met (8 required)

Warrant 8, Roadway Network

No

Warrant 1, Eight-Hour Vehicular Volume

No

Condition A or B Met	No	0 Hours met (8 required)
Condition A and B M	No	0 Hours met (8 required)

Warrant 2, Four-Hour Vehicular Volume

No 0 Hours met (4 required)

Warrant 3, Peak Hour

No

Condition A Met?	No	0 Hours met (1 required)
Condition B Met?	No	0 Hours met (1 required)

Warrant 4, Pedestrian Volume

No

Peds > 100 Conditio	No	0 Hours met (4 required)
Peds > 190 Conditio	No	0 Hours met (1 required)

Warrant 5, School Crossing

No

Warrant 6, Coordinated Signal System

No

Warrant 7, Crash Experience

No

Traffic Volume Condi	No	0 Hours met (8 required)
Ped Condition?	No	0 Hours met (8 required)

Warrant 8, Roadway Network

No

Warrant 1, Eight-Hour Vehicular Volume

No

Condition A or B Met	No	0 Hours met (8 required)
Condition A and B M	No	0 Hours met (8 required)

Warrant 2, Four-Hour Vehicular Volume

	No	0 Hours met (4 required)

Warrant 3, Peak Hour

	No	
Condition A Met?	No	0 Hours met (1 required)
Condition B Met?	No	0 Hours met (1 required)

Warrant 4, Pedestrian Volume

	No	
Peds > 100 Conditio	No	0 Hours met (4 required)
Peds > 190 Conditio	No	0 Hours met (1 required)

Warrant 5, School Crossing

	No	

Warrant 6, Coordinated Signal System

	No	

Warrant 7, Crash Experience

	No	
Traffic Volume Condi	No	0 Hours met (8 required)
Ped Condition?	No	0 Hours met (8 required)

Warrant 8, Roadway Network

No

Warrant 1, Eight-Hour Vehicular Volume

No

Condition A or B Met	No	0 Hours met (8 required)
Condition A and B M	No	0 Hours met (8 required)

Warrant 2, Four-Hour Vehicular Volume

No 0 Hours met (4 required)

Warrant 3, Peak Hour

No

Condition A Met?	No	0 Hours met (1 required)
Condition B Met?	No	0 Hours met (1 required)

Warrant 4, Pedestrian Volume

No

Peds > 100 Conditio	No	0 Hours met (4 required)
Peds > 190 Conditio	No	0 Hours met (1 required)

Warrant 5, School Crossing

No

Warrant 6, Coordinated Signal System

No

Warrant 7, Crash Experience

No

Traffic Volume Condi	No	0 Hours met (8 required)
Ped Condition?	No	0 Hours met (8 required)

Warrant 8, Roadway Network

No

Warrant 1, Eight-Hour Vehicular Volume

No

Condition A or B Met	No	0 Hours met (8 required)
Condition A and B M	No	0 Hours met (8 required)

Warrant 2, Four-Hour Vehicular Volume

No 0 Hours met (4 required)

Warrant 3, Peak Hour

No

Condition A Met?	No	0 Hours met (1 required)
Condition B Met?	No	0 Hours met (1 required)

Warrant 4, Pedestrian Volume

No

Peds > 100 Conditio	No	0 Hours met (4 required)
Peds > 190 Conditio	No	0 Hours met (1 required)

Warrant 5, School Crossing

No

Warrant 6, Coordinated Signal System

No

Warrant 7, Crash Experience

No

Traffic Volume Condi	No	0 Hours met (8 required)
Ped Condition?	No	0 Hours met (8 required)

Warrant 8, Roadway Network

No

Warrants Summary Report

15: West Driveway 1 & Palmetto Avenue

Intersection Information

	Major Street	Minor Street
Street Name	-	West Driveway 1
Direction		EB/WB/SB
Number of Lane	1	2
Approach Speed	-	30

Warrant	Met?	Notes
Warrant 1, Eight-Hour Vehicular Volume		
	No	
Condition A or B Met	No	0 Hours met (8 required)
Condition A and B M	No	0 Hours met (8 required)
Warrant 2, Four-Hour Vehicular Volume		
	No	0 Hours met (4 required)
Warrant 3, Peak Hour		
	No	
Condition A Met?	No	0 Hours met (1 required)
Condition B Met?	No	0 Hours met (1 required)
Warrant 4, Pedestrian Volume		
	No	
Peds > 100 Conditio	No	0 Hours met (4 required)
Peds > 190 Conditio	No	0 Hours met (1 required)
Warrant 5, School Crossing		
	No	

Warrant 6, Coordinated Signal System

No

Warrant 7, Crash Experience

No

Traffic Volume Condi	No	0 Hours met (8 required)
Ped Condition?	No	0 Hours met (8 required)

Warrant 8, Roadway Network

No

Warrant 1, Eight-Hour Vehicular Volume

No

Condition A or B Met	No	0 Hours met (8 required)
Condition A and B M	No	0 Hours met (8 required)

Warrant 2, Four-Hour Vehicular Volume

No 0 Hours met (4 required)

Warrant 3, Peak Hour

No

Condition A Met?	No	0 Hours met (1 required)
Condition B Met?	No	0 Hours met (1 required)

Warrant 4, Pedestrian Volume

No

Peds > 100 Conditio	No	0 Hours met (4 required)
Peds > 190 Conditio	No	0 Hours met (1 required)

Warrant 5, School Crossing

No

Warrant 6, Coordinated Signal System

No

Warrant 7, Crash Experience

No

Traffic Volume Condi	No	0 Hours met (8 required)
Ped Condition?	No	0 Hours met (8 required)

Warrant 8, Roadway Network

No

Warrant 1, Eight-Hour Vehicular Volume

No

Condition A or B Met	No	0 Hours met (8 required)
Condition A and B M	No	0 Hours met (8 required)

Warrant 2, Four-Hour Vehicular Volume

	No	0 Hours met (4 required)

Warrant 3, Peak Hour

	No	
Condition A Met?	No	0 Hours met (1 required)
Condition B Met?	No	0 Hours met (1 required)

Warrant 4, Pedestrian Volume

	No	
Peds > 100 Conditio	No	0 Hours met (4 required)
Peds > 190 Conditio	No	0 Hours met (1 required)

Warrant 5, School Crossing

	No	

Warrant 6, Coordinated Signal System

	No	

Warrant 7, Crash Experience

	No	
Traffic Volume Condi	No	0 Hours met (8 required)
Ped Condition?	No	0 Hours met (8 required)

Warrant 8, Roadway Network

No

Warrant 1, Eight-Hour Vehicular Volume

No

Condition A or B Met	No	0 Hours met (8 required)
Condition A and B M	No	0 Hours met (8 required)

Warrant 2, Four-Hour Vehicular Volume

No 0 Hours met (4 required)

Warrant 3, Peak Hour

No

Condition A Met?	No	0 Hours met (1 required)
Condition B Met?	No	0 Hours met (1 required)

Warrant 4, Pedestrian Volume

No

Peds > 100 Conditio	No	0 Hours met (4 required)
Peds > 190 Conditio	No	0 Hours met (1 required)

Warrant 5, School Crossing

No

Warrant 6, Coordinated Signal System

No

Warrant 7, Crash Experience

No

Traffic Volume Condi	No	0 Hours met (8 required)
Ped Condition?	No	0 Hours met (8 required)

Warrant 8, Roadway Network

No

Warrant 1, Eight-Hour Vehicular Volume

No

Condition A or B Met	No	0 Hours met (8 required)
Condition A and B M	No	0 Hours met (8 required)

Warrant 2, Four-Hour Vehicular Volume

No 0 Hours met (4 required)

Warrant 3, Peak Hour

No

Condition A Met?	No	0 Hours met (1 required)
Condition B Met?	No	0 Hours met (1 required)

Warrant 4, Pedestrian Volume

No

Peds > 100 Conditio	No	0 Hours met (4 required)
Peds > 190 Conditio	No	0 Hours met (1 required)

Warrant 5, School Crossing

No

Warrant 6, Coordinated Signal System

No

Warrant 7, Crash Experience

No

Traffic Volume Condi	No	0 Hours met (8 required)
Ped Condition?	No	0 Hours met (8 required)

Warrant 8, Roadway Network

No

Warrants Summary Report

15: West Driveway 1 & Palmetto Avenue

Intersection Information

	Major Street	Minor Street
Street Name	-	West Driveway 1
Direction		EB/WB/SB
Number of Lane	1	2
Approach Speed	-	30

Warrant	Met?	Notes
Warrant 1, Eight-Hour Vehicular Volume		
	No	
Condition A or B Met	No	0 Hours met (8 required)
Condition A and B M	No	0 Hours met (8 required)
Warrant 2, Four-Hour Vehicular Volume		
	No	0 Hours met (4 required)
Warrant 3, Peak Hour		
	No	
Condition A Met?	No	0 Hours met (1 required)
Condition B Met?	No	0 Hours met (1 required)
Warrant 4, Pedestrian Volume		
	No	
Peds > 100 Conditio	No	0 Hours met (4 required)
Peds > 190 Conditio	No	0 Hours met (1 required)
Warrant 5, School Crossing		
	No	

Warrant 6, Coordinated Signal System

No

Warrant 7, Crash Experience

No

Traffic Volume Condi	No	0 Hours met (8 required)
Ped Condition?	No	0 Hours met (8 required)

Warrant 8, Roadway Network

No

Warrant 1, Eight-Hour Vehicular Volume

No

Condition A or B Met	No	0 Hours met (8 required)
Condition A and B M	No	0 Hours met (8 required)

Warrant 2, Four-Hour Vehicular Volume

No 0 Hours met (4 required)

Warrant 3, Peak Hour

No

Condition A Met?	No	0 Hours met (1 required)
Condition B Met?	No	0 Hours met (1 required)

Warrant 4, Pedestrian Volume

No

Peds > 100 Conditio	No	0 Hours met (4 required)
Peds > 190 Conditio	No	0 Hours met (1 required)

Warrant 5, School Crossing

No

Warrant 6, Coordinated Signal System

No

Warrant 7, Crash Experience

No

Traffic Volume Condi	No	0 Hours met (8 required)
Ped Condition?	No	0 Hours met (8 required)

Warrant 8, Roadway Network

No

Warrant 1, Eight-Hour Vehicular Volume

No

Condition A or B Met	No	0 Hours met (8 required)
Condition A and B M	No	0 Hours met (8 required)

Warrant 2, Four-Hour Vehicular Volume

	No	0 Hours met (4 required)

Warrant 3, Peak Hour

	No	
Condition A Met?	No	0 Hours met (1 required)
Condition B Met?	No	0 Hours met (1 required)

Warrant 4, Pedestrian Volume

	No	
Peds > 100 Conditio	No	0 Hours met (4 required)
Peds > 190 Conditio	No	0 Hours met (1 required)

Warrant 5, School Crossing

	No	

Warrant 6, Coordinated Signal System

	No	

Warrant 7, Crash Experience

	No	
Traffic Volume Condi	No	0 Hours met (8 required)
Ped Condition?	No	0 Hours met (8 required)

Warrant 8, Roadway Network

No

Warrant 1, Eight-Hour Vehicular Volume

No

Condition A or B Met	No	0 Hours met (8 required)
Condition A and B M	No	0 Hours met (8 required)

Warrant 2, Four-Hour Vehicular Volume

No 0 Hours met (4 required)

Warrant 3, Peak Hour

No

Condition A Met?	No	0 Hours met (1 required)
Condition B Met?	No	0 Hours met (1 required)

Warrant 4, Pedestrian Volume

No

Peds > 100 Conditio	No	0 Hours met (4 required)
Peds > 190 Conditio	No	0 Hours met (1 required)

Warrant 5, School Crossing

No

Warrant 6, Coordinated Signal System

No

Warrant 7, Crash Experience

No

Traffic Volume Condi	No	0 Hours met (8 required)
Ped Condition?	No	0 Hours met (8 required)

Warrant 8, Roadway Network

No

Warrant 1, Eight-Hour Vehicular Volume

No

Condition A or B Met	No	0 Hours met (8 required)
Condition A and B M	No	0 Hours met (8 required)

Warrant 2, Four-Hour Vehicular Volume

No 0 Hours met (4 required)

Warrant 3, Peak Hour

No

Condition A Met?	No	0 Hours met (1 required)
Condition B Met?	No	0 Hours met (1 required)

Warrant 4, Pedestrian Volume

No

Peds > 100 Conditio	No	0 Hours met (4 required)
Peds > 190 Conditio	No	0 Hours met (1 required)

Warrant 5, School Crossing

No

Warrant 6, Coordinated Signal System

No

Warrant 7, Crash Experience

No

Traffic Volume Condi	No	0 Hours met (8 required)
Ped Condition?	No	0 Hours met (8 required)

Warrant 8, Roadway Network

No

Warrants Summary Report

15: West Driveway 1 & Palmetto Avenue

Intersection Information

	Major Street	Minor Street
Street Name	-	West Driveway 1
Direction		EB/WB/SB
Number of Lane	1	2
Approach Speed	-	30

Warrant	Met?	Notes
Warrant 1, Eight-Hour Vehicular Volume		
	No	
Condition A or B Met	No	0 Hours met (8 required)
Condition A and B M	No	0 Hours met (8 required)
Warrant 2, Four-Hour Vehicular Volume		
	No	0 Hours met (4 required)
Warrant 3, Peak Hour		
	No	
Condition A Met?	No	0 Hours met (1 required)
Condition B Met?	No	0 Hours met (1 required)
Warrant 4, Pedestrian Volume		
	No	
Peds > 100 Conditio	No	0 Hours met (4 required)
Peds > 190 Conditio	No	0 Hours met (1 required)
Warrant 5, School Crossing		
	No	

Warrant 6, Coordinated Signal System

No

Warrant 7, Crash Experience

No

Traffic Volume Condi	No	0 Hours met (8 required)
Ped Condition?	No	0 Hours met (8 required)

Warrant 8, Roadway Network

No

Warrant 1, Eight-Hour Vehicular Volume

No

Condition A or B Met	No	0 Hours met (8 required)
Condition A and B M	No	0 Hours met (8 required)

Warrant 2, Four-Hour Vehicular Volume

No 0 Hours met (4 required)

Warrant 3, Peak Hour

No

Condition A Met?	No	0 Hours met (1 required)
Condition B Met?	No	0 Hours met (1 required)

Warrant 4, Pedestrian Volume

No

Peds > 100 Conditio	No	0 Hours met (4 required)
Peds > 190 Conditio	No	0 Hours met (1 required)

Warrant 5, School Crossing

No

Warrant 6, Coordinated Signal System

No

Warrant 7, Crash Experience

No

Traffic Volume Condi	No	0 Hours met (8 required)
Ped Condition?	No	0 Hours met (8 required)

Warrant 8, Roadway Network

No

Warrant 1, Eight-Hour Vehicular Volume

No

Condition A or B Met	No	0 Hours met (8 required)
Condition A and B M	No	0 Hours met (8 required)

Warrant 2, Four-Hour Vehicular Volume

	No	0 Hours met (4 required)

Warrant 3, Peak Hour

	No	
Condition A Met?	No	0 Hours met (1 required)
Condition B Met?	No	0 Hours met (1 required)

Warrant 4, Pedestrian Volume

	No	
Peds > 100 Conditio	No	0 Hours met (4 required)
Peds > 190 Conditio	No	0 Hours met (1 required)

Warrant 5, School Crossing

	No	

Warrant 6, Coordinated Signal System

	No	

Warrant 7, Crash Experience

	No	
Traffic Volume Condi	No	0 Hours met (8 required)
Ped Condition?	No	0 Hours met (8 required)

Warrant 8, Roadway Network

No

Warrant 1, Eight-Hour Vehicular Volume

No

Condition A or B Met	No	0 Hours met (8 required)
Condition A and B M	No	0 Hours met (8 required)

Warrant 2, Four-Hour Vehicular Volume

No 0 Hours met (4 required)

Warrant 3, Peak Hour

No

Condition A Met?	No	0 Hours met (1 required)
Condition B Met?	No	0 Hours met (1 required)

Warrant 4, Pedestrian Volume

No

Peds > 100 Conditio	No	0 Hours met (4 required)
Peds > 190 Conditio	No	0 Hours met (1 required)

Warrant 5, School Crossing

No

Warrant 6, Coordinated Signal System

No

Warrant 7, Crash Experience

No

Traffic Volume Condi	No	0 Hours met (8 required)
Ped Condition?	No	0 Hours met (8 required)

Warrant 8, Roadway Network

No

Warrant 1, Eight-Hour Vehicular Volume

No

Condition A or B Met	No	0 Hours met (8 required)
Condition A and B M	No	0 Hours met (8 required)

Warrant 2, Four-Hour Vehicular Volume

No 0 Hours met (4 required)

Warrant 3, Peak Hour

No

Condition A Met?	No	0 Hours met (1 required)
Condition B Met?	No	0 Hours met (1 required)

Warrant 4, Pedestrian Volume

No

Peds > 100 Conditio	No	0 Hours met (4 required)
Peds > 190 Conditio	No	0 Hours met (1 required)

Warrant 5, School Crossing

No

Warrant 6, Coordinated Signal System

No

Warrant 7, Crash Experience

No

Traffic Volume Condi	No	0 Hours met (8 required)
Ped Condition?	No	0 Hours met (8 required)

Warrant 8, Roadway Network

No

Warrants Summary Report

15: West Driveway 1 & Palmetto Avenue

Intersection Information

	Major Street	Minor Street
Street Name	-	West Driveway 1
Direction		EB/WB/SB
Number of Lane	1	2
Approach Speed	-	30

Warrant	Met?	Notes
Warrant 1, Eight-Hour Vehicular Volume		
	No	
Condition A or B Met	No	0 Hours met (8 required)
Condition A and B M	No	0 Hours met (8 required)
Warrant 2, Four-Hour Vehicular Volume		
	No	0 Hours met (4 required)
Warrant 3, Peak Hour		
	No	
Condition A Met?	No	0 Hours met (1 required)
Condition B Met?	No	0 Hours met (1 required)
Warrant 4, Pedestrian Volume		
	No	
Peds > 100 Conditio	No	0 Hours met (4 required)
Peds > 190 Conditio	No	0 Hours met (1 required)
Warrant 5, School Crossing		
	No	

Warrant 6, Coordinated Signal System

No

Warrant 7, Crash Experience

No

Traffic Volume Condi	No	0 Hours met (8 required)
Ped Condition?	No	0 Hours met (8 required)

Warrant 8, Roadway Network

No

Warrant 1, Eight-Hour Vehicular Volume

No

Condition A or B Met	No	0 Hours met (8 required)
Condition A and B M	No	0 Hours met (8 required)

Warrant 2, Four-Hour Vehicular Volume

No 0 Hours met (4 required)

Warrant 3, Peak Hour

No

Condition A Met?	No	0 Hours met (1 required)
Condition B Met?	No	0 Hours met (1 required)

Warrant 4, Pedestrian Volume

No

Peds > 100 Conditio	No	0 Hours met (4 required)
Peds > 190 Conditio	No	0 Hours met (1 required)

Warrant 5, School Crossing

No

Warrant 6, Coordinated Signal System

No

Warrant 7, Crash Experience

No

Traffic Volume Condi	No	0 Hours met (8 required)
Ped Condition?	No	0 Hours met (8 required)

Warrant 8, Roadway Network

No

Warrant 1, Eight-Hour Vehicular Volume

No

Condition A or B Met	No	0 Hours met (8 required)
Condition A and B M	No	0 Hours met (8 required)

Warrant 2, Four-Hour Vehicular Volume

	No	0 Hours met (4 required)

Warrant 3, Peak Hour

	No	
Condition A Met?	No	0 Hours met (1 required)
Condition B Met?	No	0 Hours met (1 required)

Warrant 4, Pedestrian Volume

	No	
Peds > 100 Conditio	No	0 Hours met (4 required)
Peds > 190 Conditio	No	0 Hours met (1 required)

Warrant 5, School Crossing

	No	

Warrant 6, Coordinated Signal System

	No	

Warrant 7, Crash Experience

	No	
Traffic Volume Condi	No	0 Hours met (8 required)
Ped Condition?	No	0 Hours met (8 required)

Warrant 8, Roadway Network

No

Warrant 1, Eight-Hour Vehicular Volume

No

Condition A or B Met	No	0 Hours met (8 required)
Condition A and B M	No	0 Hours met (8 required)

Warrant 2, Four-Hour Vehicular Volume

No 0 Hours met (4 required)

Warrant 3, Peak Hour

No

Condition A Met?	No	0 Hours met (1 required)
Condition B Met?	No	0 Hours met (1 required)

Warrant 4, Pedestrian Volume

No

Peds > 100 Conditio	No	0 Hours met (4 required)
Peds > 190 Conditio	No	0 Hours met (1 required)

Warrant 5, School Crossing

No

Warrant 6, Coordinated Signal System

No

Warrant 7, Crash Experience

No

Traffic Volume Condi	No	0 Hours met (8 required)
Ped Condition?	No	0 Hours met (8 required)

Warrant 8, Roadway Network

No

Warrant 1, Eight-Hour Vehicular Volume

No

Condition A or B Met	No	0 Hours met (8 required)
Condition A and B M	No	0 Hours met (8 required)

Warrant 2, Four-Hour Vehicular Volume

No 0 Hours met (4 required)

Warrant 3, Peak Hour

No

Condition A Met?	No	0 Hours met (1 required)
Condition B Met?	No	0 Hours met (1 required)

Warrant 4, Pedestrian Volume

No

Peds > 100 Conditio	No	0 Hours met (4 required)
Peds > 190 Conditio	No	0 Hours met (1 required)

Warrant 5, School Crossing

No

Warrant 6, Coordinated Signal System

No

Warrant 7, Crash Experience

No

Traffic Volume Condi	No	0 Hours met (8 required)
Ped Condition?	No	0 Hours met (8 required)

Warrant 8, Roadway Network

No

Warrants Summary Report

15: West Driveway 1 & Palmetto Avenue

Intersection Information

	Major Street	Minor Street
Street Name	-	West Driveway 1
Direction		EB/WB/SB
Number of Lane	1	2
Approach Speed	-	30

Warrant	Met?	Notes
Warrant 1, Eight-Hour Vehicular Volume		
	No	
Condition A or B Met	No	0 Hours met (8 required)
Condition A and B M	No	0 Hours met (8 required)
Warrant 2, Four-Hour Vehicular Volume		
	No	0 Hours met (4 required)
Warrant 3, Peak Hour		
	No	
Condition A Met?	No	0 Hours met (1 required)
Condition B Met?	No	0 Hours met (1 required)
Warrant 4, Pedestrian Volume		
	No	
Peds > 100 Conditio	No	0 Hours met (4 required)
Peds > 190 Conditio	No	0 Hours met (1 required)
Warrant 5, School Crossing		
	No	

Warrant 6, Coordinated Signal System

No

Warrant 7, Crash Experience

No

Traffic Volume Condi	No	0 Hours met (8 required)
Ped Condition?	No	0 Hours met (8 required)

Warrant 8, Roadway Network

No

Warrant 1, Eight-Hour Vehicular Volume

No

Condition A or B Met	No	0 Hours met (8 required)
Condition A and B M	No	0 Hours met (8 required)

Warrant 2, Four-Hour Vehicular Volume

No 0 Hours met (4 required)

Warrant 3, Peak Hour

No

Condition A Met?	No	0 Hours met (1 required)
Condition B Met?	No	0 Hours met (1 required)

Warrant 4, Pedestrian Volume

No

Peds > 100 Conditio	No	0 Hours met (4 required)
Peds > 190 Conditio	No	0 Hours met (1 required)

Warrant 5, School Crossing

No

Warrant 6, Coordinated Signal System

No

Warrant 7, Crash Experience

No

Traffic Volume Condi	No	0 Hours met (8 required)
Ped Condition?	No	0 Hours met (8 required)

Warrant 8, Roadway Network

No

Warrant 1, Eight-Hour Vehicular Volume

No

Condition A or B Met	No	0 Hours met (8 required)
Condition A and B M	No	0 Hours met (8 required)

Warrant 2, Four-Hour Vehicular Volume

	No	0 Hours met (4 required)

Warrant 3, Peak Hour

	No	
Condition A Met?	No	0 Hours met (1 required)
Condition B Met?	No	0 Hours met (1 required)

Warrant 4, Pedestrian Volume

	No	
Peds > 100 Conditio	No	0 Hours met (4 required)
Peds > 190 Conditio	No	0 Hours met (1 required)

Warrant 5, School Crossing

	No	

Warrant 6, Coordinated Signal System

	No	

Warrant 7, Crash Experience

	No	
Traffic Volume Condi	No	0 Hours met (8 required)
Ped Condition?	No	0 Hours met (8 required)

Warrant 8, Roadway Network

No

Warrant 1, Eight-Hour Vehicular Volume

No

Condition A or B Met	No	0 Hours met (8 required)
Condition A and B M	No	0 Hours met (8 required)

Warrant 2, Four-Hour Vehicular Volume

No 0 Hours met (4 required)

Warrant 3, Peak Hour

No

Condition A Met?	No	0 Hours met (1 required)
Condition B Met?	No	0 Hours met (1 required)

Warrant 4, Pedestrian Volume

No

Peds > 100 Conditio	No	0 Hours met (4 required)
Peds > 190 Conditio	No	0 Hours met (1 required)

Warrant 5, School Crossing

No

Warrant 6, Coordinated Signal System

No

Warrant 7, Crash Experience

No

Traffic Volume Condi	No	0 Hours met (8 required)
Ped Condition?	No	0 Hours met (8 required)

Warrant 8, Roadway Network

No

Warrant 1, Eight-Hour Vehicular Volume

No

Condition A or B Met	No	0 Hours met (8 required)
Condition A and B M	No	0 Hours met (8 required)

Warrant 2, Four-Hour Vehicular Volume

No 0 Hours met (4 required)

Warrant 3, Peak Hour

No

Condition A Met?	No	0 Hours met (1 required)
Condition B Met?	No	0 Hours met (1 required)

Warrant 4, Pedestrian Volume

No

Peds > 100 Conditio	No	0 Hours met (4 required)
Peds > 190 Conditio	No	0 Hours met (1 required)

Warrant 5, School Crossing

No

Warrant 6, Coordinated Signal System

No

Warrant 7, Crash Experience

No

Traffic Volume Condi	No	0 Hours met (8 required)
Ped Condition?	No	0 Hours met (8 required)

Warrant 8, Roadway Network

No

Warrants Summary Report

15: West Driveway 1 & Palmetto Avenue

Intersection Information

	Major Street	Minor Street
Street Name	-	West Driveway 1
Direction		EB/WB/SB
Number of Lane	1	2
Approach Speed	-	30

Warrant	Met?	Notes
Warrant 1, Eight-Hour Vehicular Volume		
	No	
Condition A or B Met	No	0 Hours met (8 required)
Condition A and B M	No	0 Hours met (8 required)
Warrant 2, Four-Hour Vehicular Volume		
	No	0 Hours met (4 required)
Warrant 3, Peak Hour		
	No	
Condition A Met?	No	0 Hours met (1 required)
Condition B Met?	No	0 Hours met (1 required)
Warrant 4, Pedestrian Volume		
	No	
Peds > 100 Conditio	No	0 Hours met (4 required)
Peds > 190 Conditio	No	0 Hours met (1 required)
Warrant 5, School Crossing		
	No	

Warrant 6, Coordinated Signal System

No

Warrant 7, Crash Experience

No

Traffic Volume Condi	No	0 Hours met (8 required)
Ped Condition?	No	0 Hours met (8 required)

Warrant 8, Roadway Network

No

Warrant 1, Eight-Hour Vehicular Volume

No

Condition A or B Met	No	0 Hours met (8 required)
Condition A and B M	No	0 Hours met (8 required)

Warrant 2, Four-Hour Vehicular Volume

No 0 Hours met (4 required)

Warrant 3, Peak Hour

No

Condition A Met?	No	0 Hours met (1 required)
Condition B Met?	No	0 Hours met (1 required)

Warrant 4, Pedestrian Volume

No

Peds > 100 Conditio	No	0 Hours met (4 required)
Peds > 190 Conditio	No	0 Hours met (1 required)

Warrant 5, School Crossing

No

Warrant 6, Coordinated Signal System

No

Warrant 7, Crash Experience

No

Traffic Volume Condi	No	0 Hours met (8 required)
Ped Condition?	No	0 Hours met (8 required)

Warrant 8, Roadway Network

No

Warrant 1, Eight-Hour Vehicular Volume

No

Condition A or B Met	No	0 Hours met (8 required)
Condition A and B M	No	0 Hours met (8 required)

Warrant 2, Four-Hour Vehicular Volume

	No	0 Hours met (4 required)

Warrant 3, Peak Hour

	No	
Condition A Met?	No	0 Hours met (1 required)
Condition B Met?	No	0 Hours met (1 required)

Warrant 4, Pedestrian Volume

	No	
Peds > 100 Conditio	No	0 Hours met (4 required)
Peds > 190 Conditio	No	0 Hours met (1 required)

Warrant 5, School Crossing

	No	

Warrant 6, Coordinated Signal System

	No	

Warrant 7, Crash Experience

	No	
Traffic Volume Condi	No	0 Hours met (8 required)
Ped Condition?	No	0 Hours met (8 required)

Warrant 8, Roadway Network

No

Warrant 1, Eight-Hour Vehicular Volume

No

Condition A or B Met	No	0 Hours met (8 required)
Condition A and B M	No	0 Hours met (8 required)

Warrant 2, Four-Hour Vehicular Volume

No 0 Hours met (4 required)

Warrant 3, Peak Hour

No

Condition A Met?	No	0 Hours met (1 required)
Condition B Met?	No	0 Hours met (1 required)

Warrant 4, Pedestrian Volume

No

Peds > 100 Conditio	No	0 Hours met (4 required)
Peds > 190 Conditio	No	0 Hours met (1 required)

Warrant 5, School Crossing

No

Warrant 6, Coordinated Signal System

No

Warrant 7, Crash Experience

No

Traffic Volume Condi	No	0 Hours met (8 required)
Ped Condition?	No	0 Hours met (8 required)

Warrant 8, Roadway Network

No

Warrant 1, Eight-Hour Vehicular Volume

No

Condition A or B Met	No	0 Hours met (8 required)
Condition A and B M	No	0 Hours met (8 required)

Warrant 2, Four-Hour Vehicular Volume

No 0 Hours met (4 required)

Warrant 3, Peak Hour

No

Condition A Met?	No	0 Hours met (1 required)
Condition B Met?	No	0 Hours met (1 required)

Warrant 4, Pedestrian Volume

No

Peds > 100 Conditio	No	0 Hours met (4 required)
Peds > 190 Conditio	No	0 Hours met (1 required)

Warrant 5, School Crossing

No

Warrant 6, Coordinated Signal System

No

Warrant 7, Crash Experience

No

Traffic Volume Condi	No	0 Hours met (8 required)
Ped Condition?	No	0 Hours met (8 required)

Warrant 8, Roadway Network

No

Warrants Summary Report

15: West Driveway 1 & Palmetto Avenue

Intersection Information

	Major Street	Minor Street
Street Name	-	West Driveway 1
Direction		EB/WB/SB
Number of Lane	1	2
Approach Speed	-	30

Warrant	Met?	Notes
Warrant 1, Eight-Hour Vehicular Volume		
	No	
Condition A or B Met	No	0 Hours met (8 required)
Condition A and B M	No	0 Hours met (8 required)
Warrant 2, Four-Hour Vehicular Volume		
	No	0 Hours met (4 required)
Warrant 3, Peak Hour		
	No	
Condition A Met?	No	0 Hours met (1 required)
Condition B Met?	No	0 Hours met (1 required)
Warrant 4, Pedestrian Volume		
	No	
Peds > 100 Conditio	No	0 Hours met (4 required)
Peds > 190 Conditio	No	0 Hours met (1 required)
Warrant 5, School Crossing		
	No	

Warrant 6, Coordinated Signal System

No

Warrant 7, Crash Experience

No

Traffic Volume Condi	No	0 Hours met (8 required)
Ped Condition?	No	0 Hours met (8 required)

Warrant 8, Roadway Network

No

Warrant 1, Eight-Hour Vehicular Volume

No

Condition A or B Met	No	0 Hours met (8 required)
Condition A and B M	No	0 Hours met (8 required)

Warrant 2, Four-Hour Vehicular Volume

No 0 Hours met (4 required)

Warrant 3, Peak Hour

No

Condition A Met?	No	0 Hours met (1 required)
Condition B Met?	No	0 Hours met (1 required)

Warrant 4, Pedestrian Volume

No

Peds > 100 Conditio	No	0 Hours met (4 required)
Peds > 190 Conditio	No	0 Hours met (1 required)

Warrant 5, School Crossing

No

Warrant 6, Coordinated Signal System

No

Warrant 7, Crash Experience

No

Traffic Volume Condi	No	0 Hours met (8 required)
Ped Condition?	No	0 Hours met (8 required)

Warrant 8, Roadway Network

No

Warrant 1, Eight-Hour Vehicular Volume

No

Condition A or B Met	No	0 Hours met (8 required)
Condition A and B M	No	0 Hours met (8 required)

Warrant 2, Four-Hour Vehicular Volume

	No	0 Hours met (4 required)

Warrant 3, Peak Hour

	No	
Condition A Met?	No	0 Hours met (1 required)
Condition B Met?	No	0 Hours met (1 required)

Warrant 4, Pedestrian Volume

	No	
Peds > 100 Conditio	No	0 Hours met (4 required)
Peds > 190 Conditio	No	0 Hours met (1 required)

Warrant 5, School Crossing

	No	

Warrant 6, Coordinated Signal System

	No	

Warrant 7, Crash Experience

	No	
Traffic Volume Condi	No	0 Hours met (8 required)
Ped Condition?	No	0 Hours met (8 required)

Warrant 8, Roadway Network

No

Warrant 1, Eight-Hour Vehicular Volume

No

Condition A or B Met	No	0 Hours met (8 required)
Condition A and B M	No	0 Hours met (8 required)

Warrant 2, Four-Hour Vehicular Volume

No 0 Hours met (4 required)

Warrant 3, Peak Hour

No

Condition A Met?	No	0 Hours met (1 required)
Condition B Met?	No	0 Hours met (1 required)

Warrant 4, Pedestrian Volume

No

Peds > 100 Conditio	No	0 Hours met (4 required)
Peds > 190 Conditio	No	0 Hours met (1 required)

Warrant 5, School Crossing

No

Warrant 6, Coordinated Signal System

No

Warrant 7, Crash Experience

No

Traffic Volume Condi	No	0 Hours met (8 required)
Ped Condition?	No	0 Hours met (8 required)

Warrant 8, Roadway Network

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Warrant 1, Eight-Hour Vehicular Volume

No

Condition A or B Met	No	0 Hours met (8 required)
Condition A and B M	No	0 Hours met (8 required)

Warrant 2, Four-Hour Vehicular Volume

No 0 Hours met (4 required)

Warrant 3, Peak Hour

No

Condition A Met?	No	0 Hours met (1 required)
Condition B Met?	No	0 Hours met (1 required)

Warrant 4, Pedestrian Volume

No

Peds > 100 Conditio	No	0 Hours met (4 required)
Peds > 190 Conditio	No	0 Hours met (1 required)

Warrant 5, School Crossing

No

Warrant 6, Coordinated Signal System

No

Warrant 7, Crash Experience

No

Traffic Volume Condi	No	0 Hours met (8 required)
Ped Condition?	No	0 Hours met (8 required)

Warrant 8, Roadway Network

No

Warrants Summary Report

15: West Driveway 1 & Palmetto Avenue

Intersection Information

	Major Street	Minor Street
Street Name	-	West Driveway 1
Direction		EB/WB/SB
Number of Lane	1	2
Approach Speed	-	30

Warrant	Met?	Notes
Warrant 1, Eight-Hour Vehicular Volume		
	No	
Condition A or B Met	No	0 Hours met (8 required)
Condition A and B M	No	0 Hours met (8 required)
Warrant 2, Four-Hour Vehicular Volume		
	No	0 Hours met (4 required)
Warrant 3, Peak Hour		
	No	
Condition A Met?	No	0 Hours met (1 required)
Condition B Met?	No	0 Hours met (1 required)
Warrant 4, Pedestrian Volume		
	No	
Peds > 100 Conditio	No	0 Hours met (4 required)
Peds > 190 Conditio	No	0 Hours met (1 required)
Warrant 5, School Crossing		
	No	

Warrant 6, Coordinated Signal System

No

Warrant 7, Crash Experience

No

Traffic Volume Condi	No	0 Hours met (8 required)
Ped Condition?	No	0 Hours met (8 required)

Warrant 8, Roadway Network

No

Warrant 1, Eight-Hour Vehicular Volume

No

Condition A or B Met	No	0 Hours met (8 required)
Condition A and B M	No	0 Hours met (8 required)

Warrant 2, Four-Hour Vehicular Volume

No 0 Hours met (4 required)

Warrant 3, Peak Hour

No

Condition A Met?	No	0 Hours met (1 required)
Condition B Met?	No	0 Hours met (1 required)

Warrant 4, Pedestrian Volume

No

Peds > 100 Conditio	No	0 Hours met (4 required)
Peds > 190 Conditio	No	0 Hours met (1 required)

Warrant 5, School Crossing

No

Warrant 6, Coordinated Signal System

No

Warrant 7, Crash Experience

No

Traffic Volume Condi	No	0 Hours met (8 required)
Ped Condition?	No	0 Hours met (8 required)

Warrant 8, Roadway Network

No

Warrant 1, Eight-Hour Vehicular Volume

No

Condition A or B Met	No	0 Hours met (8 required)
Condition A and B M	No	0 Hours met (8 required)

Warrant 2, Four-Hour Vehicular Volume

	No	0 Hours met (4 required)

Warrant 3, Peak Hour

	No	
Condition A Met?	No	0 Hours met (1 required)
Condition B Met?	No	0 Hours met (1 required)

Warrant 4, Pedestrian Volume

	No	
Peds > 100 Conditio	No	0 Hours met (4 required)
Peds > 190 Conditio	No	0 Hours met (1 required)

Warrant 5, School Crossing

	No	

Warrant 6, Coordinated Signal System

	No	

Warrant 7, Crash Experience

	No	
Traffic Volume Condi	No	0 Hours met (8 required)
Ped Condition?	No	0 Hours met (8 required)

Warrant 8, Roadway Network

No

Warrant 1, Eight-Hour Vehicular Volume

No

Condition A or B Met	No	0 Hours met (8 required)
Condition A and B M	No	0 Hours met (8 required)

Warrant 2, Four-Hour Vehicular Volume

No 0 Hours met (4 required)

Warrant 3, Peak Hour

No

Condition A Met?	No	0 Hours met (1 required)
Condition B Met?	No	0 Hours met (1 required)

Warrant 4, Pedestrian Volume

No

Peds > 100 Conditio	No	0 Hours met (4 required)
Peds > 190 Conditio	No	0 Hours met (1 required)

Warrant 5, School Crossing

No

Warrant 6, Coordinated Signal System

No

Warrant 7, Crash Experience

No

Traffic Volume Condi	No	0 Hours met (8 required)
Ped Condition?	No	0 Hours met (8 required)

Warrant 8, Roadway Network

No

Warrant 1, Eight-Hour Vehicular Volume

No

Condition A or B Met	No	0 Hours met (8 required)
Condition A and B M	No	0 Hours met (8 required)

Warrant 2, Four-Hour Vehicular Volume

No 0 Hours met (4 required)

Warrant 3, Peak Hour

No

Condition A Met?	No	0 Hours met (1 required)
Condition B Met?	No	0 Hours met (1 required)

Warrant 4, Pedestrian Volume

No

Peds > 100 Conditio	No	0 Hours met (4 required)
Peds > 190 Conditio	No	0 Hours met (1 required)

Warrant 5, School Crossing

No

Warrant 6, Coordinated Signal System

No

Warrant 7, Crash Experience

No

Traffic Volume Condi	No	0 Hours met (8 required)
Ped Condition?	No	0 Hours met (8 required)

Warrant 8, Roadway Network

No

Warrants Summary Report

15: West Driveway 1 & Palmetto Avenue

Intersection Information

	Major Street	Minor Street
Street Name	-	West Driveway 1
Direction		EB/WB/SB
Number of Lane	1	2
Approach Speed	-	30

Warrant	Met?	Notes
Warrant 1, Eight-Hour Vehicular Volume		
	No	
Condition A or B Met	No	0 Hours met (8 required)
Condition A and B M	No	0 Hours met (8 required)
Warrant 2, Four-Hour Vehicular Volume		
	No	0 Hours met (4 required)
Warrant 3, Peak Hour		
	No	
Condition A Met?	No	0 Hours met (1 required)
Condition B Met?	No	0 Hours met (1 required)
Warrant 4, Pedestrian Volume		
	No	
Peds > 100 Conditio	No	0 Hours met (4 required)
Peds > 190 Conditio	No	0 Hours met (1 required)
Warrant 5, School Crossing		
	No	

Warrant 6, Coordinated Signal System

No

Warrant 7, Crash Experience

No

Traffic Volume Condi	No	0 Hours met (8 required)
Ped Condition?	No	0 Hours met (8 required)

Warrant 8, Roadway Network

No

Warrant 1, Eight-Hour Vehicular Volume

No

Condition A or B Met	No	0 Hours met (8 required)
Condition A and B M	No	0 Hours met (8 required)

Warrant 2, Four-Hour Vehicular Volume

No 0 Hours met (4 required)

Warrant 3, Peak Hour

No

Condition A Met?	No	0 Hours met (1 required)
Condition B Met?	No	0 Hours met (1 required)

Warrant 4, Pedestrian Volume

No

Peds > 100 Conditio	No	0 Hours met (4 required)
Peds > 190 Conditio	No	0 Hours met (1 required)

Warrant 5, School Crossing

No

Warrant 6, Coordinated Signal System

No

Warrant 7, Crash Experience

No

Traffic Volume Condi	No	0 Hours met (8 required)
Ped Condition?	No	0 Hours met (8 required)

Warrant 8, Roadway Network

No

Warrant 1, Eight-Hour Vehicular Volume

No

Condition A or B Met	No	0 Hours met (8 required)
Condition A and B M	No	0 Hours met (8 required)

Warrant 2, Four-Hour Vehicular Volume

	No	0 Hours met (4 required)

Warrant 3, Peak Hour

	No	
Condition A Met?	No	0 Hours met (1 required)
Condition B Met?	No	0 Hours met (1 required)

Warrant 4, Pedestrian Volume

	No	
Peds > 100 Conditio	No	0 Hours met (4 required)
Peds > 190 Conditio	No	0 Hours met (1 required)

Warrant 5, School Crossing

	No	

Warrant 6, Coordinated Signal System

	No	

Warrant 7, Crash Experience

	No	
Traffic Volume Condi	No	0 Hours met (8 required)
Ped Condition?	No	0 Hours met (8 required)

Warrant 8, Roadway Network

No

Warrant 1, Eight-Hour Vehicular Volume

No

Condition A or B Met	No	0 Hours met (8 required)
Condition A and B M	No	0 Hours met (8 required)

Warrant 2, Four-Hour Vehicular Volume

No 0 Hours met (4 required)

Warrant 3, Peak Hour

No

Condition A Met?	No	0 Hours met (1 required)
Condition B Met?	No	0 Hours met (1 required)

Warrant 4, Pedestrian Volume

No

Peds > 100 Conditio	No	0 Hours met (4 required)
Peds > 190 Conditio	No	0 Hours met (1 required)

Warrant 5, School Crossing

No

Warrant 6, Coordinated Signal System

No

Warrant 7, Crash Experience

No

Traffic Volume Condi	No	0 Hours met (8 required)
Ped Condition?	No	0 Hours met (8 required)

Warrant 8, Roadway Network

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Warrant 1, Eight-Hour Vehicular Volume

No

Condition A or B Met	No	0 Hours met (8 required)
Condition A and B M	No	0 Hours met (8 required)

Warrant 2, Four-Hour Vehicular Volume

No 0 Hours met (4 required)

Warrant 3, Peak Hour

No

Condition A Met?	No	0 Hours met (1 required)
Condition B Met?	No	0 Hours met (1 required)

Warrant 4, Pedestrian Volume

No

Peds > 100 Conditio	No	0 Hours met (4 required)
Peds > 190 Conditio	No	0 Hours met (1 required)

Warrant 5, School Crossing

No

Warrant 6, Coordinated Signal System

No

Warrant 7, Crash Experience

No

Traffic Volume Condi	No	0 Hours met (8 required)
Ped Condition?	No	0 Hours met (8 required)

Warrant 8, Roadway Network

No

Warrants Summary Report

15: West Driveway 1 & Palmetto Avenue

Intersection Information

	Major Street	Minor Street
Street Name	-	West Driveway 1
Direction		EB/WB/SB
Number of Lane	1	2
Approach Speed	-	30

Warrant	Met?	Notes
Warrant 1, Eight-Hour Vehicular Volume		
	No	
Condition A or B Met	No	0 Hours met (8 required)
Condition A and B M	No	0 Hours met (8 required)
Warrant 2, Four-Hour Vehicular Volume		
	No	0 Hours met (4 required)
Warrant 3, Peak Hour		
	No	
Condition A Met?	No	0 Hours met (1 required)
Condition B Met?	No	0 Hours met (1 required)
Warrant 4, Pedestrian Volume		
	No	
Peds > 100 Conditio	No	0 Hours met (4 required)
Peds > 190 Conditio	No	0 Hours met (1 required)
Warrant 5, School Crossing		
	No	

Warrant 6, Coordinated Signal System

No

Warrant 7, Crash Experience

No

Traffic Volume Condi	No	0 Hours met (8 required)
Ped Condition?	No	0 Hours met (8 required)

Warrant 8, Roadway Network

No

Warrant 1, Eight-Hour Vehicular Volume

No

Condition A or B Met	No	0 Hours met (8 required)
Condition A and B M	No	0 Hours met (8 required)

Warrant 2, Four-Hour Vehicular Volume

No 0 Hours met (4 required)

Warrant 3, Peak Hour

No

Condition A Met?	No	0 Hours met (1 required)
Condition B Met?	No	0 Hours met (1 required)

Warrant 4, Pedestrian Volume

No

Peds > 100 Conditio	No	0 Hours met (4 required)
Peds > 190 Conditio	No	0 Hours met (1 required)

Warrant 5, School Crossing

No

Warrant 6, Coordinated Signal System

No

Warrant 7, Crash Experience

No

Traffic Volume Condi	No	0 Hours met (8 required)
Ped Condition?	No	0 Hours met (8 required)

Warrant 8, Roadway Network

No

Warrant 1, Eight-Hour Vehicular Volume

No

Condition A or B Met	No	0 Hours met (8 required)
Condition A and B M	No	0 Hours met (8 required)

Warrant 2, Four-Hour Vehicular Volume

	No	0 Hours met (4 required)

Warrant 3, Peak Hour

	No	
Condition A Met?	No	0 Hours met (1 required)
Condition B Met?	No	0 Hours met (1 required)

Warrant 4, Pedestrian Volume

	No	
Peds > 100 Conditio	No	0 Hours met (4 required)
Peds > 190 Conditio	No	0 Hours met (1 required)

Warrant 5, School Crossing

	No	

Warrant 6, Coordinated Signal System

	No	

Warrant 7, Crash Experience

	No	
Traffic Volume Condi	No	0 Hours met (8 required)
Ped Condition?	No	0 Hours met (8 required)

Warrant 8, Roadway Network

No

Warrant 1, Eight-Hour Vehicular Volume

No

Condition A or B Met	No	0 Hours met (8 required)
Condition A and B M	No	0 Hours met (8 required)

Warrant 2, Four-Hour Vehicular Volume

No 0 Hours met (4 required)

Warrant 3, Peak Hour

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Condition A Met?	No	0 Hours met (1 required)
Condition B Met?	No	0 Hours met (1 required)

Warrant 4, Pedestrian Volume

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Peds > 100 Conditio	No	0 Hours met (4 required)
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Warrant 5, School Crossing

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Warrant 6, Coordinated Signal System

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Warrant 7, Crash Experience

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Traffic Volume Condi	No	0 Hours met (8 required)
Ped Condition?	No	0 Hours met (8 required)

Warrant 8, Roadway Network

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Warrant 1, Eight-Hour Vehicular Volume

No

Condition A or B Met	No	0 Hours met (8 required)
Condition A and B M	No	0 Hours met (8 required)

Warrant 2, Four-Hour Vehicular Volume

No 0 Hours met (4 required)

Warrant 3, Peak Hour

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Condition A Met?	No	0 Hours met (1 required)
Condition B Met?	No	0 Hours met (1 required)

Warrant 4, Pedestrian Volume

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Peds > 100 Conditio	No	0 Hours met (4 required)
Peds > 190 Conditio	No	0 Hours met (1 required)

Warrant 5, School Crossing

No

Warrant 6, Coordinated Signal System

No

Warrant 7, Crash Experience

No

Traffic Volume Condi	No	0 Hours met (8 required)
Ped Condition?	No	0 Hours met (8 required)

Warrant 8, Roadway Network

No

Warrants Summary Report

15: West Driveway 1 & Palmetto Avenue

Intersection Information

	Major Street	Minor Street
Street Name	-	West Driveway 1
Direction		EB/WB/SB
Number of Lane	1	2
Approach Speed	-	30

Warrant	Met?	Notes
Warrant 1, Eight-Hour Vehicular Volume		
	No	
Condition A or B Met	No	0 Hours met (8 required)
Condition A and B M	No	0 Hours met (8 required)
Warrant 2, Four-Hour Vehicular Volume		
	No	0 Hours met (4 required)
Warrant 3, Peak Hour		
	No	
Condition A Met?	No	0 Hours met (1 required)
Condition B Met?	No	0 Hours met (1 required)
Warrant 4, Pedestrian Volume		
	No	
Peds > 100 Conditio	No	0 Hours met (4 required)
Peds > 190 Conditio	No	0 Hours met (1 required)
Warrant 5, School Crossing		
	No	

Warrant 6, Coordinated Signal System

No

Warrant 7, Crash Experience

No

Traffic Volume Condi	No	0 Hours met (8 required)
Ped Condition?	No	0 Hours met (8 required)

Warrant 8, Roadway Network

No

Warrant 1, Eight-Hour Vehicular Volume

No

Condition A or B Met	No	0 Hours met (8 required)
Condition A and B M	No	0 Hours met (8 required)

Warrant 2, Four-Hour Vehicular Volume

No 0 Hours met (4 required)

Warrant 3, Peak Hour

No

Condition A Met?	No	0 Hours met (1 required)
Condition B Met?	No	0 Hours met (1 required)

Warrant 4, Pedestrian Volume

No

Peds > 100 Conditio	No	0 Hours met (4 required)
Peds > 190 Conditio	No	0 Hours met (1 required)

Warrant 5, School Crossing

No

Warrant 6, Coordinated Signal System

No

Warrant 7, Crash Experience

No

Traffic Volume Condi	No	0 Hours met (8 required)
Ped Condition?	No	0 Hours met (8 required)

Warrant 8, Roadway Network

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Warrant 1, Eight-Hour Vehicular Volume

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Condition A or B Met	No	0 Hours met (8 required)
Condition A and B M	No	0 Hours met (8 required)

Warrant 2, Four-Hour Vehicular Volume

	No	0 Hours met (4 required)

Warrant 3, Peak Hour

	No	
Condition A Met?	No	0 Hours met (1 required)
Condition B Met?	No	0 Hours met (1 required)

Warrant 4, Pedestrian Volume

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Peds > 190 Conditio	No	0 Hours met (1 required)

Warrant 5, School Crossing

	No	

Warrant 6, Coordinated Signal System

	No	

Warrant 7, Crash Experience

	No	
Traffic Volume Condi	No	0 Hours met (8 required)
Ped Condition?	No	0 Hours met (8 required)

Warrant 8, Roadway Network

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Warrant 1, Eight-Hour Vehicular Volume

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Condition A or B Met	No	0 Hours met (8 required)
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Warrant 5, School Crossing

No

Warrant 6, Coordinated Signal System

	No	

Warrant 7, Crash Experience

	No	
Traffic Volume Condi	No	0 Hours met (8 required)
Ped Condition?	No	0 Hours met (8 required)

Warrant 8, Roadway Network

	No	

Warrant 1, Eight-Hour Vehicular Volume

	No	
Condition A or B Met	No	0 Hours met (8 required)
Condition A and B M	No	0 Hours met (8 required)

Warrant 2, Four-Hour Vehicular Volume

	No	0 Hours met (4 required)

Warrant 3, Peak Hour

	No	
Condition A Met?	No	0 Hours met (1 required)
Condition B Met?	No	0 Hours met (1 required)

Warrant 4, Pedestrian Volume

No

Peds > 100 Conditio	No	0 Hours met (4 required)
Peds > 190 Conditio	No	0 Hours met (1 required)

Warrant 5, School Crossing

No

Warrant 6, Coordinated Signal System

No

Warrant 7, Crash Experience

No

Traffic Volume Condi	No	0 Hours met (8 required)
Ped Condition?	No	0 Hours met (8 required)

Warrant 8, Roadway Network

No

Warrants Summary Report

15: West Driveway 1 & Palmetto Avenue

Intersection Information

	Major Street	Minor Street
Street Name	-	West Driveway 1
Direction		EB/WB/SB
Number of Lane	1	2
Approach Speed	-	30

Warrant	Met?	Notes
Warrant 1, Eight-Hour Vehicular Volume		
	No	
Condition A or B Met	No	0 Hours met (8 required)
Condition A and B M	No	0 Hours met (8 required)
Warrant 2, Four-Hour Vehicular Volume		
	No	0 Hours met (4 required)
Warrant 3, Peak Hour		
	No	
Condition A Met?	No	0 Hours met (1 required)
Condition B Met?	No	0 Hours met (1 required)
Warrant 4, Pedestrian Volume		
	No	
Peds > 100 Conditio	No	0 Hours met (4 required)
Peds > 190 Conditio	No	0 Hours met (1 required)
Warrant 5, School Crossing		
	No	

Warrant 6, Coordinated Signal System

No

Warrant 7, Crash Experience

No

Traffic Volume Condi	No	0 Hours met (8 required)
Ped Condition?	No	0 Hours met (8 required)

Warrant 8, Roadway Network

No

Warrant 1, Eight-Hour Vehicular Volume

No

Condition A or B Met	No	0 Hours met (8 required)
Condition A and B M	No	0 Hours met (8 required)

Warrant 2, Four-Hour Vehicular Volume

No 0 Hours met (4 required)

Warrant 3, Peak Hour

No

Condition A Met?	No	0 Hours met (1 required)
Condition B Met?	No	0 Hours met (1 required)

Warrant 4, Pedestrian Volume

No

Peds > 100 Conditio	No	0 Hours met (4 required)
Peds > 190 Conditio	No	0 Hours met (1 required)

Warrant 5, School Crossing

No

Warrant 6, Coordinated Signal System

No

Warrant 7, Crash Experience

No

Traffic Volume Condi	No	0 Hours met (8 required)
Ped Condition?	No	0 Hours met (8 required)

Warrant 8, Roadway Network

No

Warrant 1, Eight-Hour Vehicular Volume

No

Condition A or B Met	No	0 Hours met (8 required)
Condition A and B M	No	0 Hours met (8 required)

Warrant 2, Four-Hour Vehicular Volume

	No	0 Hours met (4 required)

Warrant 3, Peak Hour

	No	
Condition A Met?	No	0 Hours met (1 required)
Condition B Met?	No	0 Hours met (1 required)

Warrant 4, Pedestrian Volume

	No	
Peds > 100 Conditio	No	0 Hours met (4 required)
Peds > 190 Conditio	No	0 Hours met (1 required)

Warrant 5, School Crossing

	No	

Warrant 6, Coordinated Signal System

	No	

Warrant 7, Crash Experience

	No	
Traffic Volume Condi	No	0 Hours met (8 required)
Ped Condition?	No	0 Hours met (8 required)

Warrant 8, Roadway Network

No

Warrant 1, Eight-Hour Vehicular Volume

No

Condition A or B Met	No	0 Hours met (8 required)
Condition A and B M	No	0 Hours met (8 required)

Warrant 2, Four-Hour Vehicular Volume

No 0 Hours met (4 required)

Warrant 3, Peak Hour

No

Condition A Met?	No	0 Hours met (1 required)
Condition B Met?	No	0 Hours met (1 required)

Warrant 4, Pedestrian Volume

No

Peds > 100 Conditio	No	0 Hours met (4 required)
Peds > 190 Conditio	No	0 Hours met (1 required)

Warrant 5, School Crossing

No

Warrant 6, Coordinated Signal System

No

Warrant 7, Crash Experience

No

Traffic Volume Condi	No	0 Hours met (8 required)
Ped Condition?	No	0 Hours met (8 required)

Warrant 8, Roadway Network

No

Warrant 1, Eight-Hour Vehicular Volume

No

Condition A or B Met	No	0 Hours met (8 required)
Condition A and B M	No	0 Hours met (8 required)

Warrant 2, Four-Hour Vehicular Volume

No 0 Hours met (4 required)

Warrant 3, Peak Hour

No

Condition A Met?	No	0 Hours met (1 required)
Condition B Met?	No	0 Hours met (1 required)

Warrant 4, Pedestrian Volume

No

Peds > 100 Conditio	No	0 Hours met (4 required)
Peds > 190 Conditio	No	0 Hours met (1 required)

Warrant 5, School Crossing

No

Warrant 6, Coordinated Signal System

No

Warrant 7, Crash Experience

No

Traffic Volume Condi	No	0 Hours met (8 required)
Ped Condition?	No	0 Hours met (8 required)

Warrant 8, Roadway Network

No

APPENDIX E:
LEVEL OF SERVICE CALCULATION WORKSHEETS

EXISTING CONDITIONS

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	224	2	127	576	537	0	0	536	681
Future Volume (veh/h)	0	0	0	224	2	127	576	537	0	0	536	681
Number				3	8	18	5	2	12	1	6	16
Initial Q, veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln				1700	1800	1800	1700	1800	0	0	1800	1800
Adj Flow Rate, veh/h				241	2	137	619	577	0	0	576	732
Peak Hour Factor				0.93	0.93	0.93	0.93	0.93	0.95	0.95	0.93	0.93
Percent Heavy Veh, %				0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence				Yes			Yes			No		
Cap, veh/h				267	2	240	614	2626	0	0	1725	536
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	2.00	2.00
Prop Arrive On Green				0.16	0.16	0.16	0.76	1.00	0.00	0.00	0.70	0.70
Unsig. Movement Delay												
Ln Grp Delay, s/veh				79.0	0.0	49.8	40.6	0.1	0.0	0.0	12.9	194.5
Ln Grp LOS				E	A	D	F	A	A	A	B	F
Approach Vol, veh/h					380			1196			1308	
Approach Delay, s/veh					68.5			21.1			114.6	
Approach LOS					E			C			F	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2	8		5	6		
Case No		4.0	11.0		2.0	7.0		
Phs Duration (G+Y+Rc), s		96.6	23.4		50.0	46.6		
Change Period (Y+Rc), s		4.5	4.5		4.5	4.5		
Max Green (Gmax), s		91.5	19.5		45.5	41.5		
Max Allow Headway (MAH), s		5.2	4.9		3.8	4.5		
Max Q Clear (g_c+I1), s		2.0	18.7		47.5	44.1		
Green Ext Time (g_e), s		4.6	0.2		0.0	0.0		
Prob of Phs Call (p_c)		1.00	1.00		1.00	1.00		
Prob of Max Out (p_x)		0.00	1.00		1.00	0.00		
Left-Turn Movement Data								
Assigned Mvmt			3		5	1		
Mvmt Sat Flow, veh/h			1701		1619	0		
Through Movement Data								
Assigned Mvmt		2	8			6		
Mvmt Sat Flow, veh/h		3510	14			5076		
Right-Turn Movement Data								
Assigned Mvmt		12	18			16		
Mvmt Sat Flow, veh/h		0	1525			1525		
Left Lane Group Data								
Assigned Mvmt	0	0	3	0	5	1	0	0
Lane Assignment			L+T		L (Prot)			

Lanes in Grp	0	0	1	0	1	0	0	0
Grp Vol (v), veh/h	0	0	243	0	619	0	0	0
Grp Sat Flow (s), veh/h/ln	0	0	1715	0	1619	0	0	0
Q Serve Time (g_s), s	0.0	0.0	16.7	0.0	45.5	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	16.7	0.0	45.5	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	42.1	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	0.00	0.99	0.00	1.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	270	0	614	0	0	0
V/C Ratio (X)	0.00	0.00	0.90	0.00	1.01	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	0	279	0	614	0	0	0
Upstream Filter (I)	0.00	0.00	1.00	0.00	0.44	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	49.7	0.0	14.5	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	29.4	0.0	26.1	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	79.0	0.0	40.6	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	7.1	0.0	5.8	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	2.2	0.0	4.5	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	0.00	1.00	0.00	1.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	9.3	0.0	10.2	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.19	0.00	0.93	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	1.3	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	8	0	0	6	0	0
Lane Assignment		T				T		
Lanes in Grp	0	2	0	0	0	3	0	0
Grp Vol (v), veh/h	0	577	0	0	0	576	0	0
Grp Sat Flow (s), veh/h/ln	0	1710	0	0	0	1638	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	5.5	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	5.5	0.0	0.0
Lane Grp Cap (c), veh/h	0	2626	0	0	0	1725	0	0
V/C Ratio (X)	0.00	0.22	0.00	0.00	0.00	0.33	0.00	0.00
Avail Cap (c_a), veh/h	0	2626	0	0	0	1725	0	0
Upstream Filter (I)	0.00	0.44	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	12.4	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.1	0.0	0.0	0.0	0.5	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.1	0.0	0.0	0.0	12.9	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	1.7	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.0	0.0	1.8	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	18	0	0	16	0	0
Lane Assignment			R			R		
Lanes in Grp	0	0	1	0	0	1	0	0
Grp Vol (v), veh/h	0	0	137	0	0	732	0	0
Grp Sat Flow (s), veh/h/ln	0	0	1525	0	0	1525	0	0
Q Serve Time (g_s), s	0.0	0.0	10.0	0.0	0.0	42.1	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	10.0	0.0	0.0	42.1	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	240	0	0	536	0	0
V/C Ratio (X)	0.00	0.00	0.57	0.00	0.00	1.37	0.00	0.00
Avail Cap (c_a), veh/h	0	0	248	0	0	536	0	0
Upstream Filter (I)	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	46.8	0.0	0.0	17.9	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	2.9	0.0	0.0	176.7	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	49.8	0.0	0.0	194.5	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	3.8	0.0	0.0	7.5	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.2	0.0	0.0	26.3	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	4.0	0.0	0.0	33.7	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.08	0.00	0.00	0.73	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	49.1	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	69.7
HCM 6th LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	528	3	478	0	0	0	0	652	288	74	486	0
Future Volume (veh/h)	528	3	478	0	0	0	0	652	288	74	486	0
Number	7	4	14				5	2	12	1	6	16
Initial Q, veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1700	1800	1800				0	1800	1800	1800	1800	0
Adj Flow Rate, veh/h	568	3	514				0	701	310	80	523	0
Peak Hour Factor	0.93	0.93	0.93				0.95	0.93	0.93	0.93	0.93	0.95
Percent Heavy Veh, %	0	0	0				0	0	0	0	0	0
Opposing Right Turn Influence	Yes						No			Yes		
Cap, veh/h	555	3	502				0	862	268	99	926	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	2.00	2.00	2.00	1.00	1.00
Prop Arrive On Green	0.65	0.65	0.65				0.00	0.35	0.35	0.12	0.27	0.00
Unsig. Movement Delay												
Ln Grp Delay, s/veh	54.7	0.0	0.0				0.0	45.4	143.6	84.1	40.0	0.0
Ln Grp LOS	F	A	A				A	D	F	F	D	A
Approach Vol, veh/h		1085						1011			603	
Approach Delay, s/veh		54.7						75.5			45.9	
Approach LOS		D						E			D	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Case No	2.0	7.0		12.0		4.0		
Phs Duration (G+Y+Rc), s	11.4	25.6		83.0		37.0		
Change Period (Y+Rc), s	4.5	4.5		4.5		4.5		
Max Green (Gmax), s	7.5	20.5		78.5		32.5		
Max Allow Headway (MAH), s	3.8	4.9		5.4		5.2		
Max Q Clear (g_c+I1), s	7.5	23.1		80.5		17.8		
Green Ext Time (g_e), s	0.0	0.0		0.0		3.0		
Prob of Phs Call (p_c)	0.93	1.00		1.00		1.00		
Prob of Max Out (p_x)	1.00	0.00		1.00		0.00		

Left-Turn Movement Data								
Assigned Mvmt	1	5		7				
Mvmt Sat Flow, veh/h	1714	0		848				

Through Movement Data								
Assigned Mvmt		2		4		6		
Mvmt Sat Flow, veh/h		5076		4		3510		

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		
Mvmt Sat Flow, veh/h		1525		767		0		

Left Lane Group Data								
Assigned Mvmt	1	5	0	7	0	0	0	0
Lane Assignment	L (Prot)			L+T+R				

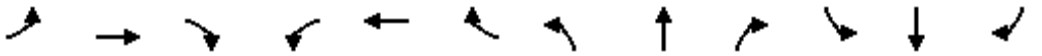
Lanes in Grp	1	0	0	1	0	0	0	0
Grp Vol (v), veh/h	80	0	0	1085	0	0	0	0
Grp Sat Flow (s), veh/h/ln	1714	0	0	1620	0	0	0	0
Q Serve Time (g_s), s	5.5	0.0	0.0	78.5	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	5.5	0.0	0.0	78.5	0.0	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	21.1	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	0.52	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	99	0	0	1059	0	0	0	0
V/C Ratio (X)	0.81	0.00	0.00	1.02	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	107	0	0	1059	0	0	0	0
Upstream Filter (I)	0.95	0.00	0.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	52.4	0.0	0.0	20.8	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	31.7	0.0	0.0	33.9	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	84.1	0.0	0.0	54.7	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	2.2	0.0	0.0	26.5	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.9	0.0	0.0	10.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00
%ile Back of Q (50%), veh/ln	3.1	0.0	0.0	36.4	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.28	0.00	0.00	0.62	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	6.4	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	0
Lane Assignment		T				T		
Lanes in Grp	0	3	0	0	0	2	0	0
Grp Vol (v), veh/h	0	701	0	0	0	523	0	0
Grp Sat Flow (s), veh/h/ln	0	1638	0	0	0	1710	0	0
Q Serve Time (g_s), s	0.0	15.5	0.0	0.0	0.0	15.8	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	15.5	0.0	0.0	0.0	15.8	0.0	0.0
Lane Grp Cap (c), veh/h	0	862	0	0	0	926	0	0
V/C Ratio (X)	0.00	0.81	0.00	0.00	0.00	0.56	0.00	0.00
Avail Cap (c_a), veh/h	0	862	0	0	0	926	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	0.95	0.00	0.00
Uniform Delay (d1), s/veh	0.0	37.2	0.0	0.0	0.0	37.7	0.0	0.0
Incr Delay (d2), s/veh	0.0	8.3	0.0	0.0	0.0	2.4	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	45.4	0.0	0.0	0.0	40.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	5.2	0.0	0.0	0.0	6.6	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.7	0.0	0.0	0.0	0.3	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	5.8	0.0	0.0	0.0	6.9	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.19	0.00	0.00	0.00	0.63	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	0
Lane Assignment		R						
Lanes in Grp	0	1	0	0	0	0	0	0
Grp Vol (v), veh/h	0	310	0	0	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	1525	0	0	0	0	0	0
Q Serve Time (g_s), s	0.0	21.1	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	21.1	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	0.47	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	268	0	0	0	0	0	0
V/C Ratio (X)	0.00	1.16	0.00	0.00	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	268	0	0	0	0	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	38.9	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	104.7	0.0	0.0	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	143.6	0.0	0.0	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	6.5	0.0	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	7.8	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	14.3	0.0	0.0	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.46	0.00	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	10.6	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	60.5
HCM 6th LOS	E



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	14	220	41	370	645	111	47	166	203	169	430	48
Future Volume (veh/h)	14	220	41	370	645	111	47	166	203	169	430	48
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1700	1800	1800	1800	1800	1800	1700	1800	1800	1700	1800	1900
Adj Flow Rate, veh/h	14	227	42	381	665	114	48	171	209	174	443	49
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	27	318	58	415	980	168	63	1102	491	204	1271	140
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.02	0.11	0.11	0.24	0.34	0.34	0.04	0.32	0.32	0.13	0.41	0.41
Unsig. Movement Delay												
Ln Grp Delay, s/veh	59.1	43.4	44.0	54.1	27.5	27.6	59.7	22.1	26.6	65.9	19.7	19.7
Ln Grp LOS	E	D	D	D	C	C	E	C	C	E	B	B
Approach Vol, veh/h		283			1160			428			666	
Approach Delay, s/veh		44.5			36.3			28.5			31.8	
Approach LOS		D			D			C			C	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Case No	2.0	3.0	2.0	4.0	2.0	4.0	2.0	4.0
Phs Duration (G+Y+Rc), s	15.8	33.5	26.3	14.4	8.0	41.3	6.0	34.7
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green (Gmax), s	11.5	19.0	23.5	18.0	6.8	23.7	5.3	36.2
Max Allow Headway (MAH), s	3.8	4.6	3.8	5.3	3.8	5.3	3.8	5.3
Max Q Clear (g_c+I1), s	11.5	11.7	21.5	9.0	4.6	10.9	2.8	19.7
Green Ext Time (g_e), s	0.0	1.0	0.3	1.0	0.0	2.4	0.0	4.6
Prob of Phs Call (p_c)	0.99	1.00	1.00	1.00	0.70	1.00	0.30	1.00
Prob of Max Out (p_x)	1.00	0.00	1.00	0.21	1.00	0.00	1.00	0.18

Left-Turn Movement Data								
Assigned Mvmt	1		3		5		7	
Mvmt Sat Flow, veh/h	1619		1714		1619		1619	

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		3420		2889		3106		2920

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1525		526		342		500

Left Lane Group Data								
Assigned Mvmt	1	0	3	0	5	0	7	0
Lane Assignment	L (Prot)		L (Prot)		L (Prot)		L (Prot)	

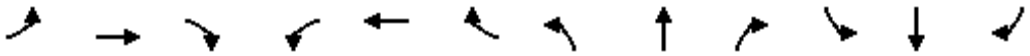
Lanes in Grp	1	0	1	0	1	0	1	0
Grp Vol (v), veh/h	174	0	381	0	48	0	14	0
Grp Sat Flow (s), veh/h/ln	1619	0	1714	0	1619	0	1619	0
Q Serve Time (g_s), s	9.5	0.0	19.5	0.0	2.6	0.0	0.8	0.0
Cycle Q Clear Time (g_c), s	9.5	0.0	19.5	0.0	2.6	0.0	0.8	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	204	0	415	0	63	0	27	0
V/C Ratio (X)	0.85	0.00	0.92	0.00	0.76	0.00	0.53	0.00
Avail Cap (c_a), veh/h	207	0	448	0	122	0	95	0
Upstream Filter (I)	1.00	0.00	0.87	0.00	0.98	0.00	1.00	0.00
Uniform Delay (d1), s/veh	38.5	0.0	33.3	0.0	42.8	0.0	43.9	0.0
Incr Delay (d2), s/veh	27.4	0.0	20.9	0.0	16.9	0.0	15.2	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	65.9	0.0	54.1	0.0	59.7	0.0	59.1	0.0
1st-Term Q (Q1), veh/ln	3.7	0.0	7.9	0.0	1.0	0.0	0.3	0.0
2nd-Term Q (Q2), veh/ln	1.5	0.0	2.4	0.0	0.3	0.0	0.1	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
%ile Back of Q (50%), veh/ln	5.2	0.0	10.3	0.0	1.3	0.0	0.4	0.0
%ile Storage Ratio (RQ%)	0.08	0.00	0.10	0.00	0.07	0.00	0.01	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	2	0	1	0	1	0	1
Grp Vol (v), veh/h	0	171	0	133	0	243	0	389
Grp Sat Flow (s), veh/h/ln	0	1710	0	1710	0	1710	0	1710
Q Serve Time (g_s), s	0.0	3.2	0.0	6.7	0.0	8.8	0.0	17.6
Cycle Q Clear Time (g_c), s	0.0	3.2	0.0	6.7	0.0	8.8	0.0	17.6
Lane Grp Cap (c), veh/h	0	1102	0	188	0	700	0	574
V/C Ratio (X)	0.00	0.16	0.00	0.71	0.00	0.35	0.00	0.68
Avail Cap (c_a), veh/h	0	1102	0	342	0	700	0	688
Upstream Filter (I)	0.00	0.98	0.00	1.00	0.00	1.00	0.00	0.87
Uniform Delay (d1), s/veh	0.0	21.8	0.0	38.6	0.0	18.3	0.0	25.7
Incr Delay (d2), s/veh	0.0	0.3	0.0	4.8	0.0	1.4	0.0	1.8
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	22.1	0.0	43.4	0.0	19.7	0.0	27.5
1st-Term Q (Q1), veh/ln	0.0	1.3	0.0	2.8	0.0	3.4	0.0	6.9
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.2	0.0	0.3	0.0	0.3

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	1.3	0.0	3.0	0.0	3.6	0.0	7.2
%ile Storage Ratio (RQ%)	0.00	0.07	0.00	0.04	0.00	0.06	0.00	0.07
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		T+R		T+R		T+R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	209	0	136	0	249	0	390
Grp Sat Flow (s), veh/h/ln	0	1525	0	1705	0	1738	0	1710
Q Serve Time (g_s), s	0.0	9.7	0.0	7.0	0.0	8.9	0.0	17.7
Cycle Q Clear Time (g_c), s	0.0	9.7	0.0	7.0	0.0	8.9	0.0	17.7
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	0.31	0.00	0.20	0.00	0.29
Lane Grp Cap (c), veh/h	0	491	0	188	0	711	0	574
V/C Ratio (X)	0.00	0.43	0.00	0.73	0.00	0.35	0.00	0.68
Avail Cap (c_a), veh/h	0	491	0	341	0	711	0	688
Upstream Filter (I)	0.00	0.98	0.00	1.00	0.00	1.00	0.00	0.87
Uniform Delay (d1), s/veh	0.0	24.0	0.0	38.7	0.0	18.3	0.0	25.7
Incr Delay (d2), s/veh	0.0	2.6	0.0	5.2	0.0	1.4	0.0	1.8
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	26.6	0.0	44.0	0.0	19.7	0.0	27.6
1st-Term Q (Q1), veh/ln	0.0	3.4	0.0	2.9	0.0	3.5	0.0	6.9
2nd-Term Q (Q2), veh/ln	0.0	0.4	0.0	0.3	0.0	0.3	0.0	0.3
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	3.8	0.0	3.1	0.0	3.7	0.0	7.2
%ile Storage Ratio (RQ%)	0.00	0.19	0.00	0.04	0.00	0.06	0.00	0.07
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	34.7
HCM 6th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	106	2	223	3	3	27	175	275	4	15	632	217
Future Volume (veh/h)	106	2	223	3	3	27	175	275	4	15	632	217
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1600	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1900
Adj Flow Rate, veh/h	118	2	0	3	3	30	194	306	4	17	702	241
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	180	283		96	34	51	227	2222	29	32	1305	448
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.06	0.16	0.00	0.04	0.04	0.04	0.14	0.64	0.64	0.02	0.52	0.52
Unsig. Movement Delay												
Ln Grp Delay, s/veh	40.9	26.7	0.0	35.1	0.0	46.2	57.6	5.5	5.5	46.2	13.7	13.7
Ln Grp LOS	D	C		D	A	D	E	A	A	D	B	B
Approach Vol, veh/h		120			36			504			960	
Approach Delay, s/veh		40.6			44.3			25.5			14.3	
Approach LOS		D			D			C			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6	7	8
Case No	2.0	4.0		3.0	2.0	4.0	2.0	8.3
Phs Duration (G+Y+Rc), s	6.0	52.7		16.3	15.0	43.7	9.1	7.2
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5	4.5	4.5
Max Green (Gmax), s	5.0	28.9		27.6	10.5	23.4	5.1	18.0
Max Allow Headway (MAH), s	3.8	5.2		5.2	3.8	5.3	3.8	5.5
Max Q Clear (g_c+I1), s	2.8	4.6		2.1	10.8	16.0	4.9	3.6
Green Ext Time (g_e), s	0.0	1.8		0.0	0.0	3.5	0.0	0.1
Prob of Phs Call (p_c)	0.30	1.00		0.96	0.98	1.00	0.91	0.55
Prob of Max Out (p_x)	1.00	0.00		0.00	1.00	0.00	1.00	0.00

Left-Turn Movement Data								
Assigned Mvmt	1				5		7	3
Mvmt Sat Flow, veh/h	1619				1619		2956	655

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		3457		1800		2498		934

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		45		1525		858		1388

Left Lane Group Data								
Assigned Mvmt	1	0	0	0	5	0	7	3
Lane Assignment	L (Prot)				L (Prot)		L (Prot)	L+T

Lanes in Grp	1	0	0	0	1	0	2	1
Grp Vol (v), veh/h	17	0	0	0	194	0	118	6
Grp Sat Flow (s), veh/h/ln	1619	0	0	0	1619	0	1478	1589
Q Serve Time (g_s), s	0.8	0.0	0.0	0.0	8.8	0.0	2.9	0.0
Cycle Q Clear Time (g_c), s	0.8	0.0	0.0	0.0	8.8	0.0	2.9	0.2
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	1437
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.7
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.7
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	0.00	1.00	0.00	1.00	0.50
Lane Grp Cap (c), veh/h	32	0	0	0	227	0	180	130
V/C Ratio (X)	0.53	0.00	0.00	0.00	0.86	0.00	0.65	0.05
Avail Cap (c_a), veh/h	108	0	0	0	227	0	201	446
Upstream Filter (I)	0.76	0.00	0.00	0.00	1.00	0.00	1.00	1.00
Uniform Delay (d1), s/veh	36.4	0.0	0.0	0.0	31.5	0.0	34.4	34.9
Incr Delay (d2), s/veh	9.8	0.0	0.0	0.0	26.0	0.0	6.4	0.1
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	46.2	0.0	0.0	0.0	57.6	0.0	40.9	35.1
1st-Term Q (Q1), veh/ln	0.3	0.0	0.0	0.0	3.3	0.0	1.0	0.1
2nd-Term Q (Q2), veh/ln	0.1	0.0	0.0	0.0	1.6	0.0	0.2	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	0.00	1.00	0.00	1.00	1.00
%ile Back of Q (50%), veh/ln	0.4	0.0	0.0	0.0	4.9	0.0	1.2	0.1
%ile Storage Ratio (RQ%)	0.02	0.00	0.00	0.00	0.82	0.00	0.20	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		
Lanes in Grp	0	1	0	1	0	1	0	0
Grp Vol (v), veh/h	0	151	0	2	0	481	0	0
Grp Sat Flow (s), veh/h/ln	0	1710	0	1800	0	1710	0	0
Q Serve Time (g_s), s	0.0	2.6	0.0	0.1	0.0	14.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	2.6	0.0	0.1	0.0	14.0	0.0	0.0
Lane Grp Cap (c), veh/h	0	1099	0	283	0	894	0	0
V/C Ratio (X)	0.00	0.14	0.00	0.01	0.00	0.54	0.00	0.00
Avail Cap (c_a), veh/h	0	1099	0	662	0	894	0	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	0.76	0.00	0.00
Uniform Delay (d1), s/veh	0.0	5.3	0.0	26.7	0.0	11.9	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.3	0.0	0.0	0.0	1.8	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	5.5	0.0	26.7	0.0	13.7	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.8	0.0	0.0	0.0	4.7	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	0.4	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.8	0.0	0.0	0.0	5.2	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.06	0.00	0.00	0.00	0.26	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R		R		T+R		T+R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	159	0	0	0	462	0	30
Grp Sat Flow (s), veh/h/ln	0	1792	0	1525	0	1646	0	1388
Q Serve Time (g_s), s	0.0	2.6	0.0	0.0	0.0	14.0	0.0	1.6
Cycle Q Clear Time (g_c), s	0.0	2.6	0.0	0.0	0.0	14.0	0.0	1.6
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.03	0.00	1.00	0.00	0.52	0.00	1.00
Lane Grp Cap (c), veh/h	0	1152	0	240	0	860	0	51
V/C Ratio (X)	0.00	0.14	0.00	0.00	0.00	0.54	0.00	0.59
Avail Cap (c_a), veh/h	0	1152	0	561	0	860	0	333
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	0.76	0.00	1.00
Uniform Delay (d1), s/veh	0.0	5.3	0.0	0.0	0.0	11.9	0.0	35.6
Incr Delay (d2), s/veh	0.0	0.2	0.0	0.0	0.0	1.8	0.0	10.6
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	5.5	0.0	0.0	0.0	13.7	0.0	46.2
1st-Term Q (Q1), veh/ln	0.0	0.8	0.0	0.0	0.0	4.5	0.0	0.5
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	0.4	0.0	0.1
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.9	0.0	0.0	0.0	5.0	0.0	0.7
%ile Storage Ratio (RQ%)	0.00	0.06	0.00	0.00	0.00	0.25	0.00	0.02
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	20.4
HCM 6th LOS	C

Notes

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	31	0	28	0	403	26	34	823	0
Future Volume (veh/h)	0	0	0	31	0	28	0	403	26	34	823	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	0	1800	0	1800	1800	1700	1800	0
Adj Flow Rate, veh/h	0	0	0	38	0	34	0	491	32	41	1004	0
Peak Hour Factor	0.82	0.82	0.82	0.82	0.95	0.82	0.95	0.82	0.82	0.82	0.82	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence	Yes			Yes			No			Yes		
Cap, veh/h	0	2	0	48	0	0	0	1487	1260	51	1611	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.83	0.83	0.03	0.90	0.00
Unsig. Movement Delay												
Ln Grp Delay, s/veh	0.0	0.0	0.0	81.3	0.0	0.0	0.0	3.1	1.9	82.6	3.3	0.0
Ln Grp LOS	A	A	A	F	A	A	A	A	A	F	A	A
Approach Vol, veh/h		0			38			523			1045	
Approach Delay, s/veh		0.0			81.3			3.0			6.4	
Approach LOS					F			A			A	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4		6		
Case No	2.0	7.0	2.0	8.0		4.0		
Phs Duration (G+Y+Rc), s	8.3	103.6	8.1	0.0		111.9		
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5		4.5		
Max Green (Gmax), s	15.1	30.7	28.1	28.1		50.3		
Max Allow Headway (MAH), s	3.8	5.2	3.8	0.0		5.2		
Max Q Clear (g_c+I1), s	5.0	9.8	4.8	0.0		17.9		
Green Ext Time (g_e), s	0.0	3.2	0.1	0.0		10.3		
Prob of Phs Call (p_c)	0.75	1.00	0.72	0.00		1.00		
Prob of Max Out (p_x)	0.00	0.00	0.00	0.00		0.00		

Left-Turn Movement Data								
Assigned Mvmt	1	5	3	7				
Mvmt Sat Flow, veh/h	1619	0	1619	0				

Through Movement Data								
Assigned Mvmt		2		4		6		
Mvmt Sat Flow, veh/h		1800		-81000		1800		

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		
Mvmt Sat Flow, veh/h		1525		0		0		

Left Lane Group Data								
Assigned Mvmt	1	5	3	7	0	0	0	0
Lane Assignment	L (Prot)		L (Prot)					

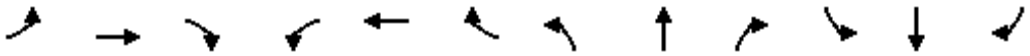
Lanes in Grp	1	0	1	0	0	0	0	0
Grp Vol (v), veh/h	41	0	38	0	0	0	0	0
Grp Sat Flow (s), veh/h/ln	1619	0	1619	0	0	0	0	0
Q Serve Time (g_s), s	3.0	0.0	2.8	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	3.0	0.0	2.8	0.0	0.0	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	99.1	0.0	-4.5	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	51	0	48	0	0	0	0	0
V/C Ratio (X)	0.81	0.00	0.78	0.00	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	204	0	379	0	0	0	0	0
Upstream Filter (I)	1.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	57.8	0.0	57.8	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	24.8	0.0	23.5	0.0	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	82.6	0.0	81.3	0.0	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	1.2	0.0	1.1	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.4	0.0	0.3	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00
%ile Back of Q (50%), veh/ln	1.6	0.0	1.5	0.0	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.16	0.00	0.02	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	0
Lane Assignment		T		T		T		
Lanes in Grp	0	1	0	1	0	1	0	0
Grp Vol (v), veh/h	0	491	0	0	0	1004	0	0
Grp Sat Flow (s), veh/h/ln	0	1800	0	1800	0	1800	0	0
Q Serve Time (g_s), s	0.0	7.8	0.0	0.0	0.0	15.9	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	7.8	0.0	0.0	0.0	15.9	0.0	0.0
Lane Grp Cap (c), veh/h	0	1487	0	2	0	1611	0	0
V/C Ratio (X)	0.00	0.33	0.00	0.00	0.00	0.62	0.00	0.00
Avail Cap (c_a), veh/h	0	1487	0	422	0	1611	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	2.5	0.0	0.0	0.0	1.5	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.6	0.0	0.0	0.0	1.8	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	3.1	0.0	0.0	0.0	3.3	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	2.0	0.0	0.0	0.0	1.4	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.2	0.0	0.0	0.0	0.8	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	2.2	0.0	0.0	0.0	2.2	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.14	0.00	0.00	0.00	0.22	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	0
Lane Assignment		R						
Lanes in Grp	0	1	0	0	0	0	0	0
Grp Vol (v), veh/h	0	32	0	0	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	1525	0	0	0	0	0	0
Q Serve Time (g_s), s	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	1260	0	0	0	0	0	0
V/C Ratio (X)	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	1260	0	0	0	0	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	1.9	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	1.9	0.0	0.0	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	7.1
HCM 6th LOS	A



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	57	5	5	2	2	9	457	14	6	636	105
Future Volume (veh/h)	20	57	5	5	2	2	9	457	14	6	636	105
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1900
Adj Flow Rate, veh/h	24	68	6	6	2	2	11	544	17	7	757	125
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	80	99	8	133	42	26	22	1293	40	15	1115	184
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.08	0.08	0.08	0.08	0.08	0.08	0.01	0.74	0.74	0.01	0.74	0.74
Unsig. Movement Delay												
Ln Grp Delay, s/veh	38.4	0.0	0.0	34.3	0.0	0.0	55.8	0.0	4.8	61.9	0.0	8.3
Ln Grp LOS	D	A	A	C	A	A	E	A	A	E	A	A
Approach Vol, veh/h		98			10			572			889	
Approach Delay, s/veh		38.4			34.3			5.8			8.7	
Approach LOS		D			C			A			A	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Case No	2.0	4.0		8.0	2.0	4.0		8.0
Phs Duration (G+Y+Rc), s	5.2	64.1		10.7	5.6	63.7		10.7
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green (Gmax), s	5.1	43.3		18.1	5.1	43.3		18.1
Max Allow Headway (MAH), s	3.8	5.2		5.3	3.8	5.3		5.4
Max Q Clear (g_c+I1), s	2.3	11.3		6.5	2.5	23.0		2.4
Green Ext Time (g_e), s	0.0	4.1		0.3	0.0	7.1		0.0
Prob of Phs Call (p_c)	0.14	1.00		0.91	0.22	1.00		0.91
Prob of Max Out (p_x)	1.00	0.00		0.01	1.00	0.00		0.00

Left-Turn Movement Data								
Assigned Mvmt	1			7	5			3
Mvmt Sat Flow, veh/h	1619			308	1619			781

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		1736		1271		1506		541

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		54		103		249		331

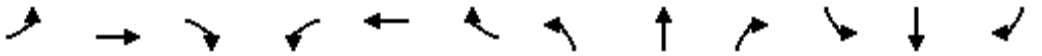
Left Lane Group Data								
Assigned Mvmt	1	0	0	7	5	0	0	3
Lane Assignment	L (Prot)			L+T+R	L (Prot)			L+T+R

Lanes in Grp	1	0	0	1	1	0	0	1
Grp Vol (v), veh/h	7	0	0	98	11	0	0	10
Grp Sat Flow (s), veh/h/ln	1619	0	0	1682	1619	0	0	1653
Q Serve Time (g_s), s	0.3	0.0	0.0	3.1	0.5	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.3	0.0	0.0	4.5	0.5	0.0	0.0	0.4
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	1435	0	0	0	1347
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	1778	0	0	0	1748
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	6.2	0.0	0.0	0.0	6.2
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	5.8	0.0	0.0	0.0	1.7
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	3.1	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	1.5	0.0	0.0	0.0	1.3
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	1.5	0.0	0.0	0.0	0.4
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	0.24	1.00	0.00	0.00	0.60
Lane Grp Cap (c), veh/h	15	0	0	187	22	0	0	200
V/C Ratio (X)	0.48	0.00	0.00	0.53	0.50	0.00	0.00	0.05
Avail Cap (c_a), veh/h	103	0	0	432	103	0	0	409
Upstream Filter (I)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	39.5	0.0	0.0	36.1	39.2	0.0	0.0	34.2
Incr Delay (d2), s/veh	22.5	0.0	0.0	2.3	16.6	0.0	0.0	0.1
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	61.9	0.0	0.0	38.4	55.8	0.0	0.0	34.3
1st-Term Q (Q1), veh/ln	0.1	0.0	0.0	1.8	0.2	0.0	0.0	0.2
2nd-Term Q (Q2), veh/ln	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.2	0.0	0.0	1.9	0.3	0.0	0.0	0.2
%ile Storage Ratio (RQ%)	0.02	0.00	0.00	0.21	0.04	0.00	0.00	0.01
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment								
Lanes in Grp	0	0	0	0	0	0	0	0
Grp Vol (v), veh/h	0	0	0	0	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	0	0	0	0	0	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lane Grp Cap (c), veh/h	0	0	0	0	0	0	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	0	0	0	0	0	0	0
Upstream Filter (I)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R				T+R		
Lanes in Grp	0	1	0	0	0	1	0	0
Grp Vol (v), veh/h	0	561	0	0	0	882	0	0
Grp Sat Flow (s), veh/h/ln	0	1790	0	0	0	1755	0	0
Q Serve Time (g_s), s	0.0	9.3	0.0	0.0	0.0	21.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	9.3	0.0	0.0	0.0	21.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.03	0.00	0.06	0.00	0.14	0.00	0.20
Lane Grp Cap (c), veh/h	0	1333	0	0	0	1299	0	0
V/C Ratio (X)	0.00	0.42	0.00	0.00	0.00	0.68	0.00	0.00
Avail Cap (c_a), veh/h	0	1333	0	0	0	1299	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	3.8	0.0	0.0	0.0	5.4	0.0	0.0
Incr Delay (d2), s/veh	0.0	1.0	0.0	0.0	0.0	2.9	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	4.8	0.0	0.0	0.0	8.3	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	2.3	0.0	0.0	0.0	5.1	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.4	0.0	0.0	0.0	1.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	2.7	0.0	0.0	0.0	6.2	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.05	0.00	0.00	0.00	0.66	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	9.7
HCM 6th LOS	A



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	36	127	29	170	355	80	112	214	75	43	414	77
Future Volume (veh/h)	36	127	29	170	355	80	112	214	75	43	414	77
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1900
Adj Flow Rate, veh/h	40	140	32	187	390	88	123	235	0	47	455	85
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	63	244	54	199	588	262	150	1674		69	1502	707
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00
Prop Arrive On Green	0.04	0.09	0.09	0.12	0.17	0.17	0.03	0.16	0.00	0.04	0.44	0.44
Unsig. Movement Delay												
Ln Grp Delay, s/veh	43.6	33.9	34.4	59.1	27.7	25.8	60.7	16.9	0.0	44.0	13.2	12.0
Ln Grp LOS	D	C	C	E	C	C	E	B		D	B	B
Approach Vol, veh/h		212			665			358			587	
Approach Delay, s/veh		35.9			36.3			32.0			15.5	
Approach LOS		D			D			C			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Case No	2.0	3.0	2.0	4.0	2.0	3.0	2.0	3.0
Phs Duration (G+Y+Rc), s	7.5	38.8	13.1	10.6	11.0	35.3	7.2	16.5
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green (Gmax), s	6.3	19.1	8.6	18.0	6.5	18.9	6.0	20.6
Max Allow Headway (MAH), s	3.8	5.2	3.8	5.3	3.8	5.0	3.8	5.0
Max Q Clear (g_c+I1), s	4.0	6.1	10.0	5.5	7.3	8.0	3.7	9.5
Green Ext Time (g_e), s	0.0	1.1	0.0	0.7	0.0	2.5	0.0	2.1
Prob of Phs Call (p_c)	0.60	1.00	0.97	1.00	0.91	1.00	0.54	1.00
Prob of Max Out (p_x)	1.00	0.00	1.00	0.02	1.00	0.00	1.00	0.15

Left-Turn Movement Data								
Assigned Mvmt	1		3		5		7	
Mvmt Sat Flow, veh/h	1619		1619		1619		1619	

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		3420		2780		3420		3420

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1525		619		1610		1525

Left Lane Group Data								
Assigned Mvmt	1	0	3	0	5	0	7	0
Lane Assignment	L (Prot)		L (Prot)		L (Prot)		L (Prot)	

Lanes in Grp	1	0	1	0	1	0	1	0
Grp Vol (v), veh/h	47	0	187	0	123	0	40	0
Grp Sat Flow (s), veh/h/ln	1619	0	1619	0	1619	0	1619	0
Q Serve Time (g_s), s	2.0	0.0	8.0	0.0	5.3	0.0	1.7	0.0
Cycle Q Clear Time (g_c), s	2.0	0.0	8.0	0.0	5.3	0.0	1.7	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	69	0	199	0	150	0	63	0
V/C Ratio (X)	0.68	0.00	0.94	0.00	0.82	0.00	0.64	0.00
Avail Cap (c_a), veh/h	146	0	199	0	150	0	139	0
Upstream Filter (I)	1.00	0.00	0.46	0.00	0.95	0.00	1.00	0.00
Uniform Delay (d1), s/veh	33.0	0.0	30.4	0.0	33.3	0.0	33.2	0.0
Incr Delay (d2), s/veh	11.0	0.0	28.7	0.0	27.4	0.0	10.4	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	44.0	0.0	59.1	0.0	60.7	0.0	43.6	0.0
1st-Term Q (Q1), veh/ln	0.8	0.0	3.0	0.0	2.1	0.0	0.6	0.0
2nd-Term Q (Q2), veh/ln	0.2	0.0	1.6	0.0	1.1	0.0	0.2	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
%ile Back of Q (50%), veh/ln	1.0	0.0	4.6	0.0	3.3	0.0	0.8	0.0
%ile Storage Ratio (RQ%)	0.09	0.00	0.06	0.00	0.48	0.00	0.21	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	2	0	1	0	2	0	2
Grp Vol (v), veh/h	0	235	0	85	0	455	0	390
Grp Sat Flow (s), veh/h/ln	0	1710	0	1710	0	1710	0	1710
Q Serve Time (g_s), s	0.0	4.1	0.0	3.3	0.0	6.0	0.0	7.5
Cycle Q Clear Time (g_c), s	0.0	4.1	0.0	3.3	0.0	6.0	0.0	7.5
Lane Grp Cap (c), veh/h	0	1674	0	150	0	1502	0	588
V/C Ratio (X)	0.00	0.14	0.00	0.56	0.00	0.30	0.00	0.66
Avail Cap (c_a), veh/h	0	1674	0	440	0	1502	0	1006
Upstream Filter (I)	0.00	0.95	0.00	1.00	0.00	1.00	0.00	0.46
Uniform Delay (d1), s/veh	0.0	16.7	0.0	30.6	0.0	12.7	0.0	27.1
Incr Delay (d2), s/veh	0.0	0.2	0.0	3.3	0.0	0.5	0.0	0.6
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	16.9	0.0	33.9	0.0	13.2	0.0	27.7
1st-Term Q (Q1), veh/ln	0.0	1.5	0.0	1.3	0.0	2.1	0.0	2.9
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	1.6	0.0	1.5	0.0	2.2	0.0	3.0
%ile Storage Ratio (RQ%)	0.00	0.02	0.00	0.01	0.00	0.04	0.00	0.04
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		T+R		R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	0	0	87	0	85	0	88
Grp Sat Flow (s), veh/h/ln	0	1525	0	1689	0	1610	0	1525
Q Serve Time (g_s), s	0.0	0.0	0.0	3.5	0.0	2.2	0.0	3.5
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	3.5	0.0	2.2	0.0	3.5
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	0.37	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	747	0	148	0	707	0	262
V/C Ratio (X)	0.00	0.00	0.00	0.59	0.00	0.12	0.00	0.34
Avail Cap (c_a), veh/h	0	747	0	434	0	707	0	449
Upstream Filter (I)	0.00	0.00	0.00	1.00	0.00	1.00	0.00	0.46
Uniform Delay (d1), s/veh	0.0	0.0	0.0	30.7	0.0	11.6	0.0	25.5
Incr Delay (d2), s/veh	0.0	0.0	0.0	3.7	0.0	0.3	0.0	0.3
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	34.4	0.0	12.0	0.0	25.8
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	1.4	0.0	0.7	0.0	1.2
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.2	0.0	0.1	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	1.5	0.0	0.8	0.0	1.3
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.01	0.00	0.04	0.00	0.02
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	28.7
HCM 6th LOS	C

Notes

Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	71	70	41	193	274	46	78	347	105	44	426	117
Future Volume (veh/h)	71	70	41	193	274	46	78	347	105	44	426	117
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1900
Adj Flow Rate, veh/h	78	77	45	212	301	51	86	381	115	48	468	129
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	97	154	84	243	475	80	106	1240	370	70	1757	470
HCM Platoon Ratio	1.33	1.33	1.33	1.33	1.33	1.00	1.33	1.33	1.33	1.33	1.33	0.33
Prop Arrive On Green	0.08	0.10	0.10	0.20	0.22	0.16	0.09	0.64	0.64	0.06	0.61	0.15
Unsig. Movement Delay												
Ln Grp Delay, s/veh	46.1	33.4	34.4	54.9	27.9	28.6	62.1	8.4	8.5	41.5	8.6	16.1
Ln Grp LOS	D	C	C	D	C	C	E	A	A	D	A	B
Approach Vol, veh/h		200			564			582			645	
Approach Delay, s/veh		38.7			38.3			16.4			13.4	
Approach LOS		D			D			B			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Case No	2.0	4.0	2.0	4.0	2.0	4.0	2.0	4.0
Phs Duration (G+Y+Rc), s	7.5	37.9	15.0	9.5	9.1	36.4	8.7	15.9
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green (Gmax), s	5.0	18.5	10.5	18.0	5.0	18.5	9.4	19.1
Max Allow Headway (MAH), s	3.8	5.3	3.8	5.4	3.8	5.3	3.8	5.3
Max Q Clear (g_c+I1), s	4.0	6.7	10.9	4.6	5.7	8.6	5.3	8.7
Green Ext Time (g_e), s	0.0	2.3	0.0	0.5	0.0	2.7	0.0	1.5
Prob of Phs Call (p_c)	0.61	1.00	0.98	1.00	0.81	1.00	0.78	1.00
Prob of Max Out (p_x)	1.00	0.00	1.00	0.01	1.00	0.00	0.72	0.17

Left-Turn Movement Data								
Assigned Mvmt	1		3		5		7	
Mvmt Sat Flow, veh/h	1619		1619		1619		1619	

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		2597		2139		3859		2931

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		774		1162		1031		491

Left Lane Group Data								
Assigned Mvmt	1	0	3	0	5	0	7	0
Lane Assignment	L (Prot)		L (Prot)		L (Prot)		L (Prot)	

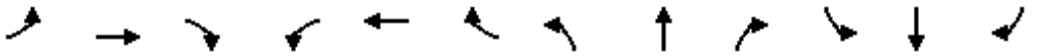
Lanes in Grp	1	0	1	0	1	0	1	0
Grp Vol (v), veh/h	48	0	212	0	86	0	78	0
Grp Sat Flow (s), veh/h/ln	1619	0	1619	0	1619	0	1619	0
Q Serve Time (g_s), s	2.0	0.0	8.9	0.0	3.7	0.0	3.3	0.0
Cycle Q Clear Time (g_c), s	2.0	0.0	8.9	0.0	3.7	0.0	3.3	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	70	0	243	0	106	0	97	0
V/C Ratio (X)	0.68	0.00	0.87	0.00	0.81	0.00	0.81	0.00
Avail Cap (c_a), veh/h	116	0	243	0	116	0	217	0
Upstream Filter (I)	0.80	0.00	1.00	0.00	0.96	0.00	1.00	0.00
Uniform Delay (d1), s/veh	32.5	0.0	27.4	0.0	31.5	0.0	31.8	0.0
Incr Delay (d2), s/veh	9.0	0.0	27.5	0.0	30.6	0.0	14.3	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	41.5	0.0	54.9	0.0	62.1	0.0	46.1	0.0
1st-Term Q (Q1), veh/ln	0.8	0.0	3.1	0.0	1.4	0.0	1.2	0.0
2nd-Term Q (Q2), veh/ln	0.2	0.0	1.9	0.0	0.9	0.0	0.4	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
%ile Back of Q (50%), veh/ln	0.9	0.0	5.0	0.0	2.3	0.0	1.6	0.0
%ile Storage Ratio (RQ%)	0.13	0.00	0.03	0.00	0.28	0.00	0.18	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	1	0	1	0	2	0	1
Grp Vol (v), veh/h	0	249	0	60	0	395	0	174
Grp Sat Flow (s), veh/h/ln	0	1710	0	1710	0	1638	0	1710
Q Serve Time (g_s), s	0.0	4.6	0.0	2.3	0.0	4.0	0.0	6.5
Cycle Q Clear Time (g_c), s	0.0	4.6	0.0	2.3	0.0	4.0	0.0	6.5
Lane Grp Cap (c), veh/h	0	817	0	123	0	1492	0	277
V/C Ratio (X)	0.00	0.31	0.00	0.49	0.00	0.26	0.00	0.63
Avail Cap (c_a), veh/h	0	817	0	440	0	1492	0	467
Upstream Filter (I)	0.00	0.96	0.00	1.00	0.00	0.80	0.00	1.00
Uniform Delay (d1), s/veh	0.0	7.5	0.0	30.4	0.0	8.3	0.0	25.5
Incr Delay (d2), s/veh	0.0	0.9	0.0	3.0	0.0	0.3	0.0	2.3
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	8.4	0.0	33.4	0.0	8.6	0.0	27.9
1st-Term Q (Q1), veh/ln	0.0	1.4	0.0	0.9	0.0	1.2	0.0	2.4
2nd-Term Q (Q2), veh/ln	0.0	0.2	0.0	0.1	0.0	0.1	0.0	0.2

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	1.6	0.0	1.0	0.0	1.3	0.0	2.6
%ile Storage Ratio (RQ%)	0.00	0.04	0.00	0.00	0.00	0.01	0.00	0.02
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R		T+R		T+R		T+R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	247	0	62	0	202	0	178
Grp Sat Flow (s), veh/h/ln	0	1661	0	1591	0	1614	0	1712
Q Serve Time (g_s), s	0.0	4.7	0.0	2.6	0.0	6.6	0.0	6.7
Cycle Q Clear Time (g_c), s	0.0	4.7	0.0	2.6	0.0	6.6	0.0	6.7
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.47	0.00	0.73	0.00	0.64	0.00	0.29
Lane Grp Cap (c), veh/h	0	793	0	114	0	735	0	278
V/C Ratio (X)	0.00	0.31	0.00	0.54	0.00	0.27	0.00	0.64
Avail Cap (c_a), veh/h	0	793	0	409	0	735	0	467
Upstream Filter (I)	0.00	0.96	0.00	1.00	0.00	0.80	0.00	1.00
Uniform Delay (d1), s/veh	0.0	7.5	0.0	30.5	0.0	15.3	0.0	26.1
Incr Delay (d2), s/veh	0.0	1.0	0.0	3.9	0.0	0.7	0.0	2.5
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	8.5	0.0	34.4	0.0	16.1	0.0	28.6
1st-Term Q (Q1), veh/ln	0.0	1.4	0.0	0.9	0.0	2.3	0.0	2.5
2nd-Term Q (Q2), veh/ln	0.0	0.2	0.0	0.1	0.0	0.2	0.0	0.2
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	1.6	0.0	1.1	0.0	2.5	0.0	2.7
%ile Storage Ratio (RQ%)	0.00	0.04	0.00	0.01	0.00	0.02	0.00	0.02
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	23.9
HCM 6th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	267	316	319	404	589	0	0	313	219
Future Volume (veh/h)	0	0	0	267	316	319	404	589	0	0	313	219
Number				3	8	18	5	2	12	1	6	16
Initial Q, veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln				1700	1800	1800	1700	1800	0	0	1800	1900
Adj Flow Rate, veh/h				284	336	339	430	627	0	0	333	233
Peak Hour Factor				0.94	0.94	0.94	0.94	0.94	0.95	0.95	0.94	0.94
Percent Heavy Veh, %				0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence				Yes			Yes			No		
Cap, veh/h				326	397	428	446	1981	0	0	910	428
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00
Prop Arrive On Green				0.35	0.35	0.35	0.55	1.00	0.00	0.00	0.27	0.27
Unsig. Movement Delay												
Ln Grp Delay, s/veh				46.2	0.0	40.7	54.6	0.4	0.0	0.0	36.8	42.1
Ln Grp LOS				D	A	D	D	A	A	A	D	D
Approach Vol, veh/h					959			1057			566	
Approach Delay, s/veh					43.7			22.4			39.0	
Approach LOS					D			C			D	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2	8		5	6		
Case No		4.0	12.0		2.0	7.0		
Phs Duration (G+Y+Rc), s		74.0	46.0		37.6	36.4		
Change Period (Y+Rc), s		4.5	4.5		4.5	4.5		
Max Green (Gmax), s		60.5	50.5		36.5	19.5		
Max Allow Headway (MAH), s		5.2	5.4		3.8	4.7		
Max Q Clear (g_c+I1), s		2.0	35.8		32.5	16.9		
Green Ext Time (g_e), s		5.0	5.7		0.6	0.8		
Prob of Phs Call (p_c)		1.00	1.00		1.00	1.00		
Prob of Max Out (p_x)		0.00	0.36		0.91	0.00		
Left-Turn Movement Data								
Assigned Mvmt			3		5	1		
Mvmt Sat Flow, veh/h			944		1619	0		
Through Movement Data								
Assigned Mvmt		2	8			6		
Mvmt Sat Flow, veh/h		3510	1147			3510		
Right-Turn Movement Data								
Assigned Mvmt		12	18			16		
Mvmt Sat Flow, veh/h		0	1238			1610		
Left Lane Group Data								
Assigned Mvmt	0	0	3	0	5	1	0	0
Lane Assignment			L+T		L (Prot)			

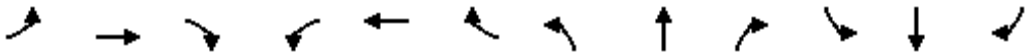
Lanes in Grp	0	0	1	0	1	0	0	0
Grp Vol (v), veh/h	0	0	527	0	430	0	0	0
Grp Sat Flow (s), veh/h/ln	0	0	1753	0	1619	0	0	0
Q Serve Time (g_s), s	0.0	0.0	33.8	0.0	30.5	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	33.8	0.0	30.5	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	31.9	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	0.00	0.54	0.00	1.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	606	0	446	0	0	0
V/C Ratio (X)	0.00	0.00	0.87	0.00	0.96	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	0	738	0	492	0	0	0
Upstream Filter (I)	0.00	0.00	1.00	0.00	0.90	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	36.7	0.0	26.3	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	9.5	0.0	28.2	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	46.2	0.0	54.6	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	14.3	0.0	8.4	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	1.6	0.0	3.5	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	0.00	1.00	0.00	1.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	15.9	0.0	11.9	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.38	0.00	1.99	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	8	0	0	6	0	0
Lane Assignment		T				T		
Lanes in Grp	0	2	0	0	0	2	0	0
Grp Vol (v), veh/h	0	627	0	0	0	333	0	0
Grp Sat Flow (s), veh/h/ln	0	1710	0	0	0	1710	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	9.5	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	9.5	0.0	0.0
Lane Grp Cap (c), veh/h	0	1981	0	0	0	910	0	0
V/C Ratio (X)	0.00	0.32	0.00	0.00	0.00	0.37	0.00	0.00
Avail Cap (c_a), veh/h	0	1981	0	0	0	910	0	0
Upstream Filter (I)	0.00	0.90	0.00	0.00	0.00	0.88	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	35.8	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.4	0.0	0.0	0.0	1.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.4	0.0	0.0	0.0	36.8	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	4.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.1	0.0	0.0	0.0	4.1	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.11	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	18	0	0	16	0	0
Lane Assignment			T+R			R		
Lanes in Grp	0	0	1	0	0	1	0	0
Grp Vol (v), veh/h	0	0	432	0	0	233	0	0
Grp Sat Flow (s), veh/h/ln	0	0	1577	0	0	1610	0	0
Q Serve Time (g_s), s	0.0	0.0	29.6	0.0	0.0	14.9	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	29.6	0.0	0.0	14.9	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.00	0.79	0.00	0.00	1.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	545	0	0	428	0	0
V/C Ratio (X)	0.00	0.00	0.79	0.00	0.00	0.54	0.00	0.00
Avail Cap (c_a), veh/h	0	0	664	0	0	428	0	0
Upstream Filter (I)	0.00	0.00	1.00	0.00	0.00	0.88	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	35.4	0.0	0.0	37.8	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	5.4	0.0	0.0	4.3	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	40.7	0.0	0.0	42.1	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	11.3	0.0	0.0	5.9	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.8	0.0	0.0	0.5	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	12.1	0.0	0.0	6.4	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.29	0.00	0.00	0.17	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	34.0
HCM 6th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	374	6	523	0	0	0	0	620	98	52	532	0
Future Volume (veh/h)	374	6	523	0	0	0	0	620	98	52	532	0
Number	7	4	14				5	2	12	1	6	16
Initial Q, veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1700	1800	1800				0	1800	1800	1700	1900	0
Adj Flow Rate, veh/h	420	7	588				0	697	110	58	598	0
Peak Hour Factor	0.89	0.89	0.89				0.95	0.89	0.89	0.89	0.89	0.95
Percent Heavy Veh, %	0	0	0				0	0	0	0	0	0
Opposing Right Turn Influence	Yes						No			Yes		
Cap, veh/h	698	12	631				0	1468	655	72	1846	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Prop Arrive On Green	0.41	0.41	0.41				0.00	0.43	0.43	0.09	1.00	0.00
Unsig. Movement Delay												
Ln Grp Delay, s/veh	28.7	0.0	52.9				0.0	25.7	21.6	71.1	0.4	0.0
Ln Grp LOS	C	A	D				A	C	C	E	A	A
Approach Vol, veh/h		1015						807			656	
Approach Delay, s/veh		42.7						25.1			6.7	
Approach LOS		D						C			A	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Case No	2.0	7.0		12.0		4.0		
Phs Duration (G+Y+Rc), s	9.9	56.0		54.2		65.8		
Change Period (Y+Rc), s	4.5	4.5		4.5		4.5		
Max Green (Gmax), s	12.5	41.5		52.5		58.5		
Max Allow Headway (MAH), s	3.8	5.1		5.5		5.2		
Max Q Clear (g_c+I1), s	6.2	19.5		46.1		2.0		
Green Ext Time (g_e), s	0.0	5.3		3.5		4.8		
Prob of Phs Call (p_c)	0.86	1.00		1.00		1.00		
Prob of Max Out (p_x)	0.04	0.00		0.92		0.00		

Left-Turn Movement Data								
Assigned Mvmt	1	5		7				
Mvmt Sat Flow, veh/h	1619	0		1688				

Through Movement Data								
Assigned Mvmt		2		4		6		
Mvmt Sat Flow, veh/h		3510		28		3705		

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		
Mvmt Sat Flow, veh/h		1525		1525		0		

Left Lane Group Data								
Assigned Mvmt	1	5	0	7	0	0	0	0
Lane Assignment	L (Prot)			L+T				

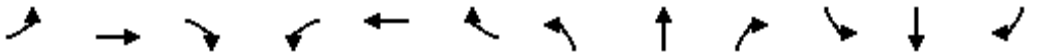
Lanes in Grp	1	0	0	1	0	0	0	0
Grp Vol (v), veh/h	58	0	0	427	0	0	0	0
Grp Sat Flow (s), veh/h/ln	1619	0	0	1716	0	0	0	0
Q Serve Time (g_s), s	4.2	0.0	0.0	23.3	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	4.2	0.0	0.0	23.3	0.0	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	51.5	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	0.98	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	72	0	0	710	0	0	0	0
V/C Ratio (X)	0.80	0.00	0.00	0.60	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	169	0	0	751	0	0	0	0
Upstream Filter (I)	0.92	0.00	0.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	54.1	0.0	0.0	27.5	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	16.9	0.0	0.0	1.2	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	71.1	0.0	0.0	28.7	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	1.7	0.0	0.0	9.5	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.3	0.0	0.0	0.2	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00
%ile Back of Q (50%), veh/ln	2.0	0.0	0.0	9.7	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.33	0.00	0.00	0.29	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	0
Lane Assignment		T				T		
Lanes in Grp	0	2	0	0	0	2	0	0
Grp Vol (v), veh/h	0	697	0	0	0	598	0	0
Grp Sat Flow (s), veh/h/ln	0	1710	0	0	0	1805	0	0
Q Serve Time (g_s), s	0.0	17.5	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	17.5	0.0	0.0	0.0	0.0	0.0	0.0
Lane Grp Cap (c), veh/h	0	1468	0	0	0	1846	0	0
V/C Ratio (X)	0.00	0.47	0.00	0.00	0.00	0.32	0.00	0.00
Avail Cap (c_a), veh/h	0	1468	0	0	0	1846	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	0.92	0.00	0.00
Uniform Delay (d1), s/veh	0.0	24.6	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	1.1	0.0	0.0	0.0	0.4	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	25.7	0.0	0.0	0.0	0.4	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	7.1	0.0	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.2	0.0	0.0	0.0	0.1	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	7.3	0.0	0.0	0.0	0.1	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.14	0.00	0.00	0.00	0.01	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	0
Lane Assignment		R		T+R				
Lanes in Grp	0	1	0	1	0	0	0	0
Grp Vol (v), veh/h	0	110	0	588	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	1525	0	1525	0	0	0	0
Q Serve Time (g_s), s	0.0	5.3	0.0	44.1	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	5.3	0.0	44.1	0.0	0.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	655	0	631	0	0	0	0
V/C Ratio (X)	0.00	0.17	0.00	0.93	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	655	0	667	0	0	0	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	21.1	0.0	33.6	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.6	0.0	19.4	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	21.6	0.0	52.9	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	1.9	0.0	15.9	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	3.4	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	2.0	0.0	19.3	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.04	0.00	0.57	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	27.5
HCM 6th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	273	444	790	987	0	0	0	0	177	0	182
Future Volume (veh/h)	0	273	444	790	987	0	0	0	0	177	0	182
Number	7	4	14	3	8	18				1	6	16
Initial Q, veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	0	1800	1800	1600	1800	0				1700	1900	1900
Adj Flow Rate, veh/h	0	287	0	832	1039	0				186	0	192
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95				0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0				0	0	0
Opposing Right Turn Influence	No			Yes						Yes		
Cap, veh/h	0	1218		866	2440	0				286	0	254
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Prop Arrive On Green	0.00	0.36	0.00	0.29	0.71	0.00				0.16	0.00	0.16
Unsig. Movement Delay												
Ln Grp Delay, s/veh	0.0	16.2	0.0	41.4	4.5	0.0				30.1	0.0	32.7
Ln Grp LOS	A	B		D	A	A				C	A	C
Approach Vol, veh/h		287			1871						378	
Approach Delay, s/veh		16.2			20.9						31.4	
Approach LOS		B			C						C	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	6		3	4				8
Case No	11.0		2.0	7.0				4.0
Phs Duration (G+Y+Rc), s	15.6		25.0	29.4				54.4
Change Period (Y+Rc), s	4.5		4.5	4.5				4.5
Max Green (Gmax), s	18.0		20.5	18.0				43.0
Max Allow Headway (MAH), s	4.7		3.8	5.2				5.2
Max Q Clear (g_c+I1), s	10.0		21.4	6.1				10.8
Green Ext Time (g_e), s	1.1		0.0	1.3				9.1
Prob of Phs Call (p_c)	1.00		1.00	1.00				1.00
Prob of Max Out (p_x)	0.27		1.00	0.00				0.00

Left-Turn Movement Data												
Assigned Mvmt		1		3	7							
Mvmt Sat Flow, veh/h		1810		2956	0							

Through Movement Data												
Assigned Mvmt		6			4				8			
Mvmt Sat Flow, veh/h		0			3510				3510			

Right-Turn Movement Data												
Assigned Mvmt		16			14				18			
Mvmt Sat Flow, veh/h		1610			1525				0			

Left Lane Group Data												
Assigned Mvmt		1	0	3	7	0	0	0	0			
Lane Assignment		L+T		L (Prot)								

Lanes in Grp	1	0	2	0	0	0	0	0
Grp Vol (v), veh/h	186	0	832	0	0	0	0	0
Grp Sat Flow (s), veh/h/ln	1810	0	1478	0	0	0	0	0
Q Serve Time (g_s), s	6.8	0.0	19.4	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	6.8	0.0	19.4	0.0	0.0	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	24.9	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	286	0	866	0	0	0	0	0
V/C Ratio (X)	0.65	0.00	0.96	0.00	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	465	0	866	0	0	0	0	0
Upstream Filter (I)	1.00	0.00	0.70	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	27.7	0.0	24.4	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	2.5	0.0	17.1	0.0	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	30.1	0.0	41.4	0.0	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	2.8	0.0	6.3	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.2	0.0	2.1	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	1.00	1.00	0.00	0.00	0.00	0.00
%ile Back of Q (50%), veh/ln	3.0	0.0	8.3	0.0	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.23	0.00	0.51	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	6	0	0	4	0	0	0	8
Lane Assignment				T				T
Lanes in Grp	0	0	0	2	0	0	0	2
Grp Vol (v), veh/h	0	0	0	287	0	0	0	1039
Grp Sat Flow (s), veh/h/ln	0	0	0	1710	0	0	0	1710
Q Serve Time (g_s), s	0.0	0.0	0.0	4.1	0.0	0.0	0.0	8.8
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	4.1	0.0	0.0	0.0	8.8
Lane Grp Cap (c), veh/h	0	0	0	1218	0	0	0	2440
V/C Ratio (X)	0.00	0.00	0.00	0.24	0.00	0.00	0.00	0.43
Avail Cap (c_a), veh/h	0	0	0	1218	0	0	0	2440
Upstream Filter (I)	0.00	0.00	0.00	0.83	0.00	0.00	0.00	0.70
Uniform Delay (d1), s/veh	0.0	0.0	0.0	15.8	0.0	0.0	0.0	4.1
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.4
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	16.2	0.0	0.0	0.0	4.5
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	1.5	0.0	0.0	0.0	2.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1

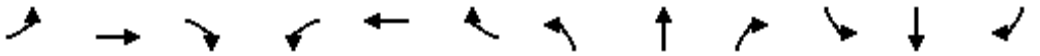
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	1.00	0.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	1.6	0.0	0.0	0.0	2.1
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.13
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	16	0	0	14	0	0	0	18
Lane Assignment	R			R				
Lanes in Grp	1	0	0	1	0	0	0	0
Grp Vol (v), veh/h	192	0	0	0	0	0	0	0
Grp Sat Flow (s), veh/h/ln	1610	0	0	1525	0	0	0	0
Q Serve Time (g_s), s	8.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	8.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	1.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	254	0	0	543	0	0	0	0
V/C Ratio (X)	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	414	0	0	543	0	0	0	0
Upstream Filter (I)	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	28.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	4.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	32.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	2.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	1.00	0.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	3.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	22.0
HCM 6th LOS	C

Notes

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	61	389	0	0	1375	365	399	2	291	0	0	0
Future Volume (veh/h)	61	389	0	0	1375	365	399	2	291	0	0	0
Number	7	4	14	3	8	18	5	2	12			
Initial Q, veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1700	1800	0	0	1800	1800	1700	1800	1800			
Adj Flow Rate, veh/h	66	423	0	0	1495	397	435	0	316			
Peak Hour Factor	0.92	0.92	0.95	0.95	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0			
Opposing Right Turn Influence	Yes			No			Yes					
Cap, veh/h	90	1853	0	0	2020	627	998	0	941			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Prop Arrive On Green	0.06	0.54	0.00	0.00	0.41	0.41	0.31	0.00	0.31			
Unsig. Movement Delay												
Ln Grp Delay, s/veh	38.3	7.5	0.0	0.0	17.4	18.9	18.0	0.0	17.0			
Ln Grp LOS	D	A	A	A	B	B	B	A	B			
Approach Vol, veh/h		489			1892			751				
Approach Delay, s/veh		11.6			17.7			17.5				
Approach LOS		B			B			B				

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2		4			7	8
Case No		9.0		4.0			2.0	7.0
Phs Duration (G+Y+Rc), s		23.0		37.0			7.8	29.2
Change Period (Y+Rc), s		4.5		4.5			4.5	4.5
Max Green (Gmax), s		18.5		32.5			5.5	22.5
Max Allow Headway (MAH), s		3.9		5.2			3.8	5.0
Max Q Clear (g_c+I1), s		8.4		5.9			4.4	17.5
Green Ext Time (g_e), s		2.2		2.9			0.0	4.1
Prob of Phs Call (p_c)		1.00		1.00			0.67	1.00
Prob of Max Out (p_x)		0.00		0.00			1.00	0.00

Left-Turn Movement Data								
Assigned Mvmt		5					7	3
Mvmt Sat Flow, veh/h		3238					1619	0

Through Movement Data								
Assigned Mvmt		2		4				8
Mvmt Sat Flow, veh/h		0		3510				5076

Right-Turn Movement Data								
Assigned Mvmt		12		14				18
Mvmt Sat Flow, veh/h		3051		0				1525

Left Lane Group Data								
Assigned Mvmt	0	5	0	0	0	0	7	3
Lane Assignment		L					L (Prot)	

Lanes in Grp	0	2	0	0	0	0	1	0
Grp Vol (v), veh/h	0	435	0	0	0	0	66	0
Grp Sat Flow (s), veh/h/ln	0	1619	0	0	0	0	1619	0
Q Serve Time (g_s), s	0.0	6.4	0.0	0.0	0.0	0.0	2.4	0.0
Cycle Q Clear Time (g_c), s	0.0	6.4	0.0	0.0	0.0	0.0	2.4	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	1619	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	24.7
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	0	998	0	0	0	0	90	0
V/C Ratio (X)	0.00	0.44	0.00	0.00	0.00	0.00	0.73	0.00
Avail Cap (c_a), veh/h	0	998	0	0	0	0	148	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	0.00	0.95	0.00
Uniform Delay (d1), s/veh	0.0	16.6	0.0	0.0	0.0	0.0	27.9	0.0
Incr Delay (d2), s/veh	0.0	1.4	0.0	0.0	0.0	0.0	10.4	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	18.0	0.0	0.0	0.0	0.0	38.3	0.0
1st-Term Q (Q1), veh/ln	0.0	2.2	0.0	0.0	0.0	0.0	0.9	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.2	0.0	0.0	0.0	0.0	0.3	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	0.00	0.00	0.00	1.00	1.00
%ile Back of Q (50%), veh/ln	0.0	2.4	0.0	0.0	0.0	0.0	1.1	0.0
%ile Storage Ratio (RQ%)	0.00	0.11	0.00	0.00	0.00	0.00	0.32	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	0	0	8
Lane Assignment				T				T
Lanes in Grp	0	0	0	2	0	0	0	3
Grp Vol (v), veh/h	0	0	0	423	0	0	0	1495
Grp Sat Flow (s), veh/h/ln	0	0	0	1710	0	0	0	1638
Q Serve Time (g_s), s	0.0	0.0	0.0	3.9	0.0	0.0	0.0	15.5
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	3.9	0.0	0.0	0.0	15.5
Lane Grp Cap (c), veh/h	0	0	0	1853	0	0	0	2020
V/C Ratio (X)	0.00	0.00	0.00	0.23	0.00	0.00	0.00	0.74
Avail Cap (c_a), veh/h	0	0	0	1853	0	0	0	2020
Upstream Filter (I)	0.00	0.00	0.00	0.95	0.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	7.2	0.0	0.0	0.0	15.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.3	0.0	0.0	0.0	2.5
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	7.5	0.0	0.0	0.0	17.4
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	1.1	0.0	0.0	0.0	5.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.5

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	1.2	0.0	0.0	0.0	5.4
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.07	0.00	0.00	0.00	0.07
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	0	0	18
Lane Assignment		R						R
Lanes in Grp	0	2	0	0	0	0	0	1
Grp Vol (v), veh/h	0	316	0	0	0	0	0	397
Grp Sat Flow (s), veh/h/ln	0	1525	0	0	0	0	0	1525
Q Serve Time (g_s), s	0.0	4.8	0.0	0.0	0.0	0.0	0.0	12.4
Cycle Q Clear Time (g_c), s	0.0	4.8	0.0	0.0	0.0	0.0	0.0	12.4
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	0.00	0.00	0.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	941	0	0	0	0	0	627
V/C Ratio (X)	0.00	0.34	0.00	0.00	0.00	0.00	0.00	0.63
Avail Cap (c_a), veh/h	0	941	0	0	0	0	0	627
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	16.0	0.0	0.0	0.0	0.0	0.0	14.1
Incr Delay (d2), s/veh	0.0	1.0	0.0	0.0	0.0	0.0	0.0	4.8
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	17.0	0.0	0.0	0.0	0.0	0.0	18.9
1st-Term Q (Q1), veh/ln	0.0	1.5	0.0	0.0	0.0	0.0	0.0	3.7
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.8
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	1.6	0.0	0.0	0.0	0.0	0.0	4.6
%ile Storage Ratio (RQ%)	0.00	0.08	0.00	0.00	0.00	0.00	0.00	0.32
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	16.7
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	46	208	22	57	349	341	17	6	24	288	243	309
Future Volume (veh/h)	46	208	22	57	349	341	17	6	24	288	243	309
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1900
Adj Flow Rate, veh/h	48	219	23	60	367	359	18	6	25	303	256	325
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	68	825	368	77	444	376	34	500	424	313	770	687
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.04	0.24	0.24	0.05	0.25	0.25	0.02	0.28	0.28	0.19	0.45	0.45
Unsig. Movement Delay												
Ln Grp Delay, s/veh	47.6	23.2	22.0	43.2	31.3	45.0	48.8	19.7	20.1	72.1	14.5	16.7
Ln Grp LOS	D	C	C	D	C	D	D	B	C	E	B	B
Approach Vol, veh/h		290			786			49			884	
Approach Delay, s/veh		27.2			38.4			30.6			35.1	
Approach LOS		C			D			C			D	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Case No	2.0	3.0	2.0	3.0	2.0	4.0	2.0	3.0
Phs Duration (G+Y+Rc), s	19.0	25.3	8.1	22.6	6.1	38.3	7.7	23.0
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green (Gmax), s	14.5	19.0	5.0	18.5	5.0	28.5	5.0	18.5
Max Allow Headway (MAH), s	3.8	4.3	3.8	5.1	3.8	5.4	3.8	4.6
Max Q Clear (g_c+I1), s	15.9	2.9	4.7	5.9	2.8	13.2	4.2	19.4
Green Ext Time (g_e), s	0.0	0.0	0.0	1.1	0.0	3.3	0.0	0.0
Prob of Phs Call (p_c)	1.00	1.00	0.71	1.00	0.31	1.00	0.63	1.00
Prob of Max Out (p_x)	1.00	0.00	1.00	0.03	1.00	0.00	1.00	1.00

Left-Turn Movement Data								
Assigned Mvmt	1		3		5		7	
Mvmt Sat Flow, veh/h	1619		1619		1619		1619	

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		1800		3420		1710		1800

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1525		1525		1525		1525

Left Lane Group Data								
Assigned Mvmt	1	0	3	0	5	0	7	0
Lane Assignment	L (Prot)		L (Prot)		L (Prot)		L (Prot)	

Lanes in Grp	1	0	1	0	1	0	1	0
Grp Vol (v), veh/h	303	0	60	0	18	0	48	0
Grp Sat Flow (s), veh/h/ln	1619	0	1619	0	1619	0	1619	0
Q Serve Time (g_s), s	13.9	0.0	2.7	0.0	0.8	0.0	2.2	0.0
Cycle Q Clear Time (g_c), s	13.9	0.0	2.7	0.0	0.8	0.0	2.2	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	313	0	77	0	34	0	68	0
V/C Ratio (X)	0.97	0.00	0.78	0.00	0.53	0.00	0.70	0.00
Avail Cap (c_a), veh/h	313	0	108	0	108	0	108	0
Upstream Filter (I)	1.00	0.00	0.34	0.00	1.00	0.00	0.98	0.00
Uniform Delay (d1), s/veh	30.0	0.0	35.3	0.0	36.4	0.0	35.5	0.0
Incr Delay (d2), s/veh	42.1	0.0	7.9	0.0	12.4	0.0	12.1	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	72.1	0.0	43.2	0.0	48.8	0.0	47.6	0.0
1st-Term Q (Q1), veh/ln	5.2	0.0	1.1	0.0	0.3	0.0	0.8	0.0
2nd-Term Q (Q2), veh/ln	3.7	0.0	0.2	0.0	0.1	0.0	0.2	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
%ile Back of Q (50%), veh/ln	8.8	0.0	1.2	0.0	0.4	0.0	1.1	0.0
%ile Storage Ratio (RQ%)	2.21	0.00	0.05	0.00	0.05	0.00	0.10	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	1	0	2	0	1	0	1
Grp Vol (v), veh/h	0	6	0	219	0	256	0	367
Grp Sat Flow (s), veh/h/ln	0	1800	0	1710	0	1710	0	1800
Q Serve Time (g_s), s	0.0	0.2	0.0	3.9	0.0	7.3	0.0	14.5
Cycle Q Clear Time (g_c), s	0.0	0.2	0.0	3.9	0.0	7.3	0.0	14.5
Lane Grp Cap (c), veh/h	0	500	0	825	0	770	0	444
V/C Ratio (X)	0.00	0.01	0.00	0.27	0.00	0.33	0.00	0.83
Avail Cap (c_a), veh/h	0	500	0	844	0	770	0	444
Upstream Filter (I)	0.00	1.00	0.00	0.98	0.00	1.00	0.00	0.34
Uniform Delay (d1), s/veh	0.0	19.6	0.0	23.1	0.0	13.3	0.0	26.7
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.2	0.0	1.2	0.0	4.5
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	19.7	0.0	23.2	0.0	14.5	0.0	31.3
1st-Term Q (Q1), veh/ln	0.0	0.1	0.0	1.5	0.0	2.6	0.0	5.9
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.6

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.1	0.0	1.5	0.0	2.8	0.0	6.5
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.02	0.00	0.48	0.00	0.27
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		R		T+R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	25	0	23	0	325	0	359
Grp Sat Flow (s), veh/h/ln	0	1525	0	1525	0	1525	0	1525
Q Serve Time (g_s), s	0.0	0.9	0.0	0.9	0.0	11.2	0.0	17.4
Cycle Q Clear Time (g_c), s	0.0	0.9	0.0	0.9	0.0	11.2	0.0	17.4
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	424	0	368	0	687	0	376
V/C Ratio (X)	0.00	0.06	0.00	0.06	0.00	0.47	0.00	0.95
Avail Cap (c_a), veh/h	0	424	0	376	0	687	0	376
Upstream Filter (I)	0.00	1.00	0.00	0.98	0.00	1.00	0.00	0.34
Uniform Delay (d1), s/veh	0.0	19.9	0.0	21.9	0.0	14.4	0.0	27.8
Incr Delay (d2), s/veh	0.0	0.3	0.0	0.1	0.0	2.3	0.0	17.1
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	20.1	0.0	22.0	0.0	16.7	0.0	45.0
1st-Term Q (Q1), veh/ln	0.0	0.3	0.0	0.3	0.0	3.5	0.0	6.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.4	0.0	1.8
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.3	0.0	0.3	0.0	4.0	0.0	7.8
%ile Storage Ratio (RQ%)	0.00	0.02	0.00	0.00	0.00	0.68	0.00	0.32
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	35.1
HCM 6th LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	109	294	127	32	595	306	51	313	21	149	9	132
Future Volume (veh/h)	109	294	127	32	595	306	51	313	21	149	9	132
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1600	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1900
Adj Flow Rate, veh/h	114	306	132	33	620	319	53	326	22	155	9	138
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	171	702	595	53	656	556	368	843	376	172	39	591
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.06	0.39	0.39	0.03	0.36	0.36	0.25	0.25	0.25	0.11	0.41	0.41
Unsig. Movement Delay												
Ln Grp Delay, s/veh	43.2	18.3	16.4	49.9	46.9	21.8	24.7	26.4	23.3	76.9	0.0	16.3
Ln Grp LOS	D	B	B	D	D	C	C	C	C	E	A	B
Approach Vol, veh/h		552			972			401			302	
Approach Delay, s/veh		23.0			38.8			26.0			47.4	
Approach LOS		C			D			C			D	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4		6	7	8
Case No	2.0	5.3	2.0	3.0		4.0	2.0	3.0
Phs Duration (G+Y+Rc), s	13.0	24.2	7.1	35.7		37.2	9.1	33.7
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5		4.5	4.5	4.5
Max Green (Gmax), s	8.5	19.0	5.7	28.8		32.0	5.0	29.5
Max Allow Headway (MAH), s	3.8	5.1	3.8	4.9		5.6	3.8	4.9
Max Q Clear (g_c+I1), s	9.6	8.4	3.6	12.0		7.0	5.0	28.7
Green Ext Time (g_e), s	0.0	1.7	0.0	2.1		0.9	0.0	0.4
Prob of Phs Call (p_c)	0.97	1.00	0.52	1.00		1.00	0.92	1.00
Prob of Max Out (p_x)	1.00	0.00	1.00	0.02		0.00	1.00	1.00

Left-Turn Movement Data								
Assigned Mvmt	1	5	3				7	
Mvmt Sat Flow, veh/h	1619	1128	1619				2956	

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		3420		1800		94		1800

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1525		1525		1446		1525

Left Lane Group Data								
Assigned Mvmt	1	5	3	0	0	0	7	0
Lane Assignment	L (Prot)	L	L (Prot)				L (Prot)	

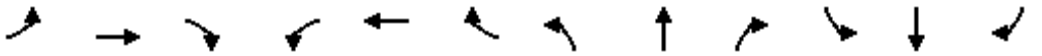
Lanes in Grp	1	1	1	0	0	0	2	0
Grp Vol (v), veh/h	155	53	33	0	0	0	114	0
Grp Sat Flow (s), veh/h/ln	1619	1128	1619	0	0	0	1478	0
Q Serve Time (g_s), s	7.6	3.0	1.6	0.0	0.0	0.0	3.0	0.0
Cycle Q Clear Time (g_c), s	7.6	3.0	1.6	0.0	0.0	0.0	3.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	1128	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	19.7	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	19.7	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	1.00	1.00	0.00	0.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	172	368	53	0	0	0	171	0
V/C Ratio (X)	0.90	0.14	0.63	0.00	0.00	0.00	0.67	0.00
Avail Cap (c_a), veh/h	172	368	115	0	0	0	185	0
Upstream Filter (I)	1.00	1.00	1.00	0.00	0.00	0.00	0.77	0.00
Uniform Delay (d1), s/veh	35.3	23.8	38.2	0.0	0.0	0.0	36.9	0.0
Incr Delay (d2), s/veh	41.6	0.8	11.6	0.0	0.0	0.0	6.2	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	76.9	24.7	49.9	0.0	0.0	0.0	43.2	0.0
1st-Term Q (Q1), veh/ln	2.9	0.8	0.6	0.0	0.0	0.0	1.1	0.0
2nd-Term Q (Q2), veh/ln	2.0	0.1	0.2	0.0	0.0	0.0	0.1	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	1.00	1.00	0.00	0.00	0.00	1.00	0.00
%ile Back of Q (50%), veh/ln	4.9	0.9	0.8	0.0	0.0	0.0	1.2	0.0
%ile Storage Ratio (RQ%)	0.59	0.14	0.01	0.00	0.00	0.00	0.10	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T				T
Lanes in Grp	0	2	0	1	0	0	0	1
Grp Vol (v), veh/h	0	326	0	306	0	0	0	620
Grp Sat Flow (s), veh/h/ln	0	1710	0	1800	0	0	0	1800
Q Serve Time (g_s), s	0.0	6.4	0.0	10.0	0.0	0.0	0.0	26.7
Cycle Q Clear Time (g_c), s	0.0	6.4	0.0	10.0	0.0	0.0	0.0	26.7
Lane Grp Cap (c), veh/h	0	843	0	702	0	0	0	656
V/C Ratio (X)	0.00	0.39	0.00	0.44	0.00	0.00	0.00	0.95
Avail Cap (c_a), veh/h	0	843	0	702	0	0	0	664
Upstream Filter (I)	0.00	1.00	0.00	0.77	0.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	25.1	0.0	17.9	0.0	0.0	0.0	24.6
Incr Delay (d2), s/veh	0.0	1.3	0.0	0.3	0.0	0.0	0.0	22.3
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	26.4	0.0	18.3	0.0	0.0	0.0	46.9
1st-Term Q (Q1), veh/ln	0.0	2.5	0.0	3.9	0.0	0.0	0.0	10.6
2nd-Term Q (Q2), veh/ln	0.0	0.2	0.0	0.1	0.0	0.0	0.0	4.1

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	2.7	0.0	4.0	0.0	0.0	0.0	14.7
%ile Storage Ratio (RQ%)	0.00	0.24	0.00	0.17	0.00	0.00	0.00	0.17
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		R		T+R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	22	0	132	0	147	0	319
Grp Sat Flow (s), veh/h/ln	0	1525	0	1525	0	1540	0	1525
Q Serve Time (g_s), s	0.0	0.9	0.0	4.6	0.0	5.0	0.0	13.4
Cycle Q Clear Time (g_c), s	0.0	0.9	0.0	4.6	0.0	5.0	0.0	13.4
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	0.94	0.00	1.00
Lane Grp Cap (c), veh/h	0	376	0	595	0	630	0	556
V/C Ratio (X)	0.00	0.06	0.00	0.22	0.00	0.23	0.00	0.57
Avail Cap (c_a), veh/h	0	376	0	595	0	630	0	563
Upstream Filter (I)	0.00	1.00	0.00	0.77	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	23.0	0.0	16.3	0.0	15.4	0.0	20.4
Incr Delay (d2), s/veh	0.0	0.3	0.0	0.1	0.0	0.9	0.0	1.4
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	23.3	0.0	16.4	0.0	16.3	0.0	21.8
1st-Term Q (Q1), veh/ln	0.0	0.3	0.0	1.5	0.0	1.7	0.0	4.5
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.2
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.3	0.0	1.6	0.0	1.8	0.0	4.7
%ile Storage Ratio (RQ%)	0.00	0.12	0.00	0.06	0.00	0.22	0.00	0.05
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	33.7
HCM 6th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	343	9	375	454	689	0	0	179	353
Future Volume (veh/h)	0	0	0	343	9	375	454	689	0	0	179	353
Number				3	8	18	5	2	12	1	6	16
Initial Q, veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln				1700	1800	1800	1700	1800	0	0	1800	1900
Adj Flow Rate, veh/h				343	9	375	454	689	0	0	179	353
Peak Hour Factor				0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %				0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence				Yes			Yes			No		
Cap, veh/h				429	11	391	490	2159	0	0	1339	439
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green				0.26	0.26	0.26	0.30	0.63	0.00	0.00	0.27	0.27
Unsig. Movement Delay												
Ln Grp Delay, s/veh				38.0	0.0	64.3	43.9	7.1	0.0	0.0	22.2	41.6
Ln Grp LOS				D	A	E	D	A	A	A	C	D
Approach Vol, veh/h					727			1143			532	
Approach Delay, s/veh					51.5			21.7			35.1	
Approach LOS					D			C			D	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2	8		5	6		
Case No		4.0	11.0		2.0	7.0		
Phs Duration (G+Y+Rc), s		55.0	25.0		28.7	26.3		
Change Period (Y+Rc), s		4.5	4.5		4.5	4.5		
Max Green (Gmax), s		50.5	20.5		26.5	19.5		
Max Allow Headway (MAH), s		5.2	4.7		3.8	4.4		
Max Q Clear (g_c+I1), s		9.4	21.4		23.7	18.3		
Green Ext Time (g_e), s		5.6	0.0		0.5	0.3		
Prob of Phs Call (p_c)		1.00	1.00		1.00	1.00		
Prob of Max Out (p_x)		0.00	1.00		1.00	0.00		
Left-Turn Movement Data								
Assigned Mvmt			3		5	1		
Mvmt Sat Flow, veh/h			1672		1619	0		
Through Movement Data								
Assigned Mvmt		2	8			6		
Mvmt Sat Flow, veh/h		3510	44			5076		
Right-Turn Movement Data								
Assigned Mvmt		12	18			16		
Mvmt Sat Flow, veh/h		0	1525			1610		
Left Lane Group Data								
Assigned Mvmt	0	0	3	0	5	1	0	0
Lane Assignment			L+T		L (Prot)			

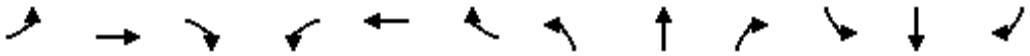
Lanes in Grp	0	0	1	0	1	0	0	0
Grp Vol (v), veh/h	0	0	352	0	454	0	0	0
Grp Sat Flow (s), veh/h/ln	0	0	1716	0	1619	0	0	0
Q Serve Time (g_s), s	0.0	0.0	15.4	0.0	21.7	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	15.4	0.0	21.7	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	21.8	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	0.00	0.97	0.00	1.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	440	0	490	0	0	0
V/C Ratio (X)	0.00	0.00	0.80	0.00	0.93	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	0	440	0	536	0	0	0
Upstream Filter (I)	0.00	0.00	1.00	0.00	0.72	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	27.8	0.0	27.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	10.1	0.0	16.8	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	38.0	0.0	43.9	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	6.0	0.0	7.9	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	1.2	0.0	2.3	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	0.00	1.00	0.00	1.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	7.3	0.0	10.2	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.15	0.00	0.93	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	8	0	0	6	0	0
Lane Assignment		T				T		
Lanes in Grp	0	2	0	0	0	3	0	0
Grp Vol (v), veh/h	0	689	0	0	0	179	0	0
Grp Sat Flow (s), veh/h/ln	0	1710	0	0	0	1638	0	0
Q Serve Time (g_s), s	0.0	7.4	0.0	0.0	0.0	2.2	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	7.4	0.0	0.0	0.0	2.2	0.0	0.0
Lane Grp Cap (c), veh/h	0	2159	0	0	0	1339	0	0
V/C Ratio (X)	0.00	0.32	0.00	0.00	0.00	0.13	0.00	0.00
Avail Cap (c_a), veh/h	0	2159	0	0	0	1339	0	0
Upstream Filter (I)	0.00	0.72	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	6.8	0.0	0.0	0.0	22.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.3	0.0	0.0	0.0	0.2	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	7.1	0.0	0.0	0.0	22.2	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	2.3	0.0	0.0	0.0	0.8	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	2.4	0.0	0.0	0.0	0.8	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.22	0.00	0.00	0.00	0.02	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	18	0	0	16	0	0
Lane Assignment			R			R		
Lanes in Grp	0	0	1	0	0	1	0	0
Grp Vol (v), veh/h	0	0	375	0	0	353	0	0
Grp Sat Flow (s), veh/h/ln	0	0	1525	0	0	1610	0	0
Q Serve Time (g_s), s	0.0	0.0	19.4	0.0	0.0	16.3	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	19.4	0.0	0.0	16.3	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	391	0	0	439	0	0
V/C Ratio (X)	0.00	0.00	0.96	0.00	0.00	0.80	0.00	0.00
Avail Cap (c_a), veh/h	0	0	391	0	0	439	0	0
Upstream Filter (I)	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	29.3	0.0	0.0	27.1	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	35.0	0.0	0.0	14.5	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	64.3	0.0	0.0	41.6	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	6.8	0.0	0.0	6.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	3.8	0.0	0.0	1.8	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	10.6	0.0	0.0	7.8	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.22	0.00	0.00	0.17	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	33.7
HCM 6th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	338	3	361	0	0	0	0	822	436	259	505	0
Future Volume (veh/h)	338	3	361	0	0	0	0	822	436	259	505	0
Number	7	4	14				5	2	12	1	6	16
Initial Q, veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1700	1800	1800				0	1800	1800	1700	1900	0
Adj Flow Rate, veh/h	338	3	361				0	822	436	259	505	0
Peak Hour Factor	0.96	0.96	0.96				0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0				0	0	0	0	0	0
Opposing Right Turn Influence	Yes						No			Yes		
Cap, veh/h	350	3	374				0	1280	397	285	1711	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.45	0.45	0.45				0.00	0.26	0.26	0.18	0.47	0.00
Unsig. Movement Delay												
Ln Grp Delay, s/veh	56.5	0.0	0.0				0.0	41.9	118.3	73.6	19.7	0.0
Ln Grp LOS	E	A	A				A	D	F	E	B	A
Approach Vol, veh/h		702						1258			764	
Approach Delay, s/veh		56.5						68.4			38.0	
Approach LOS		E						E			D	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Case No	2.0	7.0		12.0		4.0		
Phs Duration (G+Y+Rc), s	25.6	35.8		58.6		61.4		
Change Period (Y+Rc), s	4.5	4.5		4.5		4.5		
Max Green (Gmax), s	24.9	26.1		55.5		55.5		
Max Allow Headway (MAH), s	3.8	4.8		5.5		5.2		
Max Q Clear (g_c+I1), s	20.8	33.3		52.8		12.3		
Green Ext Time (g_e), s	0.3	0.0		1.3		3.8		
Prob of Phs Call (p_c)	1.00	1.00		1.00		1.00		
Prob of Max Out (p_x)	0.83	0.00		1.00		0.00		

Left-Turn Movement Data								
Assigned Mvmt	1	5		7				
Mvmt Sat Flow, veh/h	1619	0		776				

Through Movement Data								
Assigned Mvmt		2		4		6		
Mvmt Sat Flow, veh/h		5076		7		3705		

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		
Mvmt Sat Flow, veh/h		1525		829		0		

Left Lane Group Data								
Assigned Mvmt	1	5	0	7	0	0	0	0
Lane Assignment	L (Prot)			L+T+R				

Lanes in Grp	1	0	0	1	0	0	0	0
Grp Vol (v), veh/h	259	0	0	702	0	0	0	0
Grp Sat Flow (s), veh/h/ln	1619	0	0	1612	0	0	0	0
Q Serve Time (g_s), s	18.8	0.0	0.0	50.8	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	18.8	0.0	0.0	50.8	0.0	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	31.3	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	0.48	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	285	0	0	727	0	0	0	0
V/C Ratio (X)	0.91	0.00	0.00	0.97	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	336	0	0	746	0	0	0	0
Upstream Filter (I)	1.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	48.5	0.0	0.0	32.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	25.1	0.0	0.0	24.5	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	73.6	0.0	0.0	56.5	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	7.6	0.0	0.0	19.2	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	2.0	0.0	0.0	4.9	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00
%ile Back of Q (50%), veh/ln	9.6	0.0	0.0	24.1	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.87	0.00	0.00	0.41	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	0
Lane Assignment		T				T		
Lanes in Grp	0	3	0	0	0	2	0	0
Grp Vol (v), veh/h	0	822	0	0	0	505	0	0
Grp Sat Flow (s), veh/h/ln	0	1638	0	0	0	1805	0	0
Q Serve Time (g_s), s	0.0	17.8	0.0	0.0	0.0	10.3	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	17.8	0.0	0.0	0.0	10.3	0.0	0.0
Lane Grp Cap (c), veh/h	0	1280	0	0	0	1711	0	0
V/C Ratio (X)	0.00	0.64	0.00	0.00	0.00	0.30	0.00	0.00
Avail Cap (c_a), veh/h	0	1280	0	0	0	1711	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	39.4	0.0	0.0	0.0	19.3	0.0	0.0
Incr Delay (d2), s/veh	0.0	2.5	0.0	0.0	0.0	0.4	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	41.9	0.0	0.0	0.0	19.7	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	7.2	0.0	0.0	0.0	4.3	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.3	0.0	0.0	0.0	0.1	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	7.5	0.0	0.0	0.0	4.4	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.24	0.00	0.00	0.00	0.40	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	0
Lane Assignment		R						
Lanes in Grp	0	1	0	0	0	0	0	0
Grp Vol (v), veh/h	0	436	0	0	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	1525	0	0	0	0	0	0
Q Serve Time (g_s), s	0.0	31.3	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	31.3	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	0.51	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	397	0	0	0	0	0	0
V/C Ratio (X)	0.00	1.10	0.00	0.00	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	397	0	0	0	0	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	44.4	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	73.9	0.0	0.0	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	118.3	0.0	0.0	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	11.7	0.0	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	8.2	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	19.9	0.0	0.0	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.63	0.00	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	9.6	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	56.8
HCM 6th LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	57	680	50	173	241	133	99	551	487	201	290	25
Future Volume (veh/h)	57	680	50	173	241	133	99	551	487	201	290	25
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1900
Adj Flow Rate, veh/h	57	680	50	173	241	133	99	551	487	201	290	25
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	71	746	55	174	636	339	123	1103	492	225	1228	105
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.04	0.23	0.23	0.11	0.30	0.30	0.08	0.32	0.32	0.14	0.39	0.39
Unsig. Movement Delay												
Ln Grp Delay, s/veh	61.6	58.1	57.9	104.9	25.6	25.8	50.2	25.9	64.3	71.3	19.5	19.6
Ln Grp LOS	E	E	E	F	C	C	D	C	E	E	B	B
Approach Vol, veh/h		787			547			1137			516	
Approach Delay, s/veh		58.2			50.8			44.5			39.7	
Approach LOS		E			D			D			D	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Case No	2.0	3.0	2.0	4.0	2.0	4.0	2.0	4.0
Phs Duration (G+Y+Rc), s	17.0	33.5	14.2	25.3	11.4	39.2	8.4	31.1
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green (Gmax), s	12.5	28.7	9.7	21.1	11.7	29.5	8.7	22.1
Max Allow Headway (MAH), s	3.8	4.7	3.8	5.3	3.8	5.3	3.8	5.4
Max Q Clear (g_c+I1), s	13.0	30.6	11.6	20.5	7.4	7.6	5.1	10.3
Green Ext Time (g_e), s	0.0	0.0	0.0	0.3	0.1	1.8	0.0	1.7
Prob of Phs Call (p_c)	0.99	1.00	0.99	1.00	0.92	1.00	0.76	1.00
Prob of Max Out (p_x)	1.00	0.00	1.00	1.00	0.60	0.00	1.00	0.13

Left-Turn Movement Data								
Assigned Mvmt	1		3		5		7	
Mvmt Sat Flow, veh/h	1619		1619		1619		1619	

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		3420		3230		3188		2155

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1525		237		273		1148

Left Lane Group Data								
Assigned Mvmt	1	0	3	0	5	0	7	0
Lane Assignment	L (Prot)		L (Prot)		L (Prot)		L (Prot)	

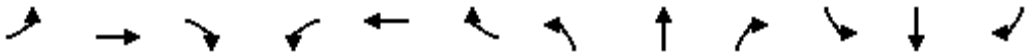
Lanes in Grp	1	0	1	0	1	0	1	0
Grp Vol (v), veh/h	201	0	173	0	99	0	57	0
Grp Sat Flow (s), veh/h/ln	1619	0	1619	0	1619	0	1619	0
Q Serve Time (g_s), s	11.0	0.0	9.6	0.0	5.4	0.0	3.1	0.0
Cycle Q Clear Time (g_c), s	11.0	0.0	9.6	0.0	5.4	0.0	3.1	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	225	0	174	0	123	0	71	0
V/C Ratio (X)	0.89	0.00	0.99	0.00	0.80	0.00	0.81	0.00
Avail Cap (c_a), veh/h	225	0	174	0	210	0	157	0
Upstream Filter (I)	1.00	0.00	0.98	0.00	0.80	0.00	1.00	0.00
Uniform Delay (d1), s/veh	38.1	0.0	40.1	0.0	40.9	0.0	42.7	0.0
Incr Delay (d2), s/veh	33.2	0.0	64.8	0.0	9.3	0.0	19.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	71.3	0.0	104.9	0.0	50.2	0.0	61.6	0.0
1st-Term Q (Q1), veh/ln	4.3	0.0	3.8	0.0	2.1	0.0	1.2	0.0
2nd-Term Q (Q2), veh/ln	2.1	0.0	3.1	0.0	0.3	0.0	0.4	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
%ile Back of Q (50%), veh/ln	6.3	0.0	6.9	0.0	2.4	0.0	1.6	0.0
%ile Storage Ratio (RQ%)	0.10	0.00	0.06	0.00	0.12	0.00	0.02	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	2	0	1	0	1	0	1
Grp Vol (v), veh/h	0	551	0	360	0	155	0	189
Grp Sat Flow (s), veh/h/ln	0	1710	0	1710	0	1710	0	1710
Q Serve Time (g_s), s	0.0	11.7	0.0	18.4	0.0	5.5	0.0	7.9
Cycle Q Clear Time (g_c), s	0.0	11.7	0.0	18.4	0.0	5.5	0.0	7.9
Lane Grp Cap (c), veh/h	0	1103	0	395	0	659	0	505
V/C Ratio (X)	0.00	0.50	0.00	0.91	0.00	0.23	0.00	0.38
Avail Cap (c_a), veh/h	0	1103	0	401	0	659	0	505
Upstream Filter (I)	0.00	0.80	0.00	1.00	0.00	1.00	0.00	0.98
Uniform Delay (d1), s/veh	0.0	24.6	0.0	33.7	0.0	18.7	0.0	25.1
Incr Delay (d2), s/veh	0.0	1.3	0.0	24.4	0.0	0.8	0.0	0.5
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	25.9	0.0	58.1	0.0	19.5	0.0	25.6
1st-Term Q (Q1), veh/ln	0.0	4.6	0.0	7.4	0.0	2.1	0.0	3.1
2nd-Term Q (Q2), veh/ln	0.0	0.2	0.0	2.7	0.0	0.2	0.0	0.1

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	4.8	0.0	10.1	0.0	2.3	0.0	3.2
%ile Storage Ratio (RQ%)	0.00	0.24	0.00	0.14	0.00	0.04	0.00	0.03
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		T+R		T+R		T+R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	487	0	370	0	160	0	185
Grp Sat Flow (s), veh/h/ln	0	1525	0	1757	0	1751	0	1593
Q Serve Time (g_s), s	0.0	28.6	0.0	18.5	0.0	5.6	0.0	8.3
Cycle Q Clear Time (g_c), s	0.0	28.6	0.0	18.5	0.0	5.6	0.0	8.3
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	0.14	0.00	0.16	0.00	0.72
Lane Grp Cap (c), veh/h	0	492	0	406	0	674	0	470
V/C Ratio (X)	0.00	0.99	0.00	0.91	0.00	0.24	0.00	0.39
Avail Cap (c_a), veh/h	0	492	0	412	0	674	0	470
Upstream Filter (I)	0.00	0.80	0.00	1.00	0.00	1.00	0.00	0.98
Uniform Delay (d1), s/veh	0.0	30.3	0.0	33.7	0.0	18.7	0.0	25.3
Incr Delay (d2), s/veh	0.0	34.0	0.0	24.1	0.0	0.8	0.0	0.5
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	64.3	0.0	57.9	0.0	19.6	0.0	25.8
1st-Term Q (Q1), veh/ln	0.0	10.0	0.0	7.7	0.0	2.2	0.0	3.1
2nd-Term Q (Q2), veh/ln	0.0	4.6	0.0	2.7	0.0	0.2	0.0	0.1
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	14.7	0.0	10.4	0.0	2.4	0.0	3.1
%ile Storage Ratio (RQ%)	0.00	0.74	0.00	0.14	0.00	0.04	0.00	0.03
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	48.4
HCM 6th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	394	28	347	9	3	16	212	779	3	6	451	76
Future Volume (veh/h)	394	28	347	9	3	16	212	779	3	6	451	76
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1600	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1900
Adj Flow Rate, veh/h	394	28	0	9	3	16	212	779	3	6	451	76
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	398	433		124	28	64	227	1997	8	13	1288	216
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.13	0.24	0.00	0.05	0.05	0.05	0.14	0.57	0.57	0.01	0.44	0.44
Unsig. Movement Delay												
Ln Grp Delay, s/veh	74.7	22.0	0.0	34.6	0.0	36.6	74.1	10.0	10.0	58.5	15.0	15.0
Ln Grp LOS	E	C		C	A	D	E	B	A	E	B	B
Approach Vol, veh/h		422			28			994			533	
Approach Delay, s/veh		71.2			35.7			23.7			15.5	
Approach LOS		E			D			C			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6	7	8
Case No	2.0	4.0		3.0	2.0	4.0	2.0	8.3
Phs Duration (G+Y+Rc), s	5.1	47.4		22.5	15.0	37.5	14.6	7.9
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5	4.5	4.5
Max Green (Gmax), s	5.0	23.9		32.6	10.5	18.4	10.1	18.0
Max Allow Headway (MAH), s	3.8	5.2		5.2	3.8	5.3	3.8	5.4
Max Q Clear (g_c+I1), s	2.3	11.2		2.9	11.7	9.7	12.0	2.8
Green Ext Time (g_e), s	0.0	4.0		0.1	0.0	2.1	0.0	0.1
Prob of Phs Call (p_c)	0.12	1.00		1.00	0.99	1.00	1.00	0.69
Prob of Max Out (p_x)	1.00	0.00		0.00	1.00	0.00	1.00	0.00

Left-Turn Movement Data								
Assigned Mvmt	1				5		7	3
Mvmt Sat Flow, veh/h	1619				1619		2956	880

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		3494		1800		2931		610

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		13		1525		491		1388

Left Lane Group Data								
Assigned Mvmt	1	0	0	0	5	0	7	3
Lane Assignment	L (Prot)				L (Prot)		L (Prot)	L+T

Lanes in Grp	1	0	0	0	1	0	2	1
Grp Vol (v), veh/h	6	0	0	0	212	0	394	12
Grp Sat Flow (s), veh/h/ln	1619	0	0	0	1619	0	1478	1489
Q Serve Time (g_s), s	0.3	0.0	0.0	0.0	9.7	0.0	10.0	0.0
Cycle Q Clear Time (g_c), s	0.3	0.0	0.0	0.0	9.7	0.0	10.0	0.5
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	1404
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.4
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.4
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	0.00	1.00	0.00	1.00	0.75
Lane Grp Cap (c), veh/h	13	0	0	0	227	0	398	152
V/C Ratio (X)	0.47	0.00	0.00	0.00	0.94	0.00	0.99	0.08
Avail Cap (c_a), veh/h	108	0	0	0	227	0	398	429
Upstream Filter (I)	0.85	0.00	0.00	0.00	1.00	0.00	1.00	1.00
Uniform Delay (d1), s/veh	37.1	0.0	0.0	0.0	31.9	0.0	32.4	34.4
Incr Delay (d2), s/veh	21.5	0.0	0.0	0.0	42.1	0.0	42.3	0.2
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	58.5	0.0	0.0	0.0	74.1	0.0	74.7	34.6
1st-Term Q (Q1), veh/ln	0.1	0.0	0.0	0.0	3.7	0.0	3.4	0.2
2nd-Term Q (Q2), veh/ln	0.1	0.0	0.0	0.0	2.7	0.0	2.3	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	0.00	1.00	0.00	1.00	1.00
%ile Back of Q (50%), veh/ln	0.2	0.0	0.0	0.0	6.3	0.0	5.8	0.2
%ile Storage Ratio (RQ%)	0.01	0.00	0.00	0.00	1.05	0.00	0.96	0.01
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		
Lanes in Grp	0	1	0	1	0	1	0	0
Grp Vol (v), veh/h	0	381	0	28	0	262	0	0
Grp Sat Flow (s), veh/h/ln	0	1710	0	1800	0	1710	0	0
Q Serve Time (g_s), s	0.0	9.2	0.0	0.9	0.0	7.6	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	9.2	0.0	0.9	0.0	7.6	0.0	0.0
Lane Grp Cap (c), veh/h	0	977	0	433	0	751	0	0
V/C Ratio (X)	0.00	0.39	0.00	0.06	0.00	0.35	0.00	0.00
Avail Cap (c_a), veh/h	0	977	0	782	0	751	0	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	0.85	0.00	0.00
Uniform Delay (d1), s/veh	0.0	8.9	0.0	22.0	0.0	13.9	0.0	0.0
Incr Delay (d2), s/veh	0.0	1.2	0.0	0.1	0.0	1.1	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	10.0	0.0	22.0	0.0	15.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	3.0	0.0	0.4	0.0	2.7	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.3	0.0	0.0	0.0	0.2	0.0	0.0

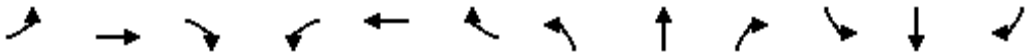
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	3.3	0.0	0.4	0.0	2.9	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.29	0.00	0.01	0.00	0.15	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R		R		T+R		T+R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	401	0	0	0	265	0	16
Grp Sat Flow (s), veh/h/ln	0	1798	0	1525	0	1712	0	1388
Q Serve Time (g_s), s	0.0	9.2	0.0	0.0	0.0	7.7	0.0	0.8
Cycle Q Clear Time (g_c), s	0.0	9.2	0.0	0.0	0.0	7.7	0.0	0.8
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.01	0.00	1.00	0.00	0.29	0.00	1.00
Lane Grp Cap (c), veh/h	0	1027	0	367	0	752	0	64
V/C Ratio (X)	0.00	0.39	0.00	0.00	0.00	0.35	0.00	0.25
Avail Cap (c_a), veh/h	0	1027	0	663	0	752	0	333
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	0.85	0.00	1.00
Uniform Delay (d1), s/veh	0.0	8.9	0.0	0.0	0.0	13.9	0.0	34.5
Incr Delay (d2), s/veh	0.0	1.1	0.0	0.0	0.0	1.1	0.0	2.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	10.0	0.0	0.0	0.0	15.0	0.0	36.6
1st-Term Q (Q1), veh/ln	0.0	3.1	0.0	0.0	0.0	2.8	0.0	0.3
2nd-Term Q (Q2), veh/ln	0.0	0.3	0.0	0.0	0.0	0.2	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	3.4	0.0	0.0	0.0	3.0	0.0	0.3
%ile Storage Ratio (RQ%)	0.00	0.30	0.00	0.00	0.00	0.15	0.00	0.01
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	31.8
HCM 6th LOS	C

Notes

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	34	0	57	0	903	41	38	783	0
Future Volume (veh/h)	0	0	0	34	0	57	0	903	41	38	783	0
Number				3	8	18	5	2	12	1	6	16
Initial Q, veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln				1700	0	1800	0	1800	1800	1700	1900	0
Adj Flow Rate, veh/h				34	0	57	0	903	41	38	783	0
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence				Yes			No			Yes		
Cap, veh/h				85	0	80	0	1449	1228	48	1658	0
HCM Platoon Ratio				1.00	1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00
Prop Arrive On Green				0.05	0.00	0.05	0.00	1.00	1.00	0.03	0.87	0.00
Unsig. Movement Delay												
Ln Grp Delay, s/veh				58.0	0.0	66.9	0.0	2.0	0.1	81.3	2.6	0.0
Ln Grp LOS				E	A	E	A	A	A	F	A	A
Approach Vol, veh/h					91			944			821	
Approach Delay, s/veh					63.6			1.9			6.3	
Approach LOS					E			A			A	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	8			6		
Case No	2.0	7.0	9.0			4.0		
Phs Duration (G+Y+Rc), s	8.1	101.1	10.8			109.2		
Change Period (Y+Rc), s	4.5	4.5	4.5			4.5		
Max Green (Gmax), s	15.1	30.7	28.1			50.3		
Max Allow Headway (MAH), s	3.8	5.2	4.0			5.2		
Max Q Clear (g_c+I1), s	4.8	2.0	6.4			12.7		
Green Ext Time (g_e), s	0.0	8.4	0.2			6.9		
Prob of Phs Call (p_c)	0.72	1.00	0.95			1.00		
Prob of Max Out (p_x)	0.00	0.00	0.00			0.00		

Left-Turn Movement Data								
Assigned Mvmt	1	5	3					
Mvmt Sat Flow, veh/h	1619	0	1619					

Through Movement Data								
Assigned Mvmt		2	8			6		
Mvmt Sat Flow, veh/h		1800	0			1900		

Right-Turn Movement Data								
Assigned Mvmt		12	18			16		
Mvmt Sat Flow, veh/h		1525	1525			0		

Left Lane Group Data								
Assigned Mvmt	1	5	3	0	0	0	0	0
Lane Assignment	L (Prot)		L					

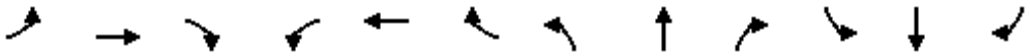
Lanes in Grp	1	0	1	0	0	0	0	0
Grp Vol (v), veh/h	38	0	34	0	0	0	0	0
Grp Sat Flow (s), veh/h/ln	1619	0	1619	0	0	0	0	0
Q Serve Time (g_s), s	2.8	0.0	2.4	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	2.8	0.0	2.4	0.0	0.0	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	1619	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	96.6	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	48	0	85	0	0	0	0	0
V/C Ratio (X)	0.78	0.00	0.40	0.00	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	204	0	379	0	0	0	0	0
Upstream Filter (I)	1.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	57.8	0.0	55.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	23.5	0.0	3.0	0.0	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	81.3	0.0	58.0	0.0	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	1.1	0.0	1.0	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.3	0.0	0.1	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	1.00	1.00	0.00	0.00	0.00	0.00	0.00
%ile Back of Q (50%), veh/ln	1.5	0.0	1.1	0.0	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.15	0.00	0.02	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	8	0	0	6	0	0
Lane Assignment		T				T		
Lanes in Grp	0	1	0	0	0	1	0	0
Grp Vol (v), veh/h	0	903	0	0	0	783	0	0
Grp Sat Flow (s), veh/h/ln	0	1800	0	0	0	1900	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	10.7	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	10.7	0.0	0.0
Lane Grp Cap (c), veh/h	0	1449	0	0	0	1658	0	0
V/C Ratio (X)	0.00	0.62	0.00	0.00	0.00	0.47	0.00	0.00
Avail Cap (c_a), veh/h	0	1449	0	0	0	1658	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	1.7	0.0	0.0
Incr Delay (d2), s/veh	0.0	2.0	0.0	0.0	0.0	1.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	2.0	0.0	0.0	0.0	2.6	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	1.8	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.8	0.0	0.0	0.0	0.4	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.8	0.0	0.0	0.0	2.3	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.05	0.00	0.00	0.00	0.22	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	18	0	0	16	0	0
Lane Assignment		R	R					
Lanes in Grp	0	1	1	0	0	0	0	0
Grp Vol (v), veh/h	0	41	57	0	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	1525	1525	0	0	0	0	0
Q Serve Time (g_s), s	0.0	0.0	4.4	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	4.4	0.0	0.0	0.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	1.00	0.00	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	1228	80	0	0	0	0	0
V/C Ratio (X)	0.00	0.03	0.71	0.00	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	1228	357	0	0	0	0	0
Upstream Filter (I)	0.00	1.00	1.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	55.9	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.1	11.0	0.0	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.1	66.9	0.0	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	1.7	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	1.9	0.0	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	6.9
HCM 6th LOS	A



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	155	2	5	11	5	8	2	781	6	5	751	62
Future Volume (veh/h)	155	2	5	11	5	8	2	781	6	5	751	62
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1700	1800	1900	1700	1900	1900
Adj Flow Rate, veh/h	155	2	5	11	5	8	2	781	6	5	751	62
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	241	2	6	135	64	78	4	1328	10	10	1295	107
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Prop Arrive On Green	0.14	0.14	0.14	0.14	0.14	0.14	0.00	0.74	0.74	0.01	1.00	1.00
Unsig. Movement Delay												
Ln Grp Delay, s/veh	53.3	0.0	0.0	45.5	0.0	0.0	120.6	0.0	8.9	90.0	0.0	1.8
Ln Grp LOS	D	A	A	D	A	A	F	A	A	F	A	A
Approach Vol, veh/h		162			24			789			818	
Approach Delay, s/veh		53.3			45.5			9.2			2.3	
Approach LOS		D			D			A			A	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Case No	2.0	4.0		8.0	2.0	4.0		8.0
Phs Duration (G+Y+Rc), s	5.3	93.8		20.9	4.8	94.3		20.9
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green (Gmax), s	27.0	39.5		40.0	27.0	39.5		40.0
Max Allow Headway (MAH), s	3.8	5.2		5.3	3.8	5.3		5.4
Max Q Clear (g_c+I1), s	2.4	25.9		15.6	2.1	2.0		3.5
Green Ext Time (g_e), s	0.0	4.8		0.9	0.0	7.4		0.1
Prob of Phs Call (p_c)	0.15	1.00		1.00	0.06	1.00		1.00
Prob of Max Out (p_x)	0.00	0.00		0.00	0.00	0.00		0.00

Left-Turn Movement Data								
Assigned Mvmt	1			7	5			3
Mvmt Sat Flow, veh/h	1619			1330	1619			670

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		1784		17		1731		466

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		14		43		143		568

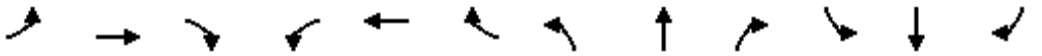
Left Lane Group Data								
Assigned Mvmt	1	0	0	7	5	0	0	3
Lane Assignment	L (Prot)			L+T+R	L (Prot)			L+T+R

Lanes in Grp	1	0	0	1	1	0	0	1
Grp Vol (v), veh/h	5	0	0	162	2	0	0	24
Grp Sat Flow (s), veh/h/ln	1619	0	0	1390	1619	0	0	1704
Q Serve Time (g_s), s	0.4	0.0	0.0	12.1	0.1	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.4	0.0	0.0	13.6	0.1	0.0	0.0	1.5
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	1423	0	0	0	1431
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	1718	0	0	0	1760
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	16.4	0.0	0.0	0.0	16.4
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	14.9	0.0	0.0	0.0	2.8
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	12.1	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	0.96	1.00	0.00	0.00	0.46
Lane Grp Cap (c), veh/h	10	0	0	249	4	0	0	277
V/C Ratio (X)	0.48	0.00	0.00	0.65	0.46	0.00	0.00	0.09
Avail Cap (c_a), veh/h	364	0	0	516	364	0	0	569
Upstream Filter (I)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	59.0	0.0	0.0	50.4	59.8	0.0	0.0	45.3
Incr Delay (d2), s/veh	30.9	0.0	0.0	2.9	60.8	0.0	0.0	0.1
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	90.0	0.0	0.0	53.3	120.6	0.0	0.0	45.5
1st-Term Q (Q1), veh/ln	0.2	0.0	0.0	4.7	0.1	0.0	0.0	0.6
2nd-Term Q (Q2), veh/ln	0.1	0.0	0.0	0.2	0.1	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.2	0.0	0.0	4.9	0.1	0.0	0.0	0.6
%ile Storage Ratio (RQ%)	0.02	0.00	0.00	0.53	0.02	0.00	0.00	0.02
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment								
Lanes in Grp	0	0	0	0	0	0	0	0
Grp Vol (v), veh/h	0	0	0	0	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	0	0	0	0	0	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lane Grp Cap (c), veh/h	0	0	0	0	0	0	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	0	0	0	0	0	0	0
Upstream Filter (I)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R				T+R		
Lanes in Grp	0	1	0	0	0	1	0	0
Grp Vol (v), veh/h	0	787	0	0	0	813	0	0
Grp Sat Flow (s), veh/h/ln	0	1798	0	0	0	1874	0	0
Q Serve Time (g_s), s	0.0	23.9	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	23.9	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.01	0.00	0.03	0.00	0.08	0.00	0.33
Lane Grp Cap (c), veh/h	0	1338	0	0	0	1402	0	0
V/C Ratio (X)	0.00	0.59	0.00	0.00	0.00	0.58	0.00	0.00
Avail Cap (c_a), veh/h	0	1338	0	0	0	1402	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	7.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	1.9	0.0	0.0	0.0	1.8	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	8.9	0.0	0.0	0.0	1.8	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	7.9	0.0	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.7	0.0	0.0	0.0	0.7	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	8.6	0.0	0.0	0.0	0.7	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.18	0.00	0.00	0.00	0.07	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	10.5
HCM 6th LOS	B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	121	570	68	124	160	137	39	464	231	140	447	57
Future Volume (veh/h)	121	570	68	124	160	137	39	464	231	140	447	57
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1673	1772	1772	1673	1772	1772	1673	1772	1772	1673	1772	1870
Adj Flow Rate, veh/h	121	570	68	124	160	137	39	464	0	140	447	57
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	148	686	82	152	772	344	61	1056		171	1289	607
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.09	0.23	0.23	0.10	0.23	0.23	0.04	0.31	0.00	0.11	0.38	0.38
Unsig. Movement Delay												
Ln Grp Delay, s/veh	60.0	37.2	37.4	47.2	21.9	23.4	39.4	19.9	0.0	56.8	16.1	14.1
Ln Grp LOS	E	D	D	D	C	C	D	B		E	B	B
Approach Vol, veh/h		759			421			503			644	
Approach Delay, s/veh		41.0			29.8			21.4			24.8	
Approach LOS		D			C			C			C	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Case No	2.0	3.0	2.0	4.0	2.0	3.0	2.0	3.0
Phs Duration (G+Y+Rc), s	12.0	26.5	11.2	20.4	7.2	31.3	11.0	20.5
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green (Gmax), s	7.5	19.0	7.5	18.0	5.8	20.7	6.5	19.0
Max Allow Headway (MAH), s	3.8	5.2	3.8	5.3	3.8	5.1	3.8	4.7
Max Q Clear (g_c+I1), s	8.0	9.7	7.3	14.6	3.7	8.6	7.2	7.4
Green Ext Time (g_e), s	0.0	2.1	0.0	1.3	0.0	2.5	0.0	1.1
Prob of Phs Call (p_c)	0.93	1.00	0.91	1.00	0.53	1.00	0.90	1.00
Prob of Max Out (p_x)	1.00	0.00	1.00	1.00	1.00	0.00	1.00	0.04

Left-Turn Movement Data								
Assigned Mvmt	1		3		5		7	
Mvmt Sat Flow, veh/h	1594		1594		1594		1594	

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		3367		3030		3367		3367

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1502		361		1585		1502

Left Lane Group Data								
Assigned Mvmt	1	0	3	0	5	0	7	0
Lane Assignment	L (Prot)		L (Prot)		L (Prot)		L (Prot)	

Lanes in Grp	1	0	1	0	1	0	1	0
Grp Vol (v), veh/h	140	0	124	0	39	0	121	0
Grp Sat Flow (s), veh/h/ln	1594	0	1594	0	1594	0	1594	0
Q Serve Time (g_s), s	6.0	0.0	5.3	0.0	1.7	0.0	5.2	0.0
Cycle Q Clear Time (g_c), s	6.0	0.0	5.3	0.0	1.7	0.0	5.2	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	171	0	152	0	61	0	148	0
V/C Ratio (X)	0.82	0.00	0.81	0.00	0.64	0.00	0.82	0.00
Avail Cap (c_a), veh/h	171	0	171	0	132	0	148	0
Upstream Filter (I)	1.00	0.00	0.65	0.00	0.55	0.00	1.00	0.00
Uniform Delay (d1), s/veh	30.6	0.0	31.0	0.0	33.2	0.0	31.2	0.0
Incr Delay (d2), s/veh	26.2	0.0	16.1	0.0	6.2	0.0	28.8	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	56.8	0.0	47.2	0.0	39.4	0.0	60.0	0.0
1st-Term Q (Q1), veh/ln	2.2	0.0	2.0	0.0	0.6	0.0	1.9	0.0
2nd-Term Q (Q2), veh/ln	1.2	0.0	0.7	0.0	0.1	0.0	1.2	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
%ile Back of Q (50%), veh/ln	3.5	0.0	2.7	0.0	0.7	0.0	3.1	0.0
%ile Storage Ratio (RQ%)	0.34	0.00	0.03	0.00	0.11	0.00	0.79	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	2	0	1	0	2	0	2
Grp Vol (v), veh/h	0	464	0	316	0	447	0	160
Grp Sat Flow (s), veh/h/ln	0	1683	0	1683	0	1683	0	1683
Q Serve Time (g_s), s	0.0	7.7	0.0	12.5	0.0	6.6	0.0	2.7
Cycle Q Clear Time (g_c), s	0.0	7.7	0.0	12.5	0.0	6.6	0.0	2.7
Lane Grp Cap (c), veh/h	0	1056	0	381	0	1289	0	772
V/C Ratio (X)	0.00	0.44	0.00	0.83	0.00	0.35	0.00	0.21
Avail Cap (c_a), veh/h	0	1056	0	433	0	1289	0	914
Upstream Filter (I)	0.00	0.55	0.00	1.00	0.00	1.00	0.00	0.65
Uniform Delay (d1), s/veh	0.0	19.1	0.0	25.8	0.0	15.4	0.0	21.8
Incr Delay (d2), s/veh	0.0	0.7	0.0	11.5	0.0	0.7	0.0	0.1
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	19.9	0.0	37.2	0.0	16.1	0.0	21.9
1st-Term Q (Q1), veh/ln	0.0	2.8	0.0	4.7	0.0	2.4	0.0	1.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	1.2	0.0	0.1	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	2.9	0.0	5.9	0.0	2.5	0.0	1.0
%ile Storage Ratio (RQ%)	0.00	0.03	0.00	0.03	0.00	0.05	0.00	0.01
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		T+R		R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	0	0	322	0	57	0	137
Grp Sat Flow (s), veh/h/ln	0	1502	0	1707	0	1585	0	1502
Q Serve Time (g_s), s	0.0	0.0	0.0	12.6	0.0	1.6	0.0	5.4
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	12.6	0.0	1.6	0.0	5.4
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	0.21	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	471	0	387	0	607	0	344
V/C Ratio (X)	0.00	0.00	0.00	0.83	0.00	0.09	0.00	0.40
Avail Cap (c_a), veh/h	0	471	0	439	0	607	0	408
Upstream Filter (I)	0.00	0.00	0.00	1.00	0.00	1.00	0.00	0.65
Uniform Delay (d1), s/veh	0.0	0.0	0.0	25.8	0.0	13.8	0.0	22.9
Incr Delay (d2), s/veh	0.0	0.0	0.0	11.6	0.0	0.3	0.0	0.5
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	37.4	0.0	14.1	0.0	23.4
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	4.8	0.0	0.5	0.0	1.8
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	1.3	0.0	0.1	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	6.1	0.0	0.6	0.0	1.9
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.03	0.00	0.03	0.00	0.02
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	30.2
HCM 6th LOS	C

Notes

Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	223	441	109	261	213	52	67	489	236	128	470	93
Future Volume (veh/h)	223	441	109	261	213	52	67	489	236	128	470	93
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1900
Adj Flow Rate, veh/h	223	441	59	261	213	52	67	489	136	128	470	93
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	257	545	72	294	554	132	83	841	233	156	1500	290
HCM Platoon Ratio	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.00	1.00
Prop Arrive On Green	0.21	0.24	0.24	0.24	0.27	0.27	0.07	0.42	0.42	0.13	0.36	0.36
Unsig. Movement Delay												
Ln Grp Delay, s/veh	51.1	38.8	39.4	53.9	25.8	26.0	52.7	23.2	23.5	56.6	18.9	19.6
Ln Grp LOS	D	D	D	D	C	C	D	C	C	E	B	B
Approach Vol, veh/h		723			526			692			691	
Approach Delay, s/veh		42.8			39.8			26.2			26.1	
Approach LOS		D			D			C			C	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Case No	2.0	4.0	2.0	4.0	2.0	4.0	2.0	4.0
Phs Duration (G+Y+Rc), s	12.2	29.9	19.0	18.9	8.6	33.5	17.2	20.7
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green (Gmax), s	8.5	20.0	15.5	18.0	7.9	20.6	14.9	18.6
Max Allow Headway (MAH), s	3.8	5.3	3.8	5.3	3.8	5.3	3.8	5.3
Max Q Clear (g_c+I1), s	8.2	13.4	14.5	13.0	5.3	8.7	12.6	7.2
Green Ext Time (g_e), s	0.0	2.1	0.1	1.3	0.0	2.8	0.1	1.1
Prob of Phs Call (p_c)	0.94	1.00	1.00	1.00	0.77	1.00	0.99	1.00
Prob of Max Out (p_x)	1.00	0.00	1.00	1.00	1.00	0.00	1.00	0.08

Left-Turn Movement Data								
Assigned Mvmt	1		3		5		7	
Mvmt Sat Flow, veh/h	1619		1619		1619		1619	

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		2647		3034		4134		2738

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		732		404		798		654

Left Lane Group Data								
Assigned Mvmt	1	0	3	0	5	0	7	0
Lane Assignment	L (Prot)		L (Prot)		L (Prot)		L (Prot)	

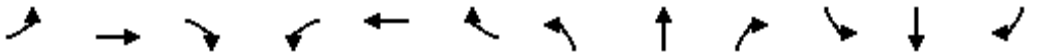
Lanes in Grp	1	0	1	0	1	0	1	0
Grp Vol (v), veh/h	128	0	261	0	67	0	223	0
Grp Sat Flow (s), veh/h/ln	1619	0	1619	0	1619	0	1619	0
Q Serve Time (g_s), s	6.2	0.0	12.5	0.0	3.3	0.0	10.6	0.0
Cycle Q Clear Time (g_c), s	6.2	0.0	12.5	0.0	3.3	0.0	10.6	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	156	0	294	0	83	0	257	0
V/C Ratio (X)	0.82	0.00	0.89	0.00	0.81	0.00	0.87	0.00
Avail Cap (c_a), veh/h	172	0	314	0	160	0	302	0
Upstream Filter (I)	0.90	0.00	1.00	0.00	0.95	0.00	1.00	0.00
Uniform Delay (d1), s/veh	34.2	0.0	29.6	0.0	36.9	0.0	30.7	0.0
Incr Delay (d2), s/veh	22.4	0.0	24.4	0.0	15.9	0.0	20.3	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	56.6	0.0	53.9	0.0	52.7	0.0	51.1	0.0
1st-Term Q (Q1), veh/ln	2.3	0.0	4.3	0.0	1.2	0.0	3.8	0.0
2nd-Term Q (Q2), veh/ln	1.0	0.0	2.0	0.0	0.4	0.0	1.4	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
%ile Back of Q (50%), veh/ln	3.3	0.0	6.3	0.0	1.6	0.0	5.2	0.0
%ile Storage Ratio (RQ%)	0.45	0.00	0.04	0.00	0.20	0.00	0.60	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	1	0	1	0	2	0	1
Grp Vol (v), veh/h	0	315	0	248	0	370	0	131
Grp Sat Flow (s), veh/h/ln	0	1710	0	1710	0	1638	0	1710
Q Serve Time (g_s), s	0.0	11.3	0.0	10.9	0.0	6.5	0.0	5.0
Cycle Q Clear Time (g_c), s	0.0	11.3	0.0	10.9	0.0	6.5	0.0	5.0
Lane Grp Cap (c), veh/h	0	544	0	307	0	1189	0	346
V/C Ratio (X)	0.00	0.58	0.00	0.81	0.00	0.31	0.00	0.38
Avail Cap (c_a), veh/h	0	544	0	385	0	1189	0	398
Upstream Filter (I)	0.00	0.95	0.00	1.00	0.00	0.90	0.00	1.00
Uniform Delay (d1), s/veh	0.0	19.0	0.0	29.1	0.0	18.3	0.0	25.2
Incr Delay (d2), s/veh	0.0	4.2	0.0	9.7	0.0	0.6	0.0	0.7
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	23.2	0.0	38.8	0.0	18.9	0.0	25.8
1st-Term Q (Q1), veh/ln	0.0	3.9	0.0	4.1	0.0	2.3	0.0	1.9
2nd-Term Q (Q2), veh/ln	0.0	0.6	0.0	0.8	0.0	0.1	0.0	0.1

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	4.5	0.0	4.9	0.0	2.5	0.0	2.0
%ile Storage Ratio (RQ%)	0.00	0.12	0.00	0.02	0.00	0.02	0.00	0.01
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R		T+R		T+R		T+R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	310	0	252	0	193	0	134
Grp Sat Flow (s), veh/h/ln	0	1668	0	1727	0	1656	0	1682
Q Serve Time (g_s), s	0.0	11.4	0.0	11.0	0.0	6.7	0.0	5.2
Cycle Q Clear Time (g_c), s	0.0	11.4	0.0	11.0	0.0	6.7	0.0	5.2
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.44	0.00	0.23	0.00	0.48	0.00	0.39
Lane Grp Cap (c), veh/h	0	530	0	310	0	601	0	340
V/C Ratio (X)	0.00	0.58	0.00	0.81	0.00	0.32	0.00	0.39
Avail Cap (c_a), veh/h	0	530	0	389	0	601	0	391
Upstream Filter (I)	0.00	0.95	0.00	1.00	0.00	0.90	0.00	1.00
Uniform Delay (d1), s/veh	0.0	19.0	0.0	29.2	0.0	18.4	0.0	25.2
Incr Delay (d2), s/veh	0.0	4.4	0.0	10.2	0.0	1.3	0.0	0.7
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	23.5	0.0	39.4	0.0	19.6	0.0	26.0
1st-Term Q (Q1), veh/ln	0.0	3.8	0.0	4.2	0.0	2.5	0.0	2.0
2nd-Term Q (Q2), veh/ln	0.0	0.7	0.0	0.9	0.0	0.2	0.0	0.1
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	4.5	0.0	5.0	0.0	2.7	0.0	2.0
%ile Storage Ratio (RQ%)	0.00	0.12	0.00	0.02	0.00	0.03	0.00	0.01
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	33.5
HCM 6th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	176	316	160	354	779	0	0	718	457
Future Volume (veh/h)	0	0	0	176	316	160	354	779	0	0	718	457
Number				3	8	18	5	2	12	1	6	16
Initial Q, veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln				1700	1800	1800	1700	1800	0	0	1800	1900
Adj Flow Rate, veh/h				176	316	160	354	779	0	0	718	457
Peak Hour Factor				0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %				0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence				Yes			Yes			No		
Cap, veh/h				210	393	209	373	2347	0	0	1430	673
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00
Prop Arrive On Green				0.24	0.24	0.24	0.46	1.00	0.00	0.00	0.42	0.42
Unsig. Movement Delay												
Ln Grp Delay, s/veh				50.3	0.0	46.4	56.4	0.3	0.0	0.0	26.8	33.0
Ln Grp LOS				D	A	D	E	A	A	A	C	C
Approach Vol, veh/h					652			1133			1175	
Approach Delay, s/veh					48.5			17.8			29.2	
Approach LOS					D			B			C	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2	8		5	6		
Case No		4.0	12.0		2.0	7.0		
Phs Duration (G+Y+Rc), s		86.8	33.2		32.2	54.7		
Change Period (Y+Rc), s		4.5	4.5		4.5	4.5		
Max Green (Gmax), s		69.5	41.5		32.5	32.5		
Max Allow Headway (MAH), s		5.2	5.3		3.8	4.8		
Max Q Clear (g_c+I1), s		2.0	24.8		27.1	29.7		
Green Ext Time (g_e), s		6.7	3.8		0.5	1.7		
Prob of Phs Call (p_c)		1.00	1.00		1.00	1.00		
Prob of Max Out (p_x)		0.00	0.12		0.42	0.00		
Left-Turn Movement Data								
Assigned Mvmt			3		5	1		
Mvmt Sat Flow, veh/h			880		1619	0		
Through Movement Data								
Assigned Mvmt		2	8			6		
Mvmt Sat Flow, veh/h		3510	1645			3510		
Right-Turn Movement Data								
Assigned Mvmt		12	18			16		
Mvmt Sat Flow, veh/h		0	873			1610		
Left Lane Group Data								
Assigned Mvmt	0	0	3	0	5	1	0	0
Lane Assignment			L+T		L (Prot)			

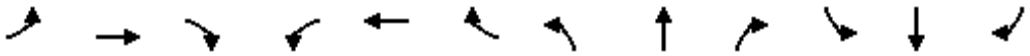
Lanes in Grp	0	0	1	0	1	0	0	0
Grp Vol (v), veh/h	0	0	351	0	354	0	0	0
Grp Sat Flow (s), veh/h/ln	0	0	1756	0	1619	0	0	0
Q Serve Time (g_s), s	0.0	0.0	22.8	0.0	25.1	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	22.8	0.0	25.1	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	50.2	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	0.00	0.50	0.00	1.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	419	0	373	0	0	0
V/C Ratio (X)	0.00	0.00	0.84	0.00	0.95	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	0	607	0	438	0	0	0
Upstream Filter (I)	0.00	0.00	1.00	0.00	0.83	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	43.5	0.0	31.6	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	6.8	0.0	24.8	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	50.3	0.0	56.4	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	9.9	0.0	7.7	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.8	0.0	2.6	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	0.00	1.00	0.00	1.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	10.7	0.0	10.2	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.25	0.00	1.70	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	8	0	0	6	0	0
Lane Assignment		T				T		
Lanes in Grp	0	2	0	0	0	2	0	0
Grp Vol (v), veh/h	0	779	0	0	0	718	0	0
Grp Sat Flow (s), veh/h/ln	0	1710	0	0	0	1710	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	18.6	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	18.6	0.0	0.0
Lane Grp Cap (c), veh/h	0	2347	0	0	0	1430	0	0
V/C Ratio (X)	0.00	0.33	0.00	0.00	0.00	0.50	0.00	0.00
Avail Cap (c_a), veh/h	0	2347	0	0	0	1430	0	0
Upstream Filter (I)	0.00	0.83	0.00	0.00	0.00	0.84	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	25.7	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.3	0.0	0.0	0.0	1.1	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.3	0.0	0.0	0.0	26.8	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	7.5	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	0.2	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.1	0.0	0.0	0.0	7.7	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.20	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	18	0	0	16	0	0
Lane Assignment			T+R			R		
Lanes in Grp	0	0	1	0	0	1	0	0
Grp Vol (v), veh/h	0	0	301	0	0	457	0	0
Grp Sat Flow (s), veh/h/ln	0	0	1643	0	0	1610	0	0
Q Serve Time (g_s), s	0.0	0.0	20.5	0.0	0.0	27.7	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	20.5	0.0	0.0	27.7	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.00	0.53	0.00	0.00	1.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	392	0	0	673	0	0
V/C Ratio (X)	0.00	0.00	0.77	0.00	0.00	0.68	0.00	0.00
Avail Cap (c_a), veh/h	0	0	568	0	0	673	0	0
Upstream Filter (I)	0.00	0.00	1.00	0.00	0.00	0.84	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	42.6	0.0	0.0	28.4	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	3.8	0.0	0.0	4.6	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	46.4	0.0	0.0	33.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	8.3	0.0	0.0	10.5	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.4	0.0	0.0	0.9	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	8.7	0.0	0.0	11.4	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.21	0.00	0.00	0.30	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	29.1
HCM 6th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	348	64	488	0	0	0	0	777	252	223	679	0
Future Volume (veh/h)	348	64	488	0	0	0	0	777	252	223	679	0
Number	7	4	14				5	2	12	1	6	16
Initial Q, veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1700	1800	1800				0	1800	1800	1700	1900	0
Adj Flow Rate, veh/h	348	64	488				0	777	252	223	679	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0				0	0	0	0	0	0
Opposing Right Turn Influence	Yes						No			Yes		
Cap, veh/h	480	88	502				0	1389	620	246	2151	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Prop Arrive On Green	0.33	0.33	0.33				0.00	0.41	0.41	0.30	1.00	0.00
Unsig. Movement Delay												
Ln Grp Delay, s/veh	40.0	0.0	72.6				0.0	29.0	27.3	57.6	0.3	0.0
Ln Grp LOS	D	A	E				A	C	C	E	A	A
Approach Vol, veh/h		900						1029			902	
Approach Delay, s/veh		57.7						28.6			14.5	
Approach LOS		E						C			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Case No	2.0	7.0		12.0		4.0		
Phs Duration (G+Y+Rc), s	22.8	53.2		44.0		76.0		
Change Period (Y+Rc), s	4.5	4.5		4.5		4.5		
Max Green (Gmax), s	26.5	40.5		39.5		71.5		
Max Allow Headway (MAH), s	3.8	4.9		5.5		5.2		
Max Q Clear (g_c+I1), s	17.9	22.9		39.9		2.0		
Green Ext Time (g_e), s	0.4	6.0		0.0		5.6		
Prob of Phs Call (p_c)	1.00	1.00		1.00		1.00		
Prob of Max Out (p_x)	0.03	0.00		1.00		0.00		

Left-Turn Movement Data								
Assigned Mvmt	1	5		7				
Mvmt Sat Flow, veh/h	1619	0		1459				

Through Movement Data								
Assigned Mvmt		2		4		6		
Mvmt Sat Flow, veh/h		3510		268		3705		

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		
Mvmt Sat Flow, veh/h		1525		1525		0		

Left Lane Group Data								
Assigned Mvmt	1	5	0	7	0	0	0	0
Lane Assignment	L (Prot)			L+T				

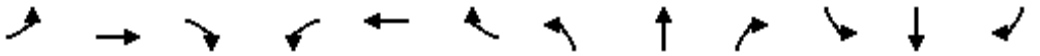
Lanes in Grp	1	0	0	1	0	0	0	0
Grp Vol (v), veh/h	223	0	0	412	0	0	0	0
Grp Sat Flow (s), veh/h/ln	1619	0	0	1727	0	0	0	0
Q Serve Time (g_s), s	15.9	0.0	0.0	25.2	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	15.9	0.0	0.0	25.2	0.0	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	48.7	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	0.84	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	246	0	0	568	0	0	0	0
V/C Ratio (X)	0.91	0.00	0.00	0.72	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	358	0	0	568	0	0	0	0
Upstream Filter (I)	0.81	0.00	0.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	40.9	0.0	0.0	35.5	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	16.7	0.0	0.0	4.6	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	57.6	0.0	0.0	40.0	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	5.4	0.0	0.0	10.5	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	1.1	0.0	0.0	0.7	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00
%ile Back of Q (50%), veh/ln	6.5	0.0	0.0	11.3	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	1.08	0.00	0.00	0.33	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	0
Lane Assignment		T				T		
Lanes in Grp	0	2	0	0	0	2	0	0
Grp Vol (v), veh/h	0	777	0	0	0	679	0	0
Grp Sat Flow (s), veh/h/ln	0	1710	0	0	0	1805	0	0
Q Serve Time (g_s), s	0.0	20.9	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	20.9	0.0	0.0	0.0	0.0	0.0	0.0
Lane Grp Cap (c), veh/h	0	1389	0	0	0	2151	0	0
V/C Ratio (X)	0.00	0.56	0.00	0.00	0.00	0.32	0.00	0.00
Avail Cap (c_a), veh/h	0	1389	0	0	0	2151	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	0.81	0.00	0.00
Uniform Delay (d1), s/veh	0.0	27.4	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	1.6	0.0	0.0	0.0	0.3	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	29.0	0.0	0.0	0.0	0.3	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	8.5	0.0	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.3	0.0	0.0	0.0	0.1	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	8.8	0.0	0.0	0.0	0.1	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.17	0.00	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	0
Lane Assignment		R		T+R				
Lanes in Grp	0	1	0	1	0	0	0	0
Grp Vol (v), veh/h	0	252	0	488	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	1525	0	1525	0	0	0	0
Q Serve Time (g_s), s	0.0	14.1	0.0	37.9	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	14.1	0.0	37.9	0.0	0.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	620	0	502	0	0	0	0
V/C Ratio (X)	0.00	0.41	0.00	0.97	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	620	0	502	0	0	0	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	25.3	0.0	39.7	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	2.0	0.0	32.9	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	27.3	0.0	72.6	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	5.1	0.0	14.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.3	0.0	4.6	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	5.4	0.0	18.6	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.10	0.00	0.55	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	33.3
HCM 6th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	947	538	274	545	0	0	0	0	308	6	124
Future Volume (veh/h)	0	947	538	274	545	0	0	0	0	308	6	124
Number	7	4	14	3	8	18				1	6	16
Initial Q, veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	0	1800	1800	1700	1800	0				1700	1800	1900
Adj Flow Rate, veh/h	0	947	0	274	545	0				308	6	124
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90				0.90	0.90	0.90
Percent Heavy Veh, %	0	0	0	0	0	0				0	0	0
Opposing Right Turn Influence	No			Yes						Yes		
Cap, veh/h	0	1958		328	2443	0				355	7	339
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00				1.00	1.00	1.00
Prop Arrive On Green	0.00	0.57	0.00	0.21	1.00	0.00				0.21	0.21	0.21
Unsig. Movement Delay												
Ln Grp Delay, s/veh	0.0	15.5	0.0	54.2	0.2	0.0				55.1	0.0	41.2
Ln Grp LOS	A	B		D	A	A				E	A	D
Approach Vol, veh/h		947			819						438	
Approach Delay, s/veh		15.5			18.3						51.1	
Approach LOS		B			B						D	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	6		3	4				8
Case No	11.0		2.0	7.0				4.0
Phs Duration (G+Y+Rc), s	29.8		17.0	73.2				90.2
Change Period (Y+Rc), s	4.5		4.5	4.5				4.5
Max Green (Gmax), s	38.5		18.5	49.5				72.5
Max Allow Headway (MAH), s	5.0		3.8	5.2				5.2
Max Q Clear (g_c+I1), s	23.2		12.0	21.6				2.0
Green Ext Time (g_e), s	2.1		0.5	7.7				4.3
Prob of Phs Call (p_c)	1.00		1.00	1.00				1.00
Prob of Max Out (p_x)	0.04		0.14	0.00				0.00

Left-Turn Movement Data												
Assigned Mvmt		1		3	7							
Mvmt Sat Flow, veh/h		1683		3141	0							

Through Movement Data												
Assigned Mvmt		6			4				8			
Mvmt Sat Flow, veh/h		33			3510				3510			

Right-Turn Movement Data												
Assigned Mvmt		16			14				18			
Mvmt Sat Flow, veh/h		1610			1525				0			

Left Lane Group Data												
Assigned Mvmt		1	0	3	7	0	0	0	0			
Lane Assignment		L+T		L (Prot)								

Lanes in Grp	1	0	2	0	0	0	0	0
Grp Vol (v), veh/h	314	0	274	0	0	0	0	0
Grp Sat Flow (s), veh/h/ln	1716	0	1570	0	0	0	0	0
Q Serve Time (g_s), s	21.2	0.0	10.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	21.2	0.0	10.0	0.0	0.0	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	68.7	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.98	0.00	1.00	0.00	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	361	0	328	0	0	0	0	0
V/C Ratio (X)	0.87	0.00	0.84	0.00	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	551	0	484	0	0	0	0	0
Upstream Filter (I)	1.00	0.00	0.96	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	45.8	0.0	46.5	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	9.3	0.0	7.7	0.0	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	55.1	0.0	54.2	0.0	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	9.0	0.0	3.5	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.9	0.0	0.4	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	1.00	1.00	0.00	0.00	0.00	0.00
%ile Back of Q (50%), veh/ln	9.9	0.0	3.9	0.0	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.76	0.00	0.24	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	6	0	0	4	0	0	0	8
Lane Assignment				T				T
Lanes in Grp	0	0	0	2	0	0	0	2
Grp Vol (v), veh/h	0	0	0	947	0	0	0	545
Grp Sat Flow (s), veh/h/ln	0	0	0	1710	0	0	0	1710
Q Serve Time (g_s), s	0.0	0.0	0.0	19.6	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	19.6	0.0	0.0	0.0	0.0
Lane Grp Cap (c), veh/h	0	0	0	1958	0	0	0	2443
V/C Ratio (X)	0.00	0.00	0.00	0.48	0.00	0.00	0.00	0.22
Avail Cap (c_a), veh/h	0	0	0	1958	0	0	0	2443
Upstream Filter (I)	0.00	0.00	0.00	0.42	0.00	0.00	0.00	0.96
Uniform Delay (d1), s/veh	0.0	0.0	0.0	15.2	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.2
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	15.5	0.0	0.0	0.0	0.2
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	7.5	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1

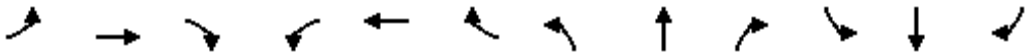
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	1.00	0.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	7.6	0.0	0.0	0.0	0.1
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.07	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	16	0	0	14	0	0	0	18
Lane Assignment	R			R				
Lanes in Grp	1	0	0	1	0	0	0	0
Grp Vol (v), veh/h	124	0	0	0	0	0	0	0
Grp Sat Flow (s), veh/h/ln	1610	0	0	1525	0	0	0	0
Q Serve Time (g_s), s	7.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	7.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	1.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	339	0	0	873	0	0	0	0
V/C Ratio (X)	0.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	517	0	0	873	0	0	0	0
Upstream Filter (I)	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	40.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	41.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	3.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	1.00	0.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	3.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	23.6
HCM 6th LOS	C

Notes

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	212	1026	0	0	600	249	218	0	478	0	0	0
Future Volume (veh/h)	212	1026	0	0	600	249	218	0	478	0	0	0
Number	7	4	14	3	8	18	5	2	12			
Initial Q, veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1700	1800	0	0	1800	1800	1600	1800	1800			
Adj Flow Rate, veh/h	212	1026	0	0	600	249	218	0	478			
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94			
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0			
Opposing Right Turn Influence	Yes			No			Yes					
Cap, veh/h	237	2514	0	0	2709	841	579	0	579			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Prop Arrive On Green	0.29	1.00	0.00	0.00	0.55	0.55	0.19	0.00	0.19			
Unsig. Movement Delay												
Ln Grp Delay, s/veh	50.2	0.4	0.0	0.0	14.0	15.3	42.8	0.0	49.7			
Ln Grp LOS	D	A	A	A	B	B	D	A	D			
Approach Vol, veh/h		1238			849			696				
Approach Delay, s/veh		8.9			14.4			47.6				
Approach LOS		A			B			D				

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2		4			7	8
Case No		9.0		4.0			2.0	7.0
Phs Duration (G+Y+Rc), s		27.3		92.7			22.1	70.6
Change Period (Y+Rc), s		4.5		4.5			4.5	4.5
Max Green (Gmax), s		40.5		70.5			33.5	32.5
Max Allow Headway (MAH), s		4.0		5.2			3.8	4.9
Max Q Clear (g_c+I1), s		20.1		2.0			17.1	12.5
Green Ext Time (g_e), s		2.7		10.0			0.5	5.0
Prob of Phs Call (p_c)		1.00		1.00			1.00	1.00
Prob of Max Out (p_x)		0.00		0.00			0.00	0.00

Left-Turn Movement Data								
Assigned Mvmt		5					7	3
Mvmt Sat Flow, veh/h		3048					1619	0

Through Movement Data								
Assigned Mvmt		2		4				8
Mvmt Sat Flow, veh/h		0		3510				5076

Right-Turn Movement Data								
Assigned Mvmt		12		14				18
Mvmt Sat Flow, veh/h		3051		0				1525

Left Lane Group Data								
Assigned Mvmt	0	5	0	0	0	0	7	3
Lane Assignment		L					L (Prot)	

Lanes in Grp	0	2	0	0	0	0	1	0
Grp Vol (v), veh/h	0	218	0	0	0	0	212	0
Grp Sat Flow (s), veh/h/ln	0	1524	0	0	0	0	1619	0
Q Serve Time (g_s), s	0.0	7.5	0.0	0.0	0.0	0.0	15.1	0.0
Cycle Q Clear Time (g_c), s	0.0	7.5	0.0	0.0	0.0	0.0	15.1	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	1524	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	66.1
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	0	579	0	0	0	0	237	0
V/C Ratio (X)	0.00	0.38	0.00	0.00	0.00	0.00	0.89	0.00
Avail Cap (c_a), veh/h	0	1029	0	0	0	0	452	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	0.00	0.73	0.00
Uniform Delay (d1), s/veh	0.0	42.4	0.0	0.0	0.0	0.0	41.6	0.0
Incr Delay (d2), s/veh	0.0	0.4	0.0	0.0	0.0	0.0	8.6	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	42.8	0.0	0.0	0.0	0.0	50.2	0.0
1st-Term Q (Q1), veh/ln	0.0	2.8	0.0	0.0	0.0	0.0	5.1	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	0.00	0.00	0.00	1.00	1.00
%ile Back of Q (50%), veh/ln	0.0	2.9	0.0	0.0	0.0	0.0	5.7	0.0
%ile Storage Ratio (RQ%)	0.00	0.13	0.00	0.00	0.00	0.00	0.35	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	0	0	8
Lane Assignment				T				T
Lanes in Grp	0	0	0	2	0	0	0	3
Grp Vol (v), veh/h	0	0	0	1026	0	0	0	600
Grp Sat Flow (s), veh/h/ln	0	0	0	1710	0	0	0	1638
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.5
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.5
Lane Grp Cap (c), veh/h	0	0	0	2514	0	0	0	2709
V/C Ratio (X)	0.00	0.00	0.00	0.41	0.00	0.00	0.00	0.22
Avail Cap (c_a), veh/h	0	0	0	2514	0	0	0	2709
Upstream Filter (I)	0.00	0.00	0.00	0.73	0.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13.8
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.2
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	0.4	0.0	0.0	0.0	14.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.8
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0

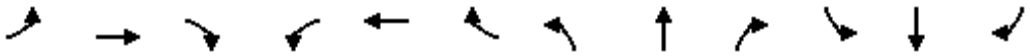
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.1	0.0	0.0	0.0	2.8
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.03
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	0	0	18
Lane Assignment		R						R
Lanes in Grp	0	2	0	0	0	0	0	1
Grp Vol (v), veh/h	0	478	0	0	0	0	0	249
Grp Sat Flow (s), veh/h/ln	0	1525	0	0	0	0	0	1525
Q Serve Time (g_s), s	0.0	18.1	0.0	0.0	0.0	0.0	0.0	10.5
Cycle Q Clear Time (g_c), s	0.0	18.1	0.0	0.0	0.0	0.0	0.0	10.5
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	0.00	0.00	0.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	579	0	0	0	0	0	841
V/C Ratio (X)	0.00	0.82	0.00	0.00	0.00	0.00	0.00	0.30
Avail Cap (c_a), veh/h	0	1030	0	0	0	0	0	841
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	46.7	0.0	0.0	0.0	0.0	0.0	14.4
Incr Delay (d2), s/veh	0.0	3.0	0.0	0.0	0.0	0.0	0.0	0.9
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	49.7	0.0	0.0	0.0	0.0	0.0	15.3
1st-Term Q (Q1), veh/ln	0.0	6.8	0.0	0.0	0.0	0.0	0.0	3.6
2nd-Term Q (Q2), veh/ln	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.2
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	7.1	0.0	0.0	0.0	0.0	0.0	3.8
%ile Storage Ratio (RQ%)	0.00	0.33	0.00	0.00	0.00	0.00	0.00	0.43
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	20.2
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	138	735	85	127	325	133	29	48	268	162	321	117
Future Volume (veh/h)	138	735	85	127	325	133	29	48	268	162	321	117
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1900
Adj Flow Rate, veh/h	138	735	85	127	325	133	29	48	268	162	321	117
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	166	809	361	154	413	350	49	554	469	196	983	352
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.20	0.47	0.47	0.19	0.46	0.46	0.03	0.31	0.31	0.12	0.40	0.40
Unsig. Movement Delay												
Ln Grp Delay, s/veh	46.6	28.4	16.0	37.8	21.6	17.0	46.8	18.8	26.8	51.8	16.9	17.0
Ln Grp LOS	D	C	B	D	C	B	D	B	C	D	B	B
Approach Vol, veh/h		958			585			345			600	
Approach Delay, s/veh		29.9			24.1			27.4			26.4	
Approach LOS		C			C			C			C	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Case No	2.0	3.0	2.0	3.0	2.0	4.0	2.0	3.0
Phs Duration (G+Y+Rc), s	13.6	27.6	11.6	22.2	6.8	34.4	12.2	21.7
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green (Gmax), s	10.5	19.5	8.5	18.5	5.9	24.1	8.5	18.5
Max Allow Headway (MAH), s	3.8	4.2	3.8	5.1	3.8	5.3	3.8	4.9
Max Q Clear (g_c+I1), s	9.3	13.1	7.7	16.9	3.3	8.9	8.1	13.5
Green Ext Time (g_e), s	0.0	0.6	0.0	0.8	0.0	2.3	0.0	1.1
Prob of Phs Call (p_c)	0.97	1.00	0.93	1.00	0.45	1.00	0.94	1.00
Prob of Max Out (p_x)	1.00	0.00	1.00	1.00	1.00	0.00	1.00	0.96

Left-Turn Movement Data								
Assigned Mvmt	1		3		5		7	
Mvmt Sat Flow, veh/h	1619		1619		1619		1619	

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		1800		3420		2468		1800

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1525		1525		883		1525

Left Lane Group Data								
Assigned Mvmt	1	0	3	0	5	0	7	0
Lane Assignment	L (Prot)		L (Prot)		L (Prot)		L (Prot)	

Lanes in Grp	1	0	1	0	1	0	1	0
Grp Vol (v), veh/h	162	0	127	0	29	0	138	0
Grp Sat Flow (s), veh/h/ln	1619	0	1619	0	1619	0	1619	0
Q Serve Time (g_s), s	7.3	0.0	5.7	0.0	1.3	0.0	6.1	0.0
Cycle Q Clear Time (g_c), s	7.3	0.0	5.7	0.0	1.3	0.0	6.1	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	196	0	154	0	49	0	166	0
V/C Ratio (X)	0.83	0.00	0.83	0.00	0.59	0.00	0.83	0.00
Avail Cap (c_a), veh/h	227	0	183	0	127	0	183	0
Upstream Filter (I)	1.00	0.00	0.31	0.00	1.00	0.00	0.65	0.00
Uniform Delay (d1), s/veh	32.2	0.0	29.8	0.0	35.9	0.0	29.2	0.0
Incr Delay (d2), s/veh	19.6	0.0	8.0	0.0	10.9	0.0	17.4	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	51.8	0.0	37.8	0.0	46.8	0.0	46.6	0.0
1st-Term Q (Q1), veh/ln	2.8	0.0	2.0	0.0	0.5	0.0	2.1	0.0
2nd-Term Q (Q2), veh/ln	1.1	0.0	0.3	0.0	0.1	0.0	0.8	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
%ile Back of Q (50%), veh/ln	3.8	0.0	2.3	0.0	0.7	0.0	2.9	0.0
%ile Storage Ratio (RQ%)	0.96	0.00	0.09	0.00	0.07	0.00	0.28	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	1	0	2	0	1	0	1
Grp Vol (v), veh/h	0	48	0	735	0	221	0	325
Grp Sat Flow (s), veh/h/ln	0	1800	0	1710	0	1710	0	1800
Q Serve Time (g_s), s	0.0	1.4	0.0	14.9	0.0	6.7	0.0	11.5
Cycle Q Clear Time (g_c), s	0.0	1.4	0.0	14.9	0.0	6.7	0.0	11.5
Lane Grp Cap (c), veh/h	0	554	0	809	0	681	0	413
V/C Ratio (X)	0.00	0.09	0.00	0.91	0.00	0.32	0.00	0.79
Avail Cap (c_a), veh/h	0	554	0	844	0	681	0	444
Upstream Filter (I)	0.00	1.00	0.00	0.65	0.00	1.00	0.00	0.31
Uniform Delay (d1), s/veh	0.0	18.5	0.0	19.0	0.0	15.6	0.0	18.8
Incr Delay (d2), s/veh	0.0	0.3	0.0	9.3	0.0	1.3	0.0	2.8
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	18.8	0.0	28.4	0.0	16.9	0.0	21.6
1st-Term Q (Q1), veh/ln	0.0	0.6	0.0	3.9	0.0	2.4	0.0	3.5
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	1.1	0.0	0.2	0.0	0.3

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.6	0.0	4.9	0.0	2.7	0.0	3.8
%ile Storage Ratio (RQ%)	0.00	0.03	0.00	0.06	0.00	0.46	0.00	0.16
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		R		T+R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	268	0	85	0	217	0	133
Grp Sat Flow (s), veh/h/ln	0	1525	0	1525	0	1641	0	1525
Q Serve Time (g_s), s	0.0	11.1	0.0	2.5	0.0	6.9	0.0	4.3
Cycle Q Clear Time (g_c), s	0.0	11.1	0.0	2.5	0.0	6.9	0.0	4.3
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	0.54	0.00	1.00
Lane Grp Cap (c), veh/h	0	469	0	361	0	653	0	350
V/C Ratio (X)	0.00	0.57	0.00	0.24	0.00	0.33	0.00	0.38
Avail Cap (c_a), veh/h	0	469	0	376	0	653	0	376
Upstream Filter (I)	0.00	1.00	0.00	0.65	0.00	1.00	0.00	0.31
Uniform Delay (d1), s/veh	0.0	21.8	0.0	15.7	0.0	15.7	0.0	16.8
Incr Delay (d2), s/veh	0.0	5.0	0.0	0.2	0.0	1.4	0.0	0.2
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	26.8	0.0	16.0	0.0	17.0	0.0	17.0
1st-Term Q (Q1), veh/ln	0.0	3.7	0.0	0.8	0.0	2.4	0.0	1.3
2nd-Term Q (Q2), veh/ln	0.0	0.6	0.0	0.0	0.0	0.2	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	4.4	0.0	0.8	0.0	2.7	0.0	1.3
%ile Storage Ratio (RQ%)	0.00	0.24	0.00	0.01	0.00	0.46	0.00	0.05
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	27.3
HCM 6th LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	439	513	164	35	341	174	80	471	54	255	23	169
Future Volume (veh/h)	439	513	164	35	341	174	80	471	54	255	23	169
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1600	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1900
Adj Flow Rate, veh/h	439	513	164	35	341	174	80	471	54	255	23	169
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	489	610	517	52	371	314	145	699	385	286	89	655
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.33	0.68	0.68	0.06	0.41	0.21	0.25	0.25	0.25	0.18	0.48	0.48
Unsig. Movement Delay												
Ln Grp Delay, s/veh	40.8	18.7	10.4	55.2	51.7	33.8	37.0	39.4	26.8	62.6	0.0	14.8
Ln Grp LOS	D	B	B	E	D	C	D	D	C	E	A	B
Approach Vol, veh/h		1116			550			605			447	
Approach Delay, s/veh		26.2			46.3			37.1			42.1	
Approach LOS		C			D			D			D	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4		6	7	8
Case No	2.0	7.3	2.0	3.0		4.0	2.0	3.0
Phs Duration (G+Y+Rc), s	20.4	27.2	7.4	35.0		47.6	19.4	23.0
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5		4.5	4.5	4.5
Max Green (Gmax), s	16.5	20.5	5.0	30.0		41.5	15.5	19.5
Max Allow Headway (MAH), s	3.8	5.2	3.8	5.0		5.5	3.8	4.8
Max Q Clear (g_c+I1), s	15.9	16.5	3.9	21.2		8.6	14.7	18.1
Green Ext Time (g_e), s	0.1	1.3	0.0	2.6		1.3	0.2	0.4
Prob of Phs Call (p_c)	1.00	1.00	0.58	1.00		1.00	1.00	1.00
Prob of Max Out (p_x)	1.00	0.00	1.00	0.46		0.00	1.00	1.00

Left-Turn Movement Data								
Assigned Mvmt	1	5	3				7	
Mvmt Sat Flow, veh/h	1619	371	1619				2956	

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		2773		1800		186		1800

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1525		1525		1368		1525

Left Lane Group Data								
Assigned Mvmt	1	5	3	0	0	0	7	0
Lane Assignment	L (Prot)	L+T	L (Prot)				L (Prot)	

Lanes in Grp	1	1	1	0	0	0	2	0
Grp Vol (v), veh/h	255	285	35	0	0	0	439	0
Grp Sat Flow (s), veh/h/ln	1619	1588	1619	0	0	0	1478	0
Q Serve Time (g_s), s	13.9	11.2	1.9	0.0	0.0	0.0	12.7	0.0
Cycle Q Clear Time (g_c), s	13.9	14.5	1.9	0.0	0.0	0.0	12.7	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	1210	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	22.7	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	22.7	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	11.2	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	3.3	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	3.3	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.28	1.00	0.00	0.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	286	452	52	0	0	0	489	0
V/C Ratio (X)	0.89	0.63	0.67	0.00	0.00	0.00	0.90	0.00
Avail Cap (c_a), veh/h	297	452	90	0	0	0	509	0
Upstream Filter (I)	1.00	1.00	1.00	0.00	0.00	0.00	0.56	0.00
Uniform Delay (d1), s/veh	36.2	30.4	41.6	0.0	0.0	0.0	29.4	0.0
Incr Delay (d2), s/veh	26.4	6.6	13.6	0.0	0.0	0.0	11.4	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	62.6	37.0	55.2	0.0	0.0	0.0	40.8	0.0
1st-Term Q (Q1), veh/ln	5.4	5.5	0.7	0.0	0.0	0.0	3.6	0.0
2nd-Term Q (Q2), veh/ln	2.1	0.8	0.2	0.0	0.0	0.0	0.8	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	1.00	1.00	0.00	0.00	0.00	1.00	0.00
%ile Back of Q (50%), veh/ln	7.5	6.3	0.9	0.0	0.0	0.0	4.4	0.0
%ile Storage Ratio (RQ%)	0.90	0.56	0.01	0.00	0.00	0.00	0.36	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

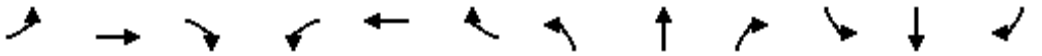
Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T				T
Lanes in Grp	0	1	0	1	0	0	0	1
Grp Vol (v), veh/h	0	266	0	513	0	0	0	341
Grp Sat Flow (s), veh/h/ln	0	1556	0	1800	0	0	0	1800
Q Serve Time (g_s), s	0.0	13.9	0.0	19.2	0.0	0.0	0.0	16.1
Cycle Q Clear Time (g_c), s	0.0	13.9	0.0	19.2	0.0	0.0	0.0	16.1
Lane Grp Cap (c), veh/h	0	392	0	610	0	0	0	371
V/C Ratio (X)	0.00	0.68	0.00	0.84	0.00	0.00	0.00	0.92
Avail Cap (c_a), veh/h	0	392	0	610	0	0	0	390
Upstream Filter (I)	0.00	1.00	0.00	0.56	0.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	30.3	0.0	12.7	0.0	0.0	0.0	25.8
Incr Delay (d2), s/veh	0.0	9.0	0.0	6.0	0.0	0.0	0.0	26.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	39.4	0.0	18.7	0.0	0.0	0.0	51.7
1st-Term Q (Q1), veh/ln	0.0	5.1	0.0	4.0	0.0	0.0	0.0	5.0
2nd-Term Q (Q2), veh/ln	0.0	1.0	0.0	1.0	0.0	0.0	0.0	2.7

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	6.0	0.0	5.0	0.0	0.0	0.0	7.7
%ile Storage Ratio (RQ%)	0.00	0.53	0.00	0.21	0.00	0.00	0.00	0.09
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		R		T+R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	54	0	164	0	192	0	174
Grp Sat Flow (s), veh/h/ln	0	1525	0	1525	0	1554	0	1525
Q Serve Time (g_s), s	0.0	2.5	0.0	4.0	0.0	6.6	0.0	9.2
Cycle Q Clear Time (g_c), s	0.0	2.5	0.0	4.0	0.0	6.6	0.0	9.2
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	0.88	0.00	1.00
Lane Grp Cap (c), veh/h	0	385	0	517	0	744	0	314
V/C Ratio (X)	0.00	0.14	0.00	0.32	0.00	0.26	0.00	0.55
Avail Cap (c_a), veh/h	0	385	0	517	0	744	0	331
Upstream Filter (I)	0.00	1.00	0.00	0.56	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	26.1	0.0	10.2	0.0	14.0	0.0	32.0
Incr Delay (d2), s/veh	0.0	0.8	0.0	0.2	0.0	0.8	0.0	1.8
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	26.8	0.0	10.4	0.0	14.8	0.0	33.8
1st-Term Q (Q1), veh/ln	0.0	0.9	0.0	1.2	0.0	2.2	0.0	3.3
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	0.2	0.0	0.2
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	1.0	0.0	1.2	0.0	2.4	0.0	3.5
%ile Storage Ratio (RQ%)	0.00	0.34	0.00	0.05	0.00	0.29	0.00	0.04
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	35.3
HCM 6th LOS	D

EXISTING PLUS PROJECT CONDITIONS



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	224	2	127	576	543	0	0	536	683
Future Volume (veh/h)	0	0	0	224	2	127	576	543	0	0	536	683
Number				3	8	18	5	2	12	1	6	16
Initial Q, veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln				1700	1800	1800	1700	1800	0	0	1800	1800
Adj Flow Rate, veh/h				241	2	137	619	584	0	0	576	734
Peak Hour Factor				0.93	0.93	0.93	0.93	0.93	0.95	0.95	0.93	0.93
Percent Heavy Veh, %				0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence				Yes			Yes			No		
Cap, veh/h				262	2	235	627	2636	0	0	1701	528
HCM Platoon Ratio				1.00	1.00	2.00	2.00	2.00	1.00	1.00	2.00	2.00
Prop Arrive On Green				0.15	0.15	0.31	0.77	1.00	0.00	0.00	0.69	0.69
Unsig. Movement Delay												
Ln Grp Delay, s/veh				84.6	0.0	41.9	39.0	0.1	0.0	0.0	13.5	205.2
Ln Grp LOS				F	A	D	D	A	A	A	B	F
Approach Vol, veh/h					380			1203			1310	
Approach Delay, s/veh					69.2			20.1			120.9	
Approach LOS					E			C			F	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2	8		5	6		
Case No		4.0	11.0		2.0	7.0		
Phs Duration (G+Y+Rc), s		97.0	23.0		51.0	46.0		
Change Period (Y+Rc), s		4.5	4.5		4.5	4.5		
Max Green (Gmax), s		92.5	18.5		47.7	40.3		
Max Allow Headway (MAH), s		4.9	4.9		3.7	4.3		
Max Q Clear (g_c+I1), s		2.0	18.8		46.0	43.5		
Green Ext Time (g_e), s		4.0	0.0		0.4	0.0		
Prob of Phs Call (p_c)		1.00	1.00		1.00	1.00		
Prob of Max Out (p_x)		0.00	1.00		1.00	0.00		
Left-Turn Movement Data								
Assigned Mvmt			3		5	1		
Mvmt Sat Flow, veh/h			1701		1619	0		
Through Movement Data								
Assigned Mvmt		2	8			6		
Mvmt Sat Flow, veh/h		3510	14			5076		
Right-Turn Movement Data								
Assigned Mvmt		12	18			16		
Mvmt Sat Flow, veh/h		0	1525			1525		
Left Lane Group Data								
Assigned Mvmt	0	0	3	0	5	1	0	0
Lane Assignment			L+T		L (Prot)			

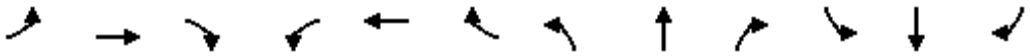
Lanes in Grp	0	0	1	0	1	0	0	0
Grp Vol (v), veh/h	0	0	243	0	619	0	0	0
Grp Sat Flow (s), veh/h/ln	0	0	1715	0	1619	0	0	0
Q Serve Time (g_s), s	0.0	0.0	16.8	0.0	44.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	16.8	0.0	44.0	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	41.5	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	0.00	0.99	0.00	1.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	264	0	627	0	0	0
V/C Ratio (X)	0.00	0.00	0.92	0.00	0.99	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	0	264	0	644	0	0	0
Upstream Filter (I)	0.00	0.00	1.00	0.00	0.67	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	50.0	0.0	13.3	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	34.6	0.0	25.7	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	84.6	0.0	39.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	7.2	0.0	4.5	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	2.5	0.0	4.5	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	0.00	1.00	0.00	1.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	9.7	0.0	8.9	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.20	0.00	0.82	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	8	0	0	6	0	0
Lane Assignment		T				T		
Lanes in Grp	0	2	0	0	0	3	0	0
Grp Vol (v), veh/h	0	584	0	0	0	576	0	0
Grp Sat Flow (s), veh/h/ln	0	1710	0	0	0	1638	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	5.7	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	5.7	0.0	0.0
Lane Grp Cap (c), veh/h	0	2636	0	0	0	1701	0	0
V/C Ratio (X)	0.00	0.22	0.00	0.00	0.00	0.34	0.00	0.00
Avail Cap (c_a), veh/h	0	2636	0	0	0	1701	0	0
Upstream Filter (I)	0.00	0.67	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	12.9	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.1	0.0	0.0	0.0	0.5	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.1	0.0	0.0	0.0	13.5	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	1.7	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.0	0.0	1.8	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	18	0	0	16	0	0
Lane Assignment			R			R		
Lanes in Grp	0	0	1	0	0	1	0	0
Grp Vol (v), veh/h	0	0	137	0	0	734	0	0
Grp Sat Flow (s), veh/h/ln	0	0	1525	0	0	1525	0	0
Q Serve Time (g_s), s	0.0	0.0	9.1	0.0	0.0	41.5	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	9.1	0.0	0.0	41.5	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	235	0	0	528	0	0
V/C Ratio (X)	0.00	0.00	0.58	0.00	0.00	1.39	0.00	0.00
Avail Cap (c_a), veh/h	0	0	235	0	0	528	0	0
Upstream Filter (I)	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	38.2	0.0	0.0	18.5	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	3.6	0.0	0.0	186.8	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	41.9	0.0	0.0	205.2	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	3.1	0.0	0.0	5.4	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.2	0.0	0.0	27.4	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	3.3	0.0	0.0	32.8	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.07	0.00	0.00	0.71	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	51.5	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	72.2
HCM 6th LOS	E



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	534	3	478	0	0	0	0	652	288	74	486	0
Future Volume (veh/h)	534	3	478	0	0	0	0	652	288	74	486	0
Number	7	4	14				5	2	12	1	6	16
Initial Q, veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1900	1800	1900				0	1800	1800	1700	1800	0
Adj Flow Rate, veh/h	574	3	514				0	701	310	80	523	0
Peak Hour Factor	0.93	0.93	0.93				0.95	0.93	0.93	0.93	0.93	0.95
Percent Heavy Veh, %	0	0	0				0	0	0	0	0	0
Opposing Right Turn Influence	Yes						No			Yes		
Cap, veh/h	497	3	445				0	1021	317	95	1083	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	2.00	2.00	2.00	2.00	1.00
Prop Arrive On Green	0.58	0.58	0.58				0.00	0.42	0.42	0.12	0.63	0.00
Unsig. Movement Delay												
Ln Grp Delay, s/veh	100.4	0.0	0.0				0.0	27.7	71.4	82.9	14.1	0.0
Ln Grp LOS	F	A	A				A	C	E	F	B	A
Approach Vol, veh/h		1091						1011			603	
Approach Delay, s/veh		100.4						41.1			23.2	
Approach LOS		F						D			C	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Case No	2.0	7.0		12.0		4.0		
Phs Duration (G+Y+Rc), s	9.8	23.2		57.0		33.0		
Change Period (Y+Rc), s	4.5	4.5		4.5		4.5		
Max Green (Gmax), s	5.3	18.7		52.5		28.5		
Max Allow Headway (MAH), s	3.8	4.9		5.4		5.2		
Max Q Clear (g_c+I1), s	6.4	20.0		54.5		9.3		
Green Ext Time (g_e), s	0.0	0.0		0.0		3.4		
Prob of Phs Call (p_c)	0.86	1.00		1.00		1.00		
Prob of Max Out (p_x)	1.00	0.00		1.00		0.00		

Left-Turn Movement Data								
Assigned Mvmt	1	5		7				
Mvmt Sat Flow, veh/h	1619	0		852				

Through Movement Data								
Assigned Mvmt		2		4		6		
Mvmt Sat Flow, veh/h		5076		4		3510		

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		
Mvmt Sat Flow, veh/h		1525		763		0		

Left Lane Group Data								
Assigned Mvmt	1	5	0	7	0	0	0	0
Lane Assignment	L (Prot)			L+T+R				

Lanes in Grp	1	0	0	1	0	0	0	0
Grp Vol (v), veh/h	80	0	0	1091	0	0	0	0
Grp Sat Flow (s), veh/h/ln	1619	0	0	1620	0	0	0	0
Q Serve Time (g_s), s	4.4	0.0	0.0	52.5	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	4.4	0.0	0.0	52.5	0.0	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	18.7	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	0.53	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	95	0	0	945	0	0	0	0
V/C Ratio (X)	0.84	0.00	0.00	1.15	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	95	0	0	945	0	0	0	0
Upstream Filter (I)	0.95	0.00	0.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	39.3	0.0	0.0	18.8	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	43.6	0.0	0.0	81.6	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	82.9	0.0	0.0	100.4	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	1.6	0.0	0.0	17.1	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	1.2	0.0	0.0	21.4	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00
%ile Back of Q (50%), veh/ln	2.8	0.0	0.0	38.5	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.25	0.00	0.00	0.66	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	36.5	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	0
Lane Assignment		T				T		
Lanes in Grp	0	3	0	0	0	2	0	0
Grp Vol (v), veh/h	0	701	0	0	0	523	0	0
Grp Sat Flow (s), veh/h/ln	0	1638	0	0	0	1710	0	0
Q Serve Time (g_s), s	0.0	10.5	0.0	0.0	0.0	7.3	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	10.5	0.0	0.0	0.0	7.3	0.0	0.0
Lane Grp Cap (c), veh/h	0	1021	0	0	0	1083	0	0
V/C Ratio (X)	0.00	0.69	0.00	0.00	0.00	0.48	0.00	0.00
Avail Cap (c_a), veh/h	0	1021	0	0	0	1083	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	0.95	0.00	0.00
Uniform Delay (d1), s/veh	0.0	23.9	0.0	0.0	0.0	12.6	0.0	0.0
Incr Delay (d2), s/veh	0.0	3.8	0.0	0.0	0.0	1.5	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	27.7	0.0	0.0	0.0	14.1	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	3.3	0.0	0.0	0.0	2.2	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.4	0.0	0.0	0.0	0.2	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	3.6	0.0	0.0	0.0	2.4	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.11	0.00	0.00	0.00	0.22	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	0
Lane Assignment		R						
Lanes in Grp	0	1	0	0	0	0	0	0
Grp Vol (v), veh/h	0	310	0	0	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	1525	0	0	0	0	0	0
Q Serve Time (g_s), s	0.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	0.47	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	317	0	0	0	0	0	0
V/C Ratio (X)	0.00	0.98	0.00	0.00	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	317	0	0	0	0	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	26.1	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	45.3	0.0	0.0	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	71.4	0.0	0.0	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	4.6	0.0	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	8.6	0.0	0.0	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.27	0.00	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	61.0
HCM 6th LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	14	220	44	385	645	111	48	169	208	169	439	48
Future Volume (veh/h)	14	220	44	385	645	111	48	169	208	169	439	48
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1700	1800	1900	1700	1800	1900	1700	1800	1800	1700	1800	1900
Adj Flow Rate, veh/h	14	227	45	397	665	114	49	174	214	174	453	49
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	27	317	62	423	1039	178	64	1032	460	204	1210	130
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.02	0.11	0.11	0.26	0.36	0.36	0.04	0.30	0.30	0.13	0.39	0.39
Unsig. Movement Delay												
Ln Grp Delay, s/veh	59.1	43.3	43.9	58.5	25.6	25.6	59.4	23.4	28.6	65.9	21.3	21.3
Ln Grp LOS	E	D	D	E	C	C	E	C	C	E	C	C
Approach Vol, veh/h		286			1176			437			676	
Approach Delay, s/veh		44.4			36.7			30.0			32.8	
Approach LOS		D			D			C			C	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Case No	2.0	3.0	2.0	4.0	2.0	4.0	2.0	4.0
Phs Duration (G+Y+Rc), s	15.8	31.7	28.0	14.5	8.0	39.5	6.0	36.5
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green (Gmax), s	11.5	19.0	23.5	18.0	6.9	23.6	5.3	36.2
Max Allow Headway (MAH), s	3.8	4.6	3.8	5.3	3.8	5.3	3.8	5.3
Max Q Clear (g_c+I1), s	11.5	12.3	23.6	9.0	4.7	11.4	2.8	19.1
Green Ext Time (g_e), s	0.0	1.0	0.0	1.0	0.0	2.4	0.0	4.7
Prob of Phs Call (p_c)	0.99	1.00	1.00	1.00	0.71	1.00	0.30	1.00
Prob of Max Out (p_x)	1.00	0.00	1.00	0.22	1.00	0.00	1.00	0.16

Left-Turn Movement Data								
Assigned Mvmt	1		3		5		7	
Mvmt Sat Flow, veh/h	1619		1619		1619		1619	

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		3420		2854		3114		2920

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1525		556		335		500

Left Lane Group Data								
Assigned Mvmt	1	0	3	0	5	0	7	0
Lane Assignment	L (Prot)		L (Prot)		L (Prot)		L (Prot)	

Lanes in Grp	1	0	1	0	1	0	1	0
Grp Vol (v), veh/h	174	0	397	0	49	0	14	0
Grp Sat Flow (s), veh/h/ln	1619	0	1619	0	1619	0	1619	0
Q Serve Time (g_s), s	9.5	0.0	21.6	0.0	2.7	0.0	0.8	0.0
Cycle Q Clear Time (g_c), s	9.5	0.0	21.6	0.0	2.7	0.0	0.8	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	204	0	423	0	64	0	27	0
V/C Ratio (X)	0.85	0.00	0.94	0.00	0.77	0.00	0.53	0.00
Avail Cap (c_a), veh/h	207	0	423	0	124	0	95	0
Upstream Filter (I)	1.00	0.00	0.85	0.00	0.93	0.00	1.00	0.00
Uniform Delay (d1), s/veh	38.5	0.0	32.5	0.0	42.8	0.0	43.9	0.0
Incr Delay (d2), s/veh	27.4	0.0	25.9	0.0	16.5	0.0	15.2	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	65.9	0.0	58.5	0.0	59.4	0.0	59.1	0.0
1st-Term Q (Q1), veh/ln	3.7	0.0	8.2	0.0	1.1	0.0	0.3	0.0
2nd-Term Q (Q2), veh/ln	1.5	0.0	3.0	0.0	0.3	0.0	0.1	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
%ile Back of Q (50%), veh/ln	5.2	0.0	11.2	0.0	1.4	0.0	0.4	0.0
%ile Storage Ratio (RQ%)	0.08	0.00	0.11	0.00	0.07	0.00	0.01	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	2	0	1	0	1	0	1
Grp Vol (v), veh/h	0	174	0	134	0	248	0	389
Grp Sat Flow (s), veh/h/ln	0	1710	0	1710	0	1710	0	1710
Q Serve Time (g_s), s	0.0	3.4	0.0	6.8	0.0	9.3	0.0	17.1
Cycle Q Clear Time (g_c), s	0.0	3.4	0.0	6.8	0.0	9.3	0.0	17.1
Lane Grp Cap (c), veh/h	0	1032	0	190	0	664	0	609
V/C Ratio (X)	0.00	0.17	0.00	0.71	0.00	0.37	0.00	0.64
Avail Cap (c_a), veh/h	0	1032	0	342	0	664	0	688
Upstream Filter (I)	0.00	0.93	0.00	1.00	0.00	1.00	0.00	0.85
Uniform Delay (d1), s/veh	0.0	23.1	0.0	38.6	0.0	19.7	0.0	24.2
Incr Delay (d2), s/veh	0.0	0.3	0.0	4.8	0.0	1.6	0.0	1.4
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	23.4	0.0	43.3	0.0	21.3	0.0	25.6
1st-Term Q (Q1), veh/ln	0.0	1.3	0.0	2.8	0.0	3.6	0.0	6.7
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.3	0.0	0.3	0.0	0.2

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	1.4	0.0	3.1	0.0	3.9	0.0	6.9
%ile Storage Ratio (RQ%)	0.00	0.07	0.00	0.04	0.00	0.06	0.00	0.06
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		T+R		T+R		T+R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	214	0	138	0	254	0	390
Grp Sat Flow (s), veh/h/ln	0	1525	0	1700	0	1740	0	1710
Q Serve Time (g_s), s	0.0	10.3	0.0	7.0	0.0	9.4	0.0	17.1
Cycle Q Clear Time (g_c), s	0.0	10.3	0.0	7.0	0.0	9.4	0.0	17.1
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	0.33	0.00	0.19	0.00	0.29
Lane Grp Cap (c), veh/h	0	460	0	189	0	676	0	609
V/C Ratio (X)	0.00	0.46	0.00	0.73	0.00	0.38	0.00	0.64
Avail Cap (c_a), veh/h	0	460	0	340	0	676	0	688
Upstream Filter (I)	0.00	0.93	0.00	1.00	0.00	1.00	0.00	0.85
Uniform Delay (d1), s/veh	0.0	25.5	0.0	38.7	0.0	19.7	0.0	24.2
Incr Delay (d2), s/veh	0.0	3.1	0.0	5.3	0.0	1.6	0.0	1.4
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	28.6	0.0	43.9	0.0	21.3	0.0	25.6
1st-Term Q (Q1), veh/ln	0.0	3.6	0.0	2.9	0.0	3.7	0.0	6.7
2nd-Term Q (Q2), veh/ln	0.0	0.4	0.0	0.3	0.0	0.3	0.0	0.2
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	4.0	0.0	3.2	0.0	4.0	0.0	6.9
%ile Storage Ratio (RQ%)	0.00	0.20	0.00	0.04	0.00	0.06	0.00	0.07
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	35.4
HCM 6th LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	106	2	223	3	3	27	175	284	4	15	659	217
Future Volume (veh/h)	106	2	223	3	3	27	175	284	4	15	659	217
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1600	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1900
Adj Flow Rate, veh/h	118	2	0	3	3	30	194	316	4	17	732	241
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	172	105		26	26	45	403	1921	24	327	1284	423
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.06	0.06	0.00	0.03	0.03	0.03	0.25	0.56	0.56	0.20	0.51	0.51
Unsig. Movement Delay												
Ln Grp Delay, s/veh	58.4	51.6	0.0	55.8	0.0	71.2	41.2	13.0	13.0	37.6	21.7	21.8
Ln Grp LOS	E	D		E	A	E	D	B	B	D	C	C
Approach Vol, veh/h		120			36			514			990	
Approach Delay, s/veh		58.3			68.6			23.6			22.0	
Approach LOS		E			E			C			C	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	8	4	5	6		
Case No	2.0	4.0	12.0	9.0	2.0	4.0		
Phs Duration (G+Y+Rc), s	27.9	68.9	7.9	11.2	33.4	63.4		
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5		
Max Green (Gmax), s	23.4	28.9	18.0	27.6	28.9	23.4		
Max Allow Headway (MAH), s	3.8	5.2	5.5	3.8	3.8	5.3		
Max Q Clear (g_c+I1), s	3.0	7.2	4.3	6.5	13.9	25.3		
Green Ext Time (g_e), s	0.0	1.8	0.1	0.3	0.4	0.0		
Prob of Phs Call (p_c)	1.00	1.00	0.69	0.98	1.00	1.00		
Prob of Max Out (p_x)	0.00	0.00	0.00	0.00	0.00	0.00		

Left-Turn Movement Data								
Assigned Mvmt	1		3	7	5			
Mvmt Sat Flow, veh/h	1619		878	2956	1619			

Through Movement Data								
Assigned Mvmt		2	8	4		6		
Mvmt Sat Flow, veh/h		3458	878	1800		2528		

Right-Turn Movement Data								
Assigned Mvmt		12	18	14		16		
Mvmt Sat Flow, veh/h		44	1525	1525		832		

Left Lane Group Data								
Assigned Mvmt	1	0	3	7	5	0	0	0
Lane Assignment	L (Prot)		L+T	L	L (Prot)			

Lanes in Grp	1	0	1	2	1	0	0	0
Grp Vol (v), veh/h	17	0	6	118	194	0	0	0
Grp Sat Flow (s), veh/h/ln	1619	0	1756	1478	1619	0	0	0
Q Serve Time (g_s), s	1.0	0.0	0.4	4.5	11.9	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	1.0	0.0	0.4	4.5	11.9	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	1478	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	0.50	1.00	1.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	327	0	52	172	403	0	0	0
V/C Ratio (X)	0.05	0.00	0.12	0.69	0.48	0.00	0.00	0.00
Avail Cap (c_a), veh/h	327	0	272	703	403	0	0	0
Upstream Filter (I)	0.72	0.00	1.00	1.00	1.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	37.4	0.0	54.8	53.6	37.2	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.2	0.0	1.0	4.8	4.1	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	37.6	0.0	55.8	58.4	41.2	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.4	0.0	0.2	1.7	4.7	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.1	0.5	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	1.00	1.00	1.00	0.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.4	0.0	0.2	1.8	5.1	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.02	0.00	0.01	0.04	0.86	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	8	4	0	6	0	0
Lane Assignment		T		T		T		
Lanes in Grp	0	1	0	1	0	1	0	0
Grp Vol (v), veh/h	0	156	0	2	0	495	0	0
Grp Sat Flow (s), veh/h/ln	0	1710	0	1800	0	1710	0	0
Q Serve Time (g_s), s	0.0	5.2	0.0	0.1	0.0	23.3	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	5.2	0.0	0.1	0.0	23.3	0.0	0.0
Lane Grp Cap (c), veh/h	0	950	0	105	0	869	0	0
V/C Ratio (X)	0.00	0.16	0.00	0.02	0.00	0.57	0.00	0.00
Avail Cap (c_a), veh/h	0	950	0	428	0	869	0	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	0.72	0.00	0.00
Uniform Delay (d1), s/veh	0.0	12.6	0.0	51.5	0.0	19.8	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.4	0.0	0.1	0.0	2.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	13.0	0.0	51.6	0.0	21.7	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	2.0	0.0	0.1	0.0	9.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	0.5	0.0	0.0

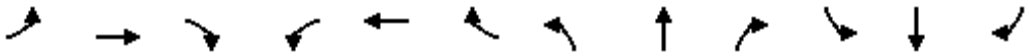
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	2.1	0.0	0.1	0.0	9.5	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.08	0.00	0.00	0.00	0.48	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	18	14	0	16	0	0
Lane Assignment		T+R	T+R	R		T+R		
Lanes in Grp	0	1	1	1	0	1	0	0
Grp Vol (v), veh/h	0	164	30	0	0	478	0	0
Grp Sat Flow (s), veh/h/ln	0	1792	1525	1525	0	1650	0	0
Q Serve Time (g_s), s	0.0	5.2	2.3	0.0	0.0	23.3	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	5.2	2.3	0.0	0.0	23.3	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.02	1.00	1.00	0.00	0.50	0.00	0.00
Lane Grp Cap (c), veh/h	0	995	45	89	0	838	0	0
V/C Ratio (X)	0.00	0.16	0.66	0.00	0.00	0.57	0.00	0.00
Avail Cap (c_a), veh/h	0	995	237	363	0	838	0	0
Upstream Filter (I)	0.00	1.00	1.00	0.00	0.00	0.72	0.00	0.00
Uniform Delay (d1), s/veh	0.0	12.6	55.7	0.0	0.0	19.8	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.4	15.5	0.0	0.0	2.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	13.0	71.2	0.0	0.0	21.8	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	2.1	0.9	0.0	0.0	8.7	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.2	0.0	0.0	0.5	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	2.2	1.1	0.0	0.0	9.2	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.09	0.03	0.00	0.00	0.46	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	26.2
HCM 6th LOS	C

Notes

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	0	4	31	0	28	11	407	26	34	835	15
Future Volume (veh/h)	5	0	4	31	0	28	11	407	26	34	835	15
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1900	1800	1900	1800	1800	1700	1900	1900
Adj Flow Rate, veh/h	6	0	5	38	0	34	13	496	32	41	1018	18
Peak Hour Factor	0.82	0.82	0.82	0.82	0.95	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	100	0	49	61	0	174	390	1347	1142	51	1521	27
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Prop Arrive On Green	0.03	0.00	0.03	0.04	0.00	0.11	1.00	1.00	1.00	0.03	0.82	0.82
Unsig. Movement Delay												
Ln Grp Delay, s/veh	56.7	0.0	57.2	66.6	0.0	49.3	2.1	0.8	0.0	83.1	0.0	6.7
Ln Grp LOS	E	A	E	E	A	D	A	A	A	F	A	A
Approach Vol, veh/h		11			72			541			1077	
Approach Delay, s/veh		56.9			58.5			0.8			9.6	
Approach LOS		E			E			A			A	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4		6		8
Case No	2.0	5.3	2.0	6.3		4.0		4.0
Phs Duration (G+Y+Rc), s	8.2	94.3	9.0	8.4		102.6		17.4
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5		4.5		4.5
Max Green (Gmax), s	7.7	58.2	18.1	18.0		70.4		40.6
Max Allow Headway (MAH), s	3.8	5.2	3.8	4.8		5.2		5.6
Max Q Clear (g_c+I1), s	5.0	20.8	4.8	2.6		28.5		4.3
Green Ext Time (g_e), s	0.0	3.8	0.0	0.0		11.9		0.2
Prob of Phs Call (p_c)	0.75	1.00	0.91	0.78		1.00		0.94
Prob of Max Out (p_x)	1.00	0.00	0.00	0.00		0.00		0.00

Left-Turn Movement Data								
Assigned Mvmt	1	5	3	7				
Mvmt Sat Flow, veh/h	1619	553	1619	1249				

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		1800		0		1861		0

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1525		1525		33		1610

Left Lane Group Data								
Assigned Mvmt	1	5	3	7	0	0	0	0
Lane Assignment	L (Prot)	L	L (Prot)	L				

Lanes in Grp	1	1	1	1	0	0	0	0
Grp Vol (v), veh/h	41	13	38	6	0	0	0	0
Grp Sat Flow (s), veh/h/ln	1619	553	1619	1249	0	0	0	0
Q Serve Time (g_s), s	3.0	0.6	2.8	0.6	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	3.0	18.8	2.8	0.6	0.0	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	553	0	1249	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	89.8	0.0	3.9	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	71.6	0.0	3.9	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.6	0.0	0.6	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	51	390	61	100	0	0	0	0
V/C Ratio (X)	0.81	0.03	0.62	0.06	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	104	390	244	247	0	0	0	0
Upstream Filter (I)	1.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	57.8	1.9	56.9	56.4	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	25.4	0.2	9.8	0.2	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	83.1	2.1	66.6	56.7	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	1.2	0.0	1.1	0.2	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.4	0.0	0.2	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00
%ile Back of Q (50%), veh/ln	1.6	0.1	1.3	0.2	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.20	0.01	0.16	0.03	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T						
Lanes in Grp	0	1	0	0	0	0	0	0
Grp Vol (v), veh/h	0	496	0	0	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	1800	0	0	0	0	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lane Grp Cap (c), veh/h	0	1347	0	0	0	0	0	0
V/C Ratio (X)	0.00	0.37	0.00	0.00	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	1347	0	0	0	0	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		T+R		T+R		T+R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	32	0	5	0	1036	0	34
Grp Sat Flow (s), veh/h/ln	0	1525	0	1525	0	1894	0	1610
Q Serve Time (g_s), s	0.0	0.0	0.0	0.4	0.0	26.5	0.0	2.3
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.4	0.0	26.5	0.0	2.3
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	0.02	0.00	1.00
Lane Grp Cap (c), veh/h	0	1142	0	49	0	1548	0	174
V/C Ratio (X)	0.00	0.03	0.00	0.10	0.00	0.67	0.00	0.20
Avail Cap (c_a), veh/h	0	1142	0	229	0	1548	0	545
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	56.4	0.0	4.4	0.0	48.8
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.9	0.0	2.3	0.0	0.5
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	57.2	0.0	6.7	0.0	49.3
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.1	0.0	7.4	0.0	0.9
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.2	0.0	8.4	0.0	1.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.01	0.00	0.85	0.00	0.02
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	9.2
HCM 6th LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	24	2	12	9	0	0	62	421	14	2	768	109
Future Volume (veh/h)	24	2	12	9	0	0	62	421	14	2	768	109
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1800	1800	1900	1800	1900	1900
Adj Flow Rate, veh/h	29	2	14	11	0	0	74	501	17	2	914	130
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	87	4	19	126	0	0	95	1461	50	5	1288	183
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Prop Arrive On Green	0.04	0.04	0.04	0.04	0.00	0.00	0.06	0.84	0.84	0.01	1.00	1.00
Unsig. Movement Delay												
Ln Grp Delay, s/veh	59.3	0.0	0.0	55.9	0.0	0.0	68.8	0.0	2.7	113.1	0.0	2.9
Ln Grp LOS	E	A	A	E	A	A	E	A	A	F	A	A
Approach Vol, veh/h		45			11			592			1046	
Approach Delay, s/veh		59.3			55.9			10.9			3.1	
Approach LOS		E			E			B			A	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Case No	2.0	4.0		8.0	2.0	4.0		8.0
Phs Duration (G+Y+Rc), s	4.8	105.8		9.4	11.1	99.5		9.4
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green (Gmax), s	27.0	39.5		40.0	27.0	39.5		40.0
Max Allow Headway (MAH), s	3.8	5.2		5.3	3.8	5.3		5.3
Max Q Clear (g_c+I1), s	2.1	9.6		5.6	7.1	2.0		2.7
Green Ext Time (g_e), s	0.0	3.7		0.2	0.1	11.9		0.0
Prob of Phs Call (p_c)	0.06	1.00		0.85	0.92	1.00		0.85
Prob of Max Out (p_x)	0.00	0.00		0.00	0.00	0.00		0.00

Left-Turn Movement Data								
Assigned Mvmt	1			7	5			3
Mvmt Sat Flow, veh/h	1714			926	1714			1615

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		1731		89		1627		0

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		59		459		231		0

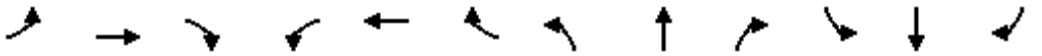
Left Lane Group Data								
Assigned Mvmt	1	0	0	7	5	0	0	3
Lane Assignment	L (Prot)			L+T+R	L (Prot)			L+T

Lanes in Grp	1	0	0	1	1	0	0	1
Grp Vol (v), veh/h	2	0	0	45	74	0	0	11
Grp Sat Flow (s), veh/h/ln	1714	0	0	1474	1714	0	0	1615
Q Serve Time (g_s), s	0.1	0.0	0.0	2.8	5.1	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.1	0.0	0.0	3.6	5.1	0.0	0.0	0.7
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	1440	0	0	0	1419
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	1744	0	0	0	1714
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	4.9	0.0	0.0	0.0	4.9
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	4.1	0.0	0.0	0.0	1.3
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	2.8	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	0.64	1.00	0.00	0.00	1.00
Lane Grp Cap (c), veh/h	5	0	0	109	95	0	0	126
V/C Ratio (X)	0.43	0.00	0.00	0.41	0.78	0.00	0.00	0.09
Avail Cap (c_a), veh/h	386	0	0	527	386	0	0	519
Upstream Filter (I)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	59.6	0.0	0.0	56.9	56.0	0.0	0.0	55.6
Incr Delay (d2), s/veh	53.5	0.0	0.0	2.5	12.8	0.0	0.0	0.3
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	113.1	0.0	0.0	59.3	68.8	0.0	0.0	55.9
1st-Term Q (Q1), veh/ln	0.1	0.0	0.0	1.4	2.2	0.0	0.0	0.3
2nd-Term Q (Q2), veh/ln	0.1	0.0	0.0	0.1	0.3	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.1	0.0	0.0	1.4	2.6	0.0	0.0	0.3
%ile Storage Ratio (RQ%)	0.01	0.00	0.00	0.15	0.38	0.00	0.00	0.01
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment								
Lanes in Grp	0	0	0	0	0	0	0	0
Grp Vol (v), veh/h	0	0	0	0	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	0	0	0	0	0	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lane Grp Cap (c), veh/h	0	0	0	0	0	0	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	0	0	0	0	0	0	0
Upstream Filter (I)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R				T+R		
Lanes in Grp	0	1	0	0	0	1	0	0
Grp Vol (v), veh/h	0	518	0	0	0	1044	0	0
Grp Sat Flow (s), veh/h/ln	0	1789	0	0	0	1858	0	0
Q Serve Time (g_s), s	0.0	7.6	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	7.6	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.03	0.00	0.31	0.00	0.12	0.00	0.00
Lane Grp Cap (c), veh/h	0	1510	0	0	0	1471	0	0
V/C Ratio (X)	0.00	0.34	0.00	0.00	0.00	0.71	0.00	0.00
Avail Cap (c_a), veh/h	0	1510	0	0	0	1471	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	2.1	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.6	0.0	0.0	0.0	2.9	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	2.7	0.0	0.0	0.0	2.9	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	1.7	0.0	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.3	0.0	0.0	0.0	1.2	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	2.0	0.0	0.0	0.0	1.2	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.04	0.00	0.00	0.00	0.13	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	7.7
HCM 6th LOS	A



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	42	127	29	170	355	121	112	232	75	56	420	79
Future Volume (veh/h)	42	127	29	170	355	121	112	232	75	56	420	79
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	46	140	32	187	390	133	123	255	0	62	462	87
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	61	220	49	219	604	269	151	1840		77	1684	751
HCM Platoon Ratio	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33
Prop Arrive On Green	0.05	0.11	0.11	0.18	0.23	0.23	0.12	0.72	0.00	0.06	0.65	0.65
Unsig. Movement Delay												
Ln Grp Delay, s/veh	58.7	43.7	44.4	42.7	32.4	31.5	48.8	6.4	0.0	59.2	9.2	8.5
Ln Grp LOS	E	D	D	D	C	C	D	A		E	A	A
Approach Vol, veh/h		218			710			378			611	
Approach Delay, s/veh		47.1			34.9			20.2			14.2	
Approach LOS		D			C			C			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Case No	2.0	3.0	2.0	4.0	2.0	3.0	2.0	3.0
Phs Duration (G+Y+Rc), s	8.8	52.9	16.7	11.6	12.9	48.8	7.9	20.4
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green (Gmax), s	8.7	27.3	17.5	18.5	13.5	22.5	6.7	29.3
Max Allow Headway (MAH), s	3.8	5.2	3.8	5.3	3.8	5.0	3.8	4.9
Max Q Clear (g_c+I1), s	5.4	4.1	12.1	6.5	8.7	7.1	4.5	11.3
Green Ext Time (g_e), s	0.0	1.6	0.2	0.7	0.1	3.0	0.0	2.8
Prob of Phs Call (p_c)	0.79	1.00	0.99	1.00	0.95	1.00	0.68	1.00
Prob of Max Out (p_x)	1.00	0.00	0.27	0.03	0.36	0.00	1.00	0.02

Left-Turn Movement Data								
Assigned Mvmt	1		3		5		7	
Mvmt Sat Flow, veh/h	1619		1619		1619		1619	

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		3420		2780		3420		3420

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1525		619		1525		1525

Left Lane Group Data								
Assigned Mvmt	1	0	3	0	5	0	7	0
Lane Assignment	L (Prot)		L (Prot)		L (Prot)		L (Prot)	

Lanes in Grp	1	0	1	0	1	0	1	0
Grp Vol (v), veh/h	62	0	187	0	123	0	46	0
Grp Sat Flow (s), veh/h/ln	1619	0	1619	0	1619	0	1619	0
Q Serve Time (g_s), s	3.4	0.0	10.1	0.0	6.7	0.0	2.5	0.0
Cycle Q Clear Time (g_c), s	3.4	0.0	10.1	0.0	6.7	0.0	2.5	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	77	0	219	0	151	0	61	0
V/C Ratio (X)	0.81	0.00	0.85	0.00	0.82	0.00	0.75	0.00
Avail Cap (c_a), veh/h	157	0	315	0	243	0	121	0
Upstream Filter (I)	1.00	0.00	0.42	0.00	0.94	0.00	1.00	0.00
Uniform Delay (d1), s/veh	41.7	0.0	36.0	0.0	38.7	0.0	42.3	0.0
Incr Delay (d2), s/veh	17.5	0.0	6.6	0.0	10.1	0.0	16.4	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	59.2	0.0	42.7	0.0	48.8	0.0	58.7	0.0
1st-Term Q (Q1), veh/ln	1.3	0.0	3.7	0.0	2.5	0.0	1.0	0.0
2nd-Term Q (Q2), veh/ln	0.4	0.0	0.4	0.0	0.4	0.0	0.3	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
%ile Back of Q (50%), veh/ln	1.7	0.0	4.1	0.0	3.0	0.0	1.3	0.0
%ile Storage Ratio (RQ%)	0.16	0.00	0.05	0.00	0.44	0.00	0.32	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	2	0	1	0	2	0	2
Grp Vol (v), veh/h	0	255	0	85	0	462	0	390
Grp Sat Flow (s), veh/h/ln	0	1710	0	1710	0	1710	0	1710
Q Serve Time (g_s), s	0.0	2.1	0.0	4.3	0.0	5.1	0.0	9.3
Cycle Q Clear Time (g_c), s	0.0	2.1	0.0	4.3	0.0	5.1	0.0	9.3
Lane Grp Cap (c), veh/h	0	1840	0	135	0	1684	0	604
V/C Ratio (X)	0.00	0.14	0.00	0.63	0.00	0.27	0.00	0.65
Avail Cap (c_a), veh/h	0	1840	0	352	0	1684	0	1113
Upstream Filter (I)	0.00	0.94	0.00	1.00	0.00	1.00	0.00	0.42
Uniform Delay (d1), s/veh	0.0	6.2	0.0	39.0	0.0	8.8	0.0	31.9
Incr Delay (d2), s/veh	0.0	0.1	0.0	4.7	0.0	0.4	0.0	0.5
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	6.4	0.0	43.7	0.0	9.2	0.0	32.4
1st-Term Q (Q1), veh/ln	0.0	0.7	0.0	1.7	0.0	1.7	0.0	3.6
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.2	0.0	0.1	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.8	0.0	1.9	0.0	1.8	0.0	3.6
%ile Storage Ratio (RQ%)	0.00	0.01	0.00	0.01	0.00	0.03	0.00	0.05
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		T+R		R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	0	0	87	0	87	0	133
Grp Sat Flow (s), veh/h/ln	0	1525	0	1689	0	1525	0	1525
Q Serve Time (g_s), s	0.0	0.0	0.0	4.5	0.0	1.9	0.0	6.8
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	4.5	0.0	1.9	0.0	6.8
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	0.37	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	821	0	134	0	751	0	269
V/C Ratio (X)	0.00	0.00	0.00	0.65	0.00	0.12	0.00	0.49
Avail Cap (c_a), veh/h	0	821	0	347	0	751	0	497
Upstream Filter (I)	0.00	0.00	0.00	1.00	0.00	1.00	0.00	0.42
Uniform Delay (d1), s/veh	0.0	0.0	0.0	39.1	0.0	8.2	0.0	31.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	5.3	0.0	0.3	0.0	0.6
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	44.4	0.0	8.5	0.0	31.5
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	1.8	0.0	0.6	0.0	2.4
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.2	0.0	0.1	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	2.0	0.0	0.7	0.0	2.4
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.01	0.00	0.01	0.00	0.03
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	26.8
HCM 6th LOS	C

Notes

Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	71	70	41	193	274	46	78	365	105	44	432	117
Future Volume (veh/h)	71	70	41	193	274	46	78	365	105	44	432	117
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1900
Adj Flow Rate, veh/h	78	77	45	212	301	51	86	401	115	48	475	129
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	97	155	84	243	476	80	106	1255	356	70	1761	464
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.06	0.07	0.07	0.15	0.16	0.16	0.07	0.48	0.48	0.04	0.45	0.45
Unsig. Movement Delay												
Ln Grp Delay, s/veh	46.6	34.2	35.1	56.6	29.7	29.8	62.2	12.3	12.3	43.1	12.3	12.8
Ln Grp LOS	D	C	D	E	C	C	E	B	B	D	B	B
Approach Vol, veh/h		200			564			602			652	
Approach Delay, s/veh		39.3			39.9			19.4			14.7	
Approach LOS		D			D			B			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Case No	2.0	4.0	2.0	4.0	2.0	4.0	2.0	4.0
Phs Duration (G+Y+Rc), s	7.5	37.9	15.0	9.6	9.1	36.3	8.7	15.9
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green (Gmax), s	5.0	18.5	10.5	18.0	5.0	18.5	9.4	19.1
Max Allow Headway (MAH), s	3.8	5.3	3.8	5.4	3.8	5.3	3.8	5.3
Max Q Clear (g_c+I1), s	4.0	8.7	11.0	4.6	5.7	7.5	5.3	8.8
Green Ext Time (g_e), s	0.0	2.2	0.0	0.5	0.0	2.9	0.0	1.4
Prob of Phs Call (p_c)	0.61	1.00	0.98	1.00	0.81	1.00	0.78	1.00
Prob of Max Out (p_x)	1.00	0.00	1.00	0.01	1.00	0.00	0.73	0.18

Left-Turn Movement Data								
Assigned Mvmt	1		3		5		7	
Mvmt Sat Flow, veh/h	1619		1619		1619		1619	

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		2630		2139		3872		2931

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		746		1162		1020		491

Left Lane Group Data								
Assigned Mvmt	1	0	3	0	5	0	7	0
Lane Assignment	L (Prot)		L (Prot)		L (Prot)		L (Prot)	

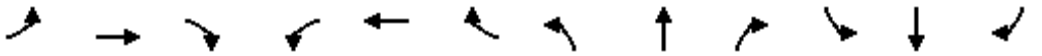
Lanes in Grp	1	0	1	0	1	0	1	0
Grp Vol (v), veh/h	48	0	212	0	86	0	78	0
Grp Sat Flow (s), veh/h/ln	1619	0	1619	0	1619	0	1619	0
Q Serve Time (g_s), s	2.0	0.0	9.0	0.0	3.7	0.0	3.3	0.0
Cycle Q Clear Time (g_c), s	2.0	0.0	9.0	0.0	3.7	0.0	3.3	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	70	0	243	0	106	0	97	0
V/C Ratio (X)	0.68	0.00	0.87	0.00	0.81	0.00	0.80	0.00
Avail Cap (c_a), veh/h	116	0	243	0	116	0	217	0
Upstream Filter (I)	0.90	0.00	1.00	0.00	0.95	0.00	1.00	0.00
Uniform Delay (d1), s/veh	33.0	0.0	29.1	0.0	32.3	0.0	32.5	0.0
Incr Delay (d2), s/veh	10.1	0.0	27.5	0.0	30.0	0.0	14.1	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	43.1	0.0	56.6	0.0	62.2	0.0	46.6	0.0
1st-Term Q (Q1), veh/ln	0.8	0.0	3.3	0.0	1.4	0.0	1.3	0.0
2nd-Term Q (Q2), veh/ln	0.2	0.0	1.9	0.0	0.9	0.0	0.4	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
%ile Back of Q (50%), veh/ln	1.0	0.0	5.2	0.0	2.3	0.0	1.6	0.0
%ile Storage Ratio (RQ%)	0.14	0.00	0.03	0.00	0.28	0.00	0.19	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	1	0	1	0	2	0	1
Grp Vol (v), veh/h	0	259	0	60	0	400	0	174
Grp Sat Flow (s), veh/h/ln	0	1710	0	1710	0	1638	0	1710
Q Serve Time (g_s), s	0.0	6.5	0.0	2.4	0.0	5.3	0.0	6.6
Cycle Q Clear Time (g_c), s	0.0	6.5	0.0	2.4	0.0	5.3	0.0	6.6
Lane Grp Cap (c), veh/h	0	816	0	124	0	1490	0	278
V/C Ratio (X)	0.00	0.32	0.00	0.49	0.00	0.27	0.00	0.63
Avail Cap (c_a), veh/h	0	816	0	440	0	1490	0	467
Upstream Filter (I)	0.00	0.95	0.00	1.00	0.00	0.90	0.00	1.00
Uniform Delay (d1), s/veh	0.0	11.3	0.0	31.2	0.0	11.9	0.0	27.3
Incr Delay (d2), s/veh	0.0	1.0	0.0	3.0	0.0	0.4	0.0	2.3
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	12.3	0.0	34.2	0.0	12.3	0.0	29.7
1st-Term Q (Q1), veh/ln	0.0	2.2	0.0	0.9	0.0	1.8	0.0	2.6
2nd-Term Q (Q2), veh/ln	0.0	0.2	0.0	0.1	0.0	0.1	0.0	0.2

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	2.4	0.0	1.0	0.0	1.8	0.0	2.8
%ile Storage Ratio (RQ%)	0.00	0.06	0.00	0.01	0.00	0.02	0.00	0.02
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R		T+R		T+R		T+R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	257	0	62	0	204	0	178
Grp Sat Flow (s), veh/h/ln	0	1666	0	1591	0	1616	0	1712
Q Serve Time (g_s), s	0.0	6.7	0.0	2.6	0.0	5.5	0.0	6.8
Cycle Q Clear Time (g_c), s	0.0	6.7	0.0	2.6	0.0	5.5	0.0	6.8
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.45	0.00	0.73	0.00	0.63	0.00	0.29
Lane Grp Cap (c), veh/h	0	795	0	115	0	735	0	278
V/C Ratio (X)	0.00	0.32	0.00	0.54	0.00	0.28	0.00	0.64
Avail Cap (c_a), veh/h	0	795	0	409	0	735	0	467
Upstream Filter (I)	0.00	0.95	0.00	1.00	0.00	0.90	0.00	1.00
Uniform Delay (d1), s/veh	0.0	11.3	0.0	31.3	0.0	11.9	0.0	27.4
Incr Delay (d2), s/veh	0.0	1.0	0.0	3.8	0.0	0.8	0.0	2.4
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	12.3	0.0	35.1	0.0	12.8	0.0	29.8
1st-Term Q (Q1), veh/ln	0.0	2.2	0.0	1.0	0.0	1.8	0.0	2.7
2nd-Term Q (Q2), veh/ln	0.0	0.2	0.0	0.1	0.0	0.2	0.0	0.2
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	2.4	0.0	1.1	0.0	2.0	0.0	2.9
%ile Storage Ratio (RQ%)	0.00	0.06	0.00	0.01	0.00	0.02	0.00	0.02
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	25.6
HCM 6th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	267	316	323	404	603	0	0	319	220
Future Volume (veh/h)	0	0	0	267	316	323	404	603	0	0	319	220
Number				3	8	18	5	2	12	1	6	16
Initial Q, veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln				1700	1800	1800	1700	1800	0	0	1800	1900
Adj Flow Rate, veh/h				284	336	344	430	641	0	0	339	234
Peak Hour Factor				0.94	0.94	0.94	0.94	0.94	0.95	0.95	0.94	0.94
Percent Heavy Veh, %				0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence				Yes			Yes			No		
Cap, veh/h				327	397	436	446	1971	0	0	900	424
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00
Prop Arrive On Green				0.35	0.35	0.35	0.55	1.00	0.00	0.00	0.26	0.26
Unsig. Movement Delay												
Ln Grp Delay, s/veh				45.5	0.0	40.2	54.6	0.4	0.0	0.0	37.2	42.6
Ln Grp LOS				D	A	D	D	A	A	A	D	D
Approach Vol, veh/h					964			1071			573	
Approach Delay, s/veh					43.1			22.1			39.4	
Approach LOS					D			C			D	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2	8		5	6		
Case No		4.0	12.0		2.0	7.0		
Phs Duration (G+Y+Rc), s		73.7	46.3		37.6	36.1		
Change Period (Y+Rc), s		4.5	4.5		4.5	4.5		
Max Green (Gmax), s		59.5	51.5		36.5	18.5		
Max Allow Headway (MAH), s		5.2	5.4		3.8	4.7		
Max Q Clear (g_c+I1), s		2.0	35.9		32.5	17.0		
Green Ext Time (g_e), s		5.2	5.9		0.6	0.5		
Prob of Phs Call (p_c)		1.00	1.00		1.00	1.00		
Prob of Max Out (p_x)		0.00	0.33		0.91	0.00		
Left-Turn Movement Data								
Assigned Mvmt			3		5	1		
Mvmt Sat Flow, veh/h			939		1619	0		
Through Movement Data								
Assigned Mvmt		2	8			6		
Mvmt Sat Flow, veh/h		3510	1140			3510		
Right-Turn Movement Data								
Assigned Mvmt		12	18			16		
Mvmt Sat Flow, veh/h		0	1250			1610		
Left Lane Group Data								
Assigned Mvmt	0	0	3	0	5	1	0	0
Lane Assignment			L+T		L (Prot)			

Lanes in Grp	0	0	1	0	1	0	0	0
Grp Vol (v), veh/h	0	0	530	0	430	0	0	0
Grp Sat Flow (s), veh/h/ln	0	0	1753	0	1619	0	0	0
Q Serve Time (g_s), s	0.0	0.0	33.9	0.0	30.5	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	33.9	0.0	30.5	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	31.6	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	0.00	0.54	0.00	1.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	611	0	446	0	0	0
V/C Ratio (X)	0.00	0.00	0.87	0.00	0.96	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	0	752	0	492	0	0	0
Upstream Filter (I)	0.00	0.00	1.00	0.00	0.90	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	36.5	0.0	26.3	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	9.0	0.0	28.2	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	45.5	0.0	54.6	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	14.3	0.0	8.4	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	1.5	0.0	3.5	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	0.00	1.00	0.00	1.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	15.9	0.0	11.9	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.38	0.00	1.99	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	8	0	0	6	0	0
Lane Assignment		T				T		
Lanes in Grp	0	2	0	0	0	2	0	0
Grp Vol (v), veh/h	0	641	0	0	0	339	0	0
Grp Sat Flow (s), veh/h/ln	0	1710	0	0	0	1710	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	9.7	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	9.7	0.0	0.0
Lane Grp Cap (c), veh/h	0	1971	0	0	0	900	0	0
V/C Ratio (X)	0.00	0.33	0.00	0.00	0.00	0.38	0.00	0.00
Avail Cap (c_a), veh/h	0	1971	0	0	0	900	0	0
Upstream Filter (I)	0.00	0.90	0.00	0.00	0.00	0.88	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	36.2	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.4	0.0	0.0	0.0	1.1	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.4	0.0	0.0	0.0	37.2	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	4.1	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.1	0.0	0.0	0.0	4.2	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.11	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	18	0	0	16	0	0
Lane Assignment			T+R			R		
Lanes in Grp	0	0	1	0	0	1	0	0
Grp Vol (v), veh/h	0	0	434	0	0	234	0	0
Grp Sat Flow (s), veh/h/ln	0	0	1575	0	0	1610	0	0
Q Serve Time (g_s), s	0.0	0.0	29.7	0.0	0.0	15.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	29.7	0.0	0.0	15.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.00	0.79	0.00	0.00	1.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	549	0	0	424	0	0
V/C Ratio (X)	0.00	0.00	0.79	0.00	0.00	0.55	0.00	0.00
Avail Cap (c_a), veh/h	0	0	676	0	0	424	0	0
Upstream Filter (I)	0.00	0.00	1.00	0.00	0.00	0.88	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	35.1	0.0	0.0	38.1	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	5.1	0.0	0.0	4.5	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	40.2	0.0	0.0	42.6	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	11.3	0.0	0.0	5.9	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.8	0.0	0.0	0.5	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	12.0	0.0	0.0	6.5	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.29	0.00	0.00	0.17	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	33.7
HCM 6th LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	376	6	523	0	0	0	0	632	98	54	536	0
Future Volume (veh/h)	376	6	523	0	0	0	0	632	98	54	536	0
Number	7	4	14				5	2	12	1	6	16
Initial Q, veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1700	1800	1800				0	1800	1800	1700	1900	0
Adj Flow Rate, veh/h	422	7	588				0	710	110	61	602	0
Peak Hour Factor	0.89	0.89	0.89				0.95	0.89	0.89	0.89	0.89	0.95
Percent Heavy Veh, %	0	0	0				0	0	0	0	0	0
Opposing Right Turn Influence	Yes						No			Yes		
Cap, veh/h	698	12	631				0	1460	651	76	1845	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	2.00	2.00	2.00	2.00	1.00
Prop Arrive On Green	0.41	0.41	0.41				0.00	0.85	0.85	0.09	1.00	0.00
Unsig. Movement Delay												
Ln Grp Delay, s/veh	28.8	0.0	52.9				0.0	6.7	5.7	69.9	0.4	0.0
Ln Grp LOS	C	A	D				A	A	A	E	A	A
Approach Vol, veh/h		1017						820			663	
Approach Delay, s/veh		42.7						6.5			6.8	
Approach LOS		D						A			A	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Case No	2.0	7.0		12.0		4.0		
Phs Duration (G+Y+Rc), s	10.1	55.7		54.2		65.8		
Change Period (Y+Rc), s	4.5	4.5		4.5		4.5		
Max Green (Gmax), s	12.5	41.5		52.5		58.5		
Max Allow Headway (MAH), s	3.8	5.1		5.5		5.2		
Max Q Clear (g_c+I1), s	6.4	8.2		46.1		2.0		
Green Ext Time (g_e), s	0.0	6.0		3.5		4.8		
Prob of Phs Call (p_c)	0.87	1.00		1.00		1.00		
Prob of Max Out (p_x)	0.06	0.00		0.92		0.00		

Left-Turn Movement Data								
Assigned Mvmt	1	5		7				
Mvmt Sat Flow, veh/h	1619	0		1688				

Through Movement Data								
Assigned Mvmt		2		4		6		
Mvmt Sat Flow, veh/h		3510		28		3705		

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		
Mvmt Sat Flow, veh/h		1525		1525		0		

Left Lane Group Data								
Assigned Mvmt	1	5	0	7	0	0	0	0
Lane Assignment	L (Prot)			L+T				

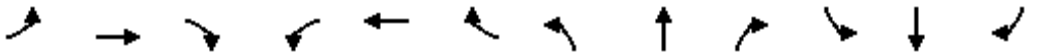
Lanes in Grp	1	0	0	1	0	0	0	0
Grp Vol (v), veh/h	61	0	0	429	0	0	0	0
Grp Sat Flow (s), veh/h/ln	1619	0	0	1716	0	0	0	0
Q Serve Time (g_s), s	4.4	0.0	0.0	23.5	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	4.4	0.0	0.0	23.5	0.0	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	51.2	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	0.98	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	76	0	0	710	0	0	0	0
V/C Ratio (X)	0.80	0.00	0.00	0.60	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	169	0	0	751	0	0	0	0
Upstream Filter (I)	0.91	0.00	0.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	53.8	0.0	0.0	27.5	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	16.1	0.0	0.0	1.3	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	69.9	0.0	0.0	28.8	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	1.7	0.0	0.0	9.5	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.3	0.0	0.0	0.2	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00
%ile Back of Q (50%), veh/ln	2.1	0.0	0.0	9.8	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.35	0.00	0.00	0.29	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	0
Lane Assignment		T				T		
Lanes in Grp	0	2	0	0	0	2	0	0
Grp Vol (v), veh/h	0	710	0	0	0	602	0	0
Grp Sat Flow (s), veh/h/ln	0	1710	0	0	0	1805	0	0
Q Serve Time (g_s), s	0.0	6.2	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	6.2	0.0	0.0	0.0	0.0	0.0	0.0
Lane Grp Cap (c), veh/h	0	1460	0	0	0	1845	0	0
V/C Ratio (X)	0.00	0.49	0.00	0.00	0.00	0.33	0.00	0.00
Avail Cap (c_a), veh/h	0	1460	0	0	0	1845	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	0.91	0.00	0.00
Uniform Delay (d1), s/veh	0.0	5.5	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	1.2	0.0	0.0	0.0	0.4	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	6.7	0.0	0.0	0.0	0.4	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	1.6	0.0	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.2	0.0	0.0	0.0	0.1	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	1.8	0.0	0.0	0.0	0.1	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.03	0.00	0.00	0.00	0.01	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	0
Lane Assignment		R		T+R				
Lanes in Grp	0	1	0	1	0	0	0	0
Grp Vol (v), veh/h	0	110	0	588	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	1525	0	1525	0	0	0	0
Q Serve Time (g_s), s	0.0	1.5	0.0	44.1	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	1.5	0.0	44.1	0.0	0.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	651	0	631	0	0	0	0
V/C Ratio (X)	0.00	0.17	0.00	0.93	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	651	0	667	0	0	0	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	5.1	0.0	33.6	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.6	0.0	19.4	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	5.7	0.0	52.9	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.5	0.0	15.9	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	3.4	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.6	0.0	19.3	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.01	0.00	0.57	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	21.3
HCM 6th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	278	444	790	987	0	0	0	0	177	0	197
Future Volume (veh/h)	0	278	444	790	987	0	0	0	0	177	0	197
Number	7	4	14	3	8	18				1	6	16
Initial Q, veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	0	1800	1800	1600	1800	0				1700	1800	1900
Adj Flow Rate, veh/h	0	293	0	832	1039	0				186	0	207
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95				0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0				0	0	0
Opposing Right Turn Influence	No			Yes						Yes		
Cap, veh/h	0	1320		743	2400	0				291	0	273
HCM Platoon Ratio	1.00	2.00	2.00	2.00	2.00	1.00				1.00	1.00	1.00
Prop Arrive On Green	0.00	0.77	0.00	0.50	1.00	0.00				0.17	0.00	0.17
Unsig. Movement Delay												
Ln Grp Delay, s/veh	0.0	5.4	0.0	84.0	0.4	0.0				29.4	0.0	32.0
Ln Grp LOS	A	A		F	A	A				C	A	C
Approach Vol, veh/h		293			1871						393	
Approach Delay, s/veh		5.4			37.6						30.8	
Approach LOS		A			D						C	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	6		3	4				8
Case No	11.0		2.0	7.0				4.0
Phs Duration (G+Y+Rc), s	16.4		22.1	31.5				53.6
Change Period (Y+Rc), s	4.5		4.5	4.5				4.5
Max Green (Gmax), s	20.9		17.6	18.0				40.1
Max Allow Headway (MAH), s	4.7		3.8	5.2				5.2
Max Q Clear (g_c+I1), s	10.6		19.6	3.6				2.0
Green Ext Time (g_e), s	1.3		0.0	1.5				9.5
Prob of Phs Call (p_c)	1.00		1.00	1.00				1.00
Prob of Max Out (p_x)	0.11		1.00	0.00				0.00

Left-Turn Movement Data												
Assigned Mvmt		1		3	7							
Mvmt Sat Flow, veh/h		1714		2956	0							

Through Movement Data												
Assigned Mvmt		6			4				8			
Mvmt Sat Flow, veh/h		0			3510				3510			

Right-Turn Movement Data												
Assigned Mvmt		16			14				18			
Mvmt Sat Flow, veh/h		1610			1525				0			

Left Lane Group Data												
Assigned Mvmt		1	0	3	7	0	0	0	0			
Lane Assignment		L+T		L (Prot)								

Lanes in Grp	1	0	2	0	0	0	0	0
Grp Vol (v), veh/h	186	0	832	0	0	0	0	0
Grp Sat Flow (s), veh/h/ln	1714	0	1478	0	0	0	0	0
Q Serve Time (g_s), s	7.1	0.0	17.6	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	7.1	0.0	17.6	0.0	0.0	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	27.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	291	0	743	0	0	0	0	0
V/C Ratio (X)	0.64	0.00	1.12	0.00	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	512	0	743	0	0	0	0	0
Upstream Filter (I)	1.00	0.00	0.70	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	27.1	0.0	17.4	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	2.3	0.0	66.6	0.0	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	29.4	0.0	84.0	0.0	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	2.8	0.0	3.5	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.2	0.0	6.9	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	1.00	1.00	0.00	0.00	0.00	0.00
%ile Back of Q (50%), veh/ln	3.0	0.0	10.3	0.0	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.23	0.00	0.63	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	22.2	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	6	0	0	4	0	0	0	8
Lane Assignment				T				T
Lanes in Grp	0	0	0	2	0	0	0	2
Grp Vol (v), veh/h	0	0	0	293	0	0	0	1039
Grp Sat Flow (s), veh/h/ln	0	0	0	1710	0	0	0	1710
Q Serve Time (g_s), s	0.0	0.0	0.0	1.6	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	1.6	0.0	0.0	0.0	0.0
Lane Grp Cap (c), veh/h	0	0	0	1320	0	0	0	2400
V/C Ratio (X)	0.00	0.00	0.00	0.22	0.00	0.00	0.00	0.43
Avail Cap (c_a), veh/h	0	0	0	1320	0	0	0	2400
Upstream Filter (I)	0.00	0.00	0.00	0.82	0.00	0.00	0.00	0.70
Uniform Delay (d1), s/veh	0.0	0.0	0.0	5.1	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.4
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	5.4	0.0	0.0	0.0	0.4
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1

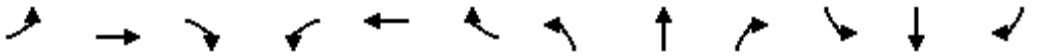
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	1.00	0.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.6	0.0	0.0	0.0	0.1
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.01
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	16	0	0	14	0	0	0	18
Lane Assignment	R			R				
Lanes in Grp	1	0	0	1	0	0	0	0
Grp Vol (v), veh/h	207	0	0	0	0	0	0	0
Grp Sat Flow (s), veh/h/ln	1610	0	0	1525	0	0	0	0
Q Serve Time (g_s), s	8.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	8.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	1.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	273	0	0	589	0	0	0	0
V/C Ratio (X)	0.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	481	0	0	589	0	0	0	0
Upstream Filter (I)	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	27.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	4.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	32.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	3.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	1.00	0.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	3.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	32.8
HCM 6th LOS	C

Notes

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	66	389	0	0	1375	0	399	2	291	0	0	0
Future Volume (veh/h)	66	389	0	0	1375	0	399	2	291	0	0	0
Number	7	4	14	3	8	18	5	2	12			
Initial Q, veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1700	1800	0	0	1800	1800	1600	1800	1800			
Adj Flow Rate, veh/h	72	423	0	0	1495	0	435	0	316			
Peak Hour Factor	0.92	0.92	0.95	0.95	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0			
Opposing Right Turn Influence	Yes			No			Yes					
Cap, veh/h	94	2221	0	0	2537	787	611	0	612			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	2.00	1.00	1.00	1.00	1.00			
Prop Arrive On Green	0.12	1.00	0.00	0.00	1.00	0.00	0.20	0.00	0.20			
Unsig. Movement Delay												
Ln Grp Delay, s/veh	37.5	0.2	0.0	0.0	1.0	0.0	23.9	0.0	22.1			
Ln Grp LOS	D	A	A	A	A	A	C	A	C			
Approach Vol, veh/h		495			1495			751				
Approach Delay, s/veh		5.6			1.0			23.1				
Approach LOS		A			A			C				

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2		4			7	8
Case No		9.0		4.0			2.0	7.0
Phs Duration (G+Y+Rc), s		16.5		43.5			8.0	35.5
Change Period (Y+Rc), s		4.5		4.5			4.5	4.5
Max Green (Gmax), s		18.5		32.5			5.5	22.5
Max Allow Headway (MAH), s		3.9		5.2			3.8	5.2
Max Q Clear (g_c+I1), s		10.0		2.0			4.6	2.0
Green Ext Time (g_e), s		2.0		3.0			0.0	11.3
Prob of Phs Call (p_c)		1.00		1.00			0.70	1.00
Prob of Max Out (p_x)		0.22		0.00			1.00	0.00

Left-Turn Movement Data								
Assigned Mvmt		5					7	3
Mvmt Sat Flow, veh/h		3048					1619	0

Through Movement Data								
Assigned Mvmt		2		4				8
Mvmt Sat Flow, veh/h		0		3510				5076

Right-Turn Movement Data								
Assigned Mvmt		12		14				18
Mvmt Sat Flow, veh/h		3051		0				1525

Left Lane Group Data								
Assigned Mvmt	0	5	0	0	0	0	7	3
Lane Assignment		L					L (Prot)	

Lanes in Grp	0	2	0	0	0	0	1	0
Grp Vol (v), veh/h	0	435	0	0	0	0	72	0
Grp Sat Flow (s), veh/h/ln	0	1524	0	0	0	0	1619	0
Q Serve Time (g_s), s	0.0	8.0	0.0	0.0	0.0	0.0	2.6	0.0
Cycle Q Clear Time (g_c), s	0.0	8.0	0.0	0.0	0.0	0.0	2.6	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	1524	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	31.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	0	611	0	0	0	0	94	0
V/C Ratio (X)	0.00	0.71	0.00	0.00	0.00	0.00	0.76	0.00
Avail Cap (c_a), veh/h	0	940	0	0	0	0	148	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	0.00	0.95	0.00
Uniform Delay (d1), s/veh	0.0	22.4	0.0	0.0	0.0	0.0	26.1	0.0
Incr Delay (d2), s/veh	0.0	1.6	0.0	0.0	0.0	0.0	11.4	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	23.9	0.0	0.0	0.0	0.0	37.5	0.0
1st-Term Q (Q1), veh/ln	0.0	2.6	0.0	0.0	0.0	0.0	0.9	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	0.0	0.3	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	0.00	0.00	0.00	1.00	1.00
%ile Back of Q (50%), veh/ln	0.0	2.8	0.0	0.0	0.0	0.0	1.2	0.0
%ile Storage Ratio (RQ%)	0.00	0.13	0.00	0.00	0.00	0.00	0.07	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	0	0	8
Lane Assignment				T				T
Lanes in Grp	0	0	0	2	0	0	0	3
Grp Vol (v), veh/h	0	0	0	423	0	0	0	1495
Grp Sat Flow (s), veh/h/ln	0	0	0	1710	0	0	0	1638
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lane Grp Cap (c), veh/h	0	0	0	2221	0	0	0	2537
V/C Ratio (X)	0.00	0.00	0.00	0.19	0.00	0.00	0.00	0.59
Avail Cap (c_a), veh/h	0	0	0	2221	0	0	0	2537
Upstream Filter (I)	0.00	0.00	0.00	0.95	0.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.2	0.0	0.0	0.0	1.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	0.2	0.0	0.0	0.0	1.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.2

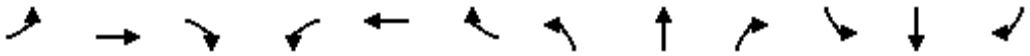
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.2
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	0	0	18
Lane Assignment		R						R
Lanes in Grp	0	2	0	0	0	0	0	1
Grp Vol (v), veh/h	0	316	0	0	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	1525	0	0	0	0	0	1525
Q Serve Time (g_s), s	0.0	5.5	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	5.5	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	0.00	0.00	0.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	612	0	0	0	0	0	787
V/C Ratio (X)	0.00	0.52	0.00	0.00	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	941	0	0	0	0	0	787
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	21.4	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	22.1	0.0	0.0	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	1.8	0.0	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	1.9	0.0	0.0	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.09	0.00	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	7.9
HCM 6th LOS	A

Notes

User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	52	216	22	57	378	341	17	6	24	288	243	322
Future Volume (veh/h)	52	216	22	57	378	341	17	6	24	288	243	322
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1900
Adj Flow Rate, veh/h	55	227	23	60	398	359	18	6	25	303	256	339
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	71	859	383	75	456	386	33	485	411	337	782	697
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.09	0.50	0.50	0.09	0.51	0.51	0.02	0.27	0.27	0.21	0.46	0.46
Unsig. Movement Delay												
Ln Grp Delay, s/veh	55.2	15.8	15.1	43.0	25.0	31.8	51.7	21.5	22.0	54.8	15.0	17.6
Ln Grp LOS	E	B	B	D	C	C	D	C	C	D	B	B
Approach Vol, veh/h		305			817			49			898	
Approach Delay, s/veh		22.9			29.3			32.8			29.4	
Approach LOS		C			C			C			C	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Case No	2.0	3.0	2.0	3.0	2.0	4.0	2.0	3.0
Phs Duration (G+Y+Rc), s	21.2	26.1	8.2	24.6	6.1	41.1	8.0	24.7
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green (Gmax), s	17.5	18.3	6.9	19.3	5.0	30.8	5.0	21.2
Max Allow Headway (MAH), s	3.8	4.3	3.8	5.1	3.8	5.4	3.8	4.7
Max Q Clear (g_c+I1), s	16.6	3.0	4.9	5.0	2.9	14.4	4.7	19.6
Green Ext Time (g_e), s	0.1	0.0	0.0	1.2	0.0	3.5	0.0	0.7
Prob of Phs Call (p_c)	1.00	1.00	0.74	1.00	0.33	1.00	0.71	1.00
Prob of Max Out (p_x)	1.00	0.00	1.00	0.01	1.00	0.00	1.00	1.00

Left-Turn Movement Data								
Assigned Mvmt	1		3		5		7	
Mvmt Sat Flow, veh/h	1619		1619		1619		1619	

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		1800		3420		1710		1800

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1525		1525		1525		1525

Left Lane Group Data								
Assigned Mvmt	1	0	3	0	5	0	7	0
Lane Assignment	L (Prot)		L (Prot)		L (Prot)		L (Prot)	

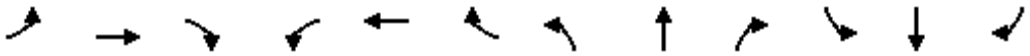
Lanes in Grp	1	0	1	0	1	0	1	0
Grp Vol (v), veh/h	303	0	60	0	18	0	55	0
Grp Sat Flow (s), veh/h/ln	1619	0	1619	0	1619	0	1619	0
Q Serve Time (g_s), s	14.6	0.0	2.9	0.0	0.9	0.0	2.7	0.0
Cycle Q Clear Time (g_c), s	14.6	0.0	2.9	0.0	0.9	0.0	2.7	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	337	0	75	0	33	0	71	0
V/C Ratio (X)	0.90	0.00	0.81	0.00	0.54	0.00	0.77	0.00
Avail Cap (c_a), veh/h	354	0	140	0	101	0	101	0
Upstream Filter (I)	1.00	0.00	0.35	0.00	1.00	0.00	0.94	0.00
Uniform Delay (d1), s/veh	30.8	0.0	36.0	0.0	38.8	0.0	36.1	0.0
Incr Delay (d2), s/veh	24.0	0.0	7.0	0.0	12.9	0.0	19.1	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	54.8	0.0	43.0	0.0	51.7	0.0	55.2	0.0
1st-Term Q (Q1), veh/ln	5.5	0.0	1.1	0.0	0.3	0.0	1.0	0.0
2nd-Term Q (Q2), veh/ln	2.2	0.0	0.1	0.0	0.1	0.0	0.4	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
%ile Back of Q (50%), veh/ln	7.7	0.0	1.2	0.0	0.5	0.0	1.4	0.0
%ile Storage Ratio (RQ%)	1.93	0.00	0.05	0.00	0.05	0.00	0.13	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	1	0	2	0	1	0	1
Grp Vol (v), veh/h	0	6	0	227	0	256	0	398
Grp Sat Flow (s), veh/h/ln	0	1800	0	1710	0	1710	0	1800
Q Serve Time (g_s), s	0.0	0.2	0.0	3.0	0.0	7.6	0.0	15.7
Cycle Q Clear Time (g_c), s	0.0	0.2	0.0	3.0	0.0	7.6	0.0	15.7
Lane Grp Cap (c), veh/h	0	485	0	859	0	782	0	456
V/C Ratio (X)	0.00	0.01	0.00	0.26	0.00	0.33	0.00	0.87
Avail Cap (c_a), veh/h	0	485	0	859	0	782	0	477
Upstream Filter (I)	0.00	1.00	0.00	0.94	0.00	1.00	0.00	0.35
Uniform Delay (d1), s/veh	0.0	21.4	0.0	15.7	0.0	13.9	0.0	18.6
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.2	0.0	1.1	0.0	6.4
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	21.5	0.0	15.8	0.0	15.0	0.0	25.0
1st-Term Q (Q1), veh/ln	0.0	0.1	0.0	1.1	0.0	2.8	0.0	4.2
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.8

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.1	0.0	1.1	0.0	3.0	0.0	5.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.01	0.00	0.52	0.00	0.21
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		R		T+R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	25	0	23	0	339	0	359
Grp Sat Flow (s), veh/h/ln	0	1525	0	1525	0	1525	0	1525
Q Serve Time (g_s), s	0.0	1.0	0.0	0.6	0.0	12.4	0.0	17.6
Cycle Q Clear Time (g_c), s	0.0	1.0	0.0	0.6	0.0	12.4	0.0	17.6
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	411	0	383	0	697	0	386
V/C Ratio (X)	0.00	0.06	0.00	0.06	0.00	0.49	0.00	0.93
Avail Cap (c_a), veh/h	0	411	0	383	0	697	0	404
Upstream Filter (I)	0.00	1.00	0.00	0.94	0.00	1.00	0.00	0.35
Uniform Delay (d1), s/veh	0.0	21.7	0.0	15.1	0.0	15.2	0.0	19.1
Incr Delay (d2), s/veh	0.0	0.3	0.0	0.1	0.0	2.4	0.0	12.7
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	22.0	0.0	15.1	0.0	17.6	0.0	31.8
1st-Term Q (Q1), veh/ln	0.0	0.3	0.0	0.2	0.0	4.0	0.0	3.9
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.5	0.0	1.4
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.4	0.0	0.2	0.0	4.5	0.0	5.2
%ile Storage Ratio (RQ%)	0.00	0.02	0.00	0.00	0.00	0.77	0.00	0.22
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	28.5
HCM 6th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	114	298	127	32	607	306	51	313	21	149	9	149
Future Volume (veh/h)	114	298	127	32	607	306	51	313	21	149	9	149
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1600	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1900
Adj Flow Rate, veh/h	119	310	132	33	632	319	53	326	22	155	9	155
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	175	703	596	53	655	555	374	874	390	156	34	593
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.12	0.78	0.78	0.06	0.73	0.36	0.26	0.26	0.26	0.10	0.41	0.41
Unsig. Movement Delay												
Ln Grp Delay, s/veh	41.8	6.2	5.7	48.6	35.6	21.7	24.1	25.7	22.8	106.5	0.0	16.7
Ln Grp LOS	D	A	A	D	D	C	C	C	C	F	A	B
Approach Vol, veh/h		561			984			401			319	
Approach Delay, s/veh		13.6			31.6			25.3			60.4	
Approach LOS		B			C			C			E	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4		6	7	8
Case No	2.0	5.3	2.0	3.0		4.0	2.0	3.0
Phs Duration (G+Y+Rc), s	12.2	24.9	7.1	35.8		37.1	9.2	33.6
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5		4.5	4.5	4.5
Max Green (Gmax), s	7.7	18.8	5.7	29.8		31.0	5.0	30.5
Max Allow Headway (MAH), s	3.8	5.1	3.8	4.9		5.6	3.8	4.9
Max Q Clear (g_c+I1), s	9.7	8.3	3.6	6.6		7.7	5.1	27.6
Green Ext Time (g_e), s	0.0	1.7	0.0	2.3		1.0	0.0	1.5
Prob of Phs Call (p_c)	0.97	1.00	0.52	1.00		1.00	0.93	1.00
Prob of Max Out (p_x)	1.00	0.00	1.00	0.00		0.00	1.00	1.00

Left-Turn Movement Data								
Assigned Mvmt	1	5	3				7	
Mvmt Sat Flow, veh/h	1619	1111	1619				2956	

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		3420		1800		84		1800

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1525		1525		1454		1525

Left Lane Group Data								
Assigned Mvmt	1	5	3	0	0	0	7	0
Lane Assignment	L (Prot)	L	L (Prot)				L (Prot)	

Lanes in Grp	1	1	1	0	0	0	2	0
Grp Vol (v), veh/h	155	53	33	0	0	0	119	0
Grp Sat Flow (s), veh/h/ln	1619	1111	1619	0	0	0	1478	0
Q Serve Time (g_s), s	7.7	3.0	1.6	0.0	0.0	0.0	3.1	0.0
Cycle Q Clear Time (g_c), s	7.7	3.0	1.6	0.0	0.0	0.0	3.1	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	1111	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	20.4	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	20.4	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	1.00	1.00	0.00	0.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	156	374	53	0	0	0	175	0
V/C Ratio (X)	0.99	0.14	0.63	0.00	0.00	0.00	0.68	0.00
Avail Cap (c_a), veh/h	156	374	115	0	0	0	185	0
Upstream Filter (I)	1.00	1.00	1.00	0.00	0.00	0.00	0.78	0.00
Uniform Delay (d1), s/veh	36.1	23.3	36.9	0.0	0.0	0.0	34.6	0.0
Incr Delay (d2), s/veh	70.4	0.8	11.6	0.0	0.0	0.0	7.2	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	106.5	24.1	48.6	0.0	0.0	0.0	41.8	0.0
1st-Term Q (Q1), veh/ln	2.9	0.8	0.6	0.0	0.0	0.0	1.0	0.0
2nd-Term Q (Q2), veh/ln	3.0	0.1	0.2	0.0	0.0	0.0	0.2	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	1.00	1.00	0.00	0.00	0.00	1.00	0.00
%ile Back of Q (50%), veh/ln	6.0	0.8	0.8	0.0	0.0	0.0	1.2	0.0
%ile Storage Ratio (RQ%)	0.73	0.14	0.01	0.00	0.00	0.00	0.10	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T				T
Lanes in Grp	0	2	0	1	0	0	0	1
Grp Vol (v), veh/h	0	326	0	310	0	0	0	632
Grp Sat Flow (s), veh/h/ln	0	1710	0	1800	0	0	0	1800
Q Serve Time (g_s), s	0.0	6.3	0.0	4.6	0.0	0.0	0.0	25.6
Cycle Q Clear Time (g_c), s	0.0	6.3	0.0	4.6	0.0	0.0	0.0	25.6
Lane Grp Cap (c), veh/h	0	874	0	703	0	0	0	655
V/C Ratio (X)	0.00	0.37	0.00	0.44	0.00	0.00	0.00	0.96
Avail Cap (c_a), veh/h	0	874	0	703	0	0	0	686
Upstream Filter (I)	0.00	1.00	0.00	0.78	0.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	24.5	0.0	5.8	0.0	0.0	0.0	10.4
Incr Delay (d2), s/veh	0.0	1.2	0.0	0.3	0.0	0.0	0.0	25.2
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	25.7	0.0	6.2	0.0	0.0	0.0	35.6
1st-Term Q (Q1), veh/ln	0.0	2.5	0.0	1.3	0.0	0.0	0.0	3.6
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.1	0.0	0.0	0.0	4.6

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	2.6	0.0	1.3	0.0	0.0	0.0	8.2
%ile Storage Ratio (RQ%)	0.00	0.23	0.00	0.05	0.00	0.00	0.00	0.09
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		R		T+R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	22	0	132	0	164	0	319
Grp Sat Flow (s), veh/h/ln	0	1525	0	1525	0	1538	0	1525
Q Serve Time (g_s), s	0.0	0.9	0.0	1.8	0.0	5.7	0.0	13.5
Cycle Q Clear Time (g_c), s	0.0	0.9	0.0	1.8	0.0	5.7	0.0	13.5
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	0.95	0.00	1.00
Lane Grp Cap (c), veh/h	0	390	0	596	0	628	0	555
V/C Ratio (X)	0.00	0.06	0.00	0.22	0.00	0.26	0.00	0.57
Avail Cap (c_a), veh/h	0	390	0	596	0	628	0	582
Upstream Filter (I)	0.00	1.00	0.00	0.78	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	22.5	0.0	5.5	0.0	15.7	0.0	20.4
Incr Delay (d2), s/veh	0.0	0.3	0.0	0.1	0.0	1.0	0.0	1.3
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	22.8	0.0	5.7	0.0	16.7	0.0	21.7
1st-Term Q (Q1), veh/ln	0.0	0.3	0.0	0.5	0.0	1.9	0.0	4.5
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.2
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.3	0.0	0.5	0.0	2.1	0.0	4.7
%ile Storage Ratio (RQ%)	0.00	0.12	0.00	0.02	0.00	0.25	0.00	0.05
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	30.1
HCM 6th LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	0	0	0	0	0	0	0	0	0
Future Volume (veh/h)	0	0	0	0	0	0	0	0	0	0	0	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	0	1444	0	0	1444	0	0	2075	0	0	1444	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Unsig. Movement Delay												
Ln Grp Delay, s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Ln Grp LOS	A	A	A	A	A	A	A	A	A	A	A	A
Approach Vol, veh/h		0			0			0			0	
Approach Delay, s/veh		0.0			0.0			0.0			0.0	
Approach LOS												

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Case No		8.0		8.0		8.0		8.0
Phs Duration (G+Y+Rc), s		22.5		22.5		22.5		22.5
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5
Max Green (Gmax), s		18.0		18.0		18.0		18.0
Max Allow Headway (MAH), s		0.0		0.0		0.0		0.0
Max Q Clear (g_c+I1), s		0.0		0.0		0.0		0.0
Green Ext Time (g_e), s		0.0		0.0		0.0		0.0
Prob of Phs Call (p_c)		1.00		1.00		1.00		1.00
Prob of Max Out (p_x)		0.00		0.00		0.00		0.00
Left-Turn Movement Data								
Assigned Mvmt		5		7		1		3
Mvmt Sat Flow, veh/h		0		0		0		0
Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		5529		3800		3800		3800
Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		0		0		0		0
Left Lane Group Data								
Assigned Mvmt	0	5	0	7	0	1	0	3
Lane Assignment								

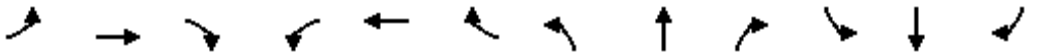
Lanes in Grp	0	0	0	0	0	0	0	0
Grp Vol (v), veh/h	0	0	0	0	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	0	0	0	0	0	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	18.0	0.0	18.0	0.0	18.0	0.0	18.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	0	0	0	0	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	0	0	0	0	0	0	0
Upstream Filter (I)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	3	0	2	0	2	0	2
Grp Vol (v), veh/h	0	0	0	0	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	1729	0	1805	0	1805	0	1805
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lane Grp Cap (c), veh/h	0	2075	0	1444	0	1444	0	1444
V/C Ratio (X)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	2075	0	1444	0	1444	0	1444
Upstream Filter (I)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment								
Lanes in Grp	0	0	0	0	0	0	0	0
Grp Vol (v), veh/h	0	0	0	0	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	0	0	0	0	0	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	0	0	0	0	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	0	0	0	0	0	0	0
Upstream Filter (I)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	0.0
HCM 6th LOS	A



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	343	9	375	454	692	0	0	179	360
Future Volume (veh/h)	0	0	0	343	9	375	454	692	0	0	179	360
Number				3	8	18	5	2	12	1	6	16
Initial Q, veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln				1700	1800	1800	1700	1800	0	0	1800	1900
Adj Flow Rate, veh/h				343	9	375	454	692	0	0	179	360
Peak Hour Factor				0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %				0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence				Yes			Yes			No		
Cap, veh/h				429	11	391	492	2159	0	0	1333	437
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	1.00
Prop Arrive On Green				0.26	0.26	0.26	0.30	0.63	0.00	0.00	0.54	0.27
Unsig. Movement Delay												
Ln Grp Delay, s/veh				38.0	0.0	64.3	41.7	7.1	0.0	0.0	13.9	43.4
Ln Grp LOS				D	A	E	D	A	A	A	B	D
Approach Vol, veh/h					727			1146			539	
Approach Delay, s/veh					51.5			20.8			33.6	
Approach LOS					D			C			C	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2	8		5	6		
Case No		4.0	11.0		2.0	7.0		
Phs Duration (G+Y+Rc), s		55.0	25.0		28.8	26.2		
Change Period (Y+Rc), s		4.5	4.5		4.5	4.5		
Max Green (Gmax), s		50.5	20.5		27.5	18.5		
Max Allow Headway (MAH), s		5.2	4.7		3.8	4.4		
Max Q Clear (g_c+I1), s		9.5	21.4		23.7	18.8		
Green Ext Time (g_e), s		5.6	0.0		0.6	0.0		
Prob of Phs Call (p_c)		1.00	1.00		1.00	1.00		
Prob of Max Out (p_x)		0.00	1.00		1.00	0.00		
Left-Turn Movement Data								
Assigned Mvmt			3		5	1		
Mvmt Sat Flow, veh/h			1672		1619	0		
Through Movement Data								
Assigned Mvmt		2	8			6		
Mvmt Sat Flow, veh/h		3510	44			5076		
Right-Turn Movement Data								
Assigned Mvmt		12	18			16		
Mvmt Sat Flow, veh/h		0	1525			1610		
Left Lane Group Data								
Assigned Mvmt	0	0	3	0	5	1	0	0
Lane Assignment			L+T		L (Prot)			

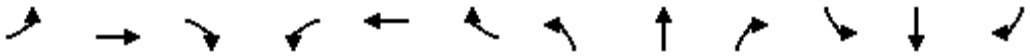
Lanes in Grp	0	0	1	0	1	0	0	0
Grp Vol (v), veh/h	0	0	352	0	454	0	0	0
Grp Sat Flow (s), veh/h/ln	0	0	1716	0	1619	0	0	0
Q Serve Time (g_s), s	0.0	0.0	15.4	0.0	21.7	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	15.4	0.0	21.7	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	21.7	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	0.00	0.97	0.00	1.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	440	0	492	0	0	0
V/C Ratio (X)	0.00	0.00	0.80	0.00	0.92	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	0	440	0	557	0	0	0
Upstream Filter (I)	0.00	0.00	1.00	0.00	0.67	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	27.8	0.0	26.9	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	10.1	0.0	14.7	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	38.0	0.0	41.7	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	6.0	0.0	7.9	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	1.2	0.0	2.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	0.00	1.00	0.00	1.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	7.3	0.0	10.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.15	0.00	0.91	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	8	0	0	6	0	0
Lane Assignment		T				T		
Lanes in Grp	0	2	0	0	0	3	0	0
Grp Vol (v), veh/h	0	692	0	0	0	179	0	0
Grp Sat Flow (s), veh/h/ln	0	1710	0	0	0	1638	0	0
Q Serve Time (g_s), s	0.0	7.5	0.0	0.0	0.0	1.4	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	7.5	0.0	0.0	0.0	1.4	0.0	0.0
Lane Grp Cap (c), veh/h	0	2159	0	0	0	1333	0	0
V/C Ratio (X)	0.00	0.32	0.00	0.00	0.00	0.13	0.00	0.00
Avail Cap (c_a), veh/h	0	2159	0	0	0	1333	0	0
Upstream Filter (I)	0.00	0.67	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	6.8	0.0	0.0	0.0	13.7	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.3	0.0	0.0	0.0	0.2	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	7.1	0.0	0.0	0.0	13.9	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	2.3	0.0	0.0	0.0	0.5	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	2.4	0.0	0.0	0.0	0.5	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.22	0.00	0.00	0.00	0.01	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	18	0	0	16	0	0
Lane Assignment			R			R		
Lanes in Grp	0	0	1	0	0	1	0	0
Grp Vol (v), veh/h	0	0	375	0	0	360	0	0
Grp Sat Flow (s), veh/h/ln	0	0	1525	0	0	1610	0	0
Q Serve Time (g_s), s	0.0	0.0	19.4	0.0	0.0	16.8	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	19.4	0.0	0.0	16.8	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	391	0	0	437	0	0
V/C Ratio (X)	0.00	0.00	0.96	0.00	0.00	0.82	0.00	0.00
Avail Cap (c_a), veh/h	0	0	391	0	0	437	0	0
Upstream Filter (I)	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	29.3	0.0	0.0	27.4	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	35.0	0.0	0.0	16.1	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	64.3	0.0	0.0	43.4	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	6.8	0.0	0.0	6.2	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	3.8	0.0	0.0	1.9	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	10.6	0.0	0.0	8.1	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.22	0.00	0.00	0.17	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	32.9
HCM 6th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	341	3	361	0	0	0	0	822	436	259	505	0
Future Volume (veh/h)	341	3	361	0	0	0	0	822	436	259	505	0
Number	7	4	14				5	2	12	1	6	16
Initial Q, veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1700	1800	1800				0	1800	1800	1700	1900	0
Adj Flow Rate, veh/h	341	3	361				0	822	436	259	505	0
Peak Hour Factor	0.96	0.96	0.96				0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0				0	0	0	0	0	0
Opposing Right Turn Influence	Yes						No			Yes		
Cap, veh/h	342	3	362				0	1142	354	289	1665	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	2.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.44	0.44	0.44				0.00	0.46	0.23	0.18	0.46	0.00
Unsig. Movement Delay												
Ln Grp Delay, s/veh	58.0	0.0	0.0				0.0	25.7	160.4	63.1	15.7	0.0
Ln Grp LOS	E	A	A				A	C	F	E	B	A
Approach Vol, veh/h		705						1258			764	
Approach Delay, s/veh		58.0						72.4			31.8	
Approach LOS		E						E			C	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Case No	2.0	7.0		12.0		4.0		
Phs Duration (G+Y+Rc), s	20.6	25.4		44.0		46.0		
Change Period (Y+Rc), s	4.5	4.5		4.5		4.5		
Max Green (Gmax), s	16.5	20.5		39.5		41.5		
Max Allow Headway (MAH), s	3.8	4.8		5.5		5.2		
Max Q Clear (g_c+I1), s	16.1	22.9		41.2		9.9		
Green Ext Time (g_e), s	0.0	0.0		0.0		3.7		
Prob of Phs Call (p_c)	1.00	1.00		1.00		1.00		
Prob of Max Out (p_x)	1.00	0.00		1.00		0.00		

Left-Turn Movement Data								
Assigned Mvmt	1	5		7				
Mvmt Sat Flow, veh/h	1619	0		780				

Through Movement Data								
Assigned Mvmt		2		4		6		
Mvmt Sat Flow, veh/h		5076		7		3705		

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		
Mvmt Sat Flow, veh/h		1525		826		0		

Left Lane Group Data								
Assigned Mvmt	1	5	0	7	0	0	0	0
Lane Assignment	L (Prot)			L+T+R				

Lanes in Grp	1	0	0	1	0	0	0	0
Grp Vol (v), veh/h	259	0	0	705	0	0	0	0
Grp Sat Flow (s), veh/h/ln	1619	0	0	1612	0	0	0	0
Q Serve Time (g_s), s	14.1	0.0	0.0	39.2	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	14.1	0.0	0.0	39.2	0.0	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	20.9	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	0.48	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	289	0	0	708	0	0	0	0
V/C Ratio (X)	0.89	0.00	0.00	1.00	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	297	0	0	708	0	0	0	0
Upstream Filter (I)	1.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	36.1	0.0	0.0	25.2	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	27.0	0.0	0.0	32.8	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	63.1	0.0	0.0	58.0	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	5.4	0.0	0.0	13.9	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	2.2	0.0	0.0	6.5	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00
%ile Back of Q (50%), veh/ln	7.6	0.0	0.0	20.4	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.69	0.00	0.00	0.35	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	0
Lane Assignment		T				T		
Lanes in Grp	0	3	0	0	0	2	0	0
Grp Vol (v), veh/h	0	822	0	0	0	505	0	0
Grp Sat Flow (s), veh/h/ln	0	1638	0	0	0	1805	0	0
Q Serve Time (g_s), s	0.0	12.1	0.0	0.0	0.0	7.9	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	12.1	0.0	0.0	0.0	7.9	0.0	0.0
Lane Grp Cap (c), veh/h	0	1142	0	0	0	1665	0	0
V/C Ratio (X)	0.00	0.72	0.00	0.00	0.00	0.30	0.00	0.00
Avail Cap (c_a), veh/h	0	1142	0	0	0	1665	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	21.7	0.0	0.0	0.0	15.2	0.0	0.0
Incr Delay (d2), s/veh	0.0	3.9	0.0	0.0	0.0	0.5	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	25.7	0.0	0.0	0.0	15.7	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	3.5	0.0	0.0	0.0	3.1	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.4	0.0	0.0	0.0	0.1	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	3.9	0.0	0.0	0.0	3.2	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.13	0.00	0.00	0.00	0.29	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	0
Lane Assignment		R						
Lanes in Grp	0	1	0	0	0	0	0	0
Grp Vol (v), veh/h	0	436	0	0	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	1525	0	0	0	0	0	0
Q Serve Time (g_s), s	0.0	20.9	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	20.9	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	0.51	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	354	0	0	0	0	0	0
V/C Ratio (X)	0.00	1.23	0.00	0.00	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	354	0	0	0	0	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	34.5	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	125.9	0.0	0.0	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	160.4	0.0	0.0	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	7.5	0.0	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	12.4	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	19.9	0.0	0.0	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.63	0.00	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	20.4	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	57.3
HCM 6th LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	57	680	51	180	241	133	102	561	505	201	294	25
Future Volume (veh/h)	57	680	51	180	241	133	102	561	505	201	294	25
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1900
Adj Flow Rate, veh/h	57	680	51	180	241	133	102	561	505	201	294	25
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	70	745	56	182	646	344	127	1087	485	225	1208	102
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.04	0.23	0.23	0.11	0.30	0.30	0.08	0.32	0.32	0.14	0.38	0.38
Unsig. Movement Delay												
Ln Grp Delay, s/veh	62.3	58.2	58.0	102.8	25.2	25.4	50.6	26.6	80.1	71.3	20.0	20.0
Ln Grp LOS	E	E	E	F	C	C	D	C	F	E	C	C
Approach Vol, veh/h		788			554			1168			520	
Approach Delay, s/veh		58.4			50.5			51.8			39.8	
Approach LOS		E			D			D			D	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Case No	2.0	3.0	2.0	4.0	2.0	4.0	2.0	4.0
Phs Duration (G+Y+Rc), s	17.0	33.1	14.6	25.3	11.6	38.5	8.4	31.5
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green (Gmax), s	12.5	28.3	10.1	21.1	11.8	29.0	6.3	24.9
Max Allow Headway (MAH), s	3.8	4.7	3.8	5.3	3.8	5.3	3.8	5.4
Max Q Clear (g_c+I1), s	13.0	30.6	12.0	20.5	7.6	7.7	5.1	10.3
Green Ext Time (g_e), s	0.0	0.0	0.0	0.3	0.1	1.8	0.0	1.9
Prob of Phs Call (p_c)	0.99	1.00	0.99	1.00	0.92	1.00	0.76	1.00
Prob of Max Out (p_x)	1.00	0.00	1.00	1.00	0.64	0.00	1.00	0.05

Left-Turn Movement Data								
Assigned Mvmt	1		3		5		7	
Mvmt Sat Flow, veh/h	1619		1619		1619		1619	

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		3420		3225		3192		2155

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1525		242		270		1148

Left Lane Group Data								
Assigned Mvmt	1	0	3	0	5	0	7	0
Lane Assignment	L (Prot)		L (Prot)		L (Prot)		L (Prot)	

Lanes in Grp	1	0	1	0	1	0	1	0
Grp Vol (v), veh/h	201	0	180	0	102	0	57	0
Grp Sat Flow (s), veh/h/ln	1619	0	1619	0	1619	0	1619	0
Q Serve Time (g_s), s	11.0	0.0	10.0	0.0	5.6	0.0	3.1	0.0
Cycle Q Clear Time (g_c), s	11.0	0.0	10.0	0.0	5.6	0.0	3.1	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	225	0	182	0	127	0	70	0
V/C Ratio (X)	0.89	0.00	0.99	0.00	0.80	0.00	0.81	0.00
Avail Cap (c_a), veh/h	225	0	182	0	212	0	113	0
Upstream Filter (I)	1.00	0.00	0.97	0.00	0.87	0.00	1.00	0.00
Uniform Delay (d1), s/veh	38.1	0.0	39.9	0.0	40.8	0.0	42.7	0.0
Incr Delay (d2), s/veh	33.2	0.0	62.9	0.0	9.8	0.0	19.6	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	71.3	0.0	102.8	0.0	50.6	0.0	62.3	0.0
1st-Term Q (Q1), veh/ln	4.3	0.0	3.9	0.0	2.2	0.0	1.2	0.0
2nd-Term Q (Q2), veh/ln	2.1	0.0	3.2	0.0	0.3	0.0	0.4	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
%ile Back of Q (50%), veh/ln	6.3	0.0	7.1	0.0	2.5	0.0	1.6	0.0
%ile Storage Ratio (RQ%)	0.10	0.00	0.07	0.00	0.13	0.00	0.02	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	2	0	1	0	1	0	1
Grp Vol (v), veh/h	0	561	0	360	0	157	0	189
Grp Sat Flow (s), veh/h/ln	0	1710	0	1710	0	1710	0	1710
Q Serve Time (g_s), s	0.0	12.0	0.0	18.5	0.0	5.6	0.0	7.9
Cycle Q Clear Time (g_c), s	0.0	12.0	0.0	18.5	0.0	5.6	0.0	7.9
Lane Grp Cap (c), veh/h	0	1087	0	395	0	647	0	513
V/C Ratio (X)	0.00	0.52	0.00	0.91	0.00	0.24	0.00	0.37
Avail Cap (c_a), veh/h	0	1087	0	401	0	647	0	513
Upstream Filter (I)	0.00	0.87	0.00	1.00	0.00	1.00	0.00	0.97
Uniform Delay (d1), s/veh	0.0	25.1	0.0	33.7	0.0	19.1	0.0	24.8
Incr Delay (d2), s/veh	0.0	1.5	0.0	24.5	0.0	0.9	0.0	0.4
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	26.6	0.0	58.2	0.0	20.0	0.0	25.2
1st-Term Q (Q1), veh/ln	0.0	4.8	0.0	7.5	0.0	2.2	0.0	3.1
2nd-Term Q (Q2), veh/ln	0.0	0.2	0.0	2.7	0.0	0.2	0.0	0.1

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	5.0	0.0	10.2	0.0	2.3	0.0	3.2
%ile Storage Ratio (RQ%)	0.00	0.25	0.00	0.14	0.00	0.04	0.00	0.03
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		T+R		T+R		T+R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	505	0	371	0	162	0	185
Grp Sat Flow (s), veh/h/ln	0	1525	0	1756	0	1751	0	1593
Q Serve Time (g_s), s	0.0	28.6	0.0	18.5	0.0	5.7	0.0	8.3
Cycle Q Clear Time (g_c), s	0.0	28.6	0.0	18.5	0.0	5.7	0.0	8.3
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	0.14	0.00	0.15	0.00	0.72
Lane Grp Cap (c), veh/h	0	485	0	406	0	663	0	478
V/C Ratio (X)	0.00	1.04	0.00	0.91	0.00	0.25	0.00	0.39
Avail Cap (c_a), veh/h	0	485	0	412	0	663	0	478
Upstream Filter (I)	0.00	0.87	0.00	1.00	0.00	1.00	0.00	0.97
Uniform Delay (d1), s/veh	0.0	30.7	0.0	33.7	0.0	19.2	0.0	25.0
Incr Delay (d2), s/veh	0.0	49.4	0.0	24.3	0.0	0.9	0.0	0.5
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	80.1	0.0	58.0	0.0	20.0	0.0	25.4
1st-Term Q (Q1), veh/ln	0.0	10.1	0.0	7.7	0.0	2.3	0.0	3.1
2nd-Term Q (Q2), veh/ln	0.0	6.7	0.0	2.7	0.0	0.2	0.0	0.1
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	16.7	0.0	10.4	0.0	2.4	0.0	3.1
%ile Storage Ratio (RQ%)	0.00	0.84	0.00	0.14	0.00	0.04	0.00	0.03
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	5.1	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	51.2
HCM 6th LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	394	28	347	9	3	16	212	811	3	6	464	76
Future Volume (veh/h)	394	28	347	9	3	16	212	811	3	6	464	76
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1600	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1900
Adj Flow Rate, veh/h	394	28	0	9	3	16	212	811	3	6	464	76
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	455	408		84	20	49	240	2284	8	12	1510	246
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.15	0.23	0.00	0.04	0.04	0.04	0.15	0.65	0.65	0.01	0.51	0.51
Unsig. Movement Delay												
Ln Grp Delay, s/veh	59.6	36.5	0.0	56.7	0.0	60.3	66.0	10.3	10.2	82.7	17.6	17.7
Ln Grp LOS	E	D		E	A	E	E	B	B	F	B	B
Approach Vol, veh/h		422			28			1026			546	
Approach Delay, s/veh		58.1			58.8			21.8			18.4	
Approach LOS		E			E			C			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6	7	8
Case No	2.0	4.0		3.0	2.0	4.0	2.0	8.3
Phs Duration (G+Y+Rc), s	5.4	82.9		31.7	22.3	66.0	23.0	8.7
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5	4.5	4.5
Max Green (Gmax), s	5.5	53.5		47.5	26.5	32.5	24.5	18.5
Max Allow Headway (MAH), s	3.8	5.2		5.2	3.8	5.3	3.8	5.4
Max Q Clear (g_c+I1), s	2.4	14.6		3.5	17.4	13.0	17.6	3.3
Green Ext Time (g_e), s	0.0	6.0		0.1	0.4	3.2	0.8	0.1
Prob of Phs Call (p_c)	0.18	1.00		1.00	1.00	1.00	1.00	0.85
Prob of Max Out (p_x)	1.00	0.00		0.00	0.02	0.00	0.17	0.00

Left-Turn Movement Data								
Assigned Mvmt	1				5		7	3
Mvmt Sat Flow, veh/h	1619				1619		2956	908

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		3495		1800		2944		571

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		13		1525		480		1388

Left Lane Group Data								
Assigned Mvmt	1	0	0	0	5	0	7	3
Lane Assignment	L (Prot)				L (Prot)		L (Prot)	L+T

Lanes in Grp	1	0	0	0	1	0	2	1
Grp Vol (v), veh/h	6	0	0	0	212	0	394	12
Grp Sat Flow (s), veh/h/ln	1619	0	0	0	1619	0	1478	1479
Q Serve Time (g_s), s	0.4	0.0	0.0	0.0	15.4	0.0	15.6	0.2
Cycle Q Clear Time (g_c), s	0.4	0.0	0.0	0.0	15.4	0.0	15.6	0.8
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	1404
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.2
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.2
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	0.00	1.00	0.00	1.00	0.75
Lane Grp Cap (c), veh/h	12	0	0	0	240	0	455	105
V/C Ratio (X)	0.49	0.00	0.00	0.00	0.88	0.00	0.87	0.11
Avail Cap (c_a), veh/h	74	0	0	0	358	0	604	274
Upstream Filter (I)	0.84	0.00	0.00	0.00	1.00	0.00	1.00	1.00
Uniform Delay (d1), s/veh	59.3	0.0	0.0	0.0	50.1	0.0	49.6	56.2
Incr Delay (d2), s/veh	23.4	0.0	0.0	0.0	15.9	0.0	10.1	0.5
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	82.7	0.0	0.0	0.0	66.0	0.0	59.6	56.7
1st-Term Q (Q1), veh/ln	0.2	0.0	0.0	0.0	6.2	0.0	5.8	0.4
2nd-Term Q (Q2), veh/ln	0.1	0.0	0.0	0.0	1.1	0.0	0.6	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	0.00	1.00	0.00	1.00	1.00
%ile Back of Q (50%), veh/ln	0.3	0.0	0.0	0.0	7.3	0.0	6.4	0.4
%ile Storage Ratio (RQ%)	0.01	0.00	0.00	0.00	1.21	0.00	1.07	0.01
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		
Lanes in Grp	0	1	0	1	0	1	0	0
Grp Vol (v), veh/h	0	397	0	28	0	268	0	0
Grp Sat Flow (s), veh/h/ln	0	1710	0	1800	0	1710	0	0
Q Serve Time (g_s), s	0.0	12.6	0.0	1.5	0.0	10.9	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	12.6	0.0	1.5	0.0	10.9	0.0	0.0
Lane Grp Cap (c), veh/h	0	1117	0	408	0	877	0	0
V/C Ratio (X)	0.00	0.36	0.00	0.07	0.00	0.31	0.00	0.00
Avail Cap (c_a), veh/h	0	1117	0	713	0	877	0	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	0.84	0.00	0.00
Uniform Delay (d1), s/veh	0.0	9.4	0.0	36.5	0.0	16.9	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.9	0.0	0.1	0.0	0.8	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	10.3	0.0	36.5	0.0	17.6	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	4.5	0.0	0.7	0.0	4.2	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.3	0.0	0.0	0.0	0.2	0.0	0.0

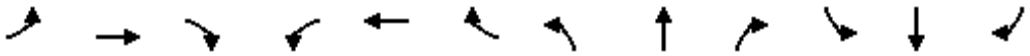
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	4.7	0.0	0.7	0.0	4.4	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.35	0.00	0.02	0.00	0.22	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R		R		T+R		T+R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	417	0	0	0	272	0	16
Grp Sat Flow (s), veh/h/ln	0	1798	0	1525	0	1714	0	1388
Q Serve Time (g_s), s	0.0	12.6	0.0	0.0	0.0	11.0	0.0	1.3
Cycle Q Clear Time (g_c), s	0.0	12.6	0.0	0.0	0.0	11.0	0.0	1.3
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.01	0.00	1.00	0.00	0.28	0.00	1.00
Lane Grp Cap (c), veh/h	0	1175	0	345	0	879	0	49
V/C Ratio (X)	0.00	0.36	0.00	0.00	0.00	0.31	0.00	0.33
Avail Cap (c_a), veh/h	0	1175	0	604	0	879	0	214
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	0.84	0.00	1.00
Uniform Delay (d1), s/veh	0.0	9.4	0.0	0.0	0.0	16.9	0.0	56.5
Incr Delay (d2), s/veh	0.0	0.8	0.0	0.0	0.0	0.8	0.0	3.8
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	10.2	0.0	0.0	0.0	17.7	0.0	60.3
1st-Term Q (Q1), veh/ln	0.0	4.7	0.0	0.0	0.0	4.3	0.0	0.5
2nd-Term Q (Q2), veh/ln	0.0	0.3	0.0	0.0	0.0	0.2	0.0	0.1
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	5.0	0.0	0.0	0.0	4.5	0.0	0.5
%ile Storage Ratio (RQ%)	0.00	0.37	0.00	0.00	0.00	0.23	0.00	0.02
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	28.9
HCM 6th LOS	C

Notes

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	18	0	14	34	0	57	5	917	41	38	789	7
Future Volume (veh/h)	18	0	14	34	0	57	5	917	41	38	789	7
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1900	1800	1900	1800	1800	1800	1900	1900
Adj Flow Rate, veh/h	18	0	14	34	0	57	5	917	41	38	789	7
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	108	0	60	64	0	188	524	1334	1130	51	1520	13
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Prop Arrive On Green	0.04	0.00	0.04	0.04	0.00	0.12	1.00	1.00	1.00	0.03	0.81	0.81
Unsig. Movement Delay												
Ln Grp Delay, s/veh	56.9	0.0	57.8	63.1	0.0	49.4	0.4	2.9	0.1	76.4	0.0	5.1
Ln Grp LOS	E	A	E	E	A	D	A	A	A	E	A	A
Approach Vol, veh/h		32			91			963			834	
Approach Delay, s/veh		57.3			54.6			2.8			8.3	
Approach LOS		E			D			A			A	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4		6		8
Case No	2.0	5.3	2.0	6.3		4.0		4.0
Phs Duration (G+Y+Rc), s	8.1	93.4	9.3	9.2		101.5		18.5
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5		4.5		4.5
Max Green (Gmax), s	15.1	30.7	28.1	28.1		50.3		18.0
Max Allow Headway (MAH), s	3.8	5.2	3.8	4.8		5.2		5.6
Max Q Clear (g_c+I1), s	4.6	10.6	4.5	3.7		18.6		5.9
Green Ext Time (g_e), s	0.0	7.5	0.1	0.1		6.9		0.2
Prob of Phs Call (p_c)	0.72	1.00	0.95	0.95		1.00		0.98
Prob of Max Out (p_x)	0.00	0.00	0.00	0.00		0.00		0.00

Left-Turn Movement Data								
Assigned Mvmt	1	5	3	7				
Mvmt Sat Flow, veh/h	1714	693	1619	1224				

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		1800		0		1880		0

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1525		1525		17		1610

Left Lane Group Data								
Assigned Mvmt	1	5	3	7	0	0	0	0
Lane Assignment	L (Prot)	L	L (Prot)	L				

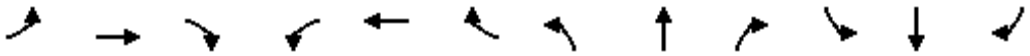
Lanes in Grp	1	1	1	1	0	0	0	0
Grp Vol (v), veh/h	38	5	34	18	0	0	0	0
Grp Sat Flow (s), veh/h/ln	1714	693	1619	1224	0	0	0	0
Q Serve Time (g_s), s	2.6	0.1	2.5	1.7	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	2.6	8.6	2.5	1.7	0.0	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	693	0	1224	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	88.9	0.0	4.7	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	80.4	0.0	4.7	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.1	0.0	1.7	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	51	524	64	108	0	0	0	0
V/C Ratio (X)	0.74	0.01	0.53	0.17	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	216	524	379	347	0	0	0	0
Upstream Filter (I)	1.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	57.7	0.4	56.5	56.2	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	18.7	0.0	6.6	0.7	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	76.4	0.4	63.1	56.9	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	1.1	0.0	1.0	0.5	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.3	0.0	0.1	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00
%ile Back of Q (50%), veh/ln	1.4	0.0	1.1	0.6	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.14	0.00	0.02	0.04	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T						
Lanes in Grp	0	1	0	0	0	0	0	0
Grp Vol (v), veh/h	0	917	0	0	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	1800	0	0	0	0	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lane Grp Cap (c), veh/h	0	1334	0	0	0	0	0	0
V/C Ratio (X)	0.00	0.69	0.00	0.00	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	1334	0	0	0	0	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	2.9	0.0	0.0	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	2.9	0.0	0.0	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	1.1	0.0	0.0	0.0	0.0	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	1.1	0.0	0.0	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.07	0.00	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		T+R		T+R		T+R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	41	0	14	0	796	0	57
Grp Sat Flow (s), veh/h/ln	0	1525	0	1525	0	1897	0	1610
Q Serve Time (g_s), s	0.0	0.0	0.0	1.1	0.0	16.6	0.0	3.9
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	1.1	0.0	16.6	0.0	3.9
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	0.01	0.00	1.00
Lane Grp Cap (c), veh/h	0	1130	0	60	0	1533	0	188
V/C Ratio (X)	0.00	0.04	0.00	0.23	0.00	0.52	0.00	0.30
Avail Cap (c_a), veh/h	0	1130	0	357	0	1533	0	242
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	55.9	0.0	3.8	0.0	48.5
Incr Delay (d2), s/veh	0.0	0.1	0.0	1.9	0.0	1.3	0.0	0.9
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.1	0.0	57.8	0.0	5.1	0.0	49.4
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.4	0.0	4.8	0.0	1.6
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.4	0.0	5.4	0.0	1.6
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.03	0.00	0.54	0.00	0.03
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	8.5
HCM 6th LOS	A



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	169	2	39	11	5	8	27	786	6	5	776	62
Future Volume (veh/h)	169	2	39	11	5	8	27	786	6	5	776	62
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1700	1800	1900	1700	1900	1900
Adj Flow Rate, veh/h	169	2	39	11	5	8	27	786	6	5	776	62
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	248	2	45	154	73	92	40	1267	10	10	1201	96
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Prop Arrive On Green	0.17	0.17	0.17	0.17	0.17	0.17	0.02	0.71	0.71	0.01	1.00	1.00
Unsig. Movement Delay												
Ln Grp Delay, s/veh	51.5	0.0	0.0	41.9	0.0	0.0	76.0	0.0	11.3	90.0	0.0	2.5
Ln Grp LOS	D	A	A	D	A	A	E	A	B	F	A	A
Approach Vol, veh/h		210			24			819			843	
Approach Delay, s/veh		51.5			41.9			13.4			3.0	
Approach LOS		D			D			B			A	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Case No	2.0	4.0		8.0	2.0	4.0		8.0
Phs Duration (G+Y+Rc), s	5.3	89.7		25.0	7.5	87.5		25.0
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green (Gmax), s	27.0	39.5		40.0	27.0	39.5		40.0
Max Allow Headway (MAH), s	3.8	5.2		5.3	3.8	5.3		5.4
Max Q Clear (g_c+I1), s	2.4	29.4		19.4	4.0	2.0		3.4
Green Ext Time (g_e), s	0.0	4.1		1.1	0.0	7.8		0.1
Prob of Phs Call (p_c)	0.15	1.00		1.00	0.59	1.00		1.00
Prob of Max Out (p_x)	0.00	0.00		0.00	0.00	0.00		0.00

Left-Turn Movement Data								
Assigned Mvmt	1			7	5			3
Mvmt Sat Flow, veh/h	1619			1131	1619			647

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		1784		13		1736		424

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		14		261		139		535

Left Lane Group Data								
Assigned Mvmt	1	0	0	7	5	0	0	3
Lane Assignment	L (Prot)			L+T+R	L (Prot)			L+T+R

Lanes in Grp	1	0	0	1	1	0	0	1
Grp Vol (v), veh/h	5	0	0	210	27	0	0	24
Grp Sat Flow (s), veh/h/ln	1619	0	0	1406	1619	0	0	1606
Q Serve Time (g_s), s	0.4	0.0	0.0	16.0	2.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.4	0.0	0.0	17.4	2.0	0.0	0.0	1.4
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	1423	0	0	0	1388
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	1730	0	0	0	1621
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	20.5	0.0	0.0	0.0	20.5
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	19.1	0.0	0.0	0.0	3.1
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	16.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.4
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	0.80	1.00	0.00	0.00	0.46
Lane Grp Cap (c), veh/h	10	0	0	295	40	0	0	319
V/C Ratio (X)	0.48	0.00	0.00	0.71	0.67	0.00	0.00	0.08
Avail Cap (c_a), veh/h	364	0	0	519	364	0	0	556
Upstream Filter (I)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	59.0	0.0	0.0	48.3	58.0	0.0	0.0	41.8
Incr Delay (d2), s/veh	30.9	0.0	0.0	3.2	17.9	0.0	0.0	0.1
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	90.0	0.0	0.0	51.5	76.0	0.0	0.0	41.9
1st-Term Q (Q1), veh/ln	0.2	0.0	0.0	6.1	0.8	0.0	0.0	0.6
2nd-Term Q (Q2), veh/ln	0.1	0.0	0.0	0.3	0.2	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.2	0.0	0.0	6.4	1.0	0.0	0.0	0.6
%ile Storage Ratio (RQ%)	0.02	0.00	0.00	0.69	0.15	0.00	0.00	0.02
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment								
Lanes in Grp	0	0	0	0	0	0	0	0
Grp Vol (v), veh/h	0	0	0	0	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	0	0	0	0	0	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lane Grp Cap (c), veh/h	0	0	0	0	0	0	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	0	0	0	0	0	0	0
Upstream Filter (I)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R				T+R		
Lanes in Grp	0	1	0	0	0	1	0	0
Grp Vol (v), veh/h	0	792	0	0	0	838	0	0
Grp Sat Flow (s), veh/h/ln	0	1798	0	0	0	1875	0	0
Q Serve Time (g_s), s	0.0	27.4	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	27.4	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.01	0.00	0.19	0.00	0.07	0.00	0.33
Lane Grp Cap (c), veh/h	0	1276	0	0	0	1297	0	0
V/C Ratio (X)	0.00	0.62	0.00	0.00	0.00	0.65	0.00	0.00
Avail Cap (c_a), veh/h	0	1276	0	0	0	1297	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	9.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	2.3	0.0	0.0	0.0	2.5	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	11.3	0.0	0.0	0.0	2.5	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	9.6	0.0	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.8	0.0	0.0	0.0	0.9	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	10.4	0.0	0.0	0.0	0.9	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.21	0.00	0.00	0.00	0.10	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	13.4
HCM 6th LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	124	570	68	124	160	156	39	473	231	188	468	64
Future Volume (veh/h)	124	570	68	124	160	156	39	473	231	188	468	64
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1900
Adj Flow Rate, veh/h	124	570	68	124	160	156	39	473	0	188	468	64
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	150	691	82	150	768	342	61	1030		201	1325	624
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.09	0.22	0.22	0.09	0.22	0.22	0.04	0.30	0.00	0.12	0.39	0.39
Unsig. Movement Delay												
Ln Grp Delay, s/veh	60.9	36.6	36.8	49.7	22.2	24.0	38.9	20.6	0.0	75.5	16.0	14.0
Ln Grp LOS	E	D	D	D	C	C	D	C		E	B	B
Approach Vol, veh/h		762			440			512			720	
Approach Delay, s/veh		40.6			30.6			22.0			31.3	
Approach LOS		D			C			C			C	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Case No	2.0	3.0	2.0	4.0	2.0	3.0	2.0	3.0
Phs Duration (G+Y+Rc), s	13.2	25.6	11.0	20.2	7.2	31.6	11.0	20.2
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green (Gmax), s	8.7	18.8	6.5	18.0	5.8	21.7	6.5	18.0
Max Allow Headway (MAH), s	3.8	5.2	3.8	5.3	3.8	5.1	3.8	4.6
Max Q Clear (g_c+I1), s	10.1	9.9	7.3	14.4	3.7	8.8	7.3	8.2
Green Ext Time (g_e), s	0.0	2.0	0.0	1.3	0.0	2.7	0.0	1.0
Prob of Phs Call (p_c)	0.97	1.00	0.91	1.00	0.53	1.00	0.91	1.00
Prob of Max Out (p_x)	1.00	0.00	1.00	1.00	1.00	0.00	1.00	0.09

Left-Turn Movement Data								
Assigned Mvmt	1		3		5		7	
Mvmt Sat Flow, veh/h	1619		1619		1619		1619	

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		3420		3078		3420		3420

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1525		366		1610		1525

Left Lane Group Data								
Assigned Mvmt	1	0	3	0	5	0	7	0
Lane Assignment	L (Prot)		L (Prot)		L (Prot)		L (Prot)	

Lanes in Grp	1	0	1	0	1	0	1	0
Grp Vol (v), veh/h	188	0	124	0	39	0	124	0
Grp Sat Flow (s), veh/h/ln	1619	0	1619	0	1619	0	1619	0
Q Serve Time (g_s), s	8.1	0.0	5.3	0.0	1.7	0.0	5.3	0.0
Cycle Q Clear Time (g_c), s	8.1	0.0	5.3	0.0	1.7	0.0	5.3	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	201	0	150	0	61	0	150	0
V/C Ratio (X)	0.93	0.00	0.82	0.00	0.63	0.00	0.82	0.00
Avail Cap (c_a), veh/h	201	0	150	0	134	0	150	0
Upstream Filter (I)	1.00	0.00	0.56	0.00	0.54	0.00	1.00	0.00
Uniform Delay (d1), s/veh	30.4	0.0	31.2	0.0	33.2	0.0	31.2	0.0
Incr Delay (d2), s/veh	45.1	0.0	18.5	0.0	5.7	0.0	29.7	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	75.5	0.0	49.7	0.0	38.9	0.0	60.9	0.0
1st-Term Q (Q1), veh/ln	3.0	0.0	2.0	0.0	0.6	0.0	2.0	0.0
2nd-Term Q (Q2), veh/ln	2.5	0.0	0.8	0.0	0.1	0.0	1.2	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
%ile Back of Q (50%), veh/ln	5.5	0.0	2.8	0.0	0.7	0.0	3.2	0.0
%ile Storage Ratio (RQ%)	0.53	0.00	0.04	0.00	0.11	0.00	0.81	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	2	0	1	0	2	0	2
Grp Vol (v), veh/h	0	473	0	316	0	468	0	160
Grp Sat Flow (s), veh/h/ln	0	1710	0	1710	0	1710	0	1710
Q Serve Time (g_s), s	0.0	7.9	0.0	12.3	0.0	6.8	0.0	2.7
Cycle Q Clear Time (g_c), s	0.0	7.9	0.0	12.3	0.0	6.8	0.0	2.7
Lane Grp Cap (c), veh/h	0	1030	0	384	0	1325	0	768
V/C Ratio (X)	0.00	0.46	0.00	0.82	0.00	0.35	0.00	0.21
Avail Cap (c_a), veh/h	0	1030	0	440	0	1325	0	879
Upstream Filter (I)	0.00	0.54	0.00	1.00	0.00	1.00	0.00	0.56
Uniform Delay (d1), s/veh	0.0	19.8	0.0	25.8	0.0	15.2	0.0	22.1
Incr Delay (d2), s/veh	0.0	0.8	0.0	10.8	0.0	0.7	0.0	0.1
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	20.6	0.0	36.6	0.0	16.0	0.0	22.2
1st-Term Q (Q1), veh/ln	0.0	2.9	0.0	4.7	0.0	2.4	0.0	1.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	1.1	0.0	0.1	0.0	0.0

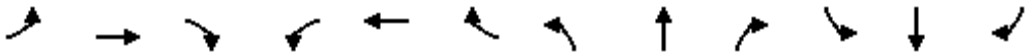
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	3.1	0.0	5.9	0.0	2.6	0.0	1.0
%ile Storage Ratio (RQ%)	0.00	0.03	0.00	0.03	0.00	0.05	0.00	0.01
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		T+R		R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	0	0	322	0	64	0	156
Grp Sat Flow (s), veh/h/ln	0	1525	0	1734	0	1610	0	1525
Q Serve Time (g_s), s	0.0	0.0	0.0	12.4	0.0	1.8	0.0	6.2
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	12.4	0.0	1.8	0.0	6.2
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	0.21	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	459	0	389	0	624	0	342
V/C Ratio (X)	0.00	0.00	0.00	0.83	0.00	0.10	0.00	0.46
Avail Cap (c_a), veh/h	0	459	0	446	0	624	0	392
Upstream Filter (I)	0.00	0.00	0.00	1.00	0.00	1.00	0.00	0.56
Uniform Delay (d1), s/veh	0.0	0.0	0.0	25.8	0.0	13.7	0.0	23.4
Incr Delay (d2), s/veh	0.0	0.0	0.0	10.9	0.0	0.3	0.0	0.5
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	36.8	0.0	14.0	0.0	24.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	4.8	0.0	0.6	0.0	2.1
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	1.2	0.0	0.1	0.0	0.1
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	6.0	0.0	0.7	0.0	2.2
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.03	0.00	0.03	0.00	0.03
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	32.1
HCM 6th LOS	C

Notes

Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	223	441	109	261	213	52	67	498	236	128	491	93
Future Volume (veh/h)	223	441	109	261	213	52	67	498	236	128	491	93
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1900
Adj Flow Rate, veh/h	223	441	109	261	213	52	67	498	236	128	491	93
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	257	528	130	294	593	142	83	684	323	156	1451	269
HCM Platoon Ratio	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33
Prop Arrive On Green	0.21	0.26	0.26	0.24	0.29	0.29	0.07	0.40	0.40	0.13	0.46	0.46
Unsig. Movement Delay												
Ln Grp Delay, s/veh	51.1	41.1	42.5	53.9	24.6	24.7	52.7	29.3	30.0	56.4	16.3	17.1
Ln Grp LOS	D	D	D	D	C	C	D	C	C	E	B	B
Approach Vol, veh/h		773			526			801			712	
Approach Delay, s/veh		44.5			39.2			31.6			23.7	
Approach LOS		D			D			C			C	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Case No	2.0	4.0	2.0	4.0	2.0	4.0	2.0	4.0
Phs Duration (G+Y+Rc), s	12.2	28.8	19.0	20.0	8.6	32.4	17.2	21.8
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green (Gmax), s	8.5	20.0	15.5	18.0	7.9	20.6	14.9	18.6
Max Allow Headway (MAH), s	3.8	5.3	3.8	5.3	3.8	5.3	3.8	5.3
Max Q Clear (g_c+I1), s	8.2	17.0	14.5	14.4	5.3	8.2	12.6	7.1
Green Ext Time (g_e), s	0.0	1.3	0.1	1.1	0.0	3.0	0.1	1.1
Prob of Phs Call (p_c)	0.94	1.00	1.00	1.00	0.77	1.00	0.99	1.00
Prob of Max Out (p_x)	1.00	0.00	1.00	1.00	1.00	0.00	1.00	0.07

Left-Turn Movement Data								
Assigned Mvmt	1		3		5		7	
Mvmt Sat Flow, veh/h	1619		1619		1619		1619	

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		2255		2722		4165		2738

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1063		668		772		654

Left Lane Group Data								
Assigned Mvmt	1	0	3	0	5	0	7	0
Lane Assignment	L (Prot)		L (Prot)		L (Prot)		L (Prot)	

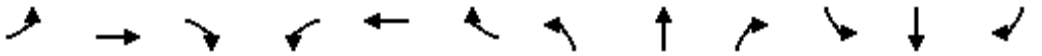
Lanes in Grp	1	0	1	0	1	0	1	0
Grp Vol (v), veh/h	128	0	261	0	67	0	223	0
Grp Sat Flow (s), veh/h/ln	1619	0	1619	0	1619	0	1619	0
Q Serve Time (g_s), s	6.2	0.0	12.5	0.0	3.3	0.0	10.6	0.0
Cycle Q Clear Time (g_c), s	6.2	0.0	12.5	0.0	3.3	0.0	10.6	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	156	0	294	0	83	0	257	0
V/C Ratio (X)	0.82	0.00	0.89	0.00	0.81	0.00	0.87	0.00
Avail Cap (c_a), veh/h	172	0	314	0	160	0	302	0
Upstream Filter (I)	0.89	0.00	1.00	0.00	0.95	0.00	1.00	0.00
Uniform Delay (d1), s/veh	34.2	0.0	29.6	0.0	36.9	0.0	30.7	0.0
Incr Delay (d2), s/veh	22.2	0.0	24.4	0.0	15.9	0.0	20.3	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	56.4	0.0	53.9	0.0	52.7	0.0	51.1	0.0
1st-Term Q (Q1), veh/ln	2.3	0.0	4.3	0.0	1.2	0.0	3.8	0.0
2nd-Term Q (Q2), veh/ln	1.0	0.0	2.0	0.0	0.4	0.0	1.4	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
%ile Back of Q (50%), veh/ln	3.3	0.0	6.3	0.0	1.6	0.0	5.2	0.0
%ile Storage Ratio (RQ%)	0.45	0.00	0.04	0.00	0.20	0.00	0.60	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	1	0	1	0	2	0	1
Grp Vol (v), veh/h	0	377	0	276	0	384	0	131
Grp Sat Flow (s), veh/h/ln	0	1710	0	1710	0	1638	0	1710
Q Serve Time (g_s), s	0.0	14.9	0.0	12.2	0.0	6.0	0.0	4.9
Cycle Q Clear Time (g_c), s	0.0	14.9	0.0	12.2	0.0	6.0	0.0	4.9
Lane Grp Cap (c), veh/h	0	519	0	332	0	1141	0	371
V/C Ratio (X)	0.00	0.73	0.00	0.83	0.00	0.34	0.00	0.35
Avail Cap (c_a), veh/h	0	519	0	385	0	1141	0	398
Upstream Filter (I)	0.00	0.95	0.00	1.00	0.00	0.89	0.00	1.00
Uniform Delay (d1), s/veh	0.0	21.1	0.0	28.4	0.0	15.6	0.0	24.0
Incr Delay (d2), s/veh	0.0	8.2	0.0	12.7	0.0	0.7	0.0	0.6
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	29.3	0.0	41.1	0.0	16.3	0.0	24.6
1st-Term Q (Q1), veh/ln	0.0	5.0	0.0	4.5	0.0	2.0	0.0	1.9
2nd-Term Q (Q2), veh/ln	0.0	1.2	0.0	1.2	0.0	0.1	0.0	0.1

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	6.2	0.0	5.6	0.0	2.1	0.0	1.9
%ile Storage Ratio (RQ%)	0.00	0.16	0.00	0.03	0.00	0.02	0.00	0.01
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R		T+R		T+R		T+R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	357	0	274	0	200	0	134
Grp Sat Flow (s), veh/h/ln	0	1609	0	1680	0	1661	0	1682
Q Serve Time (g_s), s	0.0	15.0	0.0	12.4	0.0	6.2	0.0	5.1
Cycle Q Clear Time (g_c), s	0.0	15.0	0.0	12.4	0.0	6.2	0.0	5.1
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.66	0.00	0.40	0.00	0.46	0.00	0.39
Lane Grp Cap (c), veh/h	0	488	0	326	0	579	0	365
V/C Ratio (X)	0.00	0.73	0.00	0.84	0.00	0.35	0.00	0.37
Avail Cap (c_a), veh/h	0	488	0	378	0	579	0	391
Upstream Filter (I)	0.00	0.95	0.00	1.00	0.00	0.89	0.00	1.00
Uniform Delay (d1), s/veh	0.0	21.1	0.0	28.5	0.0	15.6	0.0	24.1
Incr Delay (d2), s/veh	0.0	8.9	0.0	14.0	0.0	1.5	0.0	0.6
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	30.0	0.0	42.5	0.0	17.1	0.0	24.7
1st-Term Q (Q1), veh/ln	0.0	4.8	0.0	4.5	0.0	2.1	0.0	1.9
2nd-Term Q (Q2), veh/ln	0.0	1.2	0.0	1.3	0.0	0.2	0.0	0.1
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	6.0	0.0	5.7	0.0	2.4	0.0	2.0
%ile Storage Ratio (RQ%)	0.00	0.15	0.00	0.03	0.00	0.02	0.00	0.01
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	34.6
HCM 6th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	176	316	162	354	786	0	0	737	460
Future Volume (veh/h)	0	0	0	176	316	162	354	786	0	0	737	460
Number				3	8	18	5	2	12	1	6	16
Initial Q, veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln				1700	1800	1800	1700	1800	0	0	1800	1900
Adj Flow Rate, veh/h				176	316	162	354	786	0	0	737	460
Peak Hour Factor				0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %				0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence				Yes			Yes			No		
Cap, veh/h				210	393	211	373	2344	0	0	1429	673
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00
Prop Arrive On Green				0.24	0.24	0.24	0.46	1.00	0.00	0.00	0.42	0.42
Unsig. Movement Delay												
Ln Grp Delay, s/veh				50.3	0.0	46.4	57.5	0.3	0.0	0.0	27.0	33.1
Ln Grp LOS				D	A	D	E	A	A	A	C	C
Approach Vol, veh/h					654			1140			1197	
Approach Delay, s/veh					48.5			18.1			29.4	
Approach LOS					D			B			C	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2	8		5	6		
Case No		4.0	12.0		2.0	7.0		
Phs Duration (G+Y+Rc), s		86.8	33.2		32.1	54.6		
Change Period (Y+Rc), s		4.5	4.5		4.5	4.5		
Max Green (Gmax), s		69.5	41.5		31.5	33.5		
Max Allow Headway (MAH), s		5.2	5.3		3.8	4.8		
Max Q Clear (g_c+I1), s		2.0	24.9		27.2	29.9		
Green Ext Time (g_e), s		6.8	3.8		0.5	2.2		
Prob of Phs Call (p_c)		1.00	1.00		1.00	1.00		
Prob of Max Out (p_x)		0.00	0.12		0.74	0.00		
Left-Turn Movement Data								
Assigned Mvmt			3		5	1		
Mvmt Sat Flow, veh/h			877		1619	0		
Through Movement Data								
Assigned Mvmt		2	8			6		
Mvmt Sat Flow, veh/h		3510	1639			3510		
Right-Turn Movement Data								
Assigned Mvmt		12	18			16		
Mvmt Sat Flow, veh/h		0	881			1610		
Left Lane Group Data								
Assigned Mvmt	0	0	3	0	5	1	0	0
Lane Assignment			L+T		L (Prot)			

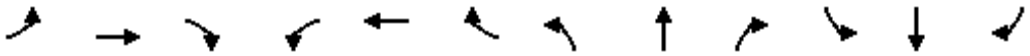
Lanes in Grp	0	0	1	0	1	0	0	0
Grp Vol (v), veh/h	0	0	352	0	354	0	0	0
Grp Sat Flow (s), veh/h/ln	0	0	1756	0	1619	0	0	0
Q Serve Time (g_s), s	0.0	0.0	22.9	0.0	25.2	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	22.9	0.0	25.2	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	50.1	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	0.00	0.50	0.00	1.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	421	0	373	0	0	0
V/C Ratio (X)	0.00	0.00	0.84	0.00	0.95	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	0	607	0	425	0	0	0
Upstream Filter (I)	0.00	0.00	1.00	0.00	0.82	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	43.4	0.0	31.7	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	6.9	0.0	25.8	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	50.3	0.0	57.5	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	9.9	0.0	7.7	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.8	0.0	2.7	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	0.00	1.00	0.00	1.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	10.7	0.0	10.3	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.26	0.00	1.72	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	8	0	0	6	0	0
Lane Assignment		T				T		
Lanes in Grp	0	2	0	0	0	2	0	0
Grp Vol (v), veh/h	0	786	0	0	0	737	0	0
Grp Sat Flow (s), veh/h/ln	0	1710	0	0	0	1710	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	19.2	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	19.2	0.0	0.0
Lane Grp Cap (c), veh/h	0	2344	0	0	0	1429	0	0
V/C Ratio (X)	0.00	0.34	0.00	0.00	0.00	0.52	0.00	0.00
Avail Cap (c_a), veh/h	0	2344	0	0	0	1429	0	0
Upstream Filter (I)	0.00	0.82	0.00	0.00	0.00	0.83	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	25.9	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.3	0.0	0.0	0.0	1.1	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.3	0.0	0.0	0.0	27.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	7.8	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	0.2	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.1	0.0	0.0	0.0	8.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.21	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	18	0	0	16	0	0
Lane Assignment			T+R			R		
Lanes in Grp	0	0	1	0	0	1	0	0
Grp Vol (v), veh/h	0	0	302	0	0	460	0	0
Grp Sat Flow (s), veh/h/ln	0	0	1641	0	0	1610	0	0
Q Serve Time (g_s), s	0.0	0.0	20.6	0.0	0.0	27.9	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	20.6	0.0	0.0	27.9	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.00	0.54	0.00	0.00	1.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	393	0	0	673	0	0
V/C Ratio (X)	0.00	0.00	0.77	0.00	0.00	0.68	0.00	0.00
Avail Cap (c_a), veh/h	0	0	568	0	0	673	0	0
Upstream Filter (I)	0.00	0.00	1.00	0.00	0.00	0.83	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	42.5	0.0	0.0	28.5	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	3.9	0.0	0.0	4.7	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	46.4	0.0	0.0	33.1	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	8.3	0.0	0.0	10.6	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.4	0.0	0.0	0.9	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	8.7	0.0	0.0	11.5	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.21	0.00	0.00	0.30	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	29.2
HCM 6th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	349	64	488	0	0	0	0	783	252	228	693	0
Future Volume (veh/h)	349	64	488	0	0	0	0	783	252	228	693	0
Number	7	4	14				5	2	12	1	6	16
Initial Q, veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1700	1800	1800				0	1800	1800	1700	1900	0
Adj Flow Rate, veh/h	349	64	488				0	783	252	228	693	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0				0	0	0	0	0	0
Opposing Right Turn Influence	Yes						No			Yes		
Cap, veh/h	480	88	502				0	1379	615	251	2151	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	2.00	1.00	2.00	2.00	1.00
Prop Arrive On Green	0.33	0.33	0.33				0.00	0.81	0.40	0.31	1.00	0.00
Unsig. Movement Delay												
Ln Grp Delay, s/veh	40.1	0.0	72.6				0.0	9.6	27.6	57.8	0.3	0.0
Ln Grp LOS	D	A	E				A	A	C	E	A	A
Approach Vol, veh/h		901						1035			921	
Approach Delay, s/veh		57.7						14.0			14.5	
Approach LOS		E						B			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Case No	2.0	7.0		12.0		4.0		
Phs Duration (G+Y+Rc), s	23.1	52.9		44.0		76.0		
Change Period (Y+Rc), s	4.5	4.5		4.5		4.5		
Max Green (Gmax), s	26.5	40.5		39.5		71.5		
Max Allow Headway (MAH), s	3.8	4.9		5.5		5.2		
Max Q Clear (g_c+I1), s	18.2	16.2		39.9		2.0		
Green Ext Time (g_e), s	0.4	6.9		0.0		5.7		
Prob of Phs Call (p_c)	1.00	1.00		1.00		1.00		
Prob of Max Out (p_x)	0.04	0.00		1.00		0.00		

Left-Turn Movement Data								
Assigned Mvmt	1	5		7				
Mvmt Sat Flow, veh/h	1619	0		1459				

Through Movement Data								
Assigned Mvmt		2		4		6		
Mvmt Sat Flow, veh/h		3510		268		3705		

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		
Mvmt Sat Flow, veh/h		1525		1525		0		

Left Lane Group Data								
Assigned Mvmt	1	5	0	7	0	0	0	0
Lane Assignment	L (Prot)			L+T				

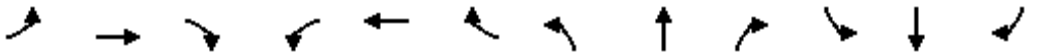
Lanes in Grp	1	0	0	1	0	0	0	0
Grp Vol (v), veh/h	228	0	0	413	0	0	0	0
Grp Sat Flow (s), veh/h/ln	1619	0	0	1727	0	0	0	0
Q Serve Time (g_s), s	16.2	0.0	0.0	25.3	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	16.2	0.0	0.0	25.3	0.0	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	48.4	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	0.85	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	251	0	0	568	0	0	0	0
V/C Ratio (X)	0.91	0.00	0.00	0.73	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	358	0	0	568	0	0	0	0
Upstream Filter (I)	0.80	0.00	0.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	40.6	0.0	0.0	35.5	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	17.2	0.0	0.0	4.6	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	57.8	0.0	0.0	40.1	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	5.5	0.0	0.0	10.6	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	1.2	0.0	0.0	0.7	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00
%ile Back of Q (50%), veh/ln	6.7	0.0	0.0	11.3	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	1.11	0.00	0.00	0.33	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	0
Lane Assignment		T				T		
Lanes in Grp	0	2	0	0	0	2	0	0
Grp Vol (v), veh/h	0	783	0	0	0	693	0	0
Grp Sat Flow (s), veh/h/ln	0	1710	0	0	0	1805	0	0
Q Serve Time (g_s), s	0.0	9.8	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	9.8	0.0	0.0	0.0	0.0	0.0	0.0
Lane Grp Cap (c), veh/h	0	1379	0	0	0	2151	0	0
V/C Ratio (X)	0.00	0.57	0.00	0.00	0.00	0.32	0.00	0.00
Avail Cap (c_a), veh/h	0	1379	0	0	0	2151	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	0.80	0.00	0.00
Uniform Delay (d1), s/veh	0.0	7.9	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	1.7	0.0	0.0	0.0	0.3	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	9.6	0.0	0.0	0.0	0.3	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	2.3	0.0	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.3	0.0	0.0	0.0	0.1	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	2.7	0.0	0.0	0.0	0.1	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	0
Lane Assignment		R		T+R				
Lanes in Grp	0	1	0	1	0	0	0	0
Grp Vol (v), veh/h	0	252	0	488	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	1525	0	1525	0	0	0	0
Q Serve Time (g_s), s	0.0	14.2	0.0	37.9	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	14.2	0.0	37.9	0.0	0.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	615	0	502	0	0	0	0
V/C Ratio (X)	0.00	0.41	0.00	0.97	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	615	0	502	0	0	0	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	25.6	0.0	39.7	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	2.0	0.0	32.9	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	27.6	0.0	72.6	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	5.1	0.0	14.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.3	0.0	4.6	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	5.5	0.0	18.6	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.10	0.00	0.55	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	27.9
HCM 6th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	965	538	274	545	0	0	0	0	308	6	131
Future Volume (veh/h)	0	965	538	274	545	0	0	0	0	308	6	131
Number	7	4	14	3	8	18				1	6	16
Initial Q, veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	0	1800	1800	1600	1800	0				1800	1800	2500
Adj Flow Rate, veh/h	0	965	0	274	545	0				308	6	131
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90				0.90	0.90	0.90
Percent Heavy Veh, %	0	0	0	0	0	0				0	0	0
Opposing Right Turn Influence	No			Yes						Yes		
Cap, veh/h	0	1227		349	1868	0				531	10	668
HCM Platoon Ratio	1.00	2.00	2.00	2.00	1.00	1.00				1.00	1.00	1.00
Prop Arrive On Green	0.00	0.72	0.00	0.24	0.55	0.00				0.32	0.32	0.32
Unsig. Movement Delay												
Ln Grp Delay, s/veh	0.0	9.6	0.0	32.9	8.3	0.0				23.1	0.0	16.9
Ln Grp LOS	A	A		C	A	A				C	A	B
Approach Vol, veh/h		965			819						445	
Approach Delay, s/veh		9.6			16.6						21.3	
Approach LOS		A			B						C	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	6		3	4				8
Case No	11.0		2.0	7.0				4.0
Phs Duration (G+Y+Rc), s	25.0		12.2	27.8				40.0
Change Period (Y+Rc), s	4.5		4.5	4.5				4.5
Max Green (Gmax), s	20.5		8.5	22.5				35.5
Max Allow Headway (MAH), s	5.0		3.8	5.2				5.2
Max Q Clear (g_c+I1), s	12.0		7.6	13.9				7.6
Green Ext Time (g_e), s	1.5		0.1	4.2				3.9
Prob of Phs Call (p_c)	1.00		0.99	1.00				1.00
Prob of Max Out (p_x)	0.00		1.00	0.00				0.00

Left-Turn Movement Data								
Assigned Mvmt	1		3	7				
Mvmt Sat Flow, veh/h	1683		2956	0				

Through Movement Data								
Assigned Mvmt	6			4				8
Mvmt Sat Flow, veh/h	33			3510				3510

Right-Turn Movement Data								
Assigned Mvmt	16			14				18
Mvmt Sat Flow, veh/h	2119			1525				0

Left Lane Group Data								
Assigned Mvmt	1	0	3	7	0	0	0	0
Lane Assignment	L+T		L (Prot)					

Lanes in Grp	1	0	2	0	0	0	0	0
Grp Vol (v), veh/h	314	0	274	0	0	0	0	0
Grp Sat Flow (s), veh/h/ln	1716	0	1478	0	0	0	0	0
Q Serve Time (g_s), s	10.0	0.0	5.6	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	10.0	0.0	5.6	0.0	0.0	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	23.3	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.98	0.00	1.00	0.00	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	541	0	349	0	0	0	0	0
V/C Ratio (X)	0.58	0.00	0.78	0.00	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	541	0	387	0	0	0	0	0
Upstream Filter (I)	1.00	0.00	0.95	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	18.6	0.0	24.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	4.5	0.0	8.9	0.0	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	23.1	0.0	32.9	0.0	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	3.6	0.0	1.7	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.7	0.0	0.4	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	1.00	1.00	0.00	0.00	0.00	0.00
%ile Back of Q (50%), veh/ln	4.3	0.0	2.1	0.0	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.33	0.00	0.13	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	6	0	0	4	0	0	0	8
Lane Assignment				T				T
Lanes in Grp	0	0	0	2	0	0	0	2
Grp Vol (v), veh/h	0	0	0	965	0	0	0	545
Grp Sat Flow (s), veh/h/ln	0	0	0	1710	0	0	0	1710
Q Serve Time (g_s), s	0.0	0.0	0.0	11.9	0.0	0.0	0.0	5.6
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	11.9	0.0	0.0	0.0	5.6
Lane Grp Cap (c), veh/h	0	0	0	1227	0	0	0	1868
V/C Ratio (X)	0.00	0.00	0.00	0.79	0.00	0.00	0.00	0.29
Avail Cap (c_a), veh/h	0	0	0	1227	0	0	0	1868
Upstream Filter (I)	0.00	0.00	0.00	0.38	0.00	0.00	0.00	0.95
Uniform Delay (d1), s/veh	0.0	0.0	0.0	7.6	0.0	0.0	0.0	8.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.4
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	9.6	0.0	0.0	0.0	8.3
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	2.1	0.0	0.0	0.0	1.7
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.1

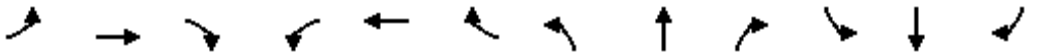
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	1.00	0.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	2.5	0.0	0.0	0.0	1.8
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.11
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	16	0	0	14	0	0	0	18
Lane Assignment	R			R				
Lanes in Grp	1	0	0	1	0	0	0	0
Grp Vol (v), veh/h	131	0	0	0	0	0	0	0
Grp Sat Flow (s), veh/h/ln	2119	0	0	1525	0	0	0	0
Q Serve Time (g_s), s	2.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	2.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	1.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	668	0	0	547	0	0	0	0
V/C Ratio (X)	0.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	668	0	0	547	0	0	0	0
Upstream Filter (I)	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	16.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	16.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	1.00	0.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	14.5
HCM 6th LOS	B

Notes

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	230	1026	0	0	600	249	218	0	478	0	0	0
Future Volume (veh/h)	230	1026	0	0	600	249	218	0	478	0	0	0
Number	7	4	14	3	8	18	5	2	12			
Initial Q, veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1700	1800	0	0	1800	1800	1600	1800	1900			
Adj Flow Rate, veh/h	230	1026	0	0	600	249	218	0	478			
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94			
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0			
Opposing Right Turn Influence	Yes			No			Yes					
Cap, veh/h	267	2429	0	0	2434	755	578	0	611			
HCM Platoon Ratio	1.00	2.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00			
Prop Arrive On Green	0.17	1.00	0.00	0.00	0.99	0.99	0.19	0.00	0.19			
Unsig. Movement Delay												
Ln Grp Delay, s/veh	41.2	0.3	0.0	0.0	0.5	1.4	32.2	0.0	36.9			
Ln Grp LOS	D	A	A	A	A	A	C	A	D			
Approach Vol, veh/h		1256			849			696				
Approach Delay, s/veh		7.8			0.7			35.5				
Approach LOS		A			A			D				

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2		4			7	8
Case No		9.0		4.0			2.0	7.0
Phs Duration (G+Y+Rc), s		21.6		68.4			19.4	49.1
Change Period (Y+Rc), s		4.5		4.5			4.5	4.5
Max Green (Gmax), s		27.5		53.5			24.5	24.5
Max Allow Headway (MAH), s		4.0		5.2			3.8	4.9
Max Q Clear (g_c+I1), s		14.7		2.0			14.4	2.2
Green Ext Time (g_e), s		2.4		9.8			0.5	5.1
Prob of Phs Call (p_c)		1.00		1.00			1.00	1.00
Prob of Max Out (p_x)		0.05		0.00			0.01	0.00

Left-Turn Movement Data								
Assigned Mvmt		5					7	3
Mvmt Sat Flow, veh/h		3048					1619	0

Through Movement Data								
Assigned Mvmt		2		4				8
Mvmt Sat Flow, veh/h		0		3510				5076

Right-Turn Movement Data								
Assigned Mvmt		12		14				18
Mvmt Sat Flow, veh/h		3220		0				1525

Left Lane Group Data								
Assigned Mvmt	0	5	0	0	0	0	7	3
Lane Assignment		L					L (Prot)	

Lanes in Grp	0	2	0	0	0	0	1	0
Grp Vol (v), veh/h	0	218	0	0	0	0	230	0
Grp Sat Flow (s), veh/h/ln	0	1524	0	0	0	0	1619	0
Q Serve Time (g_s), s	0.0	5.6	0.0	0.0	0.0	0.0	12.4	0.0
Cycle Q Clear Time (g_c), s	0.0	5.6	0.0	0.0	0.0	0.0	12.4	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	1524	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	44.6
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	0	578	0	0	0	0	267	0
V/C Ratio (X)	0.00	0.38	0.00	0.00	0.00	0.00	0.86	0.00
Avail Cap (c_a), veh/h	0	931	0	0	0	0	441	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	0.00	0.48	0.00
Uniform Delay (d1), s/veh	0.0	31.8	0.0	0.0	0.0	0.0	36.6	0.0
Incr Delay (d2), s/veh	0.0	0.4	0.0	0.0	0.0	0.0	4.7	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	32.2	0.0	0.0	0.0	0.0	41.2	0.0
1st-Term Q (Q1), veh/ln	0.0	2.0	0.0	0.0	0.0	0.0	4.8	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	0.00	0.00	0.00	1.00	1.00
%ile Back of Q (50%), veh/ln	0.0	2.1	0.0	0.0	0.0	0.0	5.2	0.0
%ile Storage Ratio (RQ%)	0.00	0.10	0.00	0.00	0.00	0.00	0.32	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	0	0	8
Lane Assignment				T				T
Lanes in Grp	0	0	0	2	0	0	0	3
Grp Vol (v), veh/h	0	0	0	1026	0	0	0	600
Grp Sat Flow (s), veh/h/ln	0	0	0	1710	0	0	0	1638
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Lane Grp Cap (c), veh/h	0	0	0	2429	0	0	0	2434
V/C Ratio (X)	0.00	0.00	0.00	0.42	0.00	0.00	0.00	0.25
Avail Cap (c_a), veh/h	0	0	0	2429	0	0	0	2434
Upstream Filter (I)	0.00	0.00	0.00	0.48	0.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.2
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.5
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1

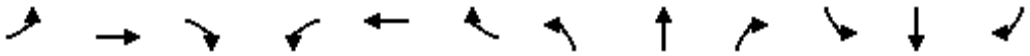
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	0	0	18
Lane Assignment		R						R
Lanes in Grp	0	2	0	0	0	0	0	1
Grp Vol (v), veh/h	0	478	0	0	0	0	0	249
Grp Sat Flow (s), veh/h/ln	0	1610	0	0	0	0	0	1525
Q Serve Time (g_s), s	0.0	12.7	0.0	0.0	0.0	0.0	0.0	0.2
Cycle Q Clear Time (g_c), s	0.0	12.7	0.0	0.0	0.0	0.0	0.0	0.2
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	0.00	0.00	0.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	611	0	0	0	0	0	755
V/C Ratio (X)	0.00	0.78	0.00	0.00	0.00	0.00	0.00	0.33
Avail Cap (c_a), veh/h	0	984	0	0	0	0	0	755
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	34.7	0.0	0.0	0.0	0.0	0.0	0.2
Incr Delay (d2), s/veh	0.0	2.2	0.0	0.0	0.0	0.0	0.0	1.2
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	36.9	0.0	0.0	0.0	0.0	0.0	1.4
1st-Term Q (Q1), veh/ln	0.0	4.9	0.0	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.2
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	5.1	0.0	0.0	0.0	0.0	0.0	0.3
%ile Storage Ratio (RQ%)	0.00	0.23	0.00	0.00	0.00	0.00	0.00	0.03
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	12.5
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	157	764	85	127	339	133	29	48	268	162	321	123
Future Volume (veh/h)	157	764	85	127	339	133	29	48	268	162	321	123
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1900
Adj Flow Rate, veh/h	157	764	85	127	339	133	29	48	268	162	321	123
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	189	842	375	156	409	347	52	553	469	198	954	359
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.22	0.49	0.49	0.18	0.45	0.23	0.03	0.31	0.31	0.12	0.39	0.39
Unsig. Movement Delay												
Ln Grp Delay, s/veh	42.8	27.0	15.2	41.3	26.3	24.9	45.0	18.8	26.8	51.7	17.3	17.5
Ln Grp LOS	D	C	B	D	C	C	D	B	C	D	B	B
Approach Vol, veh/h		1006			599			345			606	
Approach Delay, s/veh		28.5			29.2			27.2			26.5	
Approach LOS		C			C			C			C	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Case No	2.0	3.0	2.0	3.0	2.0	4.0	2.0	3.0
Phs Duration (G+Y+Rc), s	13.2	27.5	11.3	23.0	6.8	33.9	12.8	21.5
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green (Gmax), s	9.7	19.3	8.6	19.4	5.4	23.6	9.5	18.5
Max Allow Headway (MAH), s	3.8	4.2	3.8	5.1	3.8	5.3	3.8	4.9
Max Q Clear (g_c+I1), s	8.9	13.1	7.3	17.4	3.3	9.1	8.6	14.4
Green Ext Time (g_e), s	0.0	0.6	0.0	1.1	0.0	2.3	0.0	1.0
Prob of Phs Call (p_c)	0.97	1.00	0.93	1.00	0.45	1.00	0.96	1.00
Prob of Max Out (p_x)	1.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00

Left-Turn Movement Data								
Assigned Mvmt	1		3		5		7	
Mvmt Sat Flow, veh/h	1714		1714		1714		1714	

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		1800		3420		2431		1800

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1525		1525		914		1525

Left Lane Group Data								
Assigned Mvmt	1	0	3	0	5	0	7	0
Lane Assignment	L (Prot)		L (Prot)		L (Prot)		L (Prot)	

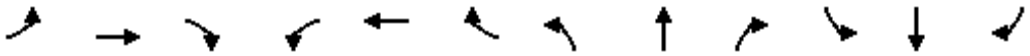
Lanes in Grp	1	0	1	0	1	0	1	0
Grp Vol (v), veh/h	162	0	127	0	29	0	157	0
Grp Sat Flow (s), veh/h/ln	1714	0	1714	0	1714	0	1714	0
Q Serve Time (g_s), s	6.9	0.0	5.3	0.0	1.3	0.0	6.6	0.0
Cycle Q Clear Time (g_c), s	6.9	0.0	5.3	0.0	1.3	0.0	6.6	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	198	0	156	0	52	0	189	0
V/C Ratio (X)	0.82	0.00	0.81	0.00	0.56	0.00	0.83	0.00
Avail Cap (c_a), veh/h	222	0	197	0	123	0	217	0
Upstream Filter (I)	1.00	0.00	0.58	0.00	1.00	0.00	0.64	0.00
Uniform Delay (d1), s/veh	32.4	0.0	30.0	0.0	35.9	0.0	28.6	0.0
Incr Delay (d2), s/veh	19.3	0.0	11.3	0.0	9.1	0.0	14.3	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	51.7	0.0	41.3	0.0	45.0	0.0	42.8	0.0
1st-Term Q (Q1), veh/ln	2.8	0.0	2.0	0.0	0.5	0.0	2.3	0.0
2nd-Term Q (Q2), veh/ln	1.1	0.0	0.5	0.0	0.1	0.0	0.7	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
%ile Back of Q (50%), veh/ln	3.8	0.0	2.5	0.0	0.6	0.0	3.1	0.0
%ile Storage Ratio (RQ%)	0.96	0.00	0.10	0.00	0.07	0.00	0.30	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	1	0	2	0	1	0	1
Grp Vol (v), veh/h	0	48	0	764	0	224	0	339
Grp Sat Flow (s), veh/h/ln	0	1800	0	1710	0	1710	0	1800
Q Serve Time (g_s), s	0.0	1.4	0.0	15.4	0.0	6.9	0.0	12.4
Cycle Q Clear Time (g_c), s	0.0	1.4	0.0	15.4	0.0	6.9	0.0	12.4
Lane Grp Cap (c), veh/h	0	553	0	842	0	671	0	409
V/C Ratio (X)	0.00	0.09	0.00	0.91	0.00	0.33	0.00	0.83
Avail Cap (c_a), veh/h	0	553	0	885	0	671	0	444
Upstream Filter (I)	0.00	1.00	0.00	0.64	0.00	1.00	0.00	0.58
Uniform Delay (d1), s/veh	0.0	18.5	0.0	18.3	0.0	15.9	0.0	19.2
Incr Delay (d2), s/veh	0.0	0.3	0.0	8.7	0.0	1.3	0.0	7.1
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	18.8	0.0	27.0	0.0	17.3	0.0	26.3
1st-Term Q (Q1), veh/ln	0.0	0.6	0.0	3.9	0.0	2.5	0.0	3.7
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	1.0	0.0	0.2	0.0	0.8

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.6	0.0	4.9	0.0	2.8	0.0	4.5
%ile Storage Ratio (RQ%)	0.00	0.03	0.00	0.06	0.00	0.47	0.00	0.18
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		R		T+R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	268	0	85	0	220	0	133
Grp Sat Flow (s), veh/h/ln	0	1525	0	1525	0	1635	0	1525
Q Serve Time (g_s), s	0.0	11.1	0.0	2.4	0.0	7.1	0.0	5.5
Cycle Q Clear Time (g_c), s	0.0	11.1	0.0	2.4	0.0	7.1	0.0	5.5
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	0.56	0.00	1.00
Lane Grp Cap (c), veh/h	0	469	0	375	0	642	0	347
V/C Ratio (X)	0.00	0.57	0.00	0.23	0.00	0.34	0.00	0.38
Avail Cap (c_a), veh/h	0	469	0	395	0	642	0	376
Upstream Filter (I)	0.00	1.00	0.00	0.64	0.00	1.00	0.00	0.58
Uniform Delay (d1), s/veh	0.0	21.8	0.0	15.0	0.0	16.0	0.0	24.5
Incr Delay (d2), s/veh	0.0	5.0	0.0	0.2	0.0	1.5	0.0	0.4
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	26.8	0.0	15.2	0.0	17.5	0.0	24.9
1st-Term Q (Q1), veh/ln	0.0	3.7	0.0	0.8	0.0	2.5	0.0	1.9
2nd-Term Q (Q2), veh/ln	0.0	0.7	0.0	0.0	0.0	0.3	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	4.4	0.0	0.8	0.0	2.7	0.0	2.0
%ile Storage Ratio (RQ%)	0.00	0.24	0.00	0.01	0.00	0.47	0.00	0.08
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	28.0
HCM 6th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	454	527	164	35	347	174	80	471	54	255	23	177
Future Volume (veh/h)	454	527	164	35	347	174	80	471	54	255	23	177
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1600	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1900
Adj Flow Rate, veh/h	454	527	164	35	347	174	80	471	54	255	23	177
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	480	617	523	56	384	325	372	876	391	289	85	652
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.32	0.69	0.69	0.06	0.43	0.21	0.26	0.26	0.26	0.17	0.47	0.47
Unsig. Movement Delay												
Ln Grp Delay, s/veh	50.5	19.5	10.1	52.7	45.3	32.8	28.1	31.2	26.5	59.6	0.0	15.2
Ln Grp LOS	D	B	B	D	D	C	C	C	C	E	A	B
Approach Vol, veh/h		1145			556			605			455	
Approach Delay, s/veh		30.4			41.9			30.4			40.0	
Approach LOS		C			D			C			D	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4		6	7	8
Case No	2.0	5.3	2.0	3.0		4.0	2.0	3.0
Phs Duration (G+Y+Rc), s	19.7	27.6	7.4	35.4		47.2	19.1	23.7
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5		4.5	4.5	4.5
Max Green (Gmax), s	16.5	19.0	5.0	31.5		40.0	14.6	21.9
Max Allow Headway (MAH), s	3.8	5.0	3.8	5.0		5.5	3.8	4.8
Max Q Clear (g_c+I1), s	15.1	12.7	3.8	22.0		9.0	15.5	18.2
Green Ext Time (g_e), s	0.1	1.9	0.0	2.8		1.3	0.0	1.0
Prob of Phs Call (p_c)	1.00	1.00	0.58	1.00		1.00	1.00	1.00
Prob of Max Out (p_x)	1.00	0.00	1.00	0.41		0.00	1.00	1.00

Left-Turn Movement Data								
Assigned Mvmt	1	5	3				7	
Mvmt Sat Flow, veh/h	1714	1138	1714				2956	

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		3420		1800		179		1800

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1525		1525		1374		1525

Left Lane Group Data								
Assigned Mvmt	1	5	3	0	0	0	7	0
Lane Assignment	L (Prot)	L	L (Prot)				L (Prot)	

Lanes in Grp	1	1	1	0	0	0	2	0
Grp Vol (v), veh/h	255	80	35	0	0	0	454	0
Grp Sat Flow (s), veh/h/ln	1714	1138	1714	0	0	0	1478	0
Q Serve Time (g_s), s	13.1	5.1	1.8	0.0	0.0	0.0	13.5	0.0
Cycle Q Clear Time (g_c), s	13.1	5.1	1.8	0.0	0.0	0.0	13.5	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	1138	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	23.1	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	23.1	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	5.1	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	1.00	1.00	0.00	0.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	289	372	56	0	0	0	480	0
V/C Ratio (X)	0.88	0.22	0.63	0.00	0.00	0.00	0.95	0.00
Avail Cap (c_a), veh/h	314	372	95	0	0	0	480	0
Upstream Filter (I)	1.00	1.00	1.00	0.00	0.00	0.00	0.62	0.00
Uniform Delay (d1), s/veh	36.5	26.8	41.6	0.0	0.0	0.0	30.0	0.0
Incr Delay (d2), s/veh	23.0	1.3	11.2	0.0	0.0	0.0	20.4	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	59.6	28.1	52.7	0.0	0.0	0.0	50.5	0.0
1st-Term Q (Q1), veh/ln	5.4	1.4	0.7	0.0	0.0	0.0	3.8	0.0
2nd-Term Q (Q2), veh/ln	1.8	0.1	0.2	0.0	0.0	0.0	1.4	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	1.00	1.00	0.00	0.00	0.00	1.00	0.00
%ile Back of Q (50%), veh/ln	7.2	1.5	0.9	0.0	0.0	0.0	5.1	0.0
%ile Storage Ratio (RQ%)	0.87	0.25	0.01	0.00	0.00	0.00	0.43	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

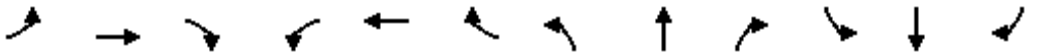
Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T				T
Lanes in Grp	0	2	0	1	0	0	0	1
Grp Vol (v), veh/h	0	471	0	527	0	0	0	347
Grp Sat Flow (s), veh/h/ln	0	1710	0	1800	0	0	0	1800
Q Serve Time (g_s), s	0.0	10.7	0.0	20.0	0.0	0.0	0.0	16.2
Cycle Q Clear Time (g_c), s	0.0	10.7	0.0	20.0	0.0	0.0	0.0	16.2
Lane Grp Cap (c), veh/h	0	876	0	617	0	0	0	384
V/C Ratio (X)	0.00	0.54	0.00	0.85	0.00	0.00	0.00	0.90
Avail Cap (c_a), veh/h	0	876	0	630	0	0	0	438
Upstream Filter (I)	0.00	1.00	0.00	0.62	0.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	28.9	0.0	12.4	0.0	0.0	0.0	25.0
Incr Delay (d2), s/veh	0.0	2.4	0.0	7.1	0.0	0.0	0.0	20.4
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	31.2	0.0	19.5	0.0	0.0	0.0	45.3
1st-Term Q (Q1), veh/ln	0.0	4.3	0.0	4.0	0.0	0.0	0.0	4.9
2nd-Term Q (Q2), veh/ln	0.0	0.3	0.0	1.2	0.0	0.0	0.0	2.2

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	4.6	0.0	5.2	0.0	0.0	0.0	7.1
%ile Storage Ratio (RQ%)	0.00	0.41	0.00	0.21	0.00	0.00	0.00	0.08
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		R		T+R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	54	0	164	0	200	0	174
Grp Sat Flow (s), veh/h/ln	0	1525	0	1525	0	1553	0	1525
Q Serve Time (g_s), s	0.0	2.5	0.0	3.9	0.0	7.0	0.0	9.1
Cycle Q Clear Time (g_c), s	0.0	2.5	0.0	3.9	0.0	7.0	0.0	9.1
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	0.88	0.00	1.00
Lane Grp Cap (c), veh/h	0	391	0	523	0	737	0	325
V/C Ratio (X)	0.00	0.14	0.00	0.31	0.00	0.27	0.00	0.54
Avail Cap (c_a), veh/h	0	391	0	534	0	737	0	371
Upstream Filter (I)	0.00	1.00	0.00	0.62	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	25.8	0.0	9.9	0.0	14.3	0.0	31.5
Incr Delay (d2), s/veh	0.0	0.7	0.0	0.2	0.0	0.9	0.0	1.4
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	26.5	0.0	10.1	0.0	15.2	0.0	32.8
1st-Term Q (Q1), veh/ln	0.0	0.9	0.0	1.1	0.0	2.4	0.0	3.3
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	0.2	0.0	0.1
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	1.0	0.0	1.2	0.0	2.5	0.0	3.4
%ile Storage Ratio (RQ%)	0.00	0.34	0.00	0.05	0.00	0.31	0.00	0.04
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	34.3
HCM 6th LOS	C

EXISTING PLUS AMBIENT GROWTH PLUS PROJECT CONDITIONS



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	233	3	133	600	565	0	0	558	711
Future Volume (veh/h)	0	0	0	233	3	133	600	565	0	0	558	711
Number				3	8	18	5	2	12	1	6	16
Initial Q, veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln				1700	1800	1800	1700	1800	0	0	1800	1900
Adj Flow Rate, veh/h				245	3	140	632	595	0	0	587	748
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence				Yes			Yes			No		
Cap, veh/h				277	3	249	641	2634	0	0	1675	549
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	2.00	1.66
Prop Arrive On Green				0.16	0.16	0.16	0.79	1.00	0.00	0.00	0.68	0.57
Unsig. Movement Delay												
Ln Grp Delay, s/veh				75.3	0.0	49.0	32.3	0.1	0.0	0.0	14.1	200.9
Ln Grp LOS				E	A	D	C	A	A	A	B	F
Approach Vol, veh/h					388			1227			1335	
Approach Delay, s/veh					65.8			16.7			118.7	
Approach LOS					E			B			F	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2	8		5	6		
Case No		4.0	11.0		2.0	7.0		
Phs Duration (G+Y+Rc), s		96.4	23.6		51.5	44.9		
Change Period (Y+Rc), s		4.5	4.5		4.5	4.5		
Max Green (Gmax), s		91.5	19.5		48.5	38.5		
Max Allow Headway (MAH), s		5.2	4.9		3.8	4.5		
Max Q Clear (g_c+I1), s		2.0	19.0		46.5	42.9		
Green Ext Time (g_e), s		4.8	0.1		0.6	0.0		
Prob of Phs Call (p_c)		1.00	1.00		1.00	1.00		
Prob of Max Out (p_x)		0.00	1.00		1.00	0.00		
Left-Turn Movement Data								
Assigned Mvmt			3		5	1		
Mvmt Sat Flow, veh/h			1695		1619	0		
Through Movement Data								
Assigned Mvmt		2	8			6		
Mvmt Sat Flow, veh/h		3510	21			5076		
Right-Turn Movement Data								
Assigned Mvmt		12	18			16		
Mvmt Sat Flow, veh/h		0	1525			1610		
Left Lane Group Data								
Assigned Mvmt	0	0	3	0	5	1	0	0
Lane Assignment			L+T		L (Prot)			

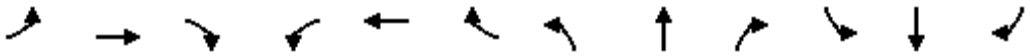
Lanes in Grp	0	0	1	0	1	0	0	0
Grp Vol (v), veh/h	0	0	248	0	632	0	0	0
Grp Sat Flow (s), veh/h/ln	0	0	1715	0	1619	0	0	0
Q Serve Time (g_s), s	0.0	0.0	17.0	0.0	44.5	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	17.0	0.0	44.5	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	40.9	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	0.00	0.99	0.00	1.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	280	0	641	0	0	0
V/C Ratio (X)	0.00	0.00	0.89	0.00	0.99	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	0	286	0	661	0	0	0
Upstream Filter (I)	0.00	0.00	1.00	0.00	0.46	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	49.1	0.0	12.2	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	26.2	0.0	20.1	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	75.3	0.0	32.3	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	7.3	0.0	4.3	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	2.0	0.0	3.6	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	0.00	1.00	0.00	1.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	9.3	0.0	7.9	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.19	0.00	0.72	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	8	0	0	6	0	0
Lane Assignment		T				T		
Lanes in Grp	0	2	0	0	0	3	0	0
Grp Vol (v), veh/h	0	595	0	0	0	587	0	0
Grp Sat Flow (s), veh/h/ln	0	1710	0	0	0	1638	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	6.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	6.0	0.0	0.0
Lane Grp Cap (c), veh/h	0	2634	0	0	0	1675	0	0
V/C Ratio (X)	0.00	0.23	0.00	0.00	0.00	0.35	0.00	0.00
Avail Cap (c_a), veh/h	0	2634	0	0	0	1675	0	0
Upstream Filter (I)	0.00	0.46	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	13.5	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.1	0.0	0.0	0.0	0.6	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.1	0.0	0.0	0.0	14.1	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	1.9	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	18	0	0	16	0	0
Lane Assignment			R			R		
Lanes in Grp	0	0	1	0	0	1	0	0
Grp Vol (v), veh/h	0	0	140	0	0	748	0	0
Grp Sat Flow (s), veh/h/ln	0	0	1525	0	0	1610	0	0
Q Serve Time (g_s), s	0.0	0.0	10.1	0.0	0.0	40.9	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	10.1	0.0	0.0	40.9	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	249	0	0	549	0	0
V/C Ratio (X)	0.00	0.00	0.56	0.00	0.00	1.36	0.00	0.00
Avail Cap (c_a), veh/h	0	0	254	0	0	549	0	0
Upstream Filter (I)	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	46.3	0.0	0.0	26.1	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	2.7	0.0	0.0	174.8	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	49.0	0.0	0.0	200.9	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	3.9	0.0	0.0	12.2	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.2	0.0	0.0	26.7	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	4.0	0.0	0.0	38.9	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.08	0.00	0.00	0.84	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	49.8	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	69.3
HCM 6th LOS	E



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	556	4	498	0	0	0	0	679	300	77	506	0
Future Volume (veh/h)	556	4	498	0	0	0	0	679	300	77	506	0
Number	7	4	14				5	2	12	1	6	16
Initial Q, veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1700	1800	1800				0	1800	1800	1700	1800	0
Adj Flow Rate, veh/h	585	4	524				0	715	316	81	533	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0				0	0	0	0	0	0
Opposing Right Turn Influence	Yes						No			Yes		
Cap, veh/h	557	4	499				0	867	269	97	933	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	2.00	2.00	2.00	1.00	1.00
Prop Arrive On Green	0.65	0.65	0.65				0.00	0.35	0.35	0.12	0.27	0.00
Unsig. Movement Delay												
Ln Grp Delay, s/veh	60.7	0.0	0.0				0.0	42.9	146.2	89.4	36.9	0.0
Ln Grp LOS	F	A	A				A	D	F	F	D	A
Approach Vol, veh/h		1113						1031			614	
Approach Delay, s/veh		60.7						74.5			43.8	
Approach LOS		E						E			D	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Case No	2.0	7.0		12.0		4.0		
Phs Duration (G+Y+Rc), s	10.6	23.4		76.0		34.0		
Change Period (Y+Rc), s	4.5	4.5		4.5		4.5		
Max Green (Gmax), s	6.1	18.9		71.5		29.5		
Max Allow Headway (MAH), s	3.7	4.6		5.4		4.9		
Max Q Clear (g_c+I1), s	7.4	21.4		74.0		16.8		
Green Ext Time (g_e), s	0.0	0.0		0.0		2.6		
Prob of Phs Call (p_c)	0.92	1.00		1.00		1.00		
Prob of Max Out (p_x)	1.00	0.00		1.00		0.00		

Left-Turn Movement Data								
Assigned Mvmt	1	5		7				
Mvmt Sat Flow, veh/h	1619	0		852				

Through Movement Data								
Assigned Mvmt		2		4		6		
Mvmt Sat Flow, veh/h		5076		6		3510		

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		
Mvmt Sat Flow, veh/h		1525		763		0		

Left Lane Group Data								
Assigned Mvmt	1	5	0	7	0	0	0	0
Lane Assignment	L (Prot)			L+T+R				

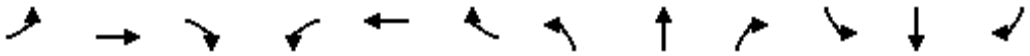
Lanes in Grp	1	0	0	1	0	0	0	0
Grp Vol (v), veh/h	81	0	0	1113	0	0	0	0
Grp Sat Flow (s), veh/h/ln	1619	0	0	1620	0	0	0	0
Q Serve Time (g_s), s	5.4	0.0	0.0	72.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	5.4	0.0	0.0	72.0	0.0	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	19.4	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	0.53	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	97	0	0	1060	0	0	0	0
V/C Ratio (X)	0.83	0.00	0.00	1.05	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	97	0	0	1060	0	0	0	0
Upstream Filter (I)	0.94	0.00	0.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	47.9	0.0	0.0	19.1	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	41.5	0.0	0.0	41.6	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	89.4	0.0	0.0	60.7	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	2.0	0.0	0.0	23.6	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	1.1	0.0	0.0	12.2	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00
%ile Back of Q (50%), veh/ln	3.1	0.0	0.0	35.8	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.28	0.00	0.00	0.61	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	13.1	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	0
Lane Assignment		T				T		
Lanes in Grp	0	3	0	0	0	2	0	0
Grp Vol (v), veh/h	0	715	0	0	0	533	0	0
Grp Sat Flow (s), veh/h/ln	0	1638	0	0	0	1710	0	0
Q Serve Time (g_s), s	0.0	14.6	0.0	0.0	0.0	14.8	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	14.6	0.0	0.0	0.0	14.8	0.0	0.0
Lane Grp Cap (c), veh/h	0	867	0	0	0	933	0	0
V/C Ratio (X)	0.00	0.83	0.00	0.00	0.00	0.57	0.00	0.00
Avail Cap (c_a), veh/h	0	867	0	0	0	933	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	0.94	0.00	0.00
Uniform Delay (d1), s/veh	0.0	34.1	0.0	0.0	0.0	34.5	0.0	0.0
Incr Delay (d2), s/veh	0.0	8.8	0.0	0.0	0.0	2.4	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	42.9	0.0	0.0	0.0	36.9	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	4.6	0.0	0.0	0.0	5.9	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.7	0.0	0.0	0.0	0.3	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	5.3	0.0	0.0	0.0	6.2	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.17	0.00	0.00	0.00	0.57	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	0
Lane Assignment		R						
Lanes in Grp	0	1	0	0	0	0	0	0
Grp Vol (v), veh/h	0	316	0	0	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	1525	0	0	0	0	0	0
Q Serve Time (g_s), s	0.0	19.4	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	19.4	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	0.47	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	269	0	0	0	0	0	0
V/C Ratio (X)	0.00	1.17	0.00	0.00	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	269	0	0	0	0	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	35.6	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	110.6	0.0	0.0	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	146.2	0.0	0.0	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	5.3	0.0	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	8.3	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	13.6	0.0	0.0	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.43	0.00	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	11.7	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	62.1
HCM 6th LOS	E



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	15	229	46	400	671	116	50	176	217	176	457	50
Future Volume (veh/h)	15	229	46	400	671	116	50	176	217	176	457	50
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1900
Adj Flow Rate, veh/h	15	234	47	408	685	118	51	180	222	180	467	51
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	37	339	67	432	1059	182	74	1036	454	216	1215	132
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.02	0.12	0.11	0.27	0.36	0.36	0.05	0.30	0.30	0.13	0.39	0.39
Unsig. Movement Delay												
Ln Grp Delay, s/veh	50.3	42.0	42.5	60.3	25.4	25.5	53.1	23.4	29.7	61.6	21.3	21.4
Ln Grp LOS	D	D	D	E	C	C	D	C	C	E	C	C
Approach Vol, veh/h		296			1211			453			698	
Approach Delay, s/veh		42.7			37.2			29.9			31.7	
Approach LOS		D			D			C			C	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Case No	2.0	3.0	2.0	4.0	2.0	4.0	2.0	4.0
Phs Duration (G+Y+Rc), s	16.0	31.3	28.0	14.7	8.1	39.2	6.1	36.7
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green (Gmax), s	11.5	19.0	23.5	18.0	6.4	24.1	5.0	36.5
Max Allow Headway (MAH), s	3.8	4.6	3.8	5.3	3.8	5.3	3.8	5.3
Max Q Clear (g_c+I1), s	11.8	12.8	24.2	9.2	4.8	11.7	2.8	19.6
Green Ext Time (g_e), s	0.0	1.0	0.0	1.0	0.0	2.5	0.0	4.8
Prob of Phs Call (p_c)	0.99	1.00	1.00	1.00	0.72	1.00	0.31	1.00
Prob of Max Out (p_x)	1.00	0.00	1.00	0.25	1.00	0.00	1.00	0.18

Left-Turn Movement Data								
Assigned Mvmt	1		3		5		7	
Mvmt Sat Flow, veh/h	1619		1619		1619		1619	

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		3420		2847		3111		2917

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1525		562		338		502

Left Lane Group Data								
Assigned Mvmt	1	0	3	0	5	0	7	0
Lane Assignment	L (Prot)		L (Prot)		L (Prot)		L (Prot)	

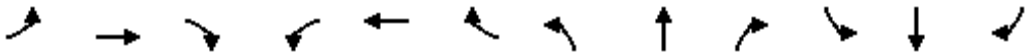
Lanes in Grp	1	0	1	0	1	0	1	0
Grp Vol (v), veh/h	180	0	408	0	51	0	15	0
Grp Sat Flow (s), veh/h/ln	1619	0	1619	0	1619	0	1619	0
Q Serve Time (g_s), s	9.8	0.0	22.2	0.0	2.8	0.0	0.8	0.0
Cycle Q Clear Time (g_c), s	9.8	0.0	22.2	0.0	2.8	0.0	0.8	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	216	0	432	0	74	0	37	0
V/C Ratio (X)	0.83	0.00	0.94	0.00	0.69	0.00	0.40	0.00
Avail Cap (c_a), veh/h	216	0	432	0	124	0	99	0
Upstream Filter (I)	1.00	0.00	0.91	0.00	0.99	0.00	1.00	0.00
Uniform Delay (d1), s/veh	38.0	0.0	32.4	0.0	42.3	0.0	43.4	0.0
Incr Delay (d2), s/veh	23.5	0.0	28.0	0.0	10.8	0.0	6.9	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	61.6	0.0	60.3	0.0	53.1	0.0	50.3	0.0
1st-Term Q (Q1), veh/ln	3.8	0.0	8.4	0.0	1.1	0.0	0.3	0.0
2nd-Term Q (Q2), veh/ln	1.4	0.0	3.4	0.0	0.2	0.0	0.1	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
%ile Back of Q (50%), veh/ln	5.2	0.0	11.8	0.0	1.3	0.0	0.4	0.0
%ile Storage Ratio (RQ%)	0.08	0.00	0.11	0.00	0.07	0.00	0.01	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	2	0	1	0	1	0	1
Grp Vol (v), veh/h	0	180	0	139	0	256	0	401
Grp Sat Flow (s), veh/h/ln	0	1710	0	1710	0	1710	0	1710
Q Serve Time (g_s), s	0.0	3.5	0.0	7.0	0.0	9.6	0.0	17.6
Cycle Q Clear Time (g_c), s	0.0	3.5	0.0	7.0	0.0	9.6	0.0	17.6
Lane Grp Cap (c), veh/h	0	1036	0	204	0	668	0	621
V/C Ratio (X)	0.00	0.17	0.00	0.68	0.00	0.38	0.00	0.65
Avail Cap (c_a), veh/h	0	1036	0	352	0	668	0	703
Upstream Filter (I)	0.00	0.99	0.00	1.00	0.00	1.00	0.00	0.91
Uniform Delay (d1), s/veh	0.0	23.1	0.0	38.0	0.0	19.6	0.0	23.9
Incr Delay (d2), s/veh	0.0	0.4	0.0	4.0	0.0	1.7	0.0	1.6
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	23.4	0.0	42.0	0.0	21.3	0.0	25.4
1st-Term Q (Q1), veh/ln	0.0	1.4	0.0	2.9	0.0	3.7	0.0	6.8
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.2	0.0	0.3	0.0	0.3

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	1.4	0.0	3.1	0.0	4.0	0.0	7.1
%ile Storage Ratio (RQ%)	0.00	0.07	0.00	0.04	0.00	0.06	0.00	0.07
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		T+R		T+R		T+R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	222	0	142	0	262	0	402
Grp Sat Flow (s), veh/h/ln	0	1525	0	1699	0	1739	0	1710
Q Serve Time (g_s), s	0.0	10.8	0.0	7.2	0.0	9.7	0.0	17.6
Cycle Q Clear Time (g_c), s	0.0	10.8	0.0	7.2	0.0	9.7	0.0	17.6
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	0.33	0.00	0.19	0.00	0.29
Lane Grp Cap (c), veh/h	0	454	0	203	0	679	0	621
V/C Ratio (X)	0.00	0.49	0.00	0.70	0.00	0.39	0.00	0.65
Avail Cap (c_a), veh/h	0	454	0	349	0	679	0	703
Upstream Filter (I)	0.00	0.99	0.00	1.00	0.00	1.00	0.00	0.91
Uniform Delay (d1), s/veh	0.0	26.0	0.0	38.2	0.0	19.7	0.0	23.9
Incr Delay (d2), s/veh	0.0	3.7	0.0	4.4	0.0	1.7	0.0	1.6
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	29.7	0.0	42.5	0.0	21.4	0.0	25.5
1st-Term Q (Q1), veh/ln	0.0	3.8	0.0	3.0	0.0	3.8	0.0	6.9
2nd-Term Q (Q2), veh/ln	0.0	0.5	0.0	0.2	0.0	0.3	0.0	0.3
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	4.3	0.0	3.2	0.0	4.1	0.0	7.1
%ile Storage Ratio (RQ%)	0.00	0.22	0.00	0.04	0.00	0.06	0.00	0.07
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	35.1
HCM 6th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	111	3	232	4	4	29	182	295	5	16	685	226
Future Volume (veh/h)	111	3	232	4	4	29	182	295	5	16	685	226
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1600	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1900
Adj Flow Rate, veh/h	105	3	0	4	4	27	172	279	5	15	649	214
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	195	292		102	38	60	215	2245	40	40	1377	454
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.07	0.16	0.00	0.04	0.04	0.04	0.13	0.65	0.65	0.02	0.54	0.54
Unsig. Movement Delay												
Ln Grp Delay, s/veh	36.2	26.4	0.0	34.7	0.0	40.5	50.4	5.1	5.1	40.2	11.7	11.8
Ln Grp LOS	D	C		C	A	D	D	A	A	D	B	B
Approach Vol, veh/h		108			35			456			878	
Approach Delay, s/veh		36.0			39.2			22.2			12.2	
Approach LOS		D			D			C			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6	7	8
Case No	2.0	4.0		3.0	2.0	4.0	2.0	8.3
Phs Duration (G+Y+Rc), s	5.8	53.0		16.2	14.0	44.9	8.9	7.2
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5	4.5	4.5
Max Green (Gmax), s	5.0	28.9		27.6	9.5	24.4	5.1	18.0
Max Allow Headway (MAH), s	3.8	5.2		5.2	3.8	5.3	3.8	5.5
Max Q Clear (g_c+I1), s	2.7	4.3		2.1	9.7	13.9	4.6	3.4
Green Ext Time (g_e), s	0.0	1.6		0.0	0.0	4.1	0.0	0.1
Prob of Phs Call (p_c)	0.27	1.00		0.95	0.97	1.00	0.89	0.55
Prob of Max Out (p_x)	1.00	0.00		0.00	1.00	0.00	1.00	0.00

Left-Turn Movement Data								
Assigned Mvmt	1				5		7	3
Mvmt Sat Flow, veh/h	1619				1619		2956	689

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		3437		1800		2527		888

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		62		1525		833		1388

Left Lane Group Data								
Assigned Mvmt	1	0	0	0	5	0	7	3
Lane Assignment	L (Prot)				L (Prot)		L (Prot)	L+T

Lanes in Grp	1	0	0	0	1	0	2	1
Grp Vol (v), veh/h	15	0	0	0	172	0	105	8
Grp Sat Flow (s), veh/h/ln	1619	0	0	0	1619	0	1478	1577
Q Serve Time (g_s), s	0.7	0.0	0.0	0.0	7.7	0.0	2.6	0.0
Cycle Q Clear Time (g_c), s	0.7	0.0	0.0	0.0	7.7	0.0	2.6	0.3
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	1436
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.2
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.2
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	0.00	1.00	0.00	1.00	0.50
Lane Grp Cap (c), veh/h	40	0	0	0	215	0	195	140
V/C Ratio (X)	0.38	0.00	0.00	0.00	0.80	0.00	0.54	0.06
Avail Cap (c_a), veh/h	119	0	0	0	216	0	221	455
Upstream Filter (I)	0.71	0.00	0.00	0.00	1.00	0.00	1.00	1.00
Uniform Delay (d1), s/veh	36.0	0.0	0.0	0.0	31.6	0.0	33.9	34.5
Incr Delay (d2), s/veh	4.1	0.0	0.0	0.0	18.9	0.0	2.3	0.2
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	40.2	0.0	0.0	0.0	50.4	0.0	36.2	34.7
1st-Term Q (Q1), veh/ln	0.3	0.0	0.0	0.0	2.9	0.0	0.9	0.1
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	1.1	0.0	0.1	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	0.00	1.00	0.00	1.00	1.00
%ile Back of Q (50%), veh/ln	0.3	0.0	0.0	0.0	4.1	0.0	1.0	0.1
%ile Storage Ratio (RQ%)	0.02	0.00	0.00	0.00	0.19	0.00	0.02	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		
Lanes in Grp	0	1	0	1	0	1	0	0
Grp Vol (v), veh/h	0	139	0	3	0	439	0	0
Grp Sat Flow (s), veh/h/ln	0	1710	0	1800	0	1710	0	0
Q Serve Time (g_s), s	0.0	2.3	0.0	0.1	0.0	11.8	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	2.3	0.0	0.1	0.0	11.8	0.0	0.0
Lane Grp Cap (c), veh/h	0	1117	0	292	0	932	0	0
V/C Ratio (X)	0.00	0.12	0.00	0.01	0.00	0.47	0.00	0.00
Avail Cap (c_a), veh/h	0	1117	0	674	0	932	0	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	0.71	0.00	0.00
Uniform Delay (d1), s/veh	0.0	4.9	0.0	26.4	0.0	10.5	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.2	0.0	0.0	0.0	1.2	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	5.1	0.0	26.4	0.0	11.7	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.7	0.0	0.0	0.0	3.9	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	0.3	0.0	0.0

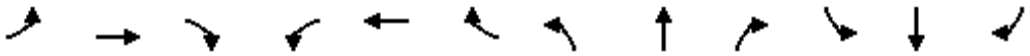
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.7	0.0	0.0	0.0	4.2	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.03	0.00	0.00	0.00	0.21	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R		R		T+R		T+R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	145	0	0	0	424	0	27
Grp Sat Flow (s), veh/h/ln	0	1789	0	1525	0	1650	0	1388
Q Serve Time (g_s), s	0.0	2.3	0.0	0.0	0.0	11.9	0.0	1.4
Cycle Q Clear Time (g_c), s	0.0	2.3	0.0	0.0	0.0	11.9	0.0	1.4
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.03	0.00	1.00	0.00	0.50	0.00	1.00
Lane Grp Cap (c), veh/h	0	1168	0	248	0	899	0	60
V/C Ratio (X)	0.00	0.12	0.00	0.00	0.00	0.47	0.00	0.45
Avail Cap (c_a), veh/h	0	1168	0	572	0	899	0	342
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	0.71	0.00	1.00
Uniform Delay (d1), s/veh	0.0	4.9	0.0	0.0	0.0	10.5	0.0	35.3
Incr Delay (d2), s/veh	0.0	0.2	0.0	0.0	0.0	1.3	0.0	5.2
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	5.1	0.0	0.0	0.0	11.8	0.0	40.5
1st-Term Q (Q1), veh/ln	0.0	0.7	0.0	0.0	0.0	3.8	0.0	0.5
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	0.3	0.0	0.1
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.8	0.0	0.0	0.0	4.1	0.0	0.6
%ile Storage Ratio (RQ%)	0.00	0.04	0.00	0.00	0.00	0.21	0.00	0.02
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	17.7
HCM 6th LOS	B

Notes

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	0	4	33	0	30	11	424	28	36	868	15
Future Volume (veh/h)	5	0	4	33	0	30	11	424	28	36	868	15
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1900	1800	1900	1800	1800	1700	1900	1900
Adj Flow Rate, veh/h	4	0	3	28	0	26	9	366	24	31	749	13
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	100	0	49	63	0	161	607	1377	1167	50	4353	75
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.03	0.00	0.03	0.04	0.00	0.10	0.76	0.76	0.76	0.03	0.83	0.82
Unsig. Movement Delay												
Ln Grp Delay, s/veh	56.6	0.0	57.1	61.2	0.0	49.6	3.4	4.6	3.4	69.1	2.2	2.3
Ln Grp LOS	E	A	E	E	A	D	A	A	A	E	A	A
Approach Vol, veh/h		7			54			399			793	
Approach Delay, s/veh		56.8			55.6			4.5			4.8	
Approach LOS		E			E			A			A	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4		6		8
Case No	2.0	5.3	2.0	6.3		4.0		4.0
Phs Duration (G+Y+Rc), s	7.7	95.8	8.7	7.8		103.5		16.5
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5		4.5		4.5
Max Green (Gmax), s	6.7	58.7	18.5	18.1		69.9		41.1
Max Allow Headway (MAH), s	3.8	5.2	3.8	4.7		5.2		5.6
Max Q Clear (g_c+I1), s	4.3	9.2	4.0	2.4		5.4		3.8
Green Ext Time (g_e), s	0.0	2.6	0.0	0.0		5.9		0.1
Prob of Phs Call (p_c)	0.64	1.00	0.83	0.67		1.00		0.87
Prob of Max Out (p_x)	1.00	0.00	0.00	0.00		0.00		0.00

Left-Turn Movement Data								
Assigned Mvmt	1	5	3	7				
Mvmt Sat Flow, veh/h	1619	715	1619	1259				

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		1800		0		5251		0

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1525		1525		91		1610

Left Lane Group Data								
Assigned Mvmt	1	5	3	7	0	0	0	0
Lane Assignment	L (Prot)	L	L (Prot)	L				

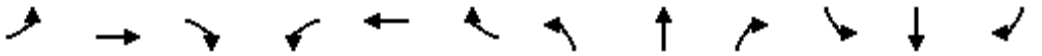
Lanes in Grp	1	1	1	1	0	0	0	0
Grp Vol (v), veh/h	31	9	28	4	0	0	0	0
Grp Sat Flow (s), veh/h/ln	1619	715	1619	1259	0	0	0	0
Q Serve Time (g_s), s	2.3	0.4	2.0	0.4	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	2.3	0.4	2.0	0.4	0.0	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	715	0	1259	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	91.8	0.0	3.8	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	91.8	0.0	3.8	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.4	0.0	0.4	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	50	607	63	100	0	0	0	0
V/C Ratio (X)	0.62	0.01	0.44	0.04	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	97	607	256	255	0	0	0	0
Upstream Filter (I)	1.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	57.4	3.4	56.4	56.4	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	11.7	0.0	4.8	0.2	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	69.1	3.4	61.2	56.6	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.9	0.0	0.8	0.1	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.2	0.0	0.1	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00
%ile Back of Q (50%), veh/ln	1.1	0.1	0.9	0.1	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.18	0.01	0.01	0.01	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T				T		
Lanes in Grp	0	1	0	0	0	2	0	0
Grp Vol (v), veh/h	0	366	0	0	0	493	0	0
Grp Sat Flow (s), veh/h/ln	0	1800	0	0	0	1729	0	0
Q Serve Time (g_s), s	0.0	7.2	0.0	0.0	0.0	3.4	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	7.2	0.0	0.0	0.0	3.4	0.0	0.0
Lane Grp Cap (c), veh/h	0	1377	0	0	0	2867	0	0
V/C Ratio (X)	0.00	0.27	0.00	0.00	0.00	0.17	0.00	0.00
Avail Cap (c_a), veh/h	0	1377	0	0	0	2867	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	4.2	0.0	0.0	0.0	2.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.5	0.0	0.0	0.0	0.1	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	4.6	0.0	0.0	0.0	2.2	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	2.3	0.0	0.0	0.0	0.8	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.2	0.0	0.0	0.0	0.1	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	2.5	0.0	0.0	0.0	0.9	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.15	0.00	0.00	0.00	0.09	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		T+R		T+R		T+R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	24	0	3	0	269	0	26
Grp Sat Flow (s), veh/h/ln	0	1525	0	1525	0	1884	0	1610
Q Serve Time (g_s), s	0.0	0.5	0.0	0.2	0.0	3.4	0.0	1.8
Cycle Q Clear Time (g_c), s	0.0	0.5	0.0	0.2	0.0	3.4	0.0	1.8
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	0.05	0.00	1.00
Lane Grp Cap (c), veh/h	0	1167	0	49	0	1562	0	161
V/C Ratio (X)	0.00	0.02	0.00	0.06	0.00	0.17	0.00	0.16
Avail Cap (c_a), veh/h	0	1167	0	236	0	1562	0	551
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	3.4	0.0	56.6	0.0	2.0	0.0	49.2
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.5	0.0	0.2	0.0	0.5
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	3.4	0.0	57.1	0.0	2.3	0.0	49.6
1st-Term Q (Q1), veh/ln	0.0	0.1	0.0	0.1	0.0	0.9	0.0	0.7
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.1	0.0	0.1	0.0	1.0	0.0	0.7
%ile Storage Ratio (RQ%)	0.00	0.01	0.00	0.01	0.00	0.10	0.00	0.01
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	7.2
HCM 6th LOS	A



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	25	3	13	10	0	0	63	438	15	3	798	114
Future Volume (veh/h)	25	3	13	10	0	0	63	438	15	3	798	114
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1700	1800	1900	1700	1900	1900
Adj Flow Rate, veh/h	22	3	11	9	0	0	56	387	13	3	706	101
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	103	5	19	147	0	0	78	1409	47	15	1474	1240
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.04	0.04	0.04	0.04	0.00	0.00	0.05	0.81	0.81	0.01	0.78	0.77
Unsig. Movement Delay												
Ln Grp Delay, s/veh	43.4	0.0	0.0	41.6	0.0	0.0	55.5	0.0	2.5	50.2	4.7	2.7
Ln Grp LOS	D	A	A	D	A	A	E	A	A	D	A	A
Approach Vol, veh/h		36			9			456			810	
Approach Delay, s/veh		43.4			41.6			9.0			4.6	
Approach LOS		D			D			A			A	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Case No	2.0	4.0		8.0	2.0	3.0		8.0
Phs Duration (G+Y+Rc), s	4.9	77.3		7.9	8.3	73.8		7.9
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green (Gmax), s	5.1	53.3		18.1	5.5	52.9		18.1
Max Allow Headway (MAH), s	3.8	5.2		5.3	3.8	5.1		5.3
Max Q Clear (g_c+I1), s	2.2	6.8		4.1	5.1	13.9		2.5
Green Ext Time (g_e), s	0.0	2.8		0.1	0.0	6.3		0.0
Prob of Phs Call (p_c)	0.07	1.00		0.68	0.75	1.00		0.68
Prob of Max Out (p_x)	1.00	0.00		0.00	1.00	0.00		0.00

Left-Turn Movement Data								
Assigned Mvmt	1			7	5			3
Mvmt Sat Flow, veh/h	1619			902	1619			1547

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		1731		123		1900		0

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		58		451		1610		0

Left Lane Group Data								
Assigned Mvmt	1	0	0	7	5	0	0	3
Lane Assignment	L (Prot)			L+T+R	L (Prot)			L+T

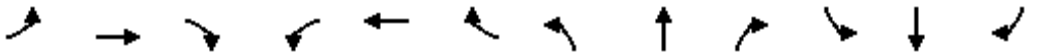
Lanes in Grp	1	0	0	1	1	0	0	1
Grp Vol (v), veh/h	3	0	0	36	56	0	0	9
Grp Sat Flow (s), veh/h/ln	1619	0	0	1476	1619	0	0	1547
Q Serve Time (g_s), s	0.2	0.0	0.0	1.7	3.1	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.2	0.0	0.0	2.1	3.1	0.0	0.0	0.5
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	1440	0	0	0	1422
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	1747	0	0	0	1714
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	3.9	0.0	0.0	0.0	3.9
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	3.4	0.0	0.0	0.0	1.8
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	1.7	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	0.61	1.00	0.00	0.00	1.00
Lane Grp Cap (c), veh/h	15	0	0	128	78	0	0	147
V/C Ratio (X)	0.19	0.00	0.00	0.28	0.72	0.00	0.00	0.06
Avail Cap (c_a), veh/h	101	0	0	364	108	0	0	367
Upstream Filter (I)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	44.2	0.0	0.0	42.3	42.2	0.0	0.0	41.4
Incr Delay (d2), s/veh	5.9	0.0	0.0	1.2	13.2	0.0	0.0	0.2
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	50.2	0.0	0.0	43.4	55.5	0.0	0.0	41.6
1st-Term Q (Q1), veh/ln	0.1	0.0	0.0	0.8	1.2	0.0	0.0	0.2
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.1	0.0	0.0	0.8	1.5	0.0	0.0	0.2
%ile Storage Ratio (RQ%)	0.01	0.00	0.00	0.10	0.19	0.00	0.00	0.01
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment						T		
Lanes in Grp	0	0	0	0	0	1	0	0
Grp Vol (v), veh/h	0	0	0	0	0	706	0	0
Grp Sat Flow (s), veh/h/ln	0	0	0	0	0	1900	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	11.9	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	11.9	0.0	0.0
Lane Grp Cap (c), veh/h	0	0	0	0	0	1474	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.00	0.00	0.48	0.00	0.00
Avail Cap (c_a), veh/h	0	0	0	0	0	1474	0	0
Upstream Filter (I)	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	3.6	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	1.1	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	4.7	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.0	0.0	3.5	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.38	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R				R		
Lanes in Grp	0	1	0	0	0	1	0	0
Grp Vol (v), veh/h	0	400	0	0	0	101	0	0
Grp Sat Flow (s), veh/h/ln	0	1790	0	0	0	1610	0	0
Q Serve Time (g_s), s	0.0	4.8	0.0	0.0	0.0	1.4	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	4.8	0.0	0.0	0.0	1.4	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.03	0.00	0.31	0.00	1.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	1457	0	0	0	1240	0	0
V/C Ratio (X)	0.00	0.27	0.00	0.00	0.00	0.08	0.00	0.00
Avail Cap (c_a), veh/h	0	1457	0	0	0	1240	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	2.0	0.0	0.0	0.0	2.5	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.5	0.0	0.0	0.0	0.1	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	2.5	0.0	0.0	0.0	2.7	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.9	0.0	0.0	0.0	0.3	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	1.1	0.0	0.0	0.0	0.4	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.02	0.00	0.00	0.00	0.04	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	7.5
HCM 6th LOS	A



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	44	133	31	177	370	125	117	241	78	58	437	83
Future Volume (veh/h)	44	133	31	177	370	125	117	241	78	58	437	83
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1900
Adj Flow Rate, veh/h	42	126	29	168	351	118	111	228	0	55	414	79
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	76	247	55	208	583	260	148	1710		88	1582	733
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.05	0.09	0.08	0.13	0.17	0.17	0.09	0.50	0.00	0.05	0.46	0.46
Unsig. Movement Delay												
Ln Grp Delay, s/veh	38.7	33.0	33.4	41.8	27.4	26.8	46.7	9.5	0.0	39.6	11.9	11.2
Ln Grp LOS	D	C	C	D	C	C	D	A		D	B	B
Approach Vol, veh/h		197			637			339			548	
Approach Delay, s/veh		34.4			31.1			21.7			14.6	
Approach LOS		C			C			C			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Case No	2.0	3.0	2.0	4.0	2.0	3.0	2.0	3.0
Phs Duration (G+Y+Rc), s	7.8	39.0	13.0	10.2	10.4	36.4	7.3	15.9
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green (Gmax), s	6.4	19.1	8.5	18.0	6.5	19.0	5.8	20.7
Max Allow Headway (MAH), s	3.8	5.2	3.8	5.3	3.8	5.0	3.8	4.9
Max Q Clear (g_c+I1), s	4.3	4.5	9.1	5.1	6.7	7.2	3.8	8.6
Green Ext Time (g_e), s	0.0	1.1	0.0	0.6	0.0	2.3	0.0	2.1
Prob of Phs Call (p_c)	0.66	1.00	0.96	1.00	0.88	1.00	0.56	1.00
Prob of Max Out (p_x)	1.00	0.00	1.00	0.01	1.00	0.00	1.00	0.10

Left-Turn Movement Data								
Assigned Mvmt	1		3		5		7	
Mvmt Sat Flow, veh/h	1619		1619		1619		1619	

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		3420		2776		3420		3420

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1525		622		1610		1525

Left Lane Group Data								
Assigned Mvmt	1	0	3	0	5	0	7	0
Lane Assignment	L (Prot)		L (Prot)		L (Prot)		L (Prot)	

Lanes in Grp	1	0	1	0	1	0	1	0
Grp Vol (v), veh/h	55	0	168	0	111	0	42	0
Grp Sat Flow (s), veh/h/ln	1619	0	1619	0	1619	0	1619	0
Q Serve Time (g_s), s	2.3	0.0	7.1	0.0	4.7	0.0	1.8	0.0
Cycle Q Clear Time (g_c), s	2.3	0.0	7.1	0.0	4.7	0.0	1.8	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	88	0	208	0	148	0	76	0
V/C Ratio (X)	0.63	0.00	0.81	0.00	0.75	0.00	0.55	0.00
Avail Cap (c_a), veh/h	160	0	208	0	162	0	146	0
Upstream Filter (I)	1.00	0.00	0.55	0.00	0.97	0.00	1.00	0.00
Uniform Delay (d1), s/veh	32.4	0.0	29.7	0.0	31.0	0.0	32.6	0.0
Incr Delay (d2), s/veh	7.2	0.0	12.2	0.0	15.6	0.0	6.1	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	39.6	0.0	41.8	0.0	46.7	0.0	38.7	0.0
1st-Term Q (Q1), veh/ln	0.9	0.0	2.6	0.0	1.8	0.0	0.7	0.0
2nd-Term Q (Q2), veh/ln	0.2	0.0	0.7	0.0	0.6	0.0	0.1	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
%ile Back of Q (50%), veh/ln	1.1	0.0	3.3	0.0	2.4	0.0	0.8	0.0
%ile Storage Ratio (RQ%)	0.10	0.00	0.04	0.00	0.35	0.00	0.20	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	2	0	1	0	2	0	2
Grp Vol (v), veh/h	0	228	0	76	0	414	0	351
Grp Sat Flow (s), veh/h/ln	0	1710	0	1710	0	1710	0	1710
Q Serve Time (g_s), s	0.0	2.5	0.0	3.0	0.0	5.2	0.0	6.6
Cycle Q Clear Time (g_c), s	0.0	2.5	0.0	3.0	0.0	5.2	0.0	6.6
Lane Grp Cap (c), veh/h	0	1710	0	152	0	1582	0	583
V/C Ratio (X)	0.00	0.13	0.00	0.50	0.00	0.26	0.00	0.60
Avail Cap (c_a), veh/h	0	1710	0	452	0	1582	0	1036
Upstream Filter (I)	0.00	0.97	0.00	1.00	0.00	1.00	0.00	0.55
Uniform Delay (d1), s/veh	0.0	9.4	0.0	30.4	0.0	11.5	0.0	26.8
Incr Delay (d2), s/veh	0.0	0.2	0.0	2.6	0.0	0.4	0.0	0.6
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	9.5	0.0	33.0	0.0	11.9	0.0	27.4
1st-Term Q (Q1), veh/ln	0.0	0.8	0.0	1.2	0.0	1.8	0.0	2.6
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.0

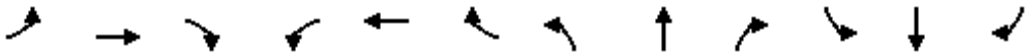
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.9	0.0	1.3	0.0	1.9	0.0	2.6
%ile Storage Ratio (RQ%)	0.00	0.01	0.00	0.01	0.00	0.04	0.00	0.03
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		T+R		R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	0	0	79	0	79	0	118
Grp Sat Flow (s), veh/h/ln	0	1525	0	1688	0	1610	0	1525
Q Serve Time (g_s), s	0.0	0.0	0.0	3.1	0.0	2.0	0.0	4.9
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	3.1	0.0	2.0	0.0	4.9
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	0.37	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	763	0	150	0	733	0	260
V/C Ratio (X)	0.00	0.00	0.00	0.53	0.00	0.11	0.00	0.45
Avail Cap (c_a), veh/h	0	763	0	446	0	733	0	462
Upstream Filter (I)	0.00	0.00	0.00	1.00	0.00	1.00	0.00	0.55
Uniform Delay (d1), s/veh	0.0	0.0	0.0	30.6	0.0	10.9	0.0	26.1
Incr Delay (d2), s/veh	0.0	0.0	0.0	2.8	0.0	0.3	0.0	0.7
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	33.4	0.0	11.2	0.0	26.8
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	1.2	0.0	0.6	0.0	1.7
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	1.3	0.0	0.7	0.0	1.7
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.01	0.00	0.03	0.00	0.02
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	24.4
HCM 6th LOS	C

Notes

Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	74	73	43	201	285	48	82	379	110	46	450	122
Future Volume (veh/h)	74	73	43	201	285	48	82	379	110	46	450	122
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1900
Adj Flow Rate, veh/h	70	69	41	190	270	45	78	359	104	44	426	116
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	96	140	77	231	439	72	106	1499	428	69	2123	559
HCM Platoon Ratio	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.00
Prop Arrive On Green	0.08	0.09	0.08	0.19	0.20	0.19	0.09	0.76	0.75	0.06	0.73	0.54
Unsig. Movement Delay												
Ln Grp Delay, s/veh	50.9	42.8	44.2	42.4	36.0	36.3	49.5	5.6	5.7	50.2	6.2	9.3
Ln Grp LOS	D	D	D	D	D	D	D	A	A	D	A	A
Approach Vol, veh/h		180			505			541			586	
Approach Delay, s/veh		46.4			38.5			12.0			10.4	
Approach LOS		D			D			B			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Case No	2.0	4.0	2.0	4.0	2.0	4.0	2.0	4.0
Phs Duration (G+Y+Rc), s	7.8	55.4	16.9	9.9	9.9	53.3	9.3	17.4
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green (Gmax), s	7.5	25.0	21.5	18.0	10.5	22.0	10.5	29.0
Max Allow Headway (MAH), s	3.8	5.3	3.8	5.4	3.8	5.3	3.8	5.3
Max Q Clear (g_c+I1), s	4.4	5.7	12.1	5.0	6.2	6.6	5.8	9.7
Green Ext Time (g_e), s	0.0	2.7	0.3	0.4	0.0	3.1	0.0	1.7
Prob of Phs Call (p_c)	0.67	1.00	0.99	1.00	0.86	1.00	0.83	1.00
Prob of Max Out (p_x)	1.00	0.00	0.01	0.01	0.58	0.00	0.34	0.01

Left-Turn Movement Data								
Assigned Mvmt	1		3		5		7	
Mvmt Sat Flow, veh/h	1619		1619		1619		1619	

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		2625		2128		3874		2939

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		750		1171		1019		484

Left Lane Group Data								
Assigned Mvmt	1	0	3	0	5	0	7	0
Lane Assignment	L (Prot)		L (Prot)		L (Prot)		L (Prot)	

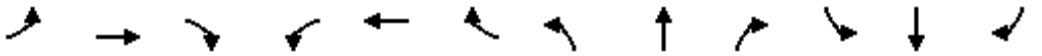
Lanes in Grp	1	0	1	0	1	0	1	0
Grp Vol (v), veh/h	44	0	190	0	78	0	70	0
Grp Sat Flow (s), veh/h/ln	1619	0	1619	0	1619	0	1619	0
Q Serve Time (g_s), s	2.4	0.0	10.1	0.0	4.2	0.0	3.8	0.0
Cycle Q Clear Time (g_c), s	2.4	0.0	10.1	0.0	4.2	0.0	3.8	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	69	0	231	0	106	0	96	0
V/C Ratio (X)	0.64	0.00	0.82	0.00	0.74	0.00	0.73	0.00
Avail Cap (c_a), veh/h	144	0	396	0	198	0	198	0
Upstream Filter (I)	0.89	0.00	1.00	0.00	0.96	0.00	1.00	0.00
Uniform Delay (d1), s/veh	41.8	0.0	35.3	0.0	40.3	0.0	40.7	0.0
Incr Delay (d2), s/veh	8.4	0.0	7.1	0.0	9.2	0.0	10.1	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	50.2	0.0	42.4	0.0	49.5	0.0	50.9	0.0
1st-Term Q (Q1), veh/ln	0.9	0.0	3.7	0.0	1.6	0.0	1.5	0.0
2nd-Term Q (Q2), veh/ln	0.2	0.0	0.5	0.0	0.3	0.0	0.3	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
%ile Back of Q (50%), veh/ln	1.1	0.0	4.2	0.0	1.9	0.0	1.7	0.0
%ile Storage Ratio (RQ%)	0.15	0.00	0.03	0.00	0.24	0.00	0.20	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	1	0	1	0	2	0	1
Grp Vol (v), veh/h	0	232	0	54	0	358	0	156
Grp Sat Flow (s), veh/h/ln	0	1710	0	1710	0	1638	0	1710
Q Serve Time (g_s), s	0.0	3.6	0.0	2.7	0.0	3.1	0.0	7.5
Cycle Q Clear Time (g_c), s	0.0	3.6	0.0	2.7	0.0	3.1	0.0	7.5
Lane Grp Cap (c), veh/h	0	976	0	112	0	1796	0	255
V/C Ratio (X)	0.00	0.24	0.00	0.48	0.00	0.20	0.00	0.61
Avail Cap (c_a), veh/h	0	976	0	352	0	1796	0	561
Upstream Filter (I)	0.00	0.96	0.00	1.00	0.00	0.89	0.00	1.00
Uniform Delay (d1), s/veh	0.0	5.1	0.0	39.6	0.0	5.9	0.0	33.7
Incr Delay (d2), s/veh	0.0	0.6	0.0	3.2	0.0	0.2	0.0	2.3
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	5.6	0.0	42.8	0.0	6.2	0.0	36.0
1st-Term Q (Q1), veh/ln	0.0	1.1	0.0	1.1	0.0	1.0	0.0	2.9
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.1	0.0	0.1	0.0	0.2

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	1.3	0.0	1.2	0.0	1.0	0.0	3.1
%ile Storage Ratio (RQ%)	0.00	0.03	0.00	0.01	0.00	0.01	0.00	0.02
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R		T+R		T+R		T+R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	231	0	56	0	184	0	159
Grp Sat Flow (s), veh/h/ln	0	1665	0	1589	0	1617	0	1713
Q Serve Time (g_s), s	0.0	3.7	0.0	3.0	0.0	4.6	0.0	7.7
Cycle Q Clear Time (g_c), s	0.0	3.7	0.0	3.0	0.0	4.6	0.0	7.7
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.45	0.00	0.74	0.00	0.63	0.00	0.28
Lane Grp Cap (c), veh/h	0	951	0	104	0	886	0	256
V/C Ratio (X)	0.00	0.24	0.00	0.53	0.00	0.21	0.00	0.62
Avail Cap (c_a), veh/h	0	951	0	327	0	886	0	561
Upstream Filter (I)	0.00	0.96	0.00	1.00	0.00	0.89	0.00	1.00
Uniform Delay (d1), s/veh	0.0	5.2	0.0	40.0	0.0	8.8	0.0	33.8
Incr Delay (d2), s/veh	0.0	0.6	0.0	4.2	0.0	0.5	0.0	2.5
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	5.7	0.0	44.2	0.0	9.3	0.0	36.3
1st-Term Q (Q1), veh/ln	0.0	1.1	0.0	1.2	0.0	1.5	0.0	3.0
2nd-Term Q (Q2), veh/ln	0.0	0.2	0.0	0.1	0.0	0.1	0.0	0.2
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	1.3	0.0	1.3	0.0	1.6	0.0	3.2
%ile Storage Ratio (RQ%)	0.00	0.03	0.00	0.01	0.00	0.02	0.00	0.02
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	22.3
HCM 6th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	278	329	336	421	627	0	0	332	229
Future Volume (veh/h)	0	0	0	278	329	336	421	627	0	0	332	229
Number				3	8	18	5	2	12	1	6	16
Initial Q, veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln				1700	1800	1800	1700	1800	0	0	1800	1900
Adj Flow Rate, veh/h				275	326	332	417	620	0	0	329	227
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence				Yes			Yes			No		
Cap, veh/h				321	390	425	438	2025	0	0	986	464
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00
Prop Arrive On Green				0.34	0.34	0.34	0.54	1.00	0.00	0.00	0.29	0.29
Unsig. Movement Delay												
Ln Grp Delay, s/veh				45.0	0.0	40.2	53.0	0.4	0.0	0.0	34.5	38.9
Ln Grp LOS				D	A	D	D	A	A	A	C	D
Approach Vol, veh/h					933			1037			556	
Approach Delay, s/veh					42.9			21.5			36.3	
Approach LOS					D			C			D	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2	8		5	6		
Case No		4.0	12.0		2.0	7.0		
Phs Duration (G+Y+Rc), s		75.0	45.0		36.4	38.6		
Change Period (Y+Rc), s		4.5	4.5		4.5	4.5		
Max Green (Gmax), s		60.5	50.5		36.5	19.5		
Max Allow Headway (MAH), s		5.2	5.4		3.8	4.7		
Max Q Clear (g_c+I1), s		2.0	34.7		31.3	16.0		
Green Ext Time (g_e), s		5.0	5.7		0.7	1.0		
Prob of Phs Call (p_c)		1.00	1.00		1.00	1.00		
Prob of Max Out (p_x)		0.00	0.30		0.49	0.00		
Left-Turn Movement Data								
Assigned Mvmt			3		5	1		
Mvmt Sat Flow, veh/h			939		1619	0		
Through Movement Data								
Assigned Mvmt		2	8			6		
Mvmt Sat Flow, veh/h		3510	1143			3510		
Right-Turn Movement Data								
Assigned Mvmt		12	18			16		
Mvmt Sat Flow, veh/h		0	1246			1610		
Left Lane Group Data								
Assigned Mvmt	0	0	3	0	5	1	0	0
Lane Assignment			L+T		L (Prot)			

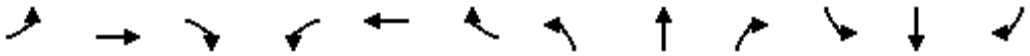
Lanes in Grp	0	0	1	0	1	0	0	0
Grp Vol (v), veh/h	0	0	513	0	417	0	0	0
Grp Sat Flow (s), veh/h/ln	0	0	1753	0	1619	0	0	0
Q Serve Time (g_s), s	0.0	0.0	32.7	0.0	29.3	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	32.7	0.0	29.3	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	34.6	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	0.00	0.54	0.00	1.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	598	0	438	0	0	0
V/C Ratio (X)	0.00	0.00	0.86	0.00	0.95	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	0	745	0	499	0	0	0
Upstream Filter (I)	0.00	0.00	1.00	0.00	0.95	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	36.8	0.0	26.8	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	8.2	0.0	26.2	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	45.0	0.0	53.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	13.8	0.0	8.2	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	1.4	0.0	3.2	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	0.00	1.00	0.00	1.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	15.2	0.0	11.4	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.36	0.00	1.90	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	8	0	0	6	0	0
Lane Assignment		T				T		
Lanes in Grp	0	2	0	0	0	2	0	0
Grp Vol (v), veh/h	0	620	0	0	0	329	0	0
Grp Sat Flow (s), veh/h/ln	0	1710	0	0	0	1710	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	9.1	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	9.1	0.0	0.0
Lane Grp Cap (c), veh/h	0	2025	0	0	0	986	0	0
V/C Ratio (X)	0.00	0.31	0.00	0.00	0.00	0.33	0.00	0.00
Avail Cap (c_a), veh/h	0	2025	0	0	0	986	0	0
Upstream Filter (I)	0.00	0.95	0.00	0.00	0.00	0.95	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	33.6	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.4	0.0	0.0	0.0	0.9	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.4	0.0	0.0	0.0	34.5	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	3.8	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.1	0.0	0.0	0.0	3.9	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.10	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	18	0	0	16	0	0
Lane Assignment			T+R			R		
Lanes in Grp	0	0	1	0	0	1	0	0
Grp Vol (v), veh/h	0	0	420	0	0	227	0	0
Grp Sat Flow (s), veh/h/ln	0	0	1576	0	0	1610	0	0
Q Serve Time (g_s), s	0.0	0.0	28.7	0.0	0.0	14.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	28.7	0.0	0.0	14.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.00	0.79	0.00	0.00	1.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	538	0	0	464	0	0
V/C Ratio (X)	0.00	0.00	0.78	0.00	0.00	0.49	0.00	0.00
Avail Cap (c_a), veh/h	0	0	670	0	0	464	0	0
Upstream Filter (I)	0.00	0.00	1.00	0.00	0.00	0.95	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	35.5	0.0	0.0	35.4	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	4.7	0.0	0.0	3.5	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	40.2	0.0	0.0	38.9	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	10.9	0.0	0.0	5.5	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.7	0.0	0.0	0.4	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	11.6	0.0	0.0	6.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.28	0.00	0.00	0.15	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	32.7
HCM 6th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	391	7	544	0	0	0	0	657	102	57	558	0
Future Volume (veh/h)	391	7	544	0	0	0	0	657	102	57	558	0
Number	7	4	14				5	2	12	1	6	16
Initial Q, veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1700	1800	1800				0	1800	1800	1700	1900	0
Adj Flow Rate, veh/h	366	7	510				0	616	96	53	523	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0				0	0	0	0	0	0
Opposing Right Turn Influence	Yes						No			Yes		
Cap, veh/h	635	12	576				0	1635	729	72	2007	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Prop Arrive On Green	0.38	0.38	0.37				0.00	0.48	0.48	0.09	1.00	0.00
Unsig. Movement Delay												
Ln Grp Delay, s/veh	30.5	0.0	47.0				0.0	20.6	17.8	66.5	0.3	0.0
Ln Grp LOS	C	A	D				A	C	B	E	A	A
Approach Vol, veh/h		883						712			576	
Approach Delay, s/veh		40.0						20.2			6.4	
Approach LOS		D						C			A	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Case No	2.0	7.0		12.0		4.0		
Phs Duration (G+Y+Rc), s	9.4	61.4		49.3		70.7		
Change Period (Y+Rc), s	4.5	4.5		4.5		4.5		
Max Green (Gmax), s	11.5	41.5		53.5		57.5		
Max Allow Headway (MAH), s	3.8	5.1		5.5		5.2		
Max Q Clear (g_c+I1), s	5.8	15.8		39.6		2.0		
Green Ext Time (g_e), s	0.0	4.8		5.2		4.0		
Prob of Phs Call (p_c)	0.83	1.00		1.00		1.00		
Prob of Max Out (p_x)	0.08	0.00		0.36		0.00		

Left-Turn Movement Data								
Assigned Mvmt	1	5		7				
Mvmt Sat Flow, veh/h	1619	0		1684				

Through Movement Data								
Assigned Mvmt		2		4		6		
Mvmt Sat Flow, veh/h		3510		32		3705		

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		
Mvmt Sat Flow, veh/h		1525		1525		0		

Left Lane Group Data								
Assigned Mvmt	1	5	0	7	0	0	0	0
Lane Assignment	L (Prot)			L+T				

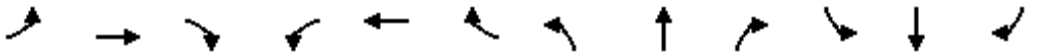
Lanes in Grp	1	0	0	1	0	0	0	0
Grp Vol (v), veh/h	53	0	0	373	0	0	0	0
Grp Sat Flow (s), veh/h/ln	1619	0	0	1716	0	0	0	0
Q Serve Time (g_s), s	3.8	0.0	0.0	20.8	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	3.8	0.0	0.0	20.8	0.0	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	57.4	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	0.98	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	72	0	0	647	0	0	0	0
V/C Ratio (X)	0.73	0.00	0.00	0.58	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	162	0	0	772	0	0	0	0
Upstream Filter (I)	0.94	0.00	0.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	53.9	0.0	0.0	29.7	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	12.6	0.0	0.0	0.8	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	66.5	0.0	0.0	30.5	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	1.5	0.0	0.0	8.5	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.3	0.0	0.0	0.1	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00
%ile Back of Q (50%), veh/ln	1.8	0.0	0.0	8.7	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.29	0.00	0.00	0.26	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	0
Lane Assignment		T				T		
Lanes in Grp	0	2	0	0	0	2	0	0
Grp Vol (v), veh/h	0	616	0	0	0	523	0	0
Grp Sat Flow (s), veh/h/ln	0	1710	0	0	0	1805	0	0
Q Serve Time (g_s), s	0.0	13.8	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	13.8	0.0	0.0	0.0	0.0	0.0	0.0
Lane Grp Cap (c), veh/h	0	1635	0	0	0	2007	0	0
V/C Ratio (X)	0.00	0.38	0.00	0.00	0.00	0.26	0.00	0.00
Avail Cap (c_a), veh/h	0	1635	0	0	0	2007	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	0.94	0.00	0.00
Uniform Delay (d1), s/veh	0.0	19.9	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.7	0.0	0.0	0.0	0.3	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	20.6	0.0	0.0	0.0	0.3	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	5.4	0.0	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.2	0.0	0.0	0.0	0.1	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	5.6	0.0	0.0	0.0	0.1	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.10	0.00	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	0
Lane Assignment		R		T+R				
Lanes in Grp	0	1	0	1	0	0	0	0
Grp Vol (v), veh/h	0	96	0	510	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	1525	0	1525	0	0	0	0
Q Serve Time (g_s), s	0.0	4.2	0.0	37.6	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	4.2	0.0	37.6	0.0	0.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	729	0	576	0	0	0	0
V/C Ratio (X)	0.00	0.13	0.00	0.89	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	729	0	686	0	0	0	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	17.4	0.0	35.2	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.4	0.0	11.8	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	17.8	0.0	47.0	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	1.5	0.0	13.7	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	1.9	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	1.6	0.0	15.6	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.03	0.00	0.46	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	24.6
HCM 6th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	289	462	822	1027	0	0	0	0	185	0	205
Future Volume (veh/h)	0	289	462	822	1027	0	0	0	0	185	0	205
Number	7	4	14	3	8	18				1	6	16
Initial Q, veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	0	1800	1800	1600	1800	0				1800	1900	1800
Adj Flow Rate, veh/h	0	289	0	822	1027	0				185	0	205
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95				0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0				0	0	0
Opposing Right Turn Influence	No			Yes						Yes		
Cap, veh/h	0	1509		881	2641	0				284	0	246
HCM Platoon Ratio	1.00	2.00	2.00	2.00	1.00	1.00				1.00	1.00	1.00
Prop Arrive On Green	0.00	0.88	0.00	0.60	0.77	0.00				0.16	0.00	0.16
Unsig. Movement Delay												
Ln Grp Delay, s/veh	0.0	4.3	0.0	32.3	4.8	0.0				49.8	0.0	60.6
Ln Grp LOS	A	A		C	A	A				D	A	E
Approach Vol, veh/h		289			1849						390	
Approach Delay, s/veh		4.3			17.0						55.5	
Approach LOS		A			B						E	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	6		3	4				8
Case No	11.0		2.0	7.0				4.0
Phs Duration (G+Y+Rc), s	23.3		39.7	56.9				96.7
Change Period (Y+Rc), s	4.5		4.5	4.5				4.5
Max Green (Gmax), s	26.5		46.5	33.5				84.5
Max Allow Headway (MAH), s	4.7		3.8	5.2				5.2
Max Q Clear (g_c+I1), s	17.6		32.4	3.4				13.7
Green Ext Time (g_e), s	1.2		2.9	2.0				10.0
Prob of Phs Call (p_c)	1.00		1.00	1.00				1.00
Prob of Max Out (p_x)	0.19		0.04	0.00				0.00

Left-Turn Movement Data									
Assigned Mvmt	1		3	7					
Mvmt Sat Flow, veh/h	1810		2956	0					

Through Movement Data									
Assigned Mvmt	6			4				8	
Mvmt Sat Flow, veh/h	0			3510				3510	

Right-Turn Movement Data									
Assigned Mvmt	16			14				18	
Mvmt Sat Flow, veh/h	1525			1525				0	

Left Lane Group Data									
Assigned Mvmt	1	0	3	7	0	0	0	0	
Lane Assignment	L+T		L (Prot)						

Lanes in Grp	1	0	2	0	0	0	0	0
Grp Vol (v), veh/h	185	0	822	0	0	0	0	0
Grp Sat Flow (s), veh/h/ln	1810	0	1478	0	0	0	0	0
Q Serve Time (g_s), s	11.5	0.0	30.4	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	11.5	0.0	30.4	0.0	0.0	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	52.9	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	284	0	881	0	0	0	0	0
V/C Ratio (X)	0.65	0.00	0.93	0.00	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	400	0	1158	0	0	0	0	0
Upstream Filter (I)	1.00	0.00	0.76	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	47.3	0.0	23.2	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	2.5	0.0	9.1	0.0	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	49.8	0.0	32.3	0.0	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	5.2	0.0	7.1	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.2	0.0	1.1	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	1.00	1.00	0.00	0.00	0.00	0.00
%ile Back of Q (50%), veh/ln	5.4	0.0	8.2	0.0	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.41	0.00	0.51	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	6	0	0	4	0	0	0	8
Lane Assignment				T				T
Lanes in Grp	0	0	0	2	0	0	0	2
Grp Vol (v), veh/h	0	0	0	289	0	0	0	1027
Grp Sat Flow (s), veh/h/ln	0	0	0	1710	0	0	0	1710
Q Serve Time (g_s), s	0.0	0.0	0.0	1.4	0.0	0.0	0.0	11.7
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	1.4	0.0	0.0	0.0	11.7
Lane Grp Cap (c), veh/h	0	0	0	1509	0	0	0	2641
V/C Ratio (X)	0.00	0.00	0.00	0.19	0.00	0.00	0.00	0.39
Avail Cap (c_a), veh/h	0	0	0	1509	0	0	0	2641
Upstream Filter (I)	0.00	0.00	0.00	0.82	0.00	0.00	0.00	0.76
Uniform Delay (d1), s/veh	0.0	0.0	0.0	4.0	0.0	0.0	0.0	4.4
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.3
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	4.3	0.0	0.0	0.0	4.8
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.5	0.0	0.0	0.0	3.5
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1

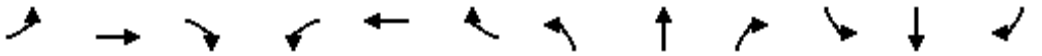
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	1.00	0.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.5	0.0	0.0	0.0	3.6
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.22
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	16	0	0	14	0	0	0	18
Lane Assignment	R			R				
Lanes in Grp	1	0	0	1	0	0	0	0
Grp Vol (v), veh/h	205	0	0	0	0	0	0	0
Grp Sat Flow (s), veh/h/ln	1525	0	0	1525	0	0	0	0
Q Serve Time (g_s), s	15.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	15.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	1.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	246	0	0	673	0	0	0	0
V/C Ratio (X)	0.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	343	0	0	673	0	0	0	0
Upstream Filter (I)	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	48.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	11.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	60.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	5.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	1.00	0.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	6.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	21.5
HCM 6th LOS	C

Notes

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	69	405	0	0	1430	380	415	3	303	0	0	0
Future Volume (veh/h)	69	405	0	0	1430	380	415	3	303	0	0	0
Number	7	4	14	3	8	18	5	2	12			
Initial Q, veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1700	1800	0	0	1800	1800	1600	1800	1900			
Adj Flow Rate, veh/h	67	392	0	0	1385	368	404	0	293			
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95			
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0			
Opposing Right Turn Influence	Yes			No			Yes					
Cap, veh/h	104	2288	0	0	2643	820	603	0	637			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	2.00	1.00	1.00	1.00	1.00			
Prop Arrive On Green	0.13	1.00	0.00	0.00	1.00	0.54	0.20	0.00	0.20			
Unsig. Movement Delay												
Ln Grp Delay, s/veh	31.8	0.2	0.0	0.0	0.7	10.2	23.6	0.0	21.8			
Ln Grp LOS	C	A	A	A	A	B	C	A	C			
Approach Vol, veh/h		459			1753			697				
Approach Delay, s/veh		4.8			2.7			22.8				
Approach LOS		A			A			C				

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2		4			7	8
Case No		9.0		4.0			2.0	7.0
Phs Duration (G+Y+Rc), s		15.9		44.1			7.9	36.3
Change Period (Y+Rc), s		4.5		4.5			4.5	4.5
Max Green (Gmax), s		19.0		32.0			5.5	22.0
Max Allow Headway (MAH), s		3.9		5.2			3.8	5.0
Max Q Clear (g_c+I1), s		9.4		2.0			4.4	10.8
Green Ext Time (g_e), s		2.0		2.7			0.0	7.7
Prob of Phs Call (p_c)		1.00		1.00			0.67	1.00
Prob of Max Out (p_x)		0.13		0.00			1.00	0.00

Left-Turn Movement Data								
Assigned Mvmt		5					7	3
Mvmt Sat Flow, veh/h		3048					1619	0

Through Movement Data								
Assigned Mvmt		2		4				8
Mvmt Sat Flow, veh/h		0		3510				5076

Right-Turn Movement Data								
Assigned Mvmt		12		14				18
Mvmt Sat Flow, veh/h		3220		0				1525

Left Lane Group Data								
Assigned Mvmt	0	5	0	0	0	0	7	3
Lane Assignment		L					L (Prot)	

Lanes in Grp	0	2	0	0	0	0	1	0
Grp Vol (v), veh/h	0	404	0	0	0	0	67	0
Grp Sat Flow (s), veh/h/ln	0	1524	0	0	0	0	1619	0
Q Serve Time (g_s), s	0.0	7.4	0.0	0.0	0.0	0.0	2.4	0.0
Cycle Q Clear Time (g_c), s	0.0	7.4	0.0	0.0	0.0	0.0	2.4	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	1524	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	32.3
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	0	603	0	0	0	0	104	0
V/C Ratio (X)	0.00	0.67	0.00	0.00	0.00	0.00	0.64	0.00
Avail Cap (c_a), veh/h	0	990	0	0	0	0	162	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	0.00	0.98	0.00
Uniform Delay (d1), s/veh	0.0	22.3	0.0	0.0	0.0	0.0	25.5	0.0
Incr Delay (d2), s/veh	0.0	1.3	0.0	0.0	0.0	0.0	6.3	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	23.6	0.0	0.0	0.0	0.0	31.8	0.0
1st-Term Q (Q1), veh/ln	0.0	2.4	0.0	0.0	0.0	0.0	0.8	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	0.0	0.2	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	0.00	0.00	0.00	1.00	1.00
%ile Back of Q (50%), veh/ln	0.0	2.5	0.0	0.0	0.0	0.0	1.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.12	0.00	0.00	0.00	0.00	0.06	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	0	0	8
Lane Assignment				T				T
Lanes in Grp	0	0	0	2	0	0	0	3
Grp Vol (v), veh/h	0	0	0	392	0	0	0	1385
Grp Sat Flow (s), veh/h/ln	0	0	0	1710	0	0	0	1638
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lane Grp Cap (c), veh/h	0	0	0	2288	0	0	0	2643
V/C Ratio (X)	0.00	0.00	0.00	0.17	0.00	0.00	0.00	0.52
Avail Cap (c_a), veh/h	0	0	0	2288	0	0	0	2643
Upstream Filter (I)	0.00	0.00	0.00	0.98	0.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.7
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.7
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.2

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.2
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	0	0	18
Lane Assignment		R						R
Lanes in Grp	0	2	0	0	0	0	0	1
Grp Vol (v), veh/h	0	293	0	0	0	0	0	368
Grp Sat Flow (s), veh/h/ln	0	1610	0	0	0	0	0	1525
Q Serve Time (g_s), s	0.0	4.8	0.0	0.0	0.0	0.0	0.0	8.8
Cycle Q Clear Time (g_c), s	0.0	4.8	0.0	0.0	0.0	0.0	0.0	8.8
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	0.00	0.00	0.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	637	0	0	0	0	0	820
V/C Ratio (X)	0.00	0.46	0.00	0.00	0.00	0.00	0.00	0.45
Avail Cap (c_a), veh/h	0	1047	0	0	0	0	0	820
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	21.2	0.0	0.0	0.0	0.0	0.0	8.4
Incr Delay (d2), s/veh	0.0	0.5	0.0	0.0	0.0	0.0	0.0	1.8
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	21.8	0.0	0.0	0.0	0.0	0.0	10.2
1st-Term Q (Q1), veh/ln	0.0	1.7	0.0	0.0	0.0	0.0	0.0	2.3
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	1.7	0.0	0.0	0.0	0.0	0.0	2.7
%ile Storage Ratio (RQ%)	0.00	0.08	0.00	0.00	0.00	0.00	0.00	0.31
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	7.9
HCM 6th LOS	A

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	54	225	23	60	392	355	18	7	25	300	253	335
Future Volume (veh/h)	54	225	23	60	392	355	18	7	25	300	253	335
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1900
Adj Flow Rate, veh/h	53	223	23	59	388	351	18	7	25	297	250	331
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	73	889	396	80	476	404	37	634	537	332	913	815
HCM Platoon Ratio	1.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.04	0.52	0.26	0.05	0.26	0.26	0.02	0.35	0.35	0.20	0.53	0.53
Unsig. Movement Delay												
Ln Grp Delay, s/veh	69.3	22.5	33.4	60.9	44.0	47.2	67.4	25.3	25.7	62.1	16.0	18.1
Ln Grp LOS	E	C	C	E	D	D	E	C	C	E	B	B
Approach Vol, veh/h		299			798			50			878	
Approach Delay, s/veh		31.6			46.6			40.7			32.4	
Approach LOS		C			D			D			C	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Case No	2.0	3.0	2.0	3.0	2.0	4.0	2.0	3.0
Phs Duration (G+Y+Rc), s	28.6	46.3	10.0	35.2	6.8	68.1	9.4	35.7
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green (Gmax), s	33.5	19.5	9.5	39.5	5.5	47.5	9.5	39.5
Max Allow Headway (MAH), s	3.8	4.3	3.8	5.1	3.8	5.4	3.8	4.7
Max Q Clear (g_c+I1), s	23.4	3.3	6.3	6.3	3.3	17.5	5.9	28.4
Green Ext Time (g_e), s	0.6	0.0	0.0	1.6	0.0	4.1	0.0	2.9
Prob of Phs Call (p_c)	1.00	1.00	0.86	1.00	0.45	1.00	0.83	1.00
Prob of Max Out (p_x)	0.02	0.00	1.00	0.00	1.00	0.00	1.00	0.25

Left-Turn Movement Data								
Assigned Mvmt	1		3		5		7	
Mvmt Sat Flow, veh/h	1619		1619		1619		1619	

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		1800		3420		1710		1800

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1525		1525		1525		1525

Left Lane Group Data								
Assigned Mvmt	1	0	3	0	5	0	7	0
Lane Assignment	L (Prot)		L (Prot)		L (Prot)		L (Prot)	

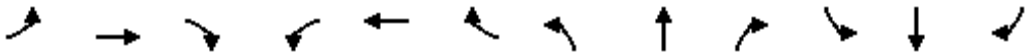
Lanes in Grp	1	0	1	0	1	0	1	0
Grp Vol (v), veh/h	297	0	59	0	18	0	53	0
Grp Sat Flow (s), veh/h/ln	1619	0	1619	0	1619	0	1619	0
Q Serve Time (g_s), s	21.4	0.0	4.3	0.0	1.3	0.0	3.9	0.0
Cycle Q Clear Time (g_c), s	21.4	0.0	4.3	0.0	1.3	0.0	3.9	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	332	0	80	0	37	0	73	0
V/C Ratio (X)	0.90	0.00	0.73	0.00	0.48	0.00	0.73	0.00
Avail Cap (c_a), veh/h	459	0	135	0	81	0	135	0
Upstream Filter (I)	1.00	0.00	0.36	0.00	1.00	0.00	0.98	0.00
Uniform Delay (d1), s/veh	46.5	0.0	56.2	0.0	57.9	0.0	56.6	0.0
Incr Delay (d2), s/veh	15.6	0.0	4.7	0.0	9.4	0.0	12.7	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	62.1	0.0	60.9	0.0	67.4	0.0	69.3	0.0
1st-Term Q (Q1), veh/ln	8.6	0.0	1.8	0.0	0.5	0.0	1.6	0.0
2nd-Term Q (Q2), veh/ln	1.4	0.0	0.1	0.0	0.1	0.0	0.3	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
%ile Back of Q (50%), veh/ln	10.0	0.0	1.9	0.0	0.6	0.0	1.8	0.0
%ile Storage Ratio (RQ%)	2.51	0.00	0.08	0.00	0.07	0.00	0.18	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	1	0	2	0	1	0	1
Grp Vol (v), veh/h	0	7	0	223	0	250	0	388
Grp Sat Flow (s), veh/h/ln	0	1800	0	1710	0	1710	0	1800
Q Serve Time (g_s), s	0.0	0.3	0.0	4.3	0.0	9.6	0.0	24.3
Cycle Q Clear Time (g_c), s	0.0	0.3	0.0	4.3	0.0	9.6	0.0	24.3
Lane Grp Cap (c), veh/h	0	634	0	889	0	913	0	476
V/C Ratio (X)	0.00	0.01	0.00	0.25	0.00	0.27	0.00	0.81
Avail Cap (c_a), veh/h	0	634	0	1140	0	913	0	600
Upstream Filter (I)	0.00	1.00	0.00	0.98	0.00	1.00	0.00	0.36
Uniform Delay (d1), s/veh	0.0	25.3	0.0	22.4	0.0	15.2	0.0	41.4
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.1	0.0	0.7	0.0	2.6
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	25.3	0.0	22.5	0.0	16.0	0.0	44.0
1st-Term Q (Q1), veh/ln	0.0	0.1	0.0	1.6	0.0	3.7	0.0	10.7
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.3

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.1	0.0	1.7	0.0	3.9	0.0	11.0
%ile Storage Ratio (RQ%)	0.00	0.01	0.00	0.02	0.00	0.66	0.00	0.46
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		R		T+R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	25	0	23	0	331	0	351
Grp Sat Flow (s), veh/h/ln	0	1525	0	1525	0	1525	0	1525
Q Serve Time (g_s), s	0.0	1.3	0.0	1.4	0.0	15.5	0.0	26.4
Cycle Q Clear Time (g_c), s	0.0	1.3	0.0	1.4	0.0	15.5	0.0	26.4
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	537	0	396	0	815	0	404
V/C Ratio (X)	0.00	0.05	0.00	0.06	0.00	0.41	0.00	0.87
Avail Cap (c_a), veh/h	0	537	0	508	0	815	0	508
Upstream Filter (I)	0.00	1.00	0.00	0.98	0.00	1.00	0.00	0.36
Uniform Delay (d1), s/veh	0.0	25.6	0.0	33.4	0.0	16.6	0.0	42.2
Incr Delay (d2), s/veh	0.0	0.2	0.0	0.1	0.0	1.5	0.0	5.1
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	25.7	0.0	33.4	0.0	18.1	0.0	47.2
1st-Term Q (Q1), veh/ln	0.0	0.5	0.0	0.5	0.0	5.3	0.0	9.9
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.6
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.5	0.0	0.5	0.0	5.7	0.0	10.4
%ile Storage Ratio (RQ%)	0.00	0.03	0.00	0.01	0.00	0.97	0.00	0.43
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	38.1
HCM 6th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	119	310	133	34	631	319	54	326	22	155	10	155
Future Volume (veh/h)	119	310	133	34	631	319	54	326	22	155	10	155
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1600	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1900
Adj Flow Rate, veh/h	120	313	134	34	638	322	55	329	22	157	10	157
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	196	713	604	64	665	563	383	904	403	162	38	600
HCM Platoon Ratio	1.00	1.00	1.00	1.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.07	0.40	0.40	0.04	0.74	0.37	0.26	0.26	0.26	0.10	0.41	0.41
Unsig. Movement Delay												
Ln Grp Delay, s/veh	40.5	18.0	16.1	44.4	33.9	21.4	23.6	25.1	22.2	97.4	0.0	16.6
Ln Grp LOS	D	B	B	D	C	C	C	C	C	F	A	B
Approach Vol, veh/h		567			994			406			324	
Approach Delay, s/veh		22.3			30.2			24.7			55.7	
Approach LOS		C			C			C			E	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4		6	7	8
Case No	2.0	5.3	2.0	3.0		4.0	2.0	3.0
Phs Duration (G+Y+Rc), s	12.0	25.1	7.2	35.7		37.1	9.3	33.5
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5		4.5	4.5	4.5
Max Green (Gmax), s	7.5	19.0	5.2	30.3		31.0	5.0	30.5
Max Allow Headway (MAH), s	3.8	5.1	3.8	4.9		5.6	3.8	4.9
Max Q Clear (g_c+I1), s	9.7	8.3	3.6	12.2		7.7	5.2	27.4
Green Ext Time (g_e), s	0.0	1.8	0.0	2.2		1.0	0.0	1.6
Prob of Phs Call (p_c)	0.97	1.00	0.53	1.00		1.00	0.93	1.00
Prob of Max Out (p_x)	1.00	0.00	1.00	0.01		0.00	1.00	1.00

Left-Turn Movement Data								
Assigned Mvmt	1	5	3				7	
Mvmt Sat Flow, veh/h	1619	1107	1619				2956	

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		3420		1800		92		1800

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1525		1525		1447		1525

Left Lane Group Data								
Assigned Mvmt	1	5	3	0	0	0	7	0
Lane Assignment	L (Prot)	L	L (Prot)				L (Prot)	

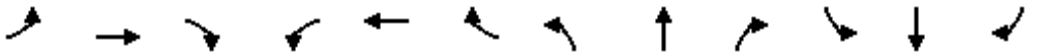
Lanes in Grp	1	1	1	0	0	0	2	0
Grp Vol (v), veh/h	157	55	34	0	0	0	120	0
Grp Sat Flow (s), veh/h/ln	1619	1107	1619	0	0	0	1478	0
Q Serve Time (g_s), s	7.7	3.1	1.6	0.0	0.0	0.0	3.2	0.0
Cycle Q Clear Time (g_c), s	7.7	3.1	1.6	0.0	0.0	0.0	3.2	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	1107	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	21.1	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	21.1	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	3.1	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	1.00	1.00	0.00	0.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	162	383	64	0	0	0	196	0
V/C Ratio (X)	0.97	0.14	0.53	0.00	0.00	0.00	0.61	0.00
Avail Cap (c_a), veh/h	162	383	115	0	0	0	203	0
Upstream Filter (I)	1.00	1.00	1.00	0.00	0.00	0.00	0.82	0.00
Uniform Delay (d1), s/veh	35.9	22.8	37.7	0.0	0.0	0.0	36.3	0.0
Incr Delay (d2), s/veh	61.5	0.8	6.7	0.0	0.0	0.0	4.2	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	97.4	23.6	44.4	0.0	0.0	0.0	40.5	0.0
1st-Term Q (Q1), veh/ln	3.0	0.8	0.6	0.0	0.0	0.0	1.1	0.0
2nd-Term Q (Q2), veh/ln	2.8	0.1	0.1	0.0	0.0	0.0	0.1	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	1.00	1.00	0.00	0.00	0.00	1.00	0.00
%ile Back of Q (50%), veh/ln	5.7	0.9	0.8	0.0	0.0	0.0	1.2	0.0
%ile Storage Ratio (RQ%)	0.70	0.14	0.01	0.00	0.00	0.00	0.10	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T				T
Lanes in Grp	0	2	0	1	0	0	0	1
Grp Vol (v), veh/h	0	329	0	313	0	0	0	638
Grp Sat Flow (s), veh/h/ln	0	1710	0	1800	0	0	0	1800
Q Serve Time (g_s), s	0.0	6.3	0.0	10.2	0.0	0.0	0.0	25.4
Cycle Q Clear Time (g_c), s	0.0	6.3	0.0	10.2	0.0	0.0	0.0	25.4
Lane Grp Cap (c), veh/h	0	904	0	713	0	0	0	665
V/C Ratio (X)	0.00	0.36	0.00	0.44	0.00	0.00	0.00	0.96
Avail Cap (c_a), veh/h	0	904	0	713	0	0	0	698
Upstream Filter (I)	0.00	1.00	0.00	0.82	0.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	24.0	0.0	17.6	0.0	0.0	0.0	9.9
Incr Delay (d2), s/veh	0.0	1.1	0.0	0.3	0.0	0.0	0.0	24.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	25.1	0.0	18.0	0.0	0.0	0.0	33.9
1st-Term Q (Q1), veh/ln	0.0	2.4	0.0	4.0	0.0	0.0	0.0	3.5
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.1	0.0	0.0	0.0	4.4

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	2.6	0.0	4.1	0.0	0.0	0.0	7.9
%ile Storage Ratio (RQ%)	0.00	0.23	0.00	0.17	0.00	0.00	0.00	0.09
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		R		T+R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	22	0	134	0	167	0	322
Grp Sat Flow (s), veh/h/ln	0	1525	0	1525	0	1539	0	1525
Q Serve Time (g_s), s	0.0	0.9	0.0	4.7	0.0	5.7	0.0	13.5
Cycle Q Clear Time (g_c), s	0.0	0.9	0.0	4.7	0.0	5.7	0.0	13.5
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	0.94	0.00	1.00
Lane Grp Cap (c), veh/h	0	403	0	604	0	638	0	563
V/C Ratio (X)	0.00	0.05	0.00	0.22	0.00	0.26	0.00	0.57
Avail Cap (c_a), veh/h	0	403	0	604	0	638	0	591
Upstream Filter (I)	0.00	1.00	0.00	0.82	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	22.0	0.0	16.0	0.0	15.6	0.0	20.2
Incr Delay (d2), s/veh	0.0	0.3	0.0	0.2	0.0	1.0	0.0	1.2
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	22.2	0.0	16.1	0.0	16.6	0.0	21.4
1st-Term Q (Q1), veh/ln	0.0	0.3	0.0	1.5	0.0	1.9	0.0	4.5
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.2
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.3	0.0	1.6	0.0	2.1	0.0	4.7
%ile Storage Ratio (RQ%)	0.00	0.12	0.00	0.06	0.00	0.25	0.00	0.05
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	30.9
HCM 6th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	357	10	390	473	720	0	0	187	375
Future Volume (veh/h)	0	0	0	357	10	390	473	720	0	0	187	375
Number				3	8	18	5	2	12	1	6	16
Initial Q, veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln				1700	1800	1800	1700	1800	0	0	1800	1900
Adj Flow Rate, veh/h				376	11	411	498	758	0	0	197	395
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence				Yes			Yes			No		
Cap, veh/h				427	13	391	517	2159	0	0	1256	411
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	2.00	1.00
Prop Arrive On Green				0.26	0.26	0.26	0.64	1.00	0.00	0.00	0.51	0.26
Unsig. Movement Delay												
Ln Grp Delay, s/veh				46.8	0.0	89.4	28.5	0.2	0.0	0.0	15.2	64.8
Ln Grp LOS				D	A	F	C	A	A	A	B	E
Approach Vol, veh/h					798			1256			592	
Approach Delay, s/veh					68.7			11.4			48.3	
Approach LOS					E			B			D	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2	8		5	6		
Case No		4.0	11.0		2.0	7.0		
Phs Duration (G+Y+Rc), s		55.0	25.0		30.1	24.9		
Change Period (Y+Rc), s		4.5	4.5		4.5	4.5		
Max Green (Gmax), s		50.5	20.5		27.5	18.5		
Max Allow Headway (MAH), s		5.2	4.7		3.8	4.4		
Max Q Clear (g_c+I1), s		2.0	22.5		25.1	21.4		
Green Ext Time (g_e), s		6.4	0.0		0.5	0.0		
Prob of Phs Call (p_c)		1.00	1.00		1.00	1.00		
Prob of Max Out (p_x)		0.00	1.00		1.00	0.00		

Left-Turn Movement Data								
Assigned Mvmt			3		5	1		
Mvmt Sat Flow, veh/h			1668		1619	0		

Through Movement Data								
Assigned Mvmt		2	8			6		
Mvmt Sat Flow, veh/h		3510	49			5076		

Right-Turn Movement Data								
Assigned Mvmt		12	18			16		
Mvmt Sat Flow, veh/h		0	1525			1610		

Left Lane Group Data								
Assigned Mvmt	0	0	3	0	5	1	0	0
Lane Assignment			L+T		L (Prot)			

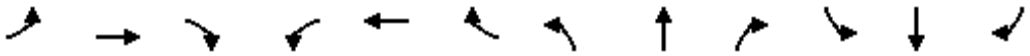
Lanes in Grp	0	0	1	0	1	0	0	0
Grp Vol (v), veh/h	0	0	387	0	498	0	0	0
Grp Sat Flow (s), veh/h/ln	0	0	1717	0	1619	0	0	0
Q Serve Time (g_s), s	0.0	0.0	17.3	0.0	23.1	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	17.3	0.0	23.1	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	20.4	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	0.00	0.97	0.00	1.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	440	0	517	0	0	0
V/C Ratio (X)	0.00	0.00	0.88	0.00	0.96	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	0	440	0	557	0	0	0
Upstream Filter (I)	0.00	0.00	1.00	0.00	0.36	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	28.6	0.0	14.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	18.2	0.0	14.5	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	46.8	0.0	28.5	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	6.8	0.0	3.9	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	2.2	0.0	2.1	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	0.00	1.00	0.00	1.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	9.0	0.0	6.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.19	0.00	0.54	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	8	0	0	6	0	0
Lane Assignment		T				T		
Lanes in Grp	0	2	0	0	0	3	0	0
Grp Vol (v), veh/h	0	758	0	0	0	197	0	0
Grp Sat Flow (s), veh/h/ln	0	1710	0	0	0	1638	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	1.7	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	1.7	0.0	0.0
Lane Grp Cap (c), veh/h	0	2159	0	0	0	1256	0	0
V/C Ratio (X)	0.00	0.35	0.00	0.00	0.00	0.16	0.00	0.00
Avail Cap (c_a), veh/h	0	2159	0	0	0	1256	0	0
Upstream Filter (I)	0.00	0.36	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	15.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.2	0.0	0.0	0.0	0.3	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.2	0.0	0.0	0.0	15.2	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	18	0	0	16	0	0
Lane Assignment			R			R		
Lanes in Grp	0	0	1	0	0	1	0	0
Grp Vol (v), veh/h	0	0	411	0	0	395	0	0
Grp Sat Flow (s), veh/h/ln	0	0	1525	0	0	1610	0	0
Q Serve Time (g_s), s	0.0	0.0	20.5	0.0	0.0	19.4	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	20.5	0.0	0.0	19.4	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	391	0	0	411	0	0
V/C Ratio (X)	0.00	0.00	1.05	0.00	0.00	0.96	0.00	0.00
Avail Cap (c_a), veh/h	0	0	391	0	0	411	0	0
Upstream Filter (I)	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	29.8	0.0	0.0	29.4	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	59.7	0.0	0.0	35.4	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	89.4	0.0	0.0	64.8	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	7.2	0.0	0.0	7.1	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	6.5	0.0	0.0	4.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	13.6	0.0	0.0	11.2	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.28	0.00	0.00	0.24	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	5.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	36.9
HCM 6th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	355	4	376	0	0	0	0	855	454	270	526	0
Future Volume (veh/h)	355	4	376	0	0	0	0	855	454	270	526	0
Number	7	4	14				5	2	12	1	6	16
Initial Q, veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1700	1800	1800				0	1800	1800	1700	1900	0
Adj Flow Rate, veh/h	374	4	396				0	900	478	284	554	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0				0	0	0	0	0	0
Opposing Right Turn Influence	Yes						No			Yes		
Cap, veh/h	351	4	371				0	1032	321	307	1624	0
HCM Platoon Ratio	1.33	1.33	1.33				1.00	2.00	2.00	2.00	1.66	1.00
Prop Arrive On Green	0.60	0.60	0.60				0.00	0.42	0.42	0.38	0.75	0.00
Unsig. Movement Delay												
Ln Grp Delay, s/veh	70.7	0.0	0.0				0.0	35.1	263.1	58.8	7.4	0.0
Ln Grp LOS	F	A	A				A	D	F	E	A	A
Approach Vol, veh/h		774						1378			838	
Approach Delay, s/veh		70.7						114.2			24.8	
Approach LOS		E						F			C	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Case No	2.0	7.0		12.0		4.0		
Phs Duration (G+Y+Rc), s	21.6	23.4		45.0		45.0		
Change Period (Y+Rc), s	4.5	4.5		4.5		4.5		
Max Green (Gmax), s	17.3	18.7		40.5		40.5		
Max Allow Headway (MAH), s	3.8	4.8		5.5		5.2		
Max Q Clear (g_c+I1), s	17.1	20.9		42.5		6.7		
Green Ext Time (g_e), s	0.0	0.0		0.0		4.2		
Prob of Phs Call (p_c)	1.00	1.00		1.00		1.00		
Prob of Max Out (p_x)	1.00	0.00		1.00		0.00		

Left-Turn Movement Data								
Assigned Mvmt	1	5		7				
Mvmt Sat Flow, veh/h	1619	0		779				

Through Movement Data								
Assigned Mvmt		2		4		6		
Mvmt Sat Flow, veh/h		5076		8		3705		

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		
Mvmt Sat Flow, veh/h		1525		825		0		

Left Lane Group Data								
Assigned Mvmt	1	5	0	7	0	0	0	0
Lane Assignment	L (Prot)			L+T+R				

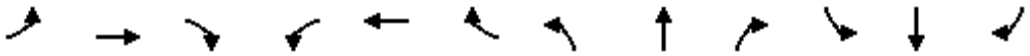
Lanes in Grp	1	0	0	1	0	0	0	0
Grp Vol (v), veh/h	284	0	0	774	0	0	0	0
Grp Sat Flow (s), veh/h/ln	1619	0	0	1613	0	0	0	0
Q Serve Time (g_s), s	15.1	0.0	0.0	40.5	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	15.1	0.0	0.0	40.5	0.0	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	18.9	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	0.48	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	307	0	0	726	0	0	0	0
V/C Ratio (X)	0.92	0.00	0.00	1.07	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	311	0	0	726	0	0	0	0
Upstream Filter (I)	0.99	0.00	0.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	27.3	0.0	0.0	18.1	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	31.6	0.0	0.0	52.6	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	58.8	0.0	0.0	70.7	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	4.4	0.0	0.0	11.2	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	2.7	0.0	0.0	10.6	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00
%ile Back of Q (50%), veh/ln	7.1	0.0	0.0	21.8	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.64	0.00	0.00	0.37	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	12.1	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	0
Lane Assignment		T				T		
Lanes in Grp	0	3	0	0	0	2	0	0
Grp Vol (v), veh/h	0	900	0	0	0	554	0	0
Grp Sat Flow (s), veh/h/ln	0	1638	0	0	0	1805	0	0
Q Serve Time (g_s), s	0.0	15.1	0.0	0.0	0.0	4.7	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	15.1	0.0	0.0	0.0	4.7	0.0	0.0
Lane Grp Cap (c), veh/h	0	1032	0	0	0	1625	0	0
V/C Ratio (X)	0.00	0.87	0.00	0.00	0.00	0.34	0.00	0.00
Avail Cap (c_a), veh/h	0	1032	0	0	0	1625	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	0.99	0.00	0.00
Uniform Delay (d1), s/veh	0.0	25.0	0.0	0.0	0.0	6.9	0.0	0.0
Incr Delay (d2), s/veh	0.0	10.1	0.0	0.0	0.0	0.6	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	35.1	0.0	0.0	0.0	7.4	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	4.3	0.0	0.0	0.0	1.5	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	1.0	0.0	0.0	0.0	0.1	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	5.3	0.0	0.0	0.0	1.6	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.17	0.00	0.00	0.00	0.15	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	0
Lane Assignment		R						
Lanes in Grp	0	1	0	0	0	0	0	0
Grp Vol (v), veh/h	0	478	0	0	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	1525	0	0	0	0	0	0
Q Serve Time (g_s), s	0.0	18.9	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	18.9	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	0.51	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	321	0	0	0	0	0	0
V/C Ratio (X)	0.00	1.49	0.00	0.00	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	321	0	0	0	0	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	26.1	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	237.0	0.0	0.0	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	263.1	0.0	0.0	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	4.8	0.0	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	21.1	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	25.9	0.0	0.0	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.82	0.00	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	39.4	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	77.9
HCM 6th LOS	E



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	60	708	53	187	251	139	106	584	525	210	306	26
Future Volume (veh/h)	60	708	53	187	251	139	106	584	525	210	306	26
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1900
Adj Flow Rate, veh/h	63	745	56	197	264	146	112	615	553	221	322	27
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	79	794	60	219	716	384	133	1126	502	244	1271	106
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.66	1.66	1.00	1.00	1.66	1.00
Prop Arrive On Green	0.05	0.25	0.25	0.14	0.33	0.33	0.14	0.55	0.33	0.15	0.66	0.40
Unsig. Movement Delay												
Ln Grp Delay, s/veh	77.9	76.4	76.0	87.3	33.3	33.5	67.0	24.7	109.9	84.5	15.1	16.9
Ln Grp LOS	E	E	E	F	C	C	E	C	F	F	B	B
Approach Vol, veh/h		864			607			1280			570	
Approach Delay, s/veh		76.3			50.9			65.2			42.6	
Approach LOS		E			D			E			D	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Case No	2.0	3.0	2.0	4.0	2.0	4.0	2.0	4.0
Phs Duration (G+Y+Rc), s	24.1	47.3	22.1	36.5	15.2	56.2	10.8	47.8
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green (Gmax), s	21.5	39.5	18.5	32.5	17.3	43.7	11.2	39.8
Max Allow Headway (MAH), s	3.8	4.6	3.8	5.3	3.8	5.3	3.8	5.4
Max Q Clear (g_c+I1), s	19.5	44.8	17.6	31.5	10.8	7.9	7.0	14.6
Green Ext Time (g_e), s	0.1	0.0	0.1	0.5	0.1	2.2	0.0	2.6
Prob of Phs Call (p_c)	1.00	1.00	1.00	1.00	0.98	1.00	0.90	1.00
Prob of Max Out (p_x)	1.00	0.00	1.00	1.00	0.06	0.00	0.61	0.00

Left-Turn Movement Data								
Assigned Mvmt	1		3		5		7	
Mvmt Sat Flow, veh/h	1619		1619		1619		1619	

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		3420		3224		3196		2150

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1525		242		266		1153

Left Lane Group Data								
Assigned Mvmt	1	0	3	0	5	0	7	0
Lane Assignment	L (Prot)		L (Prot)		L (Prot)		L (Prot)	

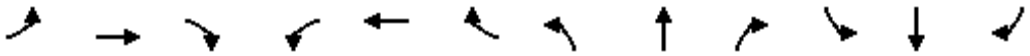
Lanes in Grp	1	0	1	0	1	0	1	0
Grp Vol (v), veh/h	221	0	197	0	112	0	63	0
Grp Sat Flow (s), veh/h/ln	1619	0	1619	0	1619	0	1619	0
Q Serve Time (g_s), s	17.5	0.0	15.6	0.0	8.8	0.0	5.0	0.0
Cycle Q Clear Time (g_c), s	17.5	0.0	15.6	0.0	8.8	0.0	5.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	244	0	219	0	133	0	79	0
V/C Ratio (X)	0.91	0.00	0.90	0.00	0.84	0.00	0.80	0.00
Avail Cap (c_a), veh/h	268	0	230	0	215	0	139	0
Upstream Filter (I)	1.00	0.00	0.97	0.00	0.78	0.00	1.00	0.00
Uniform Delay (d1), s/veh	54.3	0.0	55.3	0.0	55.3	0.0	61.2	0.0
Incr Delay (d2), s/veh	30.2	0.0	32.0	0.0	11.8	0.0	16.7	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	84.5	0.0	87.3	0.0	67.0	0.0	77.9	0.0
1st-Term Q (Q1), veh/ln	7.1	0.0	6.4	0.0	3.4	0.0	2.1	0.0
2nd-Term Q (Q2), veh/ln	2.0	0.0	1.9	0.0	0.4	0.0	0.4	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
%ile Back of Q (50%), veh/ln	9.2	0.0	8.3	0.0	3.8	0.0	2.4	0.0
%ile Storage Ratio (RQ%)	0.14	0.00	0.08	0.00	0.19	0.00	0.03	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	2	0	1	0	1	0	1
Grp Vol (v), veh/h	0	615	0	395	0	171	0	208
Grp Sat Flow (s), veh/h/ln	0	1710	0	1710	0	1710	0	1710
Q Serve Time (g_s), s	0.0	15.1	0.0	29.4	0.0	5.3	0.0	12.0
Cycle Q Clear Time (g_c), s	0.0	15.1	0.0	29.4	0.0	5.3	0.0	12.0
Lane Grp Cap (c), veh/h	0	1126	0	421	0	680	0	569
V/C Ratio (X)	0.00	0.55	0.00	0.94	0.00	0.25	0.00	0.37
Avail Cap (c_a), veh/h	0	1126	0	428	0	680	0	569
Upstream Filter (I)	0.00	0.78	0.00	1.00	0.00	1.00	0.00	0.97
Uniform Delay (d1), s/veh	0.0	23.2	0.0	48.0	0.0	14.2	0.0	32.9
Incr Delay (d2), s/veh	0.0	1.5	0.0	28.3	0.0	0.9	0.0	0.4
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	24.7	0.0	76.4	0.0	15.1	0.0	33.3
1st-Term Q (Q1), veh/ln	0.0	5.1	0.0	12.5	0.0	1.9	0.0	5.0
2nd-Term Q (Q2), veh/ln	0.0	0.2	0.0	3.3	0.0	0.2	0.0	0.1

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	5.3	0.0	15.8	0.0	2.1	0.0	5.1
%ile Storage Ratio (RQ%)	0.00	0.27	0.00	0.21	0.00	0.03	0.00	0.05
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		T+R		T+R		T+R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	553	0	406	0	178	0	202
Grp Sat Flow (s), veh/h/ln	0	1525	0	1756	0	1752	0	1593
Q Serve Time (g_s), s	0.0	42.8	0.0	29.5	0.0	5.9	0.0	12.6
Cycle Q Clear Time (g_c), s	0.0	42.8	0.0	29.5	0.0	5.9	0.0	12.6
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	0.14	0.00	0.15	0.00	0.72
Lane Grp Cap (c), veh/h	0	502	0	432	0	697	0	530
V/C Ratio (X)	0.00	1.10	0.00	0.94	0.00	0.25	0.00	0.38
Avail Cap (c_a), veh/h	0	502	0	439	0	697	0	530
Upstream Filter (I)	0.00	0.78	0.00	1.00	0.00	1.00	0.00	0.97
Uniform Delay (d1), s/veh	0.0	43.6	0.0	48.0	0.0	16.0	0.0	33.1
Incr Delay (d2), s/veh	0.0	66.3	0.0	28.0	0.0	0.9	0.0	0.4
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	109.9	0.0	76.0	0.0	16.9	0.0	33.5
1st-Term Q (Q1), veh/ln	0.0	16.0	0.0	12.8	0.0	2.3	0.0	4.9
2nd-Term Q (Q2), veh/ln	0.0	9.2	0.0	3.4	0.0	0.2	0.0	0.1
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	25.2	0.0	16.2	0.0	2.4	0.0	5.0
%ile Storage Ratio (RQ%)	0.00	1.27	0.00	0.22	0.00	0.04	0.00	0.05
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	12.7	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	61.6
HCM 6th LOS	E



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	410	30	361	10	4	17	221	843	4	7	483	80
Future Volume (veh/h)	410	30	361	10	4	17	221	843	4	7	483	80
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1600	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1900
Adj Flow Rate, veh/h	432	32	0	11	4	18	233	887	4	7	508	84
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	462	468		119	30	66	253	1962	9	15	1219	201
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.16	0.26	0.00	0.05	0.05	0.05	0.16	0.56	0.56	0.01	0.41	0.41
Unsig. Movement Delay												
Ln Grp Delay, s/veh	59.8	22.3	0.0	36.9	0.0	38.9	69.3	11.8	11.7	59.0	18.1	18.1
Ln Grp LOS	E	C		D	A	D	E	B	B	E	B	B
Approach Vol, veh/h		464			33			1124			599	
Approach Delay, s/veh		57.3			38.0			23.7			18.6	
Approach LOS		E			D			C			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6	7	8
Case No	2.0	4.0		3.0	2.0	4.0	2.0	8.3
Phs Duration (G+Y+Rc), s	5.2	49.5		25.3	17.0	37.7	17.0	8.3
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5	4.5	4.5
Max Green (Gmax), s	5.0	26.5		35.0	12.5	19.0	12.5	18.0
Max Allow Headway (MAH), s	3.8	5.2		5.2	3.8	5.3	3.8	5.4
Max Q Clear (g_c+I1), s	2.3	13.9		3.1	13.3	11.8	13.6	3.0
Green Ext Time (g_e), s	0.0	4.6		0.1	0.0	2.1	0.0	0.1
Prob of Phs Call (p_c)	0.14	1.00		1.00	0.99	1.00	1.00	0.76
Prob of Max Out (p_x)	1.00	0.00		0.00	1.00	0.00	1.00	0.00

Left-Turn Movement Data								
Assigned Mvmt	1				5		7	3
Mvmt Sat Flow, veh/h	1619				1619		2956	862

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		3491		1800		2939		629

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		16		1525		484		1388

Left Lane Group Data								
Assigned Mvmt	1	0	0	0	5	0	7	3
Lane Assignment	L (Prot)				L (Prot)		L (Prot)	L+T

Lanes in Grp	1	0	0	0	1	0	2	1
Grp Vol (v), veh/h	7	0	0	0	233	0	432	15
Grp Sat Flow (s), veh/h/ln	1619	0	0	0	1619	0	1478	1491
Q Serve Time (g_s), s	0.3	0.0	0.0	0.0	11.3	0.0	11.6	0.0
Cycle Q Clear Time (g_c), s	0.3	0.0	0.0	0.0	11.3	0.0	11.6	0.6
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	1399
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.8
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.8
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	0.00	1.00	0.00	1.00	0.73
Lane Grp Cap (c), veh/h	15	0	0	0	253	0	462	149
V/C Ratio (X)	0.48	0.00	0.00	0.00	0.92	0.00	0.94	0.10
Avail Cap (c_a), veh/h	101	0	0	0	253	0	462	402
Upstream Filter (I)	0.86	0.00	0.00	0.00	1.00	0.00	1.00	1.00
Uniform Delay (d1), s/veh	39.5	0.0	0.0	0.0	33.3	0.0	33.4	36.6
Incr Delay (d2), s/veh	19.6	0.0	0.0	0.0	36.1	0.0	26.5	0.3
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	59.0	0.0	0.0	0.0	69.3	0.0	59.8	36.9
1st-Term Q (Q1), veh/ln	0.1	0.0	0.0	0.0	4.3	0.0	4.0	0.3
2nd-Term Q (Q2), veh/ln	0.1	0.0	0.0	0.0	2.5	0.0	1.7	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	0.00	1.00	0.00	1.00	1.00
%ile Back of Q (50%), veh/ln	0.2	0.0	0.0	0.0	6.8	0.0	5.7	0.3
%ile Storage Ratio (RQ%)	0.01	0.00	0.00	0.00	1.14	0.00	0.14	0.01
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		
Lanes in Grp	0	1	0	1	0	1	0	0
Grp Vol (v), veh/h	0	434	0	32	0	295	0	0
Grp Sat Flow (s), veh/h/ln	0	1710	0	1800	0	1710	0	0
Q Serve Time (g_s), s	0.0	11.9	0.0	1.1	0.0	9.7	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	11.9	0.0	1.1	0.0	9.7	0.0	0.0
Lane Grp Cap (c), veh/h	0	961	0	468	0	709	0	0
V/C Ratio (X)	0.00	0.45	0.00	0.07	0.00	0.42	0.00	0.00
Avail Cap (c_a), veh/h	0	961	0	788	0	709	0	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	0.86	0.00	0.00
Uniform Delay (d1), s/veh	0.0	10.3	0.0	22.3	0.0	16.6	0.0	0.0
Incr Delay (d2), s/veh	0.0	1.5	0.0	0.1	0.0	1.5	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	11.8	0.0	22.3	0.0	18.1	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	4.0	0.0	0.4	0.0	3.6	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.4	0.0	0.0	0.0	0.3	0.0	0.0

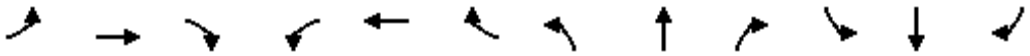
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	4.4	0.0	0.4	0.0	3.9	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.27	0.00	0.01	0.00	0.20	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R		R		T+R		T+R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	457	0	0	0	297	0	18
Grp Sat Flow (s), veh/h/ln	0	1797	0	1525	0	1713	0	1388
Q Serve Time (g_s), s	0.0	11.9	0.0	0.0	0.0	9.8	0.0	1.0
Cycle Q Clear Time (g_c), s	0.0	11.9	0.0	0.0	0.0	9.8	0.0	1.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.01	0.00	1.00	0.00	0.28	0.00	1.00
Lane Grp Cap (c), veh/h	0	1010	0	397	0	710	0	66
V/C Ratio (X)	0.00	0.45	0.00	0.00	0.00	0.42	0.00	0.27
Avail Cap (c_a), veh/h	0	1010	0	667	0	710	0	312
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	0.86	0.00	1.00
Uniform Delay (d1), s/veh	0.0	10.3	0.0	0.0	0.0	16.6	0.0	36.7
Incr Delay (d2), s/veh	0.0	1.5	0.0	0.0	0.0	1.6	0.0	2.2
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	11.7	0.0	0.0	0.0	18.1	0.0	38.9
1st-Term Q (Q1), veh/ln	0.0	4.2	0.0	0.0	0.0	3.6	0.0	0.3
2nd-Term Q (Q2), veh/ln	0.0	0.4	0.0	0.0	0.0	0.3	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	4.6	0.0	0.0	0.0	4.0	0.0	0.4
%ile Storage Ratio (RQ%)	0.00	0.28	0.00	0.00	0.00	0.20	0.00	0.01
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	29.6
HCM 6th LOS	C

Notes

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	18	0	14	36	0	60	5	954	43	40	821	7
Future Volume (veh/h)	18	0	14	36	0	60	5	954	43	40	821	7
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1900	1800	1900	1800	1800	1700	1900	1900
Adj Flow Rate, veh/h	19	0	15	38	0	63	5	1004	45	42	864	7
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	109	0	61	65	0	190	536	1328	1125	52	4284	35
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Prop Arrive On Green	0.04	0.00	0.04	0.04	0.00	0.12	1.00	1.00	1.00	0.03	0.81	0.81
Unsig. Movement Delay												
Ln Grp Delay, s/veh	56.9	0.0	57.9	64.6	0.0	49.6	0.0	4.1	0.1	81.9	2.8	3.0
Ln Grp LOS	E	A	E	E	A	D	A	A	A	F	A	A
Approach Vol, veh/h		34			101			1054			913	
Approach Delay, s/veh		57.4			55.3			3.9			6.5	
Approach LOS		E			E			A			A	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4		6		8
Case No	2.0	5.3	2.0	6.3		4.0		4.0
Phs Duration (G+Y+Rc), s	8.4	93.0	9.3	9.3		101.4		18.6
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5		4.5		4.5
Max Green (Gmax), s	15.1	30.7	28.1	28.1		50.3		18.0
Max Allow Headway (MAH), s	3.8	5.2	3.8	4.8		5.2		5.6
Max Q Clear (g_c+I1), s	5.1	2.0	4.8	3.8		6.5		6.3
Green Ext Time (g_e), s	0.0	10.1	0.1	0.1		6.9		0.2
Prob of Phs Call (p_c)	0.75	1.00	0.97	0.96		1.00		0.99
Prob of Max Out (p_x)	0.00	0.00	0.00	0.00		0.00		0.01

Left-Turn Movement Data								
Assigned Mvmt	1	5	3	7				
Mvmt Sat Flow, veh/h	1619	646	1619	1217				

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		1800		0		5307		0

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1525		1525		43		1610

Left Lane Group Data								
Assigned Mvmt	1	5	3	7	0	0	0	0
Lane Assignment	L (Prot)	L	L (Prot)	L				

Lanes in Grp	1	1	1	1	0	0	0	0
Grp Vol (v), veh/h	42	5	38	19	0	0	0	0
Grp Sat Flow (s), veh/h/ln	1619	646	1619	1217	0	0	0	0
Q Serve Time (g_s), s	3.1	0.0	2.8	1.8	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	3.1	0.0	2.8	1.8	0.0	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	646	0	1217	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	88.5	0.0	4.8	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	88.5	0.0	4.8	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	1.8	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	52	536	65	109	0	0	0	0
V/C Ratio (X)	0.81	0.01	0.58	0.17	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	204	536	379	345	0	0	0	0
Upstream Filter (I)	1.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	57.7	0.0	56.6	56.2	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	24.2	0.0	8.0	0.8	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	81.9	0.0	64.6	56.9	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	1.3	0.0	1.1	0.6	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.4	0.0	0.1	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00
%ile Back of Q (50%), veh/ln	1.6	0.0	1.3	0.6	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.27	0.00	0.02	0.04	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T				T		
Lanes in Grp	0	1	0	0	0	2	0	0
Grp Vol (v), veh/h	0	1004	0	0	0	563	0	0
Grp Sat Flow (s), veh/h/ln	0	1800	0	0	0	1729	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	4.5	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	4.5	0.0	0.0
Lane Grp Cap (c), veh/h	0	1328	0	0	0	2791	0	0
V/C Ratio (X)	0.00	0.76	0.00	0.00	0.00	0.20	0.00	0.00
Avail Cap (c_a), veh/h	0	1328	0	0	0	2791	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	2.7	0.0	0.0
Incr Delay (d2), s/veh	0.0	4.1	0.0	0.0	0.0	0.2	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	4.1	0.0	0.0	0.0	2.8	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	1.2	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	1.5	0.0	0.0	0.0	0.1	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	1.5	0.0	0.0	0.0	1.3	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.09	0.00	0.00	0.00	0.13	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		T+R		T+R		T+R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	45	0	15	0	308	0	63
Grp Sat Flow (s), veh/h/ln	0	1525	0	1525	0	1892	0	1610
Q Serve Time (g_s), s	0.0	0.0	0.0	1.1	0.0	4.5	0.0	4.3
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	1.1	0.0	4.5	0.0	4.3
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	0.02	0.00	1.00
Lane Grp Cap (c), veh/h	0	1125	0	61	0	1528	0	190
V/C Ratio (X)	0.00	0.04	0.00	0.25	0.00	0.20	0.00	0.33
Avail Cap (c_a), veh/h	0	1125	0	357	0	1528	0	242
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	55.8	0.0	2.7	0.0	48.6
Incr Delay (d2), s/veh	0.0	0.1	0.0	2.1	0.0	0.3	0.0	1.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.1	0.0	57.9	0.0	3.0	0.0	49.6
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.4	0.0	1.3	0.0	1.7
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.5	0.0	1.4	0.0	1.8
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.03	0.00	0.14	0.00	0.03
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	8.3
HCM 6th LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	176	3	40	12	6	9	28	818	7	6	807	65
Future Volume (veh/h)	176	3	40	12	6	9	28	818	7	6	807	65
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1700	1800	1900	1700	1900	1900
Adj Flow Rate, veh/h	185	3	42	13	6	9	29	861	7	6	849	68
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	264	3	48	167	79	96	42	1238	10	12	1285	1089
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Prop Arrive On Green	0.19	0.19	0.19	0.19	0.19	0.19	0.03	0.69	0.69	0.02	1.00	1.00
Unsig. Movement Delay												
Ln Grp Delay, s/veh	50.6	0.0	0.0	40.6	0.0	0.0	76.6	0.0	14.1	86.2	2.7	0.1
Ln Grp LOS	D	A	A	D	A	A	E	A	B	F	A	A
Approach Vol, veh/h		230			28			897			923	
Approach Delay, s/veh		50.6			40.6			16.1			3.0	
Approach LOS		D			D			B			A	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Case No	2.0	4.0		8.0	2.0	3.0		8.0
Phs Duration (G+Y+Rc), s	5.4	87.8		26.8	7.6	85.6		26.8
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green (Gmax), s	27.0	39.5		40.0	27.0	39.5		40.0
Max Allow Headway (MAH), s	3.8	5.2		5.3	3.8	5.2		5.4
Max Q Clear (g_c+I1), s	2.4	36.3		21.0	4.1	2.0		3.6
Green Ext Time (g_e), s	0.0	1.8		1.2	0.0	8.2		0.1
Prob of Phs Call (p_c)	0.18	1.00		1.00	0.62	1.00		1.00
Prob of Max Out (p_x)	0.00	0.00		0.00	0.00	0.00		0.00

Left-Turn Movement Data								
Assigned Mvmt	1			7	5			3
Mvmt Sat Flow, veh/h	1619			1131	1619			663

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		1783		18		1900		425

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		14		257		1610		516

Left Lane Group Data								
Assigned Mvmt	1	0	0	7	5	0	0	3
Lane Assignment	L (Prot)			L+T+R	L (Prot)			L+T+R

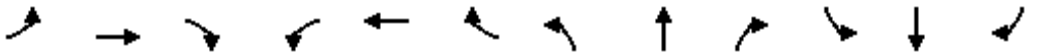
Lanes in Grp	1	0	0	1	1	0	0	1
Grp Vol (v), veh/h	6	0	0	230	29	0	0	28
Grp Sat Flow (s), veh/h/ln	1619	0	0	1406	1619	0	0	1604
Q Serve Time (g_s), s	0.4	0.0	0.0	17.4	2.1	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.4	0.0	0.0	19.0	2.1	0.0	0.0	1.6
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	1421	0	0	0	1383
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	1730	0	0	0	1618
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	22.3	0.0	0.0	0.0	22.3
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	20.6	0.0	0.0	0.0	3.2
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	17.4	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	0.80	1.00	0.00	0.00	0.46
Lane Grp Cap (c), veh/h	12	0	0	315	42	0	0	342
V/C Ratio (X)	0.49	0.00	0.00	0.73	0.69	0.00	0.00	0.08
Avail Cap (c_a), veh/h	364	0	0	519	364	0	0	558
Upstream Filter (I)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	58.9	0.0	0.0	47.4	58.0	0.0	0.0	40.5
Incr Delay (d2), s/veh	27.4	0.0	0.0	3.3	18.6	0.0	0.0	0.1
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	86.2	0.0	0.0	50.6	76.6	0.0	0.0	40.6
1st-Term Q (Q1), veh/ln	0.2	0.0	0.0	6.7	0.9	0.0	0.0	0.7
2nd-Term Q (Q2), veh/ln	0.1	0.0	0.0	0.3	0.2	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.3	0.0	0.0	6.9	1.1	0.0	0.0	0.7
%ile Storage Ratio (RQ%)	0.03	0.00	0.00	0.81	0.14	0.00	0.00	0.02
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment						T		
Lanes in Grp	0	0	0	0	0	1	0	0
Grp Vol (v), veh/h	0	0	0	0	0	849	0	0
Grp Sat Flow (s), veh/h/ln	0	0	0	0	0	1900	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lane Grp Cap (c), veh/h	0	0	0	0	0	1285	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.00	0.00	0.66	0.00	0.00
Avail Cap (c_a), veh/h	0	0	0	0	0	1285	0	0
Upstream Filter (I)	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	2.7	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	2.7	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.10	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R				R		
Lanes in Grp	0	1	0	0	0	1	0	0
Grp Vol (v), veh/h	0	868	0	0	0	68	0	0
Grp Sat Flow (s), veh/h/ln	0	1797	0	0	0	1610	0	0
Q Serve Time (g_s), s	0.0	34.3	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	34.3	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.01	0.00	0.18	0.00	1.00	0.00	0.32
Lane Grp Cap (c), veh/h	0	1248	0	0	0	1089	0	0
V/C Ratio (X)	0.00	0.70	0.00	0.00	0.00	0.06	0.00	0.00
Avail Cap (c_a), veh/h	0	1248	0	0	0	1089	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	10.8	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	3.2	0.0	0.0	0.0	0.1	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	14.1	0.0	0.0	0.0	0.1	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	12.2	0.0	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	1.1	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	13.4	0.0	0.0	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.25	0.00	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	14.4
HCM 6th LOS	B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	129	593	71	129	167	162	41	492	241	194	486	67
Future Volume (veh/h)	129	593	71	129	167	162	41	492	241	194	486	67
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1900
Adj Flow Rate, veh/h	136	624	75	136	176	171	43	518	0	204	512	71
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	150	731	88	150	813	363	66	975		206	1272	599
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.09	0.24	0.24	0.09	0.24	0.24	0.04	0.29	0.00	0.13	0.37	0.37
Unsig. Movement Delay												
Ln Grp Delay, s/veh	77.8	39.6	39.7	65.8	21.5	23.5	38.8	22.2	0.0	90.5	17.2	14.9
Ln Grp LOS	E	D	D	E	C	C	D	C		F	B	B
Approach Vol, veh/h		835			483			561			787	
Approach Delay, s/veh		45.9			34.7			23.4			36.0	
Approach LOS		D			C			C			D	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Case No	2.0	3.0	2.0	4.0	2.0	3.0	2.0	3.0
Phs Duration (G+Y+Rc), s	13.4	24.5	11.0	21.1	7.3	30.5	11.0	21.1
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green (Gmax), s	8.9	18.6	6.5	18.0	5.9	21.6	6.5	18.0
Max Allow Headway (MAH), s	3.8	5.2	3.8	5.3	3.8	5.1	3.8	4.6
Max Q Clear (g_c+I1), s	10.8	10.9	7.8	15.6	3.8	9.7	7.8	8.7
Green Ext Time (g_e), s	0.0	2.0	0.0	1.0	0.0	2.9	0.0	1.1
Prob of Phs Call (p_c)	0.98	1.00	0.93	1.00	0.57	1.00	0.93	1.00
Prob of Max Out (p_x)	1.00	0.00	1.00	1.00	1.00	0.00	1.00	0.13

Left-Turn Movement Data								
Assigned Mvmt	1		3		5		7	
Mvmt Sat Flow, veh/h	1619		1619		1619		1619	

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		3420		3075		3420		3420

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1525		369		1610		1525

Left Lane Group Data								
Assigned Mvmt	1	0	3	0	5	0	7	0
Lane Assignment	L (Prot)		L (Prot)		L (Prot)		L (Prot)	

Lanes in Grp	1	0	1	0	1	0	1	0
Grp Vol (v), veh/h	204	0	136	0	43	0	136	0
Grp Sat Flow (s), veh/h/ln	1619	0	1619	0	1619	0	1619	0
Q Serve Time (g_s), s	8.8	0.0	5.8	0.0	1.8	0.0	5.8	0.0
Cycle Q Clear Time (g_c), s	8.8	0.0	5.8	0.0	1.8	0.0	5.8	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	206	0	150	0	66	0	150	0
V/C Ratio (X)	0.99	0.00	0.90	0.00	0.66	0.00	0.90	0.00
Avail Cap (c_a), veh/h	206	0	150	0	136	0	150	0
Upstream Filter (I)	1.00	0.00	0.64	0.00	0.52	0.00	1.00	0.00
Uniform Delay (d1), s/veh	30.5	0.0	31.4	0.0	33.1	0.0	31.4	0.0
Incr Delay (d2), s/veh	60.0	0.0	34.3	0.0	5.7	0.0	46.4	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	90.5	0.0	65.8	0.0	38.8	0.0	77.8	0.0
1st-Term Q (Q1), veh/ln	3.3	0.0	2.2	0.0	0.7	0.0	2.2	0.0
2nd-Term Q (Q2), veh/ln	3.4	0.0	1.4	0.0	0.1	0.0	1.9	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
%ile Back of Q (50%), veh/ln	6.7	0.0	3.6	0.0	0.8	0.0	4.1	0.0
%ile Storage Ratio (RQ%)	0.65	0.00	0.05	0.00	0.12	0.00	1.03	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	2	0	1	0	2	0	2
Grp Vol (v), veh/h	0	518	0	347	0	512	0	176
Grp Sat Flow (s), veh/h/ln	0	1710	0	1710	0	1710	0	1710
Q Serve Time (g_s), s	0.0	8.9	0.0	13.6	0.0	7.7	0.0	2.9
Cycle Q Clear Time (g_c), s	0.0	8.9	0.0	13.6	0.0	7.7	0.0	2.9
Lane Grp Cap (c), veh/h	0	975	0	407	0	1272	0	813
V/C Ratio (X)	0.00	0.53	0.00	0.85	0.00	0.40	0.00	0.22
Avail Cap (c_a), veh/h	0	975	0	440	0	1272	0	879
Upstream Filter (I)	0.00	0.52	0.00	1.00	0.00	1.00	0.00	0.64
Uniform Delay (d1), s/veh	0.0	21.1	0.0	25.5	0.0	16.2	0.0	21.4
Incr Delay (d2), s/veh	0.0	1.1	0.0	14.1	0.0	1.0	0.0	0.1
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	22.2	0.0	39.6	0.0	17.2	0.0	21.5
1st-Term Q (Q1), veh/ln	0.0	3.4	0.0	5.2	0.0	2.8	0.0	1.1
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	1.6	0.0	0.2	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	3.5	0.0	6.8	0.0	3.0	0.0	1.1
%ile Storage Ratio (RQ%)	0.00	0.03	0.00	0.03	0.00	0.06	0.00	0.01
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		T+R		R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	0	0	352	0	71	0	171
Grp Sat Flow (s), veh/h/ln	0	1525	0	1734	0	1610	0	1525
Q Serve Time (g_s), s	0.0	0.0	0.0	13.6	0.0	2.0	0.0	6.7
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	13.6	0.0	2.0	0.0	6.7
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	0.21	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	435	0	412	0	599	0	363
V/C Ratio (X)	0.00	0.00	0.00	0.86	0.00	0.12	0.00	0.47
Avail Cap (c_a), veh/h	0	435	0	446	0	599	0	392
Upstream Filter (I)	0.00	0.00	0.00	1.00	0.00	1.00	0.00	0.64
Uniform Delay (d1), s/veh	0.0	0.0	0.0	25.5	0.0	14.4	0.0	22.9
Incr Delay (d2), s/veh	0.0	0.0	0.0	14.2	0.0	0.4	0.0	0.6
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	39.7	0.0	14.9	0.0	23.5
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	5.3	0.0	0.7	0.0	2.3
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	1.6	0.0	0.1	0.0	0.1
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	6.9	0.0	0.8	0.0	2.4
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.03	0.00	0.02	0.00	0.03
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	36.2
HCM 6th LOS	D

Notes

Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	232	459	114	272	222	55	70	518	246	134	510	97
Future Volume (veh/h)	232	459	114	272	222	55	70	518	246	134	510	97
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1900
Adj Flow Rate, veh/h	244	483	120	286	234	58	74	545	259	141	537	102
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	275	536	132	315	605	147	92	685	325	168	1462	272
HCM Platoon Ratio	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33
Prop Arrive On Green	0.23	0.26	0.26	0.26	0.30	0.30	0.08	0.40	0.40	0.14	0.47	0.47
Unsig. Movement Delay												
Ln Grp Delay, s/veh	56.6	57.3	59.3	59.4	27.5	27.6	54.8	35.4	36.2	62.6	18.3	19.1
Ln Grp LOS	E	E	E	E	C	C	D	D	D	E	B	B
Approach Vol, veh/h		847			578			878			780	
Approach Delay, s/veh		57.8			43.3			37.4			26.5	
Approach LOS		E			D			D			C	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Case No	2.0	4.0	2.0	4.0	2.0	4.0	2.0	4.0
Phs Duration (G+Y+Rc), s	13.9	31.9	22.0	22.2	9.6	36.1	19.8	24.5
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green (Gmax), s	9.7	25.8	18.5	18.0	10.1	25.4	17.7	18.8
Max Allow Headway (MAH), s	3.8	5.3	3.8	5.3	3.8	5.3	3.8	5.3
Max Q Clear (g_c+I1), s	9.6	21.2	17.4	17.6	6.0	9.6	15.1	8.3
Green Ext Time (g_e), s	0.0	2.1	0.1	0.2	0.0	3.7	0.2	1.2
Prob of Phs Call (p_c)	0.97	1.00	1.00	1.00	0.84	1.00	1.00	1.00
Prob of Max Out (p_x)	1.00	0.00	1.00	1.00	0.74	0.00	1.00	0.13

Left-Turn Movement Data								
Assigned Mvmt	1		3		5		7	
Mvmt Sat Flow, veh/h	1619		1619		1619		1619	

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		2251		2718		4161		2728

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1067		671		775		662

Left Lane Group Data								
Assigned Mvmt	1	0	3	0	5	0	7	0
Lane Assignment	L (Prot)		L (Prot)		L (Prot)		L (Prot)	

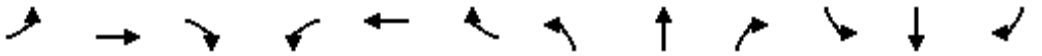
Lanes in Grp	1	0	1	0	1	0	1	0
Grp Vol (v), veh/h	141	0	286	0	74	0	244	0
Grp Sat Flow (s), veh/h/ln	1619	0	1619	0	1619	0	1619	0
Q Serve Time (g_s), s	7.6	0.0	15.4	0.0	4.0	0.0	13.1	0.0
Cycle Q Clear Time (g_c), s	7.6	0.0	15.4	0.0	4.0	0.0	13.1	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	168	0	315	0	92	0	275	0
V/C Ratio (X)	0.84	0.00	0.91	0.00	0.80	0.00	0.89	0.00
Avail Cap (c_a), veh/h	174	0	333	0	182	0	318	0
Upstream Filter (I)	0.85	0.00	1.00	0.00	0.93	0.00	1.00	0.00
Uniform Delay (d1), s/veh	38.0	0.0	32.6	0.0	41.1	0.0	34.0	0.0
Incr Delay (d2), s/veh	24.5	0.0	26.8	0.0	13.7	0.0	22.6	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	62.6	0.0	59.4	0.0	54.8	0.0	56.6	0.0
1st-Term Q (Q1), veh/ln	2.9	0.0	5.5	0.0	1.6	0.0	4.7	0.0
2nd-Term Q (Q2), veh/ln	1.1	0.0	2.3	0.0	0.4	0.0	1.7	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
%ile Back of Q (50%), veh/ln	4.0	0.0	7.8	0.0	1.9	0.0	6.5	0.0
%ile Storage Ratio (RQ%)	0.56	0.00	0.05	0.00	0.24	0.00	0.73	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	1	0	1	0	2	0	1
Grp Vol (v), veh/h	0	414	0	303	0	421	0	145
Grp Sat Flow (s), veh/h/ln	0	1710	0	1710	0	1638	0	1710
Q Serve Time (g_s), s	0.0	19.1	0.0	15.4	0.0	7.4	0.0	6.1
Cycle Q Clear Time (g_c), s	0.0	19.1	0.0	15.4	0.0	7.4	0.0	6.1
Lane Grp Cap (c), veh/h	0	521	0	337	0	1151	0	379
V/C Ratio (X)	0.00	0.79	0.00	0.90	0.00	0.37	0.00	0.38
Avail Cap (c_a), veh/h	0	521	0	342	0	1151	0	379
Upstream Filter (I)	0.00	0.93	0.00	1.00	0.00	0.85	0.00	1.00
Uniform Delay (d1), s/veh	0.0	24.3	0.0	32.3	0.0	17.5	0.0	26.8
Incr Delay (d2), s/veh	0.0	11.1	0.0	24.9	0.0	0.8	0.0	0.6
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	35.4	0.0	57.3	0.0	18.3	0.0	27.5
1st-Term Q (Q1), veh/ln	0.0	6.7	0.0	5.8	0.0	2.6	0.0	2.4
2nd-Term Q (Q2), veh/ln	0.0	1.6	0.0	2.3	0.0	0.1	0.0	0.1

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	8.4	0.0	8.1	0.0	2.7	0.0	2.4
%ile Storage Ratio (RQ%)	0.00	0.22	0.00	0.04	0.00	0.03	0.00	0.02
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R		T+R		T+R		T+R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	390	0	300	0	218	0	147
Grp Sat Flow (s), veh/h/ln	0	1608	0	1679	0	1660	0	1681
Q Serve Time (g_s), s	0.0	19.2	0.0	15.6	0.0	7.6	0.0	6.3
Cycle Q Clear Time (g_c), s	0.0	19.2	0.0	15.6	0.0	7.6	0.0	6.3
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.66	0.00	0.40	0.00	0.47	0.00	0.39
Lane Grp Cap (c), veh/h	0	489	0	331	0	583	0	373
V/C Ratio (X)	0.00	0.80	0.00	0.91	0.00	0.37	0.00	0.39
Avail Cap (c_a), veh/h	0	489	0	336	0	583	0	373
Upstream Filter (I)	0.00	0.93	0.00	1.00	0.00	0.85	0.00	1.00
Uniform Delay (d1), s/veh	0.0	24.3	0.0	32.4	0.0	17.6	0.0	26.9
Incr Delay (d2), s/veh	0.0	11.9	0.0	26.9	0.0	1.6	0.0	0.7
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	36.2	0.0	59.3	0.0	19.1	0.0	27.6
1st-Term Q (Q1), veh/ln	0.0	6.4	0.0	5.8	0.0	2.7	0.0	2.4
2nd-Term Q (Q2), veh/ln	0.0	1.6	0.0	2.5	0.0	0.3	0.0	0.1
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	8.0	0.0	8.2	0.0	2.9	0.0	2.5
%ile Storage Ratio (RQ%)	0.00	0.21	0.00	0.04	0.00	0.03	0.00	0.02
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	41.4
HCM 6th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	184	329	169	369	818	0	0	766	479
Future Volume (veh/h)	0	0	0	184	329	169	369	818	0	0	766	479
Number				3	8	18	5	2	12	1	6	16
Initial Q, veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln				1700	1800	1800	1700	1800	0	0	1800	1900
Adj Flow Rate, veh/h				194	346	178	388	861	0	0	806	504
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence				Yes			Yes			No		
Cap, veh/h				228	424	229	404	2276	0	0	1295	609
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	2.00	1.00
Prop Arrive On Green				0.26	0.26	0.26	0.50	1.00	0.00	0.00	0.76	0.38
Unsig. Movement Delay												
Ln Grp Delay, s/veh				50.8	0.0	46.1	55.9	0.3	0.0	0.0	12.5	44.0
Ln Grp LOS				D	A	D	E	A	A	A	B	D
Approach Vol, veh/h					718			1249			1310	
Approach Delay, s/veh					48.6			17.6			24.6	
Approach LOS					D			B			C	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2	8		5	6		
Case No		4.0	12.0		2.0	7.0		
Phs Duration (G+Y+Rc), s		84.4	35.6		34.4	49.9		
Change Period (Y+Rc), s		4.5	4.5		4.5	4.5		
Max Green (Gmax), s		69.5	41.5		31.5	33.5		
Max Allow Headway (MAH), s		5.2	5.3		3.8	4.8		
Max Q Clear (g_c+I1), s		2.0	27.1		29.7	36.0		
Green Ext Time (g_e), s		7.7	4.0		0.3	0.0		
Prob of Phs Call (p_c)		1.00	1.00		1.00	1.00		
Prob of Max Out (p_x)		0.00	0.22		1.00	0.00		

Left-Turn Movement Data								
Assigned Mvmt			3		5	1		
Mvmt Sat Flow, veh/h			880		1619	0		

Through Movement Data								
Assigned Mvmt		2	8			6		
Mvmt Sat Flow, veh/h		3510	1634			3510		

Right-Turn Movement Data								
Assigned Mvmt		12	18			16		
Mvmt Sat Flow, veh/h		0	883			1610		

Left Lane Group Data								
Assigned Mvmt	0	0	3	0	5	1	0	0
Lane Assignment			L+T		L (Prot)			

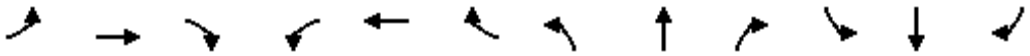
Lanes in Grp	0	0	1	0	1	0	0	0
Grp Vol (v), veh/h	0	0	387	0	388	0	0	0
Grp Sat Flow (s), veh/h/ln	0	0	1756	0	1619	0	0	0
Q Serve Time (g_s), s	0.0	0.0	25.1	0.0	27.7	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	25.1	0.0	27.7	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	45.4	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	0.00	0.50	0.00	1.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	456	0	404	0	0	0
V/C Ratio (X)	0.00	0.00	0.85	0.00	0.96	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	0	607	0	425	0	0	0
Upstream Filter (I)	0.00	0.00	1.00	0.00	0.70	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	42.2	0.0	29.5	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	8.6	0.0	26.4	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	50.8	0.0	55.9	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	10.8	0.0	8.1	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	1.1	0.0	3.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	0.00	1.00	0.00	1.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	11.9	0.0	11.1	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.28	0.00	1.85	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	8	0	0	6	0	0
Lane Assignment		T				T		
Lanes in Grp	0	2	0	0	0	2	0	0
Grp Vol (v), veh/h	0	861	0	0	0	806	0	0
Grp Sat Flow (s), veh/h/ln	0	1710	0	0	0	1710	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	13.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	13.0	0.0	0.0
Lane Grp Cap (c), veh/h	0	2276	0	0	0	1295	0	0
V/C Ratio (X)	0.00	0.38	0.00	0.00	0.00	0.62	0.00	0.00
Avail Cap (c_a), veh/h	0	2276	0	0	0	1295	0	0
Upstream Filter (I)	0.00	0.70	0.00	0.00	0.00	0.82	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	10.6	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.3	0.0	0.0	0.0	1.9	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.3	0.0	0.0	0.0	12.5	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	3.1	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	0.3	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.1	0.0	0.0	0.0	3.4	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.09	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	18	0	0	16	0	0
Lane Assignment			T+R			R		
Lanes in Grp	0	0	1	0	0	1	0	0
Grp Vol (v), veh/h	0	0	331	0	0	504	0	0
Grp Sat Flow (s), veh/h/ln	0	0	1641	0	0	1610	0	0
Q Serve Time (g_s), s	0.0	0.0	22.4	0.0	0.0	34.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	22.4	0.0	0.0	34.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.00	0.54	0.00	0.00	1.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	426	0	0	609	0	0
V/C Ratio (X)	0.00	0.00	0.78	0.00	0.00	0.83	0.00	0.00
Avail Cap (c_a), veh/h	0	0	568	0	0	609	0	0
Upstream Filter (I)	0.00	0.00	1.00	0.00	0.00	0.82	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	41.2	0.0	0.0	33.7	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	4.8	0.0	0.0	10.2	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	46.1	0.0	0.0	44.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	9.0	0.0	0.0	13.1	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.6	0.0	0.0	1.7	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	9.6	0.0	0.0	14.8	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.23	0.00	0.00	0.38	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	27.2
HCM 6th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	363	67	508	0	0	0	0	815	263	237	721	0
Future Volume (veh/h)	363	67	508	0	0	0	0	815	263	237	721	0
Number	7	4	14				5	2	12	1	6	16
Initial Q, veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1700	1800	1800				0	1800	1800	1700	1900	0
Adj Flow Rate, veh/h	382	71	535				0	858	277	249	759	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0				0	0	0	0	0	0
Opposing Right Turn Influence	Yes						No			Yes		
Cap, veh/h	504	94	528				0	1280	571	271	2091	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Prop Arrive On Green	0.35	0.35	0.35				0.00	0.37	0.37	0.33	1.00	0.00
Unsig. Movement Delay												
Ln Grp Delay, s/veh	40.4	0.0	82.0				0.0	34.2	31.6	57.8	0.3	0.0
Ln Grp LOS	D	A	F				A	C	C	E	A	A
Approach Vol, veh/h		988						1135			1008	
Approach Delay, s/veh		62.9						33.5			14.5	
Approach LOS		E						C			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Case No	2.0	7.0		12.0		4.0		
Phs Duration (G+Y+Rc), s	24.6	49.4		46.0		74.0		
Change Period (Y+Rc), s	4.5	4.5		4.5		4.5		
Max Green (Gmax), s	25.5	39.5		41.5		69.5		
Max Allow Headway (MAH), s	3.8	4.9		5.5		5.2		
Max Q Clear (g_c+I1), s	19.7	27.1		43.5		2.0		
Green Ext Time (g_e), s	0.4	5.6		0.0		6.5		
Prob of Phs Call (p_c)	1.00	1.00		1.00		1.00		
Prob of Max Out (p_x)	0.26	0.00		1.00		0.00		

Left-Turn Movement Data								
Assigned Mvmt	1	5		7				
Mvmt Sat Flow, veh/h	1619	0		1456				

Through Movement Data								
Assigned Mvmt		2		4		6		
Mvmt Sat Flow, veh/h		3510		271		3705		

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		
Mvmt Sat Flow, veh/h		1525		1525		0		

Left Lane Group Data								
Assigned Mvmt	1	5	0	7	0	0	0	0
Lane Assignment	L (Prot)			L+T				

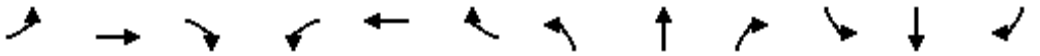
Lanes in Grp	1	0	0	1	0	0	0	0
Grp Vol (v), veh/h	249	0	0	453	0	0	0	0
Grp Sat Flow (s), veh/h/ln	1619	0	0	1727	0	0	0	0
Q Serve Time (g_s), s	17.7	0.0	0.0	27.9	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	17.7	0.0	0.0	27.9	0.0	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	44.9	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	0.84	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	271	0	0	597	0	0	0	0
V/C Ratio (X)	0.92	0.00	0.00	0.76	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	344	0	0	597	0	0	0	0
Upstream Filter (I)	0.66	0.00	0.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	39.1	0.0	0.0	34.8	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	18.6	0.0	0.0	5.6	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	57.8	0.0	0.0	40.4	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	5.9	0.0	0.0	11.6	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	1.4	0.0	0.0	0.9	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00
%ile Back of Q (50%), veh/ln	7.3	0.0	0.0	12.5	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	1.22	0.00	0.00	0.37	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	0
Lane Assignment		T				T		
Lanes in Grp	0	2	0	0	0	2	0	0
Grp Vol (v), veh/h	0	858	0	0	0	759	0	0
Grp Sat Flow (s), veh/h/ln	0	1710	0	0	0	1805	0	0
Q Serve Time (g_s), s	0.0	25.1	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	25.1	0.0	0.0	0.0	0.0	0.0	0.0
Lane Grp Cap (c), veh/h	0	1280	0	0	0	2091	0	0
V/C Ratio (X)	0.00	0.67	0.00	0.00	0.00	0.36	0.00	0.00
Avail Cap (c_a), veh/h	0	1280	0	0	0	2091	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	0.66	0.00	0.00
Uniform Delay (d1), s/veh	0.0	31.4	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	2.8	0.0	0.0	0.0	0.3	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	34.2	0.0	0.0	0.0	0.3	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	10.3	0.0	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.5	0.0	0.0	0.0	0.1	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	10.8	0.0	0.0	0.0	0.1	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.20	0.00	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	0
Lane Assignment		R		T+R				
Lanes in Grp	0	1	0	1	0	0	0	0
Grp Vol (v), veh/h	0	277	0	535	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	1525	0	1525	0	0	0	0
Q Serve Time (g_s), s	0.0	16.7	0.0	41.5	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	16.7	0.0	41.5	0.0	0.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	571	0	528	0	0	0	0
V/C Ratio (X)	0.00	0.49	0.00	1.01	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	571	0	528	0	0	0	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	28.7	0.0	39.3	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	2.9	0.0	42.8	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	31.6	0.0	82.0	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	6.1	0.0	15.3	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.5	0.0	6.3	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	6.5	0.0	21.5	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.12	0.00	0.63	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	1.9	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	36.7
HCM 6th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1003	560	285	567	0	0	0	0	321	7	136
Future Volume (veh/h)	0	1003	560	285	567	0	0	0	0	321	7	136
Number	7	4	14	3	8	18				1	6	16
Initial Q, veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	0	1800	1800	1600	1800	0				1700	1900	1900
Adj Flow Rate, veh/h	0	1056	0	300	597	0				338	7	143
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95				0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0				0	0	0
Opposing Right Turn Influence	No			Yes						Yes		
Cap, veh/h	0	1498		356	2038	0				584	12	530
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00				1.00	1.00	1.00
Prop Arrive On Green	0.00	0.44	0.00	0.24	1.00	0.00				0.33	0.33	0.33
Unsig. Movement Delay												
Ln Grp Delay, s/veh	0.0	28.4	0.0	49.6	0.3	0.0				37.4	0.0	30.9
Ln Grp LOS	A	C		D	A	A				D	A	C
Approach Vol, veh/h		1056			897						488	
Approach Delay, s/veh		28.4			16.8						35.5	
Approach LOS		C			B						D	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	6		3	4				8
Case No	11.0		2.0	7.0				4.0
Phs Duration (G+Y+Rc), s	44.0		19.0	57.0				76.0
Change Period (Y+Rc), s	4.5		4.5	4.5				4.5
Max Green (Gmax), s	39.5		27.0	40.0				71.5
Max Allow Headway (MAH), s	5.0		3.8	5.2				5.2
Max Q Clear (g_c+I1), s	20.9		13.6	32.1				2.0
Green Ext Time (g_e), s	2.5		0.9	4.3				4.8
Prob of Phs Call (p_c)	1.00		1.00	1.00				1.00
Prob of Max Out (p_x)	0.00		0.00	0.00				0.00

Left-Turn Movement Data								
Assigned Mvmt	1		3	7				
Mvmt Sat Flow, veh/h	1775		2956	0				

Through Movement Data								
Assigned Mvmt	6			4				8
Mvmt Sat Flow, veh/h	37			3510				3510

Right-Turn Movement Data								
Assigned Mvmt	16			14				18
Mvmt Sat Flow, veh/h	1610			1525				0

Left Lane Group Data								
Assigned Mvmt	1	0	3	7	0	0	0	0
Lane Assignment	L+T		L (Prot)					

Lanes in Grp	1	0	2	0	0	0	0	0
Grp Vol (v), veh/h	345	0	300	0	0	0	0	0
Grp Sat Flow (s), veh/h/ln	1811	0	1478	0	0	0	0	0
Q Serve Time (g_s), s	18.9	0.0	11.6	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	18.9	0.0	11.6	0.0	0.0	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	52.5	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.98	0.00	1.00	0.00	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	596	0	356	0	0	0	0	0
V/C Ratio (X)	0.58	0.00	0.84	0.00	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	596	0	665	0	0	0	0	0
Upstream Filter (I)	1.00	0.00	0.95	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	33.4	0.0	44.5	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	4.1	0.0	5.2	0.0	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	37.4	0.0	49.6	0.0	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	8.3	0.0	3.8	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.7	0.0	0.3	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	1.00	1.00	0.00	0.00	0.00	0.00
%ile Back of Q (50%), veh/ln	9.0	0.0	4.0	0.0	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.69	0.00	0.25	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	6	0	0	4	0	0	0	8
Lane Assignment				T				T
Lanes in Grp	0	0	0	2	0	0	0	2
Grp Vol (v), veh/h	0	0	0	1056	0	0	0	597
Grp Sat Flow (s), veh/h/ln	0	0	0	1710	0	0	0	1710
Q Serve Time (g_s), s	0.0	0.0	0.0	30.1	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	30.1	0.0	0.0	0.0	0.0
Lane Grp Cap (c), veh/h	0	0	0	1498	0	0	0	2038
V/C Ratio (X)	0.00	0.00	0.00	0.71	0.00	0.00	0.00	0.29
Avail Cap (c_a), veh/h	0	0	0	1498	0	0	0	2038
Upstream Filter (I)	0.00	0.00	0.00	0.34	0.00	0.00	0.00	0.95
Uniform Delay (d1), s/veh	0.0	0.0	0.0	27.4	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.3
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	28.4	0.0	0.0	0.0	0.3
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	12.1	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.1

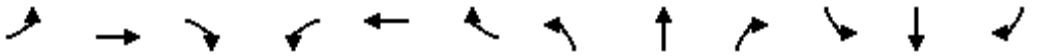
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	1.00	0.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	12.3	0.0	0.0	0.0	0.1
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.12	0.00	0.00	0.00	0.01
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	16	0	0	14	0	0	0	18
Lane Assignment	R			R				
Lanes in Grp	1	0	0	1	0	0	0	0
Grp Vol (v), veh/h	143	0	0	0	0	0	0	0
Grp Sat Flow (s), veh/h/ln	1610	0	0	1525	0	0	0	0
Q Serve Time (g_s), s	7.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	7.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	1.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	530	0	0	668	0	0	0	0
V/C Ratio (X)	0.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	530	0	0	668	0	0	0	0
Upstream Filter (I)	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	29.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	30.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	3.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	1.00	0.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	3.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	25.6
HCM 6th LOS	C

Notes

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	239	1068	0	0	624	259	227	0	498	0	0	0
Future Volume (veh/h)	239	1068	0	0	624	259	227	0	498	0	0	0
Number	7	4	14	3	8	18	5	2	12			
Initial Q, veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1700	1800	0	0	1800	1800	1600	1800	1900			
Adj Flow Rate, veh/h	252	1124	0	0	657	273	239	0	524			
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95			
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0			
Opposing Right Turn Influence	Yes			No			Yes					
Cap, veh/h	274	2488	0	0	2558	794	602	0	636			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Prop Arrive On Green	0.34	1.00	0.00	0.00	0.52	0.52	0.20	0.00	0.20			
Unsig. Movement Delay												
Ln Grp Delay, s/veh	54.4	0.3	0.0	0.0	16.2	18.0	42.4	0.0	48.9			
Ln Grp LOS	D	A	A	A	B	B	D	A	D			
Approach Vol, veh/h		1376			930			763				
Approach Delay, s/veh		10.2			16.7			46.9				
Approach LOS		B			B			D				

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2		4			7	8
Case No		9.0		4.0			2.0	7.0
Phs Duration (G+Y+Rc), s		28.2		91.8			24.8	67.0
Change Period (Y+Rc), s		4.5		4.5			4.5	4.5
Max Green (Gmax), s		39.5		71.5			27.0	40.0
Max Allow Headway (MAH), s		4.0		5.2			3.8	4.9
Max Q Clear (g_c+I1), s		20.7		2.0			19.9	14.5
Green Ext Time (g_e), s		3.0		11.5			0.4	5.9
Prob of Phs Call (p_c)		1.00		1.00			1.00	1.00
Prob of Max Out (p_x)		0.01		0.00			0.11	0.00

Left-Turn Movement Data								
Assigned Mvmt		5					7	3
Mvmt Sat Flow, veh/h		3048					1619	0

Through Movement Data								
Assigned Mvmt		2		4				8
Mvmt Sat Flow, veh/h		0		3510				5076

Right-Turn Movement Data								
Assigned Mvmt		12		14				18
Mvmt Sat Flow, veh/h		3220		0				1525

Left Lane Group Data								
Assigned Mvmt	0	5	0	0	0	0	7	3
Lane Assignment		L					L (Prot)	

Lanes in Grp	0	2	0	0	0	0	1	0
Grp Vol (v), veh/h	0	239	0	0	0	0	252	0
Grp Sat Flow (s), veh/h/ln	0	1524	0	0	0	0	1619	0
Q Serve Time (g_s), s	0.0	8.2	0.0	0.0	0.0	0.0	17.9	0.0
Cycle Q Clear Time (g_c), s	0.0	8.2	0.0	0.0	0.0	0.0	17.9	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	1524	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	62.5
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	0	602	0	0	0	0	274	0
V/C Ratio (X)	0.00	0.40	0.00	0.00	0.00	0.00	0.92	0.00
Avail Cap (c_a), veh/h	0	1003	0	0	0	0	364	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	0.00	0.58	0.00
Uniform Delay (d1), s/veh	0.0	41.9	0.0	0.0	0.0	0.0	38.9	0.0
Incr Delay (d2), s/veh	0.0	0.4	0.0	0.0	0.0	0.0	15.5	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	42.4	0.0	0.0	0.0	0.0	54.4	0.0
1st-Term Q (Q1), veh/ln	0.0	3.1	0.0	0.0	0.0	0.0	5.9	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	0.00	0.00	0.00	1.00	1.00
%ile Back of Q (50%), veh/ln	0.0	3.1	0.0	0.0	0.0	0.0	7.1	0.0
%ile Storage Ratio (RQ%)	0.00	0.15	0.00	0.00	0.00	0.00	0.44	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	0	0	8
Lane Assignment				T				T
Lanes in Grp	0	0	0	2	0	0	0	3
Grp Vol (v), veh/h	0	0	0	1124	0	0	0	657
Grp Sat Flow (s), veh/h/ln	0	0	0	1710	0	0	0	1638
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.9
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.9
Lane Grp Cap (c), veh/h	0	0	0	2488	0	0	0	2558
V/C Ratio (X)	0.00	0.00	0.00	0.45	0.00	0.00	0.00	0.26
Avail Cap (c_a), veh/h	0	0	0	2488	0	0	0	2558
Upstream Filter (I)	0.00	0.00	0.00	0.58	0.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15.9
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.2
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	0.3	0.0	0.0	0.0	16.2
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.3
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.1	0.0	0.0	0.0	3.4
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.04
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	0	0	18
Lane Assignment		R						R
Lanes in Grp	0	2	0	0	0	0	0	1
Grp Vol (v), veh/h	0	524	0	0	0	0	0	273
Grp Sat Flow (s), veh/h/ln	0	1610	0	0	0	0	0	1525
Q Serve Time (g_s), s	0.0	18.7	0.0	0.0	0.0	0.0	0.0	12.5
Cycle Q Clear Time (g_c), s	0.0	18.7	0.0	0.0	0.0	0.0	0.0	12.5
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	0.00	0.00	0.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	636	0	0	0	0	0	794
V/C Ratio (X)	0.00	0.82	0.00	0.00	0.00	0.00	0.00	0.34
Avail Cap (c_a), veh/h	0	1060	0	0	0	0	0	794
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	46.2	0.0	0.0	0.0	0.0	0.0	16.8
Incr Delay (d2), s/veh	0.0	2.8	0.0	0.0	0.0	0.0	0.0	1.2
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	48.9	0.0	0.0	0.0	0.0	0.0	18.0
1st-Term Q (Q1), veh/ln	0.0	7.5	0.0	0.0	0.0	0.0	0.0	4.4
2nd-Term Q (Q2), veh/ln	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.3
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	7.7	0.0	0.0	0.0	0.0	0.0	4.6
%ile Storage Ratio (RQ%)	0.00	0.36	0.00	0.00	0.00	0.00	0.00	0.52
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	21.3
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	163	794	89	133	352	139	31	50	279	169	334	128
Future Volume (veh/h)	163	794	89	133	352	139	31	50	279	169	334	128
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1900
Adj Flow Rate, veh/h	172	836	94	140	371	146	33	53	294	178	352	135
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	198	963	429	163	468	396	45	615	521	204	1069	403
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.12	0.28	0.28	0.20	0.52	0.52	0.03	0.34	0.34	0.13	0.44	0.44
Unsig. Movement Delay												
Ln Grp Delay, s/veh	63.3	45.1	33.1	56.3	29.7	23.3	78.2	27.1	36.6	71.2	23.1	23.3
Ln Grp LOS	E	D	C	E	C	C	E	C	D	E	C	C
Approach Vol, veh/h		1102			657			380			665	
Approach Delay, s/veh		46.9			33.9			38.9			36.1	
Approach LOS		D			C			D			D	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Case No	2.0	3.0	2.0	3.0	2.0	4.0	2.0	3.0
Phs Duration (G+Y+Rc), s	19.6	45.5	16.6	38.3	7.8	57.3	19.2	35.7
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green (Gmax), s	20.5	24.5	18.5	38.5	6.5	38.5	20.5	36.5
Max Allow Headway (MAH), s	3.8	4.2	3.8	5.1	3.8	5.3	3.8	4.9
Max Q Clear (g_c+I1), s	15.0	20.9	12.0	29.9	4.4	13.6	14.5	22.2
Green Ext Time (g_e), s	0.2	0.5	0.2	3.9	0.0	3.1	0.2	2.4
Prob of Phs Call (p_c)	1.00	1.00	0.99	1.00	0.67	1.00	1.00	1.00
Prob of Max Out (p_x)	0.24	0.00	0.08	0.61	1.00	0.00	0.16	0.07

Left-Turn Movement Data								
Assigned Mvmt	1		3		5		7	
Mvmt Sat Flow, veh/h	1619		1619		1619		1619	

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		1800		3420		2429		1800

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1525		1525		916		1525

Left Lane Group Data								
Assigned Mvmt	1	0	3	0	5	0	7	0
Lane Assignment	L (Prot)		L (Prot)		L (Prot)		L (Prot)	

Lanes in Grp	1	0	1	0	1	0	1	0
Grp Vol (v), veh/h	178	0	140	0	33	0	172	0
Grp Sat Flow (s), veh/h/ln	1619	0	1619	0	1619	0	1619	0
Q Serve Time (g_s), s	13.0	0.0	10.0	0.0	2.4	0.0	12.5	0.0
Cycle Q Clear Time (g_c), s	13.0	0.0	10.0	0.0	2.4	0.0	12.5	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	204	0	163	0	45	0	198	0
V/C Ratio (X)	0.87	0.00	0.86	0.00	0.73	0.00	0.87	0.00
Avail Cap (c_a), veh/h	277	0	250	0	88	0	277	0
Upstream Filter (I)	1.00	0.00	0.50	0.00	1.00	0.00	0.57	0.00
Uniform Delay (d1), s/veh	51.5	0.0	47.1	0.0	57.9	0.0	51.7	0.0
Incr Delay (d2), s/veh	19.7	0.0	9.2	0.0	20.3	0.0	11.6	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	71.2	0.0	56.3	0.0	78.2	0.0	63.3	0.0
1st-Term Q (Q1), veh/ln	5.2	0.0	3.7	0.0	1.0	0.0	5.1	0.0
2nd-Term Q (Q2), veh/ln	1.1	0.0	0.4	0.0	0.3	0.0	0.6	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
%ile Back of Q (50%), veh/ln	6.4	0.0	4.1	0.0	1.2	0.0	5.7	0.0
%ile Storage Ratio (RQ%)	1.59	0.00	0.17	0.00	0.14	0.00	0.55	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	1	0	2	0	1	0	1
Grp Vol (v), veh/h	0	53	0	836	0	246	0	371
Grp Sat Flow (s), veh/h/ln	0	1800	0	1710	0	1710	0	1800
Q Serve Time (g_s), s	0.0	2.4	0.0	27.9	0.0	11.3	0.0	20.2
Cycle Q Clear Time (g_c), s	0.0	2.4	0.0	27.9	0.0	11.3	0.0	20.2
Lane Grp Cap (c), veh/h	0	615	0	963	0	752	0	468
V/C Ratio (X)	0.00	0.09	0.00	0.87	0.00	0.33	0.00	0.79
Avail Cap (c_a), veh/h	0	615	0	1097	0	752	0	548
Upstream Filter (I)	0.00	1.00	0.00	0.57	0.00	1.00	0.00	0.50
Uniform Delay (d1), s/veh	0.0	26.8	0.0	41.0	0.0	22.0	0.0	26.2
Incr Delay (d2), s/veh	0.0	0.3	0.0	4.1	0.0	1.2	0.0	3.5
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	27.1	0.0	45.1	0.0	23.1	0.0	29.7
1st-Term Q (Q1), veh/ln	0.0	1.0	0.0	11.7	0.0	4.5	0.0	6.5
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.6	0.0	0.2	0.0	0.5

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	1.1	0.0	12.2	0.0	4.8	0.0	6.9
%ile Storage Ratio (RQ%)	0.00	0.06	0.00	0.16	0.00	0.82	0.00	0.29
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		R		T+R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	294	0	94	0	241	0	146
Grp Sat Flow (s), veh/h/ln	0	1525	0	1525	0	1635	0	1525
Q Serve Time (g_s), s	0.0	18.9	0.0	5.7	0.0	11.6	0.0	6.8
Cycle Q Clear Time (g_c), s	0.0	18.9	0.0	5.7	0.0	11.6	0.0	6.8
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	0.56	0.00	1.00
Lane Grp Cap (c), veh/h	0	521	0	429	0	719	0	396
V/C Ratio (X)	0.00	0.56	0.00	0.22	0.00	0.33	0.00	0.37
Avail Cap (c_a), veh/h	0	521	0	489	0	719	0	464
Upstream Filter (I)	0.00	1.00	0.00	0.57	0.00	1.00	0.00	0.50
Uniform Delay (d1), s/veh	0.0	32.2	0.0	33.0	0.0	22.1	0.0	23.0
Incr Delay (d2), s/veh	0.0	4.4	0.0	0.1	0.0	1.3	0.0	0.3
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	36.6	0.0	33.1	0.0	23.3	0.0	23.3
1st-Term Q (Q1), veh/ln	0.0	6.9	0.0	2.1	0.0	4.5	0.0	2.2
2nd-Term Q (Q2), veh/ln	0.0	0.6	0.0	0.0	0.0	0.3	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	7.6	0.0	2.1	0.0	4.7	0.0	2.2
%ile Storage Ratio (RQ%)	0.00	0.41	0.00	0.03	0.00	0.81	0.00	0.09
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	40.2
HCM 6th LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	472	548	171	37	361	181	84	490	57	266	24	184
Future Volume (veh/h)	472	548	171	37	361	181	84	490	57	266	24	184
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1600	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1900
Adj Flow Rate, veh/h	497	577	180	39	380	191	88	516	60	280	25	194
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	543	690	585	49	414	351	322	850	379	304	84	652
HCM Platoon Ratio	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.24	0.51	0.51	0.03	0.23	0.23	0.25	0.25	0.25	0.19	0.47	0.47
Unsig. Movement Delay												
Ln Grp Delay, s/veh	57.0	31.4	20.3	89.8	68.4	42.1	39.0	43.1	36.2	76.6	0.0	20.4
Ln Grp LOS	E	C	C	F	E	D	D	D	D	E	A	C
Approach Vol, veh/h		1254			610			664			499	
Approach Delay, s/veh		40.0			61.6			42.0			51.9	
Approach LOS		D			E			D			D	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4		6	7	8
Case No	2.0	5.3	2.0	3.0		4.0	2.0	3.0
Phs Duration (G+Y+Rc), s	27.1	34.3	8.1	50.5		61.4	26.5	32.1
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5		4.5	4.5	4.5
Max Green (Gmax), s	24.5	24.5	5.2	47.8		53.5	23.5	29.5
Max Allow Headway (MAH), s	3.8	5.0	3.8	5.0		5.5	3.8	4.8
Max Q Clear (g_c+I1), s	22.4	18.0	4.9	34.9		12.4	21.6	26.7
Green Ext Time (g_e), s	0.2	2.2	0.0	3.7		1.5	0.4	0.8
Prob of Phs Call (p_c)	1.00	1.00	0.73	1.00		1.00	1.00	1.00
Prob of Max Out (p_x)	1.00	0.00	1.00	0.25		0.00	1.00	1.00

Left-Turn Movement Data								
Assigned Mvmt	1	5	3				7	
Mvmt Sat Flow, veh/h	1619	1056	1619				2956	

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		3420		1800		177		1800

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1525		1525		1375		1525

Left Lane Group Data								
Assigned Mvmt	1	5	3	0	0	0	7	0
Lane Assignment	L (Prot)	L	L (Prot)				L (Prot)	

Lanes in Grp	1	1	1	0	0	0	2	0
Grp Vol (v), veh/h	280	88	39	0	0	0	497	0
Grp Sat Flow (s), veh/h/ln	1619	1056	1619	0	0	0	1478	0
Q Serve Time (g_s), s	20.4	8.2	2.9	0.0	0.0	0.0	19.6	0.0
Cycle Q Clear Time (g_c), s	20.4	8.2	2.9	0.0	0.0	0.0	19.6	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	1056	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	29.8	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	29.8	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	8.2	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	1.00	1.00	0.00	0.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	304	322	49	0	0	0	543	0
V/C Ratio (X)	0.92	0.27	0.79	0.00	0.00	0.00	0.92	0.00
Avail Cap (c_a), veh/h	331	322	70	0	0	0	579	0
Upstream Filter (I)	1.00	1.00	1.00	0.00	0.00	0.00	0.60	0.00
Uniform Delay (d1), s/veh	47.8	37.0	57.8	0.0	0.0	0.0	44.4	0.0
Incr Delay (d2), s/veh	28.7	2.1	32.0	0.0	0.0	0.0	12.6	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	76.6	39.0	89.8	0.0	0.0	0.0	57.0	0.0
1st-Term Q (Q1), veh/ln	8.2	2.1	1.2	0.0	0.0	0.0	6.8	0.0
2nd-Term Q (Q2), veh/ln	2.4	0.2	0.4	0.0	0.0	0.0	0.9	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	1.00	1.00	0.00	0.00	0.00	1.00	0.00
%ile Back of Q (50%), veh/ln	10.6	2.3	1.6	0.0	0.0	0.0	7.8	0.0
%ile Storage Ratio (RQ%)	1.29	0.39	0.02	0.00	0.00	0.00	0.65	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

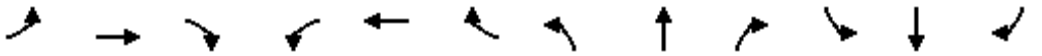
Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T				T
Lanes in Grp	0	2	0	1	0	0	0	1
Grp Vol (v), veh/h	0	516	0	577	0	0	0	380
Grp Sat Flow (s), veh/h/ln	0	1710	0	1800	0	0	0	1800
Q Serve Time (g_s), s	0.0	16.0	0.0	32.9	0.0	0.0	0.0	24.7
Cycle Q Clear Time (g_c), s	0.0	16.0	0.0	32.9	0.0	0.0	0.0	24.7
Lane Grp Cap (c), veh/h	0	850	0	690	0	0	0	414
V/C Ratio (X)	0.00	0.61	0.00	0.84	0.00	0.00	0.00	0.92
Avail Cap (c_a), veh/h	0	850	0	717	0	0	0	443
Upstream Filter (I)	0.00	1.00	0.00	0.60	0.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	39.9	0.0	26.2	0.0	0.0	0.0	45.1
Incr Delay (d2), s/veh	0.0	3.2	0.0	5.2	0.0	0.0	0.0	23.3
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	43.1	0.0	31.4	0.0	0.0	0.0	68.4
1st-Term Q (Q1), veh/ln	0.0	6.7	0.0	12.6	0.0	0.0	0.0	11.0
2nd-Term Q (Q2), veh/ln	0.0	0.4	0.0	1.0	0.0	0.0	0.0	2.7

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	7.1	0.0	13.6	0.0	0.0	0.0	13.7
%ile Storage Ratio (RQ%)	0.00	0.63	0.00	0.56	0.00	0.00	0.00	0.16
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		R		T+R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	60	0	180	0	219	0	191
Grp Sat Flow (s), veh/h/ln	0	1525	0	1525	0	1552	0	1525
Q Serve Time (g_s), s	0.0	3.7	0.0	8.2	0.0	10.4	0.0	13.2
Cycle Q Clear Time (g_c), s	0.0	3.7	0.0	8.2	0.0	10.4	0.0	13.2
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	0.89	0.00	1.00
Lane Grp Cap (c), veh/h	0	379	0	585	0	736	0	351
V/C Ratio (X)	0.00	0.16	0.00	0.31	0.00	0.30	0.00	0.54
Avail Cap (c_a), veh/h	0	379	0	608	0	736	0	375
Upstream Filter (I)	0.00	1.00	0.00	0.60	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	35.3	0.0	20.2	0.0	19.3	0.0	40.7
Incr Delay (d2), s/veh	0.0	0.9	0.0	0.2	0.0	1.0	0.0	1.4
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	36.2	0.0	20.3	0.0	20.4	0.0	42.1
1st-Term Q (Q1), veh/ln	0.0	1.4	0.0	2.8	0.0	3.7	0.0	5.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	0.2	0.0	0.1
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	1.5	0.0	2.8	0.0	3.9	0.0	5.1
%ile Storage Ratio (RQ%)	0.00	0.53	0.00	0.12	0.00	0.48	0.00	0.06
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	46.7
HCM 6th LOS	D

EXISTING PLUS AMBIENT GROWTH PLUS PROJECT WITH IMPROVEMENTS CONDITION



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	233	3	133	600	565	0	0	558	711
Future Volume (veh/h)	0	0	0	233	3	133	600	565	0	0	558	711
Number				3	8	18	5	2	12	1	6	16
Initial Q, veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln				1700	1800	1800	1600	1800	0	0	1800	1900
Adj Flow Rate, veh/h				245	3	140	632	595	0	0	587	748
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence				Yes			Yes			No		
Cap, veh/h				297	4	267	713	2517	0	0	2212	725
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green				0.18	0.18	0.18	0.24	0.74	0.00	0.00	0.45	0.45
Unsig. Movement Delay												
Ln Grp Delay, s/veh				48.1	0.0	35.3	42.4	4.0	0.0	0.0	15.7	66.7
Ln Grp LOS				D	A	D	D	A	A	A	B	F
Approach Vol, veh/h					388			1227			1335	
Approach Delay, s/veh					43.5			23.8			44.3	
Approach LOS					D			C			D	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2	8		5	6		
Case No		4.0	11.0		2.0	7.0		
Phs Duration (G+Y+Rc), s		70.2	19.8		25.7	44.5		
Change Period (Y+Rc), s		4.5	4.5		4.5	4.5		
Max Green (Gmax), s		62.5	18.5		22.9	35.1		
Max Allow Headway (MAH), s		5.2	4.9		3.8	4.5		
Max Q Clear (g_c+I1), s		7.0	14.5		20.6	42.5		
Green Ext Time (g_e), s		4.7	0.7		0.7	0.0		
Prob of Phs Call (p_c)		1.00	1.00		1.00	1.00		
Prob of Max Out (p_x)		0.00	1.00		1.00	0.00		
Left-Turn Movement Data								
Assigned Mvmt			3		5	1		
Mvmt Sat Flow, veh/h			1695		2956	0		
Through Movement Data								
Assigned Mvmt		2	8			6		
Mvmt Sat Flow, veh/h		3510	21			5076		
Right-Turn Movement Data								
Assigned Mvmt		12	18			16		
Mvmt Sat Flow, veh/h		0	1525			1610		
Left Lane Group Data								
Assigned Mvmt	0	0	3	0	5	1	0	0
Lane Assignment			L+T		L (Prot)			

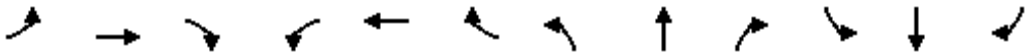
Lanes in Grp	0	0	1	0	2	0	0	0
Grp Vol (v), veh/h	0	0	248	0	632	0	0	0
Grp Sat Flow (s), veh/h/ln	0	0	1715	0	1478	0	0	0
Q Serve Time (g_s), s	0.0	0.0	12.5	0.0	18.6	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	12.5	0.0	18.6	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	40.5	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	0.00	0.99	0.00	1.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	301	0	713	0	0	0
V/C Ratio (X)	0.00	0.00	0.83	0.00	0.89	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	0	362	0	769	0	0	0
Upstream Filter (I)	0.00	0.00	1.00	0.00	0.79	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	35.8	0.0	32.9	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	12.4	0.0	9.4	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	48.1	0.0	42.4	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	5.1	0.0	6.5	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	1.0	0.0	0.9	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	0.00	1.00	0.00	1.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	6.2	0.0	7.4	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.13	0.00	0.69	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	8	0	0	6	0	0
Lane Assignment		T				T		
Lanes in Grp	0	2	0	0	0	3	0	0
Grp Vol (v), veh/h	0	595	0	0	0	587	0	0
Grp Sat Flow (s), veh/h/ln	0	1710	0	0	0	1638	0	0
Q Serve Time (g_s), s	0.0	5.0	0.0	0.0	0.0	6.7	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	5.0	0.0	0.0	0.0	6.7	0.0	0.0
Lane Grp Cap (c), veh/h	0	2517	0	0	0	2212	0	0
V/C Ratio (X)	0.00	0.24	0.00	0.00	0.00	0.27	0.00	0.00
Avail Cap (c_a), veh/h	0	2517	0	0	0	2212	0	0
Upstream Filter (I)	0.00	0.79	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	3.8	0.0	0.0	0.0	15.5	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.2	0.0	0.0	0.0	0.3	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	4.0	0.0	0.0	0.0	15.7	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	1.3	0.0	0.0	0.0	2.4	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	1.4	0.0	0.0	0.0	2.5	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.13	0.00	0.00	0.00	0.05	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	18	0	0	16	0	0
Lane Assignment			R			R		
Lanes in Grp	0	0	1	0	0	1	0	0
Grp Vol (v), veh/h	0	0	140	0	0	748	0	0
Grp Sat Flow (s), veh/h/ln	0	0	1525	0	0	1610	0	0
Q Serve Time (g_s), s	0.0	0.0	7.5	0.0	0.0	40.5	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	7.5	0.0	0.0	40.5	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	267	0	0	725	0	0
V/C Ratio (X)	0.00	0.00	0.52	0.00	0.00	1.03	0.00	0.00
Avail Cap (c_a), veh/h	0	0	322	0	0	725	0	0
Upstream Filter (I)	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	33.7	0.0	0.0	24.7	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	1.6	0.0	0.0	41.9	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	35.3	0.0	0.0	66.7	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	2.7	0.0	0.0	14.3	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.1	0.0	0.0	8.4	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	2.9	0.0	0.0	22.8	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.06	0.00	0.00	0.49	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	5.8	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	35.6
HCM 6th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	556	4	498	0	0	0	0	679	300	77	506	0
Future Volume (veh/h)	556	4	498	0	0	0	0	679	300	77	506	0
Number	7	4	14				5	2	12	1	6	16
Initial Q, veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1700	1800	1900				0	1800	1800	1700	1800	0
Adj Flow Rate, veh/h	585	4	524				0	715	316	81	533	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0				0	0	0	0	0	0
Opposing Right Turn Influence	Yes						No			Yes		
Cap, veh/h	661	5	618				0	2097	651	106	1796	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	2.00	2.00	2.00	2.00	1.00
Prop Arrive On Green	0.41	0.41	0.40				0.00	0.85	0.85	0.13	1.00	0.00
Unsig. Movement Delay												
Ln Grp Delay, s/veh	41.3	0.0	38.5				0.0	5.8	8.1	61.9	0.4	0.0
Ln Grp LOS	D	A	D				A	A	A	E	A	A
Approach Vol, veh/h		1113						1031			614	
Approach Delay, s/veh		40.0						6.5			8.5	
Approach LOS		D						A			A	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Case No	2.0	7.0		10.0		4.0		
Phs Duration (G+Y+Rc), s	11.8	55.2		53.0		67.0		
Change Period (Y+Rc), s	4.5	4.5		4.5		4.5		
Max Green (Gmax), s	13.5	27.5		65.5		45.5		
Max Allow Headway (MAH), s	3.7	4.6		4.6		4.9		
Max Q Clear (g_c+I1), s	7.8	8.2		42.2		2.0		
Green Ext Time (g_e), s	0.1	5.5		6.3		3.5		
Prob of Phs Call (p_c)	0.93	1.00		1.00		1.00		
Prob of Max Out (p_x)	0.09	0.00		0.10		0.00		

Left-Turn Movement Data								
Assigned Mvmt	1	5		7				
Mvmt Sat Flow, veh/h	1619	0		1619				

Through Movement Data								
Assigned Mvmt		2		4		6		
Mvmt Sat Flow, veh/h		5076		12		3510		

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		
Mvmt Sat Flow, veh/h		1525		1516		0		

Left Lane Group Data								
Assigned Mvmt	1	5	0	7	0	0	0	0
Lane Assignment	L (Prot)			L				

Lanes in Grp	1	0	0	1	0	0	0	0
Grp Vol (v), veh/h	81	0	0	585	0	0	0	0
Grp Sat Flow (s), veh/h/ln	1619	0	0	1619	0	0	0	0
Q Serve Time (g_s), s	5.8	0.0	0.0	40.2	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	5.8	0.0	0.0	40.2	0.0	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	1619	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	51.2	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	106	0	0	661	0	0	0	0
V/C Ratio (X)	0.77	0.00	0.00	0.89	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	189	0	0	890	0	0	0	0
Upstream Filter (I)	0.97	0.00	0.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	51.3	0.0	0.0	32.9	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	10.6	0.0	0.0	8.4	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	61.9	0.0	0.0	41.3	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	2.2	0.0	0.0	15.4	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.3	0.0	0.0	1.5	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00
%ile Back of Q (50%), veh/ln	2.5	0.0	0.0	17.0	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.23	0.00	0.00	0.29	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	0
Lane Assignment		T				T		
Lanes in Grp	0	3	0	0	0	2	0	0
Grp Vol (v), veh/h	0	715	0	0	0	533	0	0
Grp Sat Flow (s), veh/h/ln	0	1638	0	0	0	1710	0	0
Q Serve Time (g_s), s	0.0	3.6	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	3.6	0.0	0.0	0.0	0.0	0.0	0.0
Lane Grp Cap (c), veh/h	0	2097	0	0	0	1796	0	0
V/C Ratio (X)	0.00	0.34	0.00	0.00	0.00	0.30	0.00	0.00
Avail Cap (c_a), veh/h	0	2097	0	0	0	1796	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	0.97	0.00	0.00
Uniform Delay (d1), s/veh	0.0	5.3	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.4	0.0	0.0	0.0	0.4	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	5.8	0.0	0.0	0.0	0.4	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	1.1	0.0	0.0	0.0	0.1	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.03	0.00	0.00	0.00	0.01	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	0
Lane Assignment		R		T+R				
Lanes in Grp	0	1	0	1	0	0	0	0
Grp Vol (v), veh/h	0	316	0	528	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	1525	0	1527	0	0	0	0
Q Serve Time (g_s), s	0.0	6.2	0.0	37.6	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	6.2	0.0	37.6	0.0	0.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	0.99	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	651	0	623	0	0	0	0
V/C Ratio (X)	0.00	0.49	0.00	0.85	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	651	0	840	0	0	0	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	5.5	0.0	32.4	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	2.6	0.0	6.1	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	8.1	0.0	38.5	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	1.3	0.0	13.7	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.5	0.0	1.1	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	1.8	0.0	14.7	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.06	0.00	0.25	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	20.4
HCM 6th LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	237	48	401	674	118	52	181	222	179	459	54
Future Volume (veh/h)	20	237	48	401	674	118	52	181	222	179	459	54
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1900	1900
Adj Flow Rate, veh/h	21	249	51	422	709	124	55	191	234	188	483	57
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	46	355	71	450	1090	191	77	997	851	207	1210	142
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.03	0.13	0.12	0.28	0.37	0.37	0.05	0.29	0.29	0.13	0.37	0.37
Unsig. Movement Delay												
Ln Grp Delay, s/veh	50.1	41.7	42.3	56.3	24.7	24.8	53.9	24.3	11.2	77.1	22.6	22.7
Ln Grp LOS	D	D	D	E	C	C	D	C	B	E	C	C
Approach Vol, veh/h		321			1255			480			728	
Approach Delay, s/veh		42.5			35.4			21.3			36.7	
Approach LOS		D			D			C			D	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Case No	2.0	3.0	2.0	4.0	2.0	4.0	2.0	4.0
Phs Duration (G+Y+Rc), s	15.5	30.2	29.0	15.3	8.3	37.5	6.5	37.7
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green (Gmax), s	11.0	18.5	24.5	18.0	7.1	22.4	5.2	37.3
Max Allow Headway (MAH), s	3.8	4.6	3.8	5.3	3.8	5.3	3.8	5.3
Max Q Clear (g_c+I1), s	12.3	9.2	24.9	9.7	5.0	11.9	3.1	20.2
Green Ext Time (g_e), s	0.0	1.4	0.0	1.0	0.0	2.4	0.0	5.1
Prob of Phs Call (p_c)	0.99	1.00	1.00	1.00	0.75	1.00	0.41	1.00
Prob of Max Out (p_x)	1.00	0.00	1.00	0.32	1.00	0.00	1.00	0.19

Left-Turn Movement Data								
Assigned Mvmt	1		3		5		7	
Mvmt Sat Flow, veh/h	1619		1619		1619		1619	

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		3420		2836		3254		2910

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1525		571		382		509

Left Lane Group Data								
Assigned Mvmt	1	0	3	0	5	0	7	0
Lane Assignment	L (Prot)		L (Prot)		L (Prot)		L (Prot)	

Lanes in Grp	1	0	1	0	1	0	1	0
Grp Vol (v), veh/h	188	0	422	0	55	0	21	0
Grp Sat Flow (s), veh/h/ln	1619	0	1619	0	1619	0	1619	0
Q Serve Time (g_s), s	10.3	0.0	22.9	0.0	3.0	0.0	1.1	0.0
Cycle Q Clear Time (g_c), s	10.3	0.0	22.9	0.0	3.0	0.0	1.1	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	207	0	450	0	77	0	46	0
V/C Ratio (X)	0.91	0.00	0.94	0.00	0.72	0.00	0.46	0.00
Avail Cap (c_a), veh/h	207	0	450	0	137	0	103	0
Upstream Filter (I)	1.00	0.00	0.84	0.00	0.98	0.00	1.00	0.00
Uniform Delay (d1), s/veh	38.7	0.0	31.7	0.0	42.3	0.0	43.1	0.0
Incr Delay (d2), s/veh	38.4	0.0	24.5	0.0	11.6	0.0	7.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	77.1	0.0	56.3	0.0	53.9	0.0	50.1	0.0
1st-Term Q (Q1), veh/ln	4.0	0.0	8.7	0.0	1.2	0.0	0.5	0.0
2nd-Term Q (Q2), veh/ln	2.2	0.0	3.1	0.0	0.2	0.0	0.1	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
%ile Back of Q (50%), veh/ln	6.2	0.0	11.7	0.0	1.4	0.0	0.5	0.0
%ile Storage Ratio (RQ%)	0.10	0.00	0.11	0.00	0.07	0.00	0.01	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	2	0	1	0	1	0	1
Grp Vol (v), veh/h	0	191	0	148	0	267	0	416
Grp Sat Flow (s), veh/h/ln	0	1710	0	1710	0	1805	0	1710
Q Serve Time (g_s), s	0.0	3.8	0.0	7.5	0.0	9.8	0.0	18.1
Cycle Q Clear Time (g_c), s	0.0	3.8	0.0	7.5	0.0	9.8	0.0	18.1
Lane Grp Cap (c), veh/h	0	997	0	214	0	671	0	641
V/C Ratio (X)	0.00	0.19	0.00	0.69	0.00	0.40	0.00	0.65
Avail Cap (c_a), veh/h	0	997	0	352	0	671	0	718
Upstream Filter (I)	0.00	0.98	0.00	1.00	0.00	1.00	0.00	0.84
Uniform Delay (d1), s/veh	0.0	23.9	0.0	37.7	0.0	20.8	0.0	23.3
Incr Delay (d2), s/veh	0.0	0.4	0.0	4.0	0.0	1.8	0.0	1.5
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	24.3	0.0	41.7	0.0	22.6	0.0	24.7
1st-Term Q (Q1), veh/ln	0.0	1.5	0.0	3.1	0.0	4.0	0.0	7.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.2	0.0	0.3	0.0	0.3

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	1.6	0.0	3.3	0.0	4.3	0.0	7.3
%ile Storage Ratio (RQ%)	0.00	0.08	0.00	0.04	0.00	0.07	0.00	0.07
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		T+R		T+R		T+R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	234	0	152	0	273	0	417
Grp Sat Flow (s), veh/h/ln	0	1525	0	1697	0	1831	0	1708
Q Serve Time (g_s), s	0.0	7.2	0.0	7.7	0.0	9.9	0.0	18.2
Cycle Q Clear Time (g_c), s	0.0	7.2	0.0	7.7	0.0	9.9	0.0	18.2
Prot RT Sat Flow (s_R), veh/h/ln	0.0	1525.4	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	24.5	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	0.34	0.00	0.21	0.00	0.30
Lane Grp Cap (c), veh/h	0	851	0	212	0	681	0	640
V/C Ratio (X)	0.00	0.27	0.00	0.71	0.00	0.40	0.00	0.65
Avail Cap (c_a), veh/h	0	851	0	349	0	681	0	718
Upstream Filter (I)	0.00	0.98	0.00	1.00	0.00	1.00	0.00	0.84
Uniform Delay (d1), s/veh	0.0	10.4	0.0	37.9	0.0	20.9	0.0	23.3
Incr Delay (d2), s/veh	0.0	0.8	0.0	4.4	0.0	1.8	0.0	1.5
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	11.2	0.0	42.3	0.0	22.7	0.0	24.8
1st-Term Q (Q1), veh/ln	0.0	2.3	0.0	3.2	0.0	4.1	0.0	7.0
2nd-Term Q (Q2), veh/ln	0.0	0.2	0.0	0.3	0.0	0.3	0.0	0.3
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	2.4	0.0	3.4	0.0	4.5	0.0	7.3
%ile Storage Ratio (RQ%)	0.00	0.12	0.00	0.05	0.00	0.07	0.00	0.07
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	34.1
HCM 6th LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	75	74	43	204	292	47	76	364	119	44	455	139
Future Volume (veh/h)	75	74	43	204	292	47	76	364	119	44	455	139
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1900	1900
Adj Flow Rate, veh/h	79	78	45	215	307	49	80	383	125	46	479	146
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	105	135	72	250	451	71	105	2085	924	64	2322	685
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Prop Arrive On Green	0.06	0.06	0.06	0.15	0.15	0.15	0.13	1.00	1.00	0.04	0.58	0.58
Unsig. Movement Delay												
Ln Grp Delay, s/veh	65.4	59.3	61.2	57.8	51.1	51.4	61.4	0.2	0.3	68.7	12.0	12.3
Ln Grp LOS	E	E	E	E	D	D	E	A	A	E	B	B
Approach Vol, veh/h		202			571			588			671	
Approach Delay, s/veh		62.2			53.7			8.5			16.0	
Approach LOS		E			D			A			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Case No	2.0	3.0	2.0	4.0	2.0	4.0	2.0	4.0
Phs Duration (G+Y+Rc), s	8.7	77.2	22.6	11.5	11.8	74.1	11.8	22.3
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green (Gmax), s	12.5	34.5	34.5	20.5	17.5	29.5	17.5	37.5
Max Allow Headway (MAH), s	3.8	4.9	3.8	5.4	3.8	5.3	3.8	5.3
Max Q Clear (g_c+I1), s	5.4	2.0	17.5	6.6	7.7	9.1	7.8	13.9
Green Ext Time (g_e), s	0.0	3.1	0.5	0.5	0.1	4.1	0.1	2.1
Prob of Phs Call (p_c)	0.78	1.00	1.00	1.00	0.93	1.00	0.93	1.00
Prob of Max Out (p_x)	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Left-Turn Movement Data								
Assigned Mvmt	1		3		5		7	
Mvmt Sat Flow, veh/h	1619		1619		1619		1619	

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		3420		2149		3974		2959

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1525		1153		1173		467

Left Lane Group Data								
Assigned Mvmt	1	0	3	0	5	0	7	0
Lane Assignment	L (Prot)		L (Prot)		L (Prot)		L (Prot)	

Lanes in Grp	1	0	1	0	1	0	1	0
Grp Vol (v), veh/h	46	0	215	0	80	0	79	0
Grp Sat Flow (s), veh/h/ln	1619	0	1619	0	1619	0	1619	0
Q Serve Time (g_s), s	3.4	0.0	15.5	0.0	5.7	0.0	5.8	0.0
Cycle Q Clear Time (g_c), s	3.4	0.0	15.5	0.0	5.7	0.0	5.8	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	64	0	250	0	105	0	105	0
V/C Ratio (X)	0.72	0.00	0.86	0.00	0.76	0.00	0.75	0.00
Avail Cap (c_a), veh/h	175	0	472	0	243	0	243	0
Upstream Filter (I)	0.82	0.00	1.00	0.00	0.93	0.00	1.00	0.00
Uniform Delay (d1), s/veh	57.0	0.0	49.4	0.0	51.3	0.0	55.2	0.0
Incr Delay (d2), s/veh	11.7	0.0	8.3	0.0	10.1	0.0	10.2	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	68.7	0.0	57.8	0.0	61.4	0.0	65.4	0.0
1st-Term Q (Q1), veh/ln	1.4	0.0	6.3	0.0	2.2	0.0	2.4	0.0
2nd-Term Q (Q2), veh/ln	0.2	0.0	0.6	0.0	0.3	0.0	0.3	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
%ile Back of Q (50%), veh/ln	1.6	0.0	6.9	0.0	2.5	0.0	2.6	0.0
%ile Storage Ratio (RQ%)	0.22	0.00	0.05	0.00	0.31	0.00	0.30	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	2	0	1	0	2	0	1
Grp Vol (v), veh/h	0	383	0	61	0	415	0	176
Grp Sat Flow (s), veh/h/ln	0	1710	0	1710	0	1729	0	1710
Q Serve Time (g_s), s	0.0	0.0	0.0	4.2	0.0	6.8	0.0	11.7
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	4.2	0.0	6.8	0.0	11.7
Lane Grp Cap (c), veh/h	0	2085	0	107	0	2021	0	261
V/C Ratio (X)	0.00	0.18	0.00	0.57	0.00	0.21	0.00	0.67
Avail Cap (c_a), veh/h	0	2085	0	299	0	2021	0	542
Upstream Filter (I)	0.00	0.93	0.00	1.00	0.00	0.82	0.00	1.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	54.6	0.0	11.8	0.0	48.0
Incr Delay (d2), s/veh	0.0	0.2	0.0	4.6	0.0	0.2	0.0	3.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.2	0.0	59.3	0.0	12.0	0.0	51.1
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	1.8	0.0	2.6	0.0	5.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.1	0.0	0.1	0.0	0.2

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.1	0.0	1.9	0.0	2.6	0.0	5.2
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.01	0.00	0.03	0.00	0.03
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		T+R		T+R		T+R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	125	0	62	0	210	0	180
Grp Sat Flow (s), veh/h/ln	0	1525	0	1592	0	1689	0	1716
Q Serve Time (g_s), s	0.0	0.0	0.0	4.6	0.0	7.1	0.0	11.9
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	4.6	0.0	7.1	0.0	11.9
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	0.72	0.00	0.69	0.00	0.27
Lane Grp Cap (c), veh/h	0	924	0	100	0	987	0	262
V/C Ratio (X)	0.00	0.14	0.00	0.62	0.00	0.21	0.00	0.69
Avail Cap (c_a), veh/h	0	924	0	279	0	987	0	543
Upstream Filter (I)	0.00	0.93	0.00	1.00	0.00	0.82	0.00	1.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	55.0	0.0	11.9	0.0	48.2
Incr Delay (d2), s/veh	0.0	0.3	0.0	6.1	0.0	0.4	0.0	3.2
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.3	0.0	61.2	0.0	12.3	0.0	51.4
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	1.8	0.0	2.7	0.0	5.1
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.2	0.0	0.1	0.0	0.2
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.1	0.0	2.0	0.0	2.8	0.0	5.3
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.01	0.00	0.03	0.00	0.04
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	29.0
HCM 6th LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	357	10	390	473	720	0	0	187	375
Future Volume (veh/h)	0	0	0	357	10	390	473	720	0	0	187	375
Number				3	8	18	5	2	12	1	6	16
Initial Q, veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln				1700	1800	1800	1600	1800	0	0	1800	1900
Adj Flow Rate, veh/h				376	11	411	498	758	0	0	197	395
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence				Yes			Yes			No		
Cap, veh/h				494	14	452	517	1894	0	0	1493	489
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green				0.30	0.30	0.30	0.17	0.55	0.00	0.00	0.30	0.30
Unsig. Movement Delay												
Ln Grp Delay, s/veh				25.7	0.0	42.2	50.9	8.2	0.0	0.0	15.3	32.6
Ln Grp LOS				C	A	D	D	A	A	A	B	C
Approach Vol, veh/h					798			1256			592	
Approach Delay, s/veh					34.2			25.1			26.9	
Approach LOS					C			C			C	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2	8		5	6		
Case No		4.0	11.0		2.0	7.0		
Phs Duration (G+Y+Rc), s		37.7	22.3		15.0	22.7		
Change Period (Y+Rc), s		4.5	4.5		4.5	4.5		
Max Green (Gmax), s		33.0	18.0		10.5	18.0		
Max Allow Headway (MAH), s		5.2	4.7		3.8	4.4		
Max Q Clear (g_c+I1), s		9.6	17.6		12.0	15.6		
Green Ext Time (g_e), s		5.6	0.2		0.0	0.7		
Prob of Phs Call (p_c)		1.00	1.00		1.00	1.00		
Prob of Max Out (p_x)		0.00	1.00		1.00	0.00		
Left-Turn Movement Data								
Assigned Mvmt			3		5	1		
Mvmt Sat Flow, veh/h			1668		2956	0		
Through Movement Data								
Assigned Mvmt		2	8			6		
Mvmt Sat Flow, veh/h		3510	49			5076		
Right-Turn Movement Data								
Assigned Mvmt		12	18			16		
Mvmt Sat Flow, veh/h		0	1525			1610		
Left Lane Group Data								
Assigned Mvmt	0	0	3	0	5	1	0	0
Lane Assignment			L+T		L (Prot)			

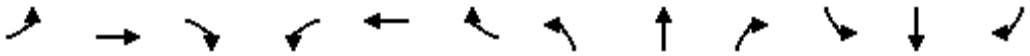
Lanes in Grp	0	0	1	0	2	0	0	0
Grp Vol (v), veh/h	0	0	387	0	498	0	0	0
Grp Sat Flow (s), veh/h/ln	0	0	1717	0	1478	0	0	0
Q Serve Time (g_s), s	0.0	0.0	12.3	0.0	10.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	12.3	0.0	10.0	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	18.2	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	0.00	0.97	0.00	1.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	509	0	517	0	0	0
V/C Ratio (X)	0.00	0.00	0.76	0.00	0.96	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	0	515	0	517	0	0	0
Upstream Filter (I)	0.00	0.00	1.00	0.00	0.80	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	19.2	0.0	24.6	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	6.5	0.0	26.3	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	25.7	0.0	50.9	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	4.4	0.0	3.3	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.9	0.0	1.9	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	0.00	1.00	0.00	1.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	5.3	0.0	5.1	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.11	0.00	0.48	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	8	0	0	6	0	0
Lane Assignment		T				T		
Lanes in Grp	0	2	0	0	0	3	0	0
Grp Vol (v), veh/h	0	758	0	0	0	197	0	0
Grp Sat Flow (s), veh/h/ln	0	1710	0	0	0	1638	0	0
Q Serve Time (g_s), s	0.0	7.6	0.0	0.0	0.0	1.7	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	7.6	0.0	0.0	0.0	1.7	0.0	0.0
Lane Grp Cap (c), veh/h	0	1894	0	0	0	1493	0	0
V/C Ratio (X)	0.00	0.40	0.00	0.00	0.00	0.13	0.00	0.00
Avail Cap (c_a), veh/h	0	1894	0	0	0	1493	0	0
Upstream Filter (I)	0.00	0.80	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	7.7	0.0	0.0	0.0	15.1	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.5	0.0	0.0	0.0	0.2	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	8.2	0.0	0.0	0.0	15.3	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	2.2	0.0	0.0	0.0	0.6	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	2.3	0.0	0.0	0.0	0.6	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.22	0.00	0.00	0.00	0.01	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	18	0	0	16	0	0
Lane Assignment			R			R		
Lanes in Grp	0	0	1	0	0	1	0	0
Grp Vol (v), veh/h	0	0	411	0	0	395	0	0
Grp Sat Flow (s), veh/h/ln	0	0	1525	0	0	1610	0	0
Q Serve Time (g_s), s	0.0	0.0	15.6	0.0	0.0	13.6	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	15.6	0.0	0.0	13.6	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	452	0	0	489	0	0
V/C Ratio (X)	0.00	0.00	0.91	0.00	0.00	0.81	0.00	0.00
Avail Cap (c_a), veh/h	0	0	458	0	0	489	0	0
Upstream Filter (I)	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	20.3	0.0	0.0	19.3	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	21.9	0.0	0.0	13.4	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	42.2	0.0	0.0	32.6	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	5.0	0.0	0.0	4.6	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	2.7	0.0	0.0	1.8	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	7.7	0.0	0.0	6.4	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.16	0.00	0.00	0.14	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	28.2
HCM 6th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	355	4	376	0	0	0	0	855	454	270	526	0
Future Volume (veh/h)	355	4	376	0	0	0	0	855	454	270	526	0
Number	7	4	14				5	2	12	1	6	16
Initial Q, veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1700	1800	1800				0	1800	1800	1700	1900	0
Adj Flow Rate, veh/h	374	4	396				0	900	478	284	554	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0				0	0	0	0	0	0
Opposing Right Turn Influence	Yes						No			Yes		
Cap, veh/h	465	4	434				0	2018	626	307	2302	0
HCM Platoon Ratio	1.33	1.33	1.33				1.00	2.00	2.00	2.00	1.66	1.00
Prop Arrive On Green	0.38	0.38	0.38				0.00	0.82	0.82	0.38	1.00	0.00
Unsig. Movement Delay												
Ln Grp Delay, s/veh	41.5	0.0	54.3				0.0	7.6	16.5	56.7	0.2	0.0
Ln Grp LOS	D	A	D				A	A	B	E	A	A
Approach Vol, veh/h		774						1378			838	
Approach Delay, s/veh		48.1						10.7			19.4	
Approach LOS		D						B			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Case No	2.0	7.0		10.0		4.0		
Phs Duration (G+Y+Rc), s	27.2	53.8		39.0		81.0		
Change Period (Y+Rc), s	4.5	4.5		4.5		4.5		
Max Green (Gmax), s	32.5	33.5		40.5		70.5		
Max Allow Headway (MAH), s	3.8	4.8		4.7		5.2		
Max Q Clear (g_c+I1), s	22.1	20.0		31.8		2.0		
Green Ext Time (g_e), s	0.6	6.8		2.7		4.4		
Prob of Phs Call (p_c)	1.00	1.00		1.00		1.00		
Prob of Max Out (p_x)	0.01	0.00		0.45		0.00		

Left-Turn Movement Data								
Assigned Mvmt	1	5		7				
Mvmt Sat Flow, veh/h	1619	0		1619				

Through Movement Data								
Assigned Mvmt		2		4		6		
Mvmt Sat Flow, veh/h		5076		15		3705		

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		
Mvmt Sat Flow, veh/h		1525		1512		0		

Left Lane Group Data								
Assigned Mvmt	1	5	0	7	0	0	0	0
Lane Assignment	L (Prot)			L				

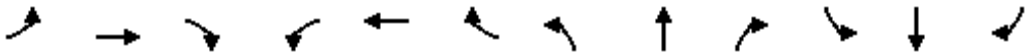
Lanes in Grp	1	0	0	1	0	0	0	0
Grp Vol (v), veh/h	284	0	0	374	0	0	0	0
Grp Sat Flow (s), veh/h/ln	1619	0	0	1619	0	0	0	0
Q Serve Time (g_s), s	20.1	0.0	0.0	24.7	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	20.1	0.0	0.0	24.7	0.0	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	1619	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	49.3	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	307	0	0	465	0	0	0	0
V/C Ratio (X)	0.93	0.00	0.00	0.80	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	438	0	0	546	0	0	0	0
Upstream Filter (I)	1.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	36.4	0.0	0.0	34.1	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	20.3	0.0	0.0	7.4	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	56.7	0.0	0.0	41.5	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	6.5	0.0	0.0	9.1	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	1.7	0.0	0.0	1.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00
%ile Back of Q (50%), veh/ln	8.3	0.0	0.0	10.0	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.78	0.00	0.00	0.17	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	0
Lane Assignment		T				T		
Lanes in Grp	0	3	0	0	0	2	0	0
Grp Vol (v), veh/h	0	900	0	0	0	554	0	0
Grp Sat Flow (s), veh/h/ln	0	1638	0	0	0	1805	0	0
Q Serve Time (g_s), s	0.0	6.2	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	6.2	0.0	0.0	0.0	0.0	0.0	0.0
Lane Grp Cap (c), veh/h	0	2018	0	0	0	2302	0	0
V/C Ratio (X)	0.00	0.45	0.00	0.00	0.00	0.24	0.00	0.00
Avail Cap (c_a), veh/h	0	2018	0	0	0	2302	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	6.9	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.7	0.0	0.0	0.0	0.2	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	7.6	0.0	0.0	0.0	0.2	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	1.6	0.0	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	1.7	0.0	0.0	0.0	0.1	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.06	0.00	0.00	0.00	0.01	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	0
Lane Assignment		R		T+R				
Lanes in Grp	0	1	0	1	0	0	0	0
Grp Vol (v), veh/h	0	478	0	400	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	1525	0	1528	0	0	0	0
Q Serve Time (g_s), s	0.0	18.0	0.0	29.8	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	18.0	0.0	29.8	0.0	0.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	0.99	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	626	0	439	0	0	0	0
V/C Ratio (X)	0.00	0.76	0.00	0.91	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	626	0	516	0	0	0	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	7.9	0.0	35.6	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	8.6	0.0	18.6	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	16.5	0.0	54.3	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	2.7	0.0	10.3	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	1.5	0.0	2.3	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	4.2	0.0	12.6	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.13	0.00	0.21	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	22.8
HCM 6th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	60	708	53	187	251	139	106	584	525	210	306	26
Future Volume (veh/h)	60	708	53	187	251	139	106	584	525	210	306	26
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1900
Adj Flow Rate, veh/h	63	745	56	197	264	146	112	615	553	221	322	27
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	79	774	58	212	692	371	139	844	576	231	970	81
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.05	0.24	0.24	0.13	0.32	0.32	0.09	0.25	0.25	0.14	0.30	0.30
Unsig. Movement Delay												
Ln Grp Delay, s/veh	51.8	62.8	62.5	74.4	20.0	20.2	50.2	30.5	48.6	79.0	21.9	21.9
Ln Grp LOS	D	E	E	E	C	C	D	C	D	E	C	C
Approach Vol, veh/h		864			607			1280			570	
Approach Delay, s/veh		61.9			37.8			40.1			44.0	
Approach LOS		E			D			D			D	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Case No	2.0	3.0	2.0	4.0	2.0	4.0	2.0	4.0
Phs Duration (G+Y+Rc), s	15.2	23.0	14.3	22.5	10.9	27.3	8.2	28.6
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green (Gmax), s	10.7	18.5	9.8	18.0	8.1	21.1	7.5	20.3
Max Allow Headway (MAH), s	3.8	4.6	3.8	5.3	3.8	5.3	3.8	5.4
Max Q Clear (g_c+I1), s	12.2	20.5	11.0	19.1	7.1	7.9	4.9	9.4
Green Ext Time (g_e), s	0.0	0.0	0.0	0.0	0.0	1.6	0.0	1.8
Prob of Phs Call (p_c)	0.99	1.00	0.98	1.00	0.90	1.00	0.73	1.00
Prob of Max Out (p_x)	1.00	0.00	1.00	1.00	1.00	0.00	1.00	0.19

Left-Turn Movement Data								
Assigned Mvmt	1		3		5		7	
Mvmt Sat Flow, veh/h	1619		1619		1619		1619	

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		3420		3224		3196		2150

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1525		242		266		1153

Left Lane Group Data								
Assigned Mvmt	1	0	3	0	5	0	7	0
Lane Assignment	L (Prot)		L (Prot)		L (Prot)		L (Prot)	

Lanes in Grp	1	0	1	0	1	0	1	0
Grp Vol (v), veh/h	221	0	197	0	112	0	63	0
Grp Sat Flow (s), veh/h/ln	1619	0	1619	0	1619	0	1619	0
Q Serve Time (g_s), s	10.2	0.0	9.0	0.0	5.1	0.0	2.9	0.0
Cycle Q Clear Time (g_c), s	10.2	0.0	9.0	0.0	5.1	0.0	2.9	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	231	0	212	0	139	0	79	0
V/C Ratio (X)	0.96	0.00	0.93	0.00	0.81	0.00	0.80	0.00
Avail Cap (c_a), veh/h	231	0	212	0	175	0	162	0
Upstream Filter (I)	1.00	0.00	0.97	0.00	0.83	0.00	1.00	0.00
Uniform Delay (d1), s/veh	31.9	0.0	32.3	0.0	33.7	0.0	35.3	0.0
Incr Delay (d2), s/veh	47.0	0.0	42.2	0.0	16.5	0.0	16.5	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	79.0	0.0	74.4	0.0	50.2	0.0	51.8	0.0
1st-Term Q (Q1), veh/ln	3.8	0.0	3.4	0.0	1.9	0.0	1.1	0.0
2nd-Term Q (Q2), veh/ln	3.0	0.0	2.5	0.0	0.6	0.0	0.4	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
%ile Back of Q (50%), veh/ln	6.8	0.0	5.9	0.0	2.6	0.0	1.5	0.0
%ile Storage Ratio (RQ%)	0.11	0.00	0.06	0.00	0.13	0.00	0.02	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	2	0	1	0	1	0	1
Grp Vol (v), veh/h	0	615	0	395	0	171	0	208
Grp Sat Flow (s), veh/h/ln	0	1710	0	1710	0	1710	0	1710
Q Serve Time (g_s), s	0.0	12.4	0.0	17.1	0.0	5.8	0.0	7.1
Cycle Q Clear Time (g_c), s	0.0	12.4	0.0	17.1	0.0	5.8	0.0	7.1
Lane Grp Cap (c), veh/h	0	844	0	410	0	519	0	551
V/C Ratio (X)	0.00	0.73	0.00	0.96	0.00	0.33	0.00	0.38
Avail Cap (c_a), veh/h	0	844	0	410	0	519	0	551
Upstream Filter (I)	0.00	0.83	0.00	1.00	0.00	1.00	0.00	0.97
Uniform Delay (d1), s/veh	0.0	25.9	0.0	28.2	0.0	20.2	0.0	19.6
Incr Delay (d2), s/veh	0.0	4.6	0.0	34.7	0.0	1.7	0.0	0.4
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	30.5	0.0	62.8	0.0	21.9	0.0	20.0
1st-Term Q (Q1), veh/ln	0.0	4.8	0.0	6.6	0.0	2.2	0.0	2.7
2nd-Term Q (Q2), veh/ln	0.0	0.5	0.0	4.0	0.0	0.2	0.0	0.1

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	5.3	0.0	10.6	0.0	2.5	0.0	2.7
%ile Storage Ratio (RQ%)	0.00	0.27	0.00	0.14	0.00	0.04	0.00	0.03
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		T+R		T+R		T+R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	553	0	406	0	178	0	202
Grp Sat Flow (s), veh/h/ln	0	1525	0	1756	0	1752	0	1593
Q Serve Time (g_s), s	0.0	18.5	0.0	17.1	0.0	5.9	0.0	7.4
Cycle Q Clear Time (g_c), s	0.0	18.5	0.0	17.1	0.0	5.9	0.0	7.4
Prot RT Sat Flow (s_R), veh/h/ln	0.0	1525.4	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	9.8	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	0.14	0.00	0.15	0.00	0.72
Lane Grp Cap (c), veh/h	0	576	0	422	0	532	0	513
V/C Ratio (X)	0.00	0.96	0.00	0.96	0.00	0.33	0.00	0.39
Avail Cap (c_a), veh/h	0	576	0	422	0	532	0	513
Upstream Filter (I)	0.00	0.83	0.00	1.00	0.00	1.00	0.00	0.97
Uniform Delay (d1), s/veh	0.0	22.8	0.0	28.2	0.0	20.2	0.0	19.7
Incr Delay (d2), s/veh	0.0	25.8	0.0	34.3	0.0	1.7	0.0	0.5
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	48.6	0.0	62.5	0.0	21.9	0.0	20.2
1st-Term Q (Q1), veh/ln	0.0	8.7	0.0	6.8	0.0	2.3	0.0	2.6
2nd-Term Q (Q2), veh/ln	0.0	4.1	0.0	4.0	0.0	0.2	0.0	0.1
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	12.9	0.0	10.8	0.0	2.5	0.0	2.7
%ile Storage Ratio (RQ%)	0.00	0.65	0.00	0.15	0.00	0.04	0.00	0.03
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	46.0
HCM 6th LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	232	459	114	272	222	55	70	518	246	134	510	97
Future Volume (veh/h)	232	459	114	272	222	55	70	518	246	134	510	97
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	244	483	120	286	234	58	74	545	259	141	537	102
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	283	553	137	324	620	150	96	1200	535	174	1649	307
HCM Platoon Ratio	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.00
Prop Arrive On Green	0.21	0.26	0.26	0.24	0.29	0.29	0.07	0.44	0.44	0.13	0.50	0.38
Unsig. Movement Delay												
Ln Grp Delay, s/veh	46.7	51.1	52.7	50.1	27.9	28.0	52.9	20.6	22.6	51.6	16.3	18.9
Ln Grp LOS	D	D	D	D	C	C	D	C	C	D	B	B
Approach Vol, veh/h		847			578			878			780	
Approach Delay, s/veh		50.4			38.9			23.9			23.4	
Approach LOS		D			D			C			C	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Case No	2.0	3.0	2.0	4.0	2.0	4.0	2.0	4.0
Phs Duration (G+Y+Rc), s	13.1	34.4	20.6	21.8	9.3	38.3	18.6	23.9
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green (Gmax), s	11.5	21.5	20.5	18.5	9.2	23.8	20.5	18.5
Max Allow Headway (MAH), s	3.8	4.8	3.8	5.3	3.8	5.3	3.8	5.3
Max Q Clear (g_c+I1), s	8.8	12.3	15.7	16.6	5.6	9.3	13.7	8.0
Green Ext Time (g_e), s	0.1	3.1	0.4	0.7	0.0	3.6	0.4	1.2
Prob of Phs Call (p_c)	0.97	1.00	1.00	1.00	0.84	1.00	1.00	1.00
Prob of Max Out (p_x)	1.00	0.00	0.54	1.00	1.00	0.00	0.12	0.13

Left-Turn Movement Data								
Assigned Mvmt	1		3		5		7	
Mvmt Sat Flow, veh/h	1810		1810		1810		1810	

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		3610		2869		4392		2880

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1610		708		818		699

Left Lane Group Data								
Assigned Mvmt	1	0	3	0	5	0	7	0
Lane Assignment	L (Prot)		L (Prot)		L (Prot)		L (Prot)	

Lanes in Grp	1	0	1	0	1	0	1	0
Grp Vol (v), veh/h	141	0	286	0	74	0	244	0
Grp Sat Flow (s), veh/h/ln	1810	0	1810	0	1810	0	1810	0
Q Serve Time (g_s), s	6.8	0.0	13.7	0.0	3.6	0.0	11.7	0.0
Cycle Q Clear Time (g_c), s	6.8	0.0	13.7	0.0	3.6	0.0	11.7	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	174	0	324	0	96	0	283	0
V/C Ratio (X)	0.81	0.00	0.88	0.00	0.77	0.00	0.86	0.00
Avail Cap (c_a), veh/h	231	0	412	0	185	0	412	0
Upstream Filter (I)	0.88	0.00	1.00	0.00	0.94	0.00	1.00	0.00
Uniform Delay (d1), s/veh	38.5	0.0	33.4	0.0	41.3	0.0	34.7	0.0
Incr Delay (d2), s/veh	13.2	0.0	16.7	0.0	11.6	0.0	12.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	51.6	0.0	50.1	0.0	52.9	0.0	46.7	0.0
1st-Term Q (Q1), veh/ln	2.9	0.0	5.5	0.0	1.6	0.0	4.8	0.0
2nd-Term Q (Q2), veh/ln	0.6	0.0	1.5	0.0	0.3	0.0	0.9	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
%ile Back of Q (50%), veh/ln	3.5	0.0	7.0	0.0	1.9	0.0	5.7	0.0
%ile Storage Ratio (RQ%)	0.49	0.00	0.05	0.00	0.24	0.00	0.65	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

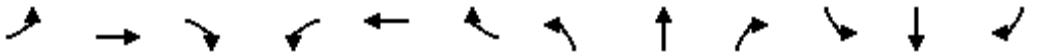
Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	2	0	1	0	2	0	1
Grp Vol (v), veh/h	0	545	0	303	0	421	0	145
Grp Sat Flow (s), veh/h/ln	0	1805	0	1805	0	1729	0	1805
Q Serve Time (g_s), s	0.0	9.5	0.0	14.5	0.0	6.5	0.0	5.8
Cycle Q Clear Time (g_c), s	0.0	9.5	0.0	14.5	0.0	6.5	0.0	5.8
Lane Grp Cap (c), veh/h	0	1200	0	348	0	1299	0	388
V/C Ratio (X)	0.00	0.45	0.00	0.87	0.00	0.32	0.00	0.37
Avail Cap (c_a), veh/h	0	1200	0	371	0	1299	0	388
Upstream Filter (I)	0.00	0.94	0.00	1.00	0.00	0.88	0.00	1.00
Uniform Delay (d1), s/veh	0.0	19.4	0.0	32.4	0.0	15.7	0.0	27.3
Incr Delay (d2), s/veh	0.0	1.2	0.0	18.7	0.0	0.6	0.0	0.6
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	20.6	0.0	51.1	0.0	16.3	0.0	27.9
1st-Term Q (Q1), veh/ln	0.0	3.6	0.0	5.7	0.0	2.4	0.0	2.4
2nd-Term Q (Q2), veh/ln	0.0	0.2	0.0	1.8	0.0	0.1	0.0	0.1

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	3.8	0.0	7.6	0.0	2.5	0.0	2.4
%ile Storage Ratio (RQ%)	0.00	0.10	0.00	0.04	0.00	0.02	0.00	0.02
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		T+R		T+R		T+R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	259	0	300	0	218	0	147
Grp Sat Flow (s), veh/h/ln	0	1610	0	1772	0	1753	0	1774
Q Serve Time (g_s), s	0.0	10.3	0.0	14.6	0.0	7.3	0.0	6.0
Cycle Q Clear Time (g_c), s	0.0	10.3	0.0	14.6	0.0	7.3	0.0	6.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	0.40	0.00	0.47	0.00	0.39
Lane Grp Cap (c), veh/h	0	535	0	342	0	658	0	382
V/C Ratio (X)	0.00	0.48	0.00	0.88	0.00	0.33	0.00	0.39
Avail Cap (c_a), veh/h	0	535	0	364	0	658	0	382
Upstream Filter (I)	0.00	0.94	0.00	1.00	0.00	0.88	0.00	1.00
Uniform Delay (d1), s/veh	0.0	19.6	0.0	32.5	0.0	17.7	0.0	27.3
Incr Delay (d2), s/veh	0.0	2.9	0.0	20.2	0.0	1.2	0.0	0.6
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	22.6	0.0	52.7	0.0	18.9	0.0	28.0
1st-Term Q (Q1), veh/ln	0.0	3.5	0.0	5.7	0.0	2.8	0.0	2.4
2nd-Term Q (Q2), veh/ln	0.0	0.4	0.0	1.9	0.0	0.2	0.0	0.1
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	3.9	0.0	7.6	0.0	3.0	0.0	2.5
%ile Storage Ratio (RQ%)	0.00	0.10	0.00	0.04	0.00	0.03	0.00	0.02
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	33.9
HCM 6th LOS	C

EXISTING PLUS AMBIENT GROWTH PLUS CUMULATIVE PLUS PROJECT CONDITIONS



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	266	3	166	626	572	0	0	571	737
Future Volume (veh/h)	0	0	0	266	3	166	626	572	0	0	571	737
Number				3	8	18	5	2	12	1	6	16
Initial Q, veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln				1700	1800	1800	1700	1800	0	0	1800	1900
Adj Flow Rate, veh/h				280	3	175	659	602	0	0	601	776
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence				Yes			Yes			No		
Cap, veh/h				305	3	275	586	2497	0	0	1587	520
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	2.00	2.00
Prop Arrive On Green				0.18	0.18	0.18	0.72	1.00	0.00	0.00	0.65	0.65
Unsig. Movement Delay												
Ln Grp Delay, s/veh				70.9	0.0	42.8	80.1	0.1	0.0	0.0	13.7	249.2
Ln Grp LOS				E	A	D	F	A	A	A	B	F
Approach Vol, veh/h					458			1261			1377	
Approach Delay, s/veh					60.2			41.9			146.4	
Approach LOS					E			D			F	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2	8		5	6		
Case No		4.0	11.0		2.0	7.0		
Phs Duration (G+Y+Rc), s		77.5	22.5		40.7	36.8		
Change Period (Y+Rc), s		4.5	4.5		4.5	4.5		
Max Green (Gmax), s		73.0	18.0		36.2	32.3		
Max Allow Headway (MAH), s		5.2	4.8		3.8	4.5		
Max Q Clear (g_c+I1), s		2.0	18.2		38.2	34.3		
Green Ext Time (g_e), s		4.8	0.0		0.0	0.0		
Prob of Phs Call (p_c)		1.00	1.00		1.00	1.00		
Prob of Max Out (p_x)		0.00	1.00		1.00	0.00		

Left-Turn Movement Data								
Assigned Mvmt			3		5	1		
Mvmt Sat Flow, veh/h			1697		1619	0		

Through Movement Data								
Assigned Mvmt		2	8			6		
Mvmt Sat Flow, veh/h		3510	18			5076		

Right-Turn Movement Data								
Assigned Mvmt		12	18			16		
Mvmt Sat Flow, veh/h		0	1525			1610		

Left Lane Group Data								
Assigned Mvmt	0	0	3	0	5	1	0	0
Lane Assignment			L+T		L (Prot)			

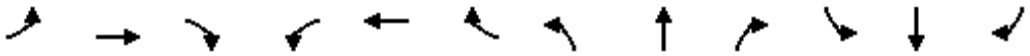
Lanes in Grp	0	0	1	0	1	0	0	0
Grp Vol (v), veh/h	0	0	283	0	659	0	0	0
Grp Sat Flow (s), veh/h/ln	0	0	1715	0	1619	0	0	0
Q Serve Time (g_s), s	0.0	0.0	16.2	0.0	36.2	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	16.2	0.0	36.2	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	32.3	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	0.00	0.99	0.00	1.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	309	0	586	0	0	0
V/C Ratio (X)	0.00	0.00	0.92	0.00	1.12	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	0	309	0	586	0	0	0
Upstream Filter (I)	0.00	0.00	1.00	0.00	0.44	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	40.3	0.0	13.8	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	30.7	0.0	66.3	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	70.9	0.0	80.1	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	6.7	0.0	4.5	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	2.6	0.0	10.8	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	0.00	1.00	0.00	1.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	9.4	0.0	15.3	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.19	0.00	1.39	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	18.2	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	8	0	0	6	0	0
Lane Assignment		T				T		
Lanes in Grp	0	2	0	0	0	3	0	0
Grp Vol (v), veh/h	0	602	0	0	0	601	0	0
Grp Sat Flow (s), veh/h/ln	0	1710	0	0	0	1638	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	5.7	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	5.7	0.0	0.0
Lane Grp Cap (c), veh/h	0	2497	0	0	0	1587	0	0
V/C Ratio (X)	0.00	0.24	0.00	0.00	0.00	0.38	0.00	0.00
Avail Cap (c_a), veh/h	0	2497	0	0	0	1587	0	0
Upstream Filter (I)	0.00	0.44	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	13.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.1	0.0	0.0	0.0	0.7	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.1	0.0	0.0	0.0	13.7	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	1.8	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.0	0.0	1.9	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	18	0	0	16	0	0
Lane Assignment			R			R		
Lanes in Grp	0	0	1	0	0	1	0	0
Grp Vol (v), veh/h	0	0	175	0	0	776	0	0
Grp Sat Flow (s), veh/h/ln	0	0	1525	0	0	1610	0	0
Q Serve Time (g_s), s	0.0	0.0	10.6	0.0	0.0	32.3	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	10.6	0.0	0.0	32.3	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	275	0	0	520	0	0
V/C Ratio (X)	0.00	0.00	0.64	0.00	0.00	1.49	0.00	0.00
Avail Cap (c_a), veh/h	0	0	275	0	0	520	0	0
Upstream Filter (I)	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	38.0	0.0	0.0	17.7	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	4.8	0.0	0.0	231.5	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	42.8	0.0	0.0	249.2	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	3.9	0.0	0.0	6.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.4	0.0	0.0	33.4	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	4.3	0.0	0.0	39.4	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.09	0.00	0.00	0.85	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	64.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	91.1
HCM 6th LOS	F



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	576	8	508	0	0	0	0	692	320	97	531	0
Future Volume (veh/h)	576	8	508	0	0	0	0	692	320	97	531	0
Number	7	4	14				5	2	12	1	6	16
Initial Q, veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1700	1800	1800				0	1800	1800	1700	1900	0
Adj Flow Rate, veh/h	606	8	535				0	728	337	102	559	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0				0	0	0	0	0	0
Opposing Right Turn Influence	Yes						No			Yes		
Cap, veh/h	534	7	471				0	871	270	122	1060	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	2.00	2.00	2.00	2.00	1.00
Prop Arrive On Green	0.62	0.62	0.62				0.00	0.35	0.35	0.15	0.59	0.00
Unsig. Movement Delay												
Ln Grp Delay, s/veh	93.7	0.0	0.0				0.0	43.4	173.4	81.0	19.9	0.0
Ln Grp LOS	F	A	A				A	D	F	F	B	A
Approach Vol, veh/h		1149						1065			661	
Approach Delay, s/veh		93.7						84.5			29.3	
Approach LOS		F						F			C	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Case No	2.0	7.0		12.0		4.0		
Phs Duration (G+Y+Rc), s	12.8	24.0		73.2		36.8		
Change Period (Y+Rc), s	4.5	4.5		4.5		4.5		
Max Green (Gmax), s	8.3	19.5		68.7		32.3		
Max Allow Headway (MAH), s	3.8	4.8		5.4		5.2		
Max Q Clear (g_c+I1), s	8.7	21.5		70.7		12.2		
Green Ext Time (g_e), s	0.0	0.0		0.0		3.7		
Prob of Phs Call (p_c)	0.96	1.00		1.00		1.00		
Prob of Max Out (p_x)	1.00	0.00		1.00		0.00		

Left-Turn Movement Data								
Assigned Mvmt	1	5		7				
Mvmt Sat Flow, veh/h	1619	0		855				

Through Movement Data								
Assigned Mvmt		2		4		6		
Mvmt Sat Flow, veh/h		5076		11		3705		

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		
Mvmt Sat Flow, veh/h		1525		755		0		

Left Lane Group Data								
Assigned Mvmt	1	5	0	7	0	0	0	0
Lane Assignment	L (Prot)			L+T+R				

Lanes in Grp	1	0	0	1	0	0	0	0
Grp Vol (v), veh/h	102	0	0	1149	0	0	0	0
Grp Sat Flow (s), veh/h/ln	1619	0	0	1621	0	0	0	0
Q Serve Time (g_s), s	6.7	0.0	0.0	68.7	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	6.7	0.0	0.0	68.7	0.0	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	19.5	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	0.53	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	122	0	0	1013	0	0	0	0
V/C Ratio (X)	0.83	0.00	0.00	1.13	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	122	0	0	1013	0	0	0	0
Upstream Filter (I)	0.93	0.00	0.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	46.0	0.0	0.0	20.7	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	34.9	0.0	0.0	73.0	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	81.0	0.0	0.0	93.7	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	2.5	0.0	0.0	23.2	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	1.2	0.0	0.0	20.5	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00
%ile Back of Q (50%), veh/ln	3.7	0.0	0.0	43.7	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.34	0.00	0.00	0.75	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	34.1	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	0
Lane Assignment		T				T		
Lanes in Grp	0	3	0	0	0	2	0	0
Grp Vol (v), veh/h	0	728	0	0	0	559	0	0
Grp Sat Flow (s), veh/h/ln	0	1638	0	0	0	1805	0	0
Q Serve Time (g_s), s	0.0	14.9	0.0	0.0	0.0	10.2	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	14.9	0.0	0.0	0.0	10.2	0.0	0.0
Lane Grp Cap (c), veh/h	0	871	0	0	0	1060	0	0
V/C Ratio (X)	0.00	0.84	0.00	0.00	0.00	0.53	0.00	0.00
Avail Cap (c_a), veh/h	0	871	0	0	0	1060	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	0.93	0.00	0.00
Uniform Delay (d1), s/veh	0.0	34.0	0.0	0.0	0.0	18.1	0.0	0.0
Incr Delay (d2), s/veh	0.0	9.3	0.0	0.0	0.0	1.7	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	43.4	0.0	0.0	0.0	19.9	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	4.8	0.0	0.0	0.0	3.4	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.8	0.0	0.0	0.0	0.3	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	5.6	0.0	0.0	0.0	3.6	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.18	0.00	0.00	0.00	0.33	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	0
Lane Assignment		R						
Lanes in Grp	0	1	0	0	0	0	0	0
Grp Vol (v), veh/h	0	337	0	0	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	1525	0	0	0	0	0	0
Q Serve Time (g_s), s	0.0	19.5	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	19.5	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	0.47	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	270	0	0	0	0	0	0
V/C Ratio (X)	0.00	1.25	0.00	0.00	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	270	0	0	0	0	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	35.5	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	137.9	0.0	0.0	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	173.4	0.0	0.0	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	5.8	0.0	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	10.4	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	16.2	0.0	0.0	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.51	0.00	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	16.6	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	75.5
HCM 6th LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	258	64	425	732	148	76	209	269	202	496	70
Future Volume (veh/h)	30	258	64	425	732	148	76	209	269	202	496	70
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1900
Adj Flow Rate, veh/h	32	272	67	447	771	156	80	220	283	213	522	74
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	50	361	87	423	1028	208	99	953	425	207	1038	147
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.03	0.13	0.13	0.52	0.73	0.73	0.06	0.28	0.28	0.13	0.35	0.35
Unsig. Movement Delay												
Ln Grp Delay, s/veh	56.4	42.4	43.4	77.4	13.3	13.3	68.2	25.6	36.6	109.7	26.4	26.4
Ln Grp LOS	E	D	D	F	B	B	E	C	D	F	C	C
Approach Vol, veh/h		371			1374			583			809	
Approach Delay, s/veh		44.1			34.1			36.8			48.3	
Approach LOS		D			C			D			D	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Case No	2.0	3.0	2.0	4.0	2.0	4.0	2.0	4.0
Phs Duration (G+Y+Rc), s	16.0	29.6	28.0	16.4	10.0	35.6	7.3	37.2
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green (Gmax), s	11.5	19.0	23.5	18.0	6.7	23.8	5.0	36.5
Max Allow Headway (MAH), s	3.8	4.6	3.8	5.3	3.8	5.3	3.8	5.3
Max Q Clear (g_c+I1), s	13.5	16.8	25.5	10.8	6.4	14.4	3.8	16.7
Green Ext Time (g_e), s	0.0	0.6	0.0	1.1	0.0	2.5	0.0	6.1
Prob of Phs Call (p_c)	1.00	1.00	1.00	1.00	0.86	1.00	0.55	1.00
Prob of Max Out (p_x)	1.00	0.00	1.00	0.52	1.00	0.00	1.00	0.18

Left-Turn Movement Data								
Assigned Mvmt	1		3		5		7	
Mvmt Sat Flow, veh/h	1619		1619		1619		1619	

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		3420		2730		3009		2834

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1525		661		425		573

Left Lane Group Data								
Assigned Mvmt	1	0	3	0	5	0	7	0
Lane Assignment	L (Prot)		L (Prot)		L (Prot)		L (Prot)	

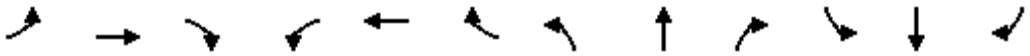
Lanes in Grp	1	0	1	0	1	0	1	0
Grp Vol (v), veh/h	213	0	447	0	80	0	32	0
Grp Sat Flow (s), veh/h/ln	1619	0	1619	0	1619	0	1619	0
Q Serve Time (g_s), s	11.5	0.0	23.5	0.0	4.4	0.0	1.8	0.0
Cycle Q Clear Time (g_c), s	11.5	0.0	23.5	0.0	4.4	0.0	1.8	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	207	0	423	0	99	0	50	0
V/C Ratio (X)	1.03	0.00	1.06	0.00	0.80	0.00	0.65	0.00
Avail Cap (c_a), veh/h	207	0	423	0	121	0	90	0
Upstream Filter (I)	1.00	0.00	0.83	0.00	0.98	0.00	1.00	0.00
Uniform Delay (d1), s/veh	39.3	0.0	21.5	0.0	41.7	0.0	43.1	0.0
Incr Delay (d2), s/veh	70.5	0.0	55.9	0.0	26.5	0.0	13.2	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	109.7	0.0	77.4	0.0	68.2	0.0	56.4	0.0
1st-Term Q (Q1), veh/ln	4.5	0.0	5.4	0.0	1.7	0.0	0.7	0.0
2nd-Term Q (Q2), veh/ln	4.1	0.0	6.6	0.0	0.7	0.0	0.2	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
%ile Back of Q (50%), veh/ln	8.5	0.0	12.0	0.0	2.5	0.0	0.9	0.0
%ile Storage Ratio (RQ%)	0.13	0.00	0.11	0.00	0.12	0.00	0.01	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	1.5	0.0	6.1	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.3	0.0	0.3	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	2	0	1	0	1	0	1
Grp Vol (v), veh/h	0	220	0	169	0	296	0	465
Grp Sat Flow (s), veh/h/ln	0	1710	0	1710	0	1710	0	1710
Q Serve Time (g_s), s	0.0	4.5	0.0	8.5	0.0	12.3	0.0	14.7
Cycle Q Clear Time (g_c), s	0.0	4.5	0.0	8.5	0.0	12.3	0.0	14.7
Lane Grp Cap (c), veh/h	0	953	0	226	0	590	0	621
V/C Ratio (X)	0.00	0.23	0.00	0.74	0.00	0.50	0.00	0.75
Avail Cap (c_a), veh/h	0	953	0	342	0	590	0	694
Upstream Filter (I)	0.00	0.98	0.00	1.00	0.00	1.00	0.00	0.83
Uniform Delay (d1), s/veh	0.0	25.0	0.0	37.6	0.0	23.3	0.0	9.9
Incr Delay (d2), s/veh	0.0	0.6	0.0	4.8	0.0	3.0	0.0	3.4
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	25.6	0.0	42.4	0.0	26.4	0.0	13.3
1st-Term Q (Q1), veh/ln	0.0	1.8	0.0	3.5	0.0	4.8	0.0	3.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.3	0.0	0.5	0.0	0.6

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	1.9	0.0	3.8	0.0	5.3	0.0	3.5
%ile Storage Ratio (RQ%)	0.00	0.09	0.00	0.05	0.00	0.08	0.00	0.03
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		T+R		T+R		T+R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	283	0	170	0	300	0	462
Grp Sat Flow (s), veh/h/ln	0	1525	0	1681	0	1724	0	1697
Q Serve Time (g_s), s	0.0	14.8	0.0	8.8	0.0	12.4	0.0	14.7
Cycle Q Clear Time (g_c), s	0.0	14.8	0.0	8.8	0.0	12.4	0.0	14.7
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	0.39	0.00	0.25	0.00	0.34
Lane Grp Cap (c), veh/h	0	425	0	223	0	595	0	616
V/C Ratio (X)	0.00	0.67	0.00	0.77	0.00	0.50	0.00	0.75
Avail Cap (c_a), veh/h	0	425	0	336	0	595	0	688
Upstream Filter (I)	0.00	0.98	0.00	1.00	0.00	1.00	0.00	0.83
Uniform Delay (d1), s/veh	0.0	28.7	0.0	37.7	0.0	23.4	0.0	9.9
Incr Delay (d2), s/veh	0.0	7.8	0.0	5.7	0.0	3.0	0.0	3.4
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	36.6	0.0	43.4	0.0	26.4	0.0	13.3
1st-Term Q (Q1), veh/ln	0.0	5.3	0.0	3.6	0.0	4.9	0.0	2.9
2nd-Term Q (Q2), veh/ln	0.0	0.9	0.0	0.4	0.0	0.5	0.0	0.6
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	6.2	0.0	3.9	0.0	5.4	0.0	3.5
%ile Storage Ratio (RQ%)	0.00	0.31	0.00	0.05	0.00	0.08	0.00	0.03
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	39.5
HCM 6th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	111	3	232	4	4	29	182	403	5	16	789	226
Future Volume (veh/h)	111	3	232	4	4	29	182	403	5	16	789	226
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1600	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1900
Adj Flow Rate, veh/h	117	3	0	4	4	31	192	424	5	17	831	238
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	167	226		62	33	44	217	2576	30	29	1648	472
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.06	0.13	0.00	0.03	0.03	0.03	0.13	0.74	0.74	0.02	0.63	0.63
Unsig. Movement Delay												
Ln Grp Delay, s/veh	60.9	46.0	0.0	56.9	0.0	76.7	76.7	4.8	4.7	68.2	13.1	13.1
Ln Grp LOS	E	D		E	A	E	E	A	A	E	B	B
Approach Vol, veh/h		120			39			621			1086	
Approach Delay, s/veh		60.5			72.7			27.0			14.0	
Approach LOS		E			E			C			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6	7	8
Case No	2.0	4.0		3.0	2.0	4.0	2.0	8.3
Phs Duration (G+Y+Rc), s	6.7	93.8		19.5	20.6	79.9	11.3	8.3
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5	4.5	4.5
Max Green (Gmax), s	19.0	32.0		55.5	19.0	32.0	19.0	32.0
Max Allow Headway (MAH), s	3.8	5.2		5.2	3.8	5.3	3.8	5.5
Max Q Clear (g_c+I1), s	3.3	6.3		2.2	16.0	22.7	6.7	4.7
Green Ext Time (g_e), s	0.0	2.6		0.0	0.1	4.7	0.2	0.2
Prob of Phs Call (p_c)	0.43	1.00		1.00	1.00	1.00	0.98	0.75
Prob of Max Out (p_x)	0.00	0.00		0.00	1.00	0.00	0.00	0.00

Left-Turn Movement Data								
Assigned Mvmt	1				5		7	3
Mvmt Sat Flow, veh/h	1619				1619		2956	557

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		3462		1800		2624		1063

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		41		1525		751		1388

Left Lane Group Data								
Assigned Mvmt	1	0	0	0	5	0	7	3
Lane Assignment	L (Prot)				L (Prot)		L (Prot)	L+T

Lanes in Grp	1	0	0	0	1	0	2	1
Grp Vol (v), veh/h	17	0	0	0	192	0	117	8
Grp Sat Flow (s), veh/h/ln	1619	0	0	0	1619	0	1478	1620
Q Serve Time (g_s), s	1.3	0.0	0.0	0.0	14.0	0.0	4.7	0.0
Cycle Q Clear Time (g_c), s	1.3	0.0	0.0	0.0	14.0	0.0	4.7	0.5
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	1436
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.8
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.8
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	0.00	1.00	0.00	1.00	0.50
Lane Grp Cap (c), veh/h	29	0	0	0	217	0	167	96
V/C Ratio (X)	0.58	0.00	0.00	0.00	0.88	0.00	0.70	0.08
Avail Cap (c_a), veh/h	256	0	0	0	256	0	468	460
Upstream Filter (I)	0.55	0.00	0.00	0.00	1.00	0.00	1.00	1.00
Uniform Delay (d1), s/veh	58.5	0.0	0.0	0.0	51.0	0.0	55.6	56.5
Incr Delay (d2), s/veh	9.7	0.0	0.0	0.0	25.7	0.0	5.3	0.4
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	68.2	0.0	0.0	0.0	76.7	0.0	60.9	56.9
1st-Term Q (Q1), veh/ln	0.5	0.0	0.0	0.0	5.7	0.0	1.7	0.2
2nd-Term Q (Q2), veh/ln	0.1	0.0	0.0	0.0	1.5	0.0	0.1	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	0.00	1.00	0.00	1.00	1.00
%ile Back of Q (50%), veh/ln	0.6	0.0	0.0	0.0	7.2	0.0	1.9	0.2
%ile Storage Ratio (RQ%)	0.03	0.00	0.00	0.00	1.20	0.00	0.05	0.01
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		
Lanes in Grp	0	1	0	1	0	1	0	0
Grp Vol (v), veh/h	0	209	0	3	0	541	0	0
Grp Sat Flow (s), veh/h/ln	0	1710	0	1800	0	1710	0	0
Q Serve Time (g_s), s	0.0	4.3	0.0	0.2	0.0	20.7	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	4.3	0.0	0.2	0.0	20.7	0.0	0.0
Lane Grp Cap (c), veh/h	0	1273	0	226	0	1074	0	0
V/C Ratio (X)	0.00	0.16	0.00	0.01	0.00	0.50	0.00	0.00
Avail Cap (c_a), veh/h	0	1273	0	833	0	1074	0	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	0.55	0.00	0.00
Uniform Delay (d1), s/veh	0.0	4.5	0.0	46.0	0.0	12.1	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.3	0.0	0.0	0.0	0.9	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	4.8	0.0	46.0	0.0	13.1	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	1.3	0.0	0.1	0.0	7.5	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	0.3	0.0	0.0

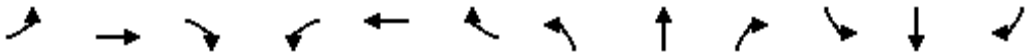
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	1.4	0.0	0.1	0.0	7.8	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.09	0.00	0.00	0.00	0.39	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R		R		T+R		T+R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	220	0	0	0	528	0	31
Grp Sat Flow (s), veh/h/ln	0	1793	0	1525	0	1665	0	1388
Q Serve Time (g_s), s	0.0	4.3	0.0	0.0	0.0	20.7	0.0	2.7
Cycle Q Clear Time (g_c), s	0.0	4.3	0.0	0.0	0.0	20.7	0.0	2.7
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.02	0.00	1.00	0.00	0.45	0.00	1.00
Lane Grp Cap (c), veh/h	0	1334	0	191	0	1046	0	44
V/C Ratio (X)	0.00	0.16	0.00	0.00	0.00	0.50	0.00	0.71
Avail Cap (c_a), veh/h	0	1334	0	706	0	1046	0	370
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	0.55	0.00	1.00
Uniform Delay (d1), s/veh	0.0	4.5	0.0	0.0	0.0	12.2	0.0	57.6
Incr Delay (d2), s/veh	0.0	0.3	0.0	0.0	0.0	1.0	0.0	19.2
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	4.7	0.0	0.0	0.0	13.1	0.0	76.7
1st-Term Q (Q1), veh/ln	0.0	1.4	0.0	0.0	0.0	7.4	0.0	0.9
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	0.3	0.0	0.2
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	1.5	0.0	0.0	0.0	7.6	0.0	1.2
%ile Storage Ratio (RQ%)	0.00	0.09	0.00	0.00	0.00	0.38	0.00	0.03
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	22.5
HCM 6th LOS	C

Notes

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	0	4	33	0	30	11	556	28	36	997	15
Future Volume (veh/h)	5	0	4	33	0	30	11	556	28	36	997	15
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1900	1800	1800	1800	1800	1700	1900	1900
Adj Flow Rate, veh/h	5	0	4	35	0	32	12	585	29	38	1049	16
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	99	0	47	60	0	170	443	1353	1147	48	4312	66
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Prop Arrive On Green	0.03	0.00	0.03	0.04	0.00	0.11	1.00	1.00	1.00	0.03	0.82	0.82
Unsig. Movement Delay												
Ln Grp Delay, s/veh	56.8	0.0	57.2	65.4	0.0	49.5	0.1	1.0	0.0	81.3	2.7	2.8
Ln Grp LOS	E	A	E	E	A	D	A	A	A	F	A	A
Approach Vol, veh/h		9			67			626			1103	
Approach Delay, s/veh		57.0			57.8			0.9			5.4	
Approach LOS		E			E			A			A	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4		6		8
Case No	2.0	5.3	2.0	6.3		4.0		4.0
Phs Duration (G+Y+Rc), s	8.1	94.7	9.0	8.2		102.8		17.2
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5		4.5		4.5
Max Green (Gmax), s	15.1	30.7	28.1	28.1		50.3		18.0
Max Allow Headway (MAH), s	3.8	5.2	3.8	4.7		5.2		5.6
Max Q Clear (g_c+I1), s	4.8	2.0	4.6	2.5		7.4		4.2
Green Ext Time (g_e), s	0.0	4.5	0.1	0.0		9.0		0.1
Prob of Phs Call (p_c)	0.72	1.00	0.89	0.75		1.00		0.92
Prob of Max Out (p_x)	0.00	0.00	0.00	0.00		0.00		0.00

Left-Turn Movement Data								
Assigned Mvmt	1	5	3	7				
Mvmt Sat Flow, veh/h	1619	510	1619	1252				

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		1800		0		5263		0

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1525		1525		80		1610

Left Lane Group Data								
Assigned Mvmt	1	5	3	7	0	0	0	0
Lane Assignment	L (Prot)	L	L (Prot)	L				

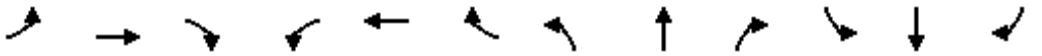
Lanes in Grp	1	1	1	1	0	0	0	0
Grp Vol (v), veh/h	38	12	35	5	0	0	0	0
Grp Sat Flow (s), veh/h/ln	1619	510	1619	1252	0	0	0	0
Q Serve Time (g_s), s	2.8	0.0	2.6	0.5	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	2.8	0.0	2.6	0.5	0.0	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	510	0	1252	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	90.2	0.0	3.7	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	90.2	0.0	3.7	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	48	443	60	99	0	0	0	0
V/C Ratio (X)	0.78	0.03	0.58	0.05	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	204	443	379	353	0	0	0	0
Upstream Filter (I)	1.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	57.8	0.0	56.8	56.6	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	23.5	0.1	8.6	0.2	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	81.3	0.1	65.4	56.8	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	1.1	0.0	1.0	0.1	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.3	0.0	0.1	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00
%ile Back of Q (50%), veh/ln	1.5	0.0	1.2	0.2	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.24	0.00	0.02	0.01	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T				T		
Lanes in Grp	0	1	0	0	0	2	0	0
Grp Vol (v), veh/h	0	585	0	0	0	689	0	0
Grp Sat Flow (s), veh/h/ln	0	1800	0	0	0	1729	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	5.4	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	5.4	0.0	0.0
Lane Grp Cap (c), veh/h	0	1353	0	0	0	2833	0	0
V/C Ratio (X)	0.00	0.43	0.00	0.00	0.00	0.24	0.00	0.00
Avail Cap (c_a), veh/h	0	1353	0	0	0	2833	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	2.4	0.0	0.0
Incr Delay (d2), s/veh	0.0	1.0	0.0	0.0	0.0	0.2	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	1.0	0.0	0.0	0.0	2.7	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	1.3	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.4	0.0	0.0	0.0	0.1	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.4	0.0	0.0	0.0	1.4	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.02	0.00	0.00	0.00	0.14	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		T+R		T+R		T+R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	29	0	4	0	376	0	32
Grp Sat Flow (s), veh/h/ln	0	1525	0	1525	0	1886	0	1610
Q Serve Time (g_s), s	0.0	0.0	0.0	0.3	0.0	5.4	0.0	2.2
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.3	0.0	5.4	0.0	2.2
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	0.04	0.00	1.00
Lane Grp Cap (c), veh/h	0	1147	0	47	0	1545	0	170
V/C Ratio (X)	0.00	0.03	0.00	0.08	0.00	0.24	0.00	0.19
Avail Cap (c_a), veh/h	0	1147	0	357	0	1545	0	242
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	56.5	0.0	2.4	0.0	49.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.8	0.0	0.4	0.0	0.5
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	57.2	0.0	2.8	0.0	49.5
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.1	0.0	1.5	0.0	0.9
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.1	0.0	1.6	0.0	0.9
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.01	0.00	0.17	0.00	0.01
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	6.1
HCM 6th LOS	A



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	29	8	19	17	10	7	67	561	22	10	921	114
Future Volume (veh/h)	29	8	19	17	10	7	67	561	22	10	921	114
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1700	1800	1900	1700	1900	1900
Adj Flow Rate, veh/h	31	8	20	18	11	7	71	591	23	11	969	120
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	84	16	28	79	37	17	90	1415	55	21	1481	1255
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Prop Arrive On Green	0.05	0.05	0.05	0.05	0.05	0.05	0.06	0.82	0.82	0.03	1.00	1.00
Unsig. Movement Delay												
Ln Grp Delay, s/veh	58.4	0.0	0.0	56.1	0.0	0.0	70.3	0.0	3.8	77.6	2.3	0.2
Ln Grp LOS	E	A	A	E	A	A	E	A	A	E	A	A
Approach Vol, veh/h		59			36			685			1100	
Approach Delay, s/veh		58.4			56.1			10.7			2.8	
Approach LOS		E			E			B			A	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Case No	2.0	4.0		8.0	2.0	3.0		8.0
Phs Duration (G+Y+Rc), s	6.0	103.1		10.8	11.1	98.0		10.8
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green (Gmax), s	27.0	39.5		40.0	27.0	39.5		40.0
Max Allow Headway (MAH), s	3.8	5.2		5.4	3.8	5.1		5.3
Max Q Clear (g_c+I1), s	2.8	13.2		6.3	7.2	2.0		4.4
Green Ext Time (g_e), s	0.0	4.5		0.3	0.1	10.6		0.2
Prob of Phs Call (p_c)	0.31	1.00		0.96	0.91	1.00		0.96
Prob of Max Out (p_x)	0.00	0.00		0.00	0.00	0.00		0.00

Left-Turn Movement Data								
Assigned Mvmt	1			7	5			3
Mvmt Sat Flow, veh/h	1619			731	1619			642

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		1721		300		1900		701

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		67		529		1610		324

Left Lane Group Data								
Assigned Mvmt	1	0	0	7	5	0	0	3
Lane Assignment	L (Prot)			L+T+R	L (Prot)			L+T+R

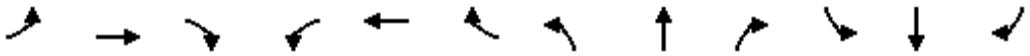
Lanes in Grp	1	0	0	1	1	0	0	1
Grp Vol (v), veh/h	11	0	0	59	71	0	0	36
Grp Sat Flow (s), veh/h/ln	1619	0	0	1560	1619	0	0	1667
Q Serve Time (g_s), s	0.8	0.0	0.0	1.9	5.2	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.8	0.0	0.0	4.3	5.2	0.0	0.0	2.4
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	1417	0	0	0	1404
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	1754	0	0	0	1756
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	6.3	0.0	0.0	0.0	6.3
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	3.9	0.0	0.0	0.0	2.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	1.9	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.6	0.0	0.0	0.0	1.4
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.6	0.0	0.0	0.0	1.4
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	0.53	1.00	0.00	0.00	0.50
Lane Grp Cap (c), veh/h	21	0	0	128	90	0	0	133
V/C Ratio (X)	0.53	0.00	0.00	0.46	0.79	0.00	0.00	0.27
Avail Cap (c_a), veh/h	364	0	0	535	364	0	0	550
Upstream Filter (I)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	58.1	0.0	0.0	55.8	56.0	0.0	0.0	55.0
Incr Delay (d2), s/veh	19.5	0.0	0.0	2.6	14.3	0.0	0.0	1.1
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	77.6	0.0	0.0	58.4	70.3	0.0	0.0	56.1
1st-Term Q (Q1), veh/ln	0.3	0.0	0.0	1.8	2.1	0.0	0.0	1.1
2nd-Term Q (Q2), veh/ln	0.1	0.0	0.0	0.1	0.4	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.4	0.0	0.0	1.8	2.5	0.0	0.0	1.1
%ile Storage Ratio (RQ%)	0.05	0.00	0.00	0.21	0.31	0.00	0.00	0.04
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment						T		
Lanes in Grp	0	0	0	0	0	1	0	0
Grp Vol (v), veh/h	0	0	0	0	0	969	0	0
Grp Sat Flow (s), veh/h/ln	0	0	0	0	0	1900	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lane Grp Cap (c), veh/h	0	0	0	0	0	1481	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.00	0.00	0.65	0.00	0.00
Avail Cap (c_a), veh/h	0	0	0	0	0	1481	0	0
Upstream Filter (I)	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	2.3	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	2.3	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.10	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R				R		
Lanes in Grp	0	1	0	0	0	1	0	0
Grp Vol (v), veh/h	0	614	0	0	0	120	0	0
Grp Sat Flow (s), veh/h/ln	0	1788	0	0	0	1610	0	0
Q Serve Time (g_s), s	0.0	11.2	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	11.2	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.04	0.00	0.34	0.00	1.00	0.00	0.19
Lane Grp Cap (c), veh/h	0	1470	0	0	0	1255	0	0
V/C Ratio (X)	0.00	0.42	0.00	0.00	0.00	0.10	0.00	0.00
Avail Cap (c_a), veh/h	0	1470	0	0	0	1255	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	2.9	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.9	0.0	0.0	0.0	0.2	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	3.8	0.0	0.0	0.0	0.2	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	2.8	0.0	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.4	0.0	0.0	0.0	0.1	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	3.2	0.0	0.0	0.0	0.1	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.06	0.00	0.00	0.00	0.01	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	8.4
HCM 6th LOS	A



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	67	191	31	196	435	151	134	306	136	123	595	90
Future Volume (veh/h)	67	191	31	196	435	151	134	306	136	123	595	90
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1900
Adj Flow Rate, veh/h	71	201	33	206	458	159	141	322	0	129	626	95
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	88	291	47	241	661	295	170	1554		158	1332	202
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.05	0.10	0.10	0.15	0.19	0.19	0.10	0.45	0.00	0.10	0.45	0.45
Unsig. Movement Delay												
Ln Grp Delay, s/veh	81.1	44.0	44.5	41.6	34.3	33.2	59.7	15.1	0.0	49.5	19.5	19.5
Ln Grp LOS	F	D	D	D	C	C	E	B		D	B	B
Approach Vol, veh/h		305			823			463			850	
Approach Delay, s/veh		52.8			35.9			28.7			24.0	
Approach LOS		D			D			C			C	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Case No	2.0	3.0	2.0	4.0	2.0	4.0	2.0	3.0
Phs Duration (G+Y+Rc), s	13.3	45.4	17.9	13.4	13.9	44.8	9.4	21.9
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green (Gmax), s	14.5	19.0	20.5	18.0	10.9	22.6	5.0	33.5
Max Allow Headway (MAH), s	3.8	5.2	3.8	5.3	3.8	5.3	3.8	4.9
Max Q Clear (g_c+I1), s	9.0	7.1	13.2	8.0	9.7	15.3	5.9	13.2
Green Ext Time (g_e), s	0.1	1.6	0.3	0.9	0.0	2.6	0.0	3.5
Prob of Phs Call (p_c)	0.96	1.00	0.99	1.00	0.97	1.00	0.83	1.00
Prob of Max Out (p_x)	0.20	0.00	0.07	0.12	1.00	0.00	1.00	0.02

Left-Turn Movement Data								
Assigned Mvmt	1		3		5		7	
Mvmt Sat Flow, veh/h	1619		1619		1619		1619	

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		3420		2948		2978		3420

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1525		476		451		1525

Left Lane Group Data								
Assigned Mvmt	1	0	3	0	5	0	7	0
Lane Assignment	L (Prot)		L (Prot)		L (Prot)		L (Prot)	

Lanes in Grp	1	0	1	0	1	0	1	0
Grp Vol (v), veh/h	129	0	206	0	141	0	71	0
Grp Sat Flow (s), veh/h/ln	1619	0	1619	0	1619	0	1619	0
Q Serve Time (g_s), s	7.0	0.0	11.2	0.0	7.7	0.0	3.9	0.0
Cycle Q Clear Time (g_c), s	7.0	0.0	11.2	0.0	7.7	0.0	3.9	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	158	0	241	0	170	0	88	0
V/C Ratio (X)	0.81	0.00	0.85	0.00	0.83	0.00	0.81	0.00
Avail Cap (c_a), veh/h	261	0	369	0	196	0	90	0
Upstream Filter (I)	1.00	0.00	0.34	0.00	0.88	0.00	1.00	0.00
Uniform Delay (d1), s/veh	39.8	0.0	37.3	0.0	39.5	0.0	42.1	0.0
Incr Delay (d2), s/veh	9.7	0.0	4.3	0.0	20.2	0.0	39.1	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	49.5	0.0	41.6	0.0	59.7	0.0	81.1	0.0
1st-Term Q (Q1), veh/ln	2.8	0.0	4.3	0.0	3.0	0.0	1.5	0.0
2nd-Term Q (Q2), veh/ln	0.4	0.0	0.3	0.0	1.0	0.0	1.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
%ile Back of Q (50%), veh/ln	3.2	0.0	4.6	0.0	4.0	0.0	2.5	0.0
%ile Storage Ratio (RQ%)	0.31	0.00	0.06	0.00	0.58	0.00	0.62	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	2	0	1	0	1	0	2
Grp Vol (v), veh/h	0	322	0	115	0	359	0	458
Grp Sat Flow (s), veh/h/ln	0	1710	0	1710	0	1710	0	1710
Q Serve Time (g_s), s	0.0	5.1	0.0	5.9	0.0	13.2	0.0	11.2
Cycle Q Clear Time (g_c), s	0.0	5.1	0.0	5.9	0.0	13.2	0.0	11.2
Lane Grp Cap (c), veh/h	0	1554	0	169	0	765	0	661
V/C Ratio (X)	0.00	0.21	0.00	0.68	0.00	0.47	0.00	0.69
Avail Cap (c_a), veh/h	0	1554	0	342	0	765	0	1273
Upstream Filter (I)	0.00	0.88	0.00	1.00	0.00	1.00	0.00	0.34
Uniform Delay (d1), s/veh	0.0	14.8	0.0	39.2	0.0	17.4	0.0	33.8
Incr Delay (d2), s/veh	0.0	0.3	0.0	4.8	0.0	2.1	0.0	0.4
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	15.1	0.0	44.0	0.0	19.5	0.0	34.3
1st-Term Q (Q1), veh/ln	0.0	1.9	0.0	2.4	0.0	5.0	0.0	4.6
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.2	0.0	0.4	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	2.0	0.0	2.7	0.0	5.4	0.0	4.6
%ile Storage Ratio (RQ%)	0.00	0.02	0.00	0.01	0.00	0.11	0.00	0.06
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		T+R		T+R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	0	0	119	0	362	0	159
Grp Sat Flow (s), veh/h/ln	0	1525	0	1714	0	1719	0	1525
Q Serve Time (g_s), s	0.0	0.0	0.0	6.0	0.0	13.3	0.0	8.4
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	6.0	0.0	13.3	0.0	8.4
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	0.28	0.00	0.26	0.00	1.00
Lane Grp Cap (c), veh/h	0	693	0	169	0	769	0	295
V/C Ratio (X)	0.00	0.00	0.00	0.70	0.00	0.47	0.00	0.54
Avail Cap (c_a), veh/h	0	693	0	343	0	769	0	568
Upstream Filter (I)	0.00	0.00	0.00	1.00	0.00	1.00	0.00	0.34
Uniform Delay (d1), s/veh	0.0	0.0	0.0	39.3	0.0	17.4	0.0	32.7
Incr Delay (d2), s/veh	0.0	0.0	0.0	5.2	0.0	2.1	0.0	0.5
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	44.5	0.0	19.5	0.0	33.2
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	2.5	0.0	5.0	0.0	3.1
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.2	0.0	0.4	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	2.8	0.0	5.5	0.0	3.1
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.01	0.00	0.11	0.00	0.04
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	32.5
HCM 6th LOS	C

Notes

Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	79	79	50	264	306	87	90	426	150	73	497	125
Future Volume (veh/h)	79	79	50	264	306	87	90	426	150	73	497	125
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1900
Adj Flow Rate, veh/h	83	83	53	278	322	92	95	448	158	77	523	132
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	104	156	92	313	539	152	118	1075	376	95	1646	405
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.06	0.08	0.08	0.19	0.20	0.20	0.07	0.43	0.43	0.06	0.42	0.42
Unsig. Movement Delay												
Ln Grp Delay, s/veh	47.7	36.6	37.8	54.6	28.6	28.8	64.6	16.3	16.5	60.0	15.1	15.6
Ln Grp LOS	D	D	D	D	C	C	E	B	B	E	B	B
Approach Vol, veh/h		219			692			701			732	
Approach Delay, s/veh		41.2			39.1			22.9			20.0	
Approach LOS		D			D			C			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Case No	2.0	4.0	2.0	4.0	2.0	4.0	2.0	4.0
Phs Duration (G+Y+Rc), s	8.9	36.9	19.0	10.2	10.0	35.9	9.3	19.8
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green (Gmax), s	5.0	19.5	14.5	18.0	5.5	19.0	9.9	22.6
Max Allow Headway (MAH), s	3.8	5.3	3.8	5.4	3.8	5.3	3.8	5.3
Max Q Clear (g_c+I1), s	5.5	11.5	14.5	5.1	6.3	8.9	5.8	10.5
Green Ext Time (g_e), s	0.0	2.4	0.0	0.5	0.0	3.1	0.1	1.9
Prob of Phs Call (p_c)	0.80	1.00	1.00	1.00	0.86	1.00	0.82	1.00
Prob of Max Out (p_x)	1.00	0.00	1.00	0.01	1.00	0.00	0.71	0.13

Left-Turn Movement Data								
Assigned Mvmt	1		3		5		7	
Mvmt Sat Flow, veh/h	1619		1619		1619		1619	

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		2485		2068		3933		2636

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		869		1222		968		741

Left Lane Group Data								
Assigned Mvmt	1	0	3	0	5	0	7	0
Lane Assignment	L (Prot)		L (Prot)		L (Prot)		L (Prot)	

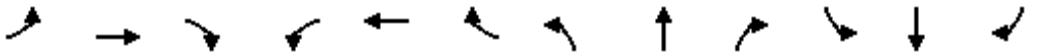
Lanes in Grp	1	0	1	0	1	0	1	0
Grp Vol (v), veh/h	77	0	278	0	95	0	83	0
Grp Sat Flow (s), veh/h/ln	1619	0	1619	0	1619	0	1619	0
Q Serve Time (g_s), s	3.5	0.0	12.5	0.0	4.3	0.0	3.8	0.0
Cycle Q Clear Time (g_c), s	3.5	0.0	12.5	0.0	4.3	0.0	3.8	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	95	0	313	0	118	0	104	0
V/C Ratio (X)	0.81	0.00	0.89	0.00	0.81	0.00	0.80	0.00
Avail Cap (c_a), veh/h	108	0	313	0	119	0	214	0
Upstream Filter (I)	0.74	0.00	1.00	0.00	0.94	0.00	1.00	0.00
Uniform Delay (d1), s/veh	34.9	0.0	29.5	0.0	34.2	0.0	34.6	0.0
Incr Delay (d2), s/veh	25.1	0.0	25.1	0.0	30.4	0.0	13.1	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	60.0	0.0	54.6	0.0	64.6	0.0	47.7	0.0
1st-Term Q (Q1), veh/ln	1.4	0.0	4.7	0.0	1.7	0.0	1.5	0.0
2nd-Term Q (Q2), veh/ln	0.7	0.0	2.2	0.0	1.0	0.0	0.4	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
%ile Back of Q (50%), veh/ln	2.0	0.0	6.9	0.0	2.7	0.0	1.8	0.0
%ile Storage Ratio (RQ%)	0.28	0.00	0.05	0.00	0.33	0.00	0.21	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	1	0	1	0	2	0	1
Grp Vol (v), veh/h	0	307	0	67	0	433	0	207
Grp Sat Flow (s), veh/h/ln	0	1710	0	1710	0	1638	0	1710
Q Serve Time (g_s), s	0.0	9.3	0.0	2.8	0.0	6.6	0.0	8.2
Cycle Q Clear Time (g_c), s	0.0	9.3	0.0	2.8	0.0	6.6	0.0	8.2
Lane Grp Cap (c), veh/h	0	739	0	129	0	1371	0	350
V/C Ratio (X)	0.00	0.42	0.00	0.52	0.00	0.32	0.00	0.59
Avail Cap (c_a), veh/h	0	739	0	410	0	1371	0	515
Upstream Filter (I)	0.00	0.94	0.00	1.00	0.00	0.74	0.00	1.00
Uniform Delay (d1), s/veh	0.0	14.7	0.0	33.4	0.0	14.6	0.0	27.0
Incr Delay (d2), s/veh	0.0	1.6	0.0	3.3	0.0	0.4	0.0	1.6
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	16.3	0.0	36.6	0.0	15.1	0.0	28.6
1st-Term Q (Q1), veh/ln	0.0	3.3	0.0	1.2	0.0	2.3	0.0	3.2
2nd-Term Q (Q2), veh/ln	0.0	0.3	0.0	0.1	0.0	0.1	0.0	0.2

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	3.7	0.0	1.3	0.0	2.4	0.0	3.4
%ile Storage Ratio (RQ%)	0.00	0.10	0.00	0.01	0.00	0.02	0.00	0.02
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R		T+R		T+R		T+R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	299	0	69	0	222	0	207
Grp Sat Flow (s), veh/h/ln	0	1644	0	1580	0	1626	0	1667
Q Serve Time (g_s), s	0.0	9.5	0.0	3.1	0.0	6.9	0.0	8.5
Cycle Q Clear Time (g_c), s	0.0	9.5	0.0	3.1	0.0	6.9	0.0	8.5
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.53	0.00	0.77	0.00	0.60	0.00	0.44
Lane Grp Cap (c), veh/h	0	711	0	119	0	680	0	341
V/C Ratio (X)	0.00	0.42	0.00	0.58	0.00	0.33	0.00	0.61
Avail Cap (c_a), veh/h	0	711	0	379	0	680	0	502
Upstream Filter (I)	0.00	0.94	0.00	1.00	0.00	0.74	0.00	1.00
Uniform Delay (d1), s/veh	0.0	14.8	0.0	33.5	0.0	14.7	0.0	27.1
Incr Delay (d2), s/veh	0.0	1.7	0.0	4.3	0.0	0.9	0.0	1.7
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	16.5	0.0	37.8	0.0	15.6	0.0	28.8
1st-Term Q (Q1), veh/ln	0.0	3.3	0.0	1.2	0.0	2.4	0.0	3.2
2nd-Term Q (Q2), veh/ln	0.0	0.3	0.0	0.1	0.0	0.2	0.0	0.2
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	3.6	0.0	1.3	0.0	2.5	0.0	3.4
%ile Storage Ratio (RQ%)	0.00	0.09	0.00	0.01	0.00	0.03	0.00	0.02
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	28.5
HCM 6th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	336	339	375	485	649	0	0	399	267
Future Volume (veh/h)	0	0	0	336	339	375	485	649	0	0	399	267
Number				3	8	18	5	2	12	1	6	16
Initial Q, veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln				1700	1800	1800	1700	1800	0	0	1800	1900
Adj Flow Rate, veh/h				354	357	395	511	683	0	0	420	281
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence				Yes			Yes			No		
Cap, veh/h				377	391	462	461	1846	0	0	717	338
HCM Platoon Ratio				1.00	2.00	2.00	2.00	2.00	1.00	1.00	2.00	2.00
Prop Arrive On Green				0.37	0.74	0.74	0.57	1.00	0.00	0.00	0.42	0.42
Unsig. Movement Delay												
Ln Grp Delay, s/veh				43.2	0.0	22.3	89.3	0.4	0.0	0.0	28.6	45.2
Ln Grp LOS				D	A	C	F	A	A	A	C	D
Approach Vol, veh/h					1106			1194			701	
Approach Delay, s/veh					33.8			38.5			35.2	
Approach LOS					C			D			D	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2	8		5	6		
Case No		4.0	12.0		2.0	7.0		
Phs Duration (G+Y+Rc), s		58.5	41.5		33.0	25.5		
Change Period (Y+Rc), s		4.5	4.5		4.5	4.5		
Max Green (Gmax), s		52.5	38.5		28.5	19.5		
Max Allow Headway (MAH), s		5.2	5.4		3.8	4.8		
Max Q Clear (g_c+I1), s		2.0	34.5		30.5	17.6		
Green Ext Time (g_e), s		5.6	2.5		0.0	0.8		
Prob of Phs Call (p_c)		1.00	1.00		1.00	1.00		
Prob of Max Out (p_x)		0.00	1.00		1.00	0.00		

Left-Turn Movement Data								
Assigned Mvmt			3		5	1		
Mvmt Sat Flow, veh/h			1020		1619	0		

Through Movement Data								
Assigned Mvmt		2	8			6		
Mvmt Sat Flow, veh/h		3510	1057			3510		

Right-Turn Movement Data								
Assigned Mvmt		12	18			16		
Mvmt Sat Flow, veh/h		0	1248			1610		

Left Lane Group Data								
Assigned Mvmt	0	0	3	0	5	1	0	0
Lane Assignment			L+T		L (Prot)			

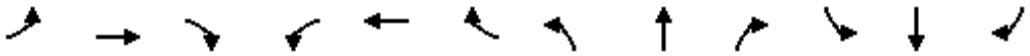
Lanes in Grp	0	0	1	0	1	0	0	0
Grp Vol (v), veh/h	0	0	607	0	511	0	0	0
Grp Sat Flow (s), veh/h/ln	0	0	1749	0	1619	0	0	0
Q Serve Time (g_s), s	0.0	0.0	32.5	0.0	28.5	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	32.5	0.0	28.5	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	21.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	0.00	0.58	0.00	1.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	648	0	461	0	0	0
V/C Ratio (X)	0.00	0.00	0.94	0.00	1.11	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	0	673	0	461	0	0	0
Upstream Filter (I)	0.00	0.00	1.00	0.00	0.68	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	22.7	0.0	21.5	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	20.5	0.0	67.8	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	43.2	0.0	89.3	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	10.9	0.0	6.6	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	3.7	0.0	8.7	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	0.00	1.00	0.00	1.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	14.6	0.0	15.3	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.35	0.00	2.55	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	12.4	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	8	0	0	6	0	0
Lane Assignment		T				T		
Lanes in Grp	0	2	0	0	0	2	0	0
Grp Vol (v), veh/h	0	683	0	0	0	420	0	0
Grp Sat Flow (s), veh/h/ln	0	1710	0	0	0	1710	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	9.4	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	9.4	0.0	0.0
Lane Grp Cap (c), veh/h	0	1846	0	0	0	717	0	0
V/C Ratio (X)	0.00	0.37	0.00	0.00	0.00	0.59	0.00	0.00
Avail Cap (c_a), veh/h	0	1846	0	0	0	717	0	0
Upstream Filter (I)	0.00	0.68	0.00	0.00	0.00	0.83	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	25.7	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.4	0.0	0.0	0.0	2.9	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.4	0.0	0.0	0.0	28.6	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	3.2	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	0.3	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.1	0.0	0.0	0.0	3.5	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.09	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	18	0	0	16	0	0
Lane Assignment			T+R			R		
Lanes in Grp	0	0	1	0	0	1	0	0
Grp Vol (v), veh/h	0	0	499	0	0	281	0	0
Grp Sat Flow (s), veh/h/ln	0	0	1575	0	0	1610	0	0
Q Serve Time (g_s), s	0.0	0.0	22.4	0.0	0.0	15.6	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	22.4	0.0	0.0	15.6	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.00	0.79	0.00	0.00	1.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	583	0	0	338	0	0
V/C Ratio (X)	0.00	0.00	0.86	0.00	0.00	0.83	0.00	0.00
Avail Cap (c_a), veh/h	0	0	607	0	0	338	0	0
Upstream Filter (I)	0.00	0.00	1.00	0.00	0.00	0.83	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	11.1	0.0	0.0	27.4	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	11.2	0.0	0.0	17.7	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	22.3	0.0	0.0	45.2	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	3.4	0.0	0.0	4.5	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	1.8	0.0	0.0	1.7	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	5.3	0.0	0.0	6.2	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.13	0.00	0.00	0.16	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	36.0
HCM 6th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	456	14	630	0	0	0	0	679	160	143	599	0
Future Volume (veh/h)	456	14	630	0	0	0	0	679	160	143	599	0
Number	7	4	14				5	2	12	1	6	16
Initial Q, veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1700	1800	1800				0	1800	1800	1700	1900	0
Adj Flow Rate, veh/h	480	15	663				0	715	168	151	631	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0				0	0	0	0	0	0
Opposing Right Turn Influence	Yes						No			Yes		
Cap, veh/h	597	19	547				0	1054	470	175	1775	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	2.00	2.00	2.00	2.00	1.00
Prop Arrive On Green	0.36	0.36	0.36				0.00	0.62	0.62	0.22	0.98	0.00
Unsig. Movement Delay												
Ln Grp Delay, s/veh	25.0	0.0	131.1				0.0	13.0	10.7	49.0	0.7	0.0
Ln Grp LOS	C	A	F				A	B	B	D	A	A
Approach Vol, veh/h		1158						883			782	
Approach Delay, s/veh		85.8						12.6			10.0	
Approach LOS		F						B			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Case No	2.0	7.0		12.0		4.0		
Phs Duration (G+Y+Rc), s	11.0	23.0		26.0		34.0		
Change Period (Y+Rc), s	4.5	4.5		4.5		4.5		
Max Green (Gmax), s	6.5	18.5		21.5		29.5		
Max Allow Headway (MAH), s	3.8	5.0		5.5		5.2		
Max Q Clear (g_c+I1), s	7.4	10.3		23.5		2.3		
Green Ext Time (g_e), s	0.0	3.4		0.0		4.7		
Prob of Phs Call (p_c)	0.92	1.00		1.00		1.00		
Prob of Max Out (p_x)	1.00	0.00		1.00		0.00		

Left-Turn Movement Data								
Assigned Mvmt	1	5		7				
Mvmt Sat Flow, veh/h	1619	0		1665				

Through Movement Data								
Assigned Mvmt		2		4		6		
Mvmt Sat Flow, veh/h		3510		52		3705		

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		
Mvmt Sat Flow, veh/h		1525		1525		0		

Left Lane Group Data								
Assigned Mvmt	1	5	0	7	0	0	0	0
Lane Assignment	L (Prot)			L+T				

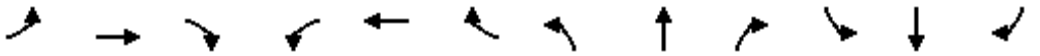
Lanes in Grp	1	0	0	1	0	0	0	0
Grp Vol (v), veh/h	151	0	0	495	0	0	0	0
Grp Sat Flow (s), veh/h/ln	1619	0	0	1717	0	0	0	0
Q Serve Time (g_s), s	5.4	0.0	0.0	15.6	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	5.4	0.0	0.0	15.6	0.0	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	18.5	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	0.97	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	175	0	0	615	0	0	0	0
V/C Ratio (X)	0.86	0.00	0.00	0.80	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	175	0	0	615	0	0	0	0
Upstream Filter (I)	0.74	0.00	0.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	23.1	0.0	0.0	17.4	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	26.0	0.0	0.0	7.7	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	49.0	0.0	0.0	25.0	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	1.7	0.0	0.0	5.4	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	1.3	0.0	0.0	1.3	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00
%ile Back of Q (50%), veh/ln	3.0	0.0	0.0	6.7	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.50	0.00	0.00	0.20	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	0
Lane Assignment		T				T		
Lanes in Grp	0	2	0	0	0	2	0	0
Grp Vol (v), veh/h	0	715	0	0	0	631	0	0
Grp Sat Flow (s), veh/h/ln	0	1710	0	0	0	1805	0	0
Q Serve Time (g_s), s	0.0	8.3	0.0	0.0	0.0	0.3	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	8.3	0.0	0.0	0.0	0.3	0.0	0.0
Lane Grp Cap (c), veh/h	0	1055	0	0	0	1775	0	0
V/C Ratio (X)	0.00	0.68	0.00	0.00	0.00	0.36	0.00	0.00
Avail Cap (c_a), veh/h	0	1055	0	0	0	1775	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	0.74	0.00	0.00
Uniform Delay (d1), s/veh	0.0	9.5	0.0	0.0	0.0	0.3	0.0	0.0
Incr Delay (d2), s/veh	0.0	3.5	0.0	0.0	0.0	0.4	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	13.0	0.0	0.0	0.0	0.7	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	1.9	0.0	0.0	0.0	0.1	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.5	0.0	0.0	0.0	0.1	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	2.4	0.0	0.0	0.0	0.2	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.05	0.00	0.00	0.00	0.01	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	0
Lane Assignment		R		T+R				
Lanes in Grp	0	1	0	1	0	0	0	0
Grp Vol (v), veh/h	0	168	0	663	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	1525	0	1525	0	0	0	0
Q Serve Time (g_s), s	0.0	3.2	0.0	21.5	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	3.2	0.0	21.5	0.0	0.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	470	0	547	0	0	0	0
V/C Ratio (X)	0.00	0.36	0.00	1.21	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	470	0	547	0	0	0	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	8.6	0.0	19.3	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	2.1	0.0	111.9	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	10.7	0.0	131.1	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.9	0.0	6.6	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.3	0.0	17.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	1.1	0.0	23.6	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.02	0.00	0.70	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	29.1	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	41.9
HCM 6th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	340	527	1000	1063	0	0	0	0	271	0	298
Future Volume (veh/h)	0	340	527	1000	1063	0	0	0	0	271	0	298
Number	7	4	14	3	8	18				1	6	16
Initial Q, veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	0	1800	1800	1600	1800	0				1700	1800	1900
Adj Flow Rate, veh/h	0	358	0	1053	1119	0				285	0	314
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95				0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0				0	0	0
Opposing Right Turn Influence	No			Yes						Yes		
Cap, veh/h	0	912		1068	2318	0				381	0	358
HCM Platoon Ratio	1.00	2.00	2.00	2.00	2.00	1.00				1.00	1.00	1.00
Prop Arrive On Green	0.00	0.53	0.00	0.72	1.00	0.00				0.22	0.00	0.22
Unsig. Movement Delay												
Ln Grp Delay, s/veh	0.0	17.6	0.0	32.9	0.5	0.0				39.0	0.0	51.7
Ln Grp LOS	A	B		C	A	A				D	A	D
Approach Vol, veh/h		358			2172						599	
Approach Delay, s/veh		17.6			16.2						45.7	
Approach LOS		B			B						D	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	6		3	4				8
Case No	11.0		2.0	7.0				4.0
Phs Duration (G+Y+Rc), s	24.5		37.0	28.5				65.5
Change Period (Y+Rc), s	4.5		4.5	4.5				4.5
Max Green (Gmax), s	22.5		32.5	21.5				58.5
Max Allow Headway (MAH), s	4.7		3.8	5.2				5.2
Max Q Clear (g_c+I1), s	19.0		33.0	7.6				2.0
Green Ext Time (g_e), s	1.0		0.0	1.9				11.3
Prob of Phs Call (p_c)	1.00		1.00	1.00				1.00
Prob of Max Out (p_x)	1.00		1.00	0.00				0.00

Left-Turn Movement Data												
Assigned Mvmt		1		3	7							
Mvmt Sat Flow, veh/h		1714		2956	0							

Through Movement Data												
Assigned Mvmt		6			4				8			
Mvmt Sat Flow, veh/h		0			3510				3510			

Right-Turn Movement Data												
Assigned Mvmt		16			14				18			
Mvmt Sat Flow, veh/h		1610			1525				0			

Left Lane Group Data												
Assigned Mvmt		1	0	3	7	0	0	0	0			
Lane Assignment		L+T		L (Prot)								

Lanes in Grp	1	0	2	0	0	0	0	0
Grp Vol (v), veh/h	285	0	1053	0	0	0	0	0
Grp Sat Flow (s), veh/h/ln	1714	0	1478	0	0	0	0	0
Q Serve Time (g_s), s	14.0	0.0	31.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	14.0	0.0	31.0	0.0	0.0	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	24.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	381	0	1068	0	0	0	0	0
V/C Ratio (X)	0.75	0.00	0.99	0.00	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	429	0	1068	0	0	0	0	0
Upstream Filter (I)	1.00	0.00	0.75	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	32.7	0.0	12.3	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	6.3	0.0	20.6	0.0	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	39.0	0.0	32.9	0.0	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	5.7	0.0	3.5	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.7	0.0	3.1	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	1.00	1.00	0.00	0.00	0.00	0.00
%ile Back of Q (50%), veh/ln	6.3	0.0	6.6	0.0	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.49	0.00	0.40	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	6	0	0	4	0	0	0	8
Lane Assignment				T				T
Lanes in Grp	0	0	0	2	0	0	0	2
Grp Vol (v), veh/h	0	0	0	358	0	0	0	1119
Grp Sat Flow (s), veh/h/ln	0	0	0	1710	0	0	0	1710
Q Serve Time (g_s), s	0.0	0.0	0.0	5.6	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	5.6	0.0	0.0	0.0	0.0
Lane Grp Cap (c), veh/h	0	0	0	912	0	0	0	2318
V/C Ratio (X)	0.00	0.00	0.00	0.39	0.00	0.00	0.00	0.48
Avail Cap (c_a), veh/h	0	0	0	912	0	0	0	2318
Upstream Filter (I)	0.00	0.00	0.00	0.74	0.00	0.00	0.00	0.75
Uniform Delay (d1), s/veh	0.0	0.0	0.0	16.7	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.9	0.0	0.0	0.0	0.5
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	17.6	0.0	0.0	0.0	0.5
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	1.9	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.2

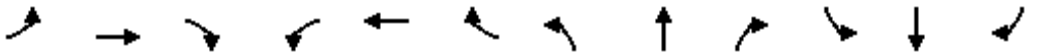
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	1.00	0.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.2
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.01
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	16	0	0	14	0	0	0	18
Lane Assignment	R			R				
Lanes in Grp	1	0	0	1	0	0	0	0
Grp Vol (v), veh/h	314	0	0	0	0	0	0	0
Grp Sat Flow (s), veh/h/ln	1610	0	0	1525	0	0	0	0
Q Serve Time (g_s), s	17.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	17.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	1.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	358	0	0	407	0	0	0	0
V/C Ratio (X)	0.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	403	0	0	407	0	0	0	0
Upstream Filter (I)	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	33.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	17.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	51.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	6.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	1.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	1.00	0.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	8.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	22.0
HCM 6th LOS	C

Notes

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	134	477	0	0	1535	523	451	5	375	0	0	0
Future Volume (veh/h)	134	477	0	0	1535	523	451	5	375	0	0	0
Number	7	4	14	3	8	18	5	2	12			
Initial Q, veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1700	1800	0	0	1800	1800	1600	1800	1900			
Adj Flow Rate, veh/h	141	502	0	0	1616	551	479	0	395			
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95			
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0			
Opposing Right Turn Influence	Yes			No			Yes					
Cap, veh/h	135	2432	0	0	2839	881	576	0	608			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	2.00	1.00	1.00	1.00	1.00			
Prop Arrive On Green	0.17	1.00	0.00	0.00	1.00	0.58	0.19	0.00	0.19			
Unsig. Movement Delay												
Ln Grp Delay, s/veh	123.5	0.2	0.0	0.0	0.8	15.9	43.2	0.0	35.5			
Ln Grp LOS	F	A	A	A	A	B	D	A	D			
Approach Vol, veh/h		643			2167			874				
Approach Delay, s/veh		27.2			4.7			39.7				
Approach LOS		C			A			D				

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2		4			7	8
Case No		9.0		4.0			2.0	7.0
Phs Duration (G+Y+Rc), s		21.5		68.5			12.0	56.5
Change Period (Y+Rc), s		4.5		4.5			4.5	4.5
Max Green (Gmax), s		19.4		61.6			7.5	49.6
Max Allow Headway (MAH), s		3.9		5.2			3.8	4.9
Max Q Clear (g_c+I1), s		15.6		2.0			9.5	23.5
Green Ext Time (g_e), s		1.4		3.9			0.0	17.0
Prob of Phs Call (p_c)		1.00		1.00			0.97	1.00
Prob of Max Out (p_x)		1.00		0.00			1.00	0.00

Left-Turn Movement Data								
Assigned Mvmt		5					7	3
Mvmt Sat Flow, veh/h		3048					1619	0

Through Movement Data								
Assigned Mvmt		2		4				8
Mvmt Sat Flow, veh/h		0		3510				5076

Right-Turn Movement Data								
Assigned Mvmt		12		14				18
Mvmt Sat Flow, veh/h		3220		0				1525

Left Lane Group Data								
Assigned Mvmt	0	5	0	0	0	0	7	3
Lane Assignment		L					L (Prot)	

Lanes in Grp	0	2	0	0	0	0	1	0
Grp Vol (v), veh/h	0	479	0	0	0	0	141	0
Grp Sat Flow (s), veh/h/ln	0	1524	0	0	0	0	1619	0
Q Serve Time (g_s), s	0.0	13.6	0.0	0.0	0.0	0.0	7.5	0.0
Cycle Q Clear Time (g_c), s	0.0	13.6	0.0	0.0	0.0	0.0	7.5	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	1524	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	52.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	0	576	0	0	0	0	135	0
V/C Ratio (X)	0.00	0.83	0.00	0.00	0.00	0.00	1.05	0.00
Avail Cap (c_a), veh/h	0	657	0	0	0	0	135	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	0.00	0.90	0.00
Uniform Delay (d1), s/veh	0.0	35.1	0.0	0.0	0.0	0.0	37.5	0.0
Incr Delay (d2), s/veh	0.0	8.0	0.0	0.0	0.0	0.0	86.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	43.2	0.0	0.0	0.0	0.0	123.5	0.0
1st-Term Q (Q1), veh/ln	0.0	4.9	0.0	0.0	0.0	0.0	2.7	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.6	0.0	0.0	0.0	0.0	3.2	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	0.00	0.00	0.00	1.00	1.00
%ile Back of Q (50%), veh/ln	0.0	5.6	0.0	0.0	0.0	0.0	5.9	0.0
%ile Storage Ratio (RQ%)	0.00	0.26	0.00	0.00	0.00	0.00	0.36	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	1.5	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	0	0	8
Lane Assignment				T				T
Lanes in Grp	0	0	0	2	0	0	0	3
Grp Vol (v), veh/h	0	0	0	502	0	0	0	1616
Grp Sat Flow (s), veh/h/ln	0	0	0	1710	0	0	0	1638
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lane Grp Cap (c), veh/h	0	0	0	2432	0	0	0	2839
V/C Ratio (X)	0.00	0.00	0.00	0.21	0.00	0.00	0.00	0.57
Avail Cap (c_a), veh/h	0	0	0	2432	0	0	0	2839
Upstream Filter (I)	0.00	0.00	0.00	0.90	0.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.8
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.8
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.2

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.2
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	0	0	18
Lane Assignment		R						R
Lanes in Grp	0	2	0	0	0	0	0	1
Grp Vol (v), veh/h	0	395	0	0	0	0	0	551
Grp Sat Flow (s), veh/h/ln	0	1610	0	0	0	0	0	1525
Q Serve Time (g_s), s	0.0	10.2	0.0	0.0	0.0	0.0	0.0	21.5
Cycle Q Clear Time (g_c), s	0.0	10.2	0.0	0.0	0.0	0.0	0.0	21.5
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	0.00	0.00	0.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	608	0	0	0	0	0	881
V/C Ratio (X)	0.00	0.65	0.00	0.00	0.00	0.00	0.00	0.63
Avail Cap (c_a), veh/h	0	694	0	0	0	0	0	881
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	33.7	0.0	0.0	0.0	0.0	0.0	12.6
Incr Delay (d2), s/veh	0.0	1.8	0.0	0.0	0.0	0.0	0.0	3.3
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	35.5	0.0	0.0	0.0	0.0	0.0	15.9
1st-Term Q (Q1), veh/ln	0.0	3.9	0.0	0.0	0.0	0.0	0.0	6.6
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.8
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	4.1	0.0	0.0	0.0	0.0	0.0	7.4
%ile Storage Ratio (RQ%)	0.00	0.19	0.00	0.00	0.00	0.00	0.00	0.85
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	16.9
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	63	241	23	85	419	386	18	7	40	336	253	380
Future Volume (veh/h)	63	241	23	85	419	386	18	7	40	336	253	380
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1900
Adj Flow Rate, veh/h	66	254	24	89	441	406	19	7	42	354	266	400
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	81	871	388	110	490	415	34	434	368	383	781	696
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	1.33	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.10	0.51	0.51	0.14	0.54	0.36	0.02	0.24	0.24	0.24	0.46	0.46
Unsig. Movement Delay												
Ln Grp Delay, s/veh	70.1	17.6	16.7	42.9	27.0	48.2	57.2	26.1	27.3	61.3	16.9	21.4
Ln Grp LOS	E	B	B	D	C	D	E	C	C	E	B	C
Approach Vol, veh/h		344			936			68			1020	
Approach Delay, s/veh		27.6			37.7			35.5			34.1	
Approach LOS		C			D			D			C	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Case No	2.0	3.0	2.0	3.0	2.0	4.0	2.0	3.0
Phs Duration (G+Y+Rc), s	25.8	26.2	10.6	27.4	6.4	45.6	9.0	29.0
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green (Gmax), s	21.5	20.5	10.0	20.0	5.0	37.0	5.5	24.5
Max Allow Headway (MAH), s	3.8	4.2	3.8	5.1	3.8	5.4	3.8	4.7
Max Q Clear (g_c+I1), s	21.2	3.9	6.8	5.9	3.0	19.4	5.6	25.7
Green Ext Time (g_e), s	0.0	0.1	0.0	1.4	0.0	4.2	0.0	0.0
Prob of Phs Call (p_c)	1.00	1.00	0.89	1.00	0.38	1.00	0.81	1.00
Prob of Max Out (p_x)	1.00	0.00	1.00	0.02	1.00	0.00	1.00	1.00

Left-Turn Movement Data								
Assigned Mvmt	1		3		5		7	
Mvmt Sat Flow, veh/h	1619		1619		1619		1619	

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		1800		3420		1710		1800

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1525		1525		1525		1525

Left Lane Group Data								
Assigned Mvmt	1	0	3	0	5	0	7	0
Lane Assignment	L (Prot)		L (Prot)		L (Prot)		L (Prot)	

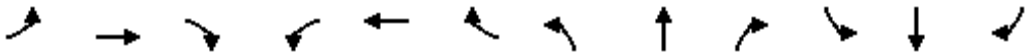
Lanes in Grp	1	0	1	0	1	0	1	0
Grp Vol (v), veh/h	354	0	89	0	19	0	66	0
Grp Sat Flow (s), veh/h/ln	1619	0	1619	0	1619	0	1619	0
Q Serve Time (g_s), s	19.2	0.0	4.8	0.0	1.0	0.0	3.6	0.0
Cycle Q Clear Time (g_c), s	19.2	0.0	4.8	0.0	1.0	0.0	3.6	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	383	0	110	0	34	0	81	0
V/C Ratio (X)	0.93	0.00	0.81	0.00	0.56	0.00	0.81	0.00
Avail Cap (c_a), veh/h	387	0	180	0	90	0	99	0
Upstream Filter (I)	1.00	0.00	0.32	0.00	1.00	0.00	0.89	0.00
Uniform Delay (d1), s/veh	33.6	0.0	38.3	0.0	43.6	0.0	40.1	0.0
Incr Delay (d2), s/veh	27.7	0.0	4.6	0.0	13.5	0.0	30.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	61.3	0.0	42.9	0.0	57.2	0.0	70.1	0.0
1st-Term Q (Q1), veh/ln	7.3	0.0	1.8	0.0	0.4	0.0	1.4	0.0
2nd-Term Q (Q2), veh/ln	2.9	0.0	0.1	0.0	0.1	0.0	0.7	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
%ile Back of Q (50%), veh/ln	10.3	0.0	1.9	0.0	0.5	0.0	2.0	0.0
%ile Storage Ratio (RQ%)	2.57	0.00	0.08	0.00	0.06	0.00	0.20	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	1	0	2	0	1	0	1
Grp Vol (v), veh/h	0	7	0	254	0	266	0	441
Grp Sat Flow (s), veh/h/ln	0	1800	0	1710	0	1710	0	1800
Q Serve Time (g_s), s	0.0	0.3	0.0	3.9	0.0	9.0	0.0	19.7
Cycle Q Clear Time (g_c), s	0.0	0.3	0.0	3.9	0.0	9.0	0.0	19.7
Lane Grp Cap (c), veh/h	0	434	0	871	0	781	0	490
V/C Ratio (X)	0.00	0.02	0.00	0.29	0.00	0.34	0.00	0.90
Avail Cap (c_a), veh/h	0	434	0	871	0	781	0	490
Upstream Filter (I)	0.00	1.00	0.00	0.89	0.00	1.00	0.00	0.32
Uniform Delay (d1), s/veh	0.0	26.0	0.0	17.4	0.0	15.7	0.0	19.4
Incr Delay (d2), s/veh	0.0	0.1	0.0	0.2	0.0	1.2	0.0	7.6
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	26.1	0.0	17.6	0.0	16.9	0.0	27.0
1st-Term Q (Q1), veh/ln	0.0	0.1	0.0	1.4	0.0	3.4	0.0	5.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.3	0.0	1.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.1	0.0	1.4	0.0	3.6	0.0	6.0
%ile Storage Ratio (RQ%)	0.00	0.01	0.00	0.02	0.00	0.62	0.00	0.25
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		R		T+R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	42	0	24	0	400	0	406
Grp Sat Flow (s), veh/h/ln	0	1525	0	1525	0	1525	0	1525
Q Serve Time (g_s), s	0.0	1.9	0.0	0.7	0.0	17.4	0.0	23.7
Cycle Q Clear Time (g_c), s	0.0	1.9	0.0	0.7	0.0	17.4	0.0	23.7
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	368	0	388	0	696	0	415
V/C Ratio (X)	0.00	0.11	0.00	0.06	0.00	0.57	0.00	0.98
Avail Cap (c_a), veh/h	0	368	0	388	0	696	0	415
Upstream Filter (I)	0.00	1.00	0.00	0.89	0.00	1.00	0.00	0.32
Uniform Delay (d1), s/veh	0.0	26.6	0.0	16.6	0.0	18.0	0.0	28.4
Incr Delay (d2), s/veh	0.0	0.6	0.0	0.1	0.0	3.4	0.0	19.8
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	27.3	0.0	16.7	0.0	21.4	0.0	48.2
1st-Term Q (Q1), veh/ln	0.0	0.7	0.0	0.3	0.0	5.8	0.0	7.6
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	0.7	0.0	2.3
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.8	0.0	0.3	0.0	6.5	0.0	9.9
%ile Storage Ratio (RQ%)	0.00	0.04	0.00	0.00	0.00	1.11	0.00	0.41
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	34.6
HCM 6th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	152	345	133	34	690	363	63	356	28	155	10	170
Future Volume (veh/h)	152	345	133	34	690	363	63	356	28	155	10	170
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1600	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1900
Adj Flow Rate, veh/h	160	363	140	36	726	382	66	375	29	163	11	179
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	164	782	663	53	742	628	314	738	329	189	34	555
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.11	0.87	0.87	0.07	0.82	0.82	0.22	0.22	0.22	0.12	0.38	0.38
Unsig. Movement Delay												
Ln Grp Delay, s/veh	92.0	3.9	3.5	55.4	34.4	6.9	31.0	33.6	28.7	70.3	0.0	21.0
Ln Grp LOS	F	A	A	E	C	A	C	C	C	E	A	C
Approach Vol, veh/h		663			1144			470			353	
Approach Delay, s/veh		25.1			25.9			32.9			43.8	
Approach LOS		C			C			C			D	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4		6	7	8
Case No	2.0	5.3	2.0	3.0		4.0	2.0	3.0
Phs Duration (G+Y+Rc), s	15.0	23.9	7.5	43.6		38.9	9.5	41.6
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5		4.5	4.5	4.5
Max Green (Gmax), s	10.5	18.0	6.0	37.5		33.0	5.0	38.5
Max Allow Headway (MAH), s	3.8	5.1	3.8	4.9		5.6	3.8	4.9
Max Q Clear (g_c+I1), s	10.9	10.7	4.0	6.0		9.8	6.9	35.0
Green Ext Time (g_e), s	0.0	1.6	0.0	2.9		1.1	0.0	2.0
Prob of Phs Call (p_c)	0.98	1.00	0.59	1.00		1.00	0.98	1.00
Prob of Max Out (p_x)	1.00	0.00	1.00	0.00		0.00	1.00	1.00

Left-Turn Movement Data								
Assigned Mvmt	1	5	3				7	
Mvmt Sat Flow, veh/h	1619	1085	1619				2956	

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		3420		1800		89		1800

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1525		1525		1450		1525

Left Lane Group Data								
Assigned Mvmt	1	5	3	0	0	0	7	0
Lane Assignment	L (Prot)	L	L (Prot)				L (Prot)	

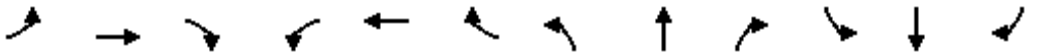
Lanes in Grp	1	1	1	0	0	0	2	0
Grp Vol (v), veh/h	163	66	36	0	0	0	160	0
Grp Sat Flow (s), veh/h/ln	1619	1085	1619	0	0	0	1478	0
Q Serve Time (g_s), s	8.9	4.6	2.0	0.0	0.0	0.0	4.9	0.0
Cycle Q Clear Time (g_c), s	8.9	4.6	2.0	0.0	0.0	0.0	4.9	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	1085	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	19.4	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	19.4	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	4.6	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	1.00	1.00	0.00	0.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	189	314	53	0	0	0	164	0
V/C Ratio (X)	0.86	0.21	0.67	0.00	0.00	0.00	0.97	0.00
Avail Cap (c_a), veh/h	189	314	108	0	0	0	164	0
Upstream Filter (I)	1.00	1.00	1.00	0.00	0.00	0.00	0.72	0.00
Uniform Delay (d1), s/veh	39.0	29.5	41.6	0.0	0.0	0.0	39.9	0.0
Incr Delay (d2), s/veh	31.3	1.5	13.8	0.0	0.0	0.0	52.1	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	70.3	31.0	55.4	0.0	0.0	0.0	92.0	0.0
1st-Term Q (Q1), veh/ln	3.5	1.2	0.8	0.0	0.0	0.0	1.6	0.0
2nd-Term Q (Q2), veh/ln	1.6	0.1	0.2	0.0	0.0	0.0	1.2	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	1.00	1.00	0.00	0.00	0.00	1.00	0.00
%ile Back of Q (50%), veh/ln	5.1	1.3	1.0	0.0	0.0	0.0	2.8	0.0
%ile Storage Ratio (RQ%)	0.62	0.22	0.01	0.00	0.00	0.00	0.24	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T				T
Lanes in Grp	0	2	0	1	0	0	0	1
Grp Vol (v), veh/h	0	375	0	363	0	0	0	726
Grp Sat Flow (s), veh/h/ln	0	1710	0	1800	0	0	0	1800
Q Serve Time (g_s), s	0.0	8.7	0.0	4.0	0.0	0.0	0.0	33.0
Cycle Q Clear Time (g_c), s	0.0	8.7	0.0	4.0	0.0	0.0	0.0	33.0
Lane Grp Cap (c), veh/h	0	738	0	782	0	0	0	742
V/C Ratio (X)	0.00	0.51	0.00	0.46	0.00	0.00	0.00	0.98
Avail Cap (c_a), veh/h	0	738	0	782	0	0	0	770
Upstream Filter (I)	0.00	1.00	0.00	0.72	0.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	31.1	0.0	3.6	0.0	0.0	0.0	7.6
Incr Delay (d2), s/veh	0.0	2.5	0.0	0.3	0.0	0.0	0.0	26.8
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	33.6	0.0	3.9	0.0	0.0	0.0	34.4
1st-Term Q (Q1), veh/ln	0.0	3.5	0.0	1.0	0.0	0.0	0.0	2.9
2nd-Term Q (Q2), veh/ln	0.0	0.3	0.0	0.1	0.0	0.0	0.0	5.5

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	3.8	0.0	1.1	0.0	0.0	0.0	8.4
%ile Storage Ratio (RQ%)	0.00	0.33	0.00	0.04	0.00	0.00	0.00	0.10
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		R		T+R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	29	0	140	0	190	0	382
Grp Sat Flow (s), veh/h/ln	0	1525	0	1525	0	1539	0	1525
Q Serve Time (g_s), s	0.0	1.4	0.0	1.3	0.0	7.8	0.0	7.9
Cycle Q Clear Time (g_c), s	0.0	1.4	0.0	1.3	0.0	7.8	0.0	7.9
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	0.94	0.00	1.00
Lane Grp Cap (c), veh/h	0	329	0	663	0	589	0	628
V/C Ratio (X)	0.00	0.09	0.00	0.21	0.00	0.32	0.00	0.61
Avail Cap (c_a), veh/h	0	329	0	663	0	589	0	653
Upstream Filter (I)	0.00	1.00	0.00	0.72	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	28.2	0.0	3.4	0.0	19.6	0.0	5.4
Incr Delay (d2), s/veh	0.0	0.5	0.0	0.1	0.0	1.5	0.0	1.5
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	28.7	0.0	3.5	0.0	21.0	0.0	6.9
1st-Term Q (Q1), veh/ln	0.0	0.5	0.0	0.4	0.0	2.7	0.0	1.5
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.3
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.5	0.0	0.4	0.0	3.0	0.0	1.7
%ile Storage Ratio (RQ%)	0.00	0.19	0.00	0.02	0.00	0.36	0.00	0.02
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	29.3
HCM 6th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	389	10	422	498	727	0	0	200	400
Future Volume (veh/h)	0	0	0	389	10	422	498	727	0	0	200	400
Number				3	8	18	5	2	12	1	6	16
Initial Q, veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln				1700	1800	1800	1700	1800	0	0	1800	1900
Adj Flow Rate, veh/h				409	11	444	524	765	0	0	211	421
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence				Yes			Yes			No		
Cap, veh/h				428	12	391	536	2159	0	0	1198	392
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green				0.26	0.26	0.26	0.33	0.63	0.00	0.00	0.24	0.24
Unsig. Movement Delay												
Ln Grp Delay, s/veh				60.8	0.0	117.7	45.1	7.2	0.0	0.0	24.2	91.3
Ln Grp LOS				E	A	F	D	A	A	A	C	F
Approach Vol, veh/h					864			1289			632	
Approach Delay, s/veh					90.0			22.6			68.9	
Approach LOS					F			C			E	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2	8		5	6		
Case No		4.0	11.0		2.0	7.0		
Phs Duration (G+Y+Rc), s		55.0	25.0		31.0	24.0		
Change Period (Y+Rc), s		4.5	4.5		4.5	4.5		
Max Green (Gmax), s		50.5	20.5		26.5	19.5		
Max Allow Headway (MAH), s		5.2	4.7		3.8	4.4		
Max Q Clear (g_c+I1), s		10.5	22.5		27.6	21.5		
Green Ext Time (g_e), s		6.3	0.0		0.0	0.0		
Prob of Phs Call (p_c)		1.00	1.00		1.00	1.00		
Prob of Max Out (p_x)		0.00	1.00		1.00	0.00		

Left-Turn Movement Data								
Assigned Mvmt			3		5	1		
Mvmt Sat Flow, veh/h			1671		1619	0		

Through Movement Data								
Assigned Mvmt		2	8			6		
Mvmt Sat Flow, veh/h		3510	45			5076		

Right-Turn Movement Data								
Assigned Mvmt		12	18			16		
Mvmt Sat Flow, veh/h		0	1525			1610		

Left Lane Group Data								
Assigned Mvmt	0	0	3	0	5	1	0	0
Lane Assignment			L+T		L (Prot)			

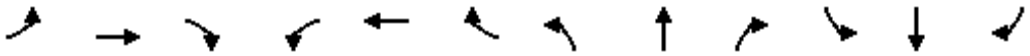
Lanes in Grp	0	0	1	0	1	0	0	0
Grp Vol (v), veh/h	0	0	420	0	524	0	0	0
Grp Sat Flow (s), veh/h/ln	0	0	1716	0	1619	0	0	0
Q Serve Time (g_s), s	0.0	0.0	19.3	0.0	25.6	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	19.3	0.0	25.6	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	19.5	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	0.00	0.97	0.00	1.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	440	0	536	0	0	0
V/C Ratio (X)	0.00	0.00	0.95	0.00	0.98	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	0	440	0	536	0	0	0
Upstream Filter (I)	0.00	0.00	1.00	0.00	0.38	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	29.3	0.0	26.4	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	31.5	0.0	18.7	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	60.8	0.0	45.1	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	7.6	0.0	9.3	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	3.9	0.0	2.8	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	0.00	1.00	0.00	1.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	11.4	0.0	12.1	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.24	0.00	1.10	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	8	0	0	6	0	0
Lane Assignment		T				T		
Lanes in Grp	0	2	0	0	0	3	0	0
Grp Vol (v), veh/h	0	765	0	0	0	211	0	0
Grp Sat Flow (s), veh/h/ln	0	1710	0	0	0	1638	0	0
Q Serve Time (g_s), s	0.0	8.5	0.0	0.0	0.0	2.7	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	8.5	0.0	0.0	0.0	2.7	0.0	0.0
Lane Grp Cap (c), veh/h	0	2159	0	0	0	1198	0	0
V/C Ratio (X)	0.00	0.35	0.00	0.00	0.00	0.18	0.00	0.00
Avail Cap (c_a), veh/h	0	2159	0	0	0	1198	0	0
Upstream Filter (I)	0.00	0.38	0.00	0.00	0.00	0.78	0.00	0.00
Uniform Delay (d1), s/veh	0.0	7.0	0.0	0.0	0.0	23.9	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.2	0.0	0.0	0.0	0.3	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	7.2	0.0	0.0	0.0	24.2	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	2.6	0.0	0.0	0.0	1.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	2.7	0.0	0.0	0.0	1.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.24	0.00	0.00	0.00	0.02	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	18	0	0	16	0	0
Lane Assignment			R			R		
Lanes in Grp	0	0	1	0	0	1	0	0
Grp Vol (v), veh/h	0	0	444	0	0	421	0	0
Grp Sat Flow (s), veh/h/ln	0	0	1525	0	0	1610	0	0
Q Serve Time (g_s), s	0.0	0.0	20.5	0.0	0.0	19.5	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	20.5	0.0	0.0	19.5	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	391	0	0	392	0	0
V/C Ratio (X)	0.00	0.00	1.14	0.00	0.00	1.07	0.00	0.00
Avail Cap (c_a), veh/h	0	0	391	0	0	392	0	0
Upstream Filter (I)	0.00	0.00	1.00	0.00	0.00	0.78	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	29.8	0.0	0.0	30.3	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	87.9	0.0	0.0	61.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	117.7	0.0	0.0	91.3	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	7.2	0.0	0.0	7.2	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	9.5	0.0	0.0	6.7	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	16.7	0.0	0.0	13.9	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.34	0.00	0.00	0.30	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	13.3	0.0	0.0	7.1	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.3	0.0	0.0	0.3	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	54.0
HCM 6th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	374	8	386	0	0	0	0	868	473	289	553	0
Future Volume (veh/h)	374	8	386	0	0	0	0	868	473	289	553	0
Number	7	4	14				5	2	12	1	6	16
Initial Q, veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1700	1800	1800				0	1800	1800	1700	1900	0
Adj Flow Rate, veh/h	394	8	406				0	914	498	304	582	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0				0	0	0	0	0	0
Opposing Right Turn Influence	Yes						No			Yes		
Cap, veh/h	346	7	356				0	1053	331	315	1577	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.44	0.44	0.44				0.00	0.22	0.22	0.19	0.46	0.00
Unsig. Movement Delay												
Ln Grp Delay, s/veh	104.7	0.0	0.0				0.0	43.7	278.5	77.1	16.4	0.0
Ln Grp LOS	F	A	A				A	D	F	E	B	A
Approach Vol, veh/h		808						1412			886	
Approach Delay, s/veh		104.7						126.5			37.2	
Approach LOS		F						F			D	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Case No	2.0	7.0		12.0		4.0		
Phs Duration (G+Y+Rc), s	22.0	24.0		44.0		46.0		
Change Period (Y+Rc), s	4.5	4.5		4.5		4.5		
Max Green (Gmax), s	17.5	19.5		39.5		41.5		
Max Allow Headway (MAH), s	3.7	4.5		5.0		4.8		
Max Q Clear (g_c+I1), s	18.8	21.5		41.5		11.9		
Green Ext Time (g_e), s	0.0	0.0		0.0		3.6		
Prob of Phs Call (p_c)	1.00	1.00		1.00		1.00		
Prob of Max Out (p_x)	1.00	0.00		1.00		0.00		

Left-Turn Movement Data								
Assigned Mvmt	1	5		7				
Mvmt Sat Flow, veh/h	1619	0		787				

Through Movement Data								
Assigned Mvmt		2		4		6		
Mvmt Sat Flow, veh/h		5040		16		3610		

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		
Mvmt Sat Flow, veh/h		1525		811		0		

Left Lane Group Data								
Assigned Mvmt	1	5	0	7	0	0	0	0
Lane Assignment	L (Prot)			L+T+R				

Lanes in Grp	1	0	0	1	0	0	0	0
Grp Vol (v), veh/h	304	0	0	808	0	0	0	0
Grp Sat Flow (s), veh/h/ln	1619	0	0	1615	0	0	0	0
Q Serve Time (g_s), s	16.8	0.0	0.0	39.5	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	16.8	0.0	0.0	39.5	0.0	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	19.5	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	0.49	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	315	0	0	709	0	0	0	0
V/C Ratio (X)	0.97	0.00	0.00	1.14	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	315	0	0	709	0	0	0	0
Upstream Filter (I)	0.99	0.00	0.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	36.0	0.0	0.0	25.3	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	41.1	0.0	0.0	79.5	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	77.1	0.0	0.0	104.7	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	6.1	0.0	0.0	12.9	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	3.6	0.0	0.0	15.6	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00
%ile Back of Q (50%), veh/ln	9.7	0.0	0.0	28.6	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.89	0.00	0.00	0.49	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	24.8	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	0
Lane Assignment		T				T		
Lanes in Grp	0	3	0	0	0	2	0	0
Grp Vol (v), veh/h	0	914	0	0	0	582	0	0
Grp Sat Flow (s), veh/h/ln	0	1620	0	0	0	1710	0	0
Q Serve Time (g_s), s	0.0	16.3	0.0	0.0	0.0	9.9	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	16.3	0.0	0.0	0.0	9.9	0.0	0.0
Lane Grp Cap (c), veh/h	0	1053	0	0	0	1577	0	0
V/C Ratio (X)	0.00	0.87	0.00	0.00	0.00	0.37	0.00	0.00
Avail Cap (c_a), veh/h	0	1053	0	0	0	1577	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	0.99	0.00	0.00
Uniform Delay (d1), s/veh	0.0	34.0	0.0	0.0	0.0	15.7	0.0	0.0
Incr Delay (d2), s/veh	0.0	9.7	0.0	0.0	0.0	0.7	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	43.7	0.0	0.0	0.0	16.4	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	5.9	0.0	0.0	0.0	3.4	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.9	0.0	0.0	0.0	0.1	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	6.9	0.0	0.0	0.0	3.5	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.22	0.00	0.00	0.00	0.32	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	0
Lane Assignment		R						
Lanes in Grp	0	1	0	0	0	0	0	0
Grp Vol (v), veh/h	0	498	0	0	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	1525	0	0	0	0	0	0
Q Serve Time (g_s), s	0.0	19.5	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	19.5	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	0.50	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	331	0	0	0	0	0	0
V/C Ratio (X)	0.00	1.51	0.00	0.00	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	331	0	0	0	0	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	35.3	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	243.2	0.0	0.0	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	278.5	0.0	0.0	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	6.7	0.0	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	22.3	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	29.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.92	0.00	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	41.9	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	95.4
HCM 6th LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	76	739	73	215	317	178	127	616	575	235	344	45
Future Volume (veh/h)	76	739	73	215	317	178	127	616	575	235	344	45
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1900
Adj Flow Rate, veh/h	80	778	77	226	334	187	134	648	605	247	362	47
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	63	821	81	230	776	426	243	944	638	277	905	117
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.04	0.26	0.26	0.14	0.36	0.36	0.15	0.28	0.28	0.17	0.30	0.30
Unsig. Movement Delay												
Ln Grp Delay, s/veh	205.2	73.0	72.7	90.7	29.2	29.4	54.0	41.9	54.6	81.1	36.0	36.0
Ln Grp LOS	F	E	E	F	C	C	D	D	D	F	D	D
Approach Vol, veh/h		935			747			1387			656	
Approach Delay, s/veh		84.2			47.9			48.6			53.0	
Approach LOS		F			D			D			D	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Case No	2.0	3.0	2.0	4.0	2.0	4.0	2.0	4.0
Phs Duration (G+Y+Rc), s	25.0	37.6	21.5	35.8	22.5	40.1	9.2	48.2
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green (Gmax), s	20.5	26.5	23.5	31.5	18.0	29.0	18.0	37.0
Max Allow Headway (MAH), s	3.7	4.4	3.7	4.8	3.7	4.8	3.7	4.9
Max Q Clear (g_c+I1), s	17.9	35.1	16.7	31.2	9.2	13.5	4.7	16.5
Green Ext Time (g_e), s	0.2	0.0	0.3	0.2	0.2	1.8	0.1	2.7
Prob of Phs Call (p_c)	1.00	1.00	1.00	1.00	1.00	1.00	0.93	1.00
Prob of Max Out (p_x)	0.00	0.00	0.09	1.00	0.00	0.00	0.00	0.01

Left-Turn Movement Data								
Assigned Mvmt	1		3		5		7	
Mvmt Sat Flow, veh/h	1619		1619		1619		1619	

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		3420		3143		3047		2131

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1525		311		393		1169

Left Lane Group Data								
Assigned Mvmt	1	0	3	0	5	0	7	0
Lane Assignment	L (Prot)		L (Prot)		L (Prot)		L (Prot)	

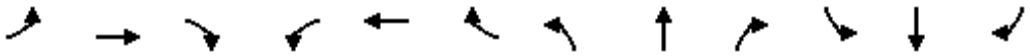
Lanes in Grp	1	0	1	0	1	0	1	0
Grp Vol (v), veh/h	247	0	226	0	134	0	80	0
Grp Sat Flow (s), veh/h/ln	1619	0	1619	0	1619	0	1619	0
Q Serve Time (g_s), s	17.9	0.0	16.7	0.0	9.2	0.0	4.7	0.0
Cycle Q Clear Time (g_c), s	17.9	0.0	16.7	0.0	9.2	0.0	4.7	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	277	0	230	0	243	0	63	0
V/C Ratio (X)	0.89	0.00	0.98	0.00	0.55	0.00	1.27	0.00
Avail Cap (c_a), veh/h	277	0	317	0	243	0	243	0
Upstream Filter (I)	1.00	0.00	0.96	0.00	0.76	0.00	1.00	0.00
Uniform Delay (d1), s/veh	48.7	0.0	51.4	0.0	47.3	0.0	57.7	0.0
Incr Delay (d2), s/veh	32.5	0.0	39.3	0.0	6.7	0.0	147.6	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	81.1	0.0	90.7	0.0	54.0	0.0	205.2	0.0
1st-Term Q (Q1), veh/ln	7.0	0.0	6.5	0.0	3.6	0.0	1.8	0.0
2nd-Term Q (Q2), veh/ln	2.5	0.0	2.5	0.0	0.5	0.0	2.6	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
%ile Back of Q (50%), veh/ln	9.4	0.0	9.0	0.0	4.0	0.0	4.4	0.0
%ile Storage Ratio (RQ%)	0.15	0.00	0.09	0.00	0.20	0.00	0.06	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	4.3	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	2	0	1	0	1	0	1
Grp Vol (v), veh/h	0	648	0	423	0	202	0	267
Grp Sat Flow (s), veh/h/ln	0	1710	0	1710	0	1710	0	1710
Q Serve Time (g_s), s	0.0	20.3	0.0	29.2	0.0	11.3	0.0	14.1
Cycle Q Clear Time (g_c), s	0.0	20.3	0.0	29.2	0.0	11.3	0.0	14.1
Lane Grp Cap (c), veh/h	0	944	0	447	0	508	0	623
V/C Ratio (X)	0.00	0.69	0.00	0.95	0.00	0.40	0.00	0.43
Avail Cap (c_a), veh/h	0	944	0	449	0	508	0	623
Upstream Filter (I)	0.00	0.76	0.00	1.00	0.00	1.00	0.00	0.96
Uniform Delay (d1), s/veh	0.0	38.8	0.0	43.5	0.0	33.6	0.0	28.7
Incr Delay (d2), s/veh	0.0	3.1	0.0	29.5	0.0	2.3	0.0	0.4
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	41.9	0.0	73.0	0.0	36.0	0.0	29.2
1st-Term Q (Q1), veh/ln	0.0	8.1	0.0	11.7	0.0	4.5	0.0	5.5
2nd-Term Q (Q2), veh/ln	0.0	0.4	0.0	3.7	0.0	0.3	0.0	0.1

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	8.5	0.0	15.4	0.0	4.8	0.0	5.6
%ile Storage Ratio (RQ%)	0.00	0.43	0.00	0.21	0.00	0.08	0.00	0.05
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		T+R		T+R		T+R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	605	0	432	0	207	0	254
Grp Sat Flow (s), veh/h/ln	0	1525	0	1744	0	1729	0	1590
Q Serve Time (g_s), s	0.0	33.1	0.0	29.2	0.0	11.5	0.0	14.5
Cycle Q Clear Time (g_c), s	0.0	33.1	0.0	29.2	0.0	11.5	0.0	14.5
Prot RT Sat Flow (s_R), veh/h/ln	0.0	1525.4	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	17.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	0.18	0.00	0.23	0.00	0.74
Lane Grp Cap (c), veh/h	0	638	0	456	0	513	0	579
V/C Ratio (X)	0.00	0.95	0.00	0.95	0.00	0.40	0.00	0.44
Avail Cap (c_a), veh/h	0	638	0	458	0	513	0	579
Upstream Filter (I)	0.00	0.76	0.00	1.00	0.00	1.00	0.00	0.96
Uniform Delay (d1), s/veh	0.0	33.7	0.0	43.5	0.0	33.7	0.0	28.9
Incr Delay (d2), s/veh	0.0	20.9	0.0	29.2	0.0	2.3	0.0	0.5
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	54.6	0.0	72.7	0.0	36.0	0.0	29.4
1st-Term Q (Q1), veh/ln	0.0	15.7	0.0	12.0	0.0	4.6	0.0	5.3
2nd-Term Q (Q2), veh/ln	0.0	3.7	0.0	3.7	0.0	0.3	0.0	0.1
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	19.4	0.0	15.7	0.0	5.0	0.0	5.3
%ile Storage Ratio (RQ%)	0.00	0.98	0.00	0.21	0.00	0.08	0.00	0.05
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	58.1
HCM 6th LOS	E



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	410	30	361	10	4	17	221	945	4	7	568	80
Future Volume (veh/h)	410	30	361	10	4	17	221	945	4	7	568	80
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1600	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1900
Adj Flow Rate, veh/h	432	32	0	11	4	18	233	995	4	7	598	84
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	462	468		119	30	66	253	1963	8	15	1249	175
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.16	0.26	0.00	0.05	0.05	0.05	0.16	0.56	0.56	0.01	0.41	0.41
Unsig. Movement Delay												
Ln Grp Delay, s/veh	59.8	22.3	0.0	36.9	0.0	38.9	69.3	12.6	12.5	56.9	18.8	18.9
Ln Grp LOS	E	C		D	A	D	E	B	B	E	B	B
Approach Vol, veh/h		464			33			1232			689	
Approach Delay, s/veh		57.3			38.0			23.3			19.2	
Approach LOS		E			D			C			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6	7	8
Case No	2.0	4.0		3.0	2.0	4.0	2.0	8.3
Phs Duration (G+Y+Rc), s	5.2	49.5		25.3	17.0	37.7	17.0	8.3
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5	4.5	4.5
Max Green (Gmax), s	5.0	26.5		35.0	12.5	19.0	12.5	18.0
Max Allow Headway (MAH), s	3.8	5.2		5.2	3.8	5.3	3.8	5.4
Max Q Clear (g_c+I1), s	2.3	16.0		3.1	13.3	13.6	13.6	3.0
Green Ext Time (g_e), s	0.0	4.7		0.1	0.0	2.0	0.0	0.1
Prob of Phs Call (p_c)	0.14	1.00		1.00	0.99	1.00	1.00	0.76
Prob of Max Out (p_x)	1.00	0.00		0.00	1.00	0.00	1.00	0.00

Left-Turn Movement Data								
Assigned Mvmt	1				5		7	3
Mvmt Sat Flow, veh/h	1619				1619		2956	862

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		3493		1800		3012		629

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		14		1525		422		1388

Left Lane Group Data								
Assigned Mvmt	1	0	0	0	5	0	7	3
Lane Assignment	L (Prot)				L (Prot)		L (Prot)	L+T

Lanes in Grp	1	0	0	0	1	0	2	1
Grp Vol (v), veh/h	7	0	0	0	233	0	432	15
Grp Sat Flow (s), veh/h/ln	1619	0	0	0	1619	0	1478	1491
Q Serve Time (g_s), s	0.3	0.0	0.0	0.0	11.3	0.0	11.6	0.0
Cycle Q Clear Time (g_c), s	0.3	0.0	0.0	0.0	11.3	0.0	11.6	0.6
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	1399
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.8
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.8
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	0.00	1.00	0.00	1.00	0.73
Lane Grp Cap (c), veh/h	15	0	0	0	253	0	462	149
V/C Ratio (X)	0.48	0.00	0.00	0.00	0.92	0.00	0.94	0.10
Avail Cap (c_a), veh/h	101	0	0	0	253	0	462	402
Upstream Filter (I)	0.76	0.00	0.00	0.00	1.00	0.00	1.00	1.00
Uniform Delay (d1), s/veh	39.5	0.0	0.0	0.0	33.3	0.0	33.4	36.6
Incr Delay (d2), s/veh	17.4	0.0	0.0	0.0	36.1	0.0	26.5	0.3
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	56.9	0.0	0.0	0.0	69.3	0.0	59.8	36.9
1st-Term Q (Q1), veh/ln	0.1	0.0	0.0	0.0	4.3	0.0	4.0	0.3
2nd-Term Q (Q2), veh/ln	0.1	0.0	0.0	0.0	2.5	0.0	1.7	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	0.00	1.00	0.00	1.00	1.00
%ile Back of Q (50%), veh/ln	0.2	0.0	0.0	0.0	6.8	0.0	5.7	0.3
%ile Storage Ratio (RQ%)	0.01	0.00	0.00	0.00	0.37	0.00	0.95	0.01
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		
Lanes in Grp	0	1	0	1	0	1	0	0
Grp Vol (v), veh/h	0	487	0	32	0	339	0	0
Grp Sat Flow (s), veh/h/ln	0	1710	0	1800	0	1710	0	0
Q Serve Time (g_s), s	0.0	14.0	0.0	1.1	0.0	11.6	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	14.0	0.0	1.1	0.0	11.6	0.0	0.0
Lane Grp Cap (c), veh/h	0	961	0	468	0	709	0	0
V/C Ratio (X)	0.00	0.51	0.00	0.07	0.00	0.48	0.00	0.00
Avail Cap (c_a), veh/h	0	961	0	788	0	709	0	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	0.76	0.00	0.00
Uniform Delay (d1), s/veh	0.0	10.7	0.0	22.3	0.0	17.1	0.0	0.0
Incr Delay (d2), s/veh	0.0	1.9	0.0	0.1	0.0	1.8	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	12.6	0.0	22.3	0.0	18.8	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	4.7	0.0	0.4	0.0	4.3	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.5	0.0	0.0	0.0	0.3	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	5.2	0.0	0.4	0.0	4.6	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.28	0.00	0.01	0.00	0.23	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R		R		T+R		T+R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	512	0	0	0	343	0	18
Grp Sat Flow (s), veh/h/ln	0	1797	0	1525	0	1724	0	1388
Q Serve Time (g_s), s	0.0	14.0	0.0	0.0	0.0	11.6	0.0	1.0
Cycle Q Clear Time (g_c), s	0.0	14.0	0.0	0.0	0.0	11.6	0.0	1.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.01	0.00	1.00	0.00	0.24	0.00	1.00
Lane Grp Cap (c), veh/h	0	1010	0	397	0	715	0	66
V/C Ratio (X)	0.00	0.51	0.00	0.00	0.00	0.48	0.00	0.27
Avail Cap (c_a), veh/h	0	1010	0	667	0	715	0	312
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	0.76	0.00	1.00
Uniform Delay (d1), s/veh	0.0	10.7	0.0	0.0	0.0	17.1	0.0	36.7
Incr Delay (d2), s/veh	0.0	1.8	0.0	0.0	0.0	1.8	0.0	2.2
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	12.5	0.0	0.0	0.0	18.9	0.0	38.9
1st-Term Q (Q1), veh/ln	0.0	4.9	0.0	0.0	0.0	4.3	0.0	0.3
2nd-Term Q (Q2), veh/ln	0.0	0.5	0.0	0.0	0.0	0.3	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	5.4	0.0	0.0	0.0	4.7	0.0	0.4
%ile Storage Ratio (RQ%)	0.00	0.29	0.00	0.00	0.00	0.24	0.00	0.01
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	28.9
HCM 6th LOS	C

Notes

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	18	0	14	36	0	60	5	1082	43	40	946	7
Future Volume (veh/h)	18	0	14	36	0	60	5	1082	43	40	946	7
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1900	1800	1900	1800	1800	1700	1900	1900
Adj Flow Rate, veh/h	19	0	15	38	0	63	5	1139	45	42	996	7
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	109	0	61	65	0	190	481	1328	1125	52	4290	30
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Prop Arrive On Green	0.04	0.00	0.04	0.04	0.00	0.12	1.00	1.00	1.00	0.03	0.81	0.81
Unsig. Movement Delay												
Ln Grp Delay, s/veh	56.9	0.0	57.9	64.6	0.0	49.6	0.0	7.3	0.1	81.9	2.9	3.1
Ln Grp LOS	E	A	E	E	A	D	A	A	A	F	A	A
Approach Vol, veh/h		34			101			1189			1045	
Approach Delay, s/veh		57.4			55.3			7.0			6.2	
Approach LOS		E			E			A			A	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4		6		8
Case No	2.0	5.3	2.0	6.3		4.0		4.0
Phs Duration (G+Y+Rc), s	8.4	93.0	9.3	9.3		101.4		18.6
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5		4.5		4.5
Max Green (Gmax), s	15.1	30.7	28.1	28.1		50.3		18.0
Max Allow Headway (MAH), s	3.8	5.2	3.8	4.8		5.2		5.6
Max Q Clear (g_c+I1), s	5.1	2.0	4.8	3.8		7.3		6.3
Green Ext Time (g_e), s	0.0	12.8	0.1	0.1		8.3		0.2
Prob of Phs Call (p_c)	0.75	1.00	0.97	0.96		1.00		0.99
Prob of Max Out (p_x)	0.00	0.00	0.00	0.00		0.00		0.01

Left-Turn Movement Data								
Assigned Mvmt	1	5	3	7				
Mvmt Sat Flow, veh/h	1619	571	1619	1217				

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		1800		0		5314		0

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1525		1525		37		1610

Left Lane Group Data								
Assigned Mvmt	1	5	3	7	0	0	0	0
Lane Assignment	L (Prot)	L	L (Prot)	L				

Lanes in Grp	1	1	1	1	0	0	0	0
Grp Vol (v), veh/h	42	5	38	19	0	0	0	0
Grp Sat Flow (s), veh/h/ln	1619	571	1619	1217	0	0	0	0
Q Serve Time (g_s), s	3.1	0.0	2.8	1.8	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	3.1	0.0	2.8	1.8	0.0	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	571	0	1217	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	88.5	0.0	4.8	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	88.5	0.0	4.8	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	1.8	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	52	481	65	109	0	0	0	0
V/C Ratio (X)	0.81	0.01	0.58	0.17	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	204	481	379	345	0	0	0	0
Upstream Filter (I)	1.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	57.7	0.0	56.6	56.2	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	24.2	0.0	8.0	0.8	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	81.9	0.0	64.6	56.9	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	1.3	0.0	1.1	0.6	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.4	0.0	0.1	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00
%ile Back of Q (50%), veh/ln	1.6	0.0	1.3	0.6	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.16	0.00	0.02	0.04	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T				T		
Lanes in Grp	0	1	0	0	0	2	0	0
Grp Vol (v), veh/h	0	1139	0	0	0	648	0	0
Grp Sat Flow (s), veh/h/ln	0	1800	0	0	0	1729	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	5.3	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	5.3	0.0	0.0
Lane Grp Cap (c), veh/h	0	1328	0	0	0	2791	0	0
V/C Ratio (X)	0.00	0.86	0.00	0.00	0.00	0.23	0.00	0.00
Avail Cap (c_a), veh/h	0	1328	0	0	0	2791	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	2.7	0.0	0.0
Incr Delay (d2), s/veh	0.0	7.3	0.0	0.0	0.0	0.2	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	7.3	0.0	0.0	0.0	2.9	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	1.4	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	2.7	0.0	0.0	0.0	0.1	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	2.7	0.0	0.0	0.0	1.5	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.17	0.00	0.00	0.00	0.15	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		T+R		T+R		T+R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	45	0	15	0	355	0	63
Grp Sat Flow (s), veh/h/ln	0	1525	0	1525	0	1893	0	1610
Q Serve Time (g_s), s	0.0	0.0	0.0	1.1	0.0	5.3	0.0	4.3
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	1.1	0.0	5.3	0.0	4.3
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	0.02	0.00	1.00
Lane Grp Cap (c), veh/h	0	1125	0	61	0	1528	0	190
V/C Ratio (X)	0.00	0.04	0.00	0.25	0.00	0.23	0.00	0.33
Avail Cap (c_a), veh/h	0	1125	0	357	0	1528	0	242
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	55.8	0.0	2.7	0.0	48.6
Incr Delay (d2), s/veh	0.0	0.1	0.0	2.1	0.0	0.4	0.0	1.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.1	0.0	57.9	0.0	3.1	0.0	49.6
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.4	0.0	1.5	0.0	1.7
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.1
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.5	0.0	1.7	0.0	1.8
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.03	0.00	0.17	0.00	0.03
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	9.4
HCM 6th LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	180	8	45	19	16	16	32	937	14	13	926	65
Future Volume (veh/h)	180	8	45	19	16	16	32	937	14	13	926	65
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1700	1800	1900	1700	1900	1900
Adj Flow Rate, veh/h	189	8	47	20	17	17	34	986	15	14	975	68
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	266	9	53	140	117	99	46	1199	18	25	1264	1071
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Prop Arrive On Green	0.19	0.19	0.19	0.19	0.19	0.19	0.03	0.68	0.68	0.03	1.00	1.00
Unsig. Movement Delay												
Ln Grp Delay, s/veh	50.0	0.0	0.0	40.5	0.0	0.0	78.7	0.0	20.4	75.5	4.6	0.1
Ln Grp LOS	D	A	A	D	A	A	E	A	C	E	A	A
Approach Vol, veh/h		244			54			1035			1057	
Approach Delay, s/veh		50.0			40.5			22.3			5.2	
Approach LOS		D			D			C			A	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Case No	2.0	4.0		8.0	2.0	3.0		8.0
Phs Duration (G+Y+Rc), s	6.4	85.9		27.8	7.9	84.4		27.8
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green (Gmax), s	27.0	39.5		40.0	27.0	39.5		40.0
Max Allow Headway (MAH), s	3.8	5.2		5.4	3.8	5.2		5.4
Max Q Clear (g_c+I1), s	3.0	50.7		21.9	4.5	2.0		5.2
Green Ext Time (g_e), s	0.0	0.0		1.3	0.1	10.5		0.3
Prob of Phs Call (p_c)	0.37	1.00		1.00	0.68	1.00		1.00
Prob of Max Out (p_x)	0.00	0.00		0.00	0.00	0.00		0.00

Left-Turn Movement Data								
Assigned Mvmt	1			7	5			3
Mvmt Sat Flow, veh/h	1619			1099	1619			508

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		1768		47		1900		602

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		27		273		1610		510

Left Lane Group Data								
Assigned Mvmt	1	0	0	7	5	0	0	3
Lane Assignment	L (Prot)			L+T+R	L (Prot)			L+T+R

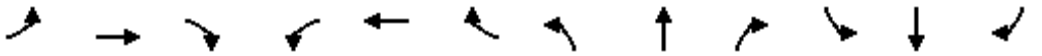
Lanes in Grp	1	0	0	1	1	0	0	1
Grp Vol (v), veh/h	14	0	0	244	34	0	0	54
Grp Sat Flow (s), veh/h/ln	1619	0	0	1419	1619	0	0	1619
Q Serve Time (g_s), s	1.0	0.0	0.0	16.8	2.5	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	1.0	0.0	0.0	19.9	2.5	0.0	0.0	3.2
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	1396	0	0	0	1370
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	1733	0	0	0	1626
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	23.3	0.0	0.0	0.0	23.3
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	20.1	0.0	0.0	0.0	3.3
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	16.8	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.4
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.2
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	0.77	1.00	0.00	0.00	0.37
Lane Grp Cap (c), veh/h	25	0	0	328	46	0	0	355
V/C Ratio (X)	0.56	0.00	0.00	0.74	0.74	0.00	0.00	0.15
Avail Cap (c_a), veh/h	364	0	0	519	364	0	0	564
Upstream Filter (I)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	57.7	0.0	0.0	46.7	57.9	0.0	0.0	40.3
Incr Delay (d2), s/veh	17.8	0.0	0.0	3.3	20.9	0.0	0.0	0.2
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	75.5	0.0	0.0	50.0	78.7	0.0	0.0	40.5
1st-Term Q (Q1), veh/ln	0.4	0.0	0.0	7.0	1.0	0.0	0.0	1.3
2nd-Term Q (Q2), veh/ln	0.1	0.0	0.0	0.3	0.3	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.5	0.0	0.0	7.4	1.3	0.0	0.0	1.4
%ile Storage Ratio (RQ%)	0.06	0.00	0.00	0.85	0.16	0.00	0.00	0.04
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment						T		
Lanes in Grp	0	0	0	0	0	1	0	0
Grp Vol (v), veh/h	0	0	0	0	0	975	0	0
Grp Sat Flow (s), veh/h/ln	0	0	0	0	0	1900	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lane Grp Cap (c), veh/h	0	0	0	0	0	1264	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.00	0.00	0.77	0.00	0.00
Avail Cap (c_a), veh/h	0	0	0	0	0	1264	0	0
Upstream Filter (I)	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	4.6	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	4.6	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	1.6	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.0	0.0	1.6	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.17	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R				R		
Lanes in Grp	0	1	0	0	0	1	0	0
Grp Vol (v), veh/h	0	1001	0	0	0	68	0	0
Grp Sat Flow (s), veh/h/ln	0	1795	0	0	0	1610	0	0
Q Serve Time (g_s), s	0.0	48.7	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	48.7	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.01	0.00	0.19	0.00	1.00	0.00	0.31
Lane Grp Cap (c), veh/h	0	1217	0	0	0	1071	0	0
V/C Ratio (X)	0.00	0.82	0.00	0.00	0.00	0.06	0.00	0.00
Avail Cap (c_a), veh/h	0	1217	0	0	0	1071	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	14.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	6.3	0.0	0.0	0.0	0.1	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	20.4	0.0	0.0	0.0	0.1	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	17.8	0.0	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	2.1	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	19.9	0.0	0.0	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.60	0.00	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	18.0
HCM 6th LOS	B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	151	650	71	144	230	187	54	555	298	257	662	74
Future Volume (veh/h)	151	650	71	144	230	187	54	555	298	257	662	74
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1900
Adj Flow Rate, veh/h	159	684	75	152	242	197	57	584	0	271	697	78
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	152	699	77	152	770	343	84	878		323	1383	651
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.09	0.22	0.22	0.09	0.22	0.22	0.05	0.26	0.00	0.20	0.40	0.40
Unsig. Movement Delay												
Ln Grp Delay, s/veh	122.5	70.5	70.6	86.1	26.0	28.7	39.3	27.5	0.0	45.9	19.1	15.3
Ln Grp LOS	F	E	E	F	C	C	D	C		D	B	B
Approach Vol, veh/h		918			591			641			1046	
Approach Delay, s/veh		79.6			42.3			28.6			25.8	
Approach LOS		E			D			C			C	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Case No	2.0	3.0	2.0	4.0	2.0	3.0	2.0	3.0
Phs Duration (G+Y+Rc), s	20.5	25.0	12.0	22.5	8.6	36.9	12.0	22.5
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green (Gmax), s	17.5	19.0	7.5	18.0	6.0	30.5	7.5	18.0
Max Allow Headway (MAH), s	3.8	5.2	3.8	5.3	3.8	5.1	3.8	4.7
Max Q Clear (g_c+I1), s	15.9	15.2	10.5	20.5	5.8	15.2	10.5	12.2
Green Ext Time (g_e), s	0.1	1.3	0.0	0.0	0.0	4.5	0.0	1.1
Prob of Phs Call (p_c)	1.00	1.00	0.97	1.00	0.72	1.00	0.97	1.00
Prob of Max Out (p_x)	1.00	0.00	1.00	1.00	1.00	0.00	1.00	0.67

Left-Turn Movement Data								
Assigned Mvmt	1		3		5		7	
Mvmt Sat Flow, veh/h	1619		1619		1619		1619	

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		3420		3108		3420		3420

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1525		341		1610		1525

Left Lane Group Data								
Assigned Mvmt	1	0	3	0	5	0	7	0
Lane Assignment	L (Prot)		L (Prot)		L (Prot)		L (Prot)	

Lanes in Grp	1	0	1	0	1	0	1	0
Grp Vol (v), veh/h	271	0	152	0	57	0	159	0
Grp Sat Flow (s), veh/h/ln	1619	0	1619	0	1619	0	1619	0
Q Serve Time (g_s), s	12.9	0.0	7.5	0.0	2.8	0.0	7.5	0.0
Cycle Q Clear Time (g_c), s	12.9	0.0	7.5	0.0	2.8	0.0	7.5	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	323	0	152	0	84	0	152	0
V/C Ratio (X)	0.84	0.00	1.00	0.00	0.68	0.00	1.05	0.00
Avail Cap (c_a), veh/h	354	0	152	0	121	0	152	0
Upstream Filter (I)	1.00	0.00	0.46	0.00	0.21	0.00	1.00	0.00
Uniform Delay (d1), s/veh	30.8	0.0	36.3	0.0	37.3	0.0	36.3	0.0
Incr Delay (d2), s/veh	15.1	0.0	49.9	0.0	2.0	0.0	86.2	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	45.9	0.0	86.1	0.0	39.3	0.0	122.5	0.0
1st-Term Q (Q1), veh/ln	4.8	0.0	2.9	0.0	1.1	0.0	2.9	0.0
2nd-Term Q (Q2), veh/ln	1.4	0.0	2.1	0.0	0.0	0.0	3.6	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
%ile Back of Q (50%), veh/ln	6.2	0.0	5.0	0.0	1.1	0.0	6.5	0.0
%ile Storage Ratio (RQ%)	0.60	0.00	0.06	0.00	0.16	0.00	1.63	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.1	0.0	0.0	0.0	1.8	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.3	0.0	0.0	0.0	0.3	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	2	0	1	0	2	0	2
Grp Vol (v), veh/h	0	584	0	376	0	697	0	242
Grp Sat Flow (s), veh/h/ln	0	1710	0	1710	0	1710	0	1710
Q Serve Time (g_s), s	0.0	12.2	0.0	17.5	0.0	12.2	0.0	4.7
Cycle Q Clear Time (g_c), s	0.0	12.2	0.0	17.5	0.0	12.2	0.0	4.7
Lane Grp Cap (c), veh/h	0	878	0	385	0	1383	0	770
V/C Ratio (X)	0.00	0.67	0.00	0.98	0.00	0.50	0.00	0.31
Avail Cap (c_a), veh/h	0	878	0	385	0	1383	0	770
Upstream Filter (I)	0.00	0.21	0.00	1.00	0.00	1.00	0.00	0.46
Uniform Delay (d1), s/veh	0.0	26.7	0.0	30.8	0.0	17.8	0.0	25.9
Incr Delay (d2), s/veh	0.0	0.9	0.0	39.7	0.0	1.3	0.0	0.1
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	27.5	0.0	70.5	0.0	19.1	0.0	26.0
1st-Term Q (Q1), veh/ln	0.0	4.8	0.0	6.9	0.0	4.5	0.0	1.9
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	4.2	0.0	0.3	0.0	0.0

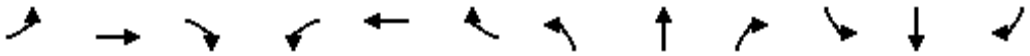
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	4.9	0.0	11.2	0.0	4.8	0.0	1.9
%ile Storage Ratio (RQ%)	0.00	0.05	0.00	0.05	0.00	0.07	0.00	0.02
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		T+R		R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	0	0	383	0	78	0	197
Grp Sat Flow (s), veh/h/ln	0	1525	0	1739	0	1610	0	1525
Q Serve Time (g_s), s	0.0	0.0	0.0	17.5	0.0	2.4	0.0	9.2
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	17.5	0.0	2.4	0.0	9.2
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	0.20	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	391	0	391	0	651	0	343
V/C Ratio (X)	0.00	0.00	0.00	0.98	0.00	0.12	0.00	0.57
Avail Cap (c_a), veh/h	0	391	0	391	0	651	0	343
Upstream Filter (I)	0.00	0.00	0.00	1.00	0.00	1.00	0.00	0.46
Uniform Delay (d1), s/veh	0.0	0.0	0.0	30.8	0.0	14.9	0.0	27.6
Incr Delay (d2), s/veh	0.0	0.0	0.0	39.8	0.0	0.4	0.0	1.1
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	70.6	0.0	15.3	0.0	28.7
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	7.0	0.0	0.8	0.0	3.2
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	4.3	0.0	0.1	0.0	0.1
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	11.4	0.0	0.9	0.0	3.3
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.05	0.00	0.05	0.00	0.04
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	44.8
HCM 6th LOS	D

Notes

Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	239	467	120	351	249	93	83	569	292	180	686	103
Future Volume (veh/h)	239	467	120	351	249	93	83	569	292	180	686	103
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1900
Adj Flow Rate, veh/h	252	492	126	369	262	98	87	599	307	189	722	108
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	283	540	137	354	599	218	108	574	294	192	1357	201
HCM Platoon Ratio	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.66	1.33	1.33	1.33
Prop Arrive On Green	0.23	0.27	0.27	0.29	0.32	0.32	0.09	0.35	0.44	0.16	0.42	0.42
Unsig. Movement Delay												
Ln Grp Delay, s/veh	52.2	54.8	56.6	90.8	26.2	26.4	52.1	81.8	80.7	90.5	22.8	24.4
Ln Grp LOS	D	D	E	F	C	C	D	F	F	F	C	C
Approach Vol, veh/h		870			729			993			1019	
Approach Delay, s/veh		54.7			59.0			78.7			35.8	
Approach LOS		D			E			E			D	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Case No	2.0	4.0	2.0	4.0	2.0	4.0	2.0	4.0
Phs Duration (G+Y+Rc), s	15.2	28.1	24.2	22.5	10.5	32.8	20.2	26.5
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green (Gmax), s	10.7	23.6	19.7	18.0	10.9	23.4	18.3	19.4
Max Allow Headway (MAH), s	3.8	5.3	3.8	5.3	3.8	5.3	3.8	5.3
Max Q Clear (g_c+I1), s	12.5	25.6	21.7	18.0	6.7	13.4	15.6	9.8
Green Ext Time (g_e), s	0.0	0.0	0.0	0.0	0.1	3.9	0.2	1.4
Prob of Phs Call (p_c)	0.99	1.00	1.00	1.00	0.89	1.00	1.00	1.00
Prob of Max Out (p_x)	1.00	0.00	1.00	1.00	0.67	0.00	1.00	0.24

Left-Turn Movement Data								
Assigned Mvmt	1		3		5		7	
Mvmt Sat Flow, veh/h	1619		1619		1619		1619	

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		2188		2699		4320		2454

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1121		687		640		895

Left Lane Group Data								
Assigned Mvmt	1	0	3	0	5	0	7	0
Lane Assignment	L (Prot)		L (Prot)		L (Prot)		L (Prot)	

Lanes in Grp	1	0	1	0	1	0	1	0
Grp Vol (v), veh/h	189	0	369	0	87	0	252	0
Grp Sat Flow (s), veh/h/ln	1619	0	1619	0	1619	0	1619	0
Q Serve Time (g_s), s	10.5	0.0	19.7	0.0	4.7	0.0	13.6	0.0
Cycle Q Clear Time (g_c), s	10.5	0.0	19.7	0.0	4.7	0.0	13.6	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	192	0	354	0	108	0	283	0
V/C Ratio (X)	0.98	0.00	1.04	0.00	0.80	0.00	0.89	0.00
Avail Cap (c_a), veh/h	192	0	354	0	196	0	329	0
Upstream Filter (I)	0.80	0.00	1.00	0.00	0.91	0.00	0.78	0.00
Uniform Delay (d1), s/veh	37.8	0.0	31.9	0.0	40.4	0.0	33.7	0.0
Incr Delay (d2), s/veh	52.7	0.0	58.9	0.0	11.7	0.0	18.5	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	90.5	0.0	90.8	0.0	52.1	0.0	52.2	0.0
1st-Term Q (Q1), veh/ln	3.9	0.0	6.9	0.0	1.8	0.0	4.9	0.0
2nd-Term Q (Q2), veh/ln	2.8	0.0	5.8	0.0	0.4	0.0	1.5	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
%ile Back of Q (50%), veh/ln	6.7	0.0	12.7	0.0	2.2	0.0	6.3	0.0
%ile Storage Ratio (RQ%)	0.93	0.00	0.09	0.00	0.27	0.00	0.72	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	3.7	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	1	0	1	0	2	0	1
Grp Vol (v), veh/h	0	468	0	311	0	546	0	181
Grp Sat Flow (s), veh/h/ln	0	1710	0	1710	0	1638	0	1710
Q Serve Time (g_s), s	0.0	23.6	0.0	15.8	0.0	11.2	0.0	7.5
Cycle Q Clear Time (g_c), s	0.0	23.6	0.0	15.8	0.0	11.2	0.0	7.5
Lane Grp Cap (c), veh/h	0	448	0	342	0	1029	0	417
V/C Ratio (X)	0.00	1.04	0.00	0.91	0.00	0.53	0.00	0.43
Avail Cap (c_a), veh/h	0	448	0	342	0	1029	0	417
Upstream Filter (I)	0.00	0.91	0.00	0.78	0.00	0.80	0.00	1.00
Uniform Delay (d1), s/veh	0.0	29.3	0.0	32.2	0.0	21.2	0.0	25.5
Incr Delay (d2), s/veh	0.0	52.5	0.0	22.5	0.0	1.6	0.0	0.7
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	81.8	0.0	54.8	0.0	22.8	0.0	26.2
1st-Term Q (Q1), veh/ln	0.0	8.6	0.0	5.9	0.0	3.8	0.0	2.9
2nd-Term Q (Q2), veh/ln	0.0	6.5	0.0	2.1	0.0	0.2	0.0	0.1

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	15.1	0.0	8.1	0.0	4.1	0.0	2.9
%ile Storage Ratio (RQ%)	0.00	0.39	0.00	0.04	0.00	0.04	0.00	0.02
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	4.9	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R		T+R		T+R		T+R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	438	0	307	0	284	0	179
Grp Sat Flow (s), veh/h/ln	0	1598	0	1676	0	1685	0	1639
Q Serve Time (g_s), s	0.0	23.6	0.0	16.0	0.0	11.4	0.0	7.8
Cycle Q Clear Time (g_c), s	0.0	23.6	0.0	16.0	0.0	11.4	0.0	7.8
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.70	0.00	0.41	0.00	0.38	0.00	0.55
Lane Grp Cap (c), veh/h	0	419	0	335	0	529	0	400
V/C Ratio (X)	0.00	1.04	0.00	0.92	0.00	0.54	0.00	0.45
Avail Cap (c_a), veh/h	0	419	0	335	0	529	0	400
Upstream Filter (I)	0.00	0.91	0.00	0.78	0.00	0.80	0.00	1.00
Uniform Delay (d1), s/veh	0.0	26.6	0.0	32.3	0.0	21.3	0.0	25.6
Incr Delay (d2), s/veh	0.0	54.1	0.0	24.3	0.0	3.1	0.0	0.8
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	80.7	0.0	56.6	0.0	24.4	0.0	26.4
1st-Term Q (Q1), veh/ln	0.0	7.3	0.0	5.9	0.0	4.0	0.0	2.8
2nd-Term Q (Q2), veh/ln	0.0	6.3	0.0	2.3	0.0	0.5	0.0	0.1
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	13.6	0.0	8.2	0.0	4.5	0.0	2.9
%ile Storage Ratio (RQ%)	0.00	0.35	0.00	0.04	0.00	0.04	0.00	0.02
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	4.7	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	56.8
HCM 6th LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	245	339	217	449	859	0	0	838	516
Future Volume (veh/h)	0	0	0	245	339	217	449	859	0	0	838	516
Number				3	8	18	5	2	12	1	6	16
Initial Q, veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln				1700	1800	1800	1700	1800	0	0	1800	1900
Adj Flow Rate, veh/h				258	357	228	473	904	0	0	882	543
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence				Yes			Yes			No		
Cap, veh/h				292	422	284	465	2153	0	0	1041	490
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	2.00	1.66
Prop Arrive On Green				0.30	0.30	0.30	0.57	1.00	0.00	0.00	0.61	0.51
Unsig. Movement Delay												
Ln Grp Delay, s/veh				53.5	0.0	46.5	57.0	0.3	0.0	0.0	26.9	95.9
Ln Grp LOS				D	A	D	F	A	A	A	C	F
Approach Vol, veh/h					843			1377			1425	
Approach Delay, s/veh					50.3			19.7			53.2	
Approach LOS					D			B			D	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2	8		5	6		
Case No		4.0	12.0		2.0	7.0		
Phs Duration (G+Y+Rc), s		80.0	40.0		39.0	41.0		
Change Period (Y+Rc), s		4.5	4.5		4.5	4.5		
Max Green (Gmax), s		70.2	40.8		34.5	31.2		
Max Allow Headway (MAH), s		5.2	5.4		3.8	4.8		
Max Q Clear (g_c+I1), s		2.0	31.8		36.5	38.5		
Green Ext Time (g_e), s		8.2	3.7		0.0	0.0		
Prob of Phs Call (p_c)		1.00	1.00		1.00	1.00		
Prob of Max Out (p_x)		0.00	0.61		1.00	0.00		

Left-Turn Movement Data								
Assigned Mvmt			3		5	1		
Mvmt Sat Flow, veh/h			989		1619	0		

Through Movement Data								
Assigned Mvmt		2	8			6		
Mvmt Sat Flow, veh/h		3510	1429			3510		

Right-Turn Movement Data								
Assigned Mvmt		12	18			16		
Mvmt Sat Flow, veh/h		0	960			1610		

Left Lane Group Data								
Assigned Mvmt	0	0	3	0	5	1	0	0
Lane Assignment			L+T		L (Prot)			

Lanes in Grp	0	0	1	0	1	0	0	0
Grp Vol (v), veh/h	0	0	456	0	473	0	0	0
Grp Sat Flow (s), veh/h/ln	0	0	1751	0	1619	0	0	0
Q Serve Time (g_s), s	0.0	0.0	29.8	0.0	34.5	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	29.8	0.0	34.5	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	36.5	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	0.00	0.57	0.00	1.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	517	0	465	0	0	0
V/C Ratio (X)	0.00	0.00	0.88	0.00	1.02	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	0	595	0	465	0	0	0
Upstream Filter (I)	0.00	0.00	1.00	0.00	0.43	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	40.3	0.0	25.5	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	13.2	0.0	31.5	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	53.5	0.0	57.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	12.7	0.0	9.2	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	1.9	0.0	4.1	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	0.00	1.00	0.00	1.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	14.6	0.0	13.2	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.35	0.00	2.21	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	1.9	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	8	0	0	6	0	0
Lane Assignment		T				T		
Lanes in Grp	0	2	0	0	0	2	0	0
Grp Vol (v), veh/h	0	904	0	0	0	882	0	0
Grp Sat Flow (s), veh/h/ln	0	1710	0	0	0	1710	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	25.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	25.0	0.0	0.0
Lane Grp Cap (c), veh/h	0	2153	0	0	0	1041	0	0
V/C Ratio (X)	0.00	0.42	0.00	0.00	0.00	0.85	0.00	0.00
Avail Cap (c_a), veh/h	0	2153	0	0	0	1041	0	0
Upstream Filter (I)	0.00	0.43	0.00	0.00	0.00	0.64	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	21.2	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.3	0.0	0.0	0.0	5.7	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.3	0.0	0.0	0.0	26.9	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	6.6	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	0.8	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.1	0.0	0.0	0.0	7.4	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.19	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	18	0	0	16	0	0
Lane Assignment			T+R			R		
Lanes in Grp	0	0	1	0	0	1	0	0
Grp Vol (v), veh/h	0	0	387	0	0	543	0	0
Grp Sat Flow (s), veh/h/ln	0	0	1627	0	0	1610	0	0
Q Serve Time (g_s), s	0.0	0.0	26.3	0.0	0.0	36.5	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	26.3	0.0	0.0	36.5	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.00	0.59	0.00	0.00	1.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	481	0	0	490	0	0
V/C Ratio (X)	0.00	0.00	0.80	0.00	0.00	1.11	0.00	0.00
Avail Cap (c_a), veh/h	0	0	553	0	0	490	0	0
Upstream Filter (I)	0.00	0.00	1.00	0.00	0.00	0.64	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	39.1	0.0	0.0	29.7	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	7.5	0.0	0.0	66.2	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	46.5	0.0	0.0	95.9	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	10.4	0.0	0.0	11.6	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	1.0	0.0	0.0	9.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	11.4	0.0	0.0	20.6	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.27	0.00	0.00	0.53	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	13.2	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	39.9
HCM 6th LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	426	74	597	0	0	0	0	872	323	326	766	0
Future Volume (veh/h)	426	74	597	0	0	0	0	872	323	326	766	0
Number	7	4	14				5	2	12	1	6	16
Initial Q, veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1700	1800	1800				0	1800	1800	1700	1900	0
Adj Flow Rate, veh/h	448	78	628				0	918	340	343	806	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0				0	0	0	0	0	0
Opposing Right Turn Influence	Yes						No			Yes		
Cap, veh/h	496	86	515				0	1120	499	360	2121	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Prop Arrive On Green	0.34	0.34	0.34				0.00	0.33	0.33	0.45	1.00	0.00
Unsig. Movement Delay												
Ln Grp Delay, s/veh	55.3	0.0	155.3				0.0	43.9	42.2	41.9	0.1	0.0
Ln Grp LOS	E	A	F				A	D	D	D	A	A
Approach Vol, veh/h		1154						1258			1149	
Approach Delay, s/veh		109.7						43.4			12.6	
Approach LOS		F						D			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Case No	2.0	7.0		12.0		4.0		
Phs Duration (G+Y+Rc), s	31.2	43.8		45.0		75.0		
Change Period (Y+Rc), s	4.5	4.5		4.5		4.5		
Max Green (Gmax), s	28.5	37.5		40.5		70.5		
Max Allow Headway (MAH), s	3.8	4.9		5.5		5.2		
Max Q Clear (g_c+I1), s	26.5	31.6		42.5		2.0		
Green Ext Time (g_e), s	0.2	3.6		0.0		7.0		
Prob of Phs Call (p_c)	1.00	1.00		1.00		1.00		
Prob of Max Out (p_x)	1.00	0.00		1.00		0.00		

Left-Turn Movement Data												
Assigned Mvmt		1	5		7							
Mvmt Sat Flow, veh/h		1619	0		1470							

Through Movement Data												
Assigned Mvmt			2		4		6					
Mvmt Sat Flow, veh/h			3510		256		3705					

Right-Turn Movement Data												
Assigned Mvmt			12		14		16					
Mvmt Sat Flow, veh/h			1525		1525		0					

Left Lane Group Data												
Assigned Mvmt		1	5	0	7	0	0	0	0			
Lane Assignment		L (Prot)			L+T							

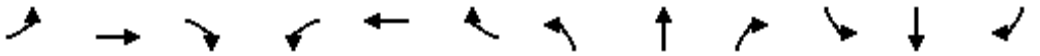
Lanes in Grp	1	0	0	1	0	0	0	0
Grp Vol (v), veh/h	343	0	0	526	0	0	0	0
Grp Sat Flow (s), veh/h/ln	1619	0	0	1726	0	0	0	0
Q Serve Time (g_s), s	24.5	0.0	0.0	34.8	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	24.5	0.0	0.0	34.8	0.0	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	39.3	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	0.85	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	360	0	0	583	0	0	0	0
V/C Ratio (X)	0.95	0.00	0.00	0.90	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	385	0	0	583	0	0	0	0
Upstream Filter (I)	0.16	0.00	0.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	32.7	0.0	0.0	37.9	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	9.2	0.0	0.0	17.4	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	41.9	0.0	0.0	55.3	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	7.6	0.0	0.0	14.5	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.9	0.0	0.0	2.8	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00
%ile Back of Q (50%), veh/ln	8.5	0.0	0.0	17.3	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	1.41	0.00	0.00	0.51	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	0
Lane Assignment		T				T		
Lanes in Grp	0	2	0	0	0	2	0	0
Grp Vol (v), veh/h	0	918	0	0	0	806	0	0
Grp Sat Flow (s), veh/h/ln	0	1710	0	0	0	1805	0	0
Q Serve Time (g_s), s	0.0	29.6	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	29.6	0.0	0.0	0.0	0.0	0.0	0.0
Lane Grp Cap (c), veh/h	0	1120	0	0	0	2121	0	0
V/C Ratio (X)	0.00	0.82	0.00	0.00	0.00	0.38	0.00	0.00
Avail Cap (c_a), veh/h	0	1120	0	0	0	2121	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	0.16	0.00	0.00
Uniform Delay (d1), s/veh	0.0	37.1	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	6.8	0.0	0.0	0.0	0.1	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	43.9	0.0	0.0	0.0	0.1	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	12.3	0.0	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	1.1	0.0	0.0	0.0	0.0	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	13.3	0.0	0.0	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.25	0.00	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	0
Lane Assignment		R		T+R				
Lanes in Grp	0	1	0	1	0	0	0	0
Grp Vol (v), veh/h	0	340	0	628	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	1525	0	1525	0	0	0	0
Q Serve Time (g_s), s	0.0	23.1	0.0	40.5	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	23.1	0.0	40.5	0.0	0.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	499	0	515	0	0	0	0
V/C Ratio (X)	0.00	0.68	0.00	1.22	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	499	0	515	0	0	0	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	34.9	0.0	39.8	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	7.3	0.0	115.5	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	42.2	0.0	155.3	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	8.5	0.0	14.9	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	1.0	0.0	16.5	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	9.6	0.0	31.4	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.18	0.00	0.93	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	28.3	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	54.9
HCM 6th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1113	623	479	606	0	0	0	0	414	7	237
Future Volume (veh/h)	0	1113	623	479	606	0	0	0	0	414	7	237
Number	7	4	14	3	8	18				1	6	16
Initial Q, veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	0	1800	1800	1600	1800	0				1700	1800	1900
Adj Flow Rate, veh/h	0	1172	0	504	638	0				436	7	249
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95				0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0				0	0	0
Opposing Right Turn Influence	No			Yes						Yes		
Cap, veh/h	0	1383		578	2223	0				422	7	403
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Prop Arrive On Green	0.00	0.40	0.00	0.20	0.65	0.00				0.25	0.25	0.25
Unsig. Movement Delay												
Ln Grp Delay, s/veh	0.0	26.6	0.0	44.2	7.0	0.0				85.9	0.0	32.8
Ln Grp LOS	A	C		D	A	A				F	A	C
Approach Vol, veh/h		1172			1142						692	
Approach Delay, s/veh		26.6			23.4						66.8	
Approach LOS		C			C						E	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	6		3	4				8
Case No	11.0		2.0	7.0				4.0
Phs Duration (G+Y+Rc), s	27.0		22.1	40.9				63.0
Change Period (Y+Rc), s	4.5		4.5	4.5				4.5
Max Green (Gmax), s	22.5		20.5	33.5				58.5
Max Allow Headway (MAH), s	4.9		3.8	5.2				5.2
Max Q Clear (g_c+I1), s	24.5		16.9	29.9				9.2
Green Ext Time (g_e), s	0.0		0.7	2.4				5.1
Prob of Phs Call (p_c)	1.00		1.00	1.00				1.00
Prob of Max Out (p_x)	1.00		1.00	0.00				0.00

Left-Turn Movement Data												
Assigned Mvmt		1		3	7							
Mvmt Sat Flow, veh/h		1688		2956	0							

Through Movement Data												
Assigned Mvmt		6			4				8			
Mvmt Sat Flow, veh/h		27			3510				3510			

Right-Turn Movement Data												
Assigned Mvmt		16			14				18			
Mvmt Sat Flow, veh/h		1610			1525				0			

Left Lane Group Data												
Assigned Mvmt		1	0	3	7	0	0	0	0			
Lane Assignment		L+T		L (Prot)								

Lanes in Grp	1	0	2	0	0	0	0	0
Grp Vol (v), veh/h	443	0	504	0	0	0	0	0
Grp Sat Flow (s), veh/h/ln	1716	0	1478	0	0	0	0	0
Q Serve Time (g_s), s	22.5	0.0	14.9	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	22.5	0.0	14.9	0.0	0.0	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	36.4	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.98	0.00	1.00	0.00	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	429	0	578	0	0	0	0	0
V/C Ratio (X)	1.03	0.00	0.87	0.00	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	429	0	673	0	0	0	0	0
Upstream Filter (I)	1.00	0.00	0.82	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	33.8	0.0	35.1	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	52.2	0.0	9.1	0.0	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	85.9	0.0	44.2	0.0	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	9.1	0.0	5.2	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	6.2	0.0	0.7	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	1.00	1.00	0.00	0.00	0.00	0.00
%ile Back of Q (50%), veh/ln	15.3	0.0	6.0	0.0	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	1.19	0.00	0.37	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	3.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	6	0	0	4	0	0	0	8
Lane Assignment				T				T
Lanes in Grp	0	0	0	2	0	0	0	2
Grp Vol (v), veh/h	0	0	0	1172	0	0	0	638
Grp Sat Flow (s), veh/h/ln	0	0	0	1710	0	0	0	1710
Q Serve Time (g_s), s	0.0	0.0	0.0	27.9	0.0	0.0	0.0	7.2
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	27.9	0.0	0.0	0.0	7.2
Lane Grp Cap (c), veh/h	0	0	0	1383	0	0	0	2223
V/C Ratio (X)	0.00	0.00	0.00	0.85	0.00	0.00	0.00	0.29
Avail Cap (c_a), veh/h	0	0	0	1383	0	0	0	2223
Upstream Filter (I)	0.00	0.00	0.00	0.33	0.00	0.00	0.00	0.82
Uniform Delay (d1), s/veh	0.0	0.0	0.0	24.3	0.0	0.0	0.0	6.8
Incr Delay (d2), s/veh	0.0	0.0	0.0	2.3	0.0	0.0	0.0	0.3
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	26.6	0.0	0.0	0.0	7.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	10.7	0.0	0.0	0.0	2.3
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.1

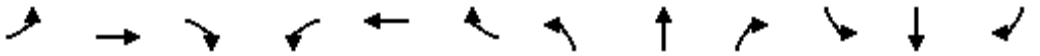
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	1.00	0.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	11.1	0.0	0.0	0.0	2.4
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.10	0.00	0.00	0.00	0.15
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	16	0	0	14	0	0	0	18
Lane Assignment	R			R				
Lanes in Grp	1	0	0	1	0	0	0	0
Grp Vol (v), veh/h	249	0	0	0	0	0	0	0
Grp Sat Flow (s), veh/h/ln	1610	0	0	1525	0	0	0	0
Q Serve Time (g_s), s	12.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	12.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	1.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	403	0	0	617	0	0	0	0
V/C Ratio (X)	0.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	403	0	0	617	0	0	0	0
Upstream Filter (I)	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	29.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	2.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	32.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	4.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	1.00	0.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	5.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	34.7
HCM 6th LOS	C

Notes

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	317	1195	0	0	779	414	266	2	576	0	0	0
Future Volume (veh/h)	317	1195	0	0	779	414	266	2	576	0	0	0
Number	7	4	14	3	8	18	5	2	12			
Initial Q, veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1700	1800	0	0	1800	1800	1600	1800	1900			
Adj Flow Rate, veh/h	334	1258	0	0	820	436	281	0	606			
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95			
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0			
Opposing Right Turn Influence	Yes			No			Yes					
Cap, veh/h	367	2031	0	0	1528	474	895	0	946			
HCM Platoon Ratio	1.66	1.66	1.00	1.00	1.66	1.00	1.00	1.00	1.00			
Prop Arrive On Green	0.38	0.99	0.00	0.00	0.52	0.31	0.29	0.00	0.29			
Unsig. Movement Delay												
Ln Grp Delay, s/veh	32.6	0.7	0.0	0.0	16.8	52.0	22.9	0.0	27.9			
Ln Grp LOS	C	A	A	A	B	D	C	A	C			
Approach Vol, veh/h		1592			1256			887				
Approach Delay, s/veh		7.4			29.0			26.3				
Approach LOS		A			C			C				

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2		4			7	8
Case No		9.0		4.0			2.0	7.0
Phs Duration (G+Y+Rc), s		28.0		52.0			22.6	29.4
Change Period (Y+Rc), s		4.5		4.5			4.5	4.5
Max Green (Gmax), s		23.5		47.5			22.5	20.5
Max Allow Headway (MAH), s		4.0		5.2			3.8	4.8
Max Q Clear (g_c+I1), s		15.1		3.1			17.7	24.1
Green Ext Time (g_e), s		2.5		13.1			0.5	0.0
Prob of Phs Call (p_c)		1.00		1.00			1.00	1.00
Prob of Max Out (p_x)		0.00		0.00			0.55	0.00

Left-Turn Movement Data								
Assigned Mvmt		5					7	3
Mvmt Sat Flow, veh/h		3048					1619	0

Through Movement Data								
Assigned Mvmt		2		4				8
Mvmt Sat Flow, veh/h		0		3510				5076

Right-Turn Movement Data								
Assigned Mvmt		12		14				18
Mvmt Sat Flow, veh/h		3220		0				1525

Left Lane Group Data								
Assigned Mvmt	0	5	0	0	0	0	7	3
Lane Assignment		L					L (Prot)	

Lanes in Grp	0	2	0	0	0	0	1	0
Grp Vol (v), veh/h	0	281	0	0	0	0	334	0
Grp Sat Flow (s), veh/h/ln	0	1524	0	0	0	0	1619	0
Q Serve Time (g_s), s	0.0	5.7	0.0	0.0	0.0	0.0	15.7	0.0
Cycle Q Clear Time (g_c), s	0.0	5.7	0.0	0.0	0.0	0.0	15.7	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	1524	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	24.9
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	0	895	0	0	0	0	367	0
V/C Ratio (X)	0.00	0.31	0.00	0.00	0.00	0.00	0.91	0.00
Avail Cap (c_a), veh/h	0	895	0	0	0	0	455	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	0.00	0.35	0.00
Uniform Delay (d1), s/veh	0.0	22.0	0.0	0.0	0.0	0.0	24.2	0.0
Incr Delay (d2), s/veh	0.0	0.9	0.0	0.0	0.0	0.0	8.4	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	22.9	0.0	0.0	0.0	0.0	32.6	0.0
1st-Term Q (Q1), veh/ln	0.0	2.0	0.0	0.0	0.0	0.0	4.6	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	0.0	0.9	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	0.00	0.00	0.00	1.00	1.00
%ile Back of Q (50%), veh/ln	0.0	2.1	0.0	0.0	0.0	0.0	5.5	0.0
%ile Storage Ratio (RQ%)	0.00	0.10	0.00	0.00	0.00	0.00	1.52	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	0	0	8
Lane Assignment				T				T
Lanes in Grp	0	0	0	2	0	0	0	3
Grp Vol (v), veh/h	0	0	0	1258	0	0	0	820
Grp Sat Flow (s), veh/h/ln	0	0	0	1710	0	0	0	1638
Q Serve Time (g_s), s	0.0	0.0	0.0	1.1	0.0	0.0	0.0	8.9
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	1.1	0.0	0.0	0.0	8.9
Lane Grp Cap (c), veh/h	0	0	0	2031	0	0	0	1528
V/C Ratio (X)	0.00	0.00	0.00	0.62	0.00	0.00	0.00	0.54
Avail Cap (c_a), veh/h	0	0	0	2031	0	0	0	1528
Upstream Filter (I)	0.00	0.00	0.00	0.35	0.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.2	0.0	0.0	0.0	15.5
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.5	0.0	0.0	0.0	1.4
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	0.7	0.0	0.0	0.0	16.8
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.1	0.0	0.0	0.0	2.7
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.2

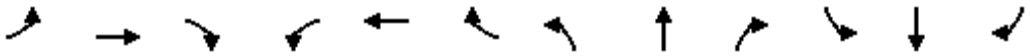
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.3	0.0	0.0	0.0	2.9
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.04
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	0	0	18
Lane Assignment		R						R
Lanes in Grp	0	2	0	0	0	0	0	1
Grp Vol (v), veh/h	0	606	0	0	0	0	0	436
Grp Sat Flow (s), veh/h/ln	0	1610	0	0	0	0	0	1525
Q Serve Time (g_s), s	0.0	13.1	0.0	0.0	0.0	0.0	0.0	22.1
Cycle Q Clear Time (g_c), s	0.0	13.1	0.0	0.0	0.0	0.0	0.0	22.1
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	0.00	0.00	0.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	946	0	0	0	0	0	474
V/C Ratio (X)	0.00	0.64	0.00	0.00	0.00	0.00	0.00	0.92
Avail Cap (c_a), veh/h	0	946	0	0	0	0	0	474
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	24.6	0.0	0.0	0.0	0.0	0.0	26.6
Incr Delay (d2), s/veh	0.0	3.3	0.0	0.0	0.0	0.0	0.0	25.4
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	27.9	0.0	0.0	0.0	0.0	0.0	52.0
1st-Term Q (Q1), veh/ln	0.0	4.8	0.0	0.0	0.0	0.0	0.0	7.6
2nd-Term Q (Q2), veh/ln	0.0	0.4	0.0	0.0	0.0	0.0	0.0	3.3
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	5.2	0.0	0.0	0.0	0.0	0.0	10.9
%ile Storage Ratio (RQ%)	0.00	0.24	0.00	0.00	0.00	0.00	0.00	1.24
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	19.2
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	176	863	89	168	387	215	31	50	279	220	334	194
Future Volume (veh/h)	176	863	89	168	387	215	31	50	279	220	334	194
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1800	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1900
Adj Flow Rate, veh/h	185	908	94	177	407	226	33	53	294	232	352	204
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	199	907	405	181	470	399	54	434	368	229	734	418
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.12	0.27	0.27	0.11	0.26	0.26	0.03	0.24	0.24	0.14	0.35	0.35
Unsig. Movement Delay												
Ln Grp Delay, s/veh	58.0	47.1	21.7	61.3	31.1	24.5	46.7	22.8	43.2	95.3	21.8	22.2
Ln Grp LOS	E	F	C	E	C	C	D	C	D	F	C	C
Approach Vol, veh/h		1187			810			380			788	
Approach Delay, s/veh		46.7			35.9			40.6			43.6	
Approach LOS		D			D			D			D	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Case No	2.0	3.0	2.0	3.0	2.0	4.0	2.0	3.0
Phs Duration (G+Y+Rc), s	15.1	22.6	12.9	24.4	7.0	30.7	13.2	24.1
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green (Gmax), s	10.6	18.1	8.4	19.9	5.6	23.1	8.7	19.6
Max Allow Headway (MAH), s	3.8	4.2	3.8	5.1	3.8	5.4	3.8	4.8
Max Q Clear (g_c+I1), s	12.6	15.6	10.2	21.9	3.5	12.0	10.0	18.2
Green Ext Time (g_e), s	0.0	0.3	0.0	0.0	0.0	2.6	0.0	0.5
Prob of Phs Call (p_c)	0.99	1.00	0.97	1.00	0.50	1.00	0.98	1.00
Prob of Max Out (p_x)	1.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00

Left-Turn Movement Data								
Assigned Mvmt	1		3		5		7	
Mvmt Sat Flow, veh/h	1619		1619		1619		1714	

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		1800		3420		2100		1800

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1525		1525		1195		1525

Left Lane Group Data								
Assigned Mvmt	1	0	3	0	5	0	7	0
Lane Assignment	L (Prot)		L (Prot)		L (Prot)		L (Prot)	

Lanes in Grp	1	0	1	0	1	0	1	0
Grp Vol (v), veh/h	232	0	177	0	33	0	185	0
Grp Sat Flow (s), veh/h/ln	1619	0	1619	0	1619	0	1714	0
Q Serve Time (g_s), s	10.6	0.0	8.2	0.0	1.5	0.0	8.0	0.0
Cycle Q Clear Time (g_c), s	10.6	0.0	8.2	0.0	1.5	0.0	8.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	229	0	181	0	54	0	199	0
V/C Ratio (X)	1.01	0.00	0.98	0.00	0.61	0.00	0.93	0.00
Avail Cap (c_a), veh/h	229	0	181	0	121	0	199	0
Upstream Filter (I)	1.00	0.00	0.26	0.00	1.00	0.00	0.42	0.00
Uniform Delay (d1), s/veh	32.2	0.0	33.2	0.0	35.8	0.0	32.8	0.0
Incr Delay (d2), s/veh	63.1	0.0	28.1	0.0	10.9	0.0	25.1	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	95.3	0.0	61.3	0.0	46.7	0.0	58.0	0.0
1st-Term Q (Q1), veh/ln	4.0	0.0	3.1	0.0	0.6	0.0	3.2	0.0
2nd-Term Q (Q2), veh/ln	4.0	0.0	1.4	0.0	0.2	0.0	1.4	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
%ile Back of Q (50%), veh/ln	8.0	0.0	4.5	0.0	0.7	0.0	4.6	0.0
%ile Storage Ratio (RQ%)	2.00	0.00	0.19	0.00	0.08	0.00	0.44	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	1	0	2	0	1	0	1
Grp Vol (v), veh/h	0	53	0	908	0	285	0	407
Grp Sat Flow (s), veh/h/ln	0	1800	0	1710	0	1710	0	1800
Q Serve Time (g_s), s	0.0	1.7	0.0	19.9	0.0	9.8	0.0	16.2
Cycle Q Clear Time (g_c), s	0.0	1.7	0.0	19.9	0.0	9.8	0.0	16.2
Lane Grp Cap (c), veh/h	0	434	0	907	0	598	0	470
V/C Ratio (X)	0.00	0.12	0.00	1.00	0.00	0.48	0.00	0.87
Avail Cap (c_a), veh/h	0	434	0	907	0	598	0	470
Upstream Filter (I)	0.00	1.00	0.00	0.42	0.00	1.00	0.00	0.26
Uniform Delay (d1), s/veh	0.0	22.2	0.0	27.5	0.0	19.0	0.0	26.4
Incr Delay (d2), s/veh	0.0	0.6	0.0	19.5	0.0	2.7	0.0	4.7
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	22.8	0.0	47.1	0.0	21.8	0.0	31.1
1st-Term Q (Q1), veh/ln	0.0	0.7	0.0	7.7	0.0	3.6	0.0	6.6
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	2.5	0.0	0.5	0.0	0.6

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.8	0.0	10.1	0.0	4.1	0.0	7.2
%ile Storage Ratio (RQ%)	0.00	0.04	0.00	0.13	0.00	0.70	0.00	0.30
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		R		T+R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	294	0	94	0	271	0	226
Grp Sat Flow (s), veh/h/ln	0	1525	0	1525	0	1585	0	1525
Q Serve Time (g_s), s	0.0	13.6	0.0	3.6	0.0	10.0	0.0	9.6
Cycle Q Clear Time (g_c), s	0.0	13.6	0.0	3.6	0.0	10.0	0.0	9.6
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	0.75	0.00	1.00
Lane Grp Cap (c), veh/h	0	368	0	405	0	554	0	399
V/C Ratio (X)	0.00	0.80	0.00	0.23	0.00	0.49	0.00	0.57
Avail Cap (c_a), veh/h	0	368	0	405	0	554	0	399
Upstream Filter (I)	0.00	1.00	0.00	0.42	0.00	1.00	0.00	0.26
Uniform Delay (d1), s/veh	0.0	26.7	0.0	21.6	0.0	19.1	0.0	24.0
Incr Delay (d2), s/veh	0.0	16.4	0.0	0.1	0.0	3.1	0.0	0.5
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	43.2	0.0	21.7	0.0	22.2	0.0	24.5
1st-Term Q (Q1), veh/ln	0.0	4.7	0.0	1.2	0.0	3.5	0.0	3.3
2nd-Term Q (Q2), veh/ln	0.0	1.7	0.0	0.0	0.0	0.5	0.0	0.1
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	6.4	0.0	1.3	0.0	4.0	0.0	3.4
%ile Storage Ratio (RQ%)	0.00	0.34	0.00	0.02	0.00	0.68	0.00	0.14
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	42.4
HCM 6th LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	531	609	171	37	473	258	117	541	68	266	24	184
Future Volume (veh/h)	531	609	171	37	473	258	117	541	68	266	24	184
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1600	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1900
Adj Flow Rate, veh/h	559	641	180	39	498	272	123	569	72	280	25	194
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	578	794	673	51	499	423	262	637	284	287	72	556
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.39	0.88	0.88	0.06	0.55	0.28	0.19	0.19	0.19	0.18	0.40	0.40
Unsig. Movement Delay												
Ln Grp Delay, s/veh	47.1	6.6	3.8	75.2	64.2	38.3	47.1	61.0	40.3	91.3	0.0	24.2
Ln Grp LOS	D	A	A	E	E	D	D	E	D	F	A	C
Approach Vol, veh/h		1380			809			764			499	
Approach Delay, s/veh		22.6			56.0			56.8			61.8	
Approach LOS		C			E			E			E	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4		6	7	8
Case No	2.0	5.3	2.0	3.0		4.0	2.0	3.0
Phs Duration (G+Y+Rc), s	24.0	25.0	8.0	53.0		49.0	26.0	35.0
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5		4.5	4.5	4.5
Max Green (Gmax), s	19.5	20.5	5.0	47.0		44.5	21.5	30.5
Max Allow Headway (MAH), s	3.8	5.0	3.8	5.0		5.5	3.8	4.8
Max Q Clear (g_c+I1), s	20.9	19.9	4.6	18.0		12.8	22.4	32.4
Green Ext Time (g_e), s	0.0	0.3	0.0	5.5		1.5	0.0	0.0
Prob of Phs Call (p_c)	1.00	1.00	0.70	1.00		1.00	1.00	1.00
Prob of Max Out (p_x)	1.00	0.00	1.00	0.02		0.00	1.00	1.00

Left-Turn Movement Data								
Assigned Mvmt	1	5	3				7	
Mvmt Sat Flow, veh/h	1619	1056	1619				2956	

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		3420		1800		177		1800

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1525		1525		1375		1525

Left Lane Group Data								
Assigned Mvmt	1	5	3	0	0	0	7	0
Lane Assignment	L (Prot)	L	L (Prot)				L (Prot)	

Lanes in Grp	1	1	1	0	0	0	2	0
Grp Vol (v), veh/h	280	123	39	0	0	0	559	0
Grp Sat Flow (s), veh/h/ln	1619	1056	1619	0	0	0	1478	0
Q Serve Time (g_s), s	18.9	11.8	2.6	0.0	0.0	0.0	20.4	0.0
Cycle Q Clear Time (g_c), s	18.9	11.8	2.6	0.0	0.0	0.0	20.4	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	1056	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	20.5	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	20.5	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	11.8	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	1.00	1.00	0.00	0.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	287	262	51	0	0	0	578	0
V/C Ratio (X)	0.98	0.47	0.76	0.00	0.00	0.00	0.97	0.00
Avail Cap (c_a), veh/h	287	262	74	0	0	0	578	0
Upstream Filter (I)	1.00	1.00	1.00	0.00	0.00	0.00	0.31	0.00
Uniform Delay (d1), s/veh	45.0	41.2	51.1	0.0	0.0	0.0	33.2	0.0
Incr Delay (d2), s/veh	46.3	5.9	24.1	0.0	0.0	0.0	14.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	91.3	47.1	75.2	0.0	0.0	0.0	47.1	0.0
1st-Term Q (Q1), veh/ln	7.5	3.1	1.0	0.0	0.0	0.0	5.8	0.0
2nd-Term Q (Q2), veh/ln	3.7	0.4	0.3	0.0	0.0	0.0	1.1	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	1.00	1.00	0.00	0.00	0.00	1.00	0.00
%ile Back of Q (50%), veh/ln	11.2	3.5	1.4	0.0	0.0	0.0	6.9	0.0
%ile Storage Ratio (RQ%)	1.36	0.58	0.02	0.00	0.00	0.00	0.57	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

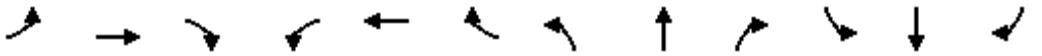
Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T				T
Lanes in Grp	0	2	0	1	0	0	0	1
Grp Vol (v), veh/h	0	569	0	641	0	0	0	498
Grp Sat Flow (s), veh/h/ln	0	1710	0	1800	0	0	0	1800
Q Serve Time (g_s), s	0.0	17.9	0.0	16.0	0.0	0.0	0.0	30.4
Cycle Q Clear Time (g_c), s	0.0	17.9	0.0	16.0	0.0	0.0	0.0	30.4
Lane Grp Cap (c), veh/h	0	637	0	794	0	0	0	499
V/C Ratio (X)	0.00	0.89	0.00	0.81	0.00	0.00	0.00	1.00
Avail Cap (c_a), veh/h	0	637	0	794	0	0	0	499
Upstream Filter (I)	0.00	1.00	0.00	0.31	0.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	43.7	0.0	4.6	0.0	0.0	0.0	24.5
Incr Delay (d2), s/veh	0.0	17.3	0.0	2.0	0.0	0.0	0.0	39.7
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	61.0	0.0	6.6	0.0	0.0	0.0	64.2
1st-Term Q (Q1), veh/ln	0.0	7.5	0.0	2.1	0.0	0.0	0.0	8.7
2nd-Term Q (Q2), veh/ln	0.0	1.5	0.0	0.4	0.0	0.0	0.0	5.5

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	9.0	0.0	2.5	0.0	0.0	0.0	14.2
%ile Storage Ratio (RQ%)	0.00	0.80	0.00	0.10	0.00	0.00	0.00	0.16
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		R		T+R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	72	0	180	0	219	0	272
Grp Sat Flow (s), veh/h/ln	0	1525	0	1525	0	1552	0	1525
Q Serve Time (g_s), s	0.0	4.4	0.0	2.0	0.0	10.8	0.0	17.3
Cycle Q Clear Time (g_c), s	0.0	4.4	0.0	2.0	0.0	10.8	0.0	17.3
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	0.89	0.00	1.00
Lane Grp Cap (c), veh/h	0	284	0	673	0	628	0	423
V/C Ratio (X)	0.00	0.25	0.00	0.27	0.00	0.35	0.00	0.64
Avail Cap (c_a), veh/h	0	284	0	673	0	628	0	423
Upstream Filter (I)	0.00	1.00	0.00	0.31	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	38.2	0.0	3.7	0.0	22.7	0.0	35.0
Incr Delay (d2), s/veh	0.0	2.1	0.0	0.1	0.0	1.5	0.0	3.3
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	40.3	0.0	3.8	0.0	24.2	0.0	38.3
1st-Term Q (Q1), veh/ln	0.0	1.7	0.0	0.6	0.0	3.9	0.0	6.3
2nd-Term Q (Q2), veh/ln	0.0	0.2	0.0	0.0	0.0	0.3	0.0	0.4
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	1.8	0.0	0.6	0.0	4.2	0.0	6.7
%ile Storage Ratio (RQ%)	0.00	0.65	0.00	0.02	0.00	0.51	0.00	0.08
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	43.7
HCM 6th LOS	D

EXISTING PLUS AMBIENT GROWTH PLUS CUMULATIVE PLUS PROJECT WITH IMPROVEMENT CONDITIONS



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	266	3	166	626	572	0	0	571	737
Future Volume (veh/h)	0	0	0	266	3	166	626	572	0	0	571	737
Number				3	8	18	5	2	12	1	6	16
Initial Q, veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln				1700	1800	1800	1600	1800	0	0	1800	1900
Adj Flow Rate, veh/h				280	3	175	659	602	0	0	601	776
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence				Yes			Yes			No		
Cap, veh/h				328	5	305	708	2316	0	0	1856	608
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	2.00	2.00
Prop Arrive On Green				0.20	0.20	0.20	0.48	1.00	0.00	0.00	0.76	0.76
Unsig. Movement Delay												
Ln Grp Delay, s/veh				43.5	0.0	28.7	32.6	0.2	0.0	0.0	6.5	145.8
Ln Grp LOS				D	A	C	C	A	A	A	A	F
Approach Vol, veh/h					458			1261			1377	
Approach Delay, s/veh					37.7			17.1			85.0	
Approach LOS					D			B			F	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2	8		5	6		
Case No		4.0	10.0		2.0	7.0		
Phs Duration (G+Y+Rc), s		55.3	19.7		22.5	32.8		
Change Period (Y+Rc), s		4.5	4.5		4.5	4.5		
Max Green (Gmax), s		48.0	18.0		18.5	25.0		
Max Allow Headway (MAH), s		5.2	4.5		3.8	4.5		
Max Q Clear (g_c+I1), s		2.0	14.5		17.7	30.3		
Green Ext Time (g_e), s		4.7	0.7		0.3	0.0		
Prob of Phs Call (p_c)		1.00	1.00		1.00	1.00		
Prob of Max Out (p_x)		0.00	1.00		1.00	0.00		

Left-Turn Movement Data								
Assigned Mvmt			3		5	1		
Mvmt Sat Flow, veh/h			1619		2956	0		

Through Movement Data								
Assigned Mvmt		2	8			6		
Mvmt Sat Flow, veh/h		3510	26			5076		

Right-Turn Movement Data								
Assigned Mvmt		12	18			16		
Mvmt Sat Flow, veh/h		0	1504			1610		

Left Lane Group Data								
Assigned Mvmt	0	0	3	0	5	1	0	0
Lane Assignment			L		L (Prot)			

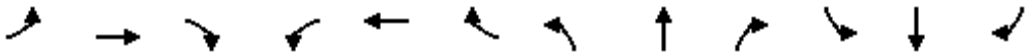
Lanes in Grp	0	0	1	0	2	0	0	0
Grp Vol (v), veh/h	0	0	280	0	659	0	0	0
Grp Sat Flow (s), veh/h/ln	0	0	1619	0	1478	0	0	0
Q Serve Time (g_s), s	0.0	0.0	12.5	0.0	15.7	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	12.5	0.0	15.7	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	1619	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	28.3	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	0.00	1.00	0.00	1.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	328	0	708	0	0	0
V/C Ratio (X)	0.00	0.00	0.85	0.00	0.93	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	0	389	0	729	0	0	0
Upstream Filter (I)	0.00	0.00	1.00	0.00	0.68	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	28.8	0.0	18.9	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	14.6	0.0	13.7	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	43.5	0.0	32.6	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	4.6	0.0	3.5	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	1.3	0.0	1.3	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	0.00	1.00	0.00	1.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	6.0	0.0	4.8	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.12	0.00	0.47	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	8	0	0	6	0	0
Lane Assignment		T				T		
Lanes in Grp	0	2	0	0	0	3	0	0
Grp Vol (v), veh/h	0	602	0	0	0	601	0	0
Grp Sat Flow (s), veh/h/ln	0	1710	0	0	0	1638	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0
Lane Grp Cap (c), veh/h	0	2316	0	0	0	1856	0	0
V/C Ratio (X)	0.00	0.26	0.00	0.00	0.00	0.32	0.00	0.00
Avail Cap (c_a), veh/h	0	2316	0	0	0	1856	0	0
Upstream Filter (I)	0.00	0.68	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	6.1	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.2	0.0	0.0	0.0	0.5	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.2	0.0	0.0	0.0	6.5	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.1	0.0	0.0	0.0	0.9	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.01	0.00	0.00	0.00	0.02	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	18	0	0	16	0	0
Lane Assignment			T+R			R		
Lanes in Grp	0	0	1	0	0	1	0	0
Grp Vol (v), veh/h	0	0	178	0	0	776	0	0
Grp Sat Flow (s), veh/h/ln	0	0	1529	0	0	1610	0	0
Q Serve Time (g_s), s	0.0	0.0	7.9	0.0	0.0	28.3	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	7.9	0.0	0.0	28.3	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.00	0.98	0.00	0.00	1.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	310	0	0	608	0	0
V/C Ratio (X)	0.00	0.00	0.57	0.00	0.00	1.28	0.00	0.00
Avail Cap (c_a), veh/h	0	0	367	0	0	608	0	0
Upstream Filter (I)	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	27.0	0.0	0.0	9.2	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	1.7	0.0	0.0	136.6	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	28.7	0.0	0.0	145.8	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	2.8	0.0	0.0	2.8	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.1	0.0	0.0	23.1	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	2.9	0.0	0.0	25.9	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.06	0.00	0.00	0.56	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	42.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	50.4
HCM 6th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	576	8	508	0	0	0	0	692	320	97	531	0
Future Volume (veh/h)	576	8	508	0	0	0	0	692	320	97	531	0
Number	7	4	14				5	2	12	1	6	16
Initial Q, veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1700	1800	1800				0	1800	1800	1600	1900	0
Adj Flow Rate, veh/h	606	8	535				0	728	337	102	559	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0				0	0	0	0	0	0
Opposing Right Turn Influence	Yes						No			Yes		
Cap, veh/h	634	9	590				0	1474	458	246	1655	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	2.00	2.00	2.00	1.00	1.00
Prop Arrive On Green	0.39	0.39	0.39				0.00	0.60	0.60	0.17	0.46	0.00
Unsig. Movement Delay												
Ln Grp Delay, s/veh	42.9	0.0	34.8				0.0	10.6	20.4	24.7	10.9	0.0
Ln Grp LOS	D	A	C				A	B	C	C	B	A
Approach Vol, veh/h		1149						1065			661	
Approach Delay, s/veh		39.1						13.7			13.0	
Approach LOS		D						B			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	2	1		4		6		
Case No	7.0	2.0		10.0		4.0		
Phs Duration (G+Y+Rc), s	22.5	9.5		28.0		32.0		
Change Period (Y+Rc), s	4.5	4.5		4.5		4.5		
Max Green (Gmax), s	18.0	5.0		23.5		27.5		
Max Allow Headway (MAH), s	4.8	3.8		4.6		5.2		
Max Q Clear (g_c+I1), s	11.5	3.9		23.8		8.0		
Green Ext Time (g_e), s	3.3	0.0		0.0		3.7		
Prob of Phs Call (p_c)	1.00	0.82		1.00		1.00		
Prob of Max Out (p_x)	0.00	1.00		1.00		0.00		

Left-Turn Movement Data								
Assigned Mvmt	5	1		7				
Mvmt Sat Flow, veh/h	0	2956		1619				

Through Movement Data								
Assigned Mvmt	2			4		6		
Mvmt Sat Flow, veh/h	5076			23		3705		

Right-Turn Movement Data								
Assigned Mvmt	12			14		16		
Mvmt Sat Flow, veh/h	1525			1506		0		

Left Lane Group Data								
Assigned Mvmt	5	1	0	7	0	0	0	0
Lane Assignment		L (Prot)		L				

Lanes in Grp	0	2	0	1	0	0	0	0
Grp Vol (v), veh/h	0	102	0	606	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	1478	0	1619	0	0	0	0
Q Serve Time (g_s), s	0.0	1.9	0.0	21.8	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	1.9	0.0	21.8	0.0	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	1619	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	246	0	634	0	0	0	0
V/C Ratio (X)	0.00	0.41	0.00	0.96	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	246	0	634	0	0	0	0
Upstream Filter (I)	0.00	0.87	0.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	23.7	0.0	17.7	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	1.0	0.0	25.2	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	24.7	0.0	42.9	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.6	0.0	7.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	4.4	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.6	0.0	11.5	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.06	0.00	0.20	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	2	0	0	4	0	6	0	0
Lane Assignment	T					T		
Lanes in Grp	3	0	0	0	0	2	0	0
Grp Vol (v), veh/h	728	0	0	0	0	559	0	0
Grp Sat Flow (s), veh/h/ln	1638	0	0	0	0	1805	0	0
Q Serve Time (g_s), s	5.1	0.0	0.0	0.0	0.0	6.0	0.0	0.0
Cycle Q Clear Time (g_c), s	5.1	0.0	0.0	0.0	0.0	6.0	0.0	0.0
Lane Grp Cap (c), veh/h	1474	0	0	0	0	1655	0	0
V/C Ratio (X)	0.49	0.00	0.00	0.00	0.00	0.34	0.00	0.00
Avail Cap (c_a), veh/h	1474	0	0	0	0	1655	0	0
Upstream Filter (I)	1.00	0.00	0.00	0.00	0.00	0.87	0.00	0.00
Uniform Delay (d1), s/veh	9.4	0.0	0.0	0.0	0.0	10.4	0.0	0.0
Incr Delay (d2), s/veh	1.2	0.0	0.0	0.0	0.0	0.5	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	10.6	0.0	0.0	0.0	0.0	10.9	0.0	0.0
1st-Term Q (Q1), veh/ln	1.3	0.0	0.0	0.0	0.0	2.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.2	0.0	0.0	0.0	0.0	0.1	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	1.5	0.0	0.0	0.0	0.0	2.1	0.0	0.0
%ile Storage Ratio (RQ%)	0.05	0.00	0.00	0.00	0.00	0.21	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	12	0	0	14	0	16	0	0
Lane Assignment	R			T+R				
Lanes in Grp	1	0	0	1	0	0	0	0
Grp Vol (v), veh/h	337	0	0	543	0	0	0	0
Grp Sat Flow (s), veh/h/ln	1525	0	0	1529	0	0	0	0
Q Serve Time (g_s), s	9.5	0.0	0.0	20.1	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	9.5	0.0	0.0	20.1	0.0	0.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	1.00	0.00	0.00	0.99	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	458	0	0	599	0	0	0	0
V/C Ratio (X)	0.74	0.00	0.00	0.91	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	458	0	0	599	0	0	0	0
Upstream Filter (I)	1.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	10.3	0.0	0.0	17.2	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	10.1	0.0	0.0	17.6	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	20.4	0.0	0.0	34.8	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	1.9	0.0	0.0	6.1	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	1.3	0.0	0.0	2.9	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	3.2	0.0	0.0	9.0	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.10	0.00	0.00	0.15	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	23.7
HCM 6th LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	258	64	425	732	148	76	209	269	202	496	70
Future Volume (veh/h)	30	258	64	425	732	148	76	209	269	202	496	70
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1900
Adj Flow Rate, veh/h	32	272	67	447	771	156	80	220	283	213	522	74
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	50	361	87	423	1028	208	100	946	820	210	1038	147
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.03	0.13	0.13	0.52	0.73	0.73	0.06	0.28	0.28	0.13	0.34	0.34
Unsig. Movement Delay												
Ln Grp Delay, s/veh	56.4	42.4	43.4	77.9	13.6	13.7	62.8	25.7	12.9	104.3	26.4	26.4
Ln Grp LOS	E	D	D	F	B	B	E	C	B	F	C	C
Approach Vol, veh/h		371			1374			583			809	
Approach Delay, s/veh		44.1			34.5			24.6			46.9	
Approach LOS		D			C			C			D	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Case No	2.0	3.0	2.0	4.0	2.0	4.0	2.0	4.0
Phs Duration (G+Y+Rc), s	16.2	29.4	28.0	16.4	10.0	35.5	7.3	37.2
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green (Gmax), s	11.7	18.8	23.5	18.0	7.5	23.0	6.3	35.2
Max Allow Headway (MAH), s	3.8	4.6	3.8	5.3	3.8	5.3	3.8	5.3
Max Q Clear (g_c+I1), s	13.7	11.5	25.5	10.8	6.4	14.4	3.8	16.7
Green Ext Time (g_e), s	0.0	1.4	0.0	1.1	0.0	2.4	0.0	5.9
Prob of Phs Call (p_c)	1.00	1.00	1.00	1.00	0.86	1.00	0.55	1.00
Prob of Max Out (p_x)	1.00	0.00	1.00	0.52	1.00	0.00	1.00	0.21

Left-Turn Movement Data								
Assigned Mvmt	1		3		5		7	
Mvmt Sat Flow, veh/h	1619		1619		1619		1619	

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		3420		2730		3009		2834

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1525		661		425		573

Left Lane Group Data								
Assigned Mvmt	1	0	3	0	5	0	7	0
Lane Assignment	L (Prot)		L (Prot)		L (Prot)		L (Prot)	

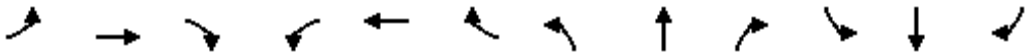
Lanes in Grp	1	0	1	0	1	0	1	0
Grp Vol (v), veh/h	213	0	447	0	80	0	32	0
Grp Sat Flow (s), veh/h/ln	1619	0	1619	0	1619	0	1619	0
Q Serve Time (g_s), s	11.7	0.0	23.5	0.0	4.4	0.0	1.8	0.0
Cycle Q Clear Time (g_c), s	11.7	0.0	23.5	0.0	4.4	0.0	1.8	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	210	0	423	0	100	0	50	0
V/C Ratio (X)	1.01	0.00	1.06	0.00	0.80	0.00	0.65	0.00
Avail Cap (c_a), veh/h	210	0	423	0	135	0	113	0
Upstream Filter (I)	1.00	0.00	0.85	0.00	0.98	0.00	1.00	0.00
Uniform Delay (d1), s/veh	39.2	0.0	21.5	0.0	41.7	0.0	43.1	0.0
Incr Delay (d2), s/veh	65.2	0.0	56.4	0.0	21.1	0.0	13.2	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	104.3	0.0	77.9	0.0	62.8	0.0	56.4	0.0
1st-Term Q (Q1), veh/ln	4.6	0.0	5.4	0.0	1.7	0.0	0.7	0.0
2nd-Term Q (Q2), veh/ln	3.8	0.0	6.6	0.0	0.6	0.0	0.2	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
%ile Back of Q (50%), veh/ln	8.4	0.0	12.1	0.0	2.3	0.0	0.9	0.0
%ile Storage Ratio (RQ%)	0.13	0.00	0.11	0.00	0.12	0.00	0.01	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.6	0.0	6.1	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.3	0.0	0.3	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	2	0	1	0	1	0	1
Grp Vol (v), veh/h	0	220	0	169	0	296	0	465
Grp Sat Flow (s), veh/h/ln	0	1710	0	1710	0	1710	0	1710
Q Serve Time (g_s), s	0.0	4.5	0.0	8.5	0.0	12.3	0.0	14.7
Cycle Q Clear Time (g_c), s	0.0	4.5	0.0	8.5	0.0	12.3	0.0	14.7
Lane Grp Cap (c), veh/h	0	946	0	226	0	590	0	621
V/C Ratio (X)	0.00	0.23	0.00	0.74	0.00	0.50	0.00	0.75
Avail Cap (c_a), veh/h	0	946	0	342	0	590	0	669
Upstream Filter (I)	0.00	0.98	0.00	1.00	0.00	1.00	0.00	0.85
Uniform Delay (d1), s/veh	0.0	25.2	0.0	37.6	0.0	23.3	0.0	9.9
Incr Delay (d2), s/veh	0.0	0.6	0.0	4.8	0.0	3.0	0.0	3.7
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	25.7	0.0	42.4	0.0	26.4	0.0	13.6
1st-Term Q (Q1), veh/ln	0.0	1.8	0.0	3.5	0.0	4.8	0.0	3.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.3	0.0	0.5	0.0	0.6

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	1.9	0.0	3.8	0.0	5.3	0.0	3.6
%ile Storage Ratio (RQ%)	0.00	0.09	0.00	0.05	0.00	0.08	0.00	0.03
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		T+R		T+R		T+R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	283	0	170	0	300	0	462
Grp Sat Flow (s), veh/h/ln	0	1525	0	1681	0	1724	0	1697
Q Serve Time (g_s), s	0.0	9.5	0.0	8.8	0.0	12.4	0.0	14.7
Cycle Q Clear Time (g_c), s	0.0	9.5	0.0	8.8	0.0	12.4	0.0	14.7
Prot RT Sat Flow (s_R), veh/h/ln	0.0	1525.4	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	23.5	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	0.39	0.00	0.25	0.00	0.34
Lane Grp Cap (c), veh/h	0	820	0	223	0	595	0	616
V/C Ratio (X)	0.00	0.35	0.00	0.77	0.00	0.50	0.00	0.75
Avail Cap (c_a), veh/h	0	820	0	336	0	595	0	664
Upstream Filter (I)	0.00	0.98	0.00	1.00	0.00	1.00	0.00	0.85
Uniform Delay (d1), s/veh	0.0	11.8	0.0	37.7	0.0	23.4	0.0	9.9
Incr Delay (d2), s/veh	0.0	1.1	0.0	5.7	0.0	3.0	0.0	3.8
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	12.9	0.0	43.4	0.0	26.4	0.0	13.7
1st-Term Q (Q1), veh/ln	0.0	3.0	0.0	3.6	0.0	4.9	0.0	2.9
2nd-Term Q (Q2), veh/ln	0.0	0.3	0.0	0.4	0.0	0.5	0.0	0.6
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	3.3	0.0	3.9	0.0	5.4	0.0	3.6
%ile Storage Ratio (RQ%)	0.00	0.16	0.00	0.05	0.00	0.08	0.00	0.03
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	37.0
HCM 6th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	79	79	50	264	306	87	90	426	150	73	497	125
Future Volume (veh/h)	79	79	50	264	306	87	90	426	150	73	497	125
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	83	83	53	278	322	92	95	448	158	77	523	132
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	107	157	93	313	517	145	121	1662	741	99	1861	458
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	1.66	1.66	1.66	1.66
Prop Arrive On Green	0.12	0.14	0.14	0.35	0.37	0.37	0.13	0.92	0.76	0.09	0.74	0.74
Unsig. Movement Delay												
Ln Grp Delay, s/veh	43.9	34.1	35.3	45.4	23.2	23.5	55.2	2.0	5.6	49.2	6.1	6.5
Ln Grp LOS	D	C	D	D	C	C	E	A	A	D	A	A
Approach Vol, veh/h		219			692			701			732	
Approach Delay, s/veh		38.2			32.2			10.0			10.7	
Approach LOS		D			C			B			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Case No	2.0	3.0	2.0	4.0	2.0	4.0	2.0	4.0
Phs Duration (G+Y+Rc), s	8.6	39.0	17.5	9.9	9.5	38.1	8.9	18.4
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green (Gmax), s	5.5	19.0	14.5	18.0	5.5	19.0	8.9	23.6
Max Allow Headway (MAH), s	3.8	4.9	3.8	5.4	3.8	5.3	3.8	5.3
Max Q Clear (g_c+I1), s	5.1	4.1	12.9	4.9	5.8	5.2	5.3	9.2
Green Ext Time (g_e), s	0.0	3.1	0.1	0.5	0.0	3.6	0.0	2.1
Prob of Phs Call (p_c)	0.80	1.00	1.00	1.00	0.86	1.00	0.82	1.00
Prob of Max Out (p_x)	1.00	0.00	1.00	0.01	1.00	0.00	1.00	0.07

Left-Turn Movement Data								
Assigned Mvmt	1		3		5		7	
Mvmt Sat Flow, veh/h	1810		1810		1810		1810	

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		3610		2183		4152		2782

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1610		1290		1022		782

Left Lane Group Data								
Assigned Mvmt	1	0	3	0	5	0	7	0
Lane Assignment	L (Prot)		L (Prot)		L (Prot)		L (Prot)	

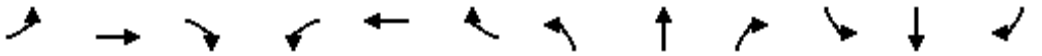
Lanes in Grp	1	0	1	0	1	0	1	0
Grp Vol (v), veh/h	77	0	278	0	95	0	83	0
Grp Sat Flow (s), veh/h/ln	1810	0	1810	0	1810	0	1810	0
Q Serve Time (g_s), s	3.1	0.0	10.9	0.0	3.8	0.0	3.3	0.0
Cycle Q Clear Time (g_c), s	3.1	0.0	10.9	0.0	3.8	0.0	3.3	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	99	0	313	0	121	0	107	0
V/C Ratio (X)	0.78	0.00	0.89	0.00	0.79	0.00	0.78	0.00
Avail Cap (c_a), veh/h	133	0	350	0	133	0	215	0
Upstream Filter (I)	0.82	0.00	1.00	0.00	0.95	0.00	1.00	0.00
Uniform Delay (d1), s/veh	33.7	0.0	23.8	0.0	32.0	0.0	32.6	0.0
Incr Delay (d2), s/veh	15.6	0.0	21.6	0.0	23.2	0.0	11.3	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	49.2	0.0	45.4	0.0	55.2	0.0	43.9	0.0
1st-Term Q (Q1), veh/ln	1.3	0.0	3.6	0.0	1.5	0.0	1.4	0.0
2nd-Term Q (Q2), veh/ln	0.4	0.0	1.9	0.0	0.8	0.0	0.3	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
%ile Back of Q (50%), veh/ln	1.7	0.0	5.5	0.0	2.3	0.0	1.7	0.0
%ile Storage Ratio (RQ%)	0.24	0.00	0.04	0.00	0.29	0.00	0.19	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	2	0	1	0	2	0	1
Grp Vol (v), veh/h	0	448	0	67	0	433	0	207
Grp Sat Flow (s), veh/h/ln	0	1805	0	1805	0	1729	0	1805
Q Serve Time (g_s), s	0.0	1.0	0.0	2.6	0.0	3.0	0.0	7.0
Cycle Q Clear Time (g_c), s	0.0	1.0	0.0	2.6	0.0	3.0	0.0	7.0
Lane Grp Cap (c), veh/h	0	1662	0	130	0	1550	0	336
V/C Ratio (X)	0.00	0.27	0.00	0.52	0.00	0.28	0.00	0.62
Avail Cap (c_a), veh/h	0	1662	0	433	0	1550	0	568
Upstream Filter (I)	0.00	0.95	0.00	1.00	0.00	0.82	0.00	1.00
Uniform Delay (d1), s/veh	0.0	1.6	0.0	30.9	0.0	5.7	0.0	21.4
Incr Delay (d2), s/veh	0.0	0.4	0.0	3.2	0.0	0.4	0.0	1.8
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	2.0	0.0	34.1	0.0	6.1	0.0	23.2
1st-Term Q (Q1), veh/ln	0.0	0.3	0.0	1.1	0.0	0.9	0.0	2.5
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.1	0.0	0.1	0.0	0.2

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.4	0.0	1.2	0.0	1.0	0.0	2.6
%ile Storage Ratio (RQ%)	0.00	0.01	0.00	0.01	0.00	0.01	0.00	0.02
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		T+R		T+R		T+R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	158	0	69	0	222	0	207
Grp Sat Flow (s), veh/h/ln	0	1610	0	1668	0	1716	0	1759
Q Serve Time (g_s), s	0.0	2.1	0.0	2.9	0.0	3.2	0.0	7.2
Cycle Q Clear Time (g_c), s	0.0	2.1	0.0	2.9	0.0	3.2	0.0	7.2
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	0.77	0.00	0.60	0.00	0.44
Lane Grp Cap (c), veh/h	0	741	0	120	0	769	0	327
V/C Ratio (X)	0.00	0.21	0.00	0.57	0.00	0.29	0.00	0.63
Avail Cap (c_a), veh/h	0	741	0	400	0	769	0	554
Upstream Filter (I)	0.00	0.95	0.00	1.00	0.00	0.82	0.00	1.00
Uniform Delay (d1), s/veh	0.0	5.0	0.0	31.0	0.0	5.7	0.0	21.5
Incr Delay (d2), s/veh	0.0	0.6	0.0	4.2	0.0	0.8	0.0	2.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	5.6	0.0	35.3	0.0	6.5	0.0	23.5
1st-Term Q (Q1), veh/ln	0.0	0.6	0.0	1.1	0.0	0.9	0.0	2.5
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.1	0.0	0.2	0.0	0.2
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.7	0.0	1.2	0.0	1.1	0.0	2.7
%ile Storage Ratio (RQ%)	0.00	0.02	0.00	0.01	0.00	0.01	0.00	0.02
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	19.4
HCM 6th LOS	B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	389	10	422	498	727	0	0	200	400
Future Volume (veh/h)	0	0	0	389	10	422	498	727	0	0	200	400
Number				3	8	18	5	2	12	1	6	16
Initial Q, veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln				1700	1800	1800	1700	1800	0	0	1800	1900
Adj Flow Rate, veh/h				409	11	444	524	765	0	0	211	421
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence				Yes			Yes			No		
Cap, veh/h				459	10	423	539	2109	0	0	1148	376
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00
Prop Arrive On Green				0.28	0.28	0.28	0.67	1.00	0.00	0.00	0.23	0.23
Unsig. Movement Delay												
Ln Grp Delay, s/veh				50.1	0.0	88.8	40.8	0.4	0.0	0.0	28.0	117.3
Ln Grp LOS				D	A	F	D	A	A	A	C	F
Approach Vol, veh/h					864			1289			632	
Approach Delay, s/veh					70.5			16.8			87.5	
Approach LOS					E			B			F	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2	8		5	6		
Case No		4.0	10.0		2.0	7.0		
Phs Duration (G+Y+Rc), s		60.0	30.0		34.5	25.5		
Change Period (Y+Rc), s		4.5	4.5		4.5	4.5		
Max Green (Gmax), s		55.5	25.5		31.5	19.5		
Max Allow Headway (MAH), s		5.2	4.7		3.8	4.4		
Max Q Clear (g_c+I1), s		2.0	27.5		29.6	23.0		
Green Ext Time (g_e), s		6.5	0.0		0.4	0.0		
Prob of Phs Call (p_c)		1.00	1.00		1.00	1.00		
Prob of Max Out (p_x)		0.00	1.00		1.00	0.00		
Left-Turn Movement Data								
Assigned Mvmt			3		5	1		
Mvmt Sat Flow, veh/h			1619		1619	0		
Through Movement Data								
Assigned Mvmt		2	8			6		
Mvmt Sat Flow, veh/h		3510	37			5076		
Right-Turn Movement Data								
Assigned Mvmt		12	18			16		
Mvmt Sat Flow, veh/h		0	1494			1610		
Left Lane Group Data								
Assigned Mvmt	0	0	3	0	5	1	0	0
Lane Assignment			L		L (Prot)			

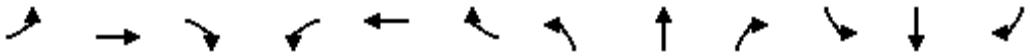
Lanes in Grp	0	0	1	0	1	0	0	0
Grp Vol (v), veh/h	0	0	409	0	524	0	0	0
Grp Sat Flow (s), veh/h/ln	0	0	1619	0	1619	0	0	0
Q Serve Time (g_s), s	0.0	0.0	21.8	0.0	27.6	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	21.8	0.0	27.6	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	1619	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	21.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	0.00	1.00	0.00	1.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	459	0	539	0	0	0
V/C Ratio (X)	0.00	0.00	0.89	0.00	0.97	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	0	459	0	567	0	0	0
Upstream Filter (I)	0.00	0.00	1.00	0.00	0.79	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	30.9	0.0	14.6	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	19.2	0.0	26.1	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	50.1	0.0	40.8	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	8.2	0.0	4.3	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	2.4	0.0	3.9	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	0.00	1.00	0.00	1.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	10.7	0.0	8.2	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.22	0.00	0.79	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	8	0	0	6	0	0
Lane Assignment		T				T		
Lanes in Grp	0	2	0	0	0	3	0	0
Grp Vol (v), veh/h	0	765	0	0	0	211	0	0
Grp Sat Flow (s), veh/h/ln	0	1710	0	0	0	1638	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	3.1	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	3.1	0.0	0.0
Lane Grp Cap (c), veh/h	0	2109	0	0	0	1148	0	0
V/C Ratio (X)	0.00	0.36	0.00	0.00	0.00	0.18	0.00	0.00
Avail Cap (c_a), veh/h	0	2109	0	0	0	1148	0	0
Upstream Filter (I)	0.00	0.79	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	27.6	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.4	0.0	0.0	0.0	0.4	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.4	0.0	0.0	0.0	28.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	1.2	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.1	0.0	0.0	0.0	1.2	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.01	0.00	0.00	0.00	0.03	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	18	0	0	16	0	0
Lane Assignment			T+R			R		
Lanes in Grp	0	0	1	0	0	1	0	0
Grp Vol (v), veh/h	0	0	455	0	0	421	0	0
Grp Sat Flow (s), veh/h/ln	0	0	1531	0	0	1610	0	0
Q Serve Time (g_s), s	0.0	0.0	25.5	0.0	0.0	21.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	25.5	0.0	0.0	21.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.00	0.98	0.00	0.00	1.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	434	0	0	376	0	0
V/C Ratio (X)	0.00	0.00	1.05	0.00	0.00	1.12	0.00	0.00
Avail Cap (c_a), veh/h	0	0	434	0	0	376	0	0
Upstream Filter (I)	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	32.3	0.0	0.0	34.5	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	56.6	0.0	0.0	82.8	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	88.8	0.0	0.0	117.3	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	9.1	0.0	0.0	8.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	6.8	0.0	0.0	8.7	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	15.9	0.0	0.0	16.6	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.33	0.00	0.00	0.36	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	5.3	0.0	0.0	11.2	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.3	0.0	0.0	0.3	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	49.5
HCM 6th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	374	8	386	0	0	0	0	868	473	289	553	0
Future Volume (veh/h)	374	8	386	0	0	0	0	868	473	289	553	0
Number	7	4	14				5	2	12	1	6	16
Initial Q, veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1700	1800	1800				0	1800	1800	1600	1900	0
Adj Flow Rate, veh/h	394	8	406				0	914	498	304	582	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0				0	0	0	0	0	0
Opposing Right Turn Influence	Yes						No			Yes		
Cap, veh/h	490	9	454				0	2050	643	370	2042	0
HCM Platoon Ratio	1.33	1.33	1.33				1.00	1.33	1.33	1.33	1.33	1.00
Prop Arrive On Green	0.40	0.40	0.40				0.00	0.56	0.56	0.17	0.79	0.00
Unsig. Movement Delay												
Ln Grp Delay, s/veh	30.9	0.0	39.9				0.0	14.3	25.2	42.7	4.4	0.0
Ln Grp LOS	C	A	D				A	B	C	D	A	A
Approach Vol, veh/h		808						1412			886	
Approach Delay, s/veh		35.5						18.2			17.5	
Approach LOS		D						B			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Case No	2.0	7.0		10.0		4.0		
Phs Duration (G+Y+Rc), s	15.8	42.5		31.8		58.2		
Change Period (Y+Rc), s	4.5	4.5		4.5		4.5		
Max Green (Gmax), s	14.5	28.5		33.5		47.5		
Max Allow Headway (MAH), s	3.7	4.5		4.4		4.8		
Max Q Clear (g_c+I1), s	10.9	24.8		24.7		6.1		
Green Ext Time (g_e), s	0.3	2.4		2.5		3.8		
Prob of Phs Call (p_c)	1.00	1.00		1.00		1.00		
Prob of Max Out (p_x)	1.00	0.00		0.39		0.00		

Left-Turn Movement Data									
Assigned Mvmt	1	5		7					
Mvmt Sat Flow, veh/h	2956	0		1619					

Through Movement Data									
Assigned Mvmt		2		4		6			
Mvmt Sat Flow, veh/h		5040		30		3610			

Right-Turn Movement Data									
Assigned Mvmt		12		14		16			
Mvmt Sat Flow, veh/h		1525		1500		0			

Left Lane Group Data									
Assigned Mvmt	1	5	0	7	0	0	0	0	
Lane Assignment	L (Prot)			L					

Lanes in Grp	2	0	0	1	0	0	0	0
Grp Vol (v), veh/h	304	0	0	394	0	0	0	0
Grp Sat Flow (s), veh/h/ln	1478	0	0	1619	0	0	0	0
Q Serve Time (g_s), s	8.9	0.0	0.0	19.3	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	8.9	0.0	0.0	19.3	0.0	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	1619	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	38.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	370	0	0	490	0	0	0	0
V/C Ratio (X)	0.82	0.00	0.00	0.80	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	476	0	0	603	0	0	0	0
Upstream Filter (I)	0.69	0.00	0.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	36.5	0.0	0.0	24.5	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	6.2	0.0	0.0	6.4	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	42.7	0.0	0.0	30.9	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	2.9	0.0	0.0	5.8	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.3	0.0	0.0	0.9	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00
%ile Back of Q (50%), veh/ln	3.2	0.0	0.0	6.7	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.31	0.00	0.00	0.11	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	0
Lane Assignment		T				T		
Lanes in Grp	0	3	0	0	0	2	0	0
Grp Vol (v), veh/h	0	914	0	0	0	582	0	0
Grp Sat Flow (s), veh/h/ln	0	1620	0	0	0	1710	0	0
Q Serve Time (g_s), s	0.0	9.9	0.0	0.0	0.0	4.1	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	9.9	0.0	0.0	0.0	4.1	0.0	0.0
Lane Grp Cap (c), veh/h	0	2050	0	0	0	2042	0	0
V/C Ratio (X)	0.00	0.45	0.00	0.00	0.00	0.28	0.00	0.00
Avail Cap (c_a), veh/h	0	2050	0	0	0	2042	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	0.69	0.00	0.00
Uniform Delay (d1), s/veh	0.0	13.6	0.0	0.0	0.0	4.2	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.7	0.0	0.0	0.0	0.2	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	14.3	0.0	0.0	0.0	4.4	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	2.9	0.0	0.0	0.0	1.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	3.0	0.0	0.0	0.0	1.1	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.10	0.00	0.00	0.00	0.10	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	0
Lane Assignment		R		T+R				
Lanes in Grp	0	1	0	1	0	0	0	0
Grp Vol (v), veh/h	0	498	0	414	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	1525	0	1530	0	0	0	0
Q Serve Time (g_s), s	0.0	22.8	0.0	22.7	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	22.8	0.0	22.7	0.0	0.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	0.98	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	643	0	463	0	0	0	0
V/C Ratio (X)	0.00	0.77	0.00	0.89	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	643	0	569	0	0	0	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	16.4	0.0	25.5	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	8.8	0.0	14.3	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	25.2	0.0	39.9	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	5.4	0.0	6.4	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	1.6	0.0	1.8	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	6.9	0.0	8.2	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.23	0.00	0.14	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	22.5
HCM 6th LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	76	739	73	215	317	178	127	616	575	235	344	45
Future Volume (veh/h)	76	739	73	215	317	178	127	616	575	235	344	45
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1900
Adj Flow Rate, veh/h	80	778	77	226	334	187	134	648	605	247	362	47
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	72	783	77	229	736	404	291	851	595	293	761	98
HCM Platoon Ratio	1.00	1.00	1.00	1.66	1.66	1.00	1.66	1.66	1.66	1.00	1.00	1.00
Prop Arrive On Green	0.04	0.25	0.25	0.23	0.57	0.35	0.30	0.41	0.41	0.18	0.25	0.25
Unsig. Movement Delay												
Ln Grp Delay, s/veh	129.4	79.4	79.1	81.7	16.4	23.5	35.3	32.0	62.9	64.1	35.6	35.7
Ln Grp LOS	F	E	E	F	B	C	D	C	F	E	D	D
Approach Vol, veh/h		935			747			1387			656	
Approach Delay, s/veh		83.5			38.5			45.8			46.4	
Approach LOS		F			D			D			D	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Case No	2.0	3.0	2.0	4.0	2.0	4.0	2.0	4.0
Phs Duration (G+Y+Rc), s	22.6	29.4	18.6	29.4	22.5	29.5	9.0	39.1
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green (Gmax), s	18.1	20.7	18.3	24.9	18.0	20.8	18.0	25.2
Max Allow Headway (MAH), s	3.7	4.4	3.7	4.8	3.7	4.8	3.7	4.9
Max Q Clear (g_c+I1), s	14.7	26.9	13.9	26.7	6.7	12.2	4.5	13.7
Green Ext Time (g_e), s	0.2	0.0	0.2	0.0	0.2	1.3	0.1	2.1
Prob of Phs Call (p_c)	1.00	1.00	1.00	1.00	1.00	1.00	0.89	1.00
Prob of Max Out (p_x)	0.00	0.00	0.57	1.00	0.00	0.00	0.00	0.16

Left-Turn Movement Data								
Assigned Mvmt	1		3		5		7	
Mvmt Sat Flow, veh/h	1619		1619		1619		1619	

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		3420		3143		3047		2131

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1525		311		393		1169

Left Lane Group Data								
Assigned Mvmt	1	0	3	0	5	0	7	0
Lane Assignment	L (Prot)		L (Prot)		L (Prot)		L (Prot)	

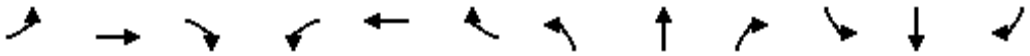
Lanes in Grp	1	0	1	0	1	0	1	0
Grp Vol (v), veh/h	247	0	226	0	134	0	80	0
Grp Sat Flow (s), veh/h/ln	1619	0	1619	0	1619	0	1619	0
Q Serve Time (g_s), s	14.7	0.0	13.9	0.0	6.7	0.0	4.5	0.0
Cycle Q Clear Time (g_c), s	14.7	0.0	13.9	0.0	6.7	0.0	4.5	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	293	0	229	0	291	0	72	0
V/C Ratio (X)	0.84	0.00	0.99	0.00	0.46	0.00	1.11	0.00
Avail Cap (c_a), veh/h	293	0	296	0	291	0	291	0
Upstream Filter (I)	1.00	0.00	0.96	0.00	0.81	0.00	1.00	0.00
Uniform Delay (d1), s/veh	39.6	0.0	38.2	0.0	31.1	0.0	47.8	0.0
Incr Delay (d2), s/veh	24.5	0.0	43.5	0.0	4.2	0.0	81.7	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	64.1	0.0	81.7	0.0	35.3	0.0	129.4	0.0
1st-Term Q (Q1), veh/ln	5.5	0.0	4.6	0.0	2.3	0.0	1.7	0.0
2nd-Term Q (Q2), veh/ln	2.0	0.0	2.8	0.0	0.3	0.0	1.6	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
%ile Back of Q (50%), veh/ln	7.5	0.0	7.4	0.0	2.7	0.0	3.4	0.0
%ile Storage Ratio (RQ%)	0.12	0.00	0.07	0.00	0.13	0.00	0.05	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	2	0	1	0	1	0	1
Grp Vol (v), veh/h	0	648	0	423	0	202	0	267
Grp Sat Flow (s), veh/h/ln	0	1710	0	1710	0	1710	0	1710
Q Serve Time (g_s), s	0.0	16.2	0.0	24.7	0.0	10.0	0.0	9.0
Cycle Q Clear Time (g_c), s	0.0	16.2	0.0	24.7	0.0	10.0	0.0	9.0
Lane Grp Cap (c), veh/h	0	851	0	426	0	427	0	591
V/C Ratio (X)	0.00	0.76	0.00	0.99	0.00	0.47	0.00	0.45
Avail Cap (c_a), veh/h	0	851	0	426	0	427	0	591
Upstream Filter (I)	0.00	0.81	0.00	1.00	0.00	1.00	0.00	0.96
Uniform Delay (d1), s/veh	0.0	26.8	0.0	37.5	0.0	31.9	0.0	15.9
Incr Delay (d2), s/veh	0.0	5.2	0.0	41.9	0.0	3.7	0.0	0.5
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	32.0	0.0	79.4	0.0	35.6	0.0	16.4
1st-Term Q (Q1), veh/ln	0.0	5.1	0.0	9.6	0.0	3.9	0.0	2.8
2nd-Term Q (Q2), veh/ln	0.0	0.6	0.0	5.0	0.0	0.4	0.0	0.1

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	5.7	0.0	14.6	0.0	4.4	0.0	2.9
%ile Storage Ratio (RQ%)	0.00	0.29	0.00	0.20	0.00	0.07	0.00	0.03
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		T+R		T+R		T+R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	605	0	432	0	207	0	254
Grp Sat Flow (s), veh/h/ln	0	1525	0	1744	0	1729	0	1590
Q Serve Time (g_s), s	0.0	24.9	0.0	24.7	0.0	10.2	0.0	11.7
Cycle Q Clear Time (g_c), s	0.0	24.9	0.0	24.7	0.0	10.2	0.0	11.7
Prot RT Sat Flow (s_R), veh/h/ln	0.0	1525.4	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	14.1	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	0.18	0.00	0.23	0.00	0.74
Lane Grp Cap (c), veh/h	0	595	0	434	0	432	0	549
V/C Ratio (X)	0.00	1.02	0.00	0.99	0.00	0.48	0.00	0.46
Avail Cap (c_a), veh/h	0	595	0	434	0	432	0	549
Upstream Filter (I)	0.00	0.81	0.00	1.00	0.00	1.00	0.00	0.96
Uniform Delay (d1), s/veh	0.0	25.4	0.0	37.5	0.0	32.0	0.0	22.9
Incr Delay (d2), s/veh	0.0	37.5	0.0	41.6	0.0	3.8	0.0	0.6
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	62.9	0.0	79.1	0.0	35.7	0.0	23.5
1st-Term Q (Q1), veh/ln	0.0	11.7	0.0	9.8	0.0	4.0	0.0	3.9
2nd-Term Q (Q2), veh/ln	0.0	6.2	0.0	5.0	0.0	0.5	0.0	0.1
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	17.9	0.0	14.8	0.0	4.5	0.0	4.0
%ile Storage Ratio (RQ%)	0.00	0.90	0.00	0.20	0.00	0.07	0.00	0.04
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	2.5	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	53.9
HCM 6th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	239	467	120	351	249	93	83	569	292	180	686	103
Future Volume (veh/h)	239	467	120	351	249	93	83	569	292	180	686	103
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1900
Adj Flow Rate, veh/h	252	492	21	369	262	45	87	599	96	189	722	3
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	279	573	24	390	702	119	107	889	764	207	1624	7
HCM Platoon Ratio	2.00	2.00	1.66	2.00	1.66	1.66	2.00	2.00	2.00	2.00	1.66	1.33
Prop Arrive On Green	0.34	0.34	0.28	0.48	0.40	0.40	0.13	0.52	0.52	0.26	0.53	0.43
Unsig. Movement Delay												
Ln Grp Delay, s/veh	53.1	45.6	45.6	53.6	22.8	22.9	59.3	22.5	7.9	67.0	17.2	18.1
Ln Grp LOS	D	D	D	D	C	C	E	C	A	E	B	B
Approach Vol, veh/h		765			676			782			914	
Approach Delay, s/veh		48.1			39.7			24.8			27.7	
Approach LOS		D			D			C			C	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Case No	2.0	3.0	2.0	4.0	2.0	4.0	2.0	4.0
Phs Duration (G+Y+Rc), s	16.0	27.9	26.2	19.9	10.5	33.4	20.0	26.1
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green (Gmax), s	11.5	20.0	22.5	18.0	7.9	23.6	18.3	22.2
Max Allow Headway (MAH), s	3.8	5.1	3.8	5.2	3.8	5.2	3.8	5.3
Max Q Clear (g_c+I1), s	12.2	13.6	21.5	14.4	6.7	9.9	15.3	7.8
Green Ext Time (g_e), s	0.0	2.3	0.1	1.0	0.0	4.0	0.2	1.5
Prob of Phs Call (p_c)	0.99	1.00	1.00	1.00	0.89	1.00	1.00	1.00
Prob of Max Out (p_x)	1.00	0.00	1.00	1.00	1.00	0.00	1.00	0.03

Left-Turn Movement Data								
Assigned Mvmt	1		3		5		7	
Mvmt Sat Flow, veh/h	1619		1619		1619		1619	

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		3420		3342		5051		2925

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1525		142		21		496

Left Lane Group Data								
Assigned Mvmt	1	0	3	0	5	0	7	0
Lane Assignment	L (Prot)		L (Prot)		L (Prot)		L (Prot)	

Lanes in Grp	1	0	1	0	1	0	1	0
Grp Vol (v), veh/h	189	0	369	0	87	0	252	0
Grp Sat Flow (s), veh/h/ln	1619	0	1619	0	1619	0	1619	0
Q Serve Time (g_s), s	10.2	0.0	19.5	0.0	4.7	0.0	13.3	0.0
Cycle Q Clear Time (g_c), s	10.2	0.0	19.5	0.0	4.7	0.0	13.3	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	207	0	390	0	107	0	279	0
V/C Ratio (X)	0.91	0.00	0.95	0.00	0.81	0.00	0.90	0.00
Avail Cap (c_a), veh/h	207	0	405	0	142	0	329	0
Upstream Filter (I)	0.80	0.00	1.00	0.00	0.91	0.00	1.00	0.00
Uniform Delay (d1), s/veh	33.0	0.0	22.8	0.0	38.5	0.0	28.8	0.0
Incr Delay (d2), s/veh	34.0	0.0	30.8	0.0	20.8	0.0	24.4	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	67.0	0.0	53.6	0.0	59.3	0.0	53.1	0.0
1st-Term Q (Q1), veh/ln	3.4	0.0	4.9	0.0	1.7	0.0	4.1	0.0
2nd-Term Q (Q2), veh/ln	2.0	0.0	3.3	0.0	0.6	0.0	1.9	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
%ile Back of Q (50%), veh/ln	5.3	0.0	8.2	0.0	2.4	0.0	5.9	0.0
%ile Storage Ratio (RQ%)	0.74	0.00	0.05	0.00	0.29	0.00	0.67	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

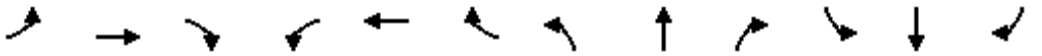
Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	2	0	1	0	2	0	1
Grp Vol (v), veh/h	0	599	0	251	0	468	0	152
Grp Sat Flow (s), veh/h/ln	0	1710	0	1710	0	1638	0	1710
Q Serve Time (g_s), s	0.0	11.6	0.0	12.3	0.0	7.9	0.0	5.6
Cycle Q Clear Time (g_c), s	0.0	11.6	0.0	12.3	0.0	7.9	0.0	5.6
Lane Grp Cap (c), veh/h	0	889	0	293	0	1053	0	410
V/C Ratio (X)	0.00	0.67	0.00	0.86	0.00	0.44	0.00	0.37
Avail Cap (c_a), veh/h	0	889	0	342	0	1053	0	422
Upstream Filter (I)	0.00	0.91	0.00	1.00	0.00	0.80	0.00	1.00
Uniform Delay (d1), s/veh	0.0	18.8	0.0	28.5	0.0	16.1	0.0	22.3
Incr Delay (d2), s/veh	0.0	3.7	0.0	17.0	0.0	1.1	0.0	0.6
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	22.5	0.0	45.6	0.0	17.2	0.0	22.8
1st-Term Q (Q1), veh/ln	0.0	3.4	0.0	4.0	0.0	2.5	0.0	2.1
2nd-Term Q (Q2), veh/ln	0.0	0.5	0.0	1.4	0.0	0.2	0.0	0.1

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	3.9	0.0	5.4	0.0	2.7	0.0	2.1
%ile Storage Ratio (RQ%)	0.00	0.10	0.00	0.03	0.00	0.03	0.00	0.01
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		T+R		T+R		T+R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	96	0	262	0	257	0	155
Grp Sat Flow (s), veh/h/ln	0	1525	0	1774	0	1796	0	1711
Q Serve Time (g_s), s	0.0	2.1	0.0	12.4	0.0	7.9	0.0	5.8
Cycle Q Clear Time (g_c), s	0.0	2.1	0.0	12.4	0.0	7.9	0.0	5.8
Prot RT Sat Flow (s_R), veh/h/ln	0.0	1525.4	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	21.7	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	0.08	0.00	0.01	0.00	0.29
Lane Grp Cap (c), veh/h	0	764	0	304	0	578	0	410
V/C Ratio (X)	0.00	0.13	0.00	0.86	0.00	0.44	0.00	0.38
Avail Cap (c_a), veh/h	0	764	0	355	0	578	0	422
Upstream Filter (I)	0.00	0.91	0.00	1.00	0.00	0.80	0.00	1.00
Uniform Delay (d1), s/veh	0.0	7.6	0.0	28.8	0.0	16.1	0.0	22.3
Incr Delay (d2), s/veh	0.0	0.3	0.0	16.9	0.0	2.0	0.0	0.6
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	7.9	0.0	45.6	0.0	18.1	0.0	22.9
1st-Term Q (Q1), veh/ln	0.0	0.6	0.0	4.2	0.0	2.8	0.0	2.1
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	1.4	0.0	0.3	0.0	0.1
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.7	0.0	5.6	0.0	3.1	0.0	2.2
%ile Storage Ratio (RQ%)	0.00	0.02	0.00	0.03	0.00	0.03	0.00	0.01
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	34.5
HCM 6th LOS	C

BUILD OUT YEAR CONDITIONS



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	370	4	210	643	594	0	0	629	809
Future Volume (veh/h)	0	0	0	370	4	210	643	594	0	0	629	809
Number				3	8	18	5	2	12	1	6	16
Initial Q, veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln				1800	1900	1900	1900	1900	0	0	1900	1900
Adj Flow Rate, veh/h				389	4	221	677	625	0	0	662	852
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence				Yes			Yes			No		
Cap, veh/h				428	4	385	730	2477	0	0	2286	710
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	2.00	1.00
Prop Arrive On Green				0.24	0.24	0.24	0.42	1.00	0.00	0.00	0.88	0.44
Unsig. Movement Delay												
Ln Grp Delay, s/veh				64.6	0.0	41.9	40.4	0.1	0.0	0.0	4.4	137.0
Ln Grp LOS				E	A	D	D	A	A	A	A	F
Approach Vol, veh/h					614			1302			1514	
Approach Delay, s/veh					56.4			21.1			79.0	
Approach LOS					E			C			E	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2	8		5	6		
Case No		4.0	11.0		2.0	7.0		
Phs Duration (G+Y+Rc), s		86.8	33.2		29.4	57.4		
Change Period (Y+Rc), s		4.5	4.5		4.5	4.5		
Max Green (Gmax), s		79.4	31.6		27.3	47.6		
Max Allow Headway (MAH), s		5.2	4.9		3.8	4.5		
Max Q Clear (g_c+I1), s		2.0	27.3		24.0	54.9		
Green Ext Time (g_e), s		5.0	1.3		0.9	0.0		
Prob of Phs Call (p_c)		1.00	1.00		1.00	1.00		
Prob of Max Out (p_x)		0.00	1.00		1.00	0.00		

Left-Turn Movement Data								
Assigned Mvmt			3		5	1		
Mvmt Sat Flow, veh/h			1792		3510	0		

Through Movement Data								
Assigned Mvmt		2	8			6		
Mvmt Sat Flow, veh/h		3705	18			5358		

Right-Turn Movement Data								
Assigned Mvmt		12	18			16		
Mvmt Sat Flow, veh/h		0	1610			1610		

Left Lane Group Data								
Assigned Mvmt	0	0	3	0	5	1	0	0
Lane Assignment			L+T		L (Prot)			

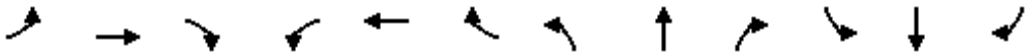
Lanes in Grp	0	0	1	0	2	0	0	0
Grp Vol (v), veh/h	0	0	393	0	677	0	0	0
Grp Sat Flow (s), veh/h/ln	0	0	1810	0	1755	0	0	0
Q Serve Time (g_s), s	0.0	0.0	25.3	0.0	22.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	25.3	0.0	22.0	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	52.9	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	0.00	0.99	0.00	1.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	432	0	730	0	0	0
V/C Ratio (X)	0.00	0.00	0.91	0.00	0.93	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	0	477	0	799	0	0	0
Upstream Filter (I)	0.00	0.00	1.00	0.00	0.31	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	44.4	0.0	34.2	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	20.2	0.0	6.3	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	64.6	0.0	40.4	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	11.3	0.0	7.5	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	2.4	0.0	0.6	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	0.00	1.00	0.00	1.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	13.7	0.0	8.2	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.28	0.00	0.76	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	8	0	0	6	0	0
Lane Assignment		T				T		
Lanes in Grp	0	2	0	0	0	3	0	0
Grp Vol (v), veh/h	0	625	0	0	0	662	0	0
Grp Sat Flow (s), veh/h/ln	0	1805	0	0	0	1729	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	2.4	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	2.4	0.0	0.0
Lane Grp Cap (c), veh/h	0	2477	0	0	0	2286	0	0
V/C Ratio (X)	0.00	0.25	0.00	0.00	0.00	0.29	0.00	0.00
Avail Cap (c_a), veh/h	0	2477	0	0	0	2286	0	0
Upstream Filter (I)	0.00	0.31	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	4.1	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.1	0.0	0.0	0.0	0.3	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.1	0.0	0.0	0.0	4.4	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	18	0	0	16	0	0
Lane Assignment			R			R		
Lanes in Grp	0	0	1	0	0	1	0	0
Grp Vol (v), veh/h	0	0	221	0	0	852	0	0
Grp Sat Flow (s), veh/h/ln	0	0	1610	0	0	1610	0	0
Q Serve Time (g_s), s	0.0	0.0	14.5	0.0	0.0	52.9	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	14.5	0.0	0.0	52.9	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	385	0	0	710	0	0
V/C Ratio (X)	0.00	0.00	0.57	0.00	0.00	1.20	0.00	0.00
Avail Cap (c_a), veh/h	0	0	424	0	0	710	0	0
Upstream Filter (I)	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	40.3	0.0	0.0	33.6	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	1.6	0.0	0.0	103.4	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	41.9	0.0	0.0	137.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	5.8	0.0	0.0	20.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.2	0.0	0.0	20.4	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	5.9	0.0	0.0	40.4	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.12	0.00	0.00	0.87	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	35.6	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	53.0
HCM 6th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	627	9	559	0	0	0	0	762	352	107	557	0
Future Volume (veh/h)	627	9	559	0	0	0	0	762	352	107	557	0
Number	7	4	14				5	2	12	1	6	16
Initial Q, veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1800	1900	1900				0	1900	1900	1900	1900	0
Adj Flow Rate, veh/h	660	9	588				0	802	371	113	586	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0				0	0	0	0	0	0
Opposing Right Turn Influence	Yes						No			Yes		
Cap, veh/h	612	8	545				0	906	281	143	902	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	2.00	2.00	2.00	1.00	1.00
Prop Arrive On Green	0.68	0.68	0.68				0.00	0.35	0.35	0.08	0.25	0.00
Unsig. Movement Delay												
Ln Grp Delay, s/veh	71.2	0.0	0.0				0.0	53.5	208.9	83.3	47.1	0.0
Ln Grp LOS	F	A	A				A	D	F	F	D	A
Approach Vol, veh/h		1257						1173			699	
Approach Delay, s/veh		71.2						102.6			53.0	
Approach LOS		E						F			D	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Case No	2.0	7.0		12.0		4.0		
Phs Duration (G+Y+Rc), s	9.8	27.2		93.0		37.0		
Change Period (Y+Rc), s	4.5	4.5		4.5		4.5		
Max Green (Gmax), s	5.3	22.2		88.5		32.0		
Max Allow Headway (MAH), s	3.8	4.6		5.4		5.2		
Max Q Clear (g_c+I1), s	6.1	24.7		90.5		20.9		
Green Ext Time (g_e), s	0.0	0.0		0.0		3.0		
Prob of Phs Call (p_c)	0.98	1.00		1.00		1.00		
Prob of Max Out (p_x)	1.00	0.00		1.00		0.00		

Left-Turn Movement Data								
Assigned Mvmt	1	5		7				
Mvmt Sat Flow, veh/h	3510	0		898				

Through Movement Data								
Assigned Mvmt		2		4		6		
Mvmt Sat Flow, veh/h		5358		12		3705		

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		
Mvmt Sat Flow, veh/h		1610		800		0		

Left Lane Group Data								
Assigned Mvmt	1	5	0	7	0	0	0	0
Lane Assignment	L (Prot)			L+T+R				

Lanes in Grp	2	0	0	1	0	0	0	0
Grp Vol (v), veh/h	113	0	0	1257	0	0	0	0
Grp Sat Flow (s), veh/h/ln	1755	0	0	1711	0	0	0	0
Q Serve Time (g_s), s	4.1	0.0	0.0	88.5	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	4.1	0.0	0.0	88.5	0.0	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	22.7	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	0.53	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	143	0	0	1165	0	0	0	0
V/C Ratio (X)	0.79	0.00	0.00	1.08	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	143	0	0	1165	0	0	0	0
Upstream Filter (I)	0.96	0.00	0.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	59.2	0.0	0.0	20.8	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	24.2	0.0	0.0	50.5	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	83.3	0.0	0.0	71.2	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	1.8	0.0	0.0	31.5	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.5	0.0	0.0	16.3	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00
%ile Back of Q (50%), veh/ln	2.3	0.0	0.0	47.8	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.21	0.00	0.00	0.82	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	23.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	0
Lane Assignment		T				T		
Lanes in Grp	0	3	0	0	0	2	0	0
Grp Vol (v), veh/h	0	802	0	0	0	586	0	0
Grp Sat Flow (s), veh/h/ln	0	1729	0	0	0	1805	0	0
Q Serve Time (g_s), s	0.0	18.9	0.0	0.0	0.0	18.9	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	18.9	0.0	0.0	0.0	18.9	0.0	0.0
Lane Grp Cap (c), veh/h	0	906	0	0	0	903	0	0
V/C Ratio (X)	0.00	0.89	0.00	0.00	0.00	0.65	0.00	0.00
Avail Cap (c_a), veh/h	0	906	0	0	0	903	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	0.96	0.00	0.00
Uniform Delay (d1), s/veh	0.0	41.1	0.0	0.0	0.0	43.6	0.0	0.0
Incr Delay (d2), s/veh	0.0	12.4	0.0	0.0	0.0	3.5	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	53.5	0.0	0.0	0.0	47.1	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	6.3	0.0	0.0	0.0	8.5	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	1.0	0.0	0.0	0.0	0.4	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	7.4	0.0	0.0	0.0	8.9	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.24	0.00	0.00	0.00	0.83	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	0
Lane Assignment		R						
Lanes in Grp	0	1	0	0	0	0	0	0
Grp Vol (v), veh/h	0	371	0	0	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	1610	0	0	0	0	0	0
Q Serve Time (g_s), s	0.0	22.7	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	22.7	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	0.47	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	281	0	0	0	0	0	0
V/C Ratio (X)	0.00	1.32	0.00	0.00	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	281	0	0	0	0	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	42.3	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	166.6	0.0	0.0	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	208.9	0.0	0.0	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	7.1	0.0	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	13.0	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	20.1	0.0	0.0	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.65	0.00	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	22.5	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	78.9
HCM 6th LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	39	293	70	453	809	165	85	233	296	226	538	82
Future Volume (veh/h)	39	293	70	453	809	165	85	233	296	226	538	82
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1800	1900	1900	1800	1900	1900	1800	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	41	308	74	477	852	174	89	245	312	238	566	86
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	58	410	97	423	1058	216	112	1136	507	212	1150	174
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.03	0.14	0.14	0.25	0.35	0.35	0.07	0.31	0.31	0.12	0.37	0.37
Unsig. Movement Delay												
Ln Grp Delay, s/veh	62.1	45.5	46.1	116.7	33.5	33.5	59.0	25.6	34.4	143.4	27.1	27.1
Ln Grp LOS	E	D	D	F	C	C	E	C	C	F	C	C
Approach Vol, veh/h		423			1503			646			890	
Approach Delay, s/veh		47.4			59.9			34.5			58.2	
Approach LOS		D			E			C			E	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Case No	2.0	3.0	2.0	4.0	2.0	4.0	2.0	4.0
Phs Duration (G+Y+Rc), s	16.2	36.0	29.2	18.6	11.1	41.1	7.9	39.9
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green (Gmax), s	11.7	21.1	24.7	24.5	9.9	22.9	6.5	42.7
Max Allow Headway (MAH), s	3.8	4.6	3.8	5.3	3.8	5.3	3.8	5.3
Max Q Clear (g_c+I1), s	13.7	18.5	26.7	12.4	7.1	16.0	4.4	27.8
Green Ext Time (g_e), s	0.0	0.7	0.0	1.8	0.0	2.3	0.0	6.0
Prob of Phs Call (p_c)	1.00	1.00	1.00	1.00	0.92	1.00	0.68	1.00
Prob of Max Out (p_x)	1.00	0.00	1.00	0.11	1.00	0.00	1.00	0.37

Left-Turn Movement Data								
Assigned Mvmt	1		3		5		7	
Mvmt Sat Flow, veh/h	1810		1714		1714		1714	

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		3610		2896		3143		2986

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1610		685		476		610

Left Lane Group Data								
Assigned Mvmt	1	0	3	0	5	0	7	0
Lane Assignment	L (Prot)		L (Prot)		L (Prot)		L (Prot)	

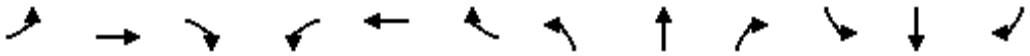
Lanes in Grp	1	0	1	0	1	0	1	0
Grp Vol (v), veh/h	238	0	477	0	89	0	41	0
Grp Sat Flow (s), veh/h/ln	1810	0	1714	0	1714	0	1714	0
Q Serve Time (g_s), s	11.7	0.0	24.7	0.0	5.1	0.0	2.4	0.0
Cycle Q Clear Time (g_c), s	11.7	0.0	24.7	0.0	5.1	0.0	2.4	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	212	0	423	0	112	0	58	0
V/C Ratio (X)	1.12	0.00	1.13	0.00	0.79	0.00	0.70	0.00
Avail Cap (c_a), veh/h	212	0	423	0	170	0	111	0
Upstream Filter (I)	1.00	0.00	0.81	0.00	0.95	0.00	1.00	0.00
Uniform Delay (d1), s/veh	44.2	0.0	37.6	0.0	46.1	0.0	47.8	0.0
Incr Delay (d2), s/veh	99.2	0.0	79.0	0.0	12.9	0.0	14.3	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	143.4	0.0	116.7	0.0	59.0	0.0	62.1	0.0
1st-Term Q (Q1), veh/ln	5.2	0.0	10.1	0.0	2.2	0.0	1.0	0.0
2nd-Term Q (Q2), veh/ln	5.8	0.0	9.3	0.0	0.4	0.0	0.2	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
%ile Back of Q (50%), veh/ln	11.0	0.0	19.4	0.0	2.6	0.0	1.2	0.0
%ile Storage Ratio (RQ%)	0.17	0.00	0.18	0.00	0.13	0.00	0.02	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	6.6	0.0	13.4	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.3	0.0	0.3	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	2	0	1	0	1	0	1
Grp Vol (v), veh/h	0	245	0	190	0	324	0	515
Grp Sat Flow (s), veh/h/ln	0	1805	0	1805	0	1805	0	1805
Q Serve Time (g_s), s	0.0	5.0	0.0	10.1	0.0	13.9	0.0	25.8
Cycle Q Clear Time (g_c), s	0.0	5.0	0.0	10.1	0.0	13.9	0.0	25.8
Lane Grp Cap (c), veh/h	0	1136	0	255	0	661	0	640
V/C Ratio (X)	0.00	0.22	0.00	0.75	0.00	0.49	0.00	0.81
Avail Cap (c_a), veh/h	0	1136	0	442	0	661	0	771
Upstream Filter (I)	0.00	0.95	0.00	1.00	0.00	1.00	0.00	0.81
Uniform Delay (d1), s/veh	0.0	25.2	0.0	41.2	0.0	24.5	0.0	29.2
Incr Delay (d2), s/veh	0.0	0.4	0.0	4.3	0.0	2.6	0.0	4.3
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	25.6	0.0	45.5	0.0	27.1	0.0	33.5
1st-Term Q (Q1), veh/ln	0.0	2.1	0.0	4.5	0.0	5.8	0.0	10.8
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.3	0.0	0.5	0.0	0.8

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	2.2	0.0	4.8	0.0	6.3	0.0	11.6
%ile Storage Ratio (RQ%)	0.00	0.11	0.00	0.06	0.00	0.10	0.00	0.11
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		T+R		T+R		T+R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	312	0	192	0	328	0	511
Grp Sat Flow (s), veh/h/ln	0	1610	0	1777	0	1814	0	1790
Q Serve Time (g_s), s	0.0	16.5	0.0	10.4	0.0	14.0	0.0	25.8
Cycle Q Clear Time (g_c), s	0.0	16.5	0.0	10.4	0.0	14.0	0.0	25.8
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	0.39	0.00	0.26	0.00	0.34
Lane Grp Cap (c), veh/h	0	507	0	251	0	664	0	635
V/C Ratio (X)	0.00	0.62	0.00	0.76	0.00	0.49	0.00	0.81
Avail Cap (c_a), veh/h	0	507	0	435	0	664	0	764
Upstream Filter (I)	0.00	0.95	0.00	1.00	0.00	1.00	0.00	0.81
Uniform Delay (d1), s/veh	0.0	29.1	0.0	41.3	0.0	24.5	0.0	29.2
Incr Delay (d2), s/veh	0.0	5.3	0.0	4.8	0.0	2.6	0.0	4.3
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	34.4	0.0	46.1	0.0	27.1	0.0	33.5
1st-Term Q (Q1), veh/ln	0.0	6.2	0.0	4.5	0.0	5.9	0.0	10.8
2nd-Term Q (Q2), veh/ln	0.0	0.7	0.0	0.3	0.0	0.5	0.0	0.8
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	7.0	0.0	4.8	0.0	6.4	0.0	11.5
%ile Storage Ratio (RQ%)	0.00	0.35	0.00	0.07	0.00	0.10	0.00	0.11
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	53.2
HCM 6th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	134	3	291	48	48	405	198	468	6	19	872	250
Future Volume (veh/h)	134	3	291	48	48	405	198	468	6	19	872	250
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1700	1900	1900	1800	1900	1900	1800	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	141	3	0	51	51	426	208	493	6	20	918	263
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	207	660		231	211	330	244	1686	21	41	948	271
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.07	0.35	0.00	0.23	0.23	0.23	0.14	0.46	0.46	0.02	0.34	0.34
Unsig. Movement Delay												
Ln Grp Delay, s/veh	44.6	17.1	0.0	25.7	0.0	183.3	57.4	14.3	14.3	43.0	44.3	45.3
Ln Grp LOS	D	B		C	A	F	E	B	B	D	D	D
Approach Vol, veh/h		144			528			707			1201	
Approach Delay, s/veh		44.0			152.9			27.0			44.8	
Approach LOS		D			F			C			D	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6	7	8
Case No	2.0	4.0		3.0	2.0	4.0	2.0	8.3
Phs Duration (G+Y+Rc), s	6.3	41.4		32.3	15.9	31.9	9.8	22.5
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5	4.5	4.5
Max Green (Gmax), s	5.0	33.5		28.0	11.5	27.0	5.5	18.0
Max Allow Headway (MAH), s	3.8	5.2		5.2	3.8	5.3	3.8	5.5
Max Q Clear (g_c+I1), s	2.9	8.7		2.1	11.5	28.2	5.5	20.0
Green Ext Time (g_e), s	0.0	3.1		0.0	0.0	0.0	0.0	0.0
Prob of Phs Call (p_c)	0.36	1.00		1.00	0.99	1.00	0.96	1.00
Prob of Max Out (p_x)	1.00	0.00		0.00	1.00	0.00	1.00	1.00

Left-Turn Movement Data								
Assigned Mvmt	1				5		7	3
Mvmt Sat Flow, veh/h	1810				1714		3141	727

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		3653		1900		2770		938

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		44		1610		792		1465

Left Lane Group Data								
Assigned Mvmt	1	0	0	0	5	0	7	3
Lane Assignment	L (Prot)				L (Prot)		L (Prot)	L+T

Lanes in Grp	1	0	0	0	1	0	2	1
Grp Vol (v), veh/h	20	0	0	0	208	0	141	102
Grp Sat Flow (s), veh/h/ln	1810	0	0	0	1714	0	1570	1665
Q Serve Time (g_s), s	0.9	0.0	0.0	0.0	9.5	0.0	3.5	1.8
Cycle Q Clear Time (g_c), s	0.9	0.0	0.0	0.0	9.5	0.0	3.5	3.8
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	1436
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	18.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	18.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.8
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	0.00	1.00	0.00	1.00	0.50
Lane Grp Cap (c), veh/h	41	0	0	0	244	0	207	442
V/C Ratio (X)	0.49	0.00	0.00	0.00	0.85	0.00	0.68	0.23
Avail Cap (c_a), veh/h	113	0	0	0	246	0	216	442
Upstream Filter (I)	0.48	0.00	0.00	0.00	1.00	0.00	1.00	1.00
Uniform Delay (d1), s/veh	38.7	0.0	0.0	0.0	33.5	0.0	36.5	25.4
Incr Delay (d2), s/veh	4.4	0.0	0.0	0.0	23.9	0.0	8.0	0.3
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	43.0	0.0	0.0	0.0	57.4	0.0	44.6	25.7
1st-Term Q (Q1), veh/ln	0.4	0.0	0.0	0.0	3.8	0.0	1.3	1.5
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	1.6	0.0	0.2	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	0.00	1.00	0.00	1.00	1.00
%ile Back of Q (50%), veh/ln	0.4	0.0	0.0	0.0	5.5	0.0	1.6	1.6
%ile Storage Ratio (RQ%)	0.02	0.00	0.00	0.00	0.91	0.00	0.26	0.05
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		
Lanes in Grp	0	1	0	1	0	1	0	0
Grp Vol (v), veh/h	0	244	0	3	0	597	0	0
Grp Sat Flow (s), veh/h/ln	0	1805	0	1900	0	1805	0	0
Q Serve Time (g_s), s	0.0	6.7	0.0	0.1	0.0	26.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	6.7	0.0	0.1	0.0	26.0	0.0	0.0
Lane Grp Cap (c), veh/h	0	833	0	660	0	617	0	0
V/C Ratio (X)	0.00	0.29	0.00	0.00	0.00	0.97	0.00	0.00
Avail Cap (c_a), veh/h	0	833	0	665	0	617	0	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	0.48	0.00	0.00
Uniform Delay (d1), s/veh	0.0	13.4	0.0	17.1	0.0	25.9	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.9	0.0	0.0	0.0	18.5	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	14.3	0.0	17.1	0.0	44.3	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	2.6	0.0	0.0	0.0	10.5	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.2	0.0	0.0	0.0	3.2	0.0	0.0

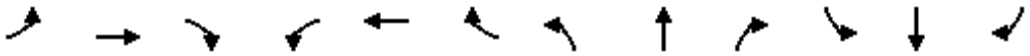
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	2.8	0.0	0.0	0.0	13.7	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.16	0.00	0.00	0.00	0.69	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R		R		T+R		T+R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	255	0	0	0	584	0	426
Grp Sat Flow (s), veh/h/ln	0	1892	0	1610	0	1757	0	1465
Q Serve Time (g_s), s	0.0	6.7	0.0	0.0	0.0	26.2	0.0	18.0
Cycle Q Clear Time (g_c), s	0.0	6.7	0.0	0.0	0.0	26.2	0.0	18.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.02	0.00	1.00	0.00	0.45	0.00	1.00
Lane Grp Cap (c), veh/h	0	873	0	559	0	601	0	330
V/C Ratio (X)	0.00	0.29	0.00	0.00	0.00	0.97	0.00	1.29
Avail Cap (c_a), veh/h	0	873	0	564	0	601	0	330
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	0.48	0.00	1.00
Uniform Delay (d1), s/veh	0.0	13.4	0.0	0.0	0.0	25.9	0.0	31.0
Incr Delay (d2), s/veh	0.0	0.8	0.0	0.0	0.0	19.4	0.0	152.3
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	14.3	0.0	0.0	0.0	45.3	0.0	183.3
1st-Term Q (Q1), veh/ln	0.0	2.7	0.0	0.0	0.0	10.3	0.0	6.1
2nd-Term Q (Q2), veh/ln	0.0	0.2	0.0	0.0	0.0	3.2	0.0	13.9
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	2.9	0.0	0.0	0.0	13.5	0.0	20.0
%ile Storage Ratio (RQ%)	0.00	0.16	0.00	0.00	0.00	0.68	0.00	0.58
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	24.1
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3

Intersection Summary	
HCM 6th Ctrl Delay	62.0
HCM 6th LOS	E

Notes

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	35	0	37	0	592	29	44	1071	0
Future Volume (veh/h)	0	0	0	35	0	37	0	592	29	44	1071	0
Number				3	8	18	5	2	12	1	6	16
Initial Q, veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln				1800	0	1900	0	1900	1900	1900	1900	0
Adj Flow Rate, veh/h				37	0	39	0	623	31	46	1127	0
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence				Yes			No			Yes		
Cap, veh/h				66	0	62	0	4129	204	60	4598	0
HCM Platoon Ratio				1.00	1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00
Prop Arrive On Green				0.04	0.00	0.04	0.00	1.00	1.00	0.03	0.89	0.00
Unsig. Movement Delay												
Ln Grp Delay, s/veh				63.8	0.0	66.7	0.0	0.1	0.2	75.8	1.1	0.0
Ln Grp LOS				E	A	E	A	A	A	E	A	A
Approach Vol, veh/h					76			654			1173	
Approach Delay, s/veh					65.3			0.1			4.0	
Approach LOS					E			A			A	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	8			6		
Case No	2.0	8.0	9.0			4.0		
Phs Duration (G+Y+Rc), s	8.5	102.4	9.1			110.9		
Change Period (Y+Rc), s	4.5	4.5	4.5			4.5		
Max Green (Gmax), s	15.1	30.7	28.1			50.3		
Max Allow Headway (MAH), s	3.8	5.2	3.9			5.2		
Max Q Clear (g_c+I1), s	5.0	2.0	4.9			5.8		
Green Ext Time (g_e), s	0.0	4.6	0.2			10.6		
Prob of Phs Call (p_c)	0.78	1.00	0.92			1.00		
Prob of Max Out (p_x)	0.00	0.00	0.00			0.00		

Left-Turn Movement Data								
Assigned Mvmt	1	5	3					
Mvmt Sat Flow, veh/h	1810	0	1714					

Through Movement Data								
Assigned Mvmt		2	8			6		
Mvmt Sat Flow, veh/h		5233	0			5358		

Right-Turn Movement Data								
Assigned Mvmt		12	18			16		
Mvmt Sat Flow, veh/h		251	1610			0		

Left Lane Group Data								
Assigned Mvmt	1	5	3	0	0	0	0	0
Lane Assignment	L (Prot)		L					

Lanes in Grp	1	0	1	0	0	0	0	0
Grp Vol (v), veh/h	46	0	37	0	0	0	0	0
Grp Sat Flow (s), veh/h/ln	1810	0	1714	0	0	0	0	0
Q Serve Time (g_s), s	3.0	0.0	2.5	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	3.0	0.0	2.5	0.0	0.0	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	1714	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	97.9	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	60	0	66	0	0	0	0	0
V/C Ratio (X)	0.77	0.00	0.56	0.00	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	228	0	401	0	0	0	0	0
Upstream Filter (I)	1.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	57.6	0.0	56.7	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	18.2	0.0	7.2	0.0	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	75.8	0.0	63.8	0.0	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	1.4	0.0	1.1	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.3	0.0	0.1	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	1.00	1.00	0.00	0.00	0.00	0.00	0.00
%ile Back of Q (50%), veh/ln	1.7	0.0	1.2	0.0	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.28	0.00	0.02	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	8	0	0	6	0	0
Lane Assignment		T				T		
Lanes in Grp	0	2	0	0	0	3	0	0
Grp Vol (v), veh/h	0	425	0	0	0	1127	0	0
Grp Sat Flow (s), veh/h/ln	0	1729	0	0	0	1729	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	3.8	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	3.8	0.0	0.0
Lane Grp Cap (c), veh/h	0	2821	0	0	0	4598	0	0
V/C Ratio (X)	0.00	0.15	0.00	0.00	0.00	0.25	0.00	0.00
Avail Cap (c_a), veh/h	0	2821	0	0	0	4598	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.1	0.0	0.0	0.0	1.1	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	18	0	0	16	0	0
Lane Assignment		T+R	R					
Lanes in Grp	0	1	1	0	0	0	0	0
Grp Vol (v), veh/h	0	229	39	0	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	1855	1610	0	0	0	0	0
Q Serve Time (g_s), s	0.0	0.0	2.9	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	2.9	0.0	0.0	0.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.14	1.00	0.00	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	1513	62	0	0	0	0	0
V/C Ratio (X)	0.00	0.15	0.63	0.00	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	1513	377	0	0	0	0	0
Upstream Filter (I)	0.00	1.00	1.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	56.8	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.2	9.9	0.0	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.2	66.7	0.0	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	1.2	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.2	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.1	1.3	0.0	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.01	0.02	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	5.2
HCM 6th LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	28	10	13	20	11	8	17	632	28	14	912	128
Future Volume (veh/h)	28	10	13	20	11	8	17	632	28	14	912	128
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1800	1900	1900	1800	1900	1900	1800	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	29	11	14	21	12	8	18	665	29	15	960	135
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	103	34	47	97	50	35	32	2907	127	30	2614	367
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Prop Arrive On Green	0.05	0.05	0.05	0.05	0.05	0.05	0.02	0.82	0.82	0.03	1.00	1.00
Unsig. Movement Delay												
Ln Grp Delay, s/veh	58.0	0.0	57.6	57.4	0.0	56.7	72.1	2.6	2.6	70.2	0.7	0.7
Ln Grp LOS	E	A	E	E	A	E	E	A	A	E	A	A
Approach Vol, veh/h		54			41			712			1110	
Approach Delay, s/veh		57.8			57.1			4.4			1.6	
Approach LOS		E			E			A			A	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Case No	2.0	4.0		8.0	2.0	4.0		8.0
Phs Duration (G+Y+Rc), s	6.5	103.5		10.0	6.8	103.2		10.0
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green (Gmax), s	27.0	39.5		40.0	27.0	39.5		40.0
Max Allow Headway (MAH), s	3.8	5.2		5.3	3.8	5.3		5.3
Max Q Clear (g_c+I1), s	3.0	6.9		5.5	3.2	2.0		5.1
Green Ext Time (g_e), s	0.0	4.8		0.3	0.0	9.2		0.2
Prob of Phs Call (p_c)	0.39	1.00		0.96	0.45	1.00		0.96
Prob of Max Out (p_x)	0.00	0.00		0.00	0.00	0.00		0.00

Left-Turn Movement Data								
Assigned Mvmt	1			7	5			3
Mvmt Sat Flow, veh/h	1810			1007	1714			897

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		3524		747		3178		1079

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		154		1021		447		764

Left Lane Group Data								
Assigned Mvmt	1	0	0	7	5	0	0	3
Lane Assignment	L (Prot)			L+T	L (Prot)			L+T

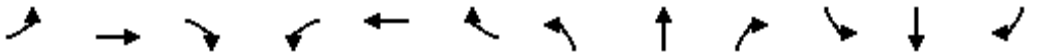
Lanes in Grp	1	0	0	1	1	0	0	1
Grp Vol (v), veh/h	15	0	0	33	18	0	0	24
Grp Sat Flow (s), veh/h/ln	1810	0	0	1229	1714	0	0	1149
Q Serve Time (g_s), s	1.0	0.0	0.0	2.3	1.2	0.0	0.0	1.5
Cycle Q Clear Time (g_c), s	1.0	0.0	0.0	3.5	1.2	0.0	0.0	3.1
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	1414	0	0	0	1408
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	5.5	0.0	0.0	0.0	5.5
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	4.3	0.0	0.0	0.0	3.9
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	2.3	0.0	0.0	0.0	1.5
Time to First Blk (g_f), s	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.3
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.3
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	0.88	1.00	0.00	0.00	0.86
Lane Grp Cap (c), veh/h	30	0	0	113	32	0	0	109
V/C Ratio (X)	0.51	0.00	0.00	0.29	0.56	0.00	0.00	0.22
Avail Cap (c_a), veh/h	407	0	0	532	386	0	0	528
Upstream Filter (I)	1.00	0.00	0.00	1.00	0.96	0.00	0.00	1.00
Uniform Delay (d1), s/veh	57.6	0.0	0.0	56.6	58.4	0.0	0.0	56.4
Incr Delay (d2), s/veh	12.7	0.0	0.0	1.4	13.7	0.0	0.0	1.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	70.2	0.0	0.0	58.0	72.1	0.0	0.0	57.4
1st-Term Q (Q1), veh/ln	0.4	0.0	0.0	1.0	0.5	0.0	0.0	0.7
2nd-Term Q (Q2), veh/ln	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.5	0.0	0.0	1.0	0.7	0.0	0.0	0.8
%ile Storage Ratio (RQ%)	0.06	0.00	0.00	0.12	0.01	0.00	0.00	0.02
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T				T		
Lanes in Grp	0	1	0	0	0	1	0	0
Grp Vol (v), veh/h	0	340	0	0	0	545	0	0
Grp Sat Flow (s), veh/h/ln	0	1805	0	0	0	1805	0	0
Q Serve Time (g_s), s	0.0	4.9	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	4.9	0.0	0.0	0.0	0.0	0.0	0.0
Lane Grp Cap (c), veh/h	0	1489	0	0	0	1485	0	0
V/C Ratio (X)	0.00	0.23	0.00	0.00	0.00	0.37	0.00	0.00
Avail Cap (c_a), veh/h	0	1489	0	0	0	1485	0	0
Upstream Filter (I)	0.00	0.96	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	2.3	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.3	0.0	0.0	0.0	0.7	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	2.6	0.0	0.0	0.0	0.7	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	1.2	0.0	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	0.3	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	1.4	0.0	0.0	0.0	0.3	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.01	0.00	0.00	0.00	0.03	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R		T+R		T+R		T+R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	354	0	21	0	550	0	17
Grp Sat Flow (s), veh/h/ln	0	1872	0	1545	0	1820	0	1591
Q Serve Time (g_s), s	0.0	4.9	0.0	1.6	0.0	0.0	0.0	1.2
Cycle Q Clear Time (g_c), s	0.0	4.9	0.0	1.6	0.0	0.0	0.0	1.2
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.08	0.00	0.66	0.00	0.25	0.00	0.48
Lane Grp Cap (c), veh/h	0	1545	0	71	0	1497	0	73
V/C Ratio (X)	0.00	0.23	0.00	0.30	0.00	0.37	0.00	0.23
Avail Cap (c_a), veh/h	0	1545	0	515	0	1497	0	530
Upstream Filter (I)	0.00	0.96	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	2.3	0.0	55.4	0.0	0.0	0.0	55.2
Incr Delay (d2), s/veh	0.0	0.3	0.0	2.3	0.0	0.7	0.0	1.5
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	2.6	0.0	57.6	0.0	0.7	0.0	56.7
1st-Term Q (Q1), veh/ln	0.0	1.3	0.0	0.6	0.0	0.0	0.0	0.5
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	0.3	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	1.4	0.0	0.7	0.0	0.3	0.0	0.5
%ile Storage Ratio (RQ%)	0.00	0.01	0.00	0.08	0.00	0.03	0.00	0.02
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	5.4
HCM 6th LOS	A



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	72	212	45	218	482	120	187	324	154	125	638	110
Future Volume (veh/h)	72	212	45	218	482	120	187	324	154	125	638	110
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1800	1900	1900	1700	1900	1900	1800	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	76	223	47	229	507	126	197	341	0	132	672	116
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	96	910	282	224	689	307	233	1454		169	1301	580
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.06	0.18	0.18	0.07	0.19	0.19	0.14	0.40	0.00	0.09	0.36	0.36
Unsig. Movement Delay												
Ln Grp Delay, s/veh	56.0	25.0	24.8	79.9	27.7	25.3	50.9	14.1	0.0	40.1	19.0	16.2
Ln Grp LOS	E	C	C	F	C	C	D	B		D	B	B
Approach Vol, veh/h		346			862			538			920	
Approach Delay, s/veh		31.8			41.2			27.6			21.7	
Approach LOS		C			D			C			C	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Case No	2.0	3.0	2.0	3.0	2.0	3.0	2.0	3.0
Phs Duration (G+Y+Rc), s	11.0	32.7	9.5	16.8	14.0	29.7	8.4	17.9
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green (Gmax), s	9.5	19.5	5.0	18.0	9.5	19.5	5.0	18.0
Max Allow Headway (MAH), s	3.8	5.2	3.8	5.0	3.8	5.1	3.8	5.0
Max Q Clear (g_c+I1), s	7.0	6.4	7.0	4.6	9.9	12.2	5.1	11.3
Green Ext Time (g_e), s	0.1	1.8	0.0	1.3	0.0	2.9	0.0	2.1
Prob of Phs Call (p_c)	0.92	1.00	0.99	1.00	0.98	1.00	0.77	1.00
Prob of Max Out (p_x)	1.00	0.00	1.00	0.02	1.00	0.00	1.00	0.66

Left-Turn Movement Data								
Assigned Mvmt	1		3		5		7	
Mvmt Sat Flow, veh/h	1810		3141		1714		1714	

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		3610		5187		3610		3610

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1610		1610		1610		1610

Left Lane Group Data								
Assigned Mvmt	1	0	3	0	5	0	7	0
Lane Assignment	L (Prot)		L (Prot)		L (Prot)		L (Prot)	

Lanes in Grp	1	0	2	0	1	0	1	0
Grp Vol (v), veh/h	132	0	229	0	197	0	76	0
Grp Sat Flow (s), veh/h/ln	1810	0	1570	0	1714	0	1714	0
Q Serve Time (g_s), s	5.0	0.0	5.0	0.0	7.9	0.0	3.1	0.0
Cycle Q Clear Time (g_c), s	5.0	0.0	5.0	0.0	7.9	0.0	3.1	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	169	0	224	0	233	0	96	0
V/C Ratio (X)	0.78	0.00	1.02	0.00	0.85	0.00	0.79	0.00
Avail Cap (c_a), veh/h	246	0	224	0	233	0	122	0
Upstream Filter (I)	0.94	0.00	0.49	0.00	0.86	0.00	1.00	0.00
Uniform Delay (d1), s/veh	31.0	0.0	32.5	0.0	29.5	0.0	32.6	0.0
Incr Delay (d2), s/veh	9.1	0.0	47.4	0.0	21.3	0.0	23.4	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	40.1	0.0	79.9	0.0	50.9	0.0	56.0	0.0
1st-Term Q (Q1), veh/ln	2.1	0.0	1.8	0.0	3.1	0.0	1.2	0.0
2nd-Term Q (Q2), veh/ln	0.4	0.0	1.5	0.0	1.4	0.0	0.6	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
%ile Back of Q (50%), veh/ln	2.5	0.0	3.3	0.0	4.5	0.0	1.9	0.0
%ile Storage Ratio (RQ%)	0.24	0.00	0.33	0.00	0.66	0.00	0.46	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	1.2	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	2	0	3	0	2	0	2
Grp Vol (v), veh/h	0	341	0	223	0	672	0	507
Grp Sat Flow (s), veh/h/ln	0	1805	0	1729	0	1805	0	1805
Q Serve Time (g_s), s	0.0	4.4	0.0	2.6	0.0	10.2	0.0	9.3
Cycle Q Clear Time (g_c), s	0.0	4.4	0.0	2.6	0.0	10.2	0.0	9.3
Lane Grp Cap (c), veh/h	0	1454	0	910	0	1301	0	689
V/C Ratio (X)	0.00	0.23	0.00	0.25	0.00	0.52	0.00	0.74
Avail Cap (c_a), veh/h	0	1454	0	1334	0	1301	0	928
Upstream Filter (I)	0.00	0.86	0.00	1.00	0.00	0.94	0.00	0.49
Uniform Delay (d1), s/veh	0.0	13.8	0.0	24.9	0.0	17.6	0.0	26.7
Incr Delay (d2), s/veh	0.0	0.3	0.0	0.1	0.0	1.4	0.0	1.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	14.1	0.0	25.0	0.0	19.0	0.0	27.7
1st-Term Q (Q1), veh/ln	0.0	1.6	0.0	1.0	0.0	3.9	0.0	3.8
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	0.2	0.0	0.1

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	1.7	0.0	1.0	0.0	4.2	0.0	3.9
%ile Storage Ratio (RQ%)	0.00	0.02	0.00	0.00	0.00	0.04	0.00	0.05
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		R		R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	0	0	47	0	116	0	126
Grp Sat Flow (s), veh/h/ln	0	1610	0	1610	0	1610	0	1610
Q Serve Time (g_s), s	0.0	0.0	0.0	1.7	0.0	3.5	0.0	4.8
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	1.7	0.0	3.5	0.0	4.8
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	649	0	282	0	580	0	307
V/C Ratio (X)	0.00	0.00	0.00	0.17	0.00	0.20	0.00	0.41
Avail Cap (c_a), veh/h	0	649	0	414	0	580	0	414
Upstream Filter (I)	0.00	0.00	0.00	1.00	0.00	0.94	0.00	0.49
Uniform Delay (d1), s/veh	0.0	0.0	0.0	24.5	0.0	15.4	0.0	24.9
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.3	0.0	0.7	0.0	0.4
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	24.8	0.0	16.2	0.0	25.3
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.6	0.0	1.2	0.0	1.8
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.7	0.0	1.3	0.0	1.8
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.02
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	30.5
HCM 6th LOS	C

Notes

Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	87	88	57	391	559	101	132	581	206	85	582	182
Future Volume (veh/h)	87	88	57	391	559	101	132	581	206	85	582	182
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1800	1900	1900	1700	1900	1900	1800	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	92	93	60	412	588	106	139	612	217	89	613	192
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	117	338	202	482	736	132	172	1400	624	115	1380	423
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.07	0.16	0.16	0.15	0.24	0.24	0.10	0.39	0.39	0.06	0.35	0.35
Unsig. Movement Delay												
Ln Grp Delay, s/veh	51.4	28.4	28.7	45.0	33.3	33.5	51.3	17.8	17.6	45.7	19.5	20.5
Ln Grp LOS	D	C	C	D	C	C	D	B	B	D	B	C
Approach Vol, veh/h		245			1106			968			894	
Approach Delay, s/veh		37.1			37.7			22.6			22.4	
Approach LOS		D			D			C			C	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Case No	2.0	3.0	2.0	4.0	2.0	4.0	2.0	4.0
Phs Duration (G+Y+Rc), s	9.3	33.6	16.0	16.2	12.0	30.8	9.6	22.6
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green (Gmax), s	6.4	21.1	11.5	18.0	8.5	19.0	6.9	22.6
Max Allow Headway (MAH), s	3.8	4.9	3.8	5.4	3.8	5.3	3.8	5.3
Max Q Clear (g_c+I1), s	5.6	11.4	11.6	5.1	8.0	11.2	6.0	15.6
Green Ext Time (g_e), s	0.0	3.5	0.0	0.6	0.0	3.2	0.0	2.5
Prob of Phs Call (p_c)	0.84	1.00	1.00	1.00	0.94	1.00	0.85	1.00
Prob of Max Out (p_x)	1.00	0.00	1.00	0.01	1.00	0.00	1.00	0.74

Left-Turn Movement Data								
Assigned Mvmt	1		3		5		7	
Mvmt Sat Flow, veh/h	1810		3141		1714		1714	

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		3610		2172		3934		3056

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1610		1299		1207		550

Left Lane Group Data								
Assigned Mvmt	1	0	3	0	5	0	7	0
Lane Assignment	L (Prot)		L (Prot)		L (Prot)		L (Prot)	

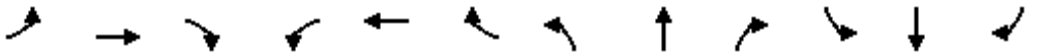
Lanes in Grp	1	0	2	0	1	0	1	0
Grp Vol (v), veh/h	89	0	412	0	139	0	92	0
Grp Sat Flow (s), veh/h/ln	1810	0	1570	0	1714	0	1714	0
Q Serve Time (g_s), s	3.6	0.0	9.6	0.0	6.0	0.0	4.0	0.0
Cycle Q Clear Time (g_c), s	3.6	0.0	9.6	0.0	6.0	0.0	4.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	115	0	482	0	172	0	117	0
V/C Ratio (X)	0.77	0.00	0.86	0.00	0.81	0.00	0.79	0.00
Avail Cap (c_a), veh/h	154	0	482	0	194	0	158	0
Upstream Filter (I)	0.68	0.00	1.00	0.00	0.91	0.00	1.00	0.00
Uniform Delay (d1), s/veh	34.6	0.0	30.9	0.0	33.0	0.0	34.4	0.0
Incr Delay (d2), s/veh	11.1	0.0	14.1	0.0	18.3	0.0	17.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	45.7	0.0	45.0	0.0	51.3	0.0	51.4	0.0
1st-Term Q (Q1), veh/ln	1.6	0.0	3.5	0.0	2.4	0.0	1.6	0.0
2nd-Term Q (Q2), veh/ln	0.4	0.0	0.9	0.0	0.9	0.0	0.6	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
%ile Back of Q (50%), veh/ln	1.9	0.0	4.4	0.0	3.3	0.0	2.2	0.0
%ile Storage Ratio (RQ%)	0.27	0.00	0.03	0.00	0.41	0.00	0.24	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	2	0	1	0	2	0	1
Grp Vol (v), veh/h	0	612	0	76	0	537	0	347
Grp Sat Flow (s), veh/h/ln	0	1805	0	1805	0	1729	0	1805
Q Serve Time (g_s), s	0.0	9.4	0.0	2.8	0.0	9.0	0.0	13.5
Cycle Q Clear Time (g_c), s	0.0	9.4	0.0	2.8	0.0	9.0	0.0	13.5
Lane Grp Cap (c), veh/h	0	1400	0	281	0	1213	0	435
V/C Ratio (X)	0.00	0.44	0.00	0.27	0.00	0.44	0.00	0.80
Avail Cap (c_a), veh/h	0	1400	0	433	0	1213	0	544
Upstream Filter (I)	0.00	0.91	0.00	1.00	0.00	0.68	0.00	1.00
Uniform Delay (d1), s/veh	0.0	16.9	0.0	27.9	0.0	18.7	0.0	26.8
Incr Delay (d2), s/veh	0.0	0.9	0.0	0.5	0.0	0.8	0.0	6.6
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	17.8	0.0	28.4	0.0	19.5	0.0	33.3
1st-Term Q (Q1), veh/ln	0.0	3.6	0.0	1.2	0.0	3.4	0.0	5.5
2nd-Term Q (Q2), veh/ln	0.0	0.2	0.0	0.0	0.0	0.1	0.0	0.8

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	3.8	0.0	1.2	0.0	3.5	0.0	6.3
%ile Storage Ratio (RQ%)	0.00	0.10	0.00	0.01	0.00	0.04	0.00	0.04
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		T+R		T+R		T+R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	217	0	77	0	268	0	347
Grp Sat Flow (s), veh/h/ln	0	1610	0	1666	0	1683	0	1801
Q Serve Time (g_s), s	0.0	7.2	0.0	3.1	0.0	9.2	0.0	13.6
Cycle Q Clear Time (g_c), s	0.0	7.2	0.0	3.1	0.0	9.2	0.0	13.6
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	0.78	0.00	0.72	0.00	0.31
Lane Grp Cap (c), veh/h	0	624	0	259	0	590	0	434
V/C Ratio (X)	0.00	0.35	0.00	0.30	0.00	0.45	0.00	0.80
Avail Cap (c_a), veh/h	0	624	0	400	0	590	0	543
Upstream Filter (I)	0.00	0.91	0.00	1.00	0.00	0.68	0.00	1.00
Uniform Delay (d1), s/veh	0.0	16.2	0.0	28.0	0.0	18.8	0.0	26.8
Incr Delay (d2), s/veh	0.0	1.4	0.0	0.6	0.0	1.7	0.0	6.8
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	17.6	0.0	28.7	0.0	20.5	0.0	33.5
1st-Term Q (Q1), veh/ln	0.0	2.5	0.0	1.2	0.0	3.4	0.0	5.6
2nd-Term Q (Q2), veh/ln	0.0	0.2	0.0	0.0	0.0	0.3	0.0	0.8
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	2.7	0.0	1.2	0.0	3.7	0.0	6.4
%ile Storage Ratio (RQ%)	0.00	0.07	0.00	0.01	0.00	0.04	0.00	0.04
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	28.9
HCM 6th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	327	388	409	631	886	0	0	1033	563
Future Volume (veh/h)	0	0	0	327	388	409	631	886	0	0	1033	563
Number				3	8	18	5	2	12	1	6	16
Initial Q, veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln				1800	1900	1900	1900	1900	0	0	1900	1900
Adj Flow Rate, veh/h				344	408	431	664	933	0	0	1087	593
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence				Yes			Yes			No		
Cap, veh/h				330	401	453	520	2232	0	0	997	423
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	2.00	1.00
Prop Arrive On Green				0.34	0.34	0.34	0.57	1.00	0.00	0.00	0.52	0.26
Unsig. Movement Delay												
Ln Grp Delay, s/veh				86.8	0.0	65.2	155.8	0.2	0.0	0.0	81.1	235.8
Ln Grp LOS				F	A	E	F	A	A	A	F	F
Approach Vol, veh/h					1183			1597			1680	
Approach Delay, s/veh					77.1			64.9			135.7	
Approach LOS					E			E			F	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2	8		5	6		
Case No		4.0	12.0		2.0	7.0		
Phs Duration (G+Y+Rc), s		75.0	45.0		39.0	36.0		
Change Period (Y+Rc), s		4.5	4.5		4.5	4.5		
Max Green (Gmax), s		70.5	40.5		34.5	31.5		
Max Allow Headway (MAH), s		5.2	5.4		3.8	4.8		
Max Q Clear (g_c+I1), s		2.0	42.5		36.5	33.5		
Green Ext Time (g_e), s		8.6	0.0		0.0	0.0		
Prob of Phs Call (p_c)		1.00	1.00		1.00	1.00		
Prob of Max Out (p_x)		0.00	1.00		1.00	0.00		

Left-Turn Movement Data								
Assigned Mvmt			3		5	1		
Mvmt Sat Flow, veh/h			979		1810	0		

Through Movement Data								
Assigned Mvmt		2	8			6		
Mvmt Sat Flow, veh/h		3800	1189			3800		

Right-Turn Movement Data								
Assigned Mvmt		12	18			16		
Mvmt Sat Flow, veh/h		0	1342			1610		

Left Lane Group Data								
Assigned Mvmt	0	0	3	0	5	1	0	0
Lane Assignment			L+T		L (Prot)			

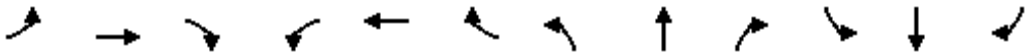
Lanes in Grp	0	0	1	0	1	0	0	0
Grp Vol (v), veh/h	0	0	650	0	664	0	0	0
Grp Sat Flow (s), veh/h/ln	0	0	1851	0	1810	0	0	0
Q Serve Time (g_s), s	0.0	0.0	40.5	0.0	34.5	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	40.5	0.0	34.5	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	31.5	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	0.00	0.53	0.00	1.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	625	0	520	0	0	0
V/C Ratio (X)	0.00	0.00	1.04	0.00	1.28	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	0	625	0	520	0	0	0
Upstream Filter (I)	0.00	0.00	1.00	0.00	0.39	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	39.8	0.0	25.5	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	47.1	0.0	130.3	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	86.8	0.0	155.8	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	18.1	0.0	10.3	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	8.2	0.0	18.8	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	0.00	1.00	0.00	1.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	26.3	0.0	29.1	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.64	0.00	4.85	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	6.4	0.0	35.9	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.3	0.0	0.3	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	8	0	0	6	0	0
Lane Assignment		T				T		
Lanes in Grp	0	2	0	0	0	2	0	0
Grp Vol (v), veh/h	0	933	0	0	0	1087	0	0
Grp Sat Flow (s), veh/h/ln	0	1900	0	0	0	1900	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	31.5	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	31.5	0.0	0.0
Lane Grp Cap (c), veh/h	0	2233	0	0	0	997	0	0
V/C Ratio (X)	0.00	0.42	0.00	0.00	0.00	1.09	0.00	0.00
Avail Cap (c_a), veh/h	0	2233	0	0	0	998	0	0
Upstream Filter (I)	0.00	0.39	0.00	0.00	0.00	0.73	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	28.5	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.2	0.0	0.0	0.0	52.6	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.2	0.0	0.0	0.0	81.1	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	10.6	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	7.3	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.1	0.0	0.0	0.0	17.9	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.47	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	22.4	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	18	0	0	16	0	0
Lane Assignment			T+R			R		
Lanes in Grp	0	0	1	0	0	1	0	0
Grp Vol (v), veh/h	0	0	533	0	0	593	0	0
Grp Sat Flow (s), veh/h/ln	0	0	1658	0	0	1610	0	0
Q Serve Time (g_s), s	0.0	0.0	37.6	0.0	0.0	31.5	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	37.6	0.0	0.0	31.5	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.00	0.81	0.00	0.00	1.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	560	0	0	423	0	0
V/C Ratio (X)	0.00	0.00	0.95	0.00	0.00	1.40	0.00	0.00
Avail Cap (c_a), veh/h	0	0	560	0	0	423	0	0
Upstream Filter (I)	0.00	0.00	1.00	0.00	0.00	0.73	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	38.8	0.0	0.0	44.3	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	26.4	0.0	0.0	191.6	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	65.2	0.0	0.0	235.8	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	15.0	0.0	0.0	12.4	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	4.1	0.0	0.0	22.5	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	19.2	0.0	0.0	34.9	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.46	0.00	0.00	0.91	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	42.6	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	94.8
HCM 6th LOS	F



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	508	17	702	0	0	0	0	1039	184	161	703	0
Future Volume (veh/h)	508	17	702	0	0	0	0	1039	184	161	703	0
Number	7	4	14				5	2	12	1	6	16
Initial Q, veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1800	1900	1900				0	1900	1900	1900	1900	0
Adj Flow Rate, veh/h	535	18	739				0	1094	194	169	740	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0				0	0	0	0	0	0
Opposing Right Turn Influence	Yes						No			Yes		
Cap, veh/h	672	23	617				0	1286	574	200	1865	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	2.00	2.00	2.00	1.00	1.00
Prop Arrive On Green	0.38	0.38	0.38				0.00	0.71	0.71	0.22	0.52	0.00
Unsig. Movement Delay												
Ln Grp Delay, s/veh	31.1	0.0	131.6				0.0	18.4	10.5	37.3	13.3	0.0
Ln Grp LOS	C	A	F				A	B	B	D	B	A
Approach Vol, veh/h		1292						1288			909	
Approach Delay, s/veh		88.6						17.2			17.7	
Approach LOS		F						B			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Case No	2.0	7.0		12.0		4.0		
Phs Duration (G+Y+Rc), s	14.4	36.6		39.0		51.0		
Change Period (Y+Rc), s	4.5	4.5		4.5		4.5		
Max Green (Gmax), s	10.5	31.5		34.5		46.5		
Max Allow Headway (MAH), s	3.8	5.1		5.5		5.2		
Max Q Clear (g_c+I1), s	10.1	21.9		36.5		13.2		
Green Ext Time (g_e), s	0.0	5.6		0.0		5.9		
Prob of Phs Call (p_c)	0.99	1.00		1.00		1.00		
Prob of Max Out (p_x)	1.00	0.00		1.00		0.00		

Left-Turn Movement Data								
Assigned Mvmt	1	5		7				
Mvmt Sat Flow, veh/h	1810	0		1753				

Through Movement Data								
Assigned Mvmt		2		4		6		
Mvmt Sat Flow, veh/h		3705		59		3705		

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		
Mvmt Sat Flow, veh/h		1610		1610		0		

Left Lane Group Data								
Assigned Mvmt	1	5	0	7	0	0	0	0
Lane Assignment	L (Prot)			L+T				

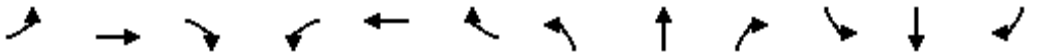
Lanes in Grp	1	0	0	1	0	0	0	0
Grp Vol (v), veh/h	169	0	0	553	0	0	0	0
Grp Sat Flow (s), veh/h/ln	1810	0	0	1812	0	0	0	0
Q Serve Time (g_s), s	8.1	0.0	0.0	24.4	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	8.1	0.0	0.0	24.4	0.0	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	32.1	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	0.97	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	200	0	0	695	0	0	0	0
V/C Ratio (X)	0.85	0.00	0.00	0.80	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	211	0	0	695	0	0	0	0
Upstream Filter (I)	0.09	0.00	0.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	34.3	0.0	0.0	24.6	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	3.0	0.0	0.0	6.4	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	37.3	0.0	0.0	31.1	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	3.1	0.0	0.0	10.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.2	0.0	0.0	1.2	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00
%ile Back of Q (50%), veh/ln	3.3	0.0	0.0	11.2	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.55	0.00	0.00	0.33	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	0
Lane Assignment		T				T		
Lanes in Grp	0	2	0	0	0	2	0	0
Grp Vol (v), veh/h	0	1094	0	0	0	740	0	0
Grp Sat Flow (s), veh/h/ln	0	1805	0	0	0	1805	0	0
Q Serve Time (g_s), s	0.0	19.9	0.0	0.0	0.0	11.2	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	19.9	0.0	0.0	0.0	11.2	0.0	0.0
Lane Grp Cap (c), veh/h	0	1286	0	0	0	1865	0	0
V/C Ratio (X)	0.00	0.85	0.00	0.00	0.00	0.40	0.00	0.00
Avail Cap (c_a), veh/h	0	1286	0	0	0	1865	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	0.09	0.00	0.00
Uniform Delay (d1), s/veh	0.0	11.2	0.0	0.0	0.0	13.2	0.0	0.0
Incr Delay (d2), s/veh	0.0	7.2	0.0	0.0	0.0	0.1	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	18.4	0.0	0.0	0.0	13.3	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	3.7	0.0	0.0	0.0	4.3	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	1.3	0.0	0.0	0.0	0.0	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	5.0	0.0	0.0	0.0	4.3	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.09	0.00	0.00	0.00	0.20	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	0
Lane Assignment		R		T+R				
Lanes in Grp	0	1	0	1	0	0	0	0
Grp Vol (v), veh/h	0	194	0	739	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	1610	0	1610	0	0	0	0
Q Serve Time (g_s), s	0.0	4.1	0.0	34.5	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	4.1	0.0	34.5	0.0	0.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	574	0	617	0	0	0	0
V/C Ratio (X)	0.00	0.34	0.00	1.20	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	574	0	617	0	0	0	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	8.9	0.0	27.8	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	1.6	0.0	103.9	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	10.5	0.0	131.6	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	1.2	0.0	12.5	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.3	0.0	17.8	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	1.5	0.0	30.3	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.03	0.00	0.89	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	30.4	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	43.8
HCM 6th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	525	589	1104	1174	0	0	0	0	303	0	312
Future Volume (veh/h)	0	525	589	1104	1174	0	0	0	0	303	0	312
Number	7	4	14	3	8	18				1	6	16
Initial Q, veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	0	1900	1900	1700	1900	0				1900	1900	1900
Adj Flow Rate, veh/h	0	553	0	1162	1236	0				319	0	328
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95				0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0				0	0	0
Opposing Right Turn Influence	No			Yes						Yes		
Cap, veh/h	0	843		1221	2427	0				412	0	367
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Prop Arrive On Green	0.00	0.23	0.00	0.39	0.67	0.00				0.23	0.00	0.23
Unsig. Movement Delay												
Ln Grp Delay, s/veh	0.0	34.2	0.0	36.2	7.8	0.0				45.8	0.0	60.3
Ln Grp LOS	A	C		D	A	A				D	A	E
Approach Vol, veh/h		553			2398						647	
Approach Delay, s/veh		34.2			21.5						53.2	
Approach LOS		C			C						D	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	6		3	4				8
Case No	11.0		2.0	7.0				4.0
Phs Duration (G+Y+Rc), s	25.0		39.5	25.5				65.0
Change Period (Y+Rc), s	4.5		4.5	4.5				4.5
Max Green (Gmax), s	20.5		35.5	20.5				60.5
Max Allow Headway (MAH), s	4.7		3.8	5.2				5.2
Max Q Clear (g_c+I1), s	19.8		34.3	14.5				17.4
Green Ext Time (g_e), s	0.3		0.7	1.9				12.6
Prob of Phs Call (p_c)	1.00		1.00	1.00				1.00
Prob of Max Out (p_x)	0.00		1.00	0.00				0.00

Left-Turn Movement Data												
Assigned Mvmt		1		3	7							
Mvmt Sat Flow, veh/h		1810		3141	0							

Through Movement Data												
Assigned Mvmt		6			4				8			
Mvmt Sat Flow, veh/h		0			3705				3705			

Right-Turn Movement Data												
Assigned Mvmt		16			14				18			
Mvmt Sat Flow, veh/h		1610			1610				0			

Left Lane Group Data												
Assigned Mvmt		1	0	3	7	0	0	0	0			
Lane Assignment		L+T		L (Prot)								

Lanes in Grp	1	0	2	0	0	0	0	0
Grp Vol (v), veh/h	319	0	1162	0	0	0	0	0
Grp Sat Flow (s), veh/h/ln	1810	0	1570	0	0	0	0	0
Q Serve Time (g_s), s	14.9	0.0	32.3	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	14.9	0.0	32.3	0.0	0.0	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	21.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	412	0	1221	0	0	0	0	0
V/C Ratio (X)	0.77	0.00	0.95	0.00	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	412	0	1239	0	0	0	0	0
Upstream Filter (I)	1.00	0.00	0.52	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	32.6	0.0	26.7	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	13.2	0.0	9.5	0.0	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	45.8	0.0	36.2	0.0	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	6.4	0.0	11.4	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	1.5	0.0	1.6	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	1.00	1.00	0.00	0.00	0.00	0.00
%ile Back of Q (50%), veh/ln	7.9	0.0	13.1	0.0	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.61	0.00	0.80	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	6	0	0	4	0	0	0	8
Lane Assignment				T				T
Lanes in Grp	0	0	0	2	0	0	0	2
Grp Vol (v), veh/h	0	0	0	553	0	0	0	1236
Grp Sat Flow (s), veh/h/ln	0	0	0	1805	0	0	0	1805
Q Serve Time (g_s), s	0.0	0.0	0.0	12.5	0.0	0.0	0.0	15.4
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	12.5	0.0	0.0	0.0	15.4
Lane Grp Cap (c), veh/h	0	0	0	843	0	0	0	2427
V/C Ratio (X)	0.00	0.00	0.00	0.66	0.00	0.00	0.00	0.51
Avail Cap (c_a), veh/h	0	0	0	843	0	0	0	2427
Upstream Filter (I)	0.00	0.00	0.00	0.76	0.00	0.00	0.00	0.52
Uniform Delay (d1), s/veh	0.0	0.0	0.0	31.2	0.0	0.0	0.0	7.4
Incr Delay (d2), s/veh	0.0	0.0	0.0	3.0	0.0	0.0	0.0	0.4
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	34.2	0.0	0.0	0.0	7.8
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	5.3	0.0	0.0	0.0	5.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.1

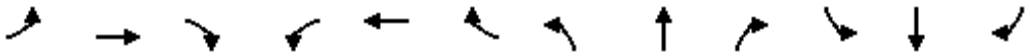
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	1.00	0.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	5.7	0.0	0.0	0.0	5.1
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.31
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	16	0	0	14	0	0	0	18
Lane Assignment	R			R				
Lanes in Grp	1	0	0	1	0	0	0	0
Grp Vol (v), veh/h	328	0	0	0	0	0	0	0
Grp Sat Flow (s), veh/h/ln	1610	0	0	1610	0	0	0	0
Q Serve Time (g_s), s	17.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	17.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	1.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	367	0	0	376	0	0	0	0
V/C Ratio (X)	0.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	367	0	0	376	0	0	0	0
Upstream Filter (I)	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	33.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	26.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	60.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	6.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	2.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	1.00	0.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	9.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	29.2
HCM 6th LOS	C

Notes

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	149	531	0	0	1738	575	498	6	413	0	0	0
Future Volume (veh/h)	149	531	0	0	1738	575	498	6	413	0	0	0
Number	7	4	14	3	8	18	5	2	12			
Initial Q, veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1800	1900	0	0	1900	1900	1900	1900	1900			
Adj Flow Rate, veh/h	157	559	0	0	1829	605	528	0	435			
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95			
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0			
Opposing Right Turn Influence	Yes			No			Yes					
Cap, veh/h	192	2234	0	0	2336	725	973	0	865			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Prop Arrive On Green	0.11	0.62	0.00	0.00	0.45	0.45	0.27	0.00	0.27			
Unsig. Movement Delay												
Ln Grp Delay, s/veh	45.8	7.1	0.0	0.0	21.4	30.2	27.2	0.0	26.8			
Ln Grp LOS	D	A	A	A	C	C	C	A	C			
Approach Vol, veh/h		716			2434			963				
Approach Delay, s/veh		15.6			23.6			27.0				
Approach LOS		B			C			C				

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2		4			7	8
Case No		9.0		4.0			2.0	7.0
Phs Duration (G+Y+Rc), s		26.0		54.0			13.5	40.5
Change Period (Y+Rc), s		4.5		4.5			4.5	4.5
Max Green (Gmax), s		21.5		49.5			11.5	33.5
Max Allow Headway (MAH), s		3.9		5.2			3.8	4.9
Max Q Clear (g_c+I1), s		12.0		7.6			9.2	28.5
Green Ext Time (g_e), s		2.9		4.3			0.1	4.6
Prob of Phs Call (p_c)		1.00		1.00			0.97	1.00
Prob of Max Out (p_x)		0.00		0.00			1.00	0.00
Left-Turn Movement Data								
Assigned Mvmt		5					7	3
Mvmt Sat Flow, veh/h		3619					1714	0
Through Movement Data								
Assigned Mvmt		2		4				8
Mvmt Sat Flow, veh/h		0		3705				5358
Right-Turn Movement Data								
Assigned Mvmt		12		14				18
Mvmt Sat Flow, veh/h		3220		0				1610
Left Lane Group Data								
Assigned Mvmt	0	5	0	0	0	0	7	3
Lane Assignment		L					L (Prot)	

Lanes in Grp	0	2	0	0	0	0	1	0
Grp Vol (v), veh/h	0	528	0	0	0	0	157	0
Grp Sat Flow (s), veh/h/ln	0	1810	0	0	0	0	1714	0
Q Serve Time (g_s), s	0.0	10.0	0.0	0.0	0.0	0.0	7.2	0.0
Cycle Q Clear Time (g_c), s	0.0	10.0	0.0	0.0	0.0	0.0	7.2	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	1810	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	0	973	0	0	0	0	192	0
V/C Ratio (X)	0.00	0.54	0.00	0.00	0.00	0.00	0.82	0.00
Avail Cap (c_a), veh/h	0	973	0	0	0	0	246	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	0.00	0.70	0.00
Uniform Delay (d1), s/veh	0.0	25.0	0.0	0.0	0.0	0.0	34.7	0.0
Incr Delay (d2), s/veh	0.0	2.2	0.0	0.0	0.0	0.0	11.1	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	27.2	0.0	0.0	0.0	0.0	45.8	0.0
1st-Term Q (Q1), veh/ln	0.0	4.1	0.0	0.0	0.0	0.0	2.9	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.3	0.0	0.0	0.0	0.0	0.6	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	0.00	0.00	0.00	1.00	1.00
%ile Back of Q (50%), veh/ln	0.0	4.4	0.0	0.0	0.0	0.0	3.5	0.0
%ile Storage Ratio (RQ%)	0.00	0.20	0.00	0.00	0.00	0.00	0.97	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	0	0	8
Lane Assignment				T				T
Lanes in Grp	0	0	0	2	0	0	0	3
Grp Vol (v), veh/h	0	0	0	559	0	0	0	1829
Grp Sat Flow (s), veh/h/ln	0	0	0	1805	0	0	0	1729
Q Serve Time (g_s), s	0.0	0.0	0.0	5.6	0.0	0.0	0.0	23.9
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	5.6	0.0	0.0	0.0	23.9
Lane Grp Cap (c), veh/h	0	0	0	2234	0	0	0	2336
V/C Ratio (X)	0.00	0.00	0.00	0.25	0.00	0.00	0.00	0.78
Avail Cap (c_a), veh/h	0	0	0	2234	0	0	0	2336
Upstream Filter (I)	0.00	0.00	0.00	0.70	0.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	6.9	0.0	0.0	0.0	18.7
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.2	0.0	0.0	0.0	2.7
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	7.1	0.0	0.0	0.0	21.4
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	1.8	0.0	0.0	0.0	8.8
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.6

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	1.9	0.0	0.0	0.0	9.4
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.12	0.00	0.00	0.00	0.11
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	0	0	18
Lane Assignment		R						R
Lanes in Grp	0	2	0	0	0	0	0	1
Grp Vol (v), veh/h	0	435	0	0	0	0	0	605
Grp Sat Flow (s), veh/h/ln	0	1610	0	0	0	0	0	1610
Q Serve Time (g_s), s	0.0	9.1	0.0	0.0	0.0	0.0	0.0	26.5
Cycle Q Clear Time (g_c), s	0.0	9.1	0.0	0.0	0.0	0.0	0.0	26.5
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	0.00	0.00	0.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	865	0	0	0	0	0	725
V/C Ratio (X)	0.00	0.50	0.00	0.00	0.00	0.00	0.00	0.83
Avail Cap (c_a), veh/h	0	865	0	0	0	0	0	725
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	24.7	0.0	0.0	0.0	0.0	0.0	19.4
Incr Delay (d2), s/veh	0.0	2.1	0.0	0.0	0.0	0.0	0.0	10.9
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	26.8	0.0	0.0	0.0	0.0	0.0	30.2
1st-Term Q (Q1), veh/ln	0.0	3.4	0.0	0.0	0.0	0.0	0.0	9.0
2nd-Term Q (Q2), veh/ln	0.0	0.3	0.0	0.0	0.0	0.0	0.0	2.2
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	3.6	0.0	0.0	0.0	0.0	0.0	11.2
%ile Storage Ratio (RQ%)	0.00	0.17	0.00	0.00	0.00	0.00	0.00	0.78
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	23.0
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	66	260	27	104	429	472	21	9	32	352	299	404
Future Volume (veh/h)	66	260	27	104	429	472	21	9	32	352	299	404
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1800	1900	1900	1800	1900	1900	1800	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	69	274	28	109	452	497	22	9	34	371	315	425
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	87	1061	473	132	609	516	37	485	411	404	825	736
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.10	0.59	0.59	0.15	0.64	0.32	0.02	0.26	0.26	0.22	0.46	0.46
Unsig. Movement Delay												
Ln Grp Delay, s/veh	68.6	18.5	17.7	52.0	18.9	48.6	72.3	33.5	34.4	63.8	22.8	27.3
Ln Grp LOS	E	B	B	D	B	D	E	C	C	E	C	C
Approach Vol, veh/h		371			1058			65			1111	
Approach Delay, s/veh		27.7			36.2			47.1			38.2	
Approach LOS		C			D			D			D	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Case No	2.0	3.0	2.0	3.0	2.0	4.0	2.0	3.0
Phs Duration (G+Y+Rc), s	31.3	35.2	13.8	39.8	7.1	59.4	10.6	43.0
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green (Gmax), s	34.5	19.5	15.4	32.6	5.9	48.1	9.5	38.5
Max Allow Headway (MAH), s	3.8	4.3	3.8	5.1	3.8	5.4	3.8	4.6
Max Q Clear (g_c+I1), s	26.0	3.9	9.4	6.4	3.5	25.4	6.7	38.4
Green Ext Time (g_e), s	0.8	0.1	0.1	1.9	0.0	5.2	0.0	0.1
Prob of Phs Call (p_c)	1.00	1.00	0.97	1.00	0.52	1.00	0.90	1.00
Prob of Max Out (p_x)	0.08	0.00	0.10	0.00	1.00	0.00	1.00	1.00

Left-Turn Movement Data								
Assigned Mvmt	1		3		5		7	
Mvmt Sat Flow, veh/h	1810		1714		1714		1714	

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		1900		3610		1805		1900

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1610		1610		1610		1610

Left Lane Group Data								
Assigned Mvmt	1	0	3	0	5	0	7	0
Lane Assignment	L (Prot)		L (Prot)		L (Prot)		L (Prot)	

Lanes in Grp	1	0	1	0	1	0	1	0
Grp Vol (v), veh/h	371	0	109	0	22	0	69	0
Grp Sat Flow (s), veh/h/ln	1810	0	1714	0	1714	0	1714	0
Q Serve Time (g_s), s	24.0	0.0	7.4	0.0	1.5	0.0	4.7	0.0
Cycle Q Clear Time (g_c), s	24.0	0.0	7.4	0.0	1.5	0.0	4.7	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	404	0	132	0	37	0	87	0
V/C Ratio (X)	0.92	0.00	0.82	0.00	0.59	0.00	0.80	0.00
Avail Cap (c_a), veh/h	520	0	220	0	84	0	136	0
Upstream Filter (I)	1.00	0.00	0.15	0.00	1.00	0.00	0.96	0.00
Uniform Delay (d1), s/veh	45.5	0.0	50.0	0.0	58.2	0.0	53.3	0.0
Incr Delay (d2), s/veh	18.3	0.0	2.0	0.0	14.2	0.0	15.2	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	63.8	0.0	52.0	0.0	72.3	0.0	68.6	0.0
1st-Term Q (Q1), veh/ln	10.7	0.0	3.0	0.0	0.7	0.0	2.0	0.0
2nd-Term Q (Q2), veh/ln	2.1	0.0	0.1	0.0	0.1	0.0	0.4	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
%ile Back of Q (50%), veh/ln	12.8	0.0	3.0	0.0	0.8	0.0	2.3	0.0
%ile Storage Ratio (RQ%)	3.19	0.00	0.13	0.00	0.09	0.00	0.22	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	1	0	2	0	1	0	1
Grp Vol (v), veh/h	0	9	0	274	0	315	0	452
Grp Sat Flow (s), veh/h/ln	0	1900	0	1805	0	1805	0	1900
Q Serve Time (g_s), s	0.0	0.4	0.0	4.4	0.0	13.8	0.0	19.6
Cycle Q Clear Time (g_c), s	0.0	0.4	0.0	4.4	0.0	13.8	0.0	19.6
Lane Grp Cap (c), veh/h	0	485	0	1061	0	825	0	609
V/C Ratio (X)	0.00	0.02	0.00	0.26	0.00	0.38	0.00	0.74
Avail Cap (c_a), veh/h	0	485	0	1061	0	825	0	610
Upstream Filter (I)	0.00	1.00	0.00	0.96	0.00	1.00	0.00	0.15
Uniform Delay (d1), s/veh	0.0	33.4	0.0	18.4	0.0	21.4	0.0	18.1
Incr Delay (d2), s/veh	0.0	0.1	0.0	0.1	0.0	1.3	0.0	0.8
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	33.5	0.0	18.5	0.0	22.8	0.0	18.9
1st-Term Q (Q1), veh/ln	0.0	0.2	0.0	1.7	0.0	5.8	0.0	5.4
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.1

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.2	0.0	1.7	0.0	6.1	0.0	5.5
%ile Storage Ratio (RQ%)	0.00	0.01	0.00	0.02	0.00	0.97	0.00	0.23
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		R		T+R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	34	0	28	0	425	0	497
Grp Sat Flow (s), veh/h/ln	0	1610	0	1610	0	1610	0	1610
Q Serve Time (g_s), s	0.0	1.9	0.0	0.9	0.0	23.4	0.0	36.4
Cycle Q Clear Time (g_c), s	0.0	1.9	0.0	0.9	0.0	23.4	0.0	36.4
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	411	0	473	0	736	0	516
V/C Ratio (X)	0.00	0.08	0.00	0.06	0.00	0.58	0.00	0.96
Avail Cap (c_a), veh/h	0	411	0	473	0	736	0	517
Upstream Filter (I)	0.00	1.00	0.00	0.96	0.00	1.00	0.00	0.15
Uniform Delay (d1), s/veh	0.0	34.0	0.0	17.6	0.0	24.0	0.0	40.1
Incr Delay (d2), s/veh	0.0	0.4	0.0	0.0	0.0	3.3	0.0	8.5
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	34.4	0.0	17.7	0.0	27.3	0.0	48.6
1st-Term Q (Q1), veh/ln	0.0	0.8	0.0	0.3	0.0	8.8	0.0	14.2
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.7	0.0	1.2
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.8	0.0	0.3	0.0	9.5	0.0	15.4
%ile Storage Ratio (RQ%)	0.00	0.04	0.00	0.00	0.00	1.50	0.00	0.64
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	36.1
HCM 6th LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	162	459	198	44	835	418	70	394	31	203	13	158
Future Volume (veh/h)	162	459	198	44	835	418	70	394	31	203	13	158
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1700	1900	1900	1800	1900	1900	1800	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	171	483	208	46	879	440	74	415	33	214	14	166
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	195	904	766	62	855	725	286	668	298	223	45	530
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.12	0.95	0.95	0.07	0.90	0.45	0.19	0.19	0.19	0.12	0.35	0.35
Unsig. Movement Delay												
Ln Grp Delay, s/veh	71.0	1.8	1.4	62.0	43.2	22.3	37.7	41.8	34.7	92.9	0.0	24.9
Ln Grp LOS	E	A	A	E	F	C	D	D	C	F	A	C
Approach Vol, veh/h		862			1365			522			394	
Approach Delay, s/veh		15.4			37.1			40.8			61.9	
Approach LOS		B			D			D			E	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4		6	7	8
Case No	2.0	5.3	2.0	3.0		4.0	2.0	3.0
Phs Duration (G+Y+Rc), s	16.8	23.0	8.1	52.1		39.8	10.7	49.5
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5		4.5	4.5	4.5
Max Green (Gmax), s	12.3	18.5	7.1	44.1		35.3	6.2	45.0
Max Allow Headway (MAH), s	3.8	5.0	3.8	4.9		5.5	3.8	4.9
Max Q Clear (g_c+I1), s	13.8	12.6	4.6	4.5		10.0	7.4	47.0
Green Ext Time (g_e), s	0.0	1.6	0.0	4.2		1.1	0.0	0.0
Prob of Phs Call (p_c)	1.00	1.00	0.72	1.00		1.00	0.99	1.00
Prob of Max Out (p_x)	1.00	0.00	1.00	0.00		0.00	1.00	1.00

Left-Turn Movement Data								
Assigned Mvmt	1	5	3				7	
Mvmt Sat Flow, veh/h	1810	1159	1714				3141	

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		3610		1900		127		1900

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1610		1610		1503		1610

Left Lane Group Data								
Assigned Mvmt	1	5	3	0	0	0	7	0
Lane Assignment	L (Prot)	L	L (Prot)				L (Prot)	

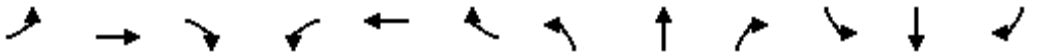
Lanes in Grp	1	1	1	0	0	0	2	0
Grp Vol (v), veh/h	214	74	46	0	0	0	171	0
Grp Sat Flow (s), veh/h/ln	1810	1159	1714	0	0	0	1570	0
Q Serve Time (g_s), s	11.8	5.6	2.6	0.0	0.0	0.0	5.4	0.0
Cycle Q Clear Time (g_c), s	11.8	5.6	2.6	0.0	0.0	0.0	5.4	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	1159	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	18.5	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	18.5	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	5.6	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	1.00	1.00	0.00	0.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	223	286	62	0	0	0	195	0
V/C Ratio (X)	0.96	0.26	0.74	0.00	0.00	0.00	0.88	0.00
Avail Cap (c_a), veh/h	223	286	122	0	0	0	195	0
Upstream Filter (I)	1.00	1.00	1.00	0.00	0.00	0.00	0.77	0.00
Uniform Delay (d1), s/veh	43.6	35.5	45.9	0.0	0.0	0.0	43.4	0.0
Incr Delay (d2), s/veh	49.3	2.2	16.0	0.0	0.0	0.0	27.6	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	92.9	37.7	62.0	0.0	0.0	0.0	71.0	0.0
1st-Term Q (Q1), veh/ln	5.2	1.6	1.1	0.0	0.0	0.0	1.9	0.0
2nd-Term Q (Q2), veh/ln	3.0	0.2	0.3	0.0	0.0	0.0	0.7	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	1.00	1.00	0.00	0.00	0.00	1.00	0.00
%ile Back of Q (50%), veh/ln	8.3	1.7	1.4	0.0	0.0	0.0	2.7	0.0
%ile Storage Ratio (RQ%)	1.00	0.29	0.02	0.00	0.00	0.00	0.26	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T				T
Lanes in Grp	0	2	0	1	0	0	0	1
Grp Vol (v), veh/h	0	415	0	483	0	0	0	879
Grp Sat Flow (s), veh/h/ln	0	1805	0	1900	0	0	0	1900
Q Serve Time (g_s), s	0.0	10.6	0.0	2.5	0.0	0.0	0.0	45.0
Cycle Q Clear Time (g_c), s	0.0	10.6	0.0	2.5	0.0	0.0	0.0	45.0
Lane Grp Cap (c), veh/h	0	668	0	904	0	0	0	855
V/C Ratio (X)	0.00	0.62	0.00	0.53	0.00	0.00	0.00	1.03
Avail Cap (c_a), veh/h	0	668	0	904	0	0	0	855
Upstream Filter (I)	0.00	1.00	0.00	0.77	0.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	37.5	0.0	1.3	0.0	0.0	0.0	5.0
Incr Delay (d2), s/veh	0.0	4.3	0.0	0.5	0.0	0.0	0.0	38.2
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	41.8	0.0	1.8	0.0	0.0	0.0	43.2
1st-Term Q (Q1), veh/ln	0.0	4.6	0.0	0.5	0.0	0.0	0.0	2.1
2nd-Term Q (Q2), veh/ln	0.0	0.4	0.0	0.1	0.0	0.0	0.0	9.1

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	5.0	0.0	0.6	0.0	0.0	0.0	11.2
%ile Storage Ratio (RQ%)	0.00	0.45	0.00	0.03	0.00	0.00	0.00	0.13
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		R		T+R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	33	0	208	0	180	0	440
Grp Sat Flow (s), veh/h/ln	0	1610	0	1610	0	1630	0	1610
Q Serve Time (g_s), s	0.0	1.7	0.0	0.8	0.0	8.0	0.0	20.7
Cycle Q Clear Time (g_c), s	0.0	1.7	0.0	0.8	0.0	8.0	0.0	20.7
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	0.92	0.00	1.00
Lane Grp Cap (c), veh/h	0	298	0	766	0	575	0	725
V/C Ratio (X)	0.00	0.11	0.00	0.27	0.00	0.31	0.00	0.61
Avail Cap (c_a), veh/h	0	298	0	766	0	575	0	725
Upstream Filter (I)	0.00	1.00	0.00	0.77	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	33.9	0.0	1.3	0.0	23.5	0.0	20.8
Incr Delay (d2), s/veh	0.0	0.8	0.0	0.1	0.0	1.4	0.0	1.5
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	34.7	0.0	1.4	0.0	24.9	0.0	22.3
1st-Term Q (Q1), veh/ln	0.0	0.7	0.0	0.2	0.0	3.1	0.0	7.5
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	0.2	0.0	0.3
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.7	0.0	0.3	0.0	3.3	0.0	7.8
%ile Storage Ratio (RQ%)	0.00	0.26	0.00	0.01	0.00	0.40	0.00	0.09
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	34.9
HCM 6th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	428	11	465	724	1095	0	0	476	931
Future Volume (veh/h)	0	0	0	428	11	465	724	1095	0	0	476	931
Number				3	8	18	5	2	12	1	6	16
Initial Q, veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln				1800	1900	1900	1900	1900	0	0	1900	1900
Adj Flow Rate, veh/h				451	12	489	762	1153	0	0	501	980
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence				Yes			Yes			No		
Cap, veh/h				453	12	413	768	2322	0	0	1942	603
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	2.00	1.00
Prop Arrive On Green				0.26	0.26	0.26	0.44	1.00	0.00	0.00	0.75	0.37
Unsig. Movement Delay												
Ln Grp Delay, s/veh				73.9	0.0	138.1	33.2	0.1	0.0	0.0	7.7	317.1
Ln Grp LOS				E	A	F	C	A	A	A	A	F
Approach Vol, veh/h					952			1915			1481	
Approach Delay, s/veh					106.9			13.2			212.5	
Approach LOS					F			B			F	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2	8		5	6		
Case No		4.0	11.0		2.0	7.0		
Phs Duration (G+Y+Rc), s		62.4	27.6		24.2	38.2		
Change Period (Y+Rc), s		4.5	4.5		4.5	4.5		
Max Green (Gmax), s		57.9	23.1		19.7	33.7		
Max Allow Headway (MAH), s		5.2	4.7		3.8	4.4		
Max Q Clear (g_c+I1), s		2.0	25.1		21.4	35.7		
Green Ext Time (g_e), s		11.8	0.0		0.0	0.0		
Prob of Phs Call (p_c)		1.00	1.00		1.00	1.00		
Prob of Max Out (p_x)		0.00	1.00		1.00	0.00		

Left-Turn Movement Data								
Assigned Mvmt			3		5	1		
Mvmt Sat Flow, veh/h			1765		3510	0		

Through Movement Data								
Assigned Mvmt		2	8			6		
Mvmt Sat Flow, veh/h		3705	47			5358		

Right-Turn Movement Data								
Assigned Mvmt		12	18			16		
Mvmt Sat Flow, veh/h		0	1610			1610		

Left Lane Group Data								
Assigned Mvmt	0	0	3	0	5	1	0	0
Lane Assignment			L+T		L (Prot)			

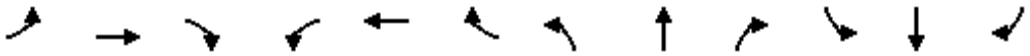
Lanes in Grp	0	0	1	0	2	0	0	0
Grp Vol (v), veh/h	0	0	463	0	762	0	0	0
Grp Sat Flow (s), veh/h/ln	0	0	1812	0	1755	0	0	0
Q Serve Time (g_s), s	0.0	0.0	23.0	0.0	19.4	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	23.0	0.0	19.4	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	33.7	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	0.00	0.97	0.00	1.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	465	0	768	0	0	0
V/C Ratio (X)	0.00	0.00	1.00	0.00	0.99	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	0	465	0	768	0	0	0
Upstream Filter (I)	0.00	0.00	1.00	0.00	0.09	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	33.4	0.0	25.2	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	40.5	0.0	7.9	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	73.9	0.0	33.2	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	9.7	0.0	5.6	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	5.2	0.0	0.8	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	0.00	1.00	0.00	1.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	15.0	0.0	6.4	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.31	0.00	0.60	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	8	0	0	6	0	0
Lane Assignment		T				T		
Lanes in Grp	0	2	0	0	0	3	0	0
Grp Vol (v), veh/h	0	1153	0	0	0	501	0	0
Grp Sat Flow (s), veh/h/ln	0	1805	0	0	0	1729	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	2.7	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	2.7	0.0	0.0
Lane Grp Cap (c), veh/h	0	2322	0	0	0	1942	0	0
V/C Ratio (X)	0.00	0.50	0.00	0.00	0.00	0.26	0.00	0.00
Avail Cap (c_a), veh/h	0	2322	0	0	0	1942	0	0
Upstream Filter (I)	0.00	0.09	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	7.4	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.1	0.0	0.0	0.0	0.3	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.1	0.0	0.0	0.0	7.7	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	18	0	0	16	0	0
Lane Assignment			R			R		
Lanes in Grp	0	0	1	0	0	1	0	0
Grp Vol (v), veh/h	0	0	489	0	0	980	0	0
Grp Sat Flow (s), veh/h/ln	0	0	1610	0	0	1610	0	0
Q Serve Time (g_s), s	0.0	0.0	23.1	0.0	0.0	33.7	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	23.1	0.0	0.0	33.7	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	413	0	0	603	0	0
V/C Ratio (X)	0.00	0.00	1.18	0.00	0.00	1.63	0.00	0.00
Avail Cap (c_a), veh/h	0	0	413	0	0	603	0	0
Upstream Filter (I)	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	33.5	0.0	0.0	28.1	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	104.6	0.0	0.0	289.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	138.1	0.0	0.0	317.1	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	8.7	0.0	0.0	12.3	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	12.0	0.0	0.0	48.4	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	20.7	0.0	0.0	60.7	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.43	0.00	0.00	1.31	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	18.9	0.0	0.0	94.3	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.3	0.0	0.0	0.4	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	101.6
HCM 6th LOS	F



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	477	9	513	0	0	0	0	1213	644	333	648	0
Future Volume (veh/h)	477	9	513	0	0	0	0	1213	644	333	648	0
Number	7	4	14				5	2	12	1	6	16
Initial Q, veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1800	1900	1900				0	1900	1900	1900	1900	0
Adj Flow Rate, veh/h	502	9	540				0	1277	678	351	682	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0				0	0	0	0	0	0
Opposing Right Turn Influence	Yes						No			Yes		
Cap, veh/h	427	8	459				0	1229	382	362	1390	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	2.00	2.00	2.00	1.00	1.00
Prop Arrive On Green	0.52	0.52	0.52				0.00	0.47	0.47	0.21	0.38	0.00
Unsig. Movement Delay												
Ln Grp Delay, s/veh	114.8	0.0	0.0				0.0	62.6	386.3	78.5	24.5	0.0
Ln Grp LOS	F	A	A				A	F	F	E	C	A
Approach Vol, veh/h		1051						1955			1033	
Approach Delay, s/veh		114.8						174.9			42.9	
Approach LOS		F						F			D	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Case No	2.0	7.0		12.0		4.0		
Phs Duration (G+Y+Rc), s	14.8	28.2		57.0		43.0		
Change Period (Y+Rc), s	4.5	4.5		4.5		4.5		
Max Green (Gmax), s	10.3	23.7		52.5		38.5		
Max Allow Headway (MAH), s	3.8	4.8		5.5		5.2		
Max Q Clear (g_c+I1), s	11.9	25.7		54.5		16.3		
Green Ext Time (g_e), s	0.0	0.0		0.0		4.8		
Prob of Phs Call (p_c)	1.00	1.00		1.00		1.00		
Prob of Max Out (p_x)	1.00	0.00		1.00		0.00		

Left-Turn Movement Data								
Assigned Mvmt	1	5		7				
Mvmt Sat Flow, veh/h	3510	0		813				

Through Movement Data								
Assigned Mvmt		2		4		6		
Mvmt Sat Flow, veh/h		5358		15		3705		

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		
Mvmt Sat Flow, veh/h		1610		874		0		

Left Lane Group Data								
Assigned Mvmt	1	5	0	7	0	0	0	0
Lane Assignment	L (Prot)			L+T+R				

Lanes in Grp	2	0	0	1	0	0	0	0
Grp Vol (v), veh/h	351	0	0	1051	0	0	0	0
Grp Sat Flow (s), veh/h/ln	1755	0	0	1702	0	0	0	0
Q Serve Time (g_s), s	9.9	0.0	0.0	52.5	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	9.9	0.0	0.0	52.5	0.0	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	23.7	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	0.48	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	362	0	0	894	0	0	0	0
V/C Ratio (X)	0.97	0.00	0.00	1.18	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	362	0	0	894	0	0	0	0
Upstream Filter (I)	0.98	0.00	0.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	39.6	0.0	0.0	23.8	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	39.0	0.0	0.0	91.0	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	78.5	0.0	0.0	114.8	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	3.8	0.0	0.0	19.4	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	2.0	0.0	0.0	22.6	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00
%ile Back of Q (50%), veh/ln	5.7	0.0	0.0	42.0	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.53	0.00	0.00	0.72	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	39.4	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	0
Lane Assignment		T				T		
Lanes in Grp	0	3	0	0	0	2	0	0
Grp Vol (v), veh/h	0	1277	0	0	0	682	0	0
Grp Sat Flow (s), veh/h/ln	0	1729	0	0	0	1805	0	0
Q Serve Time (g_s), s	0.0	23.7	0.0	0.0	0.0	14.3	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	23.7	0.0	0.0	0.0	14.3	0.0	0.0
Lane Grp Cap (c), veh/h	0	1229	0	0	0	1390	0	0
V/C Ratio (X)	0.00	1.04	0.00	0.00	0.00	0.49	0.00	0.00
Avail Cap (c_a), veh/h	0	1229	0	0	0	1390	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	0.98	0.00	0.00
Uniform Delay (d1), s/veh	0.0	26.3	0.0	0.0	0.0	23.3	0.0	0.0
Incr Delay (d2), s/veh	0.0	36.3	0.0	0.0	0.0	1.2	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	62.6	0.0	0.0	0.0	24.5	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	6.9	0.0	0.0	0.0	6.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	4.1	0.0	0.0	0.0	0.2	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	11.0	0.0	0.0	0.0	6.2	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.36	0.00	0.00	0.00	0.58	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	11.9	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	0
Lane Assignment		R						
Lanes in Grp	0	1	0	0	0	0	0	0
Grp Vol (v), veh/h	0	678	0	0	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	1610	0	0	0	0	0	0
Q Serve Time (g_s), s	0.0	23.7	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	23.7	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	0.51	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	382	0	0	0	0	0	0
V/C Ratio (X)	0.00	1.78	0.00	0.00	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	382	0	0	0	0	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	26.3	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	360.0	0.0	0.0	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	386.3	0.0	0.0	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	6.4	0.0	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	38.2	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	44.6	0.0	0.0	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	1.44	0.00	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	74.1	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	125.5
HCM 6th LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	86	814	80	225	349	198	138	669	614	261	378	54
Future Volume (veh/h)	86	814	80	225	349	198	138	669	614	261	378	54
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1800	1900	1900	1800	1900	1900	1800	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	91	857	84	237	367	208	145	704	646	275	398	57
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	114	850	83	250	749	418	172	1050	468	285	1104	157
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.07	0.26	0.26	0.15	0.34	0.34	0.10	0.29	0.29	0.16	0.35	0.35
Unsig. Movement Delay												
Ln Grp Delay, s/veh	67.4	88.7	88.3	92.2	32.3	32.5	62.7	39.9	222.5	93.8	30.8	30.8
Ln Grp LOS	E	F	F	F	C	C	E	D	F	F	C	C
Approach Vol, veh/h		1032			812			1495			730	
Approach Delay, s/veh		86.6			49.8			121.0			54.5	
Approach LOS		F			D			F			D	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Case No	2.0	3.0	2.0	4.0	2.0	4.0	2.0	4.0
Phs Duration (G+Y+Rc), s	23.4	39.4	22.0	35.2	16.6	46.2	12.4	44.8
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green (Gmax), s	18.9	34.9	17.5	30.7	18.6	35.2	13.1	35.1
Max Allow Headway (MAH), s	3.8	4.6	3.8	5.3	3.8	5.3	3.8	5.4
Max Q Clear (g_c+I1), s	20.1	36.9	18.4	32.7	12.0	13.3	8.3	18.0
Green Ext Time (g_e), s	0.0	0.0	0.0	0.0	0.2	2.7	0.1	3.4
Prob of Phs Call (p_c)	1.00	1.00	1.00	1.00	0.99	1.00	0.95	1.00
Prob of Max Out (p_x)	1.00	0.00	1.00	1.00	0.08	0.00	0.33	0.08

Left-Turn Movement Data								
Assigned Mvmt	1		3		5		7	
Mvmt Sat Flow, veh/h	1810		1714		1714		1714	

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		3610		3321		3173		2234

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1610		325		451		1246

Left Lane Group Data								
Assigned Mvmt	1	0	3	0	5	0	7	0
Lane Assignment	L (Prot)		L (Prot)		L (Prot)		L (Prot)	

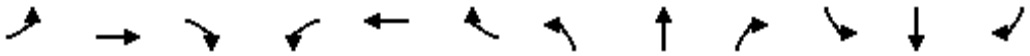
Lanes in Grp	1	0	1	0	1	0	1	0
Grp Vol (v), veh/h	275	0	237	0	145	0	91	0
Grp Sat Flow (s), veh/h/ln	1810	0	1714	0	1714	0	1714	0
Q Serve Time (g_s), s	18.1	0.0	16.4	0.0	10.0	0.0	6.3	0.0
Cycle Q Clear Time (g_c), s	18.1	0.0	16.4	0.0	10.0	0.0	6.3	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	285	0	250	0	172	0	114	0
V/C Ratio (X)	0.96	0.00	0.95	0.00	0.84	0.00	0.80	0.00
Avail Cap (c_a), veh/h	285	0	250	0	266	0	187	0
Upstream Filter (I)	1.00	0.00	0.95	0.00	0.69	0.00	1.00	0.00
Uniform Delay (d1), s/veh	50.2	0.0	50.8	0.0	53.0	0.0	55.2	0.0
Incr Delay (d2), s/veh	43.6	0.0	41.4	0.0	9.7	0.0	12.2	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	93.8	0.0	92.2	0.0	62.7	0.0	67.4	0.0
1st-Term Q (Q1), veh/ln	8.2	0.0	7.0	0.0	4.3	0.0	2.7	0.0
2nd-Term Q (Q2), veh/ln	3.5	0.0	2.9	0.0	0.5	0.0	0.4	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
%ile Back of Q (50%), veh/ln	11.6	0.0	9.9	0.0	4.8	0.0	3.1	0.0
%ile Storage Ratio (RQ%)	0.18	0.00	0.09	0.00	0.24	0.00	0.04	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	2	0	1	0	1	0	1
Grp Vol (v), veh/h	0	704	0	466	0	225	0	295
Grp Sat Flow (s), veh/h/ln	0	1805	0	1805	0	1805	0	1805
Q Serve Time (g_s), s	0.0	20.6	0.0	30.7	0.0	11.2	0.0	15.6
Cycle Q Clear Time (g_c), s	0.0	20.6	0.0	30.7	0.0	11.2	0.0	15.6
Lane Grp Cap (c), veh/h	0	1050	0	462	0	628	0	605
V/C Ratio (X)	0.00	0.67	0.00	1.01	0.00	0.36	0.00	0.49
Avail Cap (c_a), veh/h	0	1050	0	462	0	628	0	605
Upstream Filter (I)	0.00	0.69	0.00	1.00	0.00	1.00	0.00	0.95
Uniform Delay (d1), s/veh	0.0	37.5	0.0	44.6	0.0	29.2	0.0	31.7
Incr Delay (d2), s/veh	0.0	2.4	0.0	44.1	0.0	1.6	0.0	0.6
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	39.9	0.0	88.7	0.0	30.8	0.0	32.3
1st-Term Q (Q1), veh/ln	0.0	9.1	0.0	13.6	0.0	4.8	0.0	6.8
2nd-Term Q (Q2), veh/ln	0.0	0.3	0.0	5.7	0.0	0.3	0.0	0.1

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	9.4	0.0	19.2	0.0	5.1	0.0	6.9
%ile Storage Ratio (RQ%)	0.00	0.47	0.00	0.26	0.00	0.08	0.00	0.06
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		T+R		T+R		T+R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	646	0	475	0	230	0	280
Grp Sat Flow (s), veh/h/ln	0	1610	0	1841	0	1819	0	1676
Q Serve Time (g_s), s	0.0	34.9	0.0	30.7	0.0	11.3	0.0	16.0
Cycle Q Clear Time (g_c), s	0.0	34.9	0.0	30.7	0.0	11.3	0.0	16.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	0.18	0.00	0.25	0.00	0.74
Lane Grp Cap (c), veh/h	0	468	0	471	0	633	0	562
V/C Ratio (X)	0.00	1.38	0.00	1.01	0.00	0.36	0.00	0.50
Avail Cap (c_a), veh/h	0	468	0	471	0	633	0	562
Upstream Filter (I)	0.00	0.69	0.00	1.00	0.00	1.00	0.00	0.95
Uniform Delay (d1), s/veh	0.0	42.5	0.0	44.7	0.0	29.2	0.0	31.8
Incr Delay (d2), s/veh	0.0	179.9	0.0	43.7	0.0	1.6	0.0	0.6
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	222.5	0.0	88.3	0.0	30.8	0.0	32.5
1st-Term Q (Q1), veh/ln	0.0	13.7	0.0	13.9	0.0	5.0	0.0	6.5
2nd-Term Q (Q2), veh/ln	0.0	23.4	0.0	5.7	0.0	0.3	0.0	0.1
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	37.1	0.0	19.6	0.0	5.2	0.0	6.6
%ile Storage Ratio (RQ%)	0.00	1.87	0.00	0.26	0.00	0.08	0.00	0.06
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	44.4	0.0	1.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.3	0.0	0.3	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	86.2
HCM 6th LOS	F



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	480	36	427	91	25	141	214	1036	5	9	655	88
Future Volume (veh/h)	480	36	427	91	25	141	214	1036	5	9	655	88
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1700	1900	1900	1800	1900	1900	1800	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	505	38	0	96	26	148	225	1091	5	9	689	93
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	573	688		219	45	190	260	1757	8	20	1074	145
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.18	0.36	0.00	0.13	0.13	0.13	0.15	0.48	0.48	0.01	0.34	0.34
Unsig. Movement Delay												
Ln Grp Delay, s/veh	49.4	18.7	0.0	38.4	0.0	44.9	56.0	20.9	20.7	55.7	29.3	29.3
Ln Grp LOS	D	B		D	A	D	E	C	C	E	C	C
Approach Vol, veh/h		543			270			1321			791	
Approach Delay, s/veh		47.3			42.0			26.8			29.6	
Approach LOS		D			D			C			C	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6	7	8
Case No	2.0	4.0		3.0	2.0	4.0	2.0	8.3
Phs Duration (G+Y+Rc), s	5.5	47.4		37.1	18.2	34.8	20.9	16.2
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5	4.5	4.5
Max Green (Gmax), s	5.0	31.5		40.0	16.5	20.0	17.5	18.0
Max Allow Headway (MAH), s	3.8	5.2		5.2	3.8	5.3	3.8	5.5
Max Q Clear (g_c+I1), s	2.4	21.8		3.2	13.5	18.4	16.1	10.8
Green Ext Time (g_e), s	0.0	4.9		0.2	0.2	0.8	0.3	0.9
Prob of Phs Call (p_c)	0.20	1.00		1.00	1.00	1.00	1.00	1.00
Prob of Max Out (p_x)	1.00	0.00		0.00	1.00	0.00	1.00	0.50

Left-Turn Movement Data								
Assigned Mvmt	1				5		7	3
Mvmt Sat Flow, veh/h	1810				1714		3141	1138

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		3685		1900		3196		346

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		17		1610		431		1465

Left Lane Group Data								
Assigned Mvmt	1	0	0	0	5	0	7	3
Lane Assignment	L (Prot)				L (Prot)		L (Prot)	L+T

Lanes in Grp	1	0	0	0	1	0	2	1
Grp Vol (v), veh/h	9	0	0	0	225	0	505	122
Grp Sat Flow (s), veh/h/ln	1810	0	0	0	1714	0	1570	1484
Q Serve Time (g_s), s	0.4	0.0	0.0	0.0	11.5	0.0	14.1	6.8
Cycle Q Clear Time (g_c), s	0.4	0.0	0.0	0.0	11.5	0.0	14.1	7.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	1391
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.7
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.7
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.8
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	0.00	1.00	0.00	1.00	0.79
Lane Grp Cap (c), veh/h	20	0	0	0	260	0	573	264
V/C Ratio (X)	0.44	0.00	0.00	0.00	0.86	0.00	0.88	0.46
Avail Cap (c_a), veh/h	101	0	0	0	314	0	611	368
Upstream Filter (I)	0.78	0.00	0.00	0.00	1.00	0.00	1.00	1.00
Uniform Delay (d1), s/veh	44.2	0.0	0.0	0.0	37.3	0.0	35.8	37.1
Incr Delay (d2), s/veh	11.5	0.0	0.0	0.0	18.7	0.0	13.6	1.3
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	55.7	0.0	0.0	0.0	56.0	0.0	49.4	38.4
1st-Term Q (Q1), veh/ln	0.2	0.0	0.0	0.0	4.7	0.0	5.3	2.5
2nd-Term Q (Q2), veh/ln	0.1	0.0	0.0	0.0	1.4	0.0	1.1	0.1
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	0.00	1.00	0.00	1.00	1.00
%ile Back of Q (50%), veh/ln	0.3	0.0	0.0	0.0	6.1	0.0	6.4	2.6
%ile Storage Ratio (RQ%)	0.01	0.00	0.00	0.00	1.02	0.00	1.06	0.08
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		
Lanes in Grp	0	1	0	1	0	1	0	0
Grp Vol (v), veh/h	0	534	0	38	0	389	0	0
Grp Sat Flow (s), veh/h/ln	0	1805	0	1900	0	1805	0	0
Q Serve Time (g_s), s	0.0	19.8	0.0	1.2	0.0	16.4	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	19.8	0.0	1.2	0.0	16.4	0.0	0.0
Lane Grp Cap (c), veh/h	0	861	0	688	0	607	0	0
V/C Ratio (X)	0.00	0.62	0.00	0.06	0.00	0.64	0.00	0.00
Avail Cap (c_a), veh/h	0	861	0	844	0	607	0	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	0.78	0.00	0.00
Uniform Delay (d1), s/veh	0.0	17.5	0.0	18.7	0.0	25.3	0.0	0.0
Incr Delay (d2), s/veh	0.0	3.4	0.0	0.0	0.0	4.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	20.9	0.0	18.7	0.0	29.3	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	7.7	0.0	0.5	0.0	6.8	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.8	0.0	0.0	0.0	0.7	0.0	0.0

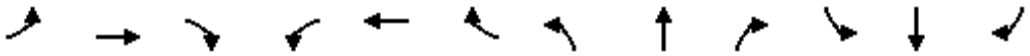
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	8.5	0.0	0.5	0.0	7.5	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.37	0.00	0.01	0.00	0.38	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R		R		T+R		T+R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	562	0	0	0	393	0	148
Grp Sat Flow (s), veh/h/ln	0	1897	0	1610	0	1822	0	1465
Q Serve Time (g_s), s	0.0	19.8	0.0	0.0	0.0	16.4	0.0	8.8
Cycle Q Clear Time (g_c), s	0.0	19.8	0.0	0.0	0.0	16.4	0.0	8.8
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.01	0.00	1.00	0.00	0.24	0.00	1.00
Lane Grp Cap (c), veh/h	0	904	0	583	0	613	0	190
V/C Ratio (X)	0.00	0.62	0.00	0.00	0.00	0.64	0.00	0.78
Avail Cap (c_a), veh/h	0	904	0	716	0	613	0	293
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	0.78	0.00	1.00
Uniform Delay (d1), s/veh	0.0	17.5	0.0	0.0	0.0	25.3	0.0	37.9
Incr Delay (d2), s/veh	0.0	3.2	0.0	0.0	0.0	4.0	0.0	7.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	20.7	0.0	0.0	0.0	29.3	0.0	44.9
1st-Term Q (Q1), veh/ln	0.0	8.1	0.0	0.0	0.0	6.9	0.0	3.1
2nd-Term Q (Q2), veh/ln	0.0	0.8	0.0	0.0	0.0	0.7	0.0	0.4
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	8.9	0.0	0.0	0.0	7.6	0.0	3.5
%ile Storage Ratio (RQ%)	0.00	0.39	0.00	0.00	0.00	0.38	0.00	0.10
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	32.7
HCM 6th LOS	C

Notes

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	97	0	143	0	1164	44	53	1026	0
Future Volume (veh/h)	0	0	0	97	0	143	0	1164	44	53	1026	0
Number				3	8	18	5	2	12	1	6	16
Initial Q, veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln				1800	0	1900	0	1900	1900	1900	1900	0
Adj Flow Rate, veh/h				102	0	151	0	1225	46	56	1080	0
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence				Yes			No			Yes		
Cap, veh/h				195	0	183	0	3762	141	73	4207	0
HCM Platoon Ratio				1.00	1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00
Prop Arrive On Green				0.11	0.00	0.11	0.00	1.00	1.00	0.04	0.81	0.00
Unsig. Movement Delay												
Ln Grp Delay, s/veh				52.3	0.0	60.9	0.0	0.3	0.6	72.2	2.9	0.0
Ln Grp LOS				D	A	E	A	A	A	E	A	A
Approach Vol, veh/h					253			1271			1136	
Approach Delay, s/veh					57.4			0.4			6.3	
Approach LOS					E			A			A	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	8			6		
Case No	2.0	8.0	9.0			4.0		
Phs Duration (G+Y+Rc), s	9.3	92.5	18.2			101.8		
Change Period (Y+Rc), s	4.5	4.5	4.5			4.5		
Max Green (Gmax), s	15.1	30.7	28.1			50.3		
Max Allow Headway (MAH), s	3.8	5.2	3.9			5.2		
Max Q Clear (g_c+I1), s	5.7	2.0	13.0			8.0		
Green Ext Time (g_e), s	0.1	10.4	0.7			9.9		
Prob of Phs Call (p_c)	0.85	1.00	1.00			1.00		
Prob of Max Out (p_x)	0.00	0.00	0.00			0.00		

Left-Turn Movement Data								
Assigned Mvmt	1	5	3					
Mvmt Sat Flow, veh/h	1810	0	1714					

Through Movement Data								
Assigned Mvmt		2	8			6		
Mvmt Sat Flow, veh/h		5302	0			5358		

Right-Turn Movement Data								
Assigned Mvmt		12	18			16		
Mvmt Sat Flow, veh/h		193	1610			0		

Left Lane Group Data								
Assigned Mvmt	1	5	3	0	0	0	0	0
Lane Assignment	L (Prot)		L					

Lanes in Grp	1	0	1	0	0	0	0	0
Grp Vol (v), veh/h	56	0	102	0	0	0	0	0
Grp Sat Flow (s), veh/h/ln	1810	0	1714	0	0	0	0	0
Q Serve Time (g_s), s	3.7	0.0	6.7	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	3.7	0.0	6.7	0.0	0.0	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	1714	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	88.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	73	0	195	0	0	0	0	0
V/C Ratio (X)	0.77	0.00	0.52	0.00	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	228	0	401	0	0	0	0	0
Upstream Filter (I)	1.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	57.0	0.0	50.1	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	15.2	0.0	2.2	0.0	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	72.2	0.0	52.3	0.0	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	1.7	0.0	2.9	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.3	0.0	0.1	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	1.00	1.00	0.00	0.00	0.00	0.00	0.00
%ile Back of Q (50%), veh/ln	2.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.19	0.00	0.05	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	8	0	0	6	0	0
Lane Assignment		T				T		
Lanes in Grp	0	2	0	0	0	3	0	0
Grp Vol (v), veh/h	0	826	0	0	0	1080	0	0
Grp Sat Flow (s), veh/h/ln	0	1729	0	0	0	1729	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	6.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	6.0	0.0	0.0
Lane Grp Cap (c), veh/h	0	2536	0	0	0	4207	0	0
V/C Ratio (X)	0.00	0.33	0.00	0.00	0.00	0.26	0.00	0.00
Avail Cap (c_a), veh/h	0	2536	0	0	0	4207	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	2.7	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.3	0.0	0.0	0.0	0.1	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.3	0.0	0.0	0.0	2.9	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	1.5	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.1	0.0	0.0	0.0	1.6	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.01	0.00	0.00	0.00	0.15	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	18	0	0	16	0	0
Lane Assignment		T+R	R					
Lanes in Grp	0	1	1	0	0	0	0	0
Grp Vol (v), veh/h	0	445	151	0	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	1865	1610	0	0	0	0	0
Q Serve Time (g_s), s	0.0	0.0	11.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	11.0	0.0	0.0	0.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.10	1.00	0.00	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	1368	183	0	0	0	0	0
V/C Ratio (X)	0.00	0.33	0.82	0.00	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	1368	377	0	0	0	0	0
Upstream Filter (I)	0.00	1.00	1.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	52.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.6	8.9	0.0	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.6	60.9	0.0	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	4.4	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.2	0.5	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.2	4.9	0.0	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.01	0.08	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	8.4
HCM 6th LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	181	10	13	21	18	18	8	1030	18	15	998	63
Future Volume (veh/h)	181	10	13	21	18	18	8	1030	18	15	998	63
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1800	1900	1900	1800	1900	1900	1800	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	191	11	14	22	19	19	8	1084	19	16	1051	66
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	283	121	154	219	179	185	17	2524	44	31	2424	152
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Prop Arrive On Green	0.18	0.18	0.18	0.18	0.18	0.18	0.01	0.70	0.70	0.03	1.00	1.00
Unsig. Movement Delay												
Ln Grp Delay, s/veh	51.9	0.0	41.6	42.0	0.0	41.7	74.3	8.8	8.7	69.9	1.1	1.0
Ln Grp LOS	D	A	D	D	A	D	E	A	A	E	A	A
Approach Vol, veh/h		216			60			1111			1133	
Approach Delay, s/veh		50.7			41.9			9.2			2.0	
Approach LOS		D			D			A			A	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Case No	2.0	4.0		8.0	2.0	4.0		8.0
Phs Duration (G+Y+Rc), s	6.6	87.9		25.5	5.7	88.8		25.5
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green (Gmax), s	27.0	39.5		40.0	27.0	39.5		40.0
Max Allow Headway (MAH), s	3.8	5.2		5.3	3.8	5.3		5.4
Max Q Clear (g_c+I1), s	3.0	17.6		19.9	2.6	2.0		4.6
Green Ext Time (g_e), s	0.0	7.8		1.2	0.0	9.4		0.3
Prob of Phs Call (p_c)	0.41	1.00		1.00	0.23	1.00		1.00
Prob of Max Out (p_x)	0.00	0.00		0.00	0.00	0.00		0.00

Left-Turn Movement Data								
Assigned Mvmt	1			7	5			3
Mvmt Sat Flow, veh/h	1810			1271	1714			964

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		3630		691		3449		1020

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		64		880		217		1058

Left Lane Group Data								
Assigned Mvmt	1	0	0	7	5	0	0	3
Lane Assignment	L (Prot)			L+T	L (Prot)			L+T

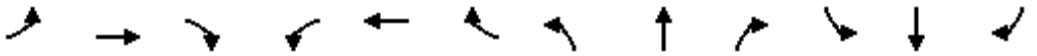
Lanes in Grp	1	0	0	1	1	0	0	1
Grp Vol (v), veh/h	16	0	0	191	8	0	0	32
Grp Sat Flow (s), veh/h/ln	1810	0	0	1271	1714	0	0	1503
Q Serve Time (g_s), s	1.0	0.0	0.0	16.0	0.6	0.0	0.0	1.0
Cycle Q Clear Time (g_c), s	1.0	0.0	0.0	17.9	0.6	0.0	0.0	2.6
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	1391	0	0	0	1408
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	21.0	0.0	0.0	0.0	21.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	19.2	0.0	0.0	0.0	19.4
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	16.0	0.0	0.0	0.0	1.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	0.68
Lane Grp Cap (c), veh/h	31	0	0	283	17	0	0	314
V/C Ratio (X)	0.51	0.00	0.00	0.68	0.48	0.00	0.00	0.10
Avail Cap (c_a), veh/h	407	0	0	503	386	0	0	557
Upstream Filter (I)	1.00	0.00	0.00	1.00	0.76	0.00	0.00	1.00
Uniform Delay (d1), s/veh	57.4	0.0	0.0	49.1	59.1	0.0	0.0	41.8
Incr Delay (d2), s/veh	12.5	0.0	0.0	2.8	15.2	0.0	0.0	0.1
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	69.9	0.0	0.0	51.9	74.3	0.0	0.0	42.0
1st-Term Q (Q1), veh/ln	0.5	0.0	0.0	5.6	0.2	0.0	0.0	0.8
2nd-Term Q (Q2), veh/ln	0.1	0.0	0.0	0.2	0.1	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.6	0.0	0.0	5.8	0.3	0.0	0.0	0.8
%ile Storage Ratio (RQ%)	0.06	0.00	0.00	0.71	0.00	0.00	0.00	0.03
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T				T		
Lanes in Grp	0	1	0	0	0	1	0	0
Grp Vol (v), veh/h	0	539	0	0	0	550	0	0
Grp Sat Flow (s), veh/h/ln	0	1805	0	0	0	1805	0	0
Q Serve Time (g_s), s	0.0	15.6	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	15.6	0.0	0.0	0.0	0.0	0.0	0.0
Lane Grp Cap (c), veh/h	0	1255	0	0	0	1268	0	0
V/C Ratio (X)	0.00	0.43	0.00	0.00	0.00	0.43	0.00	0.00
Avail Cap (c_a), veh/h	0	1255	0	0	0	1268	0	0
Upstream Filter (I)	0.00	0.76	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	7.9	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.8	0.0	0.0	0.0	1.1	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	8.8	0.0	0.0	0.0	1.1	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	5.6	0.0	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.3	0.0	0.0	0.0	0.4	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	5.9	0.0	0.0	0.0	0.4	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.06	0.00	0.00	0.00	0.04	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R		T+R		T+R		T+R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	564	0	25	0	567	0	28
Grp Sat Flow (s), veh/h/ln	0	1889	0	1571	0	1861	0	1539
Q Serve Time (g_s), s	0.0	15.6	0.0	1.6	0.0	0.0	0.0	1.8
Cycle Q Clear Time (g_c), s	0.0	15.6	0.0	1.6	0.0	0.0	0.0	1.8
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.03	0.00	0.56	0.00	0.12	0.00	0.69
Lane Grp Cap (c), veh/h	0	1313	0	275	0	1308	0	269
V/C Ratio (X)	0.00	0.43	0.00	0.09	0.00	0.43	0.00	0.10
Avail Cap (c_a), veh/h	0	1313	0	524	0	1308	0	513
Upstream Filter (I)	0.00	0.76	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	7.9	0.0	41.5	0.0	0.0	0.0	41.6
Incr Delay (d2), s/veh	0.0	0.8	0.0	0.1	0.0	1.0	0.0	0.2
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	8.7	0.0	41.6	0.0	1.0	0.0	41.7
1st-Term Q (Q1), veh/ln	0.0	5.8	0.0	0.6	0.0	0.0	0.0	0.7
2nd-Term Q (Q2), veh/ln	0.0	0.3	0.0	0.0	0.0	0.4	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	6.1	0.0	0.6	0.0	0.4	0.0	0.7
%ile Storage Ratio (RQ%)	0.00	0.06	0.00	0.08	0.00	0.04	0.00	0.02
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	10.3
HCM 6th LOS	B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	164	672	81	162	255	185	57	660	338	230	706	69
Future Volume (veh/h)	164	672	81	162	255	185	57	660	338	230	706	69
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1800	1900	1900	1800	1900	1900	1800	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	173	707	85	171	268	195	60	695	0	242	743	73
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	202	1024	318	240	548	245	77	1351		282	1753	782
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00
Prop Arrive On Green	0.12	0.20	0.20	0.07	0.15	0.15	0.01	0.12	0.00	0.16	0.49	0.49
Unsig. Movement Delay												
Ln Grp Delay, s/veh	67.6	35.0	31.0	43.9	35.3	41.9	46.8	32.0	0.0	48.9	15.7	12.7
Ln Grp LOS	E	C	C	D	D	D	D	C		D	B	B
Approach Vol, veh/h		965			634			755			1058	
Approach Delay, s/veh		40.5			39.6			33.2			23.1	
Approach LOS		D			D			C			C	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Case No	2.0	3.0	2.0	3.0	2.0	3.0	2.0	3.0
Phs Duration (G+Y+Rc), s	18.5	38.2	11.0	22.3	8.5	48.2	15.1	18.2
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green (Gmax), s	19.5	23.9	7.9	20.7	9.3	34.1	10.6	18.0
Max Allow Headway (MAH), s	3.8	5.2	3.8	5.1	3.8	5.1	3.8	4.7
Max Q Clear (g_c+I1), s	13.7	18.2	6.5	13.4	5.1	14.0	10.9	12.5
Green Ext Time (g_e), s	0.3	2.3	0.1	2.9	0.0	5.4	0.0	1.2
Prob of Phs Call (p_c)	1.00	1.00	0.99	1.00	0.78	1.00	0.99	1.00
Prob of Max Out (p_x)	0.25	0.00	1.00	0.67	0.63	0.00	1.00	0.77

Left-Turn Movement Data								
Assigned Mvmt	1		3		5		7	
Mvmt Sat Flow, veh/h	1810		3326		1714		1714	

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		3610		5187		3610		3610

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1610		1610		1610		1610

Left Lane Group Data								
Assigned Mvmt	1	0	3	0	5	0	7	0
Lane Assignment	L (Prot)		L (Prot)		L (Prot)		L (Prot)	

Lanes in Grp	1	0	2	0	1	0	1	0
Grp Vol (v), veh/h	242	0	171	0	60	0	173	0
Grp Sat Flow (s), veh/h/ln	1810	0	1663	0	1714	0	1714	0
Q Serve Time (g_s), s	11.7	0.0	4.5	0.0	3.1	0.0	8.9	0.0
Cycle Q Clear Time (g_c), s	11.7	0.0	4.5	0.0	3.1	0.0	8.9	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	282	0	240	0	77	0	202	0
V/C Ratio (X)	0.86	0.00	0.71	0.00	0.78	0.00	0.86	0.00
Avail Cap (c_a), veh/h	392	0	292	0	177	0	202	0
Upstream Filter (I)	0.92	0.00	0.48	0.00	0.16	0.00	1.00	0.00
Uniform Delay (d1), s/veh	37.0	0.0	40.8	0.0	43.9	0.0	39.0	0.0
Incr Delay (d2), s/veh	11.9	0.0	3.0	0.0	2.9	0.0	28.6	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	48.9	0.0	43.9	0.0	46.8	0.0	67.6	0.0
1st-Term Q (Q1), veh/ln	5.1	0.0	1.8	0.0	1.3	0.0	3.7	0.0
2nd-Term Q (Q2), veh/ln	0.9	0.0	0.1	0.0	0.1	0.0	1.6	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
%ile Back of Q (50%), veh/ln	6.0	0.0	1.9	0.0	1.4	0.0	5.3	0.0
%ile Storage Ratio (RQ%)	0.58	0.00	0.19	0.00	0.21	0.00	1.32	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	2	0	3	0	2	0	2
Grp Vol (v), veh/h	0	695	0	707	0	743	0	268
Grp Sat Flow (s), veh/h/ln	0	1805	0	1729	0	1805	0	1805
Q Serve Time (g_s), s	0.0	16.2	0.0	11.4	0.0	12.0	0.0	6.1
Cycle Q Clear Time (g_c), s	0.0	16.2	0.0	11.4	0.0	12.0	0.0	6.1
Lane Grp Cap (c), veh/h	0	1351	0	1024	0	1753	0	548
V/C Ratio (X)	0.00	0.51	0.00	0.69	0.00	0.42	0.00	0.49
Avail Cap (c_a), veh/h	0	1351	0	1193	0	1753	0	722
Upstream Filter (I)	0.00	0.16	0.00	1.00	0.00	0.92	0.00	0.48
Uniform Delay (d1), s/veh	0.0	31.8	0.0	33.6	0.0	15.0	0.0	35.0
Incr Delay (d2), s/veh	0.0	0.2	0.0	1.4	0.0	0.7	0.0	0.3
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	32.0	0.0	35.0	0.0	15.7	0.0	35.3
1st-Term Q (Q1), veh/ln	0.0	7.8	0.0	4.7	0.0	4.7	0.0	2.7
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.1	0.0	0.2	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	7.8	0.0	4.8	0.0	4.8	0.0	2.7
%ile Storage Ratio (RQ%)	0.00	0.08	0.00	0.02	0.00	0.05	0.00	0.03
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		R		R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	0	0	85	0	73	0	195
Grp Sat Flow (s), veh/h/ln	0	1610	0	1610	0	1610	0	1610
Q Serve Time (g_s), s	0.0	0.0	0.0	4.0	0.0	2.2	0.0	10.5
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	4.0	0.0	2.2	0.0	10.5
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	603	0	318	0	782	0	245
V/C Ratio (X)	0.00	0.00	0.00	0.27	0.00	0.09	0.00	0.80
Avail Cap (c_a), veh/h	0	603	0	370	0	782	0	322
Upstream Filter (I)	0.00	0.00	0.00	1.00	0.00	0.92	0.00	0.48
Uniform Delay (d1), s/veh	0.0	0.0	0.0	30.6	0.0	12.5	0.0	36.8
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.4	0.0	0.2	0.0	5.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	31.0	0.0	12.7	0.0	41.9
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	1.5	0.0	0.8	0.0	4.1
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	1.6	0.0	0.8	0.0	4.4
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.01	0.00	0.01	0.00	0.06
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	33.3
HCM 6th LOS	C

Notes

Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	268	520	131	462	376	102	138	935	507	248	862	194
Future Volume (veh/h)	268	520	131	462	376	102	138	935	507	248	862	194
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1800	1900	1900	1700	1900	1900	1800	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	282	547	138	486	396	107	145	984	534	261	907	204
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	288	575	144	523	563	151	177	1019	454	271	1395	312
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33
Prop Arrive On Green	0.17	0.20	0.20	0.17	0.20	0.20	0.10	0.28	0.28	0.05	0.11	0.11
Unsig. Movement Delay												
Ln Grp Delay, s/veh	84.8	69.8	71.6	60.0	39.3	40.1	51.4	47.3	125.1	83.3	37.7	40.2
Ln Grp LOS	F	E	E	E	D	D	D	D	F	F	D	D
Approach Vol, veh/h		967			989			1663			1372	
Approach Delay, s/veh		74.8			49.7			72.6			47.1	
Approach LOS		E			D			E			D	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Case No	2.0	3.0	2.0	4.0	2.0	4.0	2.0	4.0
Phs Duration (G+Y+Rc), s	18.0	29.9	19.5	22.6	13.8	34.1	19.6	22.5
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green (Gmax), s	13.5	25.4	15.0	18.1	11.5	27.4	15.1	18.0
Max Allow Headway (MAH), s	3.8	4.8	3.8	5.3	3.8	5.3	3.8	5.3
Max Q Clear (g_c+I1), s	15.0	27.4	15.7	19.1	9.5	20.6	16.7	13.9
Green Ext Time (g_e), s	0.0	0.0	0.0	0.0	0.1	3.9	0.0	1.1
Prob of Phs Call (p_c)	1.00	1.00	1.00	1.00	0.97	1.00	1.00	1.00
Prob of Max Out (p_x)	1.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00

Left-Turn Movement Data								
Assigned Mvmt	1		3		5		7	
Mvmt Sat Flow, veh/h	1810		3141		1714		1714	

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		3610		2858		4238		2817

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1610		718		949		753

Left Lane Group Data								
Assigned Mvmt	1	0	3	0	5	0	7	0
Lane Assignment	L (Prot)		L (Prot)		L (Prot)		L (Prot)	

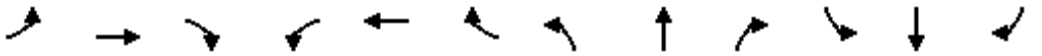
Lanes in Grp	1	0	2	0	1	0	1	0
Grp Vol (v), veh/h	261	0	486	0	145	0	282	0
Grp Sat Flow (s), veh/h/ln	1810	0	1570	0	1714	0	1714	0
Q Serve Time (g_s), s	13.0	0.0	13.7	0.0	7.5	0.0	14.7	0.0
Cycle Q Clear Time (g_c), s	13.0	0.0	13.7	0.0	7.5	0.0	14.7	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	271	0	523	0	177	0	288	0
V/C Ratio (X)	0.96	0.00	0.93	0.00	0.82	0.00	0.98	0.00
Avail Cap (c_a), veh/h	271	0	523	0	219	0	288	0
Upstream Filter (I)	0.88	0.00	1.00	0.00	0.62	0.00	1.00	0.00
Uniform Delay (d1), s/veh	42.5	0.0	37.0	0.0	39.5	0.0	37.3	0.0
Incr Delay (d2), s/veh	40.8	0.0	23.1	0.0	11.9	0.0	47.5	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	83.3	0.0	60.0	0.0	51.4	0.0	84.8	0.0
1st-Term Q (Q1), veh/ln	6.2	0.0	5.2	0.0	3.1	0.0	6.0	0.0
2nd-Term Q (Q2), veh/ln	3.1	0.0	1.7	0.0	0.6	0.0	3.8	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
%ile Back of Q (50%), veh/ln	9.3	0.0	6.8	0.0	3.7	0.0	9.8	0.0
%ile Storage Ratio (RQ%)	1.30	0.00	0.05	0.00	0.46	0.00	1.12	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	2	0	1	0	2	0	1
Grp Vol (v), veh/h	0	984	0	345	0	739	0	252
Grp Sat Flow (s), veh/h/ln	0	1805	0	1805	0	1729	0	1805
Q Serve Time (g_s), s	0.0	24.2	0.0	17.0	0.0	18.5	0.0	11.7
Cycle Q Clear Time (g_c), s	0.0	24.2	0.0	17.0	0.0	18.5	0.0	11.7
Lane Grp Cap (c), veh/h	0	1019	0	363	0	1138	0	361
V/C Ratio (X)	0.00	0.97	0.00	0.95	0.00	0.65	0.00	0.70
Avail Cap (c_a), veh/h	0	1019	0	363	0	1138	0	361
Upstream Filter (I)	0.00	0.62	0.00	1.00	0.00	0.88	0.00	1.00
Uniform Delay (d1), s/veh	0.0	31.9	0.0	35.5	0.0	35.1	0.0	33.5
Incr Delay (d2), s/veh	0.0	15.4	0.0	34.3	0.0	2.5	0.0	5.8
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	47.3	0.0	69.8	0.0	37.7	0.0	39.3
1st-Term Q (Q1), veh/ln	0.0	10.2	0.0	7.3	0.0	8.5	0.0	5.0
2nd-Term Q (Q2), veh/ln	0.0	2.2	0.0	3.5	0.0	0.4	0.0	0.6

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	12.4	0.0	10.7	0.0	8.9	0.0	5.6
%ile Storage Ratio (RQ%)	0.00	0.32	0.00	0.05	0.00	0.09	0.00	0.04
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		T+R		T+R		T+R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	534	0	340	0	372	0	251
Grp Sat Flow (s), veh/h/ln	0	1610	0	1771	0	1729	0	1764
Q Serve Time (g_s), s	0.0	25.4	0.0	17.1	0.0	18.6	0.0	11.9
Cycle Q Clear Time (g_c), s	0.0	25.4	0.0	17.1	0.0	18.6	0.0	11.9
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	0.41	0.00	0.55	0.00	0.43
Lane Grp Cap (c), veh/h	0	454	0	356	0	569	0	353
V/C Ratio (X)	0.00	1.18	0.00	0.96	0.00	0.65	0.00	0.71
Avail Cap (c_a), veh/h	0	454	0	356	0	569	0	353
Upstream Filter (I)	0.00	0.62	0.00	1.00	0.00	0.88	0.00	1.00
Uniform Delay (d1), s/veh	0.0	32.3	0.0	35.6	0.0	35.2	0.0	33.6
Incr Delay (d2), s/veh	0.0	92.8	0.0	36.0	0.0	5.1	0.0	6.5
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	125.1	0.0	71.6	0.0	40.2	0.0	40.1
1st-Term Q (Q1), veh/ln	0.0	9.5	0.0	7.2	0.0	8.5	0.0	5.0
2nd-Term Q (Q2), veh/ln	0.0	11.7	0.0	3.6	0.0	0.8	0.0	0.6
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	21.2	0.0	10.8	0.0	9.3	0.0	5.6
%ile Storage Ratio (RQ%)	0.00	0.55	0.00	0.05	0.00	0.09	0.00	0.04
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	19.9	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	61.5
HCM 6th LOS	E



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	214	387	227	828	1802	0	0	1297	769
Future Volume (veh/h)	0	0	0	214	387	227	828	1802	0	0	1297	769
Number				3	8	18	5	2	12	1	6	16
Initial Q, veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln				1800	1900	1900	1900	1900	0	0	1900	1900
Adj Flow Rate, veh/h				225	407	239	872	1897	0	0	1365	809
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence				Yes			Yes			No		
Cap, veh/h				185	348	216	585	2635	0	0	1360	606
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green				0.21	0.21	0.21	0.32	0.73	0.00	0.00	0.38	0.38
Unsig. Movement Delay												
Ln Grp Delay, s/veh				176.8	0.0	138.2	272.3	11.7	0.0	0.0	65.9	203.4
Ln Grp LOS				F	A	F	F	B	A	A	F	F
Approach Vol, veh/h					871			2769			2174	
Approach Delay, s/veh					159.2			93.7			117.1	
Approach LOS					F			F			F	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2	8		5	6		
Case No		4.0	12.0		2.0	7.0		
Phs Duration (G+Y+Rc), s		114.0	36.0		53.0	61.0		
Change Period (Y+Rc), s		4.5	4.5		4.5	4.5		
Max Green (Gmax), s		109.5	31.5		48.5	56.5		
Max Allow Headway (MAH), s		5.2	5.3		3.8	4.8		
Max Q Clear (g_c+I1), s		46.9	33.5		50.5	58.5		
Green Ext Time (g_e), s		30.0	0.0		0.0	0.0		
Prob of Phs Call (p_c)		1.00	1.00		1.00	1.00		
Prob of Max Out (p_x)		0.00	1.00		1.00	0.00		

Left-Turn Movement Data								
Assigned Mvmt			3		5	1		
Mvmt Sat Flow, veh/h			883		1810	0		

Through Movement Data								
Assigned Mvmt		2	8			6		
Mvmt Sat Flow, veh/h		3705	1658			3705		

Right-Turn Movement Data								
Assigned Mvmt		12	18			16		
Mvmt Sat Flow, veh/h		0	1030			1610		

Left Lane Group Data								
Assigned Mvmt	0	0	3	0	5	1	0	0
Lane Assignment			L+T		L (Prot)			

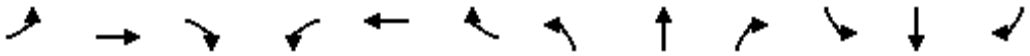
Lanes in Grp	0	0	1	0	1	0	0	0
Grp Vol (v), veh/h	0	0	473	0	872	0	0	0
Grp Sat Flow (s), veh/h/ln	0	0	1856	0	1810	0	0	0
Q Serve Time (g_s), s	0.0	0.0	31.5	0.0	48.5	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	31.5	0.0	48.5	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	56.5	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	0.00	0.48	0.00	1.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	390	0	585	0	0	0
V/C Ratio (X)	0.00	0.00	1.21	0.00	1.49	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	0	390	0	585	0	0	0
Upstream Filter (I)	0.00	0.00	1.00	0.00	0.09	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	59.3	0.0	50.8	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	117.6	0.0	221.5	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	176.8	0.0	272.3	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	14.8	0.0	21.9	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	12.7	0.0	36.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	0.00	1.00	0.00	1.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	27.5	0.0	57.9	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.67	0.00	9.65	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	20.8	0.0	71.7	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.3	0.0	0.4	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	8	0	0	6	0	0
Lane Assignment		T				T		
Lanes in Grp	0	2	0	0	0	2	0	0
Grp Vol (v), veh/h	0	1897	0	0	0	1365	0	0
Grp Sat Flow (s), veh/h/ln	0	1805	0	0	0	1805	0	0
Q Serve Time (g_s), s	0.0	44.9	0.0	0.0	0.0	56.5	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	44.9	0.0	0.0	0.0	56.5	0.0	0.0
Lane Grp Cap (c), veh/h	0	2635	0	0	0	1360	0	0
V/C Ratio (X)	0.00	0.72	0.00	0.00	0.00	1.00	0.00	0.00
Avail Cap (c_a), veh/h	0	2635	0	0	0	1360	0	0
Upstream Filter (I)	0.00	0.09	0.00	0.00	0.00	0.56	0.00	0.00
Uniform Delay (d1), s/veh	0.0	11.5	0.0	0.0	0.0	46.8	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.2	0.0	0.0	0.0	19.2	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	11.7	0.0	0.0	0.0	65.9	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	16.7	0.0	0.0	0.0	25.2	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	3.6	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	16.8	0.0	0.0	0.0	28.8	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.77	0.00	0.00	0.00	0.75	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	1.3	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	18	0	0	16	0	0
Lane Assignment			T+R			R		
Lanes in Grp	0	0	1	0	0	1	0	0
Grp Vol (v), veh/h	0	0	398	0	0	809	0	0
Grp Sat Flow (s), veh/h/ln	0	0	1715	0	0	1610	0	0
Q Serve Time (g_s), s	0.0	0.0	31.5	0.0	0.0	56.5	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	31.5	0.0	0.0	56.5	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.00	0.60	0.00	0.00	1.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	360	0	0	606	0	0
V/C Ratio (X)	0.00	0.00	1.11	0.00	0.00	1.33	0.00	0.00
Avail Cap (c_a), veh/h	0	0	360	0	0	606	0	0
Upstream Filter (I)	0.00	0.00	1.00	0.00	0.00	0.56	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	59.3	0.0	0.0	46.8	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	78.9	0.0	0.0	156.6	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	138.2	0.0	0.0	203.4	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	13.7	0.0	0.0	22.5	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	7.9	0.0	0.0	26.4	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	21.6	0.0	0.0	48.8	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.52	0.00	0.00	1.27	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	9.5	0.0	0.0	50.6	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.3	0.0	0.0	0.3	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	112.3
HCM 6th LOS	F



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	449	85	660	0	0	0	0	1548	509	322	999	0
Future Volume (veh/h)	449	85	660	0	0	0	0	1548	509	322	999	0
Number	7	4	14				5	2	12	1	6	16
Initial Q, veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1800	1900	1900				0	1900	1900	1900	1900	0
Adj Flow Rate, veh/h	473	89	695				0	1629	536	339	1052	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0				0	0	0	0	0	0
Opposing Right Turn Influence	Yes						No			Yes		
Cap, veh/h	466	88	489				0	1599	677	324	2282	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	2.00	2.00	2.00	1.00	1.00
Prop Arrive On Green	0.30	0.30	0.30				0.00	0.84	0.84	0.36	0.63	0.00
Unsig. Movement Delay												
Ln Grp Delay, s/veh	90.9	0.0	250.3				0.0	38.5	17.4	73.4	13.4	0.0
Ln Grp LOS	F	A	F				A	F	B	F	B	A
Approach Vol, veh/h		1257						2165			1391	
Approach Delay, s/veh		179.0						33.3			28.0	
Approach LOS		F						C			C	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Case No	2.0	7.0		12.0		4.0		
Phs Duration (G+Y+Rc), s	29.6	63.4		47.0		93.0		
Change Period (Y+Rc), s	4.5	4.5		4.5		4.5		
Max Green (Gmax), s	25.1	58.9		42.5		88.5		
Max Allow Headway (MAH), s	3.8	4.9		5.5		5.2		
Max Q Clear (g_c+I1), s	27.1	60.9		44.5		23.2		
Green Ext Time (g_e), s	0.0	0.0		0.0		10.3		
Prob of Phs Call (p_c)	1.00	1.00		1.00		1.00		
Prob of Max Out (p_x)	1.00	0.00		1.00		0.00		

Left-Turn Movement Data								
Assigned Mvmt	1	5		7				
Mvmt Sat Flow, veh/h	1810	0		1535				

Through Movement Data								
Assigned Mvmt		2		4		6		
Mvmt Sat Flow, veh/h		3800		289		3705		

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		
Mvmt Sat Flow, veh/h		1610		1610		0		

Left Lane Group Data								
Assigned Mvmt	1	5	0	7	0	0	0	0
Lane Assignment	L (Prot)			L+T				

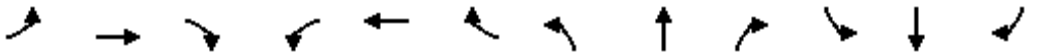
Lanes in Grp	1	0	0	1	0	0	0	0
Grp Vol (v), veh/h	339	0	0	562	0	0	0	0
Grp Sat Flow (s), veh/h/ln	1810	0	0	1823	0	0	0	0
Q Serve Time (g_s), s	25.1	0.0	0.0	42.5	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	25.1	0.0	0.0	42.5	0.0	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	58.9	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	0.84	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	324	0	0	553	0	0	0	0
V/C Ratio (X)	1.04	0.00	0.00	1.02	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	324	0	0	553	0	0	0	0
Upstream Filter (I)	0.09	0.00	0.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	44.9	0.0	0.0	48.8	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	28.5	0.0	0.0	42.2	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	73.4	0.0	0.0	90.9	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	9.7	0.0	0.0	19.2	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	2.6	0.0	0.0	6.5	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00
%ile Back of Q (50%), veh/ln	12.2	0.0	0.0	25.7	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	2.04	0.00	0.00	0.76	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	3.6	0.0	0.0	2.1	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.3	0.0	0.0	0.3	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	0
Lane Assignment		T				T		
Lanes in Grp	0	2	0	0	0	2	0	0
Grp Vol (v), veh/h	0	1629	0	0	0	1052	0	0
Grp Sat Flow (s), veh/h/ln	0	1900	0	0	0	1805	0	0
Q Serve Time (g_s), s	0.0	58.9	0.0	0.0	0.0	21.2	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	58.9	0.0	0.0	0.0	21.2	0.0	0.0
Lane Grp Cap (c), veh/h	0	1599	0	0	0	2282	0	0
V/C Ratio (X)	0.00	1.02	0.00	0.00	0.00	0.46	0.00	0.00
Avail Cap (c_a), veh/h	0	1599	0	0	0	2282	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	0.09	0.00	0.00
Uniform Delay (d1), s/veh	0.0	11.1	0.0	0.0	0.0	13.4	0.0	0.0
Incr Delay (d2), s/veh	0.0	27.4	0.0	0.0	0.0	0.1	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	38.5	0.0	0.0	0.0	13.4	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	4.9	0.0	0.0	0.0	8.5	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	6.1	0.0	0.0	0.0	0.0	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	10.9	0.0	0.0	0.0	8.5	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.20	0.00	0.00	0.00	0.39	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	7.6	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	0
Lane Assignment		R		T+R				
Lanes in Grp	0	1	0	1	0	0	0	0
Grp Vol (v), veh/h	0	536	0	695	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	1610	0	1610	0	0	0	0
Q Serve Time (g_s), s	0.0	22.1	0.0	42.5	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	22.1	0.0	42.5	0.0	0.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	677	0	489	0	0	0	0
V/C Ratio (X)	0.00	0.79	0.00	1.42	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	677	0	489	0	0	0	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	8.2	0.0	48.8	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	9.2	0.0	201.5	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	17.4	0.0	250.3	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	3.2	0.0	17.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	1.7	0.0	27.4	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	4.9	0.0	44.3	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.09	0.00	1.31	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	51.5	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	69.8
HCM 6th LOS	E



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1276	667	539	654	0	0	0	0	454	7	270
Future Volume (veh/h)	0	1276	667	539	654	0	0	0	0	454	7	270
Number	7	4	14	3	8	18				1	6	16
Initial Q, veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	0	1900	1900	1700	1900	0				1900	1900	1900
Adj Flow Rate, veh/h	0	1343	0	567	688	0				478	7	284
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95				0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0				0	0	0
Opposing Right Turn Influence	No			Yes						Yes		
Cap, veh/h	0	1375		631	2248	0				527	8	476
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Prop Arrive On Green	0.00	0.38	0.00	0.20	0.62	0.00				0.30	0.30	0.30
Unsig. Movement Delay												
Ln Grp Delay, s/veh	0.0	37.2	0.0	55.4	10.0	0.0				58.9	0.0	38.6
Ln Grp LOS	A	D		E	A	A				E	A	D
Approach Vol, veh/h		1343			1255						769	
Approach Delay, s/veh		37.2			30.5						51.4	
Approach LOS		D			C						D	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	6		3	4				8
Case No	11.0		2.0	7.0				4.0
Phs Duration (G+Y+Rc), s	37.0		26.6	46.4				73.0
Change Period (Y+Rc), s	4.5		4.5	4.5				4.5
Max Green (Gmax), s	32.5		24.5	39.5				68.5
Max Allow Headway (MAH), s	4.9		3.8	5.2				5.2
Max Q Clear (g_c+I1), s	30.4		21.4	42.3				11.8
Green Ext Time (g_e), s	0.9		0.7	0.0				5.7
Prob of Phs Call (p_c)	1.00		1.00	1.00				1.00
Prob of Max Out (p_x)	0.00		1.00	0.00				0.00

Left-Turn Movement Data				
Assigned Mvmt	1		3	7
Mvmt Sat Flow, veh/h	1785		3141	0

Through Movement Data				
Assigned Mvmt	6			4
Mvmt Sat Flow, veh/h	26			3705

Right-Turn Movement Data				
Assigned Mvmt	16			14
Mvmt Sat Flow, veh/h	1610			1610

Left Lane Group Data								
Assigned Mvmt	1	0	3	7	0	0	0	0
Lane Assignment	L+T		L (Prot)					

Lanes in Grp	1	0	2	0	0	0	0	0
Grp Vol (v), veh/h	485	0	567	0	0	0	0	0
Grp Sat Flow (s), veh/h/ln	1811	0	1570	0	0	0	0	0
Q Serve Time (g_s), s	28.4	0.0	19.4	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	28.4	0.0	19.4	0.0	0.0	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	41.9	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.99	0.00	1.00	0.00	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	535	0	631	0	0	0	0	0
V/C Ratio (X)	0.91	0.00	0.90	0.00	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	535	0	700	0	0	0	0	0
Upstream Filter (I)	1.00	0.00	0.90	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	37.3	0.0	42.9	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	21.6	0.0	12.5	0.0	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	58.9	0.0	55.4	0.0	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	12.3	0.0	7.4	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	3.2	0.0	1.1	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	1.00	1.00	0.00	0.00	0.00	0.00
%ile Back of Q (50%), veh/ln	15.5	0.0	8.5	0.0	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	1.21	0.00	0.53	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	6	0	0	4	0	0	0	8
Lane Assignment				T				T
Lanes in Grp	0	0	0	2	0	0	0	2
Grp Vol (v), veh/h	0	0	0	1343	0	0	0	688
Grp Sat Flow (s), veh/h/ln	0	0	0	1805	0	0	0	1805
Q Serve Time (g_s), s	0.0	0.0	0.0	40.3	0.0	0.0	0.0	9.8
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	40.3	0.0	0.0	0.0	9.8
Lane Grp Cap (c), veh/h	0	0	0	1375	0	0	0	2248
V/C Ratio (X)	0.00	0.00	0.00	0.98	0.00	0.00	0.00	0.31
Avail Cap (c_a), veh/h	0	0	0	1375	0	0	0	2248
Upstream Filter (I)	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.90
Uniform Delay (d1), s/veh	0.0	0.0	0.0	33.6	0.0	0.0	0.0	9.7
Incr Delay (d2), s/veh	0.0	0.0	0.0	3.7	0.0	0.0	0.0	0.3
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	37.2	0.0	0.0	0.0	10.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	17.1	0.0	0.0	0.0	3.7
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.7	0.0	0.0	0.0	0.1

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	1.00	0.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	17.8	0.0	0.0	0.0	3.8
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.17	0.00	0.00	0.00	0.23
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	16	0	0	14	0	0	0	18
Lane Assignment	R			R				
Lanes in Grp	1	0	0	1	0	0	0	0
Grp Vol (v), veh/h	284	0	0	0	0	0	0	0
Grp Sat Flow (s), veh/h/ln	1610	0	0	1610	0	0	0	0
Q Serve Time (g_s), s	16.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	16.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	1.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	476	0	0	613	0	0	0	0
V/C Ratio (X)	0.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	476	0	0	613	0	0	0	0
Upstream Filter (I)	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	33.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	5.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	38.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	6.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	1.00	0.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	7.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	37.9
HCM 6th LOS	D

Notes

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	295	1357	0	0	847	459	283	3	660	0	0	0
Future Volume (veh/h)	295	1357	0	0	847	459	283	3	660	0	0	0
Number	7	4	14	3	8	18	5	2	12			
Initial Q, veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1800	1900	0	0	1900	1900	1900	1900	1900			
Adj Flow Rate, veh/h	311	1428	0	0	892	483	300	0	695			
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95			
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0			
Opposing Right Turn Influence	Yes			No			Yes					
Cap, veh/h	355	2455	0	0	2194	681	796	0	708			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Prop Arrive On Green	0.21	0.68	0.00	0.00	0.42	0.42	0.22	0.00	0.22			
Unsig. Movement Delay												
Ln Grp Delay, s/veh	35.3	7.7	0.0	0.0	18.7	27.6	31.2	0.0	64.4			
Ln Grp LOS	D	A	A	A	B	C	C	A	E			
Approach Vol, veh/h		1739			1375			995				
Approach Delay, s/veh		12.6			21.8			54.4				
Approach LOS		B			C			D				

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2		4			7	8
Case No		9.0		4.0			2.0	7.0
Phs Duration (G+Y+Rc), s		24.3		65.7			23.1	42.6
Change Period (Y+Rc), s		4.5		4.5			4.5	4.5
Max Green (Gmax), s		19.8		61.2			33.6	23.1
Max Allow Headway (MAH), s		4.0		5.2			3.8	4.8
Max Q Clear (g_c+I1), s		21.3		20.8			17.8	24.3
Green Ext Time (g_e), s		0.0		15.5			0.8	0.0
Prob of Phs Call (p_c)		1.00		1.00			1.00	1.00
Prob of Max Out (p_x)		0.00		0.00			0.00	0.00

Left-Turn Movement Data								
Assigned Mvmt		5					7	3
Mvmt Sat Flow, veh/h		3619					1714	0

Through Movement Data								
Assigned Mvmt		2		4				8
Mvmt Sat Flow, veh/h		0		3705				5358

Right-Turn Movement Data								
Assigned Mvmt		12		14				18
Mvmt Sat Flow, veh/h		3220		0				1610

Left Lane Group Data								
Assigned Mvmt	0	5	0	0	0	0	7	3
Lane Assignment		L					L (Prot)	

Lanes in Grp	0	2	0	0	0	0	1	0
Grp Vol (v), veh/h	0	300	0	0	0	0	311	0
Grp Sat Flow (s), veh/h/ln	0	1810	0	0	0	0	1714	0
Q Serve Time (g_s), s	0.0	6.3	0.0	0.0	0.0	0.0	15.8	0.0
Cycle Q Clear Time (g_c), s	0.0	6.3	0.0	0.0	0.0	0.0	15.8	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	1810	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	38.1
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	0	796	0	0	0	0	355	0
V/C Ratio (X)	0.00	0.38	0.00	0.00	0.00	0.00	0.88	0.00
Avail Cap (c_a), veh/h	0	796	0	0	0	0	640	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	0.00	0.09	0.00
Uniform Delay (d1), s/veh	0.0	29.9	0.0	0.0	0.0	0.0	34.6	0.0
Incr Delay (d2), s/veh	0.0	1.4	0.0	0.0	0.0	0.0	0.7	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	31.2	0.0	0.0	0.0	0.0	35.3	0.0
1st-Term Q (Q1), veh/ln	0.0	2.7	0.0	0.0	0.0	0.0	6.4	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.2	0.0	0.0	0.0	0.0	0.1	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	0.00	0.00	0.00	1.00	1.00
%ile Back of Q (50%), veh/ln	0.0	2.9	0.0	0.0	0.0	0.0	6.5	0.0
%ile Storage Ratio (RQ%)	0.00	0.13	0.00	0.00	0.00	0.00	1.81	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	0	0	8
Lane Assignment				T				T
Lanes in Grp	0	0	0	2	0	0	0	3
Grp Vol (v), veh/h	0	0	0	1428	0	0	0	892
Grp Sat Flow (s), veh/h/ln	0	0	0	1805	0	0	0	1729
Q Serve Time (g_s), s	0.0	0.0	0.0	18.8	0.0	0.0	0.0	10.8
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	18.8	0.0	0.0	0.0	10.8
Lane Grp Cap (c), veh/h	0	0	0	2455	0	0	0	2194
V/C Ratio (X)	0.00	0.00	0.00	0.58	0.00	0.00	0.00	0.41
Avail Cap (c_a), veh/h	0	0	0	2455	0	0	0	2194
Upstream Filter (I)	0.00	0.00	0.00	0.09	0.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	7.6	0.0	0.0	0.0	18.1
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.6
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	7.7	0.0	0.0	0.0	18.7
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	6.1	0.0	0.0	0.0	4.1
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1

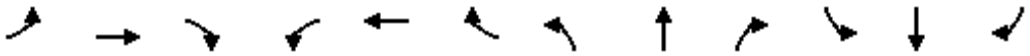
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	6.1	0.0	0.0	0.0	4.3
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.37	0.00	0.00	0.00	0.05
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	0	0	18
Lane Assignment		R						R
Lanes in Grp	0	2	0	0	0	0	0	1
Grp Vol (v), veh/h	0	695	0	0	0	0	0	483
Grp Sat Flow (s), veh/h/ln	0	1610	0	0	0	0	0	1610
Q Serve Time (g_s), s	0.0	19.3	0.0	0.0	0.0	0.0	0.0	22.3
Cycle Q Clear Time (g_c), s	0.0	19.3	0.0	0.0	0.0	0.0	0.0	22.3
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	0.00	0.00	0.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	708	0	0	0	0	0	681
V/C Ratio (X)	0.00	0.98	0.00	0.00	0.00	0.00	0.00	0.71
Avail Cap (c_a), veh/h	0	708	0	0	0	0	0	681
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	34.9	0.0	0.0	0.0	0.0	0.0	21.4
Incr Delay (d2), s/veh	0.0	29.5	0.0	0.0	0.0	0.0	0.0	6.2
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	64.4	0.0	0.0	0.0	0.0	0.0	27.6
1st-Term Q (Q1), veh/ln	0.0	7.4	0.0	0.0	0.0	0.0	0.0	8.0
2nd-Term Q (Q2), veh/ln	0.0	2.9	0.0	0.0	0.0	0.0	0.0	1.2
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	10.3	0.0	0.0	0.0	0.0	0.0	9.1
%ile Storage Ratio (RQ%)	0.00	0.47	0.00	0.00	0.00	0.00	0.00	0.63
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	25.8
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	173	865	98	197	463	259	35	55	307	313	594	221
Future Volume (veh/h)	173	865	98	197	463	259	35	55	307	313	594	221
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1800	1900	1000	1800	1900	1900	1800	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	182	911	103	207	487	273	37	58	323	329	625	233
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	207	1020	239	232	564	478	49	468	397	357	1069	398
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.12	0.28	0.28	0.14	0.30	0.30	0.03	0.25	0.25	0.20	0.42	0.42
Unsig. Movement Delay												
Ln Grp Delay, s/veh	76.8	51.8	39.0	58.7	44.4	38.8	84.0	38.6	62.8	74.1	32.6	32.8
Ln Grp LOS	E	D	D	E	D	D	F	D	E	E	C	C
Approach Vol, veh/h		1196			967			418			1187	
Approach Delay, s/veh		54.5			45.9			61.3			44.2	
Approach LOS		D			D			E			D	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Case No	2.0	3.0	2.0	3.0	2.0	4.0	2.0	3.0
Phs Duration (G+Y+Rc), s	30.2	36.5	22.1	41.2	8.2	58.5	20.2	43.1
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green (Gmax), s	30.5	21.5	20.5	39.5	6.8	45.2	18.5	41.5
Max Allow Headway (MAH), s	3.8	4.2	3.8	5.1	3.8	5.3	3.8	4.8
Max Q Clear (g_c+I1), s	25.2	26.6	17.4	33.5	4.8	26.4	15.6	33.5
Green Ext Time (g_e), s	0.5	0.0	0.2	3.2	0.0	5.5	0.1	2.6
Prob of Phs Call (p_c)	1.00	1.00	1.00	1.00	0.74	1.00	1.00	1.00
Prob of Max Out (p_x)	0.41	0.00	1.00	0.90	1.00	0.00	1.00	0.54

Left-Turn Movement Data								
Assigned Mvmt	1		3		5		7	
Mvmt Sat Flow, veh/h	1810		1714		1714		1714	

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		1900		3610		2574		1900

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1610		847		959		1610

Left Lane Group Data								
Assigned Mvmt	1	0	3	0	5	0	7	0
Lane Assignment	L (Prot)		L (Prot)		L (Prot)		L (Prot)	

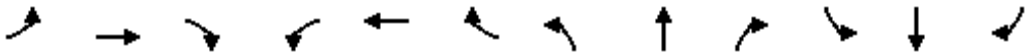
Lanes in Grp	1	0	1	0	1	0	1	0
Grp Vol (v), veh/h	329	0	207	0	37	0	182	0
Grp Sat Flow (s), veh/h/ln	1810	0	1714	0	1714	0	1714	0
Q Serve Time (g_s), s	23.2	0.0	15.4	0.0	2.8	0.0	13.6	0.0
Cycle Q Clear Time (g_c), s	23.2	0.0	15.4	0.0	2.8	0.0	13.6	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	357	0	232	0	49	0	207	0
V/C Ratio (X)	0.92	0.00	0.89	0.00	0.76	0.00	0.88	0.00
Avail Cap (c_a), veh/h	425	0	270	0	90	0	244	0
Upstream Filter (I)	1.00	0.00	0.09	0.00	1.00	0.00	0.74	0.00
Uniform Delay (d1), s/veh	51.2	0.0	55.3	0.0	62.7	0.0	56.2	0.0
Incr Delay (d2), s/veh	23.0	0.0	3.4	0.0	21.3	0.0	20.6	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	74.1	0.0	58.7	0.0	84.0	0.0	76.8	0.0
1st-Term Q (Q1), veh/ln	10.5	0.0	6.7	0.0	1.2	0.0	5.9	0.0
2nd-Term Q (Q2), veh/ln	2.3	0.0	0.2	0.0	0.3	0.0	1.2	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
%ile Back of Q (50%), veh/ln	12.8	0.0	6.9	0.0	1.5	0.0	7.1	0.0
%ile Storage Ratio (RQ%)	3.19	0.00	0.28	0.00	0.16	0.00	0.68	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	1	0	2	0	1	0	1
Grp Vol (v), veh/h	0	58	0	911	0	438	0	487
Grp Sat Flow (s), veh/h/ln	0	1900	0	1805	0	1805	0	1900
Q Serve Time (g_s), s	0.0	3.1	0.0	31.5	0.0	24.4	0.0	31.5
Cycle Q Clear Time (g_c), s	0.0	3.1	0.0	31.5	0.0	24.4	0.0	31.5
Lane Grp Cap (c), veh/h	0	468	0	1020	0	750	0	564
V/C Ratio (X)	0.00	0.12	0.00	0.89	0.00	0.58	0.00	0.86
Avail Cap (c_a), veh/h	0	468	0	1097	0	750	0	607
Upstream Filter (I)	0.00	1.00	0.00	0.74	0.00	1.00	0.00	0.09
Uniform Delay (d1), s/veh	0.0	38.1	0.0	44.8	0.0	29.3	0.0	43.2
Incr Delay (d2), s/veh	0.0	0.5	0.0	7.0	0.0	3.3	0.0	1.2
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	38.6	0.0	51.8	0.0	32.6	0.0	44.4
1st-Term Q (Q1), veh/ln	0.0	1.5	0.0	14.0	0.0	10.5	0.0	14.7
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	1.0	0.0	0.7	0.0	0.2

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	1.5	0.0	15.0	0.0	11.2	0.0	14.9
%ile Storage Ratio (RQ%)	0.00	0.08	0.00	0.19	0.00	1.78	0.00	0.62
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		R		T+R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	323	0	103	0	420	0	273
Grp Sat Flow (s), veh/h/ln	0	1610	0	847	0	1727	0	1610
Q Serve Time (g_s), s	0.0	24.6	0.0	12.9	0.0	24.4	0.0	18.7
Cycle Q Clear Time (g_c), s	0.0	24.6	0.0	12.9	0.0	24.4	0.0	18.7
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	0.55	0.00	1.00
Lane Grp Cap (c), veh/h	0	397	0	239	0	718	0	478
V/C Ratio (X)	0.00	0.81	0.00	0.43	0.00	0.59	0.00	0.57
Avail Cap (c_a), veh/h	0	397	0	257	0	718	0	514
Upstream Filter (I)	0.00	1.00	0.00	0.74	0.00	1.00	0.00	0.09
Uniform Delay (d1), s/veh	0.0	46.2	0.0	38.1	0.0	29.3	0.0	38.7
Incr Delay (d2), s/veh	0.0	16.6	0.0	0.9	0.0	3.5	0.0	0.1
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	62.8	0.0	39.0	0.0	32.8	0.0	38.8
1st-Term Q (Q1), veh/ln	0.0	9.8	0.0	2.7	0.0	10.1	0.0	7.4
2nd-Term Q (Q2), veh/ln	0.0	1.8	0.0	0.1	0.0	0.7	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	11.7	0.0	2.8	0.0	10.8	0.0	7.4
%ile Storage Ratio (RQ%)	0.00	0.63	0.00	0.04	0.00	1.71	0.00	0.31
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	49.8
HCM 6th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	633	773	247	101	969	531	104	613	76	336	29	214
Future Volume (veh/h)	633	773	247	101	969	531	104	613	76	336	29	214
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1700	1900	1900	1800	1900	1900	1800	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	666	814	260	106	1020	559	109	645	80	354	31	225
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	471	949	805	126	804	682	130	542	242	283	46	333
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.15	0.50	0.50	0.07	0.42	0.42	0.08	0.15	0.15	0.16	0.23	0.23
Unsig. Movement Delay												
Ln Grp Delay, s/veh	256.2	37.0	22.5	100.8	173.7	46.1	91.0	167.0	60.7	201.1	0.0	61.9
Ln Grp LOS	F	D	C	F	F	D	F	F	E	F	A	E
Approach Vol, veh/h		1740			1685			834			610	
Approach Delay, s/veh		118.7			126.8			146.9			142.7	
Approach LOS		F			F			F			F	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Case No	2.0	3.0	2.0	3.0	2.0	4.0	2.0	3.0
Phs Duration (G+Y+Rc), s	28.0	27.0	15.5	79.5	15.9	39.1	27.0	68.0
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green (Gmax), s	23.5	22.5	12.2	73.8	15.3	30.7	22.5	63.5
Max Allow Headway (MAH), s	3.8	5.1	3.8	5.0	3.8	5.5	3.8	4.9
Max Q Clear (g_c+I1), s	25.5	24.5	11.2	58.2	11.4	23.3	24.5	65.5
Green Ext Time (g_e), s	0.0	0.0	0.0	6.3	0.1	0.9	0.0	0.0
Prob of Phs Call (p_c)	1.00	1.00	0.99	1.00	0.99	1.00	1.00	1.00
Prob of Max Out (p_x)	1.00	0.00	1.00	0.34	0.92	0.00	1.00	1.00

Left-Turn Movement Data								
Assigned Mvmt	1		3		5		7	
Mvmt Sat Flow, veh/h	1810		1714		1714		3141	

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		3610		1900		199		1900

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1610		1610		1442		1610

Left Lane Group Data								
Assigned Mvmt	1	0	3	0	5	0	7	0
Lane Assignment	L (Prot)		L (Prot)		L (Prot)		L (Prot)	

Lanes in Grp	1	0	1	0	1	0	2	0
Grp Vol (v), veh/h	354	0	106	0	109	0	666	0
Grp Sat Flow (s), veh/h/ln	1810	0	1714	0	1714	0	1570	0
Q Serve Time (g_s), s	23.5	0.0	9.2	0.0	9.4	0.0	22.5	0.0
Cycle Q Clear Time (g_c), s	23.5	0.0	9.2	0.0	9.4	0.0	22.5	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	283	0	126	0	130	0	471	0
V/C Ratio (X)	1.25	0.00	0.84	0.00	0.84	0.00	1.41	0.00
Avail Cap (c_a), veh/h	283	0	139	0	175	0	471	0
Upstream Filter (I)	1.00	0.00	1.00	0.00	1.00	0.00	0.50	0.00
Uniform Delay (d1), s/veh	63.2	0.0	68.6	0.0	68.4	0.0	63.7	0.0
Incr Delay (d2), s/veh	137.8	0.0	32.2	0.0	22.5	0.0	192.4	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	201.1	0.0	100.8	0.0	91.0	0.0	256.2	0.0
1st-Term Q (Q1), veh/ln	10.8	0.0	4.0	0.0	4.1	0.0	9.0	0.0
2nd-Term Q (Q2), veh/ln	10.9	0.0	1.1	0.0	0.8	0.0	12.6	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
%ile Back of Q (50%), veh/ln	21.7	0.0	5.2	0.0	5.0	0.0	21.6	0.0
%ile Storage Ratio (RQ%)	2.63	0.00	0.06	0.00	0.83	0.00	2.08	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	17.6	0.0	0.0	0.0	0.0	0.0	48.7	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.3	0.0	0.0	0.0	0.0	0.0	0.4	0.0

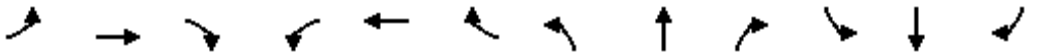
Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T				T
Lanes in Grp	0	2	0	1	0	0	0	1
Grp Vol (v), veh/h	0	645	0	814	0	0	0	1020
Grp Sat Flow (s), veh/h/ln	0	1805	0	1900	0	0	0	1900
Q Serve Time (g_s), s	0.0	22.5	0.0	56.2	0.0	0.0	0.0	63.5
Cycle Q Clear Time (g_c), s	0.0	22.5	0.0	56.2	0.0	0.0	0.0	63.5
Lane Grp Cap (c), veh/h	0	542	0	949	0	0	0	804
V/C Ratio (X)	0.00	1.19	0.00	0.86	0.00	0.00	0.00	1.27
Avail Cap (c_a), veh/h	0	542	0	949	0	0	0	804
Upstream Filter (I)	0.00	1.00	0.00	0.50	0.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	63.8	0.0	32.8	0.0	0.0	0.0	43.2
Incr Delay (d2), s/veh	0.0	103.3	0.0	4.2	0.0	0.0	0.0	130.4
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	167.0	0.0	37.0	0.0	0.0	0.0	173.7
1st-Term Q (Q1), veh/ln	0.0	10.4	0.0	25.6	0.0	0.0	0.0	29.5
2nd-Term Q (Q2), veh/ln	0.0	7.8	0.0	1.1	0.0	0.0	0.0	29.1

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	18.1	0.0	26.7	0.0	0.0	0.0	58.6
%ile Storage Ratio (RQ%)	0.00	1.61	0.00	1.10	0.00	0.00	0.00	0.67
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	25.9	0.0	0.0	0.0	0.0	0.0	53.9
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.3

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		R		T+R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	80	0	260	0	256	0	559
Grp Sat Flow (s), veh/h/ln	0	1610	0	1610	0	1640	0	1610
Q Serve Time (g_s), s	0.0	6.7	0.0	14.5	0.0	21.3	0.0	46.0
Cycle Q Clear Time (g_c), s	0.0	6.7	0.0	14.5	0.0	21.3	0.0	46.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	0.88	0.00	1.00
Lane Grp Cap (c), veh/h	0	242	0	805	0	379	0	682
V/C Ratio (X)	0.00	0.33	0.00	0.32	0.00	0.68	0.00	0.82
Avail Cap (c_a), veh/h	0	242	0	805	0	379	0	682
Upstream Filter (I)	0.00	1.00	0.00	0.50	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	57.0	0.0	22.4	0.0	52.6	0.0	38.2
Incr Delay (d2), s/veh	0.0	3.6	0.0	0.1	0.0	9.3	0.0	7.9
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	60.7	0.0	22.5	0.0	61.9	0.0	46.1
1st-Term Q (Q1), veh/ln	0.0	2.7	0.0	5.6	0.0	8.8	0.0	18.1
2nd-Term Q (Q2), veh/ln	0.0	0.2	0.0	0.0	0.0	1.0	0.0	1.5
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	3.0	0.0	5.6	0.0	9.8	0.0	19.6
%ile Storage Ratio (RQ%)	0.00	1.07	0.00	0.23	0.00	1.19	0.00	0.23
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	129.3
HCM 6th LOS	F

BUILD OUT YEAR WITH IMPROVEMENTS CONDITIONS



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	370	4	210	643	594	0	0	629	809
Future Volume (veh/h)	0	0	0	370	4	210	643	594	0	0	629	809
Number				3	8	18	5	2	12	1	6	16
Initial Q, veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln				1800	1900	1900	1900	1900	0	0	1900	1900
Adj Flow Rate, veh/h				389	4	221	677	625	0	0	662	852
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence				Yes			Yes			No		
Cap, veh/h				428	4	385	730	2477	0	0	2286	710
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	2.00	2.00
Prop Arrive On Green				0.24	0.24	0.24	0.42	1.00	0.00	0.00	0.88	0.88
Unsig. Movement Delay												
Ln Grp Delay, s/veh				64.6	0.0	41.9	47.2	0.2	0.0	0.0	4.4	110.5
Ln Grp LOS				E	A	D	D	A	A	A	A	F
Approach Vol, veh/h					614			1302			1514	
Approach Delay, s/veh					56.4			24.7			64.1	
Approach LOS					E			C			E	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2	8		5	6		
Case No		4.0	11.0		2.0	7.0		
Phs Duration (G+Y+Rc), s		86.8	33.2		29.4	57.4		
Change Period (Y+Rc), s		4.5	4.5		4.5	4.5		
Max Green (Gmax), s		79.4	31.6		27.3	47.6		
Max Allow Headway (MAH), s		5.2	4.9		3.8	4.5		
Max Q Clear (g_c+I1), s		2.0	27.3		24.0	54.9		
Green Ext Time (g_e), s		5.0	1.3		0.9	0.0		
Prob of Phs Call (p_c)		1.00	1.00		1.00	1.00		
Prob of Max Out (p_x)		0.00	1.00		1.00	0.00		

Left-Turn Movement Data								
Assigned Mvmt			3		5	1		
Mvmt Sat Flow, veh/h			1792		3510	0		

Through Movement Data								
Assigned Mvmt		2	8			6		
Mvmt Sat Flow, veh/h		3705	18			5358		

Right-Turn Movement Data								
Assigned Mvmt		12	18			16		
Mvmt Sat Flow, veh/h		0	1610			1610		

Left Lane Group Data								
Assigned Mvmt	0	0	3	0	5	1	0	0
Lane Assignment			L+T		L (Prot)			

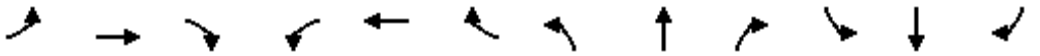
Lanes in Grp	0	0	1	0	2	0	0	0
Grp Vol (v), veh/h	0	0	393	0	677	0	0	0
Grp Sat Flow (s), veh/h/ln	0	0	1810	0	1755	0	0	0
Q Serve Time (g_s), s	0.0	0.0	25.3	0.0	22.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	25.3	0.0	22.0	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	52.9	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	0.00	0.99	0.00	1.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	432	0	730	0	0	0
V/C Ratio (X)	0.00	0.00	0.91	0.00	0.93	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	0	477	0	799	0	0	0
Upstream Filter (I)	0.00	0.00	1.00	0.00	0.76	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	44.4	0.0	34.2	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	20.2	0.0	13.1	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	64.6	0.0	47.2	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	11.3	0.0	7.5	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	2.4	0.0	1.3	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	0.00	1.00	0.00	1.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	13.7	0.0	8.9	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.28	0.00	0.85	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	8	0	0	6	0	0
Lane Assignment		T				T		
Lanes in Grp	0	2	0	0	0	3	0	0
Grp Vol (v), veh/h	0	625	0	0	0	662	0	0
Grp Sat Flow (s), veh/h/ln	0	1805	0	0	0	1729	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	2.4	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	2.4	0.0	0.0
Lane Grp Cap (c), veh/h	0	2477	0	0	0	2286	0	0
V/C Ratio (X)	0.00	0.25	0.00	0.00	0.00	0.29	0.00	0.00
Avail Cap (c_a), veh/h	0	2477	0	0	0	2286	0	0
Upstream Filter (I)	0.00	0.76	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	4.1	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.2	0.0	0.0	0.0	0.3	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.2	0.0	0.0	0.0	4.4	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.1	0.0	0.0	0.0	0.8	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.01	0.00	0.00	0.00	0.02	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	18	0	0	16	0	0
Lane Assignment			R			R		
Lanes in Grp	0	0	1	0	0	1	0	0
Grp Vol (v), veh/h	0	0	221	0	0	852	0	0
Grp Sat Flow (s), veh/h/ln	0	0	1610	0	0	1610	0	0
Q Serve Time (g_s), s	0.0	0.0	14.5	0.0	0.0	52.9	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	14.5	0.0	0.0	52.9	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	385	0	0	710	0	0
V/C Ratio (X)	0.00	0.00	0.57	0.00	0.00	1.20	0.00	0.00
Avail Cap (c_a), veh/h	0	0	424	0	0	710	0	0
Upstream Filter (I)	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	40.3	0.0	0.0	7.1	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	1.6	0.0	0.0	103.4	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	41.9	0.0	0.0	110.5	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	5.8	0.0	0.0	2.6	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.2	0.0	0.0	20.4	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	5.9	0.0	0.0	23.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.12	0.00	0.00	0.50	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	35.6	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	47.8
HCM 6th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	627	9	559	0	0	0	0	762	352	107	557	0
Future Volume (veh/h)	627	9	559	0	0	0	0	762	352	107	557	0
Number	7	4	14				5	2	12	1	6	16
Initial Q, veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1800	1900	1900				0	1900	1900	1900	1900	0
Adj Flow Rate, veh/h	660	9	588				0	802	371	113	586	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0				0	0	0	0	0	0
Opposing Right Turn Influence	Yes						No			Yes		
Cap, veh/h	737	10	684				0	2177	676	163	1808	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	2.00	2.00	2.00	2.00	1.00
Prop Arrive On Green	0.43	0.43	0.43				0.00	0.84	0.84	0.09	1.00	0.00
Unsig. Movement Delay												
Ln Grp Delay, s/veh	43.4	0.0	40.3				0.0	6.9	10.0	63.0	0.5	0.0
Ln Grp LOS	D	A	D				A	A	A	E	A	A
Approach Vol, veh/h		1257						1173			699	
Approach Delay, s/veh		41.9						7.9			10.6	
Approach LOS		D						A			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Case No	2.0	7.0		10.0		4.0		
Phs Duration (G+Y+Rc), s	10.5	59.1		60.4		69.6		
Change Period (Y+Rc), s	4.5	4.5		4.5		4.5		
Max Green (Gmax), s	9.5	34.5		72.5		48.5		
Max Allow Headway (MAH), s	3.8	4.8		4.6		5.2		
Max Q Clear (g_c+I1), s	6.1	10.9		48.4		2.0		
Green Ext Time (g_e), s	0.1	7.5		7.5		4.6		
Prob of Phs Call (p_c)	0.98	1.00		1.00		1.00		
Prob of Max Out (p_x)	1.00	0.00		0.14		0.00		

Left-Turn Movement Data								
Assigned Mvmt	1	5		7				
Mvmt Sat Flow, veh/h	3510	0		1714				

Through Movement Data								
Assigned Mvmt		2		4		6		
Mvmt Sat Flow, veh/h		5358		24		3705		

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		
Mvmt Sat Flow, veh/h		1610		1590		0		

Left Lane Group Data								
Assigned Mvmt	1	5	0	7	0	0	0	0
Lane Assignment	L (Prot)			L				

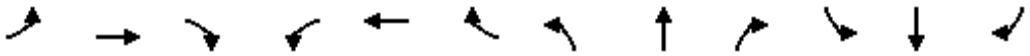
Lanes in Grp	2	0	0	1	0	0	0	0
Grp Vol (v), veh/h	113	0	0	660	0	0	0	0
Grp Sat Flow (s), veh/h/ln	1755	0	0	1714	0	0	0	0
Q Serve Time (g_s), s	4.1	0.0	0.0	46.4	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	4.1	0.0	0.0	46.4	0.0	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	1714	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	54.6	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	163	0	0	737	0	0	0	0
V/C Ratio (X)	0.69	0.00	0.00	0.90	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	257	0	0	956	0	0	0	0
Upstream Filter (I)	0.96	0.00	0.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	58.1	0.0	0.0	34.3	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	5.0	0.0	0.0	9.0	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	63.0	0.0	0.0	43.4	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	1.7	0.0	0.0	19.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.1	0.0	0.0	1.8	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00
%ile Back of Q (50%), veh/ln	1.9	0.0	0.0	20.8	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.18	0.00	0.00	0.36	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	0
Lane Assignment		T				T		
Lanes in Grp	0	3	0	0	0	2	0	0
Grp Vol (v), veh/h	0	802	0	0	0	586	0	0
Grp Sat Flow (s), veh/h/ln	0	1729	0	0	0	1805	0	0
Q Serve Time (g_s), s	0.0	4.7	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	4.7	0.0	0.0	0.0	0.0	0.0	0.0
Lane Grp Cap (c), veh/h	0	2177	0	0	0	1808	0	0
V/C Ratio (X)	0.00	0.37	0.00	0.00	0.00	0.32	0.00	0.00
Avail Cap (c_a), veh/h	0	2177	0	0	0	1808	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	0.96	0.00	0.00
Uniform Delay (d1), s/veh	0.0	6.4	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.5	0.0	0.0	0.0	0.5	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	6.9	0.0	0.0	0.0	0.5	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	1.4	0.0	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	1.5	0.0	0.0	0.0	0.1	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.05	0.00	0.00	0.00	0.01	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	0
Lane Assignment		R		T+R				
Lanes in Grp	0	1	0	1	0	0	0	0
Grp Vol (v), veh/h	0	371	0	597	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	1610	0	1614	0	0	0	0
Q Serve Time (g_s), s	0.0	8.9	0.0	43.5	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	8.9	0.0	43.5	0.0	0.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	0.98	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	676	0	694	0	0	0	0
V/C Ratio (X)	0.00	0.55	0.00	0.86	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	676	0	900	0	0	0	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	6.8	0.0	33.5	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	3.2	0.0	6.8	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	10.0	0.0	40.3	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	2.0	0.0	16.7	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.6	0.0	1.3	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	2.6	0.0	18.1	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.08	0.00	0.31	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	22.2
HCM 6th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	39	293	70	453	809	165	85	233	296	226	538	82
Future Volume (veh/h)	39	293	70	453	809	165	85	233	296	226	538	82
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1800	1900	1900	1800	1900	1900	1800	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	41	308	74	477	852	174	89	245	312	238	566	86
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	61	405	96	450	1094	223	112	944	421	247	1047	159
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.67	1.67	1.67	1.00	1.00	1.00
Prop Arrive On Green	0.04	0.14	0.14	0.26	0.37	0.37	0.11	0.44	0.44	0.14	0.33	0.33
Unsig. Movement Delay												
Ln Grp Delay, s/veh	54.9	42.6	43.8	88.4	29.5	29.5	58.5	20.4	32.2	85.3	27.9	27.9
Ln Grp LOS	D	D	D	F	C	C	E	C	C	F	C	C
Approach Vol, veh/h		423			1503			646			890	
Approach Delay, s/veh		44.3			48.2			31.3			43.2	
Approach LOS		D			D			C			D	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Case No	2.0	3.0	2.0	4.0	2.0	4.0	2.0	4.0
Phs Duration (G+Y+Rc), s	16.8	28.0	28.1	17.1	10.4	34.5	7.7	37.5
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green (Gmax), s	12.3	18.1	23.6	18.0	7.3	23.1	6.2	35.4
Max Allow Headway (MAH), s	3.8	4.6	3.8	5.3	3.8	5.3	3.8	5.3
Max Q Clear (g_c+I1), s	13.8	16.5	25.6	11.4	6.6	15.2	4.1	24.8
Green Ext Time (g_e), s	0.0	0.5	0.0	1.2	0.0	2.5	0.0	4.9
Prob of Phs Call (p_c)	1.00	1.00	1.00	1.00	0.89	1.00	0.64	1.00
Prob of Max Out (p_x)	1.00	0.00	1.00	0.65	1.00	0.00	1.00	0.58

Left-Turn Movement Data								
Assigned Mvmt	1		3		5		7	
Mvmt Sat Flow, veh/h	1810		1714		1714		1714	

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		3610		2896		3143		2986

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1610		685		476		610

Left Lane Group Data								
Assigned Mvmt	1	0	3	0	5	0	7	0
Lane Assignment	L (Prot)		L (Prot)		L (Prot)		L (Prot)	

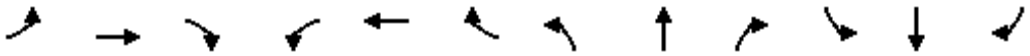
Lanes in Grp	1	0	1	0	1	0	1	0
Grp Vol (v), veh/h	238	0	477	0	89	0	41	0
Grp Sat Flow (s), veh/h/ln	1810	0	1714	0	1714	0	1714	0
Q Serve Time (g_s), s	11.8	0.0	23.6	0.0	4.6	0.0	2.1	0.0
Cycle Q Clear Time (g_c), s	11.8	0.0	23.6	0.0	4.6	0.0	2.1	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	247	0	450	0	112	0	61	0
V/C Ratio (X)	0.96	0.00	1.06	0.00	0.80	0.00	0.67	0.00
Avail Cap (c_a), veh/h	247	0	450	0	139	0	118	0
Upstream Filter (I)	1.00	0.00	0.80	0.00	0.83	0.00	1.00	0.00
Uniform Delay (d1), s/veh	38.6	0.0	33.2	0.0	39.5	0.0	42.9	0.0
Incr Delay (d2), s/veh	46.7	0.0	55.2	0.0	19.0	0.0	12.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	85.3	0.0	88.4	0.0	58.5	0.0	54.9	0.0
1st-Term Q (Q1), veh/ln	5.1	0.0	9.5	0.0	1.8	0.0	0.9	0.0
2nd-Term Q (Q2), veh/ln	3.2	0.0	6.9	0.0	0.6	0.0	0.2	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
%ile Back of Q (50%), veh/ln	8.3	0.0	16.4	0.0	2.4	0.0	1.1	0.0
%ile Storage Ratio (RQ%)	0.13	0.00	0.15	0.00	0.12	0.00	0.01	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	6.9	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	2	0	1	0	1	0	1
Grp Vol (v), veh/h	0	245	0	190	0	324	0	515
Grp Sat Flow (s), veh/h/ln	0	1805	0	1805	0	1805	0	1805
Q Serve Time (g_s), s	0.0	3.9	0.0	9.1	0.0	13.2	0.0	22.8
Cycle Q Clear Time (g_c), s	0.0	3.9	0.0	9.1	0.0	13.2	0.0	22.8
Lane Grp Cap (c), veh/h	0	944	0	252	0	601	0	661
V/C Ratio (X)	0.00	0.26	0.00	0.75	0.00	0.54	0.00	0.78
Avail Cap (c_a), veh/h	0	944	0	361	0	601	0	710
Upstream Filter (I)	0.00	0.83	0.00	1.00	0.00	1.00	0.00	0.80
Uniform Delay (d1), s/veh	0.0	19.8	0.0	37.2	0.0	24.4	0.0	25.3
Incr Delay (d2), s/veh	0.0	0.6	0.0	5.4	0.0	3.5	0.0	4.2
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	20.4	0.0	42.6	0.0	27.9	0.0	29.5
1st-Term Q (Q1), veh/ln	0.0	1.5	0.0	4.0	0.0	5.5	0.0	9.3
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.4	0.0	0.6	0.0	0.8

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	1.6	0.0	4.3	0.0	6.0	0.0	10.1
%ile Storage Ratio (RQ%)	0.00	0.08	0.00	0.06	0.00	0.09	0.00	0.10
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		T+R		T+R		T+R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	312	0	192	0	328	0	511
Grp Sat Flow (s), veh/h/ln	0	1610	0	1777	0	1814	0	1790
Q Serve Time (g_s), s	0.0	14.5	0.0	9.4	0.0	13.2	0.0	22.8
Cycle Q Clear Time (g_c), s	0.0	14.5	0.0	9.4	0.0	13.2	0.0	22.8
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	0.39	0.00	0.26	0.00	0.34
Lane Grp Cap (c), veh/h	0	421	0	248	0	604	0	656
V/C Ratio (X)	0.00	0.74	0.00	0.77	0.00	0.54	0.00	0.78
Avail Cap (c_a), veh/h	0	421	0	355	0	604	0	704
Upstream Filter (I)	0.00	0.83	0.00	1.00	0.00	1.00	0.00	0.80
Uniform Delay (d1), s/veh	0.0	22.8	0.0	37.3	0.0	24.4	0.0	25.3
Incr Delay (d2), s/veh	0.0	9.4	0.0	6.5	0.0	3.5	0.0	4.2
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	32.2	0.0	43.8	0.0	27.9	0.0	29.5
1st-Term Q (Q1), veh/ln	0.0	4.4	0.0	4.0	0.0	5.5	0.0	9.3
2nd-Term Q (Q2), veh/ln	0.0	1.1	0.0	0.4	0.0	0.6	0.0	0.8
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	5.5	0.0	4.5	0.0	6.1	0.0	10.0
%ile Storage Ratio (RQ%)	0.00	0.28	0.00	0.06	0.00	0.10	0.00	0.09
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	43.3
HCM 6th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	134	3	291	48	48	405	198	468	6	19	872	250
Future Volume (veh/h)	134	3	291	48	48	405	198	468	6	19	872	250
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1700	1900	1900	1800	1900	1900	1800	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	141	3	0	51	51	426	208	493	6	20	918	263
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	192	593		354	382	324	241	1884	23	40	1100	314
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Prop Arrive On Green	0.06	0.31	0.00	0.20	0.20	0.20	0.14	0.52	0.52	0.04	0.79	0.79
Unsig. Movement Delay												
Ln Grp Delay, s/veh	55.1	21.3	0.0	30.0	29.7	198.2	61.5	12.9	12.8	47.6	13.4	13.7
Ln Grp LOS	E	C		C	C	F	E	B	B	D	B	B
Approach Vol, veh/h		144			528			707			1201	
Approach Delay, s/veh		54.4			165.7			27.2			14.1	
Approach LOS		D			F			C			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6	7	8
Case No	2.0	4.0		3.0	2.0	4.0	2.0	5.3
Phs Duration (G+Y+Rc), s	6.5	50.9		32.6	17.2	40.2	10.0	22.6
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5	4.5	4.5
Max Green (Gmax), s	5.2	43.2		28.1	13.5	34.9	5.5	18.1
Max Allow Headway (MAH), s	3.8	5.2		5.2	3.8	5.3	3.8	4.1
Max Q Clear (g_c+I1), s	3.0	8.8		2.1	12.7	20.3	6.0	20.1
Green Ext Time (g_e), s	0.0	3.2		0.0	0.1	7.0	0.0	0.0
Prob of Phs Call (p_c)	0.39	1.00		1.00	0.99	1.00	0.97	1.00
Prob of Max Out (p_x)	1.00	0.00		0.00	1.00	0.00	1.00	1.00

Left-Turn Movement Data								
Assigned Mvmt	1				5		7	3
Mvmt Sat Flow, veh/h	1810				1714		3141	1361

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		3653		1900		2770		1900

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		44		1610		792		1610

Left Lane Group Data								
Assigned Mvmt	1	0	0	0	5	0	7	3
Lane Assignment	L (Prot)				L (Prot)		L (Prot)	L

Lanes in Grp	1	0	0	0	1	0	2	1
Grp Vol (v), veh/h	20	0	0	0	208	0	141	51
Grp Sat Flow (s), veh/h/ln	1810	0	0	0	1714	0	1570	1361
Q Serve Time (g_s), s	1.0	0.0	0.0	0.0	10.7	0.0	4.0	2.8
Cycle Q Clear Time (g_c), s	1.0	0.0	0.0	0.0	10.7	0.0	4.0	2.8
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	1361
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	18.1
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	18.1
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.8
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	0.00	1.00	0.00	1.00	1.00
Lane Grp Cap (c), veh/h	40	0	0	0	241	0	192	354
V/C Ratio (X)	0.51	0.00	0.00	0.00	0.86	0.00	0.73	0.14
Avail Cap (c_a), veh/h	105	0	0	0	257	0	192	354
Upstream Filter (I)	0.51	0.00	0.00	0.00	1.00	0.00	1.00	1.00
Uniform Delay (d1), s/veh	42.6	0.0	0.0	0.0	37.8	0.0	41.5	29.8
Incr Delay (d2), s/veh	5.0	0.0	0.0	0.0	23.7	0.0	13.6	0.2
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	47.6	0.0	0.0	0.0	61.5	0.0	55.1	30.0
1st-Term Q (Q1), veh/ln	0.4	0.0	0.0	0.0	4.4	0.0	1.5	0.9
2nd-Term Q (Q2), veh/ln	0.1	0.0	0.0	0.0	1.6	0.0	0.4	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	0.00	1.00	0.00	1.00	1.00
%ile Back of Q (50%), veh/ln	0.5	0.0	0.0	0.0	6.0	0.0	1.9	0.9
%ile Storage Ratio (RQ%)	0.02	0.00	0.00	0.00	1.00	0.00	0.05	0.03
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	244	0	3	0	597	0	51
Grp Sat Flow (s), veh/h/ln	0	1805	0	1900	0	1805	0	1900
Q Serve Time (g_s), s	0.0	6.8	0.0	0.1	0.0	18.1	0.0	2.0
Cycle Q Clear Time (g_c), s	0.0	6.8	0.0	0.1	0.0	18.1	0.0	2.0
Lane Grp Cap (c), veh/h	0	931	0	593	0	717	0	382
V/C Ratio (X)	0.00	0.26	0.00	0.01	0.00	0.83	0.00	0.13
Avail Cap (c_a), veh/h	0	931	0	593	0	717	0	382
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	0.51	0.00	1.00
Uniform Delay (d1), s/veh	0.0	12.2	0.0	21.3	0.0	7.4	0.0	29.5
Incr Delay (d2), s/veh	0.0	0.7	0.0	0.0	0.0	5.9	0.0	0.2
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	12.9	0.0	21.3	0.0	13.4	0.0	29.7
1st-Term Q (Q1), veh/ln	0.0	2.6	0.0	0.0	0.0	2.8	0.0	0.9
2nd-Term Q (Q2), veh/ln	0.0	0.2	0.0	0.0	0.0	1.2	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	2.8	0.0	0.0	0.0	4.0	0.0	0.9
%ile Storage Ratio (RQ%)	0.00	0.13	0.00	0.00	0.00	0.20	0.00	0.03
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R		R		T+R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	255	0	0	0	584	0	426
Grp Sat Flow (s), veh/h/ln	0	1892	0	1610	0	1757	0	1610
Q Serve Time (g_s), s	0.0	6.8	0.0	0.0	0.0	18.3	0.0	18.1
Cycle Q Clear Time (g_c), s	0.0	6.8	0.0	0.0	0.0	18.3	0.0	18.1
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.02	0.00	1.00	0.00	0.45	0.00	1.00
Lane Grp Cap (c), veh/h	0	976	0	503	0	698	0	324
V/C Ratio (X)	0.00	0.26	0.00	0.00	0.00	0.84	0.00	1.32
Avail Cap (c_a), veh/h	0	976	0	503	0	698	0	324
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	0.51	0.00	1.00
Uniform Delay (d1), s/veh	0.0	12.2	0.0	0.0	0.0	7.5	0.0	35.9
Incr Delay (d2), s/veh	0.0	0.7	0.0	0.0	0.0	6.2	0.0	162.3
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	12.8	0.0	0.0	0.0	13.7	0.0	198.2
1st-Term Q (Q1), veh/ln	0.0	2.7	0.0	0.0	0.0	2.7	0.0	6.9
2nd-Term Q (Q2), veh/ln	0.0	0.2	0.0	0.0	0.0	1.2	0.0	14.6
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	2.9	0.0	0.0	0.0	3.9	0.0	21.5
%ile Storage Ratio (RQ%)	0.00	0.14	0.00	0.00	0.00	0.20	0.00	0.63
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25.5
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3

Intersection Summary	
HCM 6th Ctrl Delay	51.0
HCM 6th LOS	D

Notes

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Lanes in Grp	1	0	0	2	1	0	1	0
Grp Vol (v), veh/h	89	0	0	412	139	0	92	0
Grp Sat Flow (s), veh/h/ln	1810	0	0	1619	1714	0	1714	0
Q Serve Time (g_s), s	5.8	0.0	0.0	13.8	9.6	0.0	6.3	0.0
Cycle Q Clear Time (g_c), s	5.8	0.0	0.0	13.8	9.6	0.0	6.3	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	1.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	113	0	0	684	167	0	121	0
V/C Ratio (X)	0.79	0.00	0.00	0.60	0.83	0.00	0.76	0.00
Avail Cap (c_a), veh/h	234	0	0	742	307	0	293	0
Upstream Filter (I)	0.82	0.00	0.00	1.00	0.89	0.00	1.00	0.00
Uniform Delay (d1), s/veh	55.5	0.0	0.0	42.8	53.2	0.0	54.8	0.0
Incr Delay (d2), s/veh	9.4	0.0	0.0	1.2	9.2	0.0	9.4	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	64.9	0.0	0.0	44.0	62.5	0.0	64.1	0.0
1st-Term Q (Q1), veh/ln	2.7	0.0	0.0	5.5	4.1	0.0	2.7	0.0
2nd-Term Q (Q2), veh/ln	0.3	0.0	0.0	0.1	0.4	0.0	0.3	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	1.00	1.00	0.00	1.00	0.00
%ile Back of Q (50%), veh/ln	2.9	0.0	0.0	5.6	4.5	0.0	3.0	0.0
%ile Storage Ratio (RQ%)	0.41	0.00	0.00	0.04	0.57	0.00	0.35	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	4	0	0	6	0	8
Lane Assignment		T	T			T		T
Lanes in Grp	0	2	2	0	0	3	0	2
Grp Vol (v), veh/h	0	612	93	0	0	613	0	588
Grp Sat Flow (s), veh/h/ln	0	1900	1900	0	0	1900	0	1900
Q Serve Time (g_s), s	0.0	11.0	2.9	0.0	0.0	7.4	0.0	17.7
Cycle Q Clear Time (g_c), s	0.0	11.0	2.9	0.0	0.0	7.4	0.0	17.7
Lane Grp Cap (c), veh/h	0	1992	197	0	0	2790	0	732
V/C Ratio (X)	0.00	0.31	0.47	0.00	0.00	0.22	0.00	0.80
Avail Cap (c_a), veh/h	0	1992	776	0	0	2790	0	998
Upstream Filter (I)	0.00	0.89	1.00	0.00	0.00	0.82	0.00	1.00
Uniform Delay (d1), s/veh	0.0	16.2	55.3	0.0	0.0	17.5	0.0	46.3
Incr Delay (d2), s/veh	0.0	0.4	1.7	0.0	0.0	0.1	0.0	3.4
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	16.6	57.0	0.0	0.0	17.7	0.0	49.7
1st-Term Q (Q1), veh/ln	0.0	4.7	1.4	0.0	0.0	3.2	0.0	8.4
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.3

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	4.8	1.4	0.0	0.0	3.3	0.0	8.7
%ile Storage Ratio (RQ%)	0.00	0.13	0.01	0.00	0.00	0.03	0.00	0.06
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	14	0	0	16	0	18
Lane Assignment		R	R			R		R
Lanes in Grp	0	1	1	0	0	1	0	1
Grp Vol (v), veh/h	0	217	60	0	0	192	0	106
Grp Sat Flow (s), veh/h/ln	0	1610	1610	0	0	1610	0	1610
Q Serve Time (g_s), s	0.0	3.5	3.6	0.0	0.0	8.3	0.0	6.8
Cycle Q Clear Time (g_c), s	0.0	3.5	3.6	0.0	0.0	8.3	0.0	6.8
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	844	84	0	0	788	0	310
V/C Ratio (X)	0.00	0.26	0.72	0.00	0.00	0.24	0.00	0.34
Avail Cap (c_a), veh/h	0	844	329	0	0	788	0	423
Upstream Filter (I)	0.00	0.89	1.00	0.00	0.00	0.82	0.00	1.00
Uniform Delay (d1), s/veh	0.0	2.5	37.5	0.0	0.0	17.8	0.0	41.9
Incr Delay (d2), s/veh	0.0	0.7	10.9	0.0	0.0	0.6	0.0	0.6
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	3.1	48.4	0.0	0.0	18.4	0.0	42.5
1st-Term Q (Q1), veh/ln	0.0	2.9	1.8	0.0	0.0	3.1	0.0	2.7
2nd-Term Q (Q2), veh/ln	0.0	0.2	0.3	0.0	0.0	0.1	0.0	0.1
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	3.1	2.0	0.0	0.0	3.2	0.0	2.8
%ile Storage Ratio (RQ%)	0.00	0.39	0.01	0.00	0.00	0.03	0.00	0.02
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	32.9
HCM 6th LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	327	388	409	631	886	0	0	1033	563
Future Volume (veh/h)	0	0	0	327	388	409	631	886	0	0	1033	563
Number				3	8	18	5	2	12	1	6	16
Initial Q, veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln				1800	1900	1900	1900	1900	0	0	1900	1900
Adj Flow Rate, veh/h				344	408	431	664	933	0	0	1087	593
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence				Yes			Yes			No		
Cap, veh/h				373	453	511	674	2042	0	0	1178	998
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green				0.38	0.38	0.38	0.19	0.54	0.00	0.00	0.31	0.31
Unsig. Movement Delay												
Ln Grp Delay, s/veh				49.4	0.0	40.6	61.5	15.9	0.0	0.0	49.3	34.5
Ln Grp LOS				D	A	D	E	B	A	A	D	C
Approach Vol, veh/h					1183			1597			1680	
Approach Delay, s/veh					45.4			34.8			44.1	
Approach LOS					D			C			D	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2	8		5	6		
Case No		4.0	12.0		2.0	7.0		
Phs Duration (G+Y+Rc), s		63.6	46.4		25.0	38.6		
Change Period (Y+Rc), s		4.5	4.5		4.5	4.5		
Max Green (Gmax), s		57.5	43.5		20.5	32.5		
Max Allow Headway (MAH), s		5.2	5.4		3.8	4.8		
Max Q Clear (g_c+I1), s		18.6	38.9		22.1	32.4		
Green Ext Time (g_e), s		8.2	3.0		0.0	0.1		
Prob of Phs Call (p_c)		1.00	1.00		1.00	1.00		
Prob of Max Out (p_x)		0.00	1.00		1.00	0.00		

Left-Turn Movement Data								
Assigned Mvmt			3		5	1		
Mvmt Sat Flow, veh/h			979		3619	0		

Through Movement Data								
Assigned Mvmt		2	8			6		
Mvmt Sat Flow, veh/h		3800	1189			3800		

Right-Turn Movement Data								
Assigned Mvmt		12	18			16		
Mvmt Sat Flow, veh/h		0	1342			3220		

Left Lane Group Data								
Assigned Mvmt	0	0	3	0	5	1	0	0
Lane Assignment			L+T		L (Prot)			

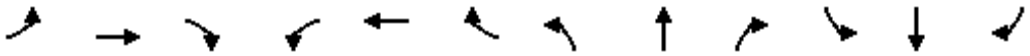
Lanes in Grp	0	0	1	0	2	0	0	0
Grp Vol (v), veh/h	0	0	650	0	664	0	0	0
Grp Sat Flow (s), veh/h/ln	0	0	1851	0	1810	0	0	0
Q Serve Time (g_s), s	0.0	0.0	36.9	0.0	20.1	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	36.9	0.0	20.1	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	34.1	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	0.00	0.53	0.00	1.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	705	0	674	0	0	0
V/C Ratio (X)	0.00	0.00	0.92	0.00	0.98	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	0	732	0	674	0	0	0
Upstream Filter (I)	0.00	0.00	1.00	0.00	0.35	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	32.5	0.0	44.6	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	16.9	0.0	16.9	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	49.4	0.0	61.5	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	16.1	0.0	8.9	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	3.3	0.0	1.6	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	0.00	1.00	0.00	1.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	19.4	0.0	10.5	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.46	0.00	1.75	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	8	0	0	6	0	0
Lane Assignment		T				T		
Lanes in Grp	0	2	0	0	0	2	0	0
Grp Vol (v), veh/h	0	933	0	0	0	1087	0	0
Grp Sat Flow (s), veh/h/ln	0	1900	0	0	0	1900	0	0
Q Serve Time (g_s), s	0.0	16.6	0.0	0.0	0.0	30.4	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	16.6	0.0	0.0	0.0	30.4	0.0	0.0
Lane Grp Cap (c), veh/h	0	2042	0	0	0	1178	0	0
V/C Ratio (X)	0.00	0.46	0.00	0.00	0.00	0.92	0.00	0.00
Avail Cap (c_a), veh/h	0	2042	0	0	0	1178	0	0
Upstream Filter (I)	0.00	0.35	0.00	0.00	0.00	0.94	0.00	0.00
Uniform Delay (d1), s/veh	0.0	15.6	0.0	0.0	0.0	36.7	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.3	0.0	0.0	0.0	12.6	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	15.9	0.0	0.0	0.0	49.3	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	7.0	0.0	0.0	0.0	13.9	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	2.1	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	7.0	0.0	0.0	0.0	15.9	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.32	0.00	0.00	0.00	0.42	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	18	0	0	16	0	0
Lane Assignment			T+R			R		
Lanes in Grp	0	0	1	0	0	2	0	0
Grp Vol (v), veh/h	0	0	533	0	0	593	0	0
Grp Sat Flow (s), veh/h/ln	0	0	1658	0	0	1610	0	0
Q Serve Time (g_s), s	0.0	0.0	32.2	0.0	0.0	17.1	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	32.2	0.0	0.0	17.1	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.00	0.81	0.00	0.00	1.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	632	0	0	998	0	0
V/C Ratio (X)	0.00	0.00	0.84	0.00	0.00	0.59	0.00	0.00
Avail Cap (c_a), veh/h	0	0	656	0	0	998	0	0
Upstream Filter (I)	0.00	0.00	1.00	0.00	0.00	0.94	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	31.1	0.0	0.0	32.1	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	9.5	0.0	0.0	2.4	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	40.6	0.0	0.0	34.5	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	12.6	0.0	0.0	6.6	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	1.7	0.0	0.0	0.3	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	14.3	0.0	0.0	7.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.34	0.00	0.00	0.18	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	41.1
HCM 6th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	508	17	702	0	0	0	0	1039	184	161	703	0
Future Volume (veh/h)	508	17	702	0	0	0	0	1039	184	161	703	0
Number	7	4	14				5	2	12	1	6	16
Initial Q, veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1800	1900	1900				0	1900	1900	1900	1900	0
Adj Flow Rate, veh/h	535	18	739				0	1094	194	169	740	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0				0	0	0	0	0	0
Opposing Right Turn Influence	Yes						No			Yes		
Cap, veh/h	662	22	608				0	1255	532	203	1815	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	2.00	2.00	2.00	2.00	1.00
Prop Arrive On Green	0.38	0.38	0.38				0.00	0.66	0.66	0.22	1.00	0.00
Unsig. Movement Delay												
Ln Grp Delay, s/veh	28.1	0.0	135.2				0.0	19.9	11.1	34.1	0.1	0.0
Ln Grp LOS	C	A	F				A	B	B	C	A	A
Approach Vol, veh/h		1292						1288			909	
Approach Delay, s/veh		89.4						18.6			6.4	
Approach LOS		F						B			A	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Case No	2.0	7.0		12.0		4.0		
Phs Duration (G+Y+Rc), s	12.9	29.3		32.8		42.2		
Change Period (Y+Rc), s	4.5	4.5		4.5		4.5		
Max Green (Gmax), s	8.7	24.5		28.3		37.7		
Max Allow Headway (MAH), s	3.8	5.1		5.5		5.2		
Max Q Clear (g_c+I1), s	8.7	19.3		30.3		2.0		
Green Ext Time (g_e), s	0.0	3.4		0.0		6.0		
Prob of Phs Call (p_c)	0.97	1.00		1.00		1.00		
Prob of Max Out (p_x)	1.00	0.00		1.00		0.00		

Left-Turn Movement Data												
Assigned Mvmt		1	5		7							
Mvmt Sat Flow, veh/h		1810	0		1753							

Through Movement Data												
Assigned Mvmt			2		4		6					
Mvmt Sat Flow, veh/h			3800		59		3705					

Right-Turn Movement Data												
Assigned Mvmt			12		14		16					
Mvmt Sat Flow, veh/h			1610		1610		0					

Left Lane Group Data												
Assigned Mvmt		1	5	0	7	0	0	0	0			
Lane Assignment		L (Prot)			L+T							

Lanes in Grp	1	0	0	1	0	0	0	0
Grp Vol (v), veh/h	169	0	0	553	0	0	0	0
Grp Sat Flow (s), veh/h/ln	1810	0	0	1812	0	0	0	0
Q Serve Time (g_s), s	6.7	0.0	0.0	20.5	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	6.7	0.0	0.0	20.5	0.0	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	24.8	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	0.97	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	203	0	0	684	0	0	0	0
V/C Ratio (X)	0.83	0.00	0.00	0.81	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	210	0	0	684	0	0	0	0
Upstream Filter (I)	0.20	0.00	0.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	28.4	0.0	0.0	20.9	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	5.7	0.0	0.0	7.2	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	34.1	0.0	0.0	28.1	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	2.5	0.0	0.0	8.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.3	0.0	0.0	1.4	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00
%ile Back of Q (50%), veh/ln	2.8	0.0	0.0	9.4	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.47	0.00	0.00	0.28	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	0
Lane Assignment		T				T		
Lanes in Grp	0	2	0	0	0	2	0	0
Grp Vol (v), veh/h	0	1094	0	0	0	740	0	0
Grp Sat Flow (s), veh/h/ln	0	1900	0	0	0	1805	0	0
Q Serve Time (g_s), s	0.0	17.3	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	17.3	0.0	0.0	0.0	0.0	0.0	0.0
Lane Grp Cap (c), veh/h	0	1255	0	0	0	1815	0	0
V/C Ratio (X)	0.00	0.87	0.00	0.00	0.00	0.41	0.00	0.00
Avail Cap (c_a), veh/h	0	1255	0	0	0	1815	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	0.20	0.00	0.00
Uniform Delay (d1), s/veh	0.0	11.4	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	8.5	0.0	0.0	0.0	0.1	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	19.9	0.0	0.0	0.0	0.1	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	3.6	0.0	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	1.5	0.0	0.0	0.0	0.0	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	5.1	0.0	0.0	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.10	0.00	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	0
Lane Assignment		R		T+R				
Lanes in Grp	0	1	0	1	0	0	0	0
Grp Vol (v), veh/h	0	194	0	739	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	1610	0	1610	0	0	0	0
Q Serve Time (g_s), s	0.0	4.0	0.0	28.3	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	4.0	0.0	28.3	0.0	0.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	532	0	608	0	0	0	0
V/C Ratio (X)	0.00	0.36	0.00	1.22	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	532	0	608	0	0	0	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	9.2	0.0	23.4	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	1.9	0.0	111.8	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	11.1	0.0	135.2	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	1.2	0.0	9.8	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.3	0.0	18.9	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	1.4	0.0	28.7	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.03	0.00	0.85	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	32.9	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	41.6
HCM 6th LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	162	459	198	44	835	418	70	394	31	203	13	158
Future Volume (veh/h)	162	459	198	44	835	418	70	394	31	203	13	158
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1700	1900	1900	1800	1900	1900	1800	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	171	483	208	46	879	440	74	415	33	214	14	166
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	233	767	328	59	1010	646	94	1432	662	245	58	687
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.07	0.30	0.30	0.03	0.27	0.27	0.05	0.38	0.38	0.14	0.46	0.46
Unsig. Movement Delay												
Ln Grp Delay, s/veh	57.9	37.1	37.3	77.5	49.8	32.3	69.4	26.7	21.4	66.0	0.0	20.6
Ln Grp LOS	E	D	D	E	D	C	E	C	C	E	A	C
Approach Vol, veh/h		862			1365			522			394	
Approach Delay, s/veh		41.3			45.1			32.4			45.3	
Approach LOS		D			D			C			D	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Case No	2.0	3.0	2.0	4.0	2.0	4.0	2.0	3.0
Phs Duration (G+Y+Rc), s	20.8	49.7	8.6	40.9	11.1	59.4	13.1	36.4
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green (Gmax), s	23.5	21.8	14.4	42.3	14.8	30.5	23.2	33.5
Max Allow Headway (MAH), s	3.8	5.1	3.8	5.3	3.8	5.5	3.8	4.8
Max Q Clear (g_c+I1), s	15.9	11.2	5.2	21.9	7.1	10.1	8.2	29.0
Green Ext Time (g_e), s	0.4	2.1	0.0	4.4	0.1	1.0	0.4	2.9
Prob of Phs Call (p_c)	1.00	1.00	0.78	1.00	0.92	1.00	1.00	1.00
Prob of Max Out (p_x)	0.06	0.00	0.00	0.07	0.01	0.00	0.00	1.00

Left-Turn Movement Data								
Assigned Mvmt	1		3		5		7	
Mvmt Sat Flow, veh/h	1810		1714		1714		3238	

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		3800		2525		127		3800

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1610		1080		1503		1610

Left Lane Group Data								
Assigned Mvmt	1	0	3	0	5	0	7	0
Lane Assignment	L (Prot)		L (Prot)		L (Prot)		L (Prot)	

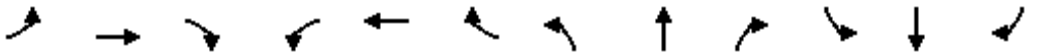
Lanes in Grp	1	0	1	0	1	0	2	0
Grp Vol (v), veh/h	214	0	46	0	74	0	171	0
Grp Sat Flow (s), veh/h/ln	1810	0	1714	0	1714	0	1619	0
Q Serve Time (g_s), s	13.9	0.0	3.2	0.0	5.1	0.0	6.2	0.0
Cycle Q Clear Time (g_c), s	13.9	0.0	3.2	0.0	5.1	0.0	6.2	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	245	0	59	0	94	0	233	0
V/C Ratio (X)	0.87	0.00	0.78	0.00	0.79	0.00	0.73	0.00
Avail Cap (c_a), veh/h	354	0	206	0	211	0	626	0
Upstream Filter (I)	1.00	0.00	1.00	0.00	1.00	0.00	0.74	0.00
Uniform Delay (d1), s/veh	50.9	0.0	57.5	0.0	56.0	0.0	54.6	0.0
Incr Delay (d2), s/veh	15.1	0.0	20.0	0.0	13.4	0.0	3.3	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	66.0	0.0	77.5	0.0	69.4	0.0	57.9	0.0
1st-Term Q (Q1), veh/ln	6.3	0.0	1.4	0.0	2.2	0.0	2.5	0.0
2nd-Term Q (Q2), veh/ln	1.0	0.0	0.3	0.0	0.4	0.0	0.1	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
%ile Back of Q (50%), veh/ln	7.3	0.0	1.7	0.0	2.6	0.0	2.6	0.0
%ile Storage Ratio (RQ%)	0.95	0.00	0.02	0.00	0.23	0.00	0.25	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T				T
Lanes in Grp	0	2	0	1	0	0	0	2
Grp Vol (v), veh/h	0	415	0	363	0	0	0	879
Grp Sat Flow (s), veh/h/ln	0	1900	0	1900	0	0	0	1900
Q Serve Time (g_s), s	0.0	9.2	0.0	19.7	0.0	0.0	0.0	26.5
Cycle Q Clear Time (g_c), s	0.0	9.2	0.0	19.7	0.0	0.0	0.0	26.5
Lane Grp Cap (c), veh/h	0	1432	0	577	0	0	0	1010
V/C Ratio (X)	0.00	0.29	0.00	0.63	0.00	0.00	0.00	0.87
Avail Cap (c_a), veh/h	0	1432	0	670	0	0	0	1061
Upstream Filter (I)	0.00	1.00	0.00	0.74	0.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	26.2	0.0	36.0	0.0	0.0	0.0	42.1
Incr Delay (d2), s/veh	0.0	0.5	0.0	1.1	0.0	0.0	0.0	7.7
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	26.7	0.0	37.1	0.0	0.0	0.0	49.8
1st-Term Q (Q1), veh/ln	0.0	4.2	0.0	9.1	0.0	0.0	0.0	12.3
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.2	0.0	0.0	0.0	1.1

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	4.3	0.0	9.3	0.0	0.0	0.0	13.4
%ile Storage Ratio (RQ%)	0.00	0.38	0.00	0.38	0.00	0.00	0.00	0.15
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		T+R		T+R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	33	0	328	0	180	0	440
Grp Sat Flow (s), veh/h/ln	0	1610	0	1706	0	1630	0	1610
Q Serve Time (g_s), s	0.0	1.5	0.0	19.9	0.0	8.1	0.0	27.0
Cycle Q Clear Time (g_c), s	0.0	1.5	0.0	19.9	0.0	8.1	0.0	27.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	1610.2	0.0	0.0	0.0	0.0	0.0	1610.2
Prot RT Eff Green (g_R), s	0.0	4.1	0.0	0.0	0.0	0.0	0.0	16.3
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	0.63	0.00	0.92	0.00	1.00
Lane Grp Cap (c), veh/h	0	662	0	518	0	745	0	646
V/C Ratio (X)	0.00	0.05	0.00	0.63	0.00	0.24	0.00	0.68
Avail Cap (c_a), veh/h	0	662	0	601	0	745	0	668
Upstream Filter (I)	0.00	1.00	0.00	0.74	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	21.2	0.0	36.0	0.0	19.9	0.0	29.6
Incr Delay (d2), s/veh	0.0	0.1	0.0	1.3	0.0	0.8	0.0	2.7
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	21.4	0.0	37.3	0.0	20.6	0.0	32.3
1st-Term Q (Q1), veh/ln	0.0	0.6	0.0	8.3	0.0	3.1	0.0	10.3
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.2	0.0	0.2	0.0	0.5
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.6	0.0	8.4	0.0	3.2	0.0	10.8
%ile Storage Ratio (RQ%)	0.00	0.21	0.00	0.35	0.00	0.42	0.00	0.12
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	42.0
HCM 6th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	428	11	465	724	1095	0	0	476	931
Future Volume (veh/h)	0	0	0	428	11	465	724	1095	0	0	476	931
Number				3	8	18	5	2	12	1	6	16
Initial Q, veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln				1800	1900	1900	1900	1900	0	0	1900	1900
Adj Flow Rate, veh/h				451	12	489	762	1153	0	0	501	980
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence				Yes			Yes			No		
Cap, veh/h				587	16	536	826	2138	0	0	1153	905
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	2.00	2.00
Prop Arrive On Green				0.33	0.33	0.33	0.47	1.00	0.00	0.00	0.64	0.64
Unsig. Movement Delay												
Ln Grp Delay, s/veh				40.7	0.0	55.7	37.5	0.5	0.0	0.0	17.5	76.7
Ln Grp LOS				D	A	E	D	A	A	A	B	F
Approach Vol, veh/h					952			1915			1481	
Approach Delay, s/veh					48.4			15.2			56.7	
Approach LOS					D			B			E	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2	8		5	6		
Case No		4.0	11.0		2.0	7.0		
Phs Duration (G+Y+Rc), s		75.6	44.4		32.7	42.8		
Change Period (Y+Rc), s		4.5	4.5		4.5	4.5		
Max Green (Gmax), s		66.5	44.5		33.5	28.5		
Max Allow Headway (MAH), s		5.2	4.7		3.8	4.4		
Max Q Clear (g_c+I1), s		2.0	36.9		26.4	40.3		
Green Ext Time (g_e), s		12.0	3.0		1.9	0.0		
Prob of Phs Call (p_c)		1.00	1.00		1.00	1.00		
Prob of Max Out (p_x)		0.00	0.64		0.33	0.00		
Left-Turn Movement Data								
Assigned Mvmt			3		5	1		
Mvmt Sat Flow, veh/h			1765		3510	0		
Through Movement Data								
Assigned Mvmt		2	8			6		
Mvmt Sat Flow, veh/h		3705	47			3705		
Right-Turn Movement Data								
Assigned Mvmt		12	18			16		
Mvmt Sat Flow, veh/h		0	1610			2834		
Left Lane Group Data								
Assigned Mvmt	0	0	3	0	5	1	0	0
Lane Assignment			L+T		L (Prot)			

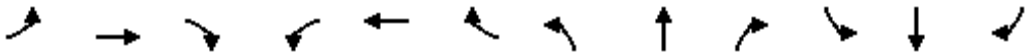
Lanes in Grp	0	0	1	0	2	0	0	0
Grp Vol (v), veh/h	0	0	463	0	762	0	0	0
Grp Sat Flow (s), veh/h/ln	0	0	1812	0	1755	0	0	0
Q Serve Time (g_s), s	0.0	0.0	27.5	0.0	24.4	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	27.5	0.0	24.4	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	38.3	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	0.00	0.97	0.00	1.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	603	0	826	0	0	0
V/C Ratio (X)	0.00	0.00	0.77	0.00	0.92	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	0	672	0	980	0	0	0
Upstream Filter (I)	0.00	0.00	1.00	0.00	0.48	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	35.9	0.0	30.7	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	4.8	0.0	6.8	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	40.7	0.0	37.5	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	12.0	0.0	8.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.8	0.0	0.8	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	0.00	1.00	0.00	1.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	12.8	0.0	8.8	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.27	0.00	0.84	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	8	0	0	6	0	0
Lane Assignment		T				T		
Lanes in Grp	0	2	0	0	0	2	0	0
Grp Vol (v), veh/h	0	1153	0	0	0	501	0	0
Grp Sat Flow (s), veh/h/ln	0	1805	0	0	0	1805	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	8.3	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	8.3	0.0	0.0
Lane Grp Cap (c), veh/h	0	2138	0	0	0	1153	0	0
V/C Ratio (X)	0.00	0.54	0.00	0.00	0.00	0.43	0.00	0.00
Avail Cap (c_a), veh/h	0	2138	0	0	0	1153	0	0
Upstream Filter (I)	0.00	0.48	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	16.3	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.5	0.0	0.0	0.0	1.2	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.5	0.0	0.0	0.0	17.5	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	2.8	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	0.2	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.1	0.0	0.0	0.0	3.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.01	0.00	0.00	0.00	0.07	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	18	0	0	16	0	0
Lane Assignment			R			R		
Lanes in Grp	0	0	1	0	0	2	0	0
Grp Vol (v), veh/h	0	0	489	0	0	980	0	0
Grp Sat Flow (s), veh/h/ln	0	0	1610	0	0	1417	0	0
Q Serve Time (g_s), s	0.0	0.0	34.9	0.0	0.0	38.3	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	34.9	0.0	0.0	38.3	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	536	0	0	905	0	0
V/C Ratio (X)	0.00	0.00	0.91	0.00	0.00	1.08	0.00	0.00
Avail Cap (c_a), veh/h	0	0	597	0	0	905	0	0
Upstream Filter (I)	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	38.3	0.0	0.0	21.7	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	17.4	0.0	0.0	55.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	55.7	0.0	0.0	76.7	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	13.6	0.0	0.0	7.8	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	2.6	0.0	0.0	6.9	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	16.2	0.0	0.0	14.8	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.33	0.00	0.00	0.32	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	18.8	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	36.6
HCM 6th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	477	9	513	0	0	0	0	1213	644	333	648	0
Future Volume (veh/h)	477	9	513	0	0	0	0	1213	644	333	648	0
Number	7	4	14				5	2	12	1	6	16
Initial Q, veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1800	1900	1900				0	1900	1900	1900	1900	0
Adj Flow Rate, veh/h	502	9	540				0	1277	678	351	682	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0				0	0	0	0	0	0
Opposing Right Turn Influence	Yes						No			Yes		
Cap, veh/h	586	9	542				0	1599	496	439	1835	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	2.00	2.00	2.00	0.67	1.00
Prop Arrive On Green	0.34	0.34	0.34				0.00	0.62	0.62	0.25	0.34	0.00
Unsig. Movement Delay												
Ln Grp Delay, s/veh	30.4	0.0	56.8				0.0	14.4	188.6	31.0	13.1	0.0
Ln Grp LOS	C	A	E				A	B	F	C	B	A
Approach Vol, veh/h		1051						1955			1033	
Approach Delay, s/veh		44.2						74.8			19.2	
Approach LOS		D						E			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Case No	2.0	7.0		10.0		4.0		
Phs Duration (G+Y+Rc), s	12.0	23.0		25.0		35.0		
Change Period (Y+Rc), s	4.5	4.5		4.5		4.5		
Max Green (Gmax), s	7.5	18.5		20.5		30.5		
Max Allow Headway (MAH), s	3.8	4.8		4.7		5.2		
Max Q Clear (g_c+I1), s	7.6	20.5		22.4		10.6		
Green Ext Time (g_e), s	0.0	0.0		0.0		4.7		
Prob of Phs Call (p_c)	1.00	1.00		1.00		1.00		
Prob of Max Out (p_x)	1.00	0.00		1.00		0.00		

Left-Turn Movement Data								
Assigned Mvmt	1	5		7				
Mvmt Sat Flow, veh/h	3510	0		1714				

Through Movement Data								
Assigned Mvmt		2		4		6		
Mvmt Sat Flow, veh/h		5358		26		3705		

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		
Mvmt Sat Flow, veh/h		1610		1588		0		

Left Lane Group Data								
Assigned Mvmt	1	5	0	7	0	0	0	0
Lane Assignment	L (Prot)			L				

Lanes in Grp	2	0	0	1	0	0	0	0
Grp Vol (v), veh/h	351	0	0	502	0	0	0	0
Grp Sat Flow (s), veh/h/ln	1755	0	0	1714	0	0	0	0
Q Serve Time (g_s), s	5.6	0.0	0.0	16.4	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	5.6	0.0	0.0	16.4	0.0	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	1714	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	18.5	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	439	0	0	586	0	0	0	0
V/C Ratio (X)	0.80	0.00	0.00	0.86	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	439	0	0	586	0	0	0	0
Upstream Filter (I)	0.90	0.00	0.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	21.8	0.0	0.0	18.4	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	9.2	0.0	0.0	12.0	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	31.0	0.0	0.0	30.4	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	1.9	0.0	0.0	5.7	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.6	0.0	0.0	2.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00
%ile Back of Q (50%), veh/ln	2.5	0.0	0.0	7.7	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.24	0.00	0.00	0.13	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	0
Lane Assignment		T				T		
Lanes in Grp	0	3	0	0	0	2	0	0
Grp Vol (v), veh/h	0	1277	0	0	0	682	0	0
Grp Sat Flow (s), veh/h/ln	0	1729	0	0	0	1805	0	0
Q Serve Time (g_s), s	0.0	11.2	0.0	0.0	0.0	8.6	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	11.2	0.0	0.0	0.0	8.6	0.0	0.0
Lane Grp Cap (c), veh/h	0	1599	0	0	0	1835	0	0
V/C Ratio (X)	0.00	0.80	0.00	0.00	0.00	0.37	0.00	0.00
Avail Cap (c_a), veh/h	0	1599	0	0	0	1835	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	0.90	0.00	0.00
Uniform Delay (d1), s/veh	0.0	10.1	0.0	0.0	0.0	12.5	0.0	0.0
Incr Delay (d2), s/veh	0.0	4.3	0.0	0.0	0.0	0.5	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	14.4	0.0	0.0	0.0	13.1	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	2.4	0.0	0.0	0.0	3.2	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.6	0.0	0.0	0.0	0.1	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	3.0	0.0	0.0	0.0	3.4	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.10	0.00	0.00	0.00	0.32	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	0
Lane Assignment		R		T+R				
Lanes in Grp	0	1	0	1	0	0	0	0
Grp Vol (v), veh/h	0	678	0	549	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	1610	0	1614	0	0	0	0
Q Serve Time (g_s), s	0.0	18.5	0.0	20.4	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	18.5	0.0	20.4	0.0	0.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	0.98	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	496	0	552	0	0	0	0
V/C Ratio (X)	0.00	1.37	0.00	1.00	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	496	0	552	0	0	0	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	11.5	0.0	19.7	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	177.1	0.0	37.1	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	188.6	0.0	56.8	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	2.9	0.0	6.7	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	24.4	0.0	5.7	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	27.3	0.0	12.4	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.89	0.00	0.21	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	45.4	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	52.6
HCM 6th LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	86	814	80	225	349	198	138	669	614	261	378	54
Future Volume (veh/h)	86	814	80	225	349	198	138	669	614	261	378	54
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1800	1900	1900	1800	1900	1900	1800	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	91	857	84	237	367	208	145	704	646	275	398	57
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	114	891	87	266	797	445	174	886	645	303	988	141
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.07	0.27	0.27	0.16	0.36	0.12	0.10	0.25	0.25	0.17	0.31	0.31
Unsig. Movement Delay												
Ln Grp Delay, s/veh	62.3	71.0	70.7	68.4	27.7	36.3	57.7	44.1	62.9	74.1	31.9	32.0
Ln Grp LOS	E	E	E	E	C	D	E	D	F	E	C	C
Approach Vol, veh/h		1032			812			1495			730	
Approach Delay, s/veh		70.1			42.6			53.5			47.8	
Approach LOS		E			D			D			D	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Case No	2.0	3.0	2.0	4.0	2.0	4.0	2.0	4.0
Phs Duration (G+Y+Rc), s	22.9	31.5	21.6	34.0	15.7	38.8	11.8	43.7
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green (Gmax), s	18.5	24.3	19.7	29.5	17.1	25.7	12.6	36.6
Max Allow Headway (MAH), s	3.8	4.6	3.8	5.3	3.8	5.3	3.8	5.4
Max Q Clear (g_c+I1), s	18.4	29.0	16.9	30.0	11.1	13.0	7.8	18.5
Green Ext Time (g_e), s	0.0	0.0	0.2	0.0	0.2	2.2	0.1	3.4
Prob of Phs Call (p_c)	1.00	1.00	1.00	1.00	0.99	1.00	0.94	1.00
Prob of Max Out (p_x)	1.00	0.00	1.00	1.00	0.14	0.00	0.32	0.06

Left-Turn Movement Data								
Assigned Mvmt	1		3		5		7	
Mvmt Sat Flow, veh/h	1810		1714		1714		1714	

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		3610		3321		3173		2234

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1610		325		451		1246

Left Lane Group Data								
Assigned Mvmt	1	0	3	0	5	0	7	0
Lane Assignment	L (Prot)		L (Prot)		L (Prot)		L (Prot)	

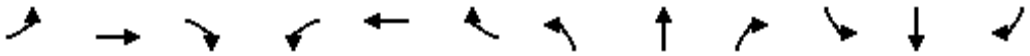
Lanes in Grp	1	0	1	0	1	0	1	0
Grp Vol (v), veh/h	275	0	237	0	145	0	91	0
Grp Sat Flow (s), veh/h/ln	1810	0	1714	0	1714	0	1714	0
Q Serve Time (g_s), s	16.4	0.0	14.9	0.0	9.1	0.0	5.8	0.0
Cycle Q Clear Time (g_c), s	16.4	0.0	14.9	0.0	9.1	0.0	5.8	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	303	0	266	0	174	0	114	0
V/C Ratio (X)	0.91	0.00	0.89	0.00	0.83	0.00	0.80	0.00
Avail Cap (c_a), veh/h	304	0	307	0	266	0	196	0
Upstream Filter (I)	1.00	0.00	0.95	0.00	0.70	0.00	1.00	0.00
Uniform Delay (d1), s/veh	45.0	0.0	45.5	0.0	48.5	0.0	50.6	0.0
Incr Delay (d2), s/veh	29.1	0.0	22.9	0.0	9.2	0.0	11.7	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	74.1	0.0	68.4	0.0	57.7	0.0	62.3	0.0
1st-Term Q (Q1), veh/ln	7.3	0.0	6.3	0.0	3.9	0.0	2.5	0.0
2nd-Term Q (Q2), veh/ln	2.5	0.0	1.7	0.0	0.4	0.0	0.4	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
%ile Back of Q (50%), veh/ln	9.8	0.0	8.0	0.0	4.3	0.0	2.8	0.0
%ile Storage Ratio (RQ%)	0.15	0.00	0.08	0.00	0.22	0.00	0.04	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	2	0	1	0	1	0	1
Grp Vol (v), veh/h	0	704	0	466	0	225	0	295
Grp Sat Flow (s), veh/h/ln	0	1805	0	1805	0	1805	0	1805
Q Serve Time (g_s), s	0.0	20.1	0.0	28.0	0.0	10.8	0.0	13.8
Cycle Q Clear Time (g_c), s	0.0	20.1	0.0	28.0	0.0	10.8	0.0	13.8
Lane Grp Cap (c), veh/h	0	886	0	484	0	562	0	644
V/C Ratio (X)	0.00	0.79	0.00	0.96	0.00	0.40	0.00	0.46
Avail Cap (c_a), veh/h	0	886	0	484	0	562	0	644
Upstream Filter (I)	0.00	0.70	0.00	1.00	0.00	1.00	0.00	0.95
Uniform Delay (d1), s/veh	0.0	38.9	0.0	39.7	0.0	29.8	0.0	27.2
Incr Delay (d2), s/veh	0.0	5.2	0.0	31.3	0.0	2.1	0.0	0.5
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	44.1	0.0	71.0	0.0	31.9	0.0	27.7
1st-Term Q (Q1), veh/ln	0.0	8.8	0.0	12.2	0.0	4.7	0.0	5.9
2nd-Term Q (Q2), veh/ln	0.0	0.6	0.0	4.2	0.0	0.3	0.0	0.1

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	9.5	0.0	16.4	0.0	5.0	0.0	6.0
%ile Storage Ratio (RQ%)	0.00	0.48	0.00	0.22	0.00	0.08	0.00	0.06
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		T+R		T+R		T+R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	646	0	475	0	230	0	280
Grp Sat Flow (s), veh/h/ln	0	1610	0	1841	0	1819	0	1676
Q Serve Time (g_s), s	0.0	27.0	0.0	28.0	0.0	11.0	0.0	16.5
Cycle Q Clear Time (g_c), s	0.0	27.0	0.0	28.0	0.0	11.0	0.0	16.5
Prot RT Sat Flow (s_R), veh/h/ln	0.0	1610.2	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	17.1	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	0.18	0.00	0.25	0.00	0.74
Lane Grp Cap (c), veh/h	0	645	0	494	0	566	0	598
V/C Ratio (X)	0.00	1.00	0.00	0.96	0.00	0.41	0.00	0.47
Avail Cap (c_a), veh/h	0	645	0	494	0	566	0	598
Upstream Filter (I)	0.00	0.70	0.00	1.00	0.00	1.00	0.00	0.95
Uniform Delay (d1), s/veh	0.0	33.0	0.0	39.7	0.0	29.9	0.0	35.8
Incr Delay (d2), s/veh	0.0	29.9	0.0	31.0	0.0	2.2	0.0	0.5
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	62.9	0.0	70.7	0.0	32.0	0.0	36.3
1st-Term Q (Q1), veh/ln	0.0	16.6	0.0	12.5	0.0	4.8	0.0	7.2
2nd-Term Q (Q2), veh/ln	0.0	5.4	0.0	4.2	0.0	0.3	0.0	0.1
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	22.0	0.0	16.7	0.0	5.1	0.0	7.3
%ile Storage Ratio (RQ%)	0.00	1.11	0.00	0.23	0.00	0.08	0.00	0.07
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	54.5
HCM 6th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	480	36	427	91	25	141	214	1036	5	9	655	88
Future Volume (veh/h)	480	36	427	91	25	141	214	1036	5	9	655	88
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1700	1900	1900	1800	1900	1900	1800	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	505	38	0	96	26	148	225	1091	5	9	689	93
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	566	661		235	224	189	258	1809	8	20	1123	151
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.18	0.35	0.00	0.12	0.12	0.12	0.15	0.49	0.49	0.01	0.35	0.35
Unsig. Movement Delay												
Ln Grp Delay, s/veh	52.0	19.6	0.0	38.9	35.7	45.4	61.0	19.6	19.5	55.5	27.5	27.5
Ln Grp LOS	D	B		D	D	D	E	B	B	E	C	C
Approach Vol, veh/h		543			270			1321			791	
Approach Delay, s/veh		49.7			42.2			26.6			27.8	
Approach LOS		D			D			C			C	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6	7	8
Case No	2.0	4.0		3.0	2.0	4.0	2.0	5.3
Phs Duration (G+Y+Rc), s	5.5	48.7		35.8	18.1	36.1	20.7	15.1
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5	4.5	4.5
Max Green (Gmax), s	5.0	32.5		39.0	14.5	23.0	16.5	18.0
Max Allow Headway (MAH), s	3.8	5.2		5.2	3.8	5.3	3.8	4.1
Max Q Clear (g_c+I1), s	2.4	21.3		3.2	13.5	18.1	16.1	10.0
Green Ext Time (g_e), s	0.0	5.4		0.2	0.1	2.1	0.1	0.6
Prob of Phs Call (p_c)	0.20	1.00		1.00	1.00	1.00	1.00	1.00
Prob of Max Out (p_x)	1.00	0.00		0.00	1.00	0.00	1.00	0.10

Left-Turn Movement Data								
Assigned Mvmt	1				5		7	3
Mvmt Sat Flow, veh/h	1810				1714		3141	1318

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		3685		1900		3196		1900

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		17		1610		431		1610

Left Lane Group Data								
Assigned Mvmt	1	0	0	0	5	0	7	3
Lane Assignment	L (Prot)				L (Prot)		L (Prot)	L

Lanes in Grp	1	0	0	0	1	0	2	1
Grp Vol (v), veh/h	9	0	0	0	225	0	505	96
Grp Sat Flow (s), veh/h/ln	1810	0	0	0	1714	0	1570	1318
Q Serve Time (g_s), s	0.4	0.0	0.0	0.0	11.5	0.0	14.1	6.2
Cycle Q Clear Time (g_c), s	0.4	0.0	0.0	0.0	11.5	0.0	14.1	6.2
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	1318
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.6
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.6
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.2
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	0.00	1.00	0.00	1.00	1.00
Lane Grp Cap (c), veh/h	20	0	0	0	258	0	566	235
V/C Ratio (X)	0.44	0.00	0.00	0.00	0.87	0.00	0.89	0.41
Avail Cap (c_a), veh/h	101	0	0	0	276	0	576	344
Upstream Filter (I)	0.77	0.00	0.00	0.00	1.00	0.00	1.00	1.00
Uniform Delay (d1), s/veh	44.2	0.0	0.0	0.0	37.4	0.0	36.0	37.8
Incr Delay (d2), s/veh	11.3	0.0	0.0	0.0	23.7	0.0	16.0	1.1
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	55.5	0.0	0.0	0.0	61.0	0.0	52.0	38.9
1st-Term Q (Q1), veh/ln	0.2	0.0	0.0	0.0	4.7	0.0	5.3	2.0
2nd-Term Q (Q2), veh/ln	0.1	0.0	0.0	0.0	1.7	0.0	1.3	0.1
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	0.00	1.00	0.00	1.00	1.00
%ile Back of Q (50%), veh/ln	0.3	0.0	0.0	0.0	6.4	0.0	6.5	2.1
%ile Storage Ratio (RQ%)	0.01	0.00	0.00	0.00	1.07	0.00	0.16	0.06
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	534	0	38	0	389	0	26
Grp Sat Flow (s), veh/h/ln	0	1805	0	1900	0	1805	0	1900
Q Serve Time (g_s), s	0.0	19.3	0.0	1.2	0.0	16.0	0.0	1.1
Cycle Q Clear Time (g_c), s	0.0	19.3	0.0	1.2	0.0	16.0	0.0	1.1
Lane Grp Cap (c), veh/h	0	886	0	661	0	634	0	224
V/C Ratio (X)	0.00	0.60	0.00	0.06	0.00	0.61	0.00	0.12
Avail Cap (c_a), veh/h	0	886	0	823	0	634	0	380
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	0.77	0.00	1.00
Uniform Delay (d1), s/veh	0.0	16.6	0.0	19.5	0.0	24.1	0.0	35.5
Incr Delay (d2), s/veh	0.0	3.0	0.0	0.0	0.0	3.4	0.0	0.2
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	19.6	0.0	19.6	0.0	27.5	0.0	35.7
1st-Term Q (Q1), veh/ln	0.0	7.5	0.0	0.5	0.0	6.6	0.0	0.5
2nd-Term Q (Q2), veh/ln	0.0	0.7	0.0	0.0	0.0	0.6	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	8.2	0.0	0.5	0.0	7.2	0.0	0.5
%ile Storage Ratio (RQ%)	0.00	0.67	0.00	0.01	0.00	0.36	0.00	0.02
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R		R		T+R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	562	0	0	0	393	0	148
Grp Sat Flow (s), veh/h/ln	0	1897	0	1610	0	1822	0	1610
Q Serve Time (g_s), s	0.0	19.3	0.0	0.0	0.0	16.1	0.0	8.0
Cycle Q Clear Time (g_c), s	0.0	19.3	0.0	0.0	0.0	16.1	0.0	8.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.01	0.00	1.00	0.00	0.24	0.00	1.00
Lane Grp Cap (c), veh/h	0	931	0	560	0	640	0	189
V/C Ratio (X)	0.00	0.60	0.00	0.00	0.00	0.61	0.00	0.78
Avail Cap (c_a), veh/h	0	931	0	698	0	640	0	322
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	0.77	0.00	1.00
Uniform Delay (d1), s/veh	0.0	16.6	0.0	0.0	0.0	24.1	0.0	38.6
Incr Delay (d2), s/veh	0.0	2.9	0.0	0.0	0.0	3.4	0.0	6.8
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	19.5	0.0	0.0	0.0	27.5	0.0	45.4
1st-Term Q (Q1), veh/ln	0.0	7.9	0.0	0.0	0.0	6.7	0.0	3.1
2nd-Term Q (Q2), veh/ln	0.0	0.7	0.0	0.0	0.0	0.6	0.0	0.4
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	8.6	0.0	0.0	0.0	7.3	0.0	3.5
%ile Storage Ratio (RQ%)	0.00	0.71	0.00	0.00	0.00	0.37	0.00	0.10
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	32.7
HCM 6th LOS	C

Notes

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	268	520	131	462	376	102	138	935	507	248	862	194
Future Volume (veh/h)	268	520	131	462	376	102	138	935	507	248	862	194
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1800	1900	1900	1700	1900	1900	1800	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	282	547	138	486	396	107	145	984	534	261	907	204
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	309	624	265	542	575	244	170	1371	581	285	1891	423
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00
Prop Arrive On Green	0.18	0.16	0.16	0.17	0.15	0.15	0.20	0.72	0.72	0.32	0.84	0.84
Unsig. Movement Delay												
Ln Grp Delay, s/veh	73.7	61.1	30.3	64.8	51.7	47.5	55.4	14.9	19.1	63.8	7.1	8.2
Ln Grp LOS	E	E	C	E	D	D	E	B	B	E	A	A
Approach Vol, veh/h		967			989			1663			1372	
Approach Delay, s/veh		60.4			57.7			19.8			18.1	
Approach LOS		E			E			B			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	4	3	5	6	7	8
Case No	2.0	3.0	3.0	2.0	2.0	4.0	2.0	3.0
Phs Duration (G+Y+Rc), s	23.4	47.8	24.2	24.6	16.4	54.8	26.1	22.7
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green (Gmax), s	22.5	36.9	20.9	21.7	18.6	40.8	24.6	18.0
Max Allow Headway (MAH), s	3.8	4.8	5.0	3.8	3.8	5.3	3.8	5.0
Max Q Clear (g_c+I1), s	18.7	22.5	18.9	19.6	11.8	8.6	21.4	13.8
Green Ext Time (g_e), s	0.3	7.8	0.9	0.4	0.2	9.3	0.3	1.1
Prob of Phs Call (p_c)	1.00	1.00	1.00	1.00	0.99	1.00	1.00	1.00
Prob of Max Out (p_x)	0.97	0.00	1.00	1.00	0.07	0.00	1.00	1.00

Left-Turn Movement Data								
Assigned Mvmt	1			3	5		7	
Mvmt Sat Flow, veh/h	1810			3238	1714		1714	

Through Movement Data								
Assigned Mvmt		2	4			6		8
Mvmt Sat Flow, veh/h		3800	3800			4509		3800

Right-Turn Movement Data								
Assigned Mvmt		12	14			16		18
Mvmt Sat Flow, veh/h		1610	1610			1009		1610

Left Lane Group Data								
Assigned Mvmt	1	0	0	3	5	0	7	0
Lane Assignment	L (Prot)			L (Prot)	L (Prot)		L (Prot)	

Lanes in Grp	1	0	0	2	1	0	1	0
Grp Vol (v), veh/h	261	0	0	486	145	0	282	0
Grp Sat Flow (s), veh/h/ln	1810	0	0	1619	1714	0	1714	0
Q Serve Time (g_s), s	16.7	0.0	0.0	17.6	9.8	0.0	19.4	0.0
Cycle Q Clear Time (g_c), s	16.7	0.0	0.0	17.6	9.8	0.0	19.4	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	1.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	285	0	0	542	170	0	309	0
V/C Ratio (X)	0.91	0.00	0.00	0.90	0.85	0.00	0.91	0.00
Avail Cap (c_a), veh/h	339	0	0	586	266	0	351	0
Upstream Filter (I)	0.88	0.00	0.00	1.00	0.51	0.00	1.00	0.00
Uniform Delay (d1), s/veh	40.3	0.0	0.0	49.0	47.3	0.0	48.2	0.0
Incr Delay (d2), s/veh	23.5	0.0	0.0	15.9	8.1	0.0	25.4	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	63.8	0.0	0.0	64.8	55.4	0.0	73.7	0.0
1st-Term Q (Q1), veh/ln	6.2	0.0	0.0	7.1	3.8	0.0	8.2	0.0
2nd-Term Q (Q2), veh/ln	1.9	0.0	0.0	1.2	0.4	0.0	2.2	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	1.00	1.00	0.00	1.00	0.00
%ile Back of Q (50%), veh/ln	8.1	0.0	0.0	8.3	4.2	0.0	10.4	0.0
%ile Storage Ratio (RQ%)	1.13	0.00	0.00	0.06	0.52	0.00	1.19	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	4	0	0	6	0	8
Lane Assignment		T	T			T		T
Lanes in Grp	0	2	2	0	0	2	0	2
Grp Vol (v), veh/h	0	984	547	0	0	764	0	396
Grp Sat Flow (s), veh/h/ln	0	1900	1900	0	0	1900	0	1900
Q Serve Time (g_s), s	0.0	18.0	16.9	0.0	0.0	6.5	0.0	11.8
Cycle Q Clear Time (g_c), s	0.0	18.0	16.9	0.0	0.0	6.5	0.0	11.8
Lane Grp Cap (c), veh/h	0	1371	624	0	0	1594	0	575
V/C Ratio (X)	0.00	0.72	0.88	0.00	0.00	0.48	0.00	0.69
Avail Cap (c_a), veh/h	0	1371	662	0	0	1594	0	575
Upstream Filter (I)	0.00	0.51	1.00	0.00	0.00	0.88	0.00	1.00
Uniform Delay (d1), s/veh	0.0	13.2	48.9	0.0	0.0	6.1	0.0	48.2
Incr Delay (d2), s/veh	0.0	1.7	12.2	0.0	0.0	0.9	0.0	3.5
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	14.9	61.1	0.0	0.0	7.1	0.0	51.7
1st-Term Q (Q1), veh/ln	0.0	4.5	8.0	0.0	0.0	1.9	0.0	5.6
2nd-Term Q (Q2), veh/ln	0.0	0.3	1.1	0.0	0.0	0.2	0.0	0.3

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	4.8	9.0	0.0	0.0	2.1	0.0	5.9
%ile Storage Ratio (RQ%)	0.00	0.13	0.04	0.00	0.00	0.02	0.00	0.04
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	14	0	0	16	0	18
Lane Assignment		R	R			T+R		R
Lanes in Grp	0	1	1	0	0	1	0	1
Grp Vol (v), veh/h	0	534	138	0	0	347	0	107
Grp Sat Flow (s), veh/h/ln	0	1610	1610	0	0	1718	0	1610
Q Serve Time (g_s), s	0.0	20.5	7.4	0.0	0.0	6.6	0.0	7.2
Cycle Q Clear Time (g_c), s	0.0	20.5	7.4	0.0	0.0	6.6	0.0	7.2
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	1.00	0.00	0.00	0.59	0.00	1.00
Lane Grp Cap (c), veh/h	0	581	265	0	0	721	0	244
V/C Ratio (X)	0.00	0.92	0.52	0.00	0.00	0.48	0.00	0.44
Avail Cap (c_a), veh/h	0	581	280	0	0	721	0	244
Upstream Filter (I)	0.00	0.51	1.00	0.00	0.00	0.88	0.00	1.00
Uniform Delay (d1), s/veh	0.0	5.9	28.7	0.0	0.0	6.1	0.0	46.3
Incr Delay (d2), s/veh	0.0	13.2	1.6	0.0	0.0	2.0	0.0	1.2
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	19.1	30.3	0.0	0.0	8.2	0.0	47.5
1st-Term Q (Q1), veh/ln	0.0	2.8	2.9	0.0	0.0	1.7	0.0	2.9
2nd-Term Q (Q2), veh/ln	0.0	2.1	0.1	0.0	0.0	0.4	0.0	0.1
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	5.0	3.0	0.0	0.0	2.1	0.0	3.0
%ile Storage Ratio (RQ%)	0.00	0.62	0.01	0.00	0.00	0.02	0.00	0.02
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	34.7
HCM 6th LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	214	387	227	828	1802	0	0	1297	769
Future Volume (veh/h)	0	0	0	214	387	227	828	1802	0	0	1297	769
Number				3	8	18	5	2	12	1	6	16
Initial Q, veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln				1800	1900	1900	1900	1900	0	0	1900	1900
Adj Flow Rate, veh/h				225	407	239	872	1897	0	0	1365	809
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence				Yes			Yes			No		
Cap, veh/h				252	473	294	829	2431	0	0	1418	1202
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33
Prop Arrive On Green				0.29	0.29	0.29	0.23	0.64	0.00	0.00	0.50	0.50
Unsig. Movement Delay												
Ln Grp Delay, s/veh				56.5	0.0	48.6	81.4	16.6	0.0	0.0	43.2	27.0
Ln Grp LOS				E	A	D	F	B	A	A	D	C
Approach Vol, veh/h					871			2769			2174	
Approach Delay, s/veh					52.9			37.0			37.2	
Approach LOS					D			D			D	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2	8		5	6		
Case No		4.0	12.0		2.0	7.0		
Phs Duration (G+Y+Rc), s		81.3	38.7		32.0	49.3		
Change Period (Y+Rc), s		4.5	4.5		4.5	4.5		
Max Green (Gmax), s		73.5	37.5		27.5	41.5		
Max Allow Headway (MAH), s		5.2	5.3		3.8	4.8		
Max Q Clear (g_c+I1), s		45.1	31.3		29.5	43.6		
Green Ext Time (g_e), s		19.2	2.9		0.0	0.0		
Prob of Phs Call (p_c)		1.00	1.00		1.00	1.00		
Prob of Max Out (p_x)		0.00	0.90		1.00	0.00		
Left-Turn Movement Data								
Assigned Mvmt			3		5	1		
Mvmt Sat Flow, veh/h			883		3619	0		
Through Movement Data								
Assigned Mvmt		2	8			6		
Mvmt Sat Flow, veh/h		3800	1658			3800		
Right-Turn Movement Data								
Assigned Mvmt		12	18			16		
Mvmt Sat Flow, veh/h		0	1030			3220		
Left Lane Group Data								
Assigned Mvmt	0	0	3	0	5	1	0	0
Lane Assignment			L+T		L (Prot)			

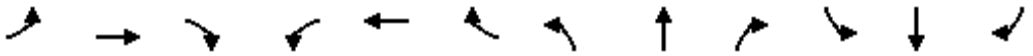
Lanes in Grp	0	0	1	0	2	0	0	0
Grp Vol (v), veh/h	0	0	473	0	872	0	0	0
Grp Sat Flow (s), veh/h/ln	0	0	1856	0	1810	0	0	0
Q Serve Time (g_s), s	0.0	0.0	29.3	0.0	27.5	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	29.3	0.0	27.5	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	44.8	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	0.00	0.48	0.00	1.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	529	0	829	0	0	0
V/C Ratio (X)	0.00	0.00	0.89	0.00	1.05	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	0	580	0	829	0	0	0
Upstream Filter (I)	0.00	0.00	1.00	0.00	0.41	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	41.1	0.0	46.3	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	15.4	0.0	35.1	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	56.5	0.0	81.4	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	13.3	0.0	12.3	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	2.3	0.0	4.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	0.00	1.00	0.00	1.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	15.5	0.0	16.3	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.37	0.00	2.72	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	10.7	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	8	0	0	6	0	0
Lane Assignment		T				T		
Lanes in Grp	0	2	0	0	0	2	0	0
Grp Vol (v), veh/h	0	1897	0	0	0	1365	0	0
Grp Sat Flow (s), veh/h/ln	0	1900	0	0	0	1900	0	0
Q Serve Time (g_s), s	0.0	43.1	0.0	0.0	0.0	41.6	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	43.1	0.0	0.0	0.0	41.6	0.0	0.0
Lane Grp Cap (c), veh/h	0	2431	0	0	0	1418	0	0
V/C Ratio (X)	0.00	0.78	0.00	0.00	0.00	0.96	0.00	0.00
Avail Cap (c_a), veh/h	0	2431	0	0	0	1418	0	0
Upstream Filter (I)	0.00	0.41	0.00	0.00	0.00	0.77	0.00	0.00
Uniform Delay (d1), s/veh	0.0	15.5	0.0	0.0	0.0	29.4	0.0	0.0
Incr Delay (d2), s/veh	0.0	1.1	0.0	0.0	0.0	13.8	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	16.6	0.0	0.0	0.0	43.2	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	17.3	0.0	0.0	0.0	16.9	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.4	0.0	0.0	0.0	2.7	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	17.6	0.0	0.0	0.0	19.7	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.81	0.00	0.00	0.00	0.52	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	18	0	0	16	0	0
Lane Assignment			T+R			R		
Lanes in Grp	0	0	1	0	0	2	0	0
Grp Vol (v), veh/h	0	0	398	0	0	809	0	0
Grp Sat Flow (s), veh/h/ln	0	0	1715	0	0	1610	0	0
Q Serve Time (g_s), s	0.0	0.0	25.9	0.0	0.0	22.8	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	25.9	0.0	0.0	22.8	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.00	0.60	0.00	0.00	1.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	489	0	0	1202	0	0
V/C Ratio (X)	0.00	0.00	0.81	0.00	0.00	0.67	0.00	0.00
Avail Cap (c_a), veh/h	0	0	536	0	0	1202	0	0
Upstream Filter (I)	0.00	0.00	1.00	0.00	0.00	0.77	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	39.9	0.0	0.0	24.7	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	8.7	0.0	0.0	2.3	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	48.6	0.0	0.0	27.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	10.8	0.0	0.0	7.9	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	1.2	0.0	0.0	0.4	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	12.0	0.0	0.0	8.3	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.29	0.00	0.00	0.22	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	39.5
HCM 6th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	449	85	660	0	0	0	0	1548	509	322	999	0
Future Volume (veh/h)	449	85	660	0	0	0	0	1548	509	322	999	0
Number	7	4	14				5	2	12	1	6	16
Initial Q, veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1800	1900	1900				0	1900	1900	1900	1900	0
Adj Flow Rate, veh/h	473	89	695				0	1629	536	339	1052	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0				0	0	0	0	0	0
Opposing Right Turn Influence	Yes						No			Yes		
Cap, veh/h	554	104	581				0	1967	556	358	2076	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	2.00	2.00	2.00	1.00	1.00
Prop Arrive On Green	0.36	0.36	0.36				0.00	0.69	0.69	0.40	0.57	0.00
Unsig. Movement Delay												
Ln Grp Delay, s/veh	52.0	0.0	149.2				0.0	22.9	51.3	46.8	17.9	0.0
Ln Grp LOS	D	A	F				A	C	D	D	B	A
Approach Vol, veh/h		1257						2165			1391	
Approach Delay, s/veh		105.8						29.9			25.0	
Approach LOS		F						C			C	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Case No	2.0	7.0		12.0		4.0		
Phs Duration (G+Y+Rc), s	32.2	52.8		55.0		85.0		
Change Period (Y+Rc), s	4.5	4.5		4.5		4.5		
Max Green (Gmax), s	30.5	45.5		50.5		80.5		
Max Allow Headway (MAH), s	3.8	4.9		5.5		5.2		
Max Q Clear (g_c+I1), s	27.3	45.2		52.5		26.5		
Green Ext Time (g_e), s	0.3	0.3		0.0		10.2		
Prob of Phs Call (p_c)	1.00	1.00		1.00		1.00		
Prob of Max Out (p_x)	1.00	0.00		1.00		0.00		

Left-Turn Movement Data								
Assigned Mvmt	1	5		7				
Mvmt Sat Flow, veh/h	1810	0		1535				

Through Movement Data								
Assigned Mvmt		2		4		6		
Mvmt Sat Flow, veh/h		5700		289		3705		

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		
Mvmt Sat Flow, veh/h		1610		1610		0		

Left Lane Group Data								
Assigned Mvmt	1	5	0	7	0	0	0	0
Lane Assignment	L (Prot)			L+T				

Lanes in Grp	1	0	0	1	0	0	0	0
Grp Vol (v), veh/h	339	0	0	562	0	0	0	0
Grp Sat Flow (s), veh/h/ln	1810	0	0	1823	0	0	0	0
Q Serve Time (g_s), s	25.3	0.0	0.0	39.9	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	25.3	0.0	0.0	39.9	0.0	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	48.3	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	0.84	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	358	0	0	658	0	0	0	0
V/C Ratio (X)	0.95	0.00	0.00	0.85	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	394	0	0	658	0	0	0	0
Upstream Filter (I)	0.09	0.00	0.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	41.6	0.0	0.0	41.4	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	5.2	0.0	0.0	10.7	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	46.8	0.0	0.0	52.0	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	9.6	0.0	0.0	17.8	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.5	0.0	0.0	1.9	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00
%ile Back of Q (50%), veh/ln	10.1	0.0	0.0	19.8	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	1.69	0.00	0.00	0.59	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	0
Lane Assignment		T				T		
Lanes in Grp	0	3	0	0	0	2	0	0
Grp Vol (v), veh/h	0	1629	0	0	0	1052	0	0
Grp Sat Flow (s), veh/h/ln	0	1900	0	0	0	1805	0	0
Q Serve Time (g_s), s	0.0	28.9	0.0	0.0	0.0	24.5	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	28.9	0.0	0.0	0.0	24.5	0.0	0.0
Lane Grp Cap (c), veh/h	0	1967	0	0	0	2076	0	0
V/C Ratio (X)	0.00	0.83	0.00	0.00	0.00	0.51	0.00	0.00
Avail Cap (c_a), veh/h	0	1967	0	0	0	2076	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	0.09	0.00	0.00
Uniform Delay (d1), s/veh	0.0	18.7	0.0	0.0	0.0	17.8	0.0	0.0
Incr Delay (d2), s/veh	0.0	4.2	0.0	0.0	0.0	0.1	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	22.9	0.0	0.0	0.0	17.9	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	7.9	0.0	0.0	0.0	10.1	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	8.7	0.0	0.0	0.0	10.1	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.16	0.00	0.00	0.00	0.47	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	0
Lane Assignment		R		T+R				
Lanes in Grp	0	1	0	1	0	0	0	0
Grp Vol (v), veh/h	0	536	0	695	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	1610	0	1610	0	0	0	0
Q Serve Time (g_s), s	0.0	43.2	0.0	50.5	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	43.2	0.0	50.5	0.0	0.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	556	0	581	0	0	0	0
V/C Ratio (X)	0.00	0.96	0.00	1.20	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	556	0	581	0	0	0	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	20.9	0.0	44.8	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	30.4	0.0	104.4	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	51.3	0.0	149.2	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	10.1	0.0	20.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	4.7	0.0	16.9	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	14.8	0.0	36.8	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.28	0.00	1.09	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	28.5	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	48.3
HCM 6th LOS	D

Lanes in Grp	1	0	1	0	1	0	2	0
Grp Vol (v), veh/h	354	0	106	0	109	0	666	0
Grp Sat Flow (s), veh/h/ln	1810	0	1714	0	1714	0	1619	0
Q Serve Time (g_s), s	23.5	0.0	7.2	0.0	7.5	0.0	24.5	0.0
Cycle Q Clear Time (g_c), s	23.5	0.0	7.2	0.0	7.5	0.0	24.5	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	354	0	128	0	134	0	661	0
V/C Ratio (X)	1.00	0.00	0.83	0.00	0.81	0.00	1.01	0.00
Avail Cap (c_a), veh/h	354	0	161	0	220	0	661	0
Upstream Filter (I)	1.00	0.00	1.00	0.00	1.00	0.00	0.36	0.00
Uniform Delay (d1), s/veh	48.2	0.0	50.3	0.0	54.5	0.0	35.5	0.0
Incr Delay (d2), s/veh	47.5	0.0	23.7	0.0	11.2	0.0	22.8	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	95.8	0.0	74.0	0.0	65.7	0.0	58.3	0.0
1st-Term Q (Q1), veh/ln	10.5	0.0	2.9	0.0	3.2	0.0	7.8	0.0
2nd-Term Q (Q2), veh/ln	4.7	0.0	0.8	0.0	0.4	0.0	2.1	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
%ile Back of Q (50%), veh/ln	15.2	0.0	3.7	0.0	3.7	0.0	9.9	0.0
%ile Storage Ratio (RQ%)	1.97	0.00	0.04	0.00	0.32	0.00	0.95	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0

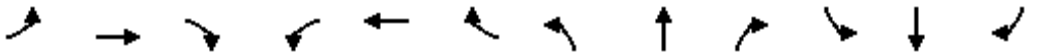
Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T				T
Lanes in Grp	0	2	0	1	0	0	0	2
Grp Vol (v), veh/h	0	645	0	560	0	0	0	1020
Grp Sat Flow (s), veh/h/ln	0	1900	0	1900	0	0	0	1900
Q Serve Time (g_s), s	0.0	20.0	0.0	18.5	0.0	0.0	0.0	31.6
Cycle Q Clear Time (g_c), s	0.0	20.0	0.0	18.5	0.0	0.0	0.0	31.6
Lane Grp Cap (c), veh/h	0	709	0	746	0	0	0	1001
V/C Ratio (X)	0.00	0.91	0.00	0.75	0.00	0.00	0.00	1.02
Avail Cap (c_a), veh/h	0	709	0	746	0	0	0	1001
Upstream Filter (I)	0.00	1.00	0.00	0.36	0.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	47.8	0.0	9.8	0.0	0.0	0.0	28.4
Incr Delay (d2), s/veh	0.0	17.7	0.0	1.6	0.0	0.0	0.0	33.4
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	65.5	0.0	11.4	0.0	0.0	0.0	61.8
1st-Term Q (Q1), veh/ln	0.0	9.4	0.0	3.8	0.0	0.0	0.0	10.6
2nd-Term Q (Q2), veh/ln	0.0	1.7	0.0	0.3	0.0	0.0	0.0	4.6

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	11.2	0.0	4.2	0.0	0.0	0.0	15.2
%ile Storage Ratio (RQ%)	0.00	0.99	0.00	0.17	0.00	0.00	0.00	0.17
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.8
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		T+R		T+R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	80	0	514	0	256	0	559
Grp Sat Flow (s), veh/h/ln	0	1610	0	1741	0	1640	0	1610
Q Serve Time (g_s), s	0.0	4.6	0.0	26.2	0.0	15.4	0.0	31.6
Cycle Q Clear Time (g_c), s	0.0	4.6	0.0	26.2	0.0	15.4	0.0	31.6
Prot RT Sat Flow (s_R), veh/h/ln	0.0	1610.2	0.0	0.0	0.0	0.0	0.0	1610.2
Prot RT Eff Green (g_R), s	0.0	9.0	0.0	0.0	0.0	0.0	0.0	23.5
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	0.51	0.00	0.88	0.00	1.00
Lane Grp Cap (c), veh/h	0	421	0	684	0	499	0	739
V/C Ratio (X)	0.00	0.19	0.00	0.75	0.00	0.51	0.00	0.76
Avail Cap (c_a), veh/h	0	421	0	684	0	499	0	739
Upstream Filter (I)	0.00	1.00	0.00	0.36	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	34.4	0.0	20.5	0.0	34.4	0.0	19.0
Incr Delay (d2), s/veh	0.0	1.0	0.0	1.7	0.0	3.7	0.0	4.5
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	35.4	0.0	22.2	0.0	38.1	0.0	23.4
1st-Term Q (Q1), veh/ln	0.0	1.8	0.0	8.7	0.0	6.2	0.0	10.6
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.3	0.0	0.5	0.0	0.9
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	1.9	0.0	9.0	0.0	6.7	0.0	11.5
%ile Storage Ratio (RQ%)	0.00	0.69	0.00	0.37	0.00	0.86	0.00	0.13
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	48.6
HCM 6th LOS	D

BUILD OUT YEAR PLUS PROJECT CONDITIONS



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	370	4	210	643	600	0	0	629	811
Future Volume (veh/h)	0	0	0	370	4	210	643	600	0	0	629	811
Number				3	8	18	5	2	12	1	6	16
Initial Q, veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln				1800	1900	1900	1900	1900	0	0	1900	1900
Adj Flow Rate, veh/h				389	4	221	677	632	0	0	662	854
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence				Yes			Yes			No		
Cap, veh/h				433	4	389	738	2498	0	0	2326	722
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	2.00	1.00
Prop Arrive On Green				0.24	0.24	0.24	0.42	1.00	0.00	0.00	0.90	0.45
Unsig. Movement Delay												
Ln Grp Delay, s/veh				62.9	0.0	41.5	38.4	0.1	0.0	0.0	3.8	129.1
Ln Grp LOS				E	A	D	D	A	A	A	A	F
Approach Vol, veh/h					614			1309			1516	
Approach Delay, s/veh					55.2			19.9			74.4	
Approach LOS					E			B			E	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2	8		5	6		
Case No		4.0	11.0		2.0	7.0		
Phs Duration (G+Y+Rc), s		87.0	33.0		29.2	57.8		
Change Period (Y+Rc), s		4.5	4.5		4.5	4.5		
Max Green (Gmax), s		79.9	31.1		26.9	48.5		
Max Allow Headway (MAH), s		5.2	4.9		3.8	4.5		
Max Q Clear (g_c+I1), s		2.0	27.2		23.8	55.8		
Green Ext Time (g_e), s		5.1	1.2		0.9	0.0		
Prob of Phs Call (p_c)		1.00	1.00		1.00	1.00		
Prob of Max Out (p_x)		0.00	1.00		1.00	0.00		
Left-Turn Movement Data								
Assigned Mvmt			3		5	1		
Mvmt Sat Flow, veh/h			1792		3510	0		
Through Movement Data								
Assigned Mvmt		2	8			6		
Mvmt Sat Flow, veh/h		3705	18			5358		
Right-Turn Movement Data								
Assigned Mvmt		12	18			16		
Mvmt Sat Flow, veh/h		0	1610			1610		
Left Lane Group Data								
Assigned Mvmt	0	0	3	0	5	1	0	0
Lane Assignment			L+T		L (Prot)			

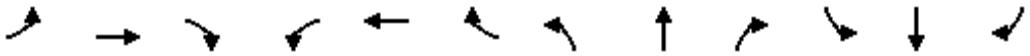
Lanes in Grp	0	0	1	0	2	0	0	0
Grp Vol (v), veh/h	0	0	393	0	677	0	0	0
Grp Sat Flow (s), veh/h/ln	0	0	1810	0	1755	0	0	0
Q Serve Time (g_s), s	0.0	0.0	25.2	0.0	21.8	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	25.2	0.0	21.8	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	53.8	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	0.00	0.99	0.00	1.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	437	0	738	0	0	0
V/C Ratio (X)	0.00	0.00	0.90	0.00	0.92	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	0	477	0	802	0	0	0
Upstream Filter (I)	0.00	0.00	1.00	0.00	0.25	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	44.1	0.0	33.8	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	18.8	0.0	4.6	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	62.9	0.0	38.4	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	11.2	0.0	7.5	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	2.3	0.0	0.5	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	0.00	1.00	0.00	1.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	13.5	0.0	7.9	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.28	0.00	0.74	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	8	0	0	6	0	0
Lane Assignment		T				T		
Lanes in Grp	0	2	0	0	0	3	0	0
Grp Vol (v), veh/h	0	632	0	0	0	662	0	0
Grp Sat Flow (s), veh/h/ln	0	1805	0	0	0	1729	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	2.1	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	2.1	0.0	0.0
Lane Grp Cap (c), veh/h	0	2498	0	0	0	2326	0	0
V/C Ratio (X)	0.00	0.25	0.00	0.00	0.00	0.28	0.00	0.00
Avail Cap (c_a), veh/h	0	2498	0	0	0	2326	0	0
Upstream Filter (I)	0.00	0.25	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	3.5	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.1	0.0	0.0	0.0	0.3	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.1	0.0	0.0	0.0	3.8	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	18	0	0	16	0	0
Lane Assignment			R			R		
Lanes in Grp	0	0	1	0	0	1	0	0
Grp Vol (v), veh/h	0	0	221	0	0	854	0	0
Grp Sat Flow (s), veh/h/ln	0	0	1610	0	0	1610	0	0
Q Serve Time (g_s), s	0.0	0.0	14.5	0.0	0.0	53.8	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	14.5	0.0	0.0	53.8	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	389	0	0	722	0	0
V/C Ratio (X)	0.00	0.00	0.57	0.00	0.00	1.18	0.00	0.00
Avail Cap (c_a), veh/h	0	0	424	0	0	722	0	0
Upstream Filter (I)	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	40.0	0.0	0.0	33.1	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	1.5	0.0	0.0	96.1	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	41.5	0.0	0.0	129.1	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	5.7	0.0	0.0	20.3	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.2	0.0	0.0	19.3	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	5.9	0.0	0.0	39.5	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.12	0.00	0.00	0.85	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	33.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	50.2
HCM 6th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	634	9	559	0	0	0	0	762	352	107	665	0
Future Volume (veh/h)	634	9	559	0	0	0	0	762	352	107	665	0
Number	7	4	14				5	2	12	1	6	16
Initial Q, veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1800	1900	1900				0	1900	1900	1900	1900	0
Adj Flow Rate, veh/h	667	9	588				0	802	371	113	700	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0				0	0	0	0	0	0
Opposing Right Turn Influence	Yes						No			Yes		
Cap, veh/h	619	8	545				0	865	268	170	896	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	2.00	2.00	2.00	2.00	1.00
Prop Arrive On Green	0.69	0.69	0.68				0.00	0.33	0.33	0.10	0.50	0.00
Unsig. Movement Delay												
Ln Grp Delay, s/veh	69.1	0.0	0.0				0.0	56.7	233.7	62.5	34.0	0.0
Ln Grp LOS	F	A	A				A	E	F	E	C	A
Approach Vol, veh/h		1264						1173			813	
Approach Delay, s/veh		69.1						112.7			38.0	
Approach LOS		E						F			D	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Case No	2.0	7.0		12.0		4.0		
Phs Duration (G+Y+Rc), s	9.8	24.0		86.2		33.8		
Change Period (Y+Rc), s	4.5	4.5		4.5		4.5		
Max Green (Gmax), s	5.3	19.5		81.7		29.3		
Max Allow Headway (MAH), s	3.7	4.6		5.4		4.9		
Max Q Clear (g_c+I1), s	5.7	22.0		84.2		21.1		
Green Ext Time (g_e), s	0.0	0.0		0.0		2.7		
Prob of Phs Call (p_c)	0.98	1.00		1.00		1.00		
Prob of Max Out (p_x)	1.00	0.00		1.00		0.00		

Left-Turn Movement Data								
Assigned Mvmt	1	5		7				
Mvmt Sat Flow, veh/h	3510	0		903				

Through Movement Data								
Assigned Mvmt		2		4		6		
Mvmt Sat Flow, veh/h		5358		12		3705		

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		
Mvmt Sat Flow, veh/h		1610		796		0		

Left Lane Group Data								
Assigned Mvmt	1	5	0	7	0	0	0	0
Lane Assignment	L (Prot)			L+T+R				

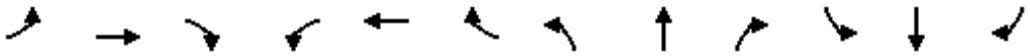
Lanes in Grp	2	0	0	1	0	0	0	0
Grp Vol (v), veh/h	113	0	0	1264	0	0	0	0
Grp Sat Flow (s), veh/h/ln	1755	0	0	1712	0	0	0	0
Q Serve Time (g_s), s	3.7	0.0	0.0	82.2	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	3.7	0.0	0.0	82.2	0.0	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	20.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	0.53	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	170	0	0	1172	0	0	0	0
V/C Ratio (X)	0.67	0.00	0.00	1.08	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	170	0	0	1172	0	0	0	0
Upstream Filter (I)	0.97	0.00	0.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	53.3	0.0	0.0	19.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	9.2	0.0	0.0	50.0	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	62.5	0.0	0.0	69.1	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	1.6	0.0	0.0	28.5	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.2	0.0	0.0	16.3	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00
%ile Back of Q (50%), veh/ln	1.8	0.0	0.0	44.8	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.17	0.00	0.00	0.77	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	22.9	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	0
Lane Assignment		T				T		
Lanes in Grp	0	3	0	0	0	2	0	0
Grp Vol (v), veh/h	0	802	0	0	0	700	0	0
Grp Sat Flow (s), veh/h/ln	0	1729	0	0	0	1805	0	0
Q Serve Time (g_s), s	0.0	17.9	0.0	0.0	0.0	19.1	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	17.9	0.0	0.0	0.0	19.1	0.0	0.0
Lane Grp Cap (c), veh/h	0	865	0	0	0	896	0	0
V/C Ratio (X)	0.00	0.93	0.00	0.00	0.00	0.78	0.00	0.00
Avail Cap (c_a), veh/h	0	865	0	0	0	896	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	0.97	0.00	0.00
Uniform Delay (d1), s/veh	0.0	39.3	0.0	0.0	0.0	27.5	0.0	0.0
Incr Delay (d2), s/veh	0.0	17.4	0.0	0.0	0.0	6.5	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	56.7	0.0	0.0	0.0	34.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	5.9	0.0	0.0	0.0	5.8	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	1.4	0.0	0.0	0.0	0.8	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	7.3	0.0	0.0	0.0	6.6	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.24	0.00	0.00	0.00	0.62	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	0
Lane Assignment		R						
Lanes in Grp	0	1	0	0	0	0	0	0
Grp Vol (v), veh/h	0	371	0	0	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	1610	0	0	0	0	0	0
Q Serve Time (g_s), s	0.0	20.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	20.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	0.47	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	268	0	0	0	0	0	0
V/C Ratio (X)	0.00	1.38	0.00	0.00	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	268	0	0	0	0	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	40.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	193.7	0.0	0.0	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	233.7	0.0	0.0	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	6.1	0.0	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	14.4	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	20.5	0.0	0.0	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.66	0.00	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	25.7	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	77.0
HCM 6th LOS	E



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	64	754	143	469	809	165	113	393	478	226	505	82
Future Volume (veh/h)	64	754	143	469	809	165	113	393	478	226	505	82
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1800	1900	1900	1800	1900	1900	1800	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	67	794	151	494	852	174	119	414	503	238	532	86
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	93	770	146	492	1456	297	143	637	277	247	713	115
HCM Platoon Ratio	1.00	1.00	1.00	1.33	1.33	1.33	1.33	1.33	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.05	0.25	0.25	0.38	0.65	0.64	0.11	0.23	0.17	0.14	0.23	0.22
Unsig. Movement Delay												
Ln Grp Delay, s/veh	61.3	91.1	91.3	71.2	13.8	13.9	78.4	43.8	426.8	94.5	50.9	51.2
Ln Grp LOS	E	F	F	F	B	B	E	D	F	F	D	D
Approach Vol, veh/h		1012			1520			1036			856	
Approach Delay, s/veh		89.2			32.5			233.8			63.1	
Approach LOS		F			C			F			E	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Case No	2.0	3.0	2.0	4.0	2.0	4.0	2.0	4.0
Phs Duration (G+Y+Rc), s	19.0	23.4	35.6	32.0	13.2	29.2	10.0	57.6
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green (Gmax), s	14.5	18.9	31.1	27.5	8.7	24.7	9.5	49.1
Max Allow Headway (MAH), s	3.8	4.6	3.8	5.3	3.8	5.3	3.8	5.3
Max Q Clear (g_c+I1), s	16.4	20.9	33.6	30.0	9.5	19.6	6.2	19.8
Green Ext Time (g_e), s	0.0	0.0	0.0	0.0	0.0	1.7	0.0	8.0
Prob of Phs Call (p_c)	1.00	1.00	1.00	1.00	0.97	1.00	0.87	1.00
Prob of Max Out (p_x)	1.00	0.00	1.00	1.00	1.00	0.00	1.00	0.09

Left-Turn Movement Data								
Assigned Mvmt	1		3		5		7	
Mvmt Sat Flow, veh/h	1810		1714		1714		1714	

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		3610		3026		3113		2986

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1610		575		501		610

Left Lane Group Data								
Assigned Mvmt	1	0	3	0	5	0	7	0
Lane Assignment	L (Prot)		L (Prot)		L (Prot)		L (Prot)	

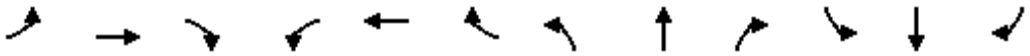
Lanes in Grp	1	0	1	0	1	0	1	0
Grp Vol (v), veh/h	238	0	494	0	119	0	67	0
Grp Sat Flow (s), veh/h/ln	1810	0	1714	0	1714	0	1714	0
Q Serve Time (g_s), s	14.4	0.0	31.6	0.0	7.5	0.0	4.2	0.0
Cycle Q Clear Time (g_c), s	14.4	0.0	31.6	0.0	7.5	0.0	4.2	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	247	0	492	0	143	0	93	0
V/C Ratio (X)	0.96	0.00	1.00	0.00	0.83	0.00	0.72	0.00
Avail Cap (c_a), veh/h	247	0	492	0	143	0	156	0
Upstream Filter (I)	1.00	0.00	0.81	0.00	0.94	0.00	1.00	0.00
Uniform Delay (d1), s/veh	47.2	0.0	34.0	0.0	48.1	0.0	51.2	0.0
Incr Delay (d2), s/veh	47.3	0.0	37.3	0.0	30.3	0.0	10.1	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	94.5	0.0	71.2	0.0	78.4	0.0	61.3	0.0
1st-Term Q (Q1), veh/ln	6.4	0.0	12.0	0.0	3.1	0.0	1.8	0.0
2nd-Term Q (Q2), veh/ln	3.2	0.0	5.1	0.0	1.2	0.0	0.3	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
%ile Back of Q (50%), veh/ln	9.7	0.0	17.1	0.0	4.3	0.0	2.1	0.0
%ile Storage Ratio (RQ%)	0.15	0.00	0.16	0.00	0.22	0.00	0.03	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	2	0	1	0	1	0	1
Grp Vol (v), veh/h	0	414	0	474	0	308	0	515
Grp Sat Flow (s), veh/h/ln	0	1805	0	1805	0	1805	0	1805
Q Serve Time (g_s), s	0.0	11.4	0.0	28.0	0.0	17.4	0.0	17.8
Cycle Q Clear Time (g_c), s	0.0	11.4	0.0	28.0	0.0	17.4	0.0	17.8
Lane Grp Cap (c), veh/h	0	637	0	459	0	414	0	880
V/C Ratio (X)	0.00	0.65	0.00	1.03	0.00	0.74	0.00	0.59
Avail Cap (c_a), veh/h	0	637	0	459	0	414	0	880
Upstream Filter (I)	0.00	0.94	0.00	1.00	0.00	1.00	0.00	0.81
Uniform Delay (d1), s/veh	0.0	39.0	0.0	41.0	0.0	39.4	0.0	13.0
Incr Delay (d2), s/veh	0.0	4.8	0.0	50.1	0.0	11.5	0.0	0.8
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	43.8	0.0	91.1	0.0	50.9	0.0	13.8
1st-Term Q (Q1), veh/ln	0.0	4.8	0.0	12.3	0.0	7.7	0.0	5.7
2nd-Term Q (Q2), veh/ln	0.0	0.4	0.0	6.4	0.0	1.3	0.0	0.2

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	5.2	0.0	18.6	0.0	9.0	0.0	5.9
%ile Storage Ratio (RQ%)	0.00	0.26	0.00	0.25	0.00	0.14	0.00	0.06
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	3.5	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		T+R		T+R		T+R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	503	0	471	0	310	0	511
Grp Sat Flow (s), veh/h/ln	0	1610	0	1796	0	1810	0	1790
Q Serve Time (g_s), s	0.0	18.9	0.0	28.0	0.0	17.6	0.0	17.8
Cycle Q Clear Time (g_c), s	0.0	18.9	0.0	28.0	0.0	17.6	0.0	17.8
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	0.32	0.00	0.28	0.00	0.34
Lane Grp Cap (c), veh/h	0	277	0	457	0	415	0	873
V/C Ratio (X)	0.00	1.82	0.00	1.03	0.00	0.75	0.00	0.59
Avail Cap (c_a), veh/h	0	277	0	457	0	415	0	873
Upstream Filter (I)	0.00	0.94	0.00	1.00	0.00	1.00	0.00	0.81
Uniform Delay (d1), s/veh	0.0	45.5	0.0	41.1	0.0	39.5	0.0	13.1
Incr Delay (d2), s/veh	0.0	381.3	0.0	50.2	0.0	11.7	0.0	0.8
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	426.8	0.0	91.3	0.0	51.2	0.0	13.9
1st-Term Q (Q1), veh/ln	0.0	7.5	0.0	12.2	0.0	7.8	0.0	5.7
2nd-Term Q (Q2), veh/ln	0.0	29.3	0.0	6.4	0.0	1.3	0.0	0.2
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	36.8	0.0	18.6	0.0	9.1	0.0	5.9
%ile Storage Ratio (RQ%)	0.00	1.85	0.00	0.25	0.00	0.14	0.00	0.06
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	56.6	0.0	3.5	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.5	0.0	0.3	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	98.5
HCM 6th LOS	F



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	150	3	327	50	50	423	198	478	6	19	901	250
Future Volume (veh/h)	150	3	327	50	50	423	198	478	6	19	901	250
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1700	1900	1900	1800	1900	1900	1800	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	158	3	0	53	53	445	208	503	6	20	948	263
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	209	604		211	193	303	250	1905	23	50	1127	312
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.07	0.32	0.00	0.21	0.21	0.20	0.15	0.52	0.52	0.03	0.40	0.40
Unsig. Movement Delay												
Ln Grp Delay, s/veh	55.7	21.0	0.0	30.4	0.0	264.4	56.3	12.6	12.6	45.0	28.9	29.3
Ln Grp LOS	E	C		C	A	F	E	B	B	D	C	C
Approach Vol, veh/h		161			551			717			1231	
Approach Delay, s/veh		55.0			219.4			25.3			29.3	
Approach LOS		E			F			C			C	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6	7	8
Case No	2.0	4.0		3.0	2.0	4.0	2.0	8.3
Phs Duration (G+Y+Rc), s	6.5	50.9		32.6	17.1	40.3	10.0	22.6
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5	4.5	4.5
Max Green (Gmax), s	5.0	43.4		28.1	13.5	34.9	5.5	18.1
Max Allow Headway (MAH), s	3.8	5.2		5.2	3.8	5.3	3.8	5.5
Max Q Clear (g_c+I1), s	3.0	8.9		2.1	12.6	29.7	6.4	20.6
Green Ext Time (g_e), s	0.0	3.3		0.0	0.1	3.3	0.0	0.0
Prob of Phs Call (p_c)	0.39	1.00		1.00	0.99	1.00	0.98	1.00
Prob of Max Out (p_x)	1.00	0.00		0.00	1.00	0.00	1.00	1.00

Left-Turn Movement Data								
Assigned Mvmt	1				5		7	3
Mvmt Sat Flow, veh/h	1810				1714		3141	730

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		3654		1900		2793		934

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		44		1610		773		1465

Left Lane Group Data								
Assigned Mvmt	1	0	0	0	5	0	7	3
Lane Assignment	L (Prot)				L (Prot)		L (Prot)	L+T

Lanes in Grp	1	0	0	0	1	0	2	1
Grp Vol (v), veh/h	20	0	0	0	208	0	158	106
Grp Sat Flow (s), veh/h/ln	1810	0	0	0	1714	0	1570	1664
Q Serve Time (g_s), s	1.0	0.0	0.0	0.0	10.6	0.0	4.4	2.6
Cycle Q Clear Time (g_c), s	1.0	0.0	0.0	0.0	10.6	0.0	4.4	4.6
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	1436
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	18.6
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	18.6
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	0.00	1.00	0.00	1.00	0.50
Lane Grp Cap (c), veh/h	50	0	0	0	250	0	209	404
V/C Ratio (X)	0.40	0.00	0.00	0.00	0.83	0.00	0.75	0.26
Avail Cap (c_a), veh/h	111	0	0	0	267	0	209	404
Upstream Filter (I)	0.38	0.00	0.00	0.00	1.00	0.00	1.00	1.00
Uniform Delay (d1), s/veh	43.0	0.0	0.0	0.0	37.4	0.0	41.3	30.1
Incr Delay (d2), s/veh	2.0	0.0	0.0	0.0	18.9	0.0	14.4	0.3
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	45.0	0.0	0.0	0.0	56.3	0.0	55.7	30.4
1st-Term Q (Q1), veh/ln	0.4	0.0	0.0	0.0	4.4	0.0	1.7	1.9
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	1.3	0.0	0.4	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	0.00	1.00	0.00	1.00	1.00
%ile Back of Q (50%), veh/ln	0.5	0.0	0.0	0.0	5.7	0.0	2.1	1.9
%ile Storage Ratio (RQ%)	0.02	0.00	0.00	0.00	0.95	0.00	0.05	0.06
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		
Lanes in Grp	0	1	0	1	0	1	0	0
Grp Vol (v), veh/h	0	248	0	3	0	612	0	0
Grp Sat Flow (s), veh/h/ln	0	1805	0	1900	0	1805	0	0
Q Serve Time (g_s), s	0.0	6.9	0.0	0.1	0.0	27.5	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	6.9	0.0	0.1	0.0	27.5	0.0	0.0
Lane Grp Cap (c), veh/h	0	941	0	604	0	728	0	0
V/C Ratio (X)	0.00	0.26	0.00	0.00	0.00	0.84	0.00	0.00
Avail Cap (c_a), veh/h	0	941	0	604	0	728	0	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	0.38	0.00	0.00
Uniform Delay (d1), s/veh	0.0	11.9	0.0	21.0	0.0	24.2	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.7	0.0	0.0	0.0	4.6	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	12.6	0.0	21.0	0.0	28.9	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	2.6	0.0	0.0	0.0	11.1	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.2	0.0	0.0	0.0	0.9	0.0	0.0

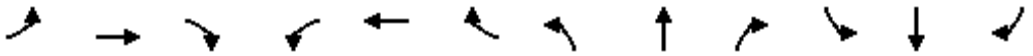
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	2.8	0.0	0.0	0.0	12.1	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.12	0.00	0.00	0.00	0.61	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R		R		T+R		T+R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	261	0	0	0	599	0	445
Grp Sat Flow (s), veh/h/ln	0	1892	0	1610	0	1761	0	1465
Q Serve Time (g_s), s	0.0	6.9	0.0	0.0	0.0	27.7	0.0	18.6
Cycle Q Clear Time (g_c), s	0.0	6.9	0.0	0.0	0.0	27.7	0.0	18.6
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.02	0.00	1.00	0.00	0.44	0.00	1.00
Lane Grp Cap (c), veh/h	0	987	0	512	0	710	0	303
V/C Ratio (X)	0.00	0.26	0.00	0.00	0.00	0.84	0.00	1.47
Avail Cap (c_a), veh/h	0	987	0	512	0	710	0	303
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	0.38	0.00	1.00
Uniform Delay (d1), s/veh	0.0	12.0	0.0	0.0	0.0	24.4	0.0	36.0
Incr Delay (d2), s/veh	0.0	0.7	0.0	0.0	0.0	4.9	0.0	228.5
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	12.6	0.0	0.0	0.0	29.3	0.0	264.4
1st-Term Q (Q1), veh/ln	0.0	2.7	0.0	0.0	0.0	11.0	0.0	6.5
2nd-Term Q (Q2), veh/ln	0.0	0.2	0.0	0.0	0.0	1.0	0.0	19.2
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	2.9	0.0	0.0	0.0	11.9	0.0	25.7
%ile Storage Ratio (RQ%)	0.00	0.13	0.00	0.00	0.00	0.60	0.00	0.75
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	35.5
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4

Intersection Summary	
HCM 6th Ctrl Delay	69.2
HCM 6th LOS	E

Notes

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	6	0	5	35	0	37	13	597	29	44	1084	17
Future Volume (veh/h)	6	0	5	35	0	37	13	597	29	44	1084	17
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1800	1900	1900	1800	0	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	6	0	5	37	0	39	14	628	31	46	1141	18
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	46	0	0	58	0	0	443	3944	194	67	4468	70
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Prop Arrive On Green	0.02	0.00	0.01	0.03	0.00	0.00	1.00	1.00	1.00	0.04	0.85	0.85
Unsig. Movement Delay												
Ln Grp Delay, s/veh	60.8	0.0	0.0	68.5	0.0	0.0	0.1	0.1	0.2	68.6	1.9	2.1
Ln Grp LOS	E	A	A	E	A	A	A	A	A	E	A	A
Approach Vol, veh/h		11			37			673			1205	
Approach Delay, s/veh		60.8			68.5			0.2			4.6	
Approach LOS		E			E			A			A	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4		6		
Case No	2.0	6.3	2.0	8.3		4.0		
Phs Duration (G+Y+Rc), s	8.5	97.5	8.0	6.0		105.9		
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5		4.5		
Max Green (Gmax), s	15.1	30.7	28.1	28.1		50.3		
Max Allow Headway (MAH), s	3.8	5.3	3.8	5.4		5.2		
Max Q Clear (g_c+I1), s	5.0	2.0	4.6	2.1		7.0		
Green Ext Time (g_e), s	0.0	4.8	0.1	0.0		10.2		
Prob of Phs Call (p_c)	0.78	1.00	0.71	0.31		1.00		
Prob of Max Out (p_x)	0.00	0.00	0.00	0.00		0.00		

Left-Turn Movement Data								
Assigned Mvmt	1	5	3	7				
Mvmt Sat Flow, veh/h	1810	492	1714	0				

Through Movement Data								
Assigned Mvmt		2		4		6		
Mvmt Sat Flow, veh/h		5064		0		5260		

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		
Mvmt Sat Flow, veh/h		249		0		83		

Left Lane Group Data								
Assigned Mvmt	1	5	3	7	0	0	0	0
Lane Assignment	L (Prot)	L	L (Prot)	L+T+R				

Lanes in Grp	1	1	1	1	0	0	0	0
Grp Vol (v), veh/h	46	14	37	11	0	0	0	0
Grp Sat Flow (s), veh/h/ln	1810	492	1714	0	0	0	0	0
Q Serve Time (g_s), s	3.0	0.0	2.6	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	3.0	0.0	2.6	0.1	0.0	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	492	0	1390	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	93.5	0.0	0.1	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	93.5	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	1.00	1.00	0.55	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	67	443	58	46	0	0	0	0
V/C Ratio (X)	0.68	0.03	0.64	0.24	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	235	443	409	374	0	0	0	0
Upstream Filter (I)	1.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	57.1	0.0	57.3	58.2	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	11.5	0.1	11.2	2.6	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	68.6	0.1	68.5	60.8	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	1.4	0.0	1.1	0.3	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.2	0.0	0.2	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00
%ile Back of Q (50%), veh/ln	1.6	0.0	1.3	0.4	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.27	0.00	0.02	0.03	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	0
Lane Assignment		T				T		
Lanes in Grp	0	2	0	0	0	2	0	0
Grp Vol (v), veh/h	0	428	0	0	0	750	0	0
Grp Sat Flow (s), veh/h/ln	0	1729	0	0	0	1729	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	5.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	5.0	0.0	0.0
Lane Grp Cap (c), veh/h	0	2693	0	0	0	2937	0	0
V/C Ratio (X)	0.00	0.16	0.00	0.00	0.00	0.26	0.00	0.00
Avail Cap (c_a), veh/h	0	2693	0	0	0	2937	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	1.7	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.1	0.0	0.0	0.0	0.2	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.1	0.0	0.0	0.0	1.9	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.0	0.0	1.1	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.11	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	0
Lane Assignment		T+R				T+R		
Lanes in Grp	0	1	0	0	0	1	0	0
Grp Vol (v), veh/h	0	231	0	0	0	409	0	0
Grp Sat Flow (s), veh/h/ln	0	1855	0	0	0	1885	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	5.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	5.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.13	0.00	0.45	0.00	0.04	0.00	0.00
Lane Grp Cap (c), veh/h	0	1445	0	0	0	1601	0	0
V/C Ratio (X)	0.00	0.16	0.00	0.00	0.00	0.26	0.00	0.00
Avail Cap (c_a), veh/h	0	1445	0	0	0	1601	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	1.7	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.2	0.0	0.0	0.0	0.4	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.2	0.0	0.0	0.0	2.1	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	1.1	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	0.2	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.1	0.0	0.0	0.0	1.3	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.01	0.00	0.00	0.00	0.13	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	4.6
HCM 6th LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	32	10	22	20	11	8	75	644	28	14	943	128
Future Volume (veh/h)	32	10	22	20	11	8	75	644	28	14	943	128
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1800	1900	1900	1800	1900	1900	1800	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	34	11	23	21	12	8	79	678	29	15	993	135
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	112	30	69	106	58	40	108	2905	124	37	2495	339
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Prop Arrive On Green	0.06	0.06	0.05	0.06	0.06	0.05	0.06	0.82	0.82	0.04	1.00	1.00
Unsig. Movement Delay												
Ln Grp Delay, s/veh	57.1	0.0	57.0	56.7	0.0	55.3	64.0	2.7	2.7	63.7	0.8	0.8
Ln Grp LOS	E	A	E	E	A	E	E	A	A	E	A	A
Approach Vol, veh/h		68			41			786			1143	
Approach Delay, s/veh		57.0			56.1			8.8			1.7	
Approach LOS		E			E			A			A	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Case No	2.0	4.0		8.0	2.0	4.0		8.0
Phs Duration (G+Y+Rc), s	6.5	102.8		10.7	11.5	97.8		10.7
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green (Gmax), s	27.0	39.5		40.0	27.0	39.5		40.0
Max Allow Headway (MAH), s	3.8	5.2		5.4	3.8	5.3		5.3
Max Q Clear (g_c+I1), s	3.0	7.0		6.0	7.4	2.0		5.7
Green Ext Time (g_e), s	0.0	4.9		0.3	0.2	9.7		0.2
Prob of Phs Call (p_c)	0.39	1.00		0.97	0.93	1.00		0.97
Prob of Max Out (p_x)	0.00	0.00		0.00	0.00	0.00		0.00

Left-Turn Movement Data								
Assigned Mvmt	1			7	5			3
Mvmt Sat Flow, veh/h	1810			1009	1714			877

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		3527		545		3193		1037

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		151		1247		434		727

Left Lane Group Data								
Assigned Mvmt	1	0	0	7	5	0	0	3
Lane Assignment	L (Prot)			L+T	L (Prot)			L+T

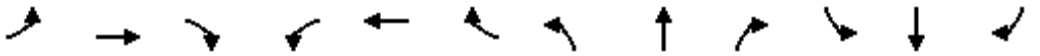
Lanes in Grp	1	0	0	1	1	0	0	1
Grp Vol (v), veh/h	15	0	0	40	79	0	0	23
Grp Sat Flow (s), veh/h/ln	1810	0	0	1296	1714	0	0	1042
Q Serve Time (g_s), s	1.0	0.0	0.0	2.7	5.4	0.0	0.0	1.6
Cycle Q Clear Time (g_c), s	1.0	0.0	0.0	4.0	5.4	0.0	0.0	3.7
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	1414	0	0	0	1396
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	6.7	0.0	0.0	0.0	6.7
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	5.4	0.0	0.0	0.0	4.6
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	2.7	0.0	0.0	0.0	1.6
Time to First Blk (g_f), s	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.2
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.2
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	0.84	1.00	0.00	0.00	0.90
Lane Grp Cap (c), veh/h	37	0	0	128	108	0	0	115
V/C Ratio (X)	0.40	0.00	0.00	0.32	0.73	0.00	0.00	0.20
Avail Cap (c_a), veh/h	415	0	0	543	393	0	0	519
Upstream Filter (I)	1.00	0.00	0.00	1.00	0.95	0.00	0.00	1.00
Uniform Delay (d1), s/veh	56.8	0.0	0.0	55.7	55.2	0.0	0.0	55.9
Incr Delay (d2), s/veh	6.9	0.0	0.0	1.4	8.8	0.0	0.0	0.9
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	63.7	0.0	0.0	57.1	64.0	0.0	0.0	56.7
1st-Term Q (Q1), veh/ln	0.4	0.0	0.0	1.2	2.3	0.0	0.0	0.7
2nd-Term Q (Q2), veh/ln	0.1	0.0	0.0	0.0	0.3	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.5	0.0	0.0	1.2	2.6	0.0	0.0	0.7
%ile Storage Ratio (RQ%)	0.06	0.00	0.00	0.15	0.03	0.00	0.00	0.02
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T				T		
Lanes in Grp	0	1	0	0	0	1	0	0
Grp Vol (v), veh/h	0	347	0	0	0	561	0	0
Grp Sat Flow (s), veh/h/ln	0	1805	0	0	0	1805	0	0
Q Serve Time (g_s), s	0.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0
Lane Grp Cap (c), veh/h	0	1487	0	0	0	1410	0	0
V/C Ratio (X)	0.00	0.23	0.00	0.00	0.00	0.40	0.00	0.00
Avail Cap (c_a), veh/h	0	1487	0	0	0	1410	0	0
Upstream Filter (I)	0.00	0.95	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	2.3	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.3	0.0	0.0	0.0	0.8	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	2.7	0.0	0.0	0.0	0.8	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	1.3	0.0	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	0.3	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	1.4	0.0	0.0	0.0	0.3	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.01	0.00	0.00	0.00	0.04	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R		T+R		T+R		T+R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	360	0	28	0	567	0	18
Grp Sat Flow (s), veh/h/ln	0	1873	0	1505	0	1822	0	1598
Q Serve Time (g_s), s	0.0	5.0	0.0	2.1	0.0	0.0	0.0	1.3
Cycle Q Clear Time (g_c), s	0.0	5.0	0.0	2.1	0.0	0.0	0.0	1.3
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.08	0.00	0.83	0.00	0.24	0.00	0.45
Lane Grp Cap (c), veh/h	0	1543	0	84	0	1424	0	89
V/C Ratio (X)	0.00	0.23	0.00	0.33	0.00	0.40	0.00	0.20
Avail Cap (c_a), veh/h	0	1543	0	508	0	1424	0	539
Upstream Filter (I)	0.00	0.95	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	2.3	0.0	54.7	0.0	0.0	0.0	54.2
Incr Delay (d2), s/veh	0.0	0.3	0.0	2.3	0.0	0.8	0.0	1.1
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	2.7	0.0	57.0	0.0	0.8	0.0	55.3
1st-Term Q (Q1), veh/ln	0.0	1.3	0.0	0.8	0.0	0.0	0.0	0.5
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.1	0.0	0.3	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	1.5	0.0	0.9	0.0	0.3	0.0	0.5
%ile Storage Ratio (RQ%)	0.00	0.01	0.00	0.11	0.00	0.04	0.00	0.02
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	7.4
HCM 6th LOS	A



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	79	212	45	218	482	165	187	342	154	139	645	112
Future Volume (veh/h)	79	212	45	218	482	165	187	342	154	139	645	112
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1800	1900	1900	1700	1900	1900	1800	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	83	223	47	229	507	174	197	360	0	146	679	118
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	117	976	303	247	717	320	245	1430		197	1307	571
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.07	0.19	0.19	0.08	0.20	0.20	0.14	0.40	0.00	0.11	0.36	0.35
Unsig. Movement Delay												
Ln Grp Delay, s/veh	45.7	24.2	24.0	51.0	26.7	25.7	44.6	14.5	0.0	37.5	18.9	16.5
Ln Grp LOS	D	C	C	D	C	C	D	B		D	B	B
Approach Vol, veh/h		353			910			557			943	
Approach Delay, s/veh		29.2			32.6			25.2			21.5	
Approach LOS		C			C			C			C	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Case No	2.0	3.0	2.0	3.0	2.0	3.0	2.0	3.0
Phs Duration (G+Y+Rc), s	11.6	31.7	9.5	17.2	14.0	29.3	8.8	17.9
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green (Gmax), s	9.5	19.5	5.0	18.0	9.5	19.5	5.0	18.0
Max Allow Headway (MAH), s	3.8	5.2	3.8	5.0	3.8	5.1	3.8	4.9
Max Q Clear (g_c+I1), s	7.5	6.7	7.1	4.6	9.8	12.3	5.3	11.2
Green Ext Time (g_e), s	0.1	1.8	0.0	1.3	0.0	2.9	0.0	2.2
Prob of Phs Call (p_c)	0.94	1.00	0.99	1.00	0.98	1.00	0.80	1.00
Prob of Max Out (p_x)	1.00	0.00	1.00	0.02	1.00	0.00	1.00	0.65

Left-Turn Movement Data								
Assigned Mvmt	1		3		5		7	
Mvmt Sat Flow, veh/h	1810		3141		1714		1714	

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		3610		5187		3610		3610

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1610		1610		1610		1610

Left Lane Group Data								
Assigned Mvmt	1	0	3	0	5	0	7	0
Lane Assignment	L (Prot)		L (Prot)		L (Prot)		L (Prot)	

Lanes in Grp	1	0	2	0	1	0	1	0
Grp Vol (v), veh/h	146	0	229	0	197	0	83	0
Grp Sat Flow (s), veh/h/ln	1810	0	1570	0	1714	0	1714	0
Q Serve Time (g_s), s	5.5	0.0	5.1	0.0	7.8	0.0	3.3	0.0
Cycle Q Clear Time (g_c), s	5.5	0.0	5.1	0.0	7.8	0.0	3.3	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	197	0	247	0	245	0	117	0
V/C Ratio (X)	0.74	0.00	0.93	0.00	0.80	0.00	0.71	0.00
Avail Cap (c_a), veh/h	259	0	247	0	245	0	135	0
Upstream Filter (I)	0.92	0.00	0.36	0.00	0.87	0.00	1.00	0.00
Uniform Delay (d1), s/veh	30.3	0.0	32.1	0.0	29.1	0.0	31.9	0.0
Incr Delay (d2), s/veh	7.3	0.0	18.9	0.0	15.5	0.0	13.7	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	37.5	0.0	51.0	0.0	44.6	0.0	45.7	0.0
1st-Term Q (Q1), veh/ln	2.3	0.0	1.9	0.0	3.1	0.0	1.3	0.0
2nd-Term Q (Q2), veh/ln	0.4	0.0	0.6	0.0	1.1	0.0	0.4	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
%ile Back of Q (50%), veh/ln	2.7	0.0	2.5	0.0	4.1	0.0	1.8	0.0
%ile Storage Ratio (RQ%)	0.26	0.00	0.25	0.00	0.61	0.00	0.44	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	2	0	3	0	2	0	2
Grp Vol (v), veh/h	0	360	0	223	0	679	0	507
Grp Sat Flow (s), veh/h/ln	0	1805	0	1729	0	1805	0	1805
Q Serve Time (g_s), s	0.0	4.7	0.0	2.6	0.0	10.3	0.0	9.2
Cycle Q Clear Time (g_c), s	0.0	4.7	0.0	2.6	0.0	10.3	0.0	9.2
Lane Grp Cap (c), veh/h	0	1430	0	976	0	1307	0	717
V/C Ratio (X)	0.00	0.25	0.00	0.23	0.00	0.52	0.00	0.71
Avail Cap (c_a), veh/h	0	1430	0	1371	0	1307	0	954
Upstream Filter (I)	0.00	0.87	0.00	1.00	0.00	0.92	0.00	0.36
Uniform Delay (d1), s/veh	0.0	14.2	0.0	24.1	0.0	17.6	0.0	26.1
Incr Delay (d2), s/veh	0.0	0.4	0.0	0.1	0.0	1.4	0.0	0.6
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	14.5	0.0	24.2	0.0	18.9	0.0	26.7
1st-Term Q (Q1), veh/ln	0.0	1.8	0.0	1.0	0.0	4.0	0.0	3.7
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	0.2	0.0	0.1

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	1.8	0.0	1.0	0.0	4.2	0.0	3.8
%ile Storage Ratio (RQ%)	0.00	0.02	0.00	0.00	0.00	0.04	0.00	0.05
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		R		R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	0	0	47	0	118	0	174
Grp Sat Flow (s), veh/h/ln	0	1610	0	1610	0	1610	0	1610
Q Serve Time (g_s), s	0.0	0.0	0.0	1.7	0.0	3.6	0.0	6.8
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	1.7	0.0	3.6	0.0	6.8
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	638	0	303	0	571	0	320
V/C Ratio (X)	0.00	0.00	0.00	0.16	0.00	0.21	0.00	0.54
Avail Cap (c_a), veh/h	0	638	0	426	0	571	0	426
Upstream Filter (I)	0.00	0.00	0.00	1.00	0.00	0.92	0.00	0.36
Uniform Delay (d1), s/veh	0.0	0.0	0.0	23.8	0.0	15.7	0.0	25.2
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.2	0.0	0.8	0.0	0.5
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	24.0	0.0	16.5	0.0	25.7
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.6	0.0	1.2	0.0	2.5
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.6	0.0	1.3	0.0	2.5
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.03
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	26.9
HCM 6th LOS	C

Notes

Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	87	88	57	391	559	101	132	599	206	85	588	182
Future Volume (veh/h)	87	88	57	391	559	101	132	599	206	85	588	182
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1800	1900	1900	1700	1900	1900	1800	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	92	93	60	412	588	106	139	631	217	89	619	192
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	128	347	207	503	749	135	183	1434	640	126	1422	432
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.07	0.16	0.15	0.16	0.25	0.24	0.11	0.40	0.40	0.07	0.36	0.35
Unsig. Movement Delay												
Ln Grp Delay, s/veh	41.9	28.1	28.5	40.8	32.4	32.7	45.0	17.4	17.0	41.9	19.0	20.1
Ln Grp LOS	D	C	C	D	C	C	D	B	B	D	B	C
Approach Vol, veh/h		245			1106			987			900	
Approach Delay, s/veh		33.4			35.6			21.2			21.6	
Approach LOS		C			D			C			C	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Case No	2.0	3.0	2.0	4.0	2.0	4.0	2.0	4.0
Phs Duration (G+Y+Rc), s	9.2	33.8	16.0	16.0	12.0	31.0	9.6	22.4
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green (Gmax), s	5.9	21.6	11.5	18.0	8.5	19.0	7.4	22.1
Max Allow Headway (MAH), s	3.8	4.9	3.8	5.4	3.8	5.3	3.8	5.3
Max Q Clear (g_c+I1), s	5.6	11.6	11.5	5.1	7.9	11.2	5.9	15.5
Green Ext Time (g_e), s	0.0	3.6	0.0	0.6	0.0	3.2	0.0	2.3
Prob of Phs Call (p_c)	0.84	1.00	1.00	1.00	0.94	1.00	0.85	1.00
Prob of Max Out (p_x)	1.00	0.00	1.00	0.01	1.00	0.00	1.00	0.80

Left-Turn Movement Data								
Assigned Mvmt	1		3		5		7	
Mvmt Sat Flow, veh/h	1810		3141		1714		1714	

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		3610		2172		3943		3056

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1610		1299		1199		550

Left Lane Group Data								
Assigned Mvmt	1	0	3	0	5	0	7	0
Lane Assignment	L (Prot)		L (Prot)		L (Prot)		L (Prot)	

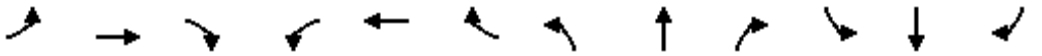
Lanes in Grp	1	0	2	0	1	0	1	0
Grp Vol (v), veh/h	89	0	412	0	139	0	92	0
Grp Sat Flow (s), veh/h/ln	1810	0	1570	0	1714	0	1714	0
Q Serve Time (g_s), s	3.6	0.0	9.5	0.0	5.9	0.0	3.9	0.0
Cycle Q Clear Time (g_c), s	3.6	0.0	9.5	0.0	5.9	0.0	3.9	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	126	0	503	0	183	0	128	0
V/C Ratio (X)	0.70	0.00	0.82	0.00	0.76	0.00	0.72	0.00
Avail Cap (c_a), veh/h	154	0	503	0	206	0	181	0
Upstream Filter (I)	0.72	0.00	1.00	0.00	0.90	0.00	1.00	0.00
Uniform Delay (d1), s/veh	34.1	0.0	30.5	0.0	32.6	0.0	33.9	0.0
Incr Delay (d2), s/veh	7.8	0.0	10.4	0.0	12.4	0.0	7.9	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	41.9	0.0	40.8	0.0	45.0	0.0	41.9	0.0
1st-Term Q (Q1), veh/ln	1.5	0.0	3.5	0.0	2.4	0.0	1.6	0.0
2nd-Term Q (Q2), veh/ln	0.3	0.0	0.7	0.0	0.6	0.0	0.3	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
%ile Back of Q (50%), veh/ln	1.8	0.0	4.2	0.0	3.0	0.0	1.9	0.0
%ile Storage Ratio (RQ%)	0.25	0.00	0.03	0.00	0.38	0.00	0.21	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	2	0	1	0	2	0	1
Grp Vol (v), veh/h	0	631	0	76	0	541	0	347
Grp Sat Flow (s), veh/h/ln	0	1805	0	1805	0	1729	0	1805
Q Serve Time (g_s), s	0.0	9.6	0.0	2.8	0.0	8.9	0.0	13.5
Cycle Q Clear Time (g_c), s	0.0	9.6	0.0	2.8	0.0	8.9	0.0	13.5
Lane Grp Cap (c), veh/h	0	1434	0	288	0	1247	0	442
V/C Ratio (X)	0.00	0.44	0.00	0.26	0.00	0.43	0.00	0.78
Avail Cap (c_a), veh/h	0	1434	0	445	0	1247	0	544
Upstream Filter (I)	0.00	0.90	0.00	1.00	0.00	0.72	0.00	1.00
Uniform Delay (d1), s/veh	0.0	16.5	0.0	27.7	0.0	18.2	0.0	26.4
Incr Delay (d2), s/veh	0.0	0.9	0.0	0.5	0.0	0.8	0.0	6.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	17.4	0.0	28.1	0.0	19.0	0.0	32.4
1st-Term Q (Q1), veh/ln	0.0	3.7	0.0	1.2	0.0	3.3	0.0	5.5
2nd-Term Q (Q2), veh/ln	0.0	0.2	0.0	0.0	0.0	0.1	0.0	0.7

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	3.9	0.0	1.2	0.0	3.5	0.0	6.3
%ile Storage Ratio (RQ%)	0.00	0.10	0.00	0.01	0.00	0.03	0.00	0.04
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		T+R		T+R		T+R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	217	0	77	0	270	0	347
Grp Sat Flow (s), veh/h/ln	0	1610	0	1666	0	1684	0	1801
Q Serve Time (g_s), s	0.0	7.0	0.0	3.1	0.0	9.2	0.0	13.5
Cycle Q Clear Time (g_c), s	0.0	7.0	0.0	3.1	0.0	9.2	0.0	13.5
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	0.78	0.00	0.71	0.00	0.31
Lane Grp Cap (c), veh/h	0	640	0	266	0	607	0	441
V/C Ratio (X)	0.00	0.34	0.00	0.29	0.00	0.44	0.00	0.79
Avail Cap (c_a), veh/h	0	640	0	411	0	607	0	543
Upstream Filter (I)	0.00	0.90	0.00	1.00	0.00	0.72	0.00	1.00
Uniform Delay (d1), s/veh	0.0	15.7	0.0	27.9	0.0	18.4	0.0	26.6
Incr Delay (d2), s/veh	0.0	1.3	0.0	0.6	0.0	1.7	0.0	6.2
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	17.0	0.0	28.5	0.0	20.1	0.0	32.7
1st-Term Q (Q1), veh/ln	0.0	2.4	0.0	1.2	0.0	3.4	0.0	5.5
2nd-Term Q (Q2), veh/ln	0.0	0.2	0.0	0.0	0.0	0.3	0.0	0.8
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	2.7	0.0	1.2	0.0	3.7	0.0	6.3
%ile Storage Ratio (RQ%)	0.00	0.07	0.00	0.01	0.00	0.04	0.00	0.04
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	27.2
HCM 6th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	327	388	413	631	900	0	0	1039	564
Future Volume (veh/h)	0	0	0	327	388	413	631	900	0	0	1039	564
Number				3	8	18	5	2	12	1	6	16
Initial Q, veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln				1800	1900	1900	1800	1900	0	0	1900	1900
Adj Flow Rate, veh/h				344	408	435	664	947	0	0	1094	594
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence				Yes			Yes			No		
Cap, veh/h				323	391	446	527	2194	0	0	972	434
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	2.00	1.00
Prop Arrive On Green				0.33	0.33	0.33	0.62	1.00	0.00	0.00	0.54	0.27
Unsig. Movement Delay												
Ln Grp Delay, s/veh				98.7	0.0	74.9	147.8	0.2	0.0	0.0	97.0	224.9
Ln Grp LOS				F	A	E	F	A	A	A	F	F
Approach Vol, veh/h					1187			1611			1688	
Approach Delay, s/veh					88.0			61.1			142.0	
Approach LOS					F			E			F	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2	8		5	6		
Case No		4.0	12.0		2.0	7.0		
Phs Duration (G+Y+Rc), s		83.0	47.0		44.0	39.0		
Change Period (Y+Rc), s		4.5	4.5		4.5	4.5		
Max Green (Gmax), s		78.5	42.5		39.5	34.5		
Max Allow Headway (MAH), s		5.2	5.4		3.8	4.8		
Max Q Clear (g_c+I1), s		2.0	45.0		42.0	37.0		
Green Ext Time (g_e), s		8.8	0.0		0.0	0.0		
Prob of Phs Call (p_c)		1.00	1.00		1.00	1.00		
Prob of Max Out (p_x)		0.00	1.00		1.00	0.00		

Left-Turn Movement Data								
Assigned Mvmt			3		5	1		
Mvmt Sat Flow, veh/h			976		1714	0		

Through Movement Data								
Assigned Mvmt		2	8			6		
Mvmt Sat Flow, veh/h		3705	1184			3705		

Right-Turn Movement Data								
Assigned Mvmt		12	18			16		
Mvmt Sat Flow, veh/h		0	1349			1610		

Left Lane Group Data								
Assigned Mvmt	0	0	3	0	5	1	0	0
Lane Assignment			L+T		L (Prot)			

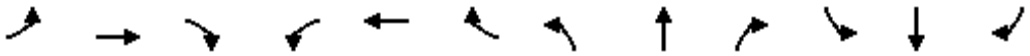
Lanes in Grp	0	0	1	0	1	0	0	0
Grp Vol (v), veh/h	0	0	653	0	664	0	0	0
Grp Sat Flow (s), veh/h/ln	0	0	1851	0	1714	0	0	0
Q Serve Time (g_s), s	0.0	0.0	43.0	0.0	40.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	43.0	0.0	40.0	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	35.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	0.00	0.53	0.00	1.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	612	0	527	0	0	0
V/C Ratio (X)	0.00	0.00	1.07	0.00	1.26	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	0	612	0	527	0	0	0
Upstream Filter (I)	0.00	0.00	1.00	0.00	0.40	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	43.5	0.0	25.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	55.2	0.0	122.8	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	98.7	0.0	147.8	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	19.5	0.0	11.1	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	9.4	0.0	18.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	0.00	1.00	0.00	1.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	28.8	0.0	29.1	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.70	0.00	4.85	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	10.1	0.0	34.1	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.3	0.0	0.3	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	8	0	0	6	0	0
Lane Assignment		T				T		
Lanes in Grp	0	2	0	0	0	2	0	0
Grp Vol (v), veh/h	0	947	0	0	0	1094	0	0
Grp Sat Flow (s), veh/h/ln	0	1805	0	0	0	1805	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	35.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	35.0	0.0	0.0
Lane Grp Cap (c), veh/h	0	2194	0	0	0	972	0	0
V/C Ratio (X)	0.00	0.43	0.00	0.00	0.00	1.13	0.00	0.00
Avail Cap (c_a), veh/h	0	2194	0	0	0	972	0	0
Upstream Filter (I)	0.00	0.40	0.00	0.00	0.00	0.75	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	30.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.2	0.0	0.0	0.0	67.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.2	0.0	0.0	0.0	97.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	11.4	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	9.0	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.1	0.0	0.0	0.0	20.5	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.53	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	30.5	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	18	0	0	16	0	0
Lane Assignment			T+R			R		
Lanes in Grp	0	0	1	0	0	1	0	0
Grp Vol (v), veh/h	0	0	534	0	0	594	0	0
Grp Sat Flow (s), veh/h/ln	0	0	1657	0	0	1610	0	0
Q Serve Time (g_s), s	0.0	0.0	41.4	0.0	0.0	35.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	41.4	0.0	0.0	35.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.00	0.81	0.00	0.00	1.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	548	0	0	434	0	0
V/C Ratio (X)	0.00	0.00	0.97	0.00	0.00	1.37	0.00	0.00
Avail Cap (c_a), veh/h	0	0	548	0	0	434	0	0
Upstream Filter (I)	0.00	0.00	1.00	0.00	0.00	0.75	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	43.0	0.0	0.0	47.5	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	32.0	0.0	0.0	177.4	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	74.9	0.0	0.0	224.9	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	16.8	0.0	0.0	13.9	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	4.9	0.0	0.0	21.4	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	21.6	0.0	0.0	35.3	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.52	0.00	0.00	0.92	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	40.1	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	98.7
HCM 6th LOS	F



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	510	17	702	0	0	0	0	1051	184	163	707	0
Future Volume (veh/h)	510	17	702	0	0	0	0	1051	184	163	707	0
Number	7	4	14				5	2	12	1	6	16
Initial Q, veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1800	1900	1900				0	1900	1900	1900	1900	0
Adj Flow Rate, veh/h	537	18	739				0	1106	194	172	744	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0				0	0	0	0	0	0
Opposing Right Turn Influence	Yes						No			Yes		
Cap, veh/h	682	23	626				0	1304	582	211	1885	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	2.00	2.00	2.00	2.00	1.00
Prop Arrive On Green	0.39	0.39	0.38				0.00	0.72	0.72	0.23	1.00	0.00
Unsig. Movement Delay												
Ln Grp Delay, s/veh	30.2	0.0	124.6				0.0	17.7	10.1	35.8	0.1	0.0
Ln Grp LOS	C	A	F				A	B	B	D	A	A
Approach Vol, veh/h		1294						1300			916	
Approach Delay, s/veh		84.1						16.6			6.8	
Approach LOS		F						B			A	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Case No	2.0	7.0		12.0		4.0		
Phs Duration (G+Y+Rc), s	14.5	36.5		39.0		51.0		
Change Period (Y+Rc), s	4.5	4.5		4.5		4.5		
Max Green (Gmax), s	10.5	31.5		34.5		46.5		
Max Allow Headway (MAH), s	3.8	5.1		5.5		5.2		
Max Q Clear (g_c+I1), s	10.1	21.8		37.0		2.0		
Green Ext Time (g_e), s	0.0	5.7		0.0		6.2		
Prob of Phs Call (p_c)	0.99	1.00		1.00		1.00		
Prob of Max Out (p_x)	1.00	0.00		1.00		0.00		

Left-Turn Movement Data												
Assigned Mvmt		1	5		7							
Mvmt Sat Flow, veh/h		1810	0		1754							

Through Movement Data												
Assigned Mvmt			2		4		6					
Mvmt Sat Flow, veh/h			3705		59		3705					

Right-Turn Movement Data												
Assigned Mvmt			12		14		16					
Mvmt Sat Flow, veh/h			1610		1610		0					

Left Lane Group Data												
Assigned Mvmt		1	5	0	7	0	0	0	0			
Lane Assignment		L (Prot)			L+T							

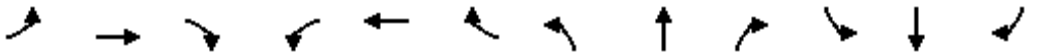
Lanes in Grp	1	0	0	1	0	0	0	0
Grp Vol (v), veh/h	172	0	0	555	0	0	0	0
Grp Sat Flow (s), veh/h/ln	1810	0	0	1812	0	0	0	0
Q Serve Time (g_s), s	8.1	0.0	0.0	24.3	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	8.1	0.0	0.0	24.3	0.0	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	32.5	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	0.97	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	211	0	0	705	0	0	0	0
V/C Ratio (X)	0.82	0.00	0.00	0.79	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	221	0	0	705	0	0	0	0
Upstream Filter (I)	0.09	0.00	0.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	33.6	0.0	0.0	24.2	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	2.2	0.0	0.0	5.9	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	35.8	0.0	0.0	30.2	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	3.1	0.0	0.0	9.9	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.1	0.0	0.0	1.2	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00
%ile Back of Q (50%), veh/ln	3.3	0.0	0.0	11.1	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.54	0.00	0.00	0.33	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	0
Lane Assignment		T				T		
Lanes in Grp	0	2	0	0	0	2	0	0
Grp Vol (v), veh/h	0	1106	0	0	0	744	0	0
Grp Sat Flow (s), veh/h/ln	0	1805	0	0	0	1805	0	0
Q Serve Time (g_s), s	0.0	19.8	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	19.8	0.0	0.0	0.0	0.0	0.0	0.0
Lane Grp Cap (c), veh/h	0	1304	0	0	0	1885	0	0
V/C Ratio (X)	0.00	0.85	0.00	0.00	0.00	0.39	0.00	0.00
Avail Cap (c_a), veh/h	0	1304	0	0	0	1885	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	0.09	0.00	0.00
Uniform Delay (d1), s/veh	0.0	10.7	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	7.0	0.0	0.0	0.0	0.1	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	17.7	0.0	0.0	0.0	0.1	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	3.6	0.0	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	1.3	0.0	0.0	0.0	0.0	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	4.9	0.0	0.0	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.09	0.00	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	0
Lane Assignment		R		T+R				
Lanes in Grp	0	1	0	1	0	0	0	0
Grp Vol (v), veh/h	0	194	0	739	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	1610	0	1610	0	0	0	0
Q Serve Time (g_s), s	0.0	4.0	0.0	35.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	4.0	0.0	35.0	0.0	0.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	582	0	626	0	0	0	0
V/C Ratio (X)	0.00	0.33	0.00	1.18	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	582	0	626	0	0	0	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	8.5	0.0	27.8	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	1.5	0.0	96.8	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	10.1	0.0	124.6	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	1.2	0.0	12.8	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.2	0.0	16.8	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	1.4	0.0	29.6	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.03	0.00	0.87	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	28.2	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	38.9
HCM 6th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	531	589	1104	1174	0	0	0	0	303	0	328
Future Volume (veh/h)	0	531	589	1104	1174	0	0	0	0	303	0	328
Number	7	4	14	3	8	18				1	6	16
Initial Q, veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	0	1900	1900	1700	1900	0				1900	1900	1900
Adj Flow Rate, veh/h	0	559	0	1162	1236	0				319	0	345
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95				0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0				0	0	0
Opposing Right Turn Influence	No			Yes						Yes		
Cap, veh/h	0	945		1209	2495	0				398	0	354
HCM Platoon Ratio	1.00	2.00	2.00	2.00	1.00	1.00				1.00	1.00	1.00
Prop Arrive On Green	0.00	0.52	0.00	0.77	0.69	0.00				0.22	0.00	0.22
Unsig. Movement Delay												
Ln Grp Delay, s/veh	0.0	18.7	0.0	21.0	7.0	0.0				48.8	0.0	76.5
Ln Grp LOS	A	B		C	A	A				D	A	E
Approach Vol, veh/h		559			2398						664	
Approach Delay, s/veh		18.7			13.8						63.2	
Approach LOS		B			B						E	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	6		3	4				8
Case No	11.0		2.0	7.0				4.0
Phs Duration (G+Y+Rc), s	23.8		38.6	27.6				66.2
Change Period (Y+Rc), s	4.5		4.5	4.5				4.5
Max Green (Gmax), s	19.3		37.5	19.7				61.7
Max Allow Headway (MAH), s	4.7		3.8	5.2				5.2
Max Q Clear (g_c+I1), s	21.1		31.5	11.6				16.5
Green Ext Time (g_e), s	0.0		2.7	2.3				12.7
Prob of Phs Call (p_c)	1.00		1.00	1.00				1.00
Prob of Max Out (p_x)	0.00		0.64	0.00				0.00

Left-Turn Movement Data												
Assigned Mvmt		1		3	7							
Mvmt Sat Flow, veh/h		1810		3141	0							

Through Movement Data												
Assigned Mvmt		6			4				8			
Mvmt Sat Flow, veh/h		0			3705				3705			

Right-Turn Movement Data												
Assigned Mvmt		16			14				18			
Mvmt Sat Flow, veh/h		1610			1610				0			

Left Lane Group Data												
Assigned Mvmt		1	0	3	7	0	0	0	0			
Lane Assignment		L+T		L (Prot)								

Lanes in Grp	1	0	2	0	0	0	0	0
Grp Vol (v), veh/h	319	0	1162	0	0	0	0	0
Grp Sat Flow (s), veh/h/ln	1810	0	1570	0	0	0	0	0
Q Serve Time (g_s), s	15.0	0.0	29.5	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	15.0	0.0	29.5	0.0	0.0	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	23.6	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	398	0	1209	0	0	0	0	0
V/C Ratio (X)	0.80	0.00	0.96	0.00	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	398	0	1326	0	0	0	0	0
Upstream Filter (I)	1.00	0.00	0.62	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	33.2	0.0	9.8	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	15.5	0.0	11.2	0.0	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	48.8	0.0	21.0	0.0	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	6.4	0.0	3.2	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	1.7	0.0	1.9	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	1.00	1.00	0.00	0.00	0.00	0.00
%ile Back of Q (50%), veh/ln	8.1	0.0	5.0	0.0	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.64	0.00	0.31	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	6	0	0	4	0	0	0	8
Lane Assignment				T				T
Lanes in Grp	0	0	0	2	0	0	0	2
Grp Vol (v), veh/h	0	0	0	559	0	0	0	1236
Grp Sat Flow (s), veh/h/ln	0	0	0	1805	0	0	0	1805
Q Serve Time (g_s), s	0.0	0.0	0.0	9.6	0.0	0.0	0.0	14.5
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	9.6	0.0	0.0	0.0	14.5
Lane Grp Cap (c), veh/h	0	0	0	945	0	0	0	2495
V/C Ratio (X)	0.00	0.00	0.00	0.59	0.00	0.00	0.00	0.50
Avail Cap (c_a), veh/h	0	0	0	945	0	0	0	2495
Upstream Filter (I)	0.00	0.00	0.00	0.22	0.00	0.00	0.00	0.62
Uniform Delay (d1), s/veh	0.0	0.0	0.0	18.1	0.0	0.0	0.0	6.5
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.6	0.0	0.0	0.0	0.4
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	18.7	0.0	0.0	0.0	7.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	3.1	0.0	0.0	0.0	4.6
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.2

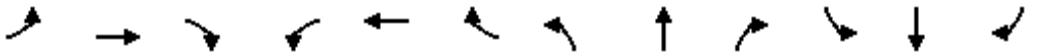
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	1.00	0.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	3.2	0.0	0.0	0.0	4.7
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.29
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	16	0	0	14	0	0	0	18
Lane Assignment	R			R				
Lanes in Grp	1	0	0	1	0	0	0	0
Grp Vol (v), veh/h	345	0	0	0	0	0	0	0
Grp Sat Flow (s), veh/h/ln	1610	0	0	1610	0	0	0	0
Q Serve Time (g_s), s	19.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	19.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	1.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	354	0	0	422	0	0	0	0
V/C Ratio (X)	0.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	354	0	0	422	0	0	0	0
Upstream Filter (I)	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	34.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	41.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	76.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	7.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	4.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	1.00	0.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	11.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	23.6
HCM 6th LOS	C

Notes

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	154	531	0	0	1738	575	498	6	413	0	0	0
Future Volume (veh/h)	154	531	0	0	1738	575	498	6	413	0	0	0
Number	7	4	14	3	8	18	5	2	12			
Initial Q, veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1800	1900	0	0	1900	1900	1900	1900	1900			
Adj Flow Rate, veh/h	162	559	0	0	1829	605	528	0	435			
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95			
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0			
Opposing Right Turn Influence	Yes			No			Yes					
Cap, veh/h	193	2301	0	0	2464	765	950	0	845			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	2.00	1.00	1.00	1.00	1.00			
Prop Arrive On Green	0.22	1.00	0.00	0.00	0.95	0.47	0.26	0.00	0.26			
Unsig. Movement Delay												
Ln Grp Delay, s/veh	50.6	0.2	0.0	0.0	3.2	25.9	27.8	0.0	27.4			
Ln Grp LOS	D	A	A	A	A	C	C	A	C			
Approach Vol, veh/h		721			2434			963				
Approach Delay, s/veh		11.5			8.9			27.6				
Approach LOS		B			A			C				

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2		4			7	8
Case No		9.0		4.0			2.0	7.0
Phs Duration (G+Y+Rc), s		25.0		55.0			13.0	42.0
Change Period (Y+Rc), s		4.5		4.5			4.5	4.5
Max Green (Gmax), s		20.5		50.5			8.5	37.5
Max Allow Headway (MAH), s		3.9		5.2			3.8	4.9
Max Q Clear (g_c+I1), s		12.1		2.0			9.2	27.3
Green Ext Time (g_e), s		2.7		4.4			0.0	8.8
Prob of Phs Call (p_c)		1.00		1.00			0.97	1.00
Prob of Max Out (p_x)		0.00		0.00			1.00	0.00

Left-Turn Movement Data								
Assigned Mvmt		5					7	3
Mvmt Sat Flow, veh/h		3619					1714	0

Through Movement Data								
Assigned Mvmt		2		4				8
Mvmt Sat Flow, veh/h		0		3705				5358

Right-Turn Movement Data								
Assigned Mvmt		12		14				18
Mvmt Sat Flow, veh/h		3220		0				1610

Left Lane Group Data								
Assigned Mvmt	0	5	0	0	0	0	7	3
Lane Assignment		L					L (Prot)	

Lanes in Grp	0	2	0	0	0	0	1	0
Grp Vol (v), veh/h	0	528	0	0	0	0	162	0
Grp Sat Flow (s), veh/h/ln	0	1810	0	0	0	0	1714	0
Q Serve Time (g_s), s	0.0	10.1	0.0	0.0	0.0	0.0	7.2	0.0
Cycle Q Clear Time (g_c), s	0.0	10.1	0.0	0.0	0.0	0.0	7.2	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	1810	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	38.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	0	950	0	0	0	0	193	0
V/C Ratio (X)	0.00	0.56	0.00	0.00	0.00	0.00	0.84	0.00
Avail Cap (c_a), veh/h	0	950	0	0	0	0	193	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	0.00	0.71	0.00
Uniform Delay (d1), s/veh	0.0	25.5	0.0	0.0	0.0	0.0	30.3	0.0
Incr Delay (d2), s/veh	0.0	2.3	0.0	0.0	0.0	0.0	20.3	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	27.8	0.0	0.0	0.0	0.0	50.6	0.0
1st-Term Q (Q1), veh/ln	0.0	4.2	0.0	0.0	0.0	0.0	2.6	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.3	0.0	0.0	0.0	0.0	1.1	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	0.00	0.00	0.00	1.00	1.00
%ile Back of Q (50%), veh/ln	0.0	4.5	0.0	0.0	0.0	0.0	3.7	0.0
%ile Storage Ratio (RQ%)	0.00	0.21	0.00	0.00	0.00	0.00	1.02	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	0	0	8
Lane Assignment				T				T
Lanes in Grp	0	0	0	2	0	0	0	3
Grp Vol (v), veh/h	0	0	0	559	0	0	0	1829
Grp Sat Flow (s), veh/h/ln	0	0	0	1805	0	0	0	1729
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.8
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.8
Lane Grp Cap (c), veh/h	0	0	0	2301	0	0	0	2464
V/C Ratio (X)	0.00	0.00	0.00	0.24	0.00	0.00	0.00	0.74
Avail Cap (c_a), veh/h	0	0	0	2301	0	0	0	2464
Upstream Filter (I)	0.00	0.00	0.00	0.71	0.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.2	0.0	0.0	0.0	2.1
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	0.2	0.0	0.0	0.0	3.2
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.5

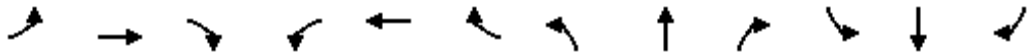
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.1	0.0	0.0	0.0	1.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	0	0	18
Lane Assignment		R						R
Lanes in Grp	0	2	0	0	0	0	0	1
Grp Vol (v), veh/h	0	435	0	0	0	0	0	605
Grp Sat Flow (s), veh/h/ln	0	1610	0	0	0	0	0	1610
Q Serve Time (g_s), s	0.0	9.2	0.0	0.0	0.0	0.0	0.0	25.3
Cycle Q Clear Time (g_c), s	0.0	9.2	0.0	0.0	0.0	0.0	0.0	25.3
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	0.00	0.00	0.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	845	0	0	0	0	0	765
V/C Ratio (X)	0.00	0.51	0.00	0.00	0.00	0.00	0.00	0.79
Avail Cap (c_a), veh/h	0	845	0	0	0	0	0	765
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	25.2	0.0	0.0	0.0	0.0	0.0	17.7
Incr Delay (d2), s/veh	0.0	2.2	0.0	0.0	0.0	0.0	0.0	8.2
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	27.4	0.0	0.0	0.0	0.0	0.0	25.9
1st-Term Q (Q1), veh/ln	0.0	3.4	0.0	0.0	0.0	0.0	0.0	8.5
2nd-Term Q (Q2), veh/ln	0.0	0.3	0.0	0.0	0.0	0.0	0.0	1.7
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	3.7	0.0	0.0	0.0	0.0	0.0	10.2
%ile Storage Ratio (RQ%)	0.00	0.17	0.00	0.00	0.00	0.00	0.00	0.71
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	13.7
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	73	269	27	104	461	472	21	9	32	352	299	418
Future Volume (veh/h)	73	269	27	104	461	472	21	9	32	352	299	418
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1800	1900	1900	1800	1900	1900	1800	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	77	283	28	109	485	497	22	9	34	371	315	440
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	105	962	429	144	549	465	50	461	391	414	799	713
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.12	0.53	0.53	0.17	0.58	0.58	0.03	0.24	0.24	0.23	0.44	0.44
Unsig. Movement Delay												
Ln Grp Delay, s/veh	57.5	16.5	15.6	38.0	21.0	57.9	49.0	26.0	26.8	53.2	18.4	23.2
Ln Grp LOS	E	B	B	D	C	F	D	C	C	D	B	C
Approach Vol, veh/h		388			1091			65			1126	
Approach Delay, s/veh		24.6			39.5			34.2			31.8	
Approach LOS		C			D			C			C	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Case No	2.0	3.0	2.0	3.0	2.0	4.0	2.0	3.0
Phs Duration (G+Y+Rc), s	24.6	25.9	11.5	28.0	6.6	43.8	9.5	30.0
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green (Gmax), s	21.5	19.5	11.4	19.6	5.0	36.0	5.5	25.5
Max Allow Headway (MAH), s	3.8	4.3	3.8	5.1	3.8	5.4	3.8	4.6
Max Q Clear (g_c+I1), s	19.9	3.5	7.5	5.9	3.1	20.9	5.9	28.0
Green Ext Time (g_e), s	0.2	0.1	0.1	1.5	0.0	4.5	0.0	0.0
Prob of Phs Call (p_c)	1.00	1.00	0.93	1.00	0.42	1.00	0.85	1.00
Prob of Max Out (p_x)	1.00	0.00	0.86	0.03	1.00	0.00	1.00	1.00

Left-Turn Movement Data								
Assigned Mvmt	1		3		5		7	
Mvmt Sat Flow, veh/h	1810		1714		1714		1714	

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		1900		3610		1805		1900

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1610		1610		1610		1610

Left Lane Group Data								
Assigned Mvmt	1	0	3	0	5	0	7	0
Lane Assignment	L (Prot)		L (Prot)		L (Prot)		L (Prot)	

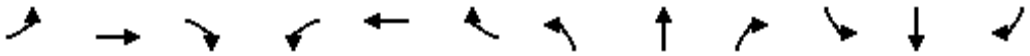
Lanes in Grp	1	0	1	0	1	0	1	0
Grp Vol (v), veh/h	371	0	109	0	22	0	77	0
Grp Sat Flow (s), veh/h/ln	1810	0	1714	0	1714	0	1714	0
Q Serve Time (g_s), s	17.9	0.0	5.5	0.0	1.1	0.0	3.9	0.0
Cycle Q Clear Time (g_c), s	17.9	0.0	5.5	0.0	1.1	0.0	3.9	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	414	0	144	0	50	0	105	0
V/C Ratio (X)	0.90	0.00	0.76	0.00	0.44	0.00	0.73	0.00
Avail Cap (c_a), veh/h	442	0	227	0	105	0	114	0
Upstream Filter (I)	1.00	0.00	0.17	0.00	1.00	0.00	0.96	0.00
Uniform Delay (d1), s/veh	33.6	0.0	36.6	0.0	43.0	0.0	38.7	0.0
Incr Delay (d2), s/veh	19.6	0.0	1.4	0.0	6.0	0.0	18.8	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	53.2	0.0	38.0	0.0	49.0	0.0	57.5	0.0
1st-Term Q (Q1), veh/ln	7.6	0.0	2.1	0.0	0.5	0.0	1.5	0.0
2nd-Term Q (Q2), veh/ln	2.3	0.0	0.1	0.0	0.1	0.0	0.5	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
%ile Back of Q (50%), veh/ln	9.9	0.0	2.2	0.0	0.6	0.0	2.1	0.0
%ile Storage Ratio (RQ%)	2.48	0.00	0.09	0.00	0.06	0.00	0.20	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	1	0	2	0	1	0	1
Grp Vol (v), veh/h	0	9	0	283	0	315	0	485
Grp Sat Flow (s), veh/h/ln	0	1900	0	1805	0	1805	0	1900
Q Serve Time (g_s), s	0.0	0.3	0.0	3.9	0.0	10.6	0.0	19.8
Cycle Q Clear Time (g_c), s	0.0	0.3	0.0	3.9	0.0	10.6	0.0	19.8
Lane Grp Cap (c), veh/h	0	461	0	962	0	799	0	549
V/C Ratio (X)	0.00	0.02	0.00	0.29	0.00	0.39	0.00	0.88
Avail Cap (c_a), veh/h	0	461	0	962	0	799	0	549
Upstream Filter (I)	0.00	1.00	0.00	0.96	0.00	1.00	0.00	0.17
Uniform Delay (d1), s/veh	0.0	25.9	0.0	16.3	0.0	16.9	0.0	17.7
Incr Delay (d2), s/veh	0.0	0.1	0.0	0.2	0.0	1.5	0.0	3.3
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	26.0	0.0	16.5	0.0	18.4	0.0	21.0
1st-Term Q (Q1), veh/ln	0.0	0.1	0.0	1.5	0.0	4.2	0.0	5.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.5

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.2	0.0	1.5	0.0	4.5	0.0	5.5
%ile Storage Ratio (RQ%)	0.00	0.01	0.00	0.02	0.00	0.72	0.00	0.23
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		R		T+R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	34	0	28	0	440	0	497
Grp Sat Flow (s), veh/h/ln	0	1610	0	1610	0	1610	0	1610
Q Serve Time (g_s), s	0.0	1.5	0.0	0.8	0.0	18.9	0.0	26.0
Cycle Q Clear Time (g_c), s	0.0	1.5	0.0	0.8	0.0	18.9	0.0	26.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	391	0	429	0	713	0	465
V/C Ratio (X)	0.00	0.09	0.00	0.07	0.00	0.62	0.00	1.07
Avail Cap (c_a), veh/h	0	391	0	429	0	713	0	465
Upstream Filter (I)	0.00	1.00	0.00	0.96	0.00	1.00	0.00	0.17
Uniform Delay (d1), s/veh	0.0	26.4	0.0	15.6	0.0	19.2	0.0	19.0
Incr Delay (d2), s/veh	0.0	0.4	0.0	0.1	0.0	4.0	0.0	38.9
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	26.8	0.0	15.6	0.0	23.2	0.0	57.9
1st-Term Q (Q1), veh/ln	0.0	0.6	0.0	0.3	0.0	6.7	0.0	5.2
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.8	0.0	5.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.6	0.0	0.3	0.0	7.5	0.0	10.3
%ile Storage Ratio (RQ%)	0.00	0.03	0.00	0.00	0.00	1.18	0.00	0.42
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3

Intersection Summary	
HCM 6th Ctrl Delay	33.9
HCM 6th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	168	463	198	44	847	418	70	394	31	203	13	175
Future Volume (veh/h)	168	463	198	44	847	418	70	394	31	203	13	175
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1700	1900	1900	1800	1900	1900	1800	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	177	487	208	46	892	440	74	415	33	214	14	184
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	179	906	768	70	876	742	293	700	312	232	42	548
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.11	0.95	0.95	0.08	0.92	0.46	0.19	0.19	0.19	0.13	0.36	0.36
Unsig. Movement Delay												
Ln Grp Delay, s/veh	99.5	1.7	1.4	55.0	39.0	21.3	36.8	40.4	33.8	82.0	0.0	24.9
Ln Grp LOS	F	A	A	E	F	C	D	D	C	F	A	C
Approach Vol, veh/h		872			1378			522			412	
Approach Delay, s/veh		21.5			33.9			39.4			54.6	
Approach LOS		C			C			D			D	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4		6	7	8
Case No	2.0	5.3	2.0	3.0		4.0	2.0	3.0
Phs Duration (G+Y+Rc), s	16.8	23.4	8.1	51.7		40.2	9.7	50.1
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5		4.5	4.5	4.5
Max Green (Gmax), s	12.3	18.9	6.8	44.0		35.7	5.2	45.6
Max Allow Headway (MAH), s	3.8	5.0	3.8	4.9		5.5	3.8	4.9
Max Q Clear (g_c+I1), s	13.7	12.5	4.6	4.4		10.9	7.6	48.1
Green Ext Time (g_e), s	0.0	1.7	0.0	4.3		1.2	0.0	0.0
Prob of Phs Call (p_c)	1.00	1.00	0.72	1.00		1.00	0.99	1.00
Prob of Max Out (p_x)	1.00	0.00	1.00	0.00		0.00	1.00	1.00

Left-Turn Movement Data								
Assigned Mvmt	1	5	3				7	
Mvmt Sat Flow, veh/h	1810	1140	1714				3141	

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		3610		1900		115		1900

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1610		1610		1513		1610

Left Lane Group Data								
Assigned Mvmt	1	5	3	0	0	0	7	0
Lane Assignment	L (Prot)	L	L (Prot)				L (Prot)	

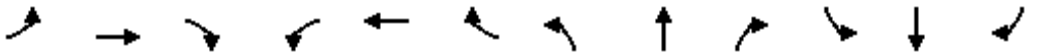
Lanes in Grp	1	1	1	0	0	0	2	0
Grp Vol (v), veh/h	214	74	46	0	0	0	177	0
Grp Sat Flow (s), veh/h/ln	1810	1140	1714	0	0	0	1570	0
Q Serve Time (g_s), s	11.7	5.6	2.6	0.0	0.0	0.0	5.6	0.0
Cycle Q Clear Time (g_c), s	11.7	5.6	2.6	0.0	0.0	0.0	5.6	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	1140	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	19.4	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	19.4	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	5.6	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	1.00	1.00	0.00	0.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	232	293	70	0	0	0	179	0
V/C Ratio (X)	0.92	0.25	0.65	0.00	0.00	0.00	0.99	0.00
Avail Cap (c_a), veh/h	232	293	125	0	0	0	179	0
Upstream Filter (I)	1.00	1.00	1.00	0.00	0.00	0.00	0.76	0.00
Uniform Delay (d1), s/veh	43.1	34.7	45.2	0.0	0.0	0.0	44.3	0.0
Incr Delay (d2), s/veh	38.9	2.1	9.8	0.0	0.0	0.0	55.3	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	82.0	36.8	55.0	0.0	0.0	0.0	99.5	0.0
1st-Term Q (Q1), veh/ln	5.2	1.5	1.1	0.0	0.0	0.0	2.0	0.0
2nd-Term Q (Q2), veh/ln	2.5	0.2	0.2	0.0	0.0	0.0	1.4	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	1.00	1.00	0.00	0.00	0.00	1.00	0.00
%ile Back of Q (50%), veh/ln	7.7	1.7	1.3	0.0	0.0	0.0	3.4	0.0
%ile Storage Ratio (RQ%)	0.93	0.28	0.01	0.00	0.00	0.00	0.33	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T				T
Lanes in Grp	0	2	0	1	0	0	0	1
Grp Vol (v), veh/h	0	415	0	487	0	0	0	892
Grp Sat Flow (s), veh/h/ln	0	1805	0	1900	0	0	0	1900
Q Serve Time (g_s), s	0.0	10.5	0.0	2.4	0.0	0.0	0.0	46.1
Cycle Q Clear Time (g_c), s	0.0	10.5	0.0	2.4	0.0	0.0	0.0	46.1
Lane Grp Cap (c), veh/h	0	700	0	906	0	0	0	876
V/C Ratio (X)	0.00	0.59	0.00	0.54	0.00	0.00	0.00	1.02
Avail Cap (c_a), veh/h	0	700	0	906	0	0	0	876
Upstream Filter (I)	0.00	1.00	0.00	0.76	0.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	36.7	0.0	1.3	0.0	0.0	0.0	3.9
Incr Delay (d2), s/veh	0.0	3.7	0.0	0.5	0.0	0.0	0.0	35.1
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	40.4	0.0	1.7	0.0	0.0	0.0	39.0
1st-Term Q (Q1), veh/ln	0.0	4.6	0.0	0.5	0.0	0.0	0.0	1.6
2nd-Term Q (Q2), veh/ln	0.0	0.4	0.0	0.1	0.0	0.0	0.0	8.5

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	4.9	0.0	0.6	0.0	0.0	0.0	10.2
%ile Storage Ratio (RQ%)	0.00	0.44	0.00	0.03	0.00	0.00	0.00	0.12
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		R		T+R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	33	0	208	0	198	0	440
Grp Sat Flow (s), veh/h/ln	0	1610	0	1610	0	1628	0	1610
Q Serve Time (g_s), s	0.0	1.7	0.0	0.8	0.0	8.9	0.0	20.3
Cycle Q Clear Time (g_c), s	0.0	1.7	0.0	0.8	0.0	8.9	0.0	20.3
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	0.93	0.00	1.00
Lane Grp Cap (c), veh/h	0	312	0	768	0	589	0	742
V/C Ratio (X)	0.00	0.11	0.00	0.27	0.00	0.34	0.00	0.59
Avail Cap (c_a), veh/h	0	312	0	768	0	589	0	742
Upstream Filter (I)	0.00	1.00	0.00	0.76	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	33.2	0.0	1.2	0.0	23.4	0.0	20.0
Incr Delay (d2), s/veh	0.0	0.7	0.0	0.1	0.0	1.5	0.0	1.3
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	33.8	0.0	1.4	0.0	24.9	0.0	21.3
1st-Term Q (Q1), veh/ln	0.0	0.7	0.0	0.2	0.0	3.4	0.0	7.3
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	0.3	0.0	0.3
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.7	0.0	0.2	0.0	3.6	0.0	7.6
%ile Storage Ratio (RQ%)	0.00	0.26	0.00	0.01	0.00	0.44	0.00	0.09
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	34.1
HCM 6th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	428	11	465	724	1098	0	0	476	938
Future Volume (veh/h)	0	0	0	428	11	465	724	1098	0	0	476	938
Number				3	8	18	5	2	12	1	6	16
Initial Q, veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln				1800	1900	1900	1900	1900	0	0	1900	1900
Adj Flow Rate, veh/h				451	12	489	762	1156	0	0	501	987
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence				Yes			Yes			No		
Cap, veh/h				450	10	414	768	2302	0	0	1913	594
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green				0.26	0.26	0.26	0.22	0.64	0.00	0.00	0.37	0.37
Unsig. Movement Delay												
Ln Grp Delay, s/veh				76.5	0.0	137.0	51.5	8.9	0.0	0.0	20.2	333.6
Ln Grp LOS				F	A	F	D	A	A	A	C	F
Approach Vol, veh/h					952			1918			1488	
Approach Delay, s/veh					108.3			25.8			228.1	
Approach LOS					F			C			F	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2	8		5	6		
Case No		4.0	10.0		2.0	7.0		
Phs Duration (G+Y+Rc), s		61.9	28.1		24.2	37.7		
Change Period (Y+Rc), s		4.5	4.5		4.5	4.5		
Max Green (Gmax), s		57.4	23.6		19.7	33.2		
Max Allow Headway (MAH), s		5.2	4.7		3.8	4.4		
Max Q Clear (g_c+I1), s		17.4	25.6		21.5	35.2		
Green Ext Time (g_e), s		11.2	0.0		0.0	0.0		
Prob of Phs Call (p_c)		1.00	1.00		1.00	1.00		
Prob of Max Out (p_x)		0.00	1.00		1.00	0.00		
Left-Turn Movement Data								
Assigned Mvmt			3		5	1		
Mvmt Sat Flow, veh/h			1714		3510	0		
Through Movement Data								
Assigned Mvmt		2	8			6		
Mvmt Sat Flow, veh/h		3705	39			5358		
Right-Turn Movement Data								
Assigned Mvmt		12	18			16		
Mvmt Sat Flow, veh/h		0	1577			1610		
Left Lane Group Data								
Assigned Mvmt	0	0	3	0	5	1	0	0
Lane Assignment			L		L (Prot)			

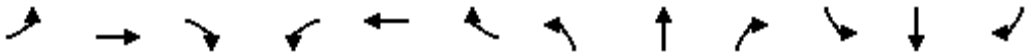
Lanes in Grp	0	0	1	0	2	0	0	0
Grp Vol (v), veh/h	0	0	451	0	762	0	0	0
Grp Sat Flow (s), veh/h/ln	0	0	1714	0	1755	0	0	0
Q Serve Time (g_s), s	0.0	0.0	23.6	0.0	19.5	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	23.6	0.0	19.5	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	1714	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	33.2	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	0.00	1.00	0.00	1.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	450	0	768	0	0	0
V/C Ratio (X)	0.00	0.00	1.00	0.00	0.99	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	0	450	0	768	0	0	0
Upstream Filter (I)	0.00	0.00	1.00	0.00	0.32	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	33.2	0.0	35.1	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	43.3	0.0	16.4	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	76.5	0.0	51.5	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	9.5	0.0	8.1	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	5.4	0.0	1.7	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	0.00	1.00	0.00	1.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	14.9	0.0	9.8	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.31	0.00	0.94	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	8	0	0	6	0	0
Lane Assignment		T				T		
Lanes in Grp	0	2	0	0	0	3	0	0
Grp Vol (v), veh/h	0	1156	0	0	0	501	0	0
Grp Sat Flow (s), veh/h/ln	0	1805	0	0	0	1729	0	0
Q Serve Time (g_s), s	0.0	15.4	0.0	0.0	0.0	6.1	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	15.4	0.0	0.0	0.0	6.1	0.0	0.0
Lane Grp Cap (c), veh/h	0	2302	0	0	0	1913	0	0
V/C Ratio (X)	0.00	0.50	0.00	0.00	0.00	0.26	0.00	0.00
Avail Cap (c_a), veh/h	0	2302	0	0	0	1913	0	0
Upstream Filter (I)	0.00	0.32	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	8.7	0.0	0.0	0.0	19.8	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.3	0.0	0.0	0.0	0.3	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	8.9	0.0	0.0	0.0	20.2	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	5.2	0.0	0.0	0.0	2.4	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	5.3	0.0	0.0	0.0	2.4	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.51	0.00	0.00	0.00	0.05	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	18	0	0	16	0	0
Lane Assignment			T+R			R		
Lanes in Grp	0	0	1	0	0	1	0	0
Grp Vol (v), veh/h	0	0	501	0	0	987	0	0
Grp Sat Flow (s), veh/h/ln	0	0	1616	0	0	1610	0	0
Q Serve Time (g_s), s	0.0	0.0	23.6	0.0	0.0	33.2	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	23.6	0.0	0.0	33.2	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.00	0.98	0.00	0.00	1.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	424	0	0	594	0	0
V/C Ratio (X)	0.00	0.00	1.18	0.00	0.00	1.66	0.00	0.00
Avail Cap (c_a), veh/h	0	0	424	0	0	594	0	0
Upstream Filter (I)	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	33.2	0.0	0.0	28.4	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	103.8	0.0	0.0	305.2	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	137.0	0.0	0.0	333.6	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	8.9	0.0	0.0	12.1	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	12.2	0.0	0.0	50.4	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	21.2	0.0	0.0	62.5	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.44	0.00	0.00	1.36	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	19.3	0.0	0.0	98.3	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.3	0.0	0.0	0.4	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	112.9
HCM 6th LOS	F



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	480	9	513	0	0	0	0	1213	644	333	648	0
Future Volume (veh/h)	480	9	513	0	0	0	0	1213	644	333	648	0
Number	7	4	14				5	2	12	1	6	16
Initial Q, veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1800	1900	1900				0	1900	1900	1900	1900	0
Adj Flow Rate, veh/h	505	9	540				0	1277	678	351	682	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0				0	0	0	0	0	0
Opposing Right Turn Influence	Yes						No			Yes		
Cap, veh/h	404	7	432				0	1426	443	333	1498	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.50	0.50	0.50				0.00	0.28	0.28	0.09	0.41	0.00
Unsig. Movement Delay												
Ln Grp Delay, s/veh	147.9	0.0	0.0				0.0	43.9	286.5	102.4	21.8	0.0
Ln Grp LOS	F	A	A				A	D	F	F	C	A
Approach Vol, veh/h		1054						1955			1033	
Approach Delay, s/veh		147.9						128.0			49.2	
Approach LOS		F						F			D	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Case No	2.0	7.0		12.0		4.0		
Phs Duration (G+Y+Rc), s	14.0	32.0		54.0		46.0		
Change Period (Y+Rc), s	4.5	4.5		4.5		4.5		
Max Green (Gmax), s	9.5	27.5		49.5		41.5		
Max Allow Headway (MAH), s	3.8	4.8		5.5		5.2		
Max Q Clear (g_c+I1), s	11.5	29.5		51.5		15.6		
Green Ext Time (g_e), s	0.0	0.0		0.0		5.1		
Prob of Phs Call (p_c)	1.00	1.00		1.00		1.00		
Prob of Max Out (p_x)	1.00	0.00		1.00		0.00		

Left-Turn Movement Data								
Assigned Mvmt	1	5		7				
Mvmt Sat Flow, veh/h	3510	0		816				

Through Movement Data								
Assigned Mvmt		2		4		6		
Mvmt Sat Flow, veh/h		5358		15		3705		

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		
Mvmt Sat Flow, veh/h		1610		872		0		

Left Lane Group Data								
Assigned Mvmt	1	5	0	7	0	0	0	0
Lane Assignment	L (Prot)			L+T+R				

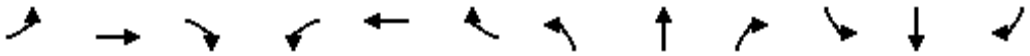
Lanes in Grp	2	0	0	1	0	0	0	0
Grp Vol (v), veh/h	351	0	0	1054	0	0	0	0
Grp Sat Flow (s), veh/h/ln	1755	0	0	1702	0	0	0	0
Q Serve Time (g_s), s	9.5	0.0	0.0	49.5	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	9.5	0.0	0.0	49.5	0.0	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	27.5	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	0.48	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	333	0	0	843	0	0	0	0
V/C Ratio (X)	1.05	0.00	0.00	1.25	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	333	0	0	843	0	0	0	0
Upstream Filter (I)	0.75	0.00	0.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	45.3	0.0	0.0	25.3	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	57.2	0.0	0.0	122.7	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	102.4	0.0	0.0	147.9	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	4.1	0.0	0.0	18.6	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	2.6	0.0	0.0	28.7	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00
%ile Back of Q (50%), veh/ln	6.7	0.0	0.0	47.3	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.64	0.00	0.00	0.81	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	4.4	0.0	0.0	52.8	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.3	0.0	0.0	0.3	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	0
Lane Assignment		T				T		
Lanes in Grp	0	3	0	0	0	2	0	0
Grp Vol (v), veh/h	0	1277	0	0	0	682	0	0
Grp Sat Flow (s), veh/h/ln	0	1729	0	0	0	1805	0	0
Q Serve Time (g_s), s	0.0	23.7	0.0	0.0	0.0	13.6	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	23.7	0.0	0.0	0.0	13.6	0.0	0.0
Lane Grp Cap (c), veh/h	0	1426	0	0	0	1498	0	0
V/C Ratio (X)	0.00	0.90	0.00	0.00	0.00	0.46	0.00	0.00
Avail Cap (c_a), veh/h	0	1426	0	0	0	1498	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	0.75	0.00	0.00
Uniform Delay (d1), s/veh	0.0	34.9	0.0	0.0	0.0	21.1	0.0	0.0
Incr Delay (d2), s/veh	0.0	9.0	0.0	0.0	0.0	0.8	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	43.9	0.0	0.0	0.0	21.8	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	9.7	0.0	0.0	0.0	5.6	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	1.2	0.0	0.0	0.0	0.2	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	10.9	0.0	0.0	0.0	5.8	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.35	0.00	0.00	0.00	0.55	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	0
Lane Assignment		R						
Lanes in Grp	0	1	0	0	0	0	0	0
Grp Vol (v), veh/h	0	678	0	0	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	1610	0	0	0	0	0	0
Q Serve Time (g_s), s	0.0	27.5	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	27.5	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	0.51	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	443	0	0	0	0	0	0
V/C Ratio (X)	0.00	1.53	0.00	0.00	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	443	0	0	0	0	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	36.2	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	250.2	0.0	0.0	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	286.5	0.0	0.0	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	10.5	0.0	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	30.8	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	41.3	0.0	0.0	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	1.33	0.00	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	58.8	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	113.1
HCM 6th LOS	F



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	86	814	81	233	349	198	141	680	634	261	382	54
Future Volume (veh/h)	86	814	81	233	349	198	141	680	634	261	382	54
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1800	1900	1900	1800	1900	1900	1800	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	91	857	85	245	367	208	148	716	667	275	402	57
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	115	813	81	231	699	390	179	1043	465	273	1066	150
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.07	0.25	0.25	0.14	0.31	0.31	0.10	0.29	0.29	0.15	0.34	0.34
Unsig. Movement Delay												
Ln Grp Delay, s/veh	57.4	95.7	95.3	116.9	29.0	29.3	52.6	34.0	238.8	98.5	27.0	27.1
Ln Grp LOS	E	F	F	F	C	C	D	C	F	F	C	C
Approach Vol, veh/h		1033			820			1531			734	
Approach Delay, s/veh		92.1			55.4			125.0			53.8	
Approach LOS		F			E			F			D	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Case No	2.0	3.0	2.0	4.0	2.0	4.0	2.0	4.0
Phs Duration (G+Y+Rc), s	19.6	33.4	18.0	29.0	14.9	38.1	11.2	35.8
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green (Gmax), s	15.1	28.9	13.5	24.5	15.6	28.4	11.5	26.5
Max Allow Headway (MAH), s	3.8	4.6	3.8	5.3	3.8	5.3	3.8	5.4
Max Q Clear (g_c+I1), s	17.1	30.9	15.5	26.5	10.5	11.7	7.2	15.8
Green Ext Time (g_e), s	0.0	0.0	0.0	0.0	0.2	2.5	0.1	2.7
Prob of Phs Call (p_c)	1.00	1.00	1.00	1.00	0.98	1.00	0.92	1.00
Prob of Max Out (p_x)	1.00	0.00	1.00	1.00	0.30	0.00	0.60	0.32

Left-Turn Movement Data								
Assigned Mvmt	1		3		5		7	
Mvmt Sat Flow, veh/h	1810		1714		1714		1714	

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		3610		3317		3177		2234

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1610		329		447		1246

Left Lane Group Data								
Assigned Mvmt	1	0	3	0	5	0	7	0
Lane Assignment	L (Prot)		L (Prot)		L (Prot)		L (Prot)	

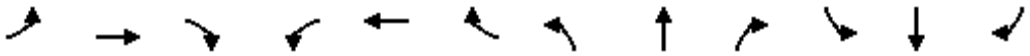
Lanes in Grp	1	0	1	0	1	0	1	0
Grp Vol (v), veh/h	275	0	245	0	148	0	91	0
Grp Sat Flow (s), veh/h/ln	1810	0	1714	0	1714	0	1714	0
Q Serve Time (g_s), s	15.1	0.0	13.5	0.0	8.5	0.0	5.2	0.0
Cycle Q Clear Time (g_c), s	15.1	0.0	13.5	0.0	8.5	0.0	5.2	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	273	0	231	0	179	0	115	0
V/C Ratio (X)	1.01	0.00	1.06	0.00	0.83	0.00	0.79	0.00
Avail Cap (c_a), veh/h	273	0	231	0	267	0	197	0
Upstream Filter (I)	1.00	0.00	0.94	0.00	0.67	0.00	1.00	0.00
Uniform Delay (d1), s/veh	42.5	0.0	43.3	0.0	43.9	0.0	46.0	0.0
Incr Delay (d2), s/veh	56.1	0.0	73.7	0.0	8.7	0.0	11.4	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	98.5	0.0	116.9	0.0	52.6	0.0	57.4	0.0
1st-Term Q (Q1), veh/ln	6.7	0.0	5.7	0.0	3.6	0.0	2.2	0.0
2nd-Term Q (Q2), veh/ln	4.3	0.0	4.7	0.0	0.4	0.0	0.4	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
%ile Back of Q (50%), veh/ln	10.9	0.0	10.4	0.0	4.0	0.0	2.6	0.0
%ile Storage Ratio (RQ%)	0.17	0.00	0.10	0.00	0.20	0.00	0.03	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.4	0.0	3.4	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.3	0.0	0.3	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	2	0	1	0	1	0	1
Grp Vol (v), veh/h	0	716	0	466	0	227	0	295
Grp Sat Flow (s), veh/h/ln	0	1805	0	1805	0	1805	0	1805
Q Serve Time (g_s), s	0.0	17.6	0.0	24.5	0.0	9.6	0.0	13.4
Cycle Q Clear Time (g_c), s	0.0	17.6	0.0	24.5	0.0	9.6	0.0	13.4
Lane Grp Cap (c), veh/h	0	1043	0	442	0	606	0	565
V/C Ratio (X)	0.00	0.69	0.00	1.05	0.00	0.38	0.00	0.52
Avail Cap (c_a), veh/h	0	1043	0	442	0	606	0	565
Upstream Filter (I)	0.00	0.67	0.00	1.00	0.00	1.00	0.00	0.94
Uniform Delay (d1), s/veh	0.0	31.5	0.0	37.7	0.0	25.3	0.0	28.2
Incr Delay (d2), s/veh	0.0	2.5	0.0	57.9	0.0	1.8	0.0	0.8
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	34.0	0.0	95.7	0.0	27.0	0.0	29.0
1st-Term Q (Q1), veh/ln	0.0	7.5	0.0	10.6	0.0	4.0	0.0	5.7
2nd-Term Q (Q2), veh/ln	0.0	0.4	0.0	7.1	0.0	0.3	0.0	0.1

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	7.9	0.0	17.7	0.0	4.3	0.0	5.9
%ile Storage Ratio (RQ%)	0.00	0.40	0.00	0.24	0.00	0.07	0.00	0.06
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	6.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		T+R		T+R		T+R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	667	0	476	0	232	0	280
Grp Sat Flow (s), veh/h/ln	0	1610	0	1841	0	1819	0	1676
Q Serve Time (g_s), s	0.0	28.9	0.0	24.5	0.0	9.7	0.0	13.8
Cycle Q Clear Time (g_c), s	0.0	28.9	0.0	24.5	0.0	9.7	0.0	13.8
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	0.18	0.00	0.25	0.00	0.74
Lane Grp Cap (c), veh/h	0	465	0	451	0	611	0	524
V/C Ratio (X)	0.00	1.43	0.00	1.05	0.00	0.38	0.00	0.53
Avail Cap (c_a), veh/h	0	465	0	451	0	611	0	524
Upstream Filter (I)	0.00	0.67	0.00	1.00	0.00	1.00	0.00	0.94
Uniform Delay (d1), s/veh	0.0	35.5	0.0	37.8	0.0	25.3	0.0	28.3
Incr Delay (d2), s/veh	0.0	203.2	0.0	57.5	0.0	1.8	0.0	1.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	238.8	0.0	95.3	0.0	27.1	0.0	29.3
1st-Term Q (Q1), veh/ln	0.0	11.0	0.0	10.8	0.0	4.1	0.0	5.4
2nd-Term Q (Q2), veh/ln	0.0	26.3	0.0	7.2	0.0	0.3	0.0	0.1
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	37.3	0.0	18.0	0.0	4.4	0.0	5.6
%ile Storage Ratio (RQ%)	0.00	1.88	0.00	0.24	0.00	0.07	0.00	0.05
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	50.4	0.0	6.2	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.4	0.0	0.3	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	90.2
HCM 6th LOS	F



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	480	36	427	91	25	141	214	1071	5	9	669	88
Future Volume (veh/h)	480	36	427	91	25	141	214	1071	5	9	669	88
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1700	1900	1900	1800	1900	1900	1800	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	505	38	0	96	26	148	225	1127	5	9	704	93
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	566	684		219	45	190	258	1765	8	20	1088	144
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.18	0.36	0.00	0.13	0.13	0.13	0.15	0.48	0.48	0.01	0.34	0.34
Unsig. Movement Delay												
Ln Grp Delay, s/veh	52.0	18.8	0.0	38.4	0.0	44.9	61.0	21.2	21.0	54.8	28.9	28.9
Ln Grp LOS	D	B		D	A	D	E	C	C	D	C	C
Approach Vol, veh/h		543			270			1357			806	
Approach Delay, s/veh		49.7			42.0			27.7			29.2	
Approach LOS		D			D			C			C	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6	7	8
Case No	2.0	4.0		3.0	2.0	4.0	2.0	8.3
Phs Duration (G+Y+Rc), s	5.5	47.6		36.9	18.1	35.0	20.7	16.2
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5	4.5	4.5
Max Green (Gmax), s	5.0	32.5		39.0	14.5	23.0	16.5	18.0
Max Allow Headway (MAH), s	3.8	5.2		5.2	3.8	5.3	3.8	5.5
Max Q Clear (g_c+I1), s	2.4	22.7		3.2	13.5	18.7	16.1	10.8
Green Ext Time (g_e), s	0.0	5.1		0.2	0.1	1.9	0.1	0.9
Prob of Phs Call (p_c)	0.20	1.00		1.00	1.00	1.00	1.00	1.00
Prob of Max Out (p_x)	1.00	0.00		0.00	1.00	0.00	1.00	0.50

Left-Turn Movement Data								
Assigned Mvmt	1				5		7	3
Mvmt Sat Flow, veh/h	1810				1714		3141	1138

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		3686		1900		3206		346

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		16		1610		423		1465

Left Lane Group Data								
Assigned Mvmt	1	0	0	0	5	0	7	3
Lane Assignment	L (Prot)				L (Prot)		L (Prot)	L+T

Lanes in Grp	1	0	0	0	1	0	2	1
Grp Vol (v), veh/h	9	0	0	0	225	0	505	122
Grp Sat Flow (s), veh/h/ln	1810	0	0	0	1714	0	1570	1484
Q Serve Time (g_s), s	0.4	0.0	0.0	0.0	11.5	0.0	14.1	6.8
Cycle Q Clear Time (g_c), s	0.4	0.0	0.0	0.0	11.5	0.0	14.1	7.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	1391
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.7
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.7
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.8
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	0.00	1.00	0.00	1.00	0.79
Lane Grp Cap (c), veh/h	20	0	0	0	258	0	566	264
V/C Ratio (X)	0.44	0.00	0.00	0.00	0.87	0.00	0.89	0.46
Avail Cap (c_a), veh/h	101	0	0	0	276	0	576	368
Upstream Filter (I)	0.72	0.00	0.00	0.00	1.00	0.00	1.00	1.00
Uniform Delay (d1), s/veh	44.2	0.0	0.0	0.0	37.4	0.0	36.0	37.1
Incr Delay (d2), s/veh	10.6	0.0	0.0	0.0	23.7	0.0	16.0	1.3
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	54.8	0.0	0.0	0.0	61.0	0.0	52.0	38.4
1st-Term Q (Q1), veh/ln	0.2	0.0	0.0	0.0	4.7	0.0	5.3	2.5
2nd-Term Q (Q2), veh/ln	0.1	0.0	0.0	0.0	1.7	0.0	1.3	0.1
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	0.00	1.00	0.00	1.00	1.00
%ile Back of Q (50%), veh/ln	0.3	0.0	0.0	0.0	6.4	0.0	6.5	2.6
%ile Storage Ratio (RQ%)	0.01	0.00	0.00	0.00	1.07	0.00	0.16	0.08
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		
Lanes in Grp	0	1	0	1	0	1	0	0
Grp Vol (v), veh/h	0	552	0	38	0	396	0	0
Grp Sat Flow (s), veh/h/ln	0	1805	0	1900	0	1805	0	0
Q Serve Time (g_s), s	0.0	20.7	0.0	1.2	0.0	16.7	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	20.7	0.0	1.2	0.0	16.7	0.0	0.0
Lane Grp Cap (c), veh/h	0	864	0	684	0	613	0	0
V/C Ratio (X)	0.00	0.64	0.00	0.06	0.00	0.65	0.00	0.00
Avail Cap (c_a), veh/h	0	864	0	823	0	613	0	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	0.72	0.00	0.00
Uniform Delay (d1), s/veh	0.0	17.6	0.0	18.8	0.0	25.2	0.0	0.0
Incr Delay (d2), s/veh	0.0	3.6	0.0	0.0	0.0	3.8	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	21.2	0.0	18.8	0.0	28.9	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	8.0	0.0	0.5	0.0	6.9	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.9	0.0	0.0	0.0	0.6	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	8.9	0.0	0.5	0.0	7.6	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.71	0.00	0.01	0.00	0.38	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R		R		T+R		T+R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	580	0	0	0	401	0	148
Grp Sat Flow (s), veh/h/ln	0	1897	0	1610	0	1824	0	1465
Q Serve Time (g_s), s	0.0	20.7	0.0	0.0	0.0	16.7	0.0	8.8
Cycle Q Clear Time (g_c), s	0.0	20.7	0.0	0.0	0.0	16.7	0.0	8.8
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.01	0.00	1.00	0.00	0.23	0.00	1.00
Lane Grp Cap (c), veh/h	0	909	0	579	0	619	0	190
V/C Ratio (X)	0.00	0.64	0.00	0.00	0.00	0.65	0.00	0.78
Avail Cap (c_a), veh/h	0	909	0	698	0	619	0	293
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	0.72	0.00	1.00
Uniform Delay (d1), s/veh	0.0	17.6	0.0	0.0	0.0	25.2	0.0	37.9
Incr Delay (d2), s/veh	0.0	3.4	0.0	0.0	0.0	3.8	0.0	7.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	21.0	0.0	0.0	0.0	28.9	0.0	44.9
1st-Term Q (Q1), veh/ln	0.0	8.5	0.0	0.0	0.0	7.0	0.0	3.1
2nd-Term Q (Q2), veh/ln	0.0	0.9	0.0	0.0	0.0	0.6	0.0	0.4
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	9.3	0.0	0.0	0.0	7.6	0.0	3.5
%ile Storage Ratio (RQ%)	0.00	0.74	0.00	0.00	0.00	0.39	0.00	0.10
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	33.4
HCM 6th LOS	C

Notes

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	0	16	97	0	143	6	1180	44	53	1032	8
Future Volume (veh/h)	20	0	16	97	0	143	6	1180	44	53	1032	8
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1800	1900	1900	1800	0	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	21	0	17	102	0	151	6	1242	46	56	1086	8
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	47	0	0	128	0	0	429	3620	134	73	4160	31
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.03	0.00	0.03	0.07	0.00	0.00	0.71	0.71	0.71	0.04	0.78	0.78
Unsig. Movement Delay												
Ln Grp Delay, s/veh	84.3	0.0	0.0	65.5	0.0	0.0	5.3	7.3	7.6	72.2	3.8	4.0
Ln Grp LOS	F	A	A	E	A	A	A	A	A	E	A	A
Approach Vol, veh/h		38			102			1294			1150	
Approach Delay, s/veh		84.3			65.5			7.4			7.2	
Approach LOS		F			E			A			A	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4		6		
Case No	2.0	6.3	2.0	8.3		4.0		
Phs Duration (G+Y+Rc), s	9.3	89.1	13.4	8.1		98.5		
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5		4.5		
Max Green (Gmax), s	15.1	30.7	28.1	28.1		50.3		
Max Allow Headway (MAH), s	3.8	5.3	3.8	5.6		5.2		
Max Q Clear (g_c+I1), s	5.7	13.3	9.0	2.1		8.7		
Green Ext Time (g_e), s	0.1	8.4	0.2	0.1		9.3		
Prob of Phs Call (p_c)	0.85	1.00	0.97	0.72		1.00		
Prob of Max Out (p_x)	0.00	0.00	0.00	0.00		0.00		

Left-Turn Movement Data								
Assigned Mvmt	1	5	3	7				
Mvmt Sat Flow, veh/h	1810	524	1714	0				

Through Movement Data								
Assigned Mvmt		2		4		6		
Mvmt Sat Flow, veh/h		5134		0		5312		

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		
Mvmt Sat Flow, veh/h		190		0		39		

Left Lane Group Data								
Assigned Mvmt	1	5	3	7	0	0	0	0
Lane Assignment	L (Prot)	L	L (Prot)	L+T+R				

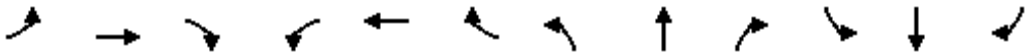
Lanes in Grp	1	1	1	1	0	0	0	0
Grp Vol (v), veh/h	56	6	102	38	0	0	0	0
Grp Sat Flow (s), veh/h/ln	1810	524	1714	0	0	0	0	0
Q Serve Time (g_s), s	3.7	0.4	7.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	3.7	0.4	7.0	0.1	0.0	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	524	0	1256	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	84.6	0.0	0.1	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	84.6	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	1.00	1.00	0.55	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	73	429	128	47	0	0	0	0
V/C Ratio (X)	0.77	0.01	0.80	0.82	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	228	429	401	331	0	0	0	0
Upstream Filter (I)	1.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	57.0	5.3	54.6	56.6	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	15.2	0.1	10.8	27.7	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	72.2	5.3	65.5	84.3	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	1.7	0.0	3.0	1.2	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.3	0.0	0.4	0.4	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00
%ile Back of Q (50%), veh/ln	2.0	0.0	3.4	1.5	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.33	0.00	0.05	0.11	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	0
Lane Assignment		T				T		
Lanes in Grp	0	2	0	0	0	2	0	0
Grp Vol (v), veh/h	0	837	0	0	0	707	0	0
Grp Sat Flow (s), veh/h/ln	0	1729	0	0	0	1729	0	0
Q Serve Time (g_s), s	0.0	11.3	0.0	0.0	0.0	6.7	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	11.3	0.0	0.0	0.0	6.7	0.0	0.0
Lane Grp Cap (c), veh/h	0	2439	0	0	0	2708	0	0
V/C Ratio (X)	0.00	0.34	0.00	0.00	0.00	0.26	0.00	0.00
Avail Cap (c_a), veh/h	0	2439	0	0	0	2708	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	6.9	0.0	0.0	0.0	3.5	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.4	0.0	0.0	0.0	0.2	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	7.3	0.0	0.0	0.0	3.8	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	3.8	0.0	0.0	0.0	1.9	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	4.0	0.0	0.0	0.0	2.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.25	0.00	0.00	0.00	0.20	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	0
Lane Assignment		T+R				T+R		
Lanes in Grp	0	1	0	0	0	1	0	0
Grp Vol (v), veh/h	0	451	0	0	0	387	0	0
Grp Sat Flow (s), veh/h/ln	0	1866	0	0	0	1893	0	0
Q Serve Time (g_s), s	0.0	11.3	0.0	0.0	0.0	6.7	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	11.3	0.0	0.0	0.0	6.7	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.10	0.00	0.45	0.00	0.02	0.00	0.00
Lane Grp Cap (c), veh/h	0	1316	0	0	0	1482	0	0
V/C Ratio (X)	0.00	0.34	0.00	0.00	0.00	0.26	0.00	0.00
Avail Cap (c_a), veh/h	0	1316	0	0	0	1482	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	6.9	0.0	0.0	0.0	3.5	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.7	0.0	0.0	0.0	0.4	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	7.6	0.0	0.0	0.0	4.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	4.1	0.0	0.0	0.0	2.1	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.3	0.0	0.0	0.0	0.2	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	4.4	0.0	0.0	0.0	2.3	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.28	0.00	0.00	0.00	0.23	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	10.7
HCM 6th LOS	B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	196	10	50	21	18	18	36	1036	18	15	1026	63
Future Volume (veh/h)	196	10	50	21	18	18	36	1036	18	15	1026	63
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1800	1900	1900	1800	1900	1900	1800	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	206	11	53	22	19	19	38	1091	19	16	1080	66
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	316	48	230	223	180	189	58	2349	41	33	2181	133
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Prop Arrive On Green	0.18	0.18	0.18	0.18	0.18	0.18	0.07	1.00	1.00	0.02	0.63	0.63
Unsig. Movement Delay												
Ln Grp Delay, s/veh	40.5	0.0	31.7	31.2	0.0	30.6	49.9	1.0	0.9	54.2	10.4	10.4
Ln Grp LOS	D	A	C	C	A	C	D	A	A	D	B	B
Approach Vol, veh/h		270			60			1148			1162	
Approach Delay, s/veh		38.4			30.9			2.6			11.0	
Approach LOS		D			C			A			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Case No	2.0	4.0		8.0	2.0	4.0		8.0
Phs Duration (G+Y+Rc), s	6.1	62.7		21.1	7.6	61.3		21.1
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green (Gmax), s	5.1	53.3		18.1	5.1	53.3		18.1
Max Allow Headway (MAH), s	3.8	5.2		5.4	3.8	5.3		5.4
Max Q Clear (g_c+I1), s	2.8	2.0		16.4	3.9	17.1		5.8
Green Ext Time (g_e), s	0.0	9.7		0.3	0.0	9.7		0.2
Prob of Phs Call (p_c)	0.33	1.00		1.00	0.61	1.00		1.00
Prob of Max Out (p_x)	1.00	0.00		1.00	1.00	0.00		0.00

Left-Turn Movement Data								
Assigned Mvmt	1			7	5			3
Mvmt Sat Flow, veh/h	1810			1275	1714			838

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		3630		259		3456		974

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		63		1246		211		1024

Left Lane Group Data								
Assigned Mvmt	1	0	0	7	5	0	0	3
Lane Assignment	L (Prot)			L+T	L (Prot)			L+T

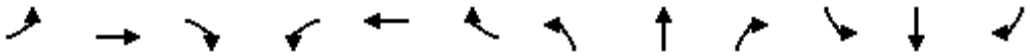
Lanes in Grp	1	0	0	1	1	0	0	1
Grp Vol (v), veh/h	16	0	0	206	38	0	0	31
Grp Sat Flow (s), veh/h/ln	1810	0	0	1275	1714	0	0	1291
Q Serve Time (g_s), s	0.8	0.0	0.0	13.0	1.9	0.0	0.0	0.5
Cycle Q Clear Time (g_c), s	0.8	0.0	0.0	14.4	1.9	0.0	0.0	3.8
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	1391	0	0	0	1359
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	16.6	0.0	0.0	0.0	16.6
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	15.2	0.0	0.0	0.0	13.4
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	13.0	0.0	0.0	0.0	0.5
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	0.70
Lane Grp Cap (c), veh/h	33	0	0	316	58	0	0	307
V/C Ratio (X)	0.48	0.00	0.00	0.65	0.65	0.00	0.00	0.10
Avail Cap (c_a), veh/h	103	0	0	338	97	0	0	331
Upstream Filter (I)	1.00	0.00	0.00	1.00	0.72	0.00	0.00	1.00
Uniform Delay (d1), s/veh	43.8	0.0	0.0	36.4	41.4	0.0	0.0	31.1
Incr Delay (d2), s/veh	10.5	0.0	0.0	4.0	8.5	0.0	0.0	0.1
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	54.2	0.0	0.0	40.5	49.9	0.0	0.0	31.2
1st-Term Q (Q1), veh/ln	0.3	0.0	0.0	4.3	0.8	0.0	0.0	0.6
2nd-Term Q (Q2), veh/ln	0.1	0.0	0.0	0.4	0.1	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.4	0.0	0.0	4.7	0.9	0.0	0.0	0.6
%ile Storage Ratio (RQ%)	0.05	0.00	0.00	0.58	0.01	0.00	0.00	0.02
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T				T		
Lanes in Grp	0	1	0	0	0	1	0	0
Grp Vol (v), veh/h	0	542	0	0	0	564	0	0
Grp Sat Flow (s), veh/h/ln	0	1805	0	0	0	1805	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	15.1	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	15.1	0.0	0.0
Lane Grp Cap (c), veh/h	0	1168	0	0	0	1139	0	0
V/C Ratio (X)	0.00	0.46	0.00	0.00	0.00	0.49	0.00	0.00
Avail Cap (c_a), veh/h	0	1168	0	0	0	1139	0	0
Upstream Filter (I)	0.00	0.72	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	8.9	0.0	0.0
Incr Delay (d2), s/veh	0.0	1.0	0.0	0.0	0.0	1.5	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	1.0	0.0	0.0	0.0	10.4	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	5.2	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.3	0.0	0.0	0.0	0.5	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.3	0.0	0.0	0.0	5.7	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.64	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R		T+R		T+R		T+R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	568	0	64	0	582	0	29
Grp Sat Flow (s), veh/h/ln	0	1889	0	1505	0	1862	0	1545
Q Serve Time (g_s), s	0.0	0.0	0.0	3.3	0.0	15.1	0.0	1.4
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	3.3	0.0	15.1	0.0	1.4
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.03	0.00	0.83	0.00	0.11	0.00	0.66
Lane Grp Cap (c), veh/h	0	1222	0	278	0	1175	0	285
V/C Ratio (X)	0.00	0.46	0.00	0.23	0.00	0.50	0.00	0.10
Avail Cap (c_a), veh/h	0	1222	0	303	0	1175	0	311
Upstream Filter (I)	0.00	0.72	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	31.2	0.0	8.9	0.0	30.5
Incr Delay (d2), s/veh	0.0	0.9	0.0	0.4	0.0	1.5	0.0	0.2
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.9	0.0	31.7	0.0	10.4	0.0	30.6
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	1.2	0.0	5.4	0.0	0.5
2nd-Term Q (Q2), veh/ln	0.0	0.3	0.0	0.0	0.0	0.5	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.3	0.0	1.2	0.0	5.8	0.0	0.5
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.15	0.00	0.66	0.00	0.02
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	10.6
HCM 6th LOS	B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	168	672	81	162	255	206	57	669	338	283	729	76
Future Volume (veh/h)	168	672	81	162	255	206	57	669	338	283	729	76
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1800	1900	1900	1700	1900	1900	1800	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	177	707	85	171	268	217	60	704	0	298	767	80
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	202	1070	332	236	590	263	77	1197		338	1711	763
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	0.67	0.67	0.67
Prop Arrive On Green	0.12	0.21	0.21	0.08	0.16	0.16	0.01	0.11	0.00	0.13	0.32	0.32
Unsig. Movement Delay												
Ln Grp Delay, s/veh	71.4	34.0	30.3	42.9	34.2	40.4	46.4	34.5	0.0	54.8	22.1	17.5
Ln Grp LOS	E	C	C	D	C	D	D	C		D	C	B
Approach Vol, veh/h		969			656			764			1145	
Approach Delay, s/veh		40.5			38.5			35.5			30.3	
Approach LOS		D			D			D			C	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Case No	2.0	3.0	2.0	3.0	2.0	3.0	2.0	3.0
Phs Duration (G+Y+Rc), s	21.3	34.3	11.3	23.1	8.5	47.2	15.1	19.2
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green (Gmax), s	19.5	23.9	7.9	20.7	9.3	34.1	10.6	18.0
Max Allow Headway (MAH), s	3.8	5.2	3.8	5.1	3.8	5.1	3.8	4.7
Max Q Clear (g_c+I1), s	16.6	18.7	6.8	13.3	5.1	17.2	11.1	13.7
Green Ext Time (g_e), s	0.3	2.1	0.1	3.0	0.0	5.2	0.0	1.0
Prob of Phs Call (p_c)	1.00	1.00	0.99	1.00	0.78	1.00	0.99	1.00
Prob of Max Out (p_x)	1.00	0.00	1.00	0.66	0.63	0.00	1.00	1.00

Left-Turn Movement Data								
Assigned Mvmt	1		3		5		7	
Mvmt Sat Flow, veh/h	1810		3141		1714		1714	

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		3610		5187		3610		3610

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1610		1610		1610		1610

Left Lane Group Data								
Assigned Mvmt	1	0	3	0	5	0	7	0
Lane Assignment	L (Prot)		L (Prot)		L (Prot)		L (Prot)	

Lanes in Grp	1	0	2	0	1	0	1	0
Grp Vol (v), veh/h	298	0	171	0	60	0	177	0
Grp Sat Flow (s), veh/h/ln	1810	0	1570	0	1714	0	1714	0
Q Serve Time (g_s), s	14.6	0.0	4.8	0.0	3.1	0.0	9.1	0.0
Cycle Q Clear Time (g_c), s	14.6	0.0	4.8	0.0	3.1	0.0	9.1	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	338	0	236	0	77	0	202	0
V/C Ratio (X)	0.88	0.00	0.73	0.00	0.78	0.00	0.88	0.00
Avail Cap (c_a), veh/h	392	0	276	0	177	0	202	0
Upstream Filter (I)	0.88	0.00	0.27	0.00	0.14	0.00	1.00	0.00
Uniform Delay (d1), s/veh	38.4	0.0	40.7	0.0	43.9	0.0	39.1	0.0
Incr Delay (d2), s/veh	16.5	0.0	2.2	0.0	2.5	0.0	32.3	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	54.8	0.0	42.9	0.0	46.4	0.0	71.4	0.0
1st-Term Q (Q1), veh/ln	6.7	0.0	1.8	0.0	1.3	0.0	3.8	0.0
2nd-Term Q (Q2), veh/ln	1.5	0.0	0.1	0.0	0.1	0.0	1.8	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
%ile Back of Q (50%), veh/ln	8.2	0.0	1.9	0.0	1.4	0.0	5.6	0.0
%ile Storage Ratio (RQ%)	0.79	0.00	0.19	0.00	0.21	0.00	1.40	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	2	0	3	0	2	0	2
Grp Vol (v), veh/h	0	704	0	707	0	767	0	268
Grp Sat Flow (s), veh/h/ln	0	1805	0	1729	0	1805	0	1805
Q Serve Time (g_s), s	0.0	16.7	0.0	11.3	0.0	15.2	0.0	6.0
Cycle Q Clear Time (g_c), s	0.0	16.7	0.0	11.3	0.0	15.2	0.0	6.0
Lane Grp Cap (c), veh/h	0	1197	0	1070	0	1711	0	590
V/C Ratio (X)	0.00	0.59	0.00	0.66	0.00	0.45	0.00	0.45
Avail Cap (c_a), veh/h	0	1197	0	1193	0	1711	0	722
Upstream Filter (I)	0.00	0.14	0.00	1.00	0.00	0.88	0.00	0.27
Uniform Delay (d1), s/veh	0.0	34.2	0.0	32.8	0.0	21.3	0.0	34.0
Incr Delay (d2), s/veh	0.0	0.3	0.0	1.2	0.0	0.7	0.0	0.1
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	34.5	0.0	34.0	0.0	22.1	0.0	34.2
1st-Term Q (Q1), veh/ln	0.0	8.0	0.0	4.6	0.0	6.8	0.0	2.6
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.1	0.0	0.2	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	8.1	0.0	4.7	0.0	7.0	0.0	2.6
%ile Storage Ratio (RQ%)	0.00	0.08	0.00	0.02	0.00	0.07	0.00	0.03
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		R		R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	0	0	85	0	80	0	217
Grp Sat Flow (s), veh/h/ln	0	1610	0	1610	0	1610	0	1610
Q Serve Time (g_s), s	0.0	0.0	0.0	4.0	0.0	3.2	0.0	11.7
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	4.0	0.0	3.2	0.0	11.7
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	534	0	332	0	763	0	263
V/C Ratio (X)	0.00	0.00	0.00	0.26	0.00	0.10	0.00	0.82
Avail Cap (c_a), veh/h	0	534	0	370	0	763	0	322
Upstream Filter (I)	0.00	0.00	0.00	1.00	0.00	0.88	0.00	0.27
Uniform Delay (d1), s/veh	0.0	0.0	0.0	29.9	0.0	17.2	0.0	36.4
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.4	0.0	0.2	0.0	4.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	30.3	0.0	17.5	0.0	40.4
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	1.5	0.0	1.1	0.0	4.5
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.3
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	1.6	0.0	1.2	0.0	4.8
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.01	0.00	0.01	0.00	0.06
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	35.7
HCM 6th LOS	D

Notes

Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	268	520	131	462	376	102	138	944	507	248	883	194
Future Volume (veh/h)	268	520	131	462	376	102	138	944	507	248	883	194
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1800	1900	1900	1700	1900	1900	1800	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	282	547	138	486	396	107	145	994	534	261	929	204
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	288	575	144	523	563	151	177	1019	454	271	1402	307
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.66	0.33	0.33	0.33
Prop Arrive On Green	0.17	0.20	0.20	0.17	0.20	0.20	0.10	0.28	0.47	0.05	0.11	0.11
Unsig. Movement Delay												
Ln Grp Delay, s/veh	84.8	69.8	71.6	60.0	39.3	40.1	50.0	47.7	115.1	83.1	38.0	40.6
Ln Grp LOS	F	E	E	E	D	D	D	D	F	F	D	D
Approach Vol, veh/h		967			989			1673			1394	
Approach Delay, s/veh		74.8			49.7			69.4			47.1	
Approach LOS		E			D			E			D	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Case No	2.0	3.0	2.0	4.0	2.0	4.0	2.0	4.0
Phs Duration (G+Y+Rc), s	18.0	29.9	19.5	22.6	13.8	34.1	19.6	22.5
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green (Gmax), s	13.5	25.4	15.0	18.1	11.5	27.4	15.1	18.0
Max Allow Headway (MAH), s	3.8	4.8	3.8	5.3	3.8	5.3	3.8	5.3
Max Q Clear (g_c+I1), s	15.0	27.4	15.7	19.1	9.5	20.9	16.7	13.9
Green Ext Time (g_e), s	0.0	0.0	0.0	0.0	0.1	3.8	0.0	1.1
Prob of Phs Call (p_c)	1.00	1.00	1.00	1.00	0.97	1.00	1.00	1.00
Prob of Max Out (p_x)	1.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00

Left-Turn Movement Data								
Assigned Mvmt	1		3		5		7	
Mvmt Sat Flow, veh/h	1810		3141		1714		1714	

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		3610		2858		4259		2817

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1610		718		932		753

Left Lane Group Data								
Assigned Mvmt	1	0	3	0	5	0	7	0
Lane Assignment	L (Prot)		L (Prot)		L (Prot)		L (Prot)	

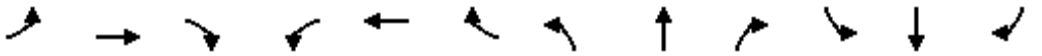
Lanes in Grp	1	0	2	0	1	0	1	0
Grp Vol (v), veh/h	261	0	486	0	145	0	282	0
Grp Sat Flow (s), veh/h/ln	1810	0	1570	0	1714	0	1714	0
Q Serve Time (g_s), s	13.0	0.0	13.7	0.0	7.5	0.0	14.7	0.0
Cycle Q Clear Time (g_c), s	13.0	0.0	13.7	0.0	7.5	0.0	14.7	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	271	0	523	0	177	0	288	0
V/C Ratio (X)	0.96	0.00	0.93	0.00	0.82	0.00	0.98	0.00
Avail Cap (c_a), veh/h	271	0	523	0	219	0	288	0
Upstream Filter (I)	0.87	0.00	1.00	0.00	0.54	0.00	1.00	0.00
Uniform Delay (d1), s/veh	42.5	0.0	37.0	0.0	39.5	0.0	37.3	0.0
Incr Delay (d2), s/veh	40.6	0.0	23.1	0.0	10.5	0.0	47.5	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	83.1	0.0	60.0	0.0	50.0	0.0	84.8	0.0
1st-Term Q (Q1), veh/ln	6.2	0.0	5.2	0.0	3.1	0.0	6.0	0.0
2nd-Term Q (Q2), veh/ln	3.1	0.0	1.7	0.0	0.5	0.0	3.8	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
%ile Back of Q (50%), veh/ln	9.3	0.0	6.8	0.0	3.6	0.0	9.8	0.0
%ile Storage Ratio (RQ%)	1.29	0.00	0.05	0.00	0.45	0.00	1.12	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	2	0	1	0	2	0	1
Grp Vol (v), veh/h	0	994	0	345	0	754	0	252
Grp Sat Flow (s), veh/h/ln	0	1805	0	1805	0	1729	0	1805
Q Serve Time (g_s), s	0.0	24.5	0.0	17.0	0.0	18.8	0.0	11.7
Cycle Q Clear Time (g_c), s	0.0	24.5	0.0	17.0	0.0	18.8	0.0	11.7
Lane Grp Cap (c), veh/h	0	1019	0	363	0	1138	0	361
V/C Ratio (X)	0.00	0.98	0.00	0.95	0.00	0.66	0.00	0.70
Avail Cap (c_a), veh/h	0	1019	0	363	0	1138	0	361
Upstream Filter (I)	0.00	0.54	0.00	1.00	0.00	0.87	0.00	1.00
Uniform Delay (d1), s/veh	0.0	32.0	0.0	35.5	0.0	35.3	0.0	33.5
Incr Delay (d2), s/veh	0.0	15.7	0.0	34.3	0.0	2.6	0.0	5.8
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	47.7	0.0	69.8	0.0	38.0	0.0	39.3
1st-Term Q (Q1), veh/ln	0.0	10.3	0.0	7.3	0.0	8.7	0.0	5.0
2nd-Term Q (Q2), veh/ln	0.0	2.2	0.0	3.5	0.0	0.4	0.0	0.6

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	12.5	0.0	10.7	0.0	9.1	0.0	5.6
%ile Storage Ratio (RQ%)	0.00	0.33	0.00	0.05	0.00	0.09	0.00	0.04
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		T+R		T+R		T+R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	534	0	340	0	379	0	251
Grp Sat Flow (s), veh/h/ln	0	1610	0	1771	0	1732	0	1764
Q Serve Time (g_s), s	0.0	25.4	0.0	17.1	0.0	18.9	0.0	11.9
Cycle Q Clear Time (g_c), s	0.0	25.4	0.0	17.1	0.0	18.9	0.0	11.9
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	0.41	0.00	0.54	0.00	0.43
Lane Grp Cap (c), veh/h	0	454	0	356	0	570	0	353
V/C Ratio (X)	0.00	1.18	0.00	0.96	0.00	0.67	0.00	0.71
Avail Cap (c_a), veh/h	0	454	0	356	0	570	0	353
Upstream Filter (I)	0.00	0.54	0.00	1.00	0.00	0.87	0.00	1.00
Uniform Delay (d1), s/veh	0.0	23.9	0.0	35.6	0.0	35.3	0.0	33.6
Incr Delay (d2), s/veh	0.0	91.2	0.0	36.0	0.0	5.3	0.0	6.5
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	115.1	0.0	71.6	0.0	40.6	0.0	40.1
1st-Term Q (Q1), veh/ln	0.0	7.3	0.0	7.2	0.0	8.7	0.0	5.0
2nd-Term Q (Q2), veh/ln	0.0	11.5	0.0	3.6	0.0	0.8	0.0	0.6
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	18.8	0.0	10.8	0.0	9.6	0.0	5.6
%ile Storage Ratio (RQ%)	0.00	0.49	0.00	0.05	0.00	0.10	0.00	0.04
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	19.9	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	60.4
HCM 6th LOS	E



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	214	387	229	828	1809	0	0	1316	772
Future Volume (veh/h)	0	0	0	214	387	229	828	1809	0	0	1316	772
Number				3	8	18	5	2	12	1	6	16
Initial Q, veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln				1800	1900	1900	1900	1900	0	0	1900	1900
Adj Flow Rate, veh/h				225	407	241	872	1904	0	0	1385	813
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence				Yes			Yes			No		
Cap, veh/h				220	413	259	550	2458	0	0	1236	551
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	2.00	1.00
Prop Arrive On Green				0.25	0.25	0.25	0.61	1.00	0.00	0.00	0.68	0.34
Unsig. Movement Delay												
Ln Grp Delay, s/veh				96.2	0.0	74.6	290.0	0.2	0.0	0.0	81.5	262.0
Ln Grp LOS				F	A	E	F	A	A	A	F	F
Approach Vol, veh/h					873			2776			2198	
Approach Delay, s/veh					86.4			91.2			148.2	
Approach LOS					F			F			F	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2	8		5	6		
Case No		4.0	12.0		2.0	7.0		
Phs Duration (G+Y+Rc), s		93.0	37.0		44.0	49.0		
Change Period (Y+Rc), s		4.5	4.5		4.5	4.5		
Max Green (Gmax), s		88.5	32.5		39.5	44.5		
Max Allow Headway (MAH), s		5.2	5.4		3.8	4.8		
Max Q Clear (g_c+I1), s		2.0	34.5		41.5	46.5		
Green Ext Time (g_e), s		34.0	0.0		0.0	0.0		
Prob of Phs Call (p_c)		1.00	1.00		1.00	1.00		
Prob of Max Out (p_x)		0.00	1.00		1.00	0.00		

Left-Turn Movement Data								
Assigned Mvmt			3		5	1		
Mvmt Sat Flow, veh/h			881		1810	0		

Through Movement Data								
Assigned Mvmt		2	8			6		
Mvmt Sat Flow, veh/h		3705	1653			3705		

Right-Turn Movement Data								
Assigned Mvmt		12	18			16		
Mvmt Sat Flow, veh/h		0	1036			1610		

Left Lane Group Data								
Assigned Mvmt	0	0	3	0	5	1	0	0
Lane Assignment			L+T		L (Prot)			

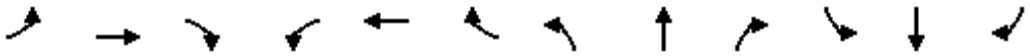
Lanes in Grp	0	0	1	0	1	0	0	0
Grp Vol (v), veh/h	0	0	474	0	872	0	0	0
Grp Sat Flow (s), veh/h/ln	0	0	1856	0	1810	0	0	0
Q Serve Time (g_s), s	0.0	0.0	32.5	0.0	39.5	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	32.5	0.0	39.5	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	44.5	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	0.00	0.47	0.00	1.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	464	0	550	0	0	0
V/C Ratio (X)	0.00	0.00	1.02	0.00	1.59	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	0	464	0	550	0	0	0
Upstream Filter (I)	0.00	0.00	1.00	0.00	0.09	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	48.8	0.0	25.5	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	47.5	0.0	264.5	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	96.2	0.0	290.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	15.0	0.0	11.7	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	6.1	0.0	40.4	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	0.00	1.00	0.00	1.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	21.1	0.0	52.1	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.51	0.00	8.69	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	2.6	0.0	80.5	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.3	0.0	0.4	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	8	0	0	6	0	0
Lane Assignment		T				T		
Lanes in Grp	0	2	0	0	0	2	0	0
Grp Vol (v), veh/h	0	1904	0	0	0	1385	0	0
Grp Sat Flow (s), veh/h/ln	0	1805	0	0	0	1805	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	44.5	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	44.5	0.0	0.0
Lane Grp Cap (c), veh/h	0	2458	0	0	0	1236	0	0
V/C Ratio (X)	0.00	0.77	0.00	0.00	0.00	1.12	0.00	0.00
Avail Cap (c_a), veh/h	0	2458	0	0	0	1236	0	0
Upstream Filter (I)	0.00	0.09	0.00	0.00	0.00	0.55	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	20.5	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.2	0.0	0.0	0.0	61.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.2	0.0	0.0	0.0	81.5	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	11.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	10.5	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.1	0.0	0.0	0.0	21.5	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.56	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	37.3	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	18	0	0	16	0	0
Lane Assignment			T+R			R		
Lanes in Grp	0	0	1	0	0	1	0	0
Grp Vol (v), veh/h	0	0	399	0	0	813	0	0
Grp Sat Flow (s), veh/h/ln	0	0	1714	0	0	1610	0	0
Q Serve Time (g_s), s	0.0	0.0	29.6	0.0	0.0	44.5	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	29.6	0.0	0.0	44.5	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.00	0.60	0.00	0.00	1.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	428	0	0	551	0	0
V/C Ratio (X)	0.00	0.00	0.93	0.00	0.00	1.48	0.00	0.00
Avail Cap (c_a), veh/h	0	0	428	0	0	551	0	0
Upstream Filter (I)	0.00	0.00	1.00	0.00	0.00	0.55	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	47.7	0.0	0.0	42.8	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	27.0	0.0	0.0	219.2	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	74.6	0.0	0.0	262.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	12.6	0.0	0.0	17.5	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	3.2	0.0	0.0	33.6	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	15.8	0.0	0.0	51.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.38	0.00	0.00	1.33	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	65.5	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	111.9
HCM 6th LOS	F



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	450	85	660	0	0	0	0	1554	509	327	1013	0
Future Volume (veh/h)	450	85	660	0	0	0	0	1554	509	327	1013	0
Number	7	4	14				5	2	12	1	6	16
Initial Q, veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1800	1900	1900				0	1900	1900	1900	1900	0
Adj Flow Rate, veh/h	474	89	695				0	1636	536	344	1066	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0				0	0	0	0	0	0
Opposing Right Turn Influence	Yes						No			Yes		
Cap, veh/h	466	88	489				0	1561	661	328	2263	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	2.00	1.00	2.00	2.00	1.00
Prop Arrive On Green	0.30	0.30	0.30				0.00	0.82	0.41	0.36	1.00	0.00
Unsig. Movement Delay												
Ln Grp Delay, s/veh	87.6	0.0	246.2				0.0	48.1	44.2	70.6	0.1	0.0
Ln Grp LOS	F	A	F				A	F	D	F	A	A
Approach Vol, veh/h		1258						2172			1410	
Approach Delay, s/veh		175.2						47.2			17.3	
Approach LOS		F						D			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Case No	2.0	7.0		12.0		4.0		
Phs Duration (G+Y+Rc), s	28.1	57.9		44.0		86.0		
Change Period (Y+Rc), s	4.5	4.5		4.5		4.5		
Max Green (Gmax), s	23.6	53.4		39.5		81.5		
Max Allow Headway (MAH), s	3.8	4.9		5.5		5.2		
Max Q Clear (g_c+I1), s	25.6	55.4		41.5		2.0		
Green Ext Time (g_e), s	0.0	0.0		0.0		10.6		
Prob of Phs Call (p_c)	1.00	1.00		1.00		1.00		
Prob of Max Out (p_x)	1.00	0.00		1.00		0.00		

Left-Turn Movement Data								
Assigned Mvmt	1	5		7				
Mvmt Sat Flow, veh/h	1810	0		1535				

Through Movement Data								
Assigned Mvmt		2		4		6		
Mvmt Sat Flow, veh/h		3800		288		3705		

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		
Mvmt Sat Flow, veh/h		1610		1610		0		

Left Lane Group Data								
Assigned Mvmt	1	5	0	7	0	0	0	0
Lane Assignment	L (Prot)			L+T				

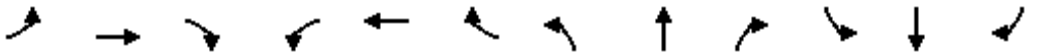
Lanes in Grp	1	0	0	1	0	0	0	0
Grp Vol (v), veh/h	344	0	0	563	0	0	0	0
Grp Sat Flow (s), veh/h/ln	1810	0	0	1823	0	0	0	0
Q Serve Time (g_s), s	23.6	0.0	0.0	39.5	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	23.6	0.0	0.0	39.5	0.0	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	53.4	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	0.84	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	328	0	0	554	0	0	0	0
V/C Ratio (X)	1.05	0.00	0.00	1.02	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	328	0	0	554	0	0	0	0
Upstream Filter (I)	0.09	0.00	0.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	41.4	0.0	0.0	45.3	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	29.2	0.0	0.0	42.4	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	70.6	0.0	0.0	87.6	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	8.9	0.0	0.0	17.7	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	2.7	0.0	0.0	6.5	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00
%ile Back of Q (50%), veh/ln	11.5	0.0	0.0	24.2	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	1.92	0.00	0.00	0.71	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	3.9	0.0	0.0	2.3	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.3	0.0	0.0	0.3	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	0
Lane Assignment		T				T		
Lanes in Grp	0	2	0	0	0	2	0	0
Grp Vol (v), veh/h	0	1636	0	0	0	1066	0	0
Grp Sat Flow (s), veh/h/ln	0	1900	0	0	0	1805	0	0
Q Serve Time (g_s), s	0.0	53.4	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	53.4	0.0	0.0	0.0	0.0	0.0	0.0
Lane Grp Cap (c), veh/h	0	1561	0	0	0	2263	0	0
V/C Ratio (X)	0.00	1.05	0.00	0.00	0.00	0.47	0.00	0.00
Avail Cap (c_a), veh/h	0	1561	0	0	0	2263	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	0.09	0.00	0.00
Uniform Delay (d1), s/veh	0.0	11.6	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	36.5	0.0	0.0	0.0	0.1	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	48.1	0.0	0.0	0.0	0.1	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	7.9	0.0	0.0	0.0	0.0	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	12.9	0.0	0.0	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.24	0.00	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	18.8	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	0
Lane Assignment		R		T+R				
Lanes in Grp	0	1	0	1	0	0	0	0
Grp Vol (v), veh/h	0	536	0	695	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	1610	0	1610	0	0	0	0
Q Serve Time (g_s), s	0.0	38.2	0.0	39.5	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	38.2	0.0	39.5	0.0	0.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	661	0	489	0	0	0	0
V/C Ratio (X)	0.00	0.81	0.00	1.42	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	661	0	489	0	0	0	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	33.8	0.0	45.3	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	10.4	0.0	201.0	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	44.2	0.0	246.2	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	14.8	0.0	15.6	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	1.9	0.0	27.3	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	16.7	0.0	42.9	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.31	0.00	1.26	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	51.4	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	71.7
HCM 6th LOS	E



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1296	667	539	664	0	0	0	0	454	7	278
Future Volume (veh/h)	0	1296	667	539	664	0	0	0	0	454	7	278
Number	7	4	14	3	8	18				1	6	16
Initial Q, veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	0	1900	1900	1700	1900	0				1900	1900	1900
Adj Flow Rate, veh/h	0	1364	0	567	699	0				478	7	293
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95				0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0				0	0	0
Opposing Right Turn Influence	No			Yes						Yes		
Cap, veh/h	0	1304		628	2206	0				515	8	465
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00				1.00	1.00	1.00
Prop Arrive On Green	0.00	0.36	0.00	0.40	1.00	0.00				0.29	0.29	0.29
Unsig. Movement Delay												
Ln Grp Delay, s/veh	0.0	52.1	0.0	37.7	0.1	0.0				56.0	0.0	34.2
Ln Grp LOS	A	F		D	A	A				E	A	C
Approach Vol, veh/h		1364			1266						778	
Approach Delay, s/veh		52.1			16.9						47.8	
Approach LOS		D			B						D	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	6		3	4				8
Case No	11.0		2.0	7.0				4.0
Phs Duration (G+Y+Rc), s	30.5		22.5	37.0				59.5
Change Period (Y+Rc), s	4.5		4.5	4.5				4.5
Max Green (Gmax), s	23.5		20.5	32.5				57.5
Max Allow Headway (MAH), s	4.9		3.8	5.2				5.2
Max Q Clear (g_c+I1), s	25.4		17.3	34.5				2.0
Green Ext Time (g_e), s	0.0		0.8	0.0				5.8
Prob of Phs Call (p_c)	1.00		1.00	1.00				1.00
Prob of Max Out (p_x)	0.00		1.00	1.00				0.00

Left-Turn Movement Data												
Assigned Mvmt		1		3	7							
Mvmt Sat Flow, veh/h		1785		3141	0							

Through Movement Data												
Assigned Mvmt		6			4				8			
Mvmt Sat Flow, veh/h		26			3705				3705			

Right-Turn Movement Data												
Assigned Mvmt		16			14				18			
Mvmt Sat Flow, veh/h		1610			1610				0			

Left Lane Group Data												
Assigned Mvmt		1	0	3	7	0	0	0	0			
Lane Assignment		L+T		L (Prot)								

Lanes in Grp	1	0	2	0	0	0	0	0
Grp Vol (v), veh/h	485	0	567	0	0	0	0	0
Grp Sat Flow (s), veh/h/ln	1811	0	1570	0	0	0	0	0
Q Serve Time (g_s), s	23.4	0.0	15.3	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	23.4	0.0	15.3	0.0	0.0	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	32.5	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.99	0.00	1.00	0.00	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	523	0	628	0	0	0	0	0
V/C Ratio (X)	0.93	0.00	0.90	0.00	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	523	0	715	0	0	0	0	0
Upstream Filter (I)	1.00	0.00	0.82	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	31.1	0.0	26.2	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	24.9	0.0	11.6	0.0	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	56.0	0.0	37.7	0.0	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	9.9	0.0	4.2	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	3.6	0.0	1.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	1.00	1.00	0.00	0.00	0.00	0.00
%ile Back of Q (50%), veh/ln	13.5	0.0	5.2	0.0	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	1.05	0.00	0.32	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	6	0	0	4	0	0	0	8
Lane Assignment				T				T
Lanes in Grp	0	0	0	2	0	0	0	2
Grp Vol (v), veh/h	0	0	0	1364	0	0	0	699
Grp Sat Flow (s), veh/h/ln	0	0	0	1805	0	0	0	1805
Q Serve Time (g_s), s	0.0	0.0	0.0	32.5	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	32.5	0.0	0.0	0.0	0.0
Lane Grp Cap (c), veh/h	0	0	0	1304	0	0	0	2206
V/C Ratio (X)	0.00	0.00	0.00	1.05	0.00	0.00	0.00	0.32
Avail Cap (c_a), veh/h	0	0	0	1304	0	0	0	2306
Upstream Filter (I)	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.82
Uniform Delay (d1), s/veh	0.0	0.0	0.0	28.7	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	23.4	0.0	0.0	0.0	0.1
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	52.1	0.0	0.0	0.0	0.1
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	13.3	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	4.2	0.0	0.0	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	1.00	0.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	17.6	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.17	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	15.1	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	16	0	0	14	0	0	0	18
Lane Assignment	R			R				
Lanes in Grp	1	0	0	1	0	0	0	0
Grp Vol (v), veh/h	293	0	0	0	0	0	0	0
Grp Sat Flow (s), veh/h/ln	1610	0	0	1610	0	0	0	0
Q Serve Time (g_s), s	14.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	14.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	1.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	465	0	0	581	0	0	0	0
V/C Ratio (X)	0.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	465	0	0	581	0	0	0	0
Upstream Filter (I)	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	27.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	6.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	34.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	5.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	1.00	0.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	6.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	38.1
HCM 6th LOS	D

Notes

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	315	1357	0	0	847	459	283	3	660	0	0	0
Future Volume (veh/h)	315	1357	0	0	847	459	283	3	660	0	0	0
Number	7	4	14	3	8	18	5	2	12			
Initial Q, veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1800	1900	0	0	1900	1900	1900	1900	1900			
Adj Flow Rate, veh/h	332	1428	0	0	892	483	300	0	695			
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95			
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0			
Opposing Right Turn Influence	Yes			No			Yes					
Cap, veh/h	366	1861	0	0	1308	406	1391	0	1238			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Prop Arrive On Green	0.43	1.00	0.00	0.00	0.25	0.25	0.38	0.00	0.38			
Unsig. Movement Delay												
Ln Grp Delay, s/veh	25.9	0.1	0.0	0.0	31.9	140.9	19.0	0.0	23.6			
Ln Grp LOS	C	A	A	A	C	F	B	A	C			
Approach Vol, veh/h		1760			1375			995				
Approach Delay, s/veh		5.0			70.2			22.2				
Approach LOS		A			E			C				

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2		4			7	8
Case No		9.0		4.0			2.0	7.0
Phs Duration (G+Y+Rc), s		39.1		50.9			23.7	27.2
Change Period (Y+Rc), s		4.5		4.5			4.5	4.5
Max Green (Gmax), s		19.3		61.7			34.5	22.7
Max Allow Headway (MAH), s		4.0		5.2			3.8	4.8
Max Q Clear (g_c+I1), s		17.2		2.0			18.3	24.7
Green Ext Time (g_e), s		1.0		17.2			0.9	0.0
Prob of Phs Call (p_c)		1.00		1.00			1.00	1.00
Prob of Max Out (p_x)		0.00		0.04			0.00	1.00

Left-Turn Movement Data								
Assigned Mvmt		5					7	3
Mvmt Sat Flow, veh/h		3619					1714	0

Through Movement Data								
Assigned Mvmt		2		4				8
Mvmt Sat Flow, veh/h		0		3705				5358

Right-Turn Movement Data								
Assigned Mvmt		12		14				18
Mvmt Sat Flow, veh/h		3220		0				1610

Left Lane Group Data								
Assigned Mvmt	0	5	0	0	0	0	7	3
Lane Assignment		L					L (Prot)	

Lanes in Grp	0	2	0	0	0	0	1	0
Grp Vol (v), veh/h	0	300	0	0	0	0	332	0
Grp Sat Flow (s), veh/h/ln	0	1810	0	0	0	0	1714	0
Q Serve Time (g_s), s	0.0	5.0	0.0	0.0	0.0	0.0	16.3	0.0
Cycle Q Clear Time (g_c), s	0.0	5.0	0.0	0.0	0.0	0.0	16.3	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	1810	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	22.7
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	0	1391	0	0	0	0	366	0
V/C Ratio (X)	0.00	0.22	0.00	0.00	0.00	0.00	0.91	0.00
Avail Cap (c_a), veh/h	0	1391	0	0	0	0	657	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	0.00	0.09	0.00
Uniform Delay (d1), s/veh	0.0	18.6	0.0	0.0	0.0	0.0	25.0	0.0
Incr Delay (d2), s/veh	0.0	0.4	0.0	0.0	0.0	0.0	1.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	19.0	0.0	0.0	0.0	0.0	25.9	0.0
1st-Term Q (Q1), veh/ln	0.0	2.0	0.0	0.0	0.0	0.0	4.7	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	0.00	0.00	0.00	1.00	1.00
%ile Back of Q (50%), veh/ln	0.0	2.1	0.0	0.0	0.0	0.0	4.8	0.0
%ile Storage Ratio (RQ%)	0.00	0.10	0.00	0.00	0.00	0.00	1.34	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	0	0	8
Lane Assignment				T				T
Lanes in Grp	0	0	0	2	0	0	0	3
Grp Vol (v), veh/h	0	0	0	1428	0	0	0	892
Grp Sat Flow (s), veh/h/ln	0	0	0	1805	0	0	0	1729
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	14.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	14.0
Lane Grp Cap (c), veh/h	0	0	0	1861	0	0	0	1308
V/C Ratio (X)	0.00	0.00	0.00	0.77	0.00	0.00	0.00	0.68
Avail Cap (c_a), veh/h	0	0	0	2475	0	0	0	1308
Upstream Filter (I)	0.00	0.00	0.00	0.09	0.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	30.4
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.1	0.0	0.0	0.0	1.5
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	0.1	0.0	0.0	0.0	31.9
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.7
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2

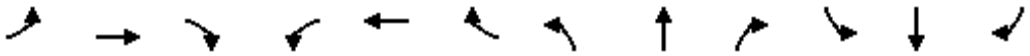
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.9
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	0	0	18
Lane Assignment		R						R
Lanes in Grp	0	2	0	0	0	0	0	1
Grp Vol (v), veh/h	0	695	0	0	0	0	0	483
Grp Sat Flow (s), veh/h/ln	0	1610	0	0	0	0	0	1610
Q Serve Time (g_s), s	0.0	15.2	0.0	0.0	0.0	0.0	0.0	22.7
Cycle Q Clear Time (g_c), s	0.0	15.2	0.0	0.0	0.0	0.0	0.0	22.7
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	0.00	0.00	0.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	1238	0	0	0	0	0	406
V/C Ratio (X)	0.00	0.56	0.00	0.00	0.00	0.00	0.00	1.19
Avail Cap (c_a), veh/h	0	1238	0	0	0	0	0	406
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	21.7	0.0	0.0	0.0	0.0	0.0	33.7
Incr Delay (d2), s/veh	0.0	1.8	0.0	0.0	0.0	0.0	0.0	107.3
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	23.6	0.0	0.0	0.0	0.0	0.0	140.9
1st-Term Q (Q1), veh/ln	0.0	5.6	0.0	0.0	0.0	0.0	0.0	8.6
2nd-Term Q (Q2), veh/ln	0.0	0.3	0.0	0.0	0.0	0.0	0.0	12.1
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	5.9	0.0	0.0	0.0	0.0	0.0	20.7
%ile Storage Ratio (RQ%)	0.00	0.27	0.00	0.00	0.00	0.00	0.00	1.44
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	19.2
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3

Intersection Summary	
HCM 6th Ctrl Delay	30.8
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	194	897	98	197	477	259	35	55	307	313	594	227
Future Volume (veh/h)	194	897	98	197	477	259	35	55	307	313	594	227
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1800	1900	1000	1800	1900	1900	1800	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	204	944	103	207	502	273	37	58	323	329	625	239
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	213	989	232	215	522	443	57	392	332	352	937	358
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.25	0.55	0.55	0.25	0.55	0.27	0.03	0.21	0.21	0.19	0.37	0.37
Unsig. Movement Delay												
Ln Grp Delay, s/veh	73.7	34.5	17.2	44.4	25.2	28.7	54.4	30.0	78.5	67.4	29.1	29.4
Ln Grp LOS	E	C	B	D	C	C	D	C	E	E	C	C
Approach Vol, veh/h		1251			982			418			1193	
Approach Delay, s/veh		39.5			30.2			69.7			39.8	
Approach LOS		D			C			E			D	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Case No	2.0	3.0	2.0	3.0	2.0	4.0	2.0	3.0
Phs Duration (G+Y+Rc), s	22.0	23.1	15.8	29.1	7.5	37.5	15.7	29.2
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green (Gmax), s	17.5	18.5	11.3	24.7	5.1	30.9	11.2	24.8
Max Allow Headway (MAH), s	3.8	4.2	3.8	5.1	3.8	5.3	3.8	4.8
Max Q Clear (g_c+I1), s	18.1	19.9	12.7	24.3	3.9	20.5	12.6	24.7
Green Ext Time (g_e), s	0.0	0.0	0.0	0.3	0.0	4.1	0.0	0.1
Prob of Phs Call (p_c)	1.00	1.00	0.99	1.00	0.60	1.00	0.99	1.00
Prob of Max Out (p_x)	1.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00

Left-Turn Movement Data								
Assigned Mvmt	1		3		5		7	
Mvmt Sat Flow, veh/h	1810		1714		1714		1714	

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		1900		3610		2554		1900

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1610		847		976		1610

Left Lane Group Data								
Assigned Mvmt	1	0	3	0	5	0	7	0
Lane Assignment	L (Prot)		L (Prot)		L (Prot)		L (Prot)	

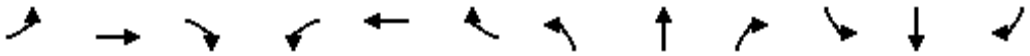
Lanes in Grp	1	0	1	0	1	0	1	0
Grp Vol (v), veh/h	329	0	207	0	37	0	204	0
Grp Sat Flow (s), veh/h/ln	1810	0	1714	0	1714	0	1714	0
Q Serve Time (g_s), s	16.1	0.0	10.7	0.0	1.9	0.0	10.6	0.0
Cycle Q Clear Time (g_c), s	16.1	0.0	10.7	0.0	1.9	0.0	10.6	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	352	0	215	0	57	0	213	0
V/C Ratio (X)	0.94	0.00	0.96	0.00	0.64	0.00	0.96	0.00
Avail Cap (c_a), veh/h	352	0	215	0	97	0	213	0
Upstream Filter (I)	1.00	0.00	0.09	0.00	1.00	0.00	0.71	0.00
Uniform Delay (d1), s/veh	35.7	0.0	33.5	0.0	43.0	0.0	33.6	0.0
Incr Delay (d2), s/veh	31.7	0.0	10.9	0.0	11.4	0.0	40.1	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	67.4	0.0	44.4	0.0	54.4	0.0	73.7	0.0
1st-Term Q (Q1), veh/ln	6.9	0.0	3.7	0.0	0.8	0.0	3.7	0.0
2nd-Term Q (Q2), veh/ln	3.1	0.0	0.7	0.0	0.2	0.0	2.4	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
%ile Back of Q (50%), veh/ln	10.0	0.0	4.4	0.0	1.0	0.0	6.1	0.0
%ile Storage Ratio (RQ%)	2.51	0.00	0.18	0.00	0.11	0.00	0.58	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	1	0	2	0	1	0	1
Grp Vol (v), veh/h	0	58	0	944	0	442	0	502
Grp Sat Flow (s), veh/h/ln	0	1900	0	1805	0	1805	0	1900
Q Serve Time (g_s), s	0.0	2.2	0.0	22.3	0.0	18.5	0.0	22.7
Cycle Q Clear Time (g_c), s	0.0	2.2	0.0	22.3	0.0	18.5	0.0	22.7
Lane Grp Cap (c), veh/h	0	392	0	989	0	663	0	522
V/C Ratio (X)	0.00	0.15	0.00	0.95	0.00	0.67	0.00	0.96
Avail Cap (c_a), veh/h	0	392	0	991	0	663	0	524
Upstream Filter (I)	0.00	1.00	0.00	0.71	0.00	1.00	0.00	0.09
Uniform Delay (d1), s/veh	0.0	29.3	0.0	19.8	0.0	23.9	0.0	19.8
Incr Delay (d2), s/veh	0.0	0.8	0.0	14.7	0.0	5.2	0.0	5.4
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	30.0	0.0	34.5	0.0	29.1	0.0	25.2
1st-Term Q (Q1), veh/ln	0.0	1.0	0.0	5.5	0.0	7.6	0.0	5.8
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	2.0	0.0	1.0	0.0	0.8

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	1.1	0.0	7.5	0.0	8.5	0.0	6.6
%ile Storage Ratio (RQ%)	0.00	0.06	0.00	0.10	0.00	1.35	0.00	0.27
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		R		T+R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	323	0	103	0	422	0	273
Grp Sat Flow (s), veh/h/ln	0	1610	0	847	0	1724	0	1610
Q Serve Time (g_s), s	0.0	17.9	0.0	6.5	0.0	18.5	0.0	13.3
Cycle Q Clear Time (g_c), s	0.0	17.9	0.0	6.5	0.0	18.5	0.0	13.3
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	0.57	0.00	1.00
Lane Grp Cap (c), veh/h	0	332	0	232	0	633	0	443
V/C Ratio (X)	0.00	0.97	0.00	0.44	0.00	0.67	0.00	0.62
Avail Cap (c_a), veh/h	0	332	0	233	0	633	0	444
Upstream Filter (I)	0.00	1.00	0.00	0.71	0.00	1.00	0.00	0.09
Uniform Delay (d1), s/veh	0.0	35.5	0.0	16.3	0.0	23.9	0.0	28.5
Incr Delay (d2), s/veh	0.0	43.0	0.0	0.9	0.0	5.5	0.0	0.2
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	78.5	0.0	17.2	0.0	29.4	0.0	28.7
1st-Term Q (Q1), veh/ln	0.0	6.8	0.0	1.1	0.0	7.2	0.0	5.0
2nd-Term Q (Q2), veh/ln	0.0	4.0	0.0	0.1	0.0	1.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	10.8	0.0	1.1	0.0	8.2	0.0	5.0
%ile Storage Ratio (RQ%)	0.00	0.58	0.00	0.01	0.00	1.30	0.00	0.21
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	40.5
HCM 6th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	648	787	247	101	975	531	104	613	76	336	29	222
Future Volume (veh/h)	648	787	247	101	975	531	104	613	76	336	29	222
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1700	1900	1900	1800	1900	1900	1800	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	682	828	260	106	1026	559	109	645	80	354	31	234
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	495	919	779	120	753	638	132	597	266	258	44	334
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.32	0.97	0.97	0.14	0.79	0.40	0.08	0.17	0.17	0.14	0.23	0.23
Unsig. Movement Delay												
Ln Grp Delay, s/veh	218.8	6.2	1.2	103.7	185.4	49.4	84.1	114.7	50.5	247.0	0.0	56.2
Ln Grp LOS	F	A	A	F	F	D	F	F	D	F	A	E
Approach Vol, veh/h		1770			1691			834			619	
Approach Delay, s/veh		87.4			135.3			104.5			165.3	
Approach LOS		F			F			F			F	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Case No	2.0	3.0	2.0	3.0	2.0	4.0	2.0	3.0
Phs Duration (G+Y+Rc), s	23.0	26.0	13.6	67.4	14.5	34.5	25.0	56.0
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green (Gmax), s	18.5	21.5	9.1	62.9	12.1	27.9	20.5	51.5
Max Allow Headway (MAH), s	3.8	5.1	3.7	4.7	3.8	5.5	3.7	4.6
Max Q Clear (g_c+I1), s	20.5	23.5	9.9	16.3	10.1	21.3	22.5	53.5
Green Ext Time (g_e), s	0.0	0.0	0.0	7.8	0.0	0.8	0.0	0.0
Prob of Phs Call (p_c)	1.00	1.00	0.98	1.00	0.98	1.00	1.00	1.00
Prob of Max Out (p_x)	1.00	0.00	1.00	0.01	1.00	0.00	1.00	1.00

Left-Turn Movement Data								
Assigned Mvmt	1		3		5		7	
Mvmt Sat Flow, veh/h	1810		1714		1714		3141	

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		3610		1900		192		1900

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1610		1610		1448		1610

Left Lane Group Data								
Assigned Mvmt	1	0	3	0	5	0	7	0
Lane Assignment	L (Prot)		L (Prot)		L (Prot)		L (Prot)	

Lanes in Grp	1	0	1	0	1	0	2	0
Grp Vol (v), veh/h	354	0	106	0	109	0	682	0
Grp Sat Flow (s), veh/h/ln	1810	0	1714	0	1714	0	1570	0
Q Serve Time (g_s), s	18.5	0.0	7.9	0.0	8.1	0.0	20.5	0.0
Cycle Q Clear Time (g_c), s	18.5	0.0	7.9	0.0	8.1	0.0	20.5	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	258	0	120	0	132	0	495	0
V/C Ratio (X)	1.37	0.00	0.88	0.00	0.83	0.00	1.38	0.00
Avail Cap (c_a), veh/h	258	0	120	0	160	0	495	0
Upstream Filter (I)	1.00	0.00	1.00	0.00	1.00	0.00	0.36	0.00
Uniform Delay (d1), s/veh	55.8	0.0	55.4	0.0	59.2	0.0	44.5	0.0
Incr Delay (d2), s/veh	191.2	0.0	48.3	0.0	24.9	0.0	174.3	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	247.0	0.0	103.7	0.0	84.1	0.0	218.8	0.0
1st-Term Q (Q1), veh/ln	8.4	0.0	3.1	0.0	3.5	0.0	6.4	0.0
2nd-Term Q (Q2), veh/ln	13.7	0.0	1.6	0.0	0.9	0.0	12.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
%ile Back of Q (50%), veh/ln	22.1	0.0	4.7	0.0	4.5	0.0	18.4	0.0
%ile Storage Ratio (RQ%)	2.68	0.00	0.05	0.00	0.39	0.00	1.77	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	24.1	0.0	0.0	0.0	0.0	0.0	46.7	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.3	0.0	0.0	0.0	0.0	0.0	0.3	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T				T
Lanes in Grp	0	2	0	1	0	0	0	1
Grp Vol (v), veh/h	0	645	0	828	0	0	0	1026
Grp Sat Flow (s), veh/h/ln	0	1805	0	1900	0	0	0	1900
Q Serve Time (g_s), s	0.0	21.5	0.0	14.3	0.0	0.0	0.0	51.5
Cycle Q Clear Time (g_c), s	0.0	21.5	0.0	14.3	0.0	0.0	0.0	51.5
Lane Grp Cap (c), veh/h	0	597	0	919	0	0	0	753
V/C Ratio (X)	0.00	1.08	0.00	0.90	0.00	0.00	0.00	1.36
Avail Cap (c_a), veh/h	0	597	0	919	0	0	0	753
Upstream Filter (I)	0.00	1.00	0.00	0.36	0.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	54.2	0.0	1.3	0.0	0.0	0.0	13.5
Incr Delay (d2), s/veh	0.0	60.4	0.0	4.9	0.0	0.0	0.0	171.9
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	114.7	0.0	6.2	0.0	0.0	0.0	185.4
1st-Term Q (Q1), veh/ln	0.0	9.7	0.0	0.8	0.0	0.0	0.0	5.5
2nd-Term Q (Q2), veh/ln	0.0	5.0	0.0	1.2	0.0	0.0	0.0	35.9

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	14.8	0.0	2.0	0.0	0.0	0.0	41.4
%ile Storage Ratio (RQ%)	0.00	1.30	0.00	0.08	0.00	0.00	0.00	0.48
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	12.0	0.0	0.0	0.0	0.0	0.0	68.3
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.3

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		R		T+R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	80	0	260	0	265	0	559
Grp Sat Flow (s), veh/h/ln	0	1610	0	1610	0	1639	0	1610
Q Serve Time (g_s), s	0.0	5.7	0.0	1.0	0.0	19.3	0.0	41.7
Cycle Q Clear Time (g_c), s	0.0	5.7	0.0	1.0	0.0	19.3	0.0	41.7
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	0.88	0.00	1.00
Lane Grp Cap (c), veh/h	0	266	0	779	0	378	0	638
V/C Ratio (X)	0.00	0.30	0.00	0.33	0.00	0.70	0.00	0.88
Avail Cap (c_a), veh/h	0	266	0	779	0	378	0	638
Upstream Filter (I)	0.00	1.00	0.00	0.36	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	47.6	0.0	1.1	0.0	45.9	0.0	36.3
Incr Delay (d2), s/veh	0.0	2.9	0.0	0.1	0.0	10.3	0.0	13.1
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	50.5	0.0	1.2	0.0	56.2	0.0	49.4
1st-Term Q (Q1), veh/ln	0.0	2.2	0.0	0.2	0.0	7.9	0.0	15.6
2nd-Term Q (Q2), veh/ln	0.0	0.2	0.0	0.0	0.0	1.1	0.0	2.3
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	2.4	0.0	0.3	0.0	8.9	0.0	17.9
%ile Storage Ratio (RQ%)	0.00	0.87	0.00	0.01	0.00	1.09	0.00	0.21
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	116.6
HCM 6th LOS	F

BUILD OUT YEAR PLUS PROJECT WITH IMPROVEMENT CONDITIONS

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	370	4	210	643	600	0	0	614	818
Future Volume (veh/h)	0	0	0	370	4	210	643	600	0	0	614	818
Number				3	8	18	5	2	12	1	6	16
Initial Q, veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln				1800	1900	1900	1700	1900	0	0	1900	1900
Adj Flow Rate, veh/h				389	4	221	677	632	0	0	646	861
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence				Yes			Yes			No		
Cap, veh/h				416	4	374	715	2501	0	0	2218	689
HCM Platoon Ratio				1.66	1.66	1.00	2.00	2.00	1.00	1.00	2.00	2.00
Prop Arrive On Green				0.39	0.39	0.23	0.46	1.00	0.00	0.00	0.86	0.86
Unsig. Movement Delay												
Ln Grp Delay, s/veh				62.4	0.0	43.1	47.7	0.2	0.0	0.0	5.5	133.1
Ln Grp LOS				E	A	D	D	A	A	A	A	F
Approach Vol, veh/h					614			1309			1507	
Approach Delay, s/veh					55.4			24.8			78.4	
Approach LOS					E			C			E	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2	8		5	6		
Case No		4.0	11.0		2.0	7.0		
Phs Duration (G+Y+Rc), s		87.6	32.4		31.8	55.8		
Change Period (Y+Rc), s		4.5	4.5		4.5	4.5		
Max Green (Gmax), s		81.5	29.5		28.5	48.5		
Max Allow Headway (MAH), s		5.2	4.9		3.8	4.5		
Max Q Clear (g_c+I1), s		2.0	27.0		26.8	53.3		
Green Ext Time (g_e), s		5.1	0.8		0.5	0.0		
Prob of Phs Call (p_c)		1.00	1.00		1.00	1.00		
Prob of Max Out (p_x)		0.00	1.00		1.00	0.00		
Left-Turn Movement Data								
Assigned Mvmt			3		5	1		
Mvmt Sat Flow, veh/h			1792		3141	0		
Through Movement Data								
Assigned Mvmt		2	8			6		
Mvmt Sat Flow, veh/h		3705	18			5358		
Right-Turn Movement Data								
Assigned Mvmt		12	18			16		
Mvmt Sat Flow, veh/h		0	1610			1610		
Left Lane Group Data								
Assigned Mvmt	0	0	3	0	5	1	0	0
Lane Assignment			L+T		L (Prot)			

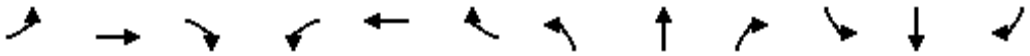
Lanes in Grp	0	0	1	0	2	0	0	0
Grp Vol (v), veh/h	0	0	393	0	677	0	0	0
Grp Sat Flow (s), veh/h/ln	0	0	1810	0	1570	0	0	0
Q Serve Time (g_s), s	0.0	0.0	25.0	0.0	24.8	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	25.0	0.0	24.8	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	51.3	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	0.00	0.99	0.00	1.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	420	0	715	0	0	0
V/C Ratio (X)	0.00	0.00	0.93	0.00	0.95	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	0	445	0	746	0	0	0
Upstream Filter (I)	0.00	0.00	1.00	0.00	0.68	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	36.0	0.0	32.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	26.4	0.0	15.8	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	62.4	0.0	47.7	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	9.6	0.0	7.4	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	3.1	0.0	1.6	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	0.00	1.00	0.00	1.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	12.7	0.0	8.9	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.26	0.00	0.85	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	8	0	0	6	0	0
Lane Assignment		T				T		
Lanes in Grp	0	2	0	0	0	3	0	0
Grp Vol (v), veh/h	0	632	0	0	0	646	0	0
Grp Sat Flow (s), veh/h/ln	0	1805	0	0	0	1729	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	2.9	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	2.9	0.0	0.0
Lane Grp Cap (c), veh/h	0	2501	0	0	0	2218	0	0
V/C Ratio (X)	0.00	0.25	0.00	0.00	0.00	0.29	0.00	0.00
Avail Cap (c_a), veh/h	0	2501	0	0	0	2218	0	0
Upstream Filter (I)	0.00	0.68	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	5.2	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.2	0.0	0.0	0.0	0.3	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.2	0.0	0.0	0.0	5.5	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.1	0.0	0.0	0.0	1.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.01	0.00	0.00	0.00	0.02	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	18	0	0	16	0	0
Lane Assignment			R			R		
Lanes in Grp	0	0	1	0	0	1	0	0
Grp Vol (v), veh/h	0	0	221	0	0	861	0	0
Grp Sat Flow (s), veh/h/ln	0	0	1610	0	0	1610	0	0
Q Serve Time (g_s), s	0.0	0.0	14.7	0.0	0.0	51.3	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	14.7	0.0	0.0	51.3	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	374	0	0	689	0	0
V/C Ratio (X)	0.00	0.00	0.59	0.00	0.00	1.25	0.00	0.00
Avail Cap (c_a), veh/h	0	0	396	0	0	689	0	0
Upstream Filter (I)	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	41.0	0.0	0.0	8.7	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	2.1	0.0	0.0	124.5	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	43.1	0.0	0.0	133.1	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	5.8	0.0	0.0	3.2	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.2	0.0	0.0	23.8	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	6.0	0.0	0.0	27.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.12	0.00	0.00	0.59	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	43.1	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	53.8
HCM 6th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	612	5	548	0	0	0	0	682	301	120	665	0
Future Volume (veh/h)	612	5	548	0	0	0	0	682	301	120	665	0
Number	7	4	14				5	2	12	1	6	16
Initial Q, veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1800	1900	1900				0	1900	1900	1700	1900	0
Adj Flow Rate, veh/h	644	5	577				0	718	317	126	700	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0				0	0	0	0	0	0
Opposing Right Turn Influence	Yes						No			Yes		
Cap, veh/h	671	5	626				0	1609	499	230	1655	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.66	1.66	1.66	1.66	1.00
Prop Arrive On Green	0.39	0.39	0.39				0.00	0.51	0.51	0.12	0.76	0.00
Unsig. Movement Delay												
Ln Grp Delay, s/veh	42.8	0.0	36.5				0.0	12.2	18.1	27.4	5.1	0.0
Ln Grp LOS	D	A	D				A	B	B	C	A	A
Approach Vol, veh/h		1226						1035			826	
Approach Delay, s/veh		39.8						14.0			8.5	
Approach LOS		D						B			A	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Case No	2.0	7.0		10.0		4.0		
Phs Duration (G+Y+Rc), s	8.9	23.1		28.0		32.0		
Change Period (Y+Rc), s	4.5	4.5		4.5		4.5		
Max Green (Gmax), s	5.0	18.0		23.5		27.5		
Max Allow Headway (MAH), s	3.8	4.9		4.6		5.2		
Max Q Clear (g_c+I1), s	4.3	10.5		24.0		6.1		
Green Ext Time (g_e), s	0.0	3.6		0.0		4.9		
Prob of Phs Call (p_c)	0.88	1.00		1.00		1.00		
Prob of Max Out (p_x)	1.00	0.00		1.00		0.00		

Left-Turn Movement Data									
Assigned Mvmt	1	5		7					
Mvmt Sat Flow, veh/h	3141	0		1714					

Through Movement Data									
Assigned Mvmt		2		4		6			
Mvmt Sat Flow, veh/h		5358		14		3705			

Right-Turn Movement Data									
Assigned Mvmt		12		14		16			
Mvmt Sat Flow, veh/h		1610		1598		0			

Left Lane Group Data									
Assigned Mvmt	1	5	0	7	0	0	0	0	
Lane Assignment	L (Prot)			L					

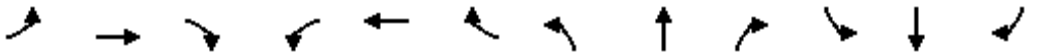
Lanes in Grp	2	0	0	1	0	0	0	0
Grp Vol (v), veh/h	126	0	0	644	0	0	0	0
Grp Sat Flow (s), veh/h/ln	1570	0	0	1714	0	0	0	0
Q Serve Time (g_s), s	2.3	0.0	0.0	22.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	2.3	0.0	0.0	22.0	0.0	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	1714	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	18.6	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	230	0	0	671	0	0	0	0
V/C Ratio (X)	0.55	0.00	0.00	0.96	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	262	0	0	671	0	0	0	0
Upstream Filter (I)	0.96	0.00	0.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	25.4	0.0	0.0	17.8	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	2.0	0.0	0.0	25.0	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	27.4	0.0	0.0	42.8	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.8	0.0	0.0	7.5	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.1	0.0	0.0	4.7	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.8	0.0	0.0	12.1	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.08	0.00	0.00	0.21	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	0
Lane Assignment		T				T		
Lanes in Grp	0	3	0	0	0	2	0	0
Grp Vol (v), veh/h	0	718	0	0	0	700	0	0
Grp Sat Flow (s), veh/h/ln	0	1729	0	0	0	1805	0	0
Q Serve Time (g_s), s	0.0	5.2	0.0	0.0	0.0	4.1	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	5.2	0.0	0.0	0.0	4.1	0.0	0.0
Lane Grp Cap (c), veh/h	0	1609	0	0	0	1655	0	0
V/C Ratio (X)	0.00	0.45	0.00	0.00	0.00	0.42	0.00	0.00
Avail Cap (c_a), veh/h	0	1609	0	0	0	1655	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	0.96	0.00	0.00
Uniform Delay (d1), s/veh	0.0	11.3	0.0	0.0	0.0	4.4	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.9	0.0	0.0	0.0	0.8	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	12.2	0.0	0.0	0.0	5.1	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	1.6	0.0	0.0	0.0	1.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	0.2	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	1.7	0.0	0.0	0.0	1.2	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.06	0.00	0.00	0.00	0.12	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	0
Lane Assignment		R		T+R				
Lanes in Grp	0	1	0	1	0	0	0	0
Grp Vol (v), veh/h	0	317	0	582	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	1610	0	1612	0	0	0	0
Q Serve Time (g_s), s	0.0	8.5	0.0	20.6	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	8.5	0.0	20.6	0.0	0.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	0.99	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	499	0	631	0	0	0	0
V/C Ratio (X)	0.00	0.63	0.00	0.92	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	499	0	631	0	0	0	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	12.1	0.0	17.4	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	6.0	0.0	19.1	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	18.1	0.0	36.5	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	2.2	0.0	6.6	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.8	0.0	3.3	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	3.1	0.0	9.9	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.10	0.00	0.17	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	22.8
HCM 6th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	64	754	143	442	938	130	113	393	478	202	505	60
Future Volume (veh/h)	64	754	143	442	938	130	113	393	478	202	505	60
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1800	1900	1900	1800	1900	1900	1800	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	67	794	151	465	987	137	119	414	503	213	532	63
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	85	772	147	442	1475	205	146	664	712	223	722	85
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00
Prop Arrive On Green	0.05	0.26	0.26	0.26	0.46	0.46	0.11	0.24	0.24	0.12	0.22	0.22
Unsig. Movement Delay												
Ln Grp Delay, s/veh	61.4	86.8	86.9	91.0	22.7	22.7	62.9	38.2	26.2	91.7	47.5	47.6
Ln Grp LOS	E	F	F	F	C	C	E	D	C	F	D	D
Approach Vol, veh/h		1012			1589			1036			808	
Approach Delay, s/veh		85.2			42.6			35.2			59.2	
Approach LOS		F			D			D			E	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Case No	2.0	3.0	2.0	4.0	2.0	4.0	2.0	4.0
Phs Duration (G+Y+Rc), s	16.8	22.9	30.3	30.0	13.0	26.7	9.5	50.8
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green (Gmax), s	12.3	18.4	25.8	25.5	9.9	20.8	9.2	42.1
Max Allow Headway (MAH), s	3.8	4.6	3.8	5.3	3.8	5.3	3.8	5.3
Max Q Clear (g_c+I1), s	13.7	20.4	27.8	27.5	8.8	17.3	5.9	26.1
Green Ext Time (g_e), s	0.0	0.0	0.0	0.0	0.0	1.2	0.0	6.9
Prob of Phs Call (p_c)	1.00	1.00	1.00	1.00	0.96	1.00	0.84	1.00
Prob of Max Out (p_x)	1.00	0.00	1.00	1.00	1.00	0.00	1.00	0.39

Left-Turn Movement Data								
Assigned Mvmt	1		3		5		7	
Mvmt Sat Flow, veh/h	1810		1714		1714		1714	

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		3610		3026		3252		3184

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1610		575		384		442

Left Lane Group Data								
Assigned Mvmt	1	0	3	0	5	0	7	0
Lane Assignment	L (Prot)		L (Prot)		L (Prot)		L (Prot)	

Lanes in Grp	1	0	1	0	1	0	1	0
Grp Vol (v), veh/h	213	0	465	0	119	0	67	0
Grp Sat Flow (s), veh/h/ln	1810	0	1714	0	1714	0	1714	0
Q Serve Time (g_s), s	11.7	0.0	25.8	0.0	6.8	0.0	3.9	0.0
Cycle Q Clear Time (g_c), s	11.7	0.0	25.8	0.0	6.8	0.0	3.9	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	223	0	442	0	146	0	85	0
V/C Ratio (X)	0.96	0.00	1.05	0.00	0.82	0.00	0.78	0.00
Avail Cap (c_a), veh/h	223	0	442	0	170	0	158	0
Upstream Filter (I)	1.00	0.00	0.86	0.00	0.81	0.00	1.00	0.00
Uniform Delay (d1), s/veh	43.6	0.0	37.1	0.0	43.6	0.0	47.0	0.0
Incr Delay (d2), s/veh	48.1	0.0	53.9	0.0	19.3	0.0	14.5	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	91.7	0.0	91.0	0.0	62.9	0.0	61.4	0.0
1st-Term Q (Q1), veh/ln	5.2	0.0	10.6	0.0	2.8	0.0	1.6	0.0
2nd-Term Q (Q2), veh/ln	3.0	0.0	6.6	0.0	0.8	0.0	0.3	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
%ile Back of Q (50%), veh/ln	8.2	0.0	17.2	0.0	3.6	0.0	2.0	0.0
%ile Storage Ratio (RQ%)	0.13	0.00	0.16	0.00	0.18	0.00	0.03	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	5.7	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	2	0	1	0	1	0	1
Grp Vol (v), veh/h	0	414	0	474	0	295	0	559
Grp Sat Flow (s), veh/h/ln	0	1805	0	1805	0	1805	0	1805
Q Serve Time (g_s), s	0.0	10.2	0.0	25.5	0.0	15.2	0.0	24.1
Cycle Q Clear Time (g_c), s	0.0	10.2	0.0	25.5	0.0	15.2	0.0	24.1
Lane Grp Cap (c), veh/h	0	664	0	460	0	401	0	836
V/C Ratio (X)	0.00	0.62	0.00	1.03	0.00	0.73	0.00	0.67
Avail Cap (c_a), veh/h	0	664	0	460	0	401	0	836
Upstream Filter (I)	0.00	0.81	0.00	1.00	0.00	1.00	0.00	0.86
Uniform Delay (d1), s/veh	0.0	34.7	0.0	37.3	0.0	36.2	0.0	20.9
Incr Delay (d2), s/veh	0.0	3.6	0.0	49.6	0.0	11.4	0.0	1.8
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	38.2	0.0	86.8	0.0	47.5	0.0	22.7
1st-Term Q (Q1), veh/ln	0.0	4.2	0.0	11.0	0.0	6.6	0.0	9.7
2nd-Term Q (Q2), veh/ln	0.0	0.3	0.0	6.3	0.0	1.3	0.0	0.4

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	4.6	0.0	17.3	0.0	7.9	0.0	10.2
%ile Storage Ratio (RQ%)	0.00	0.23	0.00	0.23	0.00	0.12	0.00	0.10
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	3.3	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		T+R		T+R		T+R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	503	0	471	0	300	0	565
Grp Sat Flow (s), veh/h/ln	0	1610	0	1796	0	1831	0	1820
Q Serve Time (g_s), s	0.0	18.4	0.0	25.5	0.0	15.3	0.0	24.1
Cycle Q Clear Time (g_c), s	0.0	18.4	0.0	25.5	0.0	15.3	0.0	24.1
Prot RT Sat Flow (s_R), veh/h/ln	0.0	1610.2	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	25.8	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	0.32	0.00	0.21	0.00	0.24
Lane Grp Cap (c), veh/h	0	712	0	458	0	407	0	843
V/C Ratio (X)	0.00	0.71	0.00	1.03	0.00	0.74	0.00	0.67
Avail Cap (c_a), veh/h	0	712	0	458	0	407	0	843
Upstream Filter (I)	0.00	0.81	0.00	1.00	0.00	1.00	0.00	0.86
Uniform Delay (d1), s/veh	0.0	21.4	0.0	37.3	0.0	36.2	0.0	20.9
Incr Delay (d2), s/veh	0.0	4.8	0.0	49.7	0.0	11.4	0.0	1.8
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	26.2	0.0	86.9	0.0	47.6	0.0	22.7
1st-Term Q (Q1), veh/ln	0.0	9.0	0.0	10.9	0.0	6.7	0.0	9.8
2nd-Term Q (Q2), veh/ln	0.0	0.9	0.0	6.3	0.0	1.3	0.0	0.4
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	10.0	0.0	17.3	0.0	8.0	0.0	10.3
%ile Storage Ratio (RQ%)	0.00	0.51	0.00	0.23	0.00	0.13	0.00	0.10
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	3.3	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	53.6
HCM 6th LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	150	3	327	50	50	423	198	477	6	19	759	250
Future Volume (veh/h)	150	3	327	50	50	423	198	477	6	19	759	250
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1700	1900	1900	1800	1900	1900	1800	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	158	3	0	53	53	445	208	502	6	20	799	263
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	215	489		67	433	367	239	1835	22	39	1024	337
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.66	2.00
Prop Arrive On Green	0.07	0.26	0.00	0.04	0.23	0.23	0.14	0.50	0.50	0.02	0.64	0.77
Unsig. Movement Delay												
Ln Grp Delay, s/veh	57.4	27.6	0.0	65.8	30.8	156.7	64.1	15.1	15.1	51.7	17.9	15.0
Ln Grp LOS	E	C		E	C	F	E	B	B	D	B	B
Approach Vol, veh/h		161			551			716			1082	
Approach Delay, s/veh		56.9			135.8			29.3			17.1	
Approach LOS		E			F			C			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Case No	2.0	4.0	2.0	3.0	2.0	4.0	2.0	3.0
Phs Duration (G+Y+Rc), s	6.6	54.7	8.4	30.2	18.5	42.9	11.4	27.3
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green (Gmax), s	5.5	46.7	8.6	21.2	16.2	36.0	7.0	22.8
Max Allow Headway (MAH), s	3.8	5.2	3.8	5.2	3.8	5.3	3.8	4.2
Max Q Clear (g_c+I1), s	3.1	9.9	5.1	2.1	13.9	23.6	6.9	24.8
Green Ext Time (g_e), s	0.0	3.3	0.0	0.0	0.1	5.7	0.0	0.0
Prob of Phs Call (p_c)	0.43	1.00	0.77	1.00	1.00	1.00	0.99	1.00
Prob of Max Out (p_x)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	1.00

Left-Turn Movement Data								
Assigned Mvmt	1		3		5		7	
Mvmt Sat Flow, veh/h	1810		1714		1714		3141	

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		3653		1900		2669		1900

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		44		1610		878		1610

Left Lane Group Data								
Assigned Mvmt	1	0	3	0	5	0	7	0
Lane Assignment	L (Prot)		L (Prot)		L (Prot)		L (Prot)	

Lanes in Grp	1	0	1	0	1	0	2	0
Grp Vol (v), veh/h	20	0	53	0	208	0	158	0
Grp Sat Flow (s), veh/h/ln	1810	0	1714	0	1714	0	1570	0
Q Serve Time (g_s), s	1.1	0.0	3.1	0.0	11.9	0.0	4.9	0.0
Cycle Q Clear Time (g_c), s	1.1	0.0	3.1	0.0	11.9	0.0	4.9	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	39	0	67	0	239	0	215	0
V/C Ratio (X)	0.52	0.00	0.79	0.00	0.87	0.00	0.73	0.00
Avail Cap (c_a), veh/h	100	0	147	0	278	0	220	0
Upstream Filter (I)	0.31	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Uniform Delay (d1), s/veh	48.4	0.0	47.6	0.0	42.1	0.0	45.7	0.0
Incr Delay (d2), s/veh	3.3	0.0	18.1	0.0	22.0	0.0	11.8	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	51.7	0.0	65.8	0.0	64.1	0.0	57.4	0.0
1st-Term Q (Q1), veh/ln	0.5	0.0	1.3	0.0	5.0	0.0	1.9	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.3	0.0	1.5	0.0	0.4	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
%ile Back of Q (50%), veh/ln	0.5	0.0	1.6	0.0	6.4	0.0	2.3	0.0
%ile Storage Ratio (RQ%)	0.03	0.00	0.05	0.00	0.43	0.00	0.06	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	248	0	3	0	540	0	53
Grp Sat Flow (s), veh/h/ln	0	1805	0	1900	0	1805	0	1900
Q Serve Time (g_s), s	0.0	7.9	0.0	0.1	0.0	21.6	0.0	2.2
Cycle Q Clear Time (g_c), s	0.0	7.9	0.0	0.1	0.0	21.6	0.0	2.2
Lane Grp Cap (c), veh/h	0	906	0	489	0	693	0	433
V/C Ratio (X)	0.00	0.27	0.00	0.01	0.00	0.78	0.00	0.12
Avail Cap (c_a), veh/h	0	906	0	489	0	693	0	433
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	0.31	0.00	1.00
Uniform Delay (d1), s/veh	0.0	14.4	0.0	27.6	0.0	15.1	0.0	30.7
Incr Delay (d2), s/veh	0.0	0.7	0.0	0.0	0.0	2.8	0.0	0.1
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	15.1	0.0	27.6	0.0	17.9	0.0	30.8
1st-Term Q (Q1), veh/ln	0.0	3.1	0.0	0.1	0.0	5.7	0.0	1.0
2nd-Term Q (Q2), veh/ln	0.0	0.2	0.0	0.0	0.0	0.5	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	3.3	0.0	0.1	0.0	6.2	0.0	1.0
%ile Storage Ratio (RQ%)	0.00	0.22	0.00	0.00	0.00	0.31	0.00	0.03
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R		R		T+R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	260	0	0	0	522	0	445
Grp Sat Flow (s), veh/h/ln	0	1892	0	1610	0	1742	0	1610
Q Serve Time (g_s), s	0.0	7.9	0.0	0.0	0.0	19.7	0.0	22.8
Cycle Q Clear Time (g_c), s	0.0	7.9	0.0	0.0	0.0	19.7	0.0	22.8
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	1610.2	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	14.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.02	0.00	1.00	0.00	0.50	0.00	1.00
Lane Grp Cap (c), veh/h	0	950	0	639	0	669	0	367
V/C Ratio (X)	0.00	0.27	0.00	0.00	0.00	0.78	0.00	1.21
Avail Cap (c_a), veh/h	0	950	0	639	0	669	0	367
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	0.31	0.00	1.00
Uniform Delay (d1), s/veh	0.0	14.4	0.0	0.0	0.0	12.1	0.0	38.6
Incr Delay (d2), s/veh	0.0	0.7	0.0	0.0	0.0	2.9	0.0	118.1
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	15.1	0.0	0.0	0.0	15.0	0.0	156.7
1st-Term Q (Q1), veh/ln	0.0	3.3	0.0	0.0	0.0	4.2	0.0	8.8
2nd-Term Q (Q2), veh/ln	0.0	0.2	0.0	0.0	0.0	0.5	0.0	12.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	3.5	0.0	0.0	0.0	4.7	0.0	20.9
%ile Storage Ratio (RQ%)	0.00	0.23	0.00	0.00	0.00	0.24	0.00	0.61
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	19.5
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3

Intersection Summary	
HCM 6th Ctrl Delay	49.2
HCM 6th LOS	D

Notes

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	83	82	48	391	559	90	132	599	206	58	675	182
Future Volume (veh/h)	83	82	48	391	559	90	132	599	206	58	675	182
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1800	1900	1900	1700	1900	1900	1800	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	87	86	51	412	588	95	139	631	217	61	711	192
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	109	390	174	476	708	316	165	1975	881	79	2014	537
HCM Platoon Ratio	1.66	1.66	1.66	1.66	1.66	1.66	1.66	1.66	1.66	1.66	1.66	1.00
Prop Arrive On Green	0.11	0.18	0.18	0.25	0.33	0.33	0.16	0.91	0.91	0.07	0.82	0.49
Unsig. Movement Delay												
Ln Grp Delay, s/veh	65.6	45.2	46.2	50.9	43.1	34.9	59.3	3.0	3.2	66.3	6.3	14.7
Ln Grp LOS	E	D	D	D	D	C	E	A	A	E	A	B
Approach Vol, veh/h		224			1095			987			964	
Approach Delay, s/veh		53.4			45.3			11.0			12.7	
Approach LOS		D			D			B			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Case No	2.0	3.0	2.0	3.0	2.0	4.0	2.0	3.0
Phs Duration (G+Y+Rc), s	9.7	70.1	22.7	17.5	16.1	63.8	12.1	28.0
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green (Gmax), s	11.5	42.5	27.5	20.5	21.5	32.5	15.5	32.5
Max Allow Headway (MAH), s	3.8	4.9	3.8	4.8	3.8	5.3	3.8	5.1
Max Q Clear (g_c+I1), s	6.0	4.7	17.1	5.3	11.4	12.5	8.0	20.1
Green Ext Time (g_e), s	0.0	5.8	1.1	0.5	0.2	6.1	0.1	3.5
Prob of Phs Call (p_c)	0.87	1.00	1.00	1.00	0.99	1.00	0.94	1.00
Prob of Max Out (p_x)	0.11	0.00	0.02	0.00	0.00	0.00	0.02	0.21

Left-Turn Movement Data								
Assigned Mvmt	1		3		5		7	
Mvmt Sat Flow, veh/h	1810		3141		1714		1714	

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		3610		3610		4076		3610

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1610		1610		1087		1610

Left Lane Group Data								
Assigned Mvmt	1	0	3	0	5	0	7	0
Lane Assignment	L (Prot)		L (Prot)		L (Prot)		L (Prot)	

Lanes in Grp	1	0	2	0	1	0	1	0
Grp Vol (v), veh/h	61	0	412	0	139	0	87	0
Grp Sat Flow (s), veh/h/ln	1810	0	1570	0	1714	0	1714	0
Q Serve Time (g_s), s	4.0	0.0	15.1	0.0	9.4	0.0	6.0	0.0
Cycle Q Clear Time (g_c), s	4.0	0.0	15.1	0.0	9.4	0.0	6.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	79	0	476	0	165	0	109	0
V/C Ratio (X)	0.77	0.00	0.87	0.00	0.84	0.00	0.80	0.00
Avail Cap (c_a), veh/h	173	0	720	0	307	0	221	0
Upstream Filter (I)	0.74	0.00	1.00	0.00	0.89	0.00	1.00	0.00
Uniform Delay (d1), s/veh	55.1	0.0	43.7	0.0	49.5	0.0	52.9	0.0
Incr Delay (d2), s/veh	11.2	0.0	7.2	0.0	9.8	0.0	12.6	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	66.3	0.0	50.9	0.0	59.3	0.0	65.6	0.0
1st-Term Q (Q1), veh/ln	1.8	0.0	5.3	0.0	3.8	0.0	2.5	0.0
2nd-Term Q (Q2), veh/ln	0.2	0.0	0.5	0.0	0.4	0.0	0.4	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
%ile Back of Q (50%), veh/ln	2.0	0.0	5.8	0.0	4.3	0.0	2.9	0.0
%ile Storage Ratio (RQ%)	0.28	0.00	0.04	0.00	0.53	0.00	0.32	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	2	0	2	0	2	0	2
Grp Vol (v), veh/h	0	631	0	86	0	602	0	588
Grp Sat Flow (s), veh/h/ln	0	1805	0	1805	0	1729	0	1805
Q Serve Time (g_s), s	0.0	2.7	0.0	2.4	0.0	5.3	0.0	18.1
Cycle Q Clear Time (g_c), s	0.0	2.7	0.0	2.4	0.0	5.3	0.0	18.1
Lane Grp Cap (c), veh/h	0	1975	0	390	0	1709	0	708
V/C Ratio (X)	0.00	0.32	0.00	0.22	0.00	0.35	0.00	0.83
Avail Cap (c_a), veh/h	0	1975	0	617	0	1709	0	978
Upstream Filter (I)	0.00	0.89	0.00	1.00	0.00	0.74	0.00	1.00
Uniform Delay (d1), s/veh	0.0	2.6	0.0	44.9	0.0	5.9	0.0	38.6
Incr Delay (d2), s/veh	0.0	0.4	0.0	0.3	0.0	0.4	0.0	4.4
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	3.0	0.0	45.2	0.0	6.3	0.0	43.1
1st-Term Q (Q1), veh/ln	0.0	0.8	0.0	1.1	0.0	1.6	0.0	7.1
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.4

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.9	0.0	1.1	0.0	1.7	0.0	7.6
%ile Storage Ratio (RQ%)	0.00	0.02	0.00	0.01	0.00	0.02	0.00	0.05
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		R		T+R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	217	0	51	0	301	0	95
Grp Sat Flow (s), veh/h/ln	0	1610	0	1610	0	1704	0	1610
Q Serve Time (g_s), s	0.0	1.9	0.0	3.3	0.0	10.5	0.0	5.3
Cycle Q Clear Time (g_c), s	0.0	1.9	0.0	3.3	0.0	10.5	0.0	5.3
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	0.64	0.00	1.00
Lane Grp Cap (c), veh/h	0	881	0	174	0	842	0	316
V/C Ratio (X)	0.00	0.25	0.00	0.29	0.00	0.36	0.00	0.30
Avail Cap (c_a), veh/h	0	881	0	275	0	842	0	436
Upstream Filter (I)	0.00	0.89	0.00	1.00	0.00	0.74	0.00	1.00
Uniform Delay (d1), s/veh	0.0	2.6	0.0	45.3	0.0	13.8	0.0	34.3
Incr Delay (d2), s/veh	0.0	0.6	0.0	0.9	0.0	0.9	0.0	0.5
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	3.2	0.0	46.2	0.0	14.7	0.0	34.9
1st-Term Q (Q1), veh/ln	0.0	0.6	0.0	1.3	0.0	3.7	0.0	2.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	0.2	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.7	0.0	1.3	0.0	3.9	0.0	2.0
%ile Storage Ratio (RQ%)	0.00	0.02	0.00	0.01	0.00	0.04	0.00	0.01
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	25.9
HCM 6th LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	295	354	351	631	900	0	0	1039	564
Future Volume (veh/h)	0	0	0	295	354	351	631	900	0	0	1039	564
Number				3	8	18	5	2	12	1	6	16
Initial Q, veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln				1800	1900	1900	1700	1900	0	0	1900	1900
Adj Flow Rate, veh/h				311	373	369	664	947	0	0	1094	594
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence				Yes			Yes			No		
Cap, veh/h				340	420	443	660	2079	0	0	1174	921
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green				0.34	0.34	0.34	0.21	0.58	0.00	0.00	0.33	0.33
Unsig. Movement Delay												
Ln Grp Delay, s/veh				51.4	0.0	42.7	69.9	13.8	0.0	0.0	48.5	34.6
Ln Grp LOS				D	A	D	F	B	A	A	D	C
Approach Vol, veh/h					1053			1611			1688	
Approach Delay, s/veh					47.5			36.9			43.6	
Approach LOS					D			D			D	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2	8		5	6		
Case No		4.0	12.0		2.0	7.0		
Phs Duration (G+Y+Rc), s		67.9	42.1		27.6	40.3		
Change Period (Y+Rc), s		4.5	4.5		4.5	4.5		
Max Green (Gmax), s		61.5	39.5		23.1	33.9		
Max Allow Headway (MAH), s		5.2	5.4		3.8	4.8		
Max Q Clear (g_c+I1), s		18.6	34.9		25.1	34.3		
Green Ext Time (g_e), s		8.5	2.7		0.0	0.0		
Prob of Phs Call (p_c)		1.00	1.00		1.00	1.00		
Prob of Max Out (p_x)		0.00	1.00		1.00	0.00		

Left-Turn Movement Data								
Assigned Mvmt			3		5	1		
Mvmt Sat Flow, veh/h			995		3141	0		

Through Movement Data								
Assigned Mvmt		2	8			6		
Mvmt Sat Flow, veh/h		3705	1226			3705		

Right-Turn Movement Data								
Assigned Mvmt		12	18			16		
Mvmt Sat Flow, veh/h		0	1296			2834		

Left Lane Group Data								
Assigned Mvmt	0	0	3	0	5	1	0	0
Lane Assignment			L+T		L (Prot)			

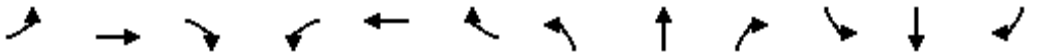
Lanes in Grp	0	0	1	0	2	0	0	0
Grp Vol (v), veh/h	0	0	578	0	664	0	0	0
Grp Sat Flow (s), veh/h/ln	0	0	1850	0	1570	0	0	0
Q Serve Time (g_s), s	0.0	0.0	32.9	0.0	23.1	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	32.9	0.0	23.1	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	35.8	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	0.00	0.54	0.00	1.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	633	0	660	0	0	0
V/C Ratio (X)	0.00	0.00	0.91	0.00	1.01	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	0	664	0	660	0	0	0
Upstream Filter (I)	0.00	0.00	1.00	0.00	0.50	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	34.6	0.0	43.5	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	16.8	0.0	26.4	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	51.4	0.0	69.9	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	14.5	0.0	8.9	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	2.9	0.0	2.4	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	0.00	1.00	0.00	1.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	17.4	0.0	11.3	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.42	0.00	1.88	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	1.1	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	8	0	0	6	0	0
Lane Assignment		T				T		
Lanes in Grp	0	2	0	0	0	2	0	0
Grp Vol (v), veh/h	0	947	0	0	0	1094	0	0
Grp Sat Flow (s), veh/h/ln	0	1805	0	0	0	1805	0	0
Q Serve Time (g_s), s	0.0	16.6	0.0	0.0	0.0	32.3	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	16.6	0.0	0.0	0.0	32.3	0.0	0.0
Lane Grp Cap (c), veh/h	0	2079	0	0	0	1174	0	0
V/C Ratio (X)	0.00	0.46	0.00	0.00	0.00	0.93	0.00	0.00
Avail Cap (c_a), veh/h	0	2079	0	0	0	1174	0	0
Upstream Filter (I)	0.00	0.50	0.00	0.00	0.00	0.84	0.00	0.00
Uniform Delay (d1), s/veh	0.0	13.4	0.0	0.0	0.0	35.9	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.4	0.0	0.0	0.0	12.5	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	13.8	0.0	0.0	0.0	48.5	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	6.5	0.0	0.0	0.0	13.9	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	2.0	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	6.6	0.0	0.0	0.0	16.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.30	0.00	0.00	0.00	0.42	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	18	0	0	16	0	0
Lane Assignment			T+R			R		
Lanes in Grp	0	0	1	0	0	2	0	0
Grp Vol (v), veh/h	0	0	475	0	0	594	0	0
Grp Sat Flow (s), veh/h/ln	0	0	1667	0	0	1417	0	0
Q Serve Time (g_s), s	0.0	0.0	28.8	0.0	0.0	19.7	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	28.8	0.0	0.0	19.7	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.00	0.78	0.00	0.00	1.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	570	0	0	921	0	0
V/C Ratio (X)	0.00	0.00	0.83	0.00	0.00	0.64	0.00	0.00
Avail Cap (c_a), veh/h	0	0	598	0	0	921	0	0
Upstream Filter (I)	0.00	0.00	1.00	0.00	0.00	0.84	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	33.3	0.0	0.0	31.7	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	9.4	0.0	0.0	2.9	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	42.7	0.0	0.0	34.6	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	11.4	0.0	0.0	6.7	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	1.5	0.0	0.0	0.4	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	12.9	0.0	0.0	7.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.31	0.00	0.00	0.19	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	42.1
HCM 6th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	446	7	569	0	0	0	0	1051	165	152	707	0
Future Volume (veh/h)	446	7	569	0	0	0	0	1051	165	152	707	0
Number	7	4	14				5	2	12	1	6	16
Initial Q, veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1800	1900	1900				0	1900	1900	1900	1900	0
Adj Flow Rate, veh/h	469	7	599				0	1106	174	160	744	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0				0	0	0	0	0	0
Opposing Right Turn Influence	Yes						No			Yes		
Cap, veh/h	583	9	526				0	1394	622	194	1998	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	2.00	2.00	2.00	1.00	1.00
Prop Arrive On Green	0.33	0.33	0.33				0.00	0.77	0.77	0.21	0.55	0.00
Unsig. Movement Delay												
Ln Grp Delay, s/veh	31.0	0.0	108.7				0.0	11.5	6.6	32.9	9.5	0.0
Ln Grp LOS	C	A	F				A	B	A	C	A	A
Approach Vol, veh/h		1075						1280			904	
Approach Delay, s/veh		74.3						10.8			13.6	
Approach LOS		E						B			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Case No	2.0	7.0		12.0		4.0		
Phs Duration (G+Y+Rc), s	12.5	33.5		29.0		46.0		
Change Period (Y+Rc), s	4.5	4.5		4.5		4.5		
Max Green (Gmax), s	8.5	28.5		24.5		41.5		
Max Allow Headway (MAH), s	3.8	5.1		5.5		5.2		
Max Q Clear (g_c+I1), s	8.3	15.5		26.5		10.7		
Green Ext Time (g_e), s	0.0	6.9		0.0		5.8		
Prob of Phs Call (p_c)	0.96	1.00		1.00		1.00		
Prob of Max Out (p_x)	1.00	0.00		1.00		0.00		

Left-Turn Movement Data								
Assigned Mvmt	1	5		7				
Mvmt Sat Flow, veh/h	1810	0		1784				

Through Movement Data								
Assigned Mvmt		2		4		6		
Mvmt Sat Flow, veh/h		3705		27		3705		

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		
Mvmt Sat Flow, veh/h		1610		1610		0		

Left Lane Group Data								
Assigned Mvmt	1	5	0	7	0	0	0	0
Lane Assignment	L (Prot)			L+T				

Lanes in Grp	1	0	0	1	0	0	0	0
Grp Vol (v), veh/h	160	0	0	476	0	0	0	0
Grp Sat Flow (s), veh/h/ln	1810	0	0	1811	0	0	0	0
Q Serve Time (g_s), s	6.3	0.0	0.0	18.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	6.3	0.0	0.0	18.0	0.0	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	29.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	0.99	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	194	0	0	592	0	0	0	0
V/C Ratio (X)	0.82	0.00	0.00	0.80	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	205	0	0	592	0	0	0	0
Upstream Filter (I)	0.15	0.00	0.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	28.8	0.0	0.0	23.1	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	4.1	0.0	0.0	8.0	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	32.9	0.0	0.0	31.0	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	2.4	0.0	0.0	7.2	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.2	0.0	0.0	1.3	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00
%ile Back of Q (50%), veh/ln	2.6	0.0	0.0	8.5	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.44	0.00	0.00	0.25	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	0
Lane Assignment		T				T		
Lanes in Grp	0	2	0	0	0	2	0	0
Grp Vol (v), veh/h	0	1106	0	0	0	744	0	0
Grp Sat Flow (s), veh/h/ln	0	1805	0	0	0	1805	0	0
Q Serve Time (g_s), s	0.0	13.5	0.0	0.0	0.0	8.7	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	13.5	0.0	0.0	0.0	8.7	0.0	0.0
Lane Grp Cap (c), veh/h	0	1394	0	0	0	1998	0	0
V/C Ratio (X)	0.00	0.79	0.00	0.00	0.00	0.37	0.00	0.00
Avail Cap (c_a), veh/h	0	1394	0	0	0	1998	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	0.15	0.00	0.00
Uniform Delay (d1), s/veh	0.0	6.8	0.0	0.0	0.0	9.4	0.0	0.0
Incr Delay (d2), s/veh	0.0	4.7	0.0	0.0	0.0	0.1	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	11.5	0.0	0.0	0.0	9.5	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	2.3	0.0	0.0	0.0	3.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.9	0.0	0.0	0.0	0.0	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	3.2	0.0	0.0	0.0	3.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.06	0.00	0.00	0.00	0.14	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	0
Lane Assignment		R		T+R				
Lanes in Grp	0	1	0	1	0	0	0	0
Grp Vol (v), veh/h	0	174	0	599	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	1610	0	1610	0	0	0	0
Q Serve Time (g_s), s	0.0	2.4	0.0	24.5	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	2.4	0.0	24.5	0.0	0.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	622	0	526	0	0	0	0
V/C Ratio (X)	0.00	0.28	0.00	1.14	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	622	0	526	0	0	0	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	5.5	0.0	25.3	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	1.1	0.0	83.5	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	6.6	0.0	108.7	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.7	0.0	8.7	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.2	0.0	12.2	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.9	0.0	20.9	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.02	0.00	0.62	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	18.3	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	32.6
HCM 6th LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	147	463	198	44	847	418	57	355	26	203	13	175
Future Volume (veh/h)	147	463	198	44	847	418	57	355	26	203	13	175
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1700	1900	1900	1800	1900	1900	1800	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	155	487	208	46	892	440	60	374	27	214	14	184
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	211	840	357	62	1116	498	413	1079	481	248	56	739
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.13	0.68	0.68	0.07	0.62	0.31	0.30	0.30	0.30	0.14	0.49	0.49
Unsig. Movement Delay												
Ln Grp Delay, s/veh	48.2	13.2	13.3	62.0	20.6	48.7	26.7	28.3	25.2	56.1	0.0	15.6
Ln Grp LOS	D	B	B	E	C	D	C	C	C	E	A	B
Approach Vol, veh/h		850			1378			461			412	
Approach Delay, s/veh		19.6			31.0			27.9			36.7	
Approach LOS		B			C			C			D	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4		6	7	8
Case No	2.0	5.3	2.0	4.0		4.0	2.0	3.0
Phs Duration (G+Y+Rc), s	19.0	34.4	8.1	38.5		53.4	11.2	35.4
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5		4.5	4.5	4.5
Max Green (Gmax), s	20.5	20.5	7.1	33.9		45.5	8.5	32.5
Max Allow Headway (MAH), s	3.8	5.1	3.8	5.3		5.5	3.8	4.8
Max Q Clear (g_c+I1), s	14.2	10.1	4.6	12.5		9.1	6.7	28.0
Green Ext Time (g_e), s	0.3	2.0	0.0	4.5		1.4	0.1	2.9
Prob of Phs Call (p_c)	1.00	1.00	0.72	1.00		1.00	0.99	1.00
Prob of Max Out (p_x)	0.15	0.00	1.00	0.06		0.00	1.00	1.00

Left-Turn Movement Data								
Assigned Mvmt	1	5	3				7	
Mvmt Sat Flow, veh/h	1714	1140	1714				3141	

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		3610		2468		115		3610

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1610		1048		1513		1610

Left Lane Group Data								
Assigned Mvmt	1	5	3	0	0	0	7	0
Lane Assignment	L (Prot)	L	L (Prot)				L (Prot)	

Lanes in Grp	1	1	1	0	0	0	2	0
Grp Vol (v), veh/h	214	60	46	0	0	0	155	0
Grp Sat Flow (s), veh/h/ln	1714	1140	1714	0	0	0	1570	0
Q Serve Time (g_s), s	12.2	3.9	2.6	0.0	0.0	0.0	4.7	0.0
Cycle Q Clear Time (g_c), s	12.2	3.9	2.6	0.0	0.0	0.0	4.7	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	1140	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	29.9	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	29.9	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	3.9	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	1.00	1.00	0.00	0.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	248	413	62	0	0	0	211	0
V/C Ratio (X)	0.86	0.15	0.74	0.00	0.00	0.00	0.73	0.00
Avail Cap (c_a), veh/h	351	413	122	0	0	0	267	0
Upstream Filter (I)	1.00	1.00	1.00	0.00	0.00	0.00	0.75	0.00
Uniform Delay (d1), s/veh	41.8	25.9	45.9	0.0	0.0	0.0	42.4	0.0
Incr Delay (d2), s/veh	14.3	0.7	16.0	0.0	0.0	0.0	5.8	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	56.1	26.7	62.0	0.0	0.0	0.0	48.2	0.0
1st-Term Q (Q1), veh/ln	5.1	1.1	1.1	0.0	0.0	0.0	1.7	0.0
2nd-Term Q (Q2), veh/ln	1.0	0.1	0.3	0.0	0.0	0.0	0.2	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	1.00	1.00	0.00	0.00	0.00	1.00	0.00
%ile Back of Q (50%), veh/ln	6.1	1.1	1.4	0.0	0.0	0.0	1.9	0.0
%ile Storage Ratio (RQ%)	0.79	0.19	0.02	0.00	0.00	0.00	0.18	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T				T
Lanes in Grp	0	2	0	1	0	0	0	2
Grp Vol (v), veh/h	0	374	0	355	0	0	0	892
Grp Sat Flow (s), veh/h/ln	0	1805	0	1805	0	0	0	1805
Q Serve Time (g_s), s	0.0	8.1	0.0	10.4	0.0	0.0	0.0	18.6
Cycle Q Clear Time (g_c), s	0.0	8.1	0.0	10.4	0.0	0.0	0.0	18.6
Lane Grp Cap (c), veh/h	0	1079	0	614	0	0	0	1116
V/C Ratio (X)	0.00	0.35	0.00	0.58	0.00	0.00	0.00	0.80
Avail Cap (c_a), veh/h	0	1079	0	614	0	0	0	1173
Upstream Filter (I)	0.00	1.00	0.00	0.75	0.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	27.4	0.0	12.2	0.0	0.0	0.0	16.7
Incr Delay (d2), s/veh	0.0	0.9	0.0	1.0	0.0	0.0	0.0	3.8
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	28.3	0.0	13.2	0.0	0.0	0.0	20.6
1st-Term Q (Q1), veh/ln	0.0	3.5	0.0	2.9	0.0	0.0	0.0	4.6
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.2	0.0	0.0	0.0	0.6

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	3.6	0.0	3.1	0.0	0.0	0.0	5.2
%ile Storage Ratio (RQ%)	0.00	0.32	0.00	0.13	0.00	0.00	0.00	0.06
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		T+R		T+R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	27	0	340	0	198	0	440
Grp Sat Flow (s), veh/h/ln	0	1610	0	1711	0	1628	0	1610
Q Serve Time (g_s), s	0.0	1.2	0.0	10.5	0.0	7.1	0.0	26.0
Cycle Q Clear Time (g_c), s	0.0	1.2	0.0	10.5	0.0	7.1	0.0	26.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	0.61	0.00	0.93	0.00	1.00
Lane Grp Cap (c), veh/h	0	481	0	582	0	795	0	498
V/C Ratio (X)	0.00	0.06	0.00	0.58	0.00	0.25	0.00	0.88
Avail Cap (c_a), veh/h	0	481	0	582	0	795	0	523
Upstream Filter (I)	0.00	1.00	0.00	0.75	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	25.0	0.0	12.2	0.0	14.9	0.0	32.8
Incr Delay (d2), s/veh	0.0	0.2	0.0	1.1	0.0	0.7	0.0	15.9
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	25.2	0.0	13.3	0.0	15.6	0.0	48.7
1st-Term Q (Q1), veh/ln	0.0	0.5	0.0	2.8	0.0	2.6	0.0	9.9
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.2	0.0	0.2	0.0	2.2
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.5	0.0	3.0	0.0	2.7	0.0	12.1
%ile Storage Ratio (RQ%)	0.00	0.17	0.00	0.12	0.00	0.35	0.00	0.14
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	28.2
HCM 6th LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	428	11	465	724	1098	0	0	476	938
Future Volume (veh/h)	0	0	0	428	11	465	724	1098	0	0	476	938
Number				3	8	18	5	2	12	1	6	16
Initial Q, veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln				1800	1900	1900	1900	1900	0	0	1900	1900
Adj Flow Rate, veh/h				451	12	489	762	1156	0	0	501	987
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence				Yes			Yes			No		
Cap, veh/h				587	16	536	826	2138	0	0	1153	905
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	2.00	2.00
Prop Arrive On Green				0.33	0.33	0.33	0.47	1.00	0.00	0.00	0.64	0.64
Unsig. Movement Delay												
Ln Grp Delay, s/veh				40.7	0.0	55.7	37.6	0.5	0.0	0.0	17.5	79.4
Ln Grp LOS				D	A	E	D	A	A	A	B	F
Approach Vol, veh/h					952			1918			1488	
Approach Delay, s/veh					48.4			15.2			58.6	
Approach LOS					D			B			E	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2	8		5	6		
Case No		4.0	11.0		2.0	7.0		
Phs Duration (G+Y+Rc), s		75.6	44.4		32.7	42.8		
Change Period (Y+Rc), s		4.5	4.5		4.5	4.5		
Max Green (Gmax), s		66.5	44.5		33.5	28.5		
Max Allow Headway (MAH), s		5.2	4.7		3.8	4.4		
Max Q Clear (g_c+I1), s		2.0	36.9		26.4	40.3		
Green Ext Time (g_e), s		12.0	3.0		1.9	0.0		
Prob of Phs Call (p_c)		1.00	1.00		1.00	1.00		
Prob of Max Out (p_x)		0.00	0.64		0.33	0.00		
Left-Turn Movement Data								
Assigned Mvmt			3		5	1		
Mvmt Sat Flow, veh/h			1765		3510	0		
Through Movement Data								
Assigned Mvmt		2	8			6		
Mvmt Sat Flow, veh/h		3705	47			3705		
Right-Turn Movement Data								
Assigned Mvmt		12	18			16		
Mvmt Sat Flow, veh/h		0	1610			2834		
Left Lane Group Data								
Assigned Mvmt	0	0	3	0	5	1	0	0
Lane Assignment			L+T		L (Prot)			

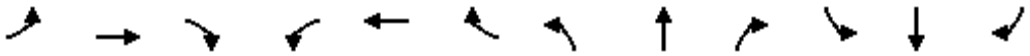
Lanes in Grp	0	0	1	0	2	0	0	0
Grp Vol (v), veh/h	0	0	463	0	762	0	0	0
Grp Sat Flow (s), veh/h/ln	0	0	1812	0	1755	0	0	0
Q Serve Time (g_s), s	0.0	0.0	27.5	0.0	24.4	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	27.5	0.0	24.4	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	38.3	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	0.00	0.97	0.00	1.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	603	0	826	0	0	0
V/C Ratio (X)	0.00	0.00	0.77	0.00	0.92	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	0	672	0	980	0	0	0
Upstream Filter (I)	0.00	0.00	1.00	0.00	0.49	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	35.9	0.0	30.7	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	4.8	0.0	6.9	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	40.7	0.0	37.6	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	12.0	0.0	8.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.8	0.0	0.8	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	0.00	1.00	0.00	1.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	12.8	0.0	8.8	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.27	0.00	0.84	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	8	0	0	6	0	0
Lane Assignment		T				T		
Lanes in Grp	0	2	0	0	0	2	0	0
Grp Vol (v), veh/h	0	1156	0	0	0	501	0	0
Grp Sat Flow (s), veh/h/ln	0	1805	0	0	0	1805	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	8.3	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	8.3	0.0	0.0
Lane Grp Cap (c), veh/h	0	2138	0	0	0	1153	0	0
V/C Ratio (X)	0.00	0.54	0.00	0.00	0.00	0.43	0.00	0.00
Avail Cap (c_a), veh/h	0	2138	0	0	0	1153	0	0
Upstream Filter (I)	0.00	0.49	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	16.3	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.5	0.0	0.0	0.0	1.2	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.5	0.0	0.0	0.0	17.5	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	2.8	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	0.2	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.1	0.0	0.0	0.0	3.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.01	0.00	0.00	0.00	0.07	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	18	0	0	16	0	0
Lane Assignment			R			R		
Lanes in Grp	0	0	1	0	0	2	0	0
Grp Vol (v), veh/h	0	0	489	0	0	987	0	0
Grp Sat Flow (s), veh/h/ln	0	0	1610	0	0	1417	0	0
Q Serve Time (g_s), s	0.0	0.0	34.9	0.0	0.0	38.3	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	34.9	0.0	0.0	38.3	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	536	0	0	905	0	0
V/C Ratio (X)	0.00	0.00	0.91	0.00	0.00	1.09	0.00	0.00
Avail Cap (c_a), veh/h	0	0	597	0	0	905	0	0
Upstream Filter (I)	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	38.3	0.0	0.0	21.7	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	17.4	0.0	0.0	57.8	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	55.7	0.0	0.0	79.4	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	13.6	0.0	0.0	7.8	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	2.6	0.0	0.0	7.3	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	16.2	0.0	0.0	15.1	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.33	0.00	0.00	0.33	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	20.5	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	37.3
HCM 6th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	480	9	513	0	0	0	0	1213	644	333	648	0
Future Volume (veh/h)	480	9	513	0	0	0	0	1213	644	333	648	0
Number	7	4	14				5	2	12	1	6	16
Initial Q, veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1800	1900	1900				0	1900	1900	1900	1900	0
Adj Flow Rate, veh/h	505	9	540				0	1277	678	351	682	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0				0	0	0	0	0	0
Opposing Right Turn Influence	Yes						No			Yes		
Cap, veh/h	557	9	516				0	1686	523	439	1895	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.66	1.66	1.66	1.66	1.00
Prop Arrive On Green	0.32	0.32	0.32				0.00	0.54	0.54	0.21	0.87	0.00
Unsig. Movement Delay												
Ln Grp Delay, s/veh	37.9	0.0	72.2				0.0	15.2	160.5	32.3	2.4	0.0
Ln Grp LOS	D	A	F				A	B	F	C	A	A
Approach Vol, veh/h		1054						1955			1033	
Approach Delay, s/veh		55.8						65.6			12.6	
Approach LOS		E						E			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Case No	2.0	7.0		10.0		4.0		
Phs Duration (G+Y+Rc), s	12.0	24.0		24.0		36.0		
Change Period (Y+Rc), s	4.5	4.5		4.5		4.5		
Max Green (Gmax), s	7.5	19.5		19.5		31.5		
Max Allow Headway (MAH), s	3.8	4.8		4.7		5.2		
Max Q Clear (g_c+I1), s	7.7	21.5		21.5		4.1		
Green Ext Time (g_e), s	0.0	0.0		0.0		5.1		
Prob of Phs Call (p_c)	1.00	1.00		1.00		1.00		
Prob of Max Out (p_x)	1.00	0.00		1.00		0.00		

Left-Turn Movement Data								
Assigned Mvmt	1	5		7				
Mvmt Sat Flow, veh/h	3510	0		1714				

Through Movement Data								
Assigned Mvmt		2		4		6		
Mvmt Sat Flow, veh/h		5358		26		3705		

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		
Mvmt Sat Flow, veh/h		1610		1588		0		

Left Lane Group Data								
Assigned Mvmt	1	5	0	7	0	0	0	0
Lane Assignment	L (Prot)			L				

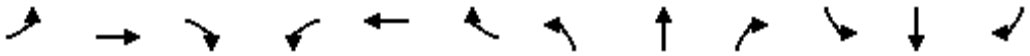
Lanes in Grp	2	0	0	1	0	0	0	0
Grp Vol (v), veh/h	351	0	0	505	0	0	0	0
Grp Sat Flow (s), veh/h/ln	1755	0	0	1714	0	0	0	0
Q Serve Time (g_s), s	5.7	0.0	0.0	16.9	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	5.7	0.0	0.0	16.9	0.0	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	1714	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	19.5	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	439	0	0	557	0	0	0	0
V/C Ratio (X)	0.80	0.00	0.00	0.91	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	439	0	0	557	0	0	0	0
Upstream Filter (I)	0.90	0.00	0.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	23.1	0.0	0.0	19.4	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	9.2	0.0	0.0	18.5	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	32.3	0.0	0.0	37.9	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	2.0	0.0	0.0	6.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.6	0.0	0.0	2.9	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00
%ile Back of Q (50%), veh/ln	2.6	0.0	0.0	8.8	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.25	0.00	0.00	0.15	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	0
Lane Assignment		T				T		
Lanes in Grp	0	3	0	0	0	2	0	0
Grp Vol (v), veh/h	0	1277	0	0	0	682	0	0
Grp Sat Flow (s), veh/h/ln	0	1729	0	0	0	1805	0	0
Q Serve Time (g_s), s	0.0	11.5	0.0	0.0	0.0	2.1	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	11.5	0.0	0.0	0.0	2.1	0.0	0.0
Lane Grp Cap (c), veh/h	0	1686	0	0	0	1895	0	0
V/C Ratio (X)	0.00	0.76	0.00	0.00	0.00	0.36	0.00	0.00
Avail Cap (c_a), veh/h	0	1686	0	0	0	1895	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	0.90	0.00	0.00
Uniform Delay (d1), s/veh	0.0	12.0	0.0	0.0	0.0	2.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	3.2	0.0	0.0	0.0	0.5	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	15.2	0.0	0.0	0.0	2.4	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	2.9	0.0	0.0	0.0	0.5	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.5	0.0	0.0	0.0	0.1	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	3.4	0.0	0.0	0.0	0.6	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.11	0.00	0.00	0.00	0.06	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	0
Lane Assignment		R		T+R				
Lanes in Grp	0	1	0	1	0	0	0	0
Grp Vol (v), veh/h	0	678	0	549	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	1610	0	1614	0	0	0	0
Q Serve Time (g_s), s	0.0	19.5	0.0	19.5	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	19.5	0.0	19.5	0.0	0.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	0.98	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	523	0	525	0	0	0	0
V/C Ratio (X)	0.00	1.30	0.00	1.05	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	523	0	525	0	0	0	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	13.8	0.0	20.3	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	146.7	0.0	52.0	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	160.5	0.0	72.2	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	3.8	0.0	6.5	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	21.3	0.0	7.6	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	25.2	0.0	14.1	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.82	0.00	0.24	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	38.7	0.0	6.1	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.3	0.0	0.3	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	49.5
HCM 6th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	86	814	81	233	349	198	141	680	634	261	382	54
Future Volume (veh/h)	86	814	81	233	349	198	141	680	634	261	382	54
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1800	1900	1900	1800	1900	1900	1800	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	91	857	85	245	367	208	148	716	667	275	402	57
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	115	851	84	278	785	438	180	811	623	283	879	124
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.07	0.26	0.26	0.16	0.35	0.35	0.10	0.22	0.22	0.16	0.28	0.28
Unsig. Movement Delay												
Ln Grp Delay, s/veh	52.5	76.9	76.5	61.5	23.1	23.3	54.0	43.4	62.5	82.8	29.9	30.0
Ln Grp LOS	D	F	F	E	C	C	D	D	F	F	C	C
Approach Vol, veh/h		1033			820			1531			734	
Approach Delay, s/veh		74.6			34.6			52.8			49.8	
Approach LOS		E			C			D			D	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	4	3	5	6	7	8
Case No	2.0	3.0	4.0	2.0	2.0	4.0	2.0	4.0
Phs Duration (G+Y+Rc), s	18.6	24.7	27.6	19.1	13.9	29.4	10.6	36.1
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green (Gmax), s	14.1	19.9	23.1	14.9	11.1	22.9	10.0	28.0
Max Allow Headway (MAH), s	3.8	4.6	5.3	3.8	3.8	5.3	3.8	5.4
Max Q Clear (g_c+I1), s	15.6	19.3	25.1	14.6	9.6	11.5	6.7	13.7
Green Ext Time (g_e), s	0.0	0.5	0.0	0.0	0.1	2.1	0.1	3.1
Prob of Phs Call (p_c)	1.00	1.00	1.00	1.00	0.98	1.00	0.90	1.00
Prob of Max Out (p_x)	1.00	0.00	1.00	1.00	1.00	0.00	1.00	0.15

Left-Turn Movement Data								
Assigned Mvmt	1			3	5		7	
Mvmt Sat Flow, veh/h	1810			1714	1714		1714	

Through Movement Data								
Assigned Mvmt		2	4			6		8
Mvmt Sat Flow, veh/h		3610	3317			3177		2234

Right-Turn Movement Data								
Assigned Mvmt		12	14			16		18
Mvmt Sat Flow, veh/h		1610	329			447		1246

Left Lane Group Data								
Assigned Mvmt	1	0	0	3	5	0	7	0
Lane Assignment	L (Prot)			L (Prot)	L (Prot)		L (Prot)	

Lanes in Grp	1	0	0	1	1	0	1	0
Grp Vol (v), veh/h	275	0	0	245	148	0	91	0
Grp Sat Flow (s), veh/h/ln	1810	0	0	1714	1714	0	1714	0
Q Serve Time (g_s), s	13.6	0.0	0.0	12.6	7.6	0.0	4.7	0.0
Cycle Q Clear Time (g_c), s	13.6	0.0	0.0	12.6	7.6	0.0	4.7	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	1.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	283	0	0	278	180	0	115	0
V/C Ratio (X)	0.97	0.00	0.00	0.88	0.82	0.00	0.79	0.00
Avail Cap (c_a), veh/h	283	0	0	284	211	0	190	0
Upstream Filter (I)	1.00	0.00	0.00	0.94	0.69	0.00	1.00	0.00
Uniform Delay (d1), s/veh	37.7	0.0	0.0	36.9	39.5	0.0	41.3	0.0
Incr Delay (d2), s/veh	45.1	0.0	0.0	24.6	14.5	0.0	11.2	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	82.8	0.0	0.0	61.5	54.0	0.0	52.5	0.0
1st-Term Q (Q1), veh/ln	5.9	0.0	0.0	5.2	3.2	0.0	2.0	0.0
2nd-Term Q (Q2), veh/ln	3.6	0.0	0.0	1.9	0.7	0.0	0.4	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	1.00	1.00	0.00	1.00	0.00
%ile Back of Q (50%), veh/ln	9.4	0.0	0.0	7.1	3.9	0.0	2.3	0.0
%ile Storage Ratio (RQ%)	0.15	0.00	0.00	0.07	0.20	0.00	0.03	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	4	0	0	6	0	8
Lane Assignment		T	T			T		T
Lanes in Grp	0	2	1	0	0	1	0	1
Grp Vol (v), veh/h	0	716	466	0	0	227	0	295
Grp Sat Flow (s), veh/h/ln	0	1805	1805	0	0	1805	0	1805
Q Serve Time (g_s), s	0.0	17.3	23.1	0.0	0.0	9.4	0.0	11.4
Cycle Q Clear Time (g_c), s	0.0	17.3	23.1	0.0	0.0	9.4	0.0	11.4
Lane Grp Cap (c), veh/h	0	811	463	0	0	499	0	634
V/C Ratio (X)	0.00	0.88	1.01	0.00	0.00	0.45	0.00	0.47
Avail Cap (c_a), veh/h	0	811	463	0	0	499	0	634
Upstream Filter (I)	0.00	0.69	1.00	0.00	0.00	1.00	0.00	0.94
Uniform Delay (d1), s/veh	0.0	33.7	33.5	0.0	0.0	26.9	0.0	22.6
Incr Delay (d2), s/veh	0.0	9.7	43.5	0.0	0.0	3.0	0.0	0.5
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	43.4	76.9	0.0	0.0	29.9	0.0	23.1
1st-Term Q (Q1), veh/ln	0.0	7.4	9.8	0.0	0.0	3.9	0.0	4.7
2nd-Term Q (Q2), veh/ln	0.0	1.1	5.6	0.0	0.0	0.4	0.0	0.1

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	8.5	15.4	0.0	0.0	4.4	0.0	4.8
%ile Storage Ratio (RQ%)	0.00	0.43	0.21	0.00	0.00	0.07	0.00	0.05
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.8	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	14	0	0	16	0	18
Lane Assignment		R	T+R			T+R		T+R
Lanes in Grp	0	1	1	0	0	1	0	1
Grp Vol (v), veh/h	0	667	476	0	0	232	0	280
Grp Sat Flow (s), veh/h/ln	0	1610	1841	0	0	1819	0	1676
Q Serve Time (g_s), s	0.0	14.6	23.1	0.0	0.0	9.5	0.0	11.7
Cycle Q Clear Time (g_c), s	0.0	14.6	23.1	0.0	0.0	9.5	0.0	11.7
Prot RT Sat Flow (s_R), veh/h/ln	0.0	1610.2	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	14.6	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.18	0.00	0.00	0.25	0.00	0.74
Lane Grp Cap (c), veh/h	0	623	472	0	0	503	0	589
V/C Ratio (X)	0.00	1.07	1.01	0.00	0.00	0.46	0.00	0.48
Avail Cap (c_a), veh/h	0	623	472	0	0	503	0	589
Upstream Filter (I)	0.00	0.69	1.00	0.00	0.00	1.00	0.00	0.94
Uniform Delay (d1), s/veh	0.0	11.5	33.5	0.0	0.0	27.0	0.0	22.7
Incr Delay (d2), s/veh	0.0	51.0	43.1	0.0	0.0	3.0	0.0	0.6
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	62.5	76.5	0.0	0.0	30.0	0.0	23.3
1st-Term Q (Q1), veh/ln	0.0	4.8	10.0	0.0	0.0	4.0	0.0	4.5
2nd-Term Q (Q2), veh/ln	0.0	8.8	5.7	0.0	0.0	0.4	0.0	0.1
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	13.7	15.6	0.0	0.0	4.5	0.0	4.6
%ile Storage Ratio (RQ%)	0.00	0.69	0.21	0.00	0.00	0.07	0.00	0.04
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	11.1	0.8	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.3	0.3	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	54.1
HCM 6th LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	480	36	427	91	25	141	214	1071	5	9	669	88
Future Volume (veh/h)	480	36	427	91	25	141	214	1071	5	9	669	88
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1700	1900	1900	1800	1900	1900	1800	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	505	38	0	96	26	148	225	1127	5	9	704	93
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	573	665		235	224	189	260	1801	8	20	1116	147
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Prop Arrive On Green	0.18	0.35	0.00	0.12	0.12	0.12	0.15	0.49	0.49	0.02	0.70	0.70
Unsig. Movement Delay												
Ln Grp Delay, s/veh	49.4	19.4	0.0	38.9	35.7	45.4	56.0	20.3	20.1	54.7	14.1	14.1
Ln Grp LOS	D	B		D	D	D	E	C	C	D	B	B
Approach Vol, veh/h		543			270			1357			806	
Approach Delay, s/veh		47.3			42.2			26.1			14.6	
Approach LOS		D			D			C			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6	7	8
Case No	2.0	4.0		3.0	2.0	4.0	2.0	5.3
Phs Duration (G+Y+Rc), s	5.5	48.5		36.0	18.2	35.8	20.9	15.1
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5	4.5	4.5
Max Green (Gmax), s	5.0	31.5		40.0	16.5	20.0	17.5	18.0
Max Allow Headway (MAH), s	3.8	5.2		5.2	3.8	5.3	3.8	4.1
Max Q Clear (g_c+I1), s	2.4	22.3		3.2	13.5	12.7	16.1	10.0
Green Ext Time (g_e), s	0.0	4.9		0.2	0.2	2.9	0.3	0.6
Prob of Phs Call (p_c)	0.20	1.00		1.00	1.00	1.00	1.00	1.00
Prob of Max Out (p_x)	1.00	0.00		0.00	1.00	0.00	1.00	0.10

Left-Turn Movement Data								
Assigned Mvmt	1				5		7	3
Mvmt Sat Flow, veh/h	1810				1714		3141	1318

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		3686		1900		3206		1900

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		16		1610		423		1610

Left Lane Group Data								
Assigned Mvmt	1	0	0	0	5	0	7	3
Lane Assignment	L (Prot)				L (Prot)		L (Prot)	L

Lanes in Grp	1	0	0	0	1	0	2	1
Grp Vol (v), veh/h	9	0	0	0	225	0	505	96
Grp Sat Flow (s), veh/h/ln	1810	0	0	0	1714	0	1570	1318
Q Serve Time (g_s), s	0.4	0.0	0.0	0.0	11.5	0.0	14.1	6.2
Cycle Q Clear Time (g_c), s	0.4	0.0	0.0	0.0	11.5	0.0	14.1	6.2
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	1318
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.6
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.6
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.2
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	0.00	1.00	0.00	1.00	1.00
Lane Grp Cap (c), veh/h	20	0	0	0	260	0	573	235
V/C Ratio (X)	0.44	0.00	0.00	0.00	0.86	0.00	0.88	0.41
Avail Cap (c_a), veh/h	101	0	0	0	314	0	611	344
Upstream Filter (I)	0.75	0.00	0.00	0.00	1.00	0.00	1.00	1.00
Uniform Delay (d1), s/veh	43.7	0.0	0.0	0.0	37.3	0.0	35.8	37.8
Incr Delay (d2), s/veh	11.0	0.0	0.0	0.0	18.7	0.0	13.6	1.1
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	54.7	0.0	0.0	0.0	56.0	0.0	49.4	38.9
1st-Term Q (Q1), veh/ln	0.2	0.0	0.0	0.0	4.7	0.0	5.3	2.0
2nd-Term Q (Q2), veh/ln	0.1	0.0	0.0	0.0	1.4	0.0	1.1	0.1
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	0.00	1.00	0.00	1.00	1.00
%ile Back of Q (50%), veh/ln	0.3	0.0	0.0	0.0	6.1	0.0	6.4	2.1
%ile Storage Ratio (RQ%)	0.01	0.00	0.00	0.00	0.35	0.00	0.16	0.06
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	552	0	38	0	396	0	26
Grp Sat Flow (s), veh/h/ln	0	1805	0	1900	0	1805	0	1900
Q Serve Time (g_s), s	0.0	20.3	0.0	1.2	0.0	10.7	0.0	1.1
Cycle Q Clear Time (g_c), s	0.0	20.3	0.0	1.2	0.0	10.7	0.0	1.1
Lane Grp Cap (c), veh/h	0	882	0	665	0	628	0	224
V/C Ratio (X)	0.00	0.63	0.00	0.06	0.00	0.63	0.00	0.12
Avail Cap (c_a), veh/h	0	882	0	844	0	628	0	380
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	0.75	0.00	1.00
Uniform Delay (d1), s/veh	0.0	16.9	0.0	19.4	0.0	10.5	0.0	35.5
Incr Delay (d2), s/veh	0.0	3.3	0.0	0.0	0.0	3.6	0.0	0.2
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	20.3	0.0	19.4	0.0	14.1	0.0	35.7
1st-Term Q (Q1), veh/ln	0.0	7.9	0.0	0.5	0.0	2.8	0.0	0.5
2nd-Term Q (Q2), veh/ln	0.0	0.8	0.0	0.0	0.0	0.6	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	8.7	0.0	0.5	0.0	3.4	0.0	0.5
%ile Storage Ratio (RQ%)	0.00	0.50	0.00	0.01	0.00	0.17	0.00	0.02
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R		R		T+R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	580	0	0	0	401	0	148
Grp Sat Flow (s), veh/h/ln	0	1897	0	1610	0	1824	0	1610
Q Serve Time (g_s), s	0.0	20.3	0.0	0.0	0.0	10.7	0.0	8.0
Cycle Q Clear Time (g_c), s	0.0	20.3	0.0	0.0	0.0	10.7	0.0	8.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.01	0.00	1.00	0.00	0.23	0.00	1.00
Lane Grp Cap (c), veh/h	0	927	0	564	0	635	0	189
V/C Ratio (X)	0.00	0.63	0.00	0.00	0.00	0.63	0.00	0.78
Avail Cap (c_a), veh/h	0	927	0	716	0	635	0	322
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	0.75	0.00	1.00
Uniform Delay (d1), s/veh	0.0	16.9	0.0	0.0	0.0	10.5	0.0	38.6
Incr Delay (d2), s/veh	0.0	3.2	0.0	0.0	0.0	3.6	0.0	6.8
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	20.1	0.0	0.0	0.0	14.1	0.0	45.4
1st-Term Q (Q1), veh/ln	0.0	8.3	0.0	0.0	0.0	2.8	0.0	3.1
2nd-Term Q (Q2), veh/ln	0.0	0.8	0.0	0.0	0.0	0.6	0.0	0.4
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	9.1	0.0	0.0	0.0	3.4	0.0	3.5
%ile Storage Ratio (RQ%)	0.00	0.52	0.00	0.00	0.00	0.17	0.00	0.10
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	28.3
HCM 6th LOS	C

Notes

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	268	520	131	462	376	102	138	944	507	248	883	194
Future Volume (veh/h)	268	520	131	462	376	102	138	944	507	248	883	194
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1800	1900	1900	1700	1900	1900	1800	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	282	547	85	486	396	54	145	994	429	261	929	151
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	306	617	262	536	568	495	170	1385	587	285	2024	328
HCM Platoon Ratio	1.66	1.66	1.66	1.66	1.66	1.66	2.00	2.00	2.00	2.00	2.00	1.00
Prop Arrive On Green	0.30	0.27	0.27	0.27	0.25	0.25	0.20	0.73	0.73	0.32	0.85	0.42
Unsig. Movement Delay												
Ln Grp Delay, s/veh	68.6	55.9	39.3	59.6	46.3	26.4	55.5	14.4	17.0	64.3	6.6	15.5
Ln Grp LOS	E	E	D	E	D	C	E	B	B	E	A	B
Approach Vol, veh/h		914			936			1568			1341	
Approach Delay, s/veh		58.3			52.1			18.9			20.1	
Approach LOS		E			D			B			C	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Case No	2.0	3.0	2.0	3.0	2.0	4.0	2.0	3.0
Phs Duration (G+Y+Rc), s	23.4	48.2	24.4	24.0	16.4	55.3	25.9	22.5
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green (Gmax), s	21.9	37.5	21.7	20.9	18.6	40.8	24.6	18.0
Max Allow Headway (MAH), s	3.8	4.9	3.8	5.1	3.8	5.3	3.8	5.1
Max Q Clear (g_c+I1), s	18.7	20.5	19.4	18.6	11.8	13.4	21.1	13.4
Green Ext Time (g_e), s	0.2	8.2	0.5	0.9	0.2	8.5	0.3	1.1
Prob of Phs Call (p_c)	1.00	1.00	1.00	1.00	0.99	1.00	1.00	1.00
Prob of Max Out (p_x)	1.00	0.00	1.00	1.00	0.07	0.00	1.00	1.00

Left-Turn Movement Data								
Assigned Mvmt	1		3		5		7	
Mvmt Sat Flow, veh/h	1810		3238		1714		1714	

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		3800		3800		4786		3800

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1610		1610		775		1610

Left Lane Group Data								
Assigned Mvmt	1	0	3	0	5	0	7	0
Lane Assignment	L (Prot)		L (Prot)		L (Prot)		L (Prot)	

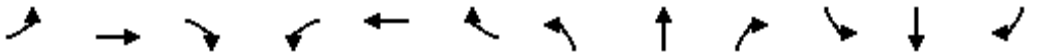
Lanes in Grp	1	0	2	0	1	0	1	0
Grp Vol (v), veh/h	261	0	486	0	145	0	282	0
Grp Sat Flow (s), veh/h/ln	1810	0	1619	0	1714	0	1714	0
Q Serve Time (g_s), s	16.7	0.0	17.4	0.0	9.8	0.0	19.1	0.0
Cycle Q Clear Time (g_c), s	16.7	0.0	17.4	0.0	9.8	0.0	19.1	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	285	0	536	0	170	0	306	0
V/C Ratio (X)	0.92	0.00	0.91	0.00	0.85	0.00	0.92	0.00
Avail Cap (c_a), veh/h	330	0	586	0	266	0	351	0
Upstream Filter (I)	0.85	0.00	1.00	0.00	0.52	0.00	1.00	0.00
Uniform Delay (d1), s/veh	40.3	0.0	42.6	0.0	47.3	0.0	41.4	0.0
Incr Delay (d2), s/veh	24.0	0.0	17.0	0.0	8.2	0.0	27.1	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	64.3	0.0	59.6	0.0	55.5	0.0	68.6	0.0
1st-Term Q (Q1), veh/ln	6.2	0.0	6.3	0.0	3.8	0.0	7.2	0.0
2nd-Term Q (Q2), veh/ln	1.9	0.0	1.3	0.0	0.4	0.0	2.3	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
%ile Back of Q (50%), veh/ln	8.1	0.0	7.5	0.0	4.2	0.0	9.5	0.0
%ile Storage Ratio (RQ%)	1.13	0.00	0.05	0.00	0.52	0.00	1.08	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	2	0	2	0	2	0	2
Grp Vol (v), veh/h	0	994	0	547	0	737	0	396
Grp Sat Flow (s), veh/h/ln	0	1900	0	1900	0	1900	0	1900
Q Serve Time (g_s), s	0.0	17.8	0.0	16.6	0.0	5.9	0.0	11.4
Cycle Q Clear Time (g_c), s	0.0	17.8	0.0	16.6	0.0	5.9	0.0	11.4
Lane Grp Cap (c), veh/h	0	1385	0	617	0	1607	0	568
V/C Ratio (X)	0.00	0.72	0.00	0.89	0.00	0.46	0.00	0.70
Avail Cap (c_a), veh/h	0	1385	0	662	0	1607	0	570
Upstream Filter (I)	0.00	0.52	0.00	1.00	0.00	0.85	0.00	1.00
Uniform Delay (d1), s/veh	0.0	12.7	0.0	42.8	0.0	5.8	0.0	42.6
Incr Delay (d2), s/veh	0.0	1.7	0.0	13.2	0.0	0.8	0.0	3.7
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	14.4	0.0	55.9	0.0	6.6	0.0	46.3
1st-Term Q (Q1), veh/ln	0.0	4.4	0.0	7.0	0.0	1.7	0.0	4.9
2nd-Term Q (Q2), veh/ln	0.0	0.3	0.0	1.1	0.0	0.2	0.0	0.3

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	4.7	0.0	8.2	0.0	1.9	0.0	5.2
%ile Storage Ratio (RQ%)	0.00	0.12	0.00	0.04	0.00	0.02	0.00	0.03
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		R		T+R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	429	0	85	0	343	0	54
Grp Sat Flow (s), veh/h/ln	0	1610	0	1610	0	1761	0	1610
Q Serve Time (g_s), s	0.0	18.5	0.0	5.1	0.0	11.4	0.0	2.6
Cycle Q Clear Time (g_c), s	0.0	18.5	0.0	5.1	0.0	11.4	0.0	2.6
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1610.2
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	18.9
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	0.44	0.00	1.00
Lane Grp Cap (c), veh/h	0	587	0	262	0	745	0	495
V/C Ratio (X)	0.00	0.73	0.00	0.33	0.00	0.46	0.00	0.11
Avail Cap (c_a), veh/h	0	587	0	280	0	745	0	495
Upstream Filter (I)	0.00	0.52	0.00	1.00	0.00	0.85	0.00	1.00
Uniform Delay (d1), s/veh	0.0	12.8	0.0	38.6	0.0	13.7	0.0	26.3
Incr Delay (d2), s/veh	0.0	4.2	0.0	0.7	0.0	1.7	0.0	0.1
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	17.0	0.0	39.3	0.0	15.5	0.0	26.4
1st-Term Q (Q1), veh/ln	0.0	3.8	0.0	1.9	0.0	3.7	0.0	1.0
2nd-Term Q (Q2), veh/ln	0.0	0.7	0.0	0.1	0.0	0.4	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	4.5	0.0	2.0	0.0	4.1	0.0	1.0
%ile Storage Ratio (RQ%)	0.00	0.56	0.00	0.01	0.00	0.04	0.00	0.01
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	33.3
HCM 6th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	214	387	229	828	1809	0	0	1316	772
Future Volume (veh/h)	0	0	0	214	387	229	828	1809	0	0	1316	772
Number				3	8	18	5	2	12	1	6	16
Initial Q, veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln				1800	1900	1900	1900	1900	0	0	1900	1900
Adj Flow Rate, veh/h				225	407	241	872	1904	0	0	1385	813
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence				Yes			Yes			No		
Cap, veh/h				249	468	293	799	2439	0	0	1458	1235
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.33	1.33
Prop Arrive On Green				0.28	0.28	0.28	0.44	1.00	0.00	0.00	0.51	0.51
Unsig. Movement Delay												
Ln Grp Delay, s/veh				58.6	0.0	49.9	82.6	0.9	0.0	0.0	40.0	25.7
Ln Grp LOS				E	A	D	F	A	A	A	D	C
Approach Vol, veh/h					873			2776			2198	
Approach Delay, s/veh					54.6			26.6			34.7	
Approach LOS					D			C			C	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2	8		5	6		
Case No		4.0	12.0		2.0	7.0		
Phs Duration (G+Y+Rc), s		81.5	38.5		31.0	50.5		
Change Period (Y+Rc), s		4.5	4.5		4.5	4.5		
Max Green (Gmax), s		74.5	36.5		26.5	43.5		
Max Allow Headway (MAH), s		5.2	5.4		3.8	4.8		
Max Q Clear (g_c+I1), s		2.0	31.5		28.5	43.6		
Green Ext Time (g_e), s		32.1	2.4		0.0	0.0		
Prob of Phs Call (p_c)		1.00	1.00		1.00	1.00		
Prob of Max Out (p_x)		0.00	1.00		1.00	0.00		

Left-Turn Movement Data								
Assigned Mvmt			3		5	1		
Mvmt Sat Flow, veh/h			881		3619	0		

Through Movement Data								
Assigned Mvmt		2	8			6		
Mvmt Sat Flow, veh/h		3800	1653			3800		

Right-Turn Movement Data								
Assigned Mvmt		12	18			16		
Mvmt Sat Flow, veh/h		0	1036			3220		

Left Lane Group Data								
Assigned Mvmt	0	0	3	0	5	1	0	0
Lane Assignment			L+T		L (Prot)			

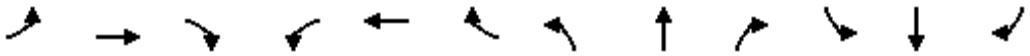
Lanes in Grp	0	0	1	0	2	0	0	0
Grp Vol (v), veh/h	0	0	474	0	872	0	0	0
Grp Sat Flow (s), veh/h/ln	0	0	1856	0	1810	0	0	0
Q Serve Time (g_s), s	0.0	0.0	29.5	0.0	26.5	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	29.5	0.0	26.5	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	46.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	0.00	0.47	0.00	1.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	525	0	799	0	0	0
V/C Ratio (X)	0.00	0.00	0.90	0.00	1.09	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	0	565	0	799	0	0	0
Upstream Filter (I)	0.00	0.00	1.00	0.00	0.36	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	41.4	0.0	33.5	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	17.1	0.0	49.1	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	58.6	0.0	82.6	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	13.4	0.0	9.2	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	2.5	0.0	5.4	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	0.00	1.00	0.00	1.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	15.9	0.0	14.6	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.38	0.00	2.44	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	18.2	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	8	0	0	6	0	0
Lane Assignment		T				T		
Lanes in Grp	0	2	0	0	0	2	0	0
Grp Vol (v), veh/h	0	1904	0	0	0	1385	0	0
Grp Sat Flow (s), veh/h/ln	0	1900	0	0	0	1900	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	41.6	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	41.6	0.0	0.0
Lane Grp Cap (c), veh/h	0	2439	0	0	0	1458	0	0
V/C Ratio (X)	0.00	0.78	0.00	0.00	0.00	0.95	0.00	0.00
Avail Cap (c_a), veh/h	0	2439	0	0	0	1458	0	0
Upstream Filter (I)	0.00	0.36	0.00	0.00	0.00	0.76	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	28.3	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.9	0.0	0.0	0.0	11.7	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.9	0.0	0.0	0.0	40.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	16.8	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.3	0.0	0.0	0.0	2.4	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.3	0.0	0.0	0.0	19.2	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.01	0.00	0.00	0.00	0.51	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	18	0	0	16	0	0
Lane Assignment			T+R			R		
Lanes in Grp	0	0	1	0	0	2	0	0
Grp Vol (v), veh/h	0	0	399	0	0	813	0	0
Grp Sat Flow (s), veh/h/ln	0	0	1714	0	0	1610	0	0
Q Serve Time (g_s), s	0.0	0.0	26.1	0.0	0.0	22.3	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	26.1	0.0	0.0	22.3	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.00	0.60	0.00	0.00	1.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	485	0	0	1235	0	0
V/C Ratio (X)	0.00	0.00	0.82	0.00	0.00	0.66	0.00	0.00
Avail Cap (c_a), veh/h	0	0	521	0	0	1235	0	0
Upstream Filter (I)	0.00	0.00	1.00	0.00	0.00	0.76	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	40.2	0.0	0.0	23.6	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	9.7	0.0	0.0	2.1	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	49.9	0.0	0.0	25.7	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	10.9	0.0	0.0	7.6	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	1.3	0.0	0.0	0.4	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	12.2	0.0	0.0	8.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.29	0.00	0.00	0.21	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	33.8
HCM 6th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	450	85	660	0	0	0	0	1554	509	327	1013	0
Future Volume (veh/h)	450	85	660	0	0	0	0	1554	509	327	1013	0
Number	7	4	14				5	2	12	1	6	16
Initial Q, veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1800	1900	1900				0	1900	1900	1900	1900	0
Adj Flow Rate, veh/h	474	89	695				0	1636	536	344	1066	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0				0	0	0	0	0	0
Opposing Right Turn Influence	Yes						No			Yes		
Cap, veh/h	544	102	570				0	1892	534	364	2061	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	2.00	2.00	2.00	2.00	1.00
Prop Arrive On Green	0.35	0.35	0.35				0.00	0.66	0.66	0.40	1.00	0.00
Unsig. Movement Delay												
Ln Grp Delay, s/veh	48.7	0.0	152.4				0.0	23.6	59.8	40.4	0.1	0.0
Ln Grp LOS	D	A	F				A	C	F	D	A	A
Approach Vol, veh/h		1258						2172			1410	
Approach Delay, s/veh		106.0						32.5			9.9	
Approach LOS		F						C			A	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Case No	2.0	7.0		12.0		4.0		
Phs Duration (G+Y+Rc), s	28.7	44.3		47.0		73.0		
Change Period (Y+Rc), s	4.5	4.5		4.5		4.5		
Max Green (Gmax), s	25.5	38.5		42.5		68.5		
Max Allow Headway (MAH), s	3.8	4.9		5.5		5.2		
Max Q Clear (g_c+I1), s	24.0	41.8		44.5		2.0		
Green Ext Time (g_e), s	0.2	0.0		0.0		10.6		
Prob of Phs Call (p_c)	1.00	1.00		1.00		1.00		
Prob of Max Out (p_x)	1.00	0.00		1.00		0.00		

Left-Turn Movement Data								
Assigned Mvmt	1	5		7				
Mvmt Sat Flow, veh/h	1810	0		1535				

Through Movement Data								
Assigned Mvmt		2		4		6		
Mvmt Sat Flow, veh/h		5700		288		3705		

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		
Mvmt Sat Flow, veh/h		1610		1610		0		

Left Lane Group Data								
Assigned Mvmt	1	5	0	7	0	0	0	0
Lane Assignment	L (Prot)			L+T				

Lanes in Grp	1	0	0	1	0	0	0	0
Grp Vol (v), veh/h	344	0	0	563	0	0	0	0
Grp Sat Flow (s), veh/h/ln	1810	0	0	1823	0	0	0	0
Q Serve Time (g_s), s	22.0	0.0	0.0	34.6	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	22.0	0.0	0.0	34.6	0.0	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	39.8	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	0.84	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	364	0	0	646	0	0	0	0
V/C Ratio (X)	0.94	0.00	0.00	0.87	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	385	0	0	646	0	0	0	0
Upstream Filter (I)	0.09	0.00	0.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	35.2	0.0	0.0	36.2	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	5.2	0.0	0.0	12.5	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	40.4	0.0	0.0	48.7	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	7.8	0.0	0.0	15.2	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.5	0.0	0.0	2.2	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00
%ile Back of Q (50%), veh/ln	8.4	0.0	0.0	17.4	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	1.40	0.00	0.00	0.52	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	0
Lane Assignment		T				T		
Lanes in Grp	0	3	0	0	0	2	0	0
Grp Vol (v), veh/h	0	1636	0	0	0	1066	0	0
Grp Sat Flow (s), veh/h/ln	0	1900	0	0	0	1805	0	0
Q Serve Time (g_s), s	0.0	27.2	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	27.2	0.0	0.0	0.0	0.0	0.0	0.0
Lane Grp Cap (c), veh/h	0	1892	0	0	0	2061	0	0
V/C Ratio (X)	0.00	0.86	0.00	0.00	0.00	0.52	0.00	0.00
Avail Cap (c_a), veh/h	0	1892	0	0	0	2061	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	0.09	0.00	0.00
Uniform Delay (d1), s/veh	0.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	5.6	0.0	0.0	0.0	0.1	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	23.6	0.0	0.0	0.0	0.1	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	6.9	0.0	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	7.9	0.0	0.0	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.15	0.00	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	0
Lane Assignment		R		T+R				
Lanes in Grp	0	1	0	1	0	0	0	0
Grp Vol (v), veh/h	0	536	0	695	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	1610	0	1610	0	0	0	0
Q Serve Time (g_s), s	0.0	39.8	0.0	42.5	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	39.8	0.0	42.5	0.0	0.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	534	0	570	0	0	0	0
V/C Ratio (X)	0.00	1.00	0.00	1.22	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	534	0	570	0	0	0	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	20.2	0.0	38.8	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	39.6	0.0	113.7	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	59.8	0.0	152.4	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	8.6	0.0	16.4	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	5.9	0.0	18.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	14.5	0.0	34.4	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.27	0.00	1.02	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.4	0.0	31.2	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.3	0.0	0.3	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	45.0
HCM 6th LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	648	787	247	101	975	531	104	613	76	336	29	222
Future Volume (veh/h)	648	787	247	101	975	531	104	613	76	336	29	222
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1700	1900	1900	1800	1900	1900	1800	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	682	828	260	106	1026	559	109	645	80	354	31	234
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	677	1108	348	128	1007	742	134	684	410	354	57	431
HCM Platoon Ratio	2.00	2.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.42	0.80	0.40	0.15	0.53	0.27	0.08	0.18	0.18	0.20	0.30	0.30
Unsig. Movement Delay												
Ln Grp Delay, s/veh	57.3	10.6	21.3	74.0	61.4	31.1	65.7	71.6	36.1	95.8	0.0	39.6
Ln Grp LOS	F	B	C	E	F	C	E	E	D	F	A	D
Approach Vol, veh/h		1770			1691			834			619	
Approach Delay, s/veh		31.7			52.2			67.4			71.7	
Approach LOS		C			D			E			E	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Case No	2.0	3.0	2.0	4.0	2.0	4.0	2.0	3.0
Phs Duration (G+Y+Rc), s	28.0	26.1	13.5	52.4	13.9	40.2	29.6	36.3
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green (Gmax), s	23.5	21.6	11.3	45.6	15.4	29.7	25.1	31.8
Max Allow Headway (MAH), s	3.8	5.1	3.8	5.3	3.8	5.5	3.8	4.8
Max Q Clear (g_c+I1), s	25.5	22.1	9.2	28.0	9.5	18.2	27.1	33.8
Green Ext Time (g_e), s	0.0	0.0	0.0	7.1	0.1	1.2	0.0	0.0
Prob of Phs Call (p_c)	1.00	1.00	0.97	1.00	0.97	1.00	1.00	1.00
Prob of Max Out (p_x)	1.00	0.00	1.00	0.33	0.12	0.00	1.00	1.00

Left-Turn Movement Data								
Assigned Mvmt	1		3		5		7	
Mvmt Sat Flow, veh/h	1810		1714		1714		3238	

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		3800		2773		192		3800

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1610		870		1448		1610

Left Lane Group Data								
Assigned Mvmt	1	0	3	0	5	0	7	0
Lane Assignment	L (Prot)		L (Prot)		L (Prot)		L (Prot)	

Lanes in Grp	1	0	1	0	1	0	2	0
Grp Vol (v), veh/h	354	0	106	0	109	0	682	0
Grp Sat Flow (s), veh/h/ln	1810	0	1714	0	1714	0	1619	0
Q Serve Time (g_s), s	23.5	0.0	7.2	0.0	7.5	0.0	25.1	0.0
Cycle Q Clear Time (g_c), s	23.5	0.0	7.2	0.0	7.5	0.0	25.1	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	354	0	128	0	134	0	677	0
V/C Ratio (X)	1.00	0.00	0.83	0.00	0.81	0.00	1.01	0.00
Avail Cap (c_a), veh/h	354	0	161	0	220	0	677	0
Upstream Filter (I)	1.00	0.00	1.00	0.00	1.00	0.00	0.36	0.00
Uniform Delay (d1), s/veh	48.2	0.0	50.3	0.0	54.5	0.0	34.9	0.0
Incr Delay (d2), s/veh	47.5	0.0	23.7	0.0	11.2	0.0	22.4	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	95.8	0.0	74.0	0.0	65.7	0.0	57.3	0.0
1st-Term Q (Q1), veh/ln	10.5	0.0	2.9	0.0	3.2	0.0	7.9	0.0
2nd-Term Q (Q2), veh/ln	4.7	0.0	0.8	0.0	0.4	0.0	2.1	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
%ile Back of Q (50%), veh/ln	15.2	0.0	3.7	0.0	3.7	0.0	10.0	0.0
%ile Storage Ratio (RQ%)	1.97	0.00	0.04	0.00	0.32	0.00	0.96	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T				T
Lanes in Grp	0	2	0	1	0	0	0	2
Grp Vol (v), veh/h	0	645	0	567	0	0	0	1026
Grp Sat Flow (s), veh/h/ln	0	1900	0	1900	0	0	0	1900
Q Serve Time (g_s), s	0.0	20.1	0.0	17.9	0.0	0.0	0.0	31.8
Cycle Q Clear Time (g_c), s	0.0	20.1	0.0	17.9	0.0	0.0	0.0	31.8
Lane Grp Cap (c), veh/h	0	684	0	759	0	0	0	1007
V/C Ratio (X)	0.00	0.94	0.00	0.75	0.00	0.00	0.00	1.02
Avail Cap (c_a), veh/h	0	684	0	759	0	0	0	1007
Upstream Filter (I)	0.00	1.00	0.00	0.36	0.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	48.6	0.0	9.1	0.0	0.0	0.0	28.2
Incr Delay (d2), s/veh	0.0	23.0	0.0	1.5	0.0	0.0	0.0	33.2
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	71.6	0.0	10.6	0.0	0.0	0.0	61.4
1st-Term Q (Q1), veh/ln	0.0	9.5	0.0	3.6	0.0	0.0	0.0	10.6
2nd-Term Q (Q2), veh/ln	0.0	2.2	0.0	0.3	0.0	0.0	0.0	4.6

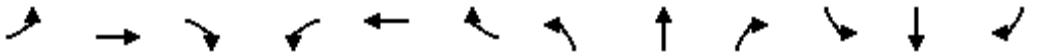
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	11.7	0.0	3.9	0.0	0.0	0.0	15.2
%ile Storage Ratio (RQ%)	0.00	1.03	0.00	0.16	0.00	0.00	0.00	0.18
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.7
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		T+R		T+R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	80	0	521	0	265	0	559
Grp Sat Flow (s), veh/h/ln	0	1610	0	1743	0	1639	0	1610
Q Serve Time (g_s), s	0.0	4.7	0.0	26.0	0.0	16.2	0.0	31.8
Cycle Q Clear Time (g_c), s	0.0	4.7	0.0	26.0	0.0	16.2	0.0	31.8
Prot RT Sat Flow (s_R), veh/h/ln	0.0	1610.2	0.0	0.0	0.0	0.0	0.0	1610.2
Prot RT Eff Green (g_R), s	0.0	9.0	0.0	0.0	0.0	0.0	0.0	23.5
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	0.50	0.00	0.88	0.00	1.00
Lane Grp Cap (c), veh/h	0	410	0	696	0	488	0	742
V/C Ratio (X)	0.00	0.20	0.00	0.75	0.00	0.54	0.00	0.75
Avail Cap (c_a), veh/h	0	410	0	696	0	488	0	742
Upstream Filter (I)	0.00	1.00	0.00	0.36	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	35.1	0.0	19.7	0.0	35.3	0.0	26.7
Incr Delay (d2), s/veh	0.0	1.1	0.0	1.6	0.0	4.3	0.0	4.4
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	36.1	0.0	21.3	0.0	39.6	0.0	31.1
1st-Term Q (Q1), veh/ln	0.0	1.8	0.0	8.5	0.0	6.5	0.0	12.9
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.3	0.0	0.6	0.0	0.9
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	2.0	0.0	8.8	0.0	7.1	0.0	13.8
%ile Storage Ratio (RQ%)	0.00	0.70	0.00	0.36	0.00	0.92	0.00	0.16
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	49.9
HCM 6th LOS	D

LANE VOLUME TIMING DETAILS

EXISTING CONDITIONS

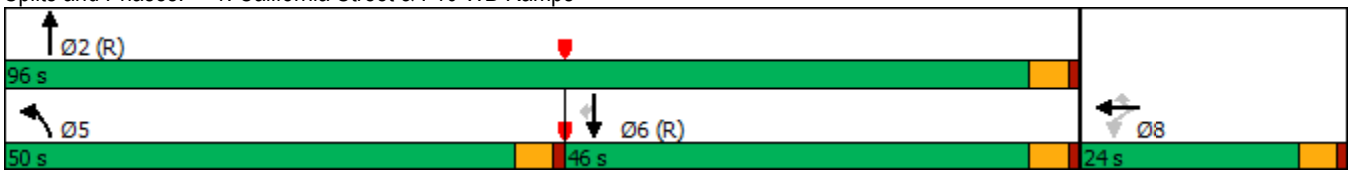


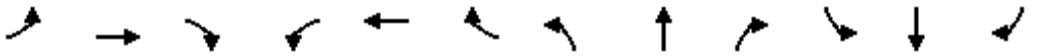
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	224	2	127	576	537	0	0	536	681
Future Volume (vph)	0	0	0	224	2	127	576	537	0	0	536	681
Ideal Flow (vphpl)	1900	1900	1900	1700	1800	1800	1700	1800	1900	1900	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.91	1.00
Frt						0.850						0.850
Flt Protected					0.953		0.950					
Satd. Flow (prot)	0	0	0	0	1715	1530	1615	3420	0	0	4914	1530
Flt Permitted					0.953		0.950					
Satd. Flow (perm)	0	0	0	0	1715	1530	1615	3420	0	0	4914	1530
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						137						411
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1502			1273			312			1245	
Travel Time (s)		34.1			28.9			7.1			28.3	
Peak Hour Factor	0.95	0.95	0.95	0.93	0.93	0.93	0.93	0.93	0.95	0.95	0.93	0.93
Adj. Flow (vph)	0	0	0	241	2	137	619	577	0	0	576	732
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	243	137	619	577	0	0	576	732
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.15	1.07	1.07	1.15	1.07	1.00	1.00	1.07	1.07
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors				1	2	1	1	2			2	1
Detector Template				Left	Thru	Right	Left	Thru			Thru	Right
Leading Detector (ft)				20	100	20	20	100			100	20
Trailing Detector (ft)				0	0	0	0	0			0	0
Detector 1 Position(ft)				0	0	0	0	0			0	0
Detector 1 Size(ft)				20	6	20	20	6			6	20
Detector 1 Type				Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)				0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 1 Queue (s)				0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 1 Delay (s)				0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 2 Position(ft)					94			94			94	
Detector 2 Size(ft)					6			6			6	
Detector 2 Type					Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)					0.0			0.0			0.0	
Turn Type				Perm	NA	Perm	Prot	NA			NA	Perm
Protected Phases					8		5	2			6	
Permitted Phases				8		8						6
Detector Phase				8	8	8	5	2			6	6
Switch Phase												
Minimum Initial (s)				5.0	5.0	5.0	5.0	5.0			5.0	5.0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)				22.5	22.5	22.5	9.5	22.5			22.5	22.5
Total Split (s)				24.0	24.0	24.0	50.0	96.0			46.0	46.0
Total Split (%)				20.0%	20.0%	20.0%	41.7%	80.0%			38.3%	38.3%
Maximum Green (s)				19.5	19.5	19.5	45.5	91.5			41.5	41.5
Yellow Time (s)				3.5	3.5	3.5	3.5	3.5			3.5	3.5
All-Red Time (s)				1.0	1.0	1.0	1.0	1.0			1.0	1.0
Lost Time Adjust (s)					0.0	0.0	0.0	0.0			0.0	0.0
Total Lost Time (s)					4.5	4.5	4.5	4.5			4.5	4.5
Lead/Lag							Lead				Lag	Lag
Lead-Lag Optimize?							Yes				Yes	Yes
Vehicle Extension (s)				3.0	3.0	3.0	3.0	3.0			3.0	3.0
Recall Mode				None	None	None	None	C-Max			C-Max	C-Max
Walk Time (s)				7.0	7.0	7.0		7.0			7.0	7.0
Flash Dont Walk (s)				11.0	11.0	11.0		11.0			11.0	11.0
Pedestrian Calls (#/hr)				0	0	0		0			0	0
Act Effct Green (s)					18.9	18.9	46.1	92.1			41.5	41.5
Actuated g/C Ratio					0.16	0.16	0.38	0.77			0.35	0.35
v/c Ratio					0.90	0.38	1.00	0.22			0.34	0.92
Control Delay					84.3	10.6	75.1	2.7			29.8	34.2
Queue Delay					0.0	0.0	38.6	0.6			0.0	0.0
Total Delay					84.3	10.6	113.7	3.3			29.8	34.2
LOS					F	B	F	A			C	C
Approach Delay					57.7			60.5			32.3	
Approach LOS					E			E			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.00			
Intersection Signal Delay: 47.3		Intersection LOS: D	
Intersection Capacity Utilization 141.7%		ICU Level of Service H	
Analysis Period (min) 15			

Splits and Phases: 1: California Street & I-10 WB Ramps



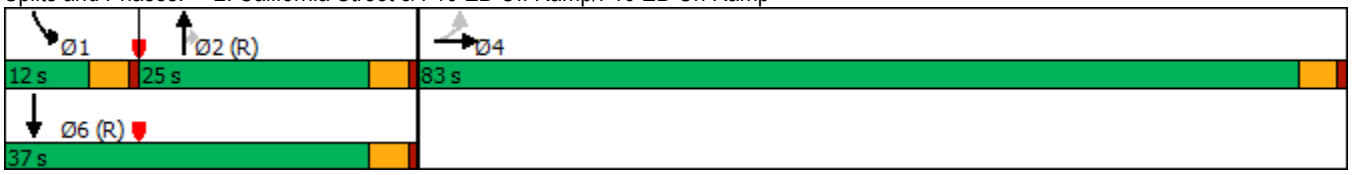


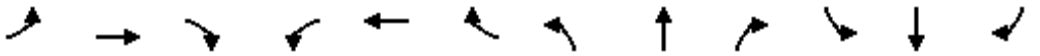
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	528	3	478	0	0	0	0	652	288	74	486	0
Future Volume (vph)	528	3	478	0	0	0	0	652	288	74	486	0
Ideal Flow (vphpl)	1700	1800	1800	1900	1900	1900	1900	1800	1800	1800	1800	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	1.00	1.00	0.95	1.00
Frt		0.936							0.850			
Flt Protected		0.974								0.950		
Satd. Flow (prot)	0	1641	0	0	0	0	0	4914	1530	1710	3420	0
Flt Permitted		0.974								0.950		
Satd. Flow (perm)	0	1641	0	0	0	0	0	4914	1530	1710	3420	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		78							310			
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1514			1294			812			312	
Travel Time (s)		34.4			29.4			18.5			7.1	
Peak Hour Factor	0.93	0.93	0.93	0.95	0.95	0.95	0.95	0.93	0.93	0.93	0.93	0.95
Adj. Flow (vph)	568	3	514	0	0	0	0	701	310	80	523	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1085	0	0	0	0	0	701	310	80	523	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.15	1.07	1.07	1.00	1.00	1.00	1.00	1.07	1.07	1.07	1.07	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2						2	1	1	2	
Detector Template	Left	Thru						Thru	Right	Left	Thru	
Leading Detector (ft)	20	100						100	20	20	100	
Trailing Detector (ft)	0	0						0	0	0	0	
Detector 1 Position(ft)	0	0						0	0	0	0	
Detector 1 Size(ft)	20	6						6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex						Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0						0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0						0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0						0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94						94			94	
Detector 2 Size(ft)		6						6			6	
Detector 2 Type		Cl+Ex						Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0						0.0			0.0	
Turn Type	Perm	NA						NA	Perm	Prot	NA	
Protected Phases		4						2		1	6	
Permitted Phases	4								2			
Detector Phase	4	4						2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0						5.0	5.0	5.0	5.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	22.5	22.5						22.5	22.5	9.5	22.5	
Total Split (s)	83.0	83.0						25.0	25.0	12.0	37.0	
Total Split (%)	69.2%	69.2%						20.8%	20.8%	10.0%	30.8%	
Maximum Green (s)	78.5	78.5						20.5	20.5	7.5	32.5	
Yellow Time (s)	3.5	3.5						3.5	3.5	3.5	3.5	
All-Red Time (s)	1.0	1.0						1.0	1.0	1.0	1.0	
Lost Time Adjust (s)		0.0						0.0	0.0	0.0	0.0	
Total Lost Time (s)		4.5						4.5	4.5	4.5	4.5	
Lead/Lag								Lag	Lag	Lead		
Lead-Lag Optimize?								Yes	Yes	Yes		
Vehicle Extension (s)	3.0	3.0						3.0	3.0	3.0	3.0	
Recall Mode	None	None						C-Max	C-Max	None	C-Max	
Walk Time (s)	7.0	7.0						7.0	7.0		7.0	
Flash Dont Walk (s)	11.0	11.0						11.0	11.0		11.0	
Pedestrian Calls (#/hr)	0	0						0	0		0	
Act Effct Green (s)		78.5						20.5	20.5	7.5	32.5	
Actuated g/C Ratio		0.65						0.17	0.17	0.06	0.27	
v/c Ratio		0.99						0.84	0.60	0.75	0.56	
Control Delay		43.8						58.0	10.1	113.4	30.7	
Queue Delay		39.2						6.7	0.0	0.0	0.7	
Total Delay		83.1						64.7	10.1	113.4	31.3	
LOS		F						E	B	F	C	
Approach Delay		83.1						48.0			42.2	
Approach LOS		F						D			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 100			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.99			
Intersection Signal Delay: 60.8		Intersection LOS: E	
Intersection Capacity Utilization 141.7%		ICU Level of Service H	
Analysis Period (min) 15			

Splits and Phases: 2: California Street & I-10 EB Off Ramp/I-10 EB On Ramp



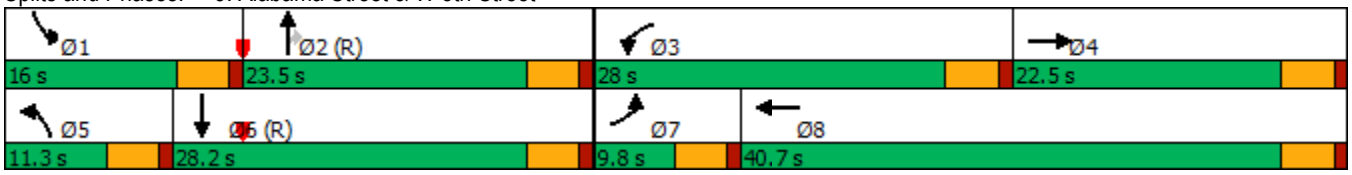


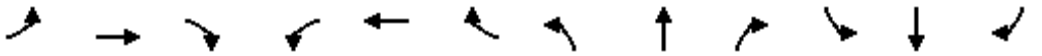
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	14	220	41	370	645	111	47	166	203	169	430	48
Future Volume (vph)	14	220	41	370	645	111	47	166	203	169	430	48
Ideal Flow (vphpl)	1700	1800	1800	1800	1800	1800	1700	1800	1800	1700	1800	1900
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	1.00	1.00	0.95	0.95
Frt		0.977			0.978				0.850		0.985	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1615	3341	0	1710	3345	0	1615	3420	1530	1615	3369	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1615	3341	0	1710	3345	0	1615	3420	1530	1615	3369	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		21			26				236		13	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1908			2750			621			1649	
Travel Time (s)		43.4			62.5			14.1			37.5	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	14	227	42	381	665	114	48	171	209	174	443	49
Shared Lane Traffic (%)												
Lane Group Flow (vph)	14	269	0	381	779	0	48	171	209	174	492	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.15	1.07	1.07	1.07	1.07	1.07	1.15	1.07	1.07	1.15	1.07	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Size(ft)	20	6		20	6		20	6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA		Prot	NA		Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases									2			
Detector Phase	7	4		3	8		5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	9.5	22.5		9.5	22.5		9.5	22.5	22.5	9.5	22.5	
Total Split (s)	9.8	22.5		28.0	40.7		11.3	23.5	23.5	16.0	28.2	
Total Split (%)	10.9%	25.0%		31.1%	45.2%		12.6%	26.1%	26.1%	17.8%	31.3%	
Maximum Green (s)	5.3	18.0		23.5	36.2		6.8	19.0	19.0	11.5	23.7	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.5		4.5	4.5	4.5	4.5	4.5	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None		None	C-Max	C-Max	None	C-Max	
Walk Time (s)		7.0			7.0			7.0	7.0		7.0	
Flash Dont Walk (s)		11.0			11.0			11.0	11.0		11.0	
Pedestrian Calls (#/hr)		0			0			0	0		0	
Act Effct Green (s)	5.3	12.2		22.4	37.2		7.5	23.3	23.3	14.0	34.0	
Actuated g/C Ratio	0.06	0.14		0.25	0.41		0.08	0.26	0.26	0.16	0.38	
v/c Ratio	0.15	0.57		0.89	0.56		0.36	0.19	0.37	0.69	0.38	
Control Delay	43.9	37.9		57.6	21.1		46.1	28.6	5.0	51.9	23.5	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	43.9	37.9		57.6	21.1		46.1	28.6	5.0	51.9	23.5	
LOS	D	D		E	C		D	C	A	D	C	
Approach Delay		38.2			33.1			19.0			30.9	
Approach LOS		D			C			B			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 90			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.89			
Intersection Signal Delay: 30.7		Intersection LOS: C	
Intersection Capacity Utilization 62.8%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 3: Alabama Street & W 5th Street





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	106	2	223	3	3	27	175	275	4	15	632	217
Future Volume (vph)	106	2	223	3	3	27	175	275	4	15	632	217
Ideal Flow (vphpl)	1600	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1900
Storage Length (ft)	150		0	0		0	150		0	0		0
Storage Lanes	1		1	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.97	1.00	1.00	0.95	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Frt			0.850		0.875			0.998			0.962	
Flt Protected	0.950				0.996		0.950			0.950		
Satd. Flow (prot)	2949	1800	1530	0	2981	0	1615	3413	0	1615	3290	0
Flt Permitted	0.950				0.931		0.950			0.950		
Satd. Flow (perm)	2949	1800	1530	0	2786	0	1615	3413	0	1615	3290	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			248		30			2			66	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1074			950			413			621	
Travel Time (s)		24.4			21.6			9.4			14.1	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	118	2	248	3	3	30	194	306	4	17	702	241
Shared Lane Traffic (%)												
Lane Group Flow (vph)	118	2	248	0	36	0	194	310	0	17	943	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.24	1.07	1.07	1.15	1.07	1.07	1.15	1.07	1.07	1.15	1.07	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2		1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100	20	20	100		20	100		20	100	
Trailing Detector (ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Position(ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Size(ft)	20	6	20	20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Prot	Perm	NA		Prot	NA		Prot	NA	
Protected Phases	7	4	4		8		5	2		1	6	
Permitted Phases				8								

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4	4	8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	9.5	22.5	22.5	22.5	22.5		9.5	22.5		9.5	22.5	
Total Split (s)	9.6	32.1	32.1	22.5	22.5		15.0	33.4		9.5	27.9	
Total Split (%)	12.8%	42.8%	42.8%	30.0%	30.0%		20.0%	44.5%		12.7%	37.2%	
Maximum Green (s)	5.1	27.6	27.6	18.0	18.0		10.5	28.9		5.0	23.4	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.5	4.5		4.5		4.5	4.5		4.5	4.5	
Lead/Lag	Lead			Lag	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes			Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None	None	None	None		None	C-Max		None	C-Max	
Walk Time (s)		7.0	7.0	7.0	7.0			7.0			7.0	
Flash Dont Walk (s)		11.0	11.0	11.0	11.0			11.0			11.0	
Pedestrian Calls (#/hr)		0	0	0	0			0			0	
Act Effct Green (s)	5.2	11.7	11.7		6.0		15.2	51.8		6.4	34.6	
Actuated g/C Ratio	0.07	0.16	0.16		0.08		0.20	0.69		0.09	0.46	
v/c Ratio	0.58	0.01	0.55		0.14		0.59	0.13		0.12	0.61	
Control Delay	46.4	23.0	8.9		16.2		34.3	5.8		33.2	18.2	
Queue Delay	0.0	0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Delay	46.4	23.0	8.9		16.2		34.3	5.8		33.2	18.2	
LOS	D	C	A		B		C	A		C	B	
Approach Delay		21.0			16.2			16.8			18.5	
Approach LOS		C			B			B			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 75			
Actuated Cycle Length: 75			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 80			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.61			
Intersection Signal Delay: 18.5		Intersection LOS: B	
Intersection Capacity Utilization 58.1%		ICU Level of Service B	
Analysis Period (min) 15			

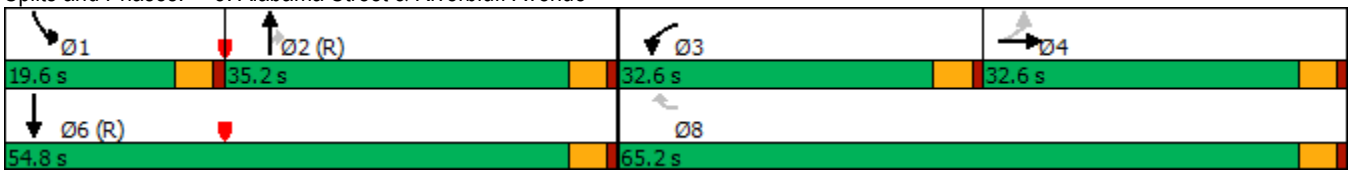
Splits and Phases: 4: Alabama Street & 3rd Street

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	31	0	28	0	403	26	34	823	0
Future Volume (vph)	0	0	0	31	0	28	0	403	26	34	823	0
Ideal Flow (vphpl)	1700	1800	1800	1700	1900	1800	1900	1800	1800	1700	1800	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt						0.850			0.850			
Flt Protected				0.950						0.950		
Satd. Flow (prot)	0	1800	0	1615	0	1530	0	1800	1530	1615	1800	0
Flt Permitted				0.950						0.950		
Satd. Flow (perm)	0	1800	0	1615	0	1530	0	1800	1530	1615	1800	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						55			95			
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		416			1617			460			310	
Travel Time (s)		9.5			36.8			10.5			7.0	
Peak Hour Factor	0.82	0.82	0.82	0.82	0.95	0.82	0.95	0.82	0.82	0.82	0.82	0.95
Adj. Flow (vph)	0	0	0	38	0	34	0	491	32	41	1004	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	38	0	34	0	491	32	41	1004	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.15	1.07	1.07	1.15	1.00	1.07	1.00	1.07	1.07	1.15	1.07	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1		1		2	1	1	2	
Detector Template	Left	Thru		Left		Right		Thru	Right	Left	Thru	
Leading Detector (ft)	20	100		20		20		100	20	20	100	
Trailing Detector (ft)	0	0		0		0		0	0	0	0	
Detector 1 Position(ft)	0	0		0		0		0	0	0	0	
Detector 1 Size(ft)	20	6		20		20		6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0		0.0		0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94						94			94	
Detector 2 Size(ft)		6						6			6	
Detector 2 Type		Cl+Ex						Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0						0.0			0.0	
Turn Type				Prot		Perm		NA	Perm	Prot	NA	
Protected Phases		4		3				2		1	6	
Permitted Phases	4					8			2			
Detector Phase	4	4		3		8		2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0		5.0		5.0	5.0	5.0	5.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	22.5	22.5		22.5		22.5		22.5	22.5	9.5	22.5	
Total Split (s)	32.6	32.6		32.6		65.2		35.2	35.2	19.6	54.8	
Total Split (%)	27.2%	27.2%		27.2%		54.3%		29.3%	29.3%	16.3%	45.7%	
Maximum Green (s)	28.1	28.1		28.1		60.7		30.7	30.7	15.1	50.3	
Yellow Time (s)	3.5	3.5		3.5		3.5		3.5	3.5	3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0		1.0		1.0	1.0	1.0	1.0	
Lost Time Adjust (s)		0.0		0.0		0.0		0.0	0.0	0.0	0.0	
Total Lost Time (s)		4.5		4.5		4.5		4.5	4.5	4.5	4.5	
Lead/Lag	Lag	Lag		Lead				Lag	Lag	Lead		
Lead-Lag Optimize?	Yes	Yes		Yes				Yes	Yes	Yes		
Vehicle Extension (s)	3.0	3.0		3.0		3.0		3.0	3.0	3.0	3.0	
Recall Mode	None	None		None		None		C-Max	C-Max	None	C-Max	
Walk Time (s)	7.0	7.0		7.0		7.0		7.0	7.0		7.0	
Flash Dont Walk (s)	11.0	11.0		11.0		11.0		11.0	11.0		11.0	
Pedestrian Calls (#/hr)	0	0		0		0		0	0		0	
Act Effct Green (s)				8.3		8.0		96.9	96.9	8.5	108.8	
Actuated g/C Ratio				0.07		0.07		0.81	0.81	0.07	0.91	
v/c Ratio				0.34		0.22		0.34	0.03	0.36	0.62	
Control Delay				60.7		9.0		5.7	0.0	61.1	4.4	
Queue Delay				0.0		0.0		0.0	0.0	0.0	0.0	
Total Delay				60.7		9.0		5.7	0.0	61.1	4.4	
LOS				E		A		A	A	E	A	
Approach Delay					36.3			5.3			6.6	
Approach LOS					D			A			A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 110			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.62			
Intersection Signal Delay: 7.5		Intersection LOS: A	
Intersection Capacity Utilization 56.1%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 5: Alabama Street & Riverbluff Avenue

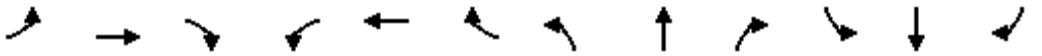


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	20	57	5	5	2	2	9	457	14	6	636	105
Future Volume (vph)	20	57	5	5	2	2	9	457	14	6	636	105
Ideal Flow (vphpl)	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1900
Storage Length (ft)	0		0	0		0	200		0	0		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.992			0.973			0.995			0.979	
Flt Protected		0.988			0.971		0.950			0.950		
Satd. Flow (prot)	0	1764	0	0	1701	0	1615	1791	0	1615	1762	0
Flt Permitted		0.916			0.896		0.950			0.950		
Satd. Flow (perm)	0	1636	0	0	1569	0	1615	1791	0	1615	1762	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		4			2			3			16	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		300			825			1319			290	
Travel Time (s)		6.8			18.8			30.0			6.6	
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Adj. Flow (vph)	24	68	6	6	2	2	11	544	17	7	757	125
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	98	0	0	10	0	11	561	0	7	882	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.15	1.07	1.07	1.15	1.07	1.07	1.15	1.07	1.07	1.15	1.07	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	22.5	22.5		22.5	22.5		9.5	22.5		9.5	22.5	
Total Split (s)	22.6	22.6		22.6	22.6		9.6	47.8		9.6	47.8	
Total Split (%)	28.3%	28.3%		28.3%	28.3%		12.0%	59.8%		12.0%	59.8%	
Maximum Green (s)	18.1	18.1		18.1	18.1		5.1	43.3		5.1	43.3	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		4.5			4.5		4.5	4.5		4.5	4.5	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	
Walk Time (s)	7.0	7.0		7.0	7.0			7.0			7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0			11.0			11.0	
Pedestrian Calls (#/hr)	0	0		0	0			0			0	
Act Effct Green (s)		9.8			9.7		6.2	61.9		6.0	61.8	
Actuated g/C Ratio		0.12			0.12		0.08	0.77		0.08	0.77	
v/c Ratio		0.48			0.05		0.09	0.40		0.06	0.65	
Control Delay		38.5			26.9		35.4	6.3		35.2	10.8	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		38.5			26.9		35.4	6.3		35.2	10.8	
LOS		D			C		D	A		D	B	
Approach Delay		38.5			26.9			6.9			10.9	
Approach LOS		D			C			A			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 80			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 80			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.65			
Intersection Signal Delay: 11.3		Intersection LOS: B	
Intersection Capacity Utilization 54.4%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 6: Alabama Street & Palmetto Avenue

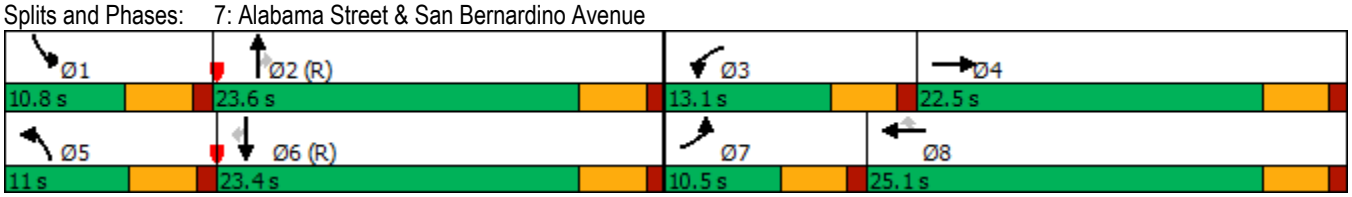


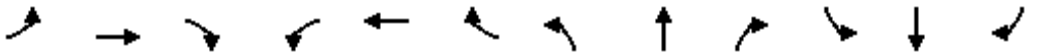
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	36	127	29	170	355	80	112	214	75	43	414	77
Future Volume (vph)	36	127	29	170	355	80	112	214	75	43	414	77
Ideal Flow (vphpl)	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1900
Storage Length (ft)	100		0	0		0	170		0	260		500
Storage Lanes	1		0	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt		0.972				0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1615	3324	0	1615	3420	1530	1615	3420	1530	1615	3420	1615
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1615	3324	0	1615	3420	1530	1615	3420	1530	1615	3420	1615
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		32				164			164			164
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		5507			2072			2636			1374	
Travel Time (s)		125.2			47.1			59.9			31.2	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	40	140	32	187	390	88	123	235	82	47	455	85
Shared Lane Traffic (%)												
Lane Group Flow (vph)	40	172	0	187	390	88	123	235	82	47	455	85
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.15	1.07	1.07	1.15	1.07	1.07	1.15	1.07	1.07	1.15	1.07	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100		20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0		0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0		0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6		20	6	20	20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8			2			6

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4		3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	22.5		9.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5	22.5
Total Split (s)	10.5	22.5		13.1	25.1	25.1	11.0	23.6	23.6	10.8	23.4	23.4
Total Split (%)	15.0%	32.1%		18.7%	35.9%	35.9%	15.7%	33.7%	33.7%	15.4%	33.4%	33.4%
Maximum Green (s)	6.0	18.0		8.6	20.6	20.6	6.5	19.1	19.1	6.3	18.9	18.9
Yellow Time (s)	3.5	3.5		3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Walk Time (s)		7.0			7.0	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)		11.0			11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0			0	0		0	0		0	0
Act Effct Green (s)	5.9	10.7		8.6	17.5	17.5	10.0	29.7	29.7	7.2	22.7	22.7
Actuated g/C Ratio	0.08	0.15		0.12	0.25	0.25	0.14	0.42	0.42	0.10	0.32	0.32
v/c Ratio	0.29	0.32		0.94	0.46	0.17	0.53	0.16	0.11	0.28	0.41	0.13
Control Delay	36.1	21.8		86.0	24.6	1.2	36.1	9.0	2.4	33.0	21.0	0.7
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	36.1	21.8		86.0	24.6	1.2	36.1	9.0	2.4	33.0	21.0	0.7
LOS	D	C		F	C	A	D	A	A	C	C	A
Approach Delay		24.5			38.8			15.3			19.0	
Approach LOS		C			D			B			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 70			
Actuated Cycle Length: 70			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 75			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.94			
Intersection Signal Delay: 25.7		Intersection LOS: C	
Intersection Capacity Utilization 49.2%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 7: Alabama Street & San Bernardino Avenue



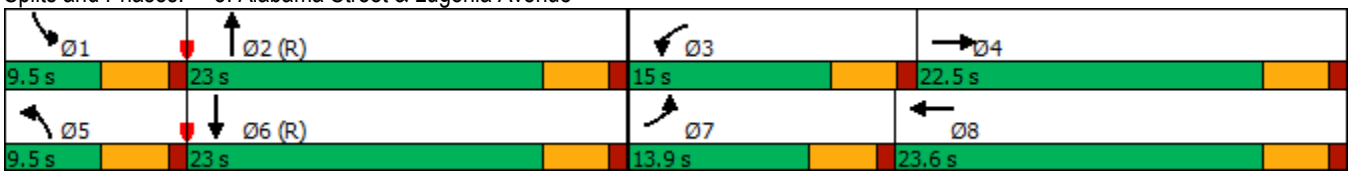


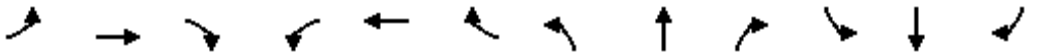
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	71	70	41	193	274	46	78	347	105	44	426	117
Future Volume (vph)	71	70	41	193	274	46	78	347	105	44	426	117
Ideal Flow (vphpl)	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1900
Storage Length (ft)	220		0	0		0	200		0	180		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.91	0.91
Frt		0.945			0.978			0.965			0.968	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1615	3232	0	1615	3345	0	1615	3300	0	1615	4757	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1615	3232	0	1615	3345	0	1615	3300	0	1615	4757	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		45			27			55			97	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		5332			3791			1051			2636	
Travel Time (s)		121.2			86.2			23.9			59.9	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	78	77	45	212	301	51	86	381	115	48	468	129
Shared Lane Traffic (%)												
Lane Group Flow (vph)	78	122	0	212	352	0	86	496	0	48	597	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.15	1.07	1.07	1.15	1.07	1.07	1.15	1.07	1.07	1.15	1.07	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	9.5	22.5		9.5	22.5		9.5	22.5		9.5	22.5	
Total Split (s)	13.9	22.5		15.0	23.6		9.5	23.0		9.5	23.0	
Total Split (%)	19.9%	32.1%		21.4%	33.7%		13.6%	32.9%		13.6%	32.9%	
Maximum Green (s)	9.4	18.0		10.5	19.1		5.0	18.5		5.0	18.5	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Dont Walk (s)		11.0			11.0			11.0			11.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	8.1	10.2		10.5	12.6		8.6	30.4		7.1	26.9	
Actuated g/C Ratio	0.12	0.15		0.15	0.18		0.12	0.43		0.10	0.38	
v/c Ratio	0.42	0.24		0.88	0.56		0.43	0.34		0.29	0.32	
Control Delay	35.5	17.4		65.8	27.4		35.6	15.8		42.4	7.9	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	35.5	17.4		65.8	27.4		35.6	15.8		42.4	7.9	
LOS	D	B		E	C		D	B		D	A	
Approach Delay		24.5			41.8			18.7			10.5	
Approach LOS		C			D			B			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 70			
Actuated Cycle Length: 70			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 70			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.88			
Intersection Signal Delay: 23.2		Intersection LOS: C	
Intersection Capacity Utilization 48.9%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 8: Alabama Street & Lugonia Avenue



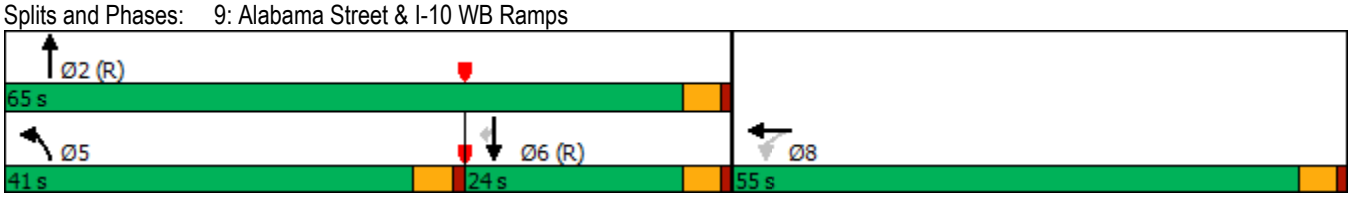


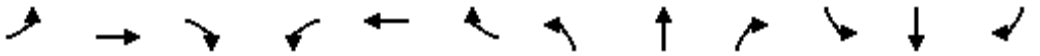
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	267	316	319	404	589	0	0	313	219
Future Volume (vph)	0	0	0	267	316	319	404	589	0	0	313	219
Ideal Flow (vphpl)	1900	1900	1900	1700	1800	1800	1700	1800	1800	1700	1800	1900
Storage Length (ft)	0		0	0		0	150		0	0		0
Storage Lanes	0		0	0		0	1		0	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.95	1.00	0.95	1.00	1.00	0.95	1.00
Frt					0.947							0.850
Flt Protected					0.985		0.950					
Satd. Flow (prot)	0	0	0	0	3190	0	1615	3420	0	0	3420	1615
Flt Permitted					0.985		0.950					
Satd. Flow (perm)	0	0	0	0	3190	0	1615	3420	0	0	3420	1615
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					106							233
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		918			1093			591			1051	
Travel Time (s)		20.9			24.8			13.4			23.9	
Peak Hour Factor	0.95	0.95	0.95	0.94	0.94	0.94	0.94	0.94	0.95	0.95	0.94	0.94
Adj. Flow (vph)	0	0	0	284	336	339	430	627	0	0	333	233
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	959	0	430	627	0	0	333	233
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.15	1.07	1.07	1.15	1.07	1.07	1.15	1.07	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors				1	2		1	2			2	1
Detector Template				Left	Thru		Left	Thru			Thru	Right
Leading Detector (ft)				20	100		20	100			100	20
Trailing Detector (ft)				0	0		0	0			0	0
Detector 1 Position(ft)				0	0		0	0			0	0
Detector 1 Size(ft)				20	6		20	6			6	20
Detector 1 Type				Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)				0.0	0.0		0.0	0.0			0.0	0.0
Detector 1 Queue (s)				0.0	0.0		0.0	0.0			0.0	0.0
Detector 1 Delay (s)				0.0	0.0		0.0	0.0			0.0	0.0
Detector 2 Position(ft)					94			94			94	
Detector 2 Size(ft)					6			6			6	
Detector 2 Type					Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)					0.0			0.0			0.0	
Turn Type				Perm	NA		Prot	NA			NA	Perm
Protected Phases					8		5	2			6	
Permitted Phases				8								6

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase				8	8		5	2			6	6
Switch Phase												
Minimum Initial (s)				5.0	5.0		5.0	5.0			5.0	5.0
Minimum Split (s)				22.5	22.5		9.5	22.5			22.5	22.5
Total Split (s)				55.0	55.0		41.0	65.0			24.0	24.0
Total Split (%)				45.8%	45.8%		34.2%	54.2%			20.0%	20.0%
Maximum Green (s)				50.5	50.5		36.5	60.5			19.5	19.5
Yellow Time (s)				3.5	3.5		3.5	3.5			3.5	3.5
All-Red Time (s)				1.0	1.0		1.0	1.0			1.0	1.0
Lost Time Adjust (s)					0.0		0.0	0.0			0.0	0.0
Total Lost Time (s)					4.5		4.5	4.5			4.5	4.5
Lead/Lag							Lead				Lag	Lag
Lead-Lag Optimize?							Yes				Yes	Yes
Vehicle Extension (s)				3.0	3.0		3.0	3.0			3.0	3.0
Recall Mode				None	None		None	C-Max			C-Max	C-Max
Walk Time (s)				7.0	7.0			7.0			7.0	7.0
Flash Dont Walk (s)				11.0	11.0			11.0			11.0	11.0
Pedestrian Calls (#/hr)				0	0			0			0	0
Act Effct Green (s)					41.8		35.8	69.2			28.9	28.9
Actuated g/C Ratio					0.35		0.30	0.58			0.24	0.24
v/c Ratio					0.81		0.89	0.32			0.41	0.41
Control Delay					37.0		68.5	17.5			42.8	8.0
Queue Delay					0.0		0.0	0.0			0.0	0.0
Total Delay					37.0		68.5	17.5			42.8	8.0
LOS					D		E	B			D	A
Approach Delay					37.0			38.2			28.5	
Approach LOS					D			D			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 75			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.89			
Intersection Signal Delay: 35.6		Intersection LOS: D	
Intersection Capacity Utilization 78.0%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 9: Alabama Street & I-10 WB Ramps



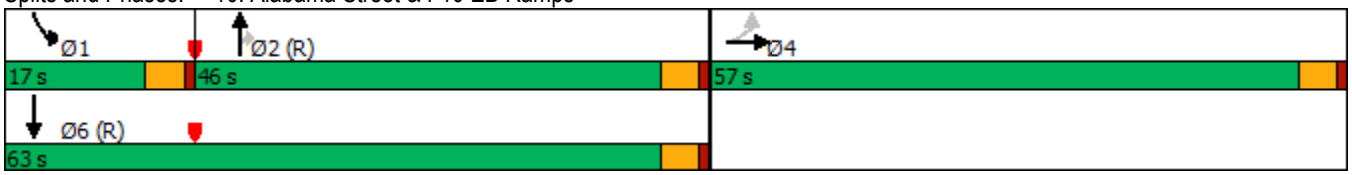


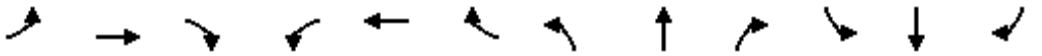
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	374	6	523	0	0	0	0	620	98	52	532	0
Future Volume (vph)	374	6	523	0	0	0	0	620	98	52	532	0
Ideal Flow (vphpl)	1700	1800	1800	1900	1900	1900	1900	1800	1800	1700	1900	1900
Storage Length (ft)	0		0	0		0	0		0	150		0
Storage Lanes	0		0	0		0	0		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.95	0.95	0.95	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt		0.913							0.850			
Flt Protected		0.980								0.950		
Satd. Flow (prot)	0	3060	0	0	0	0	0	3420	1530	1615	3610	0
Flt Permitted		0.980								0.950		
Satd. Flow (perm)	0	3060	0	0	0	0	0	3420	1530	1615	3610	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		220							110			
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		898			623			1369			591	
Travel Time (s)		20.4			14.2			31.1			13.4	
Peak Hour Factor	0.89	0.89	0.89	0.95	0.95	0.95	0.95	0.89	0.89	0.89	0.89	0.95
Adj. Flow (vph)	420	7	588	0	0	0	0	697	110	58	598	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1015	0	0	0	0	0	697	110	58	598	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.15	1.07	1.07	1.00	1.00	1.00	1.00	1.07	1.07	1.15	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2						2	1	1	2	
Detector Template	Left	Thru						Thru	Right	Left	Thru	
Leading Detector (ft)	20	100						100	20	20	100	
Trailing Detector (ft)	0	0						0	0	0	0	
Detector 1 Position(ft)	0	0						0	0	0	0	
Detector 1 Size(ft)	20	6						6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex						Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0						0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0						0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0						0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94						94			94	
Detector 2 Size(ft)		6						6			6	
Detector 2 Type		Cl+Ex						Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0						0.0			0.0	
Turn Type	Perm	NA						NA	Perm	Prot	NA	
Protected Phases		4						2		1	6	
Permitted Phases	4								2			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4						2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0						5.0	5.0	5.0	5.0	
Minimum Split (s)	22.5	22.5						22.5	22.5	9.5	22.5	
Total Split (s)	57.0	57.0						46.0	46.0	17.0	63.0	
Total Split (%)	47.5%	47.5%						38.3%	38.3%	14.2%	52.5%	
Maximum Green (s)	52.5	52.5						41.5	41.5	12.5	58.5	
Yellow Time (s)	3.5	3.5						3.5	3.5	3.5	3.5	
All-Red Time (s)	1.0	1.0						1.0	1.0	1.0	1.0	
Lost Time Adjust (s)		0.0						0.0	0.0	0.0	0.0	
Total Lost Time (s)		4.5						4.5	4.5	4.5	4.5	
Lead/Lag								Lag	Lag	Lead		
Lead-Lag Optimize?								Yes	Yes	Yes		
Vehicle Extension (s)	3.0	3.0						3.0	3.0	3.0	3.0	
Recall Mode	None	None						C-Max	C-Max	None	C-Max	
Walk Time (s)	7.0	7.0						7.0	7.0		7.0	
Flash Dont Walk (s)	11.0	11.0						11.0	11.0		11.0	
Pedestrian Calls (#/hr)	0	0						0	0		0	
Act Effct Green (s)		43.0						56.0	56.0	9.6	68.0	
Actuated g/C Ratio		0.36						0.47	0.47	0.08	0.57	
v/c Ratio		0.82						0.44	0.14	0.45	0.29	
Control Delay		32.6						25.1	5.2	75.5	16.0	
Queue Delay		0.0						0.0	0.0	0.0	0.0	
Total Delay		32.6						25.1	5.2	75.5	16.0	
LOS		C						C	A	E	B	
Approach Delay		32.6						22.4			21.2	
Approach LOS		C						C			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 60			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.82			
Intersection Signal Delay: 26.3		Intersection LOS: C	
Intersection Capacity Utilization 78.0%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 10: Alabama Street & I-10 EB Ramps



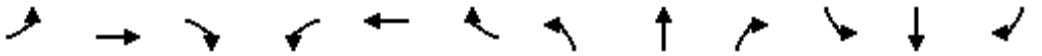


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	273	444	790	987	0	0	0	0	177	0	182
Future Volume (vph)	0	273	444	790	987	0	0	0	0	177	0	182
Ideal Flow (vphpl)	1900	1800	1800	1600	1800	1900	1900	1900	1900	1700	1900	1900
Storage Length (ft)	0		220	0		0	0		0	0		0
Storage Lanes	0		1	2		0	0		0	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850									0.850
Flt Protected				0.950							0.950	
Satd. Flow (prot)	0	3420	1530	2949	3420	0	0	0	0	0	1805	1615
Flt Permitted				0.950							0.950	
Satd. Flow (perm)	0	3420	1530	2949	3420	0	0	0	0	0	1805	1615
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			467									117
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		2750			477			659			386	
Travel Time (s)		62.5			10.8			15.0			8.8	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	287	467	832	1039	0	0	0	0	186	0	192
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	287	467	832	1039	0	0	0	0	0	186	192
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		36			36			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.07	1.07	1.24	1.07	1.00	1.00	1.00	1.00	1.15	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		2	1	1	2					1	2	1
Detector Template		Thru	Right	Left	Thru					Left	Thru	Right
Leading Detector (ft)		100	20	20	100					20	100	20
Trailing Detector (ft)		0	0	0	0					0	0	0
Detector 1 Position(ft)		0	0	0	0					0	0	0
Detector 1 Size(ft)		6	20	20	6					20	6	20
Detector 1 Type		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex					Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)		0.0	0.0	0.0	0.0					0.0	0.0	0.0
Detector 1 Queue (s)		0.0	0.0	0.0	0.0					0.0	0.0	0.0
Detector 1 Delay (s)		0.0	0.0	0.0	0.0					0.0	0.0	0.0
Detector 2 Position(ft)		94			94						94	
Detector 2 Size(ft)		6			6						6	
Detector 2 Type		Cl+Ex			Cl+Ex						Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0						0.0	
Turn Type		NA	Perm	Prot	NA					Prot	NA	Perm
Protected Phases		4		3	8					1	6	
Permitted Phases			4									6

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase		4	4	3	8					1	6	6
Switch Phase												
Minimum Initial (s)		5.0	5.0	5.0	5.0					5.0	5.0	5.0
Minimum Split (s)		22.5	22.5	9.5	22.5					9.5	22.5	22.5
Total Split (s)		22.5	22.5	25.0	47.5					22.5	22.5	22.5
Total Split (%)		32.1%	32.1%	35.7%	67.9%					32.1%	32.1%	32.1%
Maximum Green (s)		18.0	18.0	20.5	43.0					18.0	18.0	18.0
Yellow Time (s)		3.5	3.5	3.5	3.5					3.5	3.5	3.5
All-Red Time (s)		1.0	1.0	1.0	1.0					1.0	1.0	1.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0						0.0	0.0
Total Lost Time (s)		4.5	4.5	4.5	4.5						4.5	4.5
Lead/Lag		Lag	Lag	Lead								
Lead-Lag Optimize?		Yes	Yes	Yes								
Vehicle Extension (s)		3.0	3.0	3.0	3.0					3.0	3.0	3.0
Recall Mode		C-Max	C-Max	None	C-Max					None	Max	Max
Walk Time (s)		7.0	7.0		7.0						7.0	7.0
Flash Dont Walk (s)		11.0	11.0		11.0						11.0	11.0
Pedestrian Calls (#/hr)		0	0		0						0	0
Act Effct Green (s)		18.0	18.0	20.5	43.0						18.0	18.0
Actuated g/C Ratio		0.26	0.26	0.29	0.61						0.26	0.26
v/c Ratio		0.33	0.63	0.96	0.49						186.00	0.38
Control Delay		22.3	6.8	49.7	8.5						85022.3	11.7
Queue Delay		0.0	0.0	0.0	0.0						0.0	0.0
Total Delay		22.3	6.8	49.7	8.5						85022.3	11.7
LOS		C	A	D	A						F	B
Approach Delay		12.7			26.8						41842.4	
Approach LOS		B			C						F	

Intersection Summary			
Area Type:	Other		
Cycle Length: 70			
Actuated Cycle Length: 70			
Offset: 47.5 (68%), Referenced to phase 4:EBT and 8:WBT, Start of Green			
Natural Cycle: 75			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 186.00			
Intersection Signal Delay: 5286.8		Intersection LOS: F	
Intersection Capacity Utilization 76.8%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 11: 210 SB Ramps & W 5th Street

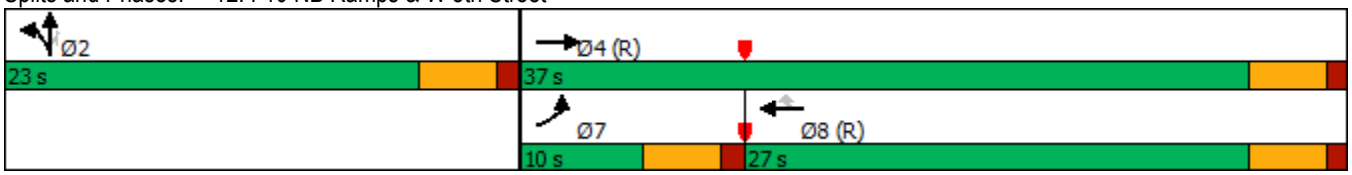


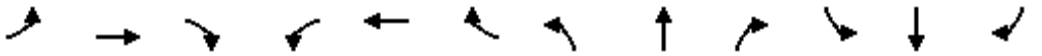
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	61	389	0	0	1375	365	399	2	291	0	0	0
Future Volume (vph)	61	389	0	0	1375	365	399	2	291	0	0	0
Ideal Flow (vphpl)	1700	1800	1900	1900	1800	1800	1700	1800	1800	1900	1900	1900
Storage Length (ft)	90		0	0		360	0		0	0		0
Storage Lanes	1		0	0		1	1		2	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.91	1.00	0.95	0.95	0.88	1.00	1.00	1.00
Frt						0.850			0.850			
Flt Protected	0.950						0.950	0.953				
Satd. Flow (prot)	1615	3420	0	0	4914	1530	1534	1630	2693	0	0	0
Flt Permitted	0.950						0.950	0.953				
Satd. Flow (perm)	1615	3420	0	0	4914	1530	1534	1630	2693	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						397			316			
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		477			2099			595			477	
Travel Time (s)		10.8			47.7			13.5			10.8	
Peak Hour Factor	0.92	0.92	0.95	0.95	0.92	0.92	0.92	0.92	0.92	0.95	0.95	0.95
Adj. Flow (vph)	66	423	0	0	1495	397	434	2	316	0	0	0
Shared Lane Traffic (%)							50%					
Lane Group Flow (vph)	66	423	0	0	1495	397	217	219	316	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.15	1.07	1.00	1.00	1.07	1.07	1.15	1.07	1.07	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2			2	1	1	2	1			
Detector Template	Left	Thru			Thru	Right	Left	Thru	Right			
Leading Detector (ft)	20	100			100	20	20	100	20			
Trailing Detector (ft)	0	0			0	0	0	0	0			
Detector 1 Position(ft)	0	0			0	0	0	0	0			
Detector 1 Size(ft)	20	6			6	20	20	6	20			
Detector 1 Type	Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex			
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0			0.0	0.0	0.0	0.0	0.0			
Detector 1 Queue (s)	0.0	0.0			0.0	0.0	0.0	0.0	0.0			
Detector 1 Delay (s)	0.0	0.0			0.0	0.0	0.0	0.0	0.0			
Detector 2 Position(ft)		94			94			94				
Detector 2 Size(ft)		6			6			6				
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				
Turn Type	Prot	NA			NA	Perm	Split	NA	Perm			
Protected Phases	7	4			8		2	2				
Permitted Phases						8			2			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4			8	8	2	2	2			
Switch Phase												
Minimum Initial (s)	5.0	5.0			5.0	5.0	5.0	5.0	5.0			
Minimum Split (s)	9.5	22.5			22.5	22.5	22.5	22.5	22.5			
Total Split (s)	10.0	37.0			27.0	27.0	23.0	23.0	23.0			
Total Split (%)	16.7%	61.7%			45.0%	45.0%	38.3%	38.3%	38.3%			
Maximum Green (s)	5.5	32.5			22.5	22.5	18.5	18.5	18.5			
Yellow Time (s)	3.5	3.5			3.5	3.5	3.5	3.5	3.5			
All-Red Time (s)	1.0	1.0			1.0	1.0	1.0	1.0	1.0			
Lost Time Adjust (s)	0.0	0.0			0.0	0.0	0.0	0.0	0.0			
Total Lost Time (s)	4.5	4.5			4.5	4.5	4.5	4.5	4.5			
Lead/Lag	Lead				Lag	Lag						
Lead-Lag Optimize?	Yes				Yes	Yes						
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	3.0	3.0			
Recall Mode	None	C-Max			C-Max	C-Max	Max	Max	Max			
Walk Time (s)		7.0			7.0	7.0	7.0	7.0	7.0			
Flash Dont Walk (s)		11.0			11.0	11.0	11.0	11.0	11.0			
Pedestrian Calls (#/hr)		0			0	0	0	0	0			
Act Effct Green (s)	5.5	32.5			26.5	26.5	18.5	18.5	18.5			
Actuated g/C Ratio	0.09	0.54			0.44	0.44	0.31	0.31	0.31			
v/c Ratio	0.45	0.23			0.69	0.44	0.46	0.44	0.30			
Control Delay	35.9	7.6			16.7	3.5	20.6	19.9	3.1			
Queue Delay	0.0	0.0			0.0	0.0	0.0	0.0	0.0			
Total Delay	35.9	7.6			16.7	3.5	20.6	19.9	3.1			
LOS	D	A			B	A	C	B	A			
Approach Delay		11.4			14.0			13.1				
Approach LOS		B			B			B				

Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 60			
Offset: 33 (55%), Referenced to phase 4:EBT and 8:WBT, Start of Green			
Natural Cycle: 60			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.69			
Intersection Signal Delay: 13.4		Intersection LOS: B	
Intersection Capacity Utilization 76.8%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 12: I-10 NB Ramps & W 5th Street



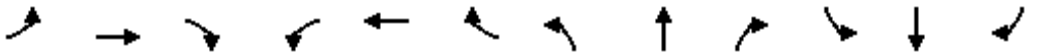


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	46	208	22	57	349	341	17	6	24	288	243	309
Future Volume (vph)	46	208	22	57	349	341	17	6	24	288	243	309
Ideal Flow (vphpl)	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1900
Storage Length (ft)	260		0	0		0	230		0	100		0
Storage Lanes	1		1	1		1	1		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95
Frt			0.850			0.850			0.850		0.916	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1615	3420	1530	1615	1800	1530	1615	1800	1530	1615	3133	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1615	3420	1530	1615	1800	1530	1615	1800	1530	1615	3133	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			218			359			218		325	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		2072			709			529			237	
Travel Time (s)		47.1			16.1			12.0			5.4	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	48	219	23	60	367	359	18	6	25	303	256	325
Shared Lane Traffic (%)												
Lane Group Flow (vph)	48	219	23	60	367	359	18	6	25	303	581	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		36			36			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.15	1.07	1.07	1.15	1.07	1.07	1.15	1.07	1.07	1.15	1.07	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100	20	20	100	20	20	100	20	20	100	
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0	
Detector 1 Size(ft)	20	6	20	20	6	20	20	6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	9.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5	
Total Split (s)	9.5	23.0	23.0	9.5	23.0	23.0	9.5	23.5	23.5	19.0	33.0	
Total Split (%)	12.7%	30.7%	30.7%	12.7%	30.7%	30.7%	12.7%	31.3%	31.3%	25.3%	44.0%	
Maximum Green (s)	5.0	18.5	18.5	5.0	18.5	18.5	5.0	19.0	19.0	14.5	28.5	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		11.0	11.0		11.0	
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	
Act Effct Green (s)	5.0	16.0	16.0	5.0	17.9	17.9	5.2	21.6	21.6	16.3	40.5	
Actuated g/C Ratio	0.07	0.21	0.21	0.07	0.24	0.24	0.07	0.29	0.29	0.22	0.54	
v/c Ratio	0.45	0.30	0.05	0.56	0.86	0.56	0.16	0.01	0.04	0.87	0.32	
Control Delay	47.6	25.4	0.2	55.8	48.0	6.8	36.6	21.2	0.1	56.1	5.7	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	47.6	25.4	0.2	55.8	48.0	6.8	36.6	21.2	0.1	56.1	5.7	
LOS	D	C	A	E	D	A	D	C	A	E	A	
Approach Delay		27.1			29.8			16.1			23.0	
Approach LOS		C			C			B			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 75			
Actuated Cycle Length: 75			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 80			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.87			
Intersection Signal Delay: 26.1		Intersection LOS: C	
Intersection Capacity Utilization 59.3%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 13: 210 SB Ramps & San Bernardino Avenue

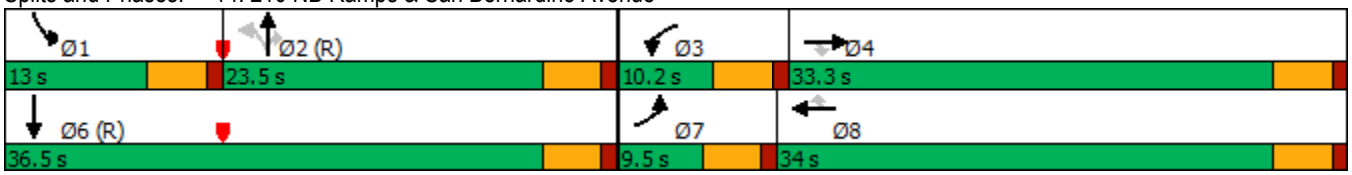


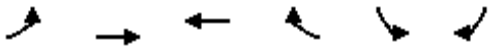
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	109	294	127	32	595	306	51	313	21	149	9	132
Future Volume (vph)	109	294	127	32	595	306	51	313	21	149	9	132
Ideal Flow (vphpl)	1600	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1900
Storage Length (ft)	300		0	0		0	150		70	0		0
Storage Lanes	2		1	1		1	1		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	1.00	1.00
Frt			0.850			0.850			0.850		0.859	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	2949	1800	1530	1615	1800	1530	1615	3420	1530	1615	1546	0
Flt Permitted	0.950			0.950			0.663			0.950		
Satd. Flow (perm)	2949	1800	1530	1615	1800	1530	1127	3420	1530	1615	1546	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			143			319			143		138	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		709			2232			344			268	
Travel Time (s)		16.1			50.7			7.8			6.1	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	114	306	132	33	620	319	53	326	22	155	9	138
Shared Lane Traffic (%)												
Lane Group Flow (vph)	114	306	132	33	620	319	53	326	22	155	147	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.24	1.07	1.07	1.15	1.07	1.07	1.15	1.07	1.07	1.15	1.07	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100	20	20	100	20	20	100	20	20	100	
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0	
Detector 1 Size(ft)	20	6	20	20	6	20	20	6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8			2		1	6	
Permitted Phases			4			8	2		2			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4	4	3	8	8	2	2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	9.5	22.5	22.5	9.5	22.5	22.5	22.5	22.5	22.5	9.5	22.5	
Total Split (s)	9.5	33.3	33.3	10.2	34.0	34.0	23.5	23.5	23.5	13.0	36.5	
Total Split (%)	11.9%	41.6%	41.6%	12.8%	42.5%	42.5%	29.4%	29.4%	29.4%	16.3%	45.6%	
Maximum Green (s)	5.0	28.8	28.8	5.7	29.5	29.5	19.0	19.0	19.0	8.5	32.0	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lag	Lag	Lag	Lead		
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None	None	None	None	None	C-Max	C-Max	C-Max	None	C-Max	
Walk Time (s)		7.0	7.0		7.0	7.0	7.0	7.0	7.0		7.0	
Flash Dont Walk (s)		11.0	11.0		11.0	11.0	11.0	11.0	11.0		11.0	
Pedestrian Calls (#/hr)		0	0		0	0	0	0	0		0	
Act Effct Green (s)	5.0	32.6	32.6	5.7	29.1	29.1	20.9	20.9	20.9	8.9	34.3	
Actuated g/C Ratio	0.06	0.41	0.41	0.07	0.36	0.36	0.26	0.26	0.26	0.11	0.43	
v/c Ratio	0.62	0.42	0.19	0.29	0.95	0.42	0.18	0.36	0.04	0.87	0.20	
Control Delay	52.4	19.6	3.6	42.1	51.0	4.1	26.5	26.4	0.1	79.0	4.2	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	52.4	19.6	3.6	42.1	51.0	4.1	26.5	26.4	0.1	79.0	4.2	
LOS	D	B	A	D	D	A	C	C	A	E	A	
Approach Delay		22.6			35.3			25.0			42.6	
Approach LOS		C			D			C			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 80			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.95			
Intersection Signal Delay: 31.3		Intersection LOS: C	
Intersection Capacity Utilization 70.6%		ICU Level of Service C	
Analysis Period (min) 15			

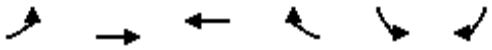
Splits and Phases: 14: 210 NB Ramps & San Bernardino Avenue





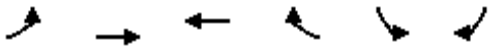
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	27	121	0	0	0
Future Volume (vph)	0	27	121	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	0	1900	1900	0	1900	1900
Flt Permitted						
Satd. Flow (perm)	0	1900	1900	0	1900	1900
Link Speed (mph)		30	30		30	
Link Distance (ft)		1636	441		315	
Travel Time (s)		37.2	10.0		7.2	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	28	127	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	28	127	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 9.7%		ICU Level of Service A	
Analysis Period (min) 15			



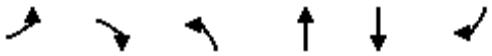
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	27	121	0	0	0
Future Volume (vph)	0	27	121	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	0	1900	1900	0	1900	0
Flt Permitted						
Satd. Flow (perm)	0	1900	1900	0	1900	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		441	580		365	
Travel Time (s)		10.0	13.2		8.3	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	28	127	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	28	127	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 9.7%		ICU Level of Service A	
Analysis Period (min) 15			



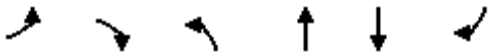
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	27	121	0	0	0
Future Volume (vph)	0	27	121	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	0	1900	1900	0	1900	1900
Flt Permitted						
Satd. Flow (perm)	0	1900	1900	0	1900	1900
Link Speed (mph)		30	30		30	
Link Distance (ft)		580	300		152	
Travel Time (s)		13.2	6.8		3.5	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	28	127	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	28	127	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 9.7%		ICU Level of Service A	
Analysis Period (min) 15			



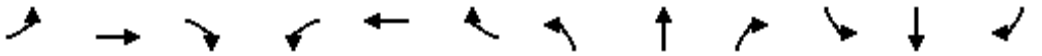
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	433	693	0
Future Volume (vph)	0	0	0	433	693	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	0.95	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	0	1900	0	3610	1900	0
Flt Permitted						
Satd. Flow (perm)	0	1900	0	3610	1900	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	368			290	460	
Travel Time (s)	8.4			6.6	10.5	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	0	0	456	729	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	456	729	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 39.8%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	433	693	0
Future Volume (vph)	0	0	0	433	693	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	0	1900	0	1900	1900	0
Flt Permitted						
Satd. Flow (perm)	0	1900	0	1900	1900	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	317			310	449	
Travel Time (s)	7.2			7.0	10.2	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	0	0	456	729	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	456	729	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 39.8%		ICU Level of Service A	
Analysis Period (min) 15			

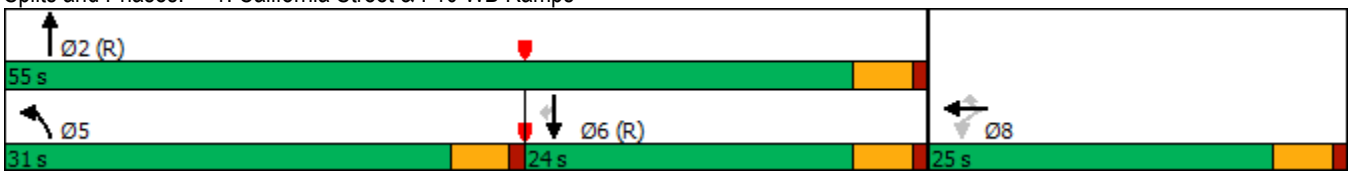


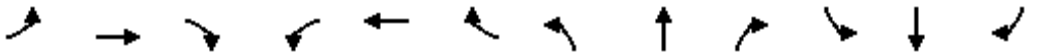
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	343	9	375	454	689	0	0	179	353
Future Volume (vph)	0	0	0	343	9	375	454	689	0	0	179	353
Ideal Flow (vphpl)	1900	1900	1900	1700	1800	1800	1700	1800	1900	1900	1800	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.91	1.00
Frt						0.850						0.850
Flt Protected					0.954		0.950					
Satd. Flow (prot)	0	0	0	0	1717	1530	1615	3420	0	0	4914	1615
Flt Permitted					0.954		0.950					
Satd. Flow (perm)	0	0	0	0	1717	1530	1615	3420	0	0	4914	1615
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						263						353
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1502			1273			312			1245	
Travel Time (s)		34.1			28.9			7.1			28.3	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Growth Factor	100%	100%	100%	93%	93%	93%	93%	93%	100%	100%	93%	93%
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	0	0	0	343	9	375	454	689	0	0	179	353
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	352	375	454	689	0	0	179	353
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.15	1.07	1.07	1.15	1.07	1.00	1.00	1.07	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors				1	2	1	1	2			2	1
Detector Template				Left	Thru	Right	Left	Thru			Thru	Right
Leading Detector (ft)				20	100	20	20	100			100	20
Trailing Detector (ft)				0	0	0	0	0			0	0
Detector 1 Position(ft)				0	0	0	0	0			0	0
Detector 1 Size(ft)				20	6	20	20	6			6	20
Detector 1 Type				Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)				0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 1 Queue (s)				0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 1 Delay (s)				0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 2 Position(ft)					94			94			94	
Detector 2 Size(ft)					6			6			6	
Detector 2 Type					Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)					0.0			0.0			0.0	
Turn Type				Perm	NA	Perm	Prot	NA			NA	Perm
Protected Phases					8		5	2			6	
Permitted Phases				8		8						6
Detector Phase				8	8	8	5	2			6	6

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)				5.0	5.0	5.0	5.0	5.0			5.0	5.0
Minimum Split (s)				22.5	22.5	22.5	9.5	22.5			22.5	22.5
Total Split (s)				25.0	25.0	25.0	31.0	55.0			24.0	24.0
Total Split (%)				31.3%	31.3%	31.3%	38.8%	68.8%			30.0%	30.0%
Maximum Green (s)				20.5	20.5	20.5	26.5	50.5			19.5	19.5
Yellow Time (s)				3.5	3.5	3.5	3.5	3.5			3.5	3.5
All-Red Time (s)				1.0	1.0	1.0	1.0	1.0			1.0	1.0
Lost Time Adjust (s)					0.0	0.0	0.0	0.0			0.0	0.0
Total Lost Time (s)					4.5	4.5	4.5	4.5			4.5	4.5
Lead/Lag							Lead				Lag	Lag
Lead-Lag Optimize?							Yes				Yes	Yes
Vehicle Extension (s)				3.0	3.0	3.0	3.0	3.0			3.0	3.0
Recall Mode				None	None	None	None	C-Max			C-Max	C-Max
Walk Time (s)				7.0	7.0	7.0		7.0			7.0	7.0
Flash Dont Walk (s)				11.0	11.0	11.0		11.0			11.0	11.0
Pedestrian Calls (#/hr)				0	0	0		0			0	0
Act Effct Green (s)					19.3	19.3	25.0	51.7			22.2	22.2
Actuated g/C Ratio					0.24	0.24	0.31	0.65			0.28	0.28
v/c Ratio					0.85	0.66	0.90	0.31			0.13	0.50
Control Delay					49.4	14.6	49.2	7.0			23.3	5.9
Queue Delay					0.0	0.0	22.6	0.6			0.0	0.0
Total Delay					49.4	14.6	71.8	7.5			23.3	5.9
LOS					D	B	E	A			C	A
Approach Delay					31.5			33.1			11.7	
Approach LOS					C			C			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 80			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 80			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.90			
Intersection Signal Delay: 27.8		Intersection LOS: C	
Intersection Capacity Utilization 95.6%		ICU Level of Service F	
Analysis Period (min) 15			

Splits and Phases: 1: California Street & I-10 WB Ramps



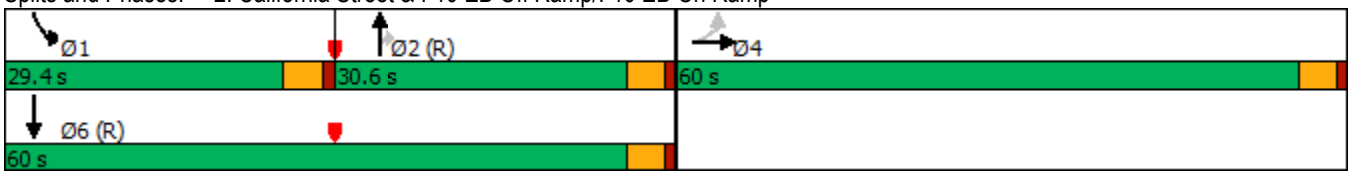


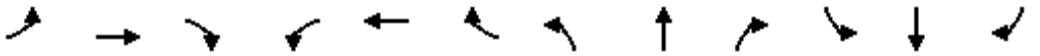
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	338	3	361	0	0	0	0	822	436	259	505	0
Future Volume (vph)	338	3	361	0	0	0	0	822	436	259	505	0
Ideal Flow (vphpl)	1700	1800	1800	1900	1900	1900	1900	1800	1800	1700	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	1.00	1.00	0.95	1.00
Frt		0.931							0.850			
Flt Protected		0.976								0.950		
Satd. Flow (prot)	0	1636	0	0	0	0	0	4914	1530	1615	3610	0
Flt Permitted		0.976								0.950		
Satd. Flow (perm)	0	1636	0	0	0	0	0	4914	1530	1615	3610	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		59							436			
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1514			1294			812			312	
Travel Time (s)		34.4			29.4			18.5			7.1	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Growth Factor	96%	96%	96%	100%	100%	100%	100%	96%	96%	96%	96%	100%
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	338	3	361	0	0	0	0	822	436	259	505	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	702	0	0	0	0	0	822	436	259	505	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.15	1.07	1.07	1.00	1.00	1.00	1.00	1.07	1.07	1.15	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2						2	1	1	2	
Detector Template	Left	Thru						Thru	Right	Left	Thru	
Leading Detector (ft)	20	100						100	20	20	100	
Trailing Detector (ft)	0	0						0	0	0	0	
Detector 1 Position(ft)	0	0						0	0	0	0	
Detector 1 Size(ft)	20	6						6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex						Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0						0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0						0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0						0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94						94			94	
Detector 2 Size(ft)		6						6			6	
Detector 2 Type		Cl+Ex						Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0						0.0			0.0	
Turn Type	Perm	NA						NA	Perm	Prot	NA	
Protected Phases		4						2		1	6	
Permitted Phases	4								2			
Detector Phase	4	4						2	2	1	6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	5.0	5.0						5.0	5.0	5.0	5.0	
Minimum Split (s)	22.5	22.5						22.5	22.5	9.5	22.5	
Total Split (s)	60.0	60.0						30.6	30.6	29.4	60.0	
Total Split (%)	50.0%	50.0%						25.5%	25.5%	24.5%	50.0%	
Maximum Green (s)	55.5	55.5						26.1	26.1	24.9	55.5	
Yellow Time (s)	3.5	3.5						3.5	3.5	3.5	3.5	
All-Red Time (s)	1.0	1.0						1.0	1.0	1.0	1.0	
Lost Time Adjust (s)		0.0						0.0	0.0	0.0	0.0	
Total Lost Time (s)		4.5						4.5	4.5	4.5	4.5	
Lead/Lag								Lag	Lag	Lead		
Lead-Lag Optimize?								Yes	Yes	Yes		
Vehicle Extension (s)	3.0	3.0						3.0	3.0	3.0	3.0	
Recall Mode	None	None						C-Max	C-Max	None	C-Max	
Walk Time (s)	7.0	7.0						7.0	7.0		7.0	
Flash Dont Walk (s)	11.0	11.0						11.0	11.0		11.0	
Pedestrian Calls (#/hr)	0	0						0	0		0	
Act Effct Green (s)		52.6						31.2	31.2	22.6	58.4	
Actuated g/C Ratio		0.44						0.26	0.26	0.19	0.49	
v/c Ratio		0.94						0.64	0.61	0.85	0.29	
Control Delay		49.9						43.5	7.7	71.8	19.6	
Queue Delay		0.0						0.0	0.0	9.6	1.0	
Total Delay		49.9						43.5	7.7	81.4	20.6	
LOS		D						D	A	F	C	
Approach Delay		49.9						31.1			41.2	
Approach LOS		D						C			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.94			
Intersection Signal Delay: 38.8		Intersection LOS: D	
Intersection Capacity Utilization 95.6%		ICU Level of Service F	
Analysis Period (min) 15			

Splits and Phases: 2: California Street & I-10 EB Off Ramp/I-10 EB On Ramp



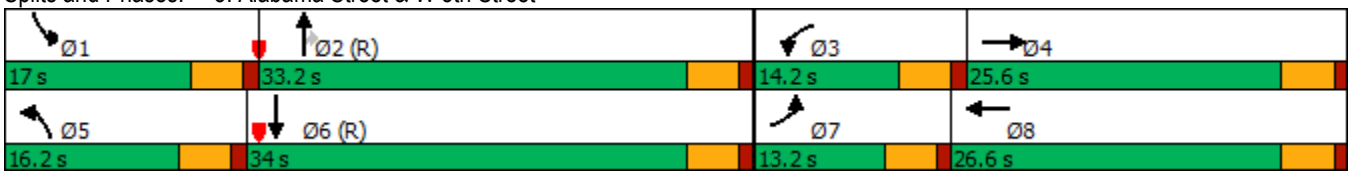


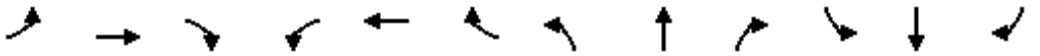
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	57	680	50	173	241	133	99	551	487	201	290	25
Future Volume (vph)	57	680	50	173	241	133	99	551	487	201	290	25
Ideal Flow (vphpl)	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1900
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	1.00	1.00	0.95	0.95
Frt		0.990			0.947				0.850		0.988	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1615	3386	0	1615	3239	0	1615	3420	1530	1615	3379	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1615	3386	0	1615	3239	0	1615	3420	1530	1615	3379	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		8			110				285		11	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1908			2750			621			1649	
Travel Time (s)		43.4			62.5			14.1			37.5	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Growth Factor	91%	91%	91%	91%	91%	91%	91%	91%	91%	91%	91%	91%
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	57	680	50	173	241	133	99	551	487	201	290	25
Shared Lane Traffic (%)												
Lane Group Flow (vph)	57	730	0	173	374	0	99	551	487	201	315	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.15	1.07	1.07	1.15	1.07	1.07	1.15	1.07	1.07	1.15	1.07	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Size(ft)	20	6		20	6		20	6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA		Prot	NA		Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases									2			
Detector Phase	7	4		3	8		5	2	2	1	6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	9.5	22.5		9.5	22.5		9.5	22.5	22.5	9.5	22.5	
Total Split (s)	13.2	25.6		14.2	26.6		16.2	33.2	33.2	17.0	34.0	
Total Split (%)	14.7%	28.4%		15.8%	29.6%		18.0%	36.9%	36.9%	18.9%	37.8%	
Maximum Green (s)	8.7	21.1		9.7	22.1		11.7	28.7	28.7	12.5	29.5	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.5		4.5	4.5	4.5	4.5	4.5	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None		None	C-Max	C-Max	None	C-Max	
Walk Time (s)		7.0			7.0			7.0	7.0		7.0	
Flash Dont Walk (s)		11.0			11.0			11.0	11.0		11.0	
Pedestrian Calls (#/hr)		0			0			0	0		0	
Act Effct Green (s)	7.7	21.0		9.7	25.0		9.9	28.7	28.7	12.5	33.5	
Actuated g/C Ratio	0.09	0.23		0.11	0.28		0.11	0.32	0.32	0.14	0.37	
v/c Ratio	0.41	0.92		0.99	0.38		0.56	0.51	0.71	0.89	0.25	
Control Delay	47.8	51.3		109.9	20.5		49.8	26.9	17.5	78.3	20.8	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	47.8	51.3		109.9	20.5		49.8	26.9	17.5	78.3	20.8	
LOS	D	D		F	C		D	C	B	E	C	
Approach Delay		51.0			48.8			24.8			43.2	
Approach LOS		D			D			C			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 90			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 75			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.99			
Intersection Signal Delay: 39.3		Intersection LOS: D	
Intersection Capacity Utilization 71.1%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 3: Alabama Street & W 5th Street



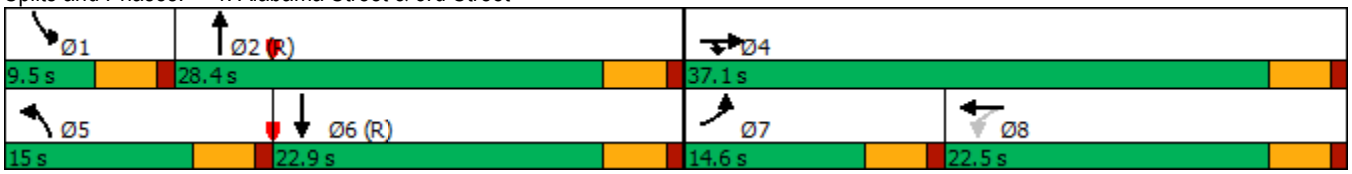


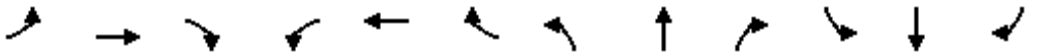
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	394	28	347	9	3	16	212	779	3	6	451	76
Future Volume (vph)	394	28	347	9	3	16	212	779	3	6	451	76
Ideal Flow (vphpl)	1600	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1900
Storage Length (ft)	150		0	0		0	150		0	0		0
Storage Lanes	1		1	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.97	1.00	1.00	0.95	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Frt			0.850		0.914			0.999			0.978	
Flt Protected	0.950				0.984		0.950			0.950		
Satd. Flow (prot)	2949	1800	1530	0	3076	0	1615	3417	0	1615	3345	0
Flt Permitted	0.950				0.955		0.950			0.950		
Satd. Flow (perm)	2949	1800	1530	0	2985	0	1615	3417	0	1615	3345	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			340		16			1			24	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1074			950			355			621	
Travel Time (s)		24.4			21.6			8.1			14.1	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor	95%	95%	95%	95%	95%	95%	95%	95%	95%	95%	95%	95%
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	394	28	347	9	3	16	212	779	3	6	451	76
Shared Lane Traffic (%)												
Lane Group Flow (vph)	394	28	347	0	28	0	212	782	0	6	527	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.24	1.07	1.07	1.15	1.07	1.07	1.15	1.07	1.07	1.15	1.07	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2		1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100	20	20	100		20	100		20	100	
Trailing Detector (ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Position(ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Size(ft)	20	6	20	20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Prot	Perm	NA		Prot	NA		Prot	NA	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	7	4	4		8		5	2		1	6	
Permitted Phases				8								
Detector Phase	7	4	4	8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	9.5	22.5	22.5	22.5	22.5		9.5	22.5		9.5	22.5	
Total Split (s)	14.6	37.1	37.1	22.5	22.5		15.0	28.4		9.5	22.9	
Total Split (%)	19.5%	49.5%	49.5%	30.0%	30.0%		20.0%	37.9%		12.7%	30.5%	
Maximum Green (s)	10.1	32.6	32.6	18.0	18.0		10.5	23.9		5.0	18.4	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.5	4.5		4.5		4.5	4.5		4.5	4.5	
Lead/Lag	Lead			Lag	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes			Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None	None	None	None		None	C-Max		None	C-Max	
Walk Time (s)		7.0	7.0	7.0	7.0			7.0			7.0	
Flash Dont Walk (s)		11.0	11.0	11.0	11.0			11.0			11.0	
Pedestrian Calls (#/hr)		0	0	0	0			0			0	
Act Effct Green (s)	10.1	14.5	14.5		6.0		16.8	49.2		5.9	30.2	
Actuated g/C Ratio	0.13	0.19	0.19		0.08		0.22	0.66		0.08	0.40	
v/c Ratio	0.99	0.08	0.61		0.11		0.59	0.35		0.05	0.39	
Control Delay	78.7	22.4	8.0		21.2		32.5	8.2		32.5	18.2	
Queue Delay	0.0	0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Delay	78.7	22.4	8.0		21.2		32.5	8.2		32.5	18.2	
LOS	E	C	A		C		C	A		C	B	
Approach Delay		44.8			21.2			13.4			18.4	
Approach LOS		D			C			B			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 75			
Actuated Cycle Length: 75			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 80			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.99			
Intersection Signal Delay: 25.0		Intersection LOS: C	
Intersection Capacity Utilization 58.0%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 4: Alabama Street & 3rd Street



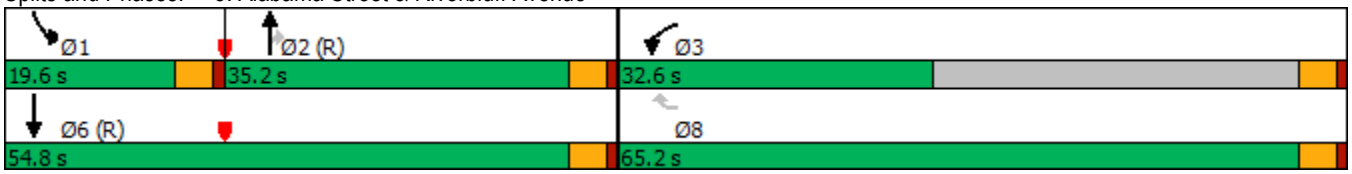


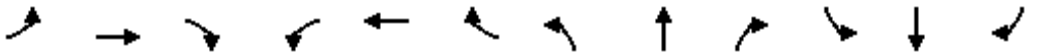
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	34	0	57	0	903	41	38	783	0
Future Volume (vph)	0	0	0	34	0	57	0	903	41	38	783	0
Ideal Flow (vphpl)	1700	1800	1800	1700	1900	1800	1900	1800	1800	1700	1900	1900
Storage Length (ft)	0		0	0		0	0		0	250		0
Storage Lanes	0		0	1		1	0		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt						0.850			0.850			
Flt Protected				0.950						0.950		
Satd. Flow (prot)	0	0	0	1615	0	1530	0	1800	1530	1615	1900	0
Flt Permitted				0.950						0.950		
Satd. Flow (perm)	0	0	0	1615	0	1530	0	1800	1530	1615	1900	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						57			55			
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		416			1617			460			310	
Travel Time (s)		9.5			36.8			10.5			7.0	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor	95%	95%	95%	95%	95%	95%	95%	95%	95%	95%	95%	95%
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	0	0	0	34	0	57	0	903	41	38	783	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	34	0	57	0	903	41	38	783	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.15	1.07	1.07	1.15	1.00	1.07	1.00	1.07	1.07	1.15	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors				1		1		2	1	1	2	
Detector Template				Left		Right		Thru	Right	Left	Thru	
Leading Detector (ft)				20		20		100	20	20	100	
Trailing Detector (ft)				0		0		0	0	0	0	
Detector 1 Position(ft)				0		0		0	0	0	0	
Detector 1 Size(ft)				20		20		6	20	20	6	
Detector 1 Type				Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)				0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Queue (s)				0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Delay (s)				0.0		0.0		0.0	0.0	0.0	0.0	
Detector 2 Position(ft)								94			94	
Detector 2 Size(ft)								6			6	
Detector 2 Type								Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)								0.0			0.0	
Turn Type				Prot		Perm		NA	Perm	Prot	NA	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases				3				2		1	6	
Permitted Phases						8			2			
Detector Phase				3		8		2	2	1	6	
Switch Phase												
Minimum Initial (s)				5.0		5.0		5.0	5.0	5.0	5.0	
Minimum Split (s)				22.5		22.5		22.5	22.5	9.5	22.5	
Total Split (s)				32.6		65.2		35.2	35.2	19.6	54.8	
Total Split (%)				27.2%		54.3%		29.3%	29.3%	16.3%	45.7%	
Maximum Green (s)				28.1		60.7		30.7	30.7	15.1	50.3	
Yellow Time (s)				3.5		3.5		3.5	3.5	3.5	3.5	
All-Red Time (s)				1.0		1.0		1.0	1.0	1.0	1.0	
Lost Time Adjust (s)				0.0		0.0		0.0	0.0	0.0	0.0	
Total Lost Time (s)				4.5		4.5		4.5	4.5	4.5	4.5	
Lead/Lag								Lag	Lag	Lead		
Lead-Lag Optimize?								Yes	Yes	Yes		
Vehicle Extension (s)				3.0		3.0		3.0	3.0	3.0	3.0	
Recall Mode				None		None		C-Max	C-Max	None	C-Max	
Walk Time (s)				7.0		7.0		7.0	7.0		7.0	
Flash Dont Walk (s)				11.0		11.0		11.0	11.0		11.0	
Pedestrian Calls (#/hr)				0		0		0	0		0	
Act Effct Green (s)				8.0		8.0		97.4	97.4	8.3	105.9	
Actuated g/C Ratio				0.07		0.07		0.81	0.81	0.07	0.88	
v/c Ratio				0.31		0.37		0.62	0.03	0.34	0.47	
Control Delay				60.2		20.2		7.4	1.4	60.8	3.0	
Queue Delay				0.0		0.0		0.0	0.0	0.0	0.0	
Total Delay				60.2		20.2		7.4	1.4	60.8	3.0	
LOS				E		C		A	A	E	A	
Approach Delay					35.1			7.2			5.7	
Approach LOS					D			A			A	

Intersection Summary	
Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.62	
Intersection Signal Delay: 7.9	Intersection LOS: A
Intersection Capacity Utilization 59.3%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 5: Alabama Street & Riverbluff Avenue



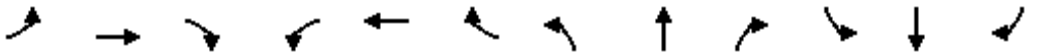


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	155	2	5	11	5	8	2	781	6	5	751	62
Future Volume (vph)	155	2	5	11	5	8	2	781	6	5	751	62
Ideal Flow (vphpl)	1700	1800	1800	1700	1800	1800	1700	1800	1900	1700	1900	1900
Storage Length (ft)	0		0	0		0	200		0	0		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.996			0.955			0.999			0.989	
Flt Protected		0.954			0.978		0.950			0.950		
Satd. Flow (prot)	0	1710	0	0	1681	0	1615	1798	0	1615	1879	0
Flt Permitted		0.718			0.888		0.950			0.950		
Satd. Flow (perm)	0	1287	0	0	1526	0	1615	1798	0	1615	1879	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		1			8						4	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		300			825			1271			290	
Travel Time (s)		6.8			18.8			28.9			6.6	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Growth Factor	94%	94%	94%	94%	94%	94%	94%	94%	94%	94%	94%	94%
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	155	2	5	11	5	8	2	781	6	5	751	62
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	162	0	0	24	0	2	787	0	5	813	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.15	1.07	1.07	1.15	1.07	1.07	1.15	1.07	1.00	1.15	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	22.5	22.5		22.5	22.5		9.5	22.5		9.5	22.5	
Total Split (s)	44.5	44.5		44.5	44.5		31.5	44.0		31.5	44.0	
Total Split (%)	37.1%	37.1%		37.1%	37.1%		26.3%	36.7%		26.3%	36.7%	
Maximum Green (s)	40.0	40.0		40.0	40.0		27.0	39.5		27.0	39.5	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		4.5			4.5		4.5	4.5		4.5	4.5	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	
Walk Time (s)	7.0	7.0		7.0	7.0			7.0			7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0			11.0			11.0	
Pedestrian Calls (#/hr)	0	0		0	0			0			0	
Act Effct Green (s)		20.5			20.5		5.8	88.2		6.0	88.3	
Actuated g/C Ratio		0.17			0.17		0.05	0.74		0.05	0.74	
v/c Ratio		0.74			0.09		0.03	0.60		0.06	0.59	
Control Delay		65.3			29.3		55.0	12.1		56.6	11.0	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		65.3			29.3		55.0	12.1		56.6	11.0	
LOS		E			C		D	B		E	B	
Approach Delay		65.3			29.3			12.2			11.3	
Approach LOS		E			C			B			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 70			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.74			
Intersection Signal Delay: 16.8		Intersection LOS: B	
Intersection Capacity Utilization 64.3%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 6: Alabama Street & Palmetto Avenue

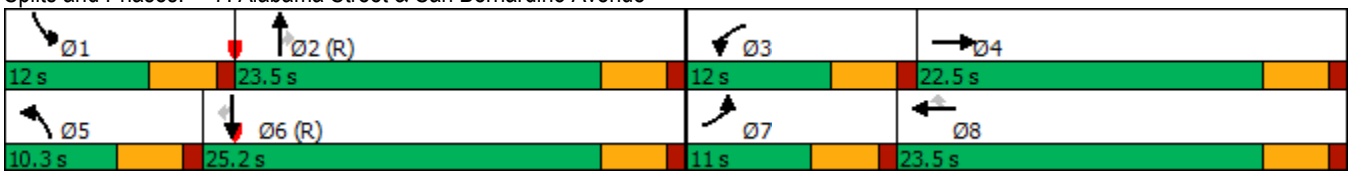


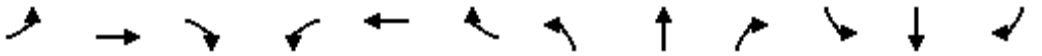
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	121	570	68	124	160	137	39	464	231	140	447	57
Future Volume (vph)	121	570	68	124	160	137	39	464	231	140	447	57
Ideal Flow (vphpl)	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1900
Storage Length (ft)	100		0	0		0	170		0	260		500
Storage Lanes	1		0	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt		0.984				0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1583	3299	0	1583	3353	1500	1583	3353	1500	1583	3353	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1583	3299	0	1583	3353	1500	1583	3353	1500	1583	3353	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		18				164			231			164
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		5507			2072			2636			1422	
Travel Time (s)		125.2			47.1			59.9			32.3	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Growth Factor	97%	97%	97%	97%	97%	97%	97%	97%	97%	97%	97%	97%
Adj. Flow (vph)	121	570	68	124	160	137	39	464	231	140	447	57
Shared Lane Traffic (%)												
Lane Group Flow (vph)	121	638	0	124	160	137	39	464	231	140	447	57
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.15	1.07	1.07	1.15	1.07	1.07	1.15	1.07	1.07	1.15	1.07	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100		20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0		0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0		0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6		20	6	20	20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases						8			2			6
Detector Phase	7	4		3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	22.5		9.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5	22.5
Total Split (s)	11.0	22.5		12.0	23.5	23.5	10.3	23.5	23.5	12.0	25.2	25.2
Total Split (%)	15.7%	32.1%		17.1%	33.6%	33.6%	14.7%	33.6%	33.6%	17.1%	36.0%	36.0%
Maximum Green (s)	6.5	18.0		7.5	19.0	19.0	5.8	19.0	19.0	7.5	20.7	20.7
Yellow Time (s)	3.5	3.5		3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Walk Time (s)		7.0			7.0	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)		11.0			11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0			0	0		0	0		0	0
Act Effct Green (s)	6.5	16.9		7.4	17.9	17.9	5.8	19.8	19.8	7.8	26.0	26.0
Actuated g/C Ratio	0.09	0.24		0.11	0.26	0.26	0.08	0.28	0.28	0.11	0.37	0.37
v/c Ratio	0.83	0.79		0.74	0.19	0.27	0.30	0.49	0.39	0.80	0.36	0.08
Control Delay	75.1	31.9		58.5	20.5	4.1	36.5	23.3	5.4	64.4	18.7	0.2
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	75.1	31.9		58.5	20.5	4.1	36.5	23.3	5.4	64.4	18.7	0.2
LOS	E	C		E	C	A	D	C	A	E	B	A
Approach Delay		38.7			26.4			18.4			27.0	
Approach LOS		D			C			B			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 70			
Actuated Cycle Length: 70			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 70			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.83			
Intersection Signal Delay: 27.9		Intersection LOS: C	
Intersection Capacity Utilization 62.3%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 7: Alabama Street & San Bernardino Avenue



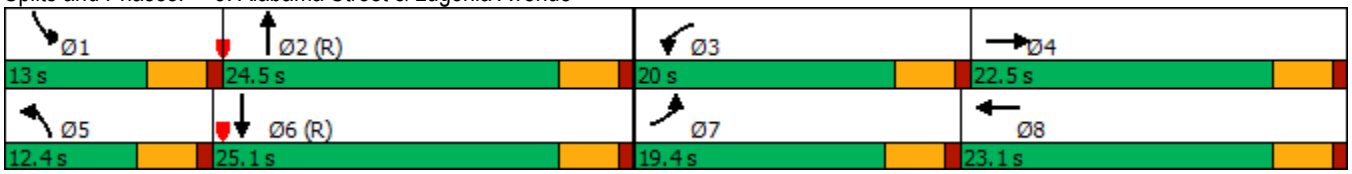


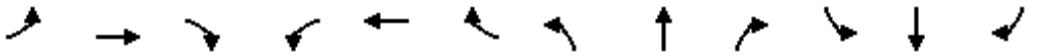
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	223	441	109	261	213	52	67	489	236	128	470	93
Future Volume (vph)	223	441	109	261	213	52	67	489	236	128	470	93
Ideal Flow (vphpl)	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1900
Storage Length (ft)	220		0	0		0	200		0	180		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.91	0.91
Frt		0.970			0.971			0.951			0.975	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1615	3317	0	1615	3321	0	1615	3252	0	1615	4791	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1615	3317	0	1615	3321	0	1615	3252	0	1615	4791	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		35			35			97			50	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		5332			3791			1051			2636	
Travel Time (s)		121.2			86.2			23.9			59.9	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Growth Factor	97%	97%	97%	97%	97%	97%	97%	97%	97%	97%	97%	97%
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	223	441	109	261	213	52	67	489	236	128	470	93
Shared Lane Traffic (%)												
Lane Group Flow (vph)	223	550	0	261	265	0	67	725	0	128	563	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.15	1.07	1.07	1.15	1.07	1.07	1.15	1.07	1.07	1.15	1.07	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	9.5	22.5		9.5	22.5		9.5	22.5		9.5	22.5	
Total Split (s)	19.4	22.5		20.0	23.1		12.4	24.5		13.0	25.1	
Total Split (%)	24.3%	28.1%		25.0%	28.9%		15.5%	30.6%		16.3%	31.4%	
Maximum Green (s)	14.9	18.0		15.5	18.6		7.9	20.0		8.5	20.6	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Dont Walk (s)		11.0			11.0			11.0			11.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	13.9	16.5		15.0	17.6		7.3	21.8		8.8	25.2	
Actuated g/C Ratio	0.17	0.21		0.19	0.22		0.09	0.27		0.11	0.32	
v/c Ratio	0.80	0.77		0.87	0.35		0.46	0.76		0.73	0.36	
Control Delay	53.5	35.9		60.2	23.9		44.6	30.1		59.8	21.6	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	53.5	35.9		60.2	23.9		44.6	30.1		59.8	21.6	
LOS	D	D		E	C		D	C		E	C	
Approach Delay		41.0			41.9			31.3			28.7	
Approach LOS		D			D			C			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 80			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 80			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.87			
Intersection Signal Delay: 35.3		Intersection LOS: D	
Intersection Capacity Utilization 76.0%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 8: Alabama Street & Lugonia Avenue



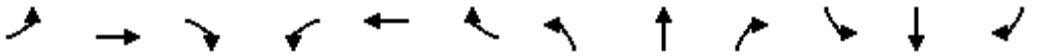


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	176	316	160	354	779	0	0	718	457
Future Volume (vph)	0	0	0	176	316	160	354	779	0	0	718	457
Ideal Flow (vphpl)	1900	1900	1900	1700	1800	1800	1700	1800	1900	1900	1800	1900
Storage Length (ft)	0		0	0		0	150		0	0		0
Storage Lanes	0		0	0		0	1		0	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.95	1.00	0.95	1.00	1.00	0.95	1.00
Frt					0.963							0.850
Flt Protected					0.987		0.950					
Satd. Flow (prot)	0	0	0	0	3251	0	1615	3420	0	0	3420	1615
Flt Permitted					0.987		0.950					
Satd. Flow (perm)	0	0	0	0	3251	0	1615	3420	0	0	3420	1615
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					40							274
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		918			1093			591			1051	
Travel Time (s)		20.9			24.8			13.4			23.9	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Growth Factor	98%	98%	98%	98%	98%	98%	98%	98%	98%	98%	98%	98%
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	0	0	0	176	316	160	354	779	0	0	718	457
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	652	0	354	779	0	0	718	457
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.15	1.07	1.07	1.15	1.07	1.00	1.00	1.07	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors				1	2		1	2			2	1
Detector Template				Left	Thru		Left	Thru			Thru	Right
Leading Detector (ft)				20	100		20	100			100	20
Trailing Detector (ft)				0	0		0	0			0	0
Detector 1 Position(ft)				0	0		0	0			0	0
Detector 1 Size(ft)				20	6		20	6			6	20
Detector 1 Type				Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)				0.0	0.0		0.0	0.0			0.0	0.0
Detector 1 Queue (s)				0.0	0.0		0.0	0.0			0.0	0.0
Detector 1 Delay (s)				0.0	0.0		0.0	0.0			0.0	0.0
Detector 2 Position(ft)					94			94			94	
Detector 2 Size(ft)					6			6			6	
Detector 2 Type					Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)					0.0			0.0			0.0	
Turn Type				Perm	NA		Prot	NA			NA	Perm

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases					8		5	2			6	
Permitted Phases				8								6
Detector Phase				8	8		5	2			6	6
Switch Phase												
Minimum Initial (s)				5.0	5.0		5.0	5.0			5.0	5.0
Minimum Split (s)				22.5	22.5		9.5	22.5			22.5	22.5
Total Split (s)				46.0	46.0		37.0	74.0			37.0	37.0
Total Split (%)				38.3%	38.3%		30.8%	61.7%			30.8%	30.8%
Maximum Green (s)				41.5	41.5		32.5	69.5			32.5	32.5
Yellow Time (s)				3.5	3.5		3.5	3.5			3.5	3.5
All-Red Time (s)				1.0	1.0		1.0	1.0			1.0	1.0
Lost Time Adjust (s)					0.0		0.0	0.0			0.0	0.0
Total Lost Time (s)					4.5		4.5	4.5			4.5	4.5
Lead/Lag							Lead				Lag	Lag
Lead-Lag Optimize?							Yes				Yes	Yes
Vehicle Extension (s)				3.0	3.0		3.0	3.0			3.0	3.0
Recall Mode				None	None		None	C-Max			C-Max	C-Max
Walk Time (s)				7.0	7.0			7.0			7.0	7.0
Flash Dont Walk (s)				11.0	11.0			11.0			11.0	11.0
Pedestrian Calls (#/hr)				0	0			0			0	0
Act Effct Green (s)					29.8		31.1	81.2			45.6	45.6
Actuated g/C Ratio					0.25		0.26	0.68			0.38	0.38
v/c Ratio					0.78		0.85	0.34			0.55	0.58
Control Delay					45.8		66.6	9.9			33.5	16.5
Queue Delay					0.0		0.0	0.0			0.0	0.0
Total Delay					45.8		66.6	9.9			33.5	16.5
LOS					D		E	A			C	B
Approach Delay					45.8			27.6			26.9	
Approach LOS					D			C			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 65			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.85			
Intersection Signal Delay: 31.3		Intersection LOS: C	
Intersection Capacity Utilization 80.1%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 9: Alabama Street & I-10 WB Ramps

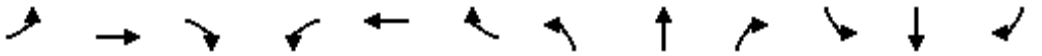


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	348	64	488	0	0	0	0	777	252	223	679	0
Future Volume (vph)	348	64	488	0	0	0	0	777	252	223	679	0
Ideal Flow (vphpl)	1700	1800	1800	1900	1900	1900	1900	1800	1800	1700	1900	1900
Storage Length (ft)	0		0	0		0	0		0	150		0
Storage Lanes	0		0	0		0	0		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.95	0.95	0.95	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt		0.919							0.850			
Flt Protected		0.981								0.950		
Satd. Flow (prot)	0	3083	0	0	0	0	0	3420	1530	1615	3610	0
Flt Permitted		0.981								0.950		
Satd. Flow (perm)	0	3083	0	0	0	0	0	3420	1530	1615	3610	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		247							252			
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		898			623			1369			591	
Travel Time (s)		20.4			14.2			31.1			13.4	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor	95%	95%	95%	95%	95%	95%	95%	95%	95%	95%	95%	95%
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	348	64	488	0	0	0	0	777	252	223	679	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	900	0	0	0	0	0	777	252	223	679	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.15	1.07	1.07	1.00	1.00	1.00	1.00	1.07	1.07	1.15	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2						2	1	1	2	
Detector Template	Left	Thru						Thru	Right	Left	Thru	
Leading Detector (ft)	20	100						100	20	20	100	
Trailing Detector (ft)	0	0						0	0	0	0	
Detector 1 Position(ft)	0	0						0	0	0	0	
Detector 1 Size(ft)	20	6						6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex						Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0						0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0						0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0						0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94						94			94	
Detector 2 Size(ft)		6						6			6	
Detector 2 Type		Cl+Ex						Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0						0.0			0.0	
Turn Type	Perm	NA						NA	Perm	Prot	NA	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases		4						2		1	6	
Permitted Phases	4								2			
Detector Phase	4	4						2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0						5.0	5.0	5.0	5.0	
Minimum Split (s)	22.5	22.5						22.5	22.5	9.5	22.5	
Total Split (s)	44.0	44.0						45.0	45.0	31.0	76.0	
Total Split (%)	36.7%	36.7%						37.5%	37.5%	25.8%	63.3%	
Maximum Green (s)	39.5	39.5						40.5	40.5	26.5	71.5	
Yellow Time (s)	3.5	3.5						3.5	3.5	3.5	3.5	
All-Red Time (s)	1.0	1.0						1.0	1.0	1.0	1.0	
Lost Time Adjust (s)		0.0						0.0	0.0	0.0	0.0	
Total Lost Time (s)		4.5						4.5	4.5	4.5	4.5	
Lead/Lag								Lag	Lag	Lead		
Lead-Lag Optimize?								Yes	Yes	Yes		
Vehicle Extension (s)	3.0	3.0						3.0	3.0	3.0	3.0	
Recall Mode	None	None						C-Max	C-Max	None	C-Max	
Walk Time (s)	7.0	7.0						7.0	7.0		7.0	
Flash Dont Walk (s)	11.0	11.0						11.0	11.0		11.0	
Pedestrian Calls (#/hr)	0	0						0	0		0	
Act Effct Green (s)		34.4						51.0	51.0	21.1	76.6	
Actuated g/C Ratio		0.29						0.42	0.42	0.18	0.64	
v/c Ratio		0.85						0.54	0.32	0.79	0.29	
Control Delay		37.0						29.4	4.5	83.7	7.7	
Queue Delay		0.0						0.0	0.0	0.0	0.0	
Total Delay		37.0						29.4	4.5	83.7	7.7	
LOS		D						C	A	F	A	
Approach Delay		37.0						23.3			26.5	
Approach LOS		D						C			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 60			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.85			
Intersection Signal Delay: 28.7		Intersection LOS: C	
Intersection Capacity Utilization 80.1%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 10: Alabama Street & I-10 EB Ramps

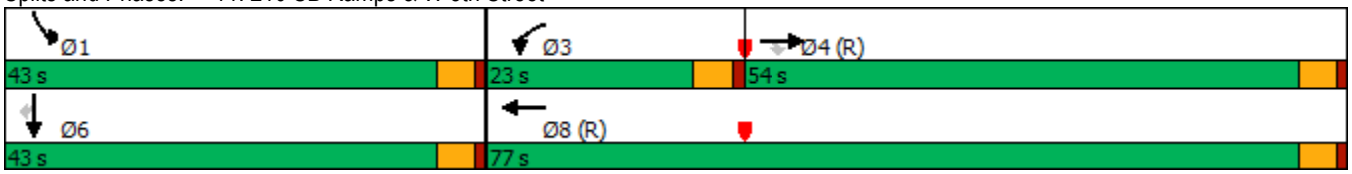


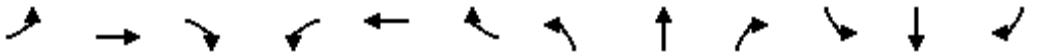
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	947	538	274	545	0	0	0	0	308	6	124
Future Volume (vph)	0	947	538	274	545	0	0	0	0	308	6	124
Ideal Flow (vphpl)	1900	1800	1800	1700	1800	1900	1900	1900	1900	1700	1800	1900
Storage Length (ft)	0		220	0		0	0		0	0		0
Storage Lanes	0		1	2		0	0		0	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850									0.850
Flt Protected				0.950							0.953	
Satd. Flow (prot)	0	3420	1530	3133	3420	0	0	0	0	0	1715	1615
Flt Permitted				0.950							0.953	
Satd. Flow (perm)	0	3420	1530	3133	3420	0	0	0	0	0	1715	1615
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			538									124
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		2750			477			659			386	
Travel Time (s)		62.5			10.8			15.0			8.8	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	90%	90%	90%	90%	90%	90%	90%	90%	90%	90%	90%	90%
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	0	947	538	274	545	0	0	0	0	308	6	124
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	947	538	274	545	0	0	0	0	0	314	124
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.07	1.07	1.15	1.07	1.00	1.00	1.00	1.00	1.15	1.07	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		2	1	1	2					1	2	1
Detector Template		Thru	Right	Left	Thru					Left	Thru	Right
Leading Detector (ft)		100	20	20	100					20	100	20
Trailing Detector (ft)		0	0	0	0					0	0	0
Detector 1 Position(ft)		0	0	0	0					0	0	0
Detector 1 Size(ft)		6	20	20	6					20	6	20
Detector 1 Type		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex					Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)		0.0	0.0	0.0	0.0					0.0	0.0	0.0
Detector 1 Queue (s)		0.0	0.0	0.0	0.0					0.0	0.0	0.0
Detector 1 Delay (s)		0.0	0.0	0.0	0.0					0.0	0.0	0.0
Detector 2 Position(ft)		94			94						94	
Detector 2 Size(ft)		6			6						6	
Detector 2 Type		Cl+Ex			Cl+Ex						Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0						0.0	
Turn Type		NA	Perm	Prot	NA					Prot	NA	Perm

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases		4		3	8					1	6	
Permitted Phases			4									6
Detector Phase		4	4	3	8					1	6	6
Switch Phase												
Minimum Initial (s)		5.0	5.0	5.0	5.0					5.0	5.0	5.0
Minimum Split (s)		22.5	22.5	9.5	22.5					9.5	22.5	22.5
Total Split (s)		54.0	54.0	23.0	77.0					43.0	43.0	43.0
Total Split (%)		45.0%	45.0%	19.2%	64.2%					35.8%	35.8%	35.8%
Maximum Green (s)		49.5	49.5	18.5	72.5					38.5	38.5	38.5
Yellow Time (s)		3.5	3.5	3.5	3.5					3.5	3.5	3.5
All-Red Time (s)		1.0	1.0	1.0	1.0					1.0	1.0	1.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0						0.0	0.0
Total Lost Time (s)		4.5	4.5	4.5	4.5						4.5	4.5
Lead/Lag		Lag	Lag	Lead								
Lead-Lag Optimize?		Yes	Yes	Yes								
Vehicle Extension (s)		3.0	3.0	3.0	3.0					3.0	3.0	3.0
Recall Mode		C-Max	C-Max	None	C-Max					None	Max	Max
Walk Time (s)		7.0	7.0		7.0						7.0	7.0
Flash Dont Walk (s)		11.0	11.0		11.0						11.0	11.0
Pedestrian Calls (#/hr)		0	0		0						0	0
Act Effct Green (s)		52.6	52.6	15.4	72.5						0.0	38.5
Actuated g/C Ratio		0.44	0.44	0.13	0.60						0.00	0.32
v/c Ratio		0.63	0.55	0.68	0.26						no cap	0.21
Control Delay		29.0	4.3	70.9	10.4							5.9
Queue Delay		0.0	0.0	0.0	0.0							0.0
Total Delay		29.0	4.3	70.9	10.4						Error	5.9
LOS		C	A	E	B						F	A
Approach Delay		20.1			30.6						Err	
Approach LOS		C			C						F	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 66 (55%), Referenced to phase 4:EBT and 8:WBT, Start of Green			
Natural Cycle: 60			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: Err			
Intersection Signal Delay: Err		Intersection LOS: F	
Intersection Capacity Utilization 67.3%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 11: 210 SB Ramps & W 5th Street



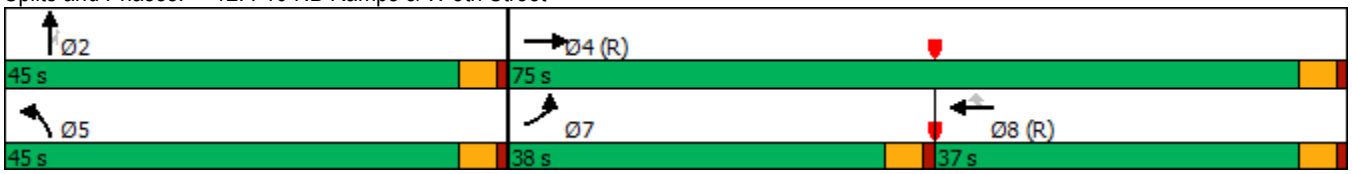


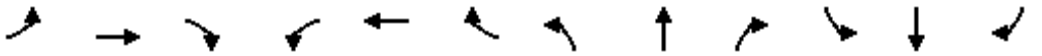
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	212	1026	0	0	600	249	218	0	478	0	0	0
Future Volume (vph)	212	1026	0	0	600	249	218	0	478	0	0	0
Ideal Flow (vphpl)	1700	1800	1900	1900	1800	1800	1600	1800	1800	1900	1900	1900
Storage Length (ft)	0		0	0		220	0		0	0		0
Storage Lanes	1		0	0		1	1		2	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.91	1.00	0.95	0.95	0.88	1.00	1.00	1.00
Frt						0.850			0.850			
Flt Protected	0.950						0.950	0.950				
Satd. Flow (prot)	1615	3420	0	0	4914	1530	1444	1624	2693	0	0	0
Flt Permitted	0.950						0.950	0.950				
Satd. Flow (perm)	1615	3420	0	0	4914	1530	1444	1624	2693	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						249			190			
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		477			2099			595			477	
Travel Time (s)		10.8			47.7			13.5			10.8	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Growth Factor	94%	94%	94%	94%	94%	94%	94%	94%	94%	94%	94%	94%
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	212	1026	0	0	600	249	218	0	478	0	0	0
Shared Lane Traffic (%)							50%					
Lane Group Flow (vph)	212	1026	0	0	600	249	109	109	478	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.15	1.07	1.00	1.00	1.07	1.07	1.24	1.07	1.07	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2			2	1	1	2	1			
Detector Template	Left	Thru			Thru	Right	Left	Thru	Right			
Leading Detector (ft)	20	100			100	20	20	100	20			
Trailing Detector (ft)	0	0			0	0	0	0	0			
Detector 1 Position(ft)	0	0			0	0	0	0	0			
Detector 1 Size(ft)	20	6			6	20	20	6	20			
Detector 1 Type	Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex			
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0			0.0	0.0	0.0	0.0	0.0			
Detector 1 Queue (s)	0.0	0.0			0.0	0.0	0.0	0.0	0.0			
Detector 1 Delay (s)	0.0	0.0			0.0	0.0	0.0	0.0	0.0			
Detector 2 Position(ft)		94			94			94				
Detector 2 Size(ft)		6			6			6				
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				
Turn Type	Prot	NA			NA	Perm	Prot	NA	Perm			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	7	4			8		5	2				
Permitted Phases						8			2			
Detector Phase	7	4			8	8	5	2	2			
Switch Phase												
Minimum Initial (s)	5.0	5.0			5.0	5.0	5.0	5.0	5.0			
Minimum Split (s)	9.5	22.5			22.5	22.5	9.5	22.5	22.5			
Total Split (s)	38.0	75.0			37.0	37.0	45.0	45.0	45.0			
Total Split (%)	31.7%	62.5%			30.8%	30.8%	37.5%	37.5%	37.5%			
Maximum Green (s)	33.5	70.5			32.5	32.5	40.5	40.5	40.5			
Yellow Time (s)	3.5	3.5			3.5	3.5	3.5	3.5	3.5			
All-Red Time (s)	1.0	1.0			1.0	1.0	1.0	1.0	1.0			
Lost Time Adjust (s)	0.0	0.0			0.0	0.0	0.0	0.0	0.0			
Total Lost Time (s)	4.5	4.5			4.5	4.5	4.5	4.5	4.5			
Lead/Lag	Lead				Lag	Lag						
Lead-Lag Optimize?	Yes				Yes	Yes						
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	3.0	3.0			
Recall Mode	None	C-Max			C-Max	C-Max	None	Max	Max			
Walk Time (s)		7.0			7.0	7.0		7.0	7.0			
Flash Dont Walk (s)		11.0			11.0	11.0		11.0	11.0			
Pedestrian Calls (#/hr)		0			0	0		0	0			
Act Effct Green (s)	21.1	70.5			44.9	44.9	40.5	40.5	40.5			
Actuated g/C Ratio	0.18	0.59			0.37	0.37	0.34	0.34	0.34			
v/c Ratio	0.75	0.51			0.33	0.34	0.22	0.20	0.46			
Control Delay	86.8	6.9			28.3	5.0	30.1	29.5	19.8			
Queue Delay	0.0	0.1			0.0	0.0	0.0	0.0	0.0			
Total Delay	86.8	7.0			28.3	5.0	30.1	29.5	19.8			
LOS	F	A			C	A	C	C	B			
Approach Delay		20.7			21.5			22.9				
Approach LOS		C			C			C				

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 83 (69%), Referenced to phase 4:EBT and 8:WBT, Start of Green			
Natural Cycle: 60			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.75			
Intersection Signal Delay: 21.5		Intersection LOS: C	
Intersection Capacity Utilization 67.3%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 12: I-10 NB Ramps & W 5th Street



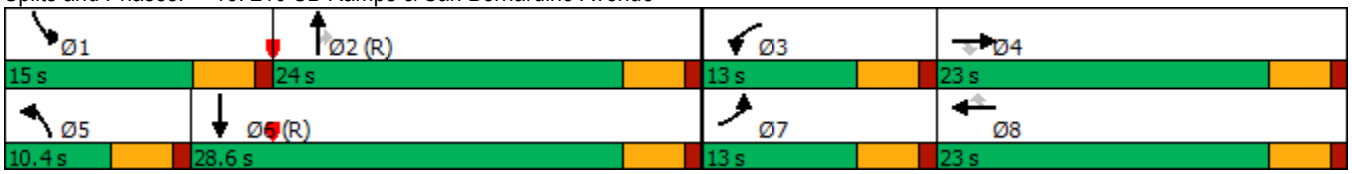


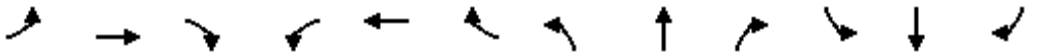
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	138	735	85	127	325	133	29	48	268	162	321	117
Future Volume (vph)	138	735	85	127	325	133	29	48	268	162	321	117
Ideal Flow (vphpl)	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1900
Storage Length (ft)	260		0	0		0	230		0	100		0
Storage Lanes	1		1	1		1	1		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95
Frt			0.850			0.850			0.850		0.960	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1615	3420	1530	1615	1800	1530	1615	1800	1530	1615	3283	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1615	3420	1530	1615	1800	1530	1615	1800	1530	1615	3283	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			218			218			268		73	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		2072			709			529			237	
Travel Time (s)		47.1			16.1			12.0			5.4	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Growth Factor	94%	94%	94%	94%	94%	94%	94%	94%	94%	94%	94%	94%
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	138	735	85	127	325	133	29	48	268	162	321	117
Shared Lane Traffic (%)												
Lane Group Flow (vph)	138	735	85	127	325	133	29	48	268	162	438	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		36			36			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.15	1.07	1.07	1.15	1.07	1.07	1.15	1.07	1.07	1.15	1.07	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100	20	20	100	20	20	100	20	20	100	
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0	
Detector 1 Size(ft)	20	6	20	20	6	20	20	6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	9.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5	
Total Split (s)	13.0	23.0	23.0	13.0	23.0	23.0	10.4	24.0	24.0	15.0	28.6	
Total Split (%)	17.3%	30.7%	30.7%	17.3%	30.7%	30.7%	13.9%	32.0%	32.0%	20.0%	38.1%	
Maximum Green (s)	8.5	18.5	18.5	8.5	18.5	18.5	5.9	19.5	19.5	10.5	24.1	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		11.0	11.0		11.0	
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	
Act Effct Green (s)	8.4	18.3	18.3	8.2	18.2	18.2	5.8	20.4	20.4	10.0	30.8	
Actuated g/C Ratio	0.11	0.24	0.24	0.11	0.24	0.24	0.08	0.27	0.27	0.13	0.41	
v/c Ratio	0.77	0.88	0.16	0.72	0.75	0.25	0.23	0.10	0.44	0.75	0.32	
Control Delay	61.0	41.2	0.6	56.2	38.4	1.7	37.3	21.9	5.8	54.1	14.4	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	61.0	41.2	0.6	56.2	38.4	1.7	37.3	21.9	5.8	54.1	14.4	
LOS	E	D	A	E	D	A	D	C	A	D	B	
Approach Delay		40.5			33.9			10.6			25.1	
Approach LOS		D			C			B			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 75			
Actuated Cycle Length: 75			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 75			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.88			
Intersection Signal Delay: 31.1		Intersection LOS: C	
Intersection Capacity Utilization 59.2%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 13: 210 SB Ramps & San Bernardino Avenue



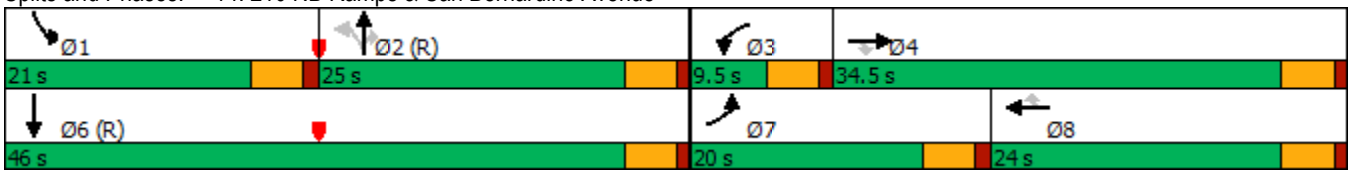


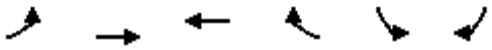
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	439	513	164	35	341	174	80	471	54	255	23	169
Future Volume (vph)	439	513	164	35	341	174	80	471	54	255	23	169
Ideal Flow (vphpl)	1600	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1900
Storage Length (ft)	300		0	0		0	0		70	0		0
Storage Lanes	2		1	1		1	0		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00
Frt			0.850			0.850			0.850		0.868	
Flt Protected	0.950			0.950				0.993		0.950		
Satd. Flow (prot)	2949	1800	1530	1615	1800	1530	0	3396	1530	1615	1562	0
Flt Permitted	0.950			0.950				0.865		0.950		
Satd. Flow (perm)	2949	1800	1530	1615	1800	1530	0	2958	1530	1615	1562	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			164			182			182		169	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		709			2232			344			268	
Travel Time (s)		16.1			50.7			7.8			6.1	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Growth Factor	96%	96%	96%	96%	96%	96%	96%	96%	96%	96%	96%	96%
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	439	513	164	35	341	174	80	471	54	255	23	169
Shared Lane Traffic (%)												
Lane Group Flow (vph)	439	513	164	35	341	174	0	551	54	255	192	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.24	1.07	1.07	1.15	1.07	1.07	1.15	1.07	1.07	1.15	1.07	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100	20	20	100	20	20	100	20	20	100	
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0	
Detector 1 Size(ft)	20	6	20	20	6	20	20	6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA	Perm	Prot	NA	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	7	4		3	8			2		1	6	
Permitted Phases			4			8	2		2			
Detector Phase	7	4	4	3	8	8	2	2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	9.5	22.5	22.5	9.5	22.5	22.5	22.5	22.5	22.5	9.5	22.5	
Total Split (s)	20.0	34.5	34.5	9.5	24.0	24.0	25.0	25.0	25.0	21.0	46.0	
Total Split (%)	22.2%	38.3%	38.3%	10.6%	26.7%	26.7%	27.8%	27.8%	27.8%	23.3%	51.1%	
Maximum Green (s)	15.5	30.0	30.0	5.0	19.5	19.5	20.5	20.5	20.5	16.5	41.5	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5		4.5	4.5	4.5	4.5	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lag	Lag	Lag	Lead		
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None	None	None	None	None	C-Max	C-Max	C-Max	None	C-Max	
Walk Time (s)		7.0	7.0		7.0	7.0	7.0	7.0	7.0		7.0	
Flash Dont Walk (s)		11.0	11.0		11.0	11.0	11.0	11.0	11.0		11.0	
Pedestrian Calls (#/hr)		0	0		0	0	0	0	0		0	
Act Effct Green (s)	15.3	33.0	33.0	5.0	18.9	18.9		21.8	21.8	16.0	42.3	
Actuated g/C Ratio	0.17	0.37	0.37	0.06	0.21	0.21		0.24	0.24	0.18	0.47	
v/c Ratio	0.88	0.78	0.25	0.39	0.90	0.37		0.77	0.11	0.89	0.23	
Control Delay	56.5	36.2	4.7	54.2	63.0	6.9		41.0	0.4	68.4	4.0	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	
Total Delay	56.5	36.2	4.7	54.2	63.0	6.9		41.0	0.4	68.4	4.0	
LOS	E	D	A	D	E	A		D	A	E	A	
Approach Delay		39.6			44.7			37.4			40.8	
Approach LOS		D			D			D			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 90			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.90			
Intersection Signal Delay: 40.3		Intersection LOS: D	
Intersection Capacity Utilization 78.2%		ICU Level of Service D	
Analysis Period (min) 15			

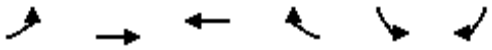
Splits and Phases: 14: 210 NB Ramps & San Bernardino Avenue





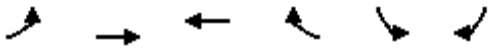
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	161	69	0	0	0
Future Volume (vph)	0	161	69	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	0	1863	1863	0	1863	1863
Flt Permitted						
Satd. Flow (perm)	0	1863	1863	0	1863	1863
Link Speed (mph)		30	30		30	
Link Distance (ft)		1636	441		315	
Travel Time (s)		37.2	10.0		7.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	175	75	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	175	75	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 11.8%		ICU Level of Service A	
Analysis Period (min) 15			



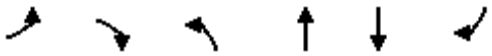
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	161	69	0	0	0
Future Volume (vph)	0	161	69	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	0	1863	1863	0	1863	0
Flt Permitted						
Satd. Flow (perm)	0	1863	1863	0	1863	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		441	580		365	
Travel Time (s)		10.0	13.2		8.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	175	75	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	175	75	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 11.8%		ICU Level of Service A	
Analysis Period (min) 15			



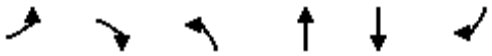
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	161	69	0	0	0
Future Volume (vph)	0	161	69	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	0	1863	1863	0	1863	1863
Flt Permitted						
Satd. Flow (perm)	0	1863	1863	0	1863	1863
Link Speed (mph)		30	30		30	
Link Distance (ft)		580	300		152	
Travel Time (s)		13.2	6.8		3.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	175	75	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	175	75	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 11.8%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	901	451	0
Future Volume (vph)	0	0	0	901	451	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	0.95	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	0	0	0	3539	1863	0
Flt Permitted						
Satd. Flow (perm)	0	0	0	3539	1863	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	368			290	460	
Travel Time (s)	8.4			6.6	10.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	979	490	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	979	490	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

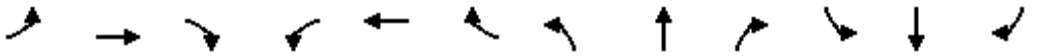
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 28.2%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	781	777	0
Future Volume (vph)	0	0	0	781	777	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	0	0	0	1863	1863	0
Flt Permitted						
Satd. Flow (perm)	0	0	0	1863	1863	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	317			310	6335	
Travel Time (s)	7.2			7.0	144.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	849	845	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	849	845	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 44.4%		ICU Level of Service A	
Analysis Period (min) 15			

EXISTING PLUS PROJECT CONDITIONS

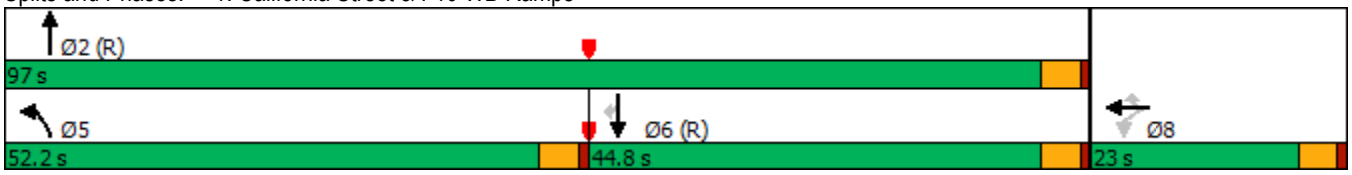


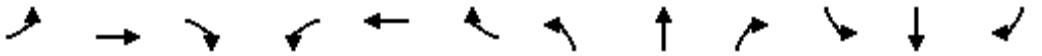
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	224	2	127	576	543	0	0	536	683
Future Volume (vph)	0	0	0	224	2	127	576	543	0	0	536	683
Ideal Flow (vphpl)	1900	1900	1900	1700	1800	1800	1700	1800	1900	1900	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.91	1.00
Frt						0.850						0.850
Flt Protected					0.953		0.950					
Satd. Flow (prot)	0	0	0	0	1715	1530	1615	3420	0	0	4914	1530
Flt Permitted					0.953		0.950					
Satd. Flow (perm)	0	0	0	0	1715	1530	1615	3420	0	0	4914	1530
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						137						401
Link Speed (mph)		30			30			45			45	
Link Distance (ft)		1502			1273			312			1245	
Travel Time (s)		34.1			28.9			4.7			18.9	
Peak Hour Factor	0.95	0.95	0.95	0.93	0.93	0.93	0.93	0.93	0.95	0.95	0.93	0.93
Adj. Flow (vph)	0	0	0	241	2	137	619	584	0	0	576	734
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	243	137	619	584	0	0	576	734
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.15	1.07	1.07	1.15	1.07	1.00	1.00	1.07	1.07
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors				1	2	1	1	2			2	1
Detector Template				Left	Thru	Right	Left	Thru			Thru	Right
Leading Detector (ft)				20	100	20	20	100			100	20
Trailing Detector (ft)				0	0	0	0	0			0	0
Detector 1 Position(ft)				0	0	0	0	0			0	0
Detector 1 Size(ft)				20	6	20	20	6			6	20
Detector 1 Type				Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)				0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 1 Queue (s)				0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 1 Delay (s)				0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 2 Position(ft)					94			94			94	
Detector 2 Size(ft)					6			6			6	
Detector 2 Type					Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)					0.0			0.0			0.0	
Turn Type				Perm	NA	Perm	Prot	NA			NA	Perm
Protected Phases					8		5	2			6	
Permitted Phases				8		8						6
Detector Phase				8	8	8	5	2			6	6
Switch Phase												
Minimum Initial (s)				5.0	5.0	5.0	5.0	5.0			5.0	5.0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)				22.5	22.5	22.5	9.5	22.5			22.5	22.5
Total Split (s)				23.0	23.0	23.0	52.2	97.0			44.8	44.8
Total Split (%)				19.2%	19.2%	19.2%	43.5%	80.8%			37.3%	37.3%
Maximum Green (s)				18.5	18.5	18.5	47.7	92.5			40.3	40.3
Yellow Time (s)				3.5	3.5	3.5	3.5	3.5			3.5	3.5
All-Red Time (s)				1.0	1.0	1.0	1.0	1.0			1.0	1.0
Lost Time Adjust (s)					0.0	0.0	0.0	0.0			0.0	0.0
Total Lost Time (s)					4.5	4.5	4.5	4.5			4.5	4.5
Lead/Lag							Lead				Lag	Lag
Lead-Lag Optimize?							Yes				Yes	Yes
Vehicle Extension (s)				3.0	3.0	3.0	3.0	3.0			3.0	3.0
Recall Mode				None	None	None	None	C-Max			C-Max	C-Max
Walk Time (s)				7.0	7.0	7.0		7.0			7.0	7.0
Flash Dont Walk (s)				11.0	11.0	11.0		11.0			11.0	11.0
Pedestrian Calls (#/hr)				0	0	0		0			0	0
Act Effct Green (s)					18.4	18.4	47.1	92.6			41.0	41.0
Actuated g/C Ratio					0.15	0.15	0.39	0.77			0.34	0.34
v/c Ratio					0.93	0.39	0.98	0.22			0.34	0.93
Control Delay					90.3	10.9	67.1	4.0			30.3	37.3
Queue Delay					0.0	0.0	43.3	0.9			0.0	0.0
Total Delay					90.3	10.9	110.4	4.9			30.3	37.3
LOS					F	B	F	A			C	D
Approach Delay					61.7			59.2			34.3	
Approach LOS					E			E			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 100			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.98			
Intersection Signal Delay: 48.2		Intersection LOS: D	
Intersection Capacity Utilization 146.2%		ICU Level of Service H	
Analysis Period (min) 15			

Splits and Phases: 1: California Street & I-10 WB Ramps



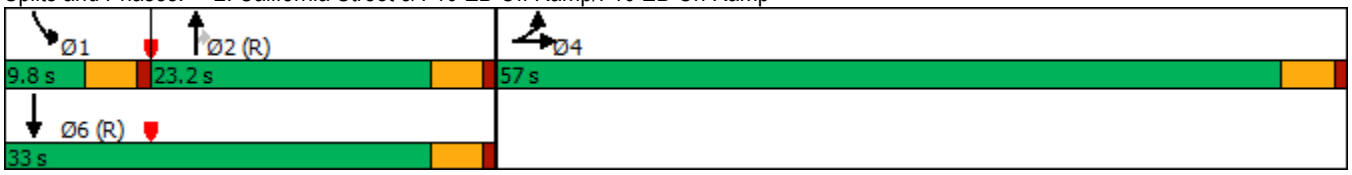


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	534	3	478	0	0	0	0	652	288	74	486	0
Future Volume (vph)	534	3	478	0	0	0	0	652	288	74	486	0
Ideal Flow (vphpl)	1900	1800	1900	1900	1900	1900	1900	1800	1800	1700	1800	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	1.00	1.00	0.95	1.00
Frt		0.936							0.850			
Flt Protected		0.974								0.950		
Satd. Flow (prot)	0	1641	0	0	0	0	0	4914	1530	1615	3420	0
Flt Permitted		0.974								0.950		
Satd. Flow (perm)	0	1641	0	0	0	0	0	4914	1530	1615	3420	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		86							310			
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1514			1294			812			312	
Travel Time (s)		34.4			29.4			18.5			7.1	
Peak Hour Factor	0.93	0.93	0.93	0.95	0.95	0.95	0.95	0.93	0.93	0.93	0.93	0.95
Adj. Flow (vph)	574	3	514	0	0	0	0	701	310	80	523	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1091	0	0	0	0	0	701	310	80	523	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.07	1.00	1.00	1.00	1.00	1.00	1.07	1.07	1.15	1.07	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2						2	1	1	2	
Detector Template	Left	Thru						Thru	Right	Left	Thru	
Leading Detector (ft)	20	100						100	20	20	100	
Trailing Detector (ft)	0	0						0	0	0	0	
Detector 1 Position(ft)	0	0						0	0	0	0	
Detector 1 Size(ft)	20	6						6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex						Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0						0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0						0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0						0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94						94			94	
Detector 2 Size(ft)		6						6			6	
Detector 2 Type		Cl+Ex						Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0						0.0			0.0	
Turn Type	Split	NA						NA	Perm	Prot	NA	
Protected Phases	4	4						2		1	6	
Permitted Phases									2			
Detector Phase	4	4						2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0						5.0	5.0	5.0	5.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	22.5	22.5						22.5	22.5	9.5	22.5	
Total Split (s)	57.0	57.0						23.2	23.2	9.8	33.0	
Total Split (%)	63.3%	63.3%						25.8%	25.8%	10.9%	36.7%	
Maximum Green (s)	52.5	52.5						18.7	18.7	5.3	28.5	
Yellow Time (s)	3.5	3.5						3.5	3.5	3.5	3.5	
All-Red Time (s)	1.0	1.0						1.0	1.0	1.0	1.0	
Lost Time Adjust (s)		0.0						0.0	0.0	0.0	0.0	
Total Lost Time (s)		4.5						4.5	4.5	4.5	4.5	
Lead/Lag								Lag	Lag	Lead		
Lead-Lag Optimize?								Yes	Yes	Yes		
Vehicle Extension (s)	3.0	3.0						3.0	3.0	3.0	3.0	
Recall Mode	None	None						C-Max	C-Max	None	C-Max	
Walk Time (s)	7.0	7.0						7.0	7.0		7.0	
Flash Dont Walk (s)	11.0	11.0						11.0	11.0		11.0	
Pedestrian Calls (#/hr)	0	0						0	0		0	
Act Effct Green (s)		52.5						18.7	18.7	5.3	28.5	
Actuated g/C Ratio		0.58						0.21	0.21	0.06	0.32	
v/c Ratio		1.10						0.69	0.55	0.84	0.48	
Control Delay		79.3						37.0	7.9	101.6	26.6	
Queue Delay		0.0						0.0	0.0	0.0	0.9	
Total Delay		79.3						37.0	7.9	101.6	27.6	
LOS		E						D	A	F	C	
Approach Delay		79.3						28.1			37.4	
Approach LOS		E						C			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 90			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 100			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.10			
Intersection Signal Delay: 50.8		Intersection LOS: D	
Intersection Capacity Utilization 142.2%		ICU Level of Service H	
Analysis Period (min) 15			

Splits and Phases: 2: California Street & I-10 EB Off Ramp/I-10 EB On Ramp

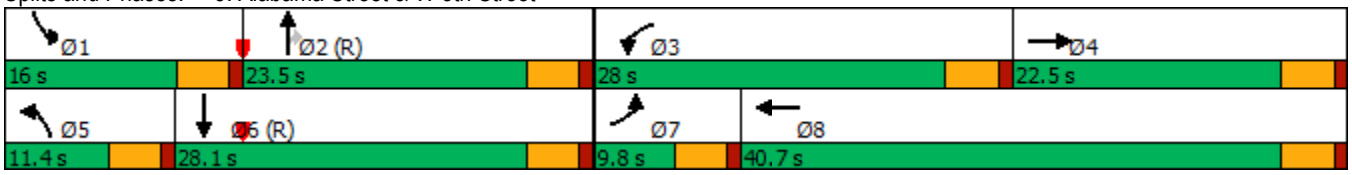


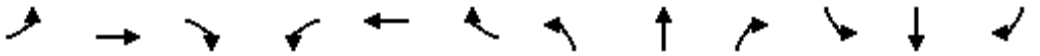
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	14	220	44	385	645	111	48	169	208	169	439	48
Future Volume (vph)	14	220	44	385	645	111	48	169	208	169	439	48
Ideal Flow (vphpl)	1700	1800	1900	1700	1800	1900	1700	1800	1800	1700	1800	1900
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	1.00	1.00	0.95	0.95
Frt		0.975			0.978				0.850		0.985	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1615	3334	0	1615	3345	0	1615	3420	1530	1615	3369	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1615	3334	0	1615	3345	0	1615	3420	1530	1615	3369	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		23			26				236		12	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1908			2750			621			1649	
Travel Time (s)		43.4			62.5			14.1			37.5	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	14	227	45	397	665	114	49	174	214	174	453	49
Shared Lane Traffic (%)												
Lane Group Flow (vph)	14	272	0	397	779	0	49	174	214	174	502	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.15	1.07	1.00	1.15	1.07	1.00	1.15	1.07	1.07	1.15	1.07	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Size(ft)	20	6		20	6		20	6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA		Prot	NA		Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases									2			
Detector Phase	7	4		3	8		5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	9.5	22.5		9.5	22.5		9.5	22.5	22.5	9.5	22.5	
Total Split (s)	9.8	22.5		28.0	40.7		11.4	23.5	23.5	16.0	28.1	
Total Split (%)	10.9%	25.0%		31.1%	45.2%		12.7%	26.1%	26.1%	17.8%	31.2%	
Maximum Green (s)	5.3	18.0		23.5	36.2		6.9	19.0	19.0	11.5	23.6	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.5		4.5	4.5	4.5	4.5	4.5	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None		None	C-Max	C-Max	None	C-Max	
Walk Time (s)		7.0			7.0			7.0	7.0		7.0	
Flash Dont Walk (s)		11.0			11.0			11.0	11.0		11.0	
Pedestrian Calls (#/hr)		0			0			0	0		0	
Act Effct Green (s)	5.3	12.3		23.3	38.1		7.6	22.4	22.4	14.0	33.1	
Actuated g/C Ratio	0.06	0.14		0.26	0.42		0.08	0.25	0.25	0.16	0.37	
v/c Ratio	0.15	0.58		0.95	0.54		0.36	0.20	0.38	0.69	0.40	
Control Delay	43.9	37.7		68.0	20.5		46.2	28.9	5.5	51.9	24.0	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	43.9	37.7		68.0	20.5		46.2	28.9	5.5	51.9	24.0	
LOS	D	D		E	C		D	C	A	D	C	
Approach Delay		38.0			36.6			19.4			31.2	
Approach LOS		D			D			B			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 90			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.95			
Intersection Signal Delay: 32.4		Intersection LOS: C	
Intersection Capacity Utilization 65.3%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 3: Alabama Street & W 5th Street



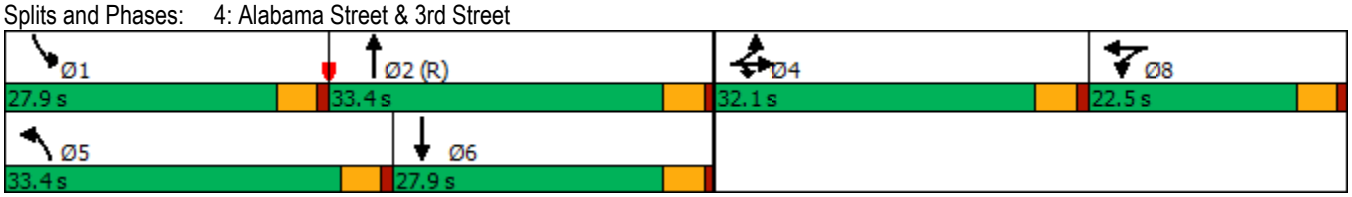


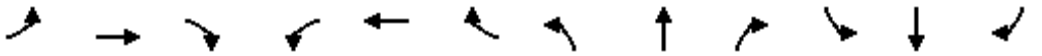
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	106	2	223	3	3	27	175	284	4	15	659	217
Future Volume (vph)	106	2	223	3	3	27	175	284	4	15	659	217
Ideal Flow (vphpl)	1600	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1900
Storage Length (ft)	0		0	0		0	150		0	0		0
Storage Lanes	2		1	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.97	1.00	1.00	0.95	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Frt			0.850		0.875			0.998			0.963	
Flt Protected	0.950				0.996		0.950			0.950		
Satd. Flow (prot)	2949	1800	1530	0	2981	0	1615	3413	0	1615	3293	0
Flt Permitted	0.950				0.996		0.950			0.950		
Satd. Flow (perm)	2949	1800	1530	0	2981	0	1615	3413	0	1615	3293	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			248		30			1			35	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1074			950			678			621	
Travel Time (s)		24.4			21.6			15.4			14.1	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	118	2	248	3	3	30	194	316	4	17	732	241
Shared Lane Traffic (%)												
Lane Group Flow (vph)	118	2	248	0	36	0	194	320	0	17	973	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.24	1.07	1.07	1.15	1.07	1.07	1.15	1.07	1.07	1.15	1.07	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2		1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100	20	20	100		20	100		20	100	
Trailing Detector (ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Position(ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Size(ft)	20	6	20	20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Split	NA	Prot	Split	NA		Prot	NA		Prot	NA	
Protected Phases	4	4	4	8	8		5	2		1	6	
Permitted Phases												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4	4	8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5		22.5	22.5		22.5	22.5	
Total Split (s)	32.1	32.1	32.1	22.5	22.5		33.4	33.4		27.9	27.9	
Total Split (%)	27.7%	27.7%	27.7%	19.4%	19.4%		28.8%	28.8%		24.1%	24.1%	
Maximum Green (s)	27.6	27.6	27.6	18.0	18.0		28.9	28.9		23.4	23.4	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.5	4.5		4.5		4.5	4.5		4.5	4.5	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None	None	None	None		Max	C-Max		Max	Max	
Walk Time (s)	7.0	7.0	7.0	7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	11.0	11.0	11.0	11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0	0	0	0		0	0		0	0	
Act Effct Green (s)	10.7	10.7	10.7		6.1		61.7	28.9		56.2	23.4	
Actuated g/C Ratio	0.09	0.09	0.09		0.05		0.53	0.25		0.48	0.20	
v/c Ratio	0.44	0.01	0.68		0.20		0.23	0.38		0.02	1.41	
Control Delay	53.9	45.0	15.8		24.3		17.2	37.5		19.5	225.8	
Queue Delay	0.0	0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Delay	53.9	45.0	15.8		24.3		17.2	37.5		19.5	225.8	
LOS	D	D	B		C		B	D		B	F	
Approach Delay		28.2			24.3			29.8			222.3	
Approach LOS		C			C			C			F	

Intersection Summary			
Area Type:	Other		
Cycle Length: 115.9			
Actuated Cycle Length: 115.9			
Offset: 0 (0%), Referenced to phase 2:NBT, Start of Green			
Natural Cycle: 100			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.41			
Intersection Signal Delay: 129.3		Intersection LOS: F	
Intersection Capacity Utilization 58.9%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 4: Alabama Street & 3rd Street





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	0	4	31	0	28	11	407	26	34	835	15
Future Volume (vph)	5	0	4	31	0	28	11	407	26	34	835	15
Ideal Flow (vphpl)	1700	1800	1800	1700	1900	1800	1900	1800	1800	1700	1900	1900
Storage Length (ft)	150		0	200		0	100		0	200		0
Storage Lanes	1		0	1		0	1		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850			0.850				0.850		0.997	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1615	1530	0	1615	1615	0	1805	1800	1530	1615	1894	0
Flt Permitted				0.950			0.245			0.950		
Satd. Flow (perm)	1700	1530	0	1615	1615	0	466	1800	1530	1615	1894	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		256			382				95		1	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		416			1617			460			310	
Travel Time (s)		9.5			36.8			10.5			7.0	
Peak Hour Factor	0.82	0.82	0.82	0.82	0.95	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Adj. Flow (vph)	6	0	5	38	0	34	13	496	32	41	1018	18
Shared Lane Traffic (%)												
Lane Group Flow (vph)	6	5	0	38	34	0	13	496	32	41	1036	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.15	1.07	1.07	1.15	1.00	1.07	1.00	1.07	1.07	1.15	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Size(ft)	20	6		20	6		20	6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Prot	NA		Perm	NA	Perm	Prot	NA	
Protected Phases		4		3	8			2		1	6	
Permitted Phases	4						2		2			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4		3	8		2	2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	22.5	22.5		22.5	22.5		22.5	22.5	22.5	9.5	22.5	
Total Split (s)	22.5	22.5		22.6	45.1		62.7	62.7	62.7	12.2	74.9	
Total Split (%)	18.8%	18.8%		18.8%	37.6%		52.3%	52.3%	52.3%	10.2%	62.4%	
Maximum Green (s)	18.0	18.0		18.1	40.6		58.2	58.2	58.2	7.7	70.4	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.5		4.5	4.5	4.5	4.5	4.5	
Lead/Lag	Lag	Lag		Lead			Lag	Lag	Lag	Lead		
Lead-Lag Optimize?	Yes	Yes		Yes			Yes	Yes	Yes	Yes		
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None		C-Max	C-Max	C-Max	None	C-Max	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0	7.0		7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0	11.0		11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0	0		0	
Act Effct Green (s)	6.3	6.3		8.3	12.7		92.3	92.3	92.3	8.5	104.1	
Actuated g/C Ratio	0.05	0.05		0.07	0.11		0.77	0.77	0.77	0.07	0.87	
v/c Ratio	0.07	0.02		0.34	0.07		0.04	0.36	0.03	0.36	0.63	
Control Delay	55.2	0.0		60.8	0.2		7.0	8.0	0.9	61.1	7.6	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	55.2	0.0		60.8	0.2		7.0	8.0	0.9	61.1	7.6	
LOS	E	A		E	A		A	A	A	E	A	
Approach Delay		30.1			32.2			7.5			9.6	
Approach LOS		C			C			A			A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green			
Natural Cycle: 110			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.63			
Intersection Signal Delay: 10.0		Intersection LOS: B	
Intersection Capacity Utilization 60.9%		ICU Level of Service B	
Analysis Period (min) 15			

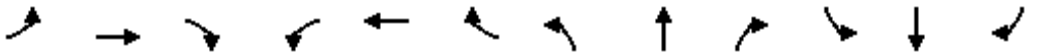
Splits and Phases: 5: Alabama Street & Riverbluff Avenue

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	24	2	12	9	0	0	62	421	14	2	768	109
Future Volume (vph)	24	2	12	9	0	0	62	421	14	2	768	109
Ideal Flow (vphpl)	1700	1800	1800	1700	1800	1800	1800	1800	1900	1800	1900	1900
Storage Length (ft)	0		0	0		0	170		0	250		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.958						0.995			0.981	
Flt Protected		0.969			0.950		0.950			0.950		
Satd. Flow (prot)	0	1671	0	0	1710	0	1710	1791	0	1710	1864	0
Flt Permitted		0.799			0.812		0.950			0.950		
Satd. Flow (perm)	0	1378	0	0	1462	0	1710	1791	0	1710	1864	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		14						2			6	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		300			825			1323			290	
Travel Time (s)		6.8			18.8			30.1			6.6	
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Adj. Flow (vph)	29	2	14	11	0	0	74	501	17	2	914	130
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	45	0	0	11	0	74	518	0	2	1044	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.15	1.07	1.07	1.15	1.07	1.07	1.07	1.07	1.00	1.07	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	22.5	22.5		22.5	22.5		9.5	22.5		9.5	22.5	
Total Split (s)	44.5	44.5		44.5	44.5		31.5	44.0		31.5	44.0	
Total Split (%)	37.1%	37.1%		37.1%	37.1%		26.3%	36.7%		26.3%	36.7%	
Maximum Green (s)	40.0	40.0		40.0	40.0		27.0	39.5		27.0	39.5	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		4.5			4.5		4.5	4.5		4.5	4.5	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	
Walk Time (s)	7.0	7.0		7.0	7.0			7.0			7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0			11.0			11.0	
Pedestrian Calls (#/hr)	0	0		0	0			0			0	
Act Effct Green (s)		8.2			8.2		10.5	103.5		5.8	92.8	
Actuated g/C Ratio		0.07			0.07		0.09	0.86		0.05	0.77	
v/c Ratio		0.42			0.11		0.49	0.34		0.02	0.72	
Control Delay		51.5			53.2		62.6	3.4		51.5	11.4	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		51.5			53.2		62.6	3.4		51.5	11.4	
LOS		D			D		E	A		D	B	
Approach Delay		51.5			53.2			10.8			11.5	
Approach LOS		D			D			B			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.72			
Intersection Signal Delay: 12.6		Intersection LOS: B	
Intersection Capacity Utilization 66.1%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 6: Alabama Street & Palmetto Avenue

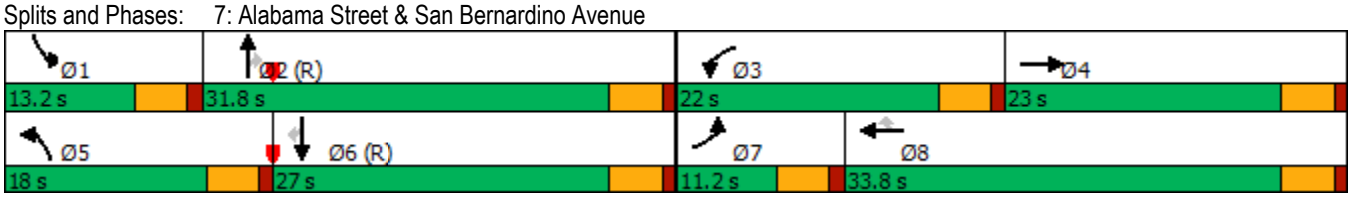


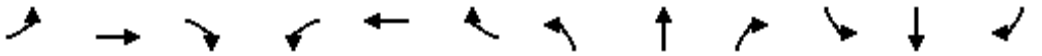
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	42	127	29	170	355	121	112	232	75	56	420	79
Future Volume (vph)	42	127	29	170	355	121	112	232	75	56	420	79
Ideal Flow (vphpl)	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Storage Length (ft)	100		0	0		0	170		0	260		0
Storage Lanes	1		0	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt		0.972				0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1615	3324	0	1615	3420	1530	1615	3420	1530	1615	3420	1530
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1615	3324	0	1615	3420	1530	1615	3420	1530	1615	3420	1530
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		27				182			182			236
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		5507			2072			2636			1370	
Travel Time (s)		125.2			47.1			59.9			31.1	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	46	140	32	187	390	133	123	255	82	62	462	87
Shared Lane Traffic (%)												
Lane Group Flow (vph)	46	172	0	187	390	133	123	255	82	62	462	87
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.15	1.07	1.07	1.15	1.07	1.07	1.15	1.07	1.07	1.15	1.07	1.07
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100		20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0		0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0		0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6		20	6	20	20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8			2			6

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4		3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	22.5		9.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5	22.5
Total Split (s)	11.2	23.0		22.0	33.8	33.8	18.0	31.8	31.8	13.2	27.0	27.0
Total Split (%)	12.4%	25.6%		24.4%	37.6%	37.6%	20.0%	35.3%	35.3%	14.7%	30.0%	30.0%
Maximum Green (s)	6.7	18.5		17.5	29.3	29.3	13.5	27.3	27.3	8.7	22.5	22.5
Yellow Time (s)	3.5	3.5		3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Walk Time (s)		7.0			7.0	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)		11.0			11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0			0	0		0	0		0	0
Act Effct Green (s)	6.5	9.3		14.7	21.7	21.7	12.1	41.2	41.2	8.8	36.0	36.0
Actuated g/C Ratio	0.07	0.10		0.16	0.24	0.24	0.13	0.46	0.46	0.10	0.40	0.40
v/c Ratio	0.40	0.47		0.71	0.47	0.26	0.57	0.16	0.10	0.39	0.34	0.12
Control Delay	50.3	35.7		50.5	31.5	3.0	46.2	17.3	0.3	44.5	21.7	0.3
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	50.3	35.7		50.5	31.5	3.0	46.2	17.3	0.3	44.5	21.7	0.3
LOS	D	D		D	C	A	D	B	A	D	C	A
Approach Delay		38.8			31.1			22.0			21.0	
Approach LOS		D			C			C			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 90			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 75			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.71			
Intersection Signal Delay: 26.8		Intersection LOS: C	
Intersection Capacity Utilization 49.4%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 7: Alabama Street & San Bernardino Avenue



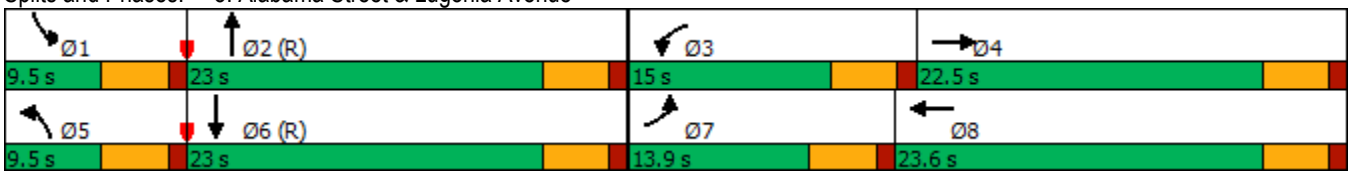


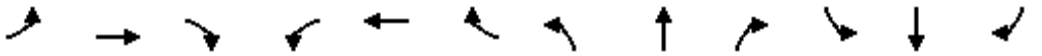
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	71	70	41	193	274	46	78	365	105	44	432	117
Future Volume (vph)	71	70	41	193	274	46	78	365	105	44	432	117
Ideal Flow (vphpl)	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1900
Storage Length (ft)	220		0	0		0	200		0	180		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.91	0.91
Frt		0.945			0.978			0.967			0.968	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1615	3232	0	1615	3345	0	1615	3307	0	1615	4757	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1615	3232	0	1615	3345	0	1615	3307	0	1615	4757	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		45			27			51			95	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		5332			3791			1051			2636	
Travel Time (s)		121.2			86.2			23.9			59.9	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	78	77	45	212	301	51	86	401	115	48	475	129
Shared Lane Traffic (%)												
Lane Group Flow (vph)	78	122	0	212	352	0	86	516	0	48	604	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.15	1.07	1.07	1.15	1.07	1.07	1.15	1.07	1.07	1.15	1.07	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	9.5	22.5		9.5	22.5		9.5	22.5		9.5	22.5	
Total Split (s)	13.9	22.5		15.0	23.6		9.5	23.0		9.5	23.0	
Total Split (%)	19.9%	32.1%		21.4%	33.7%		13.6%	32.9%		13.6%	32.9%	
Maximum Green (s)	9.4	18.0		10.5	19.1		5.0	18.5		5.0	18.5	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Dont Walk (s)		11.0			11.0			11.0			11.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	8.1	10.2		10.5	12.6		8.6	30.4		7.1	26.9	
Actuated g/C Ratio	0.12	0.15		0.15	0.18		0.12	0.43		0.10	0.38	
v/c Ratio	0.42	0.24		0.88	0.56		0.43	0.35		0.29	0.32	
Control Delay	35.5	17.4		65.8	27.4		35.6	16.1		33.7	15.9	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	35.5	17.4		65.8	27.4		35.6	16.1		33.7	15.9	
LOS	D	B		E	C		D	B		C	B	
Approach Delay		24.5			41.8			18.9			17.2	
Approach LOS		C			D			B			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 70			
Actuated Cycle Length: 70			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 70			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.88			
Intersection Signal Delay: 25.3		Intersection LOS: C	
Intersection Capacity Utilization 49.5%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 8: Alabama Street & Lugonia Avenue



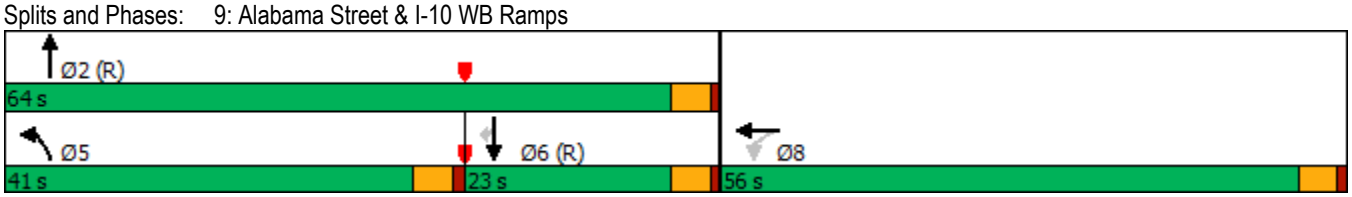


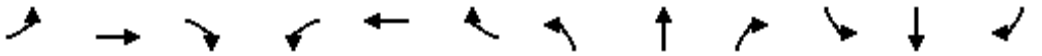
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	267	316	323	404	603	0	0	319	220
Future Volume (vph)	0	0	0	267	316	323	404	603	0	0	319	220
Ideal Flow (vphpl)	1900	1900	1900	1700	1800	1800	1700	1800	1800	1900	1800	1900
Storage Length (ft)	0		0	0		0	150		0	0		0
Storage Lanes	0		0	0		0	1		0	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.95	1.00	0.95	1.00	1.00	0.95	1.00
Frt					0.946							0.850
Flt Protected					0.985		0.950					
Satd. Flow (prot)	0	0	0	0	3187	0	1615	3420	0	0	3420	1615
Flt Permitted					0.985		0.950					
Satd. Flow (perm)	0	0	0	0	3187	0	1615	3420	0	0	3420	1615
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					111							234
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		918			1093			591			1051	
Travel Time (s)		20.9			24.8			13.4			23.9	
Peak Hour Factor	0.95	0.95	0.95	0.94	0.94	0.94	0.94	0.94	0.95	0.95	0.94	0.94
Adj. Flow (vph)	0	0	0	284	336	344	430	641	0	0	339	234
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	964	0	430	641	0	0	339	234
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.15	1.07	1.07	1.15	1.07	1.07	1.00	1.07	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors				1	2		1	2			2	1
Detector Template				Left	Thru		Left	Thru			Thru	Right
Leading Detector (ft)				20	100		20	100			100	20
Trailing Detector (ft)				0	0		0	0			0	0
Detector 1 Position(ft)				0	0		0	0			0	0
Detector 1 Size(ft)				20	6		20	6			6	20
Detector 1 Type				Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)				0.0	0.0		0.0	0.0			0.0	0.0
Detector 1 Queue (s)				0.0	0.0		0.0	0.0			0.0	0.0
Detector 1 Delay (s)				0.0	0.0		0.0	0.0			0.0	0.0
Detector 2 Position(ft)					94			94			94	
Detector 2 Size(ft)					6			6			6	
Detector 2 Type					Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)					0.0			0.0			0.0	
Turn Type				Perm	NA		Prot	NA			NA	Perm
Protected Phases					8		5	2			6	
Permitted Phases				8								6

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase				8	8		5	2			6	6
Switch Phase												
Minimum Initial (s)				5.0	5.0		5.0	5.0			5.0	5.0
Minimum Split (s)				22.5	22.5		9.5	22.5			22.5	22.5
Total Split (s)				56.0	56.0		41.0	64.0			23.0	23.0
Total Split (%)				46.7%	46.7%		34.2%	53.3%			19.2%	19.2%
Maximum Green (s)				51.5	51.5		36.5	59.5			18.5	18.5
Yellow Time (s)				3.5	3.5		3.5	3.5			3.5	3.5
All-Red Time (s)				1.0	1.0		1.0	1.0			1.0	1.0
Lost Time Adjust (s)					0.0		0.0	0.0			0.0	0.0
Total Lost Time (s)					4.5		4.5	4.5			4.5	4.5
Lead/Lag							Lead				Lag	Lag
Lead-Lag Optimize?							Yes				Yes	Yes
Vehicle Extension (s)				3.0	3.0		3.0	3.0			3.0	3.0
Recall Mode				None	None		None	C-Max			C-Max	C-Max
Walk Time (s)				7.0	7.0			7.0			7.0	7.0
Flash Dont Walk (s)				11.0	11.0			11.0			11.0	11.0
Pedestrian Calls (#/hr)				0	0			0			0	0
Act Effct Green (s)					42.1		36.0	68.9			28.4	28.4
Actuated g/C Ratio					0.35		0.30	0.57			0.24	0.24
v/c Ratio					0.81		0.89	0.33			0.42	0.42
Control Delay					36.5		67.3	18.6			43.4	8.2
Queue Delay					0.0		0.0	0.0			0.0	0.0
Total Delay					36.5		67.3	18.6			43.4	8.2
LOS					D		E	B			D	A
Approach Delay					36.5			38.2			29.0	
Approach LOS					D			D			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.89			
Intersection Signal Delay: 35.5		Intersection LOS: D	
Intersection Capacity Utilization 78.2%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 9: Alabama Street & I-10 WB Ramps



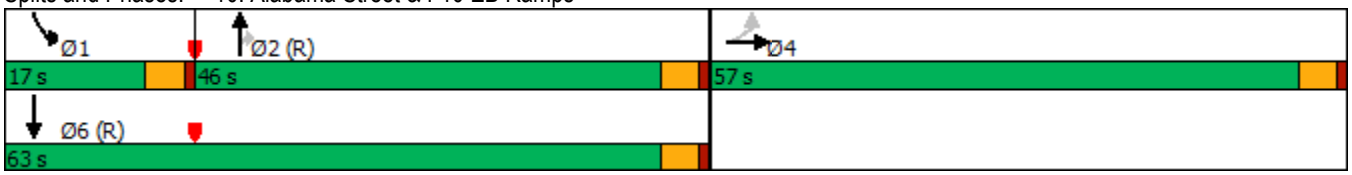


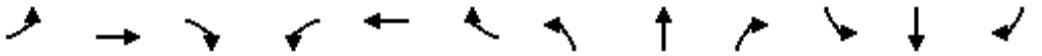
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	376	6	523	0	0	0	0	632	98	54	536	0
Future Volume (vph)	376	6	523	0	0	0	0	632	98	54	536	0
Ideal Flow (vphpl)	1700	1800	1800	1900	1900	1900	1900	1800	1800	1700	1900	1900
Storage Length (ft)	0		0	0		0	0		0	150		0
Storage Lanes	0		0	0		0	0		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.95	0.95	0.95	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt		0.913							0.850			
Flt Protected		0.980								0.950		
Satd. Flow (prot)	0	3060	0	0	0	0	0	3420	1530	1615	3610	0
Flt Permitted		0.980								0.950		
Satd. Flow (perm)	0	3060	0	0	0	0	0	3420	1530	1615	3610	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		217							110			
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		898			623			1369			591	
Travel Time (s)		20.4			14.2			31.1			13.4	
Peak Hour Factor	0.89	0.89	0.89	0.95	0.95	0.95	0.95	0.89	0.89	0.89	0.89	0.95
Adj. Flow (vph)	422	7	588	0	0	0	0	710	110	61	602	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1017	0	0	0	0	0	710	110	61	602	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.15	1.07	1.07	1.00	1.00	1.00	1.00	1.07	1.07	1.15	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2						2	1	1	2	
Detector Template	Left	Thru						Thru	Right	Left	Thru	
Leading Detector (ft)	20	100						100	20	20	100	
Trailing Detector (ft)	0	0						0	0	0	0	
Detector 1 Position(ft)	0	0						0	0	0	0	
Detector 1 Size(ft)	20	6						6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex						Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0						0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0						0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0						0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94						94			94	
Detector 2 Size(ft)		6						6			6	
Detector 2 Type		Cl+Ex						Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0						0.0			0.0	
Turn Type	Perm	NA						NA	Perm	Prot	NA	
Protected Phases		4						2		1	6	
Permitted Phases	4								2			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4						2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0						5.0	5.0	5.0	5.0	
Minimum Split (s)	22.5	22.5						22.5	22.5	9.5	22.5	
Total Split (s)	57.0	57.0						46.0	46.0	17.0	63.0	
Total Split (%)	47.5%	47.5%						38.3%	38.3%	14.2%	52.5%	
Maximum Green (s)	52.5	52.5						41.5	41.5	12.5	58.5	
Yellow Time (s)	3.5	3.5						3.5	3.5	3.5	3.5	
All-Red Time (s)	1.0	1.0						1.0	1.0	1.0	1.0	
Lost Time Adjust (s)		0.0						0.0	0.0	0.0	0.0	
Total Lost Time (s)		4.5						4.5	4.5	4.5	4.5	
Lead/Lag								Lag	Lag	Lead		
Lead-Lag Optimize?								Yes	Yes	Yes		
Vehicle Extension (s)	3.0	3.0						3.0	3.0	3.0	3.0	
Recall Mode	None	None						C-Max	C-Max	None	C-Max	
Walk Time (s)	7.0	7.0						7.0	7.0		7.0	
Flash Dont Walk (s)	11.0	11.0						11.0	11.0		11.0	
Pedestrian Calls (#/hr)	0	0						0	0		0	
Act Effct Green (s)		43.1						55.8	55.8	9.7	67.9	
Actuated g/C Ratio		0.36						0.46	0.46	0.08	0.57	
v/c Ratio		0.82						0.45	0.14	0.47	0.29	
Control Delay		32.7						25.4	5.3	76.6	15.4	
Queue Delay		0.0						0.0	0.0	0.0	0.0	
Total Delay		32.7						25.4	5.3	76.6	15.4	
LOS		C						C	A	E	B	
Approach Delay		32.7						22.7			21.1	
Approach LOS		C						C			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 60			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.82			
Intersection Signal Delay: 26.3		Intersection LOS: C	
Intersection Capacity Utilization 78.2%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 10: Alabama Street & I-10 EB Ramps



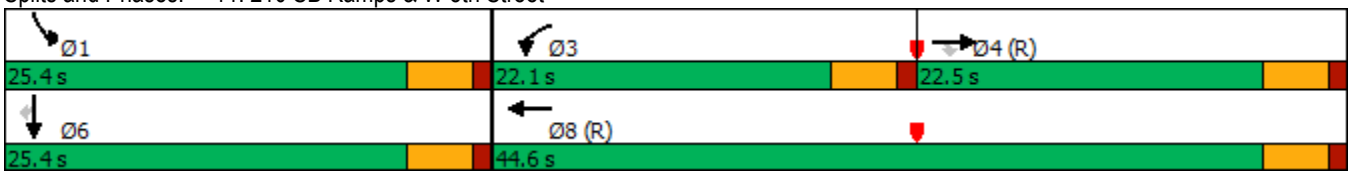


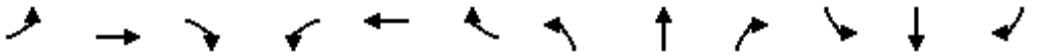
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	278	444	790	987	0	0	0	0	177	0	197
Future Volume (vph)	0	278	444	790	987	0	0	0	0	177	0	197
Ideal Flow (vphpl)	1900	1800	1800	1600	1800	1900	1900	1900	1900	1700	1800	1900
Storage Length (ft)	0		220	0		0	0		0	0		0
Storage Lanes	0		1	2		0	0		0	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850									0.850
Flt Protected				0.950							0.950	
Satd. Flow (prot)	0	3420	1530	2949	3420	0	0	0	0	0	1710	1615
Flt Permitted				0.950							0.950	
Satd. Flow (perm)	0	3420	1530	2949	3420	0	0	0	0	0	1710	1615
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			467									98
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		2750			477			659			386	
Travel Time (s)		62.5			10.8			15.0			8.8	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	293	467	832	1039	0	0	0	0	186	0	207
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	293	467	832	1039	0	0	0	0	0	186	207
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.07	1.07	1.24	1.07	1.00	1.00	1.00	1.00	1.15	1.07	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		2	1	1	2					1	2	1
Detector Template		Thru	Right	Left	Thru					Left	Thru	Right
Leading Detector (ft)		100	20	20	100					20	100	20
Trailing Detector (ft)		0	0	0	0					0	0	0
Detector 1 Position(ft)		0	0	0	0					0	0	0
Detector 1 Size(ft)		6	20	20	6					20	6	20
Detector 1 Type		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex					Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)		0.0	0.0	0.0	0.0					0.0	0.0	0.0
Detector 1 Queue (s)		0.0	0.0	0.0	0.0					0.0	0.0	0.0
Detector 1 Delay (s)		0.0	0.0	0.0	0.0					0.0	0.0	0.0
Detector 2 Position(ft)		94			94						94	
Detector 2 Size(ft)		6			6						6	
Detector 2 Type		Cl+Ex			Cl+Ex						Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0						0.0	
Turn Type		NA	Perm	Prot	NA					Prot	NA	Perm
Protected Phases		4		3	8					1	6	
Permitted Phases			4									6

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase		4	4	3	8					1	6	6
Switch Phase												
Minimum Initial (s)		5.0	5.0	5.0	5.0					5.0	5.0	5.0
Minimum Split (s)		22.5	22.5	9.5	22.5					9.5	22.5	22.5
Total Split (s)		22.5	22.5	22.1	44.6					25.4	25.4	25.4
Total Split (%)		32.1%	32.1%	31.6%	63.7%					36.3%	36.3%	36.3%
Maximum Green (s)		18.0	18.0	17.6	40.1					20.9	20.9	20.9
Yellow Time (s)		3.5	3.5	3.5	3.5					3.5	3.5	3.5
All-Red Time (s)		1.0	1.0	1.0	1.0					1.0	1.0	1.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0						0.0	0.0
Total Lost Time (s)		4.5	4.5	4.5	4.5						4.5	4.5
Lead/Lag		Lag	Lag	Lead								
Lead-Lag Optimize?		Yes	Yes	Yes								
Vehicle Extension (s)		3.0	3.0	3.0	3.0					3.0	3.0	3.0
Recall Mode		C-Max	C-Max	None	C-Max					None	Max	Max
Walk Time (s)		7.0	7.0		7.0						7.0	7.0
Flash Dont Walk (s)		11.0	11.0		11.0						11.0	11.0
Pedestrian Calls (#/hr)		0	0		0						0	0
Act Effct Green (s)		18.0	18.0	17.6	40.1						0.0	20.9
Actuated g/C Ratio		0.26	0.26	0.25	0.57						0.00	0.30
v/c Ratio		0.33	0.63	1.12	0.53						no cap	0.38
Control Delay		22.4	6.8	100.0	10.4							12.7
Queue Delay		0.0	0.0	0.0	0.0							0.0
Total Delay		22.4	6.8	100.0	10.4						Error	12.7
LOS		C	A	F	B						F	B
Approach Delay		12.8			50.2						Err	
Approach LOS		B			D						F	

Intersection Summary			
Area Type:	Other		
Cycle Length: 70			
Actuated Cycle Length: 70			
Offset: 47.5 (68%), Referenced to phase 4:EBT and 8:WBT, Start of Green			
Natural Cycle: 70			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: Err			
Intersection Signal Delay: Err		Intersection LOS: F	
Intersection Capacity Utilization 77.4%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 11: 210 SB Ramps & W 5th Street



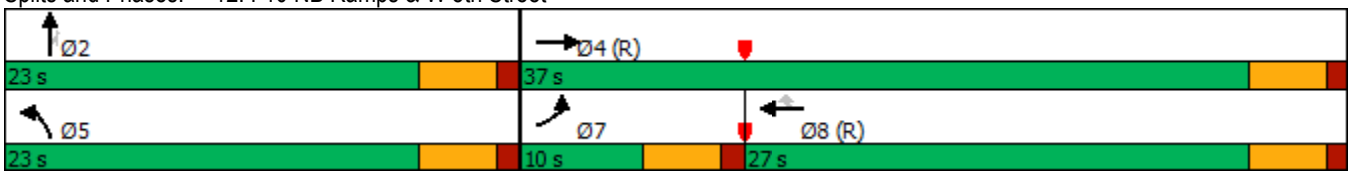


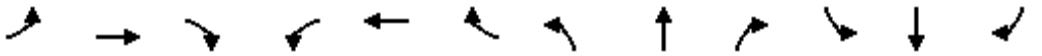
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	66	389	0	0	1375	0	399	2	291	0	0	0
Future Volume (vph)	66	389	0	0	1375	0	399	2	291	0	0	0
Ideal Flow (vphpl)	1700	1800	1900	1900	1800	1800	1600	1800	1800	1900	1900	1900
Storage Length (ft)	0		0	0		220	0		0	0		0
Storage Lanes	1		0	0		1	1		2	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.91	1.00	0.95	0.95	0.88	1.00	1.00	1.00
Frt									0.850			
Flt Protected	0.950						0.950	0.953				
Satd. Flow (prot)	1615	3420	0	0	4914	1800	1444	1630	2693	0	0	0
Flt Permitted	0.950						0.950	0.953				
Satd. Flow (perm)	1615	3420	0	0	4914	1800	1444	1630	2693	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)									316			
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		477			2099			595			477	
Travel Time (s)		10.8			47.7			13.5			10.8	
Peak Hour Factor	0.92	0.92	0.95	0.95	0.92	0.92	0.92	0.92	0.92	0.95	0.95	0.95
Adj. Flow (vph)	72	423	0	0	1495	0	434	2	316	0	0	0
Shared Lane Traffic (%)							50%					
Lane Group Flow (vph)	72	423	0	0	1495	0	217	219	316	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.15	1.07	1.00	1.00	1.07	1.07	1.24	1.07	1.07	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2			2	1	1	2	1			
Detector Template	Left	Thru			Thru	Right	Left	Thru	Right			
Leading Detector (ft)	20	100			100	20	20	100	20			
Trailing Detector (ft)	0	0			0	0	0	0	0			
Detector 1 Position(ft)	0	0			0	0	0	0	0			
Detector 1 Size(ft)	20	6			6	20	20	6	20			
Detector 1 Type	Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex			
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0			0.0	0.0	0.0	0.0	0.0			
Detector 1 Queue (s)	0.0	0.0			0.0	0.0	0.0	0.0	0.0			
Detector 1 Delay (s)	0.0	0.0			0.0	0.0	0.0	0.0	0.0			
Detector 2 Position(ft)		94			94			94				
Detector 2 Size(ft)		6			6			6				
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				
Turn Type	Prot	NA			NA	Perm	Prot	NA	Perm			
Protected Phases	7	4			8		5	2				
Permitted Phases						8			2			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4			8	8	5	2	2			
Switch Phase												
Minimum Initial (s)	5.0	5.0			5.0	5.0	5.0	5.0	5.0			
Minimum Split (s)	9.5	22.5			22.5	22.5	9.5	22.5	22.5			
Total Split (s)	10.0	37.0			27.0	27.0	23.0	23.0	23.0			
Total Split (%)	16.7%	61.7%			45.0%	45.0%	38.3%	38.3%	38.3%			
Maximum Green (s)	5.5	32.5			22.5	22.5	18.5	18.5	18.5			
Yellow Time (s)	3.5	3.5			3.5	3.5	3.5	3.5	3.5			
All-Red Time (s)	1.0	1.0			1.0	1.0	1.0	1.0	1.0			
Lost Time Adjust (s)	0.0	0.0			0.0	0.0	0.0	0.0	0.0			
Total Lost Time (s)	4.5	4.5			4.5	4.5	4.5	4.5	4.5			
Lead/Lag	Lead				Lag	Lag						
Lead-Lag Optimize?	Yes				Yes	Yes						
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	3.0	3.0			
Recall Mode	None	C-Max			C-Max	C-Max	None	Max	Max			
Walk Time (s)		7.0			7.0	7.0		7.0	7.0			
Flash Dont Walk (s)		11.0			11.0	11.0		11.0	11.0			
Pedestrian Calls (#/hr)		0			0	0		0	0			
Act Effct Green (s)	5.5	32.5			26.5		18.5	18.5	18.5			
Actuated g/C Ratio	0.09	0.54			0.44		0.31	0.31	0.31			
v/c Ratio	0.49	0.23			0.69		0.49	0.44	0.30			
Control Delay	38.3	7.6			16.7		21.4	19.9	3.1			
Queue Delay	0.0	0.0			0.0		0.0	0.0	0.0			
Total Delay	38.3	7.6			16.7		21.4	19.9	3.1			
LOS	D	A			B		C	B	A			
Approach Delay		12.0			16.7			13.3				
Approach LOS		B			B			B				

Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 60			
Offset: 33 (55%), Referenced to phase 4:EBT and 8:WBT, Start of Green			
Natural Cycle: 60			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.69			
Intersection Signal Delay: 15.0		Intersection LOS: B	
Intersection Capacity Utilization 77.4%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 12: I-10 NB Ramps & W 5th Street



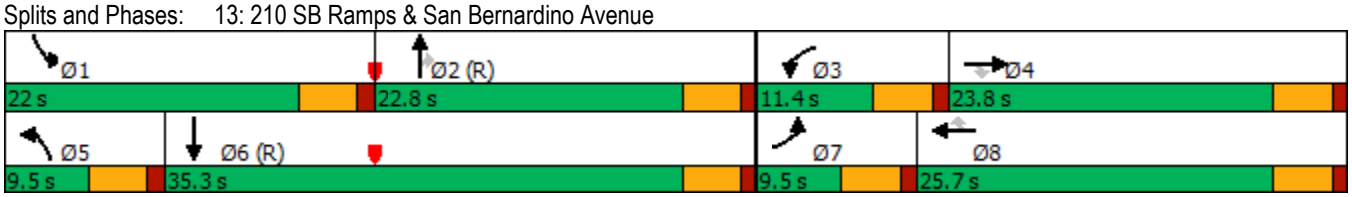


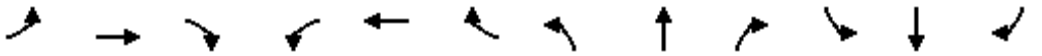
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	52	216	22	57	378	341	17	6	24	288	243	322
Future Volume (vph)	52	216	22	57	378	341	17	6	24	288	243	322
Ideal Flow (vphpl)	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1900
Storage Length (ft)	260		0	0		0	230		0	100		0
Storage Lanes	1		1	1		1	1		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95
Frt			0.850			0.850			0.850		0.915	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1615	3420	1530	1615	1800	1530	1615	1800	1530	1615	3129	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1615	3420	1530	1615	1800	1530	1615	1800	1530	1615	3129	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			205			359			205		339	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		2072			709			529			237	
Travel Time (s)		47.1			16.1			12.0			5.4	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	55	227	23	60	398	359	18	6	25	303	256	339
Shared Lane Traffic (%)												
Lane Group Flow (vph)	55	227	23	60	398	359	18	6	25	303	595	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		36			36			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.15	1.07	1.07	1.15	1.07	1.07	1.15	1.07	1.07	1.15	1.07	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100	20	20	100	20	20	100	20	20	100	
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0	
Detector 1 Size(ft)	20	6	20	20	6	20	20	6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	9.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5	
Total Split (s)	9.5	23.8	23.8	11.4	25.7	25.7	9.5	22.8	22.8	22.0	35.3	
Total Split (%)	11.9%	29.8%	29.8%	14.3%	32.1%	32.1%	11.9%	28.5%	28.5%	27.5%	44.1%	
Maximum Green (s)	5.0	19.3	19.3	6.9	21.2	21.2	5.0	18.3	18.3	17.5	30.8	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		11.0	11.0		11.0	
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	
Act Effct Green (s)	5.0	21.0	21.0	6.6	20.3	20.3	5.1	21.7	21.7	16.9	39.3	
Actuated g/C Ratio	0.06	0.26	0.26	0.08	0.25	0.25	0.06	0.27	0.27	0.21	0.49	
v/c Ratio	0.55	0.25	0.04	0.45	0.87	0.55	0.18	0.01	0.04	0.89	0.35	
Control Delay	58.5	24.5	0.1	44.7	57.3	16.8	39.8	24.2	0.2	59.7	7.0	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	58.5	24.5	0.1	44.7	57.3	16.8	39.8	24.2	0.2	59.7	7.0	
LOS	E	C	A	D	E	B	D	C	A	E	A	
Approach Delay		28.8			38.6			17.7			24.8	
Approach LOS		C			D			B			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 80			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 80			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.89			
Intersection Signal Delay: 30.6		Intersection LOS: C	
Intersection Capacity Utilization 60.9%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 13: 210 SB Ramps & San Bernardino Avenue



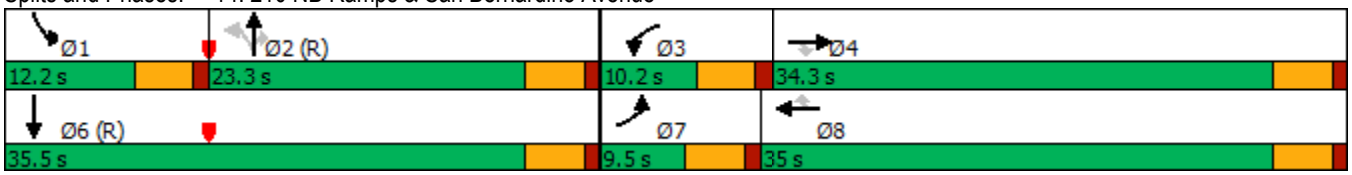


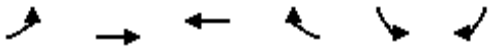
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	114	298	127	32	607	306	51	313	21	149	9	149
Future Volume (vph)	114	298	127	32	607	306	51	313	21	149	9	149
Ideal Flow (vphpl)	1600	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1900
Storage Length (ft)	300		0	0		0	150		70	0		0
Storage Lanes	2		1	1		1	1		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	1.00	1.00
Frt			0.850			0.850			0.850		0.858	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	2949	1800	1530	1615	1800	1530	1615	3420	1530	1615	1544	0
Flt Permitted	0.950			0.950			0.653			0.950		
Satd. Flow (perm)	2949	1800	1530	1615	1800	1530	1110	3420	1530	1615	1544	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			143			319			143		155	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		709			2232			344			268	
Travel Time (s)		16.1			50.7			7.8			6.1	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	119	310	132	33	632	319	53	326	22	155	9	155
Shared Lane Traffic (%)												
Lane Group Flow (vph)	119	310	132	33	632	319	53	326	22	155	164	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.24	1.07	1.07	1.15	1.07	1.07	1.15	1.07	1.07	1.15	1.07	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100	20	20	100	20	20	100	20	20	100	
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0	
Detector 1 Size(ft)	20	6	20	20	6	20	20	6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8			2		1	6	
Permitted Phases			4			8	2		2			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4	4	3	8	8	2	2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	9.5	22.5	22.5	9.5	22.5	22.5	22.5	22.5	22.5	9.5	22.5	
Total Split (s)	9.5	34.3	34.3	10.2	35.0	35.0	23.3	23.3	23.3	12.2	35.5	
Total Split (%)	11.9%	42.9%	42.9%	12.8%	43.8%	43.8%	29.1%	29.1%	29.1%	15.3%	44.4%	
Maximum Green (s)	5.0	29.8	29.8	5.7	30.5	30.5	18.8	18.8	18.8	7.7	31.0	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lag	Lag	Lag	Lead		
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None	None	None	None	None	C-Max	C-Max	C-Max	None	C-Max	
Walk Time (s)		7.0	7.0		7.0	7.0	7.0	7.0	7.0		7.0	
Flash Dont Walk (s)		11.0	11.0		11.0	11.0	11.0	11.0	11.0		11.0	
Pedestrian Calls (#/hr)		0	0		0	0	0	0	0		0	
Act Effct Green (s)	5.0	33.4	33.4	5.7	29.9	29.9	20.2	20.2	20.2	8.8	33.5	
Actuated g/C Ratio	0.06	0.42	0.42	0.07	0.37	0.37	0.25	0.25	0.25	0.11	0.42	
v/c Ratio	0.65	0.41	0.18	0.29	0.94	0.41	0.19	0.38	0.04	0.88	0.22	
Control Delay	51.1	21.8	8.8	42.1	48.6	4.0	26.8	26.9	0.2	82.0	4.3	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	51.1	21.8	8.8	42.1	48.6	4.0	26.8	26.9	0.2	82.0	4.3	
LOS	D	C	A	D	D	A	C	C	A	F	A	
Approach Delay		25.0			33.9			25.4			42.0	
Approach LOS		C			C			C			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 80			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.94			
Intersection Signal Delay: 31.3		Intersection LOS: C	
Intersection Capacity Utilization 71.2%		ICU Level of Service C	
Analysis Period (min) 15			

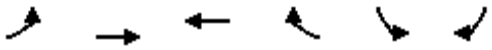
Splits and Phases: 14: 210 NB Ramps & San Bernardino Avenue





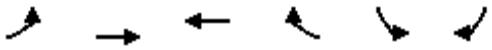
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	6	82	116	6	2	2
Future Volume (vph)	6	82	116	6	2	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.994			0.850
Flt Protected		0.997			0.950	
Satd. Flow (prot)	0	1894	1889	0	1805	1615
Flt Permitted		0.997			0.950	
Satd. Flow (perm)	0	1894	1889	0	1805	1615
Link Speed (mph)		30	30		30	
Link Distance (ft)		1636	441		315	
Travel Time (s)		37.2	10.0		7.2	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	6	86	122	6	2	2
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	92	128	0	2	2
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 19.3%		ICU Level of Service A	
Analysis Period (min) 15			



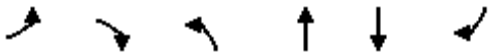
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	84	122	24	7	0
Future Volume (vph)	0	84	122	24	7	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.978			
Flt Protected					0.950	
Satd. Flow (prot)	0	1900	1858	0	1805	0
Flt Permitted					0.950	
Satd. Flow (perm)	0	1900	1858	0	1805	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		441	580		365	
Travel Time (s)		10.0	13.2		8.3	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	88	128	25	7	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	88	153	0	7	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 17.9%		ICU Level of Service A	
Analysis Period (min) 15			



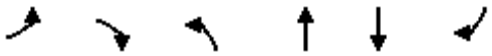
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	91	146	12	4	0
Future Volume (vph)	0	91	146	12	4	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.989			
Flt Protected					0.950	
Satd. Flow (prot)	0	1900	1879	0	1805	1900
Flt Permitted					0.950	
Satd. Flow (perm)	0	1900	1879	0	1805	1900
Link Speed (mph)		30	30		30	
Link Distance (ft)		580	300		152	
Travel Time (s)		13.2	6.8		3.5	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	96	154	13	4	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	96	167	0	4	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 18.4%		ICU Level of Service A	
Analysis Period (min) 15			



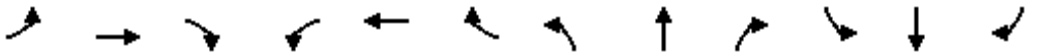
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	412	659	0
Future Volume (vph)	0	0	0	412	659	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	0	1900	0	1900	1900	0
Flt Permitted						
Satd. Flow (perm)	0	1900	0	1900	1900	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	317			310	419	
Travel Time (s)	7.2			7.0	9.5	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	0	0	434	694	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	434	694	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 38.0%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	7	0	480	827	0
Future Volume (vph)	0	7	0	480	827	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	0.95	1.00	1.00
Frt		0.865				
Flt Protected						
Satd. Flow (prot)	0	1644	0	3610	1900	0
Flt Permitted						
Satd. Flow (perm)	0	1644	0	3610	1900	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	368			290	460	
Travel Time (s)	8.4			6.6	10.5	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	7	0	505	871	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	7	0	505	871	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 53.5%		ICU Level of Service A	
Analysis Period (min) 15			

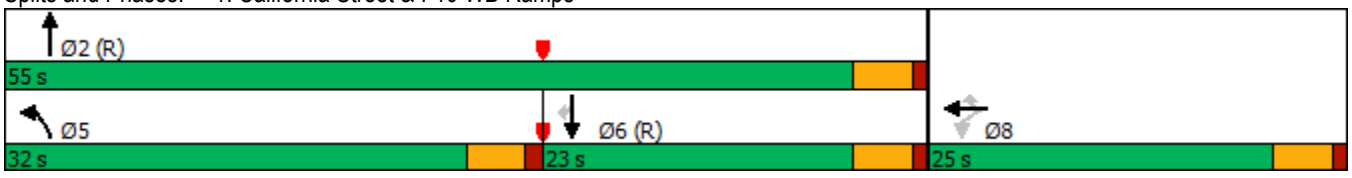


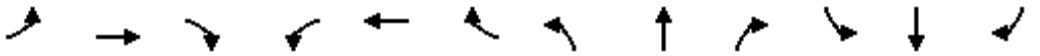
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	343	9	375	454	692	0	0	179	360
Future Volume (vph)	0	0	0	343	9	375	454	692	0	0	179	360
Ideal Flow (vphpl)	1900	1900	1900	1700	1800	1800	1700	1800	1900	1700	1800	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.91	1.00
Frt						0.850						0.850
Flt Protected					0.954		0.950					
Satd. Flow (prot)	0	0	0	0	1717	1530	1615	3420	0	0	4914	1615
Flt Permitted					0.954		0.950					
Satd. Flow (perm)	0	0	0	0	1717	1530	1615	3420	0	0	4914	1615
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						262						360
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1502			1273			312			1245	
Travel Time (s)		34.1			28.9			7.1			28.3	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Growth Factor	93%	93%	93%	93%	93%	93%	93%	93%	100%	100%	93%	93%
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	0	0	0	343	9	375	454	692	0	0	179	360
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	352	375	454	692	0	0	179	360
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.15	1.07	1.07	1.15	1.07	1.00	1.15	1.07	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors				1	2	1	1	2			2	1
Detector Template				Left	Thru	Right	Left	Thru			Thru	Right
Leading Detector (ft)				20	100	20	20	100			100	20
Trailing Detector (ft)				0	0	0	0	0			0	0
Detector 1 Position(ft)				0	0	0	0	0			0	0
Detector 1 Size(ft)				20	6	20	20	6			6	20
Detector 1 Type				Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)				0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 1 Queue (s)				0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 1 Delay (s)				0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 2 Position(ft)					94			94			94	
Detector 2 Size(ft)					6			6			6	
Detector 2 Type					Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)					0.0			0.0			0.0	
Turn Type				Perm	NA	Perm	Prot	NA			NA	Perm
Protected Phases					8		5	2			6	
Permitted Phases				8		8						6
Detector Phase				8	8	8	5	2			6	6

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)				5.0	5.0	5.0	5.0	5.0			5.0	5.0
Minimum Split (s)				22.5	22.5	22.5	9.5	22.5			22.5	22.5
Total Split (s)				25.0	25.0	25.0	32.0	55.0			23.0	23.0
Total Split (%)				31.3%	31.3%	31.3%	40.0%	68.8%			28.8%	28.8%
Maximum Green (s)				20.5	20.5	20.5	27.5	50.5			18.5	18.5
Yellow Time (s)				3.5	3.5	3.5	3.5	3.5			3.5	3.5
All-Red Time (s)				1.0	1.0	1.0	1.0	1.0			1.0	1.0
Lost Time Adjust (s)					0.0	0.0	0.0	0.0			0.0	0.0
Total Lost Time (s)					4.5	4.5	4.5	4.5			4.5	4.5
Lead/Lag							Lead				Lag	Lag
Lead-Lag Optimize?							Yes				Yes	Yes
Vehicle Extension (s)				3.0	3.0	3.0	3.0	3.0			3.0	3.0
Recall Mode				None	None	None	None	C-Max			C-Max	C-Max
Walk Time (s)				7.0	7.0	7.0		7.0			7.0	7.0
Flash Dont Walk (s)				11.0	11.0	11.0		11.0			11.0	11.0
Pedestrian Calls (#/hr)				0	0	0		0			0	0
Act Effct Green (s)					19.3	19.3	25.4	51.7			21.8	21.8
Actuated g/C Ratio					0.24	0.24	0.32	0.65			0.27	0.27
v/c Ratio					0.85	0.66	0.89	0.31			0.13	0.51
Control Delay					49.4	14.7	46.5	7.0			23.9	6.1
Queue Delay					0.0	0.0	19.5	0.6			0.0	0.0
Total Delay					49.4	14.7	66.0	7.5			23.9	6.1
LOS					D	B	E	A			C	A
Approach Delay					31.5			30.7			12.0	
Approach LOS					C			C			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 80			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 80			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.89			
Intersection Signal Delay: 26.8		Intersection LOS: C	
Intersection Capacity Utilization 95.7%		ICU Level of Service F	
Analysis Period (min) 15			

Splits and Phases: 1: California Street & I-10 WB Ramps



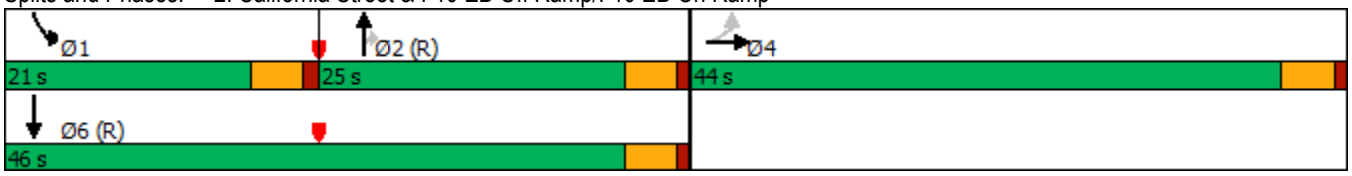


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	341	3	361	0	0	0	0	822	436	259	505	0
Future Volume (vph)	341	3	361	0	0	0	0	822	436	259	505	0
Ideal Flow (vphpl)	1700	1800	1800	1900	1900	1900	1900	1800	1800	1700	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	1.00	1.00	0.95	1.00
Frt		0.931							0.850			
Flt Protected		0.976								0.950		
Satd. Flow (prot)	0	1636	0	0	0	0	0	4914	1530	1615	3610	0
Flt Permitted		0.976								0.950		
Satd. Flow (perm)	0	1636	0	0	0	0	0	4914	1530	1615	3610	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		75							436			
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1514			1294			812			312	
Travel Time (s)		34.4			29.4			18.5			7.1	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Growth Factor	96%	96%	96%	100%	100%	100%	100%	96%	96%	96%	96%	100%
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	341	3	361	0	0	0	0	822	436	259	505	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	705	0	0	0	0	0	822	436	259	505	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.15	1.07	1.07	1.00	1.00	1.00	1.00	1.07	1.07	1.15	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2						2	1	1	2	
Detector Template	Left	Thru						Thru	Right	Left	Thru	
Leading Detector (ft)	20	100						100	20	20	100	
Trailing Detector (ft)	0	0						0	0	0	0	
Detector 1 Position(ft)	0	0						0	0	0	0	
Detector 1 Size(ft)	20	6						6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex						Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0						0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0						0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0						0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94						94			94	
Detector 2 Size(ft)		6						6			6	
Detector 2 Type		Cl+Ex						Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0						0.0			0.0	
Turn Type	Perm	NA						NA	Perm	Prot	NA	
Protected Phases		4						2		1	6	
Permitted Phases	4								2			
Detector Phase	4	4						2	2	1	6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	5.0	5.0						5.0	5.0	5.0	5.0	
Minimum Split (s)	22.5	22.5						22.5	22.5	9.5	22.5	
Total Split (s)	44.0	44.0						25.0	25.0	21.0	46.0	
Total Split (%)	48.9%	48.9%						27.8%	27.8%	23.3%	51.1%	
Maximum Green (s)	39.5	39.5						20.5	20.5	16.5	41.5	
Yellow Time (s)	3.5	3.5						3.5	3.5	3.5	3.5	
All-Red Time (s)	1.0	1.0						1.0	1.0	1.0	1.0	
Lost Time Adjust (s)		0.0						0.0	0.0	0.0	0.0	
Total Lost Time (s)		4.5						4.5	4.5	4.5	4.5	
Lead/Lag								Lag	Lag	Lead		
Lead-Lag Optimize?								Yes	Yes	Yes		
Vehicle Extension (s)	3.0	3.0						3.0	3.0	3.0	3.0	
Recall Mode	None	None						C-Max	C-Max	None	C-Max	
Walk Time (s)	7.0	7.0						7.0	7.0		7.0	
Flash Dont Walk (s)	11.0	11.0						11.0	11.0		11.0	
Pedestrian Calls (#/hr)	0	0						0	0		0	
Act Effct Green (s)		38.4						22.0	22.0	16.1	42.6	
Actuated g/C Ratio		0.43						0.24	0.24	0.18	0.47	
v/c Ratio		0.95						0.68	0.62	0.90	0.30	
Control Delay		46.5						34.8	7.4	70.2	15.4	
Queue Delay		0.0						0.0	0.0	0.0	0.6	
Total Delay		46.5						34.8	7.4	70.2	16.0	
LOS		D						C	A	E	B	
Approach Delay		46.5						25.3			34.4	
Approach LOS		D						C			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 90			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.95			
Intersection Signal Delay: 33.3		Intersection LOS: C	
Intersection Capacity Utilization 95.7%		ICU Level of Service F	
Analysis Period (min) 15			

Splits and Phases: 2: California Street & I-10 EB Off Ramp/I-10 EB On Ramp

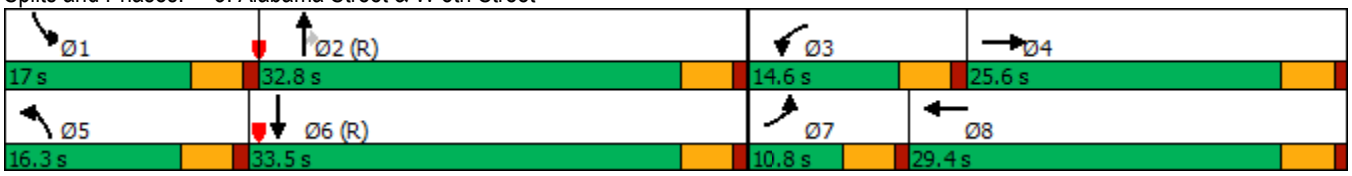


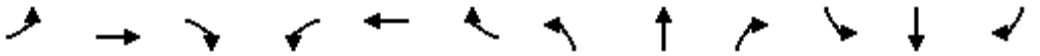
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	57	680	51	180	241	133	102	561	505	201	294	25
Future Volume (vph)	57	680	51	180	241	133	102	561	505	201	294	25
Ideal Flow (vphpl)	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1900
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	1.00	1.00	0.95	0.95
Frt		0.990			0.947				0.850		0.988	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1615	3386	0	1615	3239	0	1615	3420	1530	1615	3379	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1615	3386	0	1615	3239	0	1615	3420	1530	1615	3379	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		8			115				236		10	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1908			2750			621			1649	
Travel Time (s)		43.4			62.5			14.1			37.5	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Growth Factor	91%	91%	91%	91%	91%	91%	91%	91%	91%	91%	91%	91%
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	57	680	51	180	241	133	102	561	505	201	294	25
Shared Lane Traffic (%)												
Lane Group Flow (vph)	57	731	0	180	374	0	102	561	505	201	319	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.15	1.07	1.07	1.15	1.07	1.07	1.15	1.07	1.07	1.15	1.07	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Size(ft)	20	6		20	6		20	6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA		Prot	NA		Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases									2			
Detector Phase	7	4		3	8		5	2	2	1	6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	9.5	22.5		9.5	22.5		9.5	22.5	22.5	9.5	22.5	
Total Split (s)	10.8	25.6		14.6	29.4		16.3	32.8	32.8	17.0	33.5	
Total Split (%)	12.0%	28.4%		16.2%	32.7%		18.1%	36.4%	36.4%	18.9%	37.2%	
Maximum Green (s)	6.3	21.1		10.1	24.9		11.8	28.3	28.3	12.5	29.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.5		4.5	4.5	4.5	4.5	4.5	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None		None	C-Max	C-Max	None	C-Max	
Walk Time (s)		7.0			7.0			7.0	7.0		7.0	
Flash Dont Walk (s)		11.0			11.0			11.0	11.0		11.0	
Pedestrian Calls (#/hr)		0			0			0	0		0	
Act Effct Green (s)	6.1	21.0		10.1	27.0		10.0	28.3	28.3	12.5	33.0	
Actuated g/C Ratio	0.07	0.23		0.11	0.30		0.11	0.31	0.31	0.14	0.37	
v/c Ratio	0.52	0.92		0.99	0.36		0.57	0.52	0.79	0.89	0.26	
Control Delay	57.7	51.5		108.4	18.6		50.1	27.4	24.9	78.3	21.3	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	57.7	51.5		108.4	18.6		50.1	27.4	24.9	78.3	21.3	
LOS	E	D		F	B		D	C	C	E	C	
Approach Delay		51.9			47.8			28.3			43.4	
Approach LOS		D			D			C			D	

Intersection Summary	
Area Type:	Other
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green	
Natural Cycle: 75	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.99	
Intersection Signal Delay: 40.6	Intersection LOS: D
Intersection Capacity Utilization 72.2%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 3: Alabama Street & W 5th Street



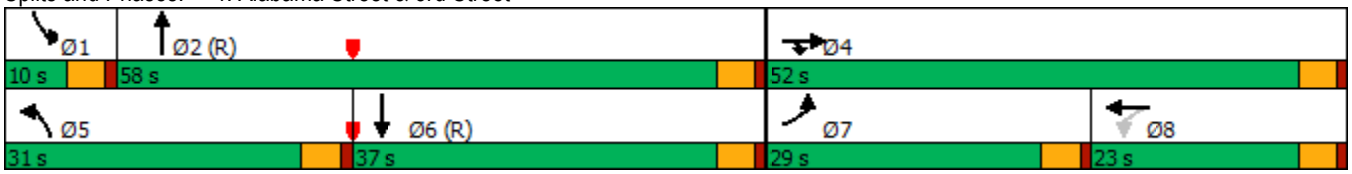


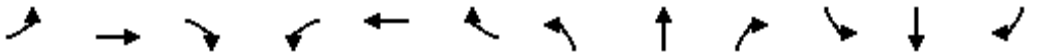
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	394	28	347	9	3	16	212	811	3	6	464	76
Future Volume (vph)	394	28	347	9	3	16	212	811	3	6	464	76
Ideal Flow (vphpl)	1600	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1900
Storage Length (ft)	150		0	0		0	150		0	0		150
Storage Lanes	1		1	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.97	1.00	1.00	0.95	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Frt			0.850		0.914			0.999			0.979	
Flt Protected	0.950				0.984		0.950			0.950		
Satd. Flow (prot)	2949	1800	1530	0	3076	0	1615	3417	0	1615	3348	0
Flt Permitted	0.950				0.868		0.950			0.950		
Satd. Flow (perm)	2949	1800	1530	0	2713	0	1615	3417	0	1615	3348	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			347		16						15	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1074			950			405			621	
Travel Time (s)		24.4			21.6			9.2			14.1	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor	95%	95%	95%	95%	95%	95%	95%	95%	95%	95%	95%	95%
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	394	28	347	9	3	16	212	811	3	6	464	76
Shared Lane Traffic (%)												
Lane Group Flow (vph)	394	28	347	0	28	0	212	814	0	6	540	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.24	1.07	1.07	1.15	1.07	1.07	1.15	1.07	1.07	1.15	1.07	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2		1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100	20	20	100		20	100		20	100	
Trailing Detector (ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Position(ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Size(ft)	20	6	20	20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Prot	Perm	NA		Prot	NA		Prot	NA	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	7	4	4		8		5	2		1	6	
Permitted Phases				8								
Detector Phase	7	4	4	8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	9.5	22.5	22.5	22.5	22.5		9.5	22.5		9.5	22.5	
Total Split (s)	29.0	52.0	52.0	23.0	23.0		31.0	58.0		10.0	37.0	
Total Split (%)	24.2%	43.3%	43.3%	19.2%	19.2%		25.8%	48.3%		8.3%	30.8%	
Maximum Green (s)	24.5	47.5	47.5	18.5	18.5		26.5	53.5		5.5	32.5	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.5	4.5		4.5		4.5	4.5		4.5	4.5	
Lead/Lag	Lead			Lag	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes			Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None	None	None	None		None	C-Max		None	C-Max	
Walk Time (s)		7.0	7.0	7.0	7.0			7.0			7.0	
Flash Dont Walk (s)		11.0	11.0	11.0	11.0			11.0			11.0	
Pedestrian Calls (#/hr)		0	0	0	0			0			0	
Act Effct Green (s)	20.7	27.5	27.5		6.2		20.9	81.2		6.1	58.2	
Actuated g/C Ratio	0.17	0.23	0.23		0.05		0.17	0.68		0.05	0.48	
v/c Ratio	0.77	0.07	0.56		0.18		0.76	0.35		0.07	0.33	
Control Delay	58.0	32.4	7.1		34.4		67.9	12.5		55.8	21.9	
Queue Delay	0.0	0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Delay	58.0	32.4	7.1		34.4		67.9	12.5		55.8	21.9	
LOS	E	C	A		C		E	B		E	C	
Approach Delay		34.1			34.4			23.9			22.2	
Approach LOS		C			C			C			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 80			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.77			
Intersection Signal Delay: 27.0		Intersection LOS: C	
Intersection Capacity Utilization 58.4%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 4: Alabama Street & 3rd Street



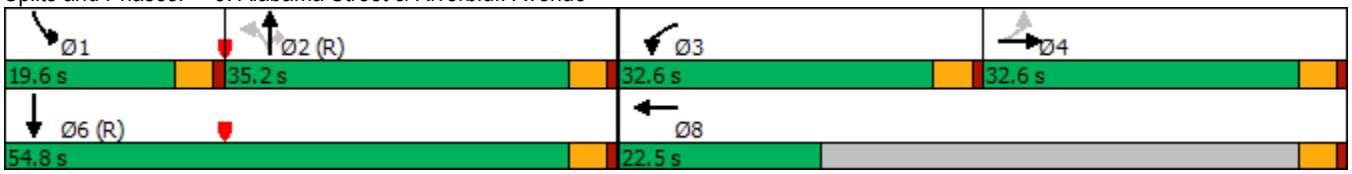


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	18	0	14	34	0	57	5	917	41	38	789	7
Future Volume (vph)	18	0	14	34	0	57	5	917	41	38	789	7
Ideal Flow (vphpl)	1700	1800	1800	1700	1900	1800	1900	1800	1800	1800	1900	1900
Storage Length (ft)	0		0	0		0	100		0	0		0
Storage Lanes	1		0	1		0	1		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850			0.850				0.850		0.999	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1615	1530	0	1615	1615	0	1805	1800	1530	1710	1898	0
Flt Permitted	0.720			0.950			0.341			0.950		
Satd. Flow (perm)	1224	1530	0	1615	1615	0	648	1800	1530	1710	1898	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		400			365				95			
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		416			1617			460			310	
Travel Time (s)		9.5			36.8			10.5			7.0	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor	95%	95%	95%	95%	95%	95%	95%	95%	95%	95%	95%	95%
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	18	0	14	34	0	57	5	917	41	38	789	7
Shared Lane Traffic (%)												
Lane Group Flow (vph)	18	14	0	34	57	0	5	917	41	38	796	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.15	1.07	1.07	1.15	1.00	1.07	1.00	1.07	1.07	1.07	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Size(ft)	20	6		20	6		20	6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Prot	NA		Perm	NA	Perm	Prot	NA	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases		4		3	8			2		1	6	
Permitted Phases	4						2		2			
Detector Phase	4	4		3	8		2	2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	22.5	22.5		22.5	22.5		22.5	22.5	22.5	9.5	22.5	
Total Split (s)	32.6	32.6		32.6	22.5		35.2	35.2	35.2	19.6	54.8	
Total Split (%)	27.2%	27.2%		27.2%	18.8%		29.3%	29.3%	29.3%	16.3%	45.7%	
Maximum Green (s)	28.1	28.1		28.1	18.0		30.7	30.7	30.7	15.1	50.3	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.5		4.5	4.5	4.5	4.5	4.5	
Lead/Lag	Lag	Lag		Lead			Lag	Lag	Lag	Lead		
Lead-Lag Optimize?	Yes	Yes		Yes			Yes	Yes	Yes	Yes		
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None		C-Max	C-Max	C-Max	None	C-Max	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0	7.0		7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0	11.0		11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0	0		0	
Act Effct Green (s)	7.4	7.4		8.0	15.7		89.8	89.8	89.8	8.1	98.2	
Actuated g/C Ratio	0.06	0.06		0.07	0.13		0.75	0.75	0.75	0.07	0.82	
v/c Ratio	0.24	0.03		0.31	0.11		0.01	0.68	0.04	0.33	0.51	
Control Delay	60.3	0.2		60.2	0.4		10.8	14.1	0.6	54.5	11.9	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	60.3	0.2		60.2	0.4		10.8	14.1	0.6	54.5	11.9	
LOS	E	A		E	A		B	B	A	D	B	
Approach Delay		34.0			22.8			13.5			13.8	
Approach LOS		C			C			B			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green			
Natural Cycle: 120			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.68			
Intersection Signal Delay: 14.4		Intersection LOS: B	
Intersection Capacity Utilization 64.6%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 5: Alabama Street & Riverbluff Avenue

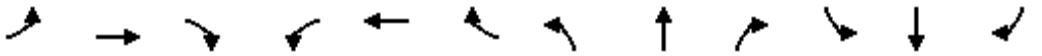


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	169	2	39	11	5	8	27	786	6	5	776	62
Future Volume (vph)	169	2	39	11	5	8	27	786	6	5	776	62
Ideal Flow (vphpl)	1700	1800	1800	1700	1800	1800	1700	1800	1900	1700	1900	1900
Storage Length (ft)	0		0	0		0	170		0	250		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.975			0.955			0.999			0.989	
Flt Protected		0.961			0.978		0.950			0.950		
Satd. Flow (prot)	0	1687	0	0	1681	0	1615	1798	0	1615	1879	0
Flt Permitted		0.751			0.884		0.950			0.950		
Satd. Flow (perm)	0	1318	0	0	1520	0	1615	1798	0	1615	1879	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		10			8						4	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		300			825			1323			290	
Travel Time (s)		6.8			18.8			30.1			6.6	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Growth Factor	94%	94%	94%	94%	94%	94%	94%	94%	94%	94%	94%	94%
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	169	2	39	11	5	8	27	786	6	5	776	62
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	210	0	0	24	0	27	792	0	5	838	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.15	1.07	1.07	1.15	1.07	1.07	1.15	1.07	1.00	1.15	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	22.5	22.5		22.5	22.5		9.5	22.5		9.5	22.5	
Total Split (s)	44.5	44.5		44.5	44.5		31.5	44.0		31.5	44.0	
Total Split (%)	37.1%	37.1%		37.1%	37.1%		26.3%	36.7%		26.3%	36.7%	
Maximum Green (s)	40.0	40.0		40.0	40.0		27.0	39.5		27.0	39.5	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		4.5			4.5		4.5	4.5		4.5	4.5	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	
Walk Time (s)	7.0	7.0		7.0	7.0			7.0			7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0			11.0			11.0	
Pedestrian Calls (#/hr)	0	0		0	0			0			0	
Act Effct Green (s)		23.9			23.9		7.5	84.8		6.0	79.3	
Actuated g/C Ratio		0.20			0.20		0.06	0.71		0.05	0.66	
v/c Ratio		0.78			0.08		0.27	0.62		0.06	0.67	
Control Delay		61.9			26.7		59.4	14.6		75.2	18.2	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		61.9			26.7		59.4	14.6		75.2	18.2	
LOS		E			C		E	B		E	B	
Approach Delay		61.9			26.7			16.0			18.5	
Approach LOS		E			C			B			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 75			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.78			
Intersection Signal Delay: 22.3		Intersection LOS: C	
Intersection Capacity Utilization 67.8%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 6: Alabama Street & Palmetto Avenue

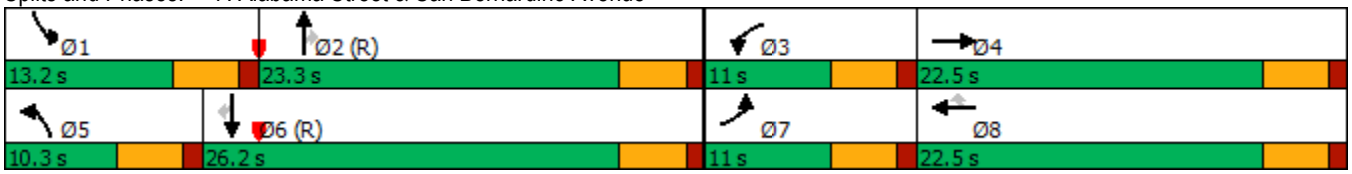


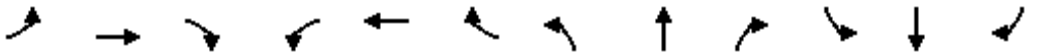
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	124	570	68	124	160	156	39	473	231	188	468	64
Future Volume (vph)	124	570	68	124	160	156	39	473	231	188	468	64
Ideal Flow (vphpl)	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1900
Storage Length (ft)	100		0	0		0	170		0	260		500
Storage Lanes	1		0	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt		0.984				0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1615	3365	0	1615	3420	1530	1615	3420	1530	1615	3420	1615
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1615	3365	0	1615	3420	1530	1615	3420	1530	1615	3420	1615
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		18				164			231			164
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		5507			2072			2636			1370	
Travel Time (s)		125.2			47.1			59.9			31.1	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Growth Factor	97%	97%	97%	97%	97%	97%	97%	97%	97%	97%	97%	97%
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	124	570	68	124	160	156	39	473	231	188	468	64
Shared Lane Traffic (%)												
Lane Group Flow (vph)	124	638	0	124	160	156	39	473	231	188	468	64
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.15	1.07	1.07	1.15	1.07	1.07	1.15	1.07	1.07	1.15	1.07	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100		20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0		0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0		0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6		20	6	20	20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8			2			6
Detector Phase	7	4		3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	22.5		9.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5	22.5
Total Split (s)	11.0	22.5		11.0	22.5	22.5	10.3	23.3	23.3	13.2	26.2	26.2
Total Split (%)	15.7%	32.1%		15.7%	32.1%	32.1%	14.7%	33.3%	33.3%	18.9%	37.4%	37.4%
Maximum Green (s)	6.5	18.0		6.5	18.0	18.0	5.8	18.8	18.8	8.7	21.7	21.7
Yellow Time (s)	3.5	3.5		3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Walk Time (s)		7.0			7.0	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)		11.0			11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0			0	0		0	0		0	0
Act Effct Green (s)	6.5	16.8		6.5	16.8	16.8	5.8	19.2	19.2	9.5	27.0	27.0
Actuated g/C Ratio	0.09	0.24		0.09	0.24	0.24	0.08	0.27	0.27	0.14	0.39	0.39
v/c Ratio	0.83	0.78		0.83	0.19	0.32	0.29	0.50	0.39	0.86	0.35	0.09
Control Delay	75.0	31.2		75.0	21.4	5.6	36.3	23.8	5.5	68.1	17.9	0.2
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	75.0	31.2		75.0	21.4	5.6	36.3	23.8	5.5	68.1	17.9	0.2
LOS	E	C		E	C	A	D	C	A	E	B	A
Approach Delay		38.4			30.9			18.8			29.5	
Approach LOS		D			C			B			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 70			
Actuated Cycle Length: 70			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 75			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.86			
Intersection Signal Delay: 29.3		Intersection LOS: C	
Intersection Capacity Utilization 65.5%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 7: Alabama Street & San Bernardino Avenue



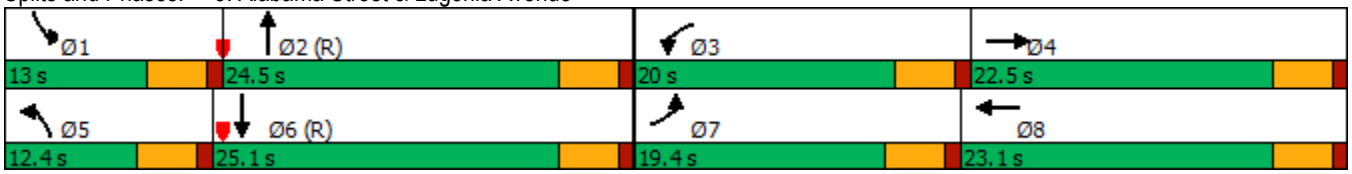


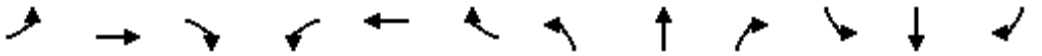
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	223	441	109	261	213	52	67	498	236	128	491	93
Future Volume (vph)	223	441	109	261	213	52	67	498	236	128	491	93
Ideal Flow (vphpl)	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1900
Storage Length (ft)	220		0	0		0	200		0	180		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.91	0.91
Frt		0.970			0.971			0.952			0.976	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1615	3317	0	1615	3321	0	1615	3256	0	1615	4796	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1615	3317	0	1615	3321	0	1615	3256	0	1615	4796	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		35			35			94			47	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		5332			3791			1051			2636	
Travel Time (s)		121.2			86.2			23.9			59.9	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Growth Factor	97%	97%	97%	97%	97%	97%	97%	97%	97%	97%	97%	97%
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	223	441	109	261	213	52	67	498	236	128	491	93
Shared Lane Traffic (%)												
Lane Group Flow (vph)	223	550	0	261	265	0	67	734	0	128	584	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.15	1.07	1.07	1.15	1.07	1.07	1.15	1.07	1.07	1.15	1.07	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	9.5	22.5		9.5	22.5		9.5	22.5		9.5	22.5	
Total Split (s)	19.4	22.5		20.0	23.1		12.4	24.5		13.0	25.1	
Total Split (%)	24.3%	28.1%		25.0%	28.9%		15.5%	30.6%		16.3%	31.4%	
Maximum Green (s)	14.9	18.0		15.5	18.6		7.9	20.0		8.5	20.6	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Dont Walk (s)		11.0			11.0			11.0			11.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	13.9	16.5		15.0	17.6		7.3	21.8		8.8	25.2	
Actuated g/C Ratio	0.17	0.21		0.19	0.22		0.09	0.27		0.11	0.32	
v/c Ratio	0.80	0.77		0.87	0.35		0.46	0.77		0.73	0.38	
Control Delay	53.5	35.9		60.2	23.9		44.6	30.7		59.8	21.9	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	53.5	35.9		60.2	23.9		44.6	30.7		59.8	21.9	
LOS	D	D		E	C		D	C		E	C	
Approach Delay		41.0			41.9			31.8			28.7	
Approach LOS		D			D			C			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 80			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 80			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.87			
Intersection Signal Delay: 35.4		Intersection LOS: D	
Intersection Capacity Utilization 76.2%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 8: Alabama Street & Lugonia Avenue



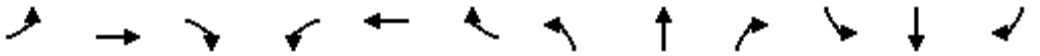


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	176	316	162	354	786	0	0	737	460
Future Volume (vph)	0	0	0	176	316	162	354	786	0	0	737	460
Ideal Flow (vphpl)	1900	1900	1900	1700	1800	1800	1700	1800	1900	1900	1800	1900
Storage Length (ft)	0		0	0		0	150		0	0		0
Storage Lanes	0		0	0		0	1		0	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.95	1.00	0.95	1.00	1.00	0.95	1.00
Frt					0.963							0.850
Flt Protected					0.987		0.950					
Satd. Flow (prot)	0	0	0	0	3251	0	1615	3420	0	0	3420	1615
Flt Permitted					0.987		0.950					
Satd. Flow (perm)	0	0	0	0	3251	0	1615	3420	0	0	3420	1615
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					41							270
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		918			1093			591			1051	
Travel Time (s)		20.9			24.8			13.4			23.9	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Growth Factor	98%	98%	98%	98%	98%	98%	98%	98%	98%	98%	98%	98%
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	0	0	0	176	316	162	354	786	0	0	737	460
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	654	0	354	786	0	0	737	460
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.15	1.07	1.07	1.15	1.07	1.00	1.00	1.07	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors				1	2		1	2			2	1
Detector Template				Left	Thru		Left	Thru			Thru	Right
Leading Detector (ft)				20	100		20	100			100	20
Trailing Detector (ft)				0	0		0	0			0	0
Detector 1 Position(ft)				0	0		0	0			0	0
Detector 1 Size(ft)				20	6		20	6			6	20
Detector 1 Type				Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)				0.0	0.0		0.0	0.0			0.0	0.0
Detector 1 Queue (s)				0.0	0.0		0.0	0.0			0.0	0.0
Detector 1 Delay (s)				0.0	0.0		0.0	0.0			0.0	0.0
Detector 2 Position(ft)					94			94			94	
Detector 2 Size(ft)					6			6			6	
Detector 2 Type					Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)					0.0			0.0			0.0	
Turn Type				Perm	NA		Prot	NA			NA	Perm

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases					8		5	2			6	
Permitted Phases				8								6
Detector Phase				8	8		5	2			6	6
Switch Phase												
Minimum Initial (s)				5.0	5.0		5.0	5.0			5.0	5.0
Minimum Split (s)				22.5	22.5		9.5	22.5			22.5	22.5
Total Split (s)				46.0	46.0		36.0	74.0			38.0	38.0
Total Split (%)				38.3%	38.3%		30.0%	61.7%			31.7%	31.7%
Maximum Green (s)				41.5	41.5		31.5	69.5			33.5	33.5
Yellow Time (s)				3.5	3.5		3.5	3.5			3.5	3.5
All-Red Time (s)				1.0	1.0		1.0	1.0			1.0	1.0
Lost Time Adjust (s)					0.0		0.0	0.0			0.0	0.0
Total Lost Time (s)					4.5		4.5	4.5			4.5	4.5
Lead/Lag							Lead				Lag	Lag
Lead-Lag Optimize?							Yes				Yes	Yes
Vehicle Extension (s)				3.0	3.0		3.0	3.0			3.0	3.0
Recall Mode				None	None		None	C-Max			C-Max	C-Max
Walk Time (s)				7.0	7.0			7.0			7.0	7.0
Flash Dont Walk (s)				11.0	11.0			11.0			11.0	11.0
Pedestrian Calls (#/hr)				0	0			0			0	0
Act Effct Green (s)					29.9		31.0	81.1			45.6	45.6
Actuated g/C Ratio					0.25		0.26	0.68			0.38	0.38
v/c Ratio					0.78		0.85	0.34			0.57	0.59
Control Delay					45.8		67.1	9.8			33.7	17.0
Queue Delay					0.0		0.0	0.0			0.0	0.0
Total Delay					45.8		67.1	9.8			33.7	17.0
LOS					D		E	A			C	B
Approach Delay					45.8			27.6			27.3	
Approach LOS					D			C			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 70			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.85			
Intersection Signal Delay: 31.4		Intersection LOS: C	
Intersection Capacity Utilization 80.3%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 9: Alabama Street & I-10 WB Ramps

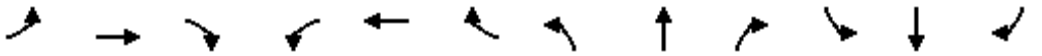


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	349	64	488	0	0	0	0	783	252	228	693	0
Future Volume (vph)	349	64	488	0	0	0	0	783	252	228	693	0
Ideal Flow (vphpl)	1700	1800	1800	1900	1900	1900	1900	1800	1800	1700	1900	1900
Storage Length (ft)	0		0	0		0	0		0	150		0
Storage Lanes	0		0	0		0	0		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.95	0.95	0.95	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt		0.919							0.850			
Flt Protected		0.981								0.950		
Satd. Flow (prot)	0	3083	0	0	0	0	0	3420	1530	1615	3610	0
Flt Permitted		0.981								0.950		
Satd. Flow (perm)	0	3083	0	0	0	0	0	3420	1530	1615	3610	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		239							252			
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		898			623			1369			591	
Travel Time (s)		20.4			14.2			31.1			13.4	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor	95%	95%	95%	95%	95%	95%	95%	95%	95%	95%	95%	95%
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	349	64	488	0	0	0	0	783	252	228	693	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	901	0	0	0	0	0	783	252	228	693	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.15	1.07	1.07	1.00	1.00	1.00	1.00	1.07	1.07	1.15	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2						2	1	1	2	
Detector Template	Left	Thru						Thru	Right	Left	Thru	
Leading Detector (ft)	20	100						100	20	20	100	
Trailing Detector (ft)	0	0						0	0	0	0	
Detector 1 Position(ft)	0	0						0	0	0	0	
Detector 1 Size(ft)	20	6						6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex						Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0						0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0						0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0						0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94						94			94	
Detector 2 Size(ft)		6						6			6	
Detector 2 Type		Cl+Ex						Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0						0.0			0.0	
Turn Type	Perm	NA						NA	Perm	Prot	NA	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases		4						2		1	6	
Permitted Phases	4								2			
Detector Phase	4	4						2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0						5.0	5.0	5.0	5.0	
Minimum Split (s)	22.5	22.5						22.5	22.5	9.5	22.5	
Total Split (s)	44.0	44.0						45.0	45.0	31.0	76.0	
Total Split (%)	36.7%	36.7%						37.5%	37.5%	25.8%	63.3%	
Maximum Green (s)	39.5	39.5						40.5	40.5	26.5	71.5	
Yellow Time (s)	3.5	3.5						3.5	3.5	3.5	3.5	
All-Red Time (s)	1.0	1.0						1.0	1.0	1.0	1.0	
Lost Time Adjust (s)		0.0						0.0	0.0	0.0	0.0	
Total Lost Time (s)		4.5						4.5	4.5	4.5	4.5	
Lead/Lag								Lag	Lag	Lead		
Lead-Lag Optimize?								Yes	Yes	Yes		
Vehicle Extension (s)	3.0	3.0						3.0	3.0	3.0	3.0	
Recall Mode	None	None						C-Max	C-Max	None	C-Max	
Walk Time (s)	7.0	7.0						7.0	7.0		7.0	
Flash Dont Walk (s)	11.0	11.0						11.0	11.0		11.0	
Pedestrian Calls (#/hr)	0	0						0	0		0	
Act Effct Green (s)		34.6						50.5	50.5	21.4	76.4	
Actuated g/C Ratio		0.29						0.42	0.42	0.18	0.64	
v/c Ratio		0.85						0.54	0.32	0.79	0.30	
Control Delay		37.4						29.8	4.6	83.5	7.9	
Queue Delay		0.0						0.0	0.0	0.0	0.0	
Total Delay		37.4						29.8	4.6	83.5	7.9	
LOS		D						C	A	F	A	
Approach Delay		37.4						23.7			26.7	
Approach LOS		D						C			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 60			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.85			
Intersection Signal Delay: 29.0		Intersection LOS: C	
Intersection Capacity Utilization 80.3%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 10: Alabama Street & I-10 EB Ramps

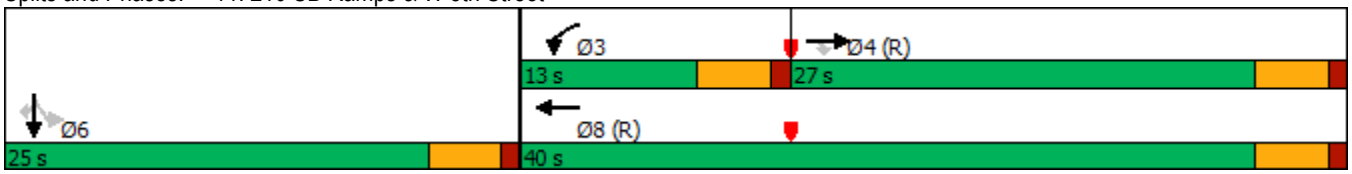


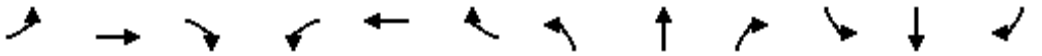
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	965	538	274	545	0	0	0	0	308	6	131
Future Volume (vph)	0	965	538	274	545	0	0	0	0	308	6	131
Ideal Flow (vphpl)	1900	1800	1800	1600	1800	1900	1900	1900	1900	1800	1800	2500
Storage Length (ft)	0		220	0		0	0		0	0		0
Storage Lanes	0		1	2		0	0		0	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850									0.850
Flt Protected				0.950							0.953	
Satd. Flow (prot)	0	3420	1530	2949	3420	0	0	0	0	0	1715	2125
Flt Permitted				0.950							0.953	
Satd. Flow (perm)	0	3420	1530	2949	3420	0	0	0	0	0	1715	2125
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			538									131
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		2750			477			659			386	
Travel Time (s)		62.5			10.8			15.0			8.8	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	90%	90%	90%	90%	90%	90%	90%	90%	90%	90%	90%	90%
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	0	965	538	274	545	0	0	0	0	308	6	131
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	965	538	274	545	0	0	0	0	0	314	131
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.07	1.07	1.24	1.07	1.00	1.00	1.00	1.00	1.07	1.07	0.69
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		2	1	1	2					1	2	1
Detector Template		Thru	Right	Left	Thru					Left	Thru	Right
Leading Detector (ft)		100	20	20	100					20	100	20
Trailing Detector (ft)		0	0	0	0					0	0	0
Detector 1 Position(ft)		0	0	0	0					0	0	0
Detector 1 Size(ft)		6	20	20	6					20	6	20
Detector 1 Type		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex					Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)		0.0	0.0	0.0	0.0					0.0	0.0	0.0
Detector 1 Queue (s)		0.0	0.0	0.0	0.0					0.0	0.0	0.0
Detector 1 Delay (s)		0.0	0.0	0.0	0.0					0.0	0.0	0.0
Detector 2 Position(ft)		94			94						94	
Detector 2 Size(ft)		6			6						6	
Detector 2 Type		Cl+Ex			Cl+Ex						Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0						0.0	
Turn Type		NA	Perm	Prot	NA					Perm	NA	Perm

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases		4		3	8						6	
Permitted Phases			4							6		6
Detector Phase		4	4	3	8					6	6	6
Switch Phase												
Minimum Initial (s)		5.0	5.0	5.0	5.0					5.0	5.0	5.0
Minimum Split (s)		22.5	22.5	9.5	22.5					22.5	22.5	22.5
Total Split (s)		27.0	27.0	13.0	40.0					25.0	25.0	25.0
Total Split (%)		41.5%	41.5%	20.0%	61.5%					38.5%	38.5%	38.5%
Maximum Green (s)		22.5	22.5	8.5	35.5					20.5	20.5	20.5
Yellow Time (s)		3.5	3.5	3.5	3.5					3.5	3.5	3.5
All-Red Time (s)		1.0	1.0	1.0	1.0					1.0	1.0	1.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0						0.0	0.0
Total Lost Time (s)		4.5	4.5	4.5	4.5						4.5	4.5
Lead/Lag		Lag	Lag	Lead								
Lead-Lag Optimize?		Yes	Yes	Yes								
Vehicle Extension (s)		3.0	3.0	3.0	3.0					3.0	3.0	3.0
Recall Mode		C-Max	C-Max	None	C-Max					Max	Max	Max
Walk Time (s)		7.0	7.0		7.0					7.0	7.0	7.0
Flash Dont Walk (s)		11.0	11.0		11.0					11.0	11.0	11.0
Pedestrian Calls (#/hr)		0	0		0					0	0	0
Act Effct Green (s)		22.6	22.6	8.4	35.5						20.5	20.5
Actuated g/C Ratio		0.35	0.35	0.13	0.55						0.32	0.32
v/c Ratio		0.81	0.61	0.72	0.29						0.58	0.17
Control Delay		26.4	5.1	39.4	8.5						23.9	4.2
Queue Delay		0.0	0.0	0.0	0.0						0.0	0.0
Total Delay		26.4	5.1	39.4	8.5						23.9	4.2
LOS		C	A	D	A						C	A
Approach Delay		18.8			18.8						18.1	
Approach LOS		B			B						B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 65			
Actuated Cycle Length: 65			
Offset: 38 (58%), Referenced to phase 4:EBT and 8:WBT, Start of Green			
Natural Cycle: 60			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.81			
Intersection Signal Delay: 18.7		Intersection LOS: B	
Intersection Capacity Utilization 67.8%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 11: 210 SB Ramps & W 5th Street



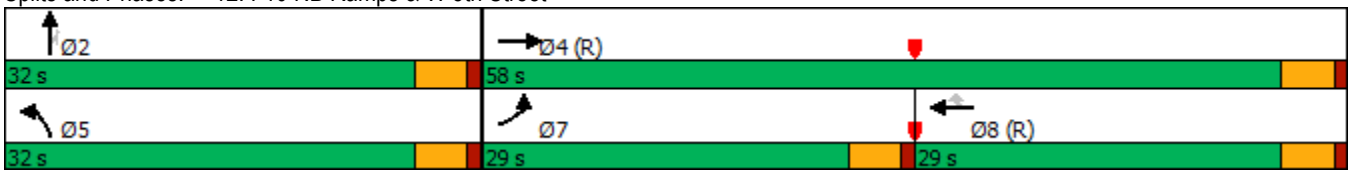


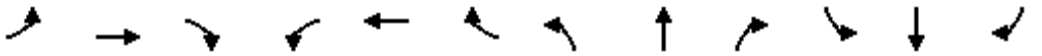
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	230	1026	0	0	600	249	218	0	478	0	0	0
Future Volume (vph)	230	1026	0	0	600	249	218	0	478	0	0	0
Ideal Flow (vphpl)	1700	1800	1900	1900	1800	1800	1600	1800	1900	1900	1900	1900
Storage Length (ft)	0		0	0		220	0		0	0		0
Storage Lanes	1		0	0		1	1		2	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.91	1.00	0.95	0.95	0.88	1.00	1.00	1.00
Frt						0.850			0.850			
Flt Protected	0.950						0.950	0.950				
Satd. Flow (prot)	1615	3420	0	0	4914	1530	1444	1624	2842	0	0	0
Flt Permitted	0.950						0.950	0.950				
Satd. Flow (perm)	1615	3420	0	0	4914	1530	1444	1624	2842	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						249			196			
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		477			2099			595			477	
Travel Time (s)		10.8			47.7			13.5			10.8	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Growth Factor	94%	94%	94%	94%	94%	94%	94%	94%	94%	94%	94%	94%
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	230	1026	0	0	600	249	218	0	478	0	0	0
Shared Lane Traffic (%)							50%					
Lane Group Flow (vph)	230	1026	0	0	600	249	109	109	478	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.15	1.07	1.00	1.00	1.07	1.07	1.24	1.07	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2			2	1	1	2	1			
Detector Template	Left	Thru			Thru	Right	Left	Thru	Right			
Leading Detector (ft)	20	100			100	20	20	100	20			
Trailing Detector (ft)	0	0			0	0	0	0	0			
Detector 1 Position(ft)	0	0			0	0	0	0	0			
Detector 1 Size(ft)	20	6			6	20	20	6	20			
Detector 1 Type	Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex			
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0			0.0	0.0	0.0	0.0	0.0			
Detector 1 Queue (s)	0.0	0.0			0.0	0.0	0.0	0.0	0.0			
Detector 1 Delay (s)	0.0	0.0			0.0	0.0	0.0	0.0	0.0			
Detector 2 Position(ft)		94			94			94				
Detector 2 Size(ft)		6			6			6				
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				
Turn Type	Prot	NA			NA	Perm	Prot	NA	Perm			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	7	4			8		5	2				
Permitted Phases						8			2			
Detector Phase	7	4			8	8	5	2	2			
Switch Phase												
Minimum Initial (s)	5.0	5.0			5.0	5.0	5.0	5.0	5.0			
Minimum Split (s)	9.5	22.5			22.5	22.5	9.5	22.5	22.5			
Total Split (s)	29.0	58.0			29.0	29.0	32.0	32.0	32.0			
Total Split (%)	32.2%	64.4%			32.2%	32.2%	35.6%	35.6%	35.6%			
Maximum Green (s)	24.5	53.5			24.5	24.5	27.5	27.5	27.5			
Yellow Time (s)	3.5	3.5			3.5	3.5	3.5	3.5	3.5			
All-Red Time (s)	1.0	1.0			1.0	1.0	1.0	1.0	1.0			
Lost Time Adjust (s)	0.0	0.0			0.0	0.0	0.0	0.0	0.0			
Total Lost Time (s)	4.5	4.5			4.5	4.5	4.5	4.5	4.5			
Lead/Lag	Lead				Lag	Lag						
Lead-Lag Optimize?	Yes				Yes	Yes						
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	3.0	3.0			
Recall Mode	None	C-Max			C-Max	C-Max	None	Max	Max			
Walk Time (s)		7.0			7.0	7.0		7.0	7.0			
Flash Dont Walk (s)		11.0			11.0	11.0		11.0	11.0			
Pedestrian Calls (#/hr)		0			0	0		0	0			
Act Effct Green (s)	18.0	53.5			31.0	31.0	23.4	22.0	27.5			
Actuated g/C Ratio	0.20	0.59			0.34	0.34	0.26	0.24	0.31			
v/c Ratio	0.71	0.50			0.35	0.36	0.29	0.27	0.48			
Control Delay	45.6	11.7			23.8	5.1	26.8	25.5	16.3			
Queue Delay	0.0	0.6			0.0	0.0	0.0	0.0	0.0			
Total Delay	45.6	12.2			23.8	5.1	26.8	25.5	16.3			
LOS	D	B			C	A	C	C	B			
Approach Delay		18.3			18.3			19.4				
Approach LOS		B			B			B				

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 90			
Offset: 61 (68%), Referenced to phase 4:EBT and 8:WBT, Start of Green			
Natural Cycle: 60			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.71			
Intersection Signal Delay: 18.6		Intersection LOS: B	
Intersection Capacity Utilization 67.8%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 12: I-10 NB Ramps & W 5th Street



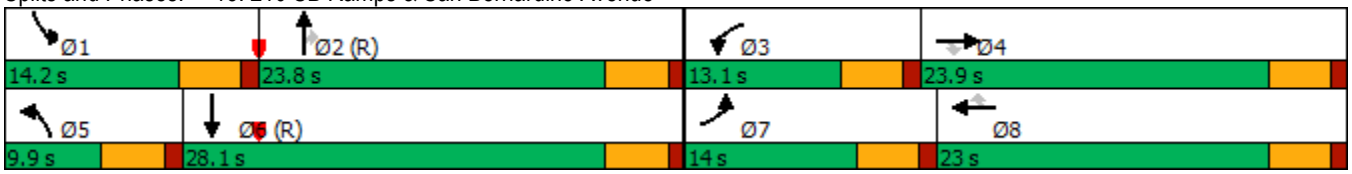


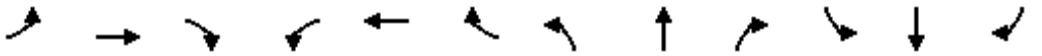
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	157	764	85	127	339	133	29	48	268	162	321	123
Future Volume (vph)	157	764	85	127	339	133	29	48	268	162	321	123
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1900
Storage Length (ft)	260		0	0		0	230		0	100		0
Storage Lanes	1		1	1		1	1		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95
Frt			0.850			0.850			0.850		0.958	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1710	3420	1530	1710	1800	1530	1710	1800	1530	1710	3276	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1710	3420	1530	1710	1800	1530	1710	1800	1530	1710	3276	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			153			153			268		78	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		2072			709			529			237	
Travel Time (s)		47.1			16.1			12.0			5.4	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Growth Factor	94%	94%	94%	94%	94%	94%	94%	94%	94%	94%	94%	94%
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	157	764	85	127	339	133	29	48	268	162	321	123
Shared Lane Traffic (%)												
Lane Group Flow (vph)	157	764	85	127	339	133	29	48	268	162	444	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		36			36			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100	20	20	100	20	20	100	20	20	100	
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0	
Detector 1 Size(ft)	20	6	20	20	6	20	20	6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	9.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5	
Total Split (s)	14.0	23.9	23.9	13.1	23.0	23.0	9.9	23.8	23.8	14.2	28.1	
Total Split (%)	18.7%	31.9%	31.9%	17.5%	30.7%	30.7%	13.2%	31.7%	31.7%	18.9%	37.5%	
Maximum Green (s)	9.5	19.4	19.4	8.6	18.5	18.5	5.4	19.3	19.3	9.7	23.6	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		11.0	11.0		11.0	
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	
Act Effct Green (s)	9.2	20.6	20.6	8.3	17.4	17.4	5.4	21.0	21.0	9.4	30.9	
Actuated g/C Ratio	0.12	0.27	0.27	0.11	0.23	0.23	0.07	0.28	0.28	0.13	0.41	
v/c Ratio	0.75	0.81	0.16	0.68	0.81	0.28	0.24	0.10	0.43	0.76	0.32	
Control Delay	55.5	34.6	1.3	51.4	43.9	5.0	37.8	22.0	5.7	55.7	14.4	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	55.5	34.6	1.3	51.4	43.9	5.0	37.8	22.0	5.7	55.7	14.4	
LOS	E	C	A	D	D	A	D	C	A	E	B	
Approach Delay		35.0			36.8			10.7			25.5	
Approach LOS		D			D			B			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 75			
Actuated Cycle Length: 75			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 75			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.81			
Intersection Signal Delay: 29.9		Intersection LOS: C	
Intersection Capacity Utilization 59.8%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 13: 210 SB Ramps & San Bernardino Avenue



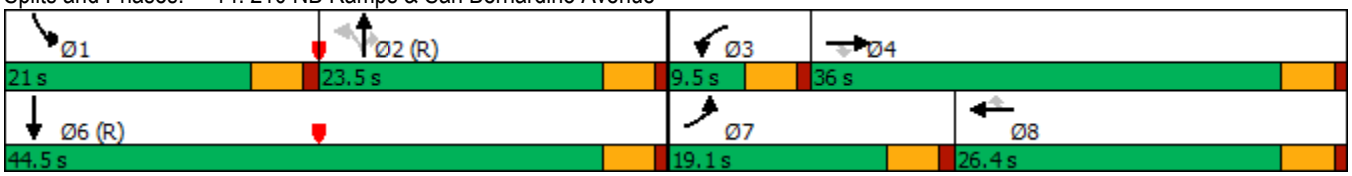


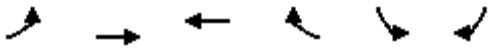
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	454	527	164	35	347	174	80	471	54	255	23	177
Future Volume (vph)	454	527	164	35	347	174	80	471	54	255	23	177
Ideal Flow (vphpl)	1600	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1900
Storage Length (ft)	300		0	0		0	150		70	0		0
Storage Lanes	2		1	1		1	1		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	1.00	1.00
Frt			0.850			0.850			0.850		0.867	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	2949	1800	1530	1710	1800	1530	1710	3420	1530	1710	1561	0
Flt Permitted	0.950			0.950			0.632			0.950		
Satd. Flow (perm)	2949	1800	1530	1710	1800	1530	1138	3420	1530	1710	1561	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			164			182			182		177	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		709			2232			344			268	
Travel Time (s)		16.1			50.7			7.8			6.1	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Growth Factor	96%	96%	96%	96%	96%	96%	96%	96%	96%	96%	96%	96%
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	454	527	164	35	347	174	80	471	54	255	23	177
Shared Lane Traffic (%)												
Lane Group Flow (vph)	454	527	164	35	347	174	80	471	54	255	200	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.24	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100	20	20	100	20	20	100	20	20	100	
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0	
Detector 1 Size(ft)	20	6	20	20	6	20	20	6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA	Perm	Prot	NA	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	7	4		3	8			2		1	6	
Permitted Phases			4			8	2		2			
Detector Phase	7	4	4	3	8	8	2	2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	9.5	22.5	22.5	9.5	22.5	22.5	22.5	22.5	22.5	9.5	22.5	
Total Split (s)	19.1	36.0	36.0	9.5	26.4	26.4	23.5	23.5	23.5	21.0	44.5	
Total Split (%)	21.2%	40.0%	40.0%	10.6%	29.3%	29.3%	26.1%	26.1%	26.1%	23.3%	49.4%	
Maximum Green (s)	14.6	31.5	31.5	5.0	21.9	21.9	19.0	19.0	19.0	16.5	40.0	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lag	Lag	Lag	Lead		
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None	None	None	None	None	C-Max	C-Max	C-Max	None	C-Max	
Walk Time (s)		7.0	7.0		7.0	7.0	7.0	7.0	7.0		7.0	
Flash Dont Walk (s)		11.0	11.0		11.0	11.0	11.0	11.0	11.0		11.0	
Pedestrian Calls (#/hr)		0	0		0	0	0	0	0		0	
Act Effct Green (s)	14.6	33.7	33.7	5.0	20.3	20.3	21.2	21.2	21.2	15.9	41.6	
Actuated g/C Ratio	0.16	0.37	0.37	0.06	0.23	0.23	0.24	0.24	0.24	0.18	0.46	
v/c Ratio	0.95	0.78	0.24	0.37	0.85	0.36	0.30	0.59	0.11	0.85	0.25	
Control Delay	69.3	35.5	4.5	52.2	53.9	6.3	33.6	34.8	0.4	61.4	4.2	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	69.3	35.5	4.5	52.2	53.9	6.3	33.6	34.8	0.4	61.4	4.2	
LOS	E	D	A	D	D	A	C	C	A	E	A	
Approach Delay		44.5			38.9			31.6			36.2	
Approach LOS		D			D			C			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 90			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.95			
Intersection Signal Delay: 39.2		Intersection LOS: D	
Intersection Capacity Utilization 75.8%		ICU Level of Service D	
Analysis Period (min) 15			

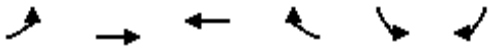
Splits and Phases: 14: 210 NB Ramps & San Bernardino Avenue





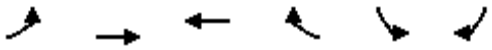
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	3	161	69	3	7	7
Future Volume (vph)	3	161	69	3	7	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.995			0.850
Flt Protected		0.999			0.950	
Satd. Flow (prot)	0	1861	1853	0	1770	1583
Flt Permitted		0.999			0.950	
Satd. Flow (perm)	0	1861	1853	0	1770	1583
Link Speed (mph)		30	30		30	
Link Distance (ft)		1636	441		315	
Travel Time (s)		37.2	10.0		7.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	3	175	75	3	8	8
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	178	78	0	8	8
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 20.9%		ICU Level of Service A	
Analysis Period (min) 15			



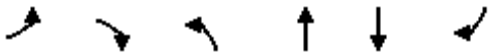
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	168	72	11	27	0
Future Volume (vph)	0	168	72	11	27	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.982			
Flt Protected					0.950	
Satd. Flow (prot)	0	1863	1829	0	1770	0
Flt Permitted					0.950	
Satd. Flow (perm)	0	1863	1829	0	1770	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		441	580		365	
Travel Time (s)		10.0	13.2		8.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	183	78	12	29	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	183	90	0	29	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 18.8%		ICU Level of Service A	
Analysis Period (min) 15			



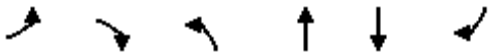
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	195	83	6	14	0
Future Volume (vph)	0	195	83	6	14	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.990			
Flt Protected					0.950	
Satd. Flow (prot)	0	1863	1844	0	1770	1863
Flt Permitted					0.950	
Satd. Flow (perm)	0	1863	1844	0	1770	1863
Link Speed (mph)		30	30		30	
Link Distance (ft)		580	300		152	
Travel Time (s)		13.2	6.8		3.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	212	90	7	15	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	212	97	0	15	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 20.3%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	933	464	0
Future Volume (vph)	0	0	0	933	464	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	0	1863	0	1863	1863	0
Flt Permitted						
Satd. Flow (perm)	0	1863	0	1863	1863	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	317			310	6285	
Travel Time (s)	7.2			7.0	142.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	1014	504	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	1014	504	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

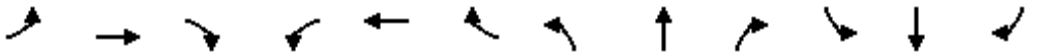
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 52.4%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	27	0	792	791	0
Future Volume (vph)	0	27	0	792	791	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	0.95	1.00	1.00
Frt		0.865				
Flt Protected						
Satd. Flow (prot)	0	1611	0	3539	1863	0
Flt Permitted						
Satd. Flow (perm)	0	1611	0	3539	1863	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	368			290	460	
Travel Time (s)	8.4			6.6	10.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	29	0	861	860	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	29	0	861	860	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 51.6%		ICU Level of Service A	
Analysis Period (min) 15			

EXISTING PLUS AMBIENT GROWTH PLUS PROJECT CONDITIONS

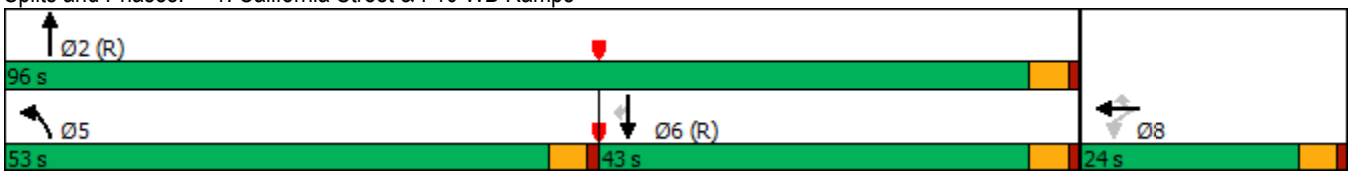


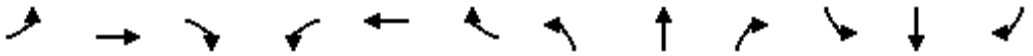
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	233	3	133	600	565	0	0	558	711
Future Volume (vph)	0	0	0	233	3	133	600	565	0	0	558	711
Ideal Flow (vphpl)	1900	1900	1900	1700	1800	1800	1700	1800	1900	1900	1800	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.91	1.00
Frt						0.850						0.850
Flt Protected					0.953		0.950					
Satd. Flow (prot)	0	0	0	0	1715	1530	1615	3420	0	0	4914	1615
Flt Permitted					0.953		0.950					
Satd. Flow (perm)	0	0	0	0	1715	1530	1615	3420	0	0	4914	1615
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						140						407
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1502			1273			312			1245	
Travel Time (s)		34.1			28.9			7.1			28.3	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor	95%	95%	95%	100%	100%	100%	100%	100%	95%	95%	100%	100%
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	0	0	0	245	3	140	632	595	0	0	587	748
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	248	140	632	595	0	0	587	748
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.15	1.07	1.07	1.15	1.07	1.00	1.00	1.07	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors				1	1	1	1	1			1	1
Detector Template				Left	Thru	Right	Left	Thru			Thru	Right
Leading Detector (ft)				20	100	20	20	100			100	20
Trailing Detector (ft)				0	0	0	0	0			0	0
Detector 1 Position(ft)				0	0	0	0	0			0	0
Detector 1 Size(ft)				20	100	20	20	100			100	20
Detector 1 Type				Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)				0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 1 Queue (s)				0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 1 Delay (s)				0.0	0.0	0.0	0.0	0.0			0.0	0.0
Turn Type				Perm	NA	Perm	Prot	NA			NA	Perm
Protected Phases					8		5	2			6	
Permitted Phases				8		8						6
Detector Phase				8	8	8	5	2			6	6
Switch Phase												
Minimum Initial (s)				5.0	5.0	5.0	5.0	5.0			5.0	5.0
Minimum Split (s)				22.5	22.5	22.5	9.5	22.5			22.5	22.5
Total Split (s)				24.0	24.0	24.0	53.0	96.0			43.0	43.0
Total Split (%)				20.0%	20.0%	20.0%	44.2%	80.0%			35.8%	35.8%

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Maximum Green (s)				19.5	19.5	19.5	48.5	91.5			38.5	38.5
Yellow Time (s)				3.5	3.5	3.5	3.5	3.5			3.5	3.5
All-Red Time (s)				1.0	1.0	1.0	1.0	1.0			1.0	1.0
Lost Time Adjust (s)					-0.5	-0.5	-0.5	-0.5			-0.5	-0.5
Total Lost Time (s)					4.0	4.0	4.0	4.0			4.0	4.0
Lead/Lag							Lead				Lag	Lag
Lead-Lag Optimize?							Yes				Yes	Yes
Vehicle Extension (s)				3.0	3.0	3.0	3.0	3.0			3.0	3.0
Recall Mode				None	None	None	None	C-Max			C-Max	C-Max
Walk Time (s)				7.0	7.0	7.0		7.0			7.0	7.0
Flash Dont Walk (s)				11.0	11.0	11.0		11.0			11.0	11.0
Pedestrian Calls (#/hr)				0	0	0		0			0	0
Act Effct Green (s)					19.4	19.4	48.3	92.6			40.2	40.2
Actuated g/C Ratio					0.16	0.16	0.40	0.77			0.34	0.34
v/c Ratio					0.90	0.38	0.97	0.23			0.36	0.92
Control Delay					82.5	10.4	64.8	4.1			31.2	35.7
Queue Delay					0.0	0.0	44.2	0.9			0.0	0.0
Total Delay					82.5	10.4	109.0	5.0			31.2	35.7
LOS					F	B	F	A			C	D
Approach Delay					56.5			58.5			33.7	
Approach LOS					E			E			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.97			
Intersection Signal Delay: 47.0		Intersection LOS: D	
Intersection Capacity Utilization 143.9%		ICU Level of Service H	
Analysis Period (min) 15			

Splits and Phases: 1: California Street & I-10 WB Ramps



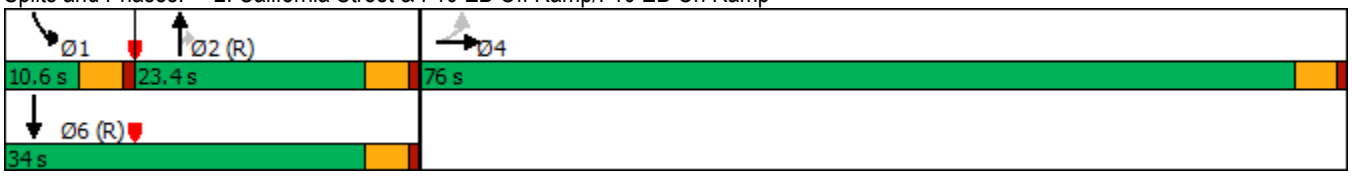


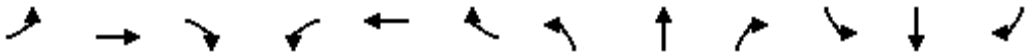
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	556	4	498	0	0	0	0	679	300	77	506	0
Future Volume (vph)	556	4	498	0	0	0	0	679	300	77	506	0
Ideal Flow (vphpl)	1700	1800	1800	1900	1900	1900	1900	1800	1800	1700	1800	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	1.00	1.00	0.95	1.00
Frt		0.936							0.850			
Flt Protected		0.974								0.950		
Satd. Flow (prot)	0	1641	0	0	0	0	0	4914	1530	1615	3420	0
Flt Permitted		0.974								0.950		
Satd. Flow (perm)	0	1641	0	0	0	0	0	4914	1530	1615	3420	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		81							316			
Link Speed (mph)		30			30			45			45	
Link Distance (ft)		1514			1294			812			312	
Travel Time (s)		34.4			29.4			12.3			4.7	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	585	4	524	0	0	0	0	715	316	81	533	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1113	0	0	0	0	0	715	316	81	533	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.15	1.07	1.07	1.00	1.00	1.00	1.00	1.07	1.07	1.15	1.07	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1						1	1	1	1	
Detector Template	Left	Thru						Thru	Right	Left	Thru	
Leading Detector (ft)	20	100						100	20	20	100	
Trailing Detector (ft)	0	0						0	0	0	0	
Detector 1 Position(ft)	0	0						0	0	0	0	
Detector 1 Size(ft)	20	100						100	20	20	100	
Detector 1 Type	Cl+Ex	Cl+Ex						Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0						0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0						0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0						0.0	0.0	0.0	0.0	
Turn Type	Perm	NA						NA	Perm	Prot	NA	
Protected Phases		4						2		1	6	
Permitted Phases	4								2			
Detector Phase	4	4						2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0						5.0	5.0	5.0	5.0	
Minimum Split (s)	22.5	22.5						22.5	22.5	9.5	22.5	
Total Split (s)	76.0	76.0						23.4	23.4	10.6	34.0	
Total Split (%)	69.1%	69.1%						21.3%	21.3%	9.6%	30.9%	
Maximum Green (s)	71.5	71.5						18.9	18.9	6.1	29.5	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Yellow Time (s)	3.5	3.5						3.5	3.5	3.5	3.5	
All-Red Time (s)	1.0	1.0						1.0	1.0	1.0	1.0	
Lost Time Adjust (s)		-0.5						-0.5	-0.5	-0.5	-0.5	
Total Lost Time (s)		4.0						4.0	4.0	4.0	4.0	
Lead/Lag								Lag	Lag	Lead		
Lead-Lag Optimize?								Yes	Yes	Yes		
Vehicle Extension (s)	3.0	3.0						3.0	3.0	3.0	3.0	
Recall Mode	None	None						C-Max	C-Max	None	C-Max	
Walk Time (s)	7.0	7.0						7.0	7.0		7.0	
Flash Dont Walk (s)	11.0	11.0						11.0	11.0		11.0	
Pedestrian Calls (#/hr)	0	0						0	0		0	
Act Effct Green (s)		72.0						19.4	19.4	6.6	30.0	
Actuated g/C Ratio		0.65						0.18	0.18	0.06	0.27	
v/c Ratio		1.01						0.83	0.60	0.84	0.57	
Control Delay		48.5						52.8	9.6	108.8	37.3	
Queue Delay		0.0						0.0	0.0	0.0	3.0	
Total Delay		48.5						52.8	9.6	108.8	40.3	
LOS		D						D	A	F	D	
Approach Delay		48.5						39.6			49.4	
Approach LOS		D						D			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 110			
Actuated Cycle Length: 110			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 110			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.01			
Intersection Signal Delay: 45.4		Intersection LOS: D	
Intersection Capacity Utilization 147.9%		ICU Level of Service H	
Analysis Period (min) 15			

Splits and Phases: 2: California Street & I-10 EB Off Ramp/I-10 EB On Ramp



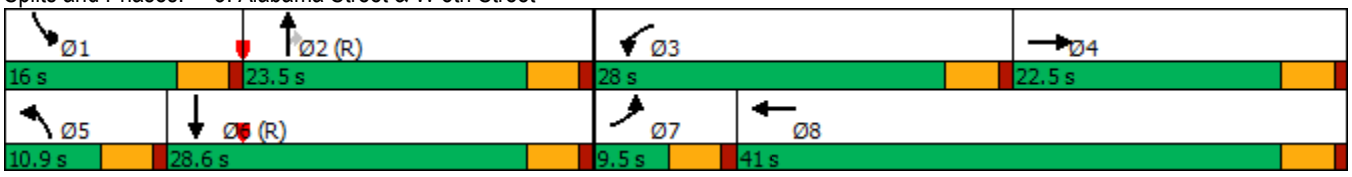


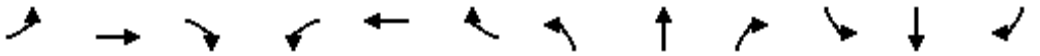
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	15	229	46	400	671	116	50	176	217	176	457	50
Future Volume (vph)	15	229	46	400	671	116	50	176	217	176	457	50
Ideal Flow (vphpl)	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1900
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	1.00	1.00	0.95	0.95
Frt		0.975			0.978				0.850		0.985	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1615	3334	0	1615	3345	0	1615	3420	1530	1615	3369	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1615	3334	0	1615	3345	0	1615	3420	1530	1615	3369	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		23			26				236		13	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1908			2750			621			1649	
Travel Time (s)		43.4			62.5			14.1			37.5	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor	97%	97%	97%	97%	97%	97%	97%	97%	97%	97%	97%	97%
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	15	234	47	408	685	118	51	180	222	180	467	51
Shared Lane Traffic (%)												
Lane Group Flow (vph)	15	281	0	408	803	0	51	180	222	180	518	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.15	1.07	1.07	1.15	1.07	1.07	1.15	1.07	1.07	1.15	1.07	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	1	1	1	1	
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Size(ft)	20	100		20	100		20	100	20	20	100	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Turn Type	Prot	NA		Prot	NA		Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases									2			
Detector Phase	7	4		3	8		5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	9.5	22.5		9.5	22.5		9.5	22.5	22.5	9.5	22.5	
Total Split (s)	9.5	22.5		28.0	41.0		10.9	23.5	23.5	16.0	28.6	
Total Split (%)	10.6%	25.0%		31.1%	45.6%		12.1%	26.1%	26.1%	17.8%	31.8%	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Maximum Green (s)	5.0	18.0		23.5	36.5		6.4	19.0	19.0	11.5	24.1	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	-0.5	-0.5		-0.5	-0.5		-0.5	-0.5	0.0	-0.5	-0.5	
Total Lost Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.5	4.0	4.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None		None	C-Max	C-Max	None	C-Max	
Walk Time (s)		7.0			7.0			7.0	7.0		7.0	
Flash Dont Walk (s)		11.0			11.0			11.0	11.0		11.0	
Pedestrian Calls (#/hr)		0			0			0	0		0	
Act Effct Green (s)	5.5	13.0		23.9	39.1		8.0	22.6	22.1	14.5	33.3	
Actuated g/C Ratio	0.06	0.14		0.27	0.43		0.09	0.25	0.25	0.16	0.37	
v/c Ratio	0.15	0.56		0.95	0.55		0.36	0.21	0.40	0.69	0.41	
Control Delay	43.8	36.7		67.2	20.0		45.6	28.8	6.0	51.4	23.9	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	43.8	36.7		67.2	20.0		45.6	28.8	6.0	51.4	23.9	
LOS	D	D		E	C		D	C	A	D	C	
Approach Delay		37.1			35.9			19.5			31.0	
Approach LOS		D			D			B			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 90			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.95			
Intersection Signal Delay: 32.0		Intersection LOS: C	
Intersection Capacity Utilization 64.1%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 3: Alabama Street & W 5th Street



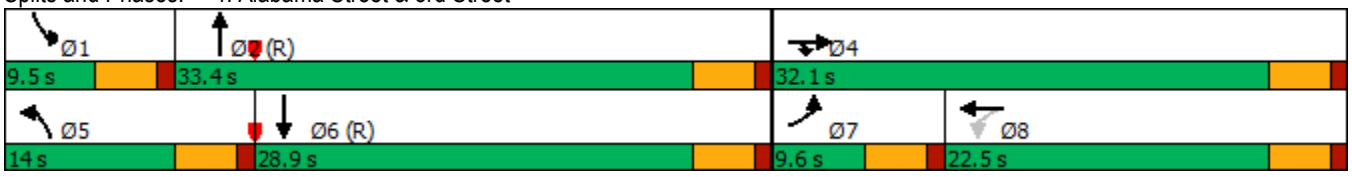


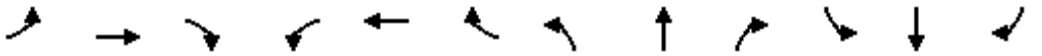
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	111	3	232	4	4	29	182	295	5	16	685	226
Future Volume (vph)	111	3	232	4	4	29	182	295	5	16	685	226
Ideal Flow (vphpl)	1600	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1900
Lane Util. Factor	0.97	1.00	1.00	0.95	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Frt			0.850		0.884			0.997			0.963	
Flt Protected	0.950				0.994		0.950			0.950		
Satd. Flow (prot)	2949	1800	1530	0	3005	0	1615	3410	0	1615	3293	0
Flt Permitted	0.950				0.923		0.950			0.950		
Satd. Flow (perm)	2949	1800	1530	0	2790	0	1615	3410	0	1615	3293	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			220		27			3			64	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1074			950			607			621	
Travel Time (s)		24.4			21.6			13.8			14.1	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor	90%	90%	90%	90%	90%	90%	90%	90%	90%	90%	90%	90%
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	105	3	220	4	4	27	172	279	5	15	649	214
Shared Lane Traffic (%)												
Lane Group Flow (vph)	105	3	220	0	35	0	172	284	0	15	863	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.24	1.07	1.07	1.15	1.07	1.07	1.15	1.07	1.07	1.15	1.07	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	1	1	1		1	1		1	1	
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100	20	20	100		20	100		20	100	
Trailing Detector (ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Position(ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Size(ft)	20	100	20	20	100		20	100		20	100	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	Prot	NA	Prot	Perm	NA		Prot	NA		Prot	NA	
Protected Phases	7	4	4		8		5	2		1	6	
Permitted Phases				8								
Detector Phase	7	4	4	8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	9.5	22.5	22.5	22.5	22.5		9.5	22.5		9.5	22.5	
Total Split (s)	9.6	32.1	32.1	22.5	22.5		14.0	33.4		9.5	28.9	
Total Split (%)	12.8%	42.8%	42.8%	30.0%	30.0%		18.7%	44.5%		12.7%	38.5%	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Maximum Green (s)	5.1	27.6	27.6	18.0	18.0		9.5	28.9		5.0	24.4	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	-0.5	-0.5	-0.5		-0.5		-0.5	-0.5		-0.5	-0.5	
Total Lost Time (s)	4.0	4.0	4.0		4.0		4.0	4.0		4.0	4.0	
Lead/Lag	Lead			Lag	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes			Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None	None	None	None		None	C-Max		None	C-Max	
Walk Time (s)		7.0	7.0	7.0	7.0			7.0			7.0	
Flash Dont Walk (s)		11.0	11.0	11.0	11.0			11.0			11.0	
Pedestrian Calls (#/hr)		0	0	0	0			0			0	
Act Effct Green (s)	5.7	12.2	12.2		6.5		14.4	52.3		6.8	36.4	
Actuated g/C Ratio	0.08	0.16	0.16		0.09		0.19	0.70		0.09	0.49	
v/c Ratio	0.47	0.01	0.51		0.13		0.55	0.12		0.10	0.53	
Control Delay	40.6	22.7	8.4		17.0		33.8	5.5		32.4	15.6	
Queue Delay	0.0	0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Delay	40.6	22.7	8.4		17.0		33.8	5.5		32.4	15.6	
LOS	D	C	A		B		C	A		C	B	
Approach Delay		18.8			17.0			16.2			15.9	
Approach LOS		B			B			B			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 75			
Actuated Cycle Length: 75			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 70			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.55			
Intersection Signal Delay: 16.6		Intersection LOS: B	
Intersection Capacity Utilization 55.0%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 4: Alabama Street & 3rd Street





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	0	4	33	0	30	11	424	28	36	868	15
Future Volume (vph)	5	0	4	33	0	30	11	424	28	36	868	15
Ideal Flow (vphpl)	1700	1800	1800	1700	1900	1800	1900	1800	1800	1700	1900	1900
Storage Length (ft)	0		0	0		0	150		0	150		0
Storage Lanes	1		0	1		0	1		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91
Frt		0.850			0.850				0.850		0.997	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1615	1530	0	1615	1615	0	1805	1800	1530	1615	5171	0
Flt Permitted				0.950			0.351			0.950		
Satd. Flow (perm)	1700	1530	0	1615	1615	0	667	1800	1530	1615	5171	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		352			488				95		4	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		416			1617			460			308	
Travel Time (s)		9.5			36.8			10.5			7.0	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor	82%	82%	82%	82%	82%	82%	82%	82%	82%	82%	82%	82%
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	4	0	3	28	0	26	9	366	24	31	749	13
Shared Lane Traffic (%)												
Lane Group Flow (vph)	4	3	0	28	26	0	9	366	24	31	762	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.15	1.07	1.07	1.15	1.00	1.07	1.00	1.07	1.07	1.15	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	1	1	1	1	
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Size(ft)	20	100		20	100		20	100	20	20	100	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Turn Type	Perm	NA		Prot	NA		Perm	NA	Perm	Prot	NA	
Protected Phases		4		3	8			2		1	6	
Permitted Phases	4						2		2			
Detector Phase	4	4		3	8		2	2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	22.5	22.5		22.5	22.5		22.5	22.5	22.5	9.5	22.5	
Total Split (s)	22.6	22.6		23.0	45.6		63.2	63.2	63.2	11.2	74.4	
Total Split (%)	18.8%	18.8%		19.2%	38.0%		52.7%	52.7%	52.7%	9.3%	62.0%	
Maximum Green (s)	18.1	18.1		18.5	41.1		58.7	58.7	58.7	6.7	69.9	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	-0.5	-0.5		-0.5	0.0		-0.5	-0.5	-0.5	-0.5	-0.5	
Total Lost Time (s)	4.0	4.0		4.0	4.5		4.0	4.0	4.0	4.0	4.0	
Lead/Lag	Lag	Lag		Lead			Lag	Lag	Lag	Lead		
Lead-Lag Optimize?	Yes	Yes		Yes			Yes	Yes	Yes	Yes		
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None		C-Max	C-Max	C-Max	None	C-Max	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0	7.0		7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0	11.0		11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0	0		0	
Act Effct Green (s)	6.6	6.6		8.1	9.8		99.2	99.2	99.2	8.3	107.3	
Actuated g/C Ratio	0.06	0.06		0.07	0.08		0.83	0.83	0.83	0.07	0.89	
v/c Ratio	0.04	0.01		0.26	0.04		0.02	0.25	0.02	0.28	0.16	
Control Delay	54.2	0.0		58.1	0.2		6.6	5.6	0.0	58.5	1.8	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	54.2	0.0		58.1	0.2		6.6	5.6	0.0	58.5	1.8	
LOS	D	A		E	A		A	A	A	E	A	
Approach Delay		31.0			30.2			5.3			4.0	
Approach LOS		C			C			A			A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green			
Natural Cycle: 80			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.28			
Intersection Signal Delay: 5.7		Intersection LOS: A	
Intersection Capacity Utilization 42.2%		ICU Level of Service A	
Analysis Period (min) 15			

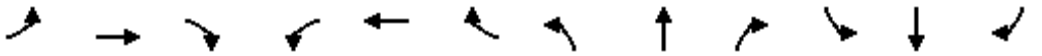
Splits and Phases: 5: Alabama Street & Riverbluff Avenue

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	25	3	13	10	0	0	63	438	15	3	798	114
Future Volume (vph)	25	3	13	10	0	0	63	438	15	3	798	114
Ideal Flow (vphpl)	1700	1800	1800	1700	1800	1800	1700	1800	1900	1700	1900	1900
Storage Length (ft)	0		0	0		0	200		150	0		0
Storage Lanes	0		0	0		0	1		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.959						0.995				0.850
Flt Protected		0.970			0.950		0.950			0.950		
Satd. Flow (prot)	0	1674	0	0	1710	0	1615	1791	0	1615	1900	1615
Flt Permitted		0.808			0.949		0.950			0.950		
Satd. Flow (perm)	0	1395	0	0	1708	0	1615	1791	0	1615	1900	1615
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		11						3				101
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		300			825			1376			290	
Travel Time (s)		6.8			18.8			31.3			6.6	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor	84%	84%	84%	84%	84%	84%	84%	84%	84%	84%	84%	84%
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	22	3	11	9	0	0	56	387	13	3	706	101
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	36	0	0	9	0	56	400	0	3	706	101
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.15	1.07	1.07	1.15	1.07	1.07	1.15	1.07	1.00	1.15	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	1		1	1	1
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	Right
Leading Detector (ft)	20	100		20	100		20	100		20	100	20
Trailing Detector (ft)	0	0		0	0		0	0		0	0	0
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	0
Detector 1 Size(ft)	20	100		20	100		20	100		20	100	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								6
Detector Phase	4	4		8	8		5	2		1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	5.0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	22.5	22.5		22.5	22.5		9.5	22.5		9.5	22.5	22.5
Total Split (s)	22.6	22.6		22.6	22.6		10.0	57.8		9.6	57.4	57.4
Total Split (%)	25.1%	25.1%		25.1%	25.1%		11.1%	64.2%		10.7%	63.8%	63.8%
Maximum Green (s)	18.1	18.1		18.1	18.1		5.5	53.3		5.1	52.9	52.9
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)		-0.5			-0.5		-0.5	-0.5		-0.5	-0.5	0.0
Total Lost Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	4.5
Lead/Lag							Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	C-Max
Walk Time (s)	7.0	7.0		7.0	7.0			7.0			7.0	7.0
Flash Dont Walk (s)	11.0	11.0		11.0	11.0			11.0			11.0	11.0
Pedestrian Calls (#/hr)	0	0		0	0			0			0	0
Act Effct Green (s)		7.7			7.7		9.1	77.8		6.3	68.0	67.6
Actuated g/C Ratio		0.09			0.09		0.10	0.86		0.07	0.76	0.75
v/c Ratio		0.28			0.06		0.34	0.26		0.03	0.49	0.08
Control Delay		34.5			37.4		42.6	3.1		39.3	8.4	1.6
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	0.0
Total Delay		34.5			37.4		42.6	3.1		39.3	8.4	1.6
LOS		C			D		D	A		D	A	A
Approach Delay		34.5			37.4			8.0			7.7	
Approach LOS		C			D			A			A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 90			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 65			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.49			
Intersection Signal Delay: 8.7		Intersection LOS: A	
Intersection Capacity Utilization 53.6%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 6: Alabama Street & Palmetto Avenue

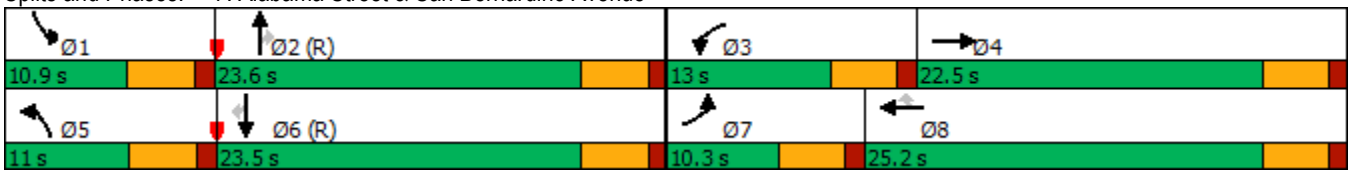


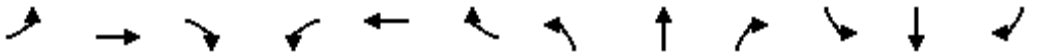
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	44	133	31	177	370	125	117	241	78	58	437	83
Future Volume (vph)	44	133	31	177	370	125	117	241	78	58	437	83
Ideal Flow (vphpl)	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1900
Storage Length (ft)	100		0	0		0	170		0	260		500
Storage Lanes	1		0	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt		0.972				0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1615	3324	0	1615	3420	1530	1615	3420	1530	1615	3420	1615
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1615	3324	0	1615	3420	1530	1615	3420	1530	1615	3420	1615
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		29				164			164			164
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		5507			2072			2636			1317	
Travel Time (s)		125.2			47.1			59.9			29.9	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor	90%	90%	90%	90%	90%	90%	90%	90%	90%	90%	90%	90%
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	42	126	29	168	351	118	111	228	74	55	414	79
Shared Lane Traffic (%)												
Lane Group Flow (vph)	42	155	0	168	351	118	111	228	74	55	414	79
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.15	1.07	1.07	1.15	1.07	1.07	1.15	1.07	1.07	1.15	1.07	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1	1	1	1	1	1	1	1
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100		20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0		0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0		0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	100		20	100	20	20	100	20	20	100	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8			2			6
Detector Phase	7	4		3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	9.5	22.5		9.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5	22.5
Total Split (s)	10.3	22.5		13.0	25.2	25.2	11.0	23.6	23.6	10.9	23.5	23.5
Total Split (%)	14.7%	32.1%		18.6%	36.0%	36.0%	15.7%	33.7%	33.7%	15.6%	33.6%	33.6%
Maximum Green (s)	5.8	18.0		8.5	20.7	20.7	6.5	19.1	19.1	6.4	19.0	19.0
Yellow Time (s)	3.5	3.5		3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	-0.5	-0.5		-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	0.0
Total Lost Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.5
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Walk Time (s)		7.0			7.0	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)		11.0			11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0			0	0		0	0		0	0
Act Effct Green (s)	6.2	10.5		9.0	17.4	17.4	10.1	30.5	30.5	8.2	26.6	26.1
Actuated g/C Ratio	0.09	0.15		0.13	0.25	0.25	0.14	0.44	0.44	0.12	0.38	0.37
v/c Ratio	0.29	0.30		0.81	0.41	0.24	0.48	0.15	0.10	0.29	0.32	0.11
Control Delay	35.5	21.7		61.1	24.2	2.9	34.4	15.4	0.3	31.8	18.6	0.3
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	35.5	21.7		61.1	24.2	2.9	34.4	15.4	0.3	31.8	18.6	0.3
LOS	D	C		E	C	A	C	B	A	C	B	A
Approach Delay		24.6			30.0			17.8			17.3	
Approach LOS		C			C			B			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 70			
Actuated Cycle Length: 70			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 70			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.81			
Intersection Signal Delay: 22.7		Intersection LOS: C	
Intersection Capacity Utilization 45.6%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 7: Alabama Street & San Bernardino Avenue



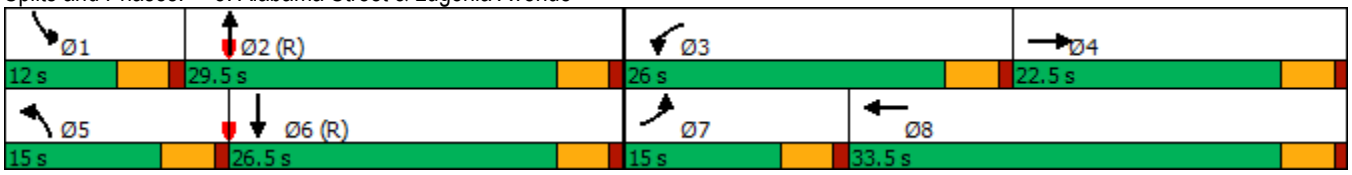


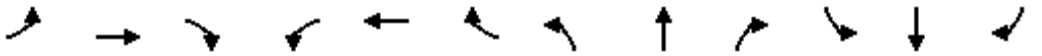
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	74	73	43	201	285	48	82	379	110	46	450	122
Future Volume (vph)	74	73	43	201	285	48	82	379	110	46	450	122
Ideal Flow (vphpl)	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1900
Storage Length (ft)	220		0	0		0	200		0	180		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.91	0.91
Frt		0.944			0.979			0.966			0.968	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1615	3228	0	1615	3348	0	1615	3304	0	1615	4757	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1615	3228	0	1615	3348	0	1615	3304	0	1615	4757	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		41			22			41			73	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		5332			3791			1051			2636	
Travel Time (s)		121.2			86.2			23.9			59.9	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor	90%	90%	90%	90%	90%	90%	90%	90%	90%	90%	90%	90%
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	70	69	41	190	270	45	78	359	104	44	426	116
Shared Lane Traffic (%)												
Lane Group Flow (vph)	70	110	0	190	315	0	78	463	0	44	542	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.15	1.07	1.07	1.15	1.07	1.07	1.15	1.07	1.07	1.15	1.07	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	1		1	1	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	100		20	100		20	100		20	100	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	9.5	22.5		9.5	22.5		9.5	22.5		9.5	22.5	
Total Split (s)	15.0	22.5		26.0	33.5		15.0	29.5		12.0	26.5	
Total Split (%)	16.7%	25.0%		28.9%	37.2%		16.7%	32.8%		13.3%	29.4%	
Maximum Green (s)	10.5	18.0		21.5	29.0		10.5	25.0		7.5	22.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	-0.5	-0.5		-0.5	-0.5		-0.5	-0.5		-0.5	-0.5	
Total Lost Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Dont Walk (s)		11.0			11.0			11.0			11.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	9.2	7.9		16.2	15.0		10.2	47.6		8.4	43.7	
Actuated g/C Ratio	0.10	0.09		0.18	0.17		0.11	0.53		0.09	0.49	
v/c Ratio	0.42	0.34		0.65	0.55		0.43	0.26		0.29	0.23	
Control Delay	45.4	27.6		44.4	34.9		43.6	14.4		42.3	14.9	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	45.4	27.6		44.4	34.9		43.6	14.4		42.3	14.9	
LOS	D	C		D	C		D	B		D	B	
Approach Delay		34.5			38.5			18.6			16.9	
Approach LOS		C			D			B			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 90			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 70			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.65			
Intersection Signal Delay: 25.2		Intersection LOS: C	
Intersection Capacity Utilization 46.2%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 8: Alabama Street & Lugonia Avenue



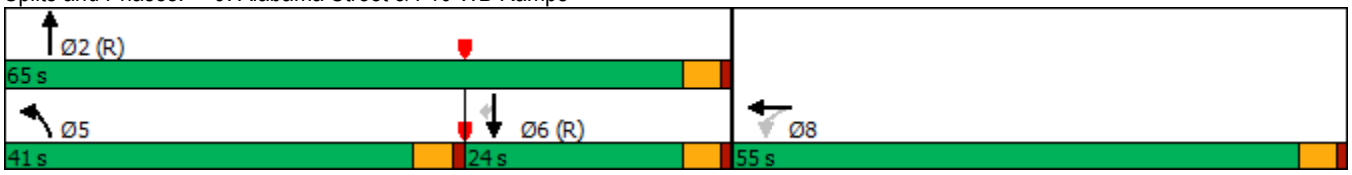


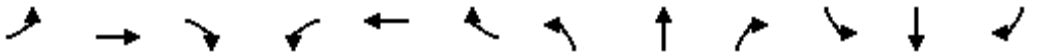
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	278	329	336	421	627	0	0	332	229
Future Volume (vph)	0	0	0	278	329	336	421	627	0	0	332	229
Ideal Flow (vphpl)	1900	1900	1900	1700	1800	1800	1700	1800	1900	1900	1800	1900
Storage Length (ft)	0		0	0		0	150		0	0		0
Storage Lanes	0		0	0		0	1		0	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.95	1.00	0.95	1.00	1.00	0.95	1.00
Frt					0.947							0.850
Flt Protected					0.985		0.950					
Satd. Flow (prot)	0	0	0	0	3190	0	1615	3420	0	0	3420	1615
Flt Permitted					0.985		0.950					
Satd. Flow (perm)	0	0	0	0	3190	0	1615	3420	0	0	3420	1615
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					109							227
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		918			1093			591			1051	
Travel Time (s)		20.9			24.8			13.4			23.9	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor	94%	94%	94%	94%	94%	94%	94%	94%	94%	94%	94%	94%
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	0	0	0	275	326	332	417	620	0	0	329	227
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	933	0	417	620	0	0	329	227
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.15	1.07	1.07	1.15	1.07	1.00	1.00	1.07	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors				1	1		1	1			1	1
Detector Template				Left	Thru		Left	Thru			Thru	Right
Leading Detector (ft)				20	100		20	100			100	20
Trailing Detector (ft)				0	0		0	0			0	0
Detector 1 Position(ft)				0	0		0	0			0	0
Detector 1 Size(ft)				20	100		20	100			100	20
Detector 1 Type				Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)				0.0	0.0		0.0	0.0			0.0	0.0
Detector 1 Queue (s)				0.0	0.0		0.0	0.0			0.0	0.0
Detector 1 Delay (s)				0.0	0.0		0.0	0.0			0.0	0.0
Turn Type				Perm	NA		Prot	NA			NA	Perm
Protected Phases					8		5	2			6	
Permitted Phases				8								6
Detector Phase				8	8		5	2			6	6
Switch Phase												
Minimum Initial (s)				5.0	5.0		5.0	5.0			5.0	5.0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)				22.5	22.5		9.5	22.5			22.5	22.5
Total Split (s)				55.0	55.0		41.0	65.0			24.0	24.0
Total Split (%)				45.8%	45.8%		34.2%	54.2%			20.0%	20.0%
Maximum Green (s)				50.5	50.5		36.5	60.5			19.5	19.5
Yellow Time (s)				3.5	3.5		3.5	3.5			3.5	3.5
All-Red Time (s)				1.0	1.0		1.0	1.0			1.0	1.0
Lost Time Adjust (s)					-0.5		-0.5	-0.5			-0.5	-0.5
Total Lost Time (s)					4.0		4.0	4.0			4.0	4.0
Lead/Lag							Lead				Lag	Lag
Lead-Lag Optimize?							Yes				Yes	Yes
Vehicle Extension (s)				3.0	3.0		3.0	3.0			3.0	3.0
Recall Mode				None	None		None	C-Max			C-Max	C-Max
Walk Time (s)				7.0	7.0			7.0			7.0	7.0
Flash Dont Walk (s)				11.0	11.0			11.0			11.0	11.0
Pedestrian Calls (#/hr)				0	0			0			0	0
Act Effct Green (s)					41.3		35.4	70.7			31.3	31.3
Actuated g/C Ratio					0.34		0.30	0.59			0.26	0.26
v/c Ratio					0.80		0.88	0.31			0.37	0.39
Control Delay					36.4		71.4	12.8			40.6	7.7
Queue Delay					0.0		0.0	0.0			0.0	0.0
Total Delay					36.4		71.4	12.8			40.6	7.7
LOS					D		E	B			D	A
Approach Delay					36.4			36.4			27.2	
Approach LOS					D			D			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 80			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.88			
Intersection Signal Delay: 34.3		Intersection LOS: C	
Intersection Capacity Utilization 75.6%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 9: Alabama Street & I-10 WB Ramps



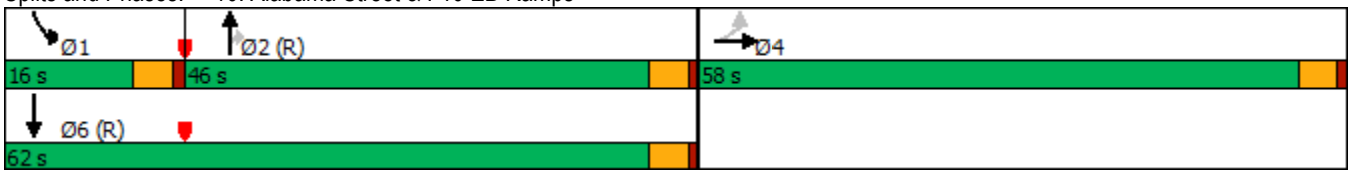


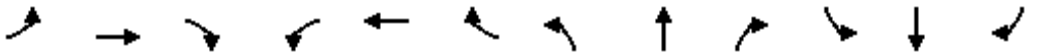
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	391	7	544	0	0	0	0	657	102	57	558	0
Future Volume (vph)	391	7	544	0	0	0	0	657	102	57	558	0
Ideal Flow (vphpl)	1700	1800	1800	1900	1900	1900	1900	1800	1800	1700	1900	1900
Storage Length (ft)	0		0	0		0	0		0	150		0
Storage Lanes	0		0	0		0	0		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.95	0.95	0.95	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt		0.913							0.850			
Flt Protected		0.980								0.950		
Satd. Flow (prot)	0	3060	0	0	0	0	0	3420	1530	1615	3610	0
Flt Permitted		0.980								0.950		
Satd. Flow (perm)	0	3060	0	0	0	0	0	3420	1530	1615	3610	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		266							96			
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		898			623			1369			591	
Travel Time (s)		20.4			14.2			31.1			13.4	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor	89%	89%	89%	89%	89%	89%	89%	89%	89%	89%	89%	89%
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	366	7	510	0	0	0	0	616	96	53	523	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	883	0	0	0	0	0	616	96	53	523	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.15	1.07	1.07	1.00	1.00	1.00	1.00	1.07	1.07	1.15	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1						1	1	1	1	
Detector Template	Left	Thru						Thru	Right	Left	Thru	
Leading Detector (ft)	20	100						100	20	20	100	
Trailing Detector (ft)	0	0						0	0	0	0	
Detector 1 Position(ft)	0	0						0	0	0	0	
Detector 1 Size(ft)	20	100						100	20	20	100	
Detector 1 Type	Cl+Ex	Cl+Ex						Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0						0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0						0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0						0.0	0.0	0.0	0.0	
Turn Type	Perm	NA						NA	Perm	Prot	NA	
Protected Phases		4						2		1	6	
Permitted Phases	4								2			
Detector Phase	4	4						2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0						5.0	5.0	5.0	5.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	22.5	22.5						22.5	22.5	9.5	22.5	
Total Split (s)	58.0	58.0						46.0	46.0	16.0	62.0	
Total Split (%)	48.3%	48.3%						38.3%	38.3%	13.3%	51.7%	
Maximum Green (s)	53.5	53.5						41.5	41.5	11.5	57.5	
Yellow Time (s)	3.5	3.5						3.5	3.5	3.5	3.5	
All-Red Time (s)	1.0	1.0						1.0	1.0	1.0	1.0	
Lost Time Adjust (s)		-0.5						-0.5	-0.5	-0.5	-0.5	
Total Lost Time (s)		4.0						4.0	4.0	4.0	4.0	
Lead/Lag								Lag	Lag	Lead		
Lead-Lag Optimize?								Yes	Yes	Yes		
Vehicle Extension (s)	3.0	3.0						3.0	3.0	3.0	3.0	
Recall Mode	None	None						C-Max	C-Max	None	C-Max	
Walk Time (s)	7.0	7.0						7.0	7.0		7.0	
Flash Dont Walk (s)	11.0	11.0						11.0	11.0		11.0	
Pedestrian Calls (#/hr)	0	0						0	0		0	
Act Effct Green (s)		36.0						64.3	64.3	9.8	76.0	
Actuated g/C Ratio		0.30						0.54	0.54	0.08	0.63	
v/c Ratio		0.80						0.34	0.11	0.40	0.23	
Control Delay		31.9						18.9	4.5	68.1	12.5	
Queue Delay		0.0						0.0	0.0	0.0	0.0	
Total Delay		31.9						18.9	4.5	68.1	12.5	
LOS		C						B	A	E	B	
Approach Delay		31.9						16.9			17.6	
Approach LOS		C						B			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 55			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.80			
Intersection Signal Delay: 23.2		Intersection LOS: C	
Intersection Capacity Utilization 75.6%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 10: Alabama Street & I-10 EB Ramps



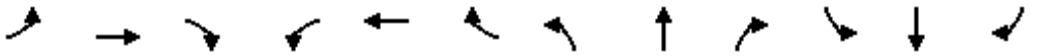


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	289	462	822	1027	0	0	0	0	185	0	205
Future Volume (vph)	0	289	462	822	1027	0	0	0	0	185	0	205
Ideal Flow (vphpl)	1900	1800	1800	1600	1800	1900	1900	1900	1900	1800	1900	1800
Storage Length (ft)	0		220	0		0	0		0	0		0
Storage Lanes	0		1	2		0	0		0	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850									0.850
Flt Protected				0.950							0.950	
Satd. Flow (prot)	0	3420	1530	2949	3420	0	0	0	0	0	1805	1530
Flt Permitted				0.950							0.950	
Satd. Flow (perm)	0	3420	1530	2949	3420	0	0	0	0	0	1805	1530
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			438									162
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		2750			477			659			386	
Travel Time (s)		62.5			10.8			15.0			8.8	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor	95%	95%	95%	95%	95%	95%	95%	95%	95%	95%	95%	95%
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	0	289	462	822	1027	0	0	0	0	185	0	205
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	289	462	822	1027	0	0	0	0	0	185	205
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.07	1.07	1.24	1.07	1.00	1.00	1.00	1.00	1.07	1.00	1.07
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		1	1	1	1					1	1	1
Detector Template		Thru	Right	Left	Thru					Left	Thru	Right
Leading Detector (ft)		100	20	20	100					20	100	20
Trailing Detector (ft)		0	0	0	0					0	0	0
Detector 1 Position(ft)		0	0	0	0					0	0	0
Detector 1 Size(ft)		100	20	20	100					20	100	20
Detector 1 Type		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex					Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)		0.0	0.0	0.0	0.0					0.0	0.0	0.0
Detector 1 Queue (s)		0.0	0.0	0.0	0.0					0.0	0.0	0.0
Detector 1 Delay (s)		0.0	0.0	0.0	0.0					0.0	0.0	0.0
Turn Type		NA	Perm	Prot	NA					Prot	NA	Perm
Protected Phases		4		3	8					1	6	
Permitted Phases			4									6
Detector Phase		4	4	3	8					1	6	6
Switch Phase												
Minimum Initial (s)		5.0	5.0	5.0	5.0					5.0	5.0	5.0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)		22.5	22.5	9.5	22.5					9.5	22.5	22.5
Total Split (s)		38.0	38.0	51.0	89.0					31.0	31.0	31.0
Total Split (%)		31.7%	31.7%	42.5%	74.2%					25.8%	25.8%	25.8%
Maximum Green (s)		33.5	33.5	46.5	84.5					26.5	26.5	26.5
Yellow Time (s)		3.5	3.5	3.5	3.5					3.5	3.5	3.5
All-Red Time (s)		1.0	1.0	1.0	1.0					1.0	1.0	1.0
Lost Time Adjust (s)		-0.5	-0.5	-0.5	-0.5						0.0	-0.5
Total Lost Time (s)		4.0	4.0	4.0	4.0						4.5	4.0
Lead/Lag		Lag	Lag	Lead								
Lead-Lag Optimize?		Yes	Yes	Yes								
Vehicle Extension (s)		3.0	3.0	3.0	3.0					3.0	3.0	3.0
Recall Mode		C-Max	C-Max	None	C-Max					None	Max	Max
Walk Time (s)		7.0	7.0		7.0						7.0	7.0
Flash Dont Walk (s)		11.0	11.0		11.0						11.0	11.0
Pedestrian Calls (#/hr)		0	0		0						0	0
Act Effct Green (s)		41.0	41.0	40.0	85.0						26.5	27.0
Actuated g/C Ratio		0.34	0.34	0.33	0.71						0.22	0.22
v/c Ratio		0.25	0.57	0.84	0.42						185.00	0.44
Control Delay		30.4	7.1	39.8	7.1						84572.2	13.4
Queue Delay		0.0	0.0	0.9	0.6						0.0	0.0
Total Delay		30.4	7.1	40.6	7.7						84572.2	13.4
LOS		C	A	D	A						F	B
Approach Delay		16.1			22.4						40124.6	
Approach LOS		B			C						F	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 82 (68%), Referenced to phase 4:EBT and 8:WBT, Start of Green			
Natural Cycle: 70			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 185.00			
Intersection Signal Delay: 5251.5		Intersection LOS: F	
Intersection Capacity Utilization 75.3%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 11: 210 SB Ramps & W 5th Street



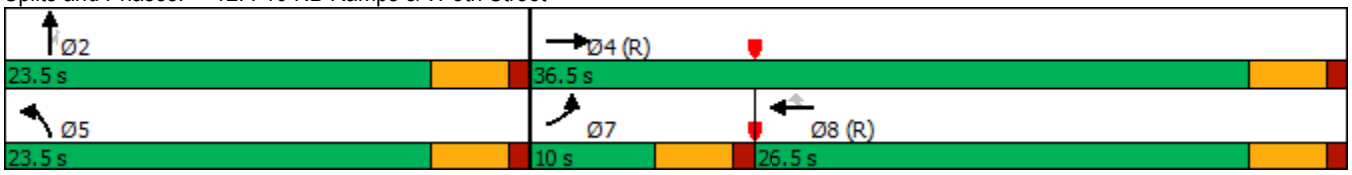
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	69	405	0	0	1430	380	415	3	303	0	0	0
Future Volume (vph)	69	405	0	0	1430	380	415	3	303	0	0	0
Ideal Flow (vphpl)	1700	1800	1900	1900	1800	1800	1600	1800	1900	1900	1900	1900
Storage Length (ft)	0		0	0		220	0		0	0		0
Storage Lanes	1		0	0		1	1		2	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.91	1.00	0.95	0.95	0.88	1.00	1.00	1.00
Frt						0.850			0.850			
Flt Protected	0.950						0.950	0.953				
Satd. Flow (prot)	1615	3420	0	0	4914	1530	1444	1630	2842	0	0	0
Flt Permitted	0.950						0.950	0.953				
Satd. Flow (perm)	1615	3420	0	0	4914	1530	1444	1630	2842	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						368			293			
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		477			2099			595			477	
Travel Time (s)		10.8			47.7			13.5			10.8	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor	92%	92%	92%	92%	92%	92%	92%	92%	92%	92%	92%	92%
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	67	392	0	0	1385	368	402	3	293	0	0	0
Shared Lane Traffic (%)							50%					
Lane Group Flow (vph)	67	392	0	0	1385	368	201	204	293	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.15	1.07	1.00	1.00	1.07	1.07	1.24	1.07	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1			1	1	1	1	1			
Detector Template	Left	Thru			Thru	Right	Left	Thru	Right			
Leading Detector (ft)	20	100			100	20	20	100	20			
Trailing Detector (ft)	0	0			0	0	0	0	0			
Detector 1 Position(ft)	0	0			0	0	0	0	0			
Detector 1 Size(ft)	20	100			100	20	20	100	20			
Detector 1 Type	Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex			
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0			0.0	0.0	0.0	0.0	0.0			
Detector 1 Queue (s)	0.0	0.0			0.0	0.0	0.0	0.0	0.0			
Detector 1 Delay (s)	0.0	0.0			0.0	0.0	0.0	0.0	0.0			
Turn Type	Prot	NA			NA	Perm	Prot	NA	Perm			
Protected Phases	7	4			8		5	2				
Permitted Phases						8			2			
Detector Phase	7	4			8	8	5	2	2			
Switch Phase												
Minimum Initial (s)	5.0	5.0			5.0	5.0	5.0	5.0	5.0			

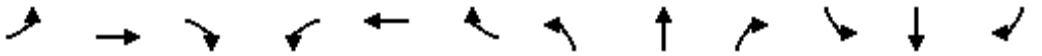
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	9.5	22.5			22.5	22.5	9.5	22.5	22.5			
Total Split (s)	10.0	36.5			26.5	26.5	23.5	23.5	23.5			
Total Split (%)	16.7%	60.8%			44.2%	44.2%	39.2%	39.2%	39.2%			
Maximum Green (s)	5.5	32.0			22.0	22.0	19.0	19.0	19.0			
Yellow Time (s)	3.5	3.5			3.5	3.5	3.5	3.5	3.5			
All-Red Time (s)	1.0	1.0			1.0	1.0	1.0	1.0	1.0			
Lost Time Adjust (s)	-0.5	-0.5			-0.5	-0.5	-0.5	-0.5	-0.5			
Total Lost Time (s)	4.0	4.0			4.0	4.0	4.0	4.0	4.0			
Lead/Lag	Lead				Lag	Lag						
Lead-Lag Optimize?	Yes				Yes	Yes						
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	3.0	3.0			
Recall Mode	None	C-Max			C-Max	C-Max	None	Max	Max			
Walk Time (s)		7.0			7.0	7.0		7.0	7.0			
Flash Dont Walk (s)		11.0			11.0	11.0		11.0	11.0			
Pedestrian Calls (#/hr)		0			0	0		0	0			
Act Effct Green (s)	6.0	32.5			26.5	26.5	19.5	19.5	19.5			
Actuated g/C Ratio	0.10	0.54			0.44	0.44	0.32	0.32	0.32			
v/c Ratio	0.42	0.21			0.64	0.42	0.43	0.39	0.26			
Control Delay	37.0	4.3			15.8	3.4	19.4	18.3	2.9			
Queue Delay	0.0	0.0			0.0	0.0	0.0	0.0	0.0			
Total Delay	37.0	4.3			15.8	3.4	19.4	18.3	2.9			
LOS	D	A			B	A	B	B	A			
Approach Delay		9.1			13.2			12.2				
Approach LOS		A			B			B				

Intersection Summary

Area Type: Other
Cycle Length: 60
Actuated Cycle Length: 60
Offset: 33.5 (56%), Referenced to phase 4:EBT and 8:WBT, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.64
Intersection Signal Delay: 12.3 Intersection LOS: B
Intersection Capacity Utilization 75.3% ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 12: I-10 NB Ramps & W 5th Street





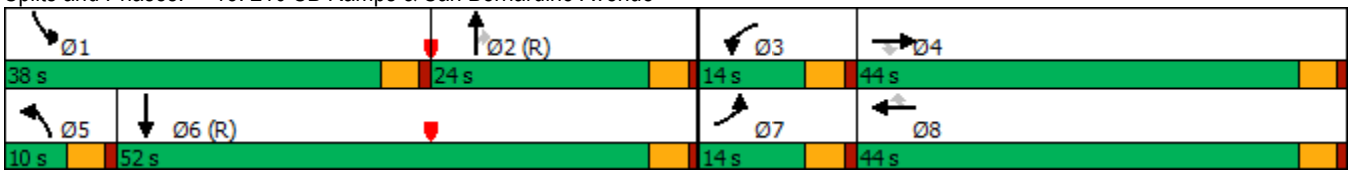
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	54	225	23	60	392	355	18	7	25	300	253	335
Future Volume (vph)	54	225	23	60	392	355	18	7	25	300	253	335
Ideal Flow (vphpl)	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1900
Storage Length (ft)	260		0	0		0	230		0	100		0
Storage Lanes	1		1	1		1	1		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95
Frt			0.850			0.850			0.850		0.915	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1615	3420	1530	1615	1800	1530	1615	1800	1530	1615	3129	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1615	3420	1530	1615	1800	1530	1615	1800	1530	1615	3129	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			136			351			136		331	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		2072			709			529			237	
Travel Time (s)		47.1			16.1			12.0			5.4	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor	94%	94%	94%	94%	94%	94%	94%	94%	94%	94%	94%	94%
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	53	223	23	59	388	351	18	7	25	297	250	331
Shared Lane Traffic (%)												
Lane Group Flow (vph)	53	223	23	59	388	351	18	7	25	297	581	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		36			36			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.15	1.07	1.07	1.15	1.07	1.07	1.15	1.07	1.07	1.15	1.07	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	1	1	1	1	1	1	1	1	1	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100	20	20	100	20	20	100	20	20	100	
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0	
Detector 1 Size(ft)	20	100	20	20	100	20	20	100	20	20	100	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	

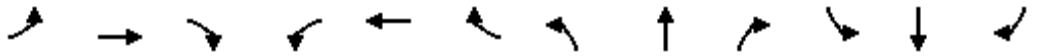
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	9.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5	
Total Split (s)	14.0	44.0	44.0	14.0	44.0	44.0	10.0	24.0	24.0	38.0	52.0	
Total Split (%)	11.7%	36.7%	36.7%	11.7%	36.7%	36.7%	8.3%	20.0%	20.0%	31.7%	43.3%	
Maximum Green (s)	9.5	39.5	39.5	9.5	39.5	39.5	5.5	19.5	19.5	33.5	47.5	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		11.0	11.0		11.0	
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	
Act Effct Green (s)	8.8	32.5	32.5	9.0	32.6	32.6	6.8	37.3	37.3	27.2	64.1	
Actuated g/C Ratio	0.07	0.27	0.27	0.08	0.27	0.27	0.06	0.31	0.31	0.23	0.53	
v/c Ratio	0.45	0.24	0.04	0.49	0.79	0.52	0.20	0.01	0.04	0.81	0.32	
Control Delay	64.9	33.5	0.2	67.0	52.3	6.1	59.4	39.3	0.1	60.8	8.8	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	64.9	33.5	0.2	67.0	52.3	6.1	59.4	39.3	0.1	60.8	8.8	
LOS	E	C	A	E	D	A	E	D	A	E	A	
Approach Delay		36.5			33.1			26.9			26.4	
Approach LOS		D			C			C			C	

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.81
Intersection Signal Delay: 30.5 Intersection LOS: C
Intersection Capacity Utilization 58.8% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 13: 210 SB Ramps & San Bernardino Avenue



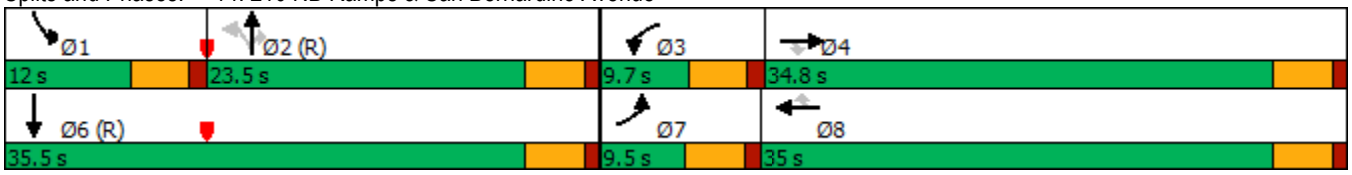


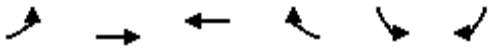
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	119	310	133	34	631	319	54	326	22	155	10	155
Future Volume (vph)	119	310	133	34	631	319	54	326	22	155	10	155
Ideal Flow (vphpl)	1600	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1900
Storage Length (ft)	300		0	0		0	150		70	0		0
Storage Lanes	2		1	1		1	1		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	1.00	1.00
Frt			0.850			0.850			0.850		0.859	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	2949	1800	1530	1615	1800	1530	1615	3420	1530	1615	1546	0
Flt Permitted	0.950			0.950			0.651			0.950		
Satd. Flow (perm)	2949	1800	1530	1615	1800	1530	1107	3420	1530	1615	1546	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			143			322			143		157	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		709			2232			344			268	
Travel Time (s)		16.1			50.7			7.8			6.1	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor	96%	96%	96%	96%	96%	96%	96%	96%	96%	96%	96%	96%
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	120	313	134	34	638	322	55	329	22	157	10	157
Shared Lane Traffic (%)												
Lane Group Flow (vph)	120	313	134	34	638	322	55	329	22	157	167	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.24	1.07	1.07	1.15	1.07	1.07	1.15	1.07	1.07	1.15	1.07	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	1	1	1	1	1	1	1	1	1	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100	20	20	100	20	20	100	20	20	100	
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0	
Detector 1 Size(ft)	20	100	20	20	100	20	20	100	20	20	100	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8			2		1	6	
Permitted Phases			4			8	2		2			
Detector Phase	7	4	4	3	8	8	2	2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	9.5	22.5	22.5	9.5	22.5	22.5	22.5	22.5	22.5	9.5	22.5	
Total Split (s)	9.5	34.8	34.8	9.7	35.0	35.0	23.5	23.5	23.5	12.0	35.5	
Total Split (%)	11.9%	43.5%	43.5%	12.1%	43.8%	43.8%	29.4%	29.4%	29.4%	15.0%	44.4%	
Maximum Green (s)	5.0	30.3	30.3	5.2	30.5	30.5	19.0	19.0	19.0	7.5	31.0	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lag	Lag	Lag	Lead		
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None	None	None	None	None	C-Max	C-Max	C-Max	None	C-Max	
Walk Time (s)		7.0	7.0		7.0	7.0	7.0	7.0	7.0		7.0	
Flash Dont Walk (s)		11.0	11.0		11.0	11.0	11.0	11.0	11.0		11.0	
Pedestrian Calls (#/hr)		0	0		0	0	0	0	0		0	
Act Effct Green (s)	5.5	32.2	32.2	5.7	30.4	30.4	21.1	21.1	21.1	9.0	34.0	
Actuated g/C Ratio	0.07	0.40	0.40	0.07	0.38	0.38	0.26	0.26	0.26	0.11	0.42	
v/c Ratio	0.59	0.43	0.19	0.30	0.93	0.41	0.19	0.37	0.04	0.87	0.22	
Control Delay	49.2	19.9	3.5	42.3	47.1	3.9	26.2	26.1	0.1	79.6	4.2	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	49.2	19.9	3.5	42.3	47.1	3.9	26.2	26.1	0.1	79.6	4.2	
LOS	D	B	A	D	D	A	C	C	A	E	A	
Approach Delay		22.2			32.9			24.7			40.7	
Approach LOS		C			C			C			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 80			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.93			
Intersection Signal Delay: 29.9		Intersection LOS: C	
Intersection Capacity Utilization 69.5%		ICU Level of Service C	
Analysis Period (min) 15			

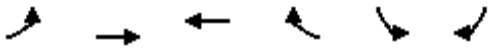
Splits and Phases: 14: 210 NB Ramps & San Bernardino Avenue





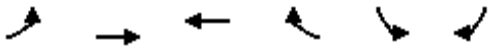
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	6	86	121	6	2	2
Future Volume (vph)	6	86	121	6	2	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.994			0.850
Flt Protected		0.997			0.950	
Satd. Flow (prot)	0	1857	1852	0	1770	1583
Flt Permitted		0.997			0.950	
Satd. Flow (perm)	0	1857	1852	0	1770	1583
Link Speed (mph)		30	30		30	
Link Distance (ft)		1636	441		315	
Travel Time (s)		37.2	10.0		7.2	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	6	91	127	6	2	2
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	97	133	0	2	2
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 19.5%		ICU Level of Service A	
Analysis Period (min) 15			



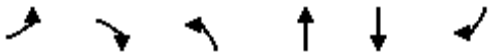
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	88	127	24	7	0
Future Volume (vph)	0	88	127	24	7	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.979			
Flt Protected					0.950	
Satd. Flow (prot)	0	1863	1824	0	1770	0
Flt Permitted					0.950	
Satd. Flow (perm)	0	1863	1824	0	1770	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		441	580		365	
Travel Time (s)		10.0	13.2		8.3	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	93	134	25	7	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	93	159	0	7	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 18.1%		ICU Level of Service A	
Analysis Period (min) 15			



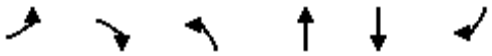
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	95	151	12	4	0
Future Volume (vph)	0	95	151	12	4	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.990			
Flt Protected					0.950	
Satd. Flow (prot)	0	1863	1844	0	1770	1863
Flt Permitted					0.950	
Satd. Flow (perm)	0	1863	1844	0	1770	1863
Link Speed (mph)		30	30		30	
Link Distance (ft)		580	300		152	
Travel Time (s)		13.2	6.8		3.5	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	100	159	13	4	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	100	172	0	4	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 18.7%		ICU Level of Service A	
Analysis Period (min) 15			



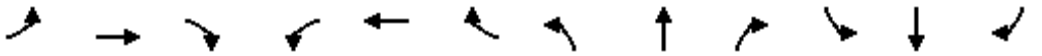
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	429	685	0
Future Volume (vph)	0	0	0	429	685	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	0.91	0.91
Frt						
Flt Protected						
Satd. Flow (prot)	0	1863	0	1863	5085	0
Flt Permitted						
Satd. Flow (perm)	0	1863	0	1863	5085	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	317			308	560	
Travel Time (s)	7.2			7.0	12.7	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	0	0	452	721	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	452	721	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 25.9%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	7	0	499	860	0
Future Volume (vph)	0	7	0	499	860	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	0.95	0.91	0.91
Frt		0.865				
Flt Protected						
Satd. Flow (prot)	0	1611	0	3539	5085	0
Flt Permitted						
Satd. Flow (perm)	0	1611	0	3539	5085	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	368			290	460	
Travel Time (s)	8.4			6.6	10.5	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	7	0	525	905	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	7	0	525	905	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 26.6%		ICU Level of Service A	
Analysis Period (min) 15			

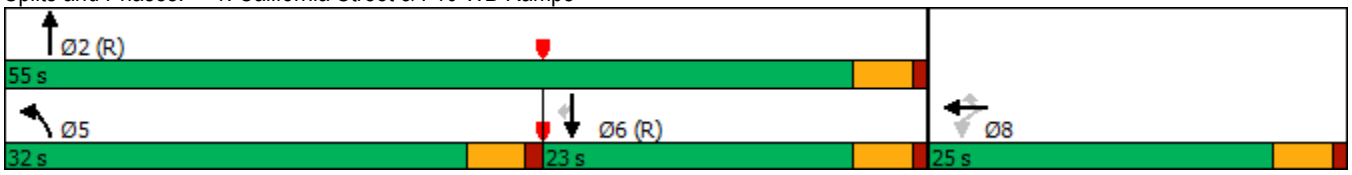


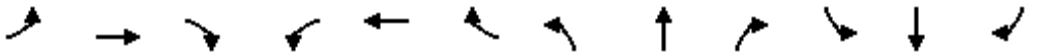
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	357	10	390	473	720	0	0	187	375
Future Volume (vph)	0	0	0	357	10	390	473	720	0	0	187	375
Ideal Flow (vphpl)	1900	1900	1900	1700	1800	1800	1700	1800	1900	1900	1800	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.91	1.00
Frt						0.850						0.850
Flt Protected					0.954		0.950					
Satd. Flow (prot)	0	0	0	0	1717	1530	1615	3420	0	0	4914	1615
Flt Permitted					0.954		0.950					
Satd. Flow (perm)	0	0	0	0	1717	1530	1615	3420	0	0	4914	1615
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						227						395
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1502			1273			312			1245	
Travel Time (s)		34.1			28.9			7.1			28.3	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	0	0	376	11	411	498	758	0	0	197	395
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	387	411	498	758	0	0	197	395
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.15	1.07	1.07	1.15	1.07	1.00	1.00	1.07	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors				1	2	1	1	2			2	1
Detector Template				Left	Thru	Right	Left	Thru			Thru	Right
Leading Detector (ft)				20	100	20	20	100			100	20
Trailing Detector (ft)				0	0	0	0	0			0	0
Detector 1 Position(ft)				0	0	0	0	0			0	0
Detector 1 Size(ft)				20	6	20	20	6			6	20
Detector 1 Type				Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)				0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 1 Queue (s)				0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 1 Delay (s)				0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 2 Position(ft)					94			94			94	
Detector 2 Size(ft)					6			6			6	
Detector 2 Type					Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)					0.0			0.0			0.0	
Turn Type				Perm	NA	Perm	Prot	NA			NA	Perm
Protected Phases					8		5	2			6	
Permitted Phases				8		8						6
Detector Phase				8	8	8	5	2			6	6
Switch Phase												
Minimum Initial (s)				5.0	5.0	5.0	5.0	5.0			5.0	5.0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)				22.5	22.5	22.5	9.5	22.5			22.5	22.5
Total Split (s)				25.0	25.0	25.0	32.0	55.0			23.0	23.0
Total Split (%)				31.3%	31.3%	31.3%	40.0%	68.8%			28.8%	28.8%
Maximum Green (s)				20.5	20.5	20.5	27.5	50.5			18.5	18.5
Yellow Time (s)				3.5	3.5	3.5	3.5	3.5			3.5	3.5
All-Red Time (s)				1.0	1.0	1.0	1.0	1.0			1.0	1.0
Lost Time Adjust (s)					0.0	0.0	0.0	0.0			0.0	0.0
Total Lost Time (s)					4.5	4.5	4.5	4.5			4.5	4.5
Lead/Lag							Lead				Lag	Lag
Lead-Lag Optimize?							Yes				Yes	Yes
Vehicle Extension (s)				3.0	3.0	3.0	3.0	3.0			3.0	3.0
Recall Mode				None	None	None	None	C-Max			C-Max	C-Max
Walk Time (s)				7.0	7.0	7.0		7.0			7.0	7.0
Flash Dont Walk (s)				11.0	11.0	11.0		11.0			11.0	11.0
Pedestrian Calls (#/hr)				0	0	0		0			0	0
Act Effct Green (s)					19.9	19.9	26.6	51.1			20.0	20.0
Actuated g/C Ratio					0.25	0.25	0.33	0.64			0.25	0.25
v/c Ratio					0.91	0.75	0.93	0.35			0.16	0.56
Control Delay					56.8	21.7	52.1	7.4			24.6	6.5
Queue Delay					0.0	0.0	43.3	0.7			0.0	0.0
Total Delay					56.8	21.7	95.4	8.1			24.6	6.5
LOS					E	C	F	A			C	A
Approach Delay					38.7			42.7			12.6	
Approach LOS					D			D			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 80			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 80			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.93			
Intersection Signal Delay: 34.8		Intersection LOS: C	
Intersection Capacity Utilization 103.0%		ICU Level of Service G	
Analysis Period (min) 15			

Splits and Phases: 1: California Street & I-10 WB Ramps



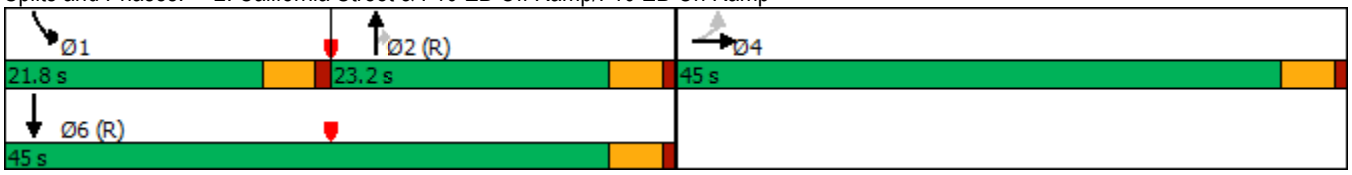


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	355	4	376	0	0	0	0	855	454	270	526	0
Future Volume (vph)	355	4	376	0	0	0	0	855	454	270	526	0
Ideal Flow (vphpl)	1700	1800	1800	1900	1900	1900	1900	1800	1800	1700	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	1.00	1.00	0.95	1.00
Frt		0.931							0.850			
Flt Protected		0.976								0.950		
Satd. Flow (prot)	0	1636	0	0	0	0	0	4914	1530	1615	3610	0
Flt Permitted		0.976								0.950		
Satd. Flow (perm)	0	1636	0	0	0	0	0	4914	1530	1615	3610	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		76							478			
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1514			1294			812			312	
Travel Time (s)		34.4			29.4			18.5			7.1	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	374	4	396	0	0	0	0	900	478	284	554	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	774	0	0	0	0	0	900	478	284	554	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.15	1.07	1.07	1.00	1.00	1.00	1.00	1.07	1.07	1.15	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2						2	1	1	2	
Detector Template	Left	Thru						Thru	Right	Left	Thru	
Leading Detector (ft)	20	100						100	20	20	100	
Trailing Detector (ft)	0	0						0	0	0	0	
Detector 1 Position(ft)	0	0						0	0	0	0	
Detector 1 Size(ft)	20	6						6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex						Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0						0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0						0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0						0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94						94			94	
Detector 2 Size(ft)		6						6			6	
Detector 2 Type		Cl+Ex						Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0						0.0			0.0	
Turn Type	Perm	NA						NA	Perm	Prot	NA	
Protected Phases		4						2		1	6	
Permitted Phases	4								2			
Detector Phase	4	4						2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0						5.0	5.0	5.0	5.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	22.5	22.5						22.5	22.5	9.5	22.5	
Total Split (s)	45.0	45.0						23.2	23.2	21.8	45.0	
Total Split (%)	50.0%	50.0%						25.8%	25.8%	24.2%	50.0%	
Maximum Green (s)	40.5	40.5						18.7	18.7	17.3	40.5	
Yellow Time (s)	3.5	3.5						3.5	3.5	3.5	3.5	
All-Red Time (s)	1.0	1.0						1.0	1.0	1.0	1.0	
Lost Time Adjust (s)		0.0						0.0	0.0	0.0	0.0	
Total Lost Time (s)		4.5						4.5	4.5	4.5	4.5	
Lead/Lag								Lag	Lag	Lead		
Lead-Lag Optimize?								Yes	Yes	Yes		
Vehicle Extension (s)	3.0	3.0						3.0	3.0	3.0	3.0	
Recall Mode	None	None						C-Max	C-Max	None	C-Max	
Walk Time (s)	0.0	0.0						7.0	7.0		7.0	
Flash Dont Walk (s)	0.0	0.0						11.0	11.0		11.0	
Pedestrian Calls (#/hr)	0	0						0	0		0	
Act Effct Green (s)		40.5						18.8	18.8	17.2	40.5	
Actuated g/C Ratio		0.45						0.21	0.21	0.19	0.45	
v/c Ratio		0.99						0.87	0.68	0.93	0.34	
Control Delay		55.1						45.5	8.9	72.9	16.8	
Queue Delay		0.0						0.0	0.0	0.0	0.9	
Total Delay		55.1						45.5	8.9	72.9	17.7	
LOS		E						D	A	E	B	
Approach Delay		55.1						32.8			36.4	
Approach LOS		E						C			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 90			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.99			
Intersection Signal Delay: 39.6		Intersection LOS: D	
Intersection Capacity Utilization 103.0%		ICU Level of Service G	
Analysis Period (min) 15			

Splits and Phases: 2: California Street & I-10 EB Off Ramp/I-10 EB On Ramp

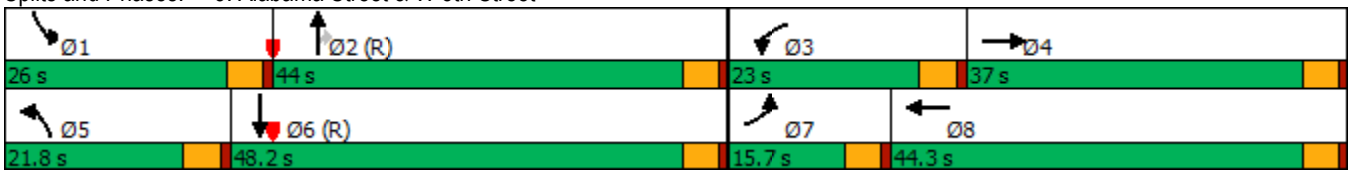


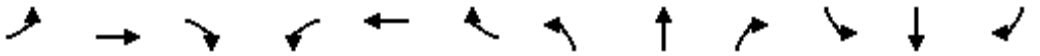
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	60	708	53	187	251	139	106	584	525	210	306	26
Future Volume (vph)	60	708	53	187	251	139	106	584	525	210	306	26
Ideal Flow (vphpl)	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1900
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	1.00	1.00	0.95	0.95
Frt		0.990			0.947				0.850		0.988	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1615	3386	0	1615	3239	0	1615	3420	1530	1615	3379	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1615	3386	0	1615	3239	0	1615	3420	1530	1615	3379	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		6			83				300		7	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1908			2750			621			1649	
Travel Time (s)		43.4			62.5			14.1			37.5	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	63	745	56	197	264	146	112	615	553	221	322	27
Shared Lane Traffic (%)												
Lane Group Flow (vph)	63	801	0	197	410	0	112	615	553	221	349	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.15	1.07	1.07	1.15	1.07	1.07	1.15	1.07	1.07	1.15	1.07	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Size(ft)	20	6		20	6		20	6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA		Prot	NA		Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases									2			
Detector Phase	7	4		3	8		5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	9.5	22.5		9.5	22.5		9.5	22.5	22.5	9.5	22.5	
Total Split (s)	15.7	37.0		23.0	44.3		21.8	44.0	44.0	26.0	48.2	
Total Split (%)	12.1%	28.5%		17.7%	34.1%		16.8%	33.8%	33.8%	20.0%	37.1%	
Maximum Green (s)	11.2	32.5		18.5	39.8		17.3	39.5	39.5	21.5	43.7	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.5		4.5	4.5	4.5	4.5	4.5	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None		None	C-Max	C-Max	None	C-Max	
Walk Time (s)		7.0			7.0			7.0	7.0		7.0	
Flash Dont Walk (s)		11.0			11.0			11.0	11.0		11.0	
Pedestrian Calls (#/hr)		0			0			0	0		0	
Act Effct Green (s)	9.5	32.3		17.9	42.7		13.8	41.5	41.5	20.3	48.1	
Actuated g/C Ratio	0.07	0.25		0.14	0.33		0.11	0.32	0.32	0.16	0.37	
v/c Ratio	0.53	0.95		0.89	0.37		0.66	0.56	0.80	0.88	0.28	
Control Delay	73.9	68.5		92.5	28.0		73.5	39.7	28.2	85.6	29.8	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	73.9	68.5		92.5	28.0		73.5	39.7	28.2	85.6	29.8	
LOS	E	E		F	C		E	D	C	F	C	
Approach Delay		68.9			48.9			37.7			51.4	
Approach LOS		E			D			D			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 130			
Actuated Cycle Length: 130			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 75			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.95			
Intersection Signal Delay: 50.2		Intersection LOS: D	
Intersection Capacity Utilization 81.0%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 3: Alabama Street & W 5th Street



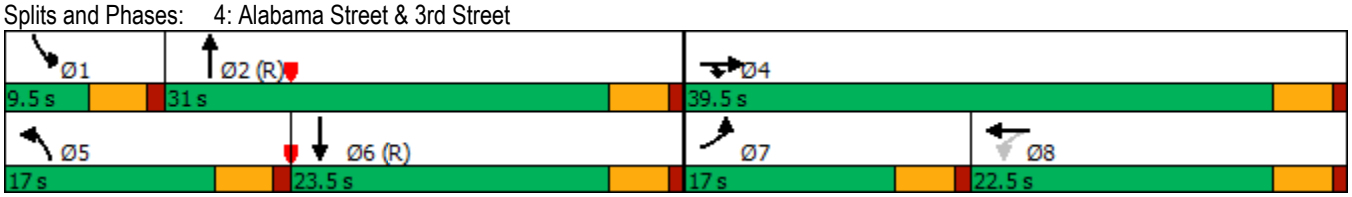


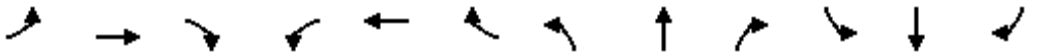
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	410	30	361	10	4	17	221	843	4	7	483	80
Future Volume (vph)	410	30	361	10	4	17	221	843	4	7	483	80
Ideal Flow (vphpl)	1600	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1900
Storage Length (ft)	0		0	0		0	150		0	0		0
Storage Lanes	2		1	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.97	1.00	1.00	0.95	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Frt			0.850		0.918			0.999			0.979	
Flt Protected	0.950				0.984		0.950			0.950		
Satd. Flow (prot)	2949	1800	1530	0	3089	0	1615	3417	0	1615	3348	0
Flt Permitted	0.950				0.865		0.950			0.950		
Satd. Flow (perm)	2949	1800	1530	0	2716	0	1615	3417	0	1615	3348	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			367		18			1			22	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1074			950			478			621	
Travel Time (s)		24.4			21.6			10.9			14.1	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	432	32	380	11	4	18	233	887	4	7	508	84
Shared Lane Traffic (%)												
Lane Group Flow (vph)	432	32	380	0	33	0	233	891	0	7	592	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.24	1.07	1.07	1.15	1.07	1.07	1.15	1.07	1.07	1.15	1.07	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2		1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100	20	20	100		20	100		20	100	
Trailing Detector (ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Position(ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Size(ft)	20	6	20	20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Prot	Perm	NA		Prot	NA		Prot	NA	
Protected Phases	7	4	4		8		5	2		1	6	
Permitted Phases				8								

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4	4	8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	9.5	22.5	22.5	22.5	22.5		9.5	22.5		9.5	22.5	
Total Split (s)	17.0	39.5	39.5	22.5	22.5		17.0	31.0		9.5	23.5	
Total Split (%)	21.3%	49.4%	49.4%	28.1%	28.1%		21.3%	38.8%		11.9%	29.4%	
Maximum Green (s)	12.5	35.0	35.0	18.0	18.0		12.5	26.5		5.0	19.0	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.5	4.5		4.5		4.5	4.5		4.5	4.5	
Lead/Lag	Lead			Lag	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes			Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None	None	None	None		None	C-Max		None	C-Max	
Walk Time (s)		7.0	7.0	7.0	7.0			7.0			7.0	
Flash Dont Walk (s)		11.0	11.0	11.0	11.0			11.0			11.0	
Pedestrian Calls (#/hr)		0	0	0	0			0			0	
Act Effct Green (s)	12.5	19.1	19.1		6.1		18.4	49.6		6.0	29.0	
Actuated g/C Ratio	0.16	0.24	0.24		0.08		0.23	0.62		0.08	0.36	
v/c Ratio	0.94	0.07	0.59		0.15		0.63	0.42		0.06	0.48	
Control Delay	64.7	21.4	7.2		22.9		35.1	10.4		35.1	22.8	
Queue Delay	0.0	0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Delay	64.7	21.4	7.2		22.9		35.1	10.4		35.1	22.8	
LOS	E	C	A		C		D	B		D	C	
Approach Delay		37.2			22.9			15.5			22.9	
Approach LOS		D			C			B			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 80			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 80			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.94			
Intersection Signal Delay: 24.3		Intersection LOS: C	
Intersection Capacity Utilization 62.3%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 4: Alabama Street & 3rd Street



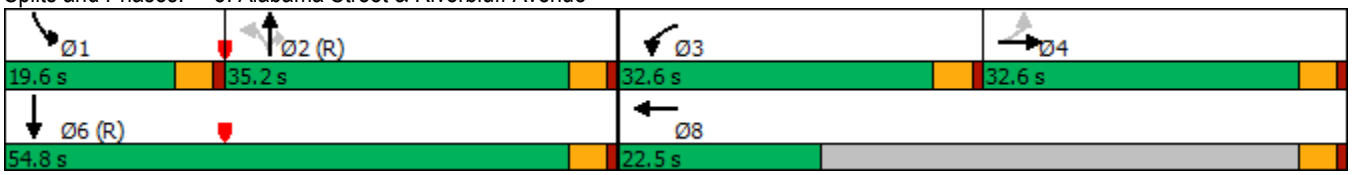


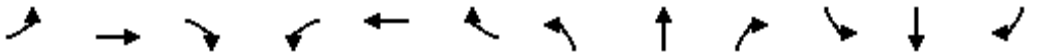
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	18	0	14	36	0	60	5	954	43	40	821	7
Future Volume (vph)	18	0	14	36	0	60	5	954	43	40	821	7
Ideal Flow (vphpl)	1700	1800	1800	1700	1900	1800	1900	1800	1800	1700	1900	1900
Storage Length (ft)	0		0	0		0	150		0	150		0
Storage Lanes	1		0	1		0	1		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91
Frt		0.850			0.850				0.850		0.999	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1615	1530	0	1615	1615	0	1805	1800	1530	1615	5182	0
Flt Permitted	0.716			0.950			0.314			0.950		
Satd. Flow (perm)	1217	1530	0	1615	1615	0	597	1800	1530	1615	5182	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		381			363				95		1	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		416			1617			460			310	
Travel Time (s)		9.5			36.8			10.5			7.0	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	19	0	15	38	0	63	5	1004	45	42	864	7
Shared Lane Traffic (%)												
Lane Group Flow (vph)	19	15	0	38	63	0	5	1004	45	42	871	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.15	1.07	1.07	1.15	1.00	1.07	1.00	1.07	1.07	1.15	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Size(ft)	20	6		20	6		20	6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Prot	NA		Perm	NA	Perm	Prot	NA	
Protected Phases		4		3	8			2		1	6	
Permitted Phases	4						2		2			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4		3	8		2	2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	22.5	22.5		22.5	22.5		22.5	22.5	22.5	9.5	22.5	
Total Split (s)	32.6	32.6		32.6	22.5		35.2	35.2	35.2	19.6	54.8	
Total Split (%)	27.2%	27.2%		27.2%	18.8%		29.3%	29.3%	29.3%	16.3%	45.7%	
Maximum Green (s)	28.1	28.1		28.1	18.0		30.7	30.7	30.7	15.1	50.3	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.5		4.5	4.5	4.5	4.5	4.5	
Lead/Lag	Lag	Lag		Lead			Lag	Lag	Lag	Lead		
Lead-Lag Optimize?	Yes	Yes		Yes			Yes	Yes	Yes	Yes		
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None		C-Max	C-Max	C-Max	None	C-Max	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0	7.0		7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0	11.0		11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0	0		0	
Act Effct Green (s)	7.5	7.5		8.3	16.0		86.8	86.8	86.8	8.6	97.9	
Actuated g/C Ratio	0.06	0.06		0.07	0.13		0.72	0.72	0.72	0.07	0.82	
v/c Ratio	0.25	0.03		0.34	0.12		0.01	0.77	0.04	0.37	0.21	
Control Delay	60.7	0.1		60.7	0.5		11.6	17.9	1.0	61.2	3.9	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	60.7	0.1		60.7	0.5		11.6	17.9	1.0	61.2	3.9	
LOS	E	A		E	A		B	B	A	E	A	
Approach Delay		34.0			23.1			17.2			6.5	
Approach LOS		C			C			B			A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green			
Natural Cycle: 130			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.77			
Intersection Signal Delay: 13.1		Intersection LOS: B	
Intersection Capacity Utilization 69.4%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 5: Alabama Street & Riverbluff Avenue



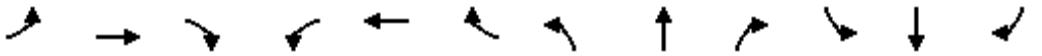


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	176	3	40	12	6	9	28	818	7	6	807	65
Future Volume (vph)	176	3	40	12	6	9	28	818	7	6	807	65
Ideal Flow (vphpl)	1700	1800	1800	1700	1800	1800	1700	1800	1900	1700	1900	1900
Storage Length (ft)	0		0	0		0	200		0	0		0
Storage Lanes	0		0	0		0	1		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.975			0.957			0.999				0.850
Flt Protected		0.961			0.977		0.950			0.950		
Satd. Flow (prot)	0	1687	0	0	1683	0	1615	1798	0	1615	1900	1615
Flt Permitted		0.749			0.874		0.950			0.950		
Satd. Flow (perm)	0	1314	0	0	1506	0	1615	1798	0	1615	1900	1615
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		10			9							55
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		300			825			1372			290	
Travel Time (s)		6.8			18.8			31.2			6.6	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	185	3	42	13	6	9	29	861	7	6	849	68
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	230	0	0	28	0	29	868	0	6	849	68
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.15	1.07	1.07	1.15	1.07	1.07	1.15	1.07	1.00	1.15	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	Right
Leading Detector (ft)	20	100		20	100		20	100		20	100	20
Trailing Detector (ft)	0	0		0	0		0	0		0	0	0
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	0
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								6

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4		8	8		5	2		1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	5.0
Minimum Split (s)	22.5	22.5		22.5	22.5		9.5	22.5		9.5	22.5	22.5
Total Split (s)	44.5	44.5		44.5	44.5		31.5	44.0		31.5	44.0	44.0
Total Split (%)	37.1%	37.1%		37.1%	37.1%		26.3%	36.7%		26.3%	36.7%	36.7%
Maximum Green (s)	40.0	40.0		40.0	40.0		27.0	39.5		27.0	39.5	39.5
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)		4.5			4.5		4.5	4.5		4.5	4.5	4.5
Lead/Lag							Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	C-Max
Walk Time (s)	7.0	7.0		7.0	7.0			7.0			7.0	7.0
Flash Dont Walk (s)	11.0	11.0		11.0	11.0			11.0			11.0	11.0
Pedestrian Calls (#/hr)	0	0		0	0			0			0	0
Act Effct Green (s)		25.7			25.7		7.7	83.0		6.1	77.3	77.3
Actuated g/C Ratio		0.21			0.21		0.06	0.69		0.05	0.64	0.64
v/c Ratio		0.80			0.09		0.28	0.70		0.07	0.69	0.06
Control Delay		61.6			25.9		59.5	17.8		57.0	19.2	3.1
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	0.0
Total Delay		61.6			25.9		59.5	17.8		57.0	19.2	3.1
LOS		E			C		E	B		E	B	A
Approach Delay		61.6			25.9			19.1			18.3	
Approach LOS		E			C			B			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 80			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.80			
Intersection Signal Delay: 23.6		Intersection LOS: C	
Intersection Capacity Utilization 73.1%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 6: Alabama Street & Palmetto Avenue

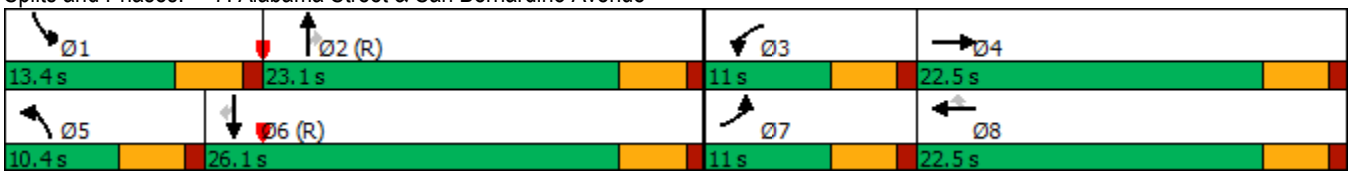


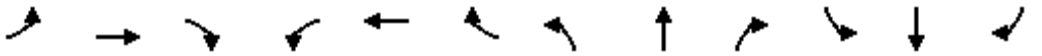
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	129	593	71	129	167	162	41	492	241	194	486	67
Future Volume (vph)	129	593	71	129	167	162	41	492	241	194	486	67
Ideal Flow (vphpl)	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1900
Storage Length (ft)	100		0	0		0	170		0	260		0
Storage Lanes	1		0	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt		0.984				0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1615	3365	0	1615	3420	1530	1615	3420	1530	1615	3420	1615
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1615	3365	0	1615	3420	1530	1615	3420	1530	1615	3420	1615
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		18				171			254			164
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		5507			2072			2636			1321	
Travel Time (s)		125.2			47.1			59.9			30.0	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	136	624	75	136	176	171	43	518	254	204	512	71
Shared Lane Traffic (%)												
Lane Group Flow (vph)	136	699	0	136	176	171	43	518	254	204	512	71
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.15	1.07	1.07	1.15	1.07	1.07	1.15	1.07	1.07	1.15	1.07	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100		20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0		0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0		0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6		20	6	20	20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8			2			6

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4		3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	22.5		9.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5	22.5
Total Split (s)	11.0	22.5		11.0	22.5	22.5	10.4	23.1	23.1	13.4	26.1	26.1
Total Split (%)	15.7%	32.1%		15.7%	32.1%	32.1%	14.9%	33.0%	33.0%	19.1%	37.3%	37.3%
Maximum Green (s)	6.5	18.0		6.5	18.0	18.0	5.9	18.6	18.6	8.9	21.6	21.6
Yellow Time (s)	3.5	3.5		3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Walk Time (s)		7.0			7.0	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)		11.0			11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0			0	0		0	0		0	0
Act Effct Green (s)	6.5	17.3		6.5	17.3	17.3	5.8	18.6	18.6	9.6	26.4	26.4
Actuated g/C Ratio	0.09	0.25		0.09	0.25	0.25	0.08	0.27	0.27	0.14	0.38	0.38
v/c Ratio	0.91	0.83		0.91	0.21	0.34	0.32	0.57	0.43	0.92	0.40	0.10
Control Delay	90.1	34.0		90.1	21.3	5.9	37.0	25.2	5.7	79.0	18.6	0.3
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	90.1	34.0		90.1	21.3	5.9	37.0	25.2	5.7	79.0	18.6	0.3
LOS	F	C		F	C	A	D	C	A	E	B	A
Approach Delay		43.1			35.2			19.7			32.6	
Approach LOS		D			D			B			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 70			
Actuated Cycle Length: 70			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 75			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.92			
Intersection Signal Delay: 32.4		Intersection LOS: C	
Intersection Capacity Utilization 69.0%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 7: Alabama Street & San Bernardino Avenue



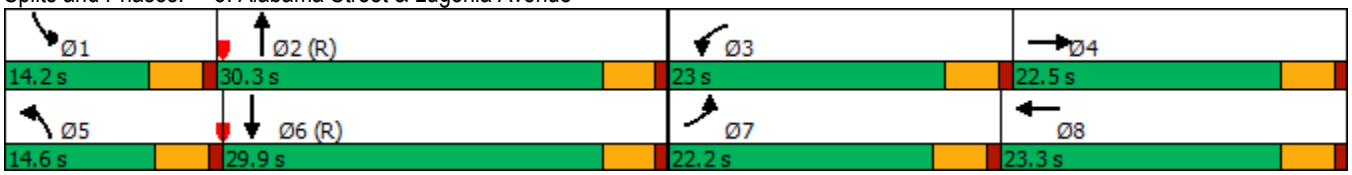


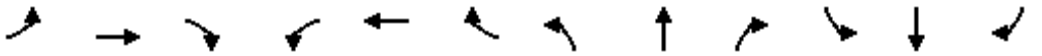
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	232	459	114	272	222	55	70	518	246	134	510	97
Future Volume (vph)	232	459	114	272	222	55	70	518	246	134	510	97
Ideal Flow (vphpl)	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1900
Storage Length (ft)	220		0	0		0	200		0	180		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.91	0.91
Frt		0.970			0.970			0.952			0.976	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1615	3317	0	1615	3317	0	1615	3256	0	1615	4796	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1615	3317	0	1615	3317	0	1615	3256	0	1615	4796	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		30			31			89			43	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		5332			3791			1051			2636	
Travel Time (s)		121.2			86.2			23.9			59.9	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	244	483	120	286	234	58	74	545	259	141	537	102
Shared Lane Traffic (%)												
Lane Group Flow (vph)	244	603	0	286	292	0	74	804	0	141	639	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.15	1.07	1.07	1.15	1.07	1.07	1.15	1.07	1.07	1.15	1.07	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	9.5	22.5		9.5	22.5		9.5	22.5		9.5	22.5	
Total Split (s)	22.2	22.5		23.0	23.3		14.6	30.3		14.2	29.9	
Total Split (%)	24.7%	25.0%		25.6%	25.9%		16.2%	33.7%		15.8%	33.2%	
Maximum Green (s)	17.7	18.0		18.5	18.8		10.1	25.8		9.7	25.4	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Dont Walk (s)		11.0			11.0			11.0			11.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	16.4	17.7		17.9	19.1		8.6	26.8		9.6	29.8	
Actuated g/C Ratio	0.18	0.20		0.20	0.21		0.10	0.30		0.11	0.33	
v/c Ratio	0.83	0.89		0.89	0.40		0.48	0.78		0.82	0.39	
Control Delay	59.1	50.8		65.9	29.1		48.6	32.2		74.9	23.7	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	59.1	50.8		65.9	29.1		48.6	32.2		74.9	23.7	
LOS	E	D		E	C		D	C		E	C	
Approach Delay		53.2			47.4			33.6			33.0	
Approach LOS		D			D			C			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 90			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.89			
Intersection Signal Delay: 41.4		Intersection LOS: D	
Intersection Capacity Utilization 80.8%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 8: Alabama Street & Lugonia Avenue



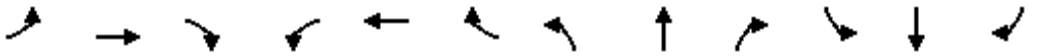


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	184	329	169	369	818	0	0	766	479
Future Volume (vph)	0	0	0	184	329	169	369	818	0	0	766	479
Ideal Flow (vphpl)	1900	1900	1900	1700	1800	1800	1700	1800	1800	1900	1800	1900
Storage Length (ft)	0		0	0		0	150		0	0		0
Storage Lanes	0		0	0		0	1		0	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.95	1.00	0.95	1.00	1.00	0.95	1.00
Frt					0.963							0.850
Flt Protected					0.987		0.950					
Satd. Flow (prot)	0	0	0	0	3251	0	1615	3420	0	0	3420	1615
Flt Permitted					0.987		0.950					
Satd. Flow (perm)	0	0	0	0	3251	0	1615	3420	0	0	3420	1615
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					41							236
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		918			1093			591			1051	
Travel Time (s)		20.9			24.8			13.4			23.9	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	0	0	194	346	178	388	861	0	0	806	504
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	718	0	388	861	0	0	806	504
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.15	1.07	1.07	1.15	1.07	1.07	1.00	1.07	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors				1	2		1	2			2	1
Detector Template				Left	Thru		Left	Thru			Thru	Right
Leading Detector (ft)				20	100		20	100			100	20
Trailing Detector (ft)				0	0		0	0			0	0
Detector 1 Position(ft)				0	0		0	0			0	0
Detector 1 Size(ft)				20	6		20	6			6	20
Detector 1 Type				Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)				0.0	0.0		0.0	0.0			0.0	0.0
Detector 1 Queue (s)				0.0	0.0		0.0	0.0			0.0	0.0
Detector 1 Delay (s)				0.0	0.0		0.0	0.0			0.0	0.0
Detector 2 Position(ft)					94			94			94	
Detector 2 Size(ft)					6			6			6	
Detector 2 Type					Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)					0.0			0.0			0.0	
Turn Type				Perm	NA		Prot	NA			NA	Perm
Protected Phases					8		5	2			6	
Permitted Phases				8								6

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase				8	8		5	2			6	6
Switch Phase												
Minimum Initial (s)				5.0	5.0		5.0	5.0			5.0	5.0
Minimum Split (s)				22.5	22.5		9.5	22.5			22.5	22.5
Total Split (s)				46.0	46.0		36.0	74.0			38.0	38.0
Total Split (%)				38.3%	38.3%		30.0%	61.7%			31.7%	31.7%
Maximum Green (s)				41.5	41.5		31.5	69.5			33.5	33.5
Yellow Time (s)				3.5	3.5		3.5	3.5			3.5	3.5
All-Red Time (s)				1.0	1.0		1.0	1.0			1.0	1.0
Lost Time Adjust (s)					0.0		0.0	0.0			0.0	0.0
Total Lost Time (s)					4.5		4.5	4.5			4.5	4.5
Lead/Lag							Lead				Lag	Lag
Lead-Lag Optimize?							Yes				Yes	Yes
Vehicle Extension (s)				3.0	3.0		3.0	3.0			3.0	3.0
Recall Mode				None	None		None	C-Max			C-Max	C-Max
Walk Time (s)				7.0	7.0			7.0			7.0	7.0
Flash Dont Walk (s)				11.0	11.0			11.0			11.0	11.0
Pedestrian Calls (#/hr)				0	0			0			0	0
Act Effct Green (s)					32.5		33.2	78.5			40.8	40.8
Actuated g/C Ratio					0.27		0.28	0.65			0.34	0.34
v/c Ratio					0.79		0.87	0.39			0.69	0.72
Control Delay					44.5		66.4	12.8			39.7	26.0
Queue Delay					0.0		0.0	0.0			0.0	0.0
Total Delay					44.5		66.4	12.8			39.7	26.0
LOS					D		E	B			D	C
Approach Delay					44.5			29.5			34.5	
Approach LOS					D			C			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 75			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.87			
Intersection Signal Delay: 34.8		Intersection LOS: C	
Intersection Capacity Utilization 84.7%		ICU Level of Service E	
Analysis Period (min) 15			

Splits and Phases: 9: Alabama Street & I-10 WB Ramps

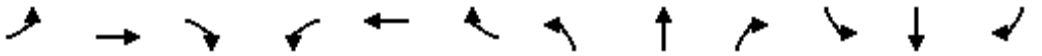


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	363	67	508	0	0	0	0	815	263	237	721	0
Future Volume (vph)	363	67	508	0	0	0	0	815	263	237	721	0
Ideal Flow (vphpl)	1700	1800	1800	1900	1900	1900	1900	1800	1800	1700	1900	1900
Storage Length (ft)	0		0	0		0	0		0	150		0
Storage Lanes	0		0	0		0	0		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.95	0.95	0.95	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt		0.919							0.850			
Flt Protected		0.981								0.950		
Satd. Flow (prot)	0	3083	0	0	0	0	0	3420	1530	1615	3610	0
Flt Permitted		0.981								0.950		
Satd. Flow (perm)	0	3083	0	0	0	0	0	3420	1530	1615	3610	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		196							277			
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		898			623			1369			591	
Travel Time (s)		20.4			14.2			31.1			13.4	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	382	71	535	0	0	0	0	858	277	249	759	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	988	0	0	0	0	0	858	277	249	759	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.15	1.07	1.07	1.00	1.00	1.00	1.00	1.07	1.07	1.15	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2						2	1	1	2	
Detector Template	Left	Thru						Thru	Right	Left	Thru	
Leading Detector (ft)	20	100						100	20	20	100	
Trailing Detector (ft)	0	0						0	0	0	0	
Detector 1 Position(ft)	0	0						0	0	0	0	
Detector 1 Size(ft)	20	6						6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex						Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0						0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0						0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0						0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94						94			94	
Detector 2 Size(ft)		6						6			6	
Detector 2 Type		Cl+Ex						Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0						0.0			0.0	
Turn Type	Perm	NA						NA	Perm	Prot	NA	
Protected Phases		4						2		1	6	
Permitted Phases	4								2			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4						2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0						5.0	5.0	5.0	5.0	
Minimum Split (s)	22.5	22.5						22.5	22.5	9.5	22.5	
Total Split (s)	46.0	46.0						44.0	44.0	30.0	74.0	
Total Split (%)	38.3%	38.3%						36.7%	36.7%	25.0%	61.7%	
Maximum Green (s)	41.5	41.5						39.5	39.5	25.5	69.5	
Yellow Time (s)	3.5	3.5						3.5	3.5	3.5	3.5	
All-Red Time (s)	1.0	1.0						1.0	1.0	1.0	1.0	
Lost Time Adjust (s)		0.0						0.0	0.0	0.0	0.0	
Total Lost Time (s)		4.5						4.5	4.5	4.5	4.5	
Lead/Lag								Lag	Lag	Lead		
Lead-Lag Optimize?								Yes	Yes	Yes		
Vehicle Extension (s)	3.0	3.0						3.0	3.0	3.0	3.0	
Recall Mode	None	None						C-Max	C-Max	None	C-Max	
Walk Time (s)	7.0	7.0						7.0	7.0		7.0	
Flash Dont Walk (s)	11.0	11.0						11.0	11.0		11.0	
Pedestrian Calls (#/hr)	0	0						0	0		0	
Act Effct Green (s)		38.4						45.8	45.8	22.3	72.6	
Actuated g/C Ratio		0.32						0.38	0.38	0.19	0.60	
v/c Ratio		0.88						0.66	0.37	0.83	0.35	
Control Delay		40.6						35.1	4.9	83.5	10.4	
Queue Delay		0.0						0.0	0.0	0.0	0.0	
Total Delay		40.6						35.1	4.9	83.5	10.4	
LOS		D						D	A	F	B	
Approach Delay		40.6						27.7			28.4	
Approach LOS		D						C			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 75			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.88			
Intersection Signal Delay: 32.0		Intersection LOS: C	
Intersection Capacity Utilization 84.7%		ICU Level of Service E	
Analysis Period (min) 15			

Splits and Phases: 10: Alabama Street & I-10 EB Ramps

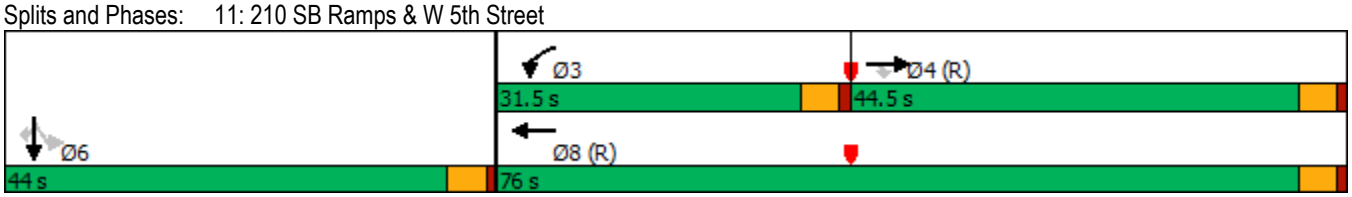


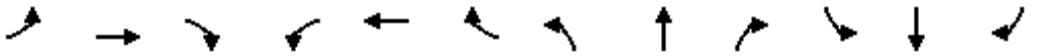
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	1003	560	285	567	0	0	0	0	321	7	136
Future Volume (vph)	0	1003	560	285	567	0	0	0	0	321	7	136
Ideal Flow (vphpl)	1900	1800	1800	1600	1800	1900	1900	1900	1900	1700	1900	1900
Storage Length (ft)	0		220	0		0	0		0	0		0
Storage Lanes	0		1	2		0	0		0	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850									0.850
Flt Protected				0.950							0.953	
Satd. Flow (prot)	0	3420	1530	2949	3420	0	0	0	0	0	1811	1615
Flt Permitted				0.950							0.953	
Satd. Flow (perm)	0	3420	1530	2949	3420	0	0	0	0	0	1811	1615
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			467									143
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		2750			477			659			386	
Travel Time (s)		62.5			10.8			15.0			8.8	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	1056	589	300	597	0	0	0	0	338	7	143
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1056	589	300	597	0	0	0	0	0	345	143
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.07	1.07	1.24	1.07	1.00	1.00	1.00	1.00	1.15	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		2	1	1	2					1	2	1
Detector Template		Thru	Right	Left	Thru					Left	Thru	Right
Leading Detector (ft)		100	20	20	100					20	100	20
Trailing Detector (ft)		0	0	0	0					0	0	0
Detector 1 Position(ft)		0	0	0	0					0	0	0
Detector 1 Size(ft)		6	20	20	6					20	6	20
Detector 1 Type		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex					Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)		0.0	0.0	0.0	0.0					0.0	0.0	0.0
Detector 1 Queue (s)		0.0	0.0	0.0	0.0					0.0	0.0	0.0
Detector 1 Delay (s)		0.0	0.0	0.0	0.0					0.0	0.0	0.0
Detector 2 Position(ft)		94			94						94	
Detector 2 Size(ft)		6			6						6	
Detector 2 Type		Cl+Ex			Cl+Ex						Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0						0.0	
Turn Type		NA	Perm	Prot	NA					Perm	NA	Perm
Protected Phases		4		3	8						6	
Permitted Phases			4							6		6

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase		4	4	3	8					6	6	6
Switch Phase												
Minimum Initial (s)		5.0	5.0	5.0	5.0					5.0	5.0	5.0
Minimum Split (s)		22.5	22.5	9.5	22.5					22.5	22.5	22.5
Total Split (s)		44.5	44.5	31.5	76.0					44.0	44.0	44.0
Total Split (%)		37.1%	37.1%	26.3%	63.3%					36.7%	36.7%	36.7%
Maximum Green (s)		40.0	40.0	27.0	71.5					39.5	39.5	39.5
Yellow Time (s)		3.5	3.5	3.5	3.5					3.5	3.5	3.5
All-Red Time (s)		1.0	1.0	1.0	1.0					1.0	1.0	1.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0						0.0	0.0
Total Lost Time (s)		4.5	4.5	4.5	4.5						4.5	4.5
Lead/Lag		Lag	Lag	Lead								
Lead-Lag Optimize?		Yes	Yes	Yes								
Vehicle Extension (s)		3.0	3.0	3.0	3.0					3.0	3.0	3.0
Recall Mode		C-Max	C-Max	None	C-Max					Max	Max	Max
Walk Time (s)		7.0	7.0		7.0					7.0	7.0	7.0
Flash Dont Walk (s)		11.0	11.0		11.0					11.0	11.0	11.0
Pedestrian Calls (#/hr)		0	0		0					0	0	0
Act Effct Green (s)		49.5	49.5	17.5	71.5						39.5	39.5
Actuated g/C Ratio		0.41	0.41	0.15	0.60						0.33	0.33
v/c Ratio		0.75	0.65	0.70	0.29						0.58	0.23
Control Delay		34.7	9.9	72.3	10.9						38.0	5.5
Queue Delay		0.0	0.0	0.0	0.0						0.0	0.0
Total Delay		34.7	9.9	72.3	10.9						38.0	5.5
LOS		C	A	E	B						D	A
Approach Delay		25.8			31.4						28.5	
Approach LOS		C			C						C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 75.5 (63%), Referenced to phase 4:EBT and 8:WBT, Start of Green			
Natural Cycle: 60			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.75			
Intersection Signal Delay: 27.9		Intersection LOS: C	
Intersection Capacity Utilization 75.7%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 11: 210 SB Ramps & W 5th Street



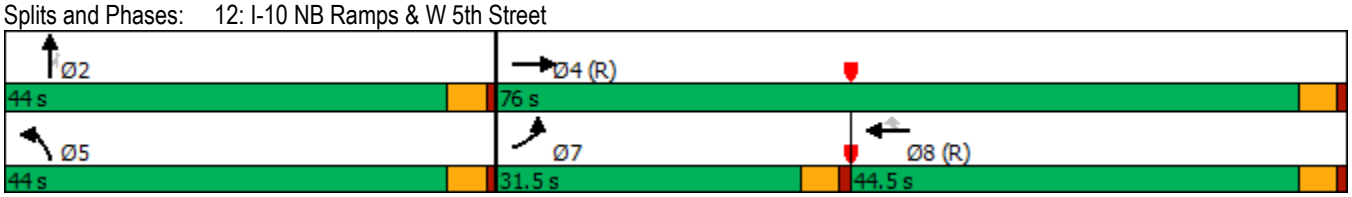


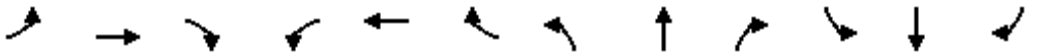
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	239	1068	0	0	624	259	227	0	498	0	0	0
Future Volume (vph)	239	1068	0	0	624	259	227	0	498	0	0	0
Ideal Flow (vphpl)	1700	1800	1900	1900	1800	1800	1600	1800	1900	1900	1900	1900
Storage Length (ft)	0		0	0		220	0		0	0		0
Storage Lanes	1		0	0		1	1		2	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.91	1.00	0.95	0.95	0.88	1.00	1.00	1.00
Frt						0.850			0.850			
Flt Protected	0.950						0.950	0.950				
Satd. Flow (prot)	1615	3420	0	0	4914	1530	1444	1624	2842	0	0	0
Flt Permitted	0.950						0.950	0.950				
Satd. Flow (perm)	1615	3420	0	0	4914	1530	1444	1624	2842	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						273			157			
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		477			2099			595			477	
Travel Time (s)		10.8			47.7			13.5			10.8	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	252	1124	0	0	657	273	239	0	524	0	0	0
Shared Lane Traffic (%)							50%					
Lane Group Flow (vph)	252	1124	0	0	657	273	119	120	524	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.15	1.07	1.00	1.00	1.07	1.07	1.24	1.07	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2			2	1	1	2	1			
Detector Template	Left	Thru			Thru	Right	Left	Thru	Right			
Leading Detector (ft)	20	100			100	20	20	100	20			
Trailing Detector (ft)	0	0			0	0	0	0	0			
Detector 1 Position(ft)	0	0			0	0	0	0	0			
Detector 1 Size(ft)	20	6			6	20	20	6	20			
Detector 1 Type	Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex			
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0			0.0	0.0	0.0	0.0	0.0			
Detector 1 Queue (s)	0.0	0.0			0.0	0.0	0.0	0.0	0.0			
Detector 1 Delay (s)	0.0	0.0			0.0	0.0	0.0	0.0	0.0			
Detector 2 Position(ft)		94			94			94				
Detector 2 Size(ft)		6			6			6				
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				
Turn Type	Prot	NA			NA	Perm	Prot	NA	Perm			
Protected Phases	7	4			8		5	2				
Permitted Phases						8			2			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4			8	8	5	2	2			
Switch Phase												
Minimum Initial (s)	5.0	5.0			5.0	5.0	5.0	5.0	5.0			
Minimum Split (s)	9.5	22.5			22.5	22.5	9.5	22.5	22.5			
Total Split (s)	31.5	76.0			44.5	44.5	44.0	44.0	44.0			
Total Split (%)	26.3%	63.3%			37.1%	37.1%	36.7%	36.7%	36.7%			
Maximum Green (s)	27.0	71.5			40.0	40.0	39.5	39.5	39.5			
Yellow Time (s)	3.5	3.5			3.5	3.5	3.5	3.5	3.5			
All-Red Time (s)	1.0	1.0			1.0	1.0	1.0	1.0	1.0			
Lost Time Adjust (s)	0.0	0.0			0.0	0.0	0.0	0.0	0.0			
Total Lost Time (s)	4.5	4.5			4.5	4.5	4.5	4.5	4.5			
Lead/Lag	Lead				Lag	Lag						
Lead-Lag Optimize?	Yes				Yes	Yes						
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	3.0	3.0			
Recall Mode	None	C-Max			C-Max	C-Max	None	Max	Max			
Walk Time (s)		7.0			7.0	7.0		7.0	7.0			
Flash Dont Walk (s)		11.0			11.0	11.0		11.0	11.0			
Pedestrian Calls (#/hr)		0			0	0		0	0			
Act Effct Green (s)	22.8	71.5			44.2	44.2	39.5	39.5	39.5			
Actuated g/C Ratio	0.19	0.60			0.37	0.37	0.33	0.33	0.33			
v/c Ratio	0.82	0.55			0.36	0.37	0.25	0.22	0.50			
Control Delay	80.8	12.2			29.1	4.9	31.2	30.6	24.0			
Queue Delay	0.0	0.2			0.0	0.0	0.0	0.0	0.0			
Total Delay	80.8	12.4			29.1	4.9	31.2	30.6	24.0			
LOS	F	B			C	A	C	C	C			
Approach Delay		24.9			22.0			26.2				
Approach LOS		C			C			C				

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 75.5 (63%), Referenced to phase 4:EBT and 8:WBT, Start of Green			
Natural Cycle: 60			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.82			
Intersection Signal Delay: 24.3		Intersection LOS: C	
Intersection Capacity Utilization 75.7%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 12: I-10 NB Ramps & W 5th Street



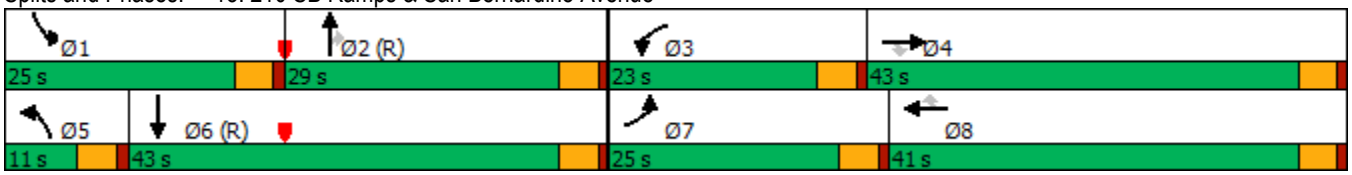


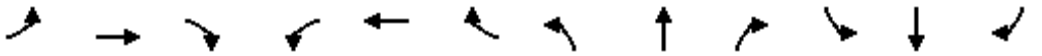
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	163	794	89	133	352	139	31	50	279	169	334	128
Future Volume (vph)	163	794	89	133	352	139	31	50	279	169	334	128
Ideal Flow (vphpl)	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1900
Storage Length (ft)	260		0	0		0	230		0	100		0
Storage Lanes	1		1	1		1	1		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95
Frt			0.850			0.850			0.850		0.958	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1615	3420	1530	1615	1800	1530	1615	1800	1530	1615	3276	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1615	3420	1530	1615	1800	1530	1615	1800	1530	1615	3276	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			136			146			294		49	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		2072			709			529			237	
Travel Time (s)		47.1			16.1			12.0			5.4	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	172	836	94	140	371	146	33	53	294	178	352	135
Shared Lane Traffic (%)												
Lane Group Flow (vph)	172	836	94	140	371	146	33	53	294	178	487	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		36			36			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.15	1.07	1.07	1.15	1.07	1.07	1.15	1.07	1.07	1.15	1.07	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100	20	20	100	20	20	100	20	20	100	
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0	
Detector 1 Size(ft)	20	6	20	20	6	20	20	6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	9.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5	
Total Split (s)	25.0	43.0	43.0	23.0	41.0	41.0	11.0	29.0	29.0	25.0	43.0	
Total Split (%)	20.8%	35.8%	35.8%	19.2%	34.2%	34.2%	9.2%	24.2%	24.2%	20.8%	35.8%	
Maximum Green (s)	20.5	38.5	38.5	18.5	36.5	36.5	6.5	24.5	24.5	20.5	38.5	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		11.0	11.0		11.0	
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	
Act Effct Green (s)	17.1	35.6	35.6	15.0	33.5	33.5	6.6	34.1	34.1	17.3	49.1	
Actuated g/C Ratio	0.14	0.30	0.30	0.12	0.28	0.28	0.06	0.28	0.28	0.14	0.41	
v/c Ratio	0.75	0.83	0.17	0.70	0.74	0.27	0.38	0.10	0.46	0.77	0.36	
Control Delay	68.9	46.8	2.2	69.8	51.4	10.4	67.0	37.6	7.1	70.2	25.2	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	68.9	46.8	2.2	69.8	51.4	10.4	67.0	37.6	7.1	70.2	25.2	
LOS	E	D	A	E	D	B	E	D	A	E	C	
Approach Delay		46.5			46.2			16.5			37.2	
Approach LOS		D			D			B			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 80			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.83			
Intersection Signal Delay: 40.2		Intersection LOS: D	
Intersection Capacity Utilization 64.6%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 13: 210 SB Ramps & San Bernardino Avenue



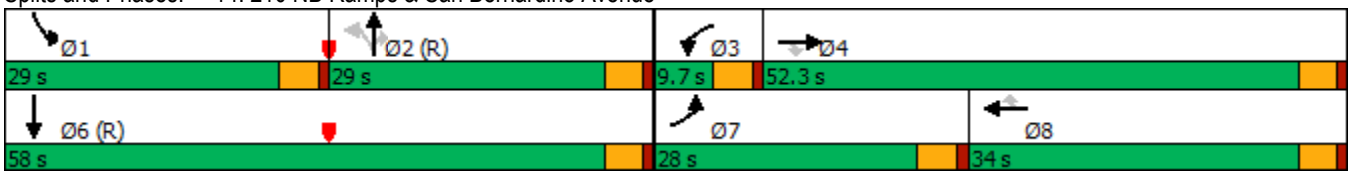


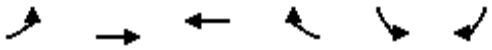
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	472	548	171	37	361	181	84	490	57	266	24	184
Future Volume (vph)	472	548	171	37	361	181	84	490	57	266	24	184
Ideal Flow (vphpl)	1600	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1900
Storage Length (ft)	300		0	0		0	150		70	0		0
Storage Lanes	2		1	1		1	1		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	1.00	1.00
Frt			0.850			0.850			0.850		0.867	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	2949	1800	1530	1615	1800	1530	1615	3420	1530	1615	1561	0
Flt Permitted	0.950			0.950			0.621			0.950		
Satd. Flow (perm)	2949	1800	1530	1615	1800	1530	1056	3420	1530	1615	1561	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			171			191			136		194	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		709			2232			344			268	
Travel Time (s)		16.1			50.7			7.8			6.1	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	497	577	180	39	380	191	88	516	60	280	25	194
Shared Lane Traffic (%)												
Lane Group Flow (vph)	497	577	180	39	380	191	88	516	60	280	219	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.24	1.07	1.07	1.15	1.07	1.07	1.15	1.07	1.07	1.15	1.07	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100	20	20	100	20	20	100	20	20	100	
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0	
Detector 1 Size(ft)	20	6	20	20	6	20	20	6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8			2		1	6	
Permitted Phases			4			8	2		2			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4	4	3	8	8	2	2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	9.5	22.5	22.5	9.5	22.5	22.5	22.5	22.5	22.5	9.5	22.5	
Total Split (s)	28.0	52.3	52.3	9.7	34.0	34.0	29.0	29.0	29.0	29.0	58.0	
Total Split (%)	23.3%	43.6%	43.6%	8.1%	28.3%	28.3%	24.2%	24.2%	24.2%	24.2%	48.3%	
Maximum Green (s)	23.5	47.8	47.8	5.2	29.5	29.5	24.5	24.5	24.5	24.5	53.5	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lag	Lag	Lag	Lead		
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None	None	None	None	None	C-Max	C-Max	C-Max	None	C-Max	
Walk Time (s)		7.0	7.0		7.0	7.0	7.0	7.0	7.0		7.0	
Flash Dont Walk (s)		11.0	11.0		11.0	11.0	11.0	11.0	11.0		11.0	
Pedestrian Calls (#/hr)		0	0		0	0	0	0	0		0	
Act Effct Green (s)	22.8	47.6	47.6	5.2	28.1	28.1	27.9	27.9	27.9	23.3	55.7	
Actuated g/C Ratio	0.19	0.40	0.40	0.04	0.23	0.23	0.23	0.23	0.23	0.19	0.46	
v/c Ratio	0.89	0.81	0.25	0.57	0.90	0.38	0.36	0.65	0.13	0.89	0.26	
Control Delay	80.9	37.7	9.1	86.5	70.1	7.4	45.9	47.3	0.6	77.6	4.8	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	80.9	37.7	9.1	86.5	70.1	7.4	45.9	47.3	0.6	77.6	4.8	
LOS	F	D	A	F	E	A	D	D	A	E	A	
Approach Delay		50.7			51.5			42.9			45.6	
Approach LOS		D			D			D			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.90			
Intersection Signal Delay: 48.3		Intersection LOS: D	
Intersection Capacity Utilization 81.8%		ICU Level of Service D	
Analysis Period (min) 15			

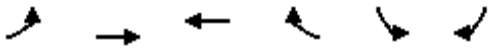
Splits and Phases: 14: 210 NB Ramps & San Bernardino Avenue





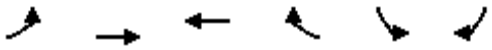
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	3	168	72	3	7	7
Future Volume (vph)	3	168	72	3	7	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.995			0.850
Flt Protected		0.999			0.950	
Satd. Flow (prot)	0	1898	1890	0	1805	1615
Flt Permitted		0.999			0.950	
Satd. Flow (perm)	0	1898	1890	0	1805	1615
Link Speed (mph)		30	30		30	
Link Distance (ft)		1636	441		315	
Travel Time (s)		37.2	10.0		7.2	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	3	177	76	3	7	7
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	180	79	0	7	7
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 21.2%		ICU Level of Service A	
Analysis Period (min) 15			



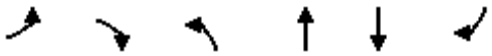
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	175	75	11	27	0
Future Volume (vph)	0	175	75	11	27	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.982			
Flt Protected					0.950	
Satd. Flow (prot)	0	1900	1866	0	1805	0
Flt Permitted					0.950	
Satd. Flow (perm)	0	1900	1866	0	1805	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		441	580		365	
Travel Time (s)		10.0	13.2		8.3	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	184	79	12	28	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	184	91	0	28	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 19.2%		ICU Level of Service A	
Analysis Period (min) 15			



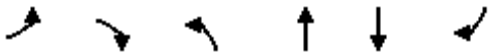
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	202	86	6	14	0
Future Volume (vph)	0	202	86	6	14	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.992			
Flt Protected					0.950	
Satd. Flow (prot)	0	1900	1885	0	1805	1900
Flt Permitted					0.950	
Satd. Flow (perm)	0	1900	1885	0	1805	1900
Link Speed (mph)		30	30		30	
Link Distance (ft)		580	300		152	
Travel Time (s)		13.2	6.8		3.5	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	213	91	6	15	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	213	97	0	15	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 20.6%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	970	483	0
Future Volume (vph)	0	0	0	970	483	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	0.91	0.91
Frt						
Flt Protected						
Satd. Flow (prot)	0	1900	0	1900	5187	0
Flt Permitted						
Satd. Flow (perm)	0	1900	0	1900	5187	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	317			310	502	
Travel Time (s)	7.2			7.0	11.4	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	0	0	1021	508	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	1021	508	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

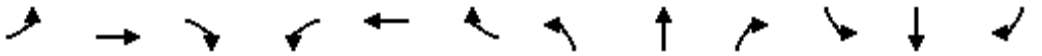
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 54.4%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	27	0	824	823	0
Future Volume (vph)	0	27	0	824	823	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	0.95	0.91	0.91
Frt		0.865				
Flt Protected						
Satd. Flow (prot)	0	1644	0	3610	5187	0
Flt Permitted						
Satd. Flow (perm)	0	1644	0	3610	5187	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	368			290	460	
Travel Time (s)	8.4			6.6	10.5	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	28	0	867	866	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	28	0	867	866	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 26.1%		ICU Level of Service A	
Analysis Period (min) 15			

EXISTING PLUS AMBIENT GROWTH PLUS PROJECT WITH IMPROVEMENTS CONDITION

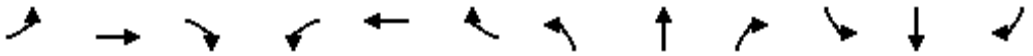


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	233	3	133	600	565	0	0	558	711
Future Volume (vph)	0	0	0	233	3	133	600	565	0	0	558	711
Ideal Flow (vphpl)	1900	1900	1900	1700	1800	1800	1600	1800	1900	1900	1800	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.97	0.95	1.00	1.00	0.91	1.00
Frt						0.850						0.850
Flt Protected					0.953		0.950					
Satd. Flow (prot)	0	0	0	0	1715	1530	2949	3420	0	0	4914	1615
Flt Permitted					0.953		0.950					
Satd. Flow (perm)	0	0	0	0	1715	1530	2949	3420	0	0	4914	1615
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						140						502
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1502			1273			312			1245	
Travel Time (s)		34.1			28.9			7.1			28.3	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	0	0	245	3	140	632	595	0	0	587	748
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	248	140	632	595	0	0	587	748
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.15	1.07	1.07	1.24	1.07	1.00	1.00	1.07	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors				1	1	1	1	1			1	1
Detector Template				Left	Thru	Right	Left	Thru			Thru	Right
Leading Detector (ft)				20	100	20	20	100			100	20
Trailing Detector (ft)				0	0	0	0	0			0	0
Detector 1 Position(ft)				0	0	0	0	0			0	0
Detector 1 Size(ft)				20	100	20	20	100			100	20
Detector 1 Type				Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)				0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 1 Queue (s)				0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 1 Delay (s)				0.0	0.0	0.0	0.0	0.0			0.0	0.0
Turn Type				Perm	NA	Perm	Prot	NA			NA	Perm
Protected Phases					8		5	2			6	
Permitted Phases				8		8						6
Detector Phase				8	8	8	5	2			6	6
Switch Phase												
Minimum Initial (s)				5.0	5.0	5.0	5.0	5.0			5.0	5.0
Minimum Split (s)				22.5	22.5	22.5	9.5	22.5			22.5	22.5
Total Split (s)				23.0	23.0	23.0	27.4	67.0			39.6	39.6
Total Split (%)				25.6%	25.6%	25.6%	30.4%	74.4%			44.0%	44.0%
Maximum Green (s)				18.5	18.5	18.5	22.9	62.5			35.1	35.1
Yellow Time (s)				3.5	3.5	3.5	3.5	3.5			3.5	3.5

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
All-Red Time (s)				1.0	1.0	1.0	1.0	1.0			1.0	1.0
Lost Time Adjust (s)					-0.5	-0.5	-0.5	-0.5			-0.5	-0.5
Total Lost Time (s)					4.0	4.0	4.0	4.0			4.0	4.0
Lead/Lag							Lead				Lag	Lag
Lead-Lag Optimize?							Yes				Yes	Yes
Vehicle Extension (s)				3.0	3.0	3.0	3.0	3.0			3.0	3.0
Recall Mode				None	None	None	None	C-Max			C-Max	C-Max
Walk Time (s)				7.0	7.0	7.0		7.0			7.0	7.0
Flash Dont Walk (s)				11.0	11.0	11.0		11.0			11.0	11.0
Pedestrian Calls (#/hr)				0	0	0		0			0	0
Act Effct Green (s)					17.0	17.0	22.5	65.0			38.5	38.5
Actuated g/C Ratio					0.19	0.19	0.25	0.72			0.43	0.43
v/c Ratio					0.77	0.35	0.86	0.24			0.28	0.76
Control Delay					50.5	8.1	45.2	4.7			17.9	13.6
Queue Delay					0.0	0.0	1.4	0.5			0.0	0.0
Total Delay					50.5	8.1	46.6	5.2			17.9	13.6
LOS					D	A	D	A			B	B
Approach Delay					35.2			26.5			15.5	
Approach LOS					D			C			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 90			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 75			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.86			
Intersection Signal Delay: 22.7		Intersection LOS: C	
Intersection Capacity Utilization 113.4%		ICU Level of Service H	
Analysis Period (min) 15			

Splits and Phases: 1: California Street & I-10 WB Ramps

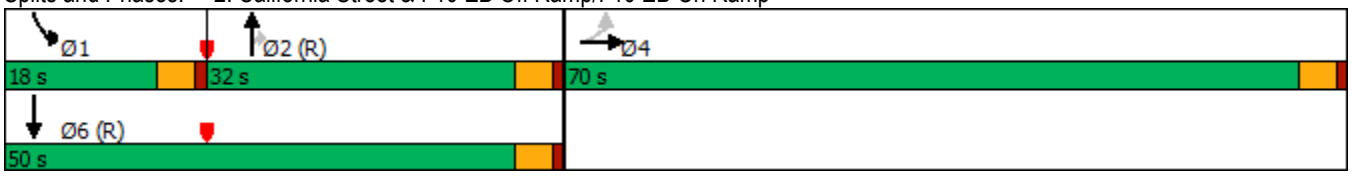


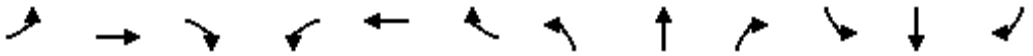
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	556	4	498	0	0	0	0	679	300	77	506	0
Future Volume (vph)	556	4	498	0	0	0	0	679	300	77	506	0
Ideal Flow (vphpl)	1700	1800	1900	1900	1900	1900	1900	1800	1800	1700	1800	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	1.00	1.00	0.95	1.00
Frt		0.851							0.850			
Flt Protected	0.950									0.950		
Satd. Flow (prot)	1615	1532	0	0	0	0	0	4914	1530	1615	3420	0
Flt Permitted	0.950									0.950		
Satd. Flow (perm)	1615	1532	0	0	0	0	0	4914	1530	1615	3420	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		176							316			
Link Speed (mph)		30			30			45			45	
Link Distance (ft)		1514			1294			812			312	
Travel Time (s)		34.4			29.4			12.3			4.7	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	585	4	524	0	0	0	0	715	316	81	533	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	585	528	0	0	0	0	0	715	316	81	533	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.15	1.07	1.00	1.00	1.00	1.00	1.00	1.07	1.07	1.15	1.07	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1						1	1	1	1	
Detector Template	Left	Thru						Thru	Right	Left	Thru	
Leading Detector (ft)	20	100						100	20	20	100	
Trailing Detector (ft)	0	0						0	0	0	0	
Detector 1 Position(ft)	0	0						0	0	0	0	
Detector 1 Size(ft)	20	100						100	20	20	100	
Detector 1 Type	Cl+Ex	Cl+Ex						Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0						0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0						0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0						0.0	0.0	0.0	0.0	
Turn Type	Perm	NA						NA	Perm	Prot	NA	
Protected Phases		4						2		1	6	
Permitted Phases	4								2			
Detector Phase	4	4						2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0						5.0	5.0	5.0	5.0	
Minimum Split (s)	22.5	22.5						22.5	22.5	9.5	22.5	
Total Split (s)	70.0	70.0						32.0	32.0	18.0	50.0	
Total Split (%)	58.3%	58.3%						26.7%	26.7%	15.0%	41.7%	
Maximum Green (s)	65.5	65.5						27.5	27.5	13.5	45.5	
Yellow Time (s)	3.5	3.5						3.5	3.5	3.5	3.5	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
All-Red Time (s)	1.0	1.0						1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	-0.5	-0.5						-0.5	-0.5	-0.5	-0.5	
Total Lost Time (s)	4.0	4.0						4.0	4.0	4.0	4.0	
Lead/Lag								Lag	Lag	Lead		
Lead-Lag Optimize?								Yes	Yes	Yes		
Vehicle Extension (s)	3.0	3.0						3.0	3.0	3.0	3.0	
Recall Mode	None	None						C-Max	C-Max	None	C-Max	
Walk Time (s)	7.0	7.0						7.0	7.0		7.0	
Flash Dont Walk (s)	11.0	11.0						11.0	11.0		11.0	
Pedestrian Calls (#/hr)	0	0						0	0		0	
Act Effct Green (s)	55.3	55.3						43.6	43.6	11.3	56.7	
Actuated g/C Ratio	0.46	0.46						0.36	0.36	0.09	0.47	
v/c Ratio	0.79	0.66						0.40	0.42	0.53	0.33	
Control Delay	34.8	19.2						32.5	5.9	64.0	22.1	
Queue Delay	0.0	0.0						0.0	0.0	0.0	1.0	
Total Delay	34.8	19.2						32.5	5.9	64.0	23.2	
LOS	C	B						C	A	E	C	
Approach Delay		27.4						24.3			28.5	
Approach LOS		C						C			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 65			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.79			
Intersection Signal Delay: 26.5		Intersection LOS: C	
Intersection Capacity Utilization 117.4%		ICU Level of Service H	
Analysis Period (min) 15			

Splits and Phases: 2: California Street & I-10 EB Off Ramp/I-10 EB On Ramp



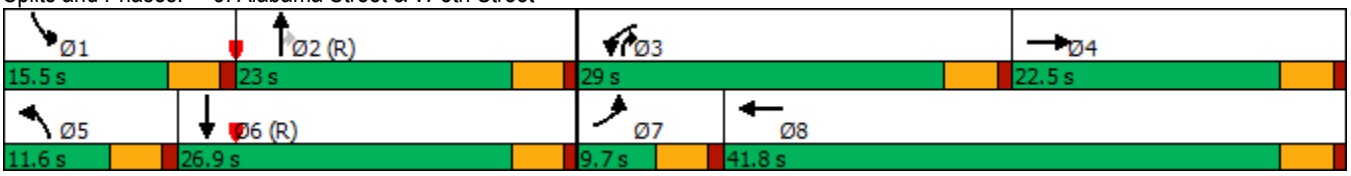


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	20	237	48	401	674	118	52	181	222	179	459	54
Future Volume (vph)	20	237	48	401	674	118	52	181	222	179	459	54
Ideal Flow (vphpl)	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1900	1900
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	1.00	1.00	0.95	0.95
Frt		0.974			0.978				0.850		0.984	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1615	3331	0	1615	3345	0	1615	3420	1530	1615	3552	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1615	3331	0	1615	3345	0	1615	3420	1530	1615	3552	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		24			27				205		13	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1908			2750			621			1649	
Travel Time (s)		43.4			62.5			14.1			37.5	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	21	249	51	422	709	124	55	191	234	188	483	57
Shared Lane Traffic (%)												
Lane Group Flow (vph)	21	300	0	422	833	0	55	191	234	188	540	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.15	1.07	1.07	1.15	1.07	1.07	1.15	1.07	1.07	1.15	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	1	1	1	1	
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Size(ft)	20	100		20	100		20	100	20	20	100	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Turn Type	Prot	NA		Prot	NA		Prot	NA	pm+ov	Prot	NA	
Protected Phases	7	4		3	8		5	2	3	1	6	
Permitted Phases									2			
Detector Phase	7	4		3	8		5	2	3	1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	9.5	22.5		9.5	22.5		9.5	22.5	9.5	9.5	22.5	
Total Split (s)	9.7	22.5		29.0	41.8		11.6	23.0	29.0	15.5	26.9	
Total Split (%)	10.8%	25.0%		32.2%	46.4%		12.9%	25.6%	32.2%	17.2%	29.9%	
Maximum Green (s)	5.2	18.0		24.5	37.3		7.1	18.5	24.5	11.0	22.4	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5	3.5	3.5	3.5	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	-0.5	-0.5		-0.5	-0.5		-0.5	-0.5	0.0	-0.5	-0.5	
Total Lost Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.5	4.0	4.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lead	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None		None	C-Max	None	None	C-Max	
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Dont Walk (s)		11.0			11.0			11.0			11.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	5.7	13.4		24.8	38.3		8.3	21.1	49.4	14.7	29.5	
Actuated g/C Ratio	0.06	0.15		0.28	0.43		0.09	0.23	0.55	0.16	0.33	
v/c Ratio	0.21	0.58		0.95	0.58		0.37	0.24	0.25	0.71	0.46	
Control Delay	45.0	37.0		65.4	21.2		45.5	29.9	3.1	52.8	26.7	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	45.0	37.0		65.4	21.2		45.5	29.9	3.1	52.8	26.7	
LOS	D	D		E	C		D	C	A	D	C	
Approach Delay		37.5			36.1			18.6			33.4	
Approach LOS		D			D			B			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 90			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.95			
Intersection Signal Delay: 32.6		Intersection LOS: C	
Intersection Capacity Utilization 65.3%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 3: Alabama Street & W 5th Street

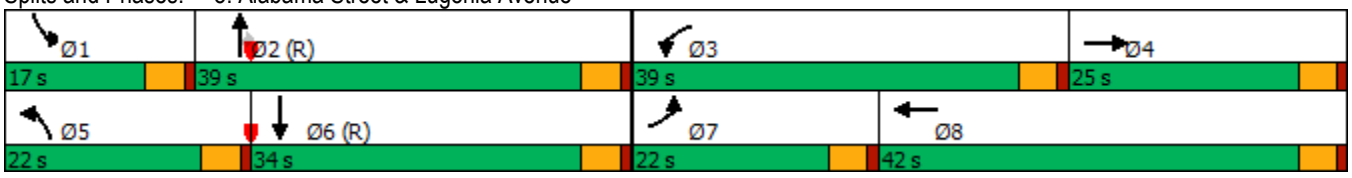


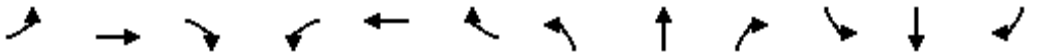
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	75	74	43	204	292	47	76	364	119	44	455	139
Future Volume (vph)	75	74	43	204	292	47	76	364	119	44	455	139
Ideal Flow (vphpl)	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1900	1900
Storage Length (ft)	220		0	0		0	200		0	180		0
Storage Lanes	1		0	1		0	1		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	1.00	1.00	0.91	0.91
Frt		0.945			0.979				0.850		0.965	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1615	3232	0	1615	3348	0	1615	3420	1530	1615	5005	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1615	3232	0	1615	3348	0	1615	3420	1530	1615	5005	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		45			16				136		61	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		5332			3791			1051			2636	
Travel Time (s)		121.2			86.2			23.9			59.9	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	79	78	45	215	307	49	80	383	125	46	479	146
Shared Lane Traffic (%)												
Lane Group Flow (vph)	79	123	0	215	356	0	80	383	125	46	625	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.15	1.07	1.07	1.15	1.07	1.07	1.15	1.07	1.07	1.15	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	1	1	1	1	
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Size(ft)	20	100		20	100		20	100	20	20	100	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Turn Type	Prot	NA		Prot	NA		Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases									2			
Detector Phase	7	4		3	8		5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	9.5	22.5		9.5	22.5		9.5	22.5	22.5	9.5	22.5	
Total Split (s)	22.0	25.0		39.0	42.0		22.0	39.0	39.0	17.0	34.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (%)	18.3%	20.8%		32.5%	35.0%		18.3%	32.5%	32.5%	14.2%	28.3%	
Maximum Green (s)	17.5	20.5		34.5	37.5		17.5	34.5	34.5	12.5	29.5	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	-0.5	-0.5		-0.5	-0.5		-0.5	-0.5	0.0	-0.5	-0.5	
Total Lost Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.5	4.0	4.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None		None	C-Max	C-Max	None	C-Max	
Walk Time (s)		7.0			7.0			7.0	7.0		7.0	
Flash Dont Walk (s)		11.0			11.0			11.0	11.0		11.0	
Pedestrian Calls (#/hr)		0			0			0	0		0	
Act Effct Green (s)	11.7	8.8		21.8	21.2		11.8	66.0	65.5	9.3	63.8	
Actuated g/C Ratio	0.10	0.07		0.18	0.18		0.10	0.55	0.55	0.08	0.53	
v/c Ratio	0.50	0.44		0.73	0.59		0.51	0.20	0.14	0.37	0.23	
Control Delay	61.6	38.1		60.5	47.6		73.7	14.9	3.9	59.9	16.0	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	61.6	38.1		60.5	47.6		73.7	14.9	3.9	59.9	16.0	
LOS	E	D		E	D		E	B	A	E	B	
Approach Delay		47.3			52.5			20.6			19.0	
Approach LOS		D			D			C			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 70			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.73			
Intersection Signal Delay: 31.7		Intersection LOS: C	
Intersection Capacity Utilization 46.7%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 8: Alabama Street & Lugonia Avenue



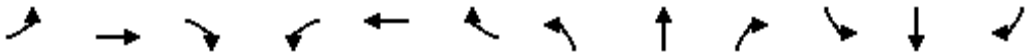


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	357	10	390	473	720	0	0	187	375
Future Volume (vph)	0	0	0	357	10	390	473	720	0	0	187	375
Ideal Flow (vphpl)	1900	1900	1900	1700	1800	1800	1600	1800	1900	1900	1800	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.97	0.95	1.00	1.00	0.91	1.00
Frt						0.850						0.850
Flt Protected					0.954		0.950					
Satd. Flow (prot)	0	0	0	0	1717	1530	2949	3420	0	0	4914	1615
Flt Permitted					0.954		0.950					
Satd. Flow (perm)	0	0	0	0	1717	1530	2949	3420	0	0	4914	1615
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						179						395
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1502			1273			312			1245	
Travel Time (s)		34.1			28.9			7.1			28.3	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	0	0	376	11	411	498	758	0	0	197	395
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	387	411	498	758	0	0	197	395
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.15	1.07	1.07	1.24	1.07	1.00	1.00	1.07	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors				1	2	1	1	2			2	1
Detector Template				Left	Thru	Right	Left	Thru			Thru	Right
Leading Detector (ft)				20	100	20	20	100			100	20
Trailing Detector (ft)				0	0	0	0	0			0	0
Detector 1 Position(ft)				0	0	0	0	0			0	0
Detector 1 Size(ft)				20	6	20	20	6			6	20
Detector 1 Type				Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)				0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 1 Queue (s)				0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 1 Delay (s)				0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 2 Position(ft)					94			94			94	
Detector 2 Size(ft)					6			6			6	
Detector 2 Type					Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)					0.0			0.0			0.0	
Turn Type				Perm	NA	Perm	Prot	NA			NA	Perm
Protected Phases					8		5	2			6	
Permitted Phases				8		8						6
Detector Phase				8	8	8	5	2			6	6
Switch Phase												
Minimum Initial (s)				5.0	5.0	5.0	5.0	5.0			5.0	5.0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)				22.5	22.5	22.5	9.5	22.5			22.5	22.5
Total Split (s)				22.5	22.5	22.5	15.0	37.5			22.5	22.5
Total Split (%)				37.5%	37.5%	37.5%	25.0%	62.5%			37.5%	37.5%
Maximum Green (s)				18.0	18.0	18.0	10.5	33.0			18.0	18.0
Yellow Time (s)				3.5	3.5	3.5	3.5	3.5			3.5	3.5
All-Red Time (s)				1.0	1.0	1.0	1.0	1.0			1.0	1.0
Lost Time Adjust (s)					0.0	0.0	0.0	0.0			0.0	0.0
Total Lost Time (s)					4.5	4.5	4.5	4.5			4.5	4.5
Lead/Lag							Lead				Lag	Lag
Lead-Lag Optimize?							Yes				Yes	Yes
Vehicle Extension (s)				3.0	3.0	3.0	3.0	3.0			3.0	3.0
Recall Mode				None	None	None	None	C-Max			C-Max	C-Max
Walk Time (s)				7.0	7.0	7.0		7.0			7.0	7.0
Flash Dont Walk (s)				11.0	11.0	11.0		11.0			11.0	11.0
Pedestrian Calls (#/hr)				0	0	0		0			0	0
Act Effct Green (s)					16.9	16.9	11.2	34.1			18.4	18.4
Actuated g/C Ratio					0.28	0.28	0.19	0.57			0.31	0.31
v/c Ratio					0.80	0.74	0.91	0.39			0.13	0.51
Control Delay					34.4	19.7	60.8	6.6			15.5	4.8
Queue Delay					0.7	0.0	0.0	0.1			0.0	0.0
Total Delay					35.1	19.7	60.8	6.7			15.5	4.8
LOS					D	B	E	A			B	A
Approach Delay					27.2			28.1			8.4	
Approach LOS					C			C			A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 60			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 60			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.91			
Intersection Signal Delay: 23.4		Intersection LOS: C	
Intersection Capacity Utilization 82.4%		ICU Level of Service E	
Analysis Period (min) 15			

Splits and Phases: 1: California Street & I-10 WB Ramps

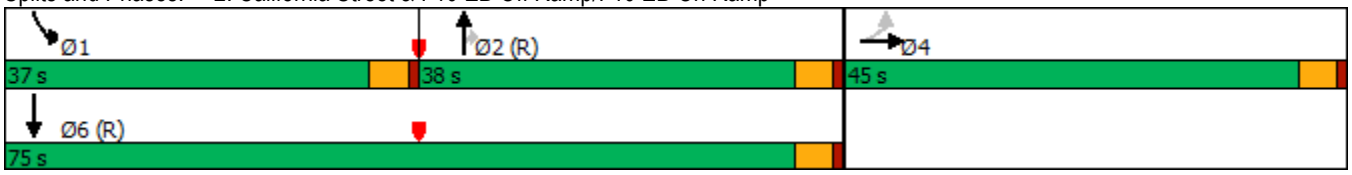


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	355	4	376	0	0	0	0	855	454	270	526	0
Future Volume (vph)	355	4	376	0	0	0	0	855	454	270	526	0
Ideal Flow (vphpl)	1700	1800	1800	1900	1900	1900	1900	1800	1800	1700	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	1.00	1.00	0.95	1.00
Frt		0.851							0.850			
Flt Protected	0.950									0.950		
Satd. Flow (prot)	1615	1532	0	0	0	0	0	4914	1530	1615	3610	0
Flt Permitted	0.950									0.950		
Satd. Flow (perm)	1615	1532	0	0	0	0	0	4914	1530	1615	3610	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		321							478			
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1514			1294			812			312	
Travel Time (s)		34.4			29.4			18.5			7.1	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	374	4	396	0	0	0	0	900	478	284	554	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	374	400	0	0	0	0	0	900	478	284	554	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.15	1.07	1.07	1.00	1.00	1.00	1.00	1.07	1.07	1.15	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2						2	1	1	2	
Detector Template	Left	Thru						Thru	Right	Left	Thru	
Leading Detector (ft)	20	100						100	20	20	100	
Trailing Detector (ft)	0	0						0	0	0	0	
Detector 1 Position(ft)	0	0						0	0	0	0	
Detector 1 Size(ft)	20	6						6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex						Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0						0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0						0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0						0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94						94			94	
Detector 2 Size(ft)		6						6			6	
Detector 2 Type		Cl+Ex						Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0						0.0			0.0	
Turn Type	Perm	NA						NA	Perm	Prot	NA	
Protected Phases		4						2		1	6	
Permitted Phases	4								2			
Detector Phase	4	4						2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0						5.0	5.0	5.0	5.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	22.5	22.5						22.5	22.5	9.5	22.5	
Total Split (s)	45.0	45.0						38.0	38.0	37.0	75.0	
Total Split (%)	37.5%	37.5%						31.7%	31.7%	30.8%	62.5%	
Maximum Green (s)	40.5	40.5						33.5	33.5	32.5	70.5	
Yellow Time (s)	3.5	3.5						3.5	3.5	3.5	3.5	
All-Red Time (s)	1.0	1.0						1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0						0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.5	4.5						4.5	4.5	4.5	4.5	
Lead/Lag								Lag	Lag	Lead		
Lead-Lag Optimize?								Yes	Yes	Yes		
Vehicle Extension (s)	3.0	3.0						3.0	3.0	3.0	3.0	
Recall Mode	None	None						C-Max	C-Max	None	C-Max	
Walk Time (s)	7.0	7.0						7.0	7.0		7.0	
Flash Dont Walk (s)	11.0	11.0						11.0	11.0		11.0	
Pedestrian Calls (#/hr)	0	0						0	0		0	
Act Effct Green (s)	33.9	33.9						46.8	46.8	25.8	77.1	
Actuated g/C Ratio	0.28	0.28						0.39	0.39	0.22	0.64	
v/c Ratio	0.82	0.60						0.47	0.54	0.82	0.24	
Control Delay	54.6	11.3						30.6	5.5	59.4	11.4	
Queue Delay	0.0	0.0						0.0	0.0	3.0	0.6	
Total Delay	54.6	11.3						30.6	5.5	62.4	12.1	
LOS	D	B						C	A	E	B	
Approach Delay		32.2						21.9			29.2	
Approach LOS		C						C			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 65			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.82			
Intersection Signal Delay: 26.6		Intersection LOS: C	
Intersection Capacity Utilization 82.4%		ICU Level of Service E	
Analysis Period (min) 15			

Splits and Phases: 2: California Street & I-10 EB Off Ramp/I-10 EB On Ramp

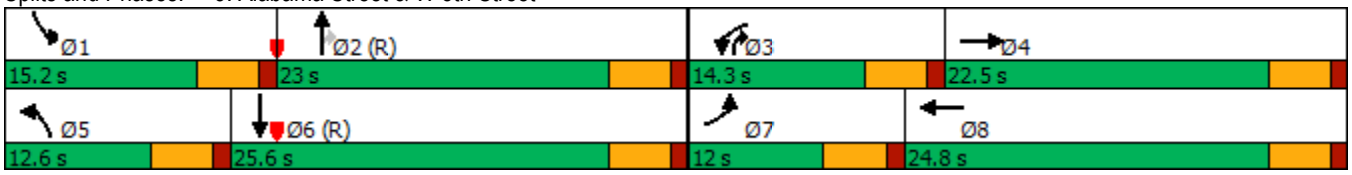


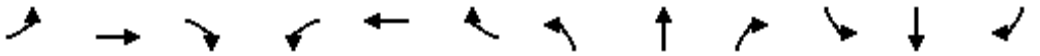
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	60	708	53	187	251	139	106	584	525	210	306	26
Future Volume (vph)	60	708	53	187	251	139	106	584	525	210	306	26
Ideal Flow (vphpl)	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1900
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	1.00	1.00	0.95	0.95
Frt		0.990			0.947				0.850		0.988	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1615	3386	0	1615	3239	0	1615	3420	1530	1615	3379	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1615	3386	0	1615	3239	0	1615	3420	1530	1615	3379	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		10			137				87		11	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1908			2750			621			1649	
Travel Time (s)		43.4			62.5			14.1			37.5	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	63	745	56	197	264	146	112	615	553	221	322	27
Shared Lane Traffic (%)												
Lane Group Flow (vph)	63	801	0	197	410	0	112	615	553	221	349	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.15	1.07	1.07	1.15	1.07	1.07	1.15	1.07	1.07	1.15	1.07	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Size(ft)	20	6		20	6		20	6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA		Prot	NA		Prot	NA	pm+ov	Prot	NA	
Protected Phases	7	4		3	8		5	2	3	1	6	
Permitted Phases									2			
Detector Phase	7	4		3	8		5	2	3	1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	9.5	22.5		9.5	22.5		9.5	22.5	9.5	9.5	22.5	
Total Split (s)	12.0	22.5		14.3	24.8		12.6	23.0	14.3	15.2	25.6	
Total Split (%)	16.0%	30.0%		19.1%	33.1%		16.8%	30.7%	19.1%	20.3%	34.1%	
Maximum Green (s)	7.5	18.0		9.8	20.3		8.1	18.5	9.8	10.7	21.1	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.5		4.5	4.5	4.5	4.5	4.5	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lead	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None		None	C-Max	None	None	C-Max	
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Dont Walk (s)		11.0			11.0			11.0			11.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	7.0	18.0		9.8	25.1		7.8	18.5	32.8	10.7	23.6	
Actuated g/C Ratio	0.09	0.24		0.13	0.33		0.10	0.25	0.44	0.14	0.31	
v/c Ratio	0.42	0.98		0.93	0.35		0.67	0.73	0.77	0.96	0.33	
Control Delay	40.8	56.3		83.0	14.5		53.3	31.8	23.9	85.9	21.1	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	40.8	56.3		83.0	14.5		53.3	31.8	23.9	85.9	21.1	
LOS	D	E		F	B		D	C	C	F	C	
Approach Delay		55.1			36.7			30.3			46.2	
Approach LOS		E			D			C			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 75			
Actuated Cycle Length: 75			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 80			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.98			
Intersection Signal Delay: 40.7		Intersection LOS: D	
Intersection Capacity Utilization 81.0%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 3: Alabama Street & W 5th Street



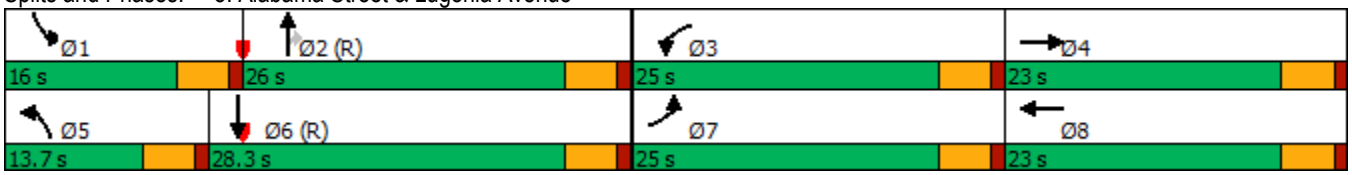


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	232	459	114	272	222	55	70	518	246	134	510	97
Future Volume (vph)	232	459	114	272	222	55	70	518	246	134	510	97
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	220		0	0		0	200		0	180		0
Storage Lanes	1		0	1		0	1		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	1.00	1.00	0.91	0.91
Frt		0.970			0.970				0.850		0.976	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1805	3502	0	1805	3502	0	1805	3610	1615	1805	5063	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1805	3502	0	1805	3502	0	1805	3610	1615	1805	5063	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		31			30				259		42	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		5332			3791			1051			2636	
Travel Time (s)		121.2			86.2			23.9			59.9	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	244	483	120	286	234	58	74	545	259	141	537	102
Shared Lane Traffic (%)												
Lane Group Flow (vph)	244	603	0	286	292	0	74	545	259	141	639	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Size(ft)	20	6		20	6		20	6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA		Prot	NA		Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases									2			

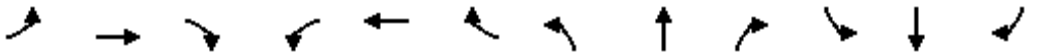
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4		3	8		5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	9.5	22.5		9.5	22.5		9.5	22.5	22.5	9.5	22.5	
Total Split (s)	25.0	23.0		25.0	23.0		13.7	26.0	26.0	16.0	28.3	
Total Split (%)	27.8%	25.6%		27.8%	25.6%		15.2%	28.9%	28.9%	17.8%	31.4%	
Maximum Green (s)	20.5	18.5		20.5	18.5		9.2	21.5	21.5	11.5	23.8	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.5		4.5	4.5	4.5	4.5	4.5	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None		None	C-Max	C-Max	None	C-Max	
Walk Time (s)		7.0			7.0			7.0	7.0		7.0	
Flash Dont Walk (s)		11.0			11.0			11.0	11.0		11.0	
Pedestrian Calls (#/hr)		0			0			0	0		0	
Act Effct Green (s)	16.7	18.2		18.0	19.5		8.1	25.3	25.3	10.5	29.7	
Actuated g/C Ratio	0.19	0.20		0.20	0.22		0.09	0.28	0.28	0.12	0.33	
v/c Ratio	0.73	0.82		0.79	0.37		0.46	0.54	0.41	0.67	0.38	
Control Delay	47.3	43.3		50.5	28.4		47.7	31.0	5.9	54.0	24.0	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	47.3	43.3		50.5	28.4		47.7	31.0	5.9	54.0	24.0	
LOS	D	D		D	C		D	C	A	D	C	
Approach Delay		44.4			39.3			25.0			29.5	
Approach LOS		D			D			C			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 90			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 75			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.82			
Intersection Signal Delay: 34.2		Intersection LOS: C	
Intersection Capacity Utilization 68.1%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 8: Alabama Street & Lugonia Avenue



EXISTING PLUS AMBIENT GROWTH PLUS CUMULATIVE PLUS PROJECT CONDITIONS

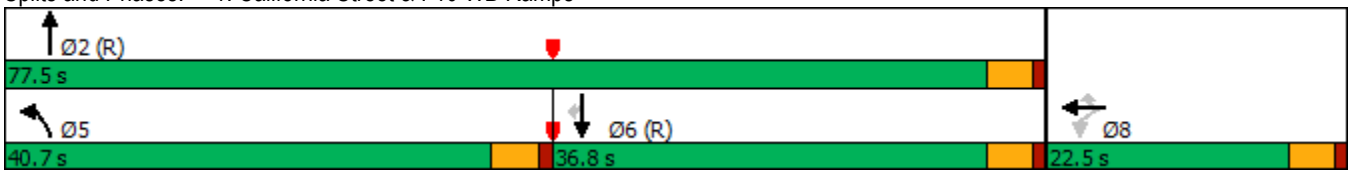


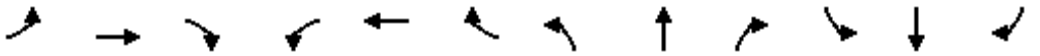
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	266	3	166	626	572	0	0	571	737
Future Volume (vph)	0	0	0	266	3	166	626	572	0	0	571	737
Ideal Flow (vphpl)	1900	1900	1900	1700	1800	1800	1700	1800	1900	1900	1800	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.91	1.00
Frt						0.850						0.850
Flt Protected					0.953		0.950					
Satd. Flow (prot)	0	0	0	0	1715	1530	1615	3420	0	0	4914	1615
Flt Permitted					0.953		0.950					
Satd. Flow (perm)	0	0	0	0	1715	1530	1615	3420	0	0	4914	1615
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						175						420
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1502			1273			312			1245	
Travel Time (s)		34.1			28.9			7.1			28.3	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	0	0	280	3	175	659	602	0	0	601	776
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	283	175	659	602	0	0	601	776
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.15	1.07	1.07	1.15	1.07	1.00	1.00	1.07	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors				1	2	1	1	2			2	1
Detector Template				Left	Thru	Right	Left	Thru			Thru	Right
Leading Detector (ft)				20	100	20	20	100			100	20
Trailing Detector (ft)				0	0	0	0	0			0	0
Detector 1 Position(ft)				0	0	0	0	0			0	0
Detector 1 Size(ft)				20	6	20	20	6			6	20
Detector 1 Type				Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)				0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 1 Queue (s)				0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 1 Delay (s)				0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 2 Position(ft)					94			94			94	
Detector 2 Size(ft)					6			6			6	
Detector 2 Type					Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)					0.0			0.0			0.0	
Turn Type				Perm	NA	Perm	Prot	NA			NA	Perm
Protected Phases					8		5	2			6	
Permitted Phases				8		8						6
Detector Phase				8	8	8	5	2			6	6
Switch Phase												
Minimum Initial (s)				5.0	5.0	5.0	5.0	5.0			5.0	5.0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)				22.5	22.5	22.5	9.5	22.5			22.5	22.5
Total Split (s)				22.5	22.5	22.5	40.7	77.5			36.8	36.8
Total Split (%)				22.5%	22.5%	22.5%	40.7%	77.5%			36.8%	36.8%
Maximum Green (s)				18.0	18.0	18.0	36.2	73.0			32.3	32.3
Yellow Time (s)				3.5	3.5	3.5	3.5	3.5			3.5	3.5
All-Red Time (s)				1.0	1.0	1.0	1.0	1.0			1.0	1.0
Lost Time Adjust (s)					0.0	0.0	0.0	0.0			0.0	0.0
Total Lost Time (s)					4.5	4.5	4.5	4.5			4.5	4.5
Lead/Lag							Lead				Lag	Lag
Lead-Lag Optimize?							Yes				Yes	Yes
Vehicle Extension (s)				3.0	3.0	3.0	3.0	3.0			3.0	3.0
Recall Mode				None	None	None	None	C-Max			C-Max	C-Max
Walk Time (s)				7.0	7.0	7.0		7.0			7.0	7.0
Flash Dont Walk (s)				11.0	11.0	11.0		11.0			11.0	11.0
Pedestrian Calls (#/hr)				0	0	0		0			0	0
Act Effct Green (s)					17.9	17.9	36.3	73.1			32.3	32.3
Actuated g/C Ratio					0.18	0.18	0.36	0.73			0.32	0.32
v/c Ratio					0.92	0.42	1.12	0.24			0.38	0.96
Control Delay					77.5	9.0	107.9	4.7			27.0	40.5
Queue Delay					0.0	0.0	2.3	0.7			0.0	0.0
Total Delay					77.5	9.0	110.2	5.4			27.0	40.5
LOS					E	A	F	A			C	D
Approach Delay					51.3			60.2			34.6	
Approach LOS					D			E			C	

Intersection Summary	
Area Type:	Other
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green	
Natural Cycle: 100	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.12	
Intersection Signal Delay: 47.5	Intersection LOS: D
Intersection Capacity Utilization 152.4%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 1: California Street & I-10 WB Ramps



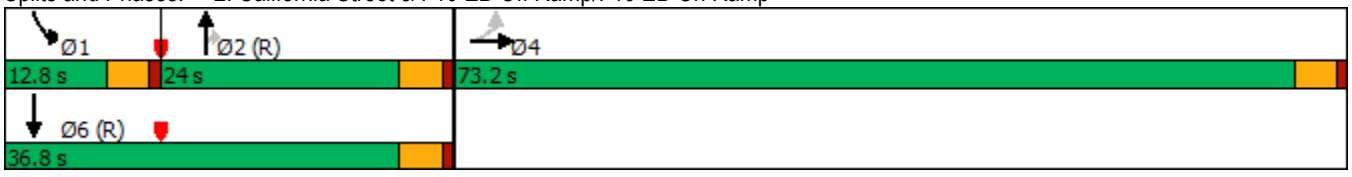


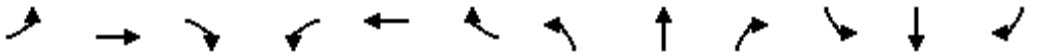
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	576	8	508	0	0	0	0	692	320	97	531	0
Future Volume (vph)	576	8	508	0	0	0	0	692	320	97	531	0
Ideal Flow (vphpl)	1700	1800	1800	1900	1900	1900	1900	1800	1800	1700	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	1.00	1.00	0.95	1.00
Frt		0.937							0.850			
Flt Protected		0.974								0.950		
Satd. Flow (prot)	0	1643	0	0	0	0	0	4914	1530	1615	3610	0
Flt Permitted		0.974								0.950		
Satd. Flow (perm)	0	1643	0	0	0	0	0	4914	1530	1615	3610	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		76							337			
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1514			1294			812			312	
Travel Time (s)		34.4			29.4			18.5			7.1	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	606	8	535	0	0	0	0	728	337	102	559	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1149	0	0	0	0	0	728	337	102	559	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.15	1.07	1.07	1.00	1.00	1.00	1.00	1.07	1.07	1.15	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2						2	1	1	2	
Detector Template	Left	Thru						Thru	Right	Left	Thru	
Leading Detector (ft)	20	100						100	20	20	100	
Trailing Detector (ft)	0	0						0	0	0	0	
Detector 1 Position(ft)	0	0						0	0	0	0	
Detector 1 Size(ft)	20	6						6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex						Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0						0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0						0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0						0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94						94			94	
Detector 2 Size(ft)		6						6			6	
Detector 2 Type		Cl+Ex						Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0						0.0			0.0	
Turn Type	Perm	NA						NA	Perm	Prot	NA	
Protected Phases		4						2		1	6	
Permitted Phases	4								2			
Detector Phase	4	4						2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0						5.0	5.0	5.0	5.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	22.5	22.5						22.5	22.5	9.5	22.5	
Total Split (s)	73.2	73.2						24.0	24.0	12.8	36.8	
Total Split (%)	66.5%	66.5%						21.8%	21.8%	11.6%	33.5%	
Maximum Green (s)	68.7	68.7						19.5	19.5	8.3	32.3	
Yellow Time (s)	3.5	3.5						3.5	3.5	3.5	3.5	
All-Red Time (s)	1.0	1.0						1.0	1.0	1.0	1.0	
Lost Time Adjust (s)		0.0						0.0	0.0	0.0	0.0	
Total Lost Time (s)		4.5						4.5	4.5	4.5	4.5	
Lead/Lag								Lag	Lag	Lead		
Lead-Lag Optimize?								Yes	Yes	Yes		
Vehicle Extension (s)	3.0	3.0						3.0	3.0	3.0	3.0	
Recall Mode	None	None						C-Max	C-Max	None	C-Max	
Walk Time (s)	7.0	7.0						7.0	7.0		7.0	
Flash Dont Walk (s)	11.0	11.0						11.0	11.0		11.0	
Pedestrian Calls (#/hr)	0	0						0	0		0	
Act Effct Green (s)		68.7						19.5	19.5	8.3	32.3	
Actuated g/C Ratio		0.62						0.18	0.18	0.08	0.29	
v/c Ratio		1.09						0.84	0.61	0.84	0.53	
Control Delay		76.7						53.4	9.7	99.2	34.7	
Queue Delay		0.0						0.0	0.0	0.0	3.3	
Total Delay		76.7						53.4	9.7	99.2	37.9	
LOS		E						D	A	F	D	
Approach Delay		76.7						39.6			47.4	
Approach LOS		E						D			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 110			
Actuated Cycle Length: 110			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 120			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.09			
Intersection Signal Delay: 56.2		Intersection LOS: E	
Intersection Capacity Utilization 152.4%		ICU Level of Service H	
Analysis Period (min) 15			

Splits and Phases: 2: California Street & I-10 EB Off Ramp/I-10 EB On Ramp



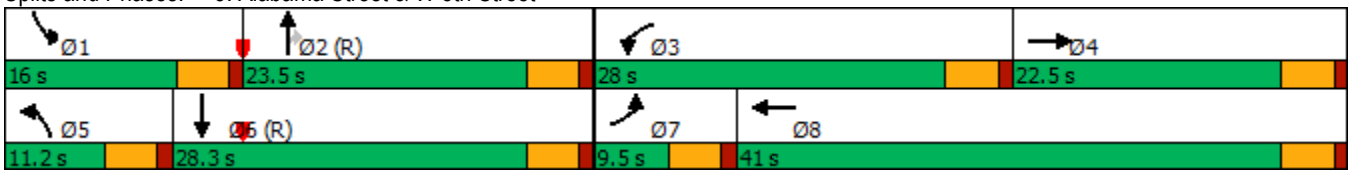


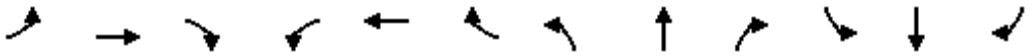
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	30	258	64	425	732	148	76	209	269	202	496	70
Future Volume (vph)	30	258	64	425	732	148	76	209	269	202	496	70
Ideal Flow (vphpl)	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1900
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	1.00	1.00	0.95	0.95
Frt		0.970			0.975				0.850		0.981	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1615	3317	0	1615	3334	0	1615	3420	1530	1615	3355	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1615	3317	0	1615	3334	0	1615	3420	1530	1615	3355	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		30			32				283		17	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1908			2750			621			1649	
Travel Time (s)		43.4			62.5			14.1			37.5	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	32	272	67	447	771	156	80	220	283	213	522	74
Shared Lane Traffic (%)												
Lane Group Flow (vph)	32	339	0	447	927	0	80	220	283	213	596	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.15	1.07	1.07	1.15	1.07	1.07	1.15	1.07	1.07	1.15	1.07	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Size(ft)	20	6		20	6		20	6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA		Prot	NA		Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases									2			
Detector Phase	7	4		3	8		5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	9.5	22.5		9.5	22.5		9.5	22.5	22.5	9.5	22.5	
Total Split (s)	9.5	22.5		28.0	41.0		11.2	23.5	23.5	16.0	28.3	
Total Split (%)	10.6%	25.0%		31.1%	45.6%		12.4%	26.1%	26.1%	17.8%	31.4%	
Maximum Green (s)	5.0	18.0		23.5	36.5		6.7	19.0	19.0	11.5	23.8	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.5		4.5	4.5	4.5	4.5	4.5	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None		None	C-Max	C-Max	None	C-Max	
Walk Time (s)		7.0			7.0			7.0	7.0		7.0	
Flash Dont Walk (s)		11.0			11.0			11.0	11.0		11.0	
Pedestrian Calls (#/hr)		0			0			0	0		0	
Act Effct Green (s)	5.0	14.1		23.5	36.4		7.9	19.2	19.2	15.2	28.7	
Actuated g/C Ratio	0.06	0.16		0.26	0.40		0.09	0.21	0.21	0.17	0.32	
v/c Ratio	0.36	0.62		1.06	0.68		0.56	0.30	0.52	0.78	0.55	
Control Delay	52.5	37.0		86.0	23.5		56.7	31.2	7.6	59.5	28.6	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	52.5	37.0		86.0	23.5		56.7	31.2	7.6	59.5	28.6	
LOS	D	D		F	C		E	C	A	E	C	
Approach Delay		38.3			43.8			23.2			36.7	
Approach LOS		D			D			C			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 90			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.06			
Intersection Signal Delay: 37.5		Intersection LOS: D	
Intersection Capacity Utilization 72.5%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 3: Alabama Street & W 5th Street



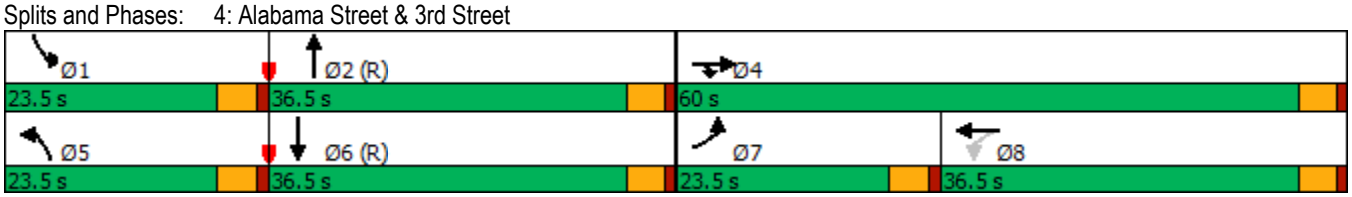


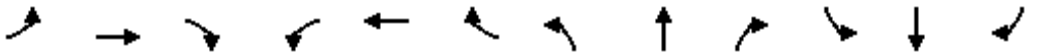
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	111	3	232	4	4	29	182	403	5	16	789	226
Future Volume (vph)	111	3	232	4	4	29	182	403	5	16	789	226
Ideal Flow (vphpl)	1600	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1900
Storage Length (ft)	0		0	0		0	150		0	0		0
Storage Lanes	2		1	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.97	1.00	1.00	0.95	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Frt			0.850		0.881			0.998			0.967	
Flt Protected	0.950				0.995		0.950			0.950		
Satd. Flow (prot)	2949	1800	1530	0	2998	0	1615	3413	0	1615	3307	0
Flt Permitted	0.950				0.926		0.950			0.950		
Satd. Flow (perm)	2949	1800	1530	0	2790	0	1615	3413	0	1615	3307	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			244		31			1			30	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1074			950			487			621	
Travel Time (s)		24.4			21.6			11.1			14.1	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	117	3	244	4	4	31	192	424	5	17	831	238
Shared Lane Traffic (%)												
Lane Group Flow (vph)	117	3	244	0	39	0	192	429	0	17	1069	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.24	1.07	1.07	1.15	1.07	1.07	1.15	1.07	1.07	1.15	1.07	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2		1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100	20	20	100		20	100		20	100	
Trailing Detector (ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Position(ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Size(ft)	20	6	20	20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Prot	Perm	NA		Prot	NA		Prot	NA	
Protected Phases	7	4	4		8		5	2		1	6	
Permitted Phases				8								

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4	4	8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	9.5	22.5	22.5	22.5	22.5		9.5	22.5		9.5	22.5	
Total Split (s)	23.5	60.0	60.0	36.5	36.5		23.5	36.5		23.5	36.5	
Total Split (%)	19.6%	50.0%	50.0%	30.4%	30.4%		19.6%	30.4%		19.6%	30.4%	
Maximum Green (s)	19.0	55.5	55.5	32.0	32.0		19.0	32.0		19.0	32.0	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.5	4.5		4.5		4.5	4.5		4.5	4.5	
Lead/Lag	Lead			Lag	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes			Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None	None	None	None		None	C-Max		None	C-Max	
Walk Time (s)		7.0	7.0	7.0	7.0			7.0			7.0	
Flash Dont Walk (s)		11.0	11.0	11.0	11.0			11.0			11.0	
Pedestrian Calls (#/hr)		0	0	0	0			0			0	
Act Effct Green (s)	10.1	16.8	16.8		6.2		19.8	89.1		6.9	69.9	
Actuated g/C Ratio	0.08	0.14	0.14		0.05		0.16	0.74		0.06	0.58	
v/c Ratio	0.47	0.01	0.58		0.23		0.72	0.17		0.18	0.55	
Control Delay	58.3	39.0	10.8		26.2		66.6	6.4		57.8	18.5	
Queue Delay	0.0	0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Delay	58.3	39.0	10.8		26.2		66.6	6.4		57.8	18.5	
LOS	E	D	B		C		E	A		E	B	
Approach Delay		26.3			26.2			25.0			19.1	
Approach LOS		C			C			C			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 80			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.72			
Intersection Signal Delay: 22.2		Intersection LOS: C	
Intersection Capacity Utilization 63.6%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 4: Alabama Street & 3rd Street



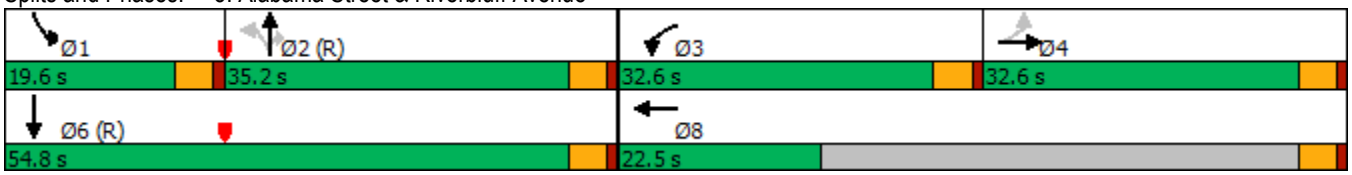


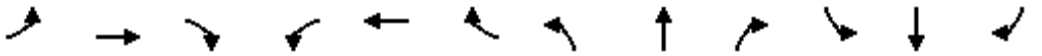
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	0	4	33	0	30	11	556	28	36	997	15
Future Volume (vph)	5	0	4	33	0	30	11	556	28	36	997	15
Ideal Flow (vphpl)	1700	1800	1800	1700	1900	1800	1800	1800	1800	1700	1900	1900
Storage Length (ft)	0		0	0		0	150		0	150		0
Storage Lanes	1		0	1		0	1		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91
Frt		0.850			0.850				0.850		0.998	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1615	1530	0	1615	1615	0	1710	1800	1530	1615	5177	0
Flt Permitted				0.950			0.256			0.950		
Satd. Flow (perm)	1700	1530	0	1615	1615	0	461	1800	1530	1615	5177	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		366			394				95		2	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		416			1617			460			310	
Travel Time (s)		9.5			36.8			10.5			7.0	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	5	0	4	35	0	32	12	585	29	38	1049	16
Shared Lane Traffic (%)												
Lane Group Flow (vph)	5	4	0	35	32	0	12	585	29	38	1065	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.15	1.07	1.07	1.15	1.00	1.07	1.07	1.07	1.07	1.15	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Size(ft)	20	6		20	6		20	6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Prot	NA		Perm	NA	Perm	Prot	NA	
Protected Phases		4		3	8			2		1	6	
Permitted Phases	4						2		2			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4		3	8		2	2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	22.5	22.5		22.5	22.5		22.5	22.5	22.5	9.5	22.5	
Total Split (s)	32.6	32.6		32.6	22.5		35.2	35.2	35.2	19.6	54.8	
Total Split (%)	27.2%	27.2%		27.2%	18.8%		29.3%	29.3%	29.3%	16.3%	45.7%	
Maximum Green (s)	28.1	28.1		28.1	18.0		30.7	30.7	30.7	15.1	50.3	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.5		4.5	4.5	4.5	4.5	4.5	
Lead/Lag	Lag	Lag		Lead			Lag	Lag	Lag	Lead		
Lead-Lag Optimize?	Yes	Yes		Yes			Yes	Yes	Yes	Yes		
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None		C-Max	C-Max	C-Max	None	C-Max	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0	7.0		7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0	11.0		11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0	0		0	
Act Effct Green (s)	6.2	6.2		8.1	10.2		98.1	98.1	98.1	8.3	106.6	
Actuated g/C Ratio	0.05	0.05		0.07	0.08		0.82	0.82	0.82	0.07	0.89	
v/c Ratio	0.06	0.01		0.32	0.06		0.03	0.40	0.02	0.34	0.23	
Control Delay	55.0	0.0		60.3	0.2		6.3	5.5	0.0	50.1	4.0	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	55.0	0.0		60.3	0.2		6.3	5.5	0.0	50.1	4.0	
LOS	D	A		E	A		A	A	A	D	A	
Approach Delay		30.6			31.6			5.2			5.6	
Approach LOS		C			C			A			A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.40			
Intersection Signal Delay: 6.6		Intersection LOS: A	
Intersection Capacity Utilization 49.6%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 5: Alabama Street & Riverbluff Avenue



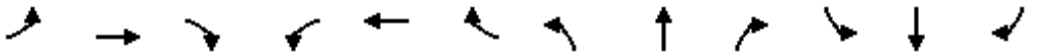


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	29	8	19	17	10	7	67	561	22	10	921	114
Future Volume (vph)	29	8	19	17	10	7	67	561	22	10	921	114
Ideal Flow (vphpl)	1700	1800	1800	1700	1800	1800	1700	1800	1900	1700	1900	1900
Storage Length (ft)	0		0	0		0	200		0	0		0
Storage Lanes	0		0	0		0	1		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.954			0.974			0.994				0.850
Flt Protected		0.974			0.976		0.950			0.950		
Satd. Flow (prot)	0	1673	0	0	1711	0	1615	1789	0	1615	1900	1615
Flt Permitted		0.874			0.831		0.950			0.950		
Satd. Flow (perm)	0	1501	0	0	1457	0	1615	1789	0	1615	1900	1615
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		20			7			2				61
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		300			825			1344			290	
Travel Time (s)		6.8			18.8			30.5			6.6	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	31	8	20	18	11	7	71	591	23	11	969	120
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	59	0	0	36	0	71	614	0	11	969	120
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.15	1.07	1.07	1.15	1.07	1.07	1.15	1.07	1.00	1.15	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	Right
Leading Detector (ft)	20	100		20	100		20	100		20	100	20
Trailing Detector (ft)	0	0		0	0		0	0		0	0	0
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	0
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								6

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4		8	8		5	2		1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	5.0
Minimum Split (s)	22.5	22.5		22.5	22.5		9.5	22.5		9.5	22.5	22.5
Total Split (s)	44.5	44.5		44.5	44.5		31.5	44.0		31.5	44.0	44.0
Total Split (%)	37.1%	37.1%		37.1%	37.1%		26.3%	36.7%		26.3%	36.7%	36.7%
Maximum Green (s)	40.0	40.0		40.0	40.0		27.0	39.5		27.0	39.5	39.5
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)		4.5			4.5		4.5	4.5		4.5	4.5	4.5
Lead/Lag							Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	C-Max
Walk Time (s)	7.0	7.0		7.0	7.0			7.0			7.0	7.0
Flash Dont Walk (s)	11.0	11.0		11.0	11.0			11.0			11.0	11.0
Pedestrian Calls (#/hr)	0	0		0	0			0			0	0
Act Effct Green (s)		8.8			8.8		10.6	102.6		6.4	92.1	92.1
Actuated g/C Ratio		0.07			0.07		0.09	0.86		0.05	0.77	0.77
v/c Ratio		0.46			0.32		0.50	0.40		0.13	0.66	0.10
Control Delay		48.4			50.9		63.2	4.2		70.4	17.2	3.6
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	0.0
Total Delay		48.4			50.9		63.2	4.2		70.4	17.2	3.6
LOS		D			D		E	A		E	B	A
Approach Delay		48.4			50.9			10.3			16.3	
Approach LOS		D			D			B			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.66			
Intersection Signal Delay: 15.8		Intersection LOS: B	
Intersection Capacity Utilization 68.2%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 6: Alabama Street & Palmetto Avenue

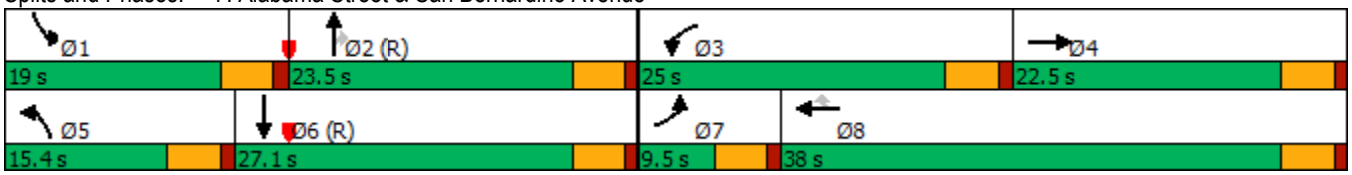


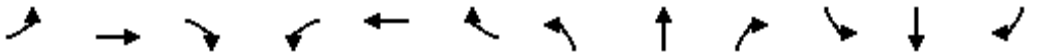
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	67	191	31	196	435	151	134	306	136	123	595	90
Future Volume (vph)	67	191	31	196	435	151	134	306	136	123	595	90
Ideal Flow (vphpl)	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1900
Storage Length (ft)	100		0	0		0	170		0	260		0
Storage Lanes	1		0	1		1	1		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Frt		0.979				0.850			0.850		0.980	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1615	3348	0	1615	3420	1530	1615	3420	1530	1615	3352	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1615	3348	0	1615	3420	1530	1615	3420	1530	1615	3352	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		18				159			182		18	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		5507			2072			2636			1349	
Travel Time (s)		125.2			47.1			59.9			30.7	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	71	201	33	206	458	159	141	322	143	129	626	95
Shared Lane Traffic (%)												
Lane Group Flow (vph)	71	234	0	206	458	159	141	322	143	129	721	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.15	1.07	1.07	1.15	1.07	1.07	1.15	1.07	1.07	1.15	1.07	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2	1	1	2	
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100		20	100	20	20	100	20	20	100	
Trailing Detector (ft)	0	0		0	0	0	0	0	0	0	0	
Detector 1 Position(ft)	0	0		0	0	0	0	0	0	0	0	
Detector 1 Size(ft)	20	6		20	6	20	20	6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8			2			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4		3	8	8	5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	9.5	22.5		9.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5	
Total Split (s)	9.5	22.5		25.0	38.0	38.0	15.4	23.5	23.5	19.0	27.1	
Total Split (%)	10.6%	25.0%		27.8%	42.2%	42.2%	17.1%	26.1%	26.1%	21.1%	30.1%	
Maximum Green (s)	5.0	18.0		20.5	33.5	33.5	10.9	19.0	19.0	14.5	22.6	
Yellow Time (s)	3.5	3.5		3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None	None	None	C-Max	C-Max	None	C-Max	
Walk Time (s)		7.0			7.0	7.0		7.0	7.0		7.0	
Flash Dont Walk (s)		11.0			11.0	11.0		11.0	11.0		11.0	
Pedestrian Calls (#/hr)		0			0	0		0	0		0	
Act Effct Green (s)	5.0	11.1		16.1	24.2	24.2	12.8	32.3	32.3	12.4	32.0	
Actuated g/C Ratio	0.06	0.12		0.18	0.27	0.27	0.14	0.36	0.36	0.14	0.36	
v/c Ratio	0.80	0.54		0.71	0.50	0.30	0.62	0.26	0.21	0.58	0.60	
Control Delay	96.3	38.6		38.1	30.3	11.4	47.9	23.9	3.1	46.2	28.1	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	96.3	38.6		38.1	30.3	11.4	47.9	23.9	3.1	46.2	28.1	
LOS	F	D		D	C	B	D	C	A	D	C	
Approach Delay		52.0			28.6			24.6			30.9	
Approach LOS		D			C			C			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 90			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 80			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.80			
Intersection Signal Delay: 31.2		Intersection LOS: C	
Intersection Capacity Utilization 62.4%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 7: Alabama Street & San Bernardino Avenue



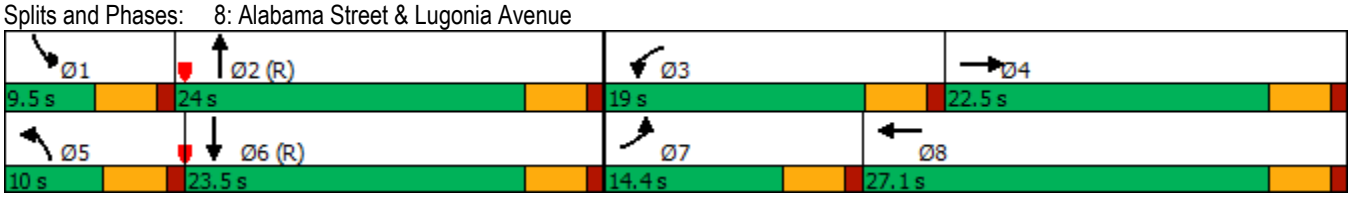


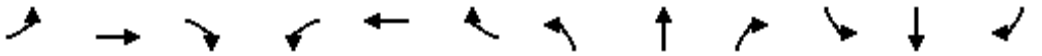
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	79	79	50	264	306	87	90	426	150	73	497	125
Future Volume (vph)	79	79	50	264	306	87	90	426	150	73	497	125
Ideal Flow (vphpl)	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1900
Storage Length (ft)	220		0	0		0	200		0	180		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.91	0.91
Frt		0.942			0.967			0.961			0.970	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1615	3222	0	1615	3307	0	1615	3287	0	1615	4767	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1615	3222	0	1615	3307	0	1615	3287	0	1615	4767	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		53			50			64			79	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		5332			3791			1051			2636	
Travel Time (s)		121.2			86.2			23.9			59.9	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	83	83	53	278	322	92	95	448	158	77	523	132
Shared Lane Traffic (%)												
Lane Group Flow (vph)	83	136	0	278	414	0	95	606	0	77	655	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.15	1.07	1.07	1.15	1.07	1.07	1.15	1.07	1.07	1.15	1.07	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	9.5	22.5		9.5	22.5		9.5	22.5		9.5	22.5	
Total Split (s)	14.4	22.5		19.0	27.1		10.0	24.0		9.5	23.5	
Total Split (%)	19.2%	30.0%		25.3%	36.1%		13.3%	32.0%		12.7%	31.3%	
Maximum Green (s)	9.9	18.0		14.5	22.6		5.5	19.5		5.0	19.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Dont Walk (s)		11.0			11.0			11.0			11.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	8.4	9.1		14.3	15.0		9.7	28.9		8.8	25.8	
Actuated g/C Ratio	0.11	0.12		0.19	0.20		0.13	0.39		0.12	0.34	
v/c Ratio	0.46	0.31		0.90	0.59		0.45	0.46		0.41	0.39	
Control Delay	39.0	19.9		63.7	27.2		37.3	19.8		37.1	18.8	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	39.0	19.9		63.7	27.2		37.3	19.8		37.1	18.8	
LOS	D	B		E	C		D	B		D	B	
Approach Delay		27.1			41.8			22.1			20.8	
Approach LOS		C			D			C			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 75			
Actuated Cycle Length: 75			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 75			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.90			
Intersection Signal Delay: 28.0		Intersection LOS: C	
Intersection Capacity Utilization 57.5%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 8: Alabama Street & Lugonia Avenue



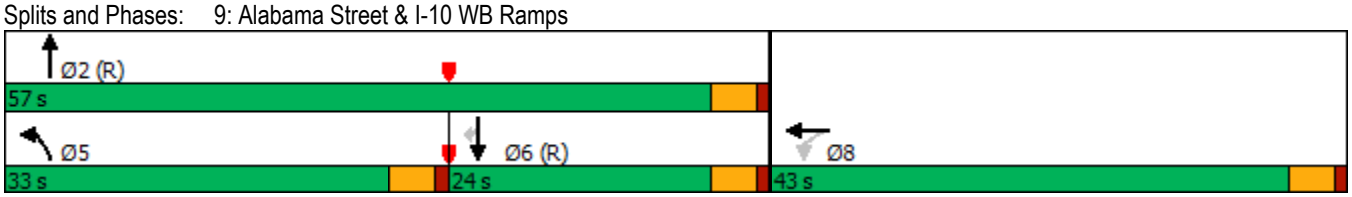


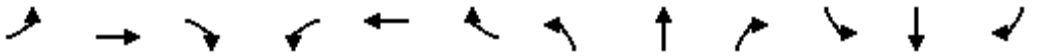
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	336	339	375	485	649	0	0	399	267
Future Volume (vph)	0	0	0	336	339	375	485	649	0	0	399	267
Ideal Flow (vphpl)	1900	1900	1900	1700	1800	1800	1700	1800	1800	1700	1800	1900
Storage Length (ft)	0		0	0		0	150		0	0		0
Storage Lanes	0		0	0		0	1		0	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.95	1.00	0.95	1.00	1.00	0.95	1.00
Frt					0.946							0.850
Flt Protected					0.984		0.950					
Satd. Flow (prot)	0	0	0	0	3184	0	1615	3420	0	0	3420	1615
Flt Permitted					0.984		0.950					
Satd. Flow (perm)	0	0	0	0	3184	0	1615	3420	0	0	3420	1615
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					124							231
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		918			1093			591			1051	
Travel Time (s)		20.9			24.8			13.4			23.9	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	0	0	354	357	395	511	683	0	0	420	281
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	1106	0	511	683	0	0	420	281
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.15	1.07	1.07	1.15	1.07	1.07	1.15	1.07	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors				1	2		1	2			2	1
Detector Template				Left	Thru		Left	Thru			Thru	Right
Leading Detector (ft)				20	100		20	100			100	20
Trailing Detector (ft)				0	0		0	0			0	0
Detector 1 Position(ft)				0	0		0	0			0	0
Detector 1 Size(ft)				20	6		20	6			6	20
Detector 1 Type				Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)				0.0	0.0		0.0	0.0			0.0	0.0
Detector 1 Queue (s)				0.0	0.0		0.0	0.0			0.0	0.0
Detector 1 Delay (s)				0.0	0.0		0.0	0.0			0.0	0.0
Detector 2 Position(ft)					94			94			94	
Detector 2 Size(ft)					6			6			6	
Detector 2 Type					Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)					0.0			0.0			0.0	
Turn Type				Perm	NA		Prot	NA			NA	Perm
Protected Phases					8		5	2			6	
Permitted Phases				8								6

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase				8	8		5	2			6	6
Switch Phase												
Minimum Initial (s)				5.0	5.0		5.0	5.0			5.0	5.0
Minimum Split (s)				22.5	22.5		9.5	22.5			22.5	22.5
Total Split (s)				43.0	43.0		33.0	57.0			24.0	24.0
Total Split (%)				43.0%	43.0%		33.0%	57.0%			24.0%	24.0%
Maximum Green (s)				38.5	38.5		28.5	52.5			19.5	19.5
Yellow Time (s)				3.5	3.5		3.5	3.5			3.5	3.5
All-Red Time (s)				1.0	1.0		1.0	1.0			1.0	1.0
Lost Time Adjust (s)					0.0		0.0	0.0			0.0	0.0
Total Lost Time (s)					4.5		4.5	4.5			4.5	4.5
Lead/Lag							Lead				Lag	Lag
Lead-Lag Optimize?							Yes				Yes	Yes
Vehicle Extension (s)				3.0	3.0		3.0	3.0			3.0	3.0
Recall Mode				None	None		None	C-Max			C-Max	C-Max
Walk Time (s)				7.0	7.0			7.0			7.0	7.0
Flash Dont Walk (s)				11.0	11.0			11.0			11.0	11.0
Pedestrian Calls (#/hr)				0	0			0			0	0
Act Effct Green (s)					37.0		30.0	54.0			19.5	19.5
Actuated g/C Ratio					0.37		0.30	0.54			0.20	0.20
v/c Ratio					0.88		1.06	0.37			0.63	0.56
Control Delay					35.3		92.3	14.3			41.8	13.0
Queue Delay					0.0		0.0	0.0			0.0	0.0
Total Delay					35.3		92.3	14.3			41.8	13.0
LOS					D		F	B			D	B
Approach Delay					35.3			47.7			30.3	
Approach LOS					D			D			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 100			
Actuated Cycle Length: 100			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.06			
Intersection Signal Delay: 39.0		Intersection LOS: D	
Intersection Capacity Utilization 90.7%		ICU Level of Service E	
Analysis Period (min) 15			

Splits and Phases: 9: Alabama Street & I-10 WB Ramps



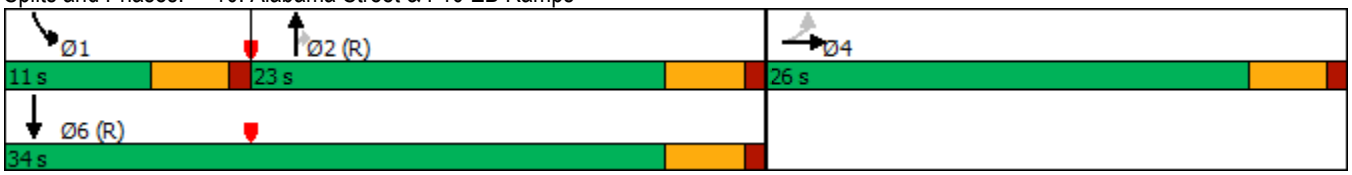


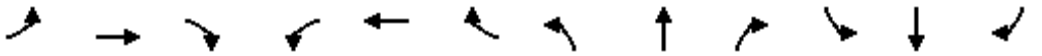
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	456	14	630	0	0	0	0	679	160	143	599	0
Future Volume (vph)	456	14	630	0	0	0	0	679	160	143	599	0
Ideal Flow (vphpl)	1700	1800	1800	1900	1900	1900	1900	1800	1800	1700	1900	1900
Storage Length (ft)	0		0	0		0	0		0	150		0
Storage Lanes	0		0	0		0	0		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.95	0.95	0.95	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt		0.914							0.850			
Flt Protected		0.980								0.950		
Satd. Flow (prot)	0	3063	0	0	0	0	0	3420	1530	1615	3610	0
Flt Permitted		0.980								0.950		
Satd. Flow (perm)	0	3063	0	0	0	0	0	3420	1530	1615	3610	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		203							168			
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		898			623			1369			591	
Travel Time (s)		20.4			14.2			31.1			13.4	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	480	15	663	0	0	0	0	715	168	151	631	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1158	0	0	0	0	0	715	168	151	631	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.15	1.07	1.07	1.00	1.00	1.00	1.00	1.07	1.07	1.15	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2						2	1	1	2	
Detector Template	Left	Thru						Thru	Right	Left	Thru	
Leading Detector (ft)	20	100						100	20	20	100	
Trailing Detector (ft)	0	0						0	0	0	0	
Detector 1 Position(ft)	0	0						0	0	0	0	
Detector 1 Size(ft)	20	6						6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex						Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0						0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0						0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0						0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94						94			94	
Detector 2 Size(ft)		6						6			6	
Detector 2 Type		Cl+Ex						Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0						0.0			0.0	
Turn Type	Perm	NA						NA	Perm	Prot	NA	
Protected Phases		4						2		1	6	
Permitted Phases	4								2			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4						2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0						5.0	5.0	5.0	5.0	
Minimum Split (s)	22.5	22.5						22.5	22.5	9.5	22.5	
Total Split (s)	26.0	26.0						23.0	23.0	11.0	34.0	
Total Split (%)	43.3%	43.3%						38.3%	38.3%	18.3%	56.7%	
Maximum Green (s)	21.5	21.5						18.5	18.5	6.5	29.5	
Yellow Time (s)	3.5	3.5						3.5	3.5	3.5	3.5	
All-Red Time (s)	1.0	1.0						1.0	1.0	1.0	1.0	
Lost Time Adjust (s)		0.0						0.0	0.0	0.0	0.0	
Total Lost Time (s)		4.5						4.5	4.5	4.5	4.5	
Lead/Lag								Lag	Lag	Lead		
Lead-Lag Optimize?								Yes	Yes	Yes		
Vehicle Extension (s)	3.0	3.0						3.0	3.0	3.0	3.0	
Recall Mode	None	None						C-Max	C-Max	None	C-Max	
Walk Time (s)	7.0	7.0						7.0	7.0		7.0	
Flash Dont Walk (s)	11.0	11.0						11.0	11.0		11.0	
Pedestrian Calls (#/hr)	0	0						0	0		0	
Act Effct Green (s)		21.5						18.5	18.5	6.5	29.5	
Actuated g/C Ratio		0.36						0.31	0.31	0.11	0.49	
v/c Ratio		0.94						0.68	0.29	0.87	0.36	
Control Delay		32.8						22.0	4.6	72.3	10.1	
Queue Delay		0.0						0.0	0.0	0.0	0.0	
Total Delay		32.8						22.0	4.6	72.3	10.1	
LOS		C						C	A	E	B	
Approach Delay		32.8						18.7			22.1	
Approach LOS		C						B			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 60			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 65			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.94			
Intersection Signal Delay: 25.4		Intersection LOS: C	
Intersection Capacity Utilization 90.7%		ICU Level of Service E	
Analysis Period (min) 15			

Splits and Phases: 10: Alabama Street & I-10 EB Ramps



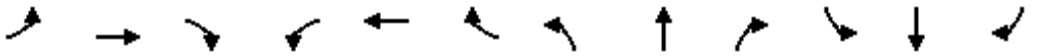


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	340	527	1000	1063	0	0	0	0	271	0	298
Future Volume (vph)	0	340	527	1000	1063	0	0	0	0	271	0	298
Ideal Flow (vphpl)	1900	1800	1800	1600	1800	1900	1900	1900	1900	1700	1800	1900
Storage Length (ft)	0		220	0		0	0		0	0		0
Storage Lanes	0		1	2		0	0		0	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850									0.850
Flt Protected				0.950							0.950	
Satd. Flow (prot)	0	3420	1530	2949	3420	0	0	0	0	0	1710	1615
Flt Permitted				0.950							0.950	
Satd. Flow (perm)	0	3420	1530	2949	3420	0	0	0	0	0	1710	1615
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			458									112
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		2750			477			659			386	
Travel Time (s)		62.5			10.8			15.0			8.8	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	358	555	1053	1119	0	0	0	0	285	0	314
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	358	555	1053	1119	0	0	0	0	0	285	314
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.07	1.07	1.24	1.07	1.00	1.00	1.00	1.00	1.15	1.07	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		2	1	1	2					1	2	1
Detector Template		Thru	Right	Left	Thru					Left	Thru	Right
Leading Detector (ft)		100	20	20	100					20	100	20
Trailing Detector (ft)		0	0	0	0					0	0	0
Detector 1 Position(ft)		0	0	0	0					0	0	0
Detector 1 Size(ft)		6	20	20	6					20	6	20
Detector 1 Type		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex					Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)		0.0	0.0	0.0	0.0					0.0	0.0	0.0
Detector 1 Queue (s)		0.0	0.0	0.0	0.0					0.0	0.0	0.0
Detector 1 Delay (s)		0.0	0.0	0.0	0.0					0.0	0.0	0.0
Detector 2 Position(ft)		94			94						94	
Detector 2 Size(ft)		6			6						6	
Detector 2 Type		Cl+Ex			Cl+Ex						Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0						0.0	
Turn Type		NA	Perm	Prot	NA					Prot	NA	Perm
Protected Phases		4		3	8					1	6	
Permitted Phases			4									6

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase		4	4	3	8					1	6	6
Switch Phase												
Minimum Initial (s)		5.0	5.0	5.0	5.0					5.0	5.0	5.0
Minimum Split (s)		22.5	22.5	9.5	22.5					9.5	22.5	22.5
Total Split (s)		26.0	26.0	37.0	63.0					27.0	27.0	27.0
Total Split (%)		28.9%	28.9%	41.1%	70.0%					30.0%	30.0%	30.0%
Maximum Green (s)		21.5	21.5	32.5	58.5					22.5	22.5	22.5
Yellow Time (s)		3.5	3.5	3.5	3.5					3.5	3.5	3.5
All-Red Time (s)		1.0	1.0	1.0	1.0					1.0	1.0	1.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0						0.0	0.0
Total Lost Time (s)		4.5	4.5	4.5	4.5						4.5	4.5
Lead/Lag		Lag	Lag	Lead								
Lead-Lag Optimize?		Yes	Yes	Yes								
Vehicle Extension (s)		3.0	3.0	3.0	3.0					3.0	3.0	3.0
Recall Mode		C-Max	C-Max	None	C-Max					None	Max	Max
Walk Time (s)		7.0	7.0		7.0						7.0	7.0
Flash Dont Walk (s)		11.0	11.0		11.0						11.0	11.0
Pedestrian Calls (#/hr)		0	0		0						0	0
Act Effct Green (s)		21.5	21.5	32.5	58.5						0.0	22.5
Actuated g/C Ratio		0.24	0.24	0.36	0.65						0.00	0.25
v/c Ratio		0.44	0.78	0.99	0.50						no cap	0.64
Control Delay		30.6	21.2	52.2	6.7							26.1
Queue Delay		0.0	0.0	0.0	0.1							0.0
Total Delay		30.6	21.2	52.2	6.8						Error	26.1
LOS		C	C	D	A						F	C
Approach Delay		24.9			28.8						Err	
Approach LOS		C			C						F	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 90			
Offset: 64 (71%), Referenced to phase 4:EBT and 8:WBT, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: Err			
Intersection Signal Delay: Err		Intersection LOS: F	
Intersection Capacity Utilization 95.4%		ICU Level of Service F	
Analysis Period (min) 15			

Splits and Phases: 11: 210 SB Ramps & W 5th Street

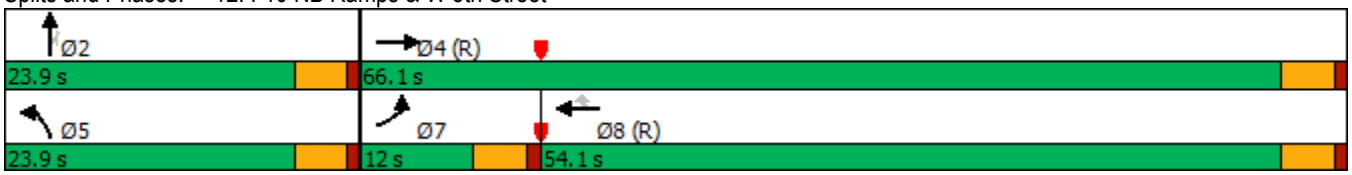


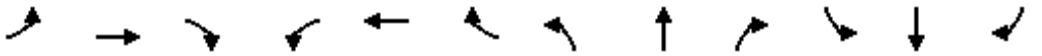
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	134	477	0	0	1535	523	451	5	375	0	0	0
Future Volume (vph)	134	477	0	0	1535	523	451	5	375	0	0	0
Ideal Flow (vphpl)	1700	1800	1900	1900	1800	1800	1600	1800	1900	1900	1900	1900
Storage Length (ft)	0		0	0		220	0		0	0		0
Storage Lanes	1		0	0		1	1		2	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.91	1.00	0.95	0.95	0.88	1.00	1.00	1.00
Frt						0.850			0.850			
Flt Protected	0.950						0.950	0.953				
Satd. Flow (prot)	1615	3420	0	0	4914	1530	1444	1630	2842	0	0	0
Flt Permitted	0.950						0.950	0.953				
Satd. Flow (perm)	1615	3420	0	0	4914	1530	1444	1630	2842	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						551			395			
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		477			2099			595			477	
Travel Time (s)		10.8			47.7			13.5			10.8	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Parking (#/hr)			0									
Adj. Flow (vph)	141	502	0	0	1616	551	475	5	395	0	0	0
Shared Lane Traffic (%)							49%					
Lane Group Flow (vph)	141	502	0	0	1616	551	242	238	395	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.15	1.07	1.00	1.00	1.07	1.07	1.24	1.07	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2			2	1	1	2	1			
Detector Template	Left	Thru			Thru	Right	Left	Thru	Right			
Leading Detector (ft)	20	100			100	20	20	100	20			
Trailing Detector (ft)	0	0			0	0	0	0	0			
Detector 1 Position(ft)	0	0			0	0	0	0	0			
Detector 1 Size(ft)	20	6			6	20	20	6	20			
Detector 1 Type	Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex			
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0			0.0	0.0	0.0	0.0	0.0			
Detector 1 Queue (s)	0.0	0.0			0.0	0.0	0.0	0.0	0.0			
Detector 1 Delay (s)	0.0	0.0			0.0	0.0	0.0	0.0	0.0			
Detector 2 Position(ft)		94			94			94				
Detector 2 Size(ft)		6			6			6				
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				
Turn Type	Prot	NA			NA	Perm	Prot	NA	Perm			
Protected Phases	7	4			8		5	2				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases						8			2			
Detector Phase	7	4			8	8	5	2	2			
Switch Phase												
Minimum Initial (s)	5.0	5.0			5.0	5.0	5.0	5.0	5.0			
Minimum Split (s)	9.5	22.5			22.5	22.5	9.5	22.5	22.5			
Total Split (s)	12.0	66.1			54.1	54.1	23.9	23.9	23.9			
Total Split (%)	13.3%	73.4%			60.1%	60.1%	26.6%	26.6%	26.6%			
Maximum Green (s)	7.5	61.6			49.6	49.6	19.4	19.4	19.4			
Yellow Time (s)	3.5	3.5			3.5	3.5	3.5	3.5	3.5			
All-Red Time (s)	1.0	1.0			1.0	1.0	1.0	1.0	1.0			
Lost Time Adjust (s)	0.0	0.0			0.0	0.0	0.0	0.0	0.0			
Total Lost Time (s)	4.5	4.5			4.5	4.5	4.5	4.5	4.5			
Lead/Lag	Lead				Lag	Lag						
Lead-Lag Optimize?	Yes				Yes	Yes						
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	3.0	3.0			
Recall Mode	None	C-Max			C-Max	C-Max	None	Max	Max			
Walk Time (s)		7.0			7.0	7.0		7.0	7.0			
Flash Dont Walk (s)		11.0			11.0	11.0		11.0	11.0			
Pedestrian Calls (#/hr)		0			0	0		0	0			
Act Effct Green (s)	7.5	61.6			49.6	49.6	19.4	19.4	19.4			
Actuated g/C Ratio	0.08	0.68			0.55	0.55	0.22	0.22	0.22			
v/c Ratio	1.05	0.21			0.60	0.51	0.78	0.68	0.43			
Control Delay	133.0	3.9			14.7	2.7	52.2	43.5	4.8			
Queue Delay	0.0	0.0			0.0	0.0	0.0	0.0	0.0			
Total Delay	133.0	3.9			14.7	2.7	52.2	43.5	4.8			
LOS	F	A			B	A	D	D	A			
Approach Delay		32.2			11.6			28.4				
Approach LOS		C			B			C				

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 90			
Offset: 35.9 (40%), Referenced to phase 4:EBT and 8:WBT, Start of Green			
Natural Cycle: 65			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.05			
Intersection Signal Delay: 19.2		Intersection LOS: B	
Intersection Capacity Utilization 95.4%		ICU Level of Service F	
Analysis Period (min) 15			

Splits and Phases: 12: I-10 NB Ramps & W 5th Street



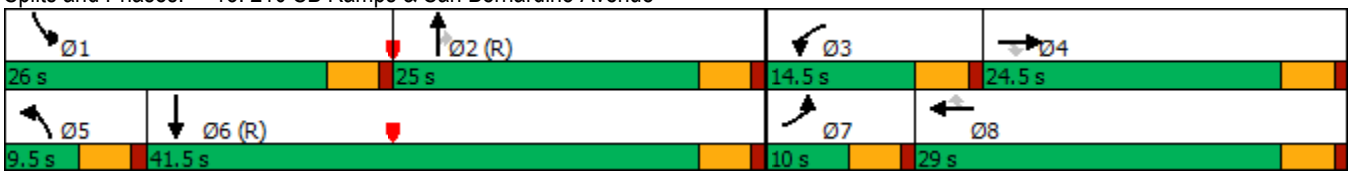


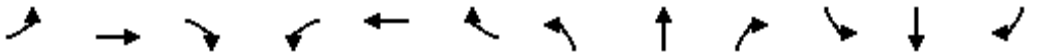
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	63	241	23	85	419	386	18	7	40	336	253	380
Future Volume (vph)	63	241	23	85	419	386	18	7	40	336	253	380
Ideal Flow (vphpl)	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1900
Storage Length (ft)	260		0	0		0	230		0	100		0
Storage Lanes	1		1	1		1	1		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95
Frt			0.850			0.850			0.850		0.910	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1615	3420	1530	1615	1800	1530	1615	1800	1530	1615	3112	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1615	3420	1530	1615	1800	1530	1615	1800	1530	1615	3112	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			182			406			182		396	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		2072			709			529			237	
Travel Time (s)		47.1			16.1			12.0			5.4	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	66	254	24	89	441	406	19	7	42	354	266	400
Shared Lane Traffic (%)												
Lane Group Flow (vph)	66	254	24	89	441	406	19	7	42	354	666	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		36			36			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.15	1.07	1.07	1.15	1.07	1.07	1.15	1.07	1.07	1.15	1.07	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100	20	20	100	20	20	100	20	20	100	
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0	
Detector 1 Size(ft)	20	6	20	20	6	20	20	6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	9.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5	
Total Split (s)	10.0	24.5	24.5	14.5	29.0	29.0	9.5	25.0	25.0	26.0	41.5	
Total Split (%)	11.1%	27.2%	27.2%	16.1%	32.2%	32.2%	10.6%	27.8%	27.8%	28.9%	46.1%	
Maximum Green (s)	5.5	20.0	20.0	10.0	24.5	24.5	5.0	20.5	20.5	21.5	37.0	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		11.0	11.0		11.0	
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	
Act Effct Green (s)	5.5	20.7	20.7	9.0	24.0	24.0	5.1	23.4	23.4	21.1	45.2	
Actuated g/C Ratio	0.06	0.23	0.23	0.10	0.27	0.27	0.06	0.26	0.26	0.23	0.50	
v/c Ratio	0.67	0.32	0.05	0.56	0.92	0.58	0.21	0.01	0.08	0.93	0.38	
Control Delay	61.2	29.3	0.7	54.1	59.7	13.3	46.3	27.1	0.3	68.0	6.9	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	61.2	29.3	0.7	54.1	59.7	13.3	46.3	27.1	0.3	68.0	6.9	
LOS	E	C	A	D	E	B	D	C	A	E	A	
Approach Delay		33.4			39.0			15.9			28.1	
Approach LOS		C			D			B			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 90			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.93			
Intersection Signal Delay: 32.8		Intersection LOS: C	
Intersection Capacity Utilization 66.2%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 13: 210 SB Ramps & San Bernardino Avenue



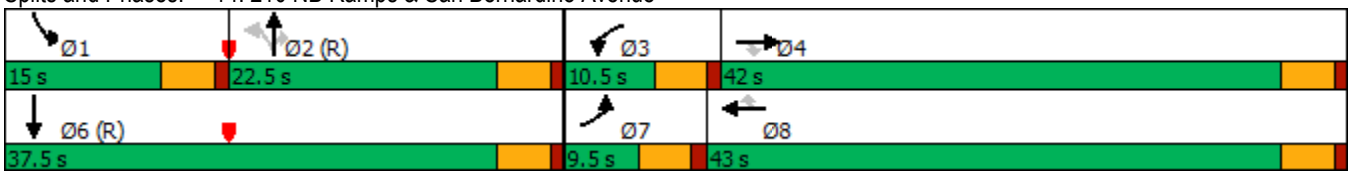


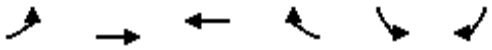
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	152	345	133	34	690	363	63	356	28	155	10	170
Future Volume (vph)	152	345	133	34	690	363	63	356	28	155	10	170
Ideal Flow (vphpl)	1600	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1900
Storage Length (ft)	300		0	0		0	150		70	0		0
Storage Lanes	2		1	1		1	1		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	1.00	1.00
Frt			0.850			0.850			0.850		0.859	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	2949	1800	1530	1615	1800	1530	1615	3420	1530	1615	1546	0
Flt Permitted	0.950			0.950			0.638			0.950		
Satd. Flow (perm)	2949	1800	1530	1615	1800	1530	1085	3420	1530	1615	1546	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			140			382			127		179	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		709			2232			344			268	
Travel Time (s)		16.1			50.7			7.8			6.1	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	160	363	140	36	726	382	66	375	29	163	11	179
Shared Lane Traffic (%)												
Lane Group Flow (vph)	160	363	140	36	726	382	66	375	29	163	190	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.24	1.07	1.07	1.15	1.07	1.07	1.15	1.07	1.07	1.15	1.07	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100	20	20	100	20	20	100	20	20	100	
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0	
Detector 1 Size(ft)	20	6	20	20	6	20	20	6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8			2		1	6	
Permitted Phases			4			8	2		2			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4	4	3	8	8	2	2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	9.5	22.5	22.5	9.5	22.5	22.5	22.5	22.5	22.5	9.5	22.5	
Total Split (s)	9.5	42.0	42.0	10.5	43.0	43.0	22.5	22.5	22.5	15.0	37.5	
Total Split (%)	10.6%	46.7%	46.7%	11.7%	47.8%	47.8%	25.0%	25.0%	25.0%	16.7%	41.7%	
Maximum Green (s)	5.0	37.5	37.5	6.0	38.5	38.5	18.0	18.0	18.0	10.5	33.0	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lag	Lag	Lag	Lead		
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None	None	None	None	None	C-Max	C-Max	C-Max	None	C-Max	
Walk Time (s)		7.0	7.0		7.0	7.0	7.0	7.0	7.0		7.0	
Flash Dont Walk (s)		11.0	11.0		11.0	11.0	11.0	11.0	11.0		11.0	
Pedestrian Calls (#/hr)		0	0		0	0	0	0	0		0	
Act Effct Green (s)	5.0	41.2	41.2	5.9	38.0	38.0	18.4	18.4	18.4	10.5	33.5	
Actuated g/C Ratio	0.06	0.46	0.46	0.07	0.42	0.42	0.20	0.20	0.20	0.12	0.37	
v/c Ratio	0.98	0.44	0.18	0.34	0.95	0.44	0.30	0.53	0.07	0.87	0.28	
Control Delay	100.7	23.1	9.8	49.4	49.8	3.6	35.0	35.4	0.3	79.2	4.9	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	100.7	23.1	9.8	49.4	49.8	3.6	35.0	35.4	0.3	79.2	4.9	
LOS	F	C	A	D	D	A	D	D	A	E	A	
Approach Delay		39.0			34.4			33.2			39.2	
Approach LOS		D			C			C			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 90			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.98			
Intersection Signal Delay: 36.0		Intersection LOS: D	
Intersection Capacity Utilization 78.5%		ICU Level of Service D	
Analysis Period (min) 15			

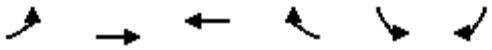
Splits and Phases: 14: 210 NB Ramps & San Bernardino Avenue





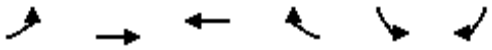
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	6	138	167	6	2	2
Future Volume (vph)	6	138	167	6	2	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.996			0.850
Flt Protected		0.998			0.950	
Satd. Flow (prot)	0	1896	1892	0	1805	1615
Flt Permitted		0.998			0.950	
Satd. Flow (perm)	0	1896	1892	0	1805	1615
Link Speed (mph)		30	30		30	
Link Distance (ft)		1636	441		315	
Travel Time (s)		37.2	10.0		7.2	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	6	145	176	6	2	2
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	151	182	0	2	2
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 22.1%		ICU Level of Service A	
Analysis Period (min) 15			



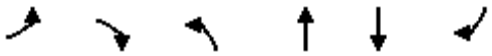
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	142	173	24	7	0
Future Volume (vph)	0	142	173	24	7	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.984			
Flt Protected					0.950	
Satd. Flow (prot)	0	1900	1870	0	1805	0
Flt Permitted					0.950	
Satd. Flow (perm)	0	1900	1870	0	1805	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		441	580		365	
Travel Time (s)		10.0	13.2		8.3	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	149	182	25	7	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	149	207	0	7	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 20.6%		ICU Level of Service A	
Analysis Period (min) 15			



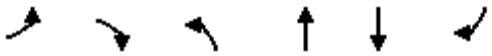
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	147	197	12	4	0
Future Volume (vph)	0	147	197	12	4	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.992			
Flt Protected					0.950	
Satd. Flow (prot)	0	1900	1885	0	1805	1900
Flt Permitted					0.950	
Satd. Flow (perm)	0	1900	1885	0	1805	1900
Link Speed (mph)		30	30		30	
Link Distance (ft)		580	300		152	
Travel Time (s)		13.2	6.8		3.5	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	155	207	13	4	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	155	220	0	4	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 21.1%		ICU Level of Service A	
Analysis Period (min) 15			



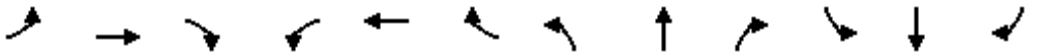
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	561	814	0
Future Volume (vph)	0	0	0	561	814	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	0.91	0.91
Frt						
Flt Protected						
Satd. Flow (prot)	0	1900	0	1900	5187	0
Flt Permitted						
Satd. Flow (perm)	0	1900	0	1900	5187	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	317			310	277	
Travel Time (s)	7.2			7.0	6.3	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	0	0	591	857	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	591	857	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 32.9%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	7	0	631	989	0
Future Volume (vph)	0	7	0	631	989	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	0.95	0.91	0.91
Frt		0.865				
Flt Protected						
Satd. Flow (prot)	0	1644	0	3610	5187	0
Flt Permitted						
Satd. Flow (perm)	0	1644	0	3610	5187	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	368			290	460	
Travel Time (s)	8.4			6.6	10.5	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	7	0	664	1041	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	7	0	664	1041	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 29.1%		ICU Level of Service A	
Analysis Period (min) 15			

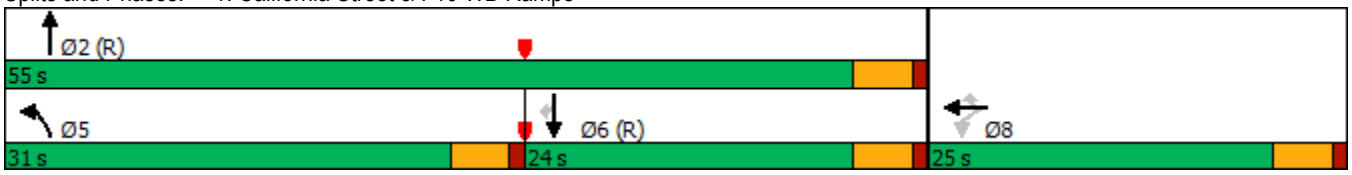


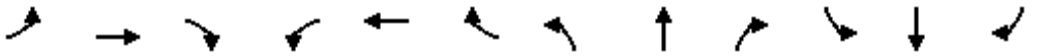
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	389	10	422	498	727	0	0	200	400
Future Volume (vph)	0	0	0	389	10	422	498	727	0	0	200	400
Ideal Flow (vphpl)	1900	1900	1900	1700	1800	1800	1700	1800	1900	1900	1800	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.91	1.00
Frt						0.850						0.850
Flt Protected					0.954		0.950					
Satd. Flow (prot)	0	0	0	0	1717	1530	1615	3420	0	0	4914	1615
Flt Permitted					0.954		0.950					
Satd. Flow (perm)	0	0	0	0	1717	1530	1615	3420	0	0	4914	1615
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						224						421
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1502			1273			312			1245	
Travel Time (s)		34.1			28.9			7.1			28.3	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	0	0	409	11	444	524	765	0	0	211	421
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	420	444	524	765	0	0	211	421
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.15	1.07	1.07	1.15	1.07	1.00	1.00	1.07	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors				1	2	1	1	2			2	1
Detector Template				Left	Thru	Right	Left	Thru			Thru	Right
Leading Detector (ft)				20	100	20	20	100			100	20
Trailing Detector (ft)				0	0	0	0	0			0	0
Detector 1 Position(ft)				0	0	0	0	0			0	0
Detector 1 Size(ft)				20	6	20	20	6			6	20
Detector 1 Type				Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)				0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 1 Queue (s)				0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 1 Delay (s)				0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 2 Position(ft)					94			94			94	
Detector 2 Size(ft)					6			6			6	
Detector 2 Type					Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)					0.0			0.0			0.0	
Turn Type				Perm	NA	Perm	Prot	NA			NA	Perm
Protected Phases					8		5	2			6	
Permitted Phases				8		8						6
Detector Phase				8	8	8	5	2			6	6
Switch Phase												
Minimum Initial (s)				5.0	5.0	5.0	5.0	5.0			5.0	5.0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)				22.5	22.5	22.5	9.5	22.5			22.5	22.5
Total Split (s)				25.0	25.0	25.0	31.0	55.0			24.0	24.0
Total Split (%)				31.3%	31.3%	31.3%	38.8%	68.8%			30.0%	30.0%
Maximum Green (s)				20.5	20.5	20.5	26.5	50.5			19.5	19.5
Yellow Time (s)				3.5	3.5	3.5	3.5	3.5			3.5	3.5
All-Red Time (s)				1.0	1.0	1.0	1.0	1.0			1.0	1.0
Lost Time Adjust (s)					0.0	0.0	0.0	0.0			0.0	0.0
Total Lost Time (s)					4.5	4.5	4.5	4.5			4.5	4.5
Lead/Lag							Lead				Lag	Lag
Lead-Lag Optimize?							Yes				Yes	Yes
Vehicle Extension (s)				3.0	3.0	3.0	3.0	3.0			3.0	3.0
Recall Mode				None	None	None	None	C-Max			C-Max	C-Max
Walk Time (s)				7.0	7.0	7.0		7.0			7.0	7.0
Flash Dont Walk (s)				11.0	11.0	11.0		11.0			11.0	11.0
Pedestrian Calls (#/hr)				0	0	0		0			0	0
Act Effct Green (s)					20.5	20.5	26.5	50.5			19.5	19.5
Actuated g/C Ratio					0.26	0.26	0.33	0.63			0.24	0.24
v/c Ratio					0.96	0.80	0.98	0.35			0.18	0.59
Control Delay					65.3	25.9	63.6	7.6			24.4	6.7
Queue Delay					0.0	0.0	38.3	0.8			0.0	0.0
Total Delay					65.3	25.9	101.9	8.4			24.4	6.7
LOS					E	C	F	A			C	A
Approach Delay					45.0			46.4			12.6	
Approach LOS					D			D			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 80			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.98			
Intersection Signal Delay: 38.3		Intersection LOS: D	
Intersection Capacity Utilization 107.4%		ICU Level of Service G	
Analysis Period (min) 15			

Splits and Phases: 1: California Street & I-10 WB Ramps





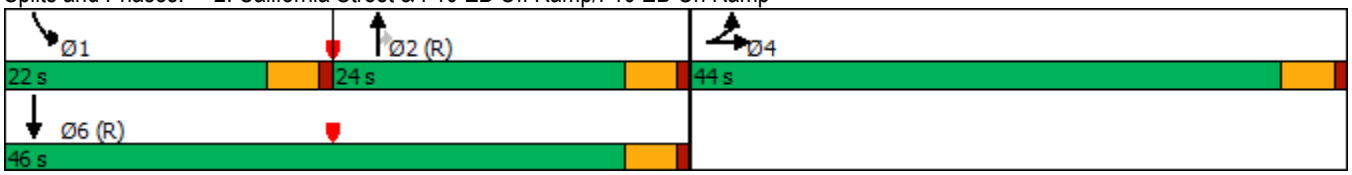
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	374	8	386	0	0	0	0	868	473	289	553	0
Future Volume (vph)	374	8	386	0	0	0	0	868	473	289	553	0
Ideal Flow (vphpl)	1700	1800	1800	1900	1900	1900	1900	1800	1800	1700	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	*0.90	1.00	1.00	*0.90	1.00
Frt		0.932							0.850			
Flt Protected		0.976								0.950		
Satd. Flow (prot)	0	1637	0	0	0	0	0	4860	1530	1615	3420	0
Flt Permitted		0.976								0.950		
Satd. Flow (perm)	0	1637	0	0	0	0	0	4860	1530	1615	3420	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		72							498			
Link Speed (mph)		50			30			50			50	
Link Distance (ft)		1514			1294			812			312	
Travel Time (s)		20.6			29.4			11.1			4.3	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	394	8	406	0	0	0	0	914	498	304	582	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	808	0	0	0	0	0	914	498	304	582	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.15	1.07	1.07	1.00	1.00	1.00	1.00	1.07	1.07	1.15	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2						2	1	1	2	
Detector Template	Left	Thru						Thru	Right	Left	Thru	
Leading Detector (ft)	20	100						100	20	20	100	
Trailing Detector (ft)	0	0						0	0	0	0	
Detector 1 Position(ft)	0	0						0	0	0	0	
Detector 1 Size(ft)	20	6						6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex						Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0						0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0						0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0						0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94						94			94	
Detector 2 Size(ft)		6						6			6	
Detector 2 Type		Cl+Ex						Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0						0.0			0.0	
Turn Type	Split	NA						NA	Perm	Prot	NA	
Protected Phases	4	4						2		1	6	
Permitted Phases									2			
Detector Phase	4	4						2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0						5.0	5.0	5.0	5.0	

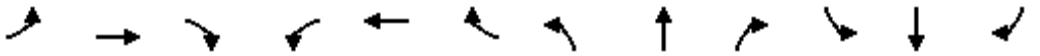
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	22.5	22.5						22.5	22.5	9.5	22.5	
Total Split (s)	44.0	44.0						24.0	24.0	22.0	46.0	
Total Split (%)	48.9%	48.9%						26.7%	26.7%	24.4%	51.1%	
Maximum Green (s)	39.5	39.5						19.5	19.5	17.5	41.5	
Yellow Time (s)	3.5	3.5						3.5	3.5	3.5	3.5	
All-Red Time (s)	1.0	1.0						1.0	1.0	1.0	1.0	
Lost Time Adjust (s)		0.0						0.0	0.0	0.0	0.0	
Total Lost Time (s)		4.5						4.5	4.5	4.5	4.5	
Lead/Lag								Lag	Lag	Lead		
Lead-Lag Optimize?								Yes	Yes	Yes		
Vehicle Extension (s)	3.0	3.0						3.0	3.0	3.0	3.0	
Recall Mode	None	None						C-Max	C-Max	None	C-Max	
Walk Time (s)	7.0	7.0						7.0	7.0		7.0	
Flash Dont Walk (s)	11.0	11.0						11.0	11.0		11.0	
Pedestrian Calls (#/hr)	0	0						0	0		0	
Act Effct Green (s)		39.5						19.5	19.5	17.5	41.5	
Actuated g/C Ratio		0.44						0.22	0.22	0.19	0.46	
v/c Ratio		1.07						0.87	0.69	0.97	0.37	
Control Delay		76.4						44.3	8.7	81.6	16.6	
Queue Delay		0.0						0.0	0.0	0.0	1.0	
Total Delay		76.4						44.3	8.7	81.6	17.6	
LOS		E						D	A	F	B	
Approach Delay		76.4						31.7			39.5	
Approach LOS		E						C			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 90			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.07			
Intersection Signal Delay: 45.6		Intersection LOS: D	
Intersection Capacity Utilization 107.4%		ICU Level of Service G	
Analysis Period (min) 15			

* User Entered Value

Splits and Phases: 2: California Street & I-10 EB Off Ramp/I-10 EB On Ramp



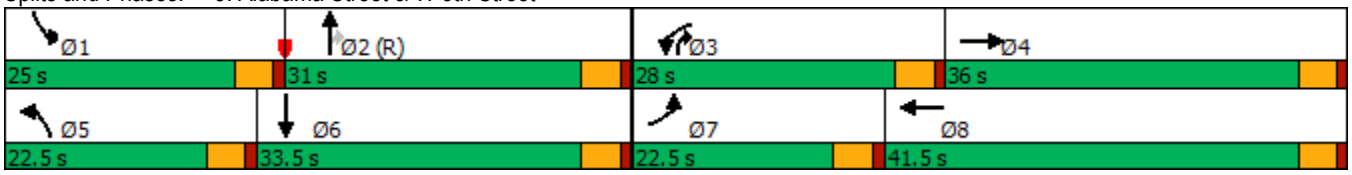


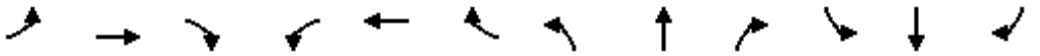
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	76	739	73	215	317	178	127	616	575	235	344	45
Future Volume (vph)	76	739	73	215	317	178	127	616	575	235	344	45
Ideal Flow (vphpl)	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1900
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	1.00	1.00	0.95	0.95
Frt		0.986			0.946				0.850		0.983	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1615	3372	0	1615	3235	0	1615	3420	1530	1615	3362	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1615	3372	0	1615	3235	0	1615	3420	1530	1615	3362	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		8			93				71		11	
Link Speed (mph)		50			50			50			50	
Link Distance (ft)		1908			2750			621			1649	
Travel Time (s)		26.0			37.5			8.5			22.5	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	80	778	77	226	334	187	134	648	605	247	362	47
Shared Lane Traffic (%)												
Lane Group Flow (vph)	80	855	0	226	521	0	134	648	605	247	409	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.15	1.07	1.07	1.15	1.07	1.07	1.15	1.07	1.07	1.15	1.07	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Size(ft)	20	6		20	6		20	6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA		Prot	NA		Prot	NA	pm+ov	Prot	NA	
Protected Phases	7	4		3	8		5	2	3	1	6	
Permitted Phases									2			
Detector Phase	7	4		3	8		5	2	3	1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	22.5	22.5		22.5	22.5		22.5	22.5	22.5	22.5	22.5	
Total Split (s)	22.5	36.0		28.0	41.5		22.5	31.0	28.0	25.0	33.5	
Total Split (%)	18.8%	30.0%		23.3%	34.6%		18.8%	25.8%	23.3%	20.8%	27.9%	
Maximum Green (s)	18.0	31.5		23.5	37.0		18.0	26.5	23.5	20.5	29.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.5		4.5	4.5	4.5	4.5	4.5	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lead	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None		Max	C-Max	None	Max	Max	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0	7.0	7.0	7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0	0	0	0	
Act Effct Green (s)	11.3	32.5		20.8	44.2		19.7	26.5	51.8	22.2	29.0	
Actuated g/C Ratio	0.09	0.27		0.17	0.37		0.16	0.22	0.43	0.18	0.24	
v/c Ratio	0.53	0.93		0.81	0.42		0.51	0.86	0.86	0.83	0.50	
Control Delay	63.6	59.9		69.2	24.8		54.2	57.5	40.8	71.0	40.6	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	1.4	0.0	0.0	
Total Delay	63.6	59.9		69.2	24.8		54.2	57.5	42.1	71.0	40.6	
LOS	E	E		E	C		D	E	D	E	D	
Approach Delay		60.2			38.2			50.5			52.1	
Approach LOS		E			D			D			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 0 (0%), Referenced to phase 2:NBT, Start of Green			
Natural Cycle: 100			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.93			
Intersection Signal Delay: 50.7		Intersection LOS: D	
Intersection Capacity Utilization 87.4%		ICU Level of Service E	
Analysis Period (min) 15			

Splits and Phases: 3: Alabama Street & W 5th Street



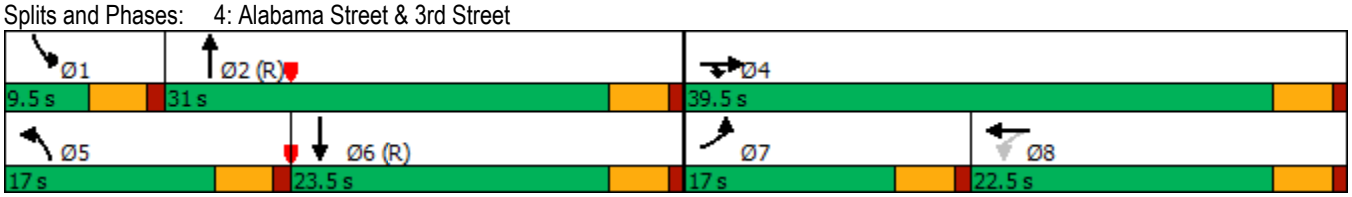


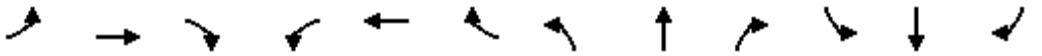
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	410	30	361	10	4	17	221	945	4	7	568	80
Future Volume (vph)	410	30	361	10	4	17	221	945	4	7	568	80
Ideal Flow (vphpl)	1600	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1900
Storage Length (ft)	150		0	0		0	0		0	0		0
Storage Lanes	1		1	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.97	1.00	1.00	0.95	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Frt			0.850		0.918			0.999			0.982	
Flt Protected	0.950				0.984		0.950			0.950		
Satd. Flow (prot)	2949	1800	1530	0	3089	0	1615	3417	0	1615	3358	0
Flt Permitted	0.950				0.865		0.950			0.950		
Satd. Flow (perm)	2949	1800	1530	0	2716	0	1615	3417	0	1615	3358	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			349		18			1			18	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1074			950			531			621	
Travel Time (s)		24.4			21.6			12.1			14.1	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	432	32	380	11	4	18	233	995	4	7	598	84
Shared Lane Traffic (%)												
Lane Group Flow (vph)	432	32	380	0	33	0	233	999	0	7	682	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.24	1.07	1.07	1.15	1.07	1.07	1.15	1.07	1.07	1.15	1.07	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2		1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100	20	20	100		20	100		20	100	
Trailing Detector (ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Position(ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Size(ft)	20	6	20	20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Prot	Perm	NA		Prot	NA		Prot	NA	
Protected Phases	7	4	4		8		5	2		1	6	
Permitted Phases				8								

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4	4	8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	9.5	22.5	22.5	22.5	22.5		9.5	22.5		9.5	22.5	
Total Split (s)	17.0	39.5	39.5	22.5	22.5		17.0	31.0		9.5	23.5	
Total Split (%)	21.3%	49.4%	49.4%	28.1%	28.1%		21.3%	38.8%		11.9%	29.4%	
Maximum Green (s)	12.5	35.0	35.0	18.0	18.0		12.5	26.5		5.0	19.0	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.5	4.5		4.5		4.5	4.5		4.5	4.5	
Lead/Lag	Lead			Lag	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes			Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None	None	None	None		None	C-Max		None	C-Max	
Walk Time (s)		7.0	7.0	7.0	7.0			7.0			7.0	
Flash Dont Walk (s)		11.0	11.0	11.0	11.0			11.0			11.0	
Pedestrian Calls (#/hr)		0	0	0	0			0			0	
Act Effct Green (s)	12.5	19.1	19.1		6.1		18.4	49.6		6.0	29.0	
Actuated g/C Ratio	0.16	0.24	0.24		0.08		0.23	0.62		0.08	0.36	
v/c Ratio	0.94	0.07	0.60		0.15		0.63	0.47		0.06	0.56	
Control Delay	64.7	21.4	8.2		22.9		35.1	11.0		35.1	24.5	
Queue Delay	0.0	0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Delay	64.7	21.4	8.2		22.9		35.1	11.0		35.1	24.5	
LOS	E	C	A		C		D	B		D	C	
Approach Delay		37.6			22.9			15.5			24.6	
Approach LOS		D			C			B			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 80			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.94			
Intersection Signal Delay: 24.5		Intersection LOS: C	
Intersection Capacity Utilization 64.8%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 4: Alabama Street & 3rd Street



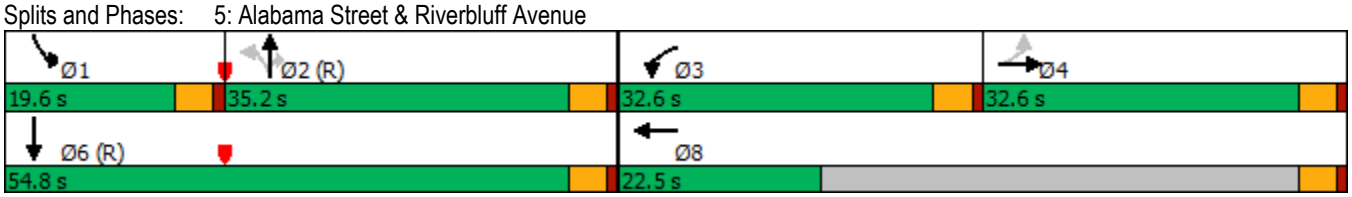


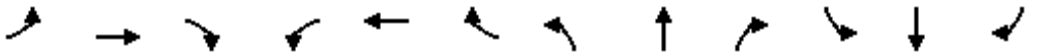
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	18	0	14	36	0	60	5	1082	43	40	946	7
Future Volume (vph)	18	0	14	36	0	60	5	1082	43	40	946	7
Ideal Flow (vphpl)	1700	1800	1800	1700	1900	1800	1900	1800	1800	1700	1900	1900
Storage Length (ft)	0		0	0		0	100		0	0		0
Storage Lanes	1		0	1		0	1		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91
Frt		0.850			0.850				0.850		0.999	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1615	1530	0	1615	1615	0	1805	1800	1530	1615	5182	0
Flt Permitted	0.716			0.950			0.273			0.950		
Satd. Flow (perm)	1217	1530	0	1615	1615	0	519	1800	1530	1615	5182	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		365			361				95		1	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		416			1617			460			310	
Travel Time (s)		9.5			36.8			10.5			7.0	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	19	0	15	38	0	63	5	1139	45	42	996	7
Shared Lane Traffic (%)												
Lane Group Flow (vph)	19	15	0	38	63	0	5	1139	45	42	1003	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.15	1.07	1.07	1.15	1.00	1.07	1.00	1.07	1.07	1.15	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Size(ft)	20	6		20	6		20	6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Prot	NA		Perm	NA	Perm	Prot	NA	
Protected Phases		4		3	8			2		1	6	
Permitted Phases	4						2		2			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4		3	8		2	2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	22.5	22.5		22.5	22.5		22.5	22.5	22.5	9.5	22.5	
Total Split (s)	32.6	32.6		32.6	22.5		35.2	35.2	35.2	19.6	54.8	
Total Split (%)	27.2%	27.2%		27.2%	18.8%		29.3%	29.3%	29.3%	16.3%	45.7%	
Maximum Green (s)	28.1	28.1		28.1	18.0		30.7	30.7	30.7	15.1	50.3	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.5		4.5	4.5	4.5	4.5	4.5	
Lead/Lag	Lag	Lag		Lead			Lag	Lag	Lag	Lead		
Lead-Lag Optimize?	Yes	Yes		Yes			Yes	Yes	Yes	Yes		
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None		C-Max	C-Max	C-Max	None	C-Max	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0	7.0		7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0	11.0		11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0	0		0	
Act Effct Green (s)	7.5	7.5		8.3	16.0		86.8	86.8	86.8	8.6	97.9	
Actuated g/C Ratio	0.06	0.06		0.07	0.13		0.72	0.72	0.72	0.07	0.82	
v/c Ratio	0.25	0.03		0.34	0.12		0.01	0.87	0.04	0.37	0.24	
Control Delay	60.7	0.1		60.7	0.5		13.6	23.7	1.1	61.2	4.0	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	60.7	0.1		60.7	0.5		13.6	23.7	1.1	61.2	4.0	
LOS	E	A		E	A		B	C	A	E	A	
Approach Delay		34.0			23.1			22.8			6.3	
Approach LOS		C			C			C			A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green			
Natural Cycle: 150			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.87			
Intersection Signal Delay: 15.7		Intersection LOS: B	
Intersection Capacity Utilization 76.5%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 5: Alabama Street & Riverbluff Avenue





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	180	8	45	19	16	16	32	937	14	13	926	65
Future Volume (vph)	180	8	45	19	16	16	32	937	14	13	926	65
Ideal Flow (vphpl)	1700	1800	1800	1700	1800	1800	1700	1800	1900	1700	1900	1900
Storage Length (ft)	0		0	0		0	200		0	0		0
Storage Lanes	0		0	0		0	1		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.974			0.957			0.998				0.850
Flt Protected		0.963			0.982		0.950			0.950		
Satd. Flow (prot)	0	1688	0	0	1692	0	1615	1796	0	1615	1900	1615
Flt Permitted		0.765			0.879		0.950			0.950		
Satd. Flow (perm)	0	1341	0	0	1514	0	1615	1796	0	1615	1900	1615
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		11			17			1				55
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		300			825			889			290	
Travel Time (s)		6.8			18.8			20.2			6.6	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	189	8	47	20	17	17	34	986	15	14	975	68
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	244	0	0	54	0	34	1001	0	14	975	68
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.15	1.07	1.07	1.15	1.07	1.07	1.15	1.07	1.00	1.15	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	Right
Leading Detector (ft)	20	100		20	100		20	100		20	100	20
Trailing Detector (ft)	0	0		0	0		0	0		0	0	0
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	0
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								6

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4		8	8		5	2		1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	5.0
Minimum Split (s)	22.5	22.5		22.5	22.5		9.5	22.5		9.5	22.5	22.5
Total Split (s)	44.5	44.5		44.5	44.5		31.5	44.0		31.5	44.0	44.0
Total Split (%)	37.1%	37.1%		37.1%	37.1%		26.3%	36.7%		26.3%	36.7%	36.7%
Maximum Green (s)	40.0	40.0		40.0	40.0		27.0	39.5		27.0	39.5	39.5
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)		4.5			4.5		4.5	4.5		4.5	4.5	4.5
Lead/Lag							Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	C-Max
Walk Time (s)	7.0	7.0		7.0	7.0			7.0			7.0	7.0
Flash Dont Walk (s)	11.0	11.0		11.0	11.0			11.0			11.0	11.0
Pedestrian Calls (#/hr)	0	0		0	0			0			0	0
Act Effct Green (s)		26.7			26.7		8.0	79.4		6.7	76.0	76.0
Actuated g/C Ratio		0.22			0.22		0.07	0.66		0.06	0.63	0.63
v/c Ratio		0.80			0.15		0.31	0.84		0.16	0.81	0.07
Control Delay		60.0			25.9		60.2	27.1		55.5	25.0	3.4
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	0.0
Total Delay		60.0			25.9		60.2	27.1		55.5	25.0	3.4
LOS		E			C		E	C		E	C	A
Approach Delay		60.0			25.9			28.2			24.0	
Approach LOS		E			C			C			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.84			
Intersection Signal Delay: 29.5		Intersection LOS: C	
Intersection Capacity Utilization 81.0%		ICU Level of Service D	
Analysis Period (min) 15			

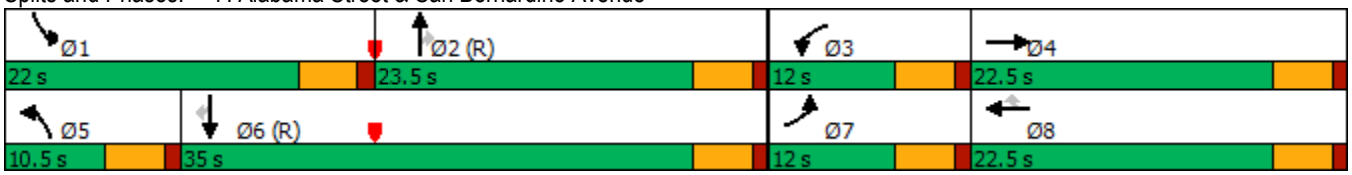
Splits and Phases: 6: Alabama Street & Palmetto Avenue

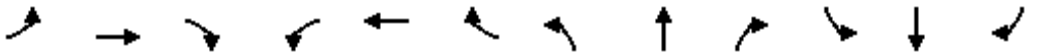
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	151	650	71	144	230	187	54	555	298	257	662	74
Future Volume (vph)	151	650	71	144	230	187	54	555	298	257	662	74
Ideal Flow (vphpl)	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1900
Storage Length (ft)	100		0	0		0	170		0	260		500
Storage Lanes	1		0	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt		0.985				0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1615	3369	0	1615	3420	1530	1615	3420	1530	1615	3420	1615
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1615	3369	0	1615	3420	1530	1615	3420	1530	1615	3420	1615
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		13				205			293			143
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		5507			2072			2636			1804	
Travel Time (s)		125.2			47.1			59.9			41.0	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	159	684	75	152	242	197	57	584	314	271	697	78
Shared Lane Traffic (%)												
Lane Group Flow (vph)	159	759	0	152	242	197	57	584	314	271	697	78
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.15	1.07	1.07	1.15	1.07	1.07	1.15	1.07	1.07	1.15	1.07	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100		20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0		0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0		0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6		20	6	20	20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8			2			6

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4		3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	22.5		9.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5	22.5
Total Split (s)	12.0	22.5		12.0	22.5	22.5	10.5	23.5	23.5	22.0	35.0	35.0
Total Split (%)	15.0%	28.1%		15.0%	28.1%	28.1%	13.1%	29.4%	29.4%	27.5%	43.8%	43.8%
Maximum Green (s)	7.5	18.0		7.5	18.0	18.0	6.0	19.0	19.0	17.5	30.5	30.5
Yellow Time (s)	3.5	3.5		3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Walk Time (s)		7.0			7.0	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)		11.0			11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0			0	0		0	0		0	0
Act Effct Green (s)	7.5	18.0		7.5	18.0	18.0	5.9	20.2	20.2	16.3	34.7	34.7
Actuated g/C Ratio	0.09	0.22		0.09	0.22	0.22	0.07	0.25	0.25	0.20	0.43	0.43
v/c Ratio	1.05	0.99		1.01	0.31	0.39	0.48	0.68	0.52	0.83	0.47	0.10
Control Delay	127.1	62.0		115.4	27.2	6.3	49.4	31.9	7.8	52.3	18.5	0.7
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	127.1	62.0		115.4	27.2	6.3	49.4	31.9	7.8	52.3	18.5	0.7
LOS	F	E		F	C	A	D	C	A	D	B	A
Approach Delay		73.3			42.9			25.0			25.9	
Approach LOS		E			D			C			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 80			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.05			
Intersection Signal Delay: 40.9		Intersection LOS: D	
Intersection Capacity Utilization 77.4%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 7: Alabama Street & San Bernardino Avenue



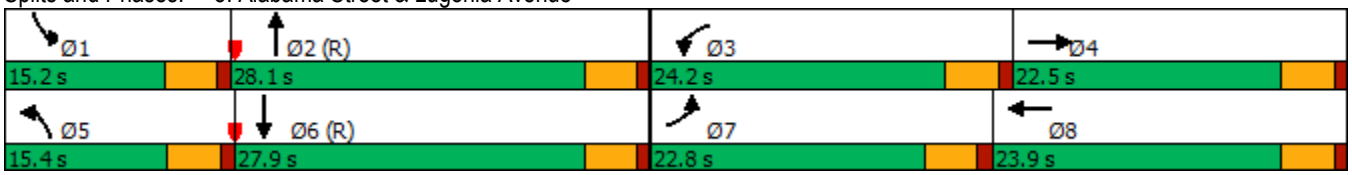


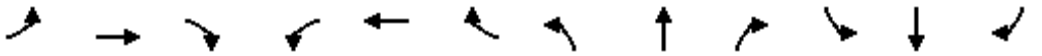
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	239	467	120	351	249	93	83	569	292	180	686	103
Future Volume (vph)	239	467	120	351	249	93	83	569	292	180	686	103
Ideal Flow (vphpl)	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1900
Storage Length (ft)	220		0	0		0	200		0	180		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.91	0.91
Frt		0.969			0.959			0.949			0.980	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1615	3314	0	1615	3280	0	1615	3246	0	1615	4816	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1615	3314	0	1615	3280	0	1615	3246	0	1615	4816	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		32			55			98			30	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		5332			3791			1051			2636	
Travel Time (s)		121.2			86.2			23.9			59.9	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	252	492	126	369	262	98	87	599	307	189	722	108
Shared Lane Traffic (%)												
Lane Group Flow (vph)	252	618	0	369	360	0	87	906	0	189	830	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.15	1.07	1.07	1.15	1.07	1.07	1.15	1.07	1.07	1.15	1.07	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	9.5	22.5		9.5	22.5		9.5	22.5		9.5	22.5	
Total Split (s)	22.8	22.5		24.2	23.9		15.4	28.1		15.2	27.9	
Total Split (%)	25.3%	25.0%		26.9%	26.6%		17.1%	31.2%		16.9%	31.0%	
Maximum Green (s)	18.3	18.0		19.7	19.4		10.9	23.6		10.7	23.4	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Dont Walk (s)		11.0			11.0			11.0			11.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	16.9	17.8		19.7	20.6		9.3	23.6		10.9	27.3	
Actuated g/C Ratio	0.19	0.20		0.22	0.23		0.10	0.26		0.12	0.30	
v/c Ratio	0.83	0.91		1.05	0.46		0.52	0.98		0.97	0.56	
Control Delay	55.3	52.9		96.7	27.7		49.4	56.2		98.7	28.2	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	55.3	52.9		96.7	27.7		49.4	56.2		98.7	28.2	
LOS	E	D		F	C		D	E		F	C	
Approach Delay		53.6			62.6			55.6			41.3	
Approach LOS		D			E			E			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 90			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.05			
Intersection Signal Delay: 52.5		Intersection LOS: D	
Intersection Capacity Utilization 92.0%		ICU Level of Service F	
Analysis Period (min) 15			

Splits and Phases: 8: Alabama Street & Lugonia Avenue



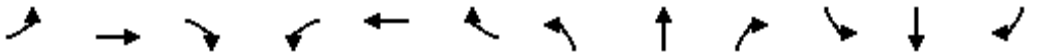


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	245	339	217	449	859	0	0	838	516
Future Volume (vph)	0	0	0	245	339	217	449	859	0	0	838	516
Ideal Flow (vphpl)	1900	1900	1900	1700	1800	1800	1700	1800	1800	1700	1800	1900
Storage Length (ft)	0		0	0		0	150		0	0		0
Storage Lanes	0		0	0		0	1		0	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.95	1.00	0.95	1.00	1.00	0.95	1.00
Frt					0.959							0.850
Flt Protected					0.985		0.950					
Satd. Flow (prot)	0	0	0	0	3231	0	1615	3420	0	0	3420	1615
Flt Permitted					0.985		0.950					
Satd. Flow (perm)	0	0	0	0	3231	0	1615	3420	0	0	3420	1615
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					48							208
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		918			1093			591			1051	
Travel Time (s)		20.9			24.8			13.4			23.9	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	0	0	258	357	228	473	904	0	0	882	543
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	843	0	473	904	0	0	882	543
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.15	1.07	1.07	1.15	1.07	1.07	1.15	1.07	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors				1	2		1	2			2	1
Detector Template				Left	Thru		Left	Thru			Thru	Right
Leading Detector (ft)				20	100		20	100			100	20
Trailing Detector (ft)				0	0		0	0			0	0
Detector 1 Position(ft)				0	0		0	0			0	0
Detector 1 Size(ft)				20	6		20	6			6	20
Detector 1 Type				Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)				0.0	0.0		0.0	0.0			0.0	0.0
Detector 1 Queue (s)				0.0	0.0		0.0	0.0			0.0	0.0
Detector 1 Delay (s)				0.0	0.0		0.0	0.0			0.0	0.0
Detector 2 Position(ft)					94			94			94	
Detector 2 Size(ft)					6			6			6	
Detector 2 Type					Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)					0.0			0.0			0.0	
Turn Type				Perm	NA		Prot	NA			NA	Perm
Protected Phases					8		5	2			6	
Permitted Phases				8								6

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase				8	8		5	2			6	6
Switch Phase												
Minimum Initial (s)				5.0	5.0		5.0	5.0			5.0	5.0
Minimum Split (s)				22.5	22.5		9.5	22.5			22.5	22.5
Total Split (s)				45.3	45.3		39.0	74.7			35.7	35.7
Total Split (%)				37.8%	37.8%		32.5%	62.3%			29.8%	29.8%
Maximum Green (s)				40.8	40.8		34.5	70.2			31.2	31.2
Yellow Time (s)				3.5	3.5		3.5	3.5			3.5	3.5
All-Red Time (s)				1.0	1.0		1.0	1.0			1.0	1.0
Lost Time Adjust (s)					0.0		0.0	0.0			0.0	0.0
Total Lost Time (s)					4.5		4.5	4.5			4.5	4.5
Lead/Lag							Lead				Lag	Lag
Lead-Lag Optimize?							Yes				Yes	Yes
Vehicle Extension (s)				3.0	3.0		3.0	3.0			3.0	3.0
Recall Mode				None	None		None	C-Max			C-Max	C-Max
Walk Time (s)				7.0	7.0			7.0			7.0	7.0
Flash Dont Walk (s)				11.0	11.0			11.0			11.0	11.0
Pedestrian Calls (#/hr)				0	0			0			0	0
Act Effct Green (s)					36.4		38.2	74.6			31.9	31.9
Actuated g/C Ratio					0.30		0.32	0.62			0.27	0.27
v/c Ratio					0.83		0.92	0.43			0.97	0.93
Control Delay					44.3		64.6	18.4			67.3	51.2
Queue Delay					0.0		0.0	0.0			0.0	0.0
Total Delay					44.3		64.6	18.4			67.3	51.2
LOS					D		E	B			E	D
Approach Delay					44.3			34.2			61.2	
Approach LOS					D			C			E	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.97			
Intersection Signal Delay: 47.1		Intersection LOS: D	
Intersection Capacity Utilization 95.7%		ICU Level of Service F	
Analysis Period (min) 15			

Splits and Phases: 9: Alabama Street & I-10 WB Ramps

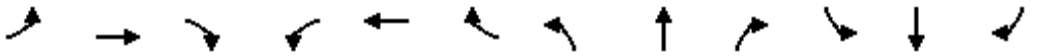


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	426	74	597	0	0	0	0	872	323	326	766	0
Future Volume (vph)	426	74	597	0	0	0	0	872	323	326	766	0
Ideal Flow (vphpl)	1700	1800	1800	1900	1900	1900	1900	1800	1800	1700	1900	1900
Storage Length (ft)	0		0	0		0	0		0	150		0
Storage Lanes	0		0	0		0	0		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.95	0.95	0.95	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt		0.918							0.850			
Flt Protected		0.981								0.950		
Satd. Flow (prot)	0	3080	0	0	0	0	0	3420	1530	1615	3610	0
Flt Permitted		0.981								0.950		
Satd. Flow (perm)	0	3080	0	0	0	0	0	3420	1530	1615	3610	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		180							338			
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		898			623			1369			591	
Travel Time (s)		20.4			14.2			31.1			13.4	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	448	78	628	0	0	0	0	918	340	343	806	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1154	0	0	0	0	0	918	340	343	806	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.15	1.07	1.07	1.00	1.00	1.00	1.00	1.07	1.07	1.15	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2						2	1	1	2	
Detector Template	Left	Thru						Thru	Right	Left	Thru	
Leading Detector (ft)	20	100						100	20	20	100	
Trailing Detector (ft)	0	0						0	0	0	0	
Detector 1 Position(ft)	0	0						0	0	0	0	
Detector 1 Size(ft)	20	6						6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex						Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0						0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0						0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0						0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94						94			94	
Detector 2 Size(ft)		6						6			6	
Detector 2 Type		Cl+Ex						Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0						0.0			0.0	
Turn Type	Perm	NA						NA	Perm	Prot	NA	
Protected Phases		4						2		1	6	
Permitted Phases	4								2			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4						2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0						5.0	5.0	5.0	5.0	
Minimum Split (s)	22.5	22.5						22.5	22.5	9.5	22.5	
Total Split (s)	45.0	45.0						42.0	42.0	33.0	75.0	
Total Split (%)	37.5%	37.5%						35.0%	35.0%	27.5%	62.5%	
Maximum Green (s)	40.5	40.5						37.5	37.5	28.5	70.5	
Yellow Time (s)	3.5	3.5						3.5	3.5	3.5	3.5	
All-Red Time (s)	1.0	1.0						1.0	1.0	1.0	1.0	
Lost Time Adjust (s)		0.0						0.0	0.0	0.0	0.0	
Total Lost Time (s)		4.5						4.5	4.5	4.5	4.5	
Lead/Lag								Lag	Lag	Lead		
Lead-Lag Optimize?								Yes	Yes	Yes		
Vehicle Extension (s)	3.0	3.0						3.0	3.0	3.0	3.0	
Recall Mode	None	None						C-Max	C-Max	None	C-Max	
Walk Time (s)	7.0	7.0						7.0	7.0		7.0	
Flash Dont Walk (s)	11.0	11.0						11.0	11.0		11.0	
Pedestrian Calls (#/hr)	0	0						0	0		0	
Act Effct Green (s)		40.5						38.5	38.5	27.5	70.5	
Actuated g/C Ratio		0.34						0.32	0.32	0.23	0.59	
v/c Ratio		1.00						0.84	0.47	0.93	0.38	
Control Delay		59.4						46.2	5.7	79.5	13.5	
Queue Delay		0.0						0.0	0.0	0.0	0.0	
Total Delay		59.4						46.2	5.7	79.5	13.5	
LOS		E						D	A	E	B	
Approach Delay		59.4						35.3			33.2	
Approach LOS		E						D			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.00			
Intersection Signal Delay: 42.4		Intersection LOS: D	
Intersection Capacity Utilization 95.7%		ICU Level of Service F	
Analysis Period (min) 15			

Splits and Phases: 10: Alabama Street & I-10 EB Ramps

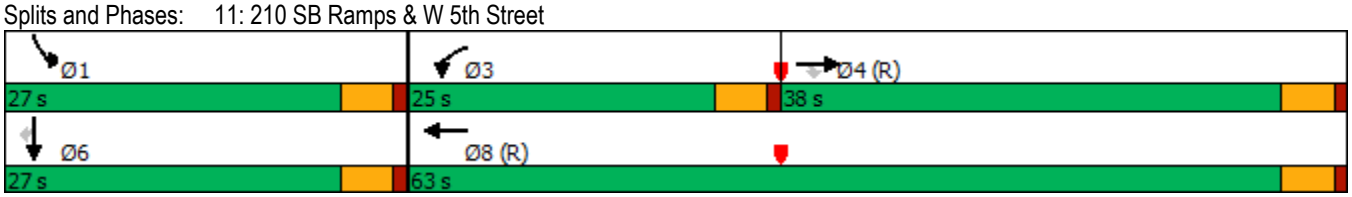


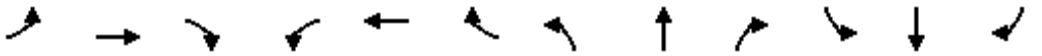
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	1113	623	479	606	0	0	0	0	414	7	237
Future Volume (vph)	0	1113	623	479	606	0	0	0	0	414	7	237
Ideal Flow (vphpl)	1900	1800	1800	1600	1800	1900	1900	1900	1900	1700	1800	1900
Storage Length (ft)	0		220	0		0	0		0	0		0
Storage Lanes	0		1	2		0	0		0	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850									0.850
Flt Protected				0.950							0.953	
Satd. Flow (prot)	0	3420	1530	2949	3420	0	0	0	0	0	1715	1615
Flt Permitted				0.950							0.953	
Satd. Flow (perm)	0	3420	1530	2949	3420	0	0	0	0	0	1715	1615
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			578									249
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		2750			477			659			386	
Travel Time (s)		62.5			10.8			15.0			8.8	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	1172	656	504	638	0	0	0	0	436	7	249
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1172	656	504	638	0	0	0	0	0	443	249
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		36			36			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.07	1.07	1.24	1.07	1.00	1.00	1.00	1.00	1.15	1.07	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		2	1	1	2					1	2	1
Detector Template		Thru	Right	Left	Thru					Left	Thru	Right
Leading Detector (ft)		100	20	20	100					20	100	20
Trailing Detector (ft)		0	0	0	0					0	0	0
Detector 1 Position(ft)		0	0	0	0					0	0	0
Detector 1 Size(ft)		6	20	20	6					20	6	20
Detector 1 Type		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex					Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)		0.0	0.0	0.0	0.0					0.0	0.0	0.0
Detector 1 Queue (s)		0.0	0.0	0.0	0.0					0.0	0.0	0.0
Detector 1 Delay (s)		0.0	0.0	0.0	0.0					0.0	0.0	0.0
Detector 2 Position(ft)		94			94						94	
Detector 2 Size(ft)		6			6						6	
Detector 2 Type		Cl+Ex			Cl+Ex						Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0						0.0	
Turn Type		NA	Perm	Prot	NA					Prot	NA	Perm
Protected Phases		4		3	8					1	6	
Permitted Phases			4									6

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase		4	4	3	8					1	6	6
Switch Phase												
Minimum Initial (s)		5.0	5.0	5.0	5.0					5.0	5.0	5.0
Minimum Split (s)		22.5	22.5	9.5	22.5					9.5	22.5	22.5
Total Split (s)		38.0	38.0	25.0	63.0					27.0	27.0	27.0
Total Split (%)		42.2%	42.2%	27.8%	70.0%					30.0%	30.0%	30.0%
Maximum Green (s)		33.5	33.5	20.5	58.5					22.5	22.5	22.5
Yellow Time (s)		3.5	3.5	3.5	3.5					3.5	3.5	3.5
All-Red Time (s)		1.0	1.0	1.0	1.0					1.0	1.0	1.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0						0.0	0.0
Total Lost Time (s)		4.5	4.5	4.5	4.5						4.5	4.5
Lead/Lag		Lag	Lag	Lead								
Lead-Lag Optimize?		Yes	Yes	Yes								
Vehicle Extension (s)		3.0	3.0	3.0	3.0					3.0	3.0	3.0
Recall Mode		C-Max	C-Max	None	C-Max					None	Max	Max
Walk Time (s)		7.0	7.0		7.0						7.0	7.0
Flash Dont Walk (s)		11.0	11.0		11.0						11.0	11.0
Pedestrian Calls (#/hr)		0	0		0						0	0
Act Effct Green (s)		35.0	35.0	19.0	58.5						0.0	22.5
Actuated g/C Ratio		0.39	0.39	0.21	0.65						0.00	0.25
v/c Ratio		0.88	0.69	0.81	0.29						no cap	0.42
Control Delay		35.6	7.9	44.8	7.2							6.2
Queue Delay		0.0	0.0	0.0	0.0							0.0
Total Delay		35.6	7.9	44.8	7.2						Error	6.2
LOS		D	A	D	A						F	A
Approach Delay		25.6			23.8						Err	
Approach LOS		C			C						F	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 90			
Offset: 47.5 (53%), Referenced to phase 4:EBT and 8:WBT, Start of Green			
Natural Cycle: 70			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: Err			
Intersection Signal Delay: Err		Intersection LOS: F	
Intersection Capacity Utilization 92.8%		ICU Level of Service F	
Analysis Period (min) 15			

Splits and Phases: 11: 210 SB Ramps & W 5th Street



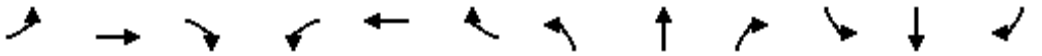


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	317	1195	0	0	779	414	266	2	576	0	0	0
Future Volume (vph)	317	1195	0	0	779	414	266	2	576	0	0	0
Ideal Flow (vphpl)	1700	1800	1900	1900	1800	1800	1600	1800	1900	1900	1900	1900
Storage Length (ft)	90		0	360		220	0		0	0		0
Storage Lanes	1		0	0		1	1		2	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.91	1.00	0.95	0.95	0.88	1.00	1.00	1.00
Frt						0.850			0.850			
Flt Protected	0.950						0.950	0.953				
Satd. Flow (prot)	1615	3420	0	0	4914	1530	1444	1630	2842	0	0	0
Flt Permitted	0.950						0.950	0.953				
Satd. Flow (perm)	1615	3420	0	0	4914	1530	1444	1630	2842	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						436			113			
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		477			2099			595			477	
Travel Time (s)		10.8			47.7			13.5			10.8	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	334	1258	0	0	820	436	280	2	606	0	0	0
Shared Lane Traffic (%)							50%					
Lane Group Flow (vph)	334	1258	0	0	820	436	140	142	606	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.15	1.07	1.00	1.00	1.07	1.07	1.24	1.07	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2			2	1	1	2	1			
Detector Template	Left	Thru			Thru	Right	Left	Thru	Right			
Leading Detector (ft)	20	100			100	20	20	100	20			
Trailing Detector (ft)	0	0			0	0	0	0	0			
Detector 1 Position(ft)	0	0			0	0	0	0	0			
Detector 1 Size(ft)	20	6			6	20	20	6	20			
Detector 1 Type	Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex			
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0			0.0	0.0	0.0	0.0	0.0			
Detector 1 Queue (s)	0.0	0.0			0.0	0.0	0.0	0.0	0.0			
Detector 1 Delay (s)	0.0	0.0			0.0	0.0	0.0	0.0	0.0			
Detector 2 Position(ft)		94			94			94				
Detector 2 Size(ft)		6			6			6				
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				
Turn Type	Prot	NA			NA	Perm	Split	NA	Perm			
Protected Phases	7	4			8		2	2				
Permitted Phases						8			2			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4			8	8	2	2	2			
Switch Phase												
Minimum Initial (s)	5.0	5.0			5.0	5.0	5.0	5.0	5.0			
Minimum Split (s)	9.5	22.5			22.5	22.5	22.5	22.5	22.5			
Total Split (s)	27.0	52.0			25.0	25.0	28.0	28.0	28.0			
Total Split (%)	33.8%	65.0%			31.3%	31.3%	35.0%	35.0%	35.0%			
Maximum Green (s)	22.5	47.5			20.5	20.5	23.5	23.5	23.5			
Yellow Time (s)	3.5	3.5			3.5	3.5	3.5	3.5	3.5			
All-Red Time (s)	1.0	1.0			1.0	1.0	1.0	1.0	1.0			
Lost Time Adjust (s)	0.0	0.0			0.0	0.0	0.0	0.0	0.0			
Total Lost Time (s)	4.5	4.5			4.5	4.5	4.5	4.5	4.5			
Lead/Lag	Lead				Lag	Lag						
Lead-Lag Optimize?	Yes				Yes	Yes						
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	3.0	3.0			
Recall Mode	None	C-Max			C-Max	C-Max	Max	Max	Max			
Walk Time (s)		7.0			7.0	7.0	7.0	7.0	7.0			
Flash Dont Walk (s)		11.0			11.0	11.0	11.0	11.0	11.0			
Pedestrian Calls (#/hr)		0			0	0	0	0	0			
Act Effct Green (s)	20.1	47.5			22.9	22.9	23.5	23.5	23.5			
Actuated g/C Ratio	0.25	0.59			0.29	0.29	0.29	0.29	0.29			
v/c Ratio	0.82	0.62			0.58	0.58	0.33	0.30	0.66			
Control Delay	46.0	12.1			27.0	6.3	24.8	24.0	24.0			
Queue Delay	0.0	0.7			0.0	0.0	0.0	0.0	0.0			
Total Delay	46.0	12.8			27.0	6.3	24.8	24.0	24.0			
LOS	D	B			C	A	C	C	C			
Approach Delay		19.8			19.8			24.1				
Approach LOS		B			B			C				

Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 80			
Offset: 55 (69%), Referenced to phase 4:EBT and 8:WBT, Start of Green			
Natural Cycle: 65			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.82			
Intersection Signal Delay: 20.8		Intersection LOS: C	
Intersection Capacity Utilization 92.8%		ICU Level of Service F	
Analysis Period (min) 15			

Splits and Phases: 12: I-10 NB Ramps & W 5th Street

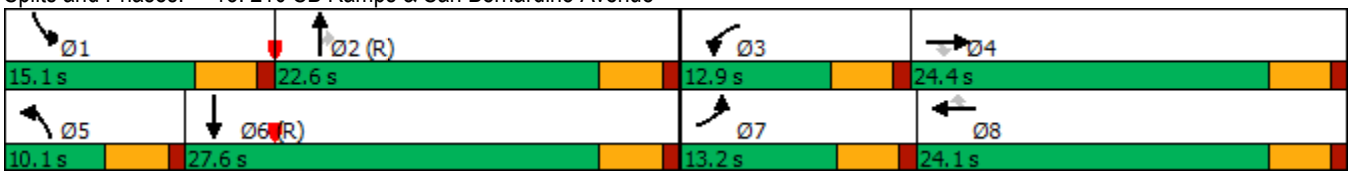


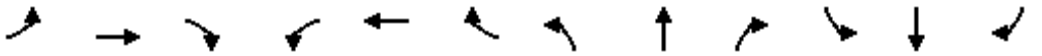
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	176	863	89	168	387	215	31	50	279	220	334	194
Future Volume (vph)	176	863	89	168	387	215	31	50	279	220	334	194
Ideal Flow (vphpl)	1800	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1900
Storage Length (ft)	260		0	0		0	230		0	100		0
Storage Lanes	1		1	1		1	1		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95
Frt			0.850			0.850			0.850		0.945	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1710	3420	1530	1615	1800	1530	1615	1800	1530	1615	3232	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1710	3420	1530	1615	1800	1530	1615	1800	1530	1615	3232	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			218			226			294		159	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		2072			709			529			237	
Travel Time (s)		47.1			16.1			12.0			5.4	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	185	908	94	177	407	226	33	53	294	232	352	204
Shared Lane Traffic (%)												
Lane Group Flow (vph)	185	908	94	177	407	226	33	53	294	232	556	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		36			36			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.07	1.07	1.07	1.15	1.07	1.07	1.15	1.07	1.07	1.15	1.07	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100	20	20	100	20	20	100	20	20	100	
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0	
Detector 1 Size(ft)	20	6	20	20	6	20	20	6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	9.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5	
Total Split (s)	13.2	24.4	24.4	12.9	24.1	24.1	10.1	22.6	22.6	15.1	27.6	
Total Split (%)	17.6%	32.5%	32.5%	17.2%	32.1%	32.1%	13.5%	30.1%	30.1%	20.1%	36.8%	
Maximum Green (s)	8.7	19.9	19.9	8.4	19.6	19.6	5.6	18.1	18.1	10.6	23.1	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		11.0	11.0		11.0	
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	
Act Effct Green (s)	8.7	19.9	19.9	8.4	19.6	19.6	5.6	18.1	18.1	10.6	29.2	
Actuated g/C Ratio	0.12	0.27	0.27	0.11	0.26	0.26	0.07	0.24	0.24	0.14	0.39	
v/c Ratio	0.93	1.00	0.17	0.98	0.87	0.40	0.28	0.12	0.50	1.02	0.41	
Control Delay	85.7	59.8	0.6	100.6	47.4	5.8	39.0	23.2	6.5	100.2	13.7	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	85.7	59.8	0.6	100.6	47.4	5.8	39.0	23.2	6.5	100.2	13.7	
LOS	F	E	A	F	D	A	D	C	A	F	B	
Approach Delay		59.1			47.4			11.6			39.2	
Approach LOS		E			D			B			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 75			
Actuated Cycle Length: 75			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.02			
Intersection Signal Delay: 45.5		Intersection LOS: D	
Intersection Capacity Utilization 71.1%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 13: 210 SB Ramps & San Bernardino Avenue



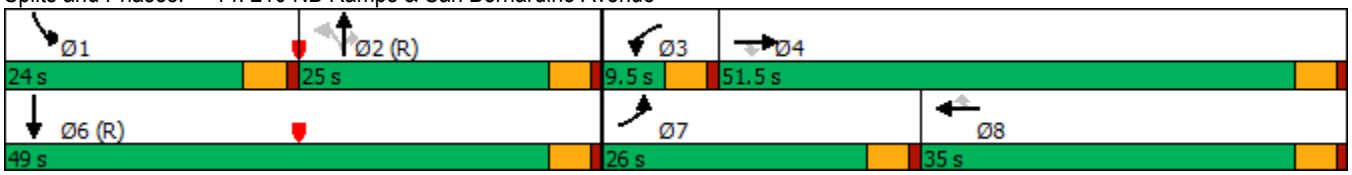


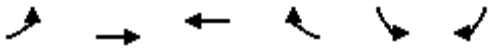
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	531	609	171	37	473	258	117	541	68	266	24	184
Future Volume (vph)	531	609	171	37	473	258	117	541	68	266	24	184
Ideal Flow (vphpl)	1600	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1900
Storage Length (ft)	300		0	0		0	150		70	0		0
Storage Lanes	2		1	1		1	1		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	1.00	1.00
Frt			0.850			0.850			0.850		0.867	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	2949	1800	1530	1615	1800	1530	1615	3420	1530	1615	1561	0
Flt Permitted	0.950			0.950			0.621			0.950		
Satd. Flow (perm)	2949	1800	1530	1615	1800	1530	1056	3420	1530	1615	1561	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			177			272			149		194	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		709			2232			344			268	
Travel Time (s)		16.1			50.7			7.8			6.1	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	559	641	180	39	498	272	123	569	72	280	25	194
Shared Lane Traffic (%)												
Lane Group Flow (vph)	559	641	180	39	498	272	123	569	72	280	219	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.24	1.07	1.07	1.15	1.07	1.07	1.15	1.07	1.07	1.15	1.07	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100	20	20	100	20	20	100	20	20	100	
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0	
Detector 1 Size(ft)	20	6	20	20	6	20	20	6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8			2		1	6	
Permitted Phases			4			8	2		2			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4	4	3	8	8	2	2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	9.5	22.5	22.5	9.5	22.5	22.5	22.5	22.5	22.5	9.5	22.5	
Total Split (s)	26.0	51.5	51.5	9.5	35.0	35.0	25.0	25.0	25.0	24.0	49.0	
Total Split (%)	23.6%	46.8%	46.8%	8.6%	31.8%	31.8%	22.7%	22.7%	22.7%	21.8%	44.5%	
Maximum Green (s)	21.5	47.0	47.0	5.0	30.5	30.5	20.5	20.5	20.5	19.5	44.5	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lag	Lag	Lag	Lead		
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None	None	None	None	None	C-Max	C-Max	C-Max	None	C-Max	
Walk Time (s)		7.0	7.0		7.0	7.0	7.0	7.0	7.0		7.0	
Flash Dont Walk (s)		11.0	11.0		11.0	11.0	11.0	11.0	11.0		11.0	
Pedestrian Calls (#/hr)		0	0		0	0	0	0	0		0	
Act Effct Green (s)	21.5	50.8	50.8	5.0	30.5	30.5	20.5	20.5	20.5	19.5	44.5	
Actuated g/C Ratio	0.20	0.46	0.46	0.05	0.28	0.28	0.19	0.19	0.19	0.18	0.40	
v/c Ratio	0.97	0.77	0.22	0.53	1.00	0.44	0.63	0.89	0.18	0.98	0.29	
Control Delay	75.5	33.6	3.8	77.6	80.4	6.2	56.8	61.6	1.0	94.3	5.4	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	75.5	33.6	3.8	77.6	80.4	6.2	56.8	61.6	1.0	94.3	5.4	
LOS	E	C	A	E	F	A	E	E	A	F	A	
Approach Delay		46.7			55.3			55.1			55.3	
Approach LOS		D			E			E			E	

Intersection Summary			
Area Type:	Other		
Cycle Length: 110			
Actuated Cycle Length: 110			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green			
Natural Cycle: 110			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.00			
Intersection Signal Delay: 51.8		Intersection LOS: D	
Intersection Capacity Utilization 91.5%		ICU Level of Service F	
Analysis Period (min) 15			

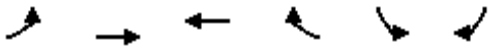
Splits and Phases: 14: 210 NB Ramps & San Bernardino Avenue





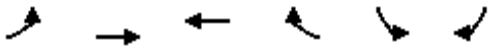
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	3	220	116	3	7	7
Future Volume (vph)	3	220	116	3	7	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.997			0.850
Flt Protected		0.999			0.950	
Satd. Flow (prot)	0	1898	1894	0	1805	1615
Flt Permitted		0.999			0.950	
Satd. Flow (perm)	0	1898	1894	0	1805	1615
Link Speed (mph)		30	30		30	
Link Distance (ft)		1636	441		315	
Travel Time (s)		37.2	10.0		7.2	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	3	232	122	3	7	7
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	235	125	0	7	7
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 24.0%		ICU Level of Service A	
Analysis Period (min) 15			



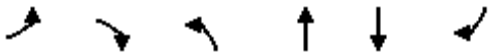
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	229	121	11	27	0
Future Volume (vph)	0	229	121	11	27	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.988			
Flt Protected					0.950	
Satd. Flow (prot)	0	1900	1877	0	1805	0
Flt Permitted					0.950	
Satd. Flow (perm)	0	1900	1877	0	1805	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		441	580		365	
Travel Time (s)		10.0	13.2		8.3	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	241	127	12	28	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	241	139	0	28	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 22.1%		ICU Level of Service A	
Analysis Period (min) 15			



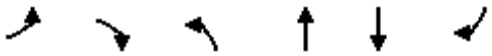
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	254	132	6	14	0
Future Volume (vph)	0	254	132	6	14	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.994			
Flt Protected					0.950	
Satd. Flow (prot)	0	1900	1889	0	1805	1900
Flt Permitted					0.950	
Satd. Flow (perm)	0	1900	1889	0	1805	1900
Link Speed (mph)		30	30		30	
Link Distance (ft)		580	300		152	
Travel Time (s)		13.2	6.8		3.5	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	267	139	6	15	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	267	145	0	15	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 23.4%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	1098	608	0
Future Volume (vph)	0	0	0	1098	608	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	0.91	0.91
Frt						
Flt Protected						
Satd. Flow (prot)	0	1900	0	1900	5187	0
Flt Permitted						
Satd. Flow (perm)	0	1900	0	1900	5187	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	317			310	374	
Travel Time (s)	7.2			7.0	8.5	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	0	0	1156	640	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	1156	640	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

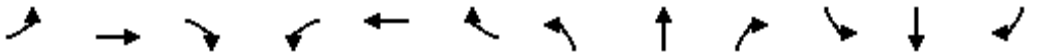
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 61.1%		ICU Level of Service B	
Analysis Period (min) 15			



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	27	0	952	948	0
Future Volume (vph)	0	27	0	952	948	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	0.95	0.91	0.91
Frt		0.865				
Flt Protected						
Satd. Flow (prot)	0	1644	0	3610	5187	0
Flt Permitted						
Satd. Flow (perm)	0	1644	0	3610	5187	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	368			290	460	
Travel Time (s)	8.4			6.6	10.5	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	28	0	1002	998	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	28	0	1002	998	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 29.6%		ICU Level of Service A	
Analysis Period (min) 15			

EXISTING PLUS AMBIENT GROWTH PLUS CUMULATIVE PLUS PROJECT WITH IMPROVEMENT CONDITIONS



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	266	3	166	626	572	0	0	571	737
Future Volume (veh/h)	0	0	0	266	3	166	626	572	0	0	571	737
Number				3	8	18	5	2	12	1	6	16
Initial Q, veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln				1700	1800	1800	1600	1800	0	0	1800	1900
Adj Flow Rate, veh/h				280	3	175	659	602	0	0	601	776
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence				Yes			Yes			No		
Cap, veh/h				328	5	305	708	2316	0	0	1856	608
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	2.00	2.00
Prop Arrive On Green				0.20	0.20	0.20	0.48	1.00	0.00	0.00	0.76	0.76
Unsig. Movement Delay												
Ln Grp Delay, s/veh				43.5	0.0	28.7	32.6	0.2	0.0	0.0	6.5	145.8
Ln Grp LOS				D	A	C	C	A	A	A	A	F
Approach Vol, veh/h					458			1261			1377	
Approach Delay, s/veh					37.7			17.1			85.0	
Approach LOS					D			B			F	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2	8		5	6		
Case No		4.0	10.0		2.0	7.0		
Phs Duration (G+Y+Rc), s		55.3	19.7		22.5	32.8		
Change Period (Y+Rc), s		4.5	4.5		4.5	4.5		
Max Green (Gmax), s		48.0	18.0		18.5	25.0		
Max Allow Headway (MAH), s		5.2	4.5		3.8	4.5		
Max Q Clear (g_c+I1), s		2.0	14.5		17.7	30.3		
Green Ext Time (g_e), s		4.7	0.7		0.3	0.0		
Prob of Phs Call (p_c)		1.00	1.00		1.00	1.00		
Prob of Max Out (p_x)		0.00	1.00		1.00	0.00		

Left-Turn Movement Data								
Assigned Mvmt			3		5	1		
Mvmt Sat Flow, veh/h			1619		2956	0		

Through Movement Data								
Assigned Mvmt		2	8			6		
Mvmt Sat Flow, veh/h		3510	26			5076		

Right-Turn Movement Data								
Assigned Mvmt		12	18			16		
Mvmt Sat Flow, veh/h		0	1504			1610		

Left Lane Group Data								
Assigned Mvmt	0	0	3	0	5	1	0	0
Lane Assignment			L		L (Prot)			

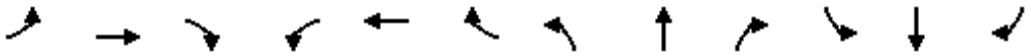
Lanes in Grp	0	0	1	0	2	0	0	0
Grp Vol (v), veh/h	0	0	280	0	659	0	0	0
Grp Sat Flow (s), veh/h/ln	0	0	1619	0	1478	0	0	0
Q Serve Time (g_s), s	0.0	0.0	12.5	0.0	15.7	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	12.5	0.0	15.7	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	1619	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	28.3	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	0.00	1.00	0.00	1.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	328	0	708	0	0	0
V/C Ratio (X)	0.00	0.00	0.85	0.00	0.93	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	0	389	0	729	0	0	0
Upstream Filter (I)	0.00	0.00	1.00	0.00	0.68	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	28.8	0.0	18.9	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	14.6	0.0	13.7	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	43.5	0.0	32.6	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	4.6	0.0	3.5	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	1.3	0.0	1.3	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	0.00	1.00	0.00	1.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	6.0	0.0	4.8	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.12	0.00	0.47	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	8	0	0	6	0	0
Lane Assignment		T				T		
Lanes in Grp	0	2	0	0	0	3	0	0
Grp Vol (v), veh/h	0	602	0	0	0	601	0	0
Grp Sat Flow (s), veh/h/ln	0	1710	0	0	0	1638	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0
Lane Grp Cap (c), veh/h	0	2316	0	0	0	1856	0	0
V/C Ratio (X)	0.00	0.26	0.00	0.00	0.00	0.32	0.00	0.00
Avail Cap (c_a), veh/h	0	2316	0	0	0	1856	0	0
Upstream Filter (I)	0.00	0.68	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	6.1	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.2	0.0	0.0	0.0	0.5	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.2	0.0	0.0	0.0	6.5	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.1	0.0	0.0	0.0	0.9	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.01	0.00	0.00	0.00	0.02	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	18	0	0	16	0	0
Lane Assignment			T+R			R		
Lanes in Grp	0	0	1	0	0	1	0	0
Grp Vol (v), veh/h	0	0	178	0	0	776	0	0
Grp Sat Flow (s), veh/h/ln	0	0	1529	0	0	1610	0	0
Q Serve Time (g_s), s	0.0	0.0	7.9	0.0	0.0	28.3	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	7.9	0.0	0.0	28.3	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.00	0.98	0.00	0.00	1.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	310	0	0	608	0	0
V/C Ratio (X)	0.00	0.00	0.57	0.00	0.00	1.28	0.00	0.00
Avail Cap (c_a), veh/h	0	0	367	0	0	608	0	0
Upstream Filter (I)	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	27.0	0.0	0.0	9.2	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	1.7	0.0	0.0	136.6	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	28.7	0.0	0.0	145.8	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	2.8	0.0	0.0	2.8	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.1	0.0	0.0	23.1	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	2.9	0.0	0.0	25.9	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.06	0.00	0.00	0.56	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	42.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	50.4
HCM 6th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	576	8	508	0	0	0	0	692	320	97	531	0
Future Volume (veh/h)	576	8	508	0	0	0	0	692	320	97	531	0
Number	7	4	14				5	2	12	1	6	16
Initial Q, veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1700	1800	1800				0	1800	1800	1600	1900	0
Adj Flow Rate, veh/h	606	8	535				0	728	337	102	559	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0				0	0	0	0	0	0
Opposing Right Turn Influence	Yes						No			Yes		
Cap, veh/h	634	9	590				0	1474	458	246	1655	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	2.00	2.00	2.00	1.00	1.00
Prop Arrive On Green	0.39	0.39	0.39				0.00	0.60	0.60	0.17	0.46	0.00
Unsig. Movement Delay												
Ln Grp Delay, s/veh	42.9	0.0	34.8				0.0	10.6	20.4	24.7	10.9	0.0
Ln Grp LOS	D	A	C				A	B	C	C	B	A
Approach Vol, veh/h		1149						1065			661	
Approach Delay, s/veh		39.1						13.7			13.0	
Approach LOS		D						B			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	2	1		4		6		
Case No	7.0	2.0		10.0		4.0		
Phs Duration (G+Y+Rc), s	22.5	9.5		28.0		32.0		
Change Period (Y+Rc), s	4.5	4.5		4.5		4.5		
Max Green (Gmax), s	18.0	5.0		23.5		27.5		
Max Allow Headway (MAH), s	4.8	3.8		4.6		5.2		
Max Q Clear (g_c+I1), s	11.5	3.9		23.8		8.0		
Green Ext Time (g_e), s	3.3	0.0		0.0		3.7		
Prob of Phs Call (p_c)	1.00	0.82		1.00		1.00		
Prob of Max Out (p_x)	0.00	1.00		1.00		0.00		

Left-Turn Movement Data								
Assigned Mvmt	5	1		7				
Mvmt Sat Flow, veh/h	0	2956		1619				

Through Movement Data								
Assigned Mvmt	2			4		6		
Mvmt Sat Flow, veh/h	5076			23		3705		

Right-Turn Movement Data								
Assigned Mvmt	12			14		16		
Mvmt Sat Flow, veh/h	1525			1506		0		

Left Lane Group Data								
Assigned Mvmt	5	1	0	7	0	0	0	0
Lane Assignment		L (Prot)		L				

Lanes in Grp	0	2	0	1	0	0	0	0
Grp Vol (v), veh/h	0	102	0	606	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	1478	0	1619	0	0	0	0
Q Serve Time (g_s), s	0.0	1.9	0.0	21.8	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	1.9	0.0	21.8	0.0	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	1619	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	246	0	634	0	0	0	0
V/C Ratio (X)	0.00	0.41	0.00	0.96	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	246	0	634	0	0	0	0
Upstream Filter (I)	0.00	0.87	0.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	23.7	0.0	17.7	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	1.0	0.0	25.2	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	24.7	0.0	42.9	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.6	0.0	7.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	4.4	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.6	0.0	11.5	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.06	0.00	0.20	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	2	0	0	4	0	6	0	0
Lane Assignment	T					T		
Lanes in Grp	3	0	0	0	0	2	0	0
Grp Vol (v), veh/h	728	0	0	0	0	559	0	0
Grp Sat Flow (s), veh/h/ln	1638	0	0	0	0	1805	0	0
Q Serve Time (g_s), s	5.1	0.0	0.0	0.0	0.0	6.0	0.0	0.0
Cycle Q Clear Time (g_c), s	5.1	0.0	0.0	0.0	0.0	6.0	0.0	0.0
Lane Grp Cap (c), veh/h	1474	0	0	0	0	1655	0	0
V/C Ratio (X)	0.49	0.00	0.00	0.00	0.00	0.34	0.00	0.00
Avail Cap (c_a), veh/h	1474	0	0	0	0	1655	0	0
Upstream Filter (I)	1.00	0.00	0.00	0.00	0.00	0.87	0.00	0.00
Uniform Delay (d1), s/veh	9.4	0.0	0.0	0.0	0.0	10.4	0.0	0.0
Incr Delay (d2), s/veh	1.2	0.0	0.0	0.0	0.0	0.5	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	10.6	0.0	0.0	0.0	0.0	10.9	0.0	0.0
1st-Term Q (Q1), veh/ln	1.3	0.0	0.0	0.0	0.0	2.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.2	0.0	0.0	0.0	0.0	0.1	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	1.5	0.0	0.0	0.0	0.0	2.1	0.0	0.0
%ile Storage Ratio (RQ%)	0.05	0.00	0.00	0.00	0.00	0.21	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	12	0	0	14	0	16	0	0
Lane Assignment	R			T+R				
Lanes in Grp	1	0	0	1	0	0	0	0
Grp Vol (v), veh/h	337	0	0	543	0	0	0	0
Grp Sat Flow (s), veh/h/ln	1525	0	0	1529	0	0	0	0
Q Serve Time (g_s), s	9.5	0.0	0.0	20.1	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	9.5	0.0	0.0	20.1	0.0	0.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	1.00	0.00	0.00	0.99	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	458	0	0	599	0	0	0	0
V/C Ratio (X)	0.74	0.00	0.00	0.91	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	458	0	0	599	0	0	0	0
Upstream Filter (I)	1.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	10.3	0.0	0.0	17.2	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	10.1	0.0	0.0	17.6	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	20.4	0.0	0.0	34.8	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	1.9	0.0	0.0	6.1	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	1.3	0.0	0.0	2.9	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	3.2	0.0	0.0	9.0	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.10	0.00	0.00	0.15	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	23.7
HCM 6th LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	258	64	425	732	148	76	209	269	202	496	70
Future Volume (veh/h)	30	258	64	425	732	148	76	209	269	202	496	70
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1900
Adj Flow Rate, veh/h	32	272	67	447	771	156	80	220	283	213	522	74
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	50	361	87	423	1028	208	100	946	820	210	1038	147
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.03	0.13	0.13	0.52	0.73	0.73	0.06	0.28	0.28	0.13	0.34	0.34
Unsig. Movement Delay												
Ln Grp Delay, s/veh	56.4	42.4	43.4	77.9	13.6	13.7	62.8	25.7	12.9	104.3	26.4	26.4
Ln Grp LOS	E	D	D	F	B	B	E	C	B	F	C	C
Approach Vol, veh/h		371			1374			583			809	
Approach Delay, s/veh		44.1			34.5			24.6			46.9	
Approach LOS		D			C			C			D	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Case No	2.0	3.0	2.0	4.0	2.0	4.0	2.0	4.0
Phs Duration (G+Y+Rc), s	16.2	29.4	28.0	16.4	10.0	35.5	7.3	37.2
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green (Gmax), s	11.7	18.8	23.5	18.0	7.5	23.0	6.3	35.2
Max Allow Headway (MAH), s	3.8	4.6	3.8	5.3	3.8	5.3	3.8	5.3
Max Q Clear (g_c+I1), s	13.7	11.5	25.5	10.8	6.4	14.4	3.8	16.7
Green Ext Time (g_e), s	0.0	1.4	0.0	1.1	0.0	2.4	0.0	5.9
Prob of Phs Call (p_c)	1.00	1.00	1.00	1.00	0.86	1.00	0.55	1.00
Prob of Max Out (p_x)	1.00	0.00	1.00	0.52	1.00	0.00	1.00	0.21

Left-Turn Movement Data								
Assigned Mvmt	1		3		5		7	
Mvmt Sat Flow, veh/h	1619		1619		1619		1619	

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		3420		2730		3009		2834

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1525		661		425		573

Left Lane Group Data								
Assigned Mvmt	1	0	3	0	5	0	7	0
Lane Assignment	L (Prot)		L (Prot)		L (Prot)		L (Prot)	

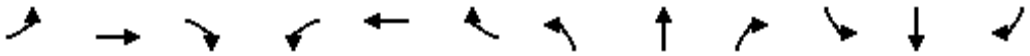
Lanes in Grp	1	0	1	0	1	0	1	0
Grp Vol (v), veh/h	213	0	447	0	80	0	32	0
Grp Sat Flow (s), veh/h/ln	1619	0	1619	0	1619	0	1619	0
Q Serve Time (g_s), s	11.7	0.0	23.5	0.0	4.4	0.0	1.8	0.0
Cycle Q Clear Time (g_c), s	11.7	0.0	23.5	0.0	4.4	0.0	1.8	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	210	0	423	0	100	0	50	0
V/C Ratio (X)	1.01	0.00	1.06	0.00	0.80	0.00	0.65	0.00
Avail Cap (c_a), veh/h	210	0	423	0	135	0	113	0
Upstream Filter (I)	1.00	0.00	0.85	0.00	0.98	0.00	1.00	0.00
Uniform Delay (d1), s/veh	39.2	0.0	21.5	0.0	41.7	0.0	43.1	0.0
Incr Delay (d2), s/veh	65.2	0.0	56.4	0.0	21.1	0.0	13.2	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	104.3	0.0	77.9	0.0	62.8	0.0	56.4	0.0
1st-Term Q (Q1), veh/ln	4.6	0.0	5.4	0.0	1.7	0.0	0.7	0.0
2nd-Term Q (Q2), veh/ln	3.8	0.0	6.6	0.0	0.6	0.0	0.2	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
%ile Back of Q (50%), veh/ln	8.4	0.0	12.1	0.0	2.3	0.0	0.9	0.0
%ile Storage Ratio (RQ%)	0.13	0.00	0.11	0.00	0.12	0.00	0.01	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.6	0.0	6.1	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.3	0.0	0.3	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	2	0	1	0	1	0	1
Grp Vol (v), veh/h	0	220	0	169	0	296	0	465
Grp Sat Flow (s), veh/h/ln	0	1710	0	1710	0	1710	0	1710
Q Serve Time (g_s), s	0.0	4.5	0.0	8.5	0.0	12.3	0.0	14.7
Cycle Q Clear Time (g_c), s	0.0	4.5	0.0	8.5	0.0	12.3	0.0	14.7
Lane Grp Cap (c), veh/h	0	946	0	226	0	590	0	621
V/C Ratio (X)	0.00	0.23	0.00	0.74	0.00	0.50	0.00	0.75
Avail Cap (c_a), veh/h	0	946	0	342	0	590	0	669
Upstream Filter (I)	0.00	0.98	0.00	1.00	0.00	1.00	0.00	0.85
Uniform Delay (d1), s/veh	0.0	25.2	0.0	37.6	0.0	23.3	0.0	9.9
Incr Delay (d2), s/veh	0.0	0.6	0.0	4.8	0.0	3.0	0.0	3.7
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	25.7	0.0	42.4	0.0	26.4	0.0	13.6
1st-Term Q (Q1), veh/ln	0.0	1.8	0.0	3.5	0.0	4.8	0.0	3.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.3	0.0	0.5	0.0	0.6

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	1.9	0.0	3.8	0.0	5.3	0.0	3.6
%ile Storage Ratio (RQ%)	0.00	0.09	0.00	0.05	0.00	0.08	0.00	0.03
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		T+R		T+R		T+R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	283	0	170	0	300	0	462
Grp Sat Flow (s), veh/h/ln	0	1525	0	1681	0	1724	0	1697
Q Serve Time (g_s), s	0.0	9.5	0.0	8.8	0.0	12.4	0.0	14.7
Cycle Q Clear Time (g_c), s	0.0	9.5	0.0	8.8	0.0	12.4	0.0	14.7
Prot RT Sat Flow (s_R), veh/h/ln	0.0	1525.4	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	23.5	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	0.39	0.00	0.25	0.00	0.34
Lane Grp Cap (c), veh/h	0	820	0	223	0	595	0	616
V/C Ratio (X)	0.00	0.35	0.00	0.77	0.00	0.50	0.00	0.75
Avail Cap (c_a), veh/h	0	820	0	336	0	595	0	664
Upstream Filter (I)	0.00	0.98	0.00	1.00	0.00	1.00	0.00	0.85
Uniform Delay (d1), s/veh	0.0	11.8	0.0	37.7	0.0	23.4	0.0	9.9
Incr Delay (d2), s/veh	0.0	1.1	0.0	5.7	0.0	3.0	0.0	3.8
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	12.9	0.0	43.4	0.0	26.4	0.0	13.7
1st-Term Q (Q1), veh/ln	0.0	3.0	0.0	3.6	0.0	4.9	0.0	2.9
2nd-Term Q (Q2), veh/ln	0.0	0.3	0.0	0.4	0.0	0.5	0.0	0.6
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	3.3	0.0	3.9	0.0	5.4	0.0	3.6
%ile Storage Ratio (RQ%)	0.00	0.16	0.00	0.05	0.00	0.08	0.00	0.03
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	37.0
HCM 6th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	79	79	50	264	306	87	90	426	150	73	497	125
Future Volume (veh/h)	79	79	50	264	306	87	90	426	150	73	497	125
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	83	83	53	278	322	92	95	448	158	77	523	132
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	107	157	93	313	517	145	121	1662	741	99	1861	458
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	1.66	1.66	1.66	1.66
Prop Arrive On Green	0.12	0.14	0.14	0.35	0.37	0.37	0.13	0.92	0.76	0.09	0.74	0.74
Unsig. Movement Delay												
Ln Grp Delay, s/veh	43.9	34.1	35.3	45.4	23.2	23.5	55.2	2.0	5.6	49.2	6.1	6.5
Ln Grp LOS	D	C	D	D	C	C	E	A	A	D	A	A
Approach Vol, veh/h		219			692			701			732	
Approach Delay, s/veh		38.2			32.2			10.0			10.7	
Approach LOS		D			C			B			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Case No	2.0	3.0	2.0	4.0	2.0	4.0	2.0	4.0
Phs Duration (G+Y+Rc), s	8.6	39.0	17.5	9.9	9.5	38.1	8.9	18.4
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green (Gmax), s	5.5	19.0	14.5	18.0	5.5	19.0	8.9	23.6
Max Allow Headway (MAH), s	3.8	4.9	3.8	5.4	3.8	5.3	3.8	5.3
Max Q Clear (g_c+I1), s	5.1	4.1	12.9	4.9	5.8	5.2	5.3	9.2
Green Ext Time (g_e), s	0.0	3.1	0.1	0.5	0.0	3.6	0.0	2.1
Prob of Phs Call (p_c)	0.80	1.00	1.00	1.00	0.86	1.00	0.82	1.00
Prob of Max Out (p_x)	1.00	0.00	1.00	0.01	1.00	0.00	1.00	0.07

Left-Turn Movement Data								
Assigned Mvmt	1		3		5		7	
Mvmt Sat Flow, veh/h	1810		1810		1810		1810	

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		3610		2183		4152		2782

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1610		1290		1022		782

Left Lane Group Data								
Assigned Mvmt	1	0	3	0	5	0	7	0
Lane Assignment	L (Prot)		L (Prot)		L (Prot)		L (Prot)	

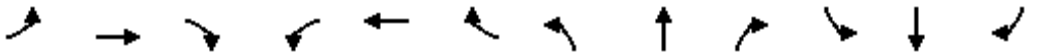
Lanes in Grp	1	0	1	0	1	0	1	0
Grp Vol (v), veh/h	77	0	278	0	95	0	83	0
Grp Sat Flow (s), veh/h/ln	1810	0	1810	0	1810	0	1810	0
Q Serve Time (g_s), s	3.1	0.0	10.9	0.0	3.8	0.0	3.3	0.0
Cycle Q Clear Time (g_c), s	3.1	0.0	10.9	0.0	3.8	0.0	3.3	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	99	0	313	0	121	0	107	0
V/C Ratio (X)	0.78	0.00	0.89	0.00	0.79	0.00	0.78	0.00
Avail Cap (c_a), veh/h	133	0	350	0	133	0	215	0
Upstream Filter (I)	0.82	0.00	1.00	0.00	0.95	0.00	1.00	0.00
Uniform Delay (d1), s/veh	33.7	0.0	23.8	0.0	32.0	0.0	32.6	0.0
Incr Delay (d2), s/veh	15.6	0.0	21.6	0.0	23.2	0.0	11.3	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	49.2	0.0	45.4	0.0	55.2	0.0	43.9	0.0
1st-Term Q (Q1), veh/ln	1.3	0.0	3.6	0.0	1.5	0.0	1.4	0.0
2nd-Term Q (Q2), veh/ln	0.4	0.0	1.9	0.0	0.8	0.0	0.3	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
%ile Back of Q (50%), veh/ln	1.7	0.0	5.5	0.0	2.3	0.0	1.7	0.0
%ile Storage Ratio (RQ%)	0.24	0.00	0.04	0.00	0.29	0.00	0.19	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	2	0	1	0	2	0	1
Grp Vol (v), veh/h	0	448	0	67	0	433	0	207
Grp Sat Flow (s), veh/h/ln	0	1805	0	1805	0	1729	0	1805
Q Serve Time (g_s), s	0.0	1.0	0.0	2.6	0.0	3.0	0.0	7.0
Cycle Q Clear Time (g_c), s	0.0	1.0	0.0	2.6	0.0	3.0	0.0	7.0
Lane Grp Cap (c), veh/h	0	1662	0	130	0	1550	0	336
V/C Ratio (X)	0.00	0.27	0.00	0.52	0.00	0.28	0.00	0.62
Avail Cap (c_a), veh/h	0	1662	0	433	0	1550	0	568
Upstream Filter (I)	0.00	0.95	0.00	1.00	0.00	0.82	0.00	1.00
Uniform Delay (d1), s/veh	0.0	1.6	0.0	30.9	0.0	5.7	0.0	21.4
Incr Delay (d2), s/veh	0.0	0.4	0.0	3.2	0.0	0.4	0.0	1.8
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	2.0	0.0	34.1	0.0	6.1	0.0	23.2
1st-Term Q (Q1), veh/ln	0.0	0.3	0.0	1.1	0.0	0.9	0.0	2.5
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.1	0.0	0.1	0.0	0.2

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.4	0.0	1.2	0.0	1.0	0.0	2.6
%ile Storage Ratio (RQ%)	0.00	0.01	0.00	0.01	0.00	0.01	0.00	0.02
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		T+R		T+R		T+R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	158	0	69	0	222	0	207
Grp Sat Flow (s), veh/h/ln	0	1610	0	1668	0	1716	0	1759
Q Serve Time (g_s), s	0.0	2.1	0.0	2.9	0.0	3.2	0.0	7.2
Cycle Q Clear Time (g_c), s	0.0	2.1	0.0	2.9	0.0	3.2	0.0	7.2
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	0.77	0.00	0.60	0.00	0.44
Lane Grp Cap (c), veh/h	0	741	0	120	0	769	0	327
V/C Ratio (X)	0.00	0.21	0.00	0.57	0.00	0.29	0.00	0.63
Avail Cap (c_a), veh/h	0	741	0	400	0	769	0	554
Upstream Filter (I)	0.00	0.95	0.00	1.00	0.00	0.82	0.00	1.00
Uniform Delay (d1), s/veh	0.0	5.0	0.0	31.0	0.0	5.7	0.0	21.5
Incr Delay (d2), s/veh	0.0	0.6	0.0	4.2	0.0	0.8	0.0	2.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	5.6	0.0	35.3	0.0	6.5	0.0	23.5
1st-Term Q (Q1), veh/ln	0.0	0.6	0.0	1.1	0.0	0.9	0.0	2.5
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.1	0.0	0.2	0.0	0.2
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.7	0.0	1.2	0.0	1.1	0.0	2.7
%ile Storage Ratio (RQ%)	0.00	0.02	0.00	0.01	0.00	0.01	0.00	0.02
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	19.4
HCM 6th LOS	B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	389	10	422	498	727	0	0	200	400
Future Volume (veh/h)	0	0	0	389	10	422	498	727	0	0	200	400
Number				3	8	18	5	2	12	1	6	16
Initial Q, veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln				1700	1800	1800	1700	1800	0	0	1800	1900
Adj Flow Rate, veh/h				409	11	444	524	765	0	0	211	421
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence				Yes			Yes			No		
Cap, veh/h				459	10	423	539	2109	0	0	1148	376
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00
Prop Arrive On Green				0.28	0.28	0.28	0.67	1.00	0.00	0.00	0.23	0.23
Unsig. Movement Delay												
Ln Grp Delay, s/veh				50.1	0.0	88.8	40.8	0.4	0.0	0.0	28.0	117.3
Ln Grp LOS				D	A	F	D	A	A	A	C	F
Approach Vol, veh/h					864			1289			632	
Approach Delay, s/veh					70.5			16.8			87.5	
Approach LOS					E			B			F	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2	8		5	6		
Case No		4.0	10.0		2.0	7.0		
Phs Duration (G+Y+Rc), s		60.0	30.0		34.5	25.5		
Change Period (Y+Rc), s		4.5	4.5		4.5	4.5		
Max Green (Gmax), s		55.5	25.5		31.5	19.5		
Max Allow Headway (MAH), s		5.2	4.7		3.8	4.4		
Max Q Clear (g_c+I1), s		2.0	27.5		29.6	23.0		
Green Ext Time (g_e), s		6.5	0.0		0.4	0.0		
Prob of Phs Call (p_c)		1.00	1.00		1.00	1.00		
Prob of Max Out (p_x)		0.00	1.00		1.00	0.00		
Left-Turn Movement Data								
Assigned Mvmt			3		5	1		
Mvmt Sat Flow, veh/h			1619		1619	0		
Through Movement Data								
Assigned Mvmt		2	8			6		
Mvmt Sat Flow, veh/h		3510	37			5076		
Right-Turn Movement Data								
Assigned Mvmt		12	18			16		
Mvmt Sat Flow, veh/h		0	1494			1610		
Left Lane Group Data								
Assigned Mvmt	0	0	3	0	5	1	0	0
Lane Assignment			L		L (Prot)			

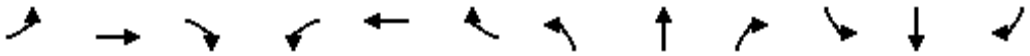
Lanes in Grp	0	0	1	0	1	0	0	0
Grp Vol (v), veh/h	0	0	409	0	524	0	0	0
Grp Sat Flow (s), veh/h/ln	0	0	1619	0	1619	0	0	0
Q Serve Time (g_s), s	0.0	0.0	21.8	0.0	27.6	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	21.8	0.0	27.6	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	1619	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	21.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	0.00	1.00	0.00	1.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	459	0	539	0	0	0
V/C Ratio (X)	0.00	0.00	0.89	0.00	0.97	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	0	459	0	567	0	0	0
Upstream Filter (I)	0.00	0.00	1.00	0.00	0.79	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	30.9	0.0	14.6	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	19.2	0.0	26.1	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	50.1	0.0	40.8	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	8.2	0.0	4.3	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	2.4	0.0	3.9	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	0.00	1.00	0.00	1.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	10.7	0.0	8.2	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.22	0.00	0.79	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	8	0	0	6	0	0
Lane Assignment		T				T		
Lanes in Grp	0	2	0	0	0	3	0	0
Grp Vol (v), veh/h	0	765	0	0	0	211	0	0
Grp Sat Flow (s), veh/h/ln	0	1710	0	0	0	1638	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	3.1	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	3.1	0.0	0.0
Lane Grp Cap (c), veh/h	0	2109	0	0	0	1148	0	0
V/C Ratio (X)	0.00	0.36	0.00	0.00	0.00	0.18	0.00	0.00
Avail Cap (c_a), veh/h	0	2109	0	0	0	1148	0	0
Upstream Filter (I)	0.00	0.79	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	27.6	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.4	0.0	0.0	0.0	0.4	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.4	0.0	0.0	0.0	28.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	1.2	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.1	0.0	0.0	0.0	1.2	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.01	0.00	0.00	0.00	0.03	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	18	0	0	16	0	0
Lane Assignment			T+R			R		
Lanes in Grp	0	0	1	0	0	1	0	0
Grp Vol (v), veh/h	0	0	455	0	0	421	0	0
Grp Sat Flow (s), veh/h/ln	0	0	1531	0	0	1610	0	0
Q Serve Time (g_s), s	0.0	0.0	25.5	0.0	0.0	21.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	25.5	0.0	0.0	21.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.00	0.98	0.00	0.00	1.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	434	0	0	376	0	0
V/C Ratio (X)	0.00	0.00	1.05	0.00	0.00	1.12	0.00	0.00
Avail Cap (c_a), veh/h	0	0	434	0	0	376	0	0
Upstream Filter (I)	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	32.3	0.0	0.0	34.5	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	56.6	0.0	0.0	82.8	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	88.8	0.0	0.0	117.3	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	9.1	0.0	0.0	8.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	6.8	0.0	0.0	8.7	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	15.9	0.0	0.0	16.6	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.33	0.00	0.00	0.36	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	5.3	0.0	0.0	11.2	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.3	0.0	0.0	0.3	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	49.5
HCM 6th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	374	8	386	0	0	0	0	868	473	289	553	0
Future Volume (veh/h)	374	8	386	0	0	0	0	868	473	289	553	0
Number	7	4	14				5	2	12	1	6	16
Initial Q, veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1700	1800	1800				0	1800	1800	1600	1900	0
Adj Flow Rate, veh/h	394	8	406				0	914	498	304	582	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0				0	0	0	0	0	0
Opposing Right Turn Influence	Yes						No			Yes		
Cap, veh/h	490	9	454				0	2050	643	370	2042	0
HCM Platoon Ratio	1.33	1.33	1.33				1.00	1.33	1.33	1.33	1.33	1.00
Prop Arrive On Green	0.40	0.40	0.40				0.00	0.56	0.56	0.17	0.79	0.00
Unsig. Movement Delay												
Ln Grp Delay, s/veh	30.9	0.0	39.9				0.0	14.3	25.2	42.7	4.4	0.0
Ln Grp LOS	C	A	D				A	B	C	D	A	A
Approach Vol, veh/h		808						1412			886	
Approach Delay, s/veh		35.5						18.2			17.5	
Approach LOS		D						B			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Case No	2.0	7.0		10.0		4.0		
Phs Duration (G+Y+Rc), s	15.8	42.5		31.8		58.2		
Change Period (Y+Rc), s	4.5	4.5		4.5		4.5		
Max Green (Gmax), s	14.5	28.5		33.5		47.5		
Max Allow Headway (MAH), s	3.7	4.5		4.4		4.8		
Max Q Clear (g_c+I1), s	10.9	24.8		24.7		6.1		
Green Ext Time (g_e), s	0.3	2.4		2.5		3.8		
Prob of Phs Call (p_c)	1.00	1.00		1.00		1.00		
Prob of Max Out (p_x)	1.00	0.00		0.39		0.00		

Left-Turn Movement Data									
Assigned Mvmt	1	5		7					
Mvmt Sat Flow, veh/h	2956	0		1619					

Through Movement Data									
Assigned Mvmt		2		4		6			
Mvmt Sat Flow, veh/h		5040		30		3610			

Right-Turn Movement Data									
Assigned Mvmt		12		14		16			
Mvmt Sat Flow, veh/h		1525		1500		0			

Left Lane Group Data									
Assigned Mvmt	1	5	0	7	0	0	0	0	
Lane Assignment	L (Prot)			L					

Lanes in Grp	2	0	0	1	0	0	0	0
Grp Vol (v), veh/h	304	0	0	394	0	0	0	0
Grp Sat Flow (s), veh/h/ln	1478	0	0	1619	0	0	0	0
Q Serve Time (g_s), s	8.9	0.0	0.0	19.3	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	8.9	0.0	0.0	19.3	0.0	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	1619	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	38.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	370	0	0	490	0	0	0	0
V/C Ratio (X)	0.82	0.00	0.00	0.80	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	476	0	0	603	0	0	0	0
Upstream Filter (I)	0.69	0.00	0.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	36.5	0.0	0.0	24.5	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	6.2	0.0	0.0	6.4	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	42.7	0.0	0.0	30.9	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	2.9	0.0	0.0	5.8	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.3	0.0	0.0	0.9	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00
%ile Back of Q (50%), veh/ln	3.2	0.0	0.0	6.7	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.31	0.00	0.00	0.11	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	0
Lane Assignment		T				T		
Lanes in Grp	0	3	0	0	0	2	0	0
Grp Vol (v), veh/h	0	914	0	0	0	582	0	0
Grp Sat Flow (s), veh/h/ln	0	1620	0	0	0	1710	0	0
Q Serve Time (g_s), s	0.0	9.9	0.0	0.0	0.0	4.1	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	9.9	0.0	0.0	0.0	4.1	0.0	0.0
Lane Grp Cap (c), veh/h	0	2050	0	0	0	2042	0	0
V/C Ratio (X)	0.00	0.45	0.00	0.00	0.00	0.28	0.00	0.00
Avail Cap (c_a), veh/h	0	2050	0	0	0	2042	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	0.69	0.00	0.00
Uniform Delay (d1), s/veh	0.0	13.6	0.0	0.0	0.0	4.2	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.7	0.0	0.0	0.0	0.2	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	14.3	0.0	0.0	0.0	4.4	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	2.9	0.0	0.0	0.0	1.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	3.0	0.0	0.0	0.0	1.1	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.10	0.00	0.00	0.00	0.10	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	0
Lane Assignment		R		T+R				
Lanes in Grp	0	1	0	1	0	0	0	0
Grp Vol (v), veh/h	0	498	0	414	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	1525	0	1530	0	0	0	0
Q Serve Time (g_s), s	0.0	22.8	0.0	22.7	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	22.8	0.0	22.7	0.0	0.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	0.98	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	643	0	463	0	0	0	0
V/C Ratio (X)	0.00	0.77	0.00	0.89	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	643	0	569	0	0	0	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	16.4	0.0	25.5	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	8.8	0.0	14.3	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	25.2	0.0	39.9	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	5.4	0.0	6.4	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	1.6	0.0	1.8	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	6.9	0.0	8.2	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.23	0.00	0.14	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	22.5
HCM 6th LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	76	739	73	215	317	178	127	616	575	235	344	45
Future Volume (veh/h)	76	739	73	215	317	178	127	616	575	235	344	45
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1900
Adj Flow Rate, veh/h	80	778	77	226	334	187	134	648	605	247	362	47
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	72	783	77	229	736	404	291	851	595	293	761	98
HCM Platoon Ratio	1.00	1.00	1.00	1.66	1.66	1.00	1.66	1.66	1.66	1.00	1.00	1.00
Prop Arrive On Green	0.04	0.25	0.25	0.23	0.57	0.35	0.30	0.41	0.41	0.18	0.25	0.25
Unsig. Movement Delay												
Ln Grp Delay, s/veh	129.4	79.4	79.1	81.7	16.4	23.5	35.3	32.0	62.9	64.1	35.6	35.7
Ln Grp LOS	F	E	E	F	B	C	D	C	F	E	D	D
Approach Vol, veh/h		935			747			1387			656	
Approach Delay, s/veh		83.5			38.5			45.8			46.4	
Approach LOS		F			D			D			D	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Case No	2.0	3.0	2.0	4.0	2.0	4.0	2.0	4.0
Phs Duration (G+Y+Rc), s	22.6	29.4	18.6	29.4	22.5	29.5	9.0	39.1
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green (Gmax), s	18.1	20.7	18.3	24.9	18.0	20.8	18.0	25.2
Max Allow Headway (MAH), s	3.7	4.4	3.7	4.8	3.7	4.8	3.7	4.9
Max Q Clear (g_c+I1), s	14.7	26.9	13.9	26.7	6.7	12.2	4.5	13.7
Green Ext Time (g_e), s	0.2	0.0	0.2	0.0	0.2	1.3	0.1	2.1
Prob of Phs Call (p_c)	1.00	1.00	1.00	1.00	1.00	1.00	0.89	1.00
Prob of Max Out (p_x)	0.00	0.00	0.57	1.00	0.00	0.00	0.00	0.16

Left-Turn Movement Data								
Assigned Mvmt	1		3		5		7	
Mvmt Sat Flow, veh/h	1619		1619		1619		1619	

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		3420		3143		3047		2131

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1525		311		393		1169

Left Lane Group Data								
Assigned Mvmt	1	0	3	0	5	0	7	0
Lane Assignment	L (Prot)		L (Prot)		L (Prot)		L (Prot)	

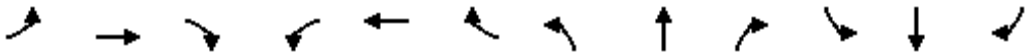
Lanes in Grp	1	0	1	0	1	0	1	0
Grp Vol (v), veh/h	247	0	226	0	134	0	80	0
Grp Sat Flow (s), veh/h/ln	1619	0	1619	0	1619	0	1619	0
Q Serve Time (g_s), s	14.7	0.0	13.9	0.0	6.7	0.0	4.5	0.0
Cycle Q Clear Time (g_c), s	14.7	0.0	13.9	0.0	6.7	0.0	4.5	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	293	0	229	0	291	0	72	0
V/C Ratio (X)	0.84	0.00	0.99	0.00	0.46	0.00	1.11	0.00
Avail Cap (c_a), veh/h	293	0	296	0	291	0	291	0
Upstream Filter (I)	1.00	0.00	0.96	0.00	0.81	0.00	1.00	0.00
Uniform Delay (d1), s/veh	39.6	0.0	38.2	0.0	31.1	0.0	47.8	0.0
Incr Delay (d2), s/veh	24.5	0.0	43.5	0.0	4.2	0.0	81.7	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	64.1	0.0	81.7	0.0	35.3	0.0	129.4	0.0
1st-Term Q (Q1), veh/ln	5.5	0.0	4.6	0.0	2.3	0.0	1.7	0.0
2nd-Term Q (Q2), veh/ln	2.0	0.0	2.8	0.0	0.3	0.0	1.6	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
%ile Back of Q (50%), veh/ln	7.5	0.0	7.4	0.0	2.7	0.0	3.4	0.0
%ile Storage Ratio (RQ%)	0.12	0.00	0.07	0.00	0.13	0.00	0.05	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	2	0	1	0	1	0	1
Grp Vol (v), veh/h	0	648	0	423	0	202	0	267
Grp Sat Flow (s), veh/h/ln	0	1710	0	1710	0	1710	0	1710
Q Serve Time (g_s), s	0.0	16.2	0.0	24.7	0.0	10.0	0.0	9.0
Cycle Q Clear Time (g_c), s	0.0	16.2	0.0	24.7	0.0	10.0	0.0	9.0
Lane Grp Cap (c), veh/h	0	851	0	426	0	427	0	591
V/C Ratio (X)	0.00	0.76	0.00	0.99	0.00	0.47	0.00	0.45
Avail Cap (c_a), veh/h	0	851	0	426	0	427	0	591
Upstream Filter (I)	0.00	0.81	0.00	1.00	0.00	1.00	0.00	0.96
Uniform Delay (d1), s/veh	0.0	26.8	0.0	37.5	0.0	31.9	0.0	15.9
Incr Delay (d2), s/veh	0.0	5.2	0.0	41.9	0.0	3.7	0.0	0.5
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	32.0	0.0	79.4	0.0	35.6	0.0	16.4
1st-Term Q (Q1), veh/ln	0.0	5.1	0.0	9.6	0.0	3.9	0.0	2.8
2nd-Term Q (Q2), veh/ln	0.0	0.6	0.0	5.0	0.0	0.4	0.0	0.1

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	5.7	0.0	14.6	0.0	4.4	0.0	2.9
%ile Storage Ratio (RQ%)	0.00	0.29	0.00	0.20	0.00	0.07	0.00	0.03
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		T+R		T+R		T+R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	605	0	432	0	207	0	254
Grp Sat Flow (s), veh/h/ln	0	1525	0	1744	0	1729	0	1590
Q Serve Time (g_s), s	0.0	24.9	0.0	24.7	0.0	10.2	0.0	11.7
Cycle Q Clear Time (g_c), s	0.0	24.9	0.0	24.7	0.0	10.2	0.0	11.7
Prot RT Sat Flow (s_R), veh/h/ln	0.0	1525.4	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	14.1	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	0.18	0.00	0.23	0.00	0.74
Lane Grp Cap (c), veh/h	0	595	0	434	0	432	0	549
V/C Ratio (X)	0.00	1.02	0.00	0.99	0.00	0.48	0.00	0.46
Avail Cap (c_a), veh/h	0	595	0	434	0	432	0	549
Upstream Filter (I)	0.00	0.81	0.00	1.00	0.00	1.00	0.00	0.96
Uniform Delay (d1), s/veh	0.0	25.4	0.0	37.5	0.0	32.0	0.0	22.9
Incr Delay (d2), s/veh	0.0	37.5	0.0	41.6	0.0	3.8	0.0	0.6
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	62.9	0.0	79.1	0.0	35.7	0.0	23.5
1st-Term Q (Q1), veh/ln	0.0	11.7	0.0	9.8	0.0	4.0	0.0	3.9
2nd-Term Q (Q2), veh/ln	0.0	6.2	0.0	5.0	0.0	0.5	0.0	0.1
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	17.9	0.0	14.8	0.0	4.5	0.0	4.0
%ile Storage Ratio (RQ%)	0.00	0.90	0.00	0.20	0.00	0.07	0.00	0.04
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	2.5	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	53.9
HCM 6th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	239	467	120	351	249	93	83	569	292	180	686	103
Future Volume (veh/h)	239	467	120	351	249	93	83	569	292	180	686	103
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1900
Adj Flow Rate, veh/h	252	492	21	369	262	45	87	599	96	189	722	3
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	279	573	24	390	702	119	107	889	764	207	1624	7
HCM Platoon Ratio	2.00	2.00	1.66	2.00	1.66	1.66	2.00	2.00	2.00	2.00	1.66	1.33
Prop Arrive On Green	0.34	0.34	0.28	0.48	0.40	0.40	0.13	0.52	0.52	0.26	0.53	0.43
Unsig. Movement Delay												
Ln Grp Delay, s/veh	53.1	45.6	45.6	53.6	22.8	22.9	59.3	22.5	7.9	67.0	17.2	18.1
Ln Grp LOS	D	D	D	D	C	C	E	C	A	E	B	B
Approach Vol, veh/h		765			676			782			914	
Approach Delay, s/veh		48.1			39.7			24.8			27.7	
Approach LOS		D			D			C			C	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Case No	2.0	3.0	2.0	4.0	2.0	4.0	2.0	4.0
Phs Duration (G+Y+Rc), s	16.0	27.9	26.2	19.9	10.5	33.4	20.0	26.1
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green (Gmax), s	11.5	20.0	22.5	18.0	7.9	23.6	18.3	22.2
Max Allow Headway (MAH), s	3.8	5.1	3.8	5.2	3.8	5.2	3.8	5.3
Max Q Clear (g_c+I1), s	12.2	13.6	21.5	14.4	6.7	9.9	15.3	7.8
Green Ext Time (g_e), s	0.0	2.3	0.1	1.0	0.0	4.0	0.2	1.5
Prob of Phs Call (p_c)	0.99	1.00	1.00	1.00	0.89	1.00	1.00	1.00
Prob of Max Out (p_x)	1.00	0.00	1.00	1.00	1.00	0.00	1.00	0.03

Left-Turn Movement Data								
Assigned Mvmt	1		3		5		7	
Mvmt Sat Flow, veh/h	1619		1619		1619		1619	

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		3420		3342		5051		2925

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1525		142		21		496

Left Lane Group Data								
Assigned Mvmt	1	0	3	0	5	0	7	0
Lane Assignment	L (Prot)		L (Prot)		L (Prot)		L (Prot)	

Lanes in Grp	1	0	1	0	1	0	1	0
Grp Vol (v), veh/h	189	0	369	0	87	0	252	0
Grp Sat Flow (s), veh/h/ln	1619	0	1619	0	1619	0	1619	0
Q Serve Time (g_s), s	10.2	0.0	19.5	0.0	4.7	0.0	13.3	0.0
Cycle Q Clear Time (g_c), s	10.2	0.0	19.5	0.0	4.7	0.0	13.3	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	207	0	390	0	107	0	279	0
V/C Ratio (X)	0.91	0.00	0.95	0.00	0.81	0.00	0.90	0.00
Avail Cap (c_a), veh/h	207	0	405	0	142	0	329	0
Upstream Filter (I)	0.80	0.00	1.00	0.00	0.91	0.00	1.00	0.00
Uniform Delay (d1), s/veh	33.0	0.0	22.8	0.0	38.5	0.0	28.8	0.0
Incr Delay (d2), s/veh	34.0	0.0	30.8	0.0	20.8	0.0	24.4	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	67.0	0.0	53.6	0.0	59.3	0.0	53.1	0.0
1st-Term Q (Q1), veh/ln	3.4	0.0	4.9	0.0	1.7	0.0	4.1	0.0
2nd-Term Q (Q2), veh/ln	2.0	0.0	3.3	0.0	0.6	0.0	1.9	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
%ile Back of Q (50%), veh/ln	5.3	0.0	8.2	0.0	2.4	0.0	5.9	0.0
%ile Storage Ratio (RQ%)	0.74	0.00	0.05	0.00	0.29	0.00	0.67	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

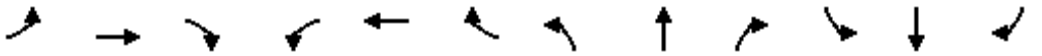
Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	2	0	1	0	2	0	1
Grp Vol (v), veh/h	0	599	0	251	0	468	0	152
Grp Sat Flow (s), veh/h/ln	0	1710	0	1710	0	1638	0	1710
Q Serve Time (g_s), s	0.0	11.6	0.0	12.3	0.0	7.9	0.0	5.6
Cycle Q Clear Time (g_c), s	0.0	11.6	0.0	12.3	0.0	7.9	0.0	5.6
Lane Grp Cap (c), veh/h	0	889	0	293	0	1053	0	410
V/C Ratio (X)	0.00	0.67	0.00	0.86	0.00	0.44	0.00	0.37
Avail Cap (c_a), veh/h	0	889	0	342	0	1053	0	422
Upstream Filter (I)	0.00	0.91	0.00	1.00	0.00	0.80	0.00	1.00
Uniform Delay (d1), s/veh	0.0	18.8	0.0	28.5	0.0	16.1	0.0	22.3
Incr Delay (d2), s/veh	0.0	3.7	0.0	17.0	0.0	1.1	0.0	0.6
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	22.5	0.0	45.6	0.0	17.2	0.0	22.8
1st-Term Q (Q1), veh/ln	0.0	3.4	0.0	4.0	0.0	2.5	0.0	2.1
2nd-Term Q (Q2), veh/ln	0.0	0.5	0.0	1.4	0.0	0.2	0.0	0.1

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	3.9	0.0	5.4	0.0	2.7	0.0	2.1
%ile Storage Ratio (RQ%)	0.00	0.10	0.00	0.03	0.00	0.03	0.00	0.01
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		T+R		T+R		T+R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	96	0	262	0	257	0	155
Grp Sat Flow (s), veh/h/ln	0	1525	0	1774	0	1796	0	1711
Q Serve Time (g_s), s	0.0	2.1	0.0	12.4	0.0	7.9	0.0	5.8
Cycle Q Clear Time (g_c), s	0.0	2.1	0.0	12.4	0.0	7.9	0.0	5.8
Prot RT Sat Flow (s_R), veh/h/ln	0.0	1525.4	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	21.7	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	0.08	0.00	0.01	0.00	0.29
Lane Grp Cap (c), veh/h	0	764	0	304	0	578	0	410
V/C Ratio (X)	0.00	0.13	0.00	0.86	0.00	0.44	0.00	0.38
Avail Cap (c_a), veh/h	0	764	0	355	0	578	0	422
Upstream Filter (I)	0.00	0.91	0.00	1.00	0.00	0.80	0.00	1.00
Uniform Delay (d1), s/veh	0.0	7.6	0.0	28.8	0.0	16.1	0.0	22.3
Incr Delay (d2), s/veh	0.0	0.3	0.0	16.9	0.0	2.0	0.0	0.6
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	7.9	0.0	45.6	0.0	18.1	0.0	22.9
1st-Term Q (Q1), veh/ln	0.0	0.6	0.0	4.2	0.0	2.8	0.0	2.1
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	1.4	0.0	0.3	0.0	0.1
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.7	0.0	5.6	0.0	3.1	0.0	2.2
%ile Storage Ratio (RQ%)	0.00	0.02	0.00	0.03	0.00	0.03	0.00	0.01
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	34.5
HCM 6th LOS	C

BUILD OUT YEAR CONDITIONS



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	370	4	210	643	594	0	0	629	809
Future Volume (veh/h)	0	0	0	370	4	210	643	594	0	0	629	809
Number				3	8	18	5	2	12	1	6	16
Initial Q, veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln				1800	1900	1900	1900	1900	0	0	1900	1900
Adj Flow Rate, veh/h				389	4	221	677	625	0	0	662	852
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence				Yes			Yes			No		
Cap, veh/h				428	4	385	730	2477	0	0	2286	710
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	2.00	1.00
Prop Arrive On Green				0.24	0.24	0.24	0.42	1.00	0.00	0.00	0.88	0.44
Unsig. Movement Delay												
Ln Grp Delay, s/veh				64.6	0.0	41.9	40.4	0.1	0.0	0.0	4.4	137.0
Ln Grp LOS				E	A	D	D	A	A	A	A	F
Approach Vol, veh/h					614			1302			1514	
Approach Delay, s/veh					56.4			21.1			79.0	
Approach LOS					E			C			E	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2	8		5	6		
Case No		4.0	11.0		2.0	7.0		
Phs Duration (G+Y+Rc), s		86.8	33.2		29.4	57.4		
Change Period (Y+Rc), s		4.5	4.5		4.5	4.5		
Max Green (Gmax), s		79.4	31.6		27.3	47.6		
Max Allow Headway (MAH), s		5.2	4.9		3.8	4.5		
Max Q Clear (g_c+I1), s		2.0	27.3		24.0	54.9		
Green Ext Time (g_e), s		5.0	1.3		0.9	0.0		
Prob of Phs Call (p_c)		1.00	1.00		1.00	1.00		
Prob of Max Out (p_x)		0.00	1.00		1.00	0.00		

Left-Turn Movement Data								
Assigned Mvmt			3		5	1		
Mvmt Sat Flow, veh/h			1792		3510	0		

Through Movement Data								
Assigned Mvmt		2	8			6		
Mvmt Sat Flow, veh/h		3705	18			5358		

Right-Turn Movement Data								
Assigned Mvmt		12	18			16		
Mvmt Sat Flow, veh/h		0	1610			1610		

Left Lane Group Data								
Assigned Mvmt	0	0	3	0	5	1	0	0
Lane Assignment			L+T		L (Prot)			

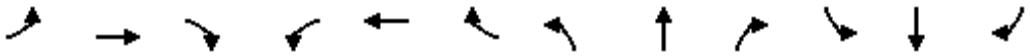
Lanes in Grp	0	0	1	0	2	0	0	0
Grp Vol (v), veh/h	0	0	393	0	677	0	0	0
Grp Sat Flow (s), veh/h/ln	0	0	1810	0	1755	0	0	0
Q Serve Time (g_s), s	0.0	0.0	25.3	0.0	22.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	25.3	0.0	22.0	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	52.9	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	0.00	0.99	0.00	1.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	432	0	730	0	0	0
V/C Ratio (X)	0.00	0.00	0.91	0.00	0.93	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	0	477	0	799	0	0	0
Upstream Filter (I)	0.00	0.00	1.00	0.00	0.31	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	44.4	0.0	34.2	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	20.2	0.0	6.3	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	64.6	0.0	40.4	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	11.3	0.0	7.5	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	2.4	0.0	0.6	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	0.00	1.00	0.00	1.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	13.7	0.0	8.2	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.28	0.00	0.76	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	8	0	0	6	0	0
Lane Assignment		T				T		
Lanes in Grp	0	2	0	0	0	3	0	0
Grp Vol (v), veh/h	0	625	0	0	0	662	0	0
Grp Sat Flow (s), veh/h/ln	0	1805	0	0	0	1729	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	2.4	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	2.4	0.0	0.0
Lane Grp Cap (c), veh/h	0	2477	0	0	0	2286	0	0
V/C Ratio (X)	0.00	0.25	0.00	0.00	0.00	0.29	0.00	0.00
Avail Cap (c_a), veh/h	0	2477	0	0	0	2286	0	0
Upstream Filter (I)	0.00	0.31	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	4.1	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.1	0.0	0.0	0.0	0.3	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.1	0.0	0.0	0.0	4.4	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	18	0	0	16	0	0
Lane Assignment			R			R		
Lanes in Grp	0	0	1	0	0	1	0	0
Grp Vol (v), veh/h	0	0	221	0	0	852	0	0
Grp Sat Flow (s), veh/h/ln	0	0	1610	0	0	1610	0	0
Q Serve Time (g_s), s	0.0	0.0	14.5	0.0	0.0	52.9	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	14.5	0.0	0.0	52.9	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	385	0	0	710	0	0
V/C Ratio (X)	0.00	0.00	0.57	0.00	0.00	1.20	0.00	0.00
Avail Cap (c_a), veh/h	0	0	424	0	0	710	0	0
Upstream Filter (I)	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	40.3	0.0	0.0	33.6	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	1.6	0.0	0.0	103.4	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	41.9	0.0	0.0	137.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	5.8	0.0	0.0	20.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.2	0.0	0.0	20.4	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	5.9	0.0	0.0	40.4	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.12	0.00	0.00	0.87	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	35.6	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	53.0
HCM 6th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	627	9	559	0	0	0	0	762	352	107	557	0
Future Volume (veh/h)	627	9	559	0	0	0	0	762	352	107	557	0
Number	7	4	14				5	2	12	1	6	16
Initial Q, veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1800	1900	1900				0	1900	1900	1900	1900	0
Adj Flow Rate, veh/h	660	9	588				0	802	371	113	586	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0				0	0	0	0	0	0
Opposing Right Turn Influence	Yes						No			Yes		
Cap, veh/h	612	8	545				0	906	281	143	902	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	2.00	2.00	2.00	1.00	1.00
Prop Arrive On Green	0.68	0.68	0.68				0.00	0.35	0.35	0.08	0.25	0.00
Unsig. Movement Delay												
Ln Grp Delay, s/veh	71.2	0.0	0.0				0.0	53.5	208.9	83.3	47.1	0.0
Ln Grp LOS	F	A	A				A	D	F	F	D	A
Approach Vol, veh/h		1257						1173			699	
Approach Delay, s/veh		71.2						102.6			53.0	
Approach LOS		E						F			D	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Case No	2.0	7.0		12.0		4.0		
Phs Duration (G+Y+Rc), s	9.8	27.2		93.0		37.0		
Change Period (Y+Rc), s	4.5	4.5		4.5		4.5		
Max Green (Gmax), s	5.3	22.2		88.5		32.0		
Max Allow Headway (MAH), s	3.8	4.6		5.4		5.2		
Max Q Clear (g_c+I1), s	6.1	24.7		90.5		20.9		
Green Ext Time (g_e), s	0.0	0.0		0.0		3.0		
Prob of Phs Call (p_c)	0.98	1.00		1.00		1.00		
Prob of Max Out (p_x)	1.00	0.00		1.00		0.00		

Left-Turn Movement Data								
Assigned Mvmt	1	5		7				
Mvmt Sat Flow, veh/h	3510	0		898				

Through Movement Data								
Assigned Mvmt		2		4		6		
Mvmt Sat Flow, veh/h		5358		12		3705		

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		
Mvmt Sat Flow, veh/h		1610		800		0		

Left Lane Group Data								
Assigned Mvmt	1	5	0	7	0	0	0	0
Lane Assignment	L (Prot)			L+T+R				

Lanes in Grp	2	0	0	1	0	0	0	0
Grp Vol (v), veh/h	113	0	0	1257	0	0	0	0
Grp Sat Flow (s), veh/h/ln	1755	0	0	1711	0	0	0	0
Q Serve Time (g_s), s	4.1	0.0	0.0	88.5	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	4.1	0.0	0.0	88.5	0.0	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	22.7	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	0.53	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	143	0	0	1165	0	0	0	0
V/C Ratio (X)	0.79	0.00	0.00	1.08	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	143	0	0	1165	0	0	0	0
Upstream Filter (I)	0.96	0.00	0.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	59.2	0.0	0.0	20.8	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	24.2	0.0	0.0	50.5	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	83.3	0.0	0.0	71.2	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	1.8	0.0	0.0	31.5	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.5	0.0	0.0	16.3	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00
%ile Back of Q (50%), veh/ln	2.3	0.0	0.0	47.8	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.21	0.00	0.00	0.82	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	23.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	0
Lane Assignment		T				T		
Lanes in Grp	0	3	0	0	0	2	0	0
Grp Vol (v), veh/h	0	802	0	0	0	586	0	0
Grp Sat Flow (s), veh/h/ln	0	1729	0	0	0	1805	0	0
Q Serve Time (g_s), s	0.0	18.9	0.0	0.0	0.0	18.9	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	18.9	0.0	0.0	0.0	18.9	0.0	0.0
Lane Grp Cap (c), veh/h	0	906	0	0	0	903	0	0
V/C Ratio (X)	0.00	0.89	0.00	0.00	0.00	0.65	0.00	0.00
Avail Cap (c_a), veh/h	0	906	0	0	0	903	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	0.96	0.00	0.00
Uniform Delay (d1), s/veh	0.0	41.1	0.0	0.0	0.0	43.6	0.0	0.0
Incr Delay (d2), s/veh	0.0	12.4	0.0	0.0	0.0	3.5	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	53.5	0.0	0.0	0.0	47.1	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	6.3	0.0	0.0	0.0	8.5	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	1.0	0.0	0.0	0.0	0.4	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	7.4	0.0	0.0	0.0	8.9	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.24	0.00	0.00	0.00	0.83	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	0
Lane Assignment		R						
Lanes in Grp	0	1	0	0	0	0	0	0
Grp Vol (v), veh/h	0	371	0	0	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	1610	0	0	0	0	0	0
Q Serve Time (g_s), s	0.0	22.7	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	22.7	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	0.47	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	281	0	0	0	0	0	0
V/C Ratio (X)	0.00	1.32	0.00	0.00	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	281	0	0	0	0	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	42.3	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	166.6	0.0	0.0	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	208.9	0.0	0.0	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	7.1	0.0	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	13.0	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	20.1	0.0	0.0	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.65	0.00	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	22.5	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	78.9
HCM 6th LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	39	293	70	453	809	165	85	233	296	226	538	82
Future Volume (veh/h)	39	293	70	453	809	165	85	233	296	226	538	82
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1800	1900	1900	1800	1900	1900	1800	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	41	308	74	477	852	174	89	245	312	238	566	86
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	58	410	97	423	1058	216	112	1136	507	212	1150	174
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.03	0.14	0.14	0.25	0.35	0.35	0.07	0.31	0.31	0.12	0.37	0.37
Unsig. Movement Delay												
Ln Grp Delay, s/veh	62.1	45.5	46.1	116.7	33.5	33.5	59.0	25.6	34.4	143.4	27.1	27.1
Ln Grp LOS	E	D	D	F	C	C	E	C	C	F	C	C
Approach Vol, veh/h		423			1503			646			890	
Approach Delay, s/veh		47.4			59.9			34.5			58.2	
Approach LOS		D			E			C			E	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Case No	2.0	3.0	2.0	4.0	2.0	4.0	2.0	4.0
Phs Duration (G+Y+Rc), s	16.2	36.0	29.2	18.6	11.1	41.1	7.9	39.9
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green (Gmax), s	11.7	21.1	24.7	24.5	9.9	22.9	6.5	42.7
Max Allow Headway (MAH), s	3.8	4.6	3.8	5.3	3.8	5.3	3.8	5.3
Max Q Clear (g_c+I1), s	13.7	18.5	26.7	12.4	7.1	16.0	4.4	27.8
Green Ext Time (g_e), s	0.0	0.7	0.0	1.8	0.0	2.3	0.0	6.0
Prob of Phs Call (p_c)	1.00	1.00	1.00	1.00	0.92	1.00	0.68	1.00
Prob of Max Out (p_x)	1.00	0.00	1.00	0.11	1.00	0.00	1.00	0.37

Left-Turn Movement Data								
Assigned Mvmt	1		3		5		7	
Mvmt Sat Flow, veh/h	1810		1714		1714		1714	

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		3610		2896		3143		2986

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1610		685		476		610

Left Lane Group Data								
Assigned Mvmt	1	0	3	0	5	0	7	0
Lane Assignment	L (Prot)		L (Prot)		L (Prot)		L (Prot)	

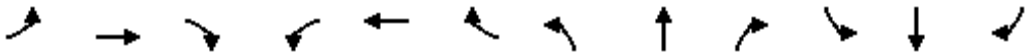
Lanes in Grp	1	0	1	0	1	0	1	0
Grp Vol (v), veh/h	238	0	477	0	89	0	41	0
Grp Sat Flow (s), veh/h/ln	1810	0	1714	0	1714	0	1714	0
Q Serve Time (g_s), s	11.7	0.0	24.7	0.0	5.1	0.0	2.4	0.0
Cycle Q Clear Time (g_c), s	11.7	0.0	24.7	0.0	5.1	0.0	2.4	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	212	0	423	0	112	0	58	0
V/C Ratio (X)	1.12	0.00	1.13	0.00	0.79	0.00	0.70	0.00
Avail Cap (c_a), veh/h	212	0	423	0	170	0	111	0
Upstream Filter (I)	1.00	0.00	0.81	0.00	0.95	0.00	1.00	0.00
Uniform Delay (d1), s/veh	44.2	0.0	37.6	0.0	46.1	0.0	47.8	0.0
Incr Delay (d2), s/veh	99.2	0.0	79.0	0.0	12.9	0.0	14.3	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	143.4	0.0	116.7	0.0	59.0	0.0	62.1	0.0
1st-Term Q (Q1), veh/ln	5.2	0.0	10.1	0.0	2.2	0.0	1.0	0.0
2nd-Term Q (Q2), veh/ln	5.8	0.0	9.3	0.0	0.4	0.0	0.2	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
%ile Back of Q (50%), veh/ln	11.0	0.0	19.4	0.0	2.6	0.0	1.2	0.0
%ile Storage Ratio (RQ%)	0.17	0.00	0.18	0.00	0.13	0.00	0.02	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	6.6	0.0	13.4	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.3	0.0	0.3	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	2	0	1	0	1	0	1
Grp Vol (v), veh/h	0	245	0	190	0	324	0	515
Grp Sat Flow (s), veh/h/ln	0	1805	0	1805	0	1805	0	1805
Q Serve Time (g_s), s	0.0	5.0	0.0	10.1	0.0	13.9	0.0	25.8
Cycle Q Clear Time (g_c), s	0.0	5.0	0.0	10.1	0.0	13.9	0.0	25.8
Lane Grp Cap (c), veh/h	0	1136	0	255	0	661	0	640
V/C Ratio (X)	0.00	0.22	0.00	0.75	0.00	0.49	0.00	0.81
Avail Cap (c_a), veh/h	0	1136	0	442	0	661	0	771
Upstream Filter (I)	0.00	0.95	0.00	1.00	0.00	1.00	0.00	0.81
Uniform Delay (d1), s/veh	0.0	25.2	0.0	41.2	0.0	24.5	0.0	29.2
Incr Delay (d2), s/veh	0.0	0.4	0.0	4.3	0.0	2.6	0.0	4.3
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	25.6	0.0	45.5	0.0	27.1	0.0	33.5
1st-Term Q (Q1), veh/ln	0.0	2.1	0.0	4.5	0.0	5.8	0.0	10.8
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.3	0.0	0.5	0.0	0.8

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	2.2	0.0	4.8	0.0	6.3	0.0	11.6
%ile Storage Ratio (RQ%)	0.00	0.11	0.00	0.06	0.00	0.10	0.00	0.11
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		T+R		T+R		T+R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	312	0	192	0	328	0	511
Grp Sat Flow (s), veh/h/ln	0	1610	0	1777	0	1814	0	1790
Q Serve Time (g_s), s	0.0	16.5	0.0	10.4	0.0	14.0	0.0	25.8
Cycle Q Clear Time (g_c), s	0.0	16.5	0.0	10.4	0.0	14.0	0.0	25.8
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	0.39	0.00	0.26	0.00	0.34
Lane Grp Cap (c), veh/h	0	507	0	251	0	664	0	635
V/C Ratio (X)	0.00	0.62	0.00	0.76	0.00	0.49	0.00	0.81
Avail Cap (c_a), veh/h	0	507	0	435	0	664	0	764
Upstream Filter (I)	0.00	0.95	0.00	1.00	0.00	1.00	0.00	0.81
Uniform Delay (d1), s/veh	0.0	29.1	0.0	41.3	0.0	24.5	0.0	29.2
Incr Delay (d2), s/veh	0.0	5.3	0.0	4.8	0.0	2.6	0.0	4.3
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	34.4	0.0	46.1	0.0	27.1	0.0	33.5
1st-Term Q (Q1), veh/ln	0.0	6.2	0.0	4.5	0.0	5.9	0.0	10.8
2nd-Term Q (Q2), veh/ln	0.0	0.7	0.0	0.3	0.0	0.5	0.0	0.8
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	7.0	0.0	4.8	0.0	6.4	0.0	11.5
%ile Storage Ratio (RQ%)	0.00	0.35	0.00	0.07	0.00	0.10	0.00	0.11
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	53.2
HCM 6th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	134	3	291	48	48	405	198	468	6	19	872	250
Future Volume (veh/h)	134	3	291	48	48	405	198	468	6	19	872	250
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1700	1900	1900	1800	1900	1900	1800	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	141	3	0	51	51	426	208	493	6	20	918	263
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	207	660		231	211	330	244	1686	21	41	948	271
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.07	0.35	0.00	0.23	0.23	0.23	0.14	0.46	0.46	0.02	0.34	0.34
Unsig. Movement Delay												
Ln Grp Delay, s/veh	44.6	17.1	0.0	25.7	0.0	183.3	57.4	14.3	14.3	43.0	44.3	45.3
Ln Grp LOS	D	B		C	A	F	E	B	B	D	D	D
Approach Vol, veh/h		144			528			707			1201	
Approach Delay, s/veh		44.0			152.9			27.0			44.8	
Approach LOS		D			F			C			D	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6	7	8
Case No	2.0	4.0		3.0	2.0	4.0	2.0	8.3
Phs Duration (G+Y+Rc), s	6.3	41.4		32.3	15.9	31.9	9.8	22.5
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5	4.5	4.5
Max Green (Gmax), s	5.0	33.5		28.0	11.5	27.0	5.5	18.0
Max Allow Headway (MAH), s	3.8	5.2		5.2	3.8	5.3	3.8	5.5
Max Q Clear (g_c+I1), s	2.9	8.7		2.1	11.5	28.2	5.5	20.0
Green Ext Time (g_e), s	0.0	3.1		0.0	0.0	0.0	0.0	0.0
Prob of Phs Call (p_c)	0.36	1.00		1.00	0.99	1.00	0.96	1.00
Prob of Max Out (p_x)	1.00	0.00		0.00	1.00	0.00	1.00	1.00

Left-Turn Movement Data								
Assigned Mvmt	1				5		7	3
Mvmt Sat Flow, veh/h	1810				1714		3141	727

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		3653		1900		2770		938

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		44		1610		792		1465

Left Lane Group Data								
Assigned Mvmt	1	0	0	0	5	0	7	3
Lane Assignment	L (Prot)				L (Prot)		L (Prot)	L+T

Lanes in Grp	1	0	0	0	1	0	2	1
Grp Vol (v), veh/h	20	0	0	0	208	0	141	102
Grp Sat Flow (s), veh/h/ln	1810	0	0	0	1714	0	1570	1665
Q Serve Time (g_s), s	0.9	0.0	0.0	0.0	9.5	0.0	3.5	1.8
Cycle Q Clear Time (g_c), s	0.9	0.0	0.0	0.0	9.5	0.0	3.5	3.8
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	1436
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	18.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	18.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.8
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	0.00	1.00	0.00	1.00	0.50
Lane Grp Cap (c), veh/h	41	0	0	0	244	0	207	442
V/C Ratio (X)	0.49	0.00	0.00	0.00	0.85	0.00	0.68	0.23
Avail Cap (c_a), veh/h	113	0	0	0	246	0	216	442
Upstream Filter (I)	0.48	0.00	0.00	0.00	1.00	0.00	1.00	1.00
Uniform Delay (d1), s/veh	38.7	0.0	0.0	0.0	33.5	0.0	36.5	25.4
Incr Delay (d2), s/veh	4.4	0.0	0.0	0.0	23.9	0.0	8.0	0.3
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	43.0	0.0	0.0	0.0	57.4	0.0	44.6	25.7
1st-Term Q (Q1), veh/ln	0.4	0.0	0.0	0.0	3.8	0.0	1.3	1.5
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	1.6	0.0	0.2	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	0.00	1.00	0.00	1.00	1.00
%ile Back of Q (50%), veh/ln	0.4	0.0	0.0	0.0	5.5	0.0	1.6	1.6
%ile Storage Ratio (RQ%)	0.02	0.00	0.00	0.00	0.91	0.00	0.26	0.05
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		
Lanes in Grp	0	1	0	1	0	1	0	0
Grp Vol (v), veh/h	0	244	0	3	0	597	0	0
Grp Sat Flow (s), veh/h/ln	0	1805	0	1900	0	1805	0	0
Q Serve Time (g_s), s	0.0	6.7	0.0	0.1	0.0	26.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	6.7	0.0	0.1	0.0	26.0	0.0	0.0
Lane Grp Cap (c), veh/h	0	833	0	660	0	617	0	0
V/C Ratio (X)	0.00	0.29	0.00	0.00	0.00	0.97	0.00	0.00
Avail Cap (c_a), veh/h	0	833	0	665	0	617	0	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	0.48	0.00	0.00
Uniform Delay (d1), s/veh	0.0	13.4	0.0	17.1	0.0	25.9	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.9	0.0	0.0	0.0	18.5	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	14.3	0.0	17.1	0.0	44.3	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	2.6	0.0	0.0	0.0	10.5	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.2	0.0	0.0	0.0	3.2	0.0	0.0

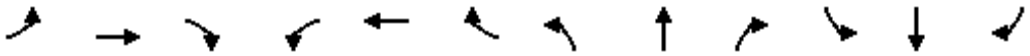
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	2.8	0.0	0.0	0.0	13.7	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.16	0.00	0.00	0.00	0.69	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R		R		T+R		T+R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	255	0	0	0	584	0	426
Grp Sat Flow (s), veh/h/ln	0	1892	0	1610	0	1757	0	1465
Q Serve Time (g_s), s	0.0	6.7	0.0	0.0	0.0	26.2	0.0	18.0
Cycle Q Clear Time (g_c), s	0.0	6.7	0.0	0.0	0.0	26.2	0.0	18.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.02	0.00	1.00	0.00	0.45	0.00	1.00
Lane Grp Cap (c), veh/h	0	873	0	559	0	601	0	330
V/C Ratio (X)	0.00	0.29	0.00	0.00	0.00	0.97	0.00	1.29
Avail Cap (c_a), veh/h	0	873	0	564	0	601	0	330
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	0.48	0.00	1.00
Uniform Delay (d1), s/veh	0.0	13.4	0.0	0.0	0.0	25.9	0.0	31.0
Incr Delay (d2), s/veh	0.0	0.8	0.0	0.0	0.0	19.4	0.0	152.3
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	14.3	0.0	0.0	0.0	45.3	0.0	183.3
1st-Term Q (Q1), veh/ln	0.0	2.7	0.0	0.0	0.0	10.3	0.0	6.1
2nd-Term Q (Q2), veh/ln	0.0	0.2	0.0	0.0	0.0	3.2	0.0	13.9
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	2.9	0.0	0.0	0.0	13.5	0.0	20.0
%ile Storage Ratio (RQ%)	0.00	0.16	0.00	0.00	0.00	0.68	0.00	0.58
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	24.1
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3

Intersection Summary	
HCM 6th Ctrl Delay	62.0
HCM 6th LOS	E

Notes

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	35	0	37	0	592	29	44	1071	0
Future Volume (veh/h)	0	0	0	35	0	37	0	592	29	44	1071	0
Number				3	8	18	5	2	12	1	6	16
Initial Q, veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln				1800	0	1900	0	1900	1900	1900	1900	0
Adj Flow Rate, veh/h				37	0	39	0	623	31	46	1127	0
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence				Yes			No			Yes		
Cap, veh/h				66	0	62	0	4129	204	60	4598	0
HCM Platoon Ratio				1.00	1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00
Prop Arrive On Green				0.04	0.00	0.04	0.00	1.00	1.00	0.03	0.89	0.00
Unsig. Movement Delay												
Ln Grp Delay, s/veh				63.8	0.0	66.7	0.0	0.1	0.2	75.8	1.1	0.0
Ln Grp LOS				E	A	E	A	A	A	E	A	A
Approach Vol, veh/h					76			654			1173	
Approach Delay, s/veh					65.3			0.1			4.0	
Approach LOS					E			A			A	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	8			6		
Case No	2.0	8.0	9.0			4.0		
Phs Duration (G+Y+Rc), s	8.5	102.4	9.1			110.9		
Change Period (Y+Rc), s	4.5	4.5	4.5			4.5		
Max Green (Gmax), s	15.1	30.7	28.1			50.3		
Max Allow Headway (MAH), s	3.8	5.2	3.9			5.2		
Max Q Clear (g_c+I1), s	5.0	2.0	4.9			5.8		
Green Ext Time (g_e), s	0.0	4.6	0.2			10.6		
Prob of Phs Call (p_c)	0.78	1.00	0.92			1.00		
Prob of Max Out (p_x)	0.00	0.00	0.00			0.00		

Left-Turn Movement Data								
Assigned Mvmt	1	5	3					
Mvmt Sat Flow, veh/h	1810	0	1714					

Through Movement Data								
Assigned Mvmt		2	8			6		
Mvmt Sat Flow, veh/h		5233	0			5358		

Right-Turn Movement Data								
Assigned Mvmt		12	18			16		
Mvmt Sat Flow, veh/h		251	1610			0		

Left Lane Group Data								
Assigned Mvmt	1	5	3	0	0	0	0	0
Lane Assignment	L (Prot)		L					

Lanes in Grp	1	0	1	0	0	0	0	0
Grp Vol (v), veh/h	46	0	37	0	0	0	0	0
Grp Sat Flow (s), veh/h/ln	1810	0	1714	0	0	0	0	0
Q Serve Time (g_s), s	3.0	0.0	2.5	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	3.0	0.0	2.5	0.0	0.0	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	1714	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	97.9	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	60	0	66	0	0	0	0	0
V/C Ratio (X)	0.77	0.00	0.56	0.00	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	228	0	401	0	0	0	0	0
Upstream Filter (I)	1.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	57.6	0.0	56.7	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	18.2	0.0	7.2	0.0	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	75.8	0.0	63.8	0.0	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	1.4	0.0	1.1	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.3	0.0	0.1	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	1.00	1.00	0.00	0.00	0.00	0.00	0.00
%ile Back of Q (50%), veh/ln	1.7	0.0	1.2	0.0	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.28	0.00	0.02	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	8	0	0	6	0	0
Lane Assignment		T				T		
Lanes in Grp	0	2	0	0	0	3	0	0
Grp Vol (v), veh/h	0	425	0	0	0	1127	0	0
Grp Sat Flow (s), veh/h/ln	0	1729	0	0	0	1729	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	3.8	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	3.8	0.0	0.0
Lane Grp Cap (c), veh/h	0	2821	0	0	0	4598	0	0
V/C Ratio (X)	0.00	0.15	0.00	0.00	0.00	0.25	0.00	0.00
Avail Cap (c_a), veh/h	0	2821	0	0	0	4598	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.1	0.0	0.0	0.0	1.1	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	18	0	0	16	0	0
Lane Assignment		T+R	R					
Lanes in Grp	0	1	1	0	0	0	0	0
Grp Vol (v), veh/h	0	229	39	0	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	1855	1610	0	0	0	0	0
Q Serve Time (g_s), s	0.0	0.0	2.9	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	2.9	0.0	0.0	0.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.14	1.00	0.00	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	1513	62	0	0	0	0	0
V/C Ratio (X)	0.00	0.15	0.63	0.00	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	1513	377	0	0	0	0	0
Upstream Filter (I)	0.00	1.00	1.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	56.8	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.2	9.9	0.0	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.2	66.7	0.0	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	1.2	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.2	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.1	1.3	0.0	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.01	0.02	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	5.2
HCM 6th LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	28	10	13	20	11	8	17	632	28	14	912	128
Future Volume (veh/h)	28	10	13	20	11	8	17	632	28	14	912	128
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1800	1900	1900	1800	1900	1900	1800	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	29	11	14	21	12	8	18	665	29	15	960	135
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	103	34	47	97	50	35	32	2907	127	30	2614	367
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Prop Arrive On Green	0.05	0.05	0.05	0.05	0.05	0.05	0.02	0.82	0.82	0.03	1.00	1.00
Unsig. Movement Delay												
Ln Grp Delay, s/veh	58.0	0.0	57.6	57.4	0.0	56.7	72.1	2.6	2.6	70.2	0.7	0.7
Ln Grp LOS	E	A	E	E	A	E	E	A	A	E	A	A
Approach Vol, veh/h		54			41			712			1110	
Approach Delay, s/veh		57.8			57.1			4.4			1.6	
Approach LOS		E			E			A			A	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Case No	2.0	4.0		8.0	2.0	4.0		8.0
Phs Duration (G+Y+Rc), s	6.5	103.5		10.0	6.8	103.2		10.0
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green (Gmax), s	27.0	39.5		40.0	27.0	39.5		40.0
Max Allow Headway (MAH), s	3.8	5.2		5.3	3.8	5.3		5.3
Max Q Clear (g_c+I1), s	3.0	6.9		5.5	3.2	2.0		5.1
Green Ext Time (g_e), s	0.0	4.8		0.3	0.0	9.2		0.2
Prob of Phs Call (p_c)	0.39	1.00		0.96	0.45	1.00		0.96
Prob of Max Out (p_x)	0.00	0.00		0.00	0.00	0.00		0.00

Left-Turn Movement Data								
Assigned Mvmt	1			7	5			3
Mvmt Sat Flow, veh/h	1810			1007	1714			897

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		3524		747		3178		1079

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		154		1021		447		764

Left Lane Group Data								
Assigned Mvmt	1	0	0	7	5	0	0	3
Lane Assignment	L (Prot)			L+T	L (Prot)			L+T

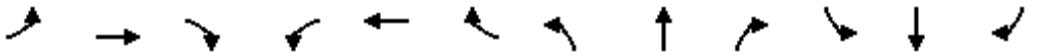
Lanes in Grp	1	0	0	1	1	0	0	1
Grp Vol (v), veh/h	15	0	0	33	18	0	0	24
Grp Sat Flow (s), veh/h/ln	1810	0	0	1229	1714	0	0	1149
Q Serve Time (g_s), s	1.0	0.0	0.0	2.3	1.2	0.0	0.0	1.5
Cycle Q Clear Time (g_c), s	1.0	0.0	0.0	3.5	1.2	0.0	0.0	3.1
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	1414	0	0	0	1408
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	5.5	0.0	0.0	0.0	5.5
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	4.3	0.0	0.0	0.0	3.9
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	2.3	0.0	0.0	0.0	1.5
Time to First Blk (g_f), s	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.3
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.3
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	0.88	1.00	0.00	0.00	0.86
Lane Grp Cap (c), veh/h	30	0	0	113	32	0	0	109
V/C Ratio (X)	0.51	0.00	0.00	0.29	0.56	0.00	0.00	0.22
Avail Cap (c_a), veh/h	407	0	0	532	386	0	0	528
Upstream Filter (I)	1.00	0.00	0.00	1.00	0.96	0.00	0.00	1.00
Uniform Delay (d1), s/veh	57.6	0.0	0.0	56.6	58.4	0.0	0.0	56.4
Incr Delay (d2), s/veh	12.7	0.0	0.0	1.4	13.7	0.0	0.0	1.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	70.2	0.0	0.0	58.0	72.1	0.0	0.0	57.4
1st-Term Q (Q1), veh/ln	0.4	0.0	0.0	1.0	0.5	0.0	0.0	0.7
2nd-Term Q (Q2), veh/ln	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.5	0.0	0.0	1.0	0.7	0.0	0.0	0.8
%ile Storage Ratio (RQ%)	0.06	0.00	0.00	0.12	0.01	0.00	0.00	0.02
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T				T		
Lanes in Grp	0	1	0	0	0	1	0	0
Grp Vol (v), veh/h	0	340	0	0	0	545	0	0
Grp Sat Flow (s), veh/h/ln	0	1805	0	0	0	1805	0	0
Q Serve Time (g_s), s	0.0	4.9	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	4.9	0.0	0.0	0.0	0.0	0.0	0.0
Lane Grp Cap (c), veh/h	0	1489	0	0	0	1485	0	0
V/C Ratio (X)	0.00	0.23	0.00	0.00	0.00	0.37	0.00	0.00
Avail Cap (c_a), veh/h	0	1489	0	0	0	1485	0	0
Upstream Filter (I)	0.00	0.96	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	2.3	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.3	0.0	0.0	0.0	0.7	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	2.6	0.0	0.0	0.0	0.7	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	1.2	0.0	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	0.3	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	1.4	0.0	0.0	0.0	0.3	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.01	0.00	0.00	0.00	0.03	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R		T+R		T+R		T+R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	354	0	21	0	550	0	17
Grp Sat Flow (s), veh/h/ln	0	1872	0	1545	0	1820	0	1591
Q Serve Time (g_s), s	0.0	4.9	0.0	1.6	0.0	0.0	0.0	1.2
Cycle Q Clear Time (g_c), s	0.0	4.9	0.0	1.6	0.0	0.0	0.0	1.2
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.08	0.00	0.66	0.00	0.25	0.00	0.48
Lane Grp Cap (c), veh/h	0	1545	0	71	0	1497	0	73
V/C Ratio (X)	0.00	0.23	0.00	0.30	0.00	0.37	0.00	0.23
Avail Cap (c_a), veh/h	0	1545	0	515	0	1497	0	530
Upstream Filter (I)	0.00	0.96	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	2.3	0.0	55.4	0.0	0.0	0.0	55.2
Incr Delay (d2), s/veh	0.0	0.3	0.0	2.3	0.0	0.7	0.0	1.5
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	2.6	0.0	57.6	0.0	0.7	0.0	56.7
1st-Term Q (Q1), veh/ln	0.0	1.3	0.0	0.6	0.0	0.0	0.0	0.5
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	0.3	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	1.4	0.0	0.7	0.0	0.3	0.0	0.5
%ile Storage Ratio (RQ%)	0.00	0.01	0.00	0.08	0.00	0.03	0.00	0.02
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	5.4
HCM 6th LOS	A



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	72	212	45	218	482	120	187	324	154	125	638	110
Future Volume (veh/h)	72	212	45	218	482	120	187	324	154	125	638	110
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1800	1900	1900	1700	1900	1900	1800	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	76	223	47	229	507	126	197	341	0	132	672	116
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	96	910	282	224	689	307	233	1454		169	1301	580
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.06	0.18	0.18	0.07	0.19	0.19	0.14	0.40	0.00	0.09	0.36	0.36
Unsig. Movement Delay												
Ln Grp Delay, s/veh	56.0	25.0	24.8	79.9	27.7	25.3	50.9	14.1	0.0	40.1	19.0	16.2
Ln Grp LOS	E	C	C	F	C	C	D	B		D	B	B
Approach Vol, veh/h		346			862			538			920	
Approach Delay, s/veh		31.8			41.2			27.6			21.7	
Approach LOS		C			D			C			C	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Case No	2.0	3.0	2.0	3.0	2.0	3.0	2.0	3.0
Phs Duration (G+Y+Rc), s	11.0	32.7	9.5	16.8	14.0	29.7	8.4	17.9
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green (Gmax), s	9.5	19.5	5.0	18.0	9.5	19.5	5.0	18.0
Max Allow Headway (MAH), s	3.8	5.2	3.8	5.0	3.8	5.1	3.8	5.0
Max Q Clear (g_c+I1), s	7.0	6.4	7.0	4.6	9.9	12.2	5.1	11.3
Green Ext Time (g_e), s	0.1	1.8	0.0	1.3	0.0	2.9	0.0	2.1
Prob of Phs Call (p_c)	0.92	1.00	0.99	1.00	0.98	1.00	0.77	1.00
Prob of Max Out (p_x)	1.00	0.00	1.00	0.02	1.00	0.00	1.00	0.66

Left-Turn Movement Data								
Assigned Mvmt	1		3		5		7	
Mvmt Sat Flow, veh/h	1810		3141		1714		1714	

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		3610		5187		3610		3610

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1610		1610		1610		1610

Left Lane Group Data								
Assigned Mvmt	1	0	3	0	5	0	7	0
Lane Assignment	L (Prot)		L (Prot)		L (Prot)		L (Prot)	

Lanes in Grp	1	0	2	0	1	0	1	0
Grp Vol (v), veh/h	132	0	229	0	197	0	76	0
Grp Sat Flow (s), veh/h/ln	1810	0	1570	0	1714	0	1714	0
Q Serve Time (g_s), s	5.0	0.0	5.0	0.0	7.9	0.0	3.1	0.0
Cycle Q Clear Time (g_c), s	5.0	0.0	5.0	0.0	7.9	0.0	3.1	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	169	0	224	0	233	0	96	0
V/C Ratio (X)	0.78	0.00	1.02	0.00	0.85	0.00	0.79	0.00
Avail Cap (c_a), veh/h	246	0	224	0	233	0	122	0
Upstream Filter (I)	0.94	0.00	0.49	0.00	0.86	0.00	1.00	0.00
Uniform Delay (d1), s/veh	31.0	0.0	32.5	0.0	29.5	0.0	32.6	0.0
Incr Delay (d2), s/veh	9.1	0.0	47.4	0.0	21.3	0.0	23.4	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	40.1	0.0	79.9	0.0	50.9	0.0	56.0	0.0
1st-Term Q (Q1), veh/ln	2.1	0.0	1.8	0.0	3.1	0.0	1.2	0.0
2nd-Term Q (Q2), veh/ln	0.4	0.0	1.5	0.0	1.4	0.0	0.6	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
%ile Back of Q (50%), veh/ln	2.5	0.0	3.3	0.0	4.5	0.0	1.9	0.0
%ile Storage Ratio (RQ%)	0.24	0.00	0.33	0.00	0.66	0.00	0.46	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	1.2	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	2	0	3	0	2	0	2
Grp Vol (v), veh/h	0	341	0	223	0	672	0	507
Grp Sat Flow (s), veh/h/ln	0	1805	0	1729	0	1805	0	1805
Q Serve Time (g_s), s	0.0	4.4	0.0	2.6	0.0	10.2	0.0	9.3
Cycle Q Clear Time (g_c), s	0.0	4.4	0.0	2.6	0.0	10.2	0.0	9.3
Lane Grp Cap (c), veh/h	0	1454	0	910	0	1301	0	689
V/C Ratio (X)	0.00	0.23	0.00	0.25	0.00	0.52	0.00	0.74
Avail Cap (c_a), veh/h	0	1454	0	1334	0	1301	0	928
Upstream Filter (I)	0.00	0.86	0.00	1.00	0.00	0.94	0.00	0.49
Uniform Delay (d1), s/veh	0.0	13.8	0.0	24.9	0.0	17.6	0.0	26.7
Incr Delay (d2), s/veh	0.0	0.3	0.0	0.1	0.0	1.4	0.0	1.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	14.1	0.0	25.0	0.0	19.0	0.0	27.7
1st-Term Q (Q1), veh/ln	0.0	1.6	0.0	1.0	0.0	3.9	0.0	3.8
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	0.2	0.0	0.1

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	1.7	0.0	1.0	0.0	4.2	0.0	3.9
%ile Storage Ratio (RQ%)	0.00	0.02	0.00	0.00	0.00	0.04	0.00	0.05
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		R		R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	0	0	47	0	116	0	126
Grp Sat Flow (s), veh/h/ln	0	1610	0	1610	0	1610	0	1610
Q Serve Time (g_s), s	0.0	0.0	0.0	1.7	0.0	3.5	0.0	4.8
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	1.7	0.0	3.5	0.0	4.8
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	649	0	282	0	580	0	307
V/C Ratio (X)	0.00	0.00	0.00	0.17	0.00	0.20	0.00	0.41
Avail Cap (c_a), veh/h	0	649	0	414	0	580	0	414
Upstream Filter (I)	0.00	0.00	0.00	1.00	0.00	0.94	0.00	0.49
Uniform Delay (d1), s/veh	0.0	0.0	0.0	24.5	0.0	15.4	0.0	24.9
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.3	0.0	0.7	0.0	0.4
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	24.8	0.0	16.2	0.0	25.3
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.6	0.0	1.2	0.0	1.8
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.7	0.0	1.3	0.0	1.8
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.02
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	30.5
HCM 6th LOS	C

Notes

Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	87	88	57	391	559	101	132	581	206	85	582	182
Future Volume (veh/h)	87	88	57	391	559	101	132	581	206	85	582	182
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1800	1900	1900	1700	1900	1900	1800	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	92	93	60	412	588	106	139	612	217	89	613	192
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	117	338	202	482	736	132	172	1400	624	115	1380	423
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.07	0.16	0.16	0.15	0.24	0.24	0.10	0.39	0.39	0.06	0.35	0.35
Unsig. Movement Delay												
Ln Grp Delay, s/veh	51.4	28.4	28.7	45.0	33.3	33.5	51.3	17.8	17.6	45.7	19.5	20.5
Ln Grp LOS	D	C	C	D	C	C	D	B	B	D	B	C
Approach Vol, veh/h		245			1106			968			894	
Approach Delay, s/veh		37.1			37.7			22.6			22.4	
Approach LOS		D			D			C			C	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Case No	2.0	3.0	2.0	4.0	2.0	4.0	2.0	4.0
Phs Duration (G+Y+Rc), s	9.3	33.6	16.0	16.2	12.0	30.8	9.6	22.6
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green (Gmax), s	6.4	21.1	11.5	18.0	8.5	19.0	6.9	22.6
Max Allow Headway (MAH), s	3.8	4.9	3.8	5.4	3.8	5.3	3.8	5.3
Max Q Clear (g_c+I1), s	5.6	11.4	11.6	5.1	8.0	11.2	6.0	15.6
Green Ext Time (g_e), s	0.0	3.5	0.0	0.6	0.0	3.2	0.0	2.5
Prob of Phs Call (p_c)	0.84	1.00	1.00	1.00	0.94	1.00	0.85	1.00
Prob of Max Out (p_x)	1.00	0.00	1.00	0.01	1.00	0.00	1.00	0.74

Left-Turn Movement Data								
Assigned Mvmt	1		3		5		7	
Mvmt Sat Flow, veh/h	1810		3141		1714		1714	

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		3610		2172		3934		3056

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1610		1299		1207		550

Left Lane Group Data								
Assigned Mvmt	1	0	3	0	5	0	7	0
Lane Assignment	L (Prot)		L (Prot)		L (Prot)		L (Prot)	

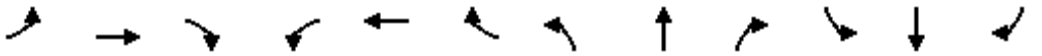
Lanes in Grp	1	0	2	0	1	0	1	0
Grp Vol (v), veh/h	89	0	412	0	139	0	92	0
Grp Sat Flow (s), veh/h/ln	1810	0	1570	0	1714	0	1714	0
Q Serve Time (g_s), s	3.6	0.0	9.6	0.0	6.0	0.0	4.0	0.0
Cycle Q Clear Time (g_c), s	3.6	0.0	9.6	0.0	6.0	0.0	4.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	115	0	482	0	172	0	117	0
V/C Ratio (X)	0.77	0.00	0.86	0.00	0.81	0.00	0.79	0.00
Avail Cap (c_a), veh/h	154	0	482	0	194	0	158	0
Upstream Filter (I)	0.68	0.00	1.00	0.00	0.91	0.00	1.00	0.00
Uniform Delay (d1), s/veh	34.6	0.0	30.9	0.0	33.0	0.0	34.4	0.0
Incr Delay (d2), s/veh	11.1	0.0	14.1	0.0	18.3	0.0	17.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	45.7	0.0	45.0	0.0	51.3	0.0	51.4	0.0
1st-Term Q (Q1), veh/ln	1.6	0.0	3.5	0.0	2.4	0.0	1.6	0.0
2nd-Term Q (Q2), veh/ln	0.4	0.0	0.9	0.0	0.9	0.0	0.6	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
%ile Back of Q (50%), veh/ln	1.9	0.0	4.4	0.0	3.3	0.0	2.2	0.0
%ile Storage Ratio (RQ%)	0.27	0.00	0.03	0.00	0.41	0.00	0.24	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	2	0	1	0	2	0	1
Grp Vol (v), veh/h	0	612	0	76	0	537	0	347
Grp Sat Flow (s), veh/h/ln	0	1805	0	1805	0	1729	0	1805
Q Serve Time (g_s), s	0.0	9.4	0.0	2.8	0.0	9.0	0.0	13.5
Cycle Q Clear Time (g_c), s	0.0	9.4	0.0	2.8	0.0	9.0	0.0	13.5
Lane Grp Cap (c), veh/h	0	1400	0	281	0	1213	0	435
V/C Ratio (X)	0.00	0.44	0.00	0.27	0.00	0.44	0.00	0.80
Avail Cap (c_a), veh/h	0	1400	0	433	0	1213	0	544
Upstream Filter (I)	0.00	0.91	0.00	1.00	0.00	0.68	0.00	1.00
Uniform Delay (d1), s/veh	0.0	16.9	0.0	27.9	0.0	18.7	0.0	26.8
Incr Delay (d2), s/veh	0.0	0.9	0.0	0.5	0.0	0.8	0.0	6.6
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	17.8	0.0	28.4	0.0	19.5	0.0	33.3
1st-Term Q (Q1), veh/ln	0.0	3.6	0.0	1.2	0.0	3.4	0.0	5.5
2nd-Term Q (Q2), veh/ln	0.0	0.2	0.0	0.0	0.0	0.1	0.0	0.8

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	3.8	0.0	1.2	0.0	3.5	0.0	6.3
%ile Storage Ratio (RQ%)	0.00	0.10	0.00	0.01	0.00	0.04	0.00	0.04
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		T+R		T+R		T+R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	217	0	77	0	268	0	347
Grp Sat Flow (s), veh/h/ln	0	1610	0	1666	0	1683	0	1801
Q Serve Time (g_s), s	0.0	7.2	0.0	3.1	0.0	9.2	0.0	13.6
Cycle Q Clear Time (g_c), s	0.0	7.2	0.0	3.1	0.0	9.2	0.0	13.6
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	0.78	0.00	0.72	0.00	0.31
Lane Grp Cap (c), veh/h	0	624	0	259	0	590	0	434
V/C Ratio (X)	0.00	0.35	0.00	0.30	0.00	0.45	0.00	0.80
Avail Cap (c_a), veh/h	0	624	0	400	0	590	0	543
Upstream Filter (I)	0.00	0.91	0.00	1.00	0.00	0.68	0.00	1.00
Uniform Delay (d1), s/veh	0.0	16.2	0.0	28.0	0.0	18.8	0.0	26.8
Incr Delay (d2), s/veh	0.0	1.4	0.0	0.6	0.0	1.7	0.0	6.8
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	17.6	0.0	28.7	0.0	20.5	0.0	33.5
1st-Term Q (Q1), veh/ln	0.0	2.5	0.0	1.2	0.0	3.4	0.0	5.6
2nd-Term Q (Q2), veh/ln	0.0	0.2	0.0	0.0	0.0	0.3	0.0	0.8
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	2.7	0.0	1.2	0.0	3.7	0.0	6.4
%ile Storage Ratio (RQ%)	0.00	0.07	0.00	0.01	0.00	0.04	0.00	0.04
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	28.9
HCM 6th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	327	388	409	631	886	0	0	1033	563
Future Volume (veh/h)	0	0	0	327	388	409	631	886	0	0	1033	563
Number				3	8	18	5	2	12	1	6	16
Initial Q, veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln				1800	1900	1900	1900	1900	0	0	1900	1900
Adj Flow Rate, veh/h				344	408	431	664	933	0	0	1087	593
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence				Yes			Yes			No		
Cap, veh/h				330	401	453	520	2232	0	0	997	423
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	2.00	1.00
Prop Arrive On Green				0.34	0.34	0.34	0.57	1.00	0.00	0.00	0.52	0.26
Unsig. Movement Delay												
Ln Grp Delay, s/veh				86.8	0.0	65.2	155.8	0.2	0.0	0.0	81.1	235.8
Ln Grp LOS				F	A	E	F	A	A	A	F	F
Approach Vol, veh/h					1183			1597			1680	
Approach Delay, s/veh					77.1			64.9			135.7	
Approach LOS					E			E			F	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2	8		5	6		
Case No		4.0	12.0		2.0	7.0		
Phs Duration (G+Y+Rc), s		75.0	45.0		39.0	36.0		
Change Period (Y+Rc), s		4.5	4.5		4.5	4.5		
Max Green (Gmax), s		70.5	40.5		34.5	31.5		
Max Allow Headway (MAH), s		5.2	5.4		3.8	4.8		
Max Q Clear (g_c+I1), s		2.0	42.5		36.5	33.5		
Green Ext Time (g_e), s		8.6	0.0		0.0	0.0		
Prob of Phs Call (p_c)		1.00	1.00		1.00	1.00		
Prob of Max Out (p_x)		0.00	1.00		1.00	0.00		

Left-Turn Movement Data								
Assigned Mvmt			3		5	1		
Mvmt Sat Flow, veh/h			979		1810	0		

Through Movement Data								
Assigned Mvmt		2	8			6		
Mvmt Sat Flow, veh/h		3800	1189			3800		

Right-Turn Movement Data								
Assigned Mvmt		12	18			16		
Mvmt Sat Flow, veh/h		0	1342			1610		

Left Lane Group Data								
Assigned Mvmt	0	0	3	0	5	1	0	0
Lane Assignment			L+T		L (Prot)			

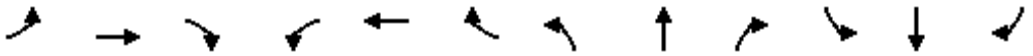
Lanes in Grp	0	0	1	0	1	0	0	0
Grp Vol (v), veh/h	0	0	650	0	664	0	0	0
Grp Sat Flow (s), veh/h/ln	0	0	1851	0	1810	0	0	0
Q Serve Time (g_s), s	0.0	0.0	40.5	0.0	34.5	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	40.5	0.0	34.5	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	31.5	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	0.00	0.53	0.00	1.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	625	0	520	0	0	0
V/C Ratio (X)	0.00	0.00	1.04	0.00	1.28	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	0	625	0	520	0	0	0
Upstream Filter (I)	0.00	0.00	1.00	0.00	0.39	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	39.8	0.0	25.5	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	47.1	0.0	130.3	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	86.8	0.0	155.8	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	18.1	0.0	10.3	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	8.2	0.0	18.8	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	0.00	1.00	0.00	1.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	26.3	0.0	29.1	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.64	0.00	4.85	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	6.4	0.0	35.9	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.3	0.0	0.3	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	8	0	0	6	0	0
Lane Assignment		T				T		
Lanes in Grp	0	2	0	0	0	2	0	0
Grp Vol (v), veh/h	0	933	0	0	0	1087	0	0
Grp Sat Flow (s), veh/h/ln	0	1900	0	0	0	1900	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	31.5	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	31.5	0.0	0.0
Lane Grp Cap (c), veh/h	0	2233	0	0	0	997	0	0
V/C Ratio (X)	0.00	0.42	0.00	0.00	0.00	1.09	0.00	0.00
Avail Cap (c_a), veh/h	0	2233	0	0	0	998	0	0
Upstream Filter (I)	0.00	0.39	0.00	0.00	0.00	0.73	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	28.5	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.2	0.0	0.0	0.0	52.6	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.2	0.0	0.0	0.0	81.1	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	10.6	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	7.3	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.1	0.0	0.0	0.0	17.9	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.47	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	22.4	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	18	0	0	16	0	0
Lane Assignment			T+R			R		
Lanes in Grp	0	0	1	0	0	1	0	0
Grp Vol (v), veh/h	0	0	533	0	0	593	0	0
Grp Sat Flow (s), veh/h/ln	0	0	1658	0	0	1610	0	0
Q Serve Time (g_s), s	0.0	0.0	37.6	0.0	0.0	31.5	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	37.6	0.0	0.0	31.5	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.00	0.81	0.00	0.00	1.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	560	0	0	423	0	0
V/C Ratio (X)	0.00	0.00	0.95	0.00	0.00	1.40	0.00	0.00
Avail Cap (c_a), veh/h	0	0	560	0	0	423	0	0
Upstream Filter (I)	0.00	0.00	1.00	0.00	0.00	0.73	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	38.8	0.0	0.0	44.3	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	26.4	0.0	0.0	191.6	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	65.2	0.0	0.0	235.8	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	15.0	0.0	0.0	12.4	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	4.1	0.0	0.0	22.5	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	19.2	0.0	0.0	34.9	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.46	0.00	0.00	0.91	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	42.6	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	94.8
HCM 6th LOS	F



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	508	17	702	0	0	0	0	1039	184	161	703	0
Future Volume (veh/h)	508	17	702	0	0	0	0	1039	184	161	703	0
Number	7	4	14				5	2	12	1	6	16
Initial Q, veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1800	1900	1900				0	1900	1900	1900	1900	0
Adj Flow Rate, veh/h	535	18	739				0	1094	194	169	740	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0				0	0	0	0	0	0
Opposing Right Turn Influence	Yes						No			Yes		
Cap, veh/h	672	23	617				0	1286	574	200	1865	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	2.00	2.00	2.00	1.00	1.00
Prop Arrive On Green	0.38	0.38	0.38				0.00	0.71	0.71	0.22	0.52	0.00
Unsig. Movement Delay												
Ln Grp Delay, s/veh	31.1	0.0	131.6				0.0	18.4	10.5	37.3	13.3	0.0
Ln Grp LOS	C	A	F				A	B	B	D	B	A
Approach Vol, veh/h		1292						1288			909	
Approach Delay, s/veh		88.6						17.2			17.7	
Approach LOS		F						B			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Case No	2.0	7.0		12.0		4.0		
Phs Duration (G+Y+Rc), s	14.4	36.6		39.0		51.0		
Change Period (Y+Rc), s	4.5	4.5		4.5		4.5		
Max Green (Gmax), s	10.5	31.5		34.5		46.5		
Max Allow Headway (MAH), s	3.8	5.1		5.5		5.2		
Max Q Clear (g_c+I1), s	10.1	21.9		36.5		13.2		
Green Ext Time (g_e), s	0.0	5.6		0.0		5.9		
Prob of Phs Call (p_c)	0.99	1.00		1.00		1.00		
Prob of Max Out (p_x)	1.00	0.00		1.00		0.00		

Left-Turn Movement Data								
Assigned Mvmt	1	5		7				
Mvmt Sat Flow, veh/h	1810	0		1753				

Through Movement Data								
Assigned Mvmt		2		4		6		
Mvmt Sat Flow, veh/h		3705		59		3705		

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		
Mvmt Sat Flow, veh/h		1610		1610		0		

Left Lane Group Data								
Assigned Mvmt	1	5	0	7	0	0	0	0
Lane Assignment	L (Prot)			L+T				

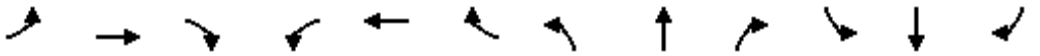
Lanes in Grp	1	0	0	1	0	0	0	0
Grp Vol (v), veh/h	169	0	0	553	0	0	0	0
Grp Sat Flow (s), veh/h/ln	1810	0	0	1812	0	0	0	0
Q Serve Time (g_s), s	8.1	0.0	0.0	24.4	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	8.1	0.0	0.0	24.4	0.0	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	32.1	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	0.97	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	200	0	0	695	0	0	0	0
V/C Ratio (X)	0.85	0.00	0.00	0.80	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	211	0	0	695	0	0	0	0
Upstream Filter (I)	0.09	0.00	0.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	34.3	0.0	0.0	24.6	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	3.0	0.0	0.0	6.4	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	37.3	0.0	0.0	31.1	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	3.1	0.0	0.0	10.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.2	0.0	0.0	1.2	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00
%ile Back of Q (50%), veh/ln	3.3	0.0	0.0	11.2	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.55	0.00	0.00	0.33	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	0
Lane Assignment		T				T		
Lanes in Grp	0	2	0	0	0	2	0	0
Grp Vol (v), veh/h	0	1094	0	0	0	740	0	0
Grp Sat Flow (s), veh/h/ln	0	1805	0	0	0	1805	0	0
Q Serve Time (g_s), s	0.0	19.9	0.0	0.0	0.0	11.2	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	19.9	0.0	0.0	0.0	11.2	0.0	0.0
Lane Grp Cap (c), veh/h	0	1286	0	0	0	1865	0	0
V/C Ratio (X)	0.00	0.85	0.00	0.00	0.00	0.40	0.00	0.00
Avail Cap (c_a), veh/h	0	1286	0	0	0	1865	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	0.09	0.00	0.00
Uniform Delay (d1), s/veh	0.0	11.2	0.0	0.0	0.0	13.2	0.0	0.0
Incr Delay (d2), s/veh	0.0	7.2	0.0	0.0	0.0	0.1	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	18.4	0.0	0.0	0.0	13.3	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	3.7	0.0	0.0	0.0	4.3	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	1.3	0.0	0.0	0.0	0.0	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	5.0	0.0	0.0	0.0	4.3	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.09	0.00	0.00	0.00	0.20	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	0
Lane Assignment		R		T+R				
Lanes in Grp	0	1	0	1	0	0	0	0
Grp Vol (v), veh/h	0	194	0	739	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	1610	0	1610	0	0	0	0
Q Serve Time (g_s), s	0.0	4.1	0.0	34.5	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	4.1	0.0	34.5	0.0	0.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	574	0	617	0	0	0	0
V/C Ratio (X)	0.00	0.34	0.00	1.20	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	574	0	617	0	0	0	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	8.9	0.0	27.8	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	1.6	0.0	103.9	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	10.5	0.0	131.6	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	1.2	0.0	12.5	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.3	0.0	17.8	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	1.5	0.0	30.3	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.03	0.00	0.89	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	30.4	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	43.8
HCM 6th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	525	589	1104	1174	0	0	0	0	303	0	312
Future Volume (veh/h)	0	525	589	1104	1174	0	0	0	0	303	0	312
Number	7	4	14	3	8	18				1	6	16
Initial Q, veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	0	1900	1900	1700	1900	0				1900	1900	1900
Adj Flow Rate, veh/h	0	553	0	1162	1236	0				319	0	328
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95				0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0				0	0	0
Opposing Right Turn Influence	No			Yes						Yes		
Cap, veh/h	0	843		1221	2427	0				412	0	367
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Prop Arrive On Green	0.00	0.23	0.00	0.39	0.67	0.00				0.23	0.00	0.23
Unsig. Movement Delay												
Ln Grp Delay, s/veh	0.0	34.2	0.0	36.2	7.8	0.0				45.8	0.0	60.3
Ln Grp LOS	A	C		D	A	A				D	A	E
Approach Vol, veh/h		553			2398						647	
Approach Delay, s/veh		34.2			21.5						53.2	
Approach LOS		C			C						D	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	6		3	4				8
Case No	11.0		2.0	7.0				4.0
Phs Duration (G+Y+Rc), s	25.0		39.5	25.5				65.0
Change Period (Y+Rc), s	4.5		4.5	4.5				4.5
Max Green (Gmax), s	20.5		35.5	20.5				60.5
Max Allow Headway (MAH), s	4.7		3.8	5.2				5.2
Max Q Clear (g_c+I1), s	19.8		34.3	14.5				17.4
Green Ext Time (g_e), s	0.3		0.7	1.9				12.6
Prob of Phs Call (p_c)	1.00		1.00	1.00				1.00
Prob of Max Out (p_x)	0.00		1.00	0.00				0.00

Left-Turn Movement Data												
Assigned Mvmt		1		3	7							
Mvmt Sat Flow, veh/h		1810		3141	0							

Through Movement Data												
Assigned Mvmt		6			4				8			
Mvmt Sat Flow, veh/h		0			3705				3705			

Right-Turn Movement Data												
Assigned Mvmt		16			14				18			
Mvmt Sat Flow, veh/h		1610			1610				0			

Left Lane Group Data												
Assigned Mvmt		1	0	3	7	0	0	0	0			
Lane Assignment		L+T		L (Prot)								

Lanes in Grp	1	0	2	0	0	0	0	0
Grp Vol (v), veh/h	319	0	1162	0	0	0	0	0
Grp Sat Flow (s), veh/h/ln	1810	0	1570	0	0	0	0	0
Q Serve Time (g_s), s	14.9	0.0	32.3	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	14.9	0.0	32.3	0.0	0.0	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	21.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	412	0	1221	0	0	0	0	0
V/C Ratio (X)	0.77	0.00	0.95	0.00	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	412	0	1239	0	0	0	0	0
Upstream Filter (I)	1.00	0.00	0.52	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	32.6	0.0	26.7	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	13.2	0.0	9.5	0.0	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	45.8	0.0	36.2	0.0	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	6.4	0.0	11.4	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	1.5	0.0	1.6	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	1.00	1.00	0.00	0.00	0.00	0.00
%ile Back of Q (50%), veh/ln	7.9	0.0	13.1	0.0	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.61	0.00	0.80	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	6	0	0	4	0	0	0	8
Lane Assignment				T				T
Lanes in Grp	0	0	0	2	0	0	0	2
Grp Vol (v), veh/h	0	0	0	553	0	0	0	1236
Grp Sat Flow (s), veh/h/ln	0	0	0	1805	0	0	0	1805
Q Serve Time (g_s), s	0.0	0.0	0.0	12.5	0.0	0.0	0.0	15.4
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	12.5	0.0	0.0	0.0	15.4
Lane Grp Cap (c), veh/h	0	0	0	843	0	0	0	2427
V/C Ratio (X)	0.00	0.00	0.00	0.66	0.00	0.00	0.00	0.51
Avail Cap (c_a), veh/h	0	0	0	843	0	0	0	2427
Upstream Filter (I)	0.00	0.00	0.00	0.76	0.00	0.00	0.00	0.52
Uniform Delay (d1), s/veh	0.0	0.0	0.0	31.2	0.0	0.0	0.0	7.4
Incr Delay (d2), s/veh	0.0	0.0	0.0	3.0	0.0	0.0	0.0	0.4
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	34.2	0.0	0.0	0.0	7.8
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	5.3	0.0	0.0	0.0	5.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.1

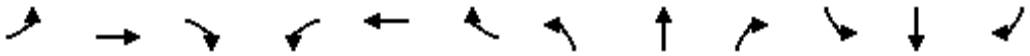
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	1.00	0.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	5.7	0.0	0.0	0.0	5.1
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.31
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	16	0	0	14	0	0	0	18
Lane Assignment	R			R				
Lanes in Grp	1	0	0	1	0	0	0	0
Grp Vol (v), veh/h	328	0	0	0	0	0	0	0
Grp Sat Flow (s), veh/h/ln	1610	0	0	1610	0	0	0	0
Q Serve Time (g_s), s	17.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	17.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	1.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	367	0	0	376	0	0	0	0
V/C Ratio (X)	0.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	367	0	0	376	0	0	0	0
Upstream Filter (I)	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	33.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	26.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	60.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	6.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	2.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	1.00	0.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	9.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	29.2
HCM 6th LOS	C

Notes

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	149	531	0	0	1738	575	498	6	413	0	0	0
Future Volume (veh/h)	149	531	0	0	1738	575	498	6	413	0	0	0
Number	7	4	14	3	8	18	5	2	12			
Initial Q, veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1800	1900	0	0	1900	1900	1900	1900	1900			
Adj Flow Rate, veh/h	157	559	0	0	1829	605	528	0	435			
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95			
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0			
Opposing Right Turn Influence	Yes			No			Yes					
Cap, veh/h	192	2234	0	0	2336	725	973	0	865			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Prop Arrive On Green	0.11	0.62	0.00	0.00	0.45	0.45	0.27	0.00	0.27			
Unsig. Movement Delay												
Ln Grp Delay, s/veh	45.8	7.1	0.0	0.0	21.4	30.2	27.2	0.0	26.8			
Ln Grp LOS	D	A	A	A	C	C	C	A	C			
Approach Vol, veh/h		716			2434			963				
Approach Delay, s/veh		15.6			23.6			27.0				
Approach LOS		B			C			C				

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2		4			7	8
Case No		9.0		4.0			2.0	7.0
Phs Duration (G+Y+Rc), s		26.0		54.0			13.5	40.5
Change Period (Y+Rc), s		4.5		4.5			4.5	4.5
Max Green (Gmax), s		21.5		49.5			11.5	33.5
Max Allow Headway (MAH), s		3.9		5.2			3.8	4.9
Max Q Clear (g_c+I1), s		12.0		7.6			9.2	28.5
Green Ext Time (g_e), s		2.9		4.3			0.1	4.6
Prob of Phs Call (p_c)		1.00		1.00			0.97	1.00
Prob of Max Out (p_x)		0.00		0.00			1.00	0.00
Left-Turn Movement Data								
Assigned Mvmt		5					7	3
Mvmt Sat Flow, veh/h		3619					1714	0
Through Movement Data								
Assigned Mvmt		2		4				8
Mvmt Sat Flow, veh/h		0		3705				5358
Right-Turn Movement Data								
Assigned Mvmt		12		14				18
Mvmt Sat Flow, veh/h		3220		0				1610
Left Lane Group Data								
Assigned Mvmt	0	5	0	0	0	0	7	3
Lane Assignment		L					L (Prot)	

Lanes in Grp	0	2	0	0	0	0	1	0
Grp Vol (v), veh/h	0	528	0	0	0	0	157	0
Grp Sat Flow (s), veh/h/ln	0	1810	0	0	0	0	1714	0
Q Serve Time (g_s), s	0.0	10.0	0.0	0.0	0.0	0.0	7.2	0.0
Cycle Q Clear Time (g_c), s	0.0	10.0	0.0	0.0	0.0	0.0	7.2	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	1810	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	0	973	0	0	0	0	192	0
V/C Ratio (X)	0.00	0.54	0.00	0.00	0.00	0.00	0.82	0.00
Avail Cap (c_a), veh/h	0	973	0	0	0	0	246	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	0.00	0.70	0.00
Uniform Delay (d1), s/veh	0.0	25.0	0.0	0.0	0.0	0.0	34.7	0.0
Incr Delay (d2), s/veh	0.0	2.2	0.0	0.0	0.0	0.0	11.1	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	27.2	0.0	0.0	0.0	0.0	45.8	0.0
1st-Term Q (Q1), veh/ln	0.0	4.1	0.0	0.0	0.0	0.0	2.9	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.3	0.0	0.0	0.0	0.0	0.6	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	0.00	0.00	0.00	1.00	1.00
%ile Back of Q (50%), veh/ln	0.0	4.4	0.0	0.0	0.0	0.0	3.5	0.0
%ile Storage Ratio (RQ%)	0.00	0.20	0.00	0.00	0.00	0.00	0.97	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	0	0	8
Lane Assignment				T				T
Lanes in Grp	0	0	0	2	0	0	0	3
Grp Vol (v), veh/h	0	0	0	559	0	0	0	1829
Grp Sat Flow (s), veh/h/ln	0	0	0	1805	0	0	0	1729
Q Serve Time (g_s), s	0.0	0.0	0.0	5.6	0.0	0.0	0.0	23.9
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	5.6	0.0	0.0	0.0	23.9
Lane Grp Cap (c), veh/h	0	0	0	2234	0	0	0	2336
V/C Ratio (X)	0.00	0.00	0.00	0.25	0.00	0.00	0.00	0.78
Avail Cap (c_a), veh/h	0	0	0	2234	0	0	0	2336
Upstream Filter (I)	0.00	0.00	0.00	0.70	0.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	6.9	0.0	0.0	0.0	18.7
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.2	0.0	0.0	0.0	2.7
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	7.1	0.0	0.0	0.0	21.4
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	1.8	0.0	0.0	0.0	8.8
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.6

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	1.9	0.0	0.0	0.0	9.4
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.12	0.00	0.00	0.00	0.11
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	0	0	18
Lane Assignment		R						R
Lanes in Grp	0	2	0	0	0	0	0	1
Grp Vol (v), veh/h	0	435	0	0	0	0	0	605
Grp Sat Flow (s), veh/h/ln	0	1610	0	0	0	0	0	1610
Q Serve Time (g_s), s	0.0	9.1	0.0	0.0	0.0	0.0	0.0	26.5
Cycle Q Clear Time (g_c), s	0.0	9.1	0.0	0.0	0.0	0.0	0.0	26.5
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	0.00	0.00	0.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	865	0	0	0	0	0	725
V/C Ratio (X)	0.00	0.50	0.00	0.00	0.00	0.00	0.00	0.83
Avail Cap (c_a), veh/h	0	865	0	0	0	0	0	725
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	24.7	0.0	0.0	0.0	0.0	0.0	19.4
Incr Delay (d2), s/veh	0.0	2.1	0.0	0.0	0.0	0.0	0.0	10.9
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	26.8	0.0	0.0	0.0	0.0	0.0	30.2
1st-Term Q (Q1), veh/ln	0.0	3.4	0.0	0.0	0.0	0.0	0.0	9.0
2nd-Term Q (Q2), veh/ln	0.0	0.3	0.0	0.0	0.0	0.0	0.0	2.2
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	3.6	0.0	0.0	0.0	0.0	0.0	11.2
%ile Storage Ratio (RQ%)	0.00	0.17	0.00	0.00	0.00	0.00	0.00	0.78
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	23.0
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	66	260	27	104	429	472	21	9	32	352	299	404
Future Volume (veh/h)	66	260	27	104	429	472	21	9	32	352	299	404
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1800	1900	1900	1800	1900	1900	1800	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	69	274	28	109	452	497	22	9	34	371	315	425
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	87	1061	473	132	609	516	37	485	411	404	825	736
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.10	0.59	0.59	0.15	0.64	0.32	0.02	0.26	0.26	0.22	0.46	0.46
Unsig. Movement Delay												
Ln Grp Delay, s/veh	68.6	18.5	17.7	52.0	18.9	48.6	72.3	33.5	34.4	63.8	22.8	27.3
Ln Grp LOS	E	B	B	D	B	D	E	C	C	E	C	C
Approach Vol, veh/h		371			1058			65			1111	
Approach Delay, s/veh		27.7			36.2			47.1			38.2	
Approach LOS		C			D			D			D	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Case No	2.0	3.0	2.0	3.0	2.0	4.0	2.0	3.0
Phs Duration (G+Y+Rc), s	31.3	35.2	13.8	39.8	7.1	59.4	10.6	43.0
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green (Gmax), s	34.5	19.5	15.4	32.6	5.9	48.1	9.5	38.5
Max Allow Headway (MAH), s	3.8	4.3	3.8	5.1	3.8	5.4	3.8	4.6
Max Q Clear (g_c+I1), s	26.0	3.9	9.4	6.4	3.5	25.4	6.7	38.4
Green Ext Time (g_e), s	0.8	0.1	0.1	1.9	0.0	5.2	0.0	0.1
Prob of Phs Call (p_c)	1.00	1.00	0.97	1.00	0.52	1.00	0.90	1.00
Prob of Max Out (p_x)	0.08	0.00	0.10	0.00	1.00	0.00	1.00	1.00

Left-Turn Movement Data								
Assigned Mvmt	1		3		5		7	
Mvmt Sat Flow, veh/h	1810		1714		1714		1714	

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		1900		3610		1805		1900

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1610		1610		1610		1610

Left Lane Group Data								
Assigned Mvmt	1	0	3	0	5	0	7	0
Lane Assignment	L (Prot)		L (Prot)		L (Prot)		L (Prot)	

Lanes in Grp	1	0	1	0	1	0	1	0
Grp Vol (v), veh/h	371	0	109	0	22	0	69	0
Grp Sat Flow (s), veh/h/ln	1810	0	1714	0	1714	0	1714	0
Q Serve Time (g_s), s	24.0	0.0	7.4	0.0	1.5	0.0	4.7	0.0
Cycle Q Clear Time (g_c), s	24.0	0.0	7.4	0.0	1.5	0.0	4.7	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	404	0	132	0	37	0	87	0
V/C Ratio (X)	0.92	0.00	0.82	0.00	0.59	0.00	0.80	0.00
Avail Cap (c_a), veh/h	520	0	220	0	84	0	136	0
Upstream Filter (I)	1.00	0.00	0.15	0.00	1.00	0.00	0.96	0.00
Uniform Delay (d1), s/veh	45.5	0.0	50.0	0.0	58.2	0.0	53.3	0.0
Incr Delay (d2), s/veh	18.3	0.0	2.0	0.0	14.2	0.0	15.2	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	63.8	0.0	52.0	0.0	72.3	0.0	68.6	0.0
1st-Term Q (Q1), veh/ln	10.7	0.0	3.0	0.0	0.7	0.0	2.0	0.0
2nd-Term Q (Q2), veh/ln	2.1	0.0	0.1	0.0	0.1	0.0	0.4	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
%ile Back of Q (50%), veh/ln	12.8	0.0	3.0	0.0	0.8	0.0	2.3	0.0
%ile Storage Ratio (RQ%)	3.19	0.00	0.13	0.00	0.09	0.00	0.22	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	1	0	2	0	1	0	1
Grp Vol (v), veh/h	0	9	0	274	0	315	0	452
Grp Sat Flow (s), veh/h/ln	0	1900	0	1805	0	1805	0	1900
Q Serve Time (g_s), s	0.0	0.4	0.0	4.4	0.0	13.8	0.0	19.6
Cycle Q Clear Time (g_c), s	0.0	0.4	0.0	4.4	0.0	13.8	0.0	19.6
Lane Grp Cap (c), veh/h	0	485	0	1061	0	825	0	609
V/C Ratio (X)	0.00	0.02	0.00	0.26	0.00	0.38	0.00	0.74
Avail Cap (c_a), veh/h	0	485	0	1061	0	825	0	610
Upstream Filter (I)	0.00	1.00	0.00	0.96	0.00	1.00	0.00	0.15
Uniform Delay (d1), s/veh	0.0	33.4	0.0	18.4	0.0	21.4	0.0	18.1
Incr Delay (d2), s/veh	0.0	0.1	0.0	0.1	0.0	1.3	0.0	0.8
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	33.5	0.0	18.5	0.0	22.8	0.0	18.9
1st-Term Q (Q1), veh/ln	0.0	0.2	0.0	1.7	0.0	5.8	0.0	5.4
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.1

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.2	0.0	1.7	0.0	6.1	0.0	5.5
%ile Storage Ratio (RQ%)	0.00	0.01	0.00	0.02	0.00	0.97	0.00	0.23
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		R		T+R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	34	0	28	0	425	0	497
Grp Sat Flow (s), veh/h/ln	0	1610	0	1610	0	1610	0	1610
Q Serve Time (g_s), s	0.0	1.9	0.0	0.9	0.0	23.4	0.0	36.4
Cycle Q Clear Time (g_c), s	0.0	1.9	0.0	0.9	0.0	23.4	0.0	36.4
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	411	0	473	0	736	0	516
V/C Ratio (X)	0.00	0.08	0.00	0.06	0.00	0.58	0.00	0.96
Avail Cap (c_a), veh/h	0	411	0	473	0	736	0	517
Upstream Filter (I)	0.00	1.00	0.00	0.96	0.00	1.00	0.00	0.15
Uniform Delay (d1), s/veh	0.0	34.0	0.0	17.6	0.0	24.0	0.0	40.1
Incr Delay (d2), s/veh	0.0	0.4	0.0	0.0	0.0	3.3	0.0	8.5
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	34.4	0.0	17.7	0.0	27.3	0.0	48.6
1st-Term Q (Q1), veh/ln	0.0	0.8	0.0	0.3	0.0	8.8	0.0	14.2
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.7	0.0	1.2
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.8	0.0	0.3	0.0	9.5	0.0	15.4
%ile Storage Ratio (RQ%)	0.00	0.04	0.00	0.00	0.00	1.50	0.00	0.64
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	36.1
HCM 6th LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	162	459	198	44	835	418	70	394	31	203	13	158
Future Volume (veh/h)	162	459	198	44	835	418	70	394	31	203	13	158
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1700	1900	1900	1800	1900	1900	1800	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	171	483	208	46	879	440	74	415	33	214	14	166
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	195	904	766	62	855	725	286	668	298	223	45	530
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.12	0.95	0.95	0.07	0.90	0.45	0.19	0.19	0.19	0.12	0.35	0.35
Unsig. Movement Delay												
Ln Grp Delay, s/veh	71.0	1.8	1.4	62.0	43.2	22.3	37.7	41.8	34.7	92.9	0.0	24.9
Ln Grp LOS	E	A	A	E	F	C	D	D	C	F	A	C
Approach Vol, veh/h		862			1365			522			394	
Approach Delay, s/veh		15.4			37.1			40.8			61.9	
Approach LOS		B			D			D			E	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4		6	7	8
Case No	2.0	5.3	2.0	3.0		4.0	2.0	3.0
Phs Duration (G+Y+Rc), s	16.8	23.0	8.1	52.1		39.8	10.7	49.5
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5		4.5	4.5	4.5
Max Green (Gmax), s	12.3	18.5	7.1	44.1		35.3	6.2	45.0
Max Allow Headway (MAH), s	3.8	5.0	3.8	4.9		5.5	3.8	4.9
Max Q Clear (g_c+I1), s	13.8	12.6	4.6	4.5		10.0	7.4	47.0
Green Ext Time (g_e), s	0.0	1.6	0.0	4.2		1.1	0.0	0.0
Prob of Phs Call (p_c)	1.00	1.00	0.72	1.00		1.00	0.99	1.00
Prob of Max Out (p_x)	1.00	0.00	1.00	0.00		0.00	1.00	1.00

Left-Turn Movement Data								
Assigned Mvmt	1	5	3				7	
Mvmt Sat Flow, veh/h	1810	1159	1714				3141	

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		3610		1900		127		1900

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1610		1610		1503		1610

Left Lane Group Data								
Assigned Mvmt	1	5	3	0	0	0	7	0
Lane Assignment	L (Prot)	L	L (Prot)				L (Prot)	

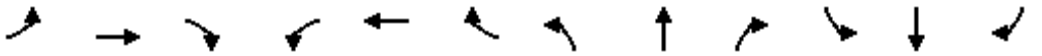
Lanes in Grp	1	1	1	0	0	0	2	0
Grp Vol (v), veh/h	214	74	46	0	0	0	171	0
Grp Sat Flow (s), veh/h/ln	1810	1159	1714	0	0	0	1570	0
Q Serve Time (g_s), s	11.8	5.6	2.6	0.0	0.0	0.0	5.4	0.0
Cycle Q Clear Time (g_c), s	11.8	5.6	2.6	0.0	0.0	0.0	5.4	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	1159	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	18.5	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	18.5	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	5.6	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	1.00	1.00	0.00	0.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	223	286	62	0	0	0	195	0
V/C Ratio (X)	0.96	0.26	0.74	0.00	0.00	0.00	0.88	0.00
Avail Cap (c_a), veh/h	223	286	122	0	0	0	195	0
Upstream Filter (I)	1.00	1.00	1.00	0.00	0.00	0.00	0.77	0.00
Uniform Delay (d1), s/veh	43.6	35.5	45.9	0.0	0.0	0.0	43.4	0.0
Incr Delay (d2), s/veh	49.3	2.2	16.0	0.0	0.0	0.0	27.6	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	92.9	37.7	62.0	0.0	0.0	0.0	71.0	0.0
1st-Term Q (Q1), veh/ln	5.2	1.6	1.1	0.0	0.0	0.0	1.9	0.0
2nd-Term Q (Q2), veh/ln	3.0	0.2	0.3	0.0	0.0	0.0	0.7	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	1.00	1.00	0.00	0.00	0.00	1.00	0.00
%ile Back of Q (50%), veh/ln	8.3	1.7	1.4	0.0	0.0	0.0	2.7	0.0
%ile Storage Ratio (RQ%)	1.00	0.29	0.02	0.00	0.00	0.00	0.26	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T				T
Lanes in Grp	0	2	0	1	0	0	0	1
Grp Vol (v), veh/h	0	415	0	483	0	0	0	879
Grp Sat Flow (s), veh/h/ln	0	1805	0	1900	0	0	0	1900
Q Serve Time (g_s), s	0.0	10.6	0.0	2.5	0.0	0.0	0.0	45.0
Cycle Q Clear Time (g_c), s	0.0	10.6	0.0	2.5	0.0	0.0	0.0	45.0
Lane Grp Cap (c), veh/h	0	668	0	904	0	0	0	855
V/C Ratio (X)	0.00	0.62	0.00	0.53	0.00	0.00	0.00	1.03
Avail Cap (c_a), veh/h	0	668	0	904	0	0	0	855
Upstream Filter (I)	0.00	1.00	0.00	0.77	0.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	37.5	0.0	1.3	0.0	0.0	0.0	5.0
Incr Delay (d2), s/veh	0.0	4.3	0.0	0.5	0.0	0.0	0.0	38.2
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	41.8	0.0	1.8	0.0	0.0	0.0	43.2
1st-Term Q (Q1), veh/ln	0.0	4.6	0.0	0.5	0.0	0.0	0.0	2.1
2nd-Term Q (Q2), veh/ln	0.0	0.4	0.0	0.1	0.0	0.0	0.0	9.1

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	5.0	0.0	0.6	0.0	0.0	0.0	11.2
%ile Storage Ratio (RQ%)	0.00	0.45	0.00	0.03	0.00	0.00	0.00	0.13
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		R		T+R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	33	0	208	0	180	0	440
Grp Sat Flow (s), veh/h/ln	0	1610	0	1610	0	1630	0	1610
Q Serve Time (g_s), s	0.0	1.7	0.0	0.8	0.0	8.0	0.0	20.7
Cycle Q Clear Time (g_c), s	0.0	1.7	0.0	0.8	0.0	8.0	0.0	20.7
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	0.92	0.00	1.00
Lane Grp Cap (c), veh/h	0	298	0	766	0	575	0	725
V/C Ratio (X)	0.00	0.11	0.00	0.27	0.00	0.31	0.00	0.61
Avail Cap (c_a), veh/h	0	298	0	766	0	575	0	725
Upstream Filter (I)	0.00	1.00	0.00	0.77	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	33.9	0.0	1.3	0.0	23.5	0.0	20.8
Incr Delay (d2), s/veh	0.0	0.8	0.0	0.1	0.0	1.4	0.0	1.5
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	34.7	0.0	1.4	0.0	24.9	0.0	22.3
1st-Term Q (Q1), veh/ln	0.0	0.7	0.0	0.2	0.0	3.1	0.0	7.5
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	0.2	0.0	0.3
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.7	0.0	0.3	0.0	3.3	0.0	7.8
%ile Storage Ratio (RQ%)	0.00	0.26	0.00	0.01	0.00	0.40	0.00	0.09
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	34.9
HCM 6th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	428	11	465	724	1095	0	0	476	931
Future Volume (veh/h)	0	0	0	428	11	465	724	1095	0	0	476	931
Number				3	8	18	5	2	12	1	6	16
Initial Q, veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln				1800	1900	1900	1900	1900	0	0	1900	1900
Adj Flow Rate, veh/h				451	12	489	762	1153	0	0	501	980
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence				Yes			Yes			No		
Cap, veh/h				453	12	413	768	2322	0	0	1942	603
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	2.00	1.00
Prop Arrive On Green				0.26	0.26	0.26	0.44	1.00	0.00	0.00	0.75	0.37
Unsig. Movement Delay												
Ln Grp Delay, s/veh				73.9	0.0	138.1	33.2	0.1	0.0	0.0	7.7	317.1
Ln Grp LOS				E	A	F	C	A	A	A	A	F
Approach Vol, veh/h					952			1915			1481	
Approach Delay, s/veh					106.9			13.2			212.5	
Approach LOS					F			B			F	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2	8		5	6		
Case No		4.0	11.0		2.0	7.0		
Phs Duration (G+Y+Rc), s		62.4	27.6		24.2	38.2		
Change Period (Y+Rc), s		4.5	4.5		4.5	4.5		
Max Green (Gmax), s		57.9	23.1		19.7	33.7		
Max Allow Headway (MAH), s		5.2	4.7		3.8	4.4		
Max Q Clear (g_c+I1), s		2.0	25.1		21.4	35.7		
Green Ext Time (g_e), s		11.8	0.0		0.0	0.0		
Prob of Phs Call (p_c)		1.00	1.00		1.00	1.00		
Prob of Max Out (p_x)		0.00	1.00		1.00	0.00		

Left-Turn Movement Data								
Assigned Mvmt			3		5	1		
Mvmt Sat Flow, veh/h			1765		3510	0		

Through Movement Data								
Assigned Mvmt		2	8			6		
Mvmt Sat Flow, veh/h		3705	47			5358		

Right-Turn Movement Data								
Assigned Mvmt		12	18			16		
Mvmt Sat Flow, veh/h		0	1610			1610		

Left Lane Group Data								
Assigned Mvmt	0	0	3	0	5	1	0	0
Lane Assignment			L+T		L (Prot)			

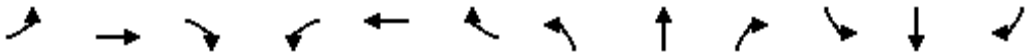
Lanes in Grp	0	0	1	0	2	0	0	0
Grp Vol (v), veh/h	0	0	463	0	762	0	0	0
Grp Sat Flow (s), veh/h/ln	0	0	1812	0	1755	0	0	0
Q Serve Time (g_s), s	0.0	0.0	23.0	0.0	19.4	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	23.0	0.0	19.4	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	33.7	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	0.00	0.97	0.00	1.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	465	0	768	0	0	0
V/C Ratio (X)	0.00	0.00	1.00	0.00	0.99	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	0	465	0	768	0	0	0
Upstream Filter (I)	0.00	0.00	1.00	0.00	0.09	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	33.4	0.0	25.2	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	40.5	0.0	7.9	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	73.9	0.0	33.2	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	9.7	0.0	5.6	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	5.2	0.0	0.8	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	0.00	1.00	0.00	1.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	15.0	0.0	6.4	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.31	0.00	0.60	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	8	0	0	6	0	0
Lane Assignment		T				T		
Lanes in Grp	0	2	0	0	0	3	0	0
Grp Vol (v), veh/h	0	1153	0	0	0	501	0	0
Grp Sat Flow (s), veh/h/ln	0	1805	0	0	0	1729	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	2.7	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	2.7	0.0	0.0
Lane Grp Cap (c), veh/h	0	2322	0	0	0	1942	0	0
V/C Ratio (X)	0.00	0.50	0.00	0.00	0.00	0.26	0.00	0.00
Avail Cap (c_a), veh/h	0	2322	0	0	0	1942	0	0
Upstream Filter (I)	0.00	0.09	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	7.4	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.1	0.0	0.0	0.0	0.3	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.1	0.0	0.0	0.0	7.7	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	18	0	0	16	0	0
Lane Assignment			R			R		
Lanes in Grp	0	0	1	0	0	1	0	0
Grp Vol (v), veh/h	0	0	489	0	0	980	0	0
Grp Sat Flow (s), veh/h/ln	0	0	1610	0	0	1610	0	0
Q Serve Time (g_s), s	0.0	0.0	23.1	0.0	0.0	33.7	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	23.1	0.0	0.0	33.7	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	413	0	0	603	0	0
V/C Ratio (X)	0.00	0.00	1.18	0.00	0.00	1.63	0.00	0.00
Avail Cap (c_a), veh/h	0	0	413	0	0	603	0	0
Upstream Filter (I)	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	33.5	0.0	0.0	28.1	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	104.6	0.0	0.0	289.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	138.1	0.0	0.0	317.1	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	8.7	0.0	0.0	12.3	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	12.0	0.0	0.0	48.4	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	20.7	0.0	0.0	60.7	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.43	0.00	0.00	1.31	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	18.9	0.0	0.0	94.3	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.3	0.0	0.0	0.4	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	101.6
HCM 6th LOS	F



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	477	9	513	0	0	0	0	1213	644	333	648	0
Future Volume (veh/h)	477	9	513	0	0	0	0	1213	644	333	648	0
Number	7	4	14				5	2	12	1	6	16
Initial Q, veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1800	1900	1900				0	1900	1900	1900	1900	0
Adj Flow Rate, veh/h	502	9	540				0	1277	678	351	682	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0				0	0	0	0	0	0
Opposing Right Turn Influence	Yes						No			Yes		
Cap, veh/h	427	8	459				0	1229	382	362	1390	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	2.00	2.00	2.00	1.00	1.00
Prop Arrive On Green	0.52	0.52	0.52				0.00	0.47	0.47	0.21	0.38	0.00
Unsig. Movement Delay												
Ln Grp Delay, s/veh	114.8	0.0	0.0				0.0	62.6	386.3	78.5	24.5	0.0
Ln Grp LOS	F	A	A				A	F	F	E	C	A
Approach Vol, veh/h		1051						1955			1033	
Approach Delay, s/veh		114.8						174.9			42.9	
Approach LOS		F						F			D	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Case No	2.0	7.0		12.0		4.0		
Phs Duration (G+Y+Rc), s	14.8	28.2		57.0		43.0		
Change Period (Y+Rc), s	4.5	4.5		4.5		4.5		
Max Green (Gmax), s	10.3	23.7		52.5		38.5		
Max Allow Headway (MAH), s	3.8	4.8		5.5		5.2		
Max Q Clear (g_c+I1), s	11.9	25.7		54.5		16.3		
Green Ext Time (g_e), s	0.0	0.0		0.0		4.8		
Prob of Phs Call (p_c)	1.00	1.00		1.00		1.00		
Prob of Max Out (p_x)	1.00	0.00		1.00		0.00		

Left-Turn Movement Data								
Assigned Mvmt	1	5		7				
Mvmt Sat Flow, veh/h	3510	0		813				

Through Movement Data								
Assigned Mvmt		2		4		6		
Mvmt Sat Flow, veh/h		5358		15		3705		

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		
Mvmt Sat Flow, veh/h		1610		874		0		

Left Lane Group Data								
Assigned Mvmt	1	5	0	7	0	0	0	0
Lane Assignment	L (Prot)			L+T+R				

Lanes in Grp	2	0	0	1	0	0	0	0
Grp Vol (v), veh/h	351	0	0	1051	0	0	0	0
Grp Sat Flow (s), veh/h/ln	1755	0	0	1702	0	0	0	0
Q Serve Time (g_s), s	9.9	0.0	0.0	52.5	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	9.9	0.0	0.0	52.5	0.0	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	23.7	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	0.48	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	362	0	0	894	0	0	0	0
V/C Ratio (X)	0.97	0.00	0.00	1.18	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	362	0	0	894	0	0	0	0
Upstream Filter (I)	0.98	0.00	0.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	39.6	0.0	0.0	23.8	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	39.0	0.0	0.0	91.0	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	78.5	0.0	0.0	114.8	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	3.8	0.0	0.0	19.4	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	2.0	0.0	0.0	22.6	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00
%ile Back of Q (50%), veh/ln	5.7	0.0	0.0	42.0	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.53	0.00	0.00	0.72	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	39.4	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	0
Lane Assignment		T				T		
Lanes in Grp	0	3	0	0	0	2	0	0
Grp Vol (v), veh/h	0	1277	0	0	0	682	0	0
Grp Sat Flow (s), veh/h/ln	0	1729	0	0	0	1805	0	0
Q Serve Time (g_s), s	0.0	23.7	0.0	0.0	0.0	14.3	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	23.7	0.0	0.0	0.0	14.3	0.0	0.0
Lane Grp Cap (c), veh/h	0	1229	0	0	0	1390	0	0
V/C Ratio (X)	0.00	1.04	0.00	0.00	0.00	0.49	0.00	0.00
Avail Cap (c_a), veh/h	0	1229	0	0	0	1390	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	0.98	0.00	0.00
Uniform Delay (d1), s/veh	0.0	26.3	0.0	0.0	0.0	23.3	0.0	0.0
Incr Delay (d2), s/veh	0.0	36.3	0.0	0.0	0.0	1.2	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	62.6	0.0	0.0	0.0	24.5	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	6.9	0.0	0.0	0.0	6.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	4.1	0.0	0.0	0.0	0.2	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	11.0	0.0	0.0	0.0	6.2	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.36	0.00	0.00	0.00	0.58	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	11.9	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	0
Lane Assignment		R						
Lanes in Grp	0	1	0	0	0	0	0	0
Grp Vol (v), veh/h	0	678	0	0	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	1610	0	0	0	0	0	0
Q Serve Time (g_s), s	0.0	23.7	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	23.7	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	0.51	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	382	0	0	0	0	0	0
V/C Ratio (X)	0.00	1.78	0.00	0.00	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	382	0	0	0	0	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	26.3	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	360.0	0.0	0.0	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	386.3	0.0	0.0	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	6.4	0.0	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	38.2	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	44.6	0.0	0.0	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	1.44	0.00	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	74.1	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	125.5
HCM 6th LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	86	814	80	225	349	198	138	669	614	261	378	54
Future Volume (veh/h)	86	814	80	225	349	198	138	669	614	261	378	54
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1800	1900	1900	1800	1900	1900	1800	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	91	857	84	237	367	208	145	704	646	275	398	57
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	114	850	83	250	749	418	172	1050	468	285	1104	157
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.07	0.26	0.26	0.15	0.34	0.34	0.10	0.29	0.29	0.16	0.35	0.35
Unsig. Movement Delay												
Ln Grp Delay, s/veh	67.4	88.7	88.3	92.2	32.3	32.5	62.7	39.9	222.5	93.8	30.8	30.8
Ln Grp LOS	E	F	F	F	C	C	E	D	F	F	C	C
Approach Vol, veh/h		1032			812			1495			730	
Approach Delay, s/veh		86.6			49.8			121.0			54.5	
Approach LOS		F			D			F			D	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Case No	2.0	3.0	2.0	4.0	2.0	4.0	2.0	4.0
Phs Duration (G+Y+Rc), s	23.4	39.4	22.0	35.2	16.6	46.2	12.4	44.8
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green (Gmax), s	18.9	34.9	17.5	30.7	18.6	35.2	13.1	35.1
Max Allow Headway (MAH), s	3.8	4.6	3.8	5.3	3.8	5.3	3.8	5.4
Max Q Clear (g_c+I1), s	20.1	36.9	18.4	32.7	12.0	13.3	8.3	18.0
Green Ext Time (g_e), s	0.0	0.0	0.0	0.0	0.2	2.7	0.1	3.4
Prob of Phs Call (p_c)	1.00	1.00	1.00	1.00	0.99	1.00	0.95	1.00
Prob of Max Out (p_x)	1.00	0.00	1.00	1.00	0.08	0.00	0.33	0.08

Left-Turn Movement Data								
Assigned Mvmt	1		3		5		7	
Mvmt Sat Flow, veh/h	1810		1714		1714		1714	

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		3610		3321		3173		2234

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1610		325		451		1246

Left Lane Group Data								
Assigned Mvmt	1	0	3	0	5	0	7	0
Lane Assignment	L (Prot)		L (Prot)		L (Prot)		L (Prot)	

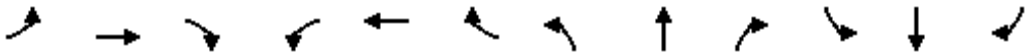
Lanes in Grp	1	0	1	0	1	0	1	0
Grp Vol (v), veh/h	275	0	237	0	145	0	91	0
Grp Sat Flow (s), veh/h/ln	1810	0	1714	0	1714	0	1714	0
Q Serve Time (g_s), s	18.1	0.0	16.4	0.0	10.0	0.0	6.3	0.0
Cycle Q Clear Time (g_c), s	18.1	0.0	16.4	0.0	10.0	0.0	6.3	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	285	0	250	0	172	0	114	0
V/C Ratio (X)	0.96	0.00	0.95	0.00	0.84	0.00	0.80	0.00
Avail Cap (c_a), veh/h	285	0	250	0	266	0	187	0
Upstream Filter (I)	1.00	0.00	0.95	0.00	0.69	0.00	1.00	0.00
Uniform Delay (d1), s/veh	50.2	0.0	50.8	0.0	53.0	0.0	55.2	0.0
Incr Delay (d2), s/veh	43.6	0.0	41.4	0.0	9.7	0.0	12.2	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	93.8	0.0	92.2	0.0	62.7	0.0	67.4	0.0
1st-Term Q (Q1), veh/ln	8.2	0.0	7.0	0.0	4.3	0.0	2.7	0.0
2nd-Term Q (Q2), veh/ln	3.5	0.0	2.9	0.0	0.5	0.0	0.4	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
%ile Back of Q (50%), veh/ln	11.6	0.0	9.9	0.0	4.8	0.0	3.1	0.0
%ile Storage Ratio (RQ%)	0.18	0.00	0.09	0.00	0.24	0.00	0.04	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	2	0	1	0	1	0	1
Grp Vol (v), veh/h	0	704	0	466	0	225	0	295
Grp Sat Flow (s), veh/h/ln	0	1805	0	1805	0	1805	0	1805
Q Serve Time (g_s), s	0.0	20.6	0.0	30.7	0.0	11.2	0.0	15.6
Cycle Q Clear Time (g_c), s	0.0	20.6	0.0	30.7	0.0	11.2	0.0	15.6
Lane Grp Cap (c), veh/h	0	1050	0	462	0	628	0	605
V/C Ratio (X)	0.00	0.67	0.00	1.01	0.00	0.36	0.00	0.49
Avail Cap (c_a), veh/h	0	1050	0	462	0	628	0	605
Upstream Filter (I)	0.00	0.69	0.00	1.00	0.00	1.00	0.00	0.95
Uniform Delay (d1), s/veh	0.0	37.5	0.0	44.6	0.0	29.2	0.0	31.7
Incr Delay (d2), s/veh	0.0	2.4	0.0	44.1	0.0	1.6	0.0	0.6
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	39.9	0.0	88.7	0.0	30.8	0.0	32.3
1st-Term Q (Q1), veh/ln	0.0	9.1	0.0	13.6	0.0	4.8	0.0	6.8
2nd-Term Q (Q2), veh/ln	0.0	0.3	0.0	5.7	0.0	0.3	0.0	0.1

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	9.4	0.0	19.2	0.0	5.1	0.0	6.9
%ile Storage Ratio (RQ%)	0.00	0.47	0.00	0.26	0.00	0.08	0.00	0.06
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		T+R		T+R		T+R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	646	0	475	0	230	0	280
Grp Sat Flow (s), veh/h/ln	0	1610	0	1841	0	1819	0	1676
Q Serve Time (g_s), s	0.0	34.9	0.0	30.7	0.0	11.3	0.0	16.0
Cycle Q Clear Time (g_c), s	0.0	34.9	0.0	30.7	0.0	11.3	0.0	16.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	0.18	0.00	0.25	0.00	0.74
Lane Grp Cap (c), veh/h	0	468	0	471	0	633	0	562
V/C Ratio (X)	0.00	1.38	0.00	1.01	0.00	0.36	0.00	0.50
Avail Cap (c_a), veh/h	0	468	0	471	0	633	0	562
Upstream Filter (I)	0.00	0.69	0.00	1.00	0.00	1.00	0.00	0.95
Uniform Delay (d1), s/veh	0.0	42.5	0.0	44.7	0.0	29.2	0.0	31.8
Incr Delay (d2), s/veh	0.0	179.9	0.0	43.7	0.0	1.6	0.0	0.6
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	222.5	0.0	88.3	0.0	30.8	0.0	32.5
1st-Term Q (Q1), veh/ln	0.0	13.7	0.0	13.9	0.0	5.0	0.0	6.5
2nd-Term Q (Q2), veh/ln	0.0	23.4	0.0	5.7	0.0	0.3	0.0	0.1
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	37.1	0.0	19.6	0.0	5.2	0.0	6.6
%ile Storage Ratio (RQ%)	0.00	1.87	0.00	0.26	0.00	0.08	0.00	0.06
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	44.4	0.0	1.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.3	0.0	0.3	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	86.2
HCM 6th LOS	F



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	480	36	427	91	25	141	214	1036	5	9	655	88
Future Volume (veh/h)	480	36	427	91	25	141	214	1036	5	9	655	88
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1700	1900	1900	1800	1900	1900	1800	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	505	38	0	96	26	148	225	1091	5	9	689	93
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	573	688		219	45	190	260	1757	8	20	1074	145
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.18	0.36	0.00	0.13	0.13	0.13	0.15	0.48	0.48	0.01	0.34	0.34
Unsig. Movement Delay												
Ln Grp Delay, s/veh	49.4	18.7	0.0	38.4	0.0	44.9	56.0	20.9	20.7	55.7	29.3	29.3
Ln Grp LOS	D	B		D	A	D	E	C	C	E	C	C
Approach Vol, veh/h		543			270			1321			791	
Approach Delay, s/veh		47.3			42.0			26.8			29.6	
Approach LOS		D			D			C			C	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6	7	8
Case No	2.0	4.0		3.0	2.0	4.0	2.0	8.3
Phs Duration (G+Y+Rc), s	5.5	47.4		37.1	18.2	34.8	20.9	16.2
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5	4.5	4.5
Max Green (Gmax), s	5.0	31.5		40.0	16.5	20.0	17.5	18.0
Max Allow Headway (MAH), s	3.8	5.2		5.2	3.8	5.3	3.8	5.5
Max Q Clear (g_c+I1), s	2.4	21.8		3.2	13.5	18.4	16.1	10.8
Green Ext Time (g_e), s	0.0	4.9		0.2	0.2	0.8	0.3	0.9
Prob of Phs Call (p_c)	0.20	1.00		1.00	1.00	1.00	1.00	1.00
Prob of Max Out (p_x)	1.00	0.00		0.00	1.00	0.00	1.00	0.50

Left-Turn Movement Data								
Assigned Mvmt	1				5		7	3
Mvmt Sat Flow, veh/h	1810				1714		3141	1138

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		3685		1900		3196		346

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		17		1610		431		1465

Left Lane Group Data								
Assigned Mvmt	1	0	0	0	5	0	7	3
Lane Assignment	L (Prot)				L (Prot)		L (Prot)	L+T

Lanes in Grp	1	0	0	0	1	0	2	1
Grp Vol (v), veh/h	9	0	0	0	225	0	505	122
Grp Sat Flow (s), veh/h/ln	1810	0	0	0	1714	0	1570	1484
Q Serve Time (g_s), s	0.4	0.0	0.0	0.0	11.5	0.0	14.1	6.8
Cycle Q Clear Time (g_c), s	0.4	0.0	0.0	0.0	11.5	0.0	14.1	7.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	1391
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.7
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.7
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.8
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	0.00	1.00	0.00	1.00	0.79
Lane Grp Cap (c), veh/h	20	0	0	0	260	0	573	264
V/C Ratio (X)	0.44	0.00	0.00	0.00	0.86	0.00	0.88	0.46
Avail Cap (c_a), veh/h	101	0	0	0	314	0	611	368
Upstream Filter (I)	0.78	0.00	0.00	0.00	1.00	0.00	1.00	1.00
Uniform Delay (d1), s/veh	44.2	0.0	0.0	0.0	37.3	0.0	35.8	37.1
Incr Delay (d2), s/veh	11.5	0.0	0.0	0.0	18.7	0.0	13.6	1.3
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	55.7	0.0	0.0	0.0	56.0	0.0	49.4	38.4
1st-Term Q (Q1), veh/ln	0.2	0.0	0.0	0.0	4.7	0.0	5.3	2.5
2nd-Term Q (Q2), veh/ln	0.1	0.0	0.0	0.0	1.4	0.0	1.1	0.1
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	0.00	1.00	0.00	1.00	1.00
%ile Back of Q (50%), veh/ln	0.3	0.0	0.0	0.0	6.1	0.0	6.4	2.6
%ile Storage Ratio (RQ%)	0.01	0.00	0.00	0.00	1.02	0.00	1.06	0.08
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		
Lanes in Grp	0	1	0	1	0	1	0	0
Grp Vol (v), veh/h	0	534	0	38	0	389	0	0
Grp Sat Flow (s), veh/h/ln	0	1805	0	1900	0	1805	0	0
Q Serve Time (g_s), s	0.0	19.8	0.0	1.2	0.0	16.4	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	19.8	0.0	1.2	0.0	16.4	0.0	0.0
Lane Grp Cap (c), veh/h	0	861	0	688	0	607	0	0
V/C Ratio (X)	0.00	0.62	0.00	0.06	0.00	0.64	0.00	0.00
Avail Cap (c_a), veh/h	0	861	0	844	0	607	0	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	0.78	0.00	0.00
Uniform Delay (d1), s/veh	0.0	17.5	0.0	18.7	0.0	25.3	0.0	0.0
Incr Delay (d2), s/veh	0.0	3.4	0.0	0.0	0.0	4.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	20.9	0.0	18.7	0.0	29.3	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	7.7	0.0	0.5	0.0	6.8	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.8	0.0	0.0	0.0	0.7	0.0	0.0

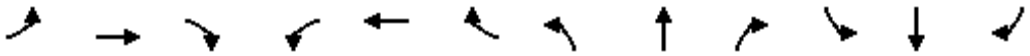
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	8.5	0.0	0.5	0.0	7.5	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.37	0.00	0.01	0.00	0.38	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R		R		T+R		T+R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	562	0	0	0	393	0	148
Grp Sat Flow (s), veh/h/ln	0	1897	0	1610	0	1822	0	1465
Q Serve Time (g_s), s	0.0	19.8	0.0	0.0	0.0	16.4	0.0	8.8
Cycle Q Clear Time (g_c), s	0.0	19.8	0.0	0.0	0.0	16.4	0.0	8.8
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.01	0.00	1.00	0.00	0.24	0.00	1.00
Lane Grp Cap (c), veh/h	0	904	0	583	0	613	0	190
V/C Ratio (X)	0.00	0.62	0.00	0.00	0.00	0.64	0.00	0.78
Avail Cap (c_a), veh/h	0	904	0	716	0	613	0	293
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	0.78	0.00	1.00
Uniform Delay (d1), s/veh	0.0	17.5	0.0	0.0	0.0	25.3	0.0	37.9
Incr Delay (d2), s/veh	0.0	3.2	0.0	0.0	0.0	4.0	0.0	7.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	20.7	0.0	0.0	0.0	29.3	0.0	44.9
1st-Term Q (Q1), veh/ln	0.0	8.1	0.0	0.0	0.0	6.9	0.0	3.1
2nd-Term Q (Q2), veh/ln	0.0	0.8	0.0	0.0	0.0	0.7	0.0	0.4
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	8.9	0.0	0.0	0.0	7.6	0.0	3.5
%ile Storage Ratio (RQ%)	0.00	0.39	0.00	0.00	0.00	0.38	0.00	0.10
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	32.7
HCM 6th LOS	C

Notes

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	97	0	143	0	1164	44	53	1026	0
Future Volume (veh/h)	0	0	0	97	0	143	0	1164	44	53	1026	0
Number				3	8	18	5	2	12	1	6	16
Initial Q, veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln				1800	0	1900	0	1900	1900	1900	1900	0
Adj Flow Rate, veh/h				102	0	151	0	1225	46	56	1080	0
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence				Yes			No			Yes		
Cap, veh/h				195	0	183	0	3762	141	73	4207	0
HCM Platoon Ratio				1.00	1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00
Prop Arrive On Green				0.11	0.00	0.11	0.00	1.00	1.00	0.04	0.81	0.00
Unsig. Movement Delay												
Ln Grp Delay, s/veh				52.3	0.0	60.9	0.0	0.3	0.6	72.2	2.9	0.0
Ln Grp LOS				D	A	E	A	A	A	E	A	A
Approach Vol, veh/h					253			1271			1136	
Approach Delay, s/veh					57.4			0.4			6.3	
Approach LOS					E			A			A	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	8			6		
Case No	2.0	8.0	9.0			4.0		
Phs Duration (G+Y+Rc), s	9.3	92.5	18.2			101.8		
Change Period (Y+Rc), s	4.5	4.5	4.5			4.5		
Max Green (Gmax), s	15.1	30.7	28.1			50.3		
Max Allow Headway (MAH), s	3.8	5.2	3.9			5.2		
Max Q Clear (g_c+I1), s	5.7	2.0	13.0			8.0		
Green Ext Time (g_e), s	0.1	10.4	0.7			9.9		
Prob of Phs Call (p_c)	0.85	1.00	1.00			1.00		
Prob of Max Out (p_x)	0.00	0.00	0.00			0.00		

Left-Turn Movement Data								
Assigned Mvmt	1	5	3					
Mvmt Sat Flow, veh/h	1810	0	1714					

Through Movement Data								
Assigned Mvmt		2	8			6		
Mvmt Sat Flow, veh/h		5302	0			5358		

Right-Turn Movement Data								
Assigned Mvmt		12	18			16		
Mvmt Sat Flow, veh/h		193	1610			0		

Left Lane Group Data								
Assigned Mvmt	1	5	3	0	0	0	0	0
Lane Assignment	L (Prot)		L					

Lanes in Grp	1	0	1	0	0	0	0	0
Grp Vol (v), veh/h	56	0	102	0	0	0	0	0
Grp Sat Flow (s), veh/h/ln	1810	0	1714	0	0	0	0	0
Q Serve Time (g_s), s	3.7	0.0	6.7	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	3.7	0.0	6.7	0.0	0.0	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	1714	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	88.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	73	0	195	0	0	0	0	0
V/C Ratio (X)	0.77	0.00	0.52	0.00	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	228	0	401	0	0	0	0	0
Upstream Filter (I)	1.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	57.0	0.0	50.1	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	15.2	0.0	2.2	0.0	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	72.2	0.0	52.3	0.0	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	1.7	0.0	2.9	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.3	0.0	0.1	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	1.00	1.00	0.00	0.00	0.00	0.00	0.00
%ile Back of Q (50%), veh/ln	2.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.19	0.00	0.05	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	8	0	0	6	0	0
Lane Assignment		T				T		
Lanes in Grp	0	2	0	0	0	3	0	0
Grp Vol (v), veh/h	0	826	0	0	0	1080	0	0
Grp Sat Flow (s), veh/h/ln	0	1729	0	0	0	1729	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	6.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	6.0	0.0	0.0
Lane Grp Cap (c), veh/h	0	2536	0	0	0	4207	0	0
V/C Ratio (X)	0.00	0.33	0.00	0.00	0.00	0.26	0.00	0.00
Avail Cap (c_a), veh/h	0	2536	0	0	0	4207	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	2.7	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.3	0.0	0.0	0.0	0.1	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.3	0.0	0.0	0.0	2.9	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	1.5	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.1	0.0	0.0	0.0	1.6	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.01	0.00	0.00	0.00	0.15	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	18	0	0	16	0	0
Lane Assignment		T+R	R					
Lanes in Grp	0	1	1	0	0	0	0	0
Grp Vol (v), veh/h	0	445	151	0	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	1865	1610	0	0	0	0	0
Q Serve Time (g_s), s	0.0	0.0	11.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	11.0	0.0	0.0	0.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.10	1.00	0.00	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	1368	183	0	0	0	0	0
V/C Ratio (X)	0.00	0.33	0.82	0.00	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	1368	377	0	0	0	0	0
Upstream Filter (I)	0.00	1.00	1.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	52.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.6	8.9	0.0	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.6	60.9	0.0	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	4.4	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.2	0.5	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.2	4.9	0.0	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.01	0.08	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	8.4
HCM 6th LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	181	10	13	21	18	18	8	1030	18	15	998	63
Future Volume (veh/h)	181	10	13	21	18	18	8	1030	18	15	998	63
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1800	1900	1900	1800	1900	1900	1800	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	191	11	14	22	19	19	8	1084	19	16	1051	66
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	283	121	154	219	179	185	17	2524	44	31	2424	152
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Prop Arrive On Green	0.18	0.18	0.18	0.18	0.18	0.18	0.01	0.70	0.70	0.03	1.00	1.00
Unsig. Movement Delay												
Ln Grp Delay, s/veh	51.9	0.0	41.6	42.0	0.0	41.7	74.3	8.8	8.7	69.9	1.1	1.0
Ln Grp LOS	D	A	D	D	A	D	E	A	A	E	A	A
Approach Vol, veh/h		216			60			1111			1133	
Approach Delay, s/veh		50.7			41.9			9.2			2.0	
Approach LOS		D			D			A			A	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Case No	2.0	4.0		8.0	2.0	4.0		8.0
Phs Duration (G+Y+Rc), s	6.6	87.9		25.5	5.7	88.8		25.5
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green (Gmax), s	27.0	39.5		40.0	27.0	39.5		40.0
Max Allow Headway (MAH), s	3.8	5.2		5.3	3.8	5.3		5.4
Max Q Clear (g_c+I1), s	3.0	17.6		19.9	2.6	2.0		4.6
Green Ext Time (g_e), s	0.0	7.8		1.2	0.0	9.4		0.3
Prob of Phs Call (p_c)	0.41	1.00		1.00	0.23	1.00		1.00
Prob of Max Out (p_x)	0.00	0.00		0.00	0.00	0.00		0.00

Left-Turn Movement Data								
Assigned Mvmt	1			7	5			3
Mvmt Sat Flow, veh/h	1810			1271	1714			964

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		3630		691		3449		1020

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		64		880		217		1058

Left Lane Group Data								
Assigned Mvmt	1	0	0	7	5	0	0	3
Lane Assignment	L (Prot)			L+T	L (Prot)			L+T

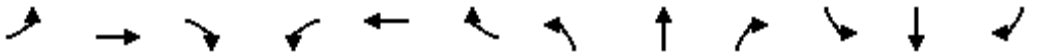
Lanes in Grp	1	0	0	1	1	0	0	1
Grp Vol (v), veh/h	16	0	0	191	8	0	0	32
Grp Sat Flow (s), veh/h/ln	1810	0	0	1271	1714	0	0	1503
Q Serve Time (g_s), s	1.0	0.0	0.0	16.0	0.6	0.0	0.0	1.0
Cycle Q Clear Time (g_c), s	1.0	0.0	0.0	17.9	0.6	0.0	0.0	2.6
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	1391	0	0	0	1408
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	21.0	0.0	0.0	0.0	21.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	19.2	0.0	0.0	0.0	19.4
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	16.0	0.0	0.0	0.0	1.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	0.68
Lane Grp Cap (c), veh/h	31	0	0	283	17	0	0	314
V/C Ratio (X)	0.51	0.00	0.00	0.68	0.48	0.00	0.00	0.10
Avail Cap (c_a), veh/h	407	0	0	503	386	0	0	557
Upstream Filter (I)	1.00	0.00	0.00	1.00	0.76	0.00	0.00	1.00
Uniform Delay (d1), s/veh	57.4	0.0	0.0	49.1	59.1	0.0	0.0	41.8
Incr Delay (d2), s/veh	12.5	0.0	0.0	2.8	15.2	0.0	0.0	0.1
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	69.9	0.0	0.0	51.9	74.3	0.0	0.0	42.0
1st-Term Q (Q1), veh/ln	0.5	0.0	0.0	5.6	0.2	0.0	0.0	0.8
2nd-Term Q (Q2), veh/ln	0.1	0.0	0.0	0.2	0.1	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.6	0.0	0.0	5.8	0.3	0.0	0.0	0.8
%ile Storage Ratio (RQ%)	0.06	0.00	0.00	0.71	0.00	0.00	0.00	0.03
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T				T		
Lanes in Grp	0	1	0	0	0	1	0	0
Grp Vol (v), veh/h	0	539	0	0	0	550	0	0
Grp Sat Flow (s), veh/h/ln	0	1805	0	0	0	1805	0	0
Q Serve Time (g_s), s	0.0	15.6	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	15.6	0.0	0.0	0.0	0.0	0.0	0.0
Lane Grp Cap (c), veh/h	0	1255	0	0	0	1268	0	0
V/C Ratio (X)	0.00	0.43	0.00	0.00	0.00	0.43	0.00	0.00
Avail Cap (c_a), veh/h	0	1255	0	0	0	1268	0	0
Upstream Filter (I)	0.00	0.76	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	7.9	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.8	0.0	0.0	0.0	1.1	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	8.8	0.0	0.0	0.0	1.1	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	5.6	0.0	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.3	0.0	0.0	0.0	0.4	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	5.9	0.0	0.0	0.0	0.4	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.06	0.00	0.00	0.00	0.04	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R		T+R		T+R		T+R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	564	0	25	0	567	0	28
Grp Sat Flow (s), veh/h/ln	0	1889	0	1571	0	1861	0	1539
Q Serve Time (g_s), s	0.0	15.6	0.0	1.6	0.0	0.0	0.0	1.8
Cycle Q Clear Time (g_c), s	0.0	15.6	0.0	1.6	0.0	0.0	0.0	1.8
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.03	0.00	0.56	0.00	0.12	0.00	0.69
Lane Grp Cap (c), veh/h	0	1313	0	275	0	1308	0	269
V/C Ratio (X)	0.00	0.43	0.00	0.09	0.00	0.43	0.00	0.10
Avail Cap (c_a), veh/h	0	1313	0	524	0	1308	0	513
Upstream Filter (I)	0.00	0.76	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	7.9	0.0	41.5	0.0	0.0	0.0	41.6
Incr Delay (d2), s/veh	0.0	0.8	0.0	0.1	0.0	1.0	0.0	0.2
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	8.7	0.0	41.6	0.0	1.0	0.0	41.7
1st-Term Q (Q1), veh/ln	0.0	5.8	0.0	0.6	0.0	0.0	0.0	0.7
2nd-Term Q (Q2), veh/ln	0.0	0.3	0.0	0.0	0.0	0.4	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	6.1	0.0	0.6	0.0	0.4	0.0	0.7
%ile Storage Ratio (RQ%)	0.00	0.06	0.00	0.08	0.00	0.04	0.00	0.02
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	10.3
HCM 6th LOS	B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	164	672	81	162	255	185	57	660	338	230	706	69
Future Volume (veh/h)	164	672	81	162	255	185	57	660	338	230	706	69
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1800	1900	1900	1800	1900	1900	1800	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	173	707	85	171	268	195	60	695	0	242	743	73
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	202	1024	318	240	548	245	77	1351		282	1753	782
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00
Prop Arrive On Green	0.12	0.20	0.20	0.07	0.15	0.15	0.01	0.12	0.00	0.16	0.49	0.49
Unsig. Movement Delay												
Ln Grp Delay, s/veh	67.6	35.0	31.0	43.9	35.3	41.9	46.8	32.0	0.0	48.9	15.7	12.7
Ln Grp LOS	E	C	C	D	D	D	D	C		D	B	B
Approach Vol, veh/h		965			634			755			1058	
Approach Delay, s/veh		40.5			39.6			33.2			23.1	
Approach LOS		D			D			C			C	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Case No	2.0	3.0	2.0	3.0	2.0	3.0	2.0	3.0
Phs Duration (G+Y+Rc), s	18.5	38.2	11.0	22.3	8.5	48.2	15.1	18.2
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green (Gmax), s	19.5	23.9	7.9	20.7	9.3	34.1	10.6	18.0
Max Allow Headway (MAH), s	3.8	5.2	3.8	5.1	3.8	5.1	3.8	4.7
Max Q Clear (g_c+I1), s	13.7	18.2	6.5	13.4	5.1	14.0	10.9	12.5
Green Ext Time (g_e), s	0.3	2.3	0.1	2.9	0.0	5.4	0.0	1.2
Prob of Phs Call (p_c)	1.00	1.00	0.99	1.00	0.78	1.00	0.99	1.00
Prob of Max Out (p_x)	0.25	0.00	1.00	0.67	0.63	0.00	1.00	0.77

Left-Turn Movement Data								
Assigned Mvmt	1		3		5		7	
Mvmt Sat Flow, veh/h	1810		3326		1714		1714	

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		3610		5187		3610		3610

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1610		1610		1610		1610

Left Lane Group Data								
Assigned Mvmt	1	0	3	0	5	0	7	0
Lane Assignment	L (Prot)		L (Prot)		L (Prot)		L (Prot)	

Lanes in Grp	1	0	2	0	1	0	1	0
Grp Vol (v), veh/h	242	0	171	0	60	0	173	0
Grp Sat Flow (s), veh/h/ln	1810	0	1663	0	1714	0	1714	0
Q Serve Time (g_s), s	11.7	0.0	4.5	0.0	3.1	0.0	8.9	0.0
Cycle Q Clear Time (g_c), s	11.7	0.0	4.5	0.0	3.1	0.0	8.9	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	282	0	240	0	77	0	202	0
V/C Ratio (X)	0.86	0.00	0.71	0.00	0.78	0.00	0.86	0.00
Avail Cap (c_a), veh/h	392	0	292	0	177	0	202	0
Upstream Filter (I)	0.92	0.00	0.48	0.00	0.16	0.00	1.00	0.00
Uniform Delay (d1), s/veh	37.0	0.0	40.8	0.0	43.9	0.0	39.0	0.0
Incr Delay (d2), s/veh	11.9	0.0	3.0	0.0	2.9	0.0	28.6	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	48.9	0.0	43.9	0.0	46.8	0.0	67.6	0.0
1st-Term Q (Q1), veh/ln	5.1	0.0	1.8	0.0	1.3	0.0	3.7	0.0
2nd-Term Q (Q2), veh/ln	0.9	0.0	0.1	0.0	0.1	0.0	1.6	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
%ile Back of Q (50%), veh/ln	6.0	0.0	1.9	0.0	1.4	0.0	5.3	0.0
%ile Storage Ratio (RQ%)	0.58	0.00	0.19	0.00	0.21	0.00	1.32	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	2	0	3	0	2	0	2
Grp Vol (v), veh/h	0	695	0	707	0	743	0	268
Grp Sat Flow (s), veh/h/ln	0	1805	0	1729	0	1805	0	1805
Q Serve Time (g_s), s	0.0	16.2	0.0	11.4	0.0	12.0	0.0	6.1
Cycle Q Clear Time (g_c), s	0.0	16.2	0.0	11.4	0.0	12.0	0.0	6.1
Lane Grp Cap (c), veh/h	0	1351	0	1024	0	1753	0	548
V/C Ratio (X)	0.00	0.51	0.00	0.69	0.00	0.42	0.00	0.49
Avail Cap (c_a), veh/h	0	1351	0	1193	0	1753	0	722
Upstream Filter (I)	0.00	0.16	0.00	1.00	0.00	0.92	0.00	0.48
Uniform Delay (d1), s/veh	0.0	31.8	0.0	33.6	0.0	15.0	0.0	35.0
Incr Delay (d2), s/veh	0.0	0.2	0.0	1.4	0.0	0.7	0.0	0.3
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	32.0	0.0	35.0	0.0	15.7	0.0	35.3
1st-Term Q (Q1), veh/ln	0.0	7.8	0.0	4.7	0.0	4.7	0.0	2.7
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.1	0.0	0.2	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	7.8	0.0	4.8	0.0	4.8	0.0	2.7
%ile Storage Ratio (RQ%)	0.00	0.08	0.00	0.02	0.00	0.05	0.00	0.03
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		R		R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	0	0	85	0	73	0	195
Grp Sat Flow (s), veh/h/ln	0	1610	0	1610	0	1610	0	1610
Q Serve Time (g_s), s	0.0	0.0	0.0	4.0	0.0	2.2	0.0	10.5
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	4.0	0.0	2.2	0.0	10.5
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	603	0	318	0	782	0	245
V/C Ratio (X)	0.00	0.00	0.00	0.27	0.00	0.09	0.00	0.80
Avail Cap (c_a), veh/h	0	603	0	370	0	782	0	322
Upstream Filter (I)	0.00	0.00	0.00	1.00	0.00	0.92	0.00	0.48
Uniform Delay (d1), s/veh	0.0	0.0	0.0	30.6	0.0	12.5	0.0	36.8
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.4	0.0	0.2	0.0	5.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	31.0	0.0	12.7	0.0	41.9
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	1.5	0.0	0.8	0.0	4.1
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	1.6	0.0	0.8	0.0	4.4
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.01	0.00	0.01	0.00	0.06
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	33.3
HCM 6th LOS	C

Notes

Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	268	520	131	462	376	102	138	935	507	248	862	194
Future Volume (veh/h)	268	520	131	462	376	102	138	935	507	248	862	194
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1800	1900	1900	1700	1900	1900	1800	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	282	547	138	486	396	107	145	984	534	261	907	204
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	288	575	144	523	563	151	177	1019	454	271	1395	312
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33
Prop Arrive On Green	0.17	0.20	0.20	0.17	0.20	0.20	0.10	0.28	0.28	0.05	0.11	0.11
Unsig. Movement Delay												
Ln Grp Delay, s/veh	84.8	69.8	71.6	60.0	39.3	40.1	51.4	47.3	125.1	83.3	37.7	40.2
Ln Grp LOS	F	E	E	E	D	D	D	D	F	F	D	D
Approach Vol, veh/h		967			989			1663			1372	
Approach Delay, s/veh		74.8			49.7			72.6			47.1	
Approach LOS		E			D			E			D	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Case No	2.0	3.0	2.0	4.0	2.0	4.0	2.0	4.0
Phs Duration (G+Y+Rc), s	18.0	29.9	19.5	22.6	13.8	34.1	19.6	22.5
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green (Gmax), s	13.5	25.4	15.0	18.1	11.5	27.4	15.1	18.0
Max Allow Headway (MAH), s	3.8	4.8	3.8	5.3	3.8	5.3	3.8	5.3
Max Q Clear (g_c+I1), s	15.0	27.4	15.7	19.1	9.5	20.6	16.7	13.9
Green Ext Time (g_e), s	0.0	0.0	0.0	0.0	0.1	3.9	0.0	1.1
Prob of Phs Call (p_c)	1.00	1.00	1.00	1.00	0.97	1.00	1.00	1.00
Prob of Max Out (p_x)	1.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00

Left-Turn Movement Data								
Assigned Mvmt	1		3		5		7	
Mvmt Sat Flow, veh/h	1810		3141		1714		1714	

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		3610		2858		4238		2817

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1610		718		949		753

Left Lane Group Data								
Assigned Mvmt	1	0	3	0	5	0	7	0
Lane Assignment	L (Prot)		L (Prot)		L (Prot)		L (Prot)	

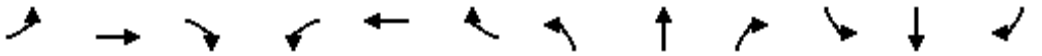
Lanes in Grp	1	0	2	0	1	0	1	0
Grp Vol (v), veh/h	261	0	486	0	145	0	282	0
Grp Sat Flow (s), veh/h/ln	1810	0	1570	0	1714	0	1714	0
Q Serve Time (g_s), s	13.0	0.0	13.7	0.0	7.5	0.0	14.7	0.0
Cycle Q Clear Time (g_c), s	13.0	0.0	13.7	0.0	7.5	0.0	14.7	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	271	0	523	0	177	0	288	0
V/C Ratio (X)	0.96	0.00	0.93	0.00	0.82	0.00	0.98	0.00
Avail Cap (c_a), veh/h	271	0	523	0	219	0	288	0
Upstream Filter (I)	0.88	0.00	1.00	0.00	0.62	0.00	1.00	0.00
Uniform Delay (d1), s/veh	42.5	0.0	37.0	0.0	39.5	0.0	37.3	0.0
Incr Delay (d2), s/veh	40.8	0.0	23.1	0.0	11.9	0.0	47.5	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	83.3	0.0	60.0	0.0	51.4	0.0	84.8	0.0
1st-Term Q (Q1), veh/ln	6.2	0.0	5.2	0.0	3.1	0.0	6.0	0.0
2nd-Term Q (Q2), veh/ln	3.1	0.0	1.7	0.0	0.6	0.0	3.8	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
%ile Back of Q (50%), veh/ln	9.3	0.0	6.8	0.0	3.7	0.0	9.8	0.0
%ile Storage Ratio (RQ%)	1.30	0.00	0.05	0.00	0.46	0.00	1.12	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	2	0	1	0	2	0	1
Grp Vol (v), veh/h	0	984	0	345	0	739	0	252
Grp Sat Flow (s), veh/h/ln	0	1805	0	1805	0	1729	0	1805
Q Serve Time (g_s), s	0.0	24.2	0.0	17.0	0.0	18.5	0.0	11.7
Cycle Q Clear Time (g_c), s	0.0	24.2	0.0	17.0	0.0	18.5	0.0	11.7
Lane Grp Cap (c), veh/h	0	1019	0	363	0	1138	0	361
V/C Ratio (X)	0.00	0.97	0.00	0.95	0.00	0.65	0.00	0.70
Avail Cap (c_a), veh/h	0	1019	0	363	0	1138	0	361
Upstream Filter (I)	0.00	0.62	0.00	1.00	0.00	0.88	0.00	1.00
Uniform Delay (d1), s/veh	0.0	31.9	0.0	35.5	0.0	35.1	0.0	33.5
Incr Delay (d2), s/veh	0.0	15.4	0.0	34.3	0.0	2.5	0.0	5.8
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	47.3	0.0	69.8	0.0	37.7	0.0	39.3
1st-Term Q (Q1), veh/ln	0.0	10.2	0.0	7.3	0.0	8.5	0.0	5.0
2nd-Term Q (Q2), veh/ln	0.0	2.2	0.0	3.5	0.0	0.4	0.0	0.6

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	12.4	0.0	10.7	0.0	8.9	0.0	5.6
%ile Storage Ratio (RQ%)	0.00	0.32	0.00	0.05	0.00	0.09	0.00	0.04
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		T+R		T+R		T+R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	534	0	340	0	372	0	251
Grp Sat Flow (s), veh/h/ln	0	1610	0	1771	0	1729	0	1764
Q Serve Time (g_s), s	0.0	25.4	0.0	17.1	0.0	18.6	0.0	11.9
Cycle Q Clear Time (g_c), s	0.0	25.4	0.0	17.1	0.0	18.6	0.0	11.9
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	0.41	0.00	0.55	0.00	0.43
Lane Grp Cap (c), veh/h	0	454	0	356	0	569	0	353
V/C Ratio (X)	0.00	1.18	0.00	0.96	0.00	0.65	0.00	0.71
Avail Cap (c_a), veh/h	0	454	0	356	0	569	0	353
Upstream Filter (I)	0.00	0.62	0.00	1.00	0.00	0.88	0.00	1.00
Uniform Delay (d1), s/veh	0.0	32.3	0.0	35.6	0.0	35.2	0.0	33.6
Incr Delay (d2), s/veh	0.0	92.8	0.0	36.0	0.0	5.1	0.0	6.5
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	125.1	0.0	71.6	0.0	40.2	0.0	40.1
1st-Term Q (Q1), veh/ln	0.0	9.5	0.0	7.2	0.0	8.5	0.0	5.0
2nd-Term Q (Q2), veh/ln	0.0	11.7	0.0	3.6	0.0	0.8	0.0	0.6
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	21.2	0.0	10.8	0.0	9.3	0.0	5.6
%ile Storage Ratio (RQ%)	0.00	0.55	0.00	0.05	0.00	0.09	0.00	0.04
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	19.9	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	61.5
HCM 6th LOS	E



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	214	387	227	828	1802	0	0	1297	769
Future Volume (veh/h)	0	0	0	214	387	227	828	1802	0	0	1297	769
Number				3	8	18	5	2	12	1	6	16
Initial Q, veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln				1800	1900	1900	1900	1900	0	0	1900	1900
Adj Flow Rate, veh/h				225	407	239	872	1897	0	0	1365	809
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence				Yes			Yes			No		
Cap, veh/h				185	348	216	585	2635	0	0	1360	606
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green				0.21	0.21	0.21	0.32	0.73	0.00	0.00	0.38	0.38
Unsig. Movement Delay												
Ln Grp Delay, s/veh				176.8	0.0	138.2	272.3	11.7	0.0	0.0	65.9	203.4
Ln Grp LOS				F	A	F	F	B	A	A	F	F
Approach Vol, veh/h					871			2769			2174	
Approach Delay, s/veh					159.2			93.7			117.1	
Approach LOS					F			F			F	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2	8		5	6		
Case No		4.0	12.0		2.0	7.0		
Phs Duration (G+Y+Rc), s		114.0	36.0		53.0	61.0		
Change Period (Y+Rc), s		4.5	4.5		4.5	4.5		
Max Green (Gmax), s		109.5	31.5		48.5	56.5		
Max Allow Headway (MAH), s		5.2	5.3		3.8	4.8		
Max Q Clear (g_c+I1), s		46.9	33.5		50.5	58.5		
Green Ext Time (g_e), s		30.0	0.0		0.0	0.0		
Prob of Phs Call (p_c)		1.00	1.00		1.00	1.00		
Prob of Max Out (p_x)		0.00	1.00		1.00	0.00		

Left-Turn Movement Data								
Assigned Mvmt			3		5	1		
Mvmt Sat Flow, veh/h			883		1810	0		

Through Movement Data								
Assigned Mvmt		2	8			6		
Mvmt Sat Flow, veh/h		3705	1658			3705		

Right-Turn Movement Data								
Assigned Mvmt		12	18			16		
Mvmt Sat Flow, veh/h		0	1030			1610		

Left Lane Group Data								
Assigned Mvmt	0	0	3	0	5	1	0	0
Lane Assignment			L+T		L (Prot)			

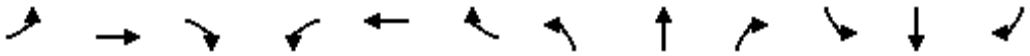
Lanes in Grp	0	0	1	0	1	0	0	0
Grp Vol (v), veh/h	0	0	473	0	872	0	0	0
Grp Sat Flow (s), veh/h/ln	0	0	1856	0	1810	0	0	0
Q Serve Time (g_s), s	0.0	0.0	31.5	0.0	48.5	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	31.5	0.0	48.5	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	56.5	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	0.00	0.48	0.00	1.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	390	0	585	0	0	0
V/C Ratio (X)	0.00	0.00	1.21	0.00	1.49	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	0	390	0	585	0	0	0
Upstream Filter (I)	0.00	0.00	1.00	0.00	0.09	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	59.3	0.0	50.8	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	117.6	0.0	221.5	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	176.8	0.0	272.3	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	14.8	0.0	21.9	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	12.7	0.0	36.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	0.00	1.00	0.00	1.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	27.5	0.0	57.9	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.67	0.00	9.65	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	20.8	0.0	71.7	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.3	0.0	0.4	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	8	0	0	6	0	0
Lane Assignment		T				T		
Lanes in Grp	0	2	0	0	0	2	0	0
Grp Vol (v), veh/h	0	1897	0	0	0	1365	0	0
Grp Sat Flow (s), veh/h/ln	0	1805	0	0	0	1805	0	0
Q Serve Time (g_s), s	0.0	44.9	0.0	0.0	0.0	56.5	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	44.9	0.0	0.0	0.0	56.5	0.0	0.0
Lane Grp Cap (c), veh/h	0	2635	0	0	0	1360	0	0
V/C Ratio (X)	0.00	0.72	0.00	0.00	0.00	1.00	0.00	0.00
Avail Cap (c_a), veh/h	0	2635	0	0	0	1360	0	0
Upstream Filter (I)	0.00	0.09	0.00	0.00	0.00	0.56	0.00	0.00
Uniform Delay (d1), s/veh	0.0	11.5	0.0	0.0	0.0	46.8	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.2	0.0	0.0	0.0	19.2	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	11.7	0.0	0.0	0.0	65.9	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	16.7	0.0	0.0	0.0	25.2	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	3.6	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	16.8	0.0	0.0	0.0	28.8	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.77	0.00	0.00	0.00	0.75	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	1.3	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	18	0	0	16	0	0
Lane Assignment			T+R			R		
Lanes in Grp	0	0	1	0	0	1	0	0
Grp Vol (v), veh/h	0	0	398	0	0	809	0	0
Grp Sat Flow (s), veh/h/ln	0	0	1715	0	0	1610	0	0
Q Serve Time (g_s), s	0.0	0.0	31.5	0.0	0.0	56.5	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	31.5	0.0	0.0	56.5	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.00	0.60	0.00	0.00	1.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	360	0	0	606	0	0
V/C Ratio (X)	0.00	0.00	1.11	0.00	0.00	1.33	0.00	0.00
Avail Cap (c_a), veh/h	0	0	360	0	0	606	0	0
Upstream Filter (I)	0.00	0.00	1.00	0.00	0.00	0.56	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	59.3	0.0	0.0	46.8	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	78.9	0.0	0.0	156.6	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	138.2	0.0	0.0	203.4	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	13.7	0.0	0.0	22.5	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	7.9	0.0	0.0	26.4	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	21.6	0.0	0.0	48.8	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.52	0.00	0.00	1.27	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	9.5	0.0	0.0	50.6	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.3	0.0	0.0	0.3	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	112.3
HCM 6th LOS	F



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	449	85	660	0	0	0	0	1548	509	322	999	0
Future Volume (veh/h)	449	85	660	0	0	0	0	1548	509	322	999	0
Number	7	4	14				5	2	12	1	6	16
Initial Q, veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1800	1900	1900				0	1900	1900	1900	1900	0
Adj Flow Rate, veh/h	473	89	695				0	1629	536	339	1052	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0				0	0	0	0	0	0
Opposing Right Turn Influence	Yes						No			Yes		
Cap, veh/h	466	88	489				0	1599	677	324	2282	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	2.00	2.00	2.00	1.00	1.00
Prop Arrive On Green	0.30	0.30	0.30				0.00	0.84	0.84	0.36	0.63	0.00
Unsig. Movement Delay												
Ln Grp Delay, s/veh	90.9	0.0	250.3				0.0	38.5	17.4	73.4	13.4	0.0
Ln Grp LOS	F	A	F				A	F	B	F	B	A
Approach Vol, veh/h		1257						2165			1391	
Approach Delay, s/veh		179.0						33.3			28.0	
Approach LOS		F						C			C	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Case No	2.0	7.0		12.0		4.0		
Phs Duration (G+Y+Rc), s	29.6	63.4		47.0		93.0		
Change Period (Y+Rc), s	4.5	4.5		4.5		4.5		
Max Green (Gmax), s	25.1	58.9		42.5		88.5		
Max Allow Headway (MAH), s	3.8	4.9		5.5		5.2		
Max Q Clear (g_c+I1), s	27.1	60.9		44.5		23.2		
Green Ext Time (g_e), s	0.0	0.0		0.0		10.3		
Prob of Phs Call (p_c)	1.00	1.00		1.00		1.00		
Prob of Max Out (p_x)	1.00	0.00		1.00		0.00		

Left-Turn Movement Data								
Assigned Mvmt	1	5		7				
Mvmt Sat Flow, veh/h	1810	0		1535				

Through Movement Data								
Assigned Mvmt		2		4		6		
Mvmt Sat Flow, veh/h		3800		289		3705		

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		
Mvmt Sat Flow, veh/h		1610		1610		0		

Left Lane Group Data								
Assigned Mvmt	1	5	0	7	0	0	0	0
Lane Assignment	L (Prot)			L+T				

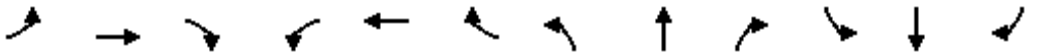
Lanes in Grp	1	0	0	1	0	0	0	0
Grp Vol (v), veh/h	339	0	0	562	0	0	0	0
Grp Sat Flow (s), veh/h/ln	1810	0	0	1823	0	0	0	0
Q Serve Time (g_s), s	25.1	0.0	0.0	42.5	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	25.1	0.0	0.0	42.5	0.0	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	58.9	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	0.84	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	324	0	0	553	0	0	0	0
V/C Ratio (X)	1.04	0.00	0.00	1.02	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	324	0	0	553	0	0	0	0
Upstream Filter (I)	0.09	0.00	0.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	44.9	0.0	0.0	48.8	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	28.5	0.0	0.0	42.2	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	73.4	0.0	0.0	90.9	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	9.7	0.0	0.0	19.2	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	2.6	0.0	0.0	6.5	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00
%ile Back of Q (50%), veh/ln	12.2	0.0	0.0	25.7	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	2.04	0.00	0.00	0.76	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	3.6	0.0	0.0	2.1	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.3	0.0	0.0	0.3	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	0
Lane Assignment		T				T		
Lanes in Grp	0	2	0	0	0	2	0	0
Grp Vol (v), veh/h	0	1629	0	0	0	1052	0	0
Grp Sat Flow (s), veh/h/ln	0	1900	0	0	0	1805	0	0
Q Serve Time (g_s), s	0.0	58.9	0.0	0.0	0.0	21.2	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	58.9	0.0	0.0	0.0	21.2	0.0	0.0
Lane Grp Cap (c), veh/h	0	1599	0	0	0	2282	0	0
V/C Ratio (X)	0.00	1.02	0.00	0.00	0.00	0.46	0.00	0.00
Avail Cap (c_a), veh/h	0	1599	0	0	0	2282	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	0.09	0.00	0.00
Uniform Delay (d1), s/veh	0.0	11.1	0.0	0.0	0.0	13.4	0.0	0.0
Incr Delay (d2), s/veh	0.0	27.4	0.0	0.0	0.0	0.1	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	38.5	0.0	0.0	0.0	13.4	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	4.9	0.0	0.0	0.0	8.5	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	6.1	0.0	0.0	0.0	0.0	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	10.9	0.0	0.0	0.0	8.5	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.20	0.00	0.00	0.00	0.39	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	7.6	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	0
Lane Assignment		R		T+R				
Lanes in Grp	0	1	0	1	0	0	0	0
Grp Vol (v), veh/h	0	536	0	695	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	1610	0	1610	0	0	0	0
Q Serve Time (g_s), s	0.0	22.1	0.0	42.5	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	22.1	0.0	42.5	0.0	0.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	677	0	489	0	0	0	0
V/C Ratio (X)	0.00	0.79	0.00	1.42	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	677	0	489	0	0	0	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	8.2	0.0	48.8	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	9.2	0.0	201.5	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	17.4	0.0	250.3	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	3.2	0.0	17.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	1.7	0.0	27.4	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	4.9	0.0	44.3	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.09	0.00	1.31	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	51.5	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	69.8
HCM 6th LOS	E



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1276	667	539	654	0	0	0	0	454	7	270
Future Volume (veh/h)	0	1276	667	539	654	0	0	0	0	454	7	270
Number	7	4	14	3	8	18				1	6	16
Initial Q, veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	0	1900	1900	1700	1900	0				1900	1900	1900
Adj Flow Rate, veh/h	0	1343	0	567	688	0				478	7	284
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95				0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0				0	0	0
Opposing Right Turn Influence	No			Yes						Yes		
Cap, veh/h	0	1375		631	2248	0				527	8	476
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Prop Arrive On Green	0.00	0.38	0.00	0.20	0.62	0.00				0.30	0.30	0.30
Unsig. Movement Delay												
Ln Grp Delay, s/veh	0.0	37.2	0.0	55.4	10.0	0.0				58.9	0.0	38.6
Ln Grp LOS	A	D		E	A	A				E	A	D
Approach Vol, veh/h		1343			1255						769	
Approach Delay, s/veh		37.2			30.5						51.4	
Approach LOS		D			C						D	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	6		3	4				8
Case No	11.0		2.0	7.0				4.0
Phs Duration (G+Y+Rc), s	37.0		26.6	46.4				73.0
Change Period (Y+Rc), s	4.5		4.5	4.5				4.5
Max Green (Gmax), s	32.5		24.5	39.5				68.5
Max Allow Headway (MAH), s	4.9		3.8	5.2				5.2
Max Q Clear (g_c+I1), s	30.4		21.4	42.3				11.8
Green Ext Time (g_e), s	0.9		0.7	0.0				5.7
Prob of Phs Call (p_c)	1.00		1.00	1.00				1.00
Prob of Max Out (p_x)	0.00		1.00	0.00				0.00

Left-Turn Movement Data				
Assigned Mvmt	1		3	7
Mvmt Sat Flow, veh/h	1785		3141	0

Through Movement Data				
Assigned Mvmt	6			4
Mvmt Sat Flow, veh/h	26			3705

Right-Turn Movement Data				
Assigned Mvmt	16			14
Mvmt Sat Flow, veh/h	1610			1610

Left Lane Group Data								
Assigned Mvmt	1	0	3	7	0	0	0	0
Lane Assignment	L+T		L (Prot)					

Lanes in Grp	1	0	2	0	0	0	0	0
Grp Vol (v), veh/h	485	0	567	0	0	0	0	0
Grp Sat Flow (s), veh/h/ln	1811	0	1570	0	0	0	0	0
Q Serve Time (g_s), s	28.4	0.0	19.4	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	28.4	0.0	19.4	0.0	0.0	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	41.9	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.99	0.00	1.00	0.00	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	535	0	631	0	0	0	0	0
V/C Ratio (X)	0.91	0.00	0.90	0.00	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	535	0	700	0	0	0	0	0
Upstream Filter (I)	1.00	0.00	0.90	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	37.3	0.0	42.9	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	21.6	0.0	12.5	0.0	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	58.9	0.0	55.4	0.0	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	12.3	0.0	7.4	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	3.2	0.0	1.1	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	1.00	1.00	0.00	0.00	0.00	0.00
%ile Back of Q (50%), veh/ln	15.5	0.0	8.5	0.0	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	1.21	0.00	0.53	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	6	0	0	4	0	0	0	8
Lane Assignment				T				T
Lanes in Grp	0	0	0	2	0	0	0	2
Grp Vol (v), veh/h	0	0	0	1343	0	0	0	688
Grp Sat Flow (s), veh/h/ln	0	0	0	1805	0	0	0	1805
Q Serve Time (g_s), s	0.0	0.0	0.0	40.3	0.0	0.0	0.0	9.8
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	40.3	0.0	0.0	0.0	9.8
Lane Grp Cap (c), veh/h	0	0	0	1375	0	0	0	2248
V/C Ratio (X)	0.00	0.00	0.00	0.98	0.00	0.00	0.00	0.31
Avail Cap (c_a), veh/h	0	0	0	1375	0	0	0	2248
Upstream Filter (I)	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.90
Uniform Delay (d1), s/veh	0.0	0.0	0.0	33.6	0.0	0.0	0.0	9.7
Incr Delay (d2), s/veh	0.0	0.0	0.0	3.7	0.0	0.0	0.0	0.3
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	37.2	0.0	0.0	0.0	10.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	17.1	0.0	0.0	0.0	3.7
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.7	0.0	0.0	0.0	0.1

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	1.00	0.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	17.8	0.0	0.0	0.0	3.8
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.17	0.00	0.00	0.00	0.23
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	16	0	0	14	0	0	0	18
Lane Assignment	R			R				
Lanes in Grp	1	0	0	1	0	0	0	0
Grp Vol (v), veh/h	284	0	0	0	0	0	0	0
Grp Sat Flow (s), veh/h/ln	1610	0	0	1610	0	0	0	0
Q Serve Time (g_s), s	16.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	16.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	1.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	476	0	0	613	0	0	0	0
V/C Ratio (X)	0.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	476	0	0	613	0	0	0	0
Upstream Filter (I)	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	33.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	5.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	38.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	6.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	1.00	0.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	7.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	37.9
HCM 6th LOS	D

Notes

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	295	1357	0	0	847	459	283	3	660	0	0	0
Future Volume (veh/h)	295	1357	0	0	847	459	283	3	660	0	0	0
Number	7	4	14	3	8	18	5	2	12			
Initial Q, veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1800	1900	0	0	1900	1900	1900	1900	1900			
Adj Flow Rate, veh/h	311	1428	0	0	892	483	300	0	695			
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95			
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0			
Opposing Right Turn Influence	Yes			No			Yes					
Cap, veh/h	355	2455	0	0	2194	681	796	0	708			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Prop Arrive On Green	0.21	0.68	0.00	0.00	0.42	0.42	0.22	0.00	0.22			
Unsig. Movement Delay												
Ln Grp Delay, s/veh	35.3	7.7	0.0	0.0	18.7	27.6	31.2	0.0	64.4			
Ln Grp LOS	D	A	A	A	B	C	C	A	E			
Approach Vol, veh/h		1739			1375			995				
Approach Delay, s/veh		12.6			21.8			54.4				
Approach LOS		B			C			D				

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2		4			7	8
Case No		9.0		4.0			2.0	7.0
Phs Duration (G+Y+Rc), s		24.3		65.7			23.1	42.6
Change Period (Y+Rc), s		4.5		4.5			4.5	4.5
Max Green (Gmax), s		19.8		61.2			33.6	23.1
Max Allow Headway (MAH), s		4.0		5.2			3.8	4.8
Max Q Clear (g_c+I1), s		21.3		20.8			17.8	24.3
Green Ext Time (g_e), s		0.0		15.5			0.8	0.0
Prob of Phs Call (p_c)		1.00		1.00			1.00	1.00
Prob of Max Out (p_x)		0.00		0.00			0.00	0.00

Left-Turn Movement Data								
Assigned Mvmt		5					7	3
Mvmt Sat Flow, veh/h		3619					1714	0

Through Movement Data								
Assigned Mvmt		2		4				8
Mvmt Sat Flow, veh/h		0		3705				5358

Right-Turn Movement Data								
Assigned Mvmt		12		14				18
Mvmt Sat Flow, veh/h		3220		0				1610

Left Lane Group Data								
Assigned Mvmt	0	5	0	0	0	0	7	3
Lane Assignment		L					L (Prot)	

Lanes in Grp	0	2	0	0	0	0	1	0
Grp Vol (v), veh/h	0	300	0	0	0	0	311	0
Grp Sat Flow (s), veh/h/ln	0	1810	0	0	0	0	1714	0
Q Serve Time (g_s), s	0.0	6.3	0.0	0.0	0.0	0.0	15.8	0.0
Cycle Q Clear Time (g_c), s	0.0	6.3	0.0	0.0	0.0	0.0	15.8	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	1810	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	38.1
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	0	796	0	0	0	0	355	0
V/C Ratio (X)	0.00	0.38	0.00	0.00	0.00	0.00	0.88	0.00
Avail Cap (c_a), veh/h	0	796	0	0	0	0	640	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	0.00	0.09	0.00
Uniform Delay (d1), s/veh	0.0	29.9	0.0	0.0	0.0	0.0	34.6	0.0
Incr Delay (d2), s/veh	0.0	1.4	0.0	0.0	0.0	0.0	0.7	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	31.2	0.0	0.0	0.0	0.0	35.3	0.0
1st-Term Q (Q1), veh/ln	0.0	2.7	0.0	0.0	0.0	0.0	6.4	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.2	0.0	0.0	0.0	0.0	0.1	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	0.00	0.00	0.00	1.00	1.00
%ile Back of Q (50%), veh/ln	0.0	2.9	0.0	0.0	0.0	0.0	6.5	0.0
%ile Storage Ratio (RQ%)	0.00	0.13	0.00	0.00	0.00	0.00	1.81	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	0	0	8
Lane Assignment				T				T
Lanes in Grp	0	0	0	2	0	0	0	3
Grp Vol (v), veh/h	0	0	0	1428	0	0	0	892
Grp Sat Flow (s), veh/h/ln	0	0	0	1805	0	0	0	1729
Q Serve Time (g_s), s	0.0	0.0	0.0	18.8	0.0	0.0	0.0	10.8
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	18.8	0.0	0.0	0.0	10.8
Lane Grp Cap (c), veh/h	0	0	0	2455	0	0	0	2194
V/C Ratio (X)	0.00	0.00	0.00	0.58	0.00	0.00	0.00	0.41
Avail Cap (c_a), veh/h	0	0	0	2455	0	0	0	2194
Upstream Filter (I)	0.00	0.00	0.00	0.09	0.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	7.6	0.0	0.0	0.0	18.1
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.6
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	7.7	0.0	0.0	0.0	18.7
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	6.1	0.0	0.0	0.0	4.1
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1

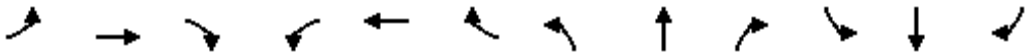
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	6.1	0.0	0.0	0.0	4.3
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.37	0.00	0.00	0.00	0.05
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	0	0	18
Lane Assignment		R						R
Lanes in Grp	0	2	0	0	0	0	0	1
Grp Vol (v), veh/h	0	695	0	0	0	0	0	483
Grp Sat Flow (s), veh/h/ln	0	1610	0	0	0	0	0	1610
Q Serve Time (g_s), s	0.0	19.3	0.0	0.0	0.0	0.0	0.0	22.3
Cycle Q Clear Time (g_c), s	0.0	19.3	0.0	0.0	0.0	0.0	0.0	22.3
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	0.00	0.00	0.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	708	0	0	0	0	0	681
V/C Ratio (X)	0.00	0.98	0.00	0.00	0.00	0.00	0.00	0.71
Avail Cap (c_a), veh/h	0	708	0	0	0	0	0	681
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	34.9	0.0	0.0	0.0	0.0	0.0	21.4
Incr Delay (d2), s/veh	0.0	29.5	0.0	0.0	0.0	0.0	0.0	6.2
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	64.4	0.0	0.0	0.0	0.0	0.0	27.6
1st-Term Q (Q1), veh/ln	0.0	7.4	0.0	0.0	0.0	0.0	0.0	8.0
2nd-Term Q (Q2), veh/ln	0.0	2.9	0.0	0.0	0.0	0.0	0.0	1.2
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	10.3	0.0	0.0	0.0	0.0	0.0	9.1
%ile Storage Ratio (RQ%)	0.00	0.47	0.00	0.00	0.00	0.00	0.00	0.63
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	25.8
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	173	865	98	197	463	259	35	55	307	313	594	221
Future Volume (veh/h)	173	865	98	197	463	259	35	55	307	313	594	221
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1800	1900	1000	1800	1900	1900	1800	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	182	911	103	207	487	273	37	58	323	329	625	233
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	207	1020	239	232	564	478	49	468	397	357	1069	398
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.12	0.28	0.28	0.14	0.30	0.30	0.03	0.25	0.25	0.20	0.42	0.42
Unsig. Movement Delay												
Ln Grp Delay, s/veh	76.8	51.8	39.0	58.7	44.4	38.8	84.0	38.6	62.8	74.1	32.6	32.8
Ln Grp LOS	E	D	D	E	D	D	F	D	E	E	C	C
Approach Vol, veh/h		1196			967			418			1187	
Approach Delay, s/veh		54.5			45.9			61.3			44.2	
Approach LOS		D			D			E			D	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Case No	2.0	3.0	2.0	3.0	2.0	4.0	2.0	3.0
Phs Duration (G+Y+Rc), s	30.2	36.5	22.1	41.2	8.2	58.5	20.2	43.1
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green (Gmax), s	30.5	21.5	20.5	39.5	6.8	45.2	18.5	41.5
Max Allow Headway (MAH), s	3.8	4.2	3.8	5.1	3.8	5.3	3.8	4.8
Max Q Clear (g_c+I1), s	25.2	26.6	17.4	33.5	4.8	26.4	15.6	33.5
Green Ext Time (g_e), s	0.5	0.0	0.2	3.2	0.0	5.5	0.1	2.6
Prob of Phs Call (p_c)	1.00	1.00	1.00	1.00	0.74	1.00	1.00	1.00
Prob of Max Out (p_x)	0.41	0.00	1.00	0.90	1.00	0.00	1.00	0.54

Left-Turn Movement Data								
Assigned Mvmt	1		3		5		7	
Mvmt Sat Flow, veh/h	1810		1714		1714		1714	

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		1900		3610		2574		1900

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1610		847		959		1610

Left Lane Group Data								
Assigned Mvmt	1	0	3	0	5	0	7	0
Lane Assignment	L (Prot)		L (Prot)		L (Prot)		L (Prot)	

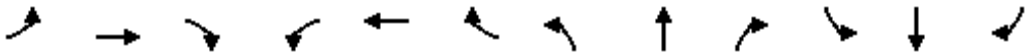
Lanes in Grp	1	0	1	0	1	0	1	0
Grp Vol (v), veh/h	329	0	207	0	37	0	182	0
Grp Sat Flow (s), veh/h/ln	1810	0	1714	0	1714	0	1714	0
Q Serve Time (g_s), s	23.2	0.0	15.4	0.0	2.8	0.0	13.6	0.0
Cycle Q Clear Time (g_c), s	23.2	0.0	15.4	0.0	2.8	0.0	13.6	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	357	0	232	0	49	0	207	0
V/C Ratio (X)	0.92	0.00	0.89	0.00	0.76	0.00	0.88	0.00
Avail Cap (c_a), veh/h	425	0	270	0	90	0	244	0
Upstream Filter (I)	1.00	0.00	0.09	0.00	1.00	0.00	0.74	0.00
Uniform Delay (d1), s/veh	51.2	0.0	55.3	0.0	62.7	0.0	56.2	0.0
Incr Delay (d2), s/veh	23.0	0.0	3.4	0.0	21.3	0.0	20.6	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	74.1	0.0	58.7	0.0	84.0	0.0	76.8	0.0
1st-Term Q (Q1), veh/ln	10.5	0.0	6.7	0.0	1.2	0.0	5.9	0.0
2nd-Term Q (Q2), veh/ln	2.3	0.0	0.2	0.0	0.3	0.0	1.2	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
%ile Back of Q (50%), veh/ln	12.8	0.0	6.9	0.0	1.5	0.0	7.1	0.0
%ile Storage Ratio (RQ%)	3.19	0.00	0.28	0.00	0.16	0.00	0.68	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	1	0	2	0	1	0	1
Grp Vol (v), veh/h	0	58	0	911	0	438	0	487
Grp Sat Flow (s), veh/h/ln	0	1900	0	1805	0	1805	0	1900
Q Serve Time (g_s), s	0.0	3.1	0.0	31.5	0.0	24.4	0.0	31.5
Cycle Q Clear Time (g_c), s	0.0	3.1	0.0	31.5	0.0	24.4	0.0	31.5
Lane Grp Cap (c), veh/h	0	468	0	1020	0	750	0	564
V/C Ratio (X)	0.00	0.12	0.00	0.89	0.00	0.58	0.00	0.86
Avail Cap (c_a), veh/h	0	468	0	1097	0	750	0	607
Upstream Filter (I)	0.00	1.00	0.00	0.74	0.00	1.00	0.00	0.09
Uniform Delay (d1), s/veh	0.0	38.1	0.0	44.8	0.0	29.3	0.0	43.2
Incr Delay (d2), s/veh	0.0	0.5	0.0	7.0	0.0	3.3	0.0	1.2
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	38.6	0.0	51.8	0.0	32.6	0.0	44.4
1st-Term Q (Q1), veh/ln	0.0	1.5	0.0	14.0	0.0	10.5	0.0	14.7
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	1.0	0.0	0.7	0.0	0.2

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	1.5	0.0	15.0	0.0	11.2	0.0	14.9
%ile Storage Ratio (RQ%)	0.00	0.08	0.00	0.19	0.00	1.78	0.00	0.62
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		R		T+R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	323	0	103	0	420	0	273
Grp Sat Flow (s), veh/h/ln	0	1610	0	847	0	1727	0	1610
Q Serve Time (g_s), s	0.0	24.6	0.0	12.9	0.0	24.4	0.0	18.7
Cycle Q Clear Time (g_c), s	0.0	24.6	0.0	12.9	0.0	24.4	0.0	18.7
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	0.55	0.00	1.00
Lane Grp Cap (c), veh/h	0	397	0	239	0	718	0	478
V/C Ratio (X)	0.00	0.81	0.00	0.43	0.00	0.59	0.00	0.57
Avail Cap (c_a), veh/h	0	397	0	257	0	718	0	514
Upstream Filter (I)	0.00	1.00	0.00	0.74	0.00	1.00	0.00	0.09
Uniform Delay (d1), s/veh	0.0	46.2	0.0	38.1	0.0	29.3	0.0	38.7
Incr Delay (d2), s/veh	0.0	16.6	0.0	0.9	0.0	3.5	0.0	0.1
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	62.8	0.0	39.0	0.0	32.8	0.0	38.8
1st-Term Q (Q1), veh/ln	0.0	9.8	0.0	2.7	0.0	10.1	0.0	7.4
2nd-Term Q (Q2), veh/ln	0.0	1.8	0.0	0.1	0.0	0.7	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	11.7	0.0	2.8	0.0	10.8	0.0	7.4
%ile Storage Ratio (RQ%)	0.00	0.63	0.00	0.04	0.00	1.71	0.00	0.31
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	49.8
HCM 6th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	633	773	247	101	969	531	104	613	76	336	29	214
Future Volume (veh/h)	633	773	247	101	969	531	104	613	76	336	29	214
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1700	1900	1900	1800	1900	1900	1800	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	666	814	260	106	1020	559	109	645	80	354	31	225
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	471	949	805	126	804	682	130	542	242	283	46	333
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.15	0.50	0.50	0.07	0.42	0.42	0.08	0.15	0.15	0.16	0.23	0.23
Unsig. Movement Delay												
Ln Grp Delay, s/veh	256.2	37.0	22.5	100.8	173.7	46.1	91.0	167.0	60.7	201.1	0.0	61.9
Ln Grp LOS	F	D	C	F	F	D	F	F	E	F	A	E
Approach Vol, veh/h		1740			1685			834			610	
Approach Delay, s/veh		118.7			126.8			146.9			142.7	
Approach LOS		F			F			F			F	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Case No	2.0	3.0	2.0	3.0	2.0	4.0	2.0	3.0
Phs Duration (G+Y+Rc), s	28.0	27.0	15.5	79.5	15.9	39.1	27.0	68.0
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green (Gmax), s	23.5	22.5	12.2	73.8	15.3	30.7	22.5	63.5
Max Allow Headway (MAH), s	3.8	5.1	3.8	5.0	3.8	5.5	3.8	4.9
Max Q Clear (g_c+I1), s	25.5	24.5	11.2	58.2	11.4	23.3	24.5	65.5
Green Ext Time (g_e), s	0.0	0.0	0.0	6.3	0.1	0.9	0.0	0.0
Prob of Phs Call (p_c)	1.00	1.00	0.99	1.00	0.99	1.00	1.00	1.00
Prob of Max Out (p_x)	1.00	0.00	1.00	0.34	0.92	0.00	1.00	1.00

Left-Turn Movement Data								
Assigned Mvmt	1		3		5		7	
Mvmt Sat Flow, veh/h	1810		1714		1714		3141	

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		3610		1900		199		1900

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1610		1610		1442		1610

Left Lane Group Data								
Assigned Mvmt	1	0	3	0	5	0	7	0
Lane Assignment	L (Prot)		L (Prot)		L (Prot)		L (Prot)	

Lanes in Grp	1	0	1	0	1	0	2	0
Grp Vol (v), veh/h	354	0	106	0	109	0	666	0
Grp Sat Flow (s), veh/h/ln	1810	0	1714	0	1714	0	1570	0
Q Serve Time (g_s), s	23.5	0.0	9.2	0.0	9.4	0.0	22.5	0.0
Cycle Q Clear Time (g_c), s	23.5	0.0	9.2	0.0	9.4	0.0	22.5	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	283	0	126	0	130	0	471	0
V/C Ratio (X)	1.25	0.00	0.84	0.00	0.84	0.00	1.41	0.00
Avail Cap (c_a), veh/h	283	0	139	0	175	0	471	0
Upstream Filter (I)	1.00	0.00	1.00	0.00	1.00	0.00	0.50	0.00
Uniform Delay (d1), s/veh	63.2	0.0	68.6	0.0	68.4	0.0	63.7	0.0
Incr Delay (d2), s/veh	137.8	0.0	32.2	0.0	22.5	0.0	192.4	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	201.1	0.0	100.8	0.0	91.0	0.0	256.2	0.0
1st-Term Q (Q1), veh/ln	10.8	0.0	4.0	0.0	4.1	0.0	9.0	0.0
2nd-Term Q (Q2), veh/ln	10.9	0.0	1.1	0.0	0.8	0.0	12.6	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
%ile Back of Q (50%), veh/ln	21.7	0.0	5.2	0.0	5.0	0.0	21.6	0.0
%ile Storage Ratio (RQ%)	2.63	0.00	0.06	0.00	0.83	0.00	2.08	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	17.6	0.0	0.0	0.0	0.0	0.0	48.7	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.3	0.0	0.0	0.0	0.0	0.0	0.4	0.0

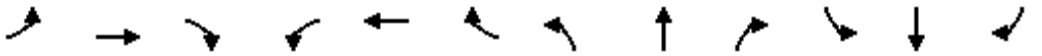
Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T				T
Lanes in Grp	0	2	0	1	0	0	0	1
Grp Vol (v), veh/h	0	645	0	814	0	0	0	1020
Grp Sat Flow (s), veh/h/ln	0	1805	0	1900	0	0	0	1900
Q Serve Time (g_s), s	0.0	22.5	0.0	56.2	0.0	0.0	0.0	63.5
Cycle Q Clear Time (g_c), s	0.0	22.5	0.0	56.2	0.0	0.0	0.0	63.5
Lane Grp Cap (c), veh/h	0	542	0	949	0	0	0	804
V/C Ratio (X)	0.00	1.19	0.00	0.86	0.00	0.00	0.00	1.27
Avail Cap (c_a), veh/h	0	542	0	949	0	0	0	804
Upstream Filter (I)	0.00	1.00	0.00	0.50	0.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	63.8	0.0	32.8	0.0	0.0	0.0	43.2
Incr Delay (d2), s/veh	0.0	103.3	0.0	4.2	0.0	0.0	0.0	130.4
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	167.0	0.0	37.0	0.0	0.0	0.0	173.7
1st-Term Q (Q1), veh/ln	0.0	10.4	0.0	25.6	0.0	0.0	0.0	29.5
2nd-Term Q (Q2), veh/ln	0.0	7.8	0.0	1.1	0.0	0.0	0.0	29.1

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	18.1	0.0	26.7	0.0	0.0	0.0	58.6
%ile Storage Ratio (RQ%)	0.00	1.61	0.00	1.10	0.00	0.00	0.00	0.67
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	25.9	0.0	0.0	0.0	0.0	0.0	53.9
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.3

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		R		T+R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	80	0	260	0	256	0	559
Grp Sat Flow (s), veh/h/ln	0	1610	0	1610	0	1640	0	1610
Q Serve Time (g_s), s	0.0	6.7	0.0	14.5	0.0	21.3	0.0	46.0
Cycle Q Clear Time (g_c), s	0.0	6.7	0.0	14.5	0.0	21.3	0.0	46.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	0.88	0.00	1.00
Lane Grp Cap (c), veh/h	0	242	0	805	0	379	0	682
V/C Ratio (X)	0.00	0.33	0.00	0.32	0.00	0.68	0.00	0.82
Avail Cap (c_a), veh/h	0	242	0	805	0	379	0	682
Upstream Filter (I)	0.00	1.00	0.00	0.50	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	57.0	0.0	22.4	0.0	52.6	0.0	38.2
Incr Delay (d2), s/veh	0.0	3.6	0.0	0.1	0.0	9.3	0.0	7.9
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	60.7	0.0	22.5	0.0	61.9	0.0	46.1
1st-Term Q (Q1), veh/ln	0.0	2.7	0.0	5.6	0.0	8.8	0.0	18.1
2nd-Term Q (Q2), veh/ln	0.0	0.2	0.0	0.0	0.0	1.0	0.0	1.5
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	3.0	0.0	5.6	0.0	9.8	0.0	19.6
%ile Storage Ratio (RQ%)	0.00	1.07	0.00	0.23	0.00	1.19	0.00	0.23
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	129.3
HCM 6th LOS	F

BUILD OUT YEAR WITH IMPROVEMENTS CONDITIONS



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	370	4	210	643	594	0	0	629	809
Future Volume (veh/h)	0	0	0	370	4	210	643	594	0	0	629	809
Number				3	8	18	5	2	12	1	6	16
Initial Q, veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln				1800	1900	1900	1900	1900	0	0	1900	1900
Adj Flow Rate, veh/h				389	4	221	677	625	0	0	662	852
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence				Yes			Yes			No		
Cap, veh/h				428	4	385	730	2477	0	0	2286	710
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	2.00	2.00
Prop Arrive On Green				0.24	0.24	0.24	0.42	1.00	0.00	0.00	0.88	0.88
Unsig. Movement Delay												
Ln Grp Delay, s/veh				64.6	0.0	41.9	47.2	0.2	0.0	0.0	4.4	110.5
Ln Grp LOS				E	A	D	D	A	A	A	A	F
Approach Vol, veh/h					614			1302			1514	
Approach Delay, s/veh					56.4			24.7			64.1	
Approach LOS					E			C			E	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2	8		5	6		
Case No		4.0	11.0		2.0	7.0		
Phs Duration (G+Y+Rc), s		86.8	33.2		29.4	57.4		
Change Period (Y+Rc), s		4.5	4.5		4.5	4.5		
Max Green (Gmax), s		79.4	31.6		27.3	47.6		
Max Allow Headway (MAH), s		5.2	4.9		3.8	4.5		
Max Q Clear (g_c+I1), s		2.0	27.3		24.0	54.9		
Green Ext Time (g_e), s		5.0	1.3		0.9	0.0		
Prob of Phs Call (p_c)		1.00	1.00		1.00	1.00		
Prob of Max Out (p_x)		0.00	1.00		1.00	0.00		

Left-Turn Movement Data								
Assigned Mvmt			3		5	1		
Mvmt Sat Flow, veh/h			1792		3510	0		

Through Movement Data								
Assigned Mvmt		2	8			6		
Mvmt Sat Flow, veh/h		3705	18			5358		

Right-Turn Movement Data								
Assigned Mvmt		12	18			16		
Mvmt Sat Flow, veh/h		0	1610			1610		

Left Lane Group Data								
Assigned Mvmt	0	0	3	0	5	1	0	0
Lane Assignment			L+T		L (Prot)			

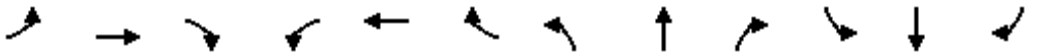
Lanes in Grp	0	0	1	0	2	0	0	0
Grp Vol (v), veh/h	0	0	393	0	677	0	0	0
Grp Sat Flow (s), veh/h/ln	0	0	1810	0	1755	0	0	0
Q Serve Time (g_s), s	0.0	0.0	25.3	0.0	22.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	25.3	0.0	22.0	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	52.9	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	0.00	0.99	0.00	1.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	432	0	730	0	0	0
V/C Ratio (X)	0.00	0.00	0.91	0.00	0.93	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	0	477	0	799	0	0	0
Upstream Filter (I)	0.00	0.00	1.00	0.00	0.76	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	44.4	0.0	34.2	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	20.2	0.0	13.1	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	64.6	0.0	47.2	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	11.3	0.0	7.5	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	2.4	0.0	1.3	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	0.00	1.00	0.00	1.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	13.7	0.0	8.9	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.28	0.00	0.85	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	8	0	0	6	0	0
Lane Assignment		T				T		
Lanes in Grp	0	2	0	0	0	3	0	0
Grp Vol (v), veh/h	0	625	0	0	0	662	0	0
Grp Sat Flow (s), veh/h/ln	0	1805	0	0	0	1729	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	2.4	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	2.4	0.0	0.0
Lane Grp Cap (c), veh/h	0	2477	0	0	0	2286	0	0
V/C Ratio (X)	0.00	0.25	0.00	0.00	0.00	0.29	0.00	0.00
Avail Cap (c_a), veh/h	0	2477	0	0	0	2286	0	0
Upstream Filter (I)	0.00	0.76	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	4.1	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.2	0.0	0.0	0.0	0.3	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.2	0.0	0.0	0.0	4.4	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.1	0.0	0.0	0.0	0.8	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.01	0.00	0.00	0.00	0.02	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	18	0	0	16	0	0
Lane Assignment			R			R		
Lanes in Grp	0	0	1	0	0	1	0	0
Grp Vol (v), veh/h	0	0	221	0	0	852	0	0
Grp Sat Flow (s), veh/h/ln	0	0	1610	0	0	1610	0	0
Q Serve Time (g_s), s	0.0	0.0	14.5	0.0	0.0	52.9	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	14.5	0.0	0.0	52.9	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	385	0	0	710	0	0
V/C Ratio (X)	0.00	0.00	0.57	0.00	0.00	1.20	0.00	0.00
Avail Cap (c_a), veh/h	0	0	424	0	0	710	0	0
Upstream Filter (I)	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	40.3	0.0	0.0	7.1	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	1.6	0.0	0.0	103.4	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	41.9	0.0	0.0	110.5	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	5.8	0.0	0.0	2.6	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.2	0.0	0.0	20.4	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	5.9	0.0	0.0	23.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.12	0.00	0.00	0.50	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	35.6	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	47.8
HCM 6th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	627	9	559	0	0	0	0	762	352	107	557	0
Future Volume (veh/h)	627	9	559	0	0	0	0	762	352	107	557	0
Number	7	4	14				5	2	12	1	6	16
Initial Q, veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1800	1900	1900				0	1900	1900	1900	1900	0
Adj Flow Rate, veh/h	660	9	588				0	802	371	113	586	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0				0	0	0	0	0	0
Opposing Right Turn Influence	Yes						No			Yes		
Cap, veh/h	737	10	684				0	2177	676	163	1808	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	2.00	2.00	2.00	2.00	1.00
Prop Arrive On Green	0.43	0.43	0.43				0.00	0.84	0.84	0.09	1.00	0.00
Unsig. Movement Delay												
Ln Grp Delay, s/veh	43.4	0.0	40.3				0.0	6.9	10.0	63.0	0.5	0.0
Ln Grp LOS	D	A	D				A	A	A	E	A	A
Approach Vol, veh/h		1257						1173			699	
Approach Delay, s/veh		41.9						7.9			10.6	
Approach LOS		D						A			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Case No	2.0	7.0		10.0		4.0		
Phs Duration (G+Y+Rc), s	10.5	59.1		60.4		69.6		
Change Period (Y+Rc), s	4.5	4.5		4.5		4.5		
Max Green (Gmax), s	9.5	34.5		72.5		48.5		
Max Allow Headway (MAH), s	3.8	4.8		4.6		5.2		
Max Q Clear (g_c+I1), s	6.1	10.9		48.4		2.0		
Green Ext Time (g_e), s	0.1	7.5		7.5		4.6		
Prob of Phs Call (p_c)	0.98	1.00		1.00		1.00		
Prob of Max Out (p_x)	1.00	0.00		0.14		0.00		

Left-Turn Movement Data								
Assigned Mvmt	1	5		7				
Mvmt Sat Flow, veh/h	3510	0		1714				

Through Movement Data								
Assigned Mvmt		2		4		6		
Mvmt Sat Flow, veh/h		5358		24		3705		

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		
Mvmt Sat Flow, veh/h		1610		1590		0		

Left Lane Group Data								
Assigned Mvmt	1	5	0	7	0	0	0	0
Lane Assignment	L (Prot)			L				

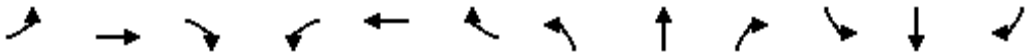
Lanes in Grp	2	0	0	1	0	0	0	0
Grp Vol (v), veh/h	113	0	0	660	0	0	0	0
Grp Sat Flow (s), veh/h/ln	1755	0	0	1714	0	0	0	0
Q Serve Time (g_s), s	4.1	0.0	0.0	46.4	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	4.1	0.0	0.0	46.4	0.0	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	1714	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	54.6	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	163	0	0	737	0	0	0	0
V/C Ratio (X)	0.69	0.00	0.00	0.90	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	257	0	0	956	0	0	0	0
Upstream Filter (I)	0.96	0.00	0.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	58.1	0.0	0.0	34.3	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	5.0	0.0	0.0	9.0	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	63.0	0.0	0.0	43.4	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	1.7	0.0	0.0	19.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.1	0.0	0.0	1.8	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00
%ile Back of Q (50%), veh/ln	1.9	0.0	0.0	20.8	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.18	0.00	0.00	0.36	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	0
Lane Assignment		T				T		
Lanes in Grp	0	3	0	0	0	2	0	0
Grp Vol (v), veh/h	0	802	0	0	0	586	0	0
Grp Sat Flow (s), veh/h/ln	0	1729	0	0	0	1805	0	0
Q Serve Time (g_s), s	0.0	4.7	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	4.7	0.0	0.0	0.0	0.0	0.0	0.0
Lane Grp Cap (c), veh/h	0	2177	0	0	0	1808	0	0
V/C Ratio (X)	0.00	0.37	0.00	0.00	0.00	0.32	0.00	0.00
Avail Cap (c_a), veh/h	0	2177	0	0	0	1808	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	0.96	0.00	0.00
Uniform Delay (d1), s/veh	0.0	6.4	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.5	0.0	0.0	0.0	0.5	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	6.9	0.0	0.0	0.0	0.5	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	1.4	0.0	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	1.5	0.0	0.0	0.0	0.1	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.05	0.00	0.00	0.00	0.01	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	0
Lane Assignment		R		T+R				
Lanes in Grp	0	1	0	1	0	0	0	0
Grp Vol (v), veh/h	0	371	0	597	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	1610	0	1614	0	0	0	0
Q Serve Time (g_s), s	0.0	8.9	0.0	43.5	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	8.9	0.0	43.5	0.0	0.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	0.98	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	676	0	694	0	0	0	0
V/C Ratio (X)	0.00	0.55	0.00	0.86	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	676	0	900	0	0	0	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	6.8	0.0	33.5	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	3.2	0.0	6.8	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	10.0	0.0	40.3	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	2.0	0.0	16.7	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.6	0.0	1.3	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	2.6	0.0	18.1	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.08	0.00	0.31	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	22.2
HCM 6th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	39	293	70	453	809	165	85	233	296	226	538	82
Future Volume (veh/h)	39	293	70	453	809	165	85	233	296	226	538	82
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1800	1900	1900	1800	1900	1900	1800	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	41	308	74	477	852	174	89	245	312	238	566	86
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	61	405	96	450	1094	223	112	944	421	247	1047	159
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.67	1.67	1.67	1.00	1.00	1.00
Prop Arrive On Green	0.04	0.14	0.14	0.26	0.37	0.37	0.11	0.44	0.44	0.14	0.33	0.33
Unsig. Movement Delay												
Ln Grp Delay, s/veh	54.9	42.6	43.8	88.4	29.5	29.5	58.5	20.4	32.2	85.3	27.9	27.9
Ln Grp LOS	D	D	D	F	C	C	E	C	C	F	C	C
Approach Vol, veh/h		423			1503			646			890	
Approach Delay, s/veh		44.3			48.2			31.3			43.2	
Approach LOS		D			D			C			D	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Case No	2.0	3.0	2.0	4.0	2.0	4.0	2.0	4.0
Phs Duration (G+Y+Rc), s	16.8	28.0	28.1	17.1	10.4	34.5	7.7	37.5
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green (Gmax), s	12.3	18.1	23.6	18.0	7.3	23.1	6.2	35.4
Max Allow Headway (MAH), s	3.8	4.6	3.8	5.3	3.8	5.3	3.8	5.3
Max Q Clear (g_c+I1), s	13.8	16.5	25.6	11.4	6.6	15.2	4.1	24.8
Green Ext Time (g_e), s	0.0	0.5	0.0	1.2	0.0	2.5	0.0	4.9
Prob of Phs Call (p_c)	1.00	1.00	1.00	1.00	0.89	1.00	0.64	1.00
Prob of Max Out (p_x)	1.00	0.00	1.00	0.65	1.00	0.00	1.00	0.58

Left-Turn Movement Data								
Assigned Mvmt	1		3		5		7	
Mvmt Sat Flow, veh/h	1810		1714		1714		1714	

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		3610		2896		3143		2986

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1610		685		476		610

Left Lane Group Data								
Assigned Mvmt	1	0	3	0	5	0	7	0
Lane Assignment	L (Prot)		L (Prot)		L (Prot)		L (Prot)	

Lanes in Grp	1	0	1	0	1	0	1	0
Grp Vol (v), veh/h	238	0	477	0	89	0	41	0
Grp Sat Flow (s), veh/h/ln	1810	0	1714	0	1714	0	1714	0
Q Serve Time (g_s), s	11.8	0.0	23.6	0.0	4.6	0.0	2.1	0.0
Cycle Q Clear Time (g_c), s	11.8	0.0	23.6	0.0	4.6	0.0	2.1	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	247	0	450	0	112	0	61	0
V/C Ratio (X)	0.96	0.00	1.06	0.00	0.80	0.00	0.67	0.00
Avail Cap (c_a), veh/h	247	0	450	0	139	0	118	0
Upstream Filter (I)	1.00	0.00	0.80	0.00	0.83	0.00	1.00	0.00
Uniform Delay (d1), s/veh	38.6	0.0	33.2	0.0	39.5	0.0	42.9	0.0
Incr Delay (d2), s/veh	46.7	0.0	55.2	0.0	19.0	0.0	12.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	85.3	0.0	88.4	0.0	58.5	0.0	54.9	0.0
1st-Term Q (Q1), veh/ln	5.1	0.0	9.5	0.0	1.8	0.0	0.9	0.0
2nd-Term Q (Q2), veh/ln	3.2	0.0	6.9	0.0	0.6	0.0	0.2	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
%ile Back of Q (50%), veh/ln	8.3	0.0	16.4	0.0	2.4	0.0	1.1	0.0
%ile Storage Ratio (RQ%)	0.13	0.00	0.15	0.00	0.12	0.00	0.01	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	6.9	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	2	0	1	0	1	0	1
Grp Vol (v), veh/h	0	245	0	190	0	324	0	515
Grp Sat Flow (s), veh/h/ln	0	1805	0	1805	0	1805	0	1805
Q Serve Time (g_s), s	0.0	3.9	0.0	9.1	0.0	13.2	0.0	22.8
Cycle Q Clear Time (g_c), s	0.0	3.9	0.0	9.1	0.0	13.2	0.0	22.8
Lane Grp Cap (c), veh/h	0	944	0	252	0	601	0	661
V/C Ratio (X)	0.00	0.26	0.00	0.75	0.00	0.54	0.00	0.78
Avail Cap (c_a), veh/h	0	944	0	361	0	601	0	710
Upstream Filter (I)	0.00	0.83	0.00	1.00	0.00	1.00	0.00	0.80
Uniform Delay (d1), s/veh	0.0	19.8	0.0	37.2	0.0	24.4	0.0	25.3
Incr Delay (d2), s/veh	0.0	0.6	0.0	5.4	0.0	3.5	0.0	4.2
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	20.4	0.0	42.6	0.0	27.9	0.0	29.5
1st-Term Q (Q1), veh/ln	0.0	1.5	0.0	4.0	0.0	5.5	0.0	9.3
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.4	0.0	0.6	0.0	0.8

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	1.6	0.0	4.3	0.0	6.0	0.0	10.1
%ile Storage Ratio (RQ%)	0.00	0.08	0.00	0.06	0.00	0.09	0.00	0.10
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		T+R		T+R		T+R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	312	0	192	0	328	0	511
Grp Sat Flow (s), veh/h/ln	0	1610	0	1777	0	1814	0	1790
Q Serve Time (g_s), s	0.0	14.5	0.0	9.4	0.0	13.2	0.0	22.8
Cycle Q Clear Time (g_c), s	0.0	14.5	0.0	9.4	0.0	13.2	0.0	22.8
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	0.39	0.00	0.26	0.00	0.34
Lane Grp Cap (c), veh/h	0	421	0	248	0	604	0	656
V/C Ratio (X)	0.00	0.74	0.00	0.77	0.00	0.54	0.00	0.78
Avail Cap (c_a), veh/h	0	421	0	355	0	604	0	704
Upstream Filter (I)	0.00	0.83	0.00	1.00	0.00	1.00	0.00	0.80
Uniform Delay (d1), s/veh	0.0	22.8	0.0	37.3	0.0	24.4	0.0	25.3
Incr Delay (d2), s/veh	0.0	9.4	0.0	6.5	0.0	3.5	0.0	4.2
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	32.2	0.0	43.8	0.0	27.9	0.0	29.5
1st-Term Q (Q1), veh/ln	0.0	4.4	0.0	4.0	0.0	5.5	0.0	9.3
2nd-Term Q (Q2), veh/ln	0.0	1.1	0.0	0.4	0.0	0.6	0.0	0.8
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	5.5	0.0	4.5	0.0	6.1	0.0	10.0
%ile Storage Ratio (RQ%)	0.00	0.28	0.00	0.06	0.00	0.10	0.00	0.09
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	43.3
HCM 6th LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	134	3	291	48	48	405	198	468	6	19	872	250
Future Volume (veh/h)	134	3	291	48	48	405	198	468	6	19	872	250
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1700	1900	1900	1800	1900	1900	1800	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	141	3	0	51	51	426	208	493	6	20	918	263
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	192	593		354	382	324	241	1884	23	40	1100	314
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Prop Arrive On Green	0.06	0.31	0.00	0.20	0.20	0.20	0.14	0.52	0.52	0.04	0.79	0.79
Unsig. Movement Delay												
Ln Grp Delay, s/veh	55.1	21.3	0.0	30.0	29.7	198.2	61.5	12.9	12.8	47.6	13.4	13.7
Ln Grp LOS	E	C		C	C	F	E	B	B	D	B	B
Approach Vol, veh/h		144			528			707			1201	
Approach Delay, s/veh		54.4			165.7			27.2			14.1	
Approach LOS		D			F			C			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6	7	8
Case No	2.0	4.0		3.0	2.0	4.0	2.0	5.3
Phs Duration (G+Y+Rc), s	6.5	50.9		32.6	17.2	40.2	10.0	22.6
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5	4.5	4.5
Max Green (Gmax), s	5.2	43.2		28.1	13.5	34.9	5.5	18.1
Max Allow Headway (MAH), s	3.8	5.2		5.2	3.8	5.3	3.8	4.1
Max Q Clear (g_c+I1), s	3.0	8.8		2.1	12.7	20.3	6.0	20.1
Green Ext Time (g_e), s	0.0	3.2		0.0	0.1	7.0	0.0	0.0
Prob of Phs Call (p_c)	0.39	1.00		1.00	0.99	1.00	0.97	1.00
Prob of Max Out (p_x)	1.00	0.00		0.00	1.00	0.00	1.00	1.00

Left-Turn Movement Data								
Assigned Mvmt	1				5		7	3
Mvmt Sat Flow, veh/h	1810				1714		3141	1361

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		3653		1900		2770		1900

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		44		1610		792		1610

Left Lane Group Data								
Assigned Mvmt	1	0	0	0	5	0	7	3
Lane Assignment	L (Prot)				L (Prot)		L (Prot)	L

Lanes in Grp	1	0	0	0	1	0	2	1
Grp Vol (v), veh/h	20	0	0	0	208	0	141	51
Grp Sat Flow (s), veh/h/ln	1810	0	0	0	1714	0	1570	1361
Q Serve Time (g_s), s	1.0	0.0	0.0	0.0	10.7	0.0	4.0	2.8
Cycle Q Clear Time (g_c), s	1.0	0.0	0.0	0.0	10.7	0.0	4.0	2.8
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	1361
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	18.1
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	18.1
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.8
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	0.00	1.00	0.00	1.00	1.00
Lane Grp Cap (c), veh/h	40	0	0	0	241	0	192	354
V/C Ratio (X)	0.51	0.00	0.00	0.00	0.86	0.00	0.73	0.14
Avail Cap (c_a), veh/h	105	0	0	0	257	0	192	354
Upstream Filter (I)	0.51	0.00	0.00	0.00	1.00	0.00	1.00	1.00
Uniform Delay (d1), s/veh	42.6	0.0	0.0	0.0	37.8	0.0	41.5	29.8
Incr Delay (d2), s/veh	5.0	0.0	0.0	0.0	23.7	0.0	13.6	0.2
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	47.6	0.0	0.0	0.0	61.5	0.0	55.1	30.0
1st-Term Q (Q1), veh/ln	0.4	0.0	0.0	0.0	4.4	0.0	1.5	0.9
2nd-Term Q (Q2), veh/ln	0.1	0.0	0.0	0.0	1.6	0.0	0.4	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	0.00	1.00	0.00	1.00	1.00
%ile Back of Q (50%), veh/ln	0.5	0.0	0.0	0.0	6.0	0.0	1.9	0.9
%ile Storage Ratio (RQ%)	0.02	0.00	0.00	0.00	1.00	0.00	0.05	0.03
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	244	0	3	0	597	0	51
Grp Sat Flow (s), veh/h/ln	0	1805	0	1900	0	1805	0	1900
Q Serve Time (g_s), s	0.0	6.8	0.0	0.1	0.0	18.1	0.0	2.0
Cycle Q Clear Time (g_c), s	0.0	6.8	0.0	0.1	0.0	18.1	0.0	2.0
Lane Grp Cap (c), veh/h	0	931	0	593	0	717	0	382
V/C Ratio (X)	0.00	0.26	0.00	0.01	0.00	0.83	0.00	0.13
Avail Cap (c_a), veh/h	0	931	0	593	0	717	0	382
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	0.51	0.00	1.00
Uniform Delay (d1), s/veh	0.0	12.2	0.0	21.3	0.0	7.4	0.0	29.5
Incr Delay (d2), s/veh	0.0	0.7	0.0	0.0	0.0	5.9	0.0	0.2
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	12.9	0.0	21.3	0.0	13.4	0.0	29.7
1st-Term Q (Q1), veh/ln	0.0	2.6	0.0	0.0	0.0	2.8	0.0	0.9
2nd-Term Q (Q2), veh/ln	0.0	0.2	0.0	0.0	0.0	1.2	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	2.8	0.0	0.0	0.0	4.0	0.0	0.9
%ile Storage Ratio (RQ%)	0.00	0.13	0.00	0.00	0.00	0.20	0.00	0.03
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R		R		T+R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	255	0	0	0	584	0	426
Grp Sat Flow (s), veh/h/ln	0	1892	0	1610	0	1757	0	1610
Q Serve Time (g_s), s	0.0	6.8	0.0	0.0	0.0	18.3	0.0	18.1
Cycle Q Clear Time (g_c), s	0.0	6.8	0.0	0.0	0.0	18.3	0.0	18.1
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.02	0.00	1.00	0.00	0.45	0.00	1.00
Lane Grp Cap (c), veh/h	0	976	0	503	0	698	0	324
V/C Ratio (X)	0.00	0.26	0.00	0.00	0.00	0.84	0.00	1.32
Avail Cap (c_a), veh/h	0	976	0	503	0	698	0	324
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	0.51	0.00	1.00
Uniform Delay (d1), s/veh	0.0	12.2	0.0	0.0	0.0	7.5	0.0	35.9
Incr Delay (d2), s/veh	0.0	0.7	0.0	0.0	0.0	6.2	0.0	162.3
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	12.8	0.0	0.0	0.0	13.7	0.0	198.2
1st-Term Q (Q1), veh/ln	0.0	2.7	0.0	0.0	0.0	2.7	0.0	6.9
2nd-Term Q (Q2), veh/ln	0.0	0.2	0.0	0.0	0.0	1.2	0.0	14.6
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	2.9	0.0	0.0	0.0	3.9	0.0	21.5
%ile Storage Ratio (RQ%)	0.00	0.14	0.00	0.00	0.00	0.20	0.00	0.63
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25.5
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3

Intersection Summary	
HCM 6th Ctrl Delay	51.0
HCM 6th LOS	D

Notes

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	87	88	57	391	559	101	132	581	206	85	582	182
Future Volume (veh/h)	87	88	57	391	559	101	132	581	206	85	582	182
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1800	1900	1900	1700	1900	1900	1800	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	92	93	60	412	588	106	139	612	217	89	613	192
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	121	197	84	684	732	310	167	1992	844	113	2790	788
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.07	0.05	0.05	0.21	0.19	0.19	0.10	0.52	0.52	0.06	0.49	0.49
Unsig. Movement Delay												
Ln Grp Delay, s/veh	64.1	57.0	48.4	44.0	49.7	42.5	62.5	16.6	3.1	64.9	17.7	18.4
Ln Grp LOS	E	E	D	D	D	D	E	B	A	E	B	B
Approach Vol, veh/h		245			1106			968			894	
Approach Delay, s/veh		57.6			46.9			20.1			22.5	
Approach LOS		E			D			C			C	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	4	3	5	6	7	8
Case No	2.0	3.0	3.0	2.0	2.0	3.0	2.0	3.0
Phs Duration (G+Y+Rc), s	12.0	67.4	10.7	29.9	16.2	63.2	13.0	27.6
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green (Gmax), s	15.5	34.5	24.5	27.5	21.5	28.5	20.5	31.5
Max Allow Headway (MAH), s	3.8	4.9	4.8	3.8	3.8	4.9	3.8	5.1
Max Q Clear (g_c+I1), s	7.8	13.0	5.6	15.8	11.6	10.3	8.3	19.7
Green Ext Time (g_e), s	0.1	5.0	0.6	1.2	0.2	4.7	0.1	3.4
Prob of Phs Call (p_c)	0.95	1.00	1.00	1.00	0.99	1.00	1.00	1.00
Prob of Max Out (p_x)	0.01	0.00	0.00	0.01	0.00	0.00	0.00	0.25

Left-Turn Movement Data								
Assigned Mvmt	1			3	5		7	
Mvmt Sat Flow, veh/h	1810			3238	1714		1714	

Through Movement Data								
Assigned Mvmt		2	4			6		8
Mvmt Sat Flow, veh/h		3800	3800			5700		3800

Right-Turn Movement Data								
Assigned Mvmt		12	14			16		18
Mvmt Sat Flow, veh/h		1610	1610			1610		1610

Left Lane Group Data								
Assigned Mvmt	1	0	0	3	5	0	7	0
Lane Assignment	L (Prot)			L (Prot)	L (Prot)		L (Prot)	

Lanes in Grp	1	0	0	2	1	0	1	0
Grp Vol (v), veh/h	89	0	0	412	139	0	92	0
Grp Sat Flow (s), veh/h/ln	1810	0	0	1619	1714	0	1714	0
Q Serve Time (g_s), s	5.8	0.0	0.0	13.8	9.6	0.0	6.3	0.0
Cycle Q Clear Time (g_c), s	5.8	0.0	0.0	13.8	9.6	0.0	6.3	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	1.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	113	0	0	684	167	0	121	0
V/C Ratio (X)	0.79	0.00	0.00	0.60	0.83	0.00	0.76	0.00
Avail Cap (c_a), veh/h	234	0	0	742	307	0	293	0
Upstream Filter (I)	0.82	0.00	0.00	1.00	0.89	0.00	1.00	0.00
Uniform Delay (d1), s/veh	55.5	0.0	0.0	42.8	53.2	0.0	54.8	0.0
Incr Delay (d2), s/veh	9.4	0.0	0.0	1.2	9.2	0.0	9.4	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	64.9	0.0	0.0	44.0	62.5	0.0	64.1	0.0
1st-Term Q (Q1), veh/ln	2.7	0.0	0.0	5.5	4.1	0.0	2.7	0.0
2nd-Term Q (Q2), veh/ln	0.3	0.0	0.0	0.1	0.4	0.0	0.3	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	1.00	1.00	0.00	1.00	0.00
%ile Back of Q (50%), veh/ln	2.9	0.0	0.0	5.6	4.5	0.0	3.0	0.0
%ile Storage Ratio (RQ%)	0.41	0.00	0.00	0.04	0.57	0.00	0.35	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	4	0	0	6	0	8
Lane Assignment		T	T			T		T
Lanes in Grp	0	2	2	0	0	3	0	2
Grp Vol (v), veh/h	0	612	93	0	0	613	0	588
Grp Sat Flow (s), veh/h/ln	0	1900	1900	0	0	1900	0	1900
Q Serve Time (g_s), s	0.0	11.0	2.9	0.0	0.0	7.4	0.0	17.7
Cycle Q Clear Time (g_c), s	0.0	11.0	2.9	0.0	0.0	7.4	0.0	17.7
Lane Grp Cap (c), veh/h	0	1992	197	0	0	2790	0	732
V/C Ratio (X)	0.00	0.31	0.47	0.00	0.00	0.22	0.00	0.80
Avail Cap (c_a), veh/h	0	1992	776	0	0	2790	0	998
Upstream Filter (I)	0.00	0.89	1.00	0.00	0.00	0.82	0.00	1.00
Uniform Delay (d1), s/veh	0.0	16.2	55.3	0.0	0.0	17.5	0.0	46.3
Incr Delay (d2), s/veh	0.0	0.4	1.7	0.0	0.0	0.1	0.0	3.4
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	16.6	57.0	0.0	0.0	17.7	0.0	49.7
1st-Term Q (Q1), veh/ln	0.0	4.7	1.4	0.0	0.0	3.2	0.0	8.4
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.3

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	4.8	1.4	0.0	0.0	3.3	0.0	8.7
%ile Storage Ratio (RQ%)	0.00	0.13	0.01	0.00	0.00	0.03	0.00	0.06
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	14	0	0	16	0	18
Lane Assignment		R	R			R		R
Lanes in Grp	0	1	1	0	0	1	0	1
Grp Vol (v), veh/h	0	217	60	0	0	192	0	106
Grp Sat Flow (s), veh/h/ln	0	1610	1610	0	0	1610	0	1610
Q Serve Time (g_s), s	0.0	3.5	3.6	0.0	0.0	8.3	0.0	6.8
Cycle Q Clear Time (g_c), s	0.0	3.5	3.6	0.0	0.0	8.3	0.0	6.8
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	844	84	0	0	788	0	310
V/C Ratio (X)	0.00	0.26	0.72	0.00	0.00	0.24	0.00	0.34
Avail Cap (c_a), veh/h	0	844	329	0	0	788	0	423
Upstream Filter (I)	0.00	0.89	1.00	0.00	0.00	0.82	0.00	1.00
Uniform Delay (d1), s/veh	0.0	2.5	37.5	0.0	0.0	17.8	0.0	41.9
Incr Delay (d2), s/veh	0.0	0.7	10.9	0.0	0.0	0.6	0.0	0.6
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	3.1	48.4	0.0	0.0	18.4	0.0	42.5
1st-Term Q (Q1), veh/ln	0.0	2.9	1.8	0.0	0.0	3.1	0.0	2.7
2nd-Term Q (Q2), veh/ln	0.0	0.2	0.3	0.0	0.0	0.1	0.0	0.1
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	3.1	2.0	0.0	0.0	3.2	0.0	2.8
%ile Storage Ratio (RQ%)	0.00	0.39	0.01	0.00	0.00	0.03	0.00	0.02
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	32.9
HCM 6th LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	327	388	409	631	886	0	0	1033	563
Future Volume (veh/h)	0	0	0	327	388	409	631	886	0	0	1033	563
Number				3	8	18	5	2	12	1	6	16
Initial Q, veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln				1800	1900	1900	1900	1900	0	0	1900	1900
Adj Flow Rate, veh/h				344	408	431	664	933	0	0	1087	593
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence				Yes			Yes			No		
Cap, veh/h				373	453	511	674	2042	0	0	1178	998
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green				0.38	0.38	0.38	0.19	0.54	0.00	0.00	0.31	0.31
Unsig. Movement Delay												
Ln Grp Delay, s/veh				49.4	0.0	40.6	61.5	15.9	0.0	0.0	49.3	34.5
Ln Grp LOS				D	A	D	E	B	A	A	D	C
Approach Vol, veh/h					1183			1597			1680	
Approach Delay, s/veh					45.4			34.8			44.1	
Approach LOS					D			C			D	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2	8		5	6		
Case No		4.0	12.0		2.0	7.0		
Phs Duration (G+Y+Rc), s		63.6	46.4		25.0	38.6		
Change Period (Y+Rc), s		4.5	4.5		4.5	4.5		
Max Green (Gmax), s		57.5	43.5		20.5	32.5		
Max Allow Headway (MAH), s		5.2	5.4		3.8	4.8		
Max Q Clear (g_c+I1), s		18.6	38.9		22.1	32.4		
Green Ext Time (g_e), s		8.2	3.0		0.0	0.1		
Prob of Phs Call (p_c)		1.00	1.00		1.00	1.00		
Prob of Max Out (p_x)		0.00	1.00		1.00	0.00		

Left-Turn Movement Data								
Assigned Mvmt			3		5	1		
Mvmt Sat Flow, veh/h			979		3619	0		

Through Movement Data								
Assigned Mvmt		2	8			6		
Mvmt Sat Flow, veh/h		3800	1189			3800		

Right-Turn Movement Data								
Assigned Mvmt		12	18			16		
Mvmt Sat Flow, veh/h		0	1342			3220		

Left Lane Group Data								
Assigned Mvmt	0	0	3	0	5	1	0	0
Lane Assignment			L+T		L (Prot)			

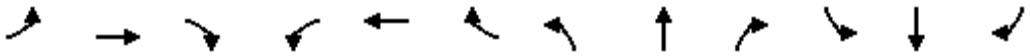
Lanes in Grp	0	0	1	0	2	0	0	0
Grp Vol (v), veh/h	0	0	650	0	664	0	0	0
Grp Sat Flow (s), veh/h/ln	0	0	1851	0	1810	0	0	0
Q Serve Time (g_s), s	0.0	0.0	36.9	0.0	20.1	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	36.9	0.0	20.1	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	34.1	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	0.00	0.53	0.00	1.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	705	0	674	0	0	0
V/C Ratio (X)	0.00	0.00	0.92	0.00	0.98	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	0	732	0	674	0	0	0
Upstream Filter (I)	0.00	0.00	1.00	0.00	0.35	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	32.5	0.0	44.6	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	16.9	0.0	16.9	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	49.4	0.0	61.5	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	16.1	0.0	8.9	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	3.3	0.0	1.6	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	0.00	1.00	0.00	1.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	19.4	0.0	10.5	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.46	0.00	1.75	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	8	0	0	6	0	0
Lane Assignment		T				T		
Lanes in Grp	0	2	0	0	0	2	0	0
Grp Vol (v), veh/h	0	933	0	0	0	1087	0	0
Grp Sat Flow (s), veh/h/ln	0	1900	0	0	0	1900	0	0
Q Serve Time (g_s), s	0.0	16.6	0.0	0.0	0.0	30.4	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	16.6	0.0	0.0	0.0	30.4	0.0	0.0
Lane Grp Cap (c), veh/h	0	2042	0	0	0	1178	0	0
V/C Ratio (X)	0.00	0.46	0.00	0.00	0.00	0.92	0.00	0.00
Avail Cap (c_a), veh/h	0	2042	0	0	0	1178	0	0
Upstream Filter (I)	0.00	0.35	0.00	0.00	0.00	0.94	0.00	0.00
Uniform Delay (d1), s/veh	0.0	15.6	0.0	0.0	0.0	36.7	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.3	0.0	0.0	0.0	12.6	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	15.9	0.0	0.0	0.0	49.3	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	7.0	0.0	0.0	0.0	13.9	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	2.1	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	7.0	0.0	0.0	0.0	15.9	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.32	0.00	0.00	0.00	0.42	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	18	0	0	16	0	0
Lane Assignment			T+R			R		
Lanes in Grp	0	0	1	0	0	2	0	0
Grp Vol (v), veh/h	0	0	533	0	0	593	0	0
Grp Sat Flow (s), veh/h/ln	0	0	1658	0	0	1610	0	0
Q Serve Time (g_s), s	0.0	0.0	32.2	0.0	0.0	17.1	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	32.2	0.0	0.0	17.1	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.00	0.81	0.00	0.00	1.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	632	0	0	998	0	0
V/C Ratio (X)	0.00	0.00	0.84	0.00	0.00	0.59	0.00	0.00
Avail Cap (c_a), veh/h	0	0	656	0	0	998	0	0
Upstream Filter (I)	0.00	0.00	1.00	0.00	0.00	0.94	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	31.1	0.0	0.0	32.1	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	9.5	0.0	0.0	2.4	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	40.6	0.0	0.0	34.5	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	12.6	0.0	0.0	6.6	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	1.7	0.0	0.0	0.3	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	14.3	0.0	0.0	7.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.34	0.00	0.00	0.18	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	41.1
HCM 6th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	508	17	702	0	0	0	0	1039	184	161	703	0
Future Volume (veh/h)	508	17	702	0	0	0	0	1039	184	161	703	0
Number	7	4	14				5	2	12	1	6	16
Initial Q, veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1800	1900	1900				0	1900	1900	1900	1900	0
Adj Flow Rate, veh/h	535	18	739				0	1094	194	169	740	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0				0	0	0	0	0	0
Opposing Right Turn Influence	Yes						No			Yes		
Cap, veh/h	662	22	608				0	1255	532	203	1815	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	2.00	2.00	2.00	2.00	1.00
Prop Arrive On Green	0.38	0.38	0.38				0.00	0.66	0.66	0.22	1.00	0.00
Unsig. Movement Delay												
Ln Grp Delay, s/veh	28.1	0.0	135.2				0.0	19.9	11.1	34.1	0.1	0.0
Ln Grp LOS	C	A	F				A	B	B	C	A	A
Approach Vol, veh/h		1292						1288			909	
Approach Delay, s/veh		89.4						18.6			6.4	
Approach LOS		F						B			A	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Case No	2.0	7.0		12.0		4.0		
Phs Duration (G+Y+Rc), s	12.9	29.3		32.8		42.2		
Change Period (Y+Rc), s	4.5	4.5		4.5		4.5		
Max Green (Gmax), s	8.7	24.5		28.3		37.7		
Max Allow Headway (MAH), s	3.8	5.1		5.5		5.2		
Max Q Clear (g_c+I1), s	8.7	19.3		30.3		2.0		
Green Ext Time (g_e), s	0.0	3.4		0.0		6.0		
Prob of Phs Call (p_c)	0.97	1.00		1.00		1.00		
Prob of Max Out (p_x)	1.00	0.00		1.00		0.00		

Left-Turn Movement Data								
Assigned Mvmt	1	5		7				
Mvmt Sat Flow, veh/h	1810	0		1753				

Through Movement Data								
Assigned Mvmt		2		4		6		
Mvmt Sat Flow, veh/h		3800		59		3705		

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		
Mvmt Sat Flow, veh/h		1610		1610		0		

Left Lane Group Data								
Assigned Mvmt	1	5	0	7	0	0	0	0
Lane Assignment	L (Prot)			L+T				

Lanes in Grp	1	0	0	1	0	0	0	0
Grp Vol (v), veh/h	169	0	0	553	0	0	0	0
Grp Sat Flow (s), veh/h/ln	1810	0	0	1812	0	0	0	0
Q Serve Time (g_s), s	6.7	0.0	0.0	20.5	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	6.7	0.0	0.0	20.5	0.0	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	24.8	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	0.97	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	203	0	0	684	0	0	0	0
V/C Ratio (X)	0.83	0.00	0.00	0.81	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	210	0	0	684	0	0	0	0
Upstream Filter (I)	0.20	0.00	0.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	28.4	0.0	0.0	20.9	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	5.7	0.0	0.0	7.2	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	34.1	0.0	0.0	28.1	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	2.5	0.0	0.0	8.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.3	0.0	0.0	1.4	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00
%ile Back of Q (50%), veh/ln	2.8	0.0	0.0	9.4	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.47	0.00	0.00	0.28	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	0
Lane Assignment		T				T		
Lanes in Grp	0	2	0	0	0	2	0	0
Grp Vol (v), veh/h	0	1094	0	0	0	740	0	0
Grp Sat Flow (s), veh/h/ln	0	1900	0	0	0	1805	0	0
Q Serve Time (g_s), s	0.0	17.3	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	17.3	0.0	0.0	0.0	0.0	0.0	0.0
Lane Grp Cap (c), veh/h	0	1255	0	0	0	1815	0	0
V/C Ratio (X)	0.00	0.87	0.00	0.00	0.00	0.41	0.00	0.00
Avail Cap (c_a), veh/h	0	1255	0	0	0	1815	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	0.20	0.00	0.00
Uniform Delay (d1), s/veh	0.0	11.4	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	8.5	0.0	0.0	0.0	0.1	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	19.9	0.0	0.0	0.0	0.1	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	3.6	0.0	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	1.5	0.0	0.0	0.0	0.0	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	5.1	0.0	0.0	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.10	0.00	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	0
Lane Assignment		R		T+R				
Lanes in Grp	0	1	0	1	0	0	0	0
Grp Vol (v), veh/h	0	194	0	739	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	1610	0	1610	0	0	0	0
Q Serve Time (g_s), s	0.0	4.0	0.0	28.3	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	4.0	0.0	28.3	0.0	0.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	532	0	608	0	0	0	0
V/C Ratio (X)	0.00	0.36	0.00	1.22	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	532	0	608	0	0	0	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	9.2	0.0	23.4	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	1.9	0.0	111.8	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	11.1	0.0	135.2	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	1.2	0.0	9.8	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.3	0.0	18.9	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	1.4	0.0	28.7	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.03	0.00	0.85	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	32.9	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	41.6
HCM 6th LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	162	459	198	44	835	418	70	394	31	203	13	158
Future Volume (veh/h)	162	459	198	44	835	418	70	394	31	203	13	158
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1700	1900	1900	1800	1900	1900	1800	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	171	483	208	46	879	440	74	415	33	214	14	166
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	233	767	328	59	1010	646	94	1432	662	245	58	687
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.07	0.30	0.30	0.03	0.27	0.27	0.05	0.38	0.38	0.14	0.46	0.46
Unsig. Movement Delay												
Ln Grp Delay, s/veh	57.9	37.1	37.3	77.5	49.8	32.3	69.4	26.7	21.4	66.0	0.0	20.6
Ln Grp LOS	E	D	D	E	D	C	E	C	C	E	A	C
Approach Vol, veh/h		862			1365			522			394	
Approach Delay, s/veh		41.3			45.1			32.4			45.3	
Approach LOS		D			D			C			D	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Case No	2.0	3.0	2.0	4.0	2.0	4.0	2.0	3.0
Phs Duration (G+Y+Rc), s	20.8	49.7	8.6	40.9	11.1	59.4	13.1	36.4
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green (Gmax), s	23.5	21.8	14.4	42.3	14.8	30.5	23.2	33.5
Max Allow Headway (MAH), s	3.8	5.1	3.8	5.3	3.8	5.5	3.8	4.8
Max Q Clear (g_c+I1), s	15.9	11.2	5.2	21.9	7.1	10.1	8.2	29.0
Green Ext Time (g_e), s	0.4	2.1	0.0	4.4	0.1	1.0	0.4	2.9
Prob of Phs Call (p_c)	1.00	1.00	0.78	1.00	0.92	1.00	1.00	1.00
Prob of Max Out (p_x)	0.06	0.00	0.00	0.07	0.01	0.00	0.00	1.00

Left-Turn Movement Data								
Assigned Mvmt	1		3		5		7	
Mvmt Sat Flow, veh/h	1810		1714		1714		3238	

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		3800		2525		127		3800

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1610		1080		1503		1610

Left Lane Group Data								
Assigned Mvmt	1	0	3	0	5	0	7	0
Lane Assignment	L (Prot)		L (Prot)		L (Prot)		L (Prot)	

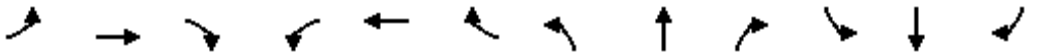
Lanes in Grp	1	0	1	0	1	0	2	0
Grp Vol (v), veh/h	214	0	46	0	74	0	171	0
Grp Sat Flow (s), veh/h/ln	1810	0	1714	0	1714	0	1619	0
Q Serve Time (g_s), s	13.9	0.0	3.2	0.0	5.1	0.0	6.2	0.0
Cycle Q Clear Time (g_c), s	13.9	0.0	3.2	0.0	5.1	0.0	6.2	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	245	0	59	0	94	0	233	0
V/C Ratio (X)	0.87	0.00	0.78	0.00	0.79	0.00	0.73	0.00
Avail Cap (c_a), veh/h	354	0	206	0	211	0	626	0
Upstream Filter (I)	1.00	0.00	1.00	0.00	1.00	0.00	0.74	0.00
Uniform Delay (d1), s/veh	50.9	0.0	57.5	0.0	56.0	0.0	54.6	0.0
Incr Delay (d2), s/veh	15.1	0.0	20.0	0.0	13.4	0.0	3.3	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	66.0	0.0	77.5	0.0	69.4	0.0	57.9	0.0
1st-Term Q (Q1), veh/ln	6.3	0.0	1.4	0.0	2.2	0.0	2.5	0.0
2nd-Term Q (Q2), veh/ln	1.0	0.0	0.3	0.0	0.4	0.0	0.1	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
%ile Back of Q (50%), veh/ln	7.3	0.0	1.7	0.0	2.6	0.0	2.6	0.0
%ile Storage Ratio (RQ%)	0.95	0.00	0.02	0.00	0.23	0.00	0.25	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T				T
Lanes in Grp	0	2	0	1	0	0	0	2
Grp Vol (v), veh/h	0	415	0	363	0	0	0	879
Grp Sat Flow (s), veh/h/ln	0	1900	0	1900	0	0	0	1900
Q Serve Time (g_s), s	0.0	9.2	0.0	19.7	0.0	0.0	0.0	26.5
Cycle Q Clear Time (g_c), s	0.0	9.2	0.0	19.7	0.0	0.0	0.0	26.5
Lane Grp Cap (c), veh/h	0	1432	0	577	0	0	0	1010
V/C Ratio (X)	0.00	0.29	0.00	0.63	0.00	0.00	0.00	0.87
Avail Cap (c_a), veh/h	0	1432	0	670	0	0	0	1061
Upstream Filter (I)	0.00	1.00	0.00	0.74	0.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	26.2	0.0	36.0	0.0	0.0	0.0	42.1
Incr Delay (d2), s/veh	0.0	0.5	0.0	1.1	0.0	0.0	0.0	7.7
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	26.7	0.0	37.1	0.0	0.0	0.0	49.8
1st-Term Q (Q1), veh/ln	0.0	4.2	0.0	9.1	0.0	0.0	0.0	12.3
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.2	0.0	0.0	0.0	1.1

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	4.3	0.0	9.3	0.0	0.0	0.0	13.4
%ile Storage Ratio (RQ%)	0.00	0.38	0.00	0.38	0.00	0.00	0.00	0.15
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		T+R		T+R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	33	0	328	0	180	0	440
Grp Sat Flow (s), veh/h/ln	0	1610	0	1706	0	1630	0	1610
Q Serve Time (g_s), s	0.0	1.5	0.0	19.9	0.0	8.1	0.0	27.0
Cycle Q Clear Time (g_c), s	0.0	1.5	0.0	19.9	0.0	8.1	0.0	27.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	1610.2	0.0	0.0	0.0	0.0	0.0	1610.2
Prot RT Eff Green (g_R), s	0.0	4.1	0.0	0.0	0.0	0.0	0.0	16.3
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	0.63	0.00	0.92	0.00	1.00
Lane Grp Cap (c), veh/h	0	662	0	518	0	745	0	646
V/C Ratio (X)	0.00	0.05	0.00	0.63	0.00	0.24	0.00	0.68
Avail Cap (c_a), veh/h	0	662	0	601	0	745	0	668
Upstream Filter (I)	0.00	1.00	0.00	0.74	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	21.2	0.0	36.0	0.0	19.9	0.0	29.6
Incr Delay (d2), s/veh	0.0	0.1	0.0	1.3	0.0	0.8	0.0	2.7
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	21.4	0.0	37.3	0.0	20.6	0.0	32.3
1st-Term Q (Q1), veh/ln	0.0	0.6	0.0	8.3	0.0	3.1	0.0	10.3
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.2	0.0	0.2	0.0	0.5
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.6	0.0	8.4	0.0	3.2	0.0	10.8
%ile Storage Ratio (RQ%)	0.00	0.21	0.00	0.35	0.00	0.42	0.00	0.12
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	42.0
HCM 6th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	428	11	465	724	1095	0	0	476	931
Future Volume (veh/h)	0	0	0	428	11	465	724	1095	0	0	476	931
Number				3	8	18	5	2	12	1	6	16
Initial Q, veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln				1800	1900	1900	1900	1900	0	0	1900	1900
Adj Flow Rate, veh/h				451	12	489	762	1153	0	0	501	980
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence				Yes			Yes			No		
Cap, veh/h				587	16	536	826	2138	0	0	1153	905
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	2.00	2.00
Prop Arrive On Green				0.33	0.33	0.33	0.47	1.00	0.00	0.00	0.64	0.64
Unsig. Movement Delay												
Ln Grp Delay, s/veh				40.7	0.0	55.7	37.5	0.5	0.0	0.0	17.5	76.7
Ln Grp LOS				D	A	E	D	A	A	A	B	F
Approach Vol, veh/h					952			1915			1481	
Approach Delay, s/veh					48.4			15.2			56.7	
Approach LOS					D			B			E	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2	8		5	6		
Case No		4.0	11.0		2.0	7.0		
Phs Duration (G+Y+Rc), s		75.6	44.4		32.7	42.8		
Change Period (Y+Rc), s		4.5	4.5		4.5	4.5		
Max Green (Gmax), s		66.5	44.5		33.5	28.5		
Max Allow Headway (MAH), s		5.2	4.7		3.8	4.4		
Max Q Clear (g_c+I1), s		2.0	36.9		26.4	40.3		
Green Ext Time (g_e), s		12.0	3.0		1.9	0.0		
Prob of Phs Call (p_c)		1.00	1.00		1.00	1.00		
Prob of Max Out (p_x)		0.00	0.64		0.33	0.00		
Left-Turn Movement Data								
Assigned Mvmt			3		5	1		
Mvmt Sat Flow, veh/h			1765		3510	0		
Through Movement Data								
Assigned Mvmt		2	8			6		
Mvmt Sat Flow, veh/h		3705	47			3705		
Right-Turn Movement Data								
Assigned Mvmt		12	18			16		
Mvmt Sat Flow, veh/h		0	1610			2834		

Left Lane Group Data								
Assigned Mvmt	0	0	3	0	5	1	0	0
Lane Assignment			L+T		L (Prot)			

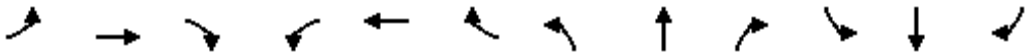
Lanes in Grp	0	0	1	0	2	0	0	0
Grp Vol (v), veh/h	0	0	463	0	762	0	0	0
Grp Sat Flow (s), veh/h/ln	0	0	1812	0	1755	0	0	0
Q Serve Time (g_s), s	0.0	0.0	27.5	0.0	24.4	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	27.5	0.0	24.4	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	38.3	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	0.00	0.97	0.00	1.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	603	0	826	0	0	0
V/C Ratio (X)	0.00	0.00	0.77	0.00	0.92	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	0	672	0	980	0	0	0
Upstream Filter (I)	0.00	0.00	1.00	0.00	0.48	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	35.9	0.0	30.7	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	4.8	0.0	6.8	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	40.7	0.0	37.5	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	12.0	0.0	8.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.8	0.0	0.8	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	0.00	1.00	0.00	1.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	12.8	0.0	8.8	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.27	0.00	0.84	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	8	0	0	6	0	0
Lane Assignment		T				T		
Lanes in Grp	0	2	0	0	0	2	0	0
Grp Vol (v), veh/h	0	1153	0	0	0	501	0	0
Grp Sat Flow (s), veh/h/ln	0	1805	0	0	0	1805	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	8.3	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	8.3	0.0	0.0
Lane Grp Cap (c), veh/h	0	2138	0	0	0	1153	0	0
V/C Ratio (X)	0.00	0.54	0.00	0.00	0.00	0.43	0.00	0.00
Avail Cap (c_a), veh/h	0	2138	0	0	0	1153	0	0
Upstream Filter (I)	0.00	0.48	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	16.3	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.5	0.0	0.0	0.0	1.2	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.5	0.0	0.0	0.0	17.5	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	2.8	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	0.2	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.1	0.0	0.0	0.0	3.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.01	0.00	0.00	0.00	0.07	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	18	0	0	16	0	0
Lane Assignment			R			R		
Lanes in Grp	0	0	1	0	0	2	0	0
Grp Vol (v), veh/h	0	0	489	0	0	980	0	0
Grp Sat Flow (s), veh/h/ln	0	0	1610	0	0	1417	0	0
Q Serve Time (g_s), s	0.0	0.0	34.9	0.0	0.0	38.3	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	34.9	0.0	0.0	38.3	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	536	0	0	905	0	0
V/C Ratio (X)	0.00	0.00	0.91	0.00	0.00	1.08	0.00	0.00
Avail Cap (c_a), veh/h	0	0	597	0	0	905	0	0
Upstream Filter (I)	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	38.3	0.0	0.0	21.7	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	17.4	0.0	0.0	55.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	55.7	0.0	0.0	76.7	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	13.6	0.0	0.0	7.8	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	2.6	0.0	0.0	6.9	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	16.2	0.0	0.0	14.8	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.33	0.00	0.00	0.32	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	18.8	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	36.6
HCM 6th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	477	9	513	0	0	0	0	1213	644	333	648	0
Future Volume (veh/h)	477	9	513	0	0	0	0	1213	644	333	648	0
Number	7	4	14				5	2	12	1	6	16
Initial Q, veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1800	1900	1900				0	1900	1900	1900	1900	0
Adj Flow Rate, veh/h	502	9	540				0	1277	678	351	682	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0				0	0	0	0	0	0
Opposing Right Turn Influence	Yes						No			Yes		
Cap, veh/h	586	9	542				0	1599	496	439	1835	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	2.00	2.00	2.00	0.67	1.00
Prop Arrive On Green	0.34	0.34	0.34				0.00	0.62	0.62	0.25	0.34	0.00
Unsig. Movement Delay												
Ln Grp Delay, s/veh	30.4	0.0	56.8				0.0	14.4	188.6	31.0	13.1	0.0
Ln Grp LOS	C	A	E				A	B	F	C	B	A
Approach Vol, veh/h		1051						1955			1033	
Approach Delay, s/veh		44.2						74.8			19.2	
Approach LOS		D						E			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Case No	2.0	7.0		10.0		4.0		
Phs Duration (G+Y+Rc), s	12.0	23.0		25.0		35.0		
Change Period (Y+Rc), s	4.5	4.5		4.5		4.5		
Max Green (Gmax), s	7.5	18.5		20.5		30.5		
Max Allow Headway (MAH), s	3.8	4.8		4.7		5.2		
Max Q Clear (g_c+I1), s	7.6	20.5		22.4		10.6		
Green Ext Time (g_e), s	0.0	0.0		0.0		4.7		
Prob of Phs Call (p_c)	1.00	1.00		1.00		1.00		
Prob of Max Out (p_x)	1.00	0.00		1.00		0.00		

Left-Turn Movement Data								
Assigned Mvmt	1	5		7				
Mvmt Sat Flow, veh/h	3510	0		1714				

Through Movement Data								
Assigned Mvmt		2		4		6		
Mvmt Sat Flow, veh/h		5358		26		3705		

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		
Mvmt Sat Flow, veh/h		1610		1588		0		

Left Lane Group Data								
Assigned Mvmt	1	5	0	7	0	0	0	0
Lane Assignment	L (Prot)			L				

Lanes in Grp	2	0	0	1	0	0	0	0
Grp Vol (v), veh/h	351	0	0	502	0	0	0	0
Grp Sat Flow (s), veh/h/ln	1755	0	0	1714	0	0	0	0
Q Serve Time (g_s), s	5.6	0.0	0.0	16.4	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	5.6	0.0	0.0	16.4	0.0	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	1714	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	18.5	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	439	0	0	586	0	0	0	0
V/C Ratio (X)	0.80	0.00	0.00	0.86	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	439	0	0	586	0	0	0	0
Upstream Filter (I)	0.90	0.00	0.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	21.8	0.0	0.0	18.4	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	9.2	0.0	0.0	12.0	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	31.0	0.0	0.0	30.4	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	1.9	0.0	0.0	5.7	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.6	0.0	0.0	2.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00
%ile Back of Q (50%), veh/ln	2.5	0.0	0.0	7.7	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.24	0.00	0.00	0.13	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	0
Lane Assignment		T				T		
Lanes in Grp	0	3	0	0	0	2	0	0
Grp Vol (v), veh/h	0	1277	0	0	0	682	0	0
Grp Sat Flow (s), veh/h/ln	0	1729	0	0	0	1805	0	0
Q Serve Time (g_s), s	0.0	11.2	0.0	0.0	0.0	8.6	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	11.2	0.0	0.0	0.0	8.6	0.0	0.0
Lane Grp Cap (c), veh/h	0	1599	0	0	0	1835	0	0
V/C Ratio (X)	0.00	0.80	0.00	0.00	0.00	0.37	0.00	0.00
Avail Cap (c_a), veh/h	0	1599	0	0	0	1835	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	0.90	0.00	0.00
Uniform Delay (d1), s/veh	0.0	10.1	0.0	0.0	0.0	12.5	0.0	0.0
Incr Delay (d2), s/veh	0.0	4.3	0.0	0.0	0.0	0.5	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	14.4	0.0	0.0	0.0	13.1	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	2.4	0.0	0.0	0.0	3.2	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.6	0.0	0.0	0.0	0.1	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	3.0	0.0	0.0	0.0	3.4	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.10	0.00	0.00	0.00	0.32	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	0
Lane Assignment		R		T+R				
Lanes in Grp	0	1	0	1	0	0	0	0
Grp Vol (v), veh/h	0	678	0	549	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	1610	0	1614	0	0	0	0
Q Serve Time (g_s), s	0.0	18.5	0.0	20.4	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	18.5	0.0	20.4	0.0	0.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	0.98	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	496	0	552	0	0	0	0
V/C Ratio (X)	0.00	1.37	0.00	1.00	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	496	0	552	0	0	0	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	11.5	0.0	19.7	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	177.1	0.0	37.1	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	188.6	0.0	56.8	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	2.9	0.0	6.7	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	24.4	0.0	5.7	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	27.3	0.0	12.4	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.89	0.00	0.21	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	45.4	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	52.6
HCM 6th LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	86	814	80	225	349	198	138	669	614	261	378	54
Future Volume (veh/h)	86	814	80	225	349	198	138	669	614	261	378	54
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1800	1900	1900	1800	1900	1900	1800	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	91	857	84	237	367	208	145	704	646	275	398	57
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	114	891	87	266	797	445	174	886	645	303	988	141
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.07	0.27	0.27	0.16	0.36	0.12	0.10	0.25	0.25	0.17	0.31	0.31
Unsig. Movement Delay												
Ln Grp Delay, s/veh	62.3	71.0	70.7	68.4	27.7	36.3	57.7	44.1	62.9	74.1	31.9	32.0
Ln Grp LOS	E	E	E	E	C	D	E	D	F	E	C	C
Approach Vol, veh/h		1032			812			1495			730	
Approach Delay, s/veh		70.1			42.6			53.5			47.8	
Approach LOS		E			D			D			D	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Case No	2.0	3.0	2.0	4.0	2.0	4.0	2.0	4.0
Phs Duration (G+Y+Rc), s	22.9	31.5	21.6	34.0	15.7	38.8	11.8	43.7
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green (Gmax), s	18.5	24.3	19.7	29.5	17.1	25.7	12.6	36.6
Max Allow Headway (MAH), s	3.8	4.6	3.8	5.3	3.8	5.3	3.8	5.4
Max Q Clear (g_c+I1), s	18.4	29.0	16.9	30.0	11.1	13.0	7.8	18.5
Green Ext Time (g_e), s	0.0	0.0	0.2	0.0	0.2	2.2	0.1	3.4
Prob of Phs Call (p_c)	1.00	1.00	1.00	1.00	0.99	1.00	0.94	1.00
Prob of Max Out (p_x)	1.00	0.00	1.00	1.00	0.14	0.00	0.32	0.06

Left-Turn Movement Data								
Assigned Mvmt	1		3		5		7	
Mvmt Sat Flow, veh/h	1810		1714		1714		1714	

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		3610		3321		3173		2234

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1610		325		451		1246

Left Lane Group Data								
Assigned Mvmt	1	0	3	0	5	0	7	0
Lane Assignment	L (Prot)		L (Prot)		L (Prot)		L (Prot)	

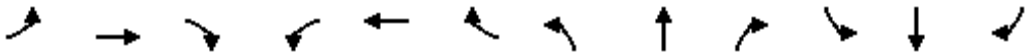
Lanes in Grp	1	0	1	0	1	0	1	0
Grp Vol (v), veh/h	275	0	237	0	145	0	91	0
Grp Sat Flow (s), veh/h/ln	1810	0	1714	0	1714	0	1714	0
Q Serve Time (g_s), s	16.4	0.0	14.9	0.0	9.1	0.0	5.8	0.0
Cycle Q Clear Time (g_c), s	16.4	0.0	14.9	0.0	9.1	0.0	5.8	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	303	0	266	0	174	0	114	0
V/C Ratio (X)	0.91	0.00	0.89	0.00	0.83	0.00	0.80	0.00
Avail Cap (c_a), veh/h	304	0	307	0	266	0	196	0
Upstream Filter (I)	1.00	0.00	0.95	0.00	0.70	0.00	1.00	0.00
Uniform Delay (d1), s/veh	45.0	0.0	45.5	0.0	48.5	0.0	50.6	0.0
Incr Delay (d2), s/veh	29.1	0.0	22.9	0.0	9.2	0.0	11.7	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	74.1	0.0	68.4	0.0	57.7	0.0	62.3	0.0
1st-Term Q (Q1), veh/ln	7.3	0.0	6.3	0.0	3.9	0.0	2.5	0.0
2nd-Term Q (Q2), veh/ln	2.5	0.0	1.7	0.0	0.4	0.0	0.4	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
%ile Back of Q (50%), veh/ln	9.8	0.0	8.0	0.0	4.3	0.0	2.8	0.0
%ile Storage Ratio (RQ%)	0.15	0.00	0.08	0.00	0.22	0.00	0.04	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	2	0	1	0	1	0	1
Grp Vol (v), veh/h	0	704	0	466	0	225	0	295
Grp Sat Flow (s), veh/h/ln	0	1805	0	1805	0	1805	0	1805
Q Serve Time (g_s), s	0.0	20.1	0.0	28.0	0.0	10.8	0.0	13.8
Cycle Q Clear Time (g_c), s	0.0	20.1	0.0	28.0	0.0	10.8	0.0	13.8
Lane Grp Cap (c), veh/h	0	886	0	484	0	562	0	644
V/C Ratio (X)	0.00	0.79	0.00	0.96	0.00	0.40	0.00	0.46
Avail Cap (c_a), veh/h	0	886	0	484	0	562	0	644
Upstream Filter (I)	0.00	0.70	0.00	1.00	0.00	1.00	0.00	0.95
Uniform Delay (d1), s/veh	0.0	38.9	0.0	39.7	0.0	29.8	0.0	27.2
Incr Delay (d2), s/veh	0.0	5.2	0.0	31.3	0.0	2.1	0.0	0.5
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	44.1	0.0	71.0	0.0	31.9	0.0	27.7
1st-Term Q (Q1), veh/ln	0.0	8.8	0.0	12.2	0.0	4.7	0.0	5.9
2nd-Term Q (Q2), veh/ln	0.0	0.6	0.0	4.2	0.0	0.3	0.0	0.1

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	9.5	0.0	16.4	0.0	5.0	0.0	6.0
%ile Storage Ratio (RQ%)	0.00	0.48	0.00	0.22	0.00	0.08	0.00	0.06
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		T+R		T+R		T+R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	646	0	475	0	230	0	280
Grp Sat Flow (s), veh/h/ln	0	1610	0	1841	0	1819	0	1676
Q Serve Time (g_s), s	0.0	27.0	0.0	28.0	0.0	11.0	0.0	16.5
Cycle Q Clear Time (g_c), s	0.0	27.0	0.0	28.0	0.0	11.0	0.0	16.5
Prot RT Sat Flow (s_R), veh/h/ln	0.0	1610.2	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	17.1	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	0.18	0.00	0.25	0.00	0.74
Lane Grp Cap (c), veh/h	0	645	0	494	0	566	0	598
V/C Ratio (X)	0.00	1.00	0.00	0.96	0.00	0.41	0.00	0.47
Avail Cap (c_a), veh/h	0	645	0	494	0	566	0	598
Upstream Filter (I)	0.00	0.70	0.00	1.00	0.00	1.00	0.00	0.95
Uniform Delay (d1), s/veh	0.0	33.0	0.0	39.7	0.0	29.9	0.0	35.8
Incr Delay (d2), s/veh	0.0	29.9	0.0	31.0	0.0	2.2	0.0	0.5
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	62.9	0.0	70.7	0.0	32.0	0.0	36.3
1st-Term Q (Q1), veh/ln	0.0	16.6	0.0	12.5	0.0	4.8	0.0	7.2
2nd-Term Q (Q2), veh/ln	0.0	5.4	0.0	4.2	0.0	0.3	0.0	0.1
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	22.0	0.0	16.7	0.0	5.1	0.0	7.3
%ile Storage Ratio (RQ%)	0.00	1.11	0.00	0.23	0.00	0.08	0.00	0.07
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	54.5
HCM 6th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	480	36	427	91	25	141	214	1036	5	9	655	88
Future Volume (veh/h)	480	36	427	91	25	141	214	1036	5	9	655	88
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1700	1900	1900	1800	1900	1900	1800	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	505	38	0	96	26	148	225	1091	5	9	689	93
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	566	661		235	224	189	258	1809	8	20	1123	151
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.18	0.35	0.00	0.12	0.12	0.12	0.15	0.49	0.49	0.01	0.35	0.35
Unsig. Movement Delay												
Ln Grp Delay, s/veh	52.0	19.6	0.0	38.9	35.7	45.4	61.0	19.6	19.5	55.5	27.5	27.5
Ln Grp LOS	D	B		D	D	D	E	B	B	E	C	C
Approach Vol, veh/h		543			270			1321			791	
Approach Delay, s/veh		49.7			42.2			26.6			27.8	
Approach LOS		D			D			C			C	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6	7	8
Case No	2.0	4.0		3.0	2.0	4.0	2.0	5.3
Phs Duration (G+Y+Rc), s	5.5	48.7		35.8	18.1	36.1	20.7	15.1
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5	4.5	4.5
Max Green (Gmax), s	5.0	32.5		39.0	14.5	23.0	16.5	18.0
Max Allow Headway (MAH), s	3.8	5.2		5.2	3.8	5.3	3.8	4.1
Max Q Clear (g_c+I1), s	2.4	21.3		3.2	13.5	18.1	16.1	10.0
Green Ext Time (g_e), s	0.0	5.4		0.2	0.1	2.1	0.1	0.6
Prob of Phs Call (p_c)	0.20	1.00		1.00	1.00	1.00	1.00	1.00
Prob of Max Out (p_x)	1.00	0.00		0.00	1.00	0.00	1.00	0.10

Left-Turn Movement Data								
Assigned Mvmt	1				5		7	3
Mvmt Sat Flow, veh/h	1810				1714		3141	1318

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		3685		1900		3196		1900

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		17		1610		431		1610

Left Lane Group Data								
Assigned Mvmt	1	0	0	0	5	0	7	3
Lane Assignment	L (Prot)				L (Prot)		L (Prot)	L

Lanes in Grp	1	0	0	0	1	0	2	1
Grp Vol (v), veh/h	9	0	0	0	225	0	505	96
Grp Sat Flow (s), veh/h/ln	1810	0	0	0	1714	0	1570	1318
Q Serve Time (g_s), s	0.4	0.0	0.0	0.0	11.5	0.0	14.1	6.2
Cycle Q Clear Time (g_c), s	0.4	0.0	0.0	0.0	11.5	0.0	14.1	6.2
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	1318
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.6
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.6
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.2
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	0.00	1.00	0.00	1.00	1.00
Lane Grp Cap (c), veh/h	20	0	0	0	258	0	566	235
V/C Ratio (X)	0.44	0.00	0.00	0.00	0.87	0.00	0.89	0.41
Avail Cap (c_a), veh/h	101	0	0	0	276	0	576	344
Upstream Filter (I)	0.77	0.00	0.00	0.00	1.00	0.00	1.00	1.00
Uniform Delay (d1), s/veh	44.2	0.0	0.0	0.0	37.4	0.0	36.0	37.8
Incr Delay (d2), s/veh	11.3	0.0	0.0	0.0	23.7	0.0	16.0	1.1
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	55.5	0.0	0.0	0.0	61.0	0.0	52.0	38.9
1st-Term Q (Q1), veh/ln	0.2	0.0	0.0	0.0	4.7	0.0	5.3	2.0
2nd-Term Q (Q2), veh/ln	0.1	0.0	0.0	0.0	1.7	0.0	1.3	0.1
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	0.00	1.00	0.00	1.00	1.00
%ile Back of Q (50%), veh/ln	0.3	0.0	0.0	0.0	6.4	0.0	6.5	2.1
%ile Storage Ratio (RQ%)	0.01	0.00	0.00	0.00	1.07	0.00	1.09	0.06
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	534	0	38	0	389	0	26
Grp Sat Flow (s), veh/h/ln	0	1805	0	1900	0	1805	0	1900
Q Serve Time (g_s), s	0.0	19.3	0.0	1.2	0.0	16.0	0.0	1.1
Cycle Q Clear Time (g_c), s	0.0	19.3	0.0	1.2	0.0	16.0	0.0	1.1
Lane Grp Cap (c), veh/h	0	886	0	661	0	634	0	224
V/C Ratio (X)	0.00	0.60	0.00	0.06	0.00	0.61	0.00	0.12
Avail Cap (c_a), veh/h	0	886	0	823	0	634	0	380
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	0.77	0.00	1.00
Uniform Delay (d1), s/veh	0.0	16.6	0.0	19.5	0.0	24.1	0.0	35.5
Incr Delay (d2), s/veh	0.0	3.0	0.0	0.0	0.0	3.4	0.0	0.2
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	19.6	0.0	19.6	0.0	27.5	0.0	35.7
1st-Term Q (Q1), veh/ln	0.0	7.5	0.0	0.5	0.0	6.6	0.0	0.5
2nd-Term Q (Q2), veh/ln	0.0	0.7	0.0	0.0	0.0	0.6	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	8.2	0.0	0.5	0.0	7.2	0.0	0.5
%ile Storage Ratio (RQ%)	0.00	0.67	0.00	0.01	0.00	0.36	0.00	0.02
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R		R		T+R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	562	0	0	0	393	0	148
Grp Sat Flow (s), veh/h/ln	0	1897	0	1610	0	1822	0	1610
Q Serve Time (g_s), s	0.0	19.3	0.0	0.0	0.0	16.1	0.0	8.0
Cycle Q Clear Time (g_c), s	0.0	19.3	0.0	0.0	0.0	16.1	0.0	8.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.01	0.00	1.00	0.00	0.24	0.00	1.00
Lane Grp Cap (c), veh/h	0	931	0	560	0	640	0	189
V/C Ratio (X)	0.00	0.60	0.00	0.00	0.00	0.61	0.00	0.78
Avail Cap (c_a), veh/h	0	931	0	698	0	640	0	322
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	0.77	0.00	1.00
Uniform Delay (d1), s/veh	0.0	16.6	0.0	0.0	0.0	24.1	0.0	38.6
Incr Delay (d2), s/veh	0.0	2.9	0.0	0.0	0.0	3.4	0.0	6.8
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	19.5	0.0	0.0	0.0	27.5	0.0	45.4
1st-Term Q (Q1), veh/ln	0.0	7.9	0.0	0.0	0.0	6.7	0.0	3.1
2nd-Term Q (Q2), veh/ln	0.0	0.7	0.0	0.0	0.0	0.6	0.0	0.4
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	8.6	0.0	0.0	0.0	7.3	0.0	3.5
%ile Storage Ratio (RQ%)	0.00	0.71	0.00	0.00	0.00	0.37	0.00	0.10
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	32.7
HCM 6th LOS	C

Notes

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	268	520	131	462	376	102	138	935	507	248	862	194
Future Volume (veh/h)	268	520	131	462	376	102	138	935	507	248	862	194
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1800	1900	1900	1700	1900	1900	1800	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	282	547	138	486	396	107	145	984	534	261	907	204
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	309	624	265	542	575	244	170	1371	581	285	1891	423
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00
Prop Arrive On Green	0.18	0.16	0.16	0.17	0.15	0.15	0.20	0.72	0.72	0.32	0.84	0.84
Unsig. Movement Delay												
Ln Grp Delay, s/veh	73.7	61.1	30.3	64.8	51.7	47.5	55.4	14.9	19.1	63.8	7.1	8.2
Ln Grp LOS	E	E	C	E	D	D	E	B	B	E	A	A
Approach Vol, veh/h		967			989			1663			1372	
Approach Delay, s/veh		60.4			57.7			19.8			18.1	
Approach LOS		E			E			B			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	4	3	5	6	7	8
Case No	2.0	3.0	3.0	2.0	2.0	4.0	2.0	3.0
Phs Duration (G+Y+Rc), s	23.4	47.8	24.2	24.6	16.4	54.8	26.1	22.7
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green (Gmax), s	22.5	36.9	20.9	21.7	18.6	40.8	24.6	18.0
Max Allow Headway (MAH), s	3.8	4.8	5.0	3.8	3.8	5.3	3.8	5.0
Max Q Clear (g_c+I1), s	18.7	22.5	18.9	19.6	11.8	8.6	21.4	13.8
Green Ext Time (g_e), s	0.3	7.8	0.9	0.4	0.2	9.3	0.3	1.1
Prob of Phs Call (p_c)	1.00	1.00	1.00	1.00	0.99	1.00	1.00	1.00
Prob of Max Out (p_x)	0.97	0.00	1.00	1.00	0.07	0.00	1.00	1.00

Left-Turn Movement Data								
Assigned Mvmt	1			3	5		7	
Mvmt Sat Flow, veh/h	1810			3238	1714		1714	

Through Movement Data								
Assigned Mvmt		2	4			6		8
Mvmt Sat Flow, veh/h		3800	3800			4509		3800

Right-Turn Movement Data								
Assigned Mvmt		12	14			16		18
Mvmt Sat Flow, veh/h		1610	1610			1009		1610

Left Lane Group Data								
Assigned Mvmt	1	0	0	3	5	0	7	0
Lane Assignment	L (Prot)			L (Prot)	L (Prot)		L (Prot)	

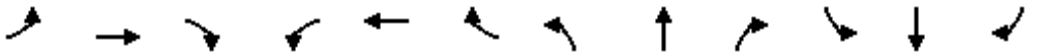
Lanes in Grp	1	0	0	2	1	0	1	0
Grp Vol (v), veh/h	261	0	0	486	145	0	282	0
Grp Sat Flow (s), veh/h/ln	1810	0	0	1619	1714	0	1714	0
Q Serve Time (g_s), s	16.7	0.0	0.0	17.6	9.8	0.0	19.4	0.0
Cycle Q Clear Time (g_c), s	16.7	0.0	0.0	17.6	9.8	0.0	19.4	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	1.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	285	0	0	542	170	0	309	0
V/C Ratio (X)	0.91	0.00	0.00	0.90	0.85	0.00	0.91	0.00
Avail Cap (c_a), veh/h	339	0	0	586	266	0	351	0
Upstream Filter (I)	0.88	0.00	0.00	1.00	0.51	0.00	1.00	0.00
Uniform Delay (d1), s/veh	40.3	0.0	0.0	49.0	47.3	0.0	48.2	0.0
Incr Delay (d2), s/veh	23.5	0.0	0.0	15.9	8.1	0.0	25.4	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	63.8	0.0	0.0	64.8	55.4	0.0	73.7	0.0
1st-Term Q (Q1), veh/ln	6.2	0.0	0.0	7.1	3.8	0.0	8.2	0.0
2nd-Term Q (Q2), veh/ln	1.9	0.0	0.0	1.2	0.4	0.0	2.2	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	1.00	1.00	0.00	1.00	0.00
%ile Back of Q (50%), veh/ln	8.1	0.0	0.0	8.3	4.2	0.0	10.4	0.0
%ile Storage Ratio (RQ%)	1.13	0.00	0.00	0.06	0.52	0.00	1.19	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	4	0	0	6	0	8
Lane Assignment		T	T			T		T
Lanes in Grp	0	2	2	0	0	2	0	2
Grp Vol (v), veh/h	0	984	547	0	0	764	0	396
Grp Sat Flow (s), veh/h/ln	0	1900	1900	0	0	1900	0	1900
Q Serve Time (g_s), s	0.0	18.0	16.9	0.0	0.0	6.5	0.0	11.8
Cycle Q Clear Time (g_c), s	0.0	18.0	16.9	0.0	0.0	6.5	0.0	11.8
Lane Grp Cap (c), veh/h	0	1371	624	0	0	1594	0	575
V/C Ratio (X)	0.00	0.72	0.88	0.00	0.00	0.48	0.00	0.69
Avail Cap (c_a), veh/h	0	1371	662	0	0	1594	0	575
Upstream Filter (I)	0.00	0.51	1.00	0.00	0.00	0.88	0.00	1.00
Uniform Delay (d1), s/veh	0.0	13.2	48.9	0.0	0.0	6.1	0.0	48.2
Incr Delay (d2), s/veh	0.0	1.7	12.2	0.0	0.0	0.9	0.0	3.5
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	14.9	61.1	0.0	0.0	7.1	0.0	51.7
1st-Term Q (Q1), veh/ln	0.0	4.5	8.0	0.0	0.0	1.9	0.0	5.6
2nd-Term Q (Q2), veh/ln	0.0	0.3	1.1	0.0	0.0	0.2	0.0	0.3

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	4.8	9.0	0.0	0.0	2.1	0.0	5.9
%ile Storage Ratio (RQ%)	0.00	0.13	0.04	0.00	0.00	0.02	0.00	0.04
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	14	0	0	16	0	18
Lane Assignment		R	R			T+R		R
Lanes in Grp	0	1	1	0	0	1	0	1
Grp Vol (v), veh/h	0	534	138	0	0	347	0	107
Grp Sat Flow (s), veh/h/ln	0	1610	1610	0	0	1718	0	1610
Q Serve Time (g_s), s	0.0	20.5	7.4	0.0	0.0	6.6	0.0	7.2
Cycle Q Clear Time (g_c), s	0.0	20.5	7.4	0.0	0.0	6.6	0.0	7.2
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	1.00	0.00	0.00	0.59	0.00	1.00
Lane Grp Cap (c), veh/h	0	581	265	0	0	721	0	244
V/C Ratio (X)	0.00	0.92	0.52	0.00	0.00	0.48	0.00	0.44
Avail Cap (c_a), veh/h	0	581	280	0	0	721	0	244
Upstream Filter (I)	0.00	0.51	1.00	0.00	0.00	0.88	0.00	1.00
Uniform Delay (d1), s/veh	0.0	5.9	28.7	0.0	0.0	6.1	0.0	46.3
Incr Delay (d2), s/veh	0.0	13.2	1.6	0.0	0.0	2.0	0.0	1.2
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	19.1	30.3	0.0	0.0	8.2	0.0	47.5
1st-Term Q (Q1), veh/ln	0.0	2.8	2.9	0.0	0.0	1.7	0.0	2.9
2nd-Term Q (Q2), veh/ln	0.0	2.1	0.1	0.0	0.0	0.4	0.0	0.1
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	5.0	3.0	0.0	0.0	2.1	0.0	3.0
%ile Storage Ratio (RQ%)	0.00	0.62	0.01	0.00	0.00	0.02	0.00	0.02
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	34.7
HCM 6th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	214	387	227	828	1802	0	0	1297	769
Future Volume (veh/h)	0	0	0	214	387	227	828	1802	0	0	1297	769
Number				3	8	18	5	2	12	1	6	16
Initial Q, veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln				1800	1900	1900	1900	1900	0	0	1900	1900
Adj Flow Rate, veh/h				225	407	239	872	1897	0	0	1365	809
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence				Yes			Yes			No		
Cap, veh/h				252	473	294	829	2431	0	0	1418	1202
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33
Prop Arrive On Green				0.29	0.29	0.29	0.23	0.64	0.00	0.00	0.50	0.50
Unsig. Movement Delay												
Ln Grp Delay, s/veh				56.5	0.0	48.6	81.4	16.6	0.0	0.0	43.2	27.0
Ln Grp LOS				E	A	D	F	B	A	A	D	C
Approach Vol, veh/h					871			2769			2174	
Approach Delay, s/veh					52.9			37.0			37.2	
Approach LOS					D			D			D	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2	8		5	6		
Case No		4.0	12.0		2.0	7.0		
Phs Duration (G+Y+Rc), s		81.3	38.7		32.0	49.3		
Change Period (Y+Rc), s		4.5	4.5		4.5	4.5		
Max Green (Gmax), s		73.5	37.5		27.5	41.5		
Max Allow Headway (MAH), s		5.2	5.3		3.8	4.8		
Max Q Clear (g_c+I1), s		45.1	31.3		29.5	43.6		
Green Ext Time (g_e), s		19.2	2.9		0.0	0.0		
Prob of Phs Call (p_c)		1.00	1.00		1.00	1.00		
Prob of Max Out (p_x)		0.00	0.90		1.00	0.00		

Left-Turn Movement Data								
Assigned Mvmt			3		5	1		
Mvmt Sat Flow, veh/h			883		3619	0		

Through Movement Data								
Assigned Mvmt		2	8			6		
Mvmt Sat Flow, veh/h		3800	1658			3800		

Right-Turn Movement Data								
Assigned Mvmt		12	18			16		
Mvmt Sat Flow, veh/h		0	1030			3220		

Left Lane Group Data								
Assigned Mvmt	0	0	3	0	5	1	0	0
Lane Assignment			L+T		L (Prot)			

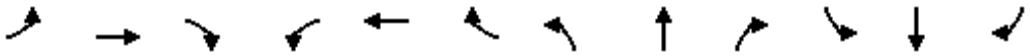
Lanes in Grp	0	0	1	0	2	0	0	0
Grp Vol (v), veh/h	0	0	473	0	872	0	0	0
Grp Sat Flow (s), veh/h/ln	0	0	1856	0	1810	0	0	0
Q Serve Time (g_s), s	0.0	0.0	29.3	0.0	27.5	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	29.3	0.0	27.5	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	44.8	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	0.00	0.48	0.00	1.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	529	0	829	0	0	0
V/C Ratio (X)	0.00	0.00	0.89	0.00	1.05	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	0	580	0	829	0	0	0
Upstream Filter (I)	0.00	0.00	1.00	0.00	0.41	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	41.1	0.0	46.3	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	15.4	0.0	35.1	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	56.5	0.0	81.4	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	13.3	0.0	12.3	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	2.3	0.0	4.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	0.00	1.00	0.00	1.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	15.5	0.0	16.3	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.37	0.00	2.72	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	10.7	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	8	0	0	6	0	0
Lane Assignment		T				T		
Lanes in Grp	0	2	0	0	0	2	0	0
Grp Vol (v), veh/h	0	1897	0	0	0	1365	0	0
Grp Sat Flow (s), veh/h/ln	0	1900	0	0	0	1900	0	0
Q Serve Time (g_s), s	0.0	43.1	0.0	0.0	0.0	41.6	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	43.1	0.0	0.0	0.0	41.6	0.0	0.0
Lane Grp Cap (c), veh/h	0	2431	0	0	0	1418	0	0
V/C Ratio (X)	0.00	0.78	0.00	0.00	0.00	0.96	0.00	0.00
Avail Cap (c_a), veh/h	0	2431	0	0	0	1418	0	0
Upstream Filter (I)	0.00	0.41	0.00	0.00	0.00	0.77	0.00	0.00
Uniform Delay (d1), s/veh	0.0	15.5	0.0	0.0	0.0	29.4	0.0	0.0
Incr Delay (d2), s/veh	0.0	1.1	0.0	0.0	0.0	13.8	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	16.6	0.0	0.0	0.0	43.2	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	17.3	0.0	0.0	0.0	16.9	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.4	0.0	0.0	0.0	2.7	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	17.6	0.0	0.0	0.0	19.7	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.81	0.00	0.00	0.00	0.52	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	18	0	0	16	0	0
Lane Assignment			T+R			R		
Lanes in Grp	0	0	1	0	0	2	0	0
Grp Vol (v), veh/h	0	0	398	0	0	809	0	0
Grp Sat Flow (s), veh/h/ln	0	0	1715	0	0	1610	0	0
Q Serve Time (g_s), s	0.0	0.0	25.9	0.0	0.0	22.8	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	25.9	0.0	0.0	22.8	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.00	0.60	0.00	0.00	1.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	489	0	0	1202	0	0
V/C Ratio (X)	0.00	0.00	0.81	0.00	0.00	0.67	0.00	0.00
Avail Cap (c_a), veh/h	0	0	536	0	0	1202	0	0
Upstream Filter (I)	0.00	0.00	1.00	0.00	0.00	0.77	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	39.9	0.0	0.0	24.7	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	8.7	0.0	0.0	2.3	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	48.6	0.0	0.0	27.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	10.8	0.0	0.0	7.9	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	1.2	0.0	0.0	0.4	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	12.0	0.0	0.0	8.3	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.29	0.00	0.00	0.22	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	39.5
HCM 6th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	449	85	660	0	0	0	0	1548	509	322	999	0
Future Volume (veh/h)	449	85	660	0	0	0	0	1548	509	322	999	0
Number	7	4	14				5	2	12	1	6	16
Initial Q, veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1800	1900	1900				0	1900	1900	1900	1900	0
Adj Flow Rate, veh/h	473	89	695				0	1629	536	339	1052	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0				0	0	0	0	0	0
Opposing Right Turn Influence	Yes						No			Yes		
Cap, veh/h	554	104	581				0	1967	556	358	2076	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	2.00	2.00	2.00	1.00	1.00
Prop Arrive On Green	0.36	0.36	0.36				0.00	0.69	0.69	0.40	0.57	0.00
Unsig. Movement Delay												
Ln Grp Delay, s/veh	52.0	0.0	149.2				0.0	22.9	51.3	46.8	17.9	0.0
Ln Grp LOS	D	A	F				A	C	D	D	B	A
Approach Vol, veh/h		1257						2165			1391	
Approach Delay, s/veh		105.8						29.9			25.0	
Approach LOS		F						C			C	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Case No	2.0	7.0		12.0		4.0		
Phs Duration (G+Y+Rc), s	32.2	52.8		55.0		85.0		
Change Period (Y+Rc), s	4.5	4.5		4.5		4.5		
Max Green (Gmax), s	30.5	45.5		50.5		80.5		
Max Allow Headway (MAH), s	3.8	4.9		5.5		5.2		
Max Q Clear (g_c+I1), s	27.3	45.2		52.5		26.5		
Green Ext Time (g_e), s	0.3	0.3		0.0		10.2		
Prob of Phs Call (p_c)	1.00	1.00		1.00		1.00		
Prob of Max Out (p_x)	1.00	0.00		1.00		0.00		

Left-Turn Movement Data								
Assigned Mvmt	1	5		7				
Mvmt Sat Flow, veh/h	1810	0		1535				

Through Movement Data								
Assigned Mvmt		2		4		6		
Mvmt Sat Flow, veh/h		5700		289		3705		

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		
Mvmt Sat Flow, veh/h		1610		1610		0		

Left Lane Group Data								
Assigned Mvmt	1	5	0	7	0	0	0	0
Lane Assignment	L (Prot)			L+T				

Lanes in Grp	1	0	0	1	0	0	0	0
Grp Vol (v), veh/h	339	0	0	562	0	0	0	0
Grp Sat Flow (s), veh/h/ln	1810	0	0	1823	0	0	0	0
Q Serve Time (g_s), s	25.3	0.0	0.0	39.9	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	25.3	0.0	0.0	39.9	0.0	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	48.3	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	0.84	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	358	0	0	658	0	0	0	0
V/C Ratio (X)	0.95	0.00	0.00	0.85	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	394	0	0	658	0	0	0	0
Upstream Filter (I)	0.09	0.00	0.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	41.6	0.0	0.0	41.4	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	5.2	0.0	0.0	10.7	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	46.8	0.0	0.0	52.0	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	9.6	0.0	0.0	17.8	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.5	0.0	0.0	1.9	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00
%ile Back of Q (50%), veh/ln	10.1	0.0	0.0	19.8	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	1.69	0.00	0.00	0.59	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	0
Lane Assignment		T				T		
Lanes in Grp	0	3	0	0	0	2	0	0
Grp Vol (v), veh/h	0	1629	0	0	0	1052	0	0
Grp Sat Flow (s), veh/h/ln	0	1900	0	0	0	1805	0	0
Q Serve Time (g_s), s	0.0	28.9	0.0	0.0	0.0	24.5	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	28.9	0.0	0.0	0.0	24.5	0.0	0.0
Lane Grp Cap (c), veh/h	0	1967	0	0	0	2076	0	0
V/C Ratio (X)	0.00	0.83	0.00	0.00	0.00	0.51	0.00	0.00
Avail Cap (c_a), veh/h	0	1967	0	0	0	2076	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	0.09	0.00	0.00
Uniform Delay (d1), s/veh	0.0	18.7	0.0	0.0	0.0	17.8	0.0	0.0
Incr Delay (d2), s/veh	0.0	4.2	0.0	0.0	0.0	0.1	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	22.9	0.0	0.0	0.0	17.9	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	7.9	0.0	0.0	0.0	10.1	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	8.7	0.0	0.0	0.0	10.1	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.16	0.00	0.00	0.00	0.47	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	0
Lane Assignment		R		T+R				
Lanes in Grp	0	1	0	1	0	0	0	0
Grp Vol (v), veh/h	0	536	0	695	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	1610	0	1610	0	0	0	0
Q Serve Time (g_s), s	0.0	43.2	0.0	50.5	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	43.2	0.0	50.5	0.0	0.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	556	0	581	0	0	0	0
V/C Ratio (X)	0.00	0.96	0.00	1.20	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	556	0	581	0	0	0	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	20.9	0.0	44.8	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	30.4	0.0	104.4	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	51.3	0.0	149.2	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	10.1	0.0	20.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	4.7	0.0	16.9	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	14.8	0.0	36.8	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.28	0.00	1.09	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	28.5	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	48.3
HCM 6th LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	633	773	247	101	969	531	104	613	76	336	29	214
Future Volume (veh/h)	633	773	247	101	969	531	104	613	76	336	29	214
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1700	1900	1900	1800	1900	1900	1800	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	666	814	260	106	1020	559	109	645	80	354	31	225
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	661	1084	346	128	1001	739	134	709	421	354	60	439
HCM Platoon Ratio	2.00	2.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.41	0.79	0.39	0.15	0.53	0.53	0.08	0.19	0.19	0.20	0.30	0.30
Unsig. Movement Delay												
Ln Grp Delay, s/veh	58.3	11.4	22.2	74.0	61.8	23.4	65.7	65.5	35.4	95.8	0.0	38.1
Ln Grp LOS	F	B	C	E	F	C	E	E	D	F	A	D
Approach Vol, veh/h		1740			1685			834			610	
Approach Delay, s/veh		32.5			49.8			62.7			71.6	
Approach LOS		C			D			E			E	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Case No	2.0	3.0	2.0	4.0	2.0	4.0	2.0	3.0
Phs Duration (G+Y+Rc), s	28.0	26.9	13.5	51.6	13.9	41.0	29.0	36.1
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green (Gmax), s	23.5	22.4	11.3	44.8	15.4	30.5	24.5	31.6
Max Allow Headway (MAH), s	3.8	5.1	3.8	5.3	3.8	5.5	3.8	4.8
Max Q Clear (g_c+I1), s	25.5	22.0	9.2	28.2	9.5	17.4	26.5	33.6
Green Ext Time (g_e), s	0.0	0.2	0.0	6.8	0.1	1.3	0.0	0.0
Prob of Phs Call (p_c)	1.00	1.00	0.97	1.00	0.97	1.00	1.00	1.00
Prob of Max Out (p_x)	1.00	0.00	1.00	0.35	0.12	0.00	1.00	1.00

Left-Turn Movement Data								
Assigned Mvmt	1		3		5		7	
Mvmt Sat Flow, veh/h	1810		1714		1714		3238	

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		3800		2760		199		3800

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1610		881		1442		1610

Left Lane Group Data								
Assigned Mvmt	1	0	3	0	5	0	7	0
Lane Assignment	L (Prot)		L (Prot)		L (Prot)		L (Prot)	

Lanes in Grp	1	0	1	0	1	0	2	0
Grp Vol (v), veh/h	354	0	106	0	109	0	666	0
Grp Sat Flow (s), veh/h/ln	1810	0	1714	0	1714	0	1619	0
Q Serve Time (g_s), s	23.5	0.0	7.2	0.0	7.5	0.0	24.5	0.0
Cycle Q Clear Time (g_c), s	23.5	0.0	7.2	0.0	7.5	0.0	24.5	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	354	0	128	0	134	0	661	0
V/C Ratio (X)	1.00	0.00	0.83	0.00	0.81	0.00	1.01	0.00
Avail Cap (c_a), veh/h	354	0	161	0	220	0	661	0
Upstream Filter (I)	1.00	0.00	1.00	0.00	1.00	0.00	0.36	0.00
Uniform Delay (d1), s/veh	48.2	0.0	50.3	0.0	54.5	0.0	35.5	0.0
Incr Delay (d2), s/veh	47.5	0.0	23.7	0.0	11.2	0.0	22.8	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	95.8	0.0	74.0	0.0	65.7	0.0	58.3	0.0
1st-Term Q (Q1), veh/ln	10.5	0.0	2.9	0.0	3.2	0.0	7.8	0.0
2nd-Term Q (Q2), veh/ln	4.7	0.0	0.8	0.0	0.4	0.0	2.1	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
%ile Back of Q (50%), veh/ln	15.2	0.0	3.7	0.0	3.7	0.0	9.9	0.0
%ile Storage Ratio (RQ%)	1.97	0.00	0.04	0.00	0.32	0.00	0.95	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0

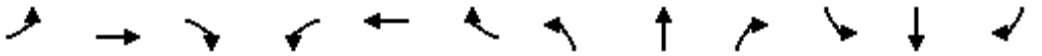
Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T				T
Lanes in Grp	0	2	0	1	0	0	0	2
Grp Vol (v), veh/h	0	645	0	560	0	0	0	1020
Grp Sat Flow (s), veh/h/ln	0	1900	0	1900	0	0	0	1900
Q Serve Time (g_s), s	0.0	20.0	0.0	18.5	0.0	0.0	0.0	31.6
Cycle Q Clear Time (g_c), s	0.0	20.0	0.0	18.5	0.0	0.0	0.0	31.6
Lane Grp Cap (c), veh/h	0	709	0	746	0	0	0	1001
V/C Ratio (X)	0.00	0.91	0.00	0.75	0.00	0.00	0.00	1.02
Avail Cap (c_a), veh/h	0	709	0	746	0	0	0	1001
Upstream Filter (I)	0.00	1.00	0.00	0.36	0.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	47.8	0.0	9.8	0.0	0.0	0.0	28.4
Incr Delay (d2), s/veh	0.0	17.7	0.0	1.6	0.0	0.0	0.0	33.4
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	65.5	0.0	11.4	0.0	0.0	0.0	61.8
1st-Term Q (Q1), veh/ln	0.0	9.4	0.0	3.8	0.0	0.0	0.0	10.6
2nd-Term Q (Q2), veh/ln	0.0	1.7	0.0	0.3	0.0	0.0	0.0	4.6

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	11.2	0.0	4.2	0.0	0.0	0.0	15.2
%ile Storage Ratio (RQ%)	0.00	0.99	0.00	0.17	0.00	0.00	0.00	0.17
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.8
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		T+R		T+R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	80	0	514	0	256	0	559
Grp Sat Flow (s), veh/h/ln	0	1610	0	1741	0	1640	0	1610
Q Serve Time (g_s), s	0.0	4.6	0.0	26.2	0.0	15.4	0.0	31.6
Cycle Q Clear Time (g_c), s	0.0	4.6	0.0	26.2	0.0	15.4	0.0	31.6
Prot RT Sat Flow (s_R), veh/h/ln	0.0	1610.2	0.0	0.0	0.0	0.0	0.0	1610.2
Prot RT Eff Green (g_R), s	0.0	9.0	0.0	0.0	0.0	0.0	0.0	23.5
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	0.51	0.00	0.88	0.00	1.00
Lane Grp Cap (c), veh/h	0	421	0	684	0	499	0	739
V/C Ratio (X)	0.00	0.19	0.00	0.75	0.00	0.51	0.00	0.76
Avail Cap (c_a), veh/h	0	421	0	684	0	499	0	739
Upstream Filter (I)	0.00	1.00	0.00	0.36	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	34.4	0.0	20.5	0.0	34.4	0.0	19.0
Incr Delay (d2), s/veh	0.0	1.0	0.0	1.7	0.0	3.7	0.0	4.5
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	35.4	0.0	22.2	0.0	38.1	0.0	23.4
1st-Term Q (Q1), veh/ln	0.0	1.8	0.0	8.7	0.0	6.2	0.0	10.6
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.3	0.0	0.5	0.0	0.9
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	1.9	0.0	9.0	0.0	6.7	0.0	11.5
%ile Storage Ratio (RQ%)	0.00	0.69	0.00	0.37	0.00	0.86	0.00	0.13
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	48.6
HCM 6th LOS	D

BUILD OUT YEAR PLUS PROJECT CONDITIONS



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	370	4	210	643	600	0	0	629	811
Future Volume (veh/h)	0	0	0	370	4	210	643	600	0	0	629	811
Number				3	8	18	5	2	12	1	6	16
Initial Q, veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln				1800	1900	1900	1900	1900	0	0	1900	1900
Adj Flow Rate, veh/h				389	4	221	677	632	0	0	662	854
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence				Yes			Yes			No		
Cap, veh/h				433	4	389	738	2498	0	0	2326	722
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	2.00	1.00
Prop Arrive On Green				0.24	0.24	0.24	0.42	1.00	0.00	0.00	0.90	0.45
Unsig. Movement Delay												
Ln Grp Delay, s/veh				62.9	0.0	41.5	38.4	0.1	0.0	0.0	3.8	129.1
Ln Grp LOS				E	A	D	D	A	A	A	A	F
Approach Vol, veh/h					614			1309			1516	
Approach Delay, s/veh					55.2			19.9			74.4	
Approach LOS					E			B			E	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2	8		5	6		
Case No		4.0	11.0		2.0	7.0		
Phs Duration (G+Y+Rc), s		87.0	33.0		29.2	57.8		
Change Period (Y+Rc), s		4.5	4.5		4.5	4.5		
Max Green (Gmax), s		79.9	31.1		26.9	48.5		
Max Allow Headway (MAH), s		5.2	4.9		3.8	4.5		
Max Q Clear (g_c+I1), s		2.0	27.2		23.8	55.8		
Green Ext Time (g_e), s		5.1	1.2		0.9	0.0		
Prob of Phs Call (p_c)		1.00	1.00		1.00	1.00		
Prob of Max Out (p_x)		0.00	1.00		1.00	0.00		
Left-Turn Movement Data								
Assigned Mvmt			3		5	1		
Mvmt Sat Flow, veh/h			1792		3510	0		
Through Movement Data								
Assigned Mvmt		2	8			6		
Mvmt Sat Flow, veh/h		3705	18			5358		
Right-Turn Movement Data								
Assigned Mvmt		12	18			16		
Mvmt Sat Flow, veh/h		0	1610			1610		
Left Lane Group Data								
Assigned Mvmt	0	0	3	0	5	1	0	0
Lane Assignment			L+T		L (Prot)			

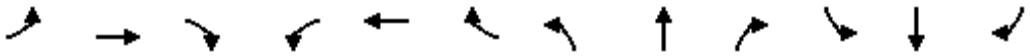
Lanes in Grp	0	0	1	0	2	0	0	0
Grp Vol (v), veh/h	0	0	393	0	677	0	0	0
Grp Sat Flow (s), veh/h/ln	0	0	1810	0	1755	0	0	0
Q Serve Time (g_s), s	0.0	0.0	25.2	0.0	21.8	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	25.2	0.0	21.8	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	53.8	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	0.00	0.99	0.00	1.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	437	0	738	0	0	0
V/C Ratio (X)	0.00	0.00	0.90	0.00	0.92	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	0	477	0	802	0	0	0
Upstream Filter (I)	0.00	0.00	1.00	0.00	0.25	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	44.1	0.0	33.8	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	18.8	0.0	4.6	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	62.9	0.0	38.4	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	11.2	0.0	7.5	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	2.3	0.0	0.5	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	0.00	1.00	0.00	1.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	13.5	0.0	7.9	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.28	0.00	0.74	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	8	0	0	6	0	0
Lane Assignment		T				T		
Lanes in Grp	0	2	0	0	0	3	0	0
Grp Vol (v), veh/h	0	632	0	0	0	662	0	0
Grp Sat Flow (s), veh/h/ln	0	1805	0	0	0	1729	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	2.1	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	2.1	0.0	0.0
Lane Grp Cap (c), veh/h	0	2498	0	0	0	2326	0	0
V/C Ratio (X)	0.00	0.25	0.00	0.00	0.00	0.28	0.00	0.00
Avail Cap (c_a), veh/h	0	2498	0	0	0	2326	0	0
Upstream Filter (I)	0.00	0.25	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	3.5	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.1	0.0	0.0	0.0	0.3	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.1	0.0	0.0	0.0	3.8	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	18	0	0	16	0	0
Lane Assignment			R			R		
Lanes in Grp	0	0	1	0	0	1	0	0
Grp Vol (v), veh/h	0	0	221	0	0	854	0	0
Grp Sat Flow (s), veh/h/ln	0	0	1610	0	0	1610	0	0
Q Serve Time (g_s), s	0.0	0.0	14.5	0.0	0.0	53.8	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	14.5	0.0	0.0	53.8	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	389	0	0	722	0	0
V/C Ratio (X)	0.00	0.00	0.57	0.00	0.00	1.18	0.00	0.00
Avail Cap (c_a), veh/h	0	0	424	0	0	722	0	0
Upstream Filter (I)	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	40.0	0.0	0.0	33.1	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	1.5	0.0	0.0	96.1	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	41.5	0.0	0.0	129.1	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	5.7	0.0	0.0	20.3	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.2	0.0	0.0	19.3	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	5.9	0.0	0.0	39.5	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.12	0.00	0.00	0.85	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	33.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	50.2
HCM 6th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	634	9	559	0	0	0	0	762	352	107	665	0
Future Volume (veh/h)	634	9	559	0	0	0	0	762	352	107	665	0
Number	7	4	14				5	2	12	1	6	16
Initial Q, veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1800	1900	1900				0	1900	1900	1900	1900	0
Adj Flow Rate, veh/h	667	9	588				0	802	371	113	700	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0				0	0	0	0	0	0
Opposing Right Turn Influence	Yes						No			Yes		
Cap, veh/h	619	8	545				0	865	268	170	896	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	2.00	2.00	2.00	2.00	1.00
Prop Arrive On Green	0.69	0.69	0.68				0.00	0.33	0.33	0.10	0.50	0.00
Unsig. Movement Delay												
Ln Grp Delay, s/veh	69.1	0.0	0.0				0.0	56.7	233.7	62.5	34.0	0.0
Ln Grp LOS	F	A	A				A	E	F	E	C	A
Approach Vol, veh/h		1264						1173			813	
Approach Delay, s/veh		69.1						112.7			38.0	
Approach LOS		E						F			D	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Case No	2.0	7.0		12.0		4.0		
Phs Duration (G+Y+Rc), s	9.8	24.0		86.2		33.8		
Change Period (Y+Rc), s	4.5	4.5		4.5		4.5		
Max Green (Gmax), s	5.3	19.5		81.7		29.3		
Max Allow Headway (MAH), s	3.7	4.6		5.4		4.9		
Max Q Clear (g_c+I1), s	5.7	22.0		84.2		21.1		
Green Ext Time (g_e), s	0.0	0.0		0.0		2.7		
Prob of Phs Call (p_c)	0.98	1.00		1.00		1.00		
Prob of Max Out (p_x)	1.00	0.00		1.00		0.00		

Left-Turn Movement Data								
Assigned Mvmt	1	5		7				
Mvmt Sat Flow, veh/h	3510	0		903				

Through Movement Data								
Assigned Mvmt		2		4		6		
Mvmt Sat Flow, veh/h		5358		12		3705		

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		
Mvmt Sat Flow, veh/h		1610		796		0		

Left Lane Group Data								
Assigned Mvmt	1	5	0	7	0	0	0	0
Lane Assignment	L (Prot)			L+T+R				

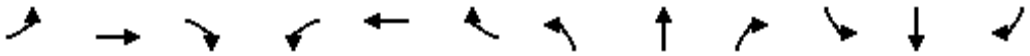
Lanes in Grp	2	0	0	1	0	0	0	0
Grp Vol (v), veh/h	113	0	0	1264	0	0	0	0
Grp Sat Flow (s), veh/h/ln	1755	0	0	1712	0	0	0	0
Q Serve Time (g_s), s	3.7	0.0	0.0	82.2	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	3.7	0.0	0.0	82.2	0.0	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	20.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	0.53	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	170	0	0	1172	0	0	0	0
V/C Ratio (X)	0.67	0.00	0.00	1.08	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	170	0	0	1172	0	0	0	0
Upstream Filter (I)	0.97	0.00	0.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	53.3	0.0	0.0	19.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	9.2	0.0	0.0	50.0	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	62.5	0.0	0.0	69.1	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	1.6	0.0	0.0	28.5	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.2	0.0	0.0	16.3	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00
%ile Back of Q (50%), veh/ln	1.8	0.0	0.0	44.8	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.17	0.00	0.00	0.77	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	22.9	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	0
Lane Assignment		T				T		
Lanes in Grp	0	3	0	0	0	2	0	0
Grp Vol (v), veh/h	0	802	0	0	0	700	0	0
Grp Sat Flow (s), veh/h/ln	0	1729	0	0	0	1805	0	0
Q Serve Time (g_s), s	0.0	17.9	0.0	0.0	0.0	19.1	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	17.9	0.0	0.0	0.0	19.1	0.0	0.0
Lane Grp Cap (c), veh/h	0	865	0	0	0	896	0	0
V/C Ratio (X)	0.00	0.93	0.00	0.00	0.00	0.78	0.00	0.00
Avail Cap (c_a), veh/h	0	865	0	0	0	896	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	0.97	0.00	0.00
Uniform Delay (d1), s/veh	0.0	39.3	0.0	0.0	0.0	27.5	0.0	0.0
Incr Delay (d2), s/veh	0.0	17.4	0.0	0.0	0.0	6.5	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	56.7	0.0	0.0	0.0	34.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	5.9	0.0	0.0	0.0	5.8	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	1.4	0.0	0.0	0.0	0.8	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	7.3	0.0	0.0	0.0	6.6	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.24	0.00	0.00	0.00	0.62	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	0
Lane Assignment		R						
Lanes in Grp	0	1	0	0	0	0	0	0
Grp Vol (v), veh/h	0	371	0	0	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	1610	0	0	0	0	0	0
Q Serve Time (g_s), s	0.0	20.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	20.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	0.47	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	268	0	0	0	0	0	0
V/C Ratio (X)	0.00	1.38	0.00	0.00	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	268	0	0	0	0	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	40.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	193.7	0.0	0.0	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	233.7	0.0	0.0	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	6.1	0.0	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	14.4	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	20.5	0.0	0.0	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.66	0.00	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	25.7	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	77.0
HCM 6th LOS	E



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	64	754	143	469	809	165	113	393	478	226	505	82
Future Volume (veh/h)	64	754	143	469	809	165	113	393	478	226	505	82
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1800	1900	1900	1800	1900	1900	1800	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	67	794	151	494	852	174	119	414	503	238	532	86
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	93	770	146	492	1456	297	143	637	277	247	713	115
HCM Platoon Ratio	1.00	1.00	1.00	1.33	1.33	1.33	1.33	1.33	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.05	0.25	0.25	0.38	0.65	0.64	0.11	0.23	0.17	0.14	0.23	0.22
Unsig. Movement Delay												
Ln Grp Delay, s/veh	61.3	91.1	91.3	71.2	13.8	13.9	78.4	43.8	426.8	94.5	50.9	51.2
Ln Grp LOS	E	F	F	F	B	B	E	D	F	F	D	D
Approach Vol, veh/h		1012			1520			1036			856	
Approach Delay, s/veh		89.2			32.5			233.8			63.1	
Approach LOS		F			C			F			E	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Case No	2.0	3.0	2.0	4.0	2.0	4.0	2.0	4.0
Phs Duration (G+Y+Rc), s	19.0	23.4	35.6	32.0	13.2	29.2	10.0	57.6
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green (Gmax), s	14.5	18.9	31.1	27.5	8.7	24.7	9.5	49.1
Max Allow Headway (MAH), s	3.8	4.6	3.8	5.3	3.8	5.3	3.8	5.3
Max Q Clear (g_c+I1), s	16.4	20.9	33.6	30.0	9.5	19.6	6.2	19.8
Green Ext Time (g_e), s	0.0	0.0	0.0	0.0	0.0	1.7	0.0	8.0
Prob of Phs Call (p_c)	1.00	1.00	1.00	1.00	0.97	1.00	0.87	1.00
Prob of Max Out (p_x)	1.00	0.00	1.00	1.00	1.00	0.00	1.00	0.09

Left-Turn Movement Data								
Assigned Mvmt	1		3		5		7	
Mvmt Sat Flow, veh/h	1810		1714		1714		1714	

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		3610		3026		3113		2986

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1610		575		501		610

Left Lane Group Data								
Assigned Mvmt	1	0	3	0	5	0	7	0
Lane Assignment	L (Prot)		L (Prot)		L (Prot)		L (Prot)	

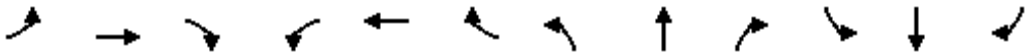
Lanes in Grp	1	0	1	0	1	0	1	0
Grp Vol (v), veh/h	238	0	494	0	119	0	67	0
Grp Sat Flow (s), veh/h/ln	1810	0	1714	0	1714	0	1714	0
Q Serve Time (g_s), s	14.4	0.0	31.6	0.0	7.5	0.0	4.2	0.0
Cycle Q Clear Time (g_c), s	14.4	0.0	31.6	0.0	7.5	0.0	4.2	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	247	0	492	0	143	0	93	0
V/C Ratio (X)	0.96	0.00	1.00	0.00	0.83	0.00	0.72	0.00
Avail Cap (c_a), veh/h	247	0	492	0	143	0	156	0
Upstream Filter (I)	1.00	0.00	0.81	0.00	0.94	0.00	1.00	0.00
Uniform Delay (d1), s/veh	47.2	0.0	34.0	0.0	48.1	0.0	51.2	0.0
Incr Delay (d2), s/veh	47.3	0.0	37.3	0.0	30.3	0.0	10.1	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	94.5	0.0	71.2	0.0	78.4	0.0	61.3	0.0
1st-Term Q (Q1), veh/ln	6.4	0.0	12.0	0.0	3.1	0.0	1.8	0.0
2nd-Term Q (Q2), veh/ln	3.2	0.0	5.1	0.0	1.2	0.0	0.3	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
%ile Back of Q (50%), veh/ln	9.7	0.0	17.1	0.0	4.3	0.0	2.1	0.0
%ile Storage Ratio (RQ%)	0.15	0.00	0.16	0.00	0.22	0.00	0.03	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	2	0	1	0	1	0	1
Grp Vol (v), veh/h	0	414	0	474	0	308	0	515
Grp Sat Flow (s), veh/h/ln	0	1805	0	1805	0	1805	0	1805
Q Serve Time (g_s), s	0.0	11.4	0.0	28.0	0.0	17.4	0.0	17.8
Cycle Q Clear Time (g_c), s	0.0	11.4	0.0	28.0	0.0	17.4	0.0	17.8
Lane Grp Cap (c), veh/h	0	637	0	459	0	414	0	880
V/C Ratio (X)	0.00	0.65	0.00	1.03	0.00	0.74	0.00	0.59
Avail Cap (c_a), veh/h	0	637	0	459	0	414	0	880
Upstream Filter (I)	0.00	0.94	0.00	1.00	0.00	1.00	0.00	0.81
Uniform Delay (d1), s/veh	0.0	39.0	0.0	41.0	0.0	39.4	0.0	13.0
Incr Delay (d2), s/veh	0.0	4.8	0.0	50.1	0.0	11.5	0.0	0.8
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	43.8	0.0	91.1	0.0	50.9	0.0	13.8
1st-Term Q (Q1), veh/ln	0.0	4.8	0.0	12.3	0.0	7.7	0.0	5.7
2nd-Term Q (Q2), veh/ln	0.0	0.4	0.0	6.4	0.0	1.3	0.0	0.2

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	5.2	0.0	18.6	0.0	9.0	0.0	5.9
%ile Storage Ratio (RQ%)	0.00	0.26	0.00	0.25	0.00	0.14	0.00	0.06
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	3.5	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		T+R		T+R		T+R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	503	0	471	0	310	0	511
Grp Sat Flow (s), veh/h/ln	0	1610	0	1796	0	1810	0	1790
Q Serve Time (g_s), s	0.0	18.9	0.0	28.0	0.0	17.6	0.0	17.8
Cycle Q Clear Time (g_c), s	0.0	18.9	0.0	28.0	0.0	17.6	0.0	17.8
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	0.32	0.00	0.28	0.00	0.34
Lane Grp Cap (c), veh/h	0	277	0	457	0	415	0	873
V/C Ratio (X)	0.00	1.82	0.00	1.03	0.00	0.75	0.00	0.59
Avail Cap (c_a), veh/h	0	277	0	457	0	415	0	873
Upstream Filter (I)	0.00	0.94	0.00	1.00	0.00	1.00	0.00	0.81
Uniform Delay (d1), s/veh	0.0	45.5	0.0	41.1	0.0	39.5	0.0	13.1
Incr Delay (d2), s/veh	0.0	381.3	0.0	50.2	0.0	11.7	0.0	0.8
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	426.8	0.0	91.3	0.0	51.2	0.0	13.9
1st-Term Q (Q1), veh/ln	0.0	7.5	0.0	12.2	0.0	7.8	0.0	5.7
2nd-Term Q (Q2), veh/ln	0.0	29.3	0.0	6.4	0.0	1.3	0.0	0.2
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	36.8	0.0	18.6	0.0	9.1	0.0	5.9
%ile Storage Ratio (RQ%)	0.00	1.85	0.00	0.25	0.00	0.14	0.00	0.06
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	56.6	0.0	3.5	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.5	0.0	0.3	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	98.5
HCM 6th LOS	F



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	150	3	327	50	50	423	198	478	6	19	901	250
Future Volume (veh/h)	150	3	327	50	50	423	198	478	6	19	901	250
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1700	1900	1900	1800	1900	1900	1800	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	158	3	0	53	53	445	208	503	6	20	948	263
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	209	604		211	193	303	250	1905	23	50	1127	312
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.07	0.32	0.00	0.21	0.21	0.20	0.15	0.52	0.52	0.03	0.40	0.40
Unsig. Movement Delay												
Ln Grp Delay, s/veh	55.7	21.0	0.0	30.4	0.0	264.4	56.3	12.6	12.6	45.0	28.9	29.3
Ln Grp LOS	E	C		C	A	F	E	B	B	D	C	C
Approach Vol, veh/h		161			551			717			1231	
Approach Delay, s/veh		55.0			219.4			25.3			29.3	
Approach LOS		E			F			C			C	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6	7	8
Case No	2.0	4.0		3.0	2.0	4.0	2.0	8.3
Phs Duration (G+Y+Rc), s	6.5	50.9		32.6	17.1	40.3	10.0	22.6
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5	4.5	4.5
Max Green (Gmax), s	5.0	43.4		28.1	13.5	34.9	5.5	18.1
Max Allow Headway (MAH), s	3.8	5.2		5.2	3.8	5.3	3.8	5.5
Max Q Clear (g_c+I1), s	3.0	8.9		2.1	12.6	29.7	6.4	20.6
Green Ext Time (g_e), s	0.0	3.3		0.0	0.1	3.3	0.0	0.0
Prob of Phs Call (p_c)	0.39	1.00		1.00	0.99	1.00	0.98	1.00
Prob of Max Out (p_x)	1.00	0.00		0.00	1.00	0.00	1.00	1.00

Left-Turn Movement Data								
Assigned Mvmt	1				5		7	3
Mvmt Sat Flow, veh/h	1810				1714		3141	730

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		3654		1900		2793		934

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		44		1610		773		1465

Left Lane Group Data								
Assigned Mvmt	1	0	0	0	5	0	7	3
Lane Assignment	L (Prot)				L (Prot)		L (Prot)	L+T

Lanes in Grp	1	0	0	0	1	0	2	1
Grp Vol (v), veh/h	20	0	0	0	208	0	158	106
Grp Sat Flow (s), veh/h/ln	1810	0	0	0	1714	0	1570	1664
Q Serve Time (g_s), s	1.0	0.0	0.0	0.0	10.6	0.0	4.4	2.6
Cycle Q Clear Time (g_c), s	1.0	0.0	0.0	0.0	10.6	0.0	4.4	4.6
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	1436
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	18.6
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	18.6
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	0.00	1.00	0.00	1.00	0.50
Lane Grp Cap (c), veh/h	50	0	0	0	250	0	209	404
V/C Ratio (X)	0.40	0.00	0.00	0.00	0.83	0.00	0.75	0.26
Avail Cap (c_a), veh/h	111	0	0	0	267	0	209	404
Upstream Filter (I)	0.38	0.00	0.00	0.00	1.00	0.00	1.00	1.00
Uniform Delay (d1), s/veh	43.0	0.0	0.0	0.0	37.4	0.0	41.3	30.1
Incr Delay (d2), s/veh	2.0	0.0	0.0	0.0	18.9	0.0	14.4	0.3
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	45.0	0.0	0.0	0.0	56.3	0.0	55.7	30.4
1st-Term Q (Q1), veh/ln	0.4	0.0	0.0	0.0	4.4	0.0	1.7	1.9
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	1.3	0.0	0.4	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	0.00	1.00	0.00	1.00	1.00
%ile Back of Q (50%), veh/ln	0.5	0.0	0.0	0.0	5.7	0.0	2.1	1.9
%ile Storage Ratio (RQ%)	0.02	0.00	0.00	0.00	0.95	0.00	0.05	0.06
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		
Lanes in Grp	0	1	0	1	0	1	0	0
Grp Vol (v), veh/h	0	248	0	3	0	612	0	0
Grp Sat Flow (s), veh/h/ln	0	1805	0	1900	0	1805	0	0
Q Serve Time (g_s), s	0.0	6.9	0.0	0.1	0.0	27.5	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	6.9	0.0	0.1	0.0	27.5	0.0	0.0
Lane Grp Cap (c), veh/h	0	941	0	604	0	728	0	0
V/C Ratio (X)	0.00	0.26	0.00	0.00	0.00	0.84	0.00	0.00
Avail Cap (c_a), veh/h	0	941	0	604	0	728	0	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	0.38	0.00	0.00
Uniform Delay (d1), s/veh	0.0	11.9	0.0	21.0	0.0	24.2	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.7	0.0	0.0	0.0	4.6	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	12.6	0.0	21.0	0.0	28.9	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	2.6	0.0	0.0	0.0	11.1	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.2	0.0	0.0	0.0	0.9	0.0	0.0

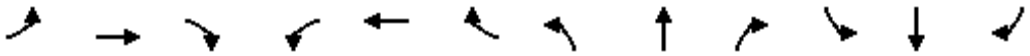
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	2.8	0.0	0.0	0.0	12.1	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.12	0.00	0.00	0.00	0.61	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R		R		T+R		T+R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	261	0	0	0	599	0	445
Grp Sat Flow (s), veh/h/ln	0	1892	0	1610	0	1761	0	1465
Q Serve Time (g_s), s	0.0	6.9	0.0	0.0	0.0	27.7	0.0	18.6
Cycle Q Clear Time (g_c), s	0.0	6.9	0.0	0.0	0.0	27.7	0.0	18.6
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.02	0.00	1.00	0.00	0.44	0.00	1.00
Lane Grp Cap (c), veh/h	0	987	0	512	0	710	0	303
V/C Ratio (X)	0.00	0.26	0.00	0.00	0.00	0.84	0.00	1.47
Avail Cap (c_a), veh/h	0	987	0	512	0	710	0	303
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	0.38	0.00	1.00
Uniform Delay (d1), s/veh	0.0	12.0	0.0	0.0	0.0	24.4	0.0	36.0
Incr Delay (d2), s/veh	0.0	0.7	0.0	0.0	0.0	4.9	0.0	228.5
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	12.6	0.0	0.0	0.0	29.3	0.0	264.4
1st-Term Q (Q1), veh/ln	0.0	2.7	0.0	0.0	0.0	11.0	0.0	6.5
2nd-Term Q (Q2), veh/ln	0.0	0.2	0.0	0.0	0.0	1.0	0.0	19.2
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	2.9	0.0	0.0	0.0	11.9	0.0	25.7
%ile Storage Ratio (RQ%)	0.00	0.13	0.00	0.00	0.00	0.60	0.00	0.75
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	35.5
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4

Intersection Summary	
HCM 6th Ctrl Delay	69.2
HCM 6th LOS	E

Notes

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	6	0	5	35	0	37	13	597	29	44	1084	17
Future Volume (veh/h)	6	0	5	35	0	37	13	597	29	44	1084	17
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1800	1900	1900	1800	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	6	0	5	37	0	39	14	628	31	46	1141	18
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	110	0	61	73	0	177	429	3793	186	67	4311	68
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Prop Arrive On Green	0.04	0.00	0.03	0.04	0.00	0.11	1.00	1.00	1.00	0.04	0.82	0.82
Unsig. Movement Delay												
Ln Grp Delay, s/veh	56.0	0.0	56.5	61.6	0.0	49.1	0.1	0.1	0.3	68.6	2.7	2.9
Ln Grp LOS	E	A	E	E	A	D	A	A	A	E	A	A
Approach Vol, veh/h		11			76			673			1205	
Approach Delay, s/veh		56.2			55.2			0.2			5.3	
Approach LOS		E			E			A			A	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4		6		8
Case No	2.0	6.3	2.0	6.3		4.0		4.0
Phs Duration (G+Y+Rc), s	8.5	93.9	9.1	8.6		102.3		17.7
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5		4.5		4.5
Max Green (Gmax), s	15.1	30.7	28.1	28.1		50.3		18.0
Max Allow Headway (MAH), s	3.8	5.3	3.8	4.7		5.2		5.6
Max Q Clear (g_c+I1), s	5.0	2.0	4.5	2.5		8.0		4.6
Green Ext Time (g_e), s	0.0	4.8	0.1	0.0		10.1		0.1
Prob of Phs Call (p_c)	0.78	1.00	0.92	0.81		1.00		0.94
Prob of Max Out (p_x)	0.00	0.00	0.00	0.00		0.00		0.00

Left-Turn Movement Data								
Assigned Mvmt	1	5	3	7				
Mvmt Sat Flow, veh/h	1810	492	1714	1317				

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		5064		0		5260		0

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		249		1610		83		1610

Left Lane Group Data								
Assigned Mvmt	1	5	3	7	0	0	0	0
Lane Assignment	L (Prot)	L	L (Prot)	L				

Lanes in Grp	1	1	1	1	0	0	0	0
Grp Vol (v), veh/h	46	14	37	6	0	0	0	0
Grp Sat Flow (s), veh/h/ln	1810	492	1714	1317	0	0	0	0
Q Serve Time (g_s), s	3.0	0.0	2.5	0.5	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	3.0	0.0	2.5	0.5	0.0	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	492	0	1317	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	89.9	0.0	4.6	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	89.9	0.0	4.6	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	67	429	73	110	0	0	0	0
V/C Ratio (X)	0.68	0.03	0.51	0.05	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	235	429	409	374	0	0	0	0
Upstream Filter (I)	1.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	57.1	0.0	56.2	55.8	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	11.5	0.1	5.4	0.2	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	68.6	0.1	61.6	56.0	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	1.4	0.0	1.1	0.2	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.2	0.0	0.1	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00
%ile Back of Q (50%), veh/ln	1.6	0.0	1.2	0.2	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.27	0.00	0.02	0.01	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T				T		
Lanes in Grp	0	2	0	0	0	2	0	0
Grp Vol (v), veh/h	0	428	0	0	0	750	0	0
Grp Sat Flow (s), veh/h/ln	0	1729	0	0	0	1729	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	6.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	6.0	0.0	0.0
Lane Grp Cap (c), veh/h	0	2590	0	0	0	2834	0	0
V/C Ratio (X)	0.00	0.17	0.00	0.00	0.00	0.26	0.00	0.00
Avail Cap (c_a), veh/h	0	2590	0	0	0	2834	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	2.5	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.1	0.0	0.0	0.0	0.2	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.1	0.0	0.0	0.0	2.7	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	1.5	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.0	0.0	1.6	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R		T+R		T+R		T+R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	231	0	5	0	409	0	39
Grp Sat Flow (s), veh/h/ln	0	1855	0	1610	0	1885	0	1610
Q Serve Time (g_s), s	0.0	0.0	0.0	0.4	0.0	6.0	0.0	2.6
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.4	0.0	6.0	0.0	2.6
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.13	0.00	1.00	0.00	0.04	0.00	1.00
Lane Grp Cap (c), veh/h	0	1389	0	61	0	1545	0	177
V/C Ratio (X)	0.00	0.17	0.00	0.08	0.00	0.26	0.00	0.22
Avail Cap (c_a), veh/h	0	1389	0	384	0	1545	0	242
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	55.9	0.0	2.5	0.0	48.5
Incr Delay (d2), s/veh	0.0	0.3	0.0	0.6	0.0	0.4	0.0	0.6
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.3	0.0	56.5	0.0	2.9	0.0	49.1
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.1	0.0	1.6	0.0	1.1
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	0.2	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.1	0.0	0.2	0.0	1.8	0.0	1.1
%ile Storage Ratio (RQ%)	0.00	0.01	0.00	0.01	0.00	0.18	0.00	0.02
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	5.8
HCM 6th LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	32	10	22	20	11	8	75	644	28	14	943	128
Future Volume (veh/h)	32	10	22	20	11	8	75	644	28	14	943	128
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1800	1900	1900	1800	1900	1900	1800	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	34	11	23	21	12	8	79	678	29	15	993	135
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	112	30	69	106	58	40	108	2905	124	37	2495	339
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Prop Arrive On Green	0.06	0.06	0.05	0.06	0.06	0.05	0.06	0.82	0.82	0.04	1.00	1.00
Unsig. Movement Delay												
Ln Grp Delay, s/veh	57.1	0.0	57.0	56.7	0.0	55.3	64.0	2.7	2.7	63.7	0.8	0.8
Ln Grp LOS	E	A	E	E	A	E	E	A	A	E	A	A
Approach Vol, veh/h		68			41			786			1143	
Approach Delay, s/veh		57.0			56.1			8.8			1.7	
Approach LOS		E			E			A			A	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Case No	2.0	4.0		8.0	2.0	4.0		8.0
Phs Duration (G+Y+Rc), s	6.5	102.8		10.7	11.5	97.8		10.7
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green (Gmax), s	27.0	39.5		40.0	27.0	39.5		40.0
Max Allow Headway (MAH), s	3.8	5.2		5.4	3.8	5.3		5.3
Max Q Clear (g_c+I1), s	3.0	7.0		6.0	7.4	2.0		5.7
Green Ext Time (g_e), s	0.0	4.9		0.3	0.2	9.7		0.2
Prob of Phs Call (p_c)	0.39	1.00		0.97	0.93	1.00		0.97
Prob of Max Out (p_x)	0.00	0.00		0.00	0.00	0.00		0.00

Left-Turn Movement Data								
Assigned Mvmt	1			7	5			3
Mvmt Sat Flow, veh/h	1810			1009	1714			877

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		3527		545		3193		1037

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		151		1247		434		727

Left Lane Group Data								
Assigned Mvmt	1	0	0	7	5	0	0	3
Lane Assignment	L (Prot)			L+T	L (Prot)			L+T

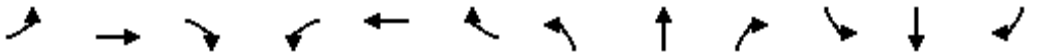
Lanes in Grp	1	0	0	1	1	0	0	1
Grp Vol (v), veh/h	15	0	0	40	79	0	0	23
Grp Sat Flow (s), veh/h/ln	1810	0	0	1296	1714	0	0	1042
Q Serve Time (g_s), s	1.0	0.0	0.0	2.7	5.4	0.0	0.0	1.6
Cycle Q Clear Time (g_c), s	1.0	0.0	0.0	4.0	5.4	0.0	0.0	3.7
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	1414	0	0	0	1396
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	6.7	0.0	0.0	0.0	6.7
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	5.4	0.0	0.0	0.0	4.6
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	2.7	0.0	0.0	0.0	1.6
Time to First Blk (g_f), s	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.2
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.2
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	0.84	1.00	0.00	0.00	0.90
Lane Grp Cap (c), veh/h	37	0	0	128	108	0	0	115
V/C Ratio (X)	0.40	0.00	0.00	0.32	0.73	0.00	0.00	0.20
Avail Cap (c_a), veh/h	415	0	0	543	393	0	0	519
Upstream Filter (I)	1.00	0.00	0.00	1.00	0.95	0.00	0.00	1.00
Uniform Delay (d1), s/veh	56.8	0.0	0.0	55.7	55.2	0.0	0.0	55.9
Incr Delay (d2), s/veh	6.9	0.0	0.0	1.4	8.8	0.0	0.0	0.9
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	63.7	0.0	0.0	57.1	64.0	0.0	0.0	56.7
1st-Term Q (Q1), veh/ln	0.4	0.0	0.0	1.2	2.3	0.0	0.0	0.7
2nd-Term Q (Q2), veh/ln	0.1	0.0	0.0	0.0	0.3	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.5	0.0	0.0	1.2	2.6	0.0	0.0	0.7
%ile Storage Ratio (RQ%)	0.06	0.00	0.00	0.15	0.03	0.00	0.00	0.02
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T				T		
Lanes in Grp	0	1	0	0	0	1	0	0
Grp Vol (v), veh/h	0	347	0	0	0	561	0	0
Grp Sat Flow (s), veh/h/ln	0	1805	0	0	0	1805	0	0
Q Serve Time (g_s), s	0.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0
Lane Grp Cap (c), veh/h	0	1487	0	0	0	1410	0	0
V/C Ratio (X)	0.00	0.23	0.00	0.00	0.00	0.40	0.00	0.00
Avail Cap (c_a), veh/h	0	1487	0	0	0	1410	0	0
Upstream Filter (I)	0.00	0.95	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	2.3	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.3	0.0	0.0	0.0	0.8	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	2.7	0.0	0.0	0.0	0.8	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	1.3	0.0	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	0.3	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	1.4	0.0	0.0	0.0	0.3	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.01	0.00	0.00	0.00	0.04	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R		T+R		T+R		T+R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	360	0	28	0	567	0	18
Grp Sat Flow (s), veh/h/ln	0	1873	0	1505	0	1822	0	1598
Q Serve Time (g_s), s	0.0	5.0	0.0	2.1	0.0	0.0	0.0	1.3
Cycle Q Clear Time (g_c), s	0.0	5.0	0.0	2.1	0.0	0.0	0.0	1.3
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.08	0.00	0.83	0.00	0.24	0.00	0.45
Lane Grp Cap (c), veh/h	0	1543	0	84	0	1424	0	89
V/C Ratio (X)	0.00	0.23	0.00	0.33	0.00	0.40	0.00	0.20
Avail Cap (c_a), veh/h	0	1543	0	508	0	1424	0	539
Upstream Filter (I)	0.00	0.95	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	2.3	0.0	54.7	0.0	0.0	0.0	54.2
Incr Delay (d2), s/veh	0.0	0.3	0.0	2.3	0.0	0.8	0.0	1.1
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	2.7	0.0	57.0	0.0	0.8	0.0	55.3
1st-Term Q (Q1), veh/ln	0.0	1.3	0.0	0.8	0.0	0.0	0.0	0.5
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.1	0.0	0.3	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	1.5	0.0	0.9	0.0	0.3	0.0	0.5
%ile Storage Ratio (RQ%)	0.00	0.01	0.00	0.11	0.00	0.04	0.00	0.02
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	7.4
HCM 6th LOS	A



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	79	212	45	218	482	165	187	342	154	139	645	112
Future Volume (veh/h)	79	212	45	218	482	165	187	342	154	139	645	112
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1800	1900	1900	1700	1900	1900	1800	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	83	223	47	229	507	174	197	360	0	146	679	118
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	117	976	303	247	717	320	245	1430		197	1307	571
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.07	0.19	0.19	0.08	0.20	0.20	0.14	0.40	0.00	0.11	0.36	0.35
Unsig. Movement Delay												
Ln Grp Delay, s/veh	45.7	24.2	24.0	51.0	26.7	25.7	44.6	14.5	0.0	37.5	18.9	16.5
Ln Grp LOS	D	C	C	D	C	C	D	B		D	B	B
Approach Vol, veh/h		353			910			557			943	
Approach Delay, s/veh		29.2			32.6			25.2			21.5	
Approach LOS		C			C			C			C	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Case No	2.0	3.0	2.0	3.0	2.0	3.0	2.0	3.0
Phs Duration (G+Y+Rc), s	11.6	31.7	9.5	17.2	14.0	29.3	8.8	17.9
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green (Gmax), s	9.5	19.5	5.0	18.0	9.5	19.5	5.0	18.0
Max Allow Headway (MAH), s	3.8	5.2	3.8	5.0	3.8	5.1	3.8	4.9
Max Q Clear (g_c+I1), s	7.5	6.7	7.1	4.6	9.8	12.3	5.3	11.2
Green Ext Time (g_e), s	0.1	1.8	0.0	1.3	0.0	2.9	0.0	2.2
Prob of Phs Call (p_c)	0.94	1.00	0.99	1.00	0.98	1.00	0.80	1.00
Prob of Max Out (p_x)	1.00	0.00	1.00	0.02	1.00	0.00	1.00	0.65

Left-Turn Movement Data								
Assigned Mvmt	1		3		5		7	
Mvmt Sat Flow, veh/h	1810		3141		1714		1714	

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		3610		5187		3610		3610

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1610		1610		1610		1610

Left Lane Group Data								
Assigned Mvmt	1	0	3	0	5	0	7	0
Lane Assignment	L (Prot)		L (Prot)		L (Prot)		L (Prot)	

Lanes in Grp	1	0	2	0	1	0	1	0
Grp Vol (v), veh/h	146	0	229	0	197	0	83	0
Grp Sat Flow (s), veh/h/ln	1810	0	1570	0	1714	0	1714	0
Q Serve Time (g_s), s	5.5	0.0	5.1	0.0	7.8	0.0	3.3	0.0
Cycle Q Clear Time (g_c), s	5.5	0.0	5.1	0.0	7.8	0.0	3.3	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	197	0	247	0	245	0	117	0
V/C Ratio (X)	0.74	0.00	0.93	0.00	0.80	0.00	0.71	0.00
Avail Cap (c_a), veh/h	259	0	247	0	245	0	135	0
Upstream Filter (I)	0.92	0.00	0.36	0.00	0.87	0.00	1.00	0.00
Uniform Delay (d1), s/veh	30.3	0.0	32.1	0.0	29.1	0.0	31.9	0.0
Incr Delay (d2), s/veh	7.3	0.0	18.9	0.0	15.5	0.0	13.7	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	37.5	0.0	51.0	0.0	44.6	0.0	45.7	0.0
1st-Term Q (Q1), veh/ln	2.3	0.0	1.9	0.0	3.1	0.0	1.3	0.0
2nd-Term Q (Q2), veh/ln	0.4	0.0	0.6	0.0	1.1	0.0	0.4	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
%ile Back of Q (50%), veh/ln	2.7	0.0	2.5	0.0	4.1	0.0	1.8	0.0
%ile Storage Ratio (RQ%)	0.26	0.00	0.25	0.00	0.61	0.00	0.44	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	2	0	3	0	2	0	2
Grp Vol (v), veh/h	0	360	0	223	0	679	0	507
Grp Sat Flow (s), veh/h/ln	0	1805	0	1729	0	1805	0	1805
Q Serve Time (g_s), s	0.0	4.7	0.0	2.6	0.0	10.3	0.0	9.2
Cycle Q Clear Time (g_c), s	0.0	4.7	0.0	2.6	0.0	10.3	0.0	9.2
Lane Grp Cap (c), veh/h	0	1430	0	976	0	1307	0	717
V/C Ratio (X)	0.00	0.25	0.00	0.23	0.00	0.52	0.00	0.71
Avail Cap (c_a), veh/h	0	1430	0	1371	0	1307	0	954
Upstream Filter (I)	0.00	0.87	0.00	1.00	0.00	0.92	0.00	0.36
Uniform Delay (d1), s/veh	0.0	14.2	0.0	24.1	0.0	17.6	0.0	26.1
Incr Delay (d2), s/veh	0.0	0.4	0.0	0.1	0.0	1.4	0.0	0.6
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	14.5	0.0	24.2	0.0	18.9	0.0	26.7
1st-Term Q (Q1), veh/ln	0.0	1.8	0.0	1.0	0.0	4.0	0.0	3.7
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	0.2	0.0	0.1

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	1.8	0.0	1.0	0.0	4.2	0.0	3.8
%ile Storage Ratio (RQ%)	0.00	0.02	0.00	0.00	0.00	0.04	0.00	0.05
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		R		R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	0	0	47	0	118	0	174
Grp Sat Flow (s), veh/h/ln	0	1610	0	1610	0	1610	0	1610
Q Serve Time (g_s), s	0.0	0.0	0.0	1.7	0.0	3.6	0.0	6.8
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	1.7	0.0	3.6	0.0	6.8
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	638	0	303	0	571	0	320
V/C Ratio (X)	0.00	0.00	0.00	0.16	0.00	0.21	0.00	0.54
Avail Cap (c_a), veh/h	0	638	0	426	0	571	0	426
Upstream Filter (I)	0.00	0.00	0.00	1.00	0.00	0.92	0.00	0.36
Uniform Delay (d1), s/veh	0.0	0.0	0.0	23.8	0.0	15.7	0.0	25.2
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.2	0.0	0.8	0.0	0.5
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	24.0	0.0	16.5	0.0	25.7
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.6	0.0	1.2	0.0	2.5
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.6	0.0	1.3	0.0	2.5
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.03
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	26.9
HCM 6th LOS	C

Notes

Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	87	88	57	391	559	101	132	599	206	85	588	182
Future Volume (veh/h)	87	88	57	391	559	101	132	599	206	85	588	182
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1800	1900	1900	1700	1900	1900	1800	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	92	93	60	412	588	106	139	631	217	89	619	192
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	128	347	207	503	749	135	183	1434	640	126	1422	432
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.07	0.16	0.15	0.16	0.25	0.24	0.11	0.40	0.40	0.07	0.36	0.35
Unsig. Movement Delay												
Ln Grp Delay, s/veh	41.9	28.1	28.5	40.8	32.4	32.7	45.0	17.4	17.0	41.9	19.0	20.1
Ln Grp LOS	D	C	C	D	C	C	D	B	B	D	B	C
Approach Vol, veh/h		245			1106			987			900	
Approach Delay, s/veh		33.4			35.6			21.2			21.6	
Approach LOS		C			D			C			C	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Case No	2.0	3.0	2.0	4.0	2.0	4.0	2.0	4.0
Phs Duration (G+Y+Rc), s	9.2	33.8	16.0	16.0	12.0	31.0	9.6	22.4
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green (Gmax), s	5.9	21.6	11.5	18.0	8.5	19.0	7.4	22.1
Max Allow Headway (MAH), s	3.8	4.9	3.8	5.4	3.8	5.3	3.8	5.3
Max Q Clear (g_c+I1), s	5.6	11.6	11.5	5.1	7.9	11.2	5.9	15.5
Green Ext Time (g_e), s	0.0	3.6	0.0	0.6	0.0	3.2	0.0	2.3
Prob of Phs Call (p_c)	0.84	1.00	1.00	1.00	0.94	1.00	0.85	1.00
Prob of Max Out (p_x)	1.00	0.00	1.00	0.01	1.00	0.00	1.00	0.80

Left-Turn Movement Data								
Assigned Mvmt	1		3		5		7	
Mvmt Sat Flow, veh/h	1810		3141		1714		1714	

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		3610		2172		3943		3056

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1610		1299		1199		550

Left Lane Group Data								
Assigned Mvmt	1	0	3	0	5	0	7	0
Lane Assignment	L (Prot)		L (Prot)		L (Prot)		L (Prot)	

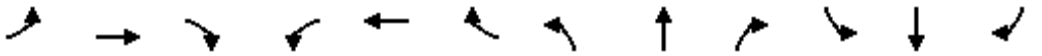
Lanes in Grp	1	0	2	0	1	0	1	0
Grp Vol (v), veh/h	89	0	412	0	139	0	92	0
Grp Sat Flow (s), veh/h/ln	1810	0	1570	0	1714	0	1714	0
Q Serve Time (g_s), s	3.6	0.0	9.5	0.0	5.9	0.0	3.9	0.0
Cycle Q Clear Time (g_c), s	3.6	0.0	9.5	0.0	5.9	0.0	3.9	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	126	0	503	0	183	0	128	0
V/C Ratio (X)	0.70	0.00	0.82	0.00	0.76	0.00	0.72	0.00
Avail Cap (c_a), veh/h	154	0	503	0	206	0	181	0
Upstream Filter (I)	0.72	0.00	1.00	0.00	0.90	0.00	1.00	0.00
Uniform Delay (d1), s/veh	34.1	0.0	30.5	0.0	32.6	0.0	33.9	0.0
Incr Delay (d2), s/veh	7.8	0.0	10.4	0.0	12.4	0.0	7.9	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	41.9	0.0	40.8	0.0	45.0	0.0	41.9	0.0
1st-Term Q (Q1), veh/ln	1.5	0.0	3.5	0.0	2.4	0.0	1.6	0.0
2nd-Term Q (Q2), veh/ln	0.3	0.0	0.7	0.0	0.6	0.0	0.3	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
%ile Back of Q (50%), veh/ln	1.8	0.0	4.2	0.0	3.0	0.0	1.9	0.0
%ile Storage Ratio (RQ%)	0.25	0.00	0.03	0.00	0.38	0.00	0.21	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	2	0	1	0	2	0	1
Grp Vol (v), veh/h	0	631	0	76	0	541	0	347
Grp Sat Flow (s), veh/h/ln	0	1805	0	1805	0	1729	0	1805
Q Serve Time (g_s), s	0.0	9.6	0.0	2.8	0.0	8.9	0.0	13.5
Cycle Q Clear Time (g_c), s	0.0	9.6	0.0	2.8	0.0	8.9	0.0	13.5
Lane Grp Cap (c), veh/h	0	1434	0	288	0	1247	0	442
V/C Ratio (X)	0.00	0.44	0.00	0.26	0.00	0.43	0.00	0.78
Avail Cap (c_a), veh/h	0	1434	0	445	0	1247	0	544
Upstream Filter (I)	0.00	0.90	0.00	1.00	0.00	0.72	0.00	1.00
Uniform Delay (d1), s/veh	0.0	16.5	0.0	27.7	0.0	18.2	0.0	26.4
Incr Delay (d2), s/veh	0.0	0.9	0.0	0.5	0.0	0.8	0.0	6.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	17.4	0.0	28.1	0.0	19.0	0.0	32.4
1st-Term Q (Q1), veh/ln	0.0	3.7	0.0	1.2	0.0	3.3	0.0	5.5
2nd-Term Q (Q2), veh/ln	0.0	0.2	0.0	0.0	0.0	0.1	0.0	0.7

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	3.9	0.0	1.2	0.0	3.5	0.0	6.3
%ile Storage Ratio (RQ%)	0.00	0.10	0.00	0.01	0.00	0.03	0.00	0.04
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		T+R		T+R		T+R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	217	0	77	0	270	0	347
Grp Sat Flow (s), veh/h/ln	0	1610	0	1666	0	1684	0	1801
Q Serve Time (g_s), s	0.0	7.0	0.0	3.1	0.0	9.2	0.0	13.5
Cycle Q Clear Time (g_c), s	0.0	7.0	0.0	3.1	0.0	9.2	0.0	13.5
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	0.78	0.00	0.71	0.00	0.31
Lane Grp Cap (c), veh/h	0	640	0	266	0	607	0	441
V/C Ratio (X)	0.00	0.34	0.00	0.29	0.00	0.44	0.00	0.79
Avail Cap (c_a), veh/h	0	640	0	411	0	607	0	543
Upstream Filter (I)	0.00	0.90	0.00	1.00	0.00	0.72	0.00	1.00
Uniform Delay (d1), s/veh	0.0	15.7	0.0	27.9	0.0	18.4	0.0	26.6
Incr Delay (d2), s/veh	0.0	1.3	0.0	0.6	0.0	1.7	0.0	6.2
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	17.0	0.0	28.5	0.0	20.1	0.0	32.7
1st-Term Q (Q1), veh/ln	0.0	2.4	0.0	1.2	0.0	3.4	0.0	5.5
2nd-Term Q (Q2), veh/ln	0.0	0.2	0.0	0.0	0.0	0.3	0.0	0.8
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	2.7	0.0	1.2	0.0	3.7	0.0	6.3
%ile Storage Ratio (RQ%)	0.00	0.07	0.00	0.01	0.00	0.04	0.00	0.04
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	27.2
HCM 6th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	327	388	413	631	900	0	0	1039	564
Future Volume (veh/h)	0	0	0	327	388	413	631	900	0	0	1039	564
Number				3	8	18	5	2	12	1	6	16
Initial Q, veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln				1800	1900	1900	1800	1900	0	0	1900	1900
Adj Flow Rate, veh/h				344	408	435	664	947	0	0	1094	594
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence				Yes			Yes			No		
Cap, veh/h				323	391	446	527	2194	0	0	972	434
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	2.00	1.00
Prop Arrive On Green				0.33	0.33	0.33	0.62	1.00	0.00	0.00	0.54	0.27
Unsig. Movement Delay												
Ln Grp Delay, s/veh				98.7	0.0	74.9	147.8	0.2	0.0	0.0	97.0	224.9
Ln Grp LOS				F	A	E	F	A	A	A	F	F
Approach Vol, veh/h					1187			1611			1688	
Approach Delay, s/veh					88.0			61.1			142.0	
Approach LOS					F			E			F	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2	8		5	6		
Case No		4.0	12.0		2.0	7.0		
Phs Duration (G+Y+Rc), s		83.0	47.0		44.0	39.0		
Change Period (Y+Rc), s		4.5	4.5		4.5	4.5		
Max Green (Gmax), s		78.5	42.5		39.5	34.5		
Max Allow Headway (MAH), s		5.2	5.4		3.8	4.8		
Max Q Clear (g_c+I1), s		2.0	45.0		42.0	37.0		
Green Ext Time (g_e), s		8.8	0.0		0.0	0.0		
Prob of Phs Call (p_c)		1.00	1.00		1.00	1.00		
Prob of Max Out (p_x)		0.00	1.00		1.00	0.00		

Left-Turn Movement Data								
Assigned Mvmt			3		5	1		
Mvmt Sat Flow, veh/h			976		1714	0		

Through Movement Data								
Assigned Mvmt		2	8			6		
Mvmt Sat Flow, veh/h		3705	1184			3705		

Right-Turn Movement Data								
Assigned Mvmt		12	18			16		
Mvmt Sat Flow, veh/h		0	1349			1610		

Left Lane Group Data								
Assigned Mvmt	0	0	3	0	5	1	0	0
Lane Assignment			L+T		L (Prot)			

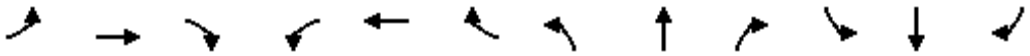
Lanes in Grp	0	0	1	0	1	0	0	0
Grp Vol (v), veh/h	0	0	653	0	664	0	0	0
Grp Sat Flow (s), veh/h/ln	0	0	1851	0	1714	0	0	0
Q Serve Time (g_s), s	0.0	0.0	43.0	0.0	40.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	43.0	0.0	40.0	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	35.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	0.00	0.53	0.00	1.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	612	0	527	0	0	0
V/C Ratio (X)	0.00	0.00	1.07	0.00	1.26	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	0	612	0	527	0	0	0
Upstream Filter (I)	0.00	0.00	1.00	0.00	0.40	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	43.5	0.0	25.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	55.2	0.0	122.8	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	98.7	0.0	147.8	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	19.5	0.0	11.1	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	9.4	0.0	18.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	0.00	1.00	0.00	1.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	28.8	0.0	29.1	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.70	0.00	4.85	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	10.1	0.0	34.1	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.3	0.0	0.3	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	8	0	0	6	0	0
Lane Assignment		T				T		
Lanes in Grp	0	2	0	0	0	2	0	0
Grp Vol (v), veh/h	0	947	0	0	0	1094	0	0
Grp Sat Flow (s), veh/h/ln	0	1805	0	0	0	1805	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	35.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	35.0	0.0	0.0
Lane Grp Cap (c), veh/h	0	2194	0	0	0	972	0	0
V/C Ratio (X)	0.00	0.43	0.00	0.00	0.00	1.13	0.00	0.00
Avail Cap (c_a), veh/h	0	2194	0	0	0	972	0	0
Upstream Filter (I)	0.00	0.40	0.00	0.00	0.00	0.75	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	30.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.2	0.0	0.0	0.0	67.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.2	0.0	0.0	0.0	97.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	11.4	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	9.0	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.1	0.0	0.0	0.0	20.5	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.53	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	30.5	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	18	0	0	16	0	0
Lane Assignment			T+R			R		
Lanes in Grp	0	0	1	0	0	1	0	0
Grp Vol (v), veh/h	0	0	534	0	0	594	0	0
Grp Sat Flow (s), veh/h/ln	0	0	1657	0	0	1610	0	0
Q Serve Time (g_s), s	0.0	0.0	41.4	0.0	0.0	35.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	41.4	0.0	0.0	35.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.00	0.81	0.00	0.00	1.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	548	0	0	434	0	0
V/C Ratio (X)	0.00	0.00	0.97	0.00	0.00	1.37	0.00	0.00
Avail Cap (c_a), veh/h	0	0	548	0	0	434	0	0
Upstream Filter (I)	0.00	0.00	1.00	0.00	0.00	0.75	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	43.0	0.0	0.0	47.5	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	32.0	0.0	0.0	177.4	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	74.9	0.0	0.0	224.9	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	16.8	0.0	0.0	13.9	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	4.9	0.0	0.0	21.4	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	21.6	0.0	0.0	35.3	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.52	0.00	0.00	0.92	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	40.1	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	98.7
HCM 6th LOS	F



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	510	17	702	0	0	0	0	1051	184	163	707	0
Future Volume (veh/h)	510	17	702	0	0	0	0	1051	184	163	707	0
Number	7	4	14				5	2	12	1	6	16
Initial Q, veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1800	1900	1900				0	1900	1900	1900	1900	0
Adj Flow Rate, veh/h	537	18	739				0	1106	194	172	744	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0				0	0	0	0	0	0
Opposing Right Turn Influence	Yes						No			Yes		
Cap, veh/h	682	23	626				0	1304	582	211	1885	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	2.00	2.00	2.00	2.00	1.00
Prop Arrive On Green	0.39	0.39	0.38				0.00	0.72	0.72	0.23	1.00	0.00
Unsig. Movement Delay												
Ln Grp Delay, s/veh	30.2	0.0	124.6				0.0	17.7	10.1	35.8	0.1	0.0
Ln Grp LOS	C	A	F				A	B	B	D	A	A
Approach Vol, veh/h		1294						1300			916	
Approach Delay, s/veh		84.1						16.6			6.8	
Approach LOS		F						B			A	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Case No	2.0	7.0		12.0		4.0		
Phs Duration (G+Y+Rc), s	14.5	36.5		39.0		51.0		
Change Period (Y+Rc), s	4.5	4.5		4.5		4.5		
Max Green (Gmax), s	10.5	31.5		34.5		46.5		
Max Allow Headway (MAH), s	3.8	5.1		5.5		5.2		
Max Q Clear (g_c+I1), s	10.1	21.8		37.0		2.0		
Green Ext Time (g_e), s	0.0	5.7		0.0		6.2		
Prob of Phs Call (p_c)	0.99	1.00		1.00		1.00		
Prob of Max Out (p_x)	1.00	0.00		1.00		0.00		

Left-Turn Movement Data												
Assigned Mvmt		1	5		7							
Mvmt Sat Flow, veh/h		1810	0		1754							

Through Movement Data												
Assigned Mvmt			2		4		6					
Mvmt Sat Flow, veh/h			3705		59		3705					

Right-Turn Movement Data												
Assigned Mvmt			12		14		16					
Mvmt Sat Flow, veh/h			1610		1610		0					

Left Lane Group Data												
Assigned Mvmt		1	5	0	7	0	0	0	0			
Lane Assignment		L (Prot)			L+T							

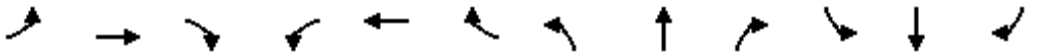
Lanes in Grp	1	0	0	1	0	0	0	0
Grp Vol (v), veh/h	172	0	0	555	0	0	0	0
Grp Sat Flow (s), veh/h/ln	1810	0	0	1812	0	0	0	0
Q Serve Time (g_s), s	8.1	0.0	0.0	24.3	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	8.1	0.0	0.0	24.3	0.0	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	32.5	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	0.97	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	211	0	0	705	0	0	0	0
V/C Ratio (X)	0.82	0.00	0.00	0.79	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	221	0	0	705	0	0	0	0
Upstream Filter (I)	0.09	0.00	0.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	33.6	0.0	0.0	24.2	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	2.2	0.0	0.0	5.9	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	35.8	0.0	0.0	30.2	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	3.1	0.0	0.0	9.9	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.1	0.0	0.0	1.2	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00
%ile Back of Q (50%), veh/ln	3.3	0.0	0.0	11.1	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.54	0.00	0.00	0.33	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	0
Lane Assignment		T				T		
Lanes in Grp	0	2	0	0	0	2	0	0
Grp Vol (v), veh/h	0	1106	0	0	0	744	0	0
Grp Sat Flow (s), veh/h/ln	0	1805	0	0	0	1805	0	0
Q Serve Time (g_s), s	0.0	19.8	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	19.8	0.0	0.0	0.0	0.0	0.0	0.0
Lane Grp Cap (c), veh/h	0	1304	0	0	0	1885	0	0
V/C Ratio (X)	0.00	0.85	0.00	0.00	0.00	0.39	0.00	0.00
Avail Cap (c_a), veh/h	0	1304	0	0	0	1885	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	0.09	0.00	0.00
Uniform Delay (d1), s/veh	0.0	10.7	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	7.0	0.0	0.0	0.0	0.1	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	17.7	0.0	0.0	0.0	0.1	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	3.6	0.0	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	1.3	0.0	0.0	0.0	0.0	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	4.9	0.0	0.0	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.09	0.00	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	0
Lane Assignment		R		T+R				
Lanes in Grp	0	1	0	1	0	0	0	0
Grp Vol (v), veh/h	0	194	0	739	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	1610	0	1610	0	0	0	0
Q Serve Time (g_s), s	0.0	4.0	0.0	35.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	4.0	0.0	35.0	0.0	0.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	582	0	626	0	0	0	0
V/C Ratio (X)	0.00	0.33	0.00	1.18	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	582	0	626	0	0	0	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	8.5	0.0	27.8	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	1.5	0.0	96.8	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	10.1	0.0	124.6	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	1.2	0.0	12.8	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.2	0.0	16.8	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	1.4	0.0	29.6	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.03	0.00	0.87	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	28.2	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	38.9
HCM 6th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	531	589	1104	1174	0	0	0	0	303	0	328
Future Volume (veh/h)	0	531	589	1104	1174	0	0	0	0	303	0	328
Number	7	4	14	3	8	18				1	6	16
Initial Q, veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	0	1900	1900	1700	1900	0				1900	1900	1900
Adj Flow Rate, veh/h	0	559	0	1162	1236	0				319	0	345
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95				0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0				0	0	0
Opposing Right Turn Influence	No			Yes						Yes		
Cap, veh/h	0	945		1209	2495	0				398	0	354
HCM Platoon Ratio	1.00	2.00	2.00	2.00	1.00	1.00				1.00	1.00	1.00
Prop Arrive On Green	0.00	0.52	0.00	0.77	0.69	0.00				0.22	0.00	0.22
Unsig. Movement Delay												
Ln Grp Delay, s/veh	0.0	18.7	0.0	21.0	7.0	0.0				48.8	0.0	76.5
Ln Grp LOS	A	B		C	A	A				D	A	E
Approach Vol, veh/h		559			2398						664	
Approach Delay, s/veh		18.7			13.8						63.2	
Approach LOS		B			B						E	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	6		3	4				8
Case No	11.0		2.0	7.0				4.0
Phs Duration (G+Y+Rc), s	23.8		38.6	27.6				66.2
Change Period (Y+Rc), s	4.5		4.5	4.5				4.5
Max Green (Gmax), s	19.3		37.5	19.7				61.7
Max Allow Headway (MAH), s	4.7		3.8	5.2				5.2
Max Q Clear (g_c+I1), s	21.1		31.5	11.6				16.5
Green Ext Time (g_e), s	0.0		2.7	2.3				12.7
Prob of Phs Call (p_c)	1.00		1.00	1.00				1.00
Prob of Max Out (p_x)	0.00		0.64	0.00				0.00

Left-Turn Movement Data												
Assigned Mvmt		1		3	7							
Mvmt Sat Flow, veh/h		1810		3141	0							

Through Movement Data												
Assigned Mvmt		6			4				8			
Mvmt Sat Flow, veh/h		0			3705				3705			

Right-Turn Movement Data												
Assigned Mvmt		16			14				18			
Mvmt Sat Flow, veh/h		1610			1610				0			

Left Lane Group Data												
Assigned Mvmt		1	0	3	7	0	0	0	0			
Lane Assignment		L+T		L (Prot)								

Lanes in Grp	1	0	2	0	0	0	0	0
Grp Vol (v), veh/h	319	0	1162	0	0	0	0	0
Grp Sat Flow (s), veh/h/ln	1810	0	1570	0	0	0	0	0
Q Serve Time (g_s), s	15.0	0.0	29.5	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	15.0	0.0	29.5	0.0	0.0	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	23.6	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	398	0	1209	0	0	0	0	0
V/C Ratio (X)	0.80	0.00	0.96	0.00	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	398	0	1326	0	0	0	0	0
Upstream Filter (I)	1.00	0.00	0.62	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	33.2	0.0	9.8	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	15.5	0.0	11.2	0.0	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	48.8	0.0	21.0	0.0	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	6.4	0.0	3.2	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	1.7	0.0	1.9	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	1.00	1.00	0.00	0.00	0.00	0.00
%ile Back of Q (50%), veh/ln	8.1	0.0	5.0	0.0	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.64	0.00	0.31	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	6	0	0	4	0	0	0	8
Lane Assignment				T				T
Lanes in Grp	0	0	0	2	0	0	0	2
Grp Vol (v), veh/h	0	0	0	559	0	0	0	1236
Grp Sat Flow (s), veh/h/ln	0	0	0	1805	0	0	0	1805
Q Serve Time (g_s), s	0.0	0.0	0.0	9.6	0.0	0.0	0.0	14.5
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	9.6	0.0	0.0	0.0	14.5
Lane Grp Cap (c), veh/h	0	0	0	945	0	0	0	2495
V/C Ratio (X)	0.00	0.00	0.00	0.59	0.00	0.00	0.00	0.50
Avail Cap (c_a), veh/h	0	0	0	945	0	0	0	2495
Upstream Filter (I)	0.00	0.00	0.00	0.22	0.00	0.00	0.00	0.62
Uniform Delay (d1), s/veh	0.0	0.0	0.0	18.1	0.0	0.0	0.0	6.5
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.6	0.0	0.0	0.0	0.4
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	18.7	0.0	0.0	0.0	7.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	3.1	0.0	0.0	0.0	4.6
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.2

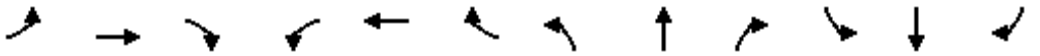
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	1.00	0.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	3.2	0.0	0.0	0.0	4.7
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.29
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	16	0	0	14	0	0	0	18
Lane Assignment	R			R				
Lanes in Grp	1	0	0	1	0	0	0	0
Grp Vol (v), veh/h	345	0	0	0	0	0	0	0
Grp Sat Flow (s), veh/h/ln	1610	0	0	1610	0	0	0	0
Q Serve Time (g_s), s	19.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	19.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	1.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	354	0	0	422	0	0	0	0
V/C Ratio (X)	0.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	354	0	0	422	0	0	0	0
Upstream Filter (I)	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	34.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	41.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	76.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	7.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	4.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	1.00	0.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	11.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	23.6
HCM 6th LOS	C

Notes

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	154	531	0	0	1738	575	498	6	413	0	0	0
Future Volume (veh/h)	154	531	0	0	1738	575	498	6	413	0	0	0
Number	7	4	14	3	8	18	5	2	12			
Initial Q, veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1800	1900	0	0	1900	1900	1900	1900	1900			
Adj Flow Rate, veh/h	162	559	0	0	1829	605	528	0	435			
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95			
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0			
Opposing Right Turn Influence	Yes			No			Yes					
Cap, veh/h	193	2301	0	0	2464	765	950	0	845			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	2.00	1.00	1.00	1.00	1.00			
Prop Arrive On Green	0.22	1.00	0.00	0.00	0.95	0.47	0.26	0.00	0.26			
Unsig. Movement Delay												
Ln Grp Delay, s/veh	50.6	0.2	0.0	0.0	3.2	25.9	27.8	0.0	27.4			
Ln Grp LOS	D	A	A	A	A	C	C	A	C			
Approach Vol, veh/h		721			2434			963				
Approach Delay, s/veh		11.5			8.9			27.6				
Approach LOS		B			A			C				

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2		4			7	8
Case No		9.0		4.0			2.0	7.0
Phs Duration (G+Y+Rc), s		25.0		55.0			13.0	42.0
Change Period (Y+Rc), s		4.5		4.5			4.5	4.5
Max Green (Gmax), s		20.5		50.5			8.5	37.5
Max Allow Headway (MAH), s		3.9		5.2			3.8	4.9
Max Q Clear (g_c+I1), s		12.1		2.0			9.2	27.3
Green Ext Time (g_e), s		2.7		4.4			0.0	8.8
Prob of Phs Call (p_c)		1.00		1.00			0.97	1.00
Prob of Max Out (p_x)		0.00		0.00			1.00	0.00

Left-Turn Movement Data								
Assigned Mvmt		5					7	3
Mvmt Sat Flow, veh/h		3619					1714	0

Through Movement Data								
Assigned Mvmt		2		4				8
Mvmt Sat Flow, veh/h		0		3705				5358

Right-Turn Movement Data								
Assigned Mvmt		12		14				18
Mvmt Sat Flow, veh/h		3220		0				1610

Left Lane Group Data								
Assigned Mvmt	0	5	0	0	0	0	7	3
Lane Assignment		L					L (Prot)	

Lanes in Grp	0	2	0	0	0	0	1	0
Grp Vol (v), veh/h	0	528	0	0	0	0	162	0
Grp Sat Flow (s), veh/h/ln	0	1810	0	0	0	0	1714	0
Q Serve Time (g_s), s	0.0	10.1	0.0	0.0	0.0	0.0	7.2	0.0
Cycle Q Clear Time (g_c), s	0.0	10.1	0.0	0.0	0.0	0.0	7.2	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	1810	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	38.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	0	950	0	0	0	0	193	0
V/C Ratio (X)	0.00	0.56	0.00	0.00	0.00	0.00	0.84	0.00
Avail Cap (c_a), veh/h	0	950	0	0	0	0	193	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	0.00	0.71	0.00
Uniform Delay (d1), s/veh	0.0	25.5	0.0	0.0	0.0	0.0	30.3	0.0
Incr Delay (d2), s/veh	0.0	2.3	0.0	0.0	0.0	0.0	20.3	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	27.8	0.0	0.0	0.0	0.0	50.6	0.0
1st-Term Q (Q1), veh/ln	0.0	4.2	0.0	0.0	0.0	0.0	2.6	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.3	0.0	0.0	0.0	0.0	1.1	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	0.00	0.00	0.00	1.00	1.00
%ile Back of Q (50%), veh/ln	0.0	4.5	0.0	0.0	0.0	0.0	3.7	0.0
%ile Storage Ratio (RQ%)	0.00	0.21	0.00	0.00	0.00	0.00	1.02	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	0	0	8
Lane Assignment				T				T
Lanes in Grp	0	0	0	2	0	0	0	3
Grp Vol (v), veh/h	0	0	0	559	0	0	0	1829
Grp Sat Flow (s), veh/h/ln	0	0	0	1805	0	0	0	1729
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.8
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.8
Lane Grp Cap (c), veh/h	0	0	0	2301	0	0	0	2464
V/C Ratio (X)	0.00	0.00	0.00	0.24	0.00	0.00	0.00	0.74
Avail Cap (c_a), veh/h	0	0	0	2301	0	0	0	2464
Upstream Filter (I)	0.00	0.00	0.00	0.71	0.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.2	0.0	0.0	0.0	2.1
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	0.2	0.0	0.0	0.0	3.2
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.5

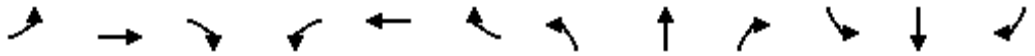
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.1	0.0	0.0	0.0	1.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	0	0	18
Lane Assignment		R						R
Lanes in Grp	0	2	0	0	0	0	0	1
Grp Vol (v), veh/h	0	435	0	0	0	0	0	605
Grp Sat Flow (s), veh/h/ln	0	1610	0	0	0	0	0	1610
Q Serve Time (g_s), s	0.0	9.2	0.0	0.0	0.0	0.0	0.0	25.3
Cycle Q Clear Time (g_c), s	0.0	9.2	0.0	0.0	0.0	0.0	0.0	25.3
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	0.00	0.00	0.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	845	0	0	0	0	0	765
V/C Ratio (X)	0.00	0.51	0.00	0.00	0.00	0.00	0.00	0.79
Avail Cap (c_a), veh/h	0	845	0	0	0	0	0	765
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	25.2	0.0	0.0	0.0	0.0	0.0	17.7
Incr Delay (d2), s/veh	0.0	2.2	0.0	0.0	0.0	0.0	0.0	8.2
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	27.4	0.0	0.0	0.0	0.0	0.0	25.9
1st-Term Q (Q1), veh/ln	0.0	3.4	0.0	0.0	0.0	0.0	0.0	8.5
2nd-Term Q (Q2), veh/ln	0.0	0.3	0.0	0.0	0.0	0.0	0.0	1.7
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	3.7	0.0	0.0	0.0	0.0	0.0	10.2
%ile Storage Ratio (RQ%)	0.00	0.17	0.00	0.00	0.00	0.00	0.00	0.71
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	13.7
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	73	269	27	104	461	472	21	9	32	352	299	418
Future Volume (veh/h)	73	269	27	104	461	472	21	9	32	352	299	418
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1800	1900	1900	1800	1900	1900	1800	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	77	283	28	109	485	497	22	9	34	371	315	440
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	105	962	429	144	549	465	50	461	391	414	799	713
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.12	0.53	0.53	0.17	0.58	0.58	0.03	0.24	0.24	0.23	0.44	0.44
Unsig. Movement Delay												
Ln Grp Delay, s/veh	57.5	16.5	15.6	38.0	21.0	57.9	49.0	26.0	26.8	53.2	18.4	23.2
Ln Grp LOS	E	B	B	D	C	F	D	C	C	D	B	C
Approach Vol, veh/h		388			1091			65			1126	
Approach Delay, s/veh		24.6			39.5			34.2			31.8	
Approach LOS		C			D			C			C	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Case No	2.0	3.0	2.0	3.0	2.0	4.0	2.0	3.0
Phs Duration (G+Y+Rc), s	24.6	25.9	11.5	28.0	6.6	43.8	9.5	30.0
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green (Gmax), s	21.5	19.5	11.4	19.6	5.0	36.0	5.5	25.5
Max Allow Headway (MAH), s	3.8	4.3	3.8	5.1	3.8	5.4	3.8	4.6
Max Q Clear (g_c+I1), s	19.9	3.5	7.5	5.9	3.1	20.9	5.9	28.0
Green Ext Time (g_e), s	0.2	0.1	0.1	1.5	0.0	4.5	0.0	0.0
Prob of Phs Call (p_c)	1.00	1.00	0.93	1.00	0.42	1.00	0.85	1.00
Prob of Max Out (p_x)	1.00	0.00	0.86	0.03	1.00	0.00	1.00	1.00

Left-Turn Movement Data								
Assigned Mvmt	1		3		5		7	
Mvmt Sat Flow, veh/h	1810		1714		1714		1714	

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		1900		3610		1805		1900

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1610		1610		1610		1610

Left Lane Group Data								
Assigned Mvmt	1	0	3	0	5	0	7	0
Lane Assignment	L (Prot)		L (Prot)		L (Prot)		L (Prot)	

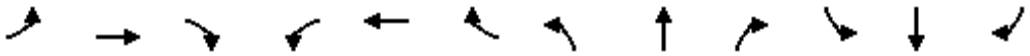
Lanes in Grp	1	0	1	0	1	0	1	0
Grp Vol (v), veh/h	371	0	109	0	22	0	77	0
Grp Sat Flow (s), veh/h/ln	1810	0	1714	0	1714	0	1714	0
Q Serve Time (g_s), s	17.9	0.0	5.5	0.0	1.1	0.0	3.9	0.0
Cycle Q Clear Time (g_c), s	17.9	0.0	5.5	0.0	1.1	0.0	3.9	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	414	0	144	0	50	0	105	0
V/C Ratio (X)	0.90	0.00	0.76	0.00	0.44	0.00	0.73	0.00
Avail Cap (c_a), veh/h	442	0	227	0	105	0	114	0
Upstream Filter (I)	1.00	0.00	0.17	0.00	1.00	0.00	0.96	0.00
Uniform Delay (d1), s/veh	33.6	0.0	36.6	0.0	43.0	0.0	38.7	0.0
Incr Delay (d2), s/veh	19.6	0.0	1.4	0.0	6.0	0.0	18.8	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	53.2	0.0	38.0	0.0	49.0	0.0	57.5	0.0
1st-Term Q (Q1), veh/ln	7.6	0.0	2.1	0.0	0.5	0.0	1.5	0.0
2nd-Term Q (Q2), veh/ln	2.3	0.0	0.1	0.0	0.1	0.0	0.5	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
%ile Back of Q (50%), veh/ln	9.9	0.0	2.2	0.0	0.6	0.0	2.1	0.0
%ile Storage Ratio (RQ%)	2.48	0.00	0.09	0.00	0.06	0.00	0.20	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	1	0	2	0	1	0	1
Grp Vol (v), veh/h	0	9	0	283	0	315	0	485
Grp Sat Flow (s), veh/h/ln	0	1900	0	1805	0	1805	0	1900
Q Serve Time (g_s), s	0.0	0.3	0.0	3.9	0.0	10.6	0.0	19.8
Cycle Q Clear Time (g_c), s	0.0	0.3	0.0	3.9	0.0	10.6	0.0	19.8
Lane Grp Cap (c), veh/h	0	461	0	962	0	799	0	549
V/C Ratio (X)	0.00	0.02	0.00	0.29	0.00	0.39	0.00	0.88
Avail Cap (c_a), veh/h	0	461	0	962	0	799	0	549
Upstream Filter (I)	0.00	1.00	0.00	0.96	0.00	1.00	0.00	0.17
Uniform Delay (d1), s/veh	0.0	25.9	0.0	16.3	0.0	16.9	0.0	17.7
Incr Delay (d2), s/veh	0.0	0.1	0.0	0.2	0.0	1.5	0.0	3.3
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	26.0	0.0	16.5	0.0	18.4	0.0	21.0
1st-Term Q (Q1), veh/ln	0.0	0.1	0.0	1.5	0.0	4.2	0.0	5.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.5

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.2	0.0	1.5	0.0	4.5	0.0	5.5
%ile Storage Ratio (RQ%)	0.00	0.01	0.00	0.02	0.00	0.72	0.00	0.23
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		R		T+R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	34	0	28	0	440	0	497
Grp Sat Flow (s), veh/h/ln	0	1610	0	1610	0	1610	0	1610
Q Serve Time (g_s), s	0.0	1.5	0.0	0.8	0.0	18.9	0.0	26.0
Cycle Q Clear Time (g_c), s	0.0	1.5	0.0	0.8	0.0	18.9	0.0	26.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	391	0	429	0	713	0	465
V/C Ratio (X)	0.00	0.09	0.00	0.07	0.00	0.62	0.00	1.07
Avail Cap (c_a), veh/h	0	391	0	429	0	713	0	465
Upstream Filter (I)	0.00	1.00	0.00	0.96	0.00	1.00	0.00	0.17
Uniform Delay (d1), s/veh	0.0	26.4	0.0	15.6	0.0	19.2	0.0	19.0
Incr Delay (d2), s/veh	0.0	0.4	0.0	0.1	0.0	4.0	0.0	38.9
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	26.8	0.0	15.6	0.0	23.2	0.0	57.9
1st-Term Q (Q1), veh/ln	0.0	0.6	0.0	0.3	0.0	6.7	0.0	5.2
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.8	0.0	5.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.6	0.0	0.3	0.0	7.5	0.0	10.3
%ile Storage Ratio (RQ%)	0.00	0.03	0.00	0.00	0.00	1.18	0.00	0.42
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3

Intersection Summary	
HCM 6th Ctrl Delay	33.9
HCM 6th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	168	463	198	44	847	418	70	394	31	203	13	175
Future Volume (veh/h)	168	463	198	44	847	418	70	394	31	203	13	175
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1700	1900	1900	1800	1900	1900	1800	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	177	487	208	46	892	440	74	415	33	214	14	184
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	179	906	768	70	876	742	293	700	312	232	42	548
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.11	0.95	0.95	0.08	0.92	0.46	0.19	0.19	0.19	0.13	0.36	0.36
Unsig. Movement Delay												
Ln Grp Delay, s/veh	99.5	1.7	1.4	55.0	39.0	21.3	36.8	40.4	33.8	82.0	0.0	24.9
Ln Grp LOS	F	A	A	E	F	C	D	D	C	F	A	C
Approach Vol, veh/h		872			1378			522			412	
Approach Delay, s/veh		21.5			33.9			39.4			54.6	
Approach LOS		C			C			D			D	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4		6	7	8
Case No	2.0	5.3	2.0	3.0		4.0	2.0	3.0
Phs Duration (G+Y+Rc), s	16.8	23.4	8.1	51.7		40.2	9.7	50.1
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5		4.5	4.5	4.5
Max Green (Gmax), s	12.3	18.9	6.8	44.0		35.7	5.2	45.6
Max Allow Headway (MAH), s	3.8	5.0	3.8	4.9		5.5	3.8	4.9
Max Q Clear (g_c+I1), s	13.7	12.5	4.6	4.4		10.9	7.6	48.1
Green Ext Time (g_e), s	0.0	1.7	0.0	4.3		1.2	0.0	0.0
Prob of Phs Call (p_c)	1.00	1.00	0.72	1.00		1.00	0.99	1.00
Prob of Max Out (p_x)	1.00	0.00	1.00	0.00		0.00	1.00	1.00

Left-Turn Movement Data								
Assigned Mvmt	1	5	3				7	
Mvmt Sat Flow, veh/h	1810	1140	1714				3141	

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		3610		1900		115		1900

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1610		1610		1513		1610

Left Lane Group Data								
Assigned Mvmt	1	5	3	0	0	0	7	0
Lane Assignment	L (Prot)	L	L (Prot)				L (Prot)	

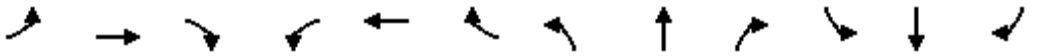
Lanes in Grp	1	1	1	0	0	0	2	0
Grp Vol (v), veh/h	214	74	46	0	0	0	177	0
Grp Sat Flow (s), veh/h/ln	1810	1140	1714	0	0	0	1570	0
Q Serve Time (g_s), s	11.7	5.6	2.6	0.0	0.0	0.0	5.6	0.0
Cycle Q Clear Time (g_c), s	11.7	5.6	2.6	0.0	0.0	0.0	5.6	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	1140	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	19.4	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	19.4	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	5.6	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	1.00	1.00	0.00	0.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	232	293	70	0	0	0	179	0
V/C Ratio (X)	0.92	0.25	0.65	0.00	0.00	0.00	0.99	0.00
Avail Cap (c_a), veh/h	232	293	125	0	0	0	179	0
Upstream Filter (I)	1.00	1.00	1.00	0.00	0.00	0.00	0.76	0.00
Uniform Delay (d1), s/veh	43.1	34.7	45.2	0.0	0.0	0.0	44.3	0.0
Incr Delay (d2), s/veh	38.9	2.1	9.8	0.0	0.0	0.0	55.3	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	82.0	36.8	55.0	0.0	0.0	0.0	99.5	0.0
1st-Term Q (Q1), veh/ln	5.2	1.5	1.1	0.0	0.0	0.0	2.0	0.0
2nd-Term Q (Q2), veh/ln	2.5	0.2	0.2	0.0	0.0	0.0	1.4	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	1.00	1.00	0.00	0.00	0.00	1.00	0.00
%ile Back of Q (50%), veh/ln	7.7	1.7	1.3	0.0	0.0	0.0	3.4	0.0
%ile Storage Ratio (RQ%)	0.93	0.28	0.01	0.00	0.00	0.00	0.33	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T				T
Lanes in Grp	0	2	0	1	0	0	0	1
Grp Vol (v), veh/h	0	415	0	487	0	0	0	892
Grp Sat Flow (s), veh/h/ln	0	1805	0	1900	0	0	0	1900
Q Serve Time (g_s), s	0.0	10.5	0.0	2.4	0.0	0.0	0.0	46.1
Cycle Q Clear Time (g_c), s	0.0	10.5	0.0	2.4	0.0	0.0	0.0	46.1
Lane Grp Cap (c), veh/h	0	700	0	906	0	0	0	876
V/C Ratio (X)	0.00	0.59	0.00	0.54	0.00	0.00	0.00	1.02
Avail Cap (c_a), veh/h	0	700	0	906	0	0	0	876
Upstream Filter (I)	0.00	1.00	0.00	0.76	0.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	36.7	0.0	1.3	0.0	0.0	0.0	3.9
Incr Delay (d2), s/veh	0.0	3.7	0.0	0.5	0.0	0.0	0.0	35.1
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	40.4	0.0	1.7	0.0	0.0	0.0	39.0
1st-Term Q (Q1), veh/ln	0.0	4.6	0.0	0.5	0.0	0.0	0.0	1.6
2nd-Term Q (Q2), veh/ln	0.0	0.4	0.0	0.1	0.0	0.0	0.0	8.5

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	4.9	0.0	0.6	0.0	0.0	0.0	10.2
%ile Storage Ratio (RQ%)	0.00	0.44	0.00	0.03	0.00	0.00	0.00	0.12
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		R		T+R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	33	0	208	0	198	0	440
Grp Sat Flow (s), veh/h/ln	0	1610	0	1610	0	1628	0	1610
Q Serve Time (g_s), s	0.0	1.7	0.0	0.8	0.0	8.9	0.0	20.3
Cycle Q Clear Time (g_c), s	0.0	1.7	0.0	0.8	0.0	8.9	0.0	20.3
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	0.93	0.00	1.00
Lane Grp Cap (c), veh/h	0	312	0	768	0	589	0	742
V/C Ratio (X)	0.00	0.11	0.00	0.27	0.00	0.34	0.00	0.59
Avail Cap (c_a), veh/h	0	312	0	768	0	589	0	742
Upstream Filter (I)	0.00	1.00	0.00	0.76	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	33.2	0.0	1.2	0.0	23.4	0.0	20.0
Incr Delay (d2), s/veh	0.0	0.7	0.0	0.1	0.0	1.5	0.0	1.3
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	33.8	0.0	1.4	0.0	24.9	0.0	21.3
1st-Term Q (Q1), veh/ln	0.0	0.7	0.0	0.2	0.0	3.4	0.0	7.3
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	0.3	0.0	0.3
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.7	0.0	0.2	0.0	3.6	0.0	7.6
%ile Storage Ratio (RQ%)	0.00	0.26	0.00	0.01	0.00	0.44	0.00	0.09
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	34.1
HCM 6th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	428	11	465	724	1098	0	0	476	938
Future Volume (veh/h)	0	0	0	428	11	465	724	1098	0	0	476	938
Number				3	8	18	5	2	12	1	6	16
Initial Q, veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln				1800	1900	1900	1900	1900	0	0	1900	1900
Adj Flow Rate, veh/h				451	12	489	762	1156	0	0	501	987
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence				Yes			Yes			No		
Cap, veh/h				450	10	414	768	2302	0	0	1913	594
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green				0.26	0.26	0.26	0.22	0.64	0.00	0.00	0.37	0.37
Unsig. Movement Delay												
Ln Grp Delay, s/veh				76.5	0.0	137.0	51.5	8.9	0.0	0.0	20.2	333.6
Ln Grp LOS				F	A	F	D	A	A	A	C	F
Approach Vol, veh/h					952			1918			1488	
Approach Delay, s/veh					108.3			25.8			228.1	
Approach LOS					F			C			F	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2	8		5	6		
Case No		4.0	10.0		2.0	7.0		
Phs Duration (G+Y+Rc), s		61.9	28.1		24.2	37.7		
Change Period (Y+Rc), s		4.5	4.5		4.5	4.5		
Max Green (Gmax), s		57.4	23.6		19.7	33.2		
Max Allow Headway (MAH), s		5.2	4.7		3.8	4.4		
Max Q Clear (g_c+I1), s		17.4	25.6		21.5	35.2		
Green Ext Time (g_e), s		11.2	0.0		0.0	0.0		
Prob of Phs Call (p_c)		1.00	1.00		1.00	1.00		
Prob of Max Out (p_x)		0.00	1.00		1.00	0.00		
Left-Turn Movement Data								
Assigned Mvmt			3		5	1		
Mvmt Sat Flow, veh/h			1714		3510	0		
Through Movement Data								
Assigned Mvmt		2	8			6		
Mvmt Sat Flow, veh/h		3705	39			5358		
Right-Turn Movement Data								
Assigned Mvmt		12	18			16		
Mvmt Sat Flow, veh/h		0	1577			1610		
Left Lane Group Data								
Assigned Mvmt	0	0	3	0	5	1	0	0
Lane Assignment			L		L (Prot)			

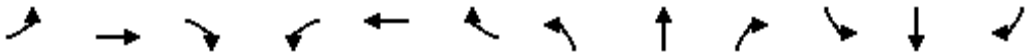
Lanes in Grp	0	0	1	0	2	0	0	0
Grp Vol (v), veh/h	0	0	451	0	762	0	0	0
Grp Sat Flow (s), veh/h/ln	0	0	1714	0	1755	0	0	0
Q Serve Time (g_s), s	0.0	0.0	23.6	0.0	19.5	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	23.6	0.0	19.5	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	1714	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	33.2	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	0.00	1.00	0.00	1.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	450	0	768	0	0	0
V/C Ratio (X)	0.00	0.00	1.00	0.00	0.99	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	0	450	0	768	0	0	0
Upstream Filter (I)	0.00	0.00	1.00	0.00	0.32	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	33.2	0.0	35.1	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	43.3	0.0	16.4	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	76.5	0.0	51.5	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	9.5	0.0	8.1	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	5.4	0.0	1.7	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	0.00	1.00	0.00	1.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	14.9	0.0	9.8	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.31	0.00	0.94	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	8	0	0	6	0	0
Lane Assignment		T				T		
Lanes in Grp	0	2	0	0	0	3	0	0
Grp Vol (v), veh/h	0	1156	0	0	0	501	0	0
Grp Sat Flow (s), veh/h/ln	0	1805	0	0	0	1729	0	0
Q Serve Time (g_s), s	0.0	15.4	0.0	0.0	0.0	6.1	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	15.4	0.0	0.0	0.0	6.1	0.0	0.0
Lane Grp Cap (c), veh/h	0	2302	0	0	0	1913	0	0
V/C Ratio (X)	0.00	0.50	0.00	0.00	0.00	0.26	0.00	0.00
Avail Cap (c_a), veh/h	0	2302	0	0	0	1913	0	0
Upstream Filter (I)	0.00	0.32	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	8.7	0.0	0.0	0.0	19.8	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.3	0.0	0.0	0.0	0.3	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	8.9	0.0	0.0	0.0	20.2	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	5.2	0.0	0.0	0.0	2.4	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	5.3	0.0	0.0	0.0	2.4	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.51	0.00	0.00	0.00	0.05	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	18	0	0	16	0	0
Lane Assignment			T+R			R		
Lanes in Grp	0	0	1	0	0	1	0	0
Grp Vol (v), veh/h	0	0	501	0	0	987	0	0
Grp Sat Flow (s), veh/h/ln	0	0	1616	0	0	1610	0	0
Q Serve Time (g_s), s	0.0	0.0	23.6	0.0	0.0	33.2	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	23.6	0.0	0.0	33.2	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.00	0.98	0.00	0.00	1.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	424	0	0	594	0	0
V/C Ratio (X)	0.00	0.00	1.18	0.00	0.00	1.66	0.00	0.00
Avail Cap (c_a), veh/h	0	0	424	0	0	594	0	0
Upstream Filter (I)	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	33.2	0.0	0.0	28.4	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	103.8	0.0	0.0	305.2	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	137.0	0.0	0.0	333.6	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	8.9	0.0	0.0	12.1	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	12.2	0.0	0.0	50.4	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	21.2	0.0	0.0	62.5	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.44	0.00	0.00	1.36	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	19.3	0.0	0.0	98.3	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.3	0.0	0.0	0.4	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	112.9
HCM 6th LOS	F



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	480	9	513	0	0	0	0	1213	644	333	648	0
Future Volume (veh/h)	480	9	513	0	0	0	0	1213	644	333	648	0
Number	7	4	14				5	2	12	1	6	16
Initial Q, veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1800	1900	1900				0	1900	1900	1900	1900	0
Adj Flow Rate, veh/h	505	9	540				0	1277	678	351	682	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0				0	0	0	0	0	0
Opposing Right Turn Influence	Yes						No			Yes		
Cap, veh/h	404	7	432				0	1426	443	333	1498	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.50	0.50	0.50				0.00	0.28	0.28	0.09	0.41	0.00
Unsig. Movement Delay												
Ln Grp Delay, s/veh	147.9	0.0	0.0				0.0	43.9	286.5	102.4	21.8	0.0
Ln Grp LOS	F	A	A				A	D	F	F	C	A
Approach Vol, veh/h		1054						1955			1033	
Approach Delay, s/veh		147.9						128.0			49.2	
Approach LOS		F						F			D	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Case No	2.0	7.0		12.0		4.0		
Phs Duration (G+Y+Rc), s	14.0	32.0		54.0		46.0		
Change Period (Y+Rc), s	4.5	4.5		4.5		4.5		
Max Green (Gmax), s	9.5	27.5		49.5		41.5		
Max Allow Headway (MAH), s	3.8	4.8		5.5		5.2		
Max Q Clear (g_c+I1), s	11.5	29.5		51.5		15.6		
Green Ext Time (g_e), s	0.0	0.0		0.0		5.1		
Prob of Phs Call (p_c)	1.00	1.00		1.00		1.00		
Prob of Max Out (p_x)	1.00	0.00		1.00		0.00		

Left-Turn Movement Data								
Assigned Mvmt	1	5		7				
Mvmt Sat Flow, veh/h	3510	0		816				

Through Movement Data								
Assigned Mvmt		2		4		6		
Mvmt Sat Flow, veh/h		5358		15		3705		

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		
Mvmt Sat Flow, veh/h		1610		872		0		

Left Lane Group Data								
Assigned Mvmt	1	5	0	7	0	0	0	0
Lane Assignment	L (Prot)			L+T+R				

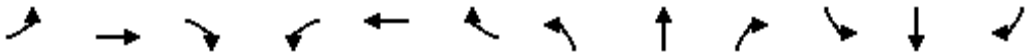
Lanes in Grp	2	0	0	1	0	0	0	0
Grp Vol (v), veh/h	351	0	0	1054	0	0	0	0
Grp Sat Flow (s), veh/h/ln	1755	0	0	1702	0	0	0	0
Q Serve Time (g_s), s	9.5	0.0	0.0	49.5	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	9.5	0.0	0.0	49.5	0.0	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	27.5	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	0.48	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	333	0	0	843	0	0	0	0
V/C Ratio (X)	1.05	0.00	0.00	1.25	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	333	0	0	843	0	0	0	0
Upstream Filter (I)	0.75	0.00	0.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	45.3	0.0	0.0	25.3	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	57.2	0.0	0.0	122.7	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	102.4	0.0	0.0	147.9	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	4.1	0.0	0.0	18.6	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	2.6	0.0	0.0	28.7	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00
%ile Back of Q (50%), veh/ln	6.7	0.0	0.0	47.3	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.64	0.00	0.00	0.81	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	4.4	0.0	0.0	52.8	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.3	0.0	0.0	0.3	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	0
Lane Assignment		T				T		
Lanes in Grp	0	3	0	0	0	2	0	0
Grp Vol (v), veh/h	0	1277	0	0	0	682	0	0
Grp Sat Flow (s), veh/h/ln	0	1729	0	0	0	1805	0	0
Q Serve Time (g_s), s	0.0	23.7	0.0	0.0	0.0	13.6	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	23.7	0.0	0.0	0.0	13.6	0.0	0.0
Lane Grp Cap (c), veh/h	0	1426	0	0	0	1498	0	0
V/C Ratio (X)	0.00	0.90	0.00	0.00	0.00	0.46	0.00	0.00
Avail Cap (c_a), veh/h	0	1426	0	0	0	1498	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	0.75	0.00	0.00
Uniform Delay (d1), s/veh	0.0	34.9	0.0	0.0	0.0	21.1	0.0	0.0
Incr Delay (d2), s/veh	0.0	9.0	0.0	0.0	0.0	0.8	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	43.9	0.0	0.0	0.0	21.8	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	9.7	0.0	0.0	0.0	5.6	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	1.2	0.0	0.0	0.0	0.2	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	10.9	0.0	0.0	0.0	5.8	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.35	0.00	0.00	0.00	0.55	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	0
Lane Assignment		R						
Lanes in Grp	0	1	0	0	0	0	0	0
Grp Vol (v), veh/h	0	678	0	0	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	1610	0	0	0	0	0	0
Q Serve Time (g_s), s	0.0	27.5	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	27.5	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	0.51	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	443	0	0	0	0	0	0
V/C Ratio (X)	0.00	1.53	0.00	0.00	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	443	0	0	0	0	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	36.2	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	250.2	0.0	0.0	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	286.5	0.0	0.0	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	10.5	0.0	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	30.8	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	41.3	0.0	0.0	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	1.33	0.00	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	58.8	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	113.1
HCM 6th LOS	F



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	86	814	81	233	349	198	141	680	634	261	382	54
Future Volume (veh/h)	86	814	81	233	349	198	141	680	634	261	382	54
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1800	1900	1900	1800	1900	1900	1800	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	91	857	85	245	367	208	148	716	667	275	402	57
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	115	813	81	231	699	390	179	1043	465	273	1066	150
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.07	0.25	0.25	0.14	0.31	0.31	0.10	0.29	0.29	0.15	0.34	0.34
Unsig. Movement Delay												
Ln Grp Delay, s/veh	57.4	95.7	95.3	116.9	29.0	29.3	52.6	34.0	238.8	98.5	27.0	27.1
Ln Grp LOS	E	F	F	F	C	C	D	C	F	F	C	C
Approach Vol, veh/h		1033			820			1531			734	
Approach Delay, s/veh		92.1			55.4			125.0			53.8	
Approach LOS		F			E			F			D	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Case No	2.0	3.0	2.0	4.0	2.0	4.0	2.0	4.0
Phs Duration (G+Y+Rc), s	19.6	33.4	18.0	29.0	14.9	38.1	11.2	35.8
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green (Gmax), s	15.1	28.9	13.5	24.5	15.6	28.4	11.5	26.5
Max Allow Headway (MAH), s	3.8	4.6	3.8	5.3	3.8	5.3	3.8	5.4
Max Q Clear (g_c+I1), s	17.1	30.9	15.5	26.5	10.5	11.7	7.2	15.8
Green Ext Time (g_e), s	0.0	0.0	0.0	0.0	0.2	2.5	0.1	2.7
Prob of Phs Call (p_c)	1.00	1.00	1.00	1.00	0.98	1.00	0.92	1.00
Prob of Max Out (p_x)	1.00	0.00	1.00	1.00	0.30	0.00	0.60	0.32

Left-Turn Movement Data								
Assigned Mvmt	1		3		5		7	
Mvmt Sat Flow, veh/h	1810		1714		1714		1714	

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		3610		3317		3177		2234

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1610		329		447		1246

Left Lane Group Data								
Assigned Mvmt	1	0	3	0	5	0	7	0
Lane Assignment	L (Prot)		L (Prot)		L (Prot)		L (Prot)	

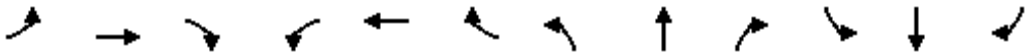
Lanes in Grp	1	0	1	0	1	0	1	0
Grp Vol (v), veh/h	275	0	245	0	148	0	91	0
Grp Sat Flow (s), veh/h/ln	1810	0	1714	0	1714	0	1714	0
Q Serve Time (g_s), s	15.1	0.0	13.5	0.0	8.5	0.0	5.2	0.0
Cycle Q Clear Time (g_c), s	15.1	0.0	13.5	0.0	8.5	0.0	5.2	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	273	0	231	0	179	0	115	0
V/C Ratio (X)	1.01	0.00	1.06	0.00	0.83	0.00	0.79	0.00
Avail Cap (c_a), veh/h	273	0	231	0	267	0	197	0
Upstream Filter (I)	1.00	0.00	0.94	0.00	0.67	0.00	1.00	0.00
Uniform Delay (d1), s/veh	42.5	0.0	43.3	0.0	43.9	0.0	46.0	0.0
Incr Delay (d2), s/veh	56.1	0.0	73.7	0.0	8.7	0.0	11.4	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	98.5	0.0	116.9	0.0	52.6	0.0	57.4	0.0
1st-Term Q (Q1), veh/ln	6.7	0.0	5.7	0.0	3.6	0.0	2.2	0.0
2nd-Term Q (Q2), veh/ln	4.3	0.0	4.7	0.0	0.4	0.0	0.4	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
%ile Back of Q (50%), veh/ln	10.9	0.0	10.4	0.0	4.0	0.0	2.6	0.0
%ile Storage Ratio (RQ%)	0.17	0.00	0.10	0.00	0.20	0.00	0.03	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.4	0.0	3.4	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.3	0.0	0.3	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	2	0	1	0	1	0	1
Grp Vol (v), veh/h	0	716	0	466	0	227	0	295
Grp Sat Flow (s), veh/h/ln	0	1805	0	1805	0	1805	0	1805
Q Serve Time (g_s), s	0.0	17.6	0.0	24.5	0.0	9.6	0.0	13.4
Cycle Q Clear Time (g_c), s	0.0	17.6	0.0	24.5	0.0	9.6	0.0	13.4
Lane Grp Cap (c), veh/h	0	1043	0	442	0	606	0	565
V/C Ratio (X)	0.00	0.69	0.00	1.05	0.00	0.38	0.00	0.52
Avail Cap (c_a), veh/h	0	1043	0	442	0	606	0	565
Upstream Filter (I)	0.00	0.67	0.00	1.00	0.00	1.00	0.00	0.94
Uniform Delay (d1), s/veh	0.0	31.5	0.0	37.7	0.0	25.3	0.0	28.2
Incr Delay (d2), s/veh	0.0	2.5	0.0	57.9	0.0	1.8	0.0	0.8
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	34.0	0.0	95.7	0.0	27.0	0.0	29.0
1st-Term Q (Q1), veh/ln	0.0	7.5	0.0	10.6	0.0	4.0	0.0	5.7
2nd-Term Q (Q2), veh/ln	0.0	0.4	0.0	7.1	0.0	0.3	0.0	0.1

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	7.9	0.0	17.7	0.0	4.3	0.0	5.9
%ile Storage Ratio (RQ%)	0.00	0.40	0.00	0.24	0.00	0.07	0.00	0.06
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	6.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		T+R		T+R		T+R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	667	0	476	0	232	0	280
Grp Sat Flow (s), veh/h/ln	0	1610	0	1841	0	1819	0	1676
Q Serve Time (g_s), s	0.0	28.9	0.0	24.5	0.0	9.7	0.0	13.8
Cycle Q Clear Time (g_c), s	0.0	28.9	0.0	24.5	0.0	9.7	0.0	13.8
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	0.18	0.00	0.25	0.00	0.74
Lane Grp Cap (c), veh/h	0	465	0	451	0	611	0	524
V/C Ratio (X)	0.00	1.43	0.00	1.05	0.00	0.38	0.00	0.53
Avail Cap (c_a), veh/h	0	465	0	451	0	611	0	524
Upstream Filter (I)	0.00	0.67	0.00	1.00	0.00	1.00	0.00	0.94
Uniform Delay (d1), s/veh	0.0	35.5	0.0	37.8	0.0	25.3	0.0	28.3
Incr Delay (d2), s/veh	0.0	203.2	0.0	57.5	0.0	1.8	0.0	1.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	238.8	0.0	95.3	0.0	27.1	0.0	29.3
1st-Term Q (Q1), veh/ln	0.0	11.0	0.0	10.8	0.0	4.1	0.0	5.4
2nd-Term Q (Q2), veh/ln	0.0	26.3	0.0	7.2	0.0	0.3	0.0	0.1
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	37.3	0.0	18.0	0.0	4.4	0.0	5.6
%ile Storage Ratio (RQ%)	0.00	1.88	0.00	0.24	0.00	0.07	0.00	0.05
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	50.4	0.0	6.2	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.4	0.0	0.3	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	90.2
HCM 6th LOS	F



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	480	36	427	91	25	141	214	1071	5	9	669	88
Future Volume (veh/h)	480	36	427	91	25	141	214	1071	5	9	669	88
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1700	1900	1900	1800	1900	1900	1800	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	505	38	0	96	26	148	225	1127	5	9	704	93
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	566	684		219	45	190	258	1765	8	20	1088	144
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.18	0.36	0.00	0.13	0.13	0.13	0.15	0.48	0.48	0.01	0.34	0.34
Unsig. Movement Delay												
Ln Grp Delay, s/veh	52.0	18.8	0.0	38.4	0.0	44.9	61.0	21.2	21.0	54.8	28.9	28.9
Ln Grp LOS	D	B		D	A	D	E	C	C	D	C	C
Approach Vol, veh/h		543			270			1357			806	
Approach Delay, s/veh		49.7			42.0			27.7			29.2	
Approach LOS		D			D			C			C	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6	7	8
Case No	2.0	4.0		3.0	2.0	4.0	2.0	8.3
Phs Duration (G+Y+Rc), s	5.5	47.6		36.9	18.1	35.0	20.7	16.2
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5	4.5	4.5
Max Green (Gmax), s	5.0	32.5		39.0	14.5	23.0	16.5	18.0
Max Allow Headway (MAH), s	3.8	5.2		5.2	3.8	5.3	3.8	5.5
Max Q Clear (g_c+I1), s	2.4	22.7		3.2	13.5	18.7	16.1	10.8
Green Ext Time (g_e), s	0.0	5.1		0.2	0.1	1.9	0.1	0.9
Prob of Phs Call (p_c)	0.20	1.00		1.00	1.00	1.00	1.00	1.00
Prob of Max Out (p_x)	1.00	0.00		0.00	1.00	0.00	1.00	0.50

Left-Turn Movement Data								
Assigned Mvmt	1				5		7	3
Mvmt Sat Flow, veh/h	1810				1714		3141	1138

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		3686		1900		3206		346

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		16		1610		423		1465

Left Lane Group Data								
Assigned Mvmt	1	0	0	0	5	0	7	3
Lane Assignment	L (Prot)				L (Prot)		L (Prot)	L+T

Lanes in Grp	1	0	0	0	1	0	2	1
Grp Vol (v), veh/h	9	0	0	0	225	0	505	122
Grp Sat Flow (s), veh/h/ln	1810	0	0	0	1714	0	1570	1484
Q Serve Time (g_s), s	0.4	0.0	0.0	0.0	11.5	0.0	14.1	6.8
Cycle Q Clear Time (g_c), s	0.4	0.0	0.0	0.0	11.5	0.0	14.1	7.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	1391
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.7
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.7
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.8
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	0.00	1.00	0.00	1.00	0.79
Lane Grp Cap (c), veh/h	20	0	0	0	258	0	566	264
V/C Ratio (X)	0.44	0.00	0.00	0.00	0.87	0.00	0.89	0.46
Avail Cap (c_a), veh/h	101	0	0	0	276	0	576	368
Upstream Filter (I)	0.72	0.00	0.00	0.00	1.00	0.00	1.00	1.00
Uniform Delay (d1), s/veh	44.2	0.0	0.0	0.0	37.4	0.0	36.0	37.1
Incr Delay (d2), s/veh	10.6	0.0	0.0	0.0	23.7	0.0	16.0	1.3
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	54.8	0.0	0.0	0.0	61.0	0.0	52.0	38.4
1st-Term Q (Q1), veh/ln	0.2	0.0	0.0	0.0	4.7	0.0	5.3	2.5
2nd-Term Q (Q2), veh/ln	0.1	0.0	0.0	0.0	1.7	0.0	1.3	0.1
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	0.00	1.00	0.00	1.00	1.00
%ile Back of Q (50%), veh/ln	0.3	0.0	0.0	0.0	6.4	0.0	6.5	2.6
%ile Storage Ratio (RQ%)	0.01	0.00	0.00	0.00	1.07	0.00	0.16	0.08
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		
Lanes in Grp	0	1	0	1	0	1	0	0
Grp Vol (v), veh/h	0	552	0	38	0	396	0	0
Grp Sat Flow (s), veh/h/ln	0	1805	0	1900	0	1805	0	0
Q Serve Time (g_s), s	0.0	20.7	0.0	1.2	0.0	16.7	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	20.7	0.0	1.2	0.0	16.7	0.0	0.0
Lane Grp Cap (c), veh/h	0	864	0	684	0	613	0	0
V/C Ratio (X)	0.00	0.64	0.00	0.06	0.00	0.65	0.00	0.00
Avail Cap (c_a), veh/h	0	864	0	823	0	613	0	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	0.72	0.00	0.00
Uniform Delay (d1), s/veh	0.0	17.6	0.0	18.8	0.0	25.2	0.0	0.0
Incr Delay (d2), s/veh	0.0	3.6	0.0	0.0	0.0	3.8	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	21.2	0.0	18.8	0.0	28.9	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	8.0	0.0	0.5	0.0	6.9	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.9	0.0	0.0	0.0	0.6	0.0	0.0

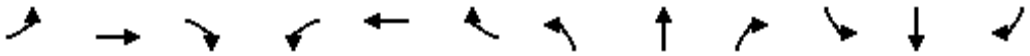
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	8.9	0.0	0.5	0.0	7.6	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.71	0.00	0.01	0.00	0.38	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R		R		T+R		T+R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	580	0	0	0	401	0	148
Grp Sat Flow (s), veh/h/ln	0	1897	0	1610	0	1824	0	1465
Q Serve Time (g_s), s	0.0	20.7	0.0	0.0	0.0	16.7	0.0	8.8
Cycle Q Clear Time (g_c), s	0.0	20.7	0.0	0.0	0.0	16.7	0.0	8.8
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.01	0.00	1.00	0.00	0.23	0.00	1.00
Lane Grp Cap (c), veh/h	0	909	0	579	0	619	0	190
V/C Ratio (X)	0.00	0.64	0.00	0.00	0.00	0.65	0.00	0.78
Avail Cap (c_a), veh/h	0	909	0	698	0	619	0	293
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	0.72	0.00	1.00
Uniform Delay (d1), s/veh	0.0	17.6	0.0	0.0	0.0	25.2	0.0	37.9
Incr Delay (d2), s/veh	0.0	3.4	0.0	0.0	0.0	3.8	0.0	7.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	21.0	0.0	0.0	0.0	28.9	0.0	44.9
1st-Term Q (Q1), veh/ln	0.0	8.5	0.0	0.0	0.0	7.0	0.0	3.1
2nd-Term Q (Q2), veh/ln	0.0	0.9	0.0	0.0	0.0	0.6	0.0	0.4
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	9.3	0.0	0.0	0.0	7.6	0.0	3.5
%ile Storage Ratio (RQ%)	0.00	0.74	0.00	0.00	0.00	0.39	0.00	0.10
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	33.4
HCM 6th LOS	C

Notes

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	0	16	97	0	143	6	1180	44	53	1032	8
Future Volume (veh/h)	20	0	16	97	0	143	6	1180	44	53	1032	8
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1800	1900	1900	1800	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	21	0	17	102	0	151	6	1242	46	56	1086	8
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	109	0	67	131	0	251	422	3551	131	73	4087	30
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.04	0.00	0.04	0.08	0.00	0.16	0.69	0.69	0.69	0.04	0.77	0.77
Unsig. Movement Delay												
Ln Grp Delay, s/veh	56.9	0.0	57.7	63.9	0.0	49.5	5.8	7.9	8.3	72.5	4.3	4.5
Ln Grp LOS	E	A	E	E	A	D	A	A	A	E	A	A
Approach Vol, veh/h		38			253			1294			1150	
Approach Delay, s/veh		57.3			55.3			8.0			7.6	
Approach LOS		E			E			A			A	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4		6		8
Case No	2.0	6.3	2.0	6.3		4.0		4.0
Phs Duration (G+Y+Rc), s	9.3	87.5	13.7	9.5		96.8		23.2
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5		4.5		4.5
Max Green (Gmax), s	11.5	49.5	21.5	19.5		65.5		45.5
Max Allow Headway (MAH), s	3.8	5.3	3.8	4.8		5.2		5.6
Max Q Clear (g_c+I1), s	5.7	13.8	9.0	4.1		9.1		12.5
Green Ext Time (g_e), s	0.0	11.5	0.2	0.1		9.6		1.0
Prob of Phs Call (p_c)	0.85	1.00	1.00	1.00		1.00		1.00
Prob of Max Out (p_x)	0.07	0.00	0.00	0.00		0.00		0.00

Left-Turn Movement Data								
Assigned Mvmt	1	5	3	7				
Mvmt Sat Flow, veh/h	1810	524	1714	1190				

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		5134		0		5312		0

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		190		1610		39		1610

Left Lane Group Data								
Assigned Mvmt	1	5	3	7	0	0	0	0
Lane Assignment	L (Prot)	L	L (Prot)	L				

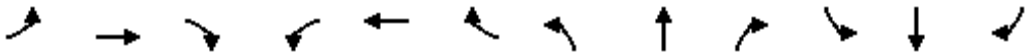
Lanes in Grp	1	1	1	1	0	0	0	0
Grp Vol (v), veh/h	56	6	102	21	0	0	0	0
Grp Sat Flow (s), veh/h/ln	1810	524	1714	1190	0	0	0	0
Q Serve Time (g_s), s	3.7	0.4	7.0	2.1	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	3.7	0.4	7.0	2.1	0.0	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	524	0	1190	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	83.0	0.0	5.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	83.0	0.0	5.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.4	0.0	2.1	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	73	422	131	109	0	0	0	0
V/C Ratio (X)	0.77	0.01	0.78	0.19	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	173	422	307	253	0	0	0	0
Upstream Filter (I)	1.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	57.0	5.8	54.4	56.1	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	15.4	0.1	9.5	0.8	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	72.5	5.8	63.9	56.9	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	1.7	0.0	3.0	0.6	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.3	0.0	0.3	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00
%ile Back of Q (50%), veh/ln	2.0	0.1	3.4	0.6	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.33	0.00	0.05	0.05	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T				T		
Lanes in Grp	0	2	0	0	0	2	0	0
Grp Vol (v), veh/h	0	837	0	0	0	707	0	0
Grp Sat Flow (s), veh/h/ln	0	1729	0	0	0	1729	0	0
Q Serve Time (g_s), s	0.0	11.8	0.0	0.0	0.0	7.1	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	11.8	0.0	0.0	0.0	7.1	0.0	0.0
Lane Grp Cap (c), veh/h	0	2392	0	0	0	2661	0	0
V/C Ratio (X)	0.00	0.35	0.00	0.00	0.00	0.27	0.00	0.00
Avail Cap (c_a), veh/h	0	2392	0	0	0	2661	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	7.5	0.0	0.0	0.0	4.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.4	0.0	0.0	0.0	0.2	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	7.9	0.0	0.0	0.0	4.3	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	4.1	0.0	0.0	0.0	2.1	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	4.2	0.0	0.0	0.0	2.2	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.27	0.00	0.00	0.00	0.22	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R		T+R		T+R		T+R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	451	0	17	0	387	0	151
Grp Sat Flow (s), veh/h/ln	0	1866	0	1610	0	1893	0	1610
Q Serve Time (g_s), s	0.0	11.8	0.0	1.2	0.0	7.1	0.0	10.5
Cycle Q Clear Time (g_c), s	0.0	11.8	0.0	1.2	0.0	7.1	0.0	10.5
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.10	0.00	1.00	0.00	0.02	0.00	1.00
Lane Grp Cap (c), veh/h	0	1290	0	67	0	1456	0	251
V/C Ratio (X)	0.00	0.35	0.00	0.25	0.00	0.27	0.00	0.60
Avail Cap (c_a), veh/h	0	1290	0	262	0	1456	0	611
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	7.5	0.0	55.7	0.0	4.0	0.0	47.2
Incr Delay (d2), s/veh	0.0	0.7	0.0	2.0	0.0	0.4	0.0	2.3
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	8.3	0.0	57.7	0.0	4.5	0.0	49.5
1st-Term Q (Q1), veh/ln	0.0	4.4	0.0	0.5	0.0	2.3	0.0	4.2
2nd-Term Q (Q2), veh/ln	0.0	0.3	0.0	0.0	0.0	0.2	0.0	0.2
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	4.7	0.0	0.5	0.0	2.5	0.0	4.4
%ile Storage Ratio (RQ%)	0.00	0.29	0.00	0.04	0.00	0.25	0.00	0.07
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	12.9
HCM 6th LOS	B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	196	10	50	21	18	18	36	1036	18	15	1026	63
Future Volume (veh/h)	196	10	50	21	18	18	36	1036	18	15	1026	63
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1800	1900	1900	1800	1900	1900	1800	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	206	11	53	22	19	19	38	1091	19	16	1080	66
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	316	48	230	223	180	189	58	2349	41	33	2181	133
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Prop Arrive On Green	0.18	0.18	0.18	0.18	0.18	0.18	0.07	1.00	1.00	0.02	0.63	0.63
Unsig. Movement Delay												
Ln Grp Delay, s/veh	40.5	0.0	31.7	31.2	0.0	30.6	49.9	1.0	0.9	54.2	10.4	10.4
Ln Grp LOS	D	A	C	C	A	C	D	A	A	D	B	B
Approach Vol, veh/h		270			60			1148			1162	
Approach Delay, s/veh		38.4			30.9			2.6			11.0	
Approach LOS		D			C			A			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Case No	2.0	4.0		8.0	2.0	4.0		8.0
Phs Duration (G+Y+Rc), s	6.1	62.7		21.1	7.6	61.3		21.1
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green (Gmax), s	5.1	53.3		18.1	5.1	53.3		18.1
Max Allow Headway (MAH), s	3.8	5.2		5.4	3.8	5.3		5.4
Max Q Clear (g_c+I1), s	2.8	2.0		16.4	3.9	17.1		5.8
Green Ext Time (g_e), s	0.0	9.7		0.3	0.0	9.7		0.2
Prob of Phs Call (p_c)	0.33	1.00		1.00	0.61	1.00		1.00
Prob of Max Out (p_x)	1.00	0.00		1.00	1.00	0.00		0.00

Left-Turn Movement Data								
Assigned Mvmt	1			7	5			3
Mvmt Sat Flow, veh/h	1810			1275	1714			838

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		3630		259		3456		974

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		63		1246		211		1024

Left Lane Group Data								
Assigned Mvmt	1	0	0	7	5	0	0	3
Lane Assignment	L (Prot)			L+T	L (Prot)			L+T

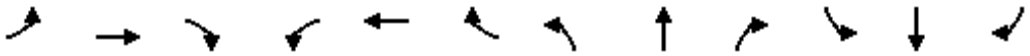
Lanes in Grp	1	0	0	1	1	0	0	1
Grp Vol (v), veh/h	16	0	0	206	38	0	0	31
Grp Sat Flow (s), veh/h/ln	1810	0	0	1275	1714	0	0	1291
Q Serve Time (g_s), s	0.8	0.0	0.0	13.0	1.9	0.0	0.0	0.5
Cycle Q Clear Time (g_c), s	0.8	0.0	0.0	14.4	1.9	0.0	0.0	3.8
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	1391	0	0	0	1359
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	16.6	0.0	0.0	0.0	16.6
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	15.2	0.0	0.0	0.0	13.4
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	13.0	0.0	0.0	0.0	0.5
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	0.70
Lane Grp Cap (c), veh/h	33	0	0	316	58	0	0	307
V/C Ratio (X)	0.48	0.00	0.00	0.65	0.65	0.00	0.00	0.10
Avail Cap (c_a), veh/h	103	0	0	338	97	0	0	331
Upstream Filter (I)	1.00	0.00	0.00	1.00	0.72	0.00	0.00	1.00
Uniform Delay (d1), s/veh	43.8	0.0	0.0	36.4	41.4	0.0	0.0	31.1
Incr Delay (d2), s/veh	10.5	0.0	0.0	4.0	8.5	0.0	0.0	0.1
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	54.2	0.0	0.0	40.5	49.9	0.0	0.0	31.2
1st-Term Q (Q1), veh/ln	0.3	0.0	0.0	4.3	0.8	0.0	0.0	0.6
2nd-Term Q (Q2), veh/ln	0.1	0.0	0.0	0.4	0.1	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.4	0.0	0.0	4.7	0.9	0.0	0.0	0.6
%ile Storage Ratio (RQ%)	0.05	0.00	0.00	0.58	0.01	0.00	0.00	0.02
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T				T		
Lanes in Grp	0	1	0	0	0	1	0	0
Grp Vol (v), veh/h	0	542	0	0	0	564	0	0
Grp Sat Flow (s), veh/h/ln	0	1805	0	0	0	1805	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	15.1	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	15.1	0.0	0.0
Lane Grp Cap (c), veh/h	0	1168	0	0	0	1139	0	0
V/C Ratio (X)	0.00	0.46	0.00	0.00	0.00	0.49	0.00	0.00
Avail Cap (c_a), veh/h	0	1168	0	0	0	1139	0	0
Upstream Filter (I)	0.00	0.72	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	8.9	0.0	0.0
Incr Delay (d2), s/veh	0.0	1.0	0.0	0.0	0.0	1.5	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	1.0	0.0	0.0	0.0	10.4	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	5.2	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.3	0.0	0.0	0.0	0.5	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.3	0.0	0.0	0.0	5.7	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.64	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R		T+R		T+R		T+R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	568	0	64	0	582	0	29
Grp Sat Flow (s), veh/h/ln	0	1889	0	1505	0	1862	0	1545
Q Serve Time (g_s), s	0.0	0.0	0.0	3.3	0.0	15.1	0.0	1.4
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	3.3	0.0	15.1	0.0	1.4
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.03	0.00	0.83	0.00	0.11	0.00	0.66
Lane Grp Cap (c), veh/h	0	1222	0	278	0	1175	0	285
V/C Ratio (X)	0.00	0.46	0.00	0.23	0.00	0.50	0.00	0.10
Avail Cap (c_a), veh/h	0	1222	0	303	0	1175	0	311
Upstream Filter (I)	0.00	0.72	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	31.2	0.0	8.9	0.0	30.5
Incr Delay (d2), s/veh	0.0	0.9	0.0	0.4	0.0	1.5	0.0	0.2
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.9	0.0	31.7	0.0	10.4	0.0	30.6
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	1.2	0.0	5.4	0.0	0.5
2nd-Term Q (Q2), veh/ln	0.0	0.3	0.0	0.0	0.0	0.5	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.3	0.0	1.2	0.0	5.8	0.0	0.5
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.15	0.00	0.66	0.00	0.02
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	10.6
HCM 6th LOS	B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	168	672	81	162	255	206	57	669	338	283	729	76
Future Volume (veh/h)	168	672	81	162	255	206	57	669	338	283	729	76
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1800	1900	1900	1700	1900	1900	1800	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	177	707	85	171	268	217	60	704	0	298	767	80
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	202	1070	332	236	590	263	77	1197		338	1711	763
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	0.67	0.67	0.67
Prop Arrive On Green	0.12	0.21	0.21	0.08	0.16	0.16	0.01	0.11	0.00	0.13	0.32	0.32
Unsig. Movement Delay												
Ln Grp Delay, s/veh	71.4	34.0	30.3	42.9	34.2	40.4	46.4	34.5	0.0	54.8	22.1	17.5
Ln Grp LOS	E	C	C	D	C	D	D	C		D	C	B
Approach Vol, veh/h		969			656			764			1145	
Approach Delay, s/veh		40.5			38.5			35.5			30.3	
Approach LOS		D			D			D			C	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Case No	2.0	3.0	2.0	3.0	2.0	3.0	2.0	3.0
Phs Duration (G+Y+Rc), s	21.3	34.3	11.3	23.1	8.5	47.2	15.1	19.2
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green (Gmax), s	19.5	23.9	7.9	20.7	9.3	34.1	10.6	18.0
Max Allow Headway (MAH), s	3.8	5.2	3.8	5.1	3.8	5.1	3.8	4.7
Max Q Clear (g_c+I1), s	16.6	18.7	6.8	13.3	5.1	17.2	11.1	13.7
Green Ext Time (g_e), s	0.3	2.1	0.1	3.0	0.0	5.2	0.0	1.0
Prob of Phs Call (p_c)	1.00	1.00	0.99	1.00	0.78	1.00	0.99	1.00
Prob of Max Out (p_x)	1.00	0.00	1.00	0.66	0.63	0.00	1.00	1.00

Left-Turn Movement Data								
Assigned Mvmt	1		3		5		7	
Mvmt Sat Flow, veh/h	1810		3141		1714		1714	

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		3610		5187		3610		3610

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1610		1610		1610		1610

Left Lane Group Data								
Assigned Mvmt	1	0	3	0	5	0	7	0
Lane Assignment	L (Prot)		L (Prot)		L (Prot)		L (Prot)	

Lanes in Grp	1	0	2	0	1	0	1	0
Grp Vol (v), veh/h	298	0	171	0	60	0	177	0
Grp Sat Flow (s), veh/h/ln	1810	0	1570	0	1714	0	1714	0
Q Serve Time (g_s), s	14.6	0.0	4.8	0.0	3.1	0.0	9.1	0.0
Cycle Q Clear Time (g_c), s	14.6	0.0	4.8	0.0	3.1	0.0	9.1	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	338	0	236	0	77	0	202	0
V/C Ratio (X)	0.88	0.00	0.73	0.00	0.78	0.00	0.88	0.00
Avail Cap (c_a), veh/h	392	0	276	0	177	0	202	0
Upstream Filter (I)	0.88	0.00	0.27	0.00	0.14	0.00	1.00	0.00
Uniform Delay (d1), s/veh	38.4	0.0	40.7	0.0	43.9	0.0	39.1	0.0
Incr Delay (d2), s/veh	16.5	0.0	2.2	0.0	2.5	0.0	32.3	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	54.8	0.0	42.9	0.0	46.4	0.0	71.4	0.0
1st-Term Q (Q1), veh/ln	6.7	0.0	1.8	0.0	1.3	0.0	3.8	0.0
2nd-Term Q (Q2), veh/ln	1.5	0.0	0.1	0.0	0.1	0.0	1.8	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
%ile Back of Q (50%), veh/ln	8.2	0.0	1.9	0.0	1.4	0.0	5.6	0.0
%ile Storage Ratio (RQ%)	0.79	0.00	0.19	0.00	0.21	0.00	1.40	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	2	0	3	0	2	0	2
Grp Vol (v), veh/h	0	704	0	707	0	767	0	268
Grp Sat Flow (s), veh/h/ln	0	1805	0	1729	0	1805	0	1805
Q Serve Time (g_s), s	0.0	16.7	0.0	11.3	0.0	15.2	0.0	6.0
Cycle Q Clear Time (g_c), s	0.0	16.7	0.0	11.3	0.0	15.2	0.0	6.0
Lane Grp Cap (c), veh/h	0	1197	0	1070	0	1711	0	590
V/C Ratio (X)	0.00	0.59	0.00	0.66	0.00	0.45	0.00	0.45
Avail Cap (c_a), veh/h	0	1197	0	1193	0	1711	0	722
Upstream Filter (I)	0.00	0.14	0.00	1.00	0.00	0.88	0.00	0.27
Uniform Delay (d1), s/veh	0.0	34.2	0.0	32.8	0.0	21.3	0.0	34.0
Incr Delay (d2), s/veh	0.0	0.3	0.0	1.2	0.0	0.7	0.0	0.1
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	34.5	0.0	34.0	0.0	22.1	0.0	34.2
1st-Term Q (Q1), veh/ln	0.0	8.0	0.0	4.6	0.0	6.8	0.0	2.6
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.1	0.0	0.2	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	8.1	0.0	4.7	0.0	7.0	0.0	2.6
%ile Storage Ratio (RQ%)	0.00	0.08	0.00	0.02	0.00	0.07	0.00	0.03
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		R		R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	0	0	85	0	80	0	217
Grp Sat Flow (s), veh/h/ln	0	1610	0	1610	0	1610	0	1610
Q Serve Time (g_s), s	0.0	0.0	0.0	4.0	0.0	3.2	0.0	11.7
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	4.0	0.0	3.2	0.0	11.7
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	534	0	332	0	763	0	263
V/C Ratio (X)	0.00	0.00	0.00	0.26	0.00	0.10	0.00	0.82
Avail Cap (c_a), veh/h	0	534	0	370	0	763	0	322
Upstream Filter (I)	0.00	0.00	0.00	1.00	0.00	0.88	0.00	0.27
Uniform Delay (d1), s/veh	0.0	0.0	0.0	29.9	0.0	17.2	0.0	36.4
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.4	0.0	0.2	0.0	4.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	30.3	0.0	17.5	0.0	40.4
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	1.5	0.0	1.1	0.0	4.5
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.3
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	1.6	0.0	1.2	0.0	4.8
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.01	0.00	0.01	0.00	0.06
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	35.7
HCM 6th LOS	D

Notes

Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	268	520	131	462	376	102	138	944	507	248	883	194
Future Volume (veh/h)	268	520	131	462	376	102	138	944	507	248	883	194
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1800	1900	1900	1700	1900	1900	1800	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	282	547	138	486	396	107	145	994	534	261	929	204
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	288	575	144	523	563	151	177	1019	454	271	1402	307
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.66	0.33	0.33	0.33
Prop Arrive On Green	0.17	0.20	0.20	0.17	0.20	0.20	0.10	0.28	0.47	0.05	0.11	0.11
Unsig. Movement Delay												
Ln Grp Delay, s/veh	84.8	69.8	71.6	60.0	39.3	40.1	50.0	47.7	115.1	83.1	38.0	40.6
Ln Grp LOS	F	E	E	E	D	D	D	D	F	F	D	D
Approach Vol, veh/h		967			989			1673			1394	
Approach Delay, s/veh		74.8			49.7			69.4			47.1	
Approach LOS		E			D			E			D	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Case No	2.0	3.0	2.0	4.0	2.0	4.0	2.0	4.0
Phs Duration (G+Y+Rc), s	18.0	29.9	19.5	22.6	13.8	34.1	19.6	22.5
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green (Gmax), s	13.5	25.4	15.0	18.1	11.5	27.4	15.1	18.0
Max Allow Headway (MAH), s	3.8	4.8	3.8	5.3	3.8	5.3	3.8	5.3
Max Q Clear (g_c+I1), s	15.0	27.4	15.7	19.1	9.5	20.9	16.7	13.9
Green Ext Time (g_e), s	0.0	0.0	0.0	0.0	0.1	3.8	0.0	1.1
Prob of Phs Call (p_c)	1.00	1.00	1.00	1.00	0.97	1.00	1.00	1.00
Prob of Max Out (p_x)	1.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00

Left-Turn Movement Data								
Assigned Mvmt	1		3		5		7	
Mvmt Sat Flow, veh/h	1810		3141		1714		1714	

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		3610		2858		4259		2817

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1610		718		932		753

Left Lane Group Data								
Assigned Mvmt	1	0	3	0	5	0	7	0
Lane Assignment	L (Prot)		L (Prot)		L (Prot)		L (Prot)	

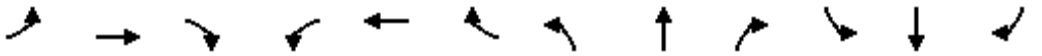
Lanes in Grp	1	0	2	0	1	0	1	0
Grp Vol (v), veh/h	261	0	486	0	145	0	282	0
Grp Sat Flow (s), veh/h/ln	1810	0	1570	0	1714	0	1714	0
Q Serve Time (g_s), s	13.0	0.0	13.7	0.0	7.5	0.0	14.7	0.0
Cycle Q Clear Time (g_c), s	13.0	0.0	13.7	0.0	7.5	0.0	14.7	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	271	0	523	0	177	0	288	0
V/C Ratio (X)	0.96	0.00	0.93	0.00	0.82	0.00	0.98	0.00
Avail Cap (c_a), veh/h	271	0	523	0	219	0	288	0
Upstream Filter (I)	0.87	0.00	1.00	0.00	0.54	0.00	1.00	0.00
Uniform Delay (d1), s/veh	42.5	0.0	37.0	0.0	39.5	0.0	37.3	0.0
Incr Delay (d2), s/veh	40.6	0.0	23.1	0.0	10.5	0.0	47.5	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	83.1	0.0	60.0	0.0	50.0	0.0	84.8	0.0
1st-Term Q (Q1), veh/ln	6.2	0.0	5.2	0.0	3.1	0.0	6.0	0.0
2nd-Term Q (Q2), veh/ln	3.1	0.0	1.7	0.0	0.5	0.0	3.8	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
%ile Back of Q (50%), veh/ln	9.3	0.0	6.8	0.0	3.6	0.0	9.8	0.0
%ile Storage Ratio (RQ%)	1.29	0.00	0.05	0.00	0.45	0.00	1.12	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	2	0	1	0	2	0	1
Grp Vol (v), veh/h	0	994	0	345	0	754	0	252
Grp Sat Flow (s), veh/h/ln	0	1805	0	1805	0	1729	0	1805
Q Serve Time (g_s), s	0.0	24.5	0.0	17.0	0.0	18.8	0.0	11.7
Cycle Q Clear Time (g_c), s	0.0	24.5	0.0	17.0	0.0	18.8	0.0	11.7
Lane Grp Cap (c), veh/h	0	1019	0	363	0	1138	0	361
V/C Ratio (X)	0.00	0.98	0.00	0.95	0.00	0.66	0.00	0.70
Avail Cap (c_a), veh/h	0	1019	0	363	0	1138	0	361
Upstream Filter (I)	0.00	0.54	0.00	1.00	0.00	0.87	0.00	1.00
Uniform Delay (d1), s/veh	0.0	32.0	0.0	35.5	0.0	35.3	0.0	33.5
Incr Delay (d2), s/veh	0.0	15.7	0.0	34.3	0.0	2.6	0.0	5.8
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	47.7	0.0	69.8	0.0	38.0	0.0	39.3
1st-Term Q (Q1), veh/ln	0.0	10.3	0.0	7.3	0.0	8.7	0.0	5.0
2nd-Term Q (Q2), veh/ln	0.0	2.2	0.0	3.5	0.0	0.4	0.0	0.6

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	12.5	0.0	10.7	0.0	9.1	0.0	5.6
%ile Storage Ratio (RQ%)	0.00	0.33	0.00	0.05	0.00	0.09	0.00	0.04
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		T+R		T+R		T+R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	534	0	340	0	379	0	251
Grp Sat Flow (s), veh/h/ln	0	1610	0	1771	0	1732	0	1764
Q Serve Time (g_s), s	0.0	25.4	0.0	17.1	0.0	18.9	0.0	11.9
Cycle Q Clear Time (g_c), s	0.0	25.4	0.0	17.1	0.0	18.9	0.0	11.9
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	0.41	0.00	0.54	0.00	0.43
Lane Grp Cap (c), veh/h	0	454	0	356	0	570	0	353
V/C Ratio (X)	0.00	1.18	0.00	0.96	0.00	0.67	0.00	0.71
Avail Cap (c_a), veh/h	0	454	0	356	0	570	0	353
Upstream Filter (I)	0.00	0.54	0.00	1.00	0.00	0.87	0.00	1.00
Uniform Delay (d1), s/veh	0.0	23.9	0.0	35.6	0.0	35.3	0.0	33.6
Incr Delay (d2), s/veh	0.0	91.2	0.0	36.0	0.0	5.3	0.0	6.5
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	115.1	0.0	71.6	0.0	40.6	0.0	40.1
1st-Term Q (Q1), veh/ln	0.0	7.3	0.0	7.2	0.0	8.7	0.0	5.0
2nd-Term Q (Q2), veh/ln	0.0	11.5	0.0	3.6	0.0	0.8	0.0	0.6
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	18.8	0.0	10.8	0.0	9.6	0.0	5.6
%ile Storage Ratio (RQ%)	0.00	0.49	0.00	0.05	0.00	0.10	0.00	0.04
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	19.9	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	60.4
HCM 6th LOS	E



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	214	387	229	828	1809	0	0	1316	772
Future Volume (veh/h)	0	0	0	214	387	229	828	1809	0	0	1316	772
Number				3	8	18	5	2	12	1	6	16
Initial Q, veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln				1800	1900	1900	1900	1900	0	0	1900	1900
Adj Flow Rate, veh/h				225	407	241	872	1904	0	0	1385	813
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence				Yes			Yes			No		
Cap, veh/h				220	413	259	550	2458	0	0	1236	551
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	2.00	1.00
Prop Arrive On Green				0.25	0.25	0.25	0.61	1.00	0.00	0.00	0.68	0.34
Unsig. Movement Delay												
Ln Grp Delay, s/veh				96.2	0.0	74.6	290.0	0.2	0.0	0.0	81.5	262.0
Ln Grp LOS				F	A	E	F	A	A	A	F	F
Approach Vol, veh/h					873			2776			2198	
Approach Delay, s/veh					86.4			91.2			148.2	
Approach LOS					F			F			F	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2	8		5	6		
Case No		4.0	12.0		2.0	7.0		
Phs Duration (G+Y+Rc), s		93.0	37.0		44.0	49.0		
Change Period (Y+Rc), s		4.5	4.5		4.5	4.5		
Max Green (Gmax), s		88.5	32.5		39.5	44.5		
Max Allow Headway (MAH), s		5.2	5.4		3.8	4.8		
Max Q Clear (g_c+I1), s		2.0	34.5		41.5	46.5		
Green Ext Time (g_e), s		34.0	0.0		0.0	0.0		
Prob of Phs Call (p_c)		1.00	1.00		1.00	1.00		
Prob of Max Out (p_x)		0.00	1.00		1.00	0.00		

Left-Turn Movement Data								
Assigned Mvmt			3		5	1		
Mvmt Sat Flow, veh/h			881		1810	0		

Through Movement Data								
Assigned Mvmt		2	8			6		
Mvmt Sat Flow, veh/h		3705	1653			3705		

Right-Turn Movement Data								
Assigned Mvmt		12	18			16		
Mvmt Sat Flow, veh/h		0	1036			1610		

Left Lane Group Data								
Assigned Mvmt	0	0	3	0	5	1	0	0
Lane Assignment			L+T		L (Prot)			

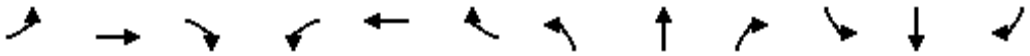
Lanes in Grp	0	0	1	0	1	0	0	0
Grp Vol (v), veh/h	0	0	474	0	872	0	0	0
Grp Sat Flow (s), veh/h/ln	0	0	1856	0	1810	0	0	0
Q Serve Time (g_s), s	0.0	0.0	32.5	0.0	39.5	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	32.5	0.0	39.5	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	44.5	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	0.00	0.47	0.00	1.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	464	0	550	0	0	0
V/C Ratio (X)	0.00	0.00	1.02	0.00	1.59	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	0	464	0	550	0	0	0
Upstream Filter (I)	0.00	0.00	1.00	0.00	0.09	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	48.8	0.0	25.5	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	47.5	0.0	264.5	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	96.2	0.0	290.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	15.0	0.0	11.7	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	6.1	0.0	40.4	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	0.00	1.00	0.00	1.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	21.1	0.0	52.1	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.51	0.00	8.69	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	2.6	0.0	80.5	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.3	0.0	0.4	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	8	0	0	6	0	0
Lane Assignment		T				T		
Lanes in Grp	0	2	0	0	0	2	0	0
Grp Vol (v), veh/h	0	1904	0	0	0	1385	0	0
Grp Sat Flow (s), veh/h/ln	0	1805	0	0	0	1805	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	44.5	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	44.5	0.0	0.0
Lane Grp Cap (c), veh/h	0	2458	0	0	0	1236	0	0
V/C Ratio (X)	0.00	0.77	0.00	0.00	0.00	1.12	0.00	0.00
Avail Cap (c_a), veh/h	0	2458	0	0	0	1236	0	0
Upstream Filter (I)	0.00	0.09	0.00	0.00	0.00	0.55	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	20.5	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.2	0.0	0.0	0.0	61.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.2	0.0	0.0	0.0	81.5	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	11.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	10.5	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.1	0.0	0.0	0.0	21.5	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.56	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	37.3	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	18	0	0	16	0	0
Lane Assignment			T+R			R		
Lanes in Grp	0	0	1	0	0	1	0	0
Grp Vol (v), veh/h	0	0	399	0	0	813	0	0
Grp Sat Flow (s), veh/h/ln	0	0	1714	0	0	1610	0	0
Q Serve Time (g_s), s	0.0	0.0	29.6	0.0	0.0	44.5	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	29.6	0.0	0.0	44.5	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.00	0.60	0.00	0.00	1.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	428	0	0	551	0	0
V/C Ratio (X)	0.00	0.00	0.93	0.00	0.00	1.48	0.00	0.00
Avail Cap (c_a), veh/h	0	0	428	0	0	551	0	0
Upstream Filter (I)	0.00	0.00	1.00	0.00	0.00	0.55	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	47.7	0.0	0.0	42.8	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	27.0	0.0	0.0	219.2	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	74.6	0.0	0.0	262.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	12.6	0.0	0.0	17.5	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	3.2	0.0	0.0	33.6	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	15.8	0.0	0.0	51.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.38	0.00	0.00	1.33	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	65.5	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	111.9
HCM 6th LOS	F



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	450	85	660	0	0	0	0	1554	509	327	1013	0
Future Volume (veh/h)	450	85	660	0	0	0	0	1554	509	327	1013	0
Number	7	4	14				5	2	12	1	6	16
Initial Q, veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1800	1900	1900				0	1900	1900	1900	1900	0
Adj Flow Rate, veh/h	474	89	695				0	1636	536	344	1066	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0				0	0	0	0	0	0
Opposing Right Turn Influence	Yes						No			Yes		
Cap, veh/h	466	88	489				0	1561	661	328	2263	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	2.00	1.00	2.00	2.00	1.00
Prop Arrive On Green	0.30	0.30	0.30				0.00	0.82	0.41	0.36	1.00	0.00
Unsig. Movement Delay												
Ln Grp Delay, s/veh	87.6	0.0	246.2				0.0	48.1	44.2	70.6	0.1	0.0
Ln Grp LOS	F	A	F				A	F	D	F	A	A
Approach Vol, veh/h		1258						2172			1410	
Approach Delay, s/veh		175.2						47.2			17.3	
Approach LOS		F						D			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Case No	2.0	7.0		12.0		4.0		
Phs Duration (G+Y+Rc), s	28.1	57.9		44.0		86.0		
Change Period (Y+Rc), s	4.5	4.5		4.5		4.5		
Max Green (Gmax), s	23.6	53.4		39.5		81.5		
Max Allow Headway (MAH), s	3.8	4.9		5.5		5.2		
Max Q Clear (g_c+I1), s	25.6	55.4		41.5		2.0		
Green Ext Time (g_e), s	0.0	0.0		0.0		10.6		
Prob of Phs Call (p_c)	1.00	1.00		1.00		1.00		
Prob of Max Out (p_x)	1.00	0.00		1.00		0.00		

Left-Turn Movement Data								
Assigned Mvmt	1	5		7				
Mvmt Sat Flow, veh/h	1810	0		1535				

Through Movement Data								
Assigned Mvmt		2		4		6		
Mvmt Sat Flow, veh/h		3800		288		3705		

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		
Mvmt Sat Flow, veh/h		1610		1610		0		

Left Lane Group Data								
Assigned Mvmt	1	5	0	7	0	0	0	0
Lane Assignment	L (Prot)			L+T				

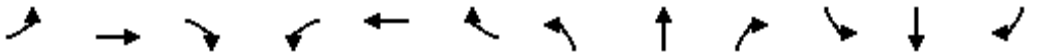
Lanes in Grp	1	0	0	1	0	0	0	0
Grp Vol (v), veh/h	344	0	0	563	0	0	0	0
Grp Sat Flow (s), veh/h/ln	1810	0	0	1823	0	0	0	0
Q Serve Time (g_s), s	23.6	0.0	0.0	39.5	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	23.6	0.0	0.0	39.5	0.0	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	53.4	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	0.84	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	328	0	0	554	0	0	0	0
V/C Ratio (X)	1.05	0.00	0.00	1.02	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	328	0	0	554	0	0	0	0
Upstream Filter (I)	0.09	0.00	0.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	41.4	0.0	0.0	45.3	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	29.2	0.0	0.0	42.4	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	70.6	0.0	0.0	87.6	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	8.9	0.0	0.0	17.7	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	2.7	0.0	0.0	6.5	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00
%ile Back of Q (50%), veh/ln	11.5	0.0	0.0	24.2	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	1.92	0.00	0.00	0.71	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	3.9	0.0	0.0	2.3	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.3	0.0	0.0	0.3	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	0
Lane Assignment		T				T		
Lanes in Grp	0	2	0	0	0	2	0	0
Grp Vol (v), veh/h	0	1636	0	0	0	1066	0	0
Grp Sat Flow (s), veh/h/ln	0	1900	0	0	0	1805	0	0
Q Serve Time (g_s), s	0.0	53.4	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	53.4	0.0	0.0	0.0	0.0	0.0	0.0
Lane Grp Cap (c), veh/h	0	1561	0	0	0	2263	0	0
V/C Ratio (X)	0.00	1.05	0.00	0.00	0.00	0.47	0.00	0.00
Avail Cap (c_a), veh/h	0	1561	0	0	0	2263	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	0.09	0.00	0.00
Uniform Delay (d1), s/veh	0.0	11.6	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	36.5	0.0	0.0	0.0	0.1	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	48.1	0.0	0.0	0.0	0.1	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	7.9	0.0	0.0	0.0	0.0	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	12.9	0.0	0.0	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.24	0.00	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	18.8	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	0
Lane Assignment		R		T+R				
Lanes in Grp	0	1	0	1	0	0	0	0
Grp Vol (v), veh/h	0	536	0	695	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	1610	0	1610	0	0	0	0
Q Serve Time (g_s), s	0.0	38.2	0.0	39.5	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	38.2	0.0	39.5	0.0	0.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	661	0	489	0	0	0	0
V/C Ratio (X)	0.00	0.81	0.00	1.42	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	661	0	489	0	0	0	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	33.8	0.0	45.3	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	10.4	0.0	201.0	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	44.2	0.0	246.2	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	14.8	0.0	15.6	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	1.9	0.0	27.3	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	16.7	0.0	42.9	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.31	0.00	1.26	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	51.4	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	71.7
HCM 6th LOS	E



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1296	667	539	664	0	0	0	0	454	7	278
Future Volume (veh/h)	0	1296	667	539	664	0	0	0	0	454	7	278
Number	7	4	14	3	8	18				1	6	16
Initial Q, veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	0	1900	1900	1700	1900	0				1900	1900	1900
Adj Flow Rate, veh/h	0	1364	0	567	699	0				478	7	293
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95				0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0				0	0	0
Opposing Right Turn Influence	No			Yes						Yes		
Cap, veh/h	0	1304		628	2206	0				515	8	465
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00				1.00	1.00	1.00
Prop Arrive On Green	0.00	0.36	0.00	0.40	1.00	0.00				0.29	0.29	0.29
Unsig. Movement Delay												
Ln Grp Delay, s/veh	0.0	52.1	0.0	37.7	0.1	0.0				56.0	0.0	34.2
Ln Grp LOS	A	F		D	A	A				E	A	C
Approach Vol, veh/h		1364			1266						778	
Approach Delay, s/veh		52.1			16.9						47.8	
Approach LOS		D			B						D	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	6		3	4				8
Case No	11.0		2.0	7.0				4.0
Phs Duration (G+Y+Rc), s	30.5		22.5	37.0				59.5
Change Period (Y+Rc), s	4.5		4.5	4.5				4.5
Max Green (Gmax), s	23.5		20.5	32.5				57.5
Max Allow Headway (MAH), s	4.9		3.8	5.2				5.2
Max Q Clear (g_c+I1), s	25.4		17.3	34.5				2.0
Green Ext Time (g_e), s	0.0		0.8	0.0				5.8
Prob of Phs Call (p_c)	1.00		1.00	1.00				1.00
Prob of Max Out (p_x)	0.00		1.00	1.00				0.00

Left-Turn Movement Data												
Assigned Mvmt		1		3	7							
Mvmt Sat Flow, veh/h		1785		3141	0							

Through Movement Data												
Assigned Mvmt		6			4				8			
Mvmt Sat Flow, veh/h		26			3705				3705			

Right-Turn Movement Data												
Assigned Mvmt		16			14				18			
Mvmt Sat Flow, veh/h		1610			1610				0			

Left Lane Group Data												
Assigned Mvmt		1	0	3	7	0	0	0	0			
Lane Assignment		L+T		L (Prot)								

Lanes in Grp	1	0	2	0	0	0	0	0
Grp Vol (v), veh/h	485	0	567	0	0	0	0	0
Grp Sat Flow (s), veh/h/ln	1811	0	1570	0	0	0	0	0
Q Serve Time (g_s), s	23.4	0.0	15.3	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	23.4	0.0	15.3	0.0	0.0	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	32.5	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.99	0.00	1.00	0.00	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	523	0	628	0	0	0	0	0
V/C Ratio (X)	0.93	0.00	0.90	0.00	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	523	0	715	0	0	0	0	0
Upstream Filter (I)	1.00	0.00	0.82	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	31.1	0.0	26.2	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	24.9	0.0	11.6	0.0	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	56.0	0.0	37.7	0.0	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	9.9	0.0	4.2	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	3.6	0.0	1.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	1.00	1.00	0.00	0.00	0.00	0.00
%ile Back of Q (50%), veh/ln	13.5	0.0	5.2	0.0	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	1.05	0.00	0.32	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	6	0	0	4	0	0	0	8
Lane Assignment				T				T
Lanes in Grp	0	0	0	2	0	0	0	2
Grp Vol (v), veh/h	0	0	0	1364	0	0	0	699
Grp Sat Flow (s), veh/h/ln	0	0	0	1805	0	0	0	1805
Q Serve Time (g_s), s	0.0	0.0	0.0	32.5	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	32.5	0.0	0.0	0.0	0.0
Lane Grp Cap (c), veh/h	0	0	0	1304	0	0	0	2206
V/C Ratio (X)	0.00	0.00	0.00	1.05	0.00	0.00	0.00	0.32
Avail Cap (c_a), veh/h	0	0	0	1304	0	0	0	2306
Upstream Filter (I)	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.82
Uniform Delay (d1), s/veh	0.0	0.0	0.0	28.7	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	23.4	0.0	0.0	0.0	0.1
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	52.1	0.0	0.0	0.0	0.1
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	13.3	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	4.2	0.0	0.0	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	1.00	0.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	17.6	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.17	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	15.1	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	16	0	0	14	0	0	0	18
Lane Assignment	R			R				
Lanes in Grp	1	0	0	1	0	0	0	0
Grp Vol (v), veh/h	293	0	0	0	0	0	0	0
Grp Sat Flow (s), veh/h/ln	1610	0	0	1610	0	0	0	0
Q Serve Time (g_s), s	14.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	14.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	1.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	465	0	0	581	0	0	0	0
V/C Ratio (X)	0.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	465	0	0	581	0	0	0	0
Upstream Filter (I)	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	27.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	6.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	34.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	5.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	1.00	0.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	6.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	38.1
HCM 6th LOS	D

Notes

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	315	1357	0	0	847	459	283	3	660	0	0	0
Future Volume (veh/h)	315	1357	0	0	847	459	283	3	660	0	0	0
Number	7	4	14	3	8	18	5	2	12			
Initial Q, veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1800	1900	0	0	1900	1900	1900	1900	1900			
Adj Flow Rate, veh/h	332	1428	0	0	892	483	300	0	695			
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95			
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0			
Opposing Right Turn Influence	Yes			No			Yes					
Cap, veh/h	366	1861	0	0	1308	406	1391	0	1238			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Prop Arrive On Green	0.43	1.00	0.00	0.00	0.25	0.25	0.38	0.00	0.38			
Unsig. Movement Delay												
Ln Grp Delay, s/veh	25.9	0.1	0.0	0.0	31.9	140.9	19.0	0.0	23.6			
Ln Grp LOS	C	A	A	A	C	F	B	A	C			
Approach Vol, veh/h		1760			1375			995				
Approach Delay, s/veh		5.0			70.2			22.2				
Approach LOS		A			E			C				

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2		4			7	8
Case No		9.0		4.0			2.0	7.0
Phs Duration (G+Y+Rc), s		39.1		50.9			23.7	27.2
Change Period (Y+Rc), s		4.5		4.5			4.5	4.5
Max Green (Gmax), s		19.3		61.7			34.5	22.7
Max Allow Headway (MAH), s		4.0		5.2			3.8	4.8
Max Q Clear (g_c+I1), s		17.2		2.0			18.3	24.7
Green Ext Time (g_e), s		1.0		17.2			0.9	0.0
Prob of Phs Call (p_c)		1.00		1.00			1.00	1.00
Prob of Max Out (p_x)		0.00		0.04			0.00	1.00

Left-Turn Movement Data								
Assigned Mvmt		5					7	3
Mvmt Sat Flow, veh/h		3619					1714	0

Through Movement Data								
Assigned Mvmt		2		4				8
Mvmt Sat Flow, veh/h		0		3705				5358

Right-Turn Movement Data								
Assigned Mvmt		12		14				18
Mvmt Sat Flow, veh/h		3220		0				1610

Left Lane Group Data								
Assigned Mvmt	0	5	0	0	0	0	7	3
Lane Assignment		L					L (Prot)	

Lanes in Grp	0	2	0	0	0	0	1	0
Grp Vol (v), veh/h	0	300	0	0	0	0	332	0
Grp Sat Flow (s), veh/h/ln	0	1810	0	0	0	0	1714	0
Q Serve Time (g_s), s	0.0	5.0	0.0	0.0	0.0	0.0	16.3	0.0
Cycle Q Clear Time (g_c), s	0.0	5.0	0.0	0.0	0.0	0.0	16.3	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	1810	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	22.7
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	0	1391	0	0	0	0	366	0
V/C Ratio (X)	0.00	0.22	0.00	0.00	0.00	0.00	0.91	0.00
Avail Cap (c_a), veh/h	0	1391	0	0	0	0	657	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	0.00	0.09	0.00
Uniform Delay (d1), s/veh	0.0	18.6	0.0	0.0	0.0	0.0	25.0	0.0
Incr Delay (d2), s/veh	0.0	0.4	0.0	0.0	0.0	0.0	1.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	19.0	0.0	0.0	0.0	0.0	25.9	0.0
1st-Term Q (Q1), veh/ln	0.0	2.0	0.0	0.0	0.0	0.0	4.7	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	0.00	0.00	0.00	1.00	1.00
%ile Back of Q (50%), veh/ln	0.0	2.1	0.0	0.0	0.0	0.0	4.8	0.0
%ile Storage Ratio (RQ%)	0.00	0.10	0.00	0.00	0.00	0.00	1.34	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	0	0	8
Lane Assignment				T				T
Lanes in Grp	0	0	0	2	0	0	0	3
Grp Vol (v), veh/h	0	0	0	1428	0	0	0	892
Grp Sat Flow (s), veh/h/ln	0	0	0	1805	0	0	0	1729
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	14.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	14.0
Lane Grp Cap (c), veh/h	0	0	0	1861	0	0	0	1308
V/C Ratio (X)	0.00	0.00	0.00	0.77	0.00	0.00	0.00	0.68
Avail Cap (c_a), veh/h	0	0	0	2475	0	0	0	1308
Upstream Filter (I)	0.00	0.00	0.00	0.09	0.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	30.4
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.1	0.0	0.0	0.0	1.5
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	0.1	0.0	0.0	0.0	31.9
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.7
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2

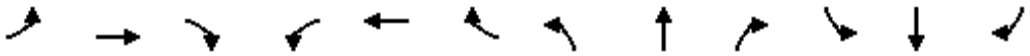
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.9
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	0	0	18
Lane Assignment		R						R
Lanes in Grp	0	2	0	0	0	0	0	1
Grp Vol (v), veh/h	0	695	0	0	0	0	0	483
Grp Sat Flow (s), veh/h/ln	0	1610	0	0	0	0	0	1610
Q Serve Time (g_s), s	0.0	15.2	0.0	0.0	0.0	0.0	0.0	22.7
Cycle Q Clear Time (g_c), s	0.0	15.2	0.0	0.0	0.0	0.0	0.0	22.7
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	0.00	0.00	0.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	1238	0	0	0	0	0	406
V/C Ratio (X)	0.00	0.56	0.00	0.00	0.00	0.00	0.00	1.19
Avail Cap (c_a), veh/h	0	1238	0	0	0	0	0	406
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	21.7	0.0	0.0	0.0	0.0	0.0	33.7
Incr Delay (d2), s/veh	0.0	1.8	0.0	0.0	0.0	0.0	0.0	107.3
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	23.6	0.0	0.0	0.0	0.0	0.0	140.9
1st-Term Q (Q1), veh/ln	0.0	5.6	0.0	0.0	0.0	0.0	0.0	8.6
2nd-Term Q (Q2), veh/ln	0.0	0.3	0.0	0.0	0.0	0.0	0.0	12.1
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	5.9	0.0	0.0	0.0	0.0	0.0	20.7
%ile Storage Ratio (RQ%)	0.00	0.27	0.00	0.00	0.00	0.00	0.00	1.44
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	19.2
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3

Intersection Summary	
HCM 6th Ctrl Delay	30.8
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	194	897	98	197	477	259	35	55	307	313	594	227
Future Volume (veh/h)	194	897	98	197	477	259	35	55	307	313	594	227
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1800	1900	1000	1800	1900	1900	1800	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	204	944	103	207	502	273	37	58	323	329	625	239
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	213	989	232	215	522	443	57	392	332	352	937	358
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.25	0.55	0.55	0.25	0.55	0.27	0.03	0.21	0.21	0.19	0.37	0.37
Unsig. Movement Delay												
Ln Grp Delay, s/veh	73.7	34.5	17.2	44.4	25.2	28.7	54.4	30.0	78.5	67.4	29.1	29.4
Ln Grp LOS	E	C	B	D	C	C	D	C	E	E	C	C
Approach Vol, veh/h		1251			982			418			1193	
Approach Delay, s/veh		39.5			30.2			69.7			39.8	
Approach LOS		D			C			E			D	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Case No	2.0	3.0	2.0	3.0	2.0	4.0	2.0	3.0
Phs Duration (G+Y+Rc), s	22.0	23.1	15.8	29.1	7.5	37.5	15.7	29.2
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green (Gmax), s	17.5	18.5	11.3	24.7	5.1	30.9	11.2	24.8
Max Allow Headway (MAH), s	3.8	4.2	3.8	5.1	3.8	5.3	3.8	4.8
Max Q Clear (g_c+I1), s	18.1	19.9	12.7	24.3	3.9	20.5	12.6	24.7
Green Ext Time (g_e), s	0.0	0.0	0.0	0.3	0.0	4.1	0.0	0.1
Prob of Phs Call (p_c)	1.00	1.00	0.99	1.00	0.60	1.00	0.99	1.00
Prob of Max Out (p_x)	1.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00

Left-Turn Movement Data								
Assigned Mvmt	1		3		5		7	
Mvmt Sat Flow, veh/h	1810		1714		1714		1714	

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		1900		3610		2554		1900

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1610		847		976		1610

Left Lane Group Data								
Assigned Mvmt	1	0	3	0	5	0	7	0
Lane Assignment	L (Prot)		L (Prot)		L (Prot)		L (Prot)	

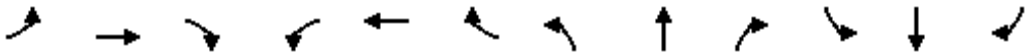
Lanes in Grp	1	0	1	0	1	0	1	0
Grp Vol (v), veh/h	329	0	207	0	37	0	204	0
Grp Sat Flow (s), veh/h/ln	1810	0	1714	0	1714	0	1714	0
Q Serve Time (g_s), s	16.1	0.0	10.7	0.0	1.9	0.0	10.6	0.0
Cycle Q Clear Time (g_c), s	16.1	0.0	10.7	0.0	1.9	0.0	10.6	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	352	0	215	0	57	0	213	0
V/C Ratio (X)	0.94	0.00	0.96	0.00	0.64	0.00	0.96	0.00
Avail Cap (c_a), veh/h	352	0	215	0	97	0	213	0
Upstream Filter (I)	1.00	0.00	0.09	0.00	1.00	0.00	0.71	0.00
Uniform Delay (d1), s/veh	35.7	0.0	33.5	0.0	43.0	0.0	33.6	0.0
Incr Delay (d2), s/veh	31.7	0.0	10.9	0.0	11.4	0.0	40.1	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	67.4	0.0	44.4	0.0	54.4	0.0	73.7	0.0
1st-Term Q (Q1), veh/ln	6.9	0.0	3.7	0.0	0.8	0.0	3.7	0.0
2nd-Term Q (Q2), veh/ln	3.1	0.0	0.7	0.0	0.2	0.0	2.4	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
%ile Back of Q (50%), veh/ln	10.0	0.0	4.4	0.0	1.0	0.0	6.1	0.0
%ile Storage Ratio (RQ%)	2.51	0.00	0.18	0.00	0.11	0.00	0.58	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	1	0	2	0	1	0	1
Grp Vol (v), veh/h	0	58	0	944	0	442	0	502
Grp Sat Flow (s), veh/h/ln	0	1900	0	1805	0	1805	0	1900
Q Serve Time (g_s), s	0.0	2.2	0.0	22.3	0.0	18.5	0.0	22.7
Cycle Q Clear Time (g_c), s	0.0	2.2	0.0	22.3	0.0	18.5	0.0	22.7
Lane Grp Cap (c), veh/h	0	392	0	989	0	663	0	522
V/C Ratio (X)	0.00	0.15	0.00	0.95	0.00	0.67	0.00	0.96
Avail Cap (c_a), veh/h	0	392	0	991	0	663	0	524
Upstream Filter (I)	0.00	1.00	0.00	0.71	0.00	1.00	0.00	0.09
Uniform Delay (d1), s/veh	0.0	29.3	0.0	19.8	0.0	23.9	0.0	19.8
Incr Delay (d2), s/veh	0.0	0.8	0.0	14.7	0.0	5.2	0.0	5.4
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	30.0	0.0	34.5	0.0	29.1	0.0	25.2
1st-Term Q (Q1), veh/ln	0.0	1.0	0.0	5.5	0.0	7.6	0.0	5.8
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	2.0	0.0	1.0	0.0	0.8

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	1.1	0.0	7.5	0.0	8.5	0.0	6.6
%ile Storage Ratio (RQ%)	0.00	0.06	0.00	0.10	0.00	1.35	0.00	0.27
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		R		T+R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	323	0	103	0	422	0	273
Grp Sat Flow (s), veh/h/ln	0	1610	0	847	0	1724	0	1610
Q Serve Time (g_s), s	0.0	17.9	0.0	6.5	0.0	18.5	0.0	13.3
Cycle Q Clear Time (g_c), s	0.0	17.9	0.0	6.5	0.0	18.5	0.0	13.3
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	0.57	0.00	1.00
Lane Grp Cap (c), veh/h	0	332	0	232	0	633	0	443
V/C Ratio (X)	0.00	0.97	0.00	0.44	0.00	0.67	0.00	0.62
Avail Cap (c_a), veh/h	0	332	0	233	0	633	0	444
Upstream Filter (I)	0.00	1.00	0.00	0.71	0.00	1.00	0.00	0.09
Uniform Delay (d1), s/veh	0.0	35.5	0.0	16.3	0.0	23.9	0.0	28.5
Incr Delay (d2), s/veh	0.0	43.0	0.0	0.9	0.0	5.5	0.0	0.2
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	78.5	0.0	17.2	0.0	29.4	0.0	28.7
1st-Term Q (Q1), veh/ln	0.0	6.8	0.0	1.1	0.0	7.2	0.0	5.0
2nd-Term Q (Q2), veh/ln	0.0	4.0	0.0	0.1	0.0	1.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	10.8	0.0	1.1	0.0	8.2	0.0	5.0
%ile Storage Ratio (RQ%)	0.00	0.58	0.00	0.01	0.00	1.30	0.00	0.21
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	40.5
HCM 6th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	648	787	247	101	975	531	104	613	76	336	29	222
Future Volume (veh/h)	648	787	247	101	975	531	104	613	76	336	29	222
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1700	1900	1900	1800	1900	1900	1800	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	682	828	260	106	1026	559	109	645	80	354	31	234
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	495	919	779	120	753	638	132	597	266	258	44	334
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.32	0.97	0.97	0.14	0.79	0.40	0.08	0.17	0.17	0.14	0.23	0.23
Unsig. Movement Delay												
Ln Grp Delay, s/veh	218.8	6.2	1.2	103.7	185.4	49.4	84.1	114.7	50.5	247.0	0.0	56.2
Ln Grp LOS	F	A	A	F	F	D	F	F	D	F	A	E
Approach Vol, veh/h		1770			1691			834			619	
Approach Delay, s/veh		87.4			135.3			104.5			165.3	
Approach LOS		F			F			F			F	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Case No	2.0	3.0	2.0	3.0	2.0	4.0	2.0	3.0
Phs Duration (G+Y+Rc), s	23.0	26.0	13.6	67.4	14.5	34.5	25.0	56.0
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green (Gmax), s	18.5	21.5	9.1	62.9	12.1	27.9	20.5	51.5
Max Allow Headway (MAH), s	3.8	5.1	3.7	4.7	3.8	5.5	3.7	4.6
Max Q Clear (g_c+I1), s	20.5	23.5	9.9	16.3	10.1	21.3	22.5	53.5
Green Ext Time (g_e), s	0.0	0.0	0.0	7.8	0.0	0.8	0.0	0.0
Prob of Phs Call (p_c)	1.00	1.00	0.98	1.00	0.98	1.00	1.00	1.00
Prob of Max Out (p_x)	1.00	0.00	1.00	0.01	1.00	0.00	1.00	1.00

Left-Turn Movement Data								
Assigned Mvmt	1		3		5		7	
Mvmt Sat Flow, veh/h	1810		1714		1714		3141	

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		3610		1900		192		1900

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1610		1610		1448		1610

Left Lane Group Data								
Assigned Mvmt	1	0	3	0	5	0	7	0
Lane Assignment	L (Prot)		L (Prot)		L (Prot)		L (Prot)	

Lanes in Grp	1	0	1	0	1	0	2	0
Grp Vol (v), veh/h	354	0	106	0	109	0	682	0
Grp Sat Flow (s), veh/h/ln	1810	0	1714	0	1714	0	1570	0
Q Serve Time (g_s), s	18.5	0.0	7.9	0.0	8.1	0.0	20.5	0.0
Cycle Q Clear Time (g_c), s	18.5	0.0	7.9	0.0	8.1	0.0	20.5	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	258	0	120	0	132	0	495	0
V/C Ratio (X)	1.37	0.00	0.88	0.00	0.83	0.00	1.38	0.00
Avail Cap (c_a), veh/h	258	0	120	0	160	0	495	0
Upstream Filter (I)	1.00	0.00	1.00	0.00	1.00	0.00	0.36	0.00
Uniform Delay (d1), s/veh	55.8	0.0	55.4	0.0	59.2	0.0	44.5	0.0
Incr Delay (d2), s/veh	191.2	0.0	48.3	0.0	24.9	0.0	174.3	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	247.0	0.0	103.7	0.0	84.1	0.0	218.8	0.0
1st-Term Q (Q1), veh/ln	8.4	0.0	3.1	0.0	3.5	0.0	6.4	0.0
2nd-Term Q (Q2), veh/ln	13.7	0.0	1.6	0.0	0.9	0.0	12.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
%ile Back of Q (50%), veh/ln	22.1	0.0	4.7	0.0	4.5	0.0	18.4	0.0
%ile Storage Ratio (RQ%)	2.68	0.00	0.05	0.00	0.39	0.00	1.77	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	24.1	0.0	0.0	0.0	0.0	0.0	46.7	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.3	0.0	0.0	0.0	0.0	0.0	0.3	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T				T
Lanes in Grp	0	2	0	1	0	0	0	1
Grp Vol (v), veh/h	0	645	0	828	0	0	0	1026
Grp Sat Flow (s), veh/h/ln	0	1805	0	1900	0	0	0	1900
Q Serve Time (g_s), s	0.0	21.5	0.0	14.3	0.0	0.0	0.0	51.5
Cycle Q Clear Time (g_c), s	0.0	21.5	0.0	14.3	0.0	0.0	0.0	51.5
Lane Grp Cap (c), veh/h	0	597	0	919	0	0	0	753
V/C Ratio (X)	0.00	1.08	0.00	0.90	0.00	0.00	0.00	1.36
Avail Cap (c_a), veh/h	0	597	0	919	0	0	0	753
Upstream Filter (I)	0.00	1.00	0.00	0.36	0.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	54.2	0.0	1.3	0.0	0.0	0.0	13.5
Incr Delay (d2), s/veh	0.0	60.4	0.0	4.9	0.0	0.0	0.0	171.9
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	114.7	0.0	6.2	0.0	0.0	0.0	185.4
1st-Term Q (Q1), veh/ln	0.0	9.7	0.0	0.8	0.0	0.0	0.0	5.5
2nd-Term Q (Q2), veh/ln	0.0	5.0	0.0	1.2	0.0	0.0	0.0	35.9

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	14.8	0.0	2.0	0.0	0.0	0.0	41.4
%ile Storage Ratio (RQ%)	0.00	1.30	0.00	0.08	0.00	0.00	0.00	0.48
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	12.0	0.0	0.0	0.0	0.0	0.0	68.3
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.3

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		R		T+R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	80	0	260	0	265	0	559
Grp Sat Flow (s), veh/h/ln	0	1610	0	1610	0	1639	0	1610
Q Serve Time (g_s), s	0.0	5.7	0.0	1.0	0.0	19.3	0.0	41.7
Cycle Q Clear Time (g_c), s	0.0	5.7	0.0	1.0	0.0	19.3	0.0	41.7
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	0.88	0.00	1.00
Lane Grp Cap (c), veh/h	0	266	0	779	0	378	0	638
V/C Ratio (X)	0.00	0.30	0.00	0.33	0.00	0.70	0.00	0.88
Avail Cap (c_a), veh/h	0	266	0	779	0	378	0	638
Upstream Filter (I)	0.00	1.00	0.00	0.36	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	47.6	0.0	1.1	0.0	45.9	0.0	36.3
Incr Delay (d2), s/veh	0.0	2.9	0.0	0.1	0.0	10.3	0.0	13.1
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	50.5	0.0	1.2	0.0	56.2	0.0	49.4
1st-Term Q (Q1), veh/ln	0.0	2.2	0.0	0.2	0.0	7.9	0.0	15.6
2nd-Term Q (Q2), veh/ln	0.0	0.2	0.0	0.0	0.0	1.1	0.0	2.3
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	2.4	0.0	0.3	0.0	8.9	0.0	17.9
%ile Storage Ratio (RQ%)	0.00	0.87	0.00	0.01	0.00	1.09	0.00	0.21
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	116.6
HCM 6th LOS	F

BUILD OUT YEAR PLUS PROJECT WITH IMPROVEMENT CONDITIONS

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	370	4	210	643	600	0	0	614	818
Future Volume (veh/h)	0	0	0	370	4	210	643	600	0	0	614	818
Number				3	8	18	5	2	12	1	6	16
Initial Q, veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln				1800	1900	1900	1700	1900	0	0	1900	1900
Adj Flow Rate, veh/h				389	4	221	677	632	0	0	646	861
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence				Yes			Yes			No		
Cap, veh/h				416	4	374	715	2501	0	0	2218	689
HCM Platoon Ratio				1.66	1.66	1.00	2.00	2.00	1.00	1.00	2.00	2.00
Prop Arrive On Green				0.39	0.39	0.23	0.46	1.00	0.00	0.00	0.86	0.86
Unsig. Movement Delay												
Ln Grp Delay, s/veh				62.4	0.0	43.1	47.7	0.2	0.0	0.0	5.5	133.1
Ln Grp LOS				E	A	D	D	A	A	A	A	F
Approach Vol, veh/h					614			1309			1507	
Approach Delay, s/veh					55.4			24.8			78.4	
Approach LOS					E			C			E	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2	8		5	6		
Case No		4.0	11.0		2.0	7.0		
Phs Duration (G+Y+Rc), s		87.6	32.4		31.8	55.8		
Change Period (Y+Rc), s		4.5	4.5		4.5	4.5		
Max Green (Gmax), s		81.5	29.5		28.5	48.5		
Max Allow Headway (MAH), s		5.2	4.9		3.8	4.5		
Max Q Clear (g_c+I1), s		2.0	27.0		26.8	53.3		
Green Ext Time (g_e), s		5.1	0.8		0.5	0.0		
Prob of Phs Call (p_c)		1.00	1.00		1.00	1.00		
Prob of Max Out (p_x)		0.00	1.00		1.00	0.00		
Left-Turn Movement Data								
Assigned Mvmt			3		5	1		
Mvmt Sat Flow, veh/h			1792		3141	0		
Through Movement Data								
Assigned Mvmt		2	8			6		
Mvmt Sat Flow, veh/h		3705	18			5358		
Right-Turn Movement Data								
Assigned Mvmt		12	18			16		
Mvmt Sat Flow, veh/h		0	1610			1610		
Left Lane Group Data								
Assigned Mvmt	0	0	3	0	5	1	0	0
Lane Assignment			L+T		L (Prot)			

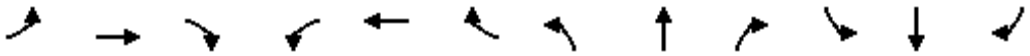
Lanes in Grp	0	0	1	0	2	0	0	0
Grp Vol (v), veh/h	0	0	393	0	677	0	0	0
Grp Sat Flow (s), veh/h/ln	0	0	1810	0	1570	0	0	0
Q Serve Time (g_s), s	0.0	0.0	25.0	0.0	24.8	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	25.0	0.0	24.8	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	51.3	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	0.00	0.99	0.00	1.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	420	0	715	0	0	0
V/C Ratio (X)	0.00	0.00	0.93	0.00	0.95	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	0	445	0	746	0	0	0
Upstream Filter (I)	0.00	0.00	1.00	0.00	0.68	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	36.0	0.0	32.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	26.4	0.0	15.8	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	62.4	0.0	47.7	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	9.6	0.0	7.4	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	3.1	0.0	1.6	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	0.00	1.00	0.00	1.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	12.7	0.0	8.9	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.26	0.00	0.85	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	8	0	0	6	0	0
Lane Assignment		T				T		
Lanes in Grp	0	2	0	0	0	3	0	0
Grp Vol (v), veh/h	0	632	0	0	0	646	0	0
Grp Sat Flow (s), veh/h/ln	0	1805	0	0	0	1729	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	2.9	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	2.9	0.0	0.0
Lane Grp Cap (c), veh/h	0	2501	0	0	0	2218	0	0
V/C Ratio (X)	0.00	0.25	0.00	0.00	0.00	0.29	0.00	0.00
Avail Cap (c_a), veh/h	0	2501	0	0	0	2218	0	0
Upstream Filter (I)	0.00	0.68	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	5.2	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.2	0.0	0.0	0.0	0.3	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.2	0.0	0.0	0.0	5.5	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.1	0.0	0.0	0.0	1.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.01	0.00	0.00	0.00	0.02	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	18	0	0	16	0	0
Lane Assignment			R			R		
Lanes in Grp	0	0	1	0	0	1	0	0
Grp Vol (v), veh/h	0	0	221	0	0	861	0	0
Grp Sat Flow (s), veh/h/ln	0	0	1610	0	0	1610	0	0
Q Serve Time (g_s), s	0.0	0.0	14.7	0.0	0.0	51.3	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	14.7	0.0	0.0	51.3	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	374	0	0	689	0	0
V/C Ratio (X)	0.00	0.00	0.59	0.00	0.00	1.25	0.00	0.00
Avail Cap (c_a), veh/h	0	0	396	0	0	689	0	0
Upstream Filter (I)	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	41.0	0.0	0.0	8.7	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	2.1	0.0	0.0	124.5	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	43.1	0.0	0.0	133.1	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	5.8	0.0	0.0	3.2	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.2	0.0	0.0	23.8	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	6.0	0.0	0.0	27.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.12	0.00	0.00	0.59	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	43.1	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	53.8
HCM 6th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	612	5	548	0	0	0	0	682	301	120	665	0
Future Volume (veh/h)	612	5	548	0	0	0	0	682	301	120	665	0
Number	7	4	14				5	2	12	1	6	16
Initial Q, veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1800	1900	1900				0	1900	1900	1700	1900	0
Adj Flow Rate, veh/h	644	5	577				0	718	317	126	700	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0				0	0	0	0	0	0
Opposing Right Turn Influence	Yes						No			Yes		
Cap, veh/h	671	5	626				0	1609	499	230	1655	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.66	1.66	1.66	1.66	1.00
Prop Arrive On Green	0.39	0.39	0.39				0.00	0.51	0.51	0.12	0.76	0.00
Unsig. Movement Delay												
Ln Grp Delay, s/veh	42.8	0.0	36.5				0.0	12.2	18.1	27.4	5.1	0.0
Ln Grp LOS	D	A	D				A	B	B	C	A	A
Approach Vol, veh/h		1226						1035			826	
Approach Delay, s/veh		39.8						14.0			8.5	
Approach LOS		D						B			A	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Case No	2.0	7.0		10.0		4.0		
Phs Duration (G+Y+Rc), s	8.9	23.1		28.0		32.0		
Change Period (Y+Rc), s	4.5	4.5		4.5		4.5		
Max Green (Gmax), s	5.0	18.0		23.5		27.5		
Max Allow Headway (MAH), s	3.8	4.9		4.6		5.2		
Max Q Clear (g_c+I1), s	4.3	10.5		24.0		6.1		
Green Ext Time (g_e), s	0.0	3.6		0.0		4.9		
Prob of Phs Call (p_c)	0.88	1.00		1.00		1.00		
Prob of Max Out (p_x)	1.00	0.00		1.00		0.00		

Left-Turn Movement Data									
Assigned Mvmt	1	5		7					
Mvmt Sat Flow, veh/h	3141	0		1714					

Through Movement Data									
Assigned Mvmt		2		4		6			
Mvmt Sat Flow, veh/h		5358		14		3705			

Right-Turn Movement Data									
Assigned Mvmt		12		14		16			
Mvmt Sat Flow, veh/h		1610		1598		0			

Left Lane Group Data									
Assigned Mvmt	1	5	0	7	0	0	0	0	
Lane Assignment	L (Prot)			L					

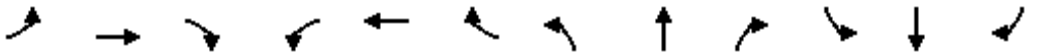
Lanes in Grp	2	0	0	1	0	0	0	0
Grp Vol (v), veh/h	126	0	0	644	0	0	0	0
Grp Sat Flow (s), veh/h/ln	1570	0	0	1714	0	0	0	0
Q Serve Time (g_s), s	2.3	0.0	0.0	22.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	2.3	0.0	0.0	22.0	0.0	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	1714	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	18.6	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	230	0	0	671	0	0	0	0
V/C Ratio (X)	0.55	0.00	0.00	0.96	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	262	0	0	671	0	0	0	0
Upstream Filter (I)	0.96	0.00	0.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	25.4	0.0	0.0	17.8	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	2.0	0.0	0.0	25.0	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	27.4	0.0	0.0	42.8	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.8	0.0	0.0	7.5	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.1	0.0	0.0	4.7	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.8	0.0	0.0	12.1	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.08	0.00	0.00	0.21	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	0
Lane Assignment		T				T		
Lanes in Grp	0	3	0	0	0	2	0	0
Grp Vol (v), veh/h	0	718	0	0	0	700	0	0
Grp Sat Flow (s), veh/h/ln	0	1729	0	0	0	1805	0	0
Q Serve Time (g_s), s	0.0	5.2	0.0	0.0	0.0	4.1	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	5.2	0.0	0.0	0.0	4.1	0.0	0.0
Lane Grp Cap (c), veh/h	0	1609	0	0	0	1655	0	0
V/C Ratio (X)	0.00	0.45	0.00	0.00	0.00	0.42	0.00	0.00
Avail Cap (c_a), veh/h	0	1609	0	0	0	1655	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	0.96	0.00	0.00
Uniform Delay (d1), s/veh	0.0	11.3	0.0	0.0	0.0	4.4	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.9	0.0	0.0	0.0	0.8	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	12.2	0.0	0.0	0.0	5.1	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	1.6	0.0	0.0	0.0	1.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	0.2	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	1.7	0.0	0.0	0.0	1.2	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.06	0.00	0.00	0.00	0.12	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	0
Lane Assignment		R		T+R				
Lanes in Grp	0	1	0	1	0	0	0	0
Grp Vol (v), veh/h	0	317	0	582	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	1610	0	1612	0	0	0	0
Q Serve Time (g_s), s	0.0	8.5	0.0	20.6	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	8.5	0.0	20.6	0.0	0.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	0.99	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	499	0	631	0	0	0	0
V/C Ratio (X)	0.00	0.63	0.00	0.92	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	499	0	631	0	0	0	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	12.1	0.0	17.4	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	6.0	0.0	19.1	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	18.1	0.0	36.5	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	2.2	0.0	6.6	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.8	0.0	3.3	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	3.1	0.0	9.9	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.10	0.00	0.17	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	22.8
HCM 6th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	64	754	143	442	938	130	113	393	478	202	505	60
Future Volume (veh/h)	64	754	143	442	938	130	113	393	478	202	505	60
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1800	1900	1900	1800	1900	1900	1800	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	67	794	151	465	987	137	119	414	503	213	532	63
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	85	772	147	442	1475	205	146	664	712	223	722	85
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00
Prop Arrive On Green	0.05	0.26	0.26	0.26	0.46	0.46	0.11	0.24	0.24	0.12	0.22	0.22
Unsig. Movement Delay												
Ln Grp Delay, s/veh	61.4	86.8	86.9	91.0	22.7	22.7	62.9	38.2	26.2	91.7	47.5	47.6
Ln Grp LOS	E	F	F	F	C	C	E	D	C	F	D	D
Approach Vol, veh/h		1012			1589			1036			808	
Approach Delay, s/veh		85.2			42.6			35.2			59.2	
Approach LOS		F			D			D			E	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Case No	2.0	3.0	2.0	4.0	2.0	4.0	2.0	4.0
Phs Duration (G+Y+Rc), s	16.8	22.9	30.3	30.0	13.0	26.7	9.5	50.8
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green (Gmax), s	12.3	18.4	25.8	25.5	9.9	20.8	9.2	42.1
Max Allow Headway (MAH), s	3.8	4.6	3.8	5.3	3.8	5.3	3.8	5.3
Max Q Clear (g_c+I1), s	13.7	20.4	27.8	27.5	8.8	17.3	5.9	26.1
Green Ext Time (g_e), s	0.0	0.0	0.0	0.0	0.0	1.2	0.0	6.9
Prob of Phs Call (p_c)	1.00	1.00	1.00	1.00	0.96	1.00	0.84	1.00
Prob of Max Out (p_x)	1.00	0.00	1.00	1.00	1.00	0.00	1.00	0.39

Left-Turn Movement Data								
Assigned Mvmt	1		3		5		7	
Mvmt Sat Flow, veh/h	1810		1714		1714		1714	

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		3610		3026		3252		3184

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1610		575		384		442

Left Lane Group Data								
Assigned Mvmt	1	0	3	0	5	0	7	0
Lane Assignment	L (Prot)		L (Prot)		L (Prot)		L (Prot)	

Lanes in Grp	1	0	1	0	1	0	1	0
Grp Vol (v), veh/h	213	0	465	0	119	0	67	0
Grp Sat Flow (s), veh/h/ln	1810	0	1714	0	1714	0	1714	0
Q Serve Time (g_s), s	11.7	0.0	25.8	0.0	6.8	0.0	3.9	0.0
Cycle Q Clear Time (g_c), s	11.7	0.0	25.8	0.0	6.8	0.0	3.9	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	223	0	442	0	146	0	85	0
V/C Ratio (X)	0.96	0.00	1.05	0.00	0.82	0.00	0.78	0.00
Avail Cap (c_a), veh/h	223	0	442	0	170	0	158	0
Upstream Filter (I)	1.00	0.00	0.86	0.00	0.81	0.00	1.00	0.00
Uniform Delay (d1), s/veh	43.6	0.0	37.1	0.0	43.6	0.0	47.0	0.0
Incr Delay (d2), s/veh	48.1	0.0	53.9	0.0	19.3	0.0	14.5	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	91.7	0.0	91.0	0.0	62.9	0.0	61.4	0.0
1st-Term Q (Q1), veh/ln	5.2	0.0	10.6	0.0	2.8	0.0	1.6	0.0
2nd-Term Q (Q2), veh/ln	3.0	0.0	6.6	0.0	0.8	0.0	0.3	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
%ile Back of Q (50%), veh/ln	8.2	0.0	17.2	0.0	3.6	0.0	2.0	0.0
%ile Storage Ratio (RQ%)	0.13	0.00	0.16	0.00	0.18	0.00	0.03	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	5.7	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	2	0	1	0	1	0	1
Grp Vol (v), veh/h	0	414	0	474	0	295	0	559
Grp Sat Flow (s), veh/h/ln	0	1805	0	1805	0	1805	0	1805
Q Serve Time (g_s), s	0.0	10.2	0.0	25.5	0.0	15.2	0.0	24.1
Cycle Q Clear Time (g_c), s	0.0	10.2	0.0	25.5	0.0	15.2	0.0	24.1
Lane Grp Cap (c), veh/h	0	664	0	460	0	401	0	836
V/C Ratio (X)	0.00	0.62	0.00	1.03	0.00	0.73	0.00	0.67
Avail Cap (c_a), veh/h	0	664	0	460	0	401	0	836
Upstream Filter (I)	0.00	0.81	0.00	1.00	0.00	1.00	0.00	0.86
Uniform Delay (d1), s/veh	0.0	34.7	0.0	37.3	0.0	36.2	0.0	20.9
Incr Delay (d2), s/veh	0.0	3.6	0.0	49.6	0.0	11.4	0.0	1.8
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	38.2	0.0	86.8	0.0	47.5	0.0	22.7
1st-Term Q (Q1), veh/ln	0.0	4.2	0.0	11.0	0.0	6.6	0.0	9.7
2nd-Term Q (Q2), veh/ln	0.0	0.3	0.0	6.3	0.0	1.3	0.0	0.4

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	4.6	0.0	17.3	0.0	7.9	0.0	10.2
%ile Storage Ratio (RQ%)	0.00	0.23	0.00	0.23	0.00	0.12	0.00	0.10
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	3.3	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		T+R		T+R		T+R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	503	0	471	0	300	0	565
Grp Sat Flow (s), veh/h/ln	0	1610	0	1796	0	1831	0	1820
Q Serve Time (g_s), s	0.0	18.4	0.0	25.5	0.0	15.3	0.0	24.1
Cycle Q Clear Time (g_c), s	0.0	18.4	0.0	25.5	0.0	15.3	0.0	24.1
Prot RT Sat Flow (s_R), veh/h/ln	0.0	1610.2	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	25.8	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	0.32	0.00	0.21	0.00	0.24
Lane Grp Cap (c), veh/h	0	712	0	458	0	407	0	843
V/C Ratio (X)	0.00	0.71	0.00	1.03	0.00	0.74	0.00	0.67
Avail Cap (c_a), veh/h	0	712	0	458	0	407	0	843
Upstream Filter (I)	0.00	0.81	0.00	1.00	0.00	1.00	0.00	0.86
Uniform Delay (d1), s/veh	0.0	21.4	0.0	37.3	0.0	36.2	0.0	20.9
Incr Delay (d2), s/veh	0.0	4.8	0.0	49.7	0.0	11.4	0.0	1.8
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	26.2	0.0	86.9	0.0	47.6	0.0	22.7
1st-Term Q (Q1), veh/ln	0.0	9.0	0.0	10.9	0.0	6.7	0.0	9.8
2nd-Term Q (Q2), veh/ln	0.0	0.9	0.0	6.3	0.0	1.3	0.0	0.4
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	10.0	0.0	17.3	0.0	8.0	0.0	10.3
%ile Storage Ratio (RQ%)	0.00	0.51	0.00	0.23	0.00	0.13	0.00	0.10
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	3.3	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	53.6
HCM 6th LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	150	3	327	50	50	423	198	477	6	19	759	250
Future Volume (veh/h)	150	3	327	50	50	423	198	477	6	19	759	250
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1700	1900	1900	1800	1900	1900	1800	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	158	3	0	53	53	445	208	502	6	20	799	263
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	215	489		67	433	367	239	1835	22	39	1024	337
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.66	2.00
Prop Arrive On Green	0.07	0.26	0.00	0.04	0.23	0.23	0.14	0.50	0.50	0.02	0.64	0.77
Unsig. Movement Delay												
Ln Grp Delay, s/veh	57.4	27.6	0.0	65.8	30.8	156.7	64.1	15.1	15.1	51.7	17.9	15.0
Ln Grp LOS	E	C		E	C	F	E	B	B	D	B	B
Approach Vol, veh/h		161			551			716			1082	
Approach Delay, s/veh		56.9			135.8			29.3			17.1	
Approach LOS		E			F			C			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Case No	2.0	4.0	2.0	3.0	2.0	4.0	2.0	3.0
Phs Duration (G+Y+Rc), s	6.6	54.7	8.4	30.2	18.5	42.9	11.4	27.3
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green (Gmax), s	5.5	46.7	8.6	21.2	16.2	36.0	7.0	22.8
Max Allow Headway (MAH), s	3.8	5.2	3.8	5.2	3.8	5.3	3.8	4.2
Max Q Clear (g_c+I1), s	3.1	9.9	5.1	2.1	13.9	23.6	6.9	24.8
Green Ext Time (g_e), s	0.0	3.3	0.0	0.0	0.1	5.7	0.0	0.0
Prob of Phs Call (p_c)	0.43	1.00	0.77	1.00	1.00	1.00	0.99	1.00
Prob of Max Out (p_x)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	1.00

Left-Turn Movement Data								
Assigned Mvmt	1		3		5		7	
Mvmt Sat Flow, veh/h	1810		1714		1714		3141	

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		3653		1900		2669		1900

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		44		1610		878		1610

Left Lane Group Data								
Assigned Mvmt	1	0	3	0	5	0	7	0
Lane Assignment	L (Prot)		L (Prot)		L (Prot)		L (Prot)	

Lanes in Grp	1	0	1	0	1	0	2	0
Grp Vol (v), veh/h	20	0	53	0	208	0	158	0
Grp Sat Flow (s), veh/h/ln	1810	0	1714	0	1714	0	1570	0
Q Serve Time (g_s), s	1.1	0.0	3.1	0.0	11.9	0.0	4.9	0.0
Cycle Q Clear Time (g_c), s	1.1	0.0	3.1	0.0	11.9	0.0	4.9	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	39	0	67	0	239	0	215	0
V/C Ratio (X)	0.52	0.00	0.79	0.00	0.87	0.00	0.73	0.00
Avail Cap (c_a), veh/h	100	0	147	0	278	0	220	0
Upstream Filter (I)	0.31	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Uniform Delay (d1), s/veh	48.4	0.0	47.6	0.0	42.1	0.0	45.7	0.0
Incr Delay (d2), s/veh	3.3	0.0	18.1	0.0	22.0	0.0	11.8	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	51.7	0.0	65.8	0.0	64.1	0.0	57.4	0.0
1st-Term Q (Q1), veh/ln	0.5	0.0	1.3	0.0	5.0	0.0	1.9	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.3	0.0	1.5	0.0	0.4	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
%ile Back of Q (50%), veh/ln	0.5	0.0	1.6	0.0	6.4	0.0	2.3	0.0
%ile Storage Ratio (RQ%)	0.03	0.00	0.05	0.00	0.43	0.00	0.06	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	248	0	3	0	540	0	53
Grp Sat Flow (s), veh/h/ln	0	1805	0	1900	0	1805	0	1900
Q Serve Time (g_s), s	0.0	7.9	0.0	0.1	0.0	21.6	0.0	2.2
Cycle Q Clear Time (g_c), s	0.0	7.9	0.0	0.1	0.0	21.6	0.0	2.2
Lane Grp Cap (c), veh/h	0	906	0	489	0	693	0	433
V/C Ratio (X)	0.00	0.27	0.00	0.01	0.00	0.78	0.00	0.12
Avail Cap (c_a), veh/h	0	906	0	489	0	693	0	433
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	0.31	0.00	1.00
Uniform Delay (d1), s/veh	0.0	14.4	0.0	27.6	0.0	15.1	0.0	30.7
Incr Delay (d2), s/veh	0.0	0.7	0.0	0.0	0.0	2.8	0.0	0.1
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	15.1	0.0	27.6	0.0	17.9	0.0	30.8
1st-Term Q (Q1), veh/ln	0.0	3.1	0.0	0.1	0.0	5.7	0.0	1.0
2nd-Term Q (Q2), veh/ln	0.0	0.2	0.0	0.0	0.0	0.5	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	3.3	0.0	0.1	0.0	6.2	0.0	1.0
%ile Storage Ratio (RQ%)	0.00	0.22	0.00	0.00	0.00	0.31	0.00	0.03
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R		R		T+R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	260	0	0	0	522	0	445
Grp Sat Flow (s), veh/h/ln	0	1892	0	1610	0	1742	0	1610
Q Serve Time (g_s), s	0.0	7.9	0.0	0.0	0.0	19.7	0.0	22.8
Cycle Q Clear Time (g_c), s	0.0	7.9	0.0	0.0	0.0	19.7	0.0	22.8
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	1610.2	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	14.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.02	0.00	1.00	0.00	0.50	0.00	1.00
Lane Grp Cap (c), veh/h	0	950	0	639	0	669	0	367
V/C Ratio (X)	0.00	0.27	0.00	0.00	0.00	0.78	0.00	1.21
Avail Cap (c_a), veh/h	0	950	0	639	0	669	0	367
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	0.31	0.00	1.00
Uniform Delay (d1), s/veh	0.0	14.4	0.0	0.0	0.0	12.1	0.0	38.6
Incr Delay (d2), s/veh	0.0	0.7	0.0	0.0	0.0	2.9	0.0	118.1
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	15.1	0.0	0.0	0.0	15.0	0.0	156.7
1st-Term Q (Q1), veh/ln	0.0	3.3	0.0	0.0	0.0	4.2	0.0	8.8
2nd-Term Q (Q2), veh/ln	0.0	0.2	0.0	0.0	0.0	0.5	0.0	12.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	3.5	0.0	0.0	0.0	4.7	0.0	20.9
%ile Storage Ratio (RQ%)	0.00	0.23	0.00	0.00	0.00	0.24	0.00	0.61
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	19.5
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3

Intersection Summary	
HCM 6th Ctrl Delay	49.2
HCM 6th LOS	D

Notes

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	83	82	48	391	559	90	132	599	206	58	675	182
Future Volume (veh/h)	83	82	48	391	559	90	132	599	206	58	675	182
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1800	1900	1900	1700	1900	1900	1800	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	87	86	51	412	588	95	139	631	217	61	711	192
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	109	390	174	476	708	316	165	1975	881	79	2014	537
HCM Platoon Ratio	1.66	1.66	1.66	1.66	1.66	1.66	1.66	1.66	1.66	1.66	1.66	1.00
Prop Arrive On Green	0.11	0.18	0.18	0.25	0.33	0.33	0.16	0.91	0.91	0.07	0.82	0.49
Unsig. Movement Delay												
Ln Grp Delay, s/veh	65.6	45.2	46.2	50.9	43.1	34.9	59.3	3.0	3.2	66.3	6.3	14.7
Ln Grp LOS	E	D	D	D	D	C	E	A	A	E	A	B
Approach Vol, veh/h		224			1095			987			964	
Approach Delay, s/veh		53.4			45.3			11.0			12.7	
Approach LOS		D			D			B			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Case No	2.0	3.0	2.0	3.0	2.0	4.0	2.0	3.0
Phs Duration (G+Y+Rc), s	9.7	70.1	22.7	17.5	16.1	63.8	12.1	28.0
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green (Gmax), s	11.5	42.5	27.5	20.5	21.5	32.5	15.5	32.5
Max Allow Headway (MAH), s	3.8	4.9	3.8	4.8	3.8	5.3	3.8	5.1
Max Q Clear (g_c+I1), s	6.0	4.7	17.1	5.3	11.4	12.5	8.0	20.1
Green Ext Time (g_e), s	0.0	5.8	1.1	0.5	0.2	6.1	0.1	3.5
Prob of Phs Call (p_c)	0.87	1.00	1.00	1.00	0.99	1.00	0.94	1.00
Prob of Max Out (p_x)	0.11	0.00	0.02	0.00	0.00	0.00	0.02	0.21

Left-Turn Movement Data								
Assigned Mvmt	1		3		5		7	
Mvmt Sat Flow, veh/h	1810		3141		1714		1714	

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		3610		3610		4076		3610

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1610		1610		1087		1610

Left Lane Group Data								
Assigned Mvmt	1	0	3	0	5	0	7	0
Lane Assignment	L (Prot)		L (Prot)		L (Prot)		L (Prot)	

Lanes in Grp	1	0	2	0	1	0	1	0
Grp Vol (v), veh/h	61	0	412	0	139	0	87	0
Grp Sat Flow (s), veh/h/ln	1810	0	1570	0	1714	0	1714	0
Q Serve Time (g_s), s	4.0	0.0	15.1	0.0	9.4	0.0	6.0	0.0
Cycle Q Clear Time (g_c), s	4.0	0.0	15.1	0.0	9.4	0.0	6.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	79	0	476	0	165	0	109	0
V/C Ratio (X)	0.77	0.00	0.87	0.00	0.84	0.00	0.80	0.00
Avail Cap (c_a), veh/h	173	0	720	0	307	0	221	0
Upstream Filter (I)	0.74	0.00	1.00	0.00	0.89	0.00	1.00	0.00
Uniform Delay (d1), s/veh	55.1	0.0	43.7	0.0	49.5	0.0	52.9	0.0
Incr Delay (d2), s/veh	11.2	0.0	7.2	0.0	9.8	0.0	12.6	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	66.3	0.0	50.9	0.0	59.3	0.0	65.6	0.0
1st-Term Q (Q1), veh/ln	1.8	0.0	5.3	0.0	3.8	0.0	2.5	0.0
2nd-Term Q (Q2), veh/ln	0.2	0.0	0.5	0.0	0.4	0.0	0.4	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
%ile Back of Q (50%), veh/ln	2.0	0.0	5.8	0.0	4.3	0.0	2.9	0.0
%ile Storage Ratio (RQ%)	0.28	0.00	0.04	0.00	0.53	0.00	0.32	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	2	0	2	0	2	0	2
Grp Vol (v), veh/h	0	631	0	86	0	602	0	588
Grp Sat Flow (s), veh/h/ln	0	1805	0	1805	0	1729	0	1805
Q Serve Time (g_s), s	0.0	2.7	0.0	2.4	0.0	5.3	0.0	18.1
Cycle Q Clear Time (g_c), s	0.0	2.7	0.0	2.4	0.0	5.3	0.0	18.1
Lane Grp Cap (c), veh/h	0	1975	0	390	0	1709	0	708
V/C Ratio (X)	0.00	0.32	0.00	0.22	0.00	0.35	0.00	0.83
Avail Cap (c_a), veh/h	0	1975	0	617	0	1709	0	978
Upstream Filter (I)	0.00	0.89	0.00	1.00	0.00	0.74	0.00	1.00
Uniform Delay (d1), s/veh	0.0	2.6	0.0	44.9	0.0	5.9	0.0	38.6
Incr Delay (d2), s/veh	0.0	0.4	0.0	0.3	0.0	0.4	0.0	4.4
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	3.0	0.0	45.2	0.0	6.3	0.0	43.1
1st-Term Q (Q1), veh/ln	0.0	0.8	0.0	1.1	0.0	1.6	0.0	7.1
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.4

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.9	0.0	1.1	0.0	1.7	0.0	7.6
%ile Storage Ratio (RQ%)	0.00	0.02	0.00	0.01	0.00	0.02	0.00	0.05
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		R		T+R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	217	0	51	0	301	0	95
Grp Sat Flow (s), veh/h/ln	0	1610	0	1610	0	1704	0	1610
Q Serve Time (g_s), s	0.0	1.9	0.0	3.3	0.0	10.5	0.0	5.3
Cycle Q Clear Time (g_c), s	0.0	1.9	0.0	3.3	0.0	10.5	0.0	5.3
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	0.64	0.00	1.00
Lane Grp Cap (c), veh/h	0	881	0	174	0	842	0	316
V/C Ratio (X)	0.00	0.25	0.00	0.29	0.00	0.36	0.00	0.30
Avail Cap (c_a), veh/h	0	881	0	275	0	842	0	436
Upstream Filter (I)	0.00	0.89	0.00	1.00	0.00	0.74	0.00	1.00
Uniform Delay (d1), s/veh	0.0	2.6	0.0	45.3	0.0	13.8	0.0	34.3
Incr Delay (d2), s/veh	0.0	0.6	0.0	0.9	0.0	0.9	0.0	0.5
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	3.2	0.0	46.2	0.0	14.7	0.0	34.9
1st-Term Q (Q1), veh/ln	0.0	0.6	0.0	1.3	0.0	3.7	0.0	2.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	0.2	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.7	0.0	1.3	0.0	3.9	0.0	2.0
%ile Storage Ratio (RQ%)	0.00	0.02	0.00	0.01	0.00	0.04	0.00	0.01
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	25.9
HCM 6th LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	295	354	351	631	900	0	0	1039	564
Future Volume (veh/h)	0	0	0	295	354	351	631	900	0	0	1039	564
Number				3	8	18	5	2	12	1	6	16
Initial Q, veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln				1800	1900	1900	1700	1900	0	0	1900	1900
Adj Flow Rate, veh/h				311	373	369	664	947	0	0	1094	594
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence				Yes			Yes			No		
Cap, veh/h				340	420	443	660	2079	0	0	1174	921
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green				0.34	0.34	0.34	0.21	0.58	0.00	0.00	0.33	0.33
Unsig. Movement Delay												
Ln Grp Delay, s/veh				51.4	0.0	42.7	69.9	13.8	0.0	0.0	48.5	34.6
Ln Grp LOS				D	A	D	F	B	A	A	D	C
Approach Vol, veh/h					1053			1611			1688	
Approach Delay, s/veh					47.5			36.9			43.6	
Approach LOS					D			D			D	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2	8		5	6		
Case No		4.0	12.0		2.0	7.0		
Phs Duration (G+Y+Rc), s		67.9	42.1		27.6	40.3		
Change Period (Y+Rc), s		4.5	4.5		4.5	4.5		
Max Green (Gmax), s		61.5	39.5		23.1	33.9		
Max Allow Headway (MAH), s		5.2	5.4		3.8	4.8		
Max Q Clear (g_c+I1), s		18.6	34.9		25.1	34.3		
Green Ext Time (g_e), s		8.5	2.7		0.0	0.0		
Prob of Phs Call (p_c)		1.00	1.00		1.00	1.00		
Prob of Max Out (p_x)		0.00	1.00		1.00	0.00		

Left-Turn Movement Data								
Assigned Mvmt			3		5	1		
Mvmt Sat Flow, veh/h			995		3141	0		

Through Movement Data								
Assigned Mvmt		2	8			6		
Mvmt Sat Flow, veh/h		3705	1226			3705		

Right-Turn Movement Data								
Assigned Mvmt		12	18			16		
Mvmt Sat Flow, veh/h		0	1296			2834		

Left Lane Group Data								
Assigned Mvmt	0	0	3	0	5	1	0	0
Lane Assignment			L+T		L (Prot)			

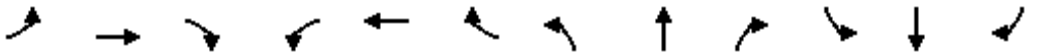
Lanes in Grp	0	0	1	0	2	0	0	0
Grp Vol (v), veh/h	0	0	578	0	664	0	0	0
Grp Sat Flow (s), veh/h/ln	0	0	1850	0	1570	0	0	0
Q Serve Time (g_s), s	0.0	0.0	32.9	0.0	23.1	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	32.9	0.0	23.1	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	35.8	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	0.00	0.54	0.00	1.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	633	0	660	0	0	0
V/C Ratio (X)	0.00	0.00	0.91	0.00	1.01	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	0	664	0	660	0	0	0
Upstream Filter (I)	0.00	0.00	1.00	0.00	0.50	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	34.6	0.0	43.5	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	16.8	0.0	26.4	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	51.4	0.0	69.9	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	14.5	0.0	8.9	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	2.9	0.0	2.4	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	0.00	1.00	0.00	1.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	17.4	0.0	11.3	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.42	0.00	1.88	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	1.1	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	8	0	0	6	0	0
Lane Assignment		T				T		
Lanes in Grp	0	2	0	0	0	2	0	0
Grp Vol (v), veh/h	0	947	0	0	0	1094	0	0
Grp Sat Flow (s), veh/h/ln	0	1805	0	0	0	1805	0	0
Q Serve Time (g_s), s	0.0	16.6	0.0	0.0	0.0	32.3	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	16.6	0.0	0.0	0.0	32.3	0.0	0.0
Lane Grp Cap (c), veh/h	0	2079	0	0	0	1174	0	0
V/C Ratio (X)	0.00	0.46	0.00	0.00	0.00	0.93	0.00	0.00
Avail Cap (c_a), veh/h	0	2079	0	0	0	1174	0	0
Upstream Filter (I)	0.00	0.50	0.00	0.00	0.00	0.84	0.00	0.00
Uniform Delay (d1), s/veh	0.0	13.4	0.0	0.0	0.0	35.9	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.4	0.0	0.0	0.0	12.5	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	13.8	0.0	0.0	0.0	48.5	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	6.5	0.0	0.0	0.0	13.9	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	2.0	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	6.6	0.0	0.0	0.0	16.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.30	0.00	0.00	0.00	0.42	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	18	0	0	16	0	0
Lane Assignment			T+R			R		
Lanes in Grp	0	0	1	0	0	2	0	0
Grp Vol (v), veh/h	0	0	475	0	0	594	0	0
Grp Sat Flow (s), veh/h/ln	0	0	1667	0	0	1417	0	0
Q Serve Time (g_s), s	0.0	0.0	28.8	0.0	0.0	19.7	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	28.8	0.0	0.0	19.7	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.00	0.78	0.00	0.00	1.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	570	0	0	921	0	0
V/C Ratio (X)	0.00	0.00	0.83	0.00	0.00	0.64	0.00	0.00
Avail Cap (c_a), veh/h	0	0	598	0	0	921	0	0
Upstream Filter (I)	0.00	0.00	1.00	0.00	0.00	0.84	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	33.3	0.0	0.0	31.7	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	9.4	0.0	0.0	2.9	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	42.7	0.0	0.0	34.6	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	11.4	0.0	0.0	6.7	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	1.5	0.0	0.0	0.4	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	12.9	0.0	0.0	7.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.31	0.00	0.00	0.19	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	42.1
HCM 6th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	446	7	569	0	0	0	0	1051	165	152	707	0
Future Volume (veh/h)	446	7	569	0	0	0	0	1051	165	152	707	0
Number	7	4	14				5	2	12	1	6	16
Initial Q, veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1800	1900	1900				0	1900	1900	1900	1900	0
Adj Flow Rate, veh/h	469	7	599				0	1106	174	160	744	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0				0	0	0	0	0	0
Opposing Right Turn Influence	Yes						No			Yes		
Cap, veh/h	583	9	526				0	1394	622	194	1998	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	2.00	2.00	2.00	1.00	1.00
Prop Arrive On Green	0.33	0.33	0.33				0.00	0.77	0.77	0.21	0.55	0.00
Unsig. Movement Delay												
Ln Grp Delay, s/veh	31.0	0.0	108.7				0.0	11.5	6.6	32.9	9.5	0.0
Ln Grp LOS	C	A	F				A	B	A	C	A	A
Approach Vol, veh/h		1075						1280			904	
Approach Delay, s/veh		74.3						10.8			13.6	
Approach LOS		E						B			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Case No	2.0	7.0		12.0		4.0		
Phs Duration (G+Y+Rc), s	12.5	33.5		29.0		46.0		
Change Period (Y+Rc), s	4.5	4.5		4.5		4.5		
Max Green (Gmax), s	8.5	28.5		24.5		41.5		
Max Allow Headway (MAH), s	3.8	5.1		5.5		5.2		
Max Q Clear (g_c+I1), s	8.3	15.5		26.5		10.7		
Green Ext Time (g_e), s	0.0	6.9		0.0		5.8		
Prob of Phs Call (p_c)	0.96	1.00		1.00		1.00		
Prob of Max Out (p_x)	1.00	0.00		1.00		0.00		

Left-Turn Movement Data								
Assigned Mvmt	1	5		7				
Mvmt Sat Flow, veh/h	1810	0		1784				

Through Movement Data								
Assigned Mvmt		2		4		6		
Mvmt Sat Flow, veh/h		3705		27		3705		

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		
Mvmt Sat Flow, veh/h		1610		1610		0		

Left Lane Group Data								
Assigned Mvmt	1	5	0	7	0	0	0	0
Lane Assignment	L (Prot)			L+T				

Lanes in Grp	1	0	0	1	0	0	0	0
Grp Vol (v), veh/h	160	0	0	476	0	0	0	0
Grp Sat Flow (s), veh/h/ln	1810	0	0	1811	0	0	0	0
Q Serve Time (g_s), s	6.3	0.0	0.0	18.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	6.3	0.0	0.0	18.0	0.0	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	29.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	0.99	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	194	0	0	592	0	0	0	0
V/C Ratio (X)	0.82	0.00	0.00	0.80	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	205	0	0	592	0	0	0	0
Upstream Filter (I)	0.15	0.00	0.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	28.8	0.0	0.0	23.1	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	4.1	0.0	0.0	8.0	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	32.9	0.0	0.0	31.0	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	2.4	0.0	0.0	7.2	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.2	0.0	0.0	1.3	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00
%ile Back of Q (50%), veh/ln	2.6	0.0	0.0	8.5	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.44	0.00	0.00	0.25	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	0
Lane Assignment		T				T		
Lanes in Grp	0	2	0	0	0	2	0	0
Grp Vol (v), veh/h	0	1106	0	0	0	744	0	0
Grp Sat Flow (s), veh/h/ln	0	1805	0	0	0	1805	0	0
Q Serve Time (g_s), s	0.0	13.5	0.0	0.0	0.0	8.7	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	13.5	0.0	0.0	0.0	8.7	0.0	0.0
Lane Grp Cap (c), veh/h	0	1394	0	0	0	1998	0	0
V/C Ratio (X)	0.00	0.79	0.00	0.00	0.00	0.37	0.00	0.00
Avail Cap (c_a), veh/h	0	1394	0	0	0	1998	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	0.15	0.00	0.00
Uniform Delay (d1), s/veh	0.0	6.8	0.0	0.0	0.0	9.4	0.0	0.0
Incr Delay (d2), s/veh	0.0	4.7	0.0	0.0	0.0	0.1	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	11.5	0.0	0.0	0.0	9.5	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	2.3	0.0	0.0	0.0	3.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.9	0.0	0.0	0.0	0.0	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	3.2	0.0	0.0	0.0	3.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.06	0.00	0.00	0.00	0.14	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	0
Lane Assignment		R		T+R				
Lanes in Grp	0	1	0	1	0	0	0	0
Grp Vol (v), veh/h	0	174	0	599	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	1610	0	1610	0	0	0	0
Q Serve Time (g_s), s	0.0	2.4	0.0	24.5	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	2.4	0.0	24.5	0.0	0.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	622	0	526	0	0	0	0
V/C Ratio (X)	0.00	0.28	0.00	1.14	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	622	0	526	0	0	0	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	5.5	0.0	25.3	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	1.1	0.0	83.5	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	6.6	0.0	108.7	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.7	0.0	8.7	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.2	0.0	12.2	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.9	0.0	20.9	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.02	0.00	0.62	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	18.3	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	32.6
HCM 6th LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	147	463	198	44	847	418	57	355	26	203	13	175
Future Volume (veh/h)	147	463	198	44	847	418	57	355	26	203	13	175
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1700	1900	1900	1800	1900	1900	1800	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	155	487	208	46	892	440	60	374	27	214	14	184
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	211	840	357	62	1116	498	413	1079	481	248	56	739
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.13	0.68	0.68	0.07	0.62	0.31	0.30	0.30	0.30	0.14	0.49	0.49
Unsig. Movement Delay												
Ln Grp Delay, s/veh	48.2	13.2	13.3	62.0	20.6	48.7	26.7	28.3	25.2	56.1	0.0	15.6
Ln Grp LOS	D	B	B	E	C	D	C	C	C	E	A	B
Approach Vol, veh/h		850			1378			461			412	
Approach Delay, s/veh		19.6			31.0			27.9			36.7	
Approach LOS		B			C			C			D	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4		6	7	8
Case No	2.0	5.3	2.0	4.0		4.0	2.0	3.0
Phs Duration (G+Y+Rc), s	19.0	34.4	8.1	38.5		53.4	11.2	35.4
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5		4.5	4.5	4.5
Max Green (Gmax), s	20.5	20.5	7.1	33.9		45.5	8.5	32.5
Max Allow Headway (MAH), s	3.8	5.1	3.8	5.3		5.5	3.8	4.8
Max Q Clear (g_c+I1), s	14.2	10.1	4.6	12.5		9.1	6.7	28.0
Green Ext Time (g_e), s	0.3	2.0	0.0	4.5		1.4	0.1	2.9
Prob of Phs Call (p_c)	1.00	1.00	0.72	1.00		1.00	0.99	1.00
Prob of Max Out (p_x)	0.15	0.00	1.00	0.06		0.00	1.00	1.00

Left-Turn Movement Data								
Assigned Mvmt	1	5	3				7	
Mvmt Sat Flow, veh/h	1714	1140	1714				3141	

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		3610		2468		115		3610

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1610		1048		1513		1610

Left Lane Group Data								
Assigned Mvmt	1	5	3	0	0	0	7	0
Lane Assignment	L (Prot)	L	L (Prot)				L (Prot)	

Lanes in Grp	1	1	1	0	0	0	2	0
Grp Vol (v), veh/h	214	60	46	0	0	0	155	0
Grp Sat Flow (s), veh/h/ln	1714	1140	1714	0	0	0	1570	0
Q Serve Time (g_s), s	12.2	3.9	2.6	0.0	0.0	0.0	4.7	0.0
Cycle Q Clear Time (g_c), s	12.2	3.9	2.6	0.0	0.0	0.0	4.7	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	1140	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	29.9	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	29.9	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	3.9	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	1.00	1.00	0.00	0.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	248	413	62	0	0	0	211	0
V/C Ratio (X)	0.86	0.15	0.74	0.00	0.00	0.00	0.73	0.00
Avail Cap (c_a), veh/h	351	413	122	0	0	0	267	0
Upstream Filter (I)	1.00	1.00	1.00	0.00	0.00	0.00	0.75	0.00
Uniform Delay (d1), s/veh	41.8	25.9	45.9	0.0	0.0	0.0	42.4	0.0
Incr Delay (d2), s/veh	14.3	0.7	16.0	0.0	0.0	0.0	5.8	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	56.1	26.7	62.0	0.0	0.0	0.0	48.2	0.0
1st-Term Q (Q1), veh/ln	5.1	1.1	1.1	0.0	0.0	0.0	1.7	0.0
2nd-Term Q (Q2), veh/ln	1.0	0.1	0.3	0.0	0.0	0.0	0.2	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	1.00	1.00	0.00	0.00	0.00	1.00	0.00
%ile Back of Q (50%), veh/ln	6.1	1.1	1.4	0.0	0.0	0.0	1.9	0.0
%ile Storage Ratio (RQ%)	0.79	0.19	0.02	0.00	0.00	0.00	0.18	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T				T
Lanes in Grp	0	2	0	1	0	0	0	2
Grp Vol (v), veh/h	0	374	0	355	0	0	0	892
Grp Sat Flow (s), veh/h/ln	0	1805	0	1805	0	0	0	1805
Q Serve Time (g_s), s	0.0	8.1	0.0	10.4	0.0	0.0	0.0	18.6
Cycle Q Clear Time (g_c), s	0.0	8.1	0.0	10.4	0.0	0.0	0.0	18.6
Lane Grp Cap (c), veh/h	0	1079	0	614	0	0	0	1116
V/C Ratio (X)	0.00	0.35	0.00	0.58	0.00	0.00	0.00	0.80
Avail Cap (c_a), veh/h	0	1079	0	614	0	0	0	1173
Upstream Filter (I)	0.00	1.00	0.00	0.75	0.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	27.4	0.0	12.2	0.0	0.0	0.0	16.7
Incr Delay (d2), s/veh	0.0	0.9	0.0	1.0	0.0	0.0	0.0	3.8
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	28.3	0.0	13.2	0.0	0.0	0.0	20.6
1st-Term Q (Q1), veh/ln	0.0	3.5	0.0	2.9	0.0	0.0	0.0	4.6
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.2	0.0	0.0	0.0	0.6

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	3.6	0.0	3.1	0.0	0.0	0.0	5.2
%ile Storage Ratio (RQ%)	0.00	0.32	0.00	0.13	0.00	0.00	0.00	0.06
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		T+R		T+R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	27	0	340	0	198	0	440
Grp Sat Flow (s), veh/h/ln	0	1610	0	1711	0	1628	0	1610
Q Serve Time (g_s), s	0.0	1.2	0.0	10.5	0.0	7.1	0.0	26.0
Cycle Q Clear Time (g_c), s	0.0	1.2	0.0	10.5	0.0	7.1	0.0	26.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	0.61	0.00	0.93	0.00	1.00
Lane Grp Cap (c), veh/h	0	481	0	582	0	795	0	498
V/C Ratio (X)	0.00	0.06	0.00	0.58	0.00	0.25	0.00	0.88
Avail Cap (c_a), veh/h	0	481	0	582	0	795	0	523
Upstream Filter (I)	0.00	1.00	0.00	0.75	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	25.0	0.0	12.2	0.0	14.9	0.0	32.8
Incr Delay (d2), s/veh	0.0	0.2	0.0	1.1	0.0	0.7	0.0	15.9
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	25.2	0.0	13.3	0.0	15.6	0.0	48.7
1st-Term Q (Q1), veh/ln	0.0	0.5	0.0	2.8	0.0	2.6	0.0	9.9
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.2	0.0	0.2	0.0	2.2
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.5	0.0	3.0	0.0	2.7	0.0	12.1
%ile Storage Ratio (RQ%)	0.00	0.17	0.00	0.12	0.00	0.35	0.00	0.14
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	28.2
HCM 6th LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	428	11	465	724	1098	0	0	476	938
Future Volume (veh/h)	0	0	0	428	11	465	724	1098	0	0	476	938
Number				3	8	18	5	2	12	1	6	16
Initial Q, veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln				1800	1900	1900	1900	1900	0	0	1900	1900
Adj Flow Rate, veh/h				451	12	489	762	1156	0	0	501	987
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence				Yes			Yes			No		
Cap, veh/h				587	16	536	826	2138	0	0	1153	905
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	2.00	2.00
Prop Arrive On Green				0.33	0.33	0.33	0.47	1.00	0.00	0.00	0.64	0.64
Unsig. Movement Delay												
Ln Grp Delay, s/veh				40.7	0.0	55.7	37.6	0.5	0.0	0.0	17.5	79.4
Ln Grp LOS				D	A	E	D	A	A	A	B	F
Approach Vol, veh/h					952			1918			1488	
Approach Delay, s/veh					48.4			15.2			58.6	
Approach LOS					D			B			E	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2	8		5	6		
Case No		4.0	11.0		2.0	7.0		
Phs Duration (G+Y+Rc), s		75.6	44.4		32.7	42.8		
Change Period (Y+Rc), s		4.5	4.5		4.5	4.5		
Max Green (Gmax), s		66.5	44.5		33.5	28.5		
Max Allow Headway (MAH), s		5.2	4.7		3.8	4.4		
Max Q Clear (g_c+I1), s		2.0	36.9		26.4	40.3		
Green Ext Time (g_e), s		12.0	3.0		1.9	0.0		
Prob of Phs Call (p_c)		1.00	1.00		1.00	1.00		
Prob of Max Out (p_x)		0.00	0.64		0.33	0.00		
Left-Turn Movement Data								
Assigned Mvmt			3		5	1		
Mvmt Sat Flow, veh/h			1765		3510	0		
Through Movement Data								
Assigned Mvmt		2	8			6		
Mvmt Sat Flow, veh/h		3705	47			3705		
Right-Turn Movement Data								
Assigned Mvmt		12	18			16		
Mvmt Sat Flow, veh/h		0	1610			2834		
Left Lane Group Data								
Assigned Mvmt	0	0	3	0	5	1	0	0
Lane Assignment			L+T		L (Prot)			

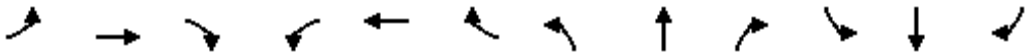
Lanes in Grp	0	0	1	0	2	0	0	0
Grp Vol (v), veh/h	0	0	463	0	762	0	0	0
Grp Sat Flow (s), veh/h/ln	0	0	1812	0	1755	0	0	0
Q Serve Time (g_s), s	0.0	0.0	27.5	0.0	24.4	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	27.5	0.0	24.4	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	38.3	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	0.00	0.97	0.00	1.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	603	0	826	0	0	0
V/C Ratio (X)	0.00	0.00	0.77	0.00	0.92	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	0	672	0	980	0	0	0
Upstream Filter (I)	0.00	0.00	1.00	0.00	0.49	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	35.9	0.0	30.7	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	4.8	0.0	6.9	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	40.7	0.0	37.6	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	12.0	0.0	8.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.8	0.0	0.8	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	0.00	1.00	0.00	1.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	12.8	0.0	8.8	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.27	0.00	0.84	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	8	0	0	6	0	0
Lane Assignment		T				T		
Lanes in Grp	0	2	0	0	0	2	0	0
Grp Vol (v), veh/h	0	1156	0	0	0	501	0	0
Grp Sat Flow (s), veh/h/ln	0	1805	0	0	0	1805	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	8.3	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	8.3	0.0	0.0
Lane Grp Cap (c), veh/h	0	2138	0	0	0	1153	0	0
V/C Ratio (X)	0.00	0.54	0.00	0.00	0.00	0.43	0.00	0.00
Avail Cap (c_a), veh/h	0	2138	0	0	0	1153	0	0
Upstream Filter (I)	0.00	0.49	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	16.3	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.5	0.0	0.0	0.0	1.2	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.5	0.0	0.0	0.0	17.5	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	2.8	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	0.2	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.1	0.0	0.0	0.0	3.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.01	0.00	0.00	0.00	0.07	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	18	0	0	16	0	0
Lane Assignment			R			R		
Lanes in Grp	0	0	1	0	0	2	0	0
Grp Vol (v), veh/h	0	0	489	0	0	987	0	0
Grp Sat Flow (s), veh/h/ln	0	0	1610	0	0	1417	0	0
Q Serve Time (g_s), s	0.0	0.0	34.9	0.0	0.0	38.3	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	34.9	0.0	0.0	38.3	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	536	0	0	905	0	0
V/C Ratio (X)	0.00	0.00	0.91	0.00	0.00	1.09	0.00	0.00
Avail Cap (c_a), veh/h	0	0	597	0	0	905	0	0
Upstream Filter (I)	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	38.3	0.0	0.0	21.7	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	17.4	0.0	0.0	57.8	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	55.7	0.0	0.0	79.4	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	13.6	0.0	0.0	7.8	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	2.6	0.0	0.0	7.3	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	16.2	0.0	0.0	15.1	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.33	0.00	0.00	0.33	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	20.5	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	37.3
HCM 6th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	480	9	513	0	0	0	0	1213	644	333	648	0
Future Volume (veh/h)	480	9	513	0	0	0	0	1213	644	333	648	0
Number	7	4	14				5	2	12	1	6	16
Initial Q, veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1800	1900	1900				0	1900	1900	1900	1900	0
Adj Flow Rate, veh/h	505	9	540				0	1277	678	351	682	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0				0	0	0	0	0	0
Opposing Right Turn Influence	Yes						No			Yes		
Cap, veh/h	557	9	516				0	1686	523	439	1895	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.66	1.66	1.66	1.66	1.00
Prop Arrive On Green	0.32	0.32	0.32				0.00	0.54	0.54	0.21	0.87	0.00
Unsig. Movement Delay												
Ln Grp Delay, s/veh	37.9	0.0	72.2				0.0	15.2	160.5	32.3	2.4	0.0
Ln Grp LOS	D	A	F				A	B	F	C	A	A
Approach Vol, veh/h		1054						1955			1033	
Approach Delay, s/veh		55.8						65.6			12.6	
Approach LOS		E						E			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Case No	2.0	7.0		10.0		4.0		
Phs Duration (G+Y+Rc), s	12.0	24.0		24.0		36.0		
Change Period (Y+Rc), s	4.5	4.5		4.5		4.5		
Max Green (Gmax), s	7.5	19.5		19.5		31.5		
Max Allow Headway (MAH), s	3.8	4.8		4.7		5.2		
Max Q Clear (g_c+I1), s	7.7	21.5		21.5		4.1		
Green Ext Time (g_e), s	0.0	0.0		0.0		5.1		
Prob of Phs Call (p_c)	1.00	1.00		1.00		1.00		
Prob of Max Out (p_x)	1.00	0.00		1.00		0.00		

Left-Turn Movement Data								
Assigned Mvmt	1	5		7				
Mvmt Sat Flow, veh/h	3510	0		1714				

Through Movement Data								
Assigned Mvmt		2		4		6		
Mvmt Sat Flow, veh/h		5358		26		3705		

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		
Mvmt Sat Flow, veh/h		1610		1588		0		

Left Lane Group Data								
Assigned Mvmt	1	5	0	7	0	0	0	0
Lane Assignment	L (Prot)			L				

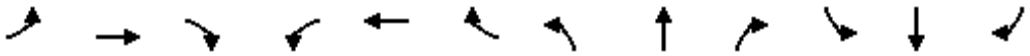
Lanes in Grp	2	0	0	1	0	0	0	0
Grp Vol (v), veh/h	351	0	0	505	0	0	0	0
Grp Sat Flow (s), veh/h/ln	1755	0	0	1714	0	0	0	0
Q Serve Time (g_s), s	5.7	0.0	0.0	16.9	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	5.7	0.0	0.0	16.9	0.0	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	1714	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	19.5	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	439	0	0	557	0	0	0	0
V/C Ratio (X)	0.80	0.00	0.00	0.91	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	439	0	0	557	0	0	0	0
Upstream Filter (I)	0.90	0.00	0.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	23.1	0.0	0.0	19.4	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	9.2	0.0	0.0	18.5	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	32.3	0.0	0.0	37.9	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	2.0	0.0	0.0	6.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.6	0.0	0.0	2.9	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00
%ile Back of Q (50%), veh/ln	2.6	0.0	0.0	8.8	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.25	0.00	0.00	0.15	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	0
Lane Assignment		T				T		
Lanes in Grp	0	3	0	0	0	2	0	0
Grp Vol (v), veh/h	0	1277	0	0	0	682	0	0
Grp Sat Flow (s), veh/h/ln	0	1729	0	0	0	1805	0	0
Q Serve Time (g_s), s	0.0	11.5	0.0	0.0	0.0	2.1	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	11.5	0.0	0.0	0.0	2.1	0.0	0.0
Lane Grp Cap (c), veh/h	0	1686	0	0	0	1895	0	0
V/C Ratio (X)	0.00	0.76	0.00	0.00	0.00	0.36	0.00	0.00
Avail Cap (c_a), veh/h	0	1686	0	0	0	1895	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	0.90	0.00	0.00
Uniform Delay (d1), s/veh	0.0	12.0	0.0	0.0	0.0	2.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	3.2	0.0	0.0	0.0	0.5	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	15.2	0.0	0.0	0.0	2.4	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	2.9	0.0	0.0	0.0	0.5	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.5	0.0	0.0	0.0	0.1	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	3.4	0.0	0.0	0.0	0.6	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.11	0.00	0.00	0.00	0.06	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	0
Lane Assignment		R		T+R				
Lanes in Grp	0	1	0	1	0	0	0	0
Grp Vol (v), veh/h	0	678	0	549	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	1610	0	1614	0	0	0	0
Q Serve Time (g_s), s	0.0	19.5	0.0	19.5	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	19.5	0.0	19.5	0.0	0.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	0.98	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	523	0	525	0	0	0	0
V/C Ratio (X)	0.00	1.30	0.00	1.05	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	523	0	525	0	0	0	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	13.8	0.0	20.3	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	146.7	0.0	52.0	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	160.5	0.0	72.2	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	3.8	0.0	6.5	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	21.3	0.0	7.6	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	25.2	0.0	14.1	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.82	0.00	0.24	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	38.7	0.0	6.1	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.3	0.0	0.3	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	49.5
HCM 6th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	86	814	81	233	349	198	141	680	634	261	382	54
Future Volume (veh/h)	86	814	81	233	349	198	141	680	634	261	382	54
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1800	1900	1900	1800	1900	1900	1800	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	91	857	85	245	367	208	148	716	667	275	402	57
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	115	851	84	278	785	438	180	811	623	283	879	124
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.07	0.26	0.26	0.16	0.35	0.35	0.10	0.22	0.22	0.16	0.28	0.28
Unsig. Movement Delay												
Ln Grp Delay, s/veh	52.5	76.9	76.5	61.5	23.1	23.3	54.0	43.4	62.5	82.8	29.9	30.0
Ln Grp LOS	D	F	F	E	C	C	D	D	F	F	C	C
Approach Vol, veh/h		1033			820			1531			734	
Approach Delay, s/veh		74.6			34.6			52.8			49.8	
Approach LOS		E			C			D			D	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	4	3	5	6	7	8
Case No	2.0	3.0	4.0	2.0	2.0	4.0	2.0	4.0
Phs Duration (G+Y+Rc), s	18.6	24.7	27.6	19.1	13.9	29.4	10.6	36.1
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green (Gmax), s	14.1	19.9	23.1	14.9	11.1	22.9	10.0	28.0
Max Allow Headway (MAH), s	3.8	4.6	5.3	3.8	3.8	5.3	3.8	5.4
Max Q Clear (g_c+I1), s	15.6	19.3	25.1	14.6	9.6	11.5	6.7	13.7
Green Ext Time (g_e), s	0.0	0.5	0.0	0.0	0.1	2.1	0.1	3.1
Prob of Phs Call (p_c)	1.00	1.00	1.00	1.00	0.98	1.00	0.90	1.00
Prob of Max Out (p_x)	1.00	0.00	1.00	1.00	1.00	0.00	1.00	0.15

Left-Turn Movement Data								
Assigned Mvmt	1			3	5		7	
Mvmt Sat Flow, veh/h	1810			1714	1714		1714	

Through Movement Data								
Assigned Mvmt		2	4			6		8
Mvmt Sat Flow, veh/h		3610	3317			3177		2234

Right-Turn Movement Data								
Assigned Mvmt		12	14			16		18
Mvmt Sat Flow, veh/h		1610	329			447		1246

Left Lane Group Data								
Assigned Mvmt	1	0	0	3	5	0	7	0
Lane Assignment	L (Prot)			L (Prot)	L (Prot)		L (Prot)	

Lanes in Grp	1	0	0	1	1	0	1	0
Grp Vol (v), veh/h	275	0	0	245	148	0	91	0
Grp Sat Flow (s), veh/h/ln	1810	0	0	1714	1714	0	1714	0
Q Serve Time (g_s), s	13.6	0.0	0.0	12.6	7.6	0.0	4.7	0.0
Cycle Q Clear Time (g_c), s	13.6	0.0	0.0	12.6	7.6	0.0	4.7	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	1.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	283	0	0	278	180	0	115	0
V/C Ratio (X)	0.97	0.00	0.00	0.88	0.82	0.00	0.79	0.00
Avail Cap (c_a), veh/h	283	0	0	284	211	0	190	0
Upstream Filter (I)	1.00	0.00	0.00	0.94	0.69	0.00	1.00	0.00
Uniform Delay (d1), s/veh	37.7	0.0	0.0	36.9	39.5	0.0	41.3	0.0
Incr Delay (d2), s/veh	45.1	0.0	0.0	24.6	14.5	0.0	11.2	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	82.8	0.0	0.0	61.5	54.0	0.0	52.5	0.0
1st-Term Q (Q1), veh/ln	5.9	0.0	0.0	5.2	3.2	0.0	2.0	0.0
2nd-Term Q (Q2), veh/ln	3.6	0.0	0.0	1.9	0.7	0.0	0.4	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	1.00	1.00	0.00	1.00	0.00
%ile Back of Q (50%), veh/ln	9.4	0.0	0.0	7.1	3.9	0.0	2.3	0.0
%ile Storage Ratio (RQ%)	0.15	0.00	0.00	0.07	0.20	0.00	0.03	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	4	0	0	6	0	8
Lane Assignment		T	T			T		T
Lanes in Grp	0	2	1	0	0	1	0	1
Grp Vol (v), veh/h	0	716	466	0	0	227	0	295
Grp Sat Flow (s), veh/h/ln	0	1805	1805	0	0	1805	0	1805
Q Serve Time (g_s), s	0.0	17.3	23.1	0.0	0.0	9.4	0.0	11.4
Cycle Q Clear Time (g_c), s	0.0	17.3	23.1	0.0	0.0	9.4	0.0	11.4
Lane Grp Cap (c), veh/h	0	811	463	0	0	499	0	634
V/C Ratio (X)	0.00	0.88	1.01	0.00	0.00	0.45	0.00	0.47
Avail Cap (c_a), veh/h	0	811	463	0	0	499	0	634
Upstream Filter (I)	0.00	0.69	1.00	0.00	0.00	1.00	0.00	0.94
Uniform Delay (d1), s/veh	0.0	33.7	33.5	0.0	0.0	26.9	0.0	22.6
Incr Delay (d2), s/veh	0.0	9.7	43.5	0.0	0.0	3.0	0.0	0.5
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	43.4	76.9	0.0	0.0	29.9	0.0	23.1
1st-Term Q (Q1), veh/ln	0.0	7.4	9.8	0.0	0.0	3.9	0.0	4.7
2nd-Term Q (Q2), veh/ln	0.0	1.1	5.6	0.0	0.0	0.4	0.0	0.1

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	8.5	15.4	0.0	0.0	4.4	0.0	4.8
%ile Storage Ratio (RQ%)	0.00	0.43	0.21	0.00	0.00	0.07	0.00	0.05
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.8	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	14	0	0	16	0	18
Lane Assignment		R	T+R			T+R		T+R
Lanes in Grp	0	1	1	0	0	1	0	1
Grp Vol (v), veh/h	0	667	476	0	0	232	0	280
Grp Sat Flow (s), veh/h/ln	0	1610	1841	0	0	1819	0	1676
Q Serve Time (g_s), s	0.0	14.6	23.1	0.0	0.0	9.5	0.0	11.7
Cycle Q Clear Time (g_c), s	0.0	14.6	23.1	0.0	0.0	9.5	0.0	11.7
Prot RT Sat Flow (s_R), veh/h/ln	0.0	1610.2	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	14.6	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.18	0.00	0.00	0.25	0.00	0.74
Lane Grp Cap (c), veh/h	0	623	472	0	0	503	0	589
V/C Ratio (X)	0.00	1.07	1.01	0.00	0.00	0.46	0.00	0.48
Avail Cap (c_a), veh/h	0	623	472	0	0	503	0	589
Upstream Filter (I)	0.00	0.69	1.00	0.00	0.00	1.00	0.00	0.94
Uniform Delay (d1), s/veh	0.0	11.5	33.5	0.0	0.0	27.0	0.0	22.7
Incr Delay (d2), s/veh	0.0	51.0	43.1	0.0	0.0	3.0	0.0	0.6
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	62.5	76.5	0.0	0.0	30.0	0.0	23.3
1st-Term Q (Q1), veh/ln	0.0	4.8	10.0	0.0	0.0	4.0	0.0	4.5
2nd-Term Q (Q2), veh/ln	0.0	8.8	5.7	0.0	0.0	0.4	0.0	0.1
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	13.7	15.6	0.0	0.0	4.5	0.0	4.6
%ile Storage Ratio (RQ%)	0.00	0.69	0.21	0.00	0.00	0.07	0.00	0.04
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	11.1	0.8	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.3	0.3	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	54.1
HCM 6th LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	480	36	427	91	25	141	214	1071	5	9	669	88
Future Volume (veh/h)	480	36	427	91	25	141	214	1071	5	9	669	88
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1700	1900	1900	1800	1900	1900	1800	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	505	38	0	96	26	148	225	1127	5	9	704	93
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	573	665		235	224	189	260	1801	8	20	1116	147
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Prop Arrive On Green	0.18	0.35	0.00	0.12	0.12	0.12	0.15	0.49	0.49	0.02	0.70	0.70
Unsig. Movement Delay												
Ln Grp Delay, s/veh	49.4	19.4	0.0	38.9	35.7	45.4	56.0	20.3	20.1	54.7	14.1	14.1
Ln Grp LOS	D	B		D	D	D	E	C	C	D	B	B
Approach Vol, veh/h		543			270			1357			806	
Approach Delay, s/veh		47.3			42.2			26.1			14.6	
Approach LOS		D			D			C			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6	7	8
Case No	2.0	4.0		3.0	2.0	4.0	2.0	5.3
Phs Duration (G+Y+Rc), s	5.5	48.5		36.0	18.2	35.8	20.9	15.1
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5	4.5	4.5
Max Green (Gmax), s	5.0	31.5		40.0	16.5	20.0	17.5	18.0
Max Allow Headway (MAH), s	3.8	5.2		5.2	3.8	5.3	3.8	4.1
Max Q Clear (g_c+I1), s	2.4	22.3		3.2	13.5	12.7	16.1	10.0
Green Ext Time (g_e), s	0.0	4.9		0.2	0.2	2.9	0.3	0.6
Prob of Phs Call (p_c)	0.20	1.00		1.00	1.00	1.00	1.00	1.00
Prob of Max Out (p_x)	1.00	0.00		0.00	1.00	0.00	1.00	0.10

Left-Turn Movement Data								
Assigned Mvmt	1				5		7	3
Mvmt Sat Flow, veh/h	1810				1714		3141	1318

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		3686		1900		3206		1900

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		16		1610		423		1610

Left Lane Group Data								
Assigned Mvmt	1	0	0	0	5	0	7	3
Lane Assignment	L (Prot)				L (Prot)		L (Prot)	L

Lanes in Grp	1	0	0	0	1	0	2	1
Grp Vol (v), veh/h	9	0	0	0	225	0	505	96
Grp Sat Flow (s), veh/h/ln	1810	0	0	0	1714	0	1570	1318
Q Serve Time (g_s), s	0.4	0.0	0.0	0.0	11.5	0.0	14.1	6.2
Cycle Q Clear Time (g_c), s	0.4	0.0	0.0	0.0	11.5	0.0	14.1	6.2
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	1318
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.6
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.6
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.2
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	0.00	1.00	0.00	1.00	1.00
Lane Grp Cap (c), veh/h	20	0	0	0	260	0	573	235
V/C Ratio (X)	0.44	0.00	0.00	0.00	0.86	0.00	0.88	0.41
Avail Cap (c_a), veh/h	101	0	0	0	314	0	611	344
Upstream Filter (I)	0.75	0.00	0.00	0.00	1.00	0.00	1.00	1.00
Uniform Delay (d1), s/veh	43.7	0.0	0.0	0.0	37.3	0.0	35.8	37.8
Incr Delay (d2), s/veh	11.0	0.0	0.0	0.0	18.7	0.0	13.6	1.1
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	54.7	0.0	0.0	0.0	56.0	0.0	49.4	38.9
1st-Term Q (Q1), veh/ln	0.2	0.0	0.0	0.0	4.7	0.0	5.3	2.0
2nd-Term Q (Q2), veh/ln	0.1	0.0	0.0	0.0	1.4	0.0	1.1	0.1
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	0.00	1.00	0.00	1.00	1.00
%ile Back of Q (50%), veh/ln	0.3	0.0	0.0	0.0	6.1	0.0	6.4	2.1
%ile Storage Ratio (RQ%)	0.01	0.00	0.00	0.00	0.35	0.00	0.16	0.06
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	552	0	38	0	396	0	26
Grp Sat Flow (s), veh/h/ln	0	1805	0	1900	0	1805	0	1900
Q Serve Time (g_s), s	0.0	20.3	0.0	1.2	0.0	10.7	0.0	1.1
Cycle Q Clear Time (g_c), s	0.0	20.3	0.0	1.2	0.0	10.7	0.0	1.1
Lane Grp Cap (c), veh/h	0	882	0	665	0	628	0	224
V/C Ratio (X)	0.00	0.63	0.00	0.06	0.00	0.63	0.00	0.12
Avail Cap (c_a), veh/h	0	882	0	844	0	628	0	380
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	0.75	0.00	1.00
Uniform Delay (d1), s/veh	0.0	16.9	0.0	19.4	0.0	10.5	0.0	35.5
Incr Delay (d2), s/veh	0.0	3.3	0.0	0.0	0.0	3.6	0.0	0.2
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	20.3	0.0	19.4	0.0	14.1	0.0	35.7
1st-Term Q (Q1), veh/ln	0.0	7.9	0.0	0.5	0.0	2.8	0.0	0.5
2nd-Term Q (Q2), veh/ln	0.0	0.8	0.0	0.0	0.0	0.6	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	8.7	0.0	0.5	0.0	3.4	0.0	0.5
%ile Storage Ratio (RQ%)	0.00	0.50	0.00	0.01	0.00	0.17	0.00	0.02
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R		R		T+R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	580	0	0	0	401	0	148
Grp Sat Flow (s), veh/h/ln	0	1897	0	1610	0	1824	0	1610
Q Serve Time (g_s), s	0.0	20.3	0.0	0.0	0.0	10.7	0.0	8.0
Cycle Q Clear Time (g_c), s	0.0	20.3	0.0	0.0	0.0	10.7	0.0	8.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.01	0.00	1.00	0.00	0.23	0.00	1.00
Lane Grp Cap (c), veh/h	0	927	0	564	0	635	0	189
V/C Ratio (X)	0.00	0.63	0.00	0.00	0.00	0.63	0.00	0.78
Avail Cap (c_a), veh/h	0	927	0	716	0	635	0	322
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	0.75	0.00	1.00
Uniform Delay (d1), s/veh	0.0	16.9	0.0	0.0	0.0	10.5	0.0	38.6
Incr Delay (d2), s/veh	0.0	3.2	0.0	0.0	0.0	3.6	0.0	6.8
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	20.1	0.0	0.0	0.0	14.1	0.0	45.4
1st-Term Q (Q1), veh/ln	0.0	8.3	0.0	0.0	0.0	2.8	0.0	3.1
2nd-Term Q (Q2), veh/ln	0.0	0.8	0.0	0.0	0.0	0.6	0.0	0.4
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	9.1	0.0	0.0	0.0	3.4	0.0	3.5
%ile Storage Ratio (RQ%)	0.00	0.52	0.00	0.00	0.00	0.17	0.00	0.10
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	28.3
HCM 6th LOS	C

Notes

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	268	520	131	462	376	102	138	944	507	248	883	194
Future Volume (veh/h)	268	520	131	462	376	102	138	944	507	248	883	194
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1800	1900	1900	1700	1900	1900	1800	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	282	547	85	486	396	54	145	994	429	261	929	151
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	306	617	262	536	568	495	170	1385	587	285	2024	328
HCM Platoon Ratio	1.66	1.66	1.66	1.66	1.66	1.66	2.00	2.00	2.00	2.00	2.00	1.00
Prop Arrive On Green	0.30	0.27	0.27	0.27	0.25	0.25	0.20	0.73	0.73	0.32	0.85	0.42
Unsig. Movement Delay												
Ln Grp Delay, s/veh	68.6	55.9	39.3	59.6	46.3	26.4	55.5	14.4	17.0	64.3	6.6	15.5
Ln Grp LOS	E	E	D	E	D	C	E	B	B	E	A	B
Approach Vol, veh/h		914			936			1568			1341	
Approach Delay, s/veh		58.3			52.1			18.9			20.1	
Approach LOS		E			D			B			C	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Case No	2.0	3.0	2.0	3.0	2.0	4.0	2.0	3.0
Phs Duration (G+Y+Rc), s	23.4	48.2	24.4	24.0	16.4	55.3	25.9	22.5
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green (Gmax), s	21.9	37.5	21.7	20.9	18.6	40.8	24.6	18.0
Max Allow Headway (MAH), s	3.8	4.9	3.8	5.1	3.8	5.3	3.8	5.1
Max Q Clear (g_c+I1), s	18.7	20.5	19.4	18.6	11.8	13.4	21.1	13.4
Green Ext Time (g_e), s	0.2	8.2	0.5	0.9	0.2	8.5	0.3	1.1
Prob of Phs Call (p_c)	1.00	1.00	1.00	1.00	0.99	1.00	1.00	1.00
Prob of Max Out (p_x)	1.00	0.00	1.00	1.00	0.07	0.00	1.00	1.00

Left-Turn Movement Data								
Assigned Mvmt	1		3		5		7	
Mvmt Sat Flow, veh/h	1810		3238		1714		1714	

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		3800		3800		4786		3800

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1610		1610		775		1610

Left Lane Group Data								
Assigned Mvmt	1	0	3	0	5	0	7	0
Lane Assignment	L (Prot)		L (Prot)		L (Prot)		L (Prot)	

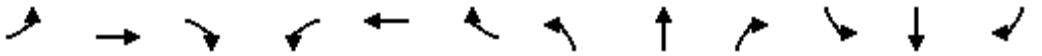
Lanes in Grp	1	0	2	0	1	0	1	0
Grp Vol (v), veh/h	261	0	486	0	145	0	282	0
Grp Sat Flow (s), veh/h/ln	1810	0	1619	0	1714	0	1714	0
Q Serve Time (g_s), s	16.7	0.0	17.4	0.0	9.8	0.0	19.1	0.0
Cycle Q Clear Time (g_c), s	16.7	0.0	17.4	0.0	9.8	0.0	19.1	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	285	0	536	0	170	0	306	0
V/C Ratio (X)	0.92	0.00	0.91	0.00	0.85	0.00	0.92	0.00
Avail Cap (c_a), veh/h	330	0	586	0	266	0	351	0
Upstream Filter (I)	0.85	0.00	1.00	0.00	0.52	0.00	1.00	0.00
Uniform Delay (d1), s/veh	40.3	0.0	42.6	0.0	47.3	0.0	41.4	0.0
Incr Delay (d2), s/veh	24.0	0.0	17.0	0.0	8.2	0.0	27.1	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	64.3	0.0	59.6	0.0	55.5	0.0	68.6	0.0
1st-Term Q (Q1), veh/ln	6.2	0.0	6.3	0.0	3.8	0.0	7.2	0.0
2nd-Term Q (Q2), veh/ln	1.9	0.0	1.3	0.0	0.4	0.0	2.3	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
%ile Back of Q (50%), veh/ln	8.1	0.0	7.5	0.0	4.2	0.0	9.5	0.0
%ile Storage Ratio (RQ%)	1.13	0.00	0.05	0.00	0.52	0.00	1.08	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	2	0	2	0	2	0	2
Grp Vol (v), veh/h	0	994	0	547	0	737	0	396
Grp Sat Flow (s), veh/h/ln	0	1900	0	1900	0	1900	0	1900
Q Serve Time (g_s), s	0.0	17.8	0.0	16.6	0.0	5.9	0.0	11.4
Cycle Q Clear Time (g_c), s	0.0	17.8	0.0	16.6	0.0	5.9	0.0	11.4
Lane Grp Cap (c), veh/h	0	1385	0	617	0	1607	0	568
V/C Ratio (X)	0.00	0.72	0.00	0.89	0.00	0.46	0.00	0.70
Avail Cap (c_a), veh/h	0	1385	0	662	0	1607	0	570
Upstream Filter (I)	0.00	0.52	0.00	1.00	0.00	0.85	0.00	1.00
Uniform Delay (d1), s/veh	0.0	12.7	0.0	42.8	0.0	5.8	0.0	42.6
Incr Delay (d2), s/veh	0.0	1.7	0.0	13.2	0.0	0.8	0.0	3.7
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	14.4	0.0	55.9	0.0	6.6	0.0	46.3
1st-Term Q (Q1), veh/ln	0.0	4.4	0.0	7.0	0.0	1.7	0.0	4.9
2nd-Term Q (Q2), veh/ln	0.0	0.3	0.0	1.1	0.0	0.2	0.0	0.3

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	4.7	0.0	8.2	0.0	1.9	0.0	5.2
%ile Storage Ratio (RQ%)	0.00	0.12	0.00	0.04	0.00	0.02	0.00	0.03
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		R		T+R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	429	0	85	0	343	0	54
Grp Sat Flow (s), veh/h/ln	0	1610	0	1610	0	1761	0	1610
Q Serve Time (g_s), s	0.0	18.5	0.0	5.1	0.0	11.4	0.0	2.6
Cycle Q Clear Time (g_c), s	0.0	18.5	0.0	5.1	0.0	11.4	0.0	2.6
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1610.2
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	18.9
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	0.44	0.00	1.00
Lane Grp Cap (c), veh/h	0	587	0	262	0	745	0	495
V/C Ratio (X)	0.00	0.73	0.00	0.33	0.00	0.46	0.00	0.11
Avail Cap (c_a), veh/h	0	587	0	280	0	745	0	495
Upstream Filter (I)	0.00	0.52	0.00	1.00	0.00	0.85	0.00	1.00
Uniform Delay (d1), s/veh	0.0	12.8	0.0	38.6	0.0	13.7	0.0	26.3
Incr Delay (d2), s/veh	0.0	4.2	0.0	0.7	0.0	1.7	0.0	0.1
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	17.0	0.0	39.3	0.0	15.5	0.0	26.4
1st-Term Q (Q1), veh/ln	0.0	3.8	0.0	1.9	0.0	3.7	0.0	1.0
2nd-Term Q (Q2), veh/ln	0.0	0.7	0.0	0.1	0.0	0.4	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	4.5	0.0	2.0	0.0	4.1	0.0	1.0
%ile Storage Ratio (RQ%)	0.00	0.56	0.00	0.01	0.00	0.04	0.00	0.01
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	33.3
HCM 6th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	214	387	229	828	1809	0	0	1316	772
Future Volume (veh/h)	0	0	0	214	387	229	828	1809	0	0	1316	772
Number				3	8	18	5	2	12	1	6	16
Initial Q, veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln				1800	1900	1900	1900	1900	0	0	1900	1900
Adj Flow Rate, veh/h				225	407	241	872	1904	0	0	1385	813
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence				Yes			Yes			No		
Cap, veh/h				249	468	293	799	2439	0	0	1458	1235
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.33	1.33
Prop Arrive On Green				0.28	0.28	0.28	0.44	1.00	0.00	0.00	0.51	0.51
Unsig. Movement Delay												
Ln Grp Delay, s/veh				58.6	0.0	49.9	82.6	0.9	0.0	0.0	40.0	25.7
Ln Grp LOS				E	A	D	F	A	A	A	D	C
Approach Vol, veh/h					873			2776			2198	
Approach Delay, s/veh					54.6			26.6			34.7	
Approach LOS					D			C			C	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2	8		5	6		
Case No		4.0	12.0		2.0	7.0		
Phs Duration (G+Y+Rc), s		81.5	38.5		31.0	50.5		
Change Period (Y+Rc), s		4.5	4.5		4.5	4.5		
Max Green (Gmax), s		74.5	36.5		26.5	43.5		
Max Allow Headway (MAH), s		5.2	5.4		3.8	4.8		
Max Q Clear (g_c+I1), s		2.0	31.5		28.5	43.6		
Green Ext Time (g_e), s		32.1	2.4		0.0	0.0		
Prob of Phs Call (p_c)		1.00	1.00		1.00	1.00		
Prob of Max Out (p_x)		0.00	1.00		1.00	0.00		

Left-Turn Movement Data								
Assigned Mvmt			3		5	1		
Mvmt Sat Flow, veh/h			881		3619	0		

Through Movement Data								
Assigned Mvmt		2	8			6		
Mvmt Sat Flow, veh/h		3800	1653			3800		

Right-Turn Movement Data								
Assigned Mvmt		12	18			16		
Mvmt Sat Flow, veh/h		0	1036			3220		

Left Lane Group Data								
Assigned Mvmt	0	0	3	0	5	1	0	0
Lane Assignment			L+T		L (Prot)			

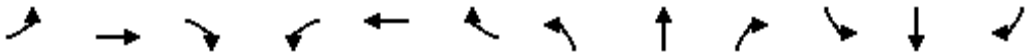
Lanes in Grp	0	0	1	0	2	0	0	0
Grp Vol (v), veh/h	0	0	474	0	872	0	0	0
Grp Sat Flow (s), veh/h/ln	0	0	1856	0	1810	0	0	0
Q Serve Time (g_s), s	0.0	0.0	29.5	0.0	26.5	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	29.5	0.0	26.5	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	46.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	0.00	0.47	0.00	1.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	525	0	799	0	0	0
V/C Ratio (X)	0.00	0.00	0.90	0.00	1.09	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	0	565	0	799	0	0	0
Upstream Filter (I)	0.00	0.00	1.00	0.00	0.36	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	41.4	0.0	33.5	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	17.1	0.0	49.1	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	58.6	0.0	82.6	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	13.4	0.0	9.2	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	2.5	0.0	5.4	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	0.00	1.00	0.00	1.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	15.9	0.0	14.6	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.38	0.00	2.44	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	18.2	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	8	0	0	6	0	0
Lane Assignment		T				T		
Lanes in Grp	0	2	0	0	0	2	0	0
Grp Vol (v), veh/h	0	1904	0	0	0	1385	0	0
Grp Sat Flow (s), veh/h/ln	0	1900	0	0	0	1900	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	41.6	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	41.6	0.0	0.0
Lane Grp Cap (c), veh/h	0	2439	0	0	0	1458	0	0
V/C Ratio (X)	0.00	0.78	0.00	0.00	0.00	0.95	0.00	0.00
Avail Cap (c_a), veh/h	0	2439	0	0	0	1458	0	0
Upstream Filter (I)	0.00	0.36	0.00	0.00	0.00	0.76	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	28.3	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.9	0.0	0.0	0.0	11.7	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.9	0.0	0.0	0.0	40.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	16.8	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.3	0.0	0.0	0.0	2.4	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.3	0.0	0.0	0.0	19.2	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.01	0.00	0.00	0.00	0.51	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	18	0	0	16	0	0
Lane Assignment			T+R			R		
Lanes in Grp	0	0	1	0	0	2	0	0
Grp Vol (v), veh/h	0	0	399	0	0	813	0	0
Grp Sat Flow (s), veh/h/ln	0	0	1714	0	0	1610	0	0
Q Serve Time (g_s), s	0.0	0.0	26.1	0.0	0.0	22.3	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	26.1	0.0	0.0	22.3	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.00	0.60	0.00	0.00	1.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	485	0	0	1235	0	0
V/C Ratio (X)	0.00	0.00	0.82	0.00	0.00	0.66	0.00	0.00
Avail Cap (c_a), veh/h	0	0	521	0	0	1235	0	0
Upstream Filter (I)	0.00	0.00	1.00	0.00	0.00	0.76	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	40.2	0.0	0.0	23.6	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	9.7	0.0	0.0	2.1	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	49.9	0.0	0.0	25.7	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	10.9	0.0	0.0	7.6	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	1.3	0.0	0.0	0.4	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	12.2	0.0	0.0	8.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.29	0.00	0.00	0.21	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	33.8
HCM 6th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	450	85	660	0	0	0	0	1554	509	327	1013	0
Future Volume (veh/h)	450	85	660	0	0	0	0	1554	509	327	1013	0
Number	7	4	14				5	2	12	1	6	16
Initial Q, veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1800	1900	1900				0	1900	1900	1900	1900	0
Adj Flow Rate, veh/h	474	89	695				0	1636	536	344	1066	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0				0	0	0	0	0	0
Opposing Right Turn Influence	Yes						No			Yes		
Cap, veh/h	544	102	570				0	1892	534	364	2061	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	2.00	2.00	2.00	2.00	1.00
Prop Arrive On Green	0.35	0.35	0.35				0.00	0.66	0.66	0.40	1.00	0.00
Unsig. Movement Delay												
Ln Grp Delay, s/veh	48.7	0.0	152.4				0.0	23.6	59.8	40.4	0.1	0.0
Ln Grp LOS	D	A	F				A	C	F	D	A	A
Approach Vol, veh/h		1258						2172			1410	
Approach Delay, s/veh		106.0						32.5			9.9	
Approach LOS		F						C			A	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Case No	2.0	7.0		12.0		4.0		
Phs Duration (G+Y+Rc), s	28.7	44.3		47.0		73.0		
Change Period (Y+Rc), s	4.5	4.5		4.5		4.5		
Max Green (Gmax), s	25.5	38.5		42.5		68.5		
Max Allow Headway (MAH), s	3.8	4.9		5.5		5.2		
Max Q Clear (g_c+I1), s	24.0	41.8		44.5		2.0		
Green Ext Time (g_e), s	0.2	0.0		0.0		10.6		
Prob of Phs Call (p_c)	1.00	1.00		1.00		1.00		
Prob of Max Out (p_x)	1.00	0.00		1.00		0.00		

Left-Turn Movement Data								
Assigned Mvmt	1	5		7				
Mvmt Sat Flow, veh/h	1810	0		1535				

Through Movement Data								
Assigned Mvmt		2		4		6		
Mvmt Sat Flow, veh/h		5700		288		3705		

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		
Mvmt Sat Flow, veh/h		1610		1610		0		

Left Lane Group Data								
Assigned Mvmt	1	5	0	7	0	0	0	0
Lane Assignment	L (Prot)			L+T				

Lanes in Grp	1	0	0	1	0	0	0	0
Grp Vol (v), veh/h	344	0	0	563	0	0	0	0
Grp Sat Flow (s), veh/h/ln	1810	0	0	1823	0	0	0	0
Q Serve Time (g_s), s	22.0	0.0	0.0	34.6	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	22.0	0.0	0.0	34.6	0.0	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	39.8	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	0.84	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	364	0	0	646	0	0	0	0
V/C Ratio (X)	0.94	0.00	0.00	0.87	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	385	0	0	646	0	0	0	0
Upstream Filter (I)	0.09	0.00	0.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	35.2	0.0	0.0	36.2	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	5.2	0.0	0.0	12.5	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	40.4	0.0	0.0	48.7	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	7.8	0.0	0.0	15.2	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.5	0.0	0.0	2.2	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00
%ile Back of Q (50%), veh/ln	8.4	0.0	0.0	17.4	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	1.40	0.00	0.00	0.52	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	0
Lane Assignment		T				T		
Lanes in Grp	0	3	0	0	0	2	0	0
Grp Vol (v), veh/h	0	1636	0	0	0	1066	0	0
Grp Sat Flow (s), veh/h/ln	0	1900	0	0	0	1805	0	0
Q Serve Time (g_s), s	0.0	27.2	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	27.2	0.0	0.0	0.0	0.0	0.0	0.0
Lane Grp Cap (c), veh/h	0	1892	0	0	0	2061	0	0
V/C Ratio (X)	0.00	0.86	0.00	0.00	0.00	0.52	0.00	0.00
Avail Cap (c_a), veh/h	0	1892	0	0	0	2061	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	0.09	0.00	0.00
Uniform Delay (d1), s/veh	0.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	5.6	0.0	0.0	0.0	0.1	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	23.6	0.0	0.0	0.0	0.1	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	6.9	0.0	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	7.9	0.0	0.0	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.15	0.00	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	0
Lane Assignment		R		T+R				
Lanes in Grp	0	1	0	1	0	0	0	0
Grp Vol (v), veh/h	0	536	0	695	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	1610	0	1610	0	0	0	0
Q Serve Time (g_s), s	0.0	39.8	0.0	42.5	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	39.8	0.0	42.5	0.0	0.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	534	0	570	0	0	0	0
V/C Ratio (X)	0.00	1.00	0.00	1.22	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	534	0	570	0	0	0	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	20.2	0.0	38.8	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	39.6	0.0	113.7	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	59.8	0.0	152.4	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	8.6	0.0	16.4	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	5.9	0.0	18.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	14.5	0.0	34.4	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.27	0.00	1.02	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.4	0.0	31.2	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.3	0.0	0.3	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	45.0
HCM 6th LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	648	787	247	101	975	531	104	613	76	336	29	222
Future Volume (veh/h)	648	787	247	101	975	531	104	613	76	336	29	222
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1700	1900	1900	1800	1900	1900	1800	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	682	828	260	106	1026	559	109	645	80	354	31	234
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	677	1108	348	128	1007	742	134	684	410	354	57	431
HCM Platoon Ratio	2.00	2.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.42	0.80	0.40	0.15	0.53	0.27	0.08	0.18	0.18	0.20	0.30	0.30
Unsig. Movement Delay												
Ln Grp Delay, s/veh	57.3	10.6	21.3	74.0	61.4	31.1	65.7	71.6	36.1	95.8	0.0	39.6
Ln Grp LOS	F	B	C	E	F	C	E	E	D	F	A	D
Approach Vol, veh/h		1770			1691			834			619	
Approach Delay, s/veh		31.7			52.2			67.4			71.7	
Approach LOS		C			D			E			E	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Case No	2.0	3.0	2.0	4.0	2.0	4.0	2.0	3.0
Phs Duration (G+Y+Rc), s	28.0	26.1	13.5	52.4	13.9	40.2	29.6	36.3
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green (Gmax), s	23.5	21.6	11.3	45.6	15.4	29.7	25.1	31.8
Max Allow Headway (MAH), s	3.8	5.1	3.8	5.3	3.8	5.5	3.8	4.8
Max Q Clear (g_c+I1), s	25.5	22.1	9.2	28.0	9.5	18.2	27.1	33.8
Green Ext Time (g_e), s	0.0	0.0	0.0	7.1	0.1	1.2	0.0	0.0
Prob of Phs Call (p_c)	1.00	1.00	0.97	1.00	0.97	1.00	1.00	1.00
Prob of Max Out (p_x)	1.00	0.00	1.00	0.33	0.12	0.00	1.00	1.00

Left-Turn Movement Data								
Assigned Mvmt	1		3		5		7	
Mvmt Sat Flow, veh/h	1810		1714		1714		3238	

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		3800		2773		192		3800

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1610		870		1448		1610

Left Lane Group Data								
Assigned Mvmt	1	0	3	0	5	0	7	0
Lane Assignment	L (Prot)		L (Prot)		L (Prot)		L (Prot)	

Lanes in Grp	1	0	1	0	1	0	2	0
Grp Vol (v), veh/h	354	0	106	0	109	0	682	0
Grp Sat Flow (s), veh/h/ln	1810	0	1714	0	1714	0	1619	0
Q Serve Time (g_s), s	23.5	0.0	7.2	0.0	7.5	0.0	25.1	0.0
Cycle Q Clear Time (g_c), s	23.5	0.0	7.2	0.0	7.5	0.0	25.1	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	354	0	128	0	134	0	677	0
V/C Ratio (X)	1.00	0.00	0.83	0.00	0.81	0.00	1.01	0.00
Avail Cap (c_a), veh/h	354	0	161	0	220	0	677	0
Upstream Filter (I)	1.00	0.00	1.00	0.00	1.00	0.00	0.36	0.00
Uniform Delay (d1), s/veh	48.2	0.0	50.3	0.0	54.5	0.0	34.9	0.0
Incr Delay (d2), s/veh	47.5	0.0	23.7	0.0	11.2	0.0	22.4	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	95.8	0.0	74.0	0.0	65.7	0.0	57.3	0.0
1st-Term Q (Q1), veh/ln	10.5	0.0	2.9	0.0	3.2	0.0	7.9	0.0
2nd-Term Q (Q2), veh/ln	4.7	0.0	0.8	0.0	0.4	0.0	2.1	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
%ile Back of Q (50%), veh/ln	15.2	0.0	3.7	0.0	3.7	0.0	10.0	0.0
%ile Storage Ratio (RQ%)	1.97	0.00	0.04	0.00	0.32	0.00	0.96	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T				T
Lanes in Grp	0	2	0	1	0	0	0	2
Grp Vol (v), veh/h	0	645	0	567	0	0	0	1026
Grp Sat Flow (s), veh/h/ln	0	1900	0	1900	0	0	0	1900
Q Serve Time (g_s), s	0.0	20.1	0.0	17.9	0.0	0.0	0.0	31.8
Cycle Q Clear Time (g_c), s	0.0	20.1	0.0	17.9	0.0	0.0	0.0	31.8
Lane Grp Cap (c), veh/h	0	684	0	759	0	0	0	1007
V/C Ratio (X)	0.00	0.94	0.00	0.75	0.00	0.00	0.00	1.02
Avail Cap (c_a), veh/h	0	684	0	759	0	0	0	1007
Upstream Filter (I)	0.00	1.00	0.00	0.36	0.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	48.6	0.0	9.1	0.0	0.0	0.0	28.2
Incr Delay (d2), s/veh	0.0	23.0	0.0	1.5	0.0	0.0	0.0	33.2
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	71.6	0.0	10.6	0.0	0.0	0.0	61.4
1st-Term Q (Q1), veh/ln	0.0	9.5	0.0	3.6	0.0	0.0	0.0	10.6
2nd-Term Q (Q2), veh/ln	0.0	2.2	0.0	0.3	0.0	0.0	0.0	4.6

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	11.7	0.0	3.9	0.0	0.0	0.0	15.2
%ile Storage Ratio (RQ%)	0.00	1.03	0.00	0.16	0.00	0.00	0.00	0.18
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.7
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		T+R		T+R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	80	0	521	0	265	0	559
Grp Sat Flow (s), veh/h/ln	0	1610	0	1743	0	1639	0	1610
Q Serve Time (g_s), s	0.0	4.7	0.0	26.0	0.0	16.2	0.0	31.8
Cycle Q Clear Time (g_c), s	0.0	4.7	0.0	26.0	0.0	16.2	0.0	31.8
Prot RT Sat Flow (s_R), veh/h/ln	0.0	1610.2	0.0	0.0	0.0	0.0	0.0	1610.2
Prot RT Eff Green (g_R), s	0.0	9.0	0.0	0.0	0.0	0.0	0.0	23.5
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	0.50	0.00	0.88	0.00	1.00
Lane Grp Cap (c), veh/h	0	410	0	696	0	488	0	742
V/C Ratio (X)	0.00	0.20	0.00	0.75	0.00	0.54	0.00	0.75
Avail Cap (c_a), veh/h	0	410	0	696	0	488	0	742
Upstream Filter (I)	0.00	1.00	0.00	0.36	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	35.1	0.0	19.7	0.0	35.3	0.0	26.7
Incr Delay (d2), s/veh	0.0	1.1	0.0	1.6	0.0	4.3	0.0	4.4
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	36.1	0.0	21.3	0.0	39.6	0.0	31.1
1st-Term Q (Q1), veh/ln	0.0	1.8	0.0	8.5	0.0	6.5	0.0	12.9
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.3	0.0	0.6	0.0	0.9
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	2.0	0.0	8.8	0.0	7.1	0.0	13.8
%ile Storage Ratio (RQ%)	0.00	0.70	0.00	0.36	0.00	0.92	0.00	0.16
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	49.9
HCM 6th LOS	D

APPENDIX F:
QUEUEING ANALYSIS

Intersection: 1: California Street & I-10 WB Ramps

Movement	WB	WB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	LT	R	L	L	T	T	T	T	T	R
Maximum Queue (ft)	262	75	270	291	74	74	119	138	276	439
Average Queue (ft)	190	61	216	225	43	51	103	69	219	374
95th Queue (ft)	280	78	263	283	71	82	126	165	313	487
Link Distance (ft)	1210	1210	268	268	268	268				
Upstream Blk Time (%)			1	3						
Queuing Penalty (veh)			5	11						
Storage Bay Dist (ft)										
Storage Blk Time (%)										
Queuing Penalty (veh)										

Intersection: 2: California Street & I-10 EB Off Ramp/I-10 EB On Ramp

Movement	EB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	LTR	T	T	T	R	L	L	T	T
Maximum Queue (ft)	1387	189	244	462	118	154	159	244	264
Average Queue (ft)	1041	171	163	319	82	117	108	191	188
95th Queue (ft)	1509	193	231	484	127	150	154	245	261
Link Distance (ft)	1460	775	775	775	775	268	268	268	268
Upstream Blk Time (%)									0
Queuing Penalty (veh)									0
Storage Bay Dist (ft)									
Storage Blk Time (%)									
Queuing Penalty (veh)									

Intersection: 3: Alabama Street & W 5th Street

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	SB	SB
Directions Served	L	T	TR	L	T	TR	L	T	T	R	L	T
Maximum Queue (ft)	85	328	334	323	407	435	119	119	164	166	270	687
Average Queue (ft)	58	259	280	220	252	287	70	73	89	147	243	434
95th Queue (ft)	84	354	380	327	410	424	119	146	186	179	279	769
Link Distance (ft)	1850	1850	1850	2654	2654	2654	496	496	496	496	1603	1603
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)												
Storage Blk Time (%)												
Queuing Penalty (veh)												

Intersection: 3: Alabama Street & W 5th Street

Movement	SB
Directions Served	TR
Maximum Queue (ft)	705
Average Queue (ft)	511
95th Queue (ft)	811
Link Distance (ft)	1603
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 4: Alabama Street & 3rd Street

Movement	EB	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	L	R	LT	TR	L	T	TR	L	T	TR
Maximum Queue (ft)	29	179	54	67	114	151	192	198	16	329	203
Average Queue (ft)	26	124	31	57	83	87	48	97	6	194	140
95th Queue (ft)	36	189	73	74	125	154	171	214	19	324	227
Link Distance (ft)	1025	1025	1025	858	858		561	561	496	496	496
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)						150					
Storage Blk Time (%)						4	0				
Queuing Penalty (veh)						9	1				

Intersection: 5: Alabama Street & Riverbluff Avenue

Movement	EB	WB	WB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	LTR	L	R	L	T	T	TR	L	T	T	TR
Maximum Queue (ft)	30	140	31	30	123	50	32	49	20	76	30
Average Queue (ft)	17	46	24	6	69	22	12	21	4	19	16
95th Queue (ft)	40	126	43	26	131	55	37	48	18	68	38
Link Distance (ft)	357	1559	1559		399	399	399		247	247	247
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)				150				150			
Storage Blk Time (%)											
Queuing Penalty (veh)											

Intersection: 6: Alabama Street & Palmetto Avenue

Movement	EB	EB	WB	NB	NB	NB	SB	SB	SB
Directions Served	LT	TR	LT	L	T	TR	L	T	TR
Maximum Queue (ft)	47	29	27	47	28	50	28	93	97
Average Queue (ft)	28	9	21	27	6	16	6	45	65
95th Queue (ft)	46	28	32	52	24	50	24	95	109
Link Distance (ft)	203	203	761	2588	2588	2588	220	220	220
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)									
Storage Blk Time (%)									
Queuing Penalty (veh)									

Intersection: 7: Alabama Street & San Bernardino Avenue

Movement	EB	EB	EB	EB	WB	WB	WB	WB	WB	NB	NB	NB
Directions Served	L	T	T	R	L	L	T	T	R	L	T	T
Maximum Queue (ft)	74	72	30	30	47	70	115	137	55	109	89	103
Average Queue (ft)	65	48	26	23	41	56	70	89	44	78	33	62
95th Queue (ft)	79	72	36	41	56	74	110	131	62	125	85	100
Link Distance (ft)		5448	5448	5448			1957	1957	1957		2508	2508
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	100				250	250				170		
Storage Blk Time (%)												
Queuing Penalty (veh)												

Intersection: 7: Alabama Street & San Bernardino Avenue

Movement	SB	SB	SB	SB
Directions Served	L	T	T	R
Maximum Queue (ft)	89	154	152	44
Average Queue (ft)	54	86	99	16
95th Queue (ft)	104	165	191	43
Link Distance (ft)		2588	2588	2588
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	260			
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 8: Alabama Street & Lugonia Avenue

Movement	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	NB	SB
Directions Served	L	T	TR	L	L	T	TR	L	T	T	R	L
Maximum Queue (ft)	92	74	96	121	137	170	184	117	182	156	101	76
Average Queue (ft)	47	62	54	75	111	128	135	83	82	79	42	34
95th Queue (ft)	87	78	90	127	144	172	211	122	171	154	98	74
Link Distance (ft)				3733	3733	3733	3733		959	959	959	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	220							200				180
Storage Blk Time (%)									0			
Queuing Penalty (veh)									0			

Intersection: 8: Alabama Street & Lugonia Avenue

Movement	SB	SB	SB
Directions Served	T	T	TR
Maximum Queue (ft)	96	97	183
Average Queue (ft)	67	58	105
95th Queue (ft)	105	112	184
Link Distance (ft)	2508	2508	2508
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 9: Alabama Street & I-10 WB Ramps

Movement	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	LT	TR	L	T	T	T	T	R
Maximum Queue (ft)	486	484	175	561	546	547	550	482
Average Queue (ft)	396	409	173	552	361	381	355	184
95th Queue (ft)	503	522	177	561	533	623	622	437
Link Distance (ft)	1034	1034		546	546	959	959	959
Upstream Blk Time (%)				25	0			
Queuing Penalty (veh)				193	2			
Storage Bay Dist (ft)			150					
Storage Blk Time (%)			68	1				
Queuing Penalty (veh)			308	6				

Intersection: 10: Alabama Street & I-10 EB Ramps

Movement	EB	EB	NB	NB	NB	SB	SB	SB
Directions Served	LT	TR	T	T	R	L	T	T
Maximum Queue (ft)	864	864	679	568	75	174	213	226
Average Queue (ft)	576	482	449	376	42	84	103	102
95th Queue (ft)	985	971	739	639	73	173	222	228
Link Distance (ft)	849	849	1334	1334	1334		546	546
Upstream Blk Time (%)	9	7						
Queuing Penalty (veh)	0	0						
Storage Bay Dist (ft)						150		
Storage Blk Time (%)							6	
Queuing Penalty (veh)							10	

Intersection: 11: 210 SB Ramps & W 5th Street

Movement	EB	EB	EB	WB	WB	WB	WB	SB	SB
Directions Served	T	T	R	L	L	T	T	LT	R
Maximum Queue (ft)	193	377	242	435	436	406	312	221	122
Average Queue (ft)	140	203	186	416	405	345	177	151	84
95th Queue (ft)	204	397	305	444	448	461	314	234	123
Link Distance (ft)	2654	2654		407	407	407	407	320	320
Upstream Blk Time (%)				18	8	1			
Queuing Penalty (veh)				101	45	4			
Storage Bay Dist (ft)			220						
Storage Blk Time (%)			14						
Queuing Penalty (veh)			36						

Intersection: 12: I-10 NB Ramps & W 5th Street

Movement	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	NB
Directions Served	L	T	T	T	T	T	R	L	LT	R	R
Maximum Queue (ft)	112	92	127	1300	1607	1646	385	179	176	64	38
Average Queue (ft)	79	46	64	1122	1267	1381	385	115	134	49	15
95th Queue (ft)	119	101	139	1332	1608	1711	385	174	181	67	35
Link Distance (ft)		407	407	2049	2049	2049		540	540	540	540
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)	90						360				
Storage Blk Time (%)	21	1				65	0				
Queuing Penalty (veh)	55	2				373	3				

Intersection: 13: 210 SB Ramps & San Bernardino Avenue

Movement	EB	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB
Directions Served	L	T	T	R	L	T	R	L	T	R	L	T
Maximum Queue (ft)	84	125	38	10	64	231	192	50	31	30	124	173
Average Queue (ft)	49	82	17	2	55	176	117	31	12	9	121	146
95th Queue (ft)	87	144	38	8	73	236	208	49	36	29	126	228
Link Distance (ft)		1957	1957	1957	606	606	606		463	463		158
Upstream Blk Time (%)												16
Queuing Penalty (veh)												0
Storage Bay Dist (ft)	260							230			100	
Storage Blk Time (%)											50	
Queuing Penalty (veh)											75	

Intersection: 13: 210 SB Ramps & San Bernardino Avenue

Movement	SB
Directions Served	TR
Maximum Queue (ft)	173
Average Queue (ft)	126
95th Queue (ft)	194
Link Distance (ft)	158
Upstream Blk Time (%)	8
Queuing Penalty (veh)	0
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 14: 210 NB Ramps & San Bernardino Avenue

Movement	EB	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	SB
Directions Served	L	L	T	R	L	T	R	L	T	T	R	L
Maximum Queue (ft)	42	86	239	236	53	427	97	47	297	192	15	221
Average Queue (ft)	17	62	177	84	40	292	80	33	142	89	11	159
95th Queue (ft)	40	88	281	221	73	432	106	63	284	200	21	217
Link Distance (ft)			606	606	2175	2175	2175		282	282		206
Upstream Blk Time (%)									2			5
Queuing Penalty (veh)									0			0
Storage Bay Dist (ft)	260	260						150			70	
Storage Blk Time (%)									13	11		
Queuing Penalty (veh)									9	3		

Intersection: 14: 210 NB Ramps & San Bernardino Avenue

Movement	SB
Directions Served	TR
Maximum Queue (ft)	92
Average Queue (ft)	60
95th Queue (ft)	95
Link Distance (ft)	206
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 15: Palmetto Avenue & West Driveway 1

Movement	SB	SB
Directions Served	L	R
Maximum Queue (ft)	29	28
Average Queue (ft)	6	6
95th Queue (ft)	25	24
Link Distance (ft)	275	275
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 16: Palmetto Avenue & West Driveway 2

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 17: Palmetto Avenue & East Driveway 3

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 18: Alabama Street & South Driveway 6

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 19: Alabama Street & North Driveway 4

Movement	EB
Directions Served	R
Maximum Queue (ft)	31
Average Queue (ft)	12
95th Queue (ft)	37
Link Distance (ft)	259
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 47: California Street & Lugonia Avenue

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Network Summary

Network wide Queuing Penalty: 1250

Intersection: 1: California Street & I-10 WB Ramps

Movement	WB	WB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	L	TR	L	L	T	T	T	T	T	R
Maximum Queue (ft)	570	141	282	268	162	184	90	76	588	588
Average Queue (ft)	488	83	256	253	93	105	56	36	397	522
95th Queue (ft)	599	151	305	296	181	197	103	92	776	738
Link Distance (ft)	1209	1209	262	262	262	262				
Upstream Blk Time (%)			12	8						
Queuing Penalty (veh)			50	33						
Storage Bay Dist (ft)										
Storage Blk Time (%)										
Queuing Penalty (veh)										

Intersection: 2: California Street & I-10 EB Off Ramp/I-10 EB On Ramp

Movement	EB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	LTR	T	T	T	R	L	L	T	T
Maximum Queue (ft)	1324	788	790	790	790	199	177	164	184
Average Queue (ft)	1061	416	644	677	406	163	156	115	114
95th Queue (ft)	1417	776	873	879	931	204	182	176	184
Link Distance (ft)	1460	775	775	775	775	262	262	262	262
Upstream Blk Time (%)		1	17	34	21				
Queuing Penalty (veh)		0	0	0	0				
Storage Bay Dist (ft)									
Storage Blk Time (%)									
Queuing Penalty (veh)									

Intersection: 3: Alabama Street & W 5th Street

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	SB	SB
Directions Served	L	T	TR	L	T	TR	L	T	T	R	L	T
Maximum Queue (ft)	91	269	275	362	129	149	115	195	184	313	244	253
Average Queue (ft)	72	223	223	269	78	132	98	122	139	170	176	127
95th Queue (ft)	98	290	298	385	125	156	131	200	191	296	236	261
Link Distance (ft)	1850	1850	1850	2654	2654	2654	496	496	496	496	1603	1603
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)												
Storage Blk Time (%)												
Queuing Penalty (veh)												

Intersection: 3: Alabama Street & W 5th Street

Movement	SB
Directions Served	TR
Maximum Queue (ft)	264
Average Queue (ft)	207
95th Queue (ft)	286
Link Distance (ft)	1603
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 4: Alabama Street & 3rd Street

Movement	EB	EB	EB	EB	WB	WB	NB	NB	NB	SB	SB
Directions Served	L	L	T	R	LT	TR	L	T	TR	T	TR
Maximum Queue (ft)	312	433	47	124	152	92	88	198	265	333	250
Average Queue (ft)	216	362	26	36	88	62	59	89	158	237	190
95th Queue (ft)	381	449	52	117	159	90	93	197	289	361	281
Link Distance (ft)	1025	1025	1025	1025	858	858		316	316	496	496
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)							150				
Storage Blk Time (%)								7			
Queuing Penalty (veh)								15			

Intersection: 5: Alabama Street & Riverbluff Avenue

Movement	EB	WB	WB	NB	NB	NB	SB	SB	SB	SB
Directions Served	LTR	L	R	T	T	TR	L	T	T	TR
Maximum Queue (ft)	97	118	54	137	50	31	90	76	111	140
Average Queue (ft)	31	84	44	77	28	12	57	21	43	53
95th Queue (ft)	89	126	63	149	55	38	92	70	105	138
Link Distance (ft)	357	1559	1559	397	397	397		247	247	247
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)							150			
Storage Blk Time (%)										
Queuing Penalty (veh)										

Intersection: 6: Alabama Street & Palmetto Avenue

Movement	EB	EB	WB	WB	NB	NB	NB	SB	SB
Directions Served	LT	TR	LT	TR	L	T	TR	T	TR
Maximum Queue (ft)	179	28	69	52	54	54	187	125	120
Average Queue (ft)	127	17	30	22	33	22	108	116	89
95th Queue (ft)	170	39	66	54	64	65	218	135	119
Link Distance (ft)	203	203	762	762	2588	2588	2588	220	220
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)									
Storage Blk Time (%)									
Queuing Penalty (veh)									

Intersection: 7: Alabama Street & San Bernardino Avenue

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	WB	NB	NB
Directions Served	L	T	T	T	R	L	L	T	T	R	L	T
Maximum Queue (ft)	125	305	270	120	51	47	70	93	94	105	67	66
Average Queue (ft)	106	180	144	92	28	23	42	54	64	59	38	45
95th Queue (ft)	146	345	254	119	54	57	71	96	100	105	71	76
Link Distance (ft)		5448	5448	5448	5448			1957	1957	1957		2508
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	100					250	250				170	
Storage Blk Time (%)	23	26										
Queuing Penalty (veh)	51	44										

Intersection: 7: Alabama Street & San Bernardino Avenue

Movement	NB	NB	SB	SB	SB	SB
Directions Served	T	R	L	T	T	R
Maximum Queue (ft)	86	106	256	140	174	21
Average Queue (ft)	68	40	163	73	78	4
95th Queue (ft)	101	104	281	132	164	18
Link Distance (ft)	2508	2508		2588	2588	2588
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)			260			
Storage Blk Time (%)			0			
Queuing Penalty (veh)			1			

Intersection: 8: Alabama Street & Lugonia Avenue

Movement	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	NB	SB
Directions Served	L	T	TR	L	L	T	TR	L	T	T	R	L
Maximum Queue (ft)	243	266	270	156	161	168	204	114	142	182	128	164
Average Queue (ft)	150	181	211	119	130	126	144	62	126	153	80	112
95th Queue (ft)	228	254	287	171	163	168	205	106	155	186	144	184
Link Distance (ft)				3733	3733	3733	3733		959	959	959	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	220							200				180
Storage Blk Time (%)		4										0
Queuing Penalty (veh)		10										0

Intersection: 8: Alabama Street & Lugonia Avenue

Movement	SB	SB	SB
Directions Served	T	T	TR
Maximum Queue (ft)	152	197	214
Average Queue (ft)	101	126	171
95th Queue (ft)	165	206	254
Link Distance (ft)	2508	2508	2508
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 9: Alabama Street & I-10 WB Ramps

Movement	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	LT	TR	L	T	T	T	T	R
Maximum Queue (ft)	322	288	174	551	461	500	525	418
Average Queue (ft)	237	220	174	548	346	391	388	250
95th Queue (ft)	323	311	176	552	505	565	620	438
Link Distance (ft)	1034	1034		546	546	959	959	959
Upstream Blk Time (%)				44				
Queuing Penalty (veh)				438				
Storage Bay Dist (ft)			150					
Storage Blk Time (%)			71	1				
Queuing Penalty (veh)			644	9				

Intersection: 10: Alabama Street & I-10 EB Ramps

Movement	EB	EB	NB	NB	NB	SB	SB	SB
Directions Served	LT	TR	T	T	R	L	T	T
Maximum Queue (ft)	864	864	1349	1349	1349	174	291	181
Average Queue (ft)	782	749	928	902	666	171	217	118
95th Queue (ft)	1046	1120	1549	1545	1616	179	359	204
Link Distance (ft)	849	849	1334	1334	1334		546	546
Upstream Blk Time (%)	65	63	15	9	1			
Queuing Penalty (veh)	0	0	0	0	0			
Storage Bay Dist (ft)						150		
Storage Blk Time (%)						36	0	
Queuing Penalty (veh)						180	1	

Intersection: 11: 210 SB Ramps & W 5th Street

Movement	EB	EB	EB	WB	WB	WB	WB	SB	SB
Directions Served	T	T	R	L	L	T	T	LT	R
Maximum Queue (ft)	292	304	245	238	224	109	91	267	56
Average Queue (ft)	204	188	80	185	169	62	72	227	53
95th Queue (ft)	316	335	229	251	243	118	93	281	56
Link Distance (ft)	2654	2654		407	407	407	407	320	320
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)			220						
Storage Blk Time (%)		7	0						
Queuing Penalty (veh)		49	0						

Intersection: 12: I-10 NB Ramps & W 5th Street

Movement	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	NB
Directions Served	L	T	T	T	T	T	R	L	LT	R	R
Maximum Queue (ft)	115	384	344	193	201	286	176	115	89	209	164
Average Queue (ft)	111	313	295	91	94	173	106	84	74	131	96
95th Queue (ft)	121	441	375	187	187	271	181	121	101	228	184
Link Distance (ft)		407	407	2049	2049	2049		540	540	540	540
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)	90						360				
Storage Blk Time (%)	23	16									
Queuing Penalty (veh)	154	50									

Intersection: 13: 210 SB Ramps & San Bernardino Avenue

Movement	EB	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB
Directions Served	L	T	T	R	L	T	R	L	T	R	L	T
Maximum Queue (ft)	284	852	736	55	123	431	57	50	50	128	124	173
Average Queue (ft)	139	511	386	24	66	235	29	30	34	82	124	171
95th Queue (ft)	340	893	750	53	120	418	55	57	64	130	124	179
Link Distance (ft)		1957	1957	1957	607	607	607		463	463		158
Upstream Blk Time (%)												53
Queuing Penalty (veh)												0
Storage Bay Dist (ft)	260							230			100	
Storage Blk Time (%)	0	48									56	7
Queuing Penalty (veh)	0	93									167	21

Intersection: 13: 210 SB Ramps & San Bernardino Avenue

Movement	SB
Directions Served	TR
Maximum Queue (ft)	173
Average Queue (ft)	130
95th Queue (ft)	219
Link Distance (ft)	158
Upstream Blk Time (%)	11
Queuing Penalty (veh)	0
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 14: 210 NB Ramps & San Bernardino Avenue

Movement	EB	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	SB
Directions Served	L	L	T	R	L	T	R	L	T	T	R	L
Maximum Queue (ft)	216	285	611	311	604	1304	264	132	298	298	95	221
Average Queue (ft)	177	228	327	108	300	1061	188	103	298	286	60	221
95th Queue (ft)	249	315	580	280	701	1425	265	150	299	310	131	221
Link Distance (ft)			607	607	2175	2175	2175	283	283	283		206
Upstream Blk Time (%)			2						47	27		87
Queuing Penalty (veh)			14						0	0		0
Storage Bay Dist (ft)	260	260									70	
Storage Blk Time (%)			13							72	0	
Queuing Penalty (veh)			84							55	1	

Intersection: 14: 210 NB Ramps & San Bernardino Avenue

Movement	SB
Directions Served	TR
Maximum Queue (ft)	53
Average Queue (ft)	17
95th Queue (ft)	52
Link Distance (ft)	206
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 15: Palmetto Avenue & West Driveway 1

Movement	SB	SB
Directions Served	L	R
Maximum Queue (ft)	28	29
Average Queue (ft)	6	11
95th Queue (ft)	25	34
Link Distance (ft)	275	275
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 16: Palmetto Avenue & West Driveway 2

Movement	SB
Directions Served	LR
Maximum Queue (ft)	31
Average Queue (ft)	24
95th Queue (ft)	44
Link Distance (ft)	324
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 17: Palmetto Avenue & East Driveway 3

Movement	SB
Directions Served	L
Maximum Queue (ft)	29
Average Queue (ft)	6
95th Queue (ft)	25
Link Distance (ft)	112
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 18: Alabama Street & South Diveway 6

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 19: Alabama Street & North Driveway 4

Movement	EB	B59
Directions Served	R	T
Maximum Queue (ft)	31	310
Average Queue (ft)	30	62
95th Queue (ft)	31	267
Link Distance (ft)	259	316
Upstream Blk Time (%)		1
Queuing Penalty (veh)		4
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 47: California Street & Lugonia Avenue

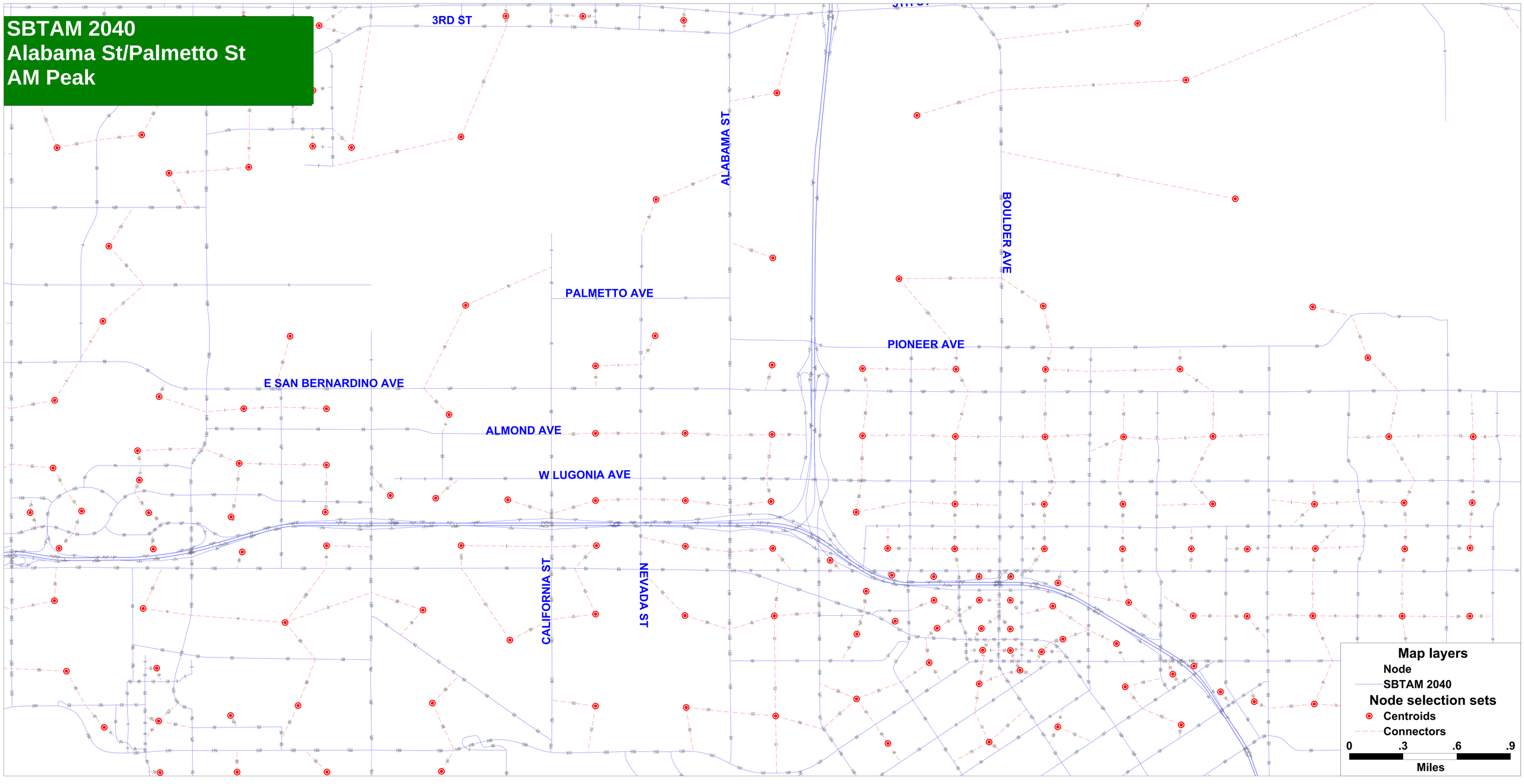
Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Network Summary

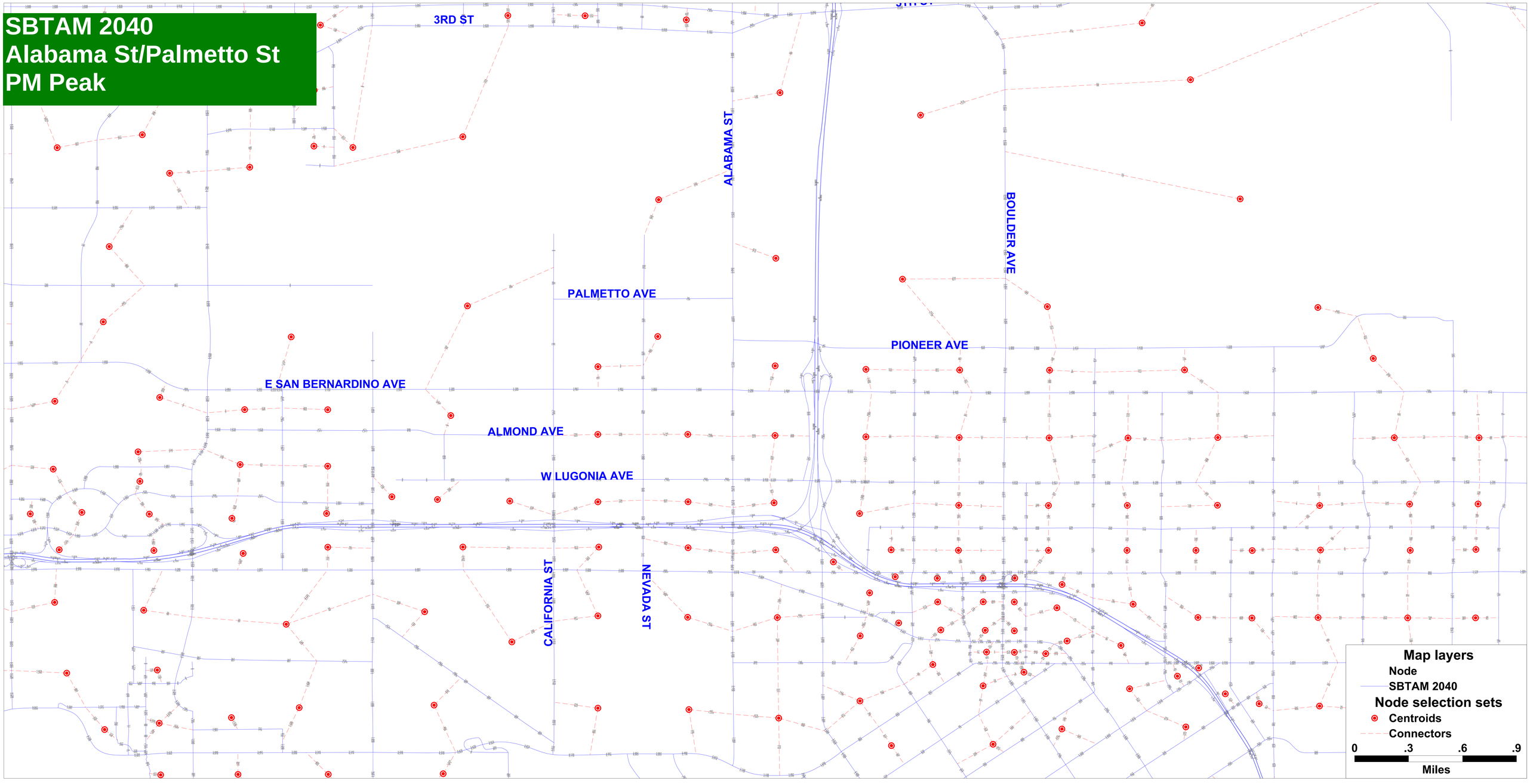
Network wide Queuing Penalty: 2169

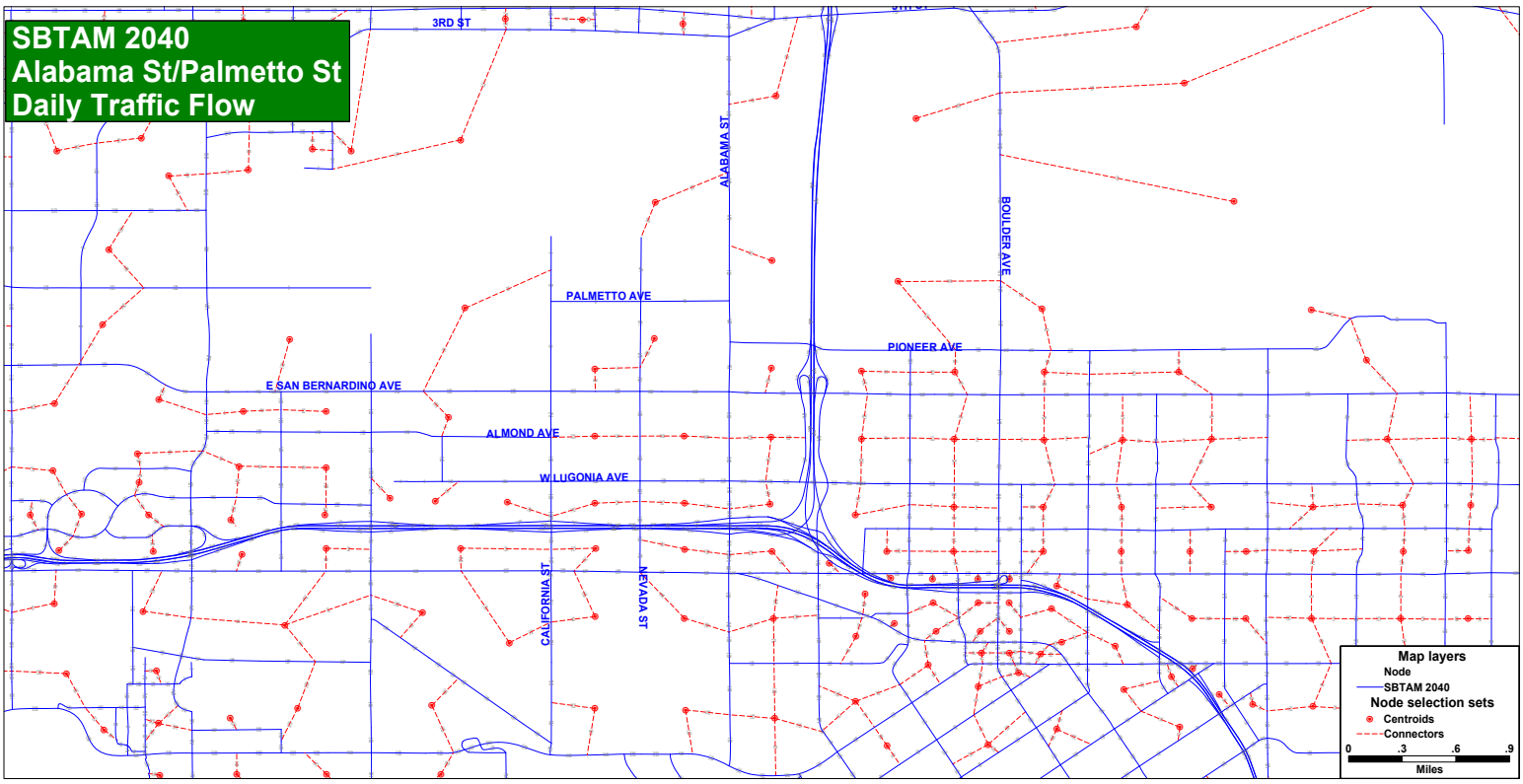
APPENDIX G:
SBTAM 2040 VOLUME PLOTS & POST-PROCESSING WORKSHEETS

SBTAM 2040
Alabama St/Palmetto St
AM Peak



SBTAM 2040
Alabama St/Palmetto St
PM Peak




SBTAM 2040
Alabama St/Palmetto St
Daily Traffic Flow
3RD ST
ALABAMA ST
BOULDER AVE
PALMETTO AVE
PIONEER AVE
E SAN BERNARDINO AVE
ALMOND AVE
W LUGONIA AVE
CALIFORNIA ST
NEVADA ST
Map layers
Node
SBTAM 2040
Node selection sets
Centroids
Connectors
0 .3 .6 .9
Miles

2040 Without Project AM Peak Hour Volume Calculation Sheets

	Existing Volumes	Approach Volume	Directional Split	2040 Volumes	Truck Volumes	Total Volume	Split Volume	Volume		EACP Volume Check		Whichever is Greater	**Final**	
DATE	43187													
TIME	1700													
INTID	**1**	**California Street (NS)**	**I-10 WB Ramps (EW)**											
NBL	576		51.75%				642.6824798	643	0	643	50	55	643	643
NBT	537	1113	48.25%	2891	92	1241.85	599.1675202	600	6	594	29	31.9	594	594
NBR	0		0.00%				0	0	0	0	0	0	0	0
SBL	0		0.00%				0	0	0	0	0	0	0	0
SBT	536	1217	44.04%	1228	50	554.8	244.3490551	245	0	245	35	38.5	245	245
SBR	681		55.96%				310.4509449	311	2	309	54	59.4	309	309
EBL	0		0.00%				0	0	0	0	0	0	0	0
EBT	0	1	0.00%	0	0	0	0	0	0	0	0	0	0	0
EBR	0		0.00%				0	0	0	0	0	0	0	0
WBL	224		63.46%				369.7903683	370	0	370	42	46.2	370	370
WBT	2	353	0.57%	1515	21	582.75	3.301699717	4	0	4	1	1.1	4	4
WBR	127		35.98%				209.657932	210	0	210	39	42.9	210	210
	2683													
INTID	**2**	**California Street (NS)**	**I-10 EB Ramps (EW)**											
NBL	0		0.00%				0	0	0	0	0	0	0	0
NBT	652	940	69.36%	2256	77	982.1	681.2012766	682	692	761.2	761.2	762	761.2	762
NBR	288		30.64%				300.8987234	301	320	352	352	352	352	352
SBL	74		13.21%				101.1685714	102	97	106.7	102	102	106.7	107
SBT	486	560	86.79%	1916	38	765.6	664.4314286	665	531	584.1	665	665	665	665
SBR	0		0.00%				0	0	0	0	0	0	0	0
EBL	528		52.33%				502.1494549	503	576	633.6	633.6	634	633.6	634
EBT	3	1009	0.30%	2306	61	959.6	2.853121903	3	8	8.8	8.8	9	8.8	9
EBR	478		47.37%				454.5974232	455	508	558.8	558.8	559	558.8	559
WBL	0		0.00%				0	0	0	0	0	0	0	0
WBT	0	1	0.00%	0	0	0	0	0	0	0	0	0	0	0
WBR	0		0.00%				0	0	0	0	0	0	0	0
Total	2509													
INTID	**3**	**Alabama Street (NS)**	**5th Street (EW)**											
NBL	49		11.45%				112.4366822	113	76	83.6	113	113	113	113
NBT	171	428	39.95%	291	8	121.85	392.3810748	393	209	229.9	393	393	393	393
NBR	208		48.60%				477.282243	478	269	295.9	478	478	478	478
SBL	172		26.26%				201.0430534	202	202	222.2	202	202	222.2	223
SBT	432	655	65.95%	1068	12	403.8	504.9453435	505	496	545.6	505	505	545.6	546
SBR	51		7.79%				59.61160305	60	70	77	77	77	77	77
EBL	19		6.57%				63.08788927	64	30	33	64	64	64	64
EBT	227	289	78.55%	578	11	229.8	753.7342561	754	258	283.8	754	754	754	754
EBR	43		14.88%				142.7778547	143	64	70.4	143	143	143	143
WBL	371		32.77%				129.2436837	130	425	467.5	467.5	468	467.5	468
WBT	648	1132	57.24%	1041	12	394.35	225.7409894	226	732	805.2	805.2	806	805.2	806
WBR	113		9.98%				39.36532686	40	148	162.8	162.8	163	162.8	163
Total	2504													
INTID	**4**	**Alabama Street (NS)**	**3rd Street (EW)**											
NBL	173		37.53%				122.413449	123	0	123	7	7.7	123	123
NBT	284	461	61.61%	932		326.2	200.9561822	201	9	192	119	130.9	192	192
NBR	4		0.87%				2.830368764	3	0	3	1	1.1	3	3
SBL	16		1.84%				6.866590126	7	0	7	1	1.1	7	7
SBT	637	871	73.13%	1068		373.8	273.3761194	274	27	247	130	143	247	247
SBR	218		25.03%				93.55729047	94	0	94	9	9.9	94	94
EBL	103		31.21%				133.0572727	134	0	134	5	5.5	134	134

EBT	2	330	0.61%	1218	426.3	2.583636364	3	0	3	1	1.1	3	3
EBR	225		68.18%			290.6590909	291	0	291	9	9.9	291	291
WBL	4		9.52%			47.56666667	48	0	48	1	1.1	48	48
WBT	4	42	9.52%	1427	499.45	47.56666667	48	0	48	1	1.1	48	48
WBR	34		80.95%			404.3166667	405	0	405	2	2.2	405	405
Total	1704												

INTID	5	Alabama Street (NS)	River Bluff Avenue (EW)											
NBL	0		0.00%				0	0	11	0	0	0	0	0
NBT	405	431	93.97%	1215	20	475.25	446.5806265	447	4	443	133	146.3	443	443
NBR	26		6.03%				28.66937355	29	0	29	2	2.2	29	29
SBL	38		4.41%				36.79211137	37	0	37	2	2.2	37	37
SBT	824	862	95.59%	2206	25	834.6	797.8078886	798	12	786	149	163.9	786	786
SBR	0		0.00%				0	0	15	0	0	0	0	0
EBL	0		0.00%				0	0	5	0	0	0	0	0
EBT	0	1	0.00%	0	0	0	0	0	0	0	0	0	0	0
EBR	0		0.00%				0	0	4	0	0	0	0	0
WBL	29		48.33%				21.99166667	22	0	22	2	2.2	22	22
WBT	0	60	0.00%	130	0	45.5	0	0	0	0	0	0	0	0
WBR	31		51.67%				23.50833333	24	0	24	2	2.2	24	24
Total	1353													

INTID	6	Alabama Street (NS)	Palmetto Avenue (EW)											
NBL	10		2.17%				10.62608696	11	53	0	5	5.5	5.5	6
NBT	433	460	94.13%	1218	25	488.8	460.1095652	461	11	450	142	156.2	450	450
NBR	17		3.70%				18.06434783	19	0	19	8	8.8	19	19
SBL	4		0.50%				3.941992434	4	0	4	8	8.8	8.8	9
SBT	678	793	85.50%	2090	20	781.5	668.1677175	669	28	641	149	163.9	641	641
SBR	111		14.00%				109.39029	110	0	110	5	5.5	110	110
EBL	20		74.07%				2.851851852	3	4	0	5	5.5	5.5	6
EBT	3	27	11.11%	11	0	3.85	0.427777778	1	0	1	8	8.8	8.8	9
EBR	4		14.81%				0.57037037	1	9	0	7	7.7	7.7	8
WBL	11		100.00%				20	20	0	20	8	8.8	20	20
WBT	0	11	0.00%	50	1	20	0	0	0	0	11	12.1	12.1	13
WBR	0		0.00%				0	0	0	0	8	8.8	8.8	9
Total	1291													

INTID	7	Alabama Street (NS)		San Bernardino Avenue (EW)										
NBL	115		28.47%				186.3483911	187	0	187	22	24.2	187	187
NBT	211	404	52.23%	1699	24	654.65	341.9087871	342	18	324	74	81.4	324	324
NBR	78		19.31%				126.3928218	127	0	127	61	67.1	127	127
SBL	46		8.70%				65.84782609	66	13	53	67	73.7	73.7	74
SBT	405	529	76.56%	1985	25	757.25	579.7471645	580	6	574	175	192.5	574	574
SBR	78		14.74%				111.6550095	112	2	110	11	12.1	110	110
EBL	40		20.20%				58.8989899	59	6	53	25	27.5	53	53
EBT	128	198	64.65%	683	21	291.55	188.4767677	189	0	189	64	70.4	189	189
EBR	30		15.15%				44.17424242	45	0	45	2	2.2	45	45
WBL	172		28.24%				179.0183908	180	0	180	26	28.6	180	180
WBT	358	609	58.78%	1711	14	633.85	372.608046	373	0	373	80	88	373	373
WBR	79		12.97%				82.22356322	83	41	42	30	33	42	42
Total	1740													

INTID	8	Alabama Street (NS)		Lugonia Avenue (EW)										
NBL	73		14.07%				131.5617534	132	0	132	12	13.2	132	132
NBT	332	519	63.97%	2501	24	935.35	598.3356455	599	18	581	61	67.1	581	581
NBR	114		21.97%				205.4526012	206	0	206	45	49.5	206	206
SBL	42		6.93%				57.23712871	58	0	58	29	31.9	58	58
SBT	431	606	71.12%	2181	25	825.85	587.3619637	588	6	582	65	71.5	582	582
SBR	133		21.95%				181.2509076	182	0	182	8	8.8	182	182
EBL	72		39.13%				67.93043478	68	0	68	8	8.8	68	68
EBT	71	184	38.59%	346	21	173.6	66.98695652	67	0	67	9	9.9	67	67
EBR	41		22.28%				38.6826087	39	0	39	9	9.9	39	39
WBL	196		37.62%				390.9278311	391	0	391	71	78.1	391	391
WBT	280	521	53.74%	2869	14	1039.15	558.4683301	559	0	559	32	35.2	559	559
WBR	45		8.64%				89.75383877	90	0	90	41	45.1	90	90
Total	1830													

INTID	9	Alabama Street (NS)	I-10 WB Ramps (EW)											
NBL	381		41.19%				630.1534054	631	0	631	81	89.1	631	631
NBT	544	925	58.81%	3714	92	1529.9	899.7465946	900	14	886	46	50.6	886	886
NBR	0		0.00%				0	0	0	0	0	0	0	0
SBL	0		0.00%				0	0	0	0	0	0	0	0
SBT	306	472	64.83%	4075	70	1601.25	1038.098517	1039	6	1033	90	99	1033	1033
SBR	166		35.17%				563.1514831	564	1	563	47	51.7	563	563
EBL	0		0.00%				0	0	0	0	0	0	0	0
EBT	0	1	0.00%	0	0	0	0	0	0	0	0	0	0	0
EBR	0		0.00%				0	0	0	0	0	0	0	0
WBL	257		29.64%				144.8922722	145	0	145	69	75.9	145	145
WBT	308	867	35.52%	1318	11	488.8	173.6452134	174	0	174	23	25.3	174	174
WBR	302		34.83%				170.2625144	171	4	167	52	57.2	167	167
Total	2264													

INTID	10	Alabama Street (NS)	I-10 EB Ramps (EW)											
NBL	0		0.00%				0	0	0	0	0	0	0	0
NBT	593	686	86.44%	2859	86	1215.65	1050.846137	1051	12	1039	47	51.7	1039	1039
NBR	93		13.56%				164.803863	165	0	165	62	68.2	165	165
SBL	49		8.19%				63.05267559	64	2	62	89	97.9	97.9	98
SBT	549	598	91.81%	2020	25	769.5	706.4473244	707	4	703	63	69.3	703	703
SBR	0		0.00%				0	0	0	0	0	0	0	0
EBL	387		43.53%				383.5392013	384	2	382	80	88	382	382
EBT	5	889	0.56%	2203	44	881.05	4.955286839	5	0	5	8	8.8	8.8	9
EBR	497		55.91%				492.5555118	493	0	493	107	117.7	493	493
WBL	0		0.00%				0	0	0	0	0	0	0	0
WBT	0	1	0.00%	0	0	0	0	0	0	0	0	0	0	0
WBR	0		0.00%				0	0	0	0	0	0	0	0
Total	2173													

INTID	**11**	**SR-210 SB Ramps (NS)**	**5th Street (EW)**											
NBL	0		0.00%				0	0	0	0	0	0	0	0
NBT	0	1	0.00%	0	0	0	0	0	0	0	0	0	0	0
NBR	0		0.00%				0	0	0	0	0	0	0	0
SBL	166		49.40%				135.072619	136	0	136	94	103.4	136	136
SBT	0	336	0.00%	724	8	273.4	0	0	0	0	0	0	0	0
SBR	170		50.60%				138.327381	139	24	115	101	111.1	115	115
EBL	0		0.00%				0	0	3	-3	0	0	0	0
EBT	274	656	41.77%	1265	26	507.75	212.0785061	213	11	202	62	68.2	202	202
EBR	382		58.23%				295.6714939	296	0	296	83	91.3	296	296
WBL	823		46.29%				600.8872047	601	0	601	210	231	601	601
WBT	955	1778	53.71%	3409	42	1298.15	697.2627953	698	21	677	76	83.6	677	677
WBR	0		0.00%				0	0	0	0	0	0	0	0
Total	2770													

INTID	**12**	**SR-210 NB Ramps (NS)**	**5th Street (EW)**											
NBL	407		59.42%				342.6821168	343	0	343	52	57.2	343	343
NBT	2	685	0.29%	1405	34	576.75	1.683941606	2	0	2	3	3.3	3.3	4
NBR	276		40.29%				232.3839416	233	0	233	84	92.4	233	233
SBL	0		0.00%				0	0	0	0	0	0	0	0
SBT	0	1	0.00%	0	0	0	0	0	0	0	0	0	0	0
SBR	0		0.00%				0	0	9	-9	0	0	0	0
EBL	47		10.68%				36.43034091	37	8	29	68	74.8	74.8	75
EBT	393	440	89.32%	853	17	341.05	304.6196591	305	4	301	88	96.8	301	301
EBR	0		0.00%				0	0	0	0	0	0	0	0
WBL	0		0.00%				0	0	0	0	0	0	0	0
WBT	1340	1848	72.51%	2662	26	996.7	722.715368	723	21	702	160	176	702	702
WBR	508		27.49%				273.984632	274	0	274	158	173.8	274	274
Total	2973													

INTID	13	SR-210 SB Ramps (NS)	San Bernardino Avenue (EW)											
NBL	15		34.09%				20.28409091	21	0	21	1	1.1	21	21
NBT	6	44	13.64%	170	0	59.5	8.113636364	9	0	9	1	1.1	9	9
NBR	23		52.27%				31.10227273	32	0	32	16	17.6	32	32
SBL	284		34.42%				351.9362424	352	0	352	48	52.8	352	352
SBT	241	825	29.21%	2721	28	1022.35	298.6501212	299	0	299	10	11	299	299
SBR	300		36.36%				371.7636364	372	13	359	58	63.8	359	359
EBL	47		17.74%				49.66037736	50	6	44	11	12.1	44	44
EBT	193	265	72.83%	700	14	280	203.9245283	204	8	196	25	27.5	196	196
EBR	25		9.43%				26.41509434	27	0	27	1	1.1	27	27
WBL	58		7.70%				51.07158035	52	0	52	28	30.8	52	52
WBT	350	753	46.48%	1723	24	663.05	308.190571	309	29	280	41	45.1	280	280
WBR	345		45.82%				303.7878486	304	0	304	45	49.5	304	304
Total	1887													

INTID	14	SR-210 NB Ramps (NS)	San Bernardino Avenue (EW)											
NBL	49		12.89%				41.81763158	42	0	42	12	13.2	42	42
NBT	309	380	81.32%	798	18	324.3	263.7071053	264	0	264	43	47.3	264	264
NBR	22		5.79%				18.77526316	19	0	19	7	7.7	19	19
SBL	144		51.99%				202.5617329	203	0	203	6	6.6	203	203
SBT	9	277	3.25%	999	16	389.65	12.6601083	13	0	13	1	1.1	13	13
SBR	124		44.77%				174.4281588	175	17	158	21	23.1	158	158
EBL	95		18.20%				146.9315134	147	5	142	38	41.8	142	142
EBT	299	522	57.28%	2071	33	807.35	462.4476054	463	4	459	47	51.7	459	459
EBR	128		24.52%				197.9708812	198	0	198	6	6.6	198	198
WBL	32		3.36%				43.99663866	44	0	44	2	2.2	44	44
WBT	616	952	64.71%	3354	54	1308.9	846.9352941	847	12	835	83	91.3	835	835
WBR	304		31.93%				417.9680672	418	0	418	57	62.7	418	418
Total	2131													

2040 Without Project PM
Peak Hour Volume
Calculation Sheets

	Existing Volumes	Approach Volume	Directional Split	2040 Volumes	Truck Volumes	Total Volume	Split Volume	Volume		EACP Volume Check			Whichever is Greater	**Final**
DATE	43187													
TIME	1700													
INTID	**1**	**California Street (NS)**	**I-10 WB Ramps (EW)**											
NBL	454		39.72%				723.3693613	724	0	724	25	27.5	724	724
NBT	689	1143	60.28%	5421	143	1821.17	1097.800639	1098	3	1,095	7	7.7	1095	1095
NBR	0		0.00%				0	0	0	0	0	0	0	0
SBL	0		0.00%				0	0	0	0	0	0	0	0
SBT	179	532	33.65%	4500	79	1412.5	475.2584586	476	0	476	13	14.3	476	476
SBR	353		66.35%				937.2415414	938	7	931	25	27.5	931	931
EBL	0		0.00%				0	0	0	0	0	0	0	0
EBT	0	1	0.00%	0	0	0	0	0	0	0	0	0	0	0
EBR	0		0.00%				0	0	0	0	0	0	0	0
WBL	343		47.18%				167.1971664	168	0	168	32	35.2	168	168
WBT	9	727	1.24%	1044	29	354.38	4.387097662	5	0	5	0	0	5	5
WBR	375		51.58%				182.7957359	183	0	183	32	35.2	183	183
	2402													
INTID	**2**	**California Street (NS)**	**I-10 EB Ramps (EW)**											
NBL	0		0.00%				0	0	0	0	0	0	0	0
NBT	822	1258	65.34%	5816	114	1855.32	1212.299714	1213	0	1,213	13	14.3	1213	1213
NBR	436		34.66%				643.0202862	644	0	644	19	20.9	644	644
SBL	259		33.90%				332.1675	333	0	333	19	20.9	333	333
SBT	505	764	66.10%	3129	54	979.83	647.6625	648	0	648	27	29.7	648	648
SBR	0		0.00%				0	0	0	0	0	0	0	0
EBL	338		48.15%				479.8059259	480	3	477	19	20.9	477	477
EBT	3	702	0.43%	2626	115	996.52	4.258632479	5	0	5	4	4.4	5	5
EBR	361		51.42%				512.4554416	513	0	513	10	11	513	513
WBL	0		0.00%				0	0	0	0	0	0	0	0
WBT	0	1	0.00%	0	0	0	0	0	0	0	0	0	0	0
WBR	0		0.00%				0	0	0	0	0	0	0	0
Total	2724													
INTID	**3**	**Alabama Street (NS)**	**5th Street (EW)**											
NBL	92		8.34%				38.13537625	39	3	36	21	23.1	36	36
NBT	550	1103	49.86%	1573	13	457.21	227.9832276	228	10	218	32	35.2	218	218
NBR	461		41.80%				191.0913962	192	18	174	50	55	174	174
SBL	200		39.68%				110.2103175	111	0	111	25	27.5	111	111
SBT	281	504	55.75%	899	14	277.73	154.845496	155	4	151	38	41.8	151	151
SBR	23		4.56%				12.67418651	13	0	13	19	20.9	20.9	21
EBL	56		7.19%				30.87404365	31	0	31	16	17.6	31	31
EBT	673	779	86.39%	1424	18	429.48	371.039846	372	0	372	31	34.1	372	372
EBR	50		6.42%				27.5661104	28	1	27	20	22	27	27
WBL	151		29.15%				99.06532819	100	7	93	28	30.8	93	93
WBT	235	518	45.37%	1092	18	339.84	154.1745174	155	0	155	66	72.6	155	155
WBR	132		25.48%				86.60015444	87	0	87	39	42.9	87	87
Total	2904													

INTID	**4**	**Alabama Street (NS)**	**3rd Street (EW)**											
NBL	202		20.40%				213.9628889	214	0	214	0	0	214	214
NBT	784	990	79.19%	3569	34	1048.63	830.4302222	831	32	799	102	112.2	799	799
NBR	4		0.40%				4.236888889	5	0	5	0	0	5	5
SBL	7		1.31%				3.640655431	4	0	4	0	0	4	4
SBT	451	534	84.46%	899	14	277.73	234.5622285	235	13	222	85	93.5	222	222
SBR	76		14.23%				39.5271161	40	0	40	0	0	40	40
EBL	397		50.96%				479.2335302	480	0	480	0	0	480	480
EBT	29	779	3.72%	3168	34	940.36	35.00698331	36	0	36	0	0	36	36
EBR	353		45.31%				426.1194865	427	0	427	0	0	427	427
WBL	11		35.48%				90.81387097	91	0	91	0	0	91	91
WBT	3	31	9.68%	809	15	255.93	24.76741935	25	0	25	0	0	25	25
WBR	17		54.84%				140.3487097	141	0	141	0	0	141	141
Total	2334													

INTID	5	Alabama Street (NS)	River Bluff Avenue (EW)											
NBL	0		0.00%				0	0	5	0	0	0	0	0
NBT	908	946	95.98%	3175	35	944.75	906.8002114	907	14	893	113	124.3	893	893
NBR	38		4.02%				37.94978858	38	0	38	0	0	38	38
SBL	46		5.52%				40.8394958	41	0	41	0	0	41	41
SBT	787	833	94.48%	2415	35	739.55	698.7105042	699	6	693	113	124.3	693	693
SBR	0		0.00%				0	0	7	0	0	0	0	0
EBL	0		0.00%				0	0	18	0	0	0	0	0
EBT	0	1	0.00%	0	0	0	0	0	0	0	0	0	0	0
EBR	0		0.00%				0	0	14	0	0	0	0	0
WBL	35		40.23%				96.15747126	97	0	97	0	0	97	97
WBT	0	87	0.00%	876	1	239.02	0	0	0	0	0	0	0	0
WBR	52		59.77%				142.8625287	143	0	143	0	0	143	143
Total	1866													

INTID	6	Alabama Street (NS)	Palmetto Avenue (EW)											
NBL	2		0.25%				2.29572327	3	25	0	4	4.4	4.4	5
NBT	785	795	98.74%	3065	34	912.55	901.0713836	902	5	897	119	130.9	897	897
NBR	8		1.01%				9.182893082	10	0	10	7	7.7	10	10
SBL	5		0.61%				5.229318735	6	0	6	7	7.7	7.7	8
SBT	757	822	92.09%	2860	35	859.7	791.7188564	792	25	767	119	130.9	767	767
SBR	60		7.30%				62.75182482	63	0	63	0	0	63	63
EBL	153		95.03%				17.77080745	18	14	0	4	4.4	4.4	5
EBT	3	161	1.86%	60	1	18.7	0.348447205	1	0	1	5	5.5	5.5	6
EBR	5		3.11%				0.580745342	1	34	0	5	5.5	5.5	6
WBL	11		45.83%				3.620833333	4	0	4	7	7.7	7.7	8
WBT	5	24	20.83%	20	1	7.9	1.645833333	2	0	2	10	11	11	11
WBR	8		33.33%				2.633333333	3	0	3	7	7.7	7.7	8
Total	1802													

INTID	7	Alabama Street (NS)	San Bernardino Avenue (EW)												
NBL	39		5.31%				56.4426703	57	0	57	13	14.3	57	57	
NBT	462	734	62.94%	3564	40	1062.28	668.6285559	669	9	660	63	69.3	660	660	
NBR	233		31.74%				337.2087738	338	0	338	57	62.7	338	338	
SBL	140		21.67%				178.2811146	179	48	131	63	69.3	131	131	
SBT	447	646	69.20%	2732	34	822.64	569.22613	570	21	549	176	193.6	549	549	
SBR	59		9.13%				75.13275542	76	7	69	7	7.7	69	69	
EBL	122		16.05%				143.6277105	144	3	141	22	24.2	141	141	
EBT	570	760	75.00%	2999	34	894.73	671.0475	672	0	672	57	62.7	672	672	
EBR	68		8.95%				80.05478947	81	0	81	0	0	81	81	
WBL	126		29.72%				161.9961792	162	0	162	15	16.5	162	162	
WBT	161	424	37.97%	1769	27	545.13	206.9951179	207	0	207	63	69.3	207	207	
WBR	137		32.31%				176.1387028	177	19	158	25	27.5	158	158	
Total	2564														

INTID	8	Alabama Street (NS)	Lugonia Avenue (EW)												
NBL	67		8.66%				137.4616667	138	0	138	13	14.3	138	138	
NBT	460	774	59.43%	5187	75	1587.99	943.7666667	944	9	935	51	56.1	935	935	
NBR	247		31.91%				506.7616667	507	0	507	46	50.6	507	507	
SBL	128		18.71%				247.7642105	248	0	248	46	50.6	248	248	
SBT	456	684	66.67%	4487	45	1323.99	882.66	883	21	862	176	193.6	862	862	
SBR	100		14.62%				193.5657895	194	0	194	6	6.6	194	194	
EBL	226		28.97%				152.3297949	153	0	153	7	7.7	153	153	
EBT	446	780	57.18%	1762	20	525.74	300.6154359	301	0	301	8	8.8	301	301	
EBR	108		13.85%				72.79476923	73	0	73	6	6.6	73	73	
WBL	264		49.81%				461.1681509	462	0	462	79	86.9	462	462	
WBT	215	530	40.57%	2929	54	925.83	375.5725472	376	0	376	27	29.7	376	376	
WBR	51		9.62%				89.08930189	90	0	90	38	41.8	90	90	
Total	2768														

INTID	9	Alabama Street (NS)	I-10 WB Ramps (EW)											
NBL	348		31.41%				827.9102166	828	0	828	80	88	828	828
NBT	760	1108	68.59%	8087	181	2635.99	1808.079783	1809	7	1,802	41	45.1	1802	1802
NBR	0		0.00%				0	0	0	0	0	0	0	0
SBL	0		0.00%				0	0	0	0	0	0	0	0
SBT	708	1123	63.05%	6857	94	2086.39	1315.373215	1316	19	1,297	72	79.2	1297	1297
SBR	415		36.95%				771.0167854	772	3	769	37	40.7	769	769
EBL	0		0.00%				0	0	0	0	0	0	0	0
EBT	0	1	0.00%	0	0	0	0	0	0	0	0	0	0	0
EBR	0		0.00%				0	0	0	0	0	0	0	0
WBL	171		26.84%				91.50244898	92	0	92	61	67.1	92	92
WBT	313	637	49.14%	1068	21	340.86	167.4869388	168	0	168	10	11	168	168
WBR	153		24.02%				81.87061224	82	2	80	48	52.8	80	80
Total	2868													

INTID	10	Alabama Street (NS)	I-10 EB Ramps (EW)											
NBL	0		0.00%				0	0	0	0	0	0	0	0
NBT	769	1021	75.32%	6258	149	2062.16	1553.184172	1554	6	1,548	57	62.7	1548	1548
NBR	252		24.68%				508.9758276	509	0	509	60	66	509	509
SBL	220		24.39%				326.4878049	327	5	322	89	97.9	322	322
SBT	682	902	75.61%	4430	57	1338.6	1012.112195	1013	14	999	45	49.5	999	999
SBR	0		0.00%				0	0	0	0	0	0	0	0
EBL	338		38.28%				377.7216988	378	1	377	63	69.3	377	377
EBT	65	883	7.36%	2951	76	986.77	72.63878822	73	0	73	7	7.7	73	73
EBR	480		54.36%				536.409513	537	0	537	89	97.9	537	537
WBL	0		0.00%				0	0	0	0	0	0	0	0
WBT	0	1	0.00%	0	0	0	0	0	0	0	0	0	0	0
WBR	0		0.00%				0	0	0	0	0	0	0	0
Total	2806													

INTID	11	SR-210 SB Ramps (NS)	5th Street (EW)											
NBL	0		0.00%				0	0	0	0	0	0	0	0
NBT	0	1	0.00%	0	0	0	0	0	0	0	0	0	0	0
NBR	0		0.00%				0	0	0	0	0	0	0	0
SBL	306		73.38%				409.9372662	410	0	410	93	102.3	410	410
SBT	5	417	1.20%	1532	58	558.64	6.698321343	7	0	7	0	0	7	7
SBR	106		1.00%				5.5864	6	11	-5	101	111.1	111.1	112
EBL	0		0.00%				0	0	10	-10	0	0	0	0
EBT	946	1604	58.98%	3876	51	1174.02	692.4083042	693	42	651	110	121	651	651
EBR	658		41.02%				481.6116958	482	0	482	63	69.3	482	482
WBL	305		37.10%				391.5576642	392	0	392	194	213.4	392	392
WBT	517	822	62.90%	3214	75	1055.28	663.7223358	664	10	654	39	42.9	654	654
WBR	0		0.00%				0	0	0	0	0	0	0	0
Total	2843													

INTID	12	SR-210 NB Ramps (NS)	5th Street (EW)											
NBL	203		29.94%				282.0023304	283	0	283	39	42.9	283	283
NBT	0	678	0.00%	3118	40	941.86	0	0	0	0	2	2.2	2.2	3
NBR	475		70.06%				659.8576696	660	0	660	78	85.8	660	660
SBL	0		0.00%				0	0	0	0	0	0	0	0
SBT	0	1	0.00%	0	0	0	0	0	0	0	0	0	0	0
SBR	0		0.00%				0	0	4	-4	0	0	0	0
EBL	197		16.06%				202.201956	203	28	175	78	85.8	175	175
EBT	1030	1227	83.94%	3970	75	1259.4	1057.198044	1058	14	1,044	127	139.7	1044	1044
EBR	0		0.00%				0	0	0	0	0	0	0	0
WBL	0		0.00%				0	0	0	0	0	0	0	0
WBT	591	855	69.12%	2769	50	872.63	603.1863509	604	10	594	155	170.5	594	594
WBR	264		30.88%				269.4436491	270	0	270	155	170.5	270	270
Total	2760													

INTID	13	SR-210 SB Ramps (NS)	San Bernardino Avenue (EW)											
NBL	29		8.58%				21.50976331	22	0	22	0	0	22	22
NBT	49	338	14.50%	910	2	250.7	36.34408284	37	0	37	0	0	37	37
NBR	260		76.92%				192.8461538	193	0	193	0	0	193	193
SBL	160		27.59%				312.1296552	313	0	313	51	56.1	313	313
SBT	304	580	52.41%	3561	68	1131.47	593.0463448	594	0	594	0	0	594	594
SBR	116		20.00%				226.294	227	6	221	66	72.6	221	221
EBL	135		14.50%				115.3474221	116	19	97	13	14.3	97	97
EBT	711	931	76.37%	2761	20	795.47	607.4964232	608	29	579	69	75.9	579	579
EBR	85		9.13%				72.62615467	73	0	73	0	0	73	73
WBL	134		22.75%				196.9617997	197	0	197	35	38.5	197	197
WBT	324	589	55.01%	2475	79	865.75	476.2359932	477	14	463	35	38.5	463	463
WBR	131		22.24%				192.5522071	193	0	193	76	83.6	193	193
Total	2438													

INTID	14	SR-210 NB Ramps (NS)	San Bernardino Avenue (EW)											
NBL	77		12.83%				78.18066667	79	0	79	33	36.3	79	79
NBT	468	600	78.00%	1960	32	609.2	475.176	476	0	476	51	56.1	476	476
NBR	55		9.17%				55.84333333	56	0	56	11	12.1	56	56
SBL	251		57.31%				335.1193836	336	0	336	0	0	336	336
SBT	21	438	4.79%	1777	42	584.79	28.03787671	29	0	29	0	0	29	29
SBR	166		37.90%				221.6327397	222	8	214	0	0	214	214
EBL	434		38.54%				647.3846181	648	15	633	59	64.9	633	633
EBT	527	1126	46.80%	5656	61	1679.62	786.1098934	787	14	773	61	67.1	773	773
EBR	165		14.65%				246.1254885	247	0	247	0	0	247	247
WBL	35		6.28%				100.9212747	101	0	101	0	0	101	101
WBT	338	557	60.68%	5217	79	1606.09	974.611167	975	6	969	112	123.2	969	969
WBR	184		33.03%				530.5575583	531	0	531	77	84.7	531	531
Total	2721													

2040 With Project AM Peak Hour Volume Calculation Sheets

	Existing Volumes	Approach Volume	Directional Split	2040 Volumes	Truck Volumes	Total Volume	Split Volume	Volume	Existing Scenarios Volume Check		Whichever is Greater	**Final**
DATE	43187											
TIME	1700											
INTID	**1**	**California Street (NS)**	**I-10 WB Ramps (EW)**									
NBL	576		51.75%				642.6824798	643	626	688.6	643	643
NBT	537	1113	48.25%	2891	92	1241.85	599.1675202	600	572	629.2	600	600
NBR	0		0.00%				0	0	0	0	0	0
SBL	0		0.00%				0	0	0	0	0	0
SBT	536	1217	44.04%	1228	50	554.8	244.3490551	245	571	628.1	628.1	629
SBR	681		55.96%				310.4509449	311	737	810.7	810.7	811
EBL	0		0.00%				0	0	0	0	0	0
EBT	0	1	0.00%	0	0	0	0	0	0	0	0	0
EBR	0		0.00%				0	0	0	0	0	0
WBL	224		63.46%				369.7903683	370	266	292.6	370	370
WBT	2	353	0.57%	1515	21	582.75	3.301699717	4	3	3.3	4	4
WBR	127		35.98%				209.657932	210	166	182.6	210	210
	2683											
INTID	**2**	**California Street (NS)**	**I-10 EB Ramps (EW)**									
NBL	0		0.00%				0	0	0	0	0	0
NBT	652	940	69.36%	2256	77	982.1	681.2012766	682	692	761.2	761.2	762
NBR	288		30.64%				300.8987234	301	320	352	352	352
SBL	74		13.21%				101.1685714	102	97	106.7	102	102
SBT	486	560	86.79%	1916	38	765.6	664.4314286	665	531	584.1	665	665
SBR	0		0.00%				0	0	0	0	0	0
EBL	528		52.33%				502.1494549	503	576	633.6	633.6	634
EBT	3	1009	0.30%	2306	61	959.6	2.853121903	3	8	8.8	8.8	9
EBR	478		47.37%				454.5974232	455	508	558.8	558.8	559
WBL	0		0.00%				0	0	0	0	0	0
WBT	0	1	0.00%	0	0	0	0	0	0	0	0	0
WBR	0		0.00%				0	0	0	0	0	0
Total	2509											
INTID	**3**	**Alabama Street (NS)**	**5th Street (EW)**									
NBL	49		11.45%				112.4366822	113	76	83.6	113	113
NBT	171	428	39.95%	291	8	121.85	392.3810748	393	209	229.9	393	393
NBR	208		48.60%				477.282243	478	269	295.9	478	478
SBL	172		26.26%				201.0430534	202	202	222.2	202	202
SBT	432	655	65.95%	1068	12	403.8	504.9453435	505	496	545.6	505	505
SBR	51		7.79%				59.61160305	60	70	77	77	77
EBL	19		6.57%				63.08788927	64	30	33	64	64
EBT	227	289	78.55%	578	11	229.8	753.7342561	754	258	283.8	754	754
EBR	43		14.88%				142.7778547	143	64	70.4	143	143
WBL	371		32.77%				129.2436837	130	425	467.5	467.5	468
WBT	648	1132	57.24%	1041	12	394.35	225.7409894	226	732	805.2	805.2	806
WBR	113		9.98%				39.36532686	40	148	162.8	162.8	163
Total	2504											

INTID	**4**	**Alabama Street (NS)**	**3rd Street (EW)**									
NBL	173		37.53%				141.1770065	142	182	200.2	200.2	201
NBT	284	461	61.61%	932	20	376.2	231.7587852	232	403	443.3	443.3	444
NBR	4		0.87%				3.264208243	4	5	5.5	5.5	6
SBL	16		1.84%				7.417680827	8	16	17.6	17.6	18
SBT	637	871	73.13%	1068	12	403.8	295.3164179	296	789	867.9	867.9	868
SBR	218		25.03%				101.0659013	102	226	248.6	248.6	249
EBL	103		31.21%				149.4436364	150	111	122.1	150	150
EBT	2	330	0.61%	1218	21	478.8	2.901818182	3	3	3.3	3	3
EBR	225		68.18%				326.4545455	327	232	255.2	327	327
WBL	4		9.52%				49.70952381	50	4	4.4	50	50
WBT	4	42	9.52%	1427	9	521.95	49.70952381	50	4	4.4	50	50
WBR	34		80.95%				422.5309524	423	29	31.9	423	423
Total	1704											

INTID	5	Alabama Street (NS)	River Bluff Avenue (EW)									
NBL	0		0.00%				0	0	11	12.1	12.1	13
NBT	405	431	93.97%	1215	20	475.25	446.5806265	447	540	594	594	594
NBR	26		6.03%				28.66937355	29	28	30.8	29	29
SBL	38		4.41%				36.79211137	37	36	39.6	37	37
SBT	824	862	95.59%	2206	25	834.6	797.8078886	798	984	1082.4	1082.4	1083
SBR	0		0.00%				0	0	15	16.5	16.5	17
EBL	0		0.00%				0	0	5	5.5	5.5	6
EBT	0	1	0.00%	0	0	0	0	0	0	0	0	0
EBR	0		0.00%				0	0	4	4.4	4.4	5
WBL	29		48.33%				21.99166667	22	33	36.3	36.3	37
WBT	0	60	0.00%	130	0	45.5	0	0	0	0	0	0
WBR	31		51.67%				23.50833333	24	30	33	33	33
Total	1353											

INTID	6	Alabama Street (NS)	Palmetto Avenue (EW)									
NBL	10		2.17%				10.62608696	11	67	73.7	73.7	74
NBT	433	460	94.13%	1218	25	488.8	460.1095652	461	610	671	671	671
NBR	17		3.70%				18.06434783	19	22	24.2	24.2	25
SBL	4		0.50%				3.941992434	4	14	15.4	15.4	16
SBT	678	793	85.50%	2090	20	781.5	668.1677175	669	813	894.3	894.3	895
SBR	111		14.00%				109.39029	110	110	121	110	110
EBL	20		74.07%				2.851851852	3	29	31.9	31.9	32
EBT	3	27	11.11%	11	0	3.85	0.427777778	1	65	71.5	71.5	72
EBR	4		14.81%				0.57037037	1	21	23.1	23.1	24
WBL	11		100.00%				20	20	13	14.3	20	20
WBT	0	11	0.00%	50	1	20	0	0	13	14.3	14.3	15
WBR	0		0.00%				0	0	10	11	11	11
Total	1291											

INTID	7	Alabama Street (NS)	San Bernardino Avenue (EW)									
NBL	115		28.47%				186.3483911	187	134	147.4	187	187
NBT	211	404	52.23%	1699	24	654.65	341.9087871	342	306	336.6	342	342
NBR	78		19.31%				126.3928218	127	136	149.6	149.6	150
SBL	46		8.70%				65.84782609	66	123	135.3	135.3	136
SBT	405	529	76.56%	1985	25	757.25	579.7471645	580	595	654.5	654.5	655
SBR	78		14.74%				111.6550095	112	90	99	112	112
EBL	40		20.20%				58.8989899	59	67	73.7	73.7	74
EBT	128	198	64.65%	683	21	291.55	188.4767677	189	191	210.1	210.1	211
EBR	30		15.15%				44.17424242	45	31	34.1	45	45
WBL	172		28.24%				179.0183908	180	196	215.6	215.6	216
WBT	358	609	58.78%	1711	14	633.85	372.608046	373	435	478.5	478.5	479
WBR	79		12.97%				82.22356322	83	151	166.1	166.1	167
Total	1740											

INTID	8	Alabama Street (NS)	Lugonia Avenue (EW)									
NBL	73		14.07%				131.5617534	132	90	99	132	132
NBT	332	519	63.97%	2501	24	935.35	598.3356455	599	426	468.6	599	599
NBR	114		21.97%				205.4526012	206	150	165	206	206
SBL	42		6.93%				57.23712871	58	73	80.3	80.3	81
SBT	431	606	71.12%	2181	25	825.85	587.3619637	588	497	546.7	588	588
SBR	133		21.95%				181.2509076	182	125	137.5	182	182
EBL	72		39.13%				67.93043478	68	79	86.9	86.9	87
EBT	71	184	38.59%	346	21	173.6	66.98695652	67	79	86.9	86.9	87
EBR	41		22.28%				38.6826087	39	50	55	55	55
WBL	196		37.62%				390.9278311	391	264	290.4	391	391
WBT	280	521	53.74%	2869	14	1039.15	558.4683301	559	306	336.6	559	559
WBR	45		8.64%				89.75383877	90	87	95.7	90	90
Total	1830											

INTID	9	Alabama Street (NS)	I-10 WB Ramps (EW)									
NBL	381		41.19%				630.1534054	631	485	533.5	631	631
NBT	544	925	58.81%	3714	92	1529.9	899.7465946	900	649	713.9	900	900
NBR	0		0.00%				0	0	0	0	0	0
SBL	0		0.00%				0	0	0	0	0	0
SBT	306	472	64.83%	4075	70	1601.25	1038.098517	1039	409	449.9	1039	1039
SBR	166		35.17%				563.1514831	564	267	293.7	564	564
EBL	0		0.00%				0	0	0	0	0	0
EBT	0	1	0.00%	0	0	0	0	0	0	0	0	0
EBR	0		0.00%				0	0	0	0	0	0
WBL	257		29.64%				144.8922722	145	336	369.6	369.6	370
WBT	308	867	35.52%	1318	11	488.8	173.6452134	174	339	372.9	372.9	373
WBR	302		34.83%				170.2625144	171	375	412.5	412.5	413
Total	2264											

INTID	10	Alabama Street (NS)	I-10 EB Ramps (EW)									
NBL	0		0.00%				0	0	0	0	0	0
NBT	593	686	86.44%	2859	86	1215.65	1050.846137	1051	679	746.9	1051	1051
NBR	93		13.56%				164.803863	165	160	176	165	165
SBL	49		8.19%				63.05267559	64	143	157.3	157.3	158
SBT	549	598	91.81%	2020	25	769.5	706.4473244	707	599	658.9	707	707
SBR	0		0.00%				0	0	0	0	0	0
EBL	387		43.53%				383.5392013	384	456	501.6	501.6	502
EBT	5	889	0.56%	2203	44	881.05	4.955286839	5	14	15.4	15.4	16
EBR	497		55.91%				492.5555118	493	630	693	693	693
WBL	0		0.00%				0	0	0	0	0	0
WBT	0	1	0.00%	0	0	0	0	0	0	0	0	0
WBR	0		0.00%				0	0	0	0	0	0
Total	2173											

INTID	**11**	**SR-210 SB Ramps (NS)**	**5th Street (EW)**									
NBL	0		0.00%				0	0	0	0	0	0
NBT	0	1	0.00%	0	0	0	0	0	0	0	0	0
NBR	0		0.00%				0	0	0	0	0	0
SBL	166		49.40%				135.072619	136	271	298.1	298.1	299
SBT	0	336	0.00%	724	8	273.4	0	0	0	0	0	0
SBR	170		50.60%				138.327381	139	298	327.8	327.8	328
EBL	0		0.00%				0	0	0	0	0	0
EBT	274	656	41.77%	1265	26	507.75	212.0785061	213	340	374	374	374
EBR	382		58.23%				295.6714939	296	527	579.7	579.7	580
WBL	823		46.29%				600.8872047	601	1000	1100	1100	1100
WBT	955	1778	53.71%	3409	42	1298.15	697.2627953	698	1063	1169.3	1169.3	1170
WBR	0		0.00%				0	0	0	0	0	0
Total	2770											

INTID	**12**	**SR-210 NB Ramps (NS)**	**5th Street (EW)**									
NBL	407		59.42%				342.6821168	343	451	496.1	496.1	497
NBT	2	685	0.29%	1405	34	576.75	1.683941606	2	5	5.5	5.5	6
NBR	276		40.29%				232.3839416	233	375	412.5	412.5	413
SBL	0		0.00%				0	0	0	0	0	0
SBT	0	1	0.00%	0	0	0	0	0	0	0	0	0
SBR	0		0.00%				0	0	0	0	0	0
EBL	47		10.68%				36.43034091	37	134	147.4	147.4	148
EBT	393	440	89.32%	853	17	341.05	304.6196591	305	477	524.7	524.7	525
EBR	0		0.00%				0	0	0	0	0	0
WBL	0		0.00%				0	0	0	0	0	0
WBT	1340	1848	72.51%	2662	26	996.7	722.715368	723	1535	1688.5	1688.5	1689
WBR	508		27.49%				273.984632	274	523	575.3	575.3	576
Total	2973											

INTID	**13**	**SR-210 SB Ramps (NS)**	**San Bernardino Avenue (EW)**									
NBL	15		34.09%				20.28409091	21	18	19.8	21	21
NBT	6	44	13.64%	170	0	59.5	8.113636364	9	7	7.7	9	9
NBR	23		52.27%				31.10227273	32	40	44	44	44
SBL	284		34.42%				351.9362424	352	336	369.6	352	352
SBT	241	825	29.21%	2721	28	1022.35	298.6501212	299	253	278.3	299	299
SBR	300		36.36%				371.7636364	372	380	418	418	418
EBL	47		17.74%				49.66037736	50	63	69.3	69.3	70
EBT	193	265	72.83%	700	14	280	203.9245283	204	241	265.1	265.1	266
EBR	25		9.43%				26.41509434	27	23	25.3	27	27
WBL	58		7.70%				51.07158035	52	85	93.5	93.5	94
WBT	350	753	46.48%	1723	24	663.05	308.190571	309	419	460.9	460.9	461
WBR	345		45.82%				303.7878486	304	386	424.6	424.6	425
Total	1887											

INTID	**14**	**SR-210 NB Ramps (NS)**	**San Bernardino Avenue (EW)**									
NBL	49		12.89%				41.81763158	42	63	69.3	69.3	70
NBT	309	380	81.32%	798	18	324.3	263.7071053	264	356	391.6	391.6	392
NBR	22		5.79%				18.77526316	19	28	30.8	30.8	31
SBL	144		51.99%				202.5617329	203	155	170.5	203	203
SBT	9	277	3.25%	999	16	389.65	12.6601083	13	10	11	13	13
SBR	124		44.77%				174.4281588	175	170	187	175	175
EBL	95		18.20%				146.9315134	147	152	167.2	167.2	168
EBT	299	522	57.28%	2071	33	807.35	462.4476054	463	345	379.5	463	463
EBR	128		24.52%				197.9708812	198	133	146.3	198	198
WBL	32		3.36%				43.99663866	44	34	37.4	44	44
WBT	616	952	64.71%	3354	54	1308.9	846.9352941	847	690	759	847	847
WBR	304		31.93%				417.9680672	418	363	399.3	418	418
Total	2131											

2040 With Project PM Peak Hour Volume Calculation Sheets

	Existing Volumes	Approach Volume	Directional Split	2040 Volumes	Truck Volume	Total Volume	Split Volume	Volume	Existing Scenarios Volume Check		Whichever is Greater	**Final**
DATE	43187											
TIME	1700											
INTID	**1**	**California Street (NS)**	**I-10 WB Ramps (EW)**									
NBL	454		39.72%				723.3693613	724	498	547.8	724	724
NBT	689	1143	60.28%	5421	143	1821.17	1097.800639	1098	727	799.7	1098	1098
NBR	0		0.00%				0	0	0	0	0	0
SBL	0		0.00%				0	0	0	0	0	0
SBT	179	532	33.65%	4500	79	1412.5	475.2584586	476	200	220	476	476
SBR	353		66.35%				937.2415414	938	400	440	938	938
EBL	0		0.00%				0	0	0	0	0	0
EBT	0	1	0.00%	0	0	0	0	0	0	0	0	0
EBR	0		0.00%				0	0	0	0	0	0
WBL	343		47.18%				167.1971664	168	389	427.9	427.9	428
WBT	9	727	1.24%	1044	29	354.38	4.387097662	5	10	11	11	11
WBR	375		51.58%				182.7957359	183	422	464.2	464.2	465
	2402											
INTID	**2**	**California Street (NS)**	**I-10 EB Ramps (EW)**									
NBL	0		0.00%				0	0	0	0	0	0
NBT	822	1258	65.34%	5816	114	1855.32	1212.299714	1213	868	954.8	1213	1213
NBR	436		34.66%				643.0202862	644	473	520.3	644	644
SBL	259		33.90%				332.1675	333	289	317.9	333	333
SBT	505	764	66.10%	3129	54	979.83	647.6625	648	553	608.3	648	648
SBR	0		0.00%				0	0	0	0	0	0
EBL	338		48.15%				479.8059259	480	374	411.4	480	480
EBT	3	702	0.43%	2626	115	996.52	4.258632479	5	8	8.8	8.8	9
EBR	361		51.42%				512.4554416	513	386	424.6	513	513
WBL	0		0.00%				0	0	0	0	0	0
WBT	0	1	0.00%	0	0	0	0	0	0	0	0	0
WBR	0		0.00%				0	0	0	0	0	0
Total	2724											
INTID	**3**	**Alabama Street (NS)**	**5th Street (EW)**									
NBL	92		8.34%				38.13537625	39	127	139.7	139.7	140
NBT	550	1103	49.86%	1573	13	457.21	227.9832276	228	616	677.6	677.6	678
NBR	461		41.80%				191.0913962	192	575	632.5	632.5	633
SBL	200		39.68%				110.2103175	111	235	258.5	258.5	259
SBT	281	504	55.75%	899	14	277.73	154.845496	155	344	378.4	378.4	379
SBR	23		4.56%				12.67418651	13	45	49.5	49.5	50
EBL	56		7.19%				30.87404365	31	76	83.6	83.6	84
EBT	673	779	86.39%	1424	18	429.48	371.039846	372	739	812.9	812.9	813
EBR	50		6.42%				27.5661104	28	73	80.3	80.3	81
WBL	151		29.15%				99.06532819	100	215	236.5	236.5	237
WBT	235	518	45.37%	1092	18	339.84	154.1745174	155	317	348.7	348.7	349
WBR	132		25.48%				86.60015444	87	178	195.8	195.8	196
Total	2904											

INTID	4	Alabama Street (NS)	3rd Street (EW)									
NBL	202		20.40%				213.9628889	214	221	243.1	243.1	244
NBT	784	990	79.19%	3569	34	1048.63	830.4302222	831	945	1039.5	1039.5	1040
NBR	4		0.40%				4.236888889	5	4	4.4	5	5
SBL	7		1.31%				3.640655431	4	7	7.7	7.7	8
SBT	451	534	84.46%	899	14	277.73	234.5622285	235	568	624.8	624.8	625
SBR	76		14.23%				39.5271161	40	80	88	88	88
EBL	397		50.96%				479.2335302	480	410	451	480	480
EBT	29	779	3.72%	3168	34	940.36	35.00698331	36	30	33	36	36
EBR	353		45.31%				426.1194865	427	361	397.1	427	427
WBL	11		35.48%				90.81387097	91	10	11	91	91
WBT	3	31	9.68%	809	15	255.93	24.76741935	25	4	4.4	25	25
WBR	17		54.84%				140.3487097	141	17	18.7	141	141
Total	2334											

INTID	5	Alabama Street (NS)	River Bluff Avenue (EW)									
NBL	0		0.00%				0	0	5	5.5	5.5	6
NBT	908	946	95.98%	3175	35	944.75	906.8002114	907	1067	1173.7	1173.7	1174
NBR	38		4.02%				37.94978858	38	43	47.3	47.3	48
SBL	46		5.52%				40.8394958	41	40	44	41	41
SBT	787	833	94.48%	2415	35	739.55	698.7105042	699	934	1027.4	1027.4	1028
SBR	0		0.00%				0	0	7	7.7	7.7	8
EBL	0		0.00%				0	0	18	19.8	19.8	20
EBT	0	1	0.00%	0	0	0	0	0	0	0	0	0
EBR	0		0.00%				0	0	14	15.4	15.4	16
WBL	35		40.23%				96.15747126	97	36	39.6	97	97
WBT	0	87	0.00%	876	1	239.02	0	0	0	0	0	0
WBR	52		59.77%				142.8625287	143	60	66	143	143
Total	1866											

INTID	6	Alabama Street (NS)	Palmetto Avenue (EW)									
NBL	2		0.25%				2.29572327	3	32	35.2	35.2	36
NBT	785	795	98.74%	3065	34	912.55	901.0713836	902	937	1030.7	1030.7	1031
NBR	8		1.01%				9.182893082	10	14	15.4	15.4	16
SBL	5		0.61%				5.229318735	6	13	14.3	14.3	15
SBT	757	822	92.09%	2860	35	859.7	791.7188564	792	926	1018.6	1018.6	1019
SBR	60		7.30%				62.75182482	63	65	71.5	71.5	72
EBL	153		95.03%				17.77080745	18	180	198	198	198
EBT	3	161	1.86%	60	1	18.7	0.348447205	1	8	8.8	8.8	9
EBR	5		3.11%				0.580745342	1	45	49.5	49.5	50
WBL	11		45.83%				3.620833333	4	19	20.9	20.9	21
WBT	5	24	20.83%	20	1	7.9	1.645833333	2	16	17.6	17.6	18
WBR	8		33.33%				2.633333333	3	16	17.6	17.6	18
Total	1802											

INTID	7	Alabama Street (NS)	San Bernardino Avenue (EW)									
NBL	39		5.31%				56.4426703	57	54	59.4	57	57
NBT	462	734	62.94%	3564	40	1062.28	668.6285559	669	555	610.5	669	669
NBR	233		31.74%				337.2087738	338	298	327.8	338	338
SBL	140		21.67%				178.2811146	179	257	282.7	282.7	283
SBT	447	646	69.20%	2732	34	822.64	569.22613	570	662	728.2	728.2	729
SBR	59		9.13%				75.13275542	76	74	81.4	76	76
EBL	122		16.05%				143.6277105	144	151	166.1	166.1	167
EBT	570	760	75.00%	2999	34	894.73	671.0475	672	650	715	672	672
EBR	68		8.95%				80.05478947	81	71	78.1	81	81
WBL	126		29.72%				161.9961792	162	144	158.4	162	162
WBT	161	424	37.97%	1769	27	545.13	206.9951179	207	230	253	253	253
WBR	137		32.31%				176.1387028	177	187	205.7	205.7	206
Total	2564											

INTID	8	Alabama Street (NS)	Lugonia Avenue (EW)									
NBL	67		8.66%				137.4616667	138	83	91.3	138	138
NBT	460	774	59.43%	5187	75	1587.99	943.7666667	944	569	625.9	944	944
NBR	247		31.91%				506.7616667	507	292	321.2	507	507
SBL	128		18.71%				247.7642105	248	180	198	248	248
SBT	456	684	66.67%	4487	45	1323.99	882.66	883	686	754.6	883	883
SBR	100		14.62%				193.5657895	194	103	113.3	194	194
EBL	226		28.97%				152.3297949	153	239	262.9	262.9	263
EBT	446	780	57.18%	1762	20	525.74	300.6154359	301	467	513.7	513.7	514
EBR	108		13.85%				72.79476923	73	120	132	132	132
WBL	264		49.81%				461.1681509	462	351	386.1	462	462
WBT	215	530	40.57%	2929	54	925.83	375.5725472	376	249	273.9	376	376
WBR	51		9.62%				89.08930189	90	93	102.3	102.3	103
Total	2768											

INTID	9	Alabama Street (NS)	I-10 WB Ramps (EW)									
NBL	348		31.41%				827.9102166	828	449	493.9	828	828
NBT	760	1108	68.59%	8087	181	2635.99	1808.079783	1809	859	944.9	1809	1809
NBR	0		0.00%				0	0	0	0	0	0
SBL	0		0.00%				0	0	0	0	0	0
SBT	708	1123	63.05%	6857	94	2086.39	1315.373215	1316	838	921.8	1316	1316
SBR	415		36.95%				771.0167854	772	516	567.6	772	772
EBL	0		0.00%				0	0	0	0	0	0
EBT	0	1	0.00%	0	0	0	0	0	0	0	0	0
EBR	0		0.00%				0	0	0	0	0	0
WBL	171		26.84%				91.50244898	92	245	269.5	269.5	270
WBT	313	637	49.14%	1068	21	340.86	167.4869388	168	339	372.9	372.9	373
WBR	153		24.02%				81.87061224	82	217	238.7	238.7	239
Total	2868											

INTID	10	Alabama Street (NS)	I-10 EB Ramps (EW)									
NBL	0		0.00%				0	0	0	0	0	0
NBT	769	1021	75.32%	6258	149	2062.16	1553.184172	1554	872	959.2	1554	1554
NBR	252		24.68%				508.9758276	509	323	355.3	509	509
SBL	220		24.39%				326.4878049	327	326	358.6	327	327
SBT	682	902	75.61%	4430	57	1338.6	1012.112195	1013	766	842.6	1013	1013
SBR	0		0.00%				0	0	0	0	0	0
EBL	338		38.28%				377.7216988	378	426	468.6	468.6	469
EBT	65	883	7.36%	2951	76	986.77	72.63878822	73	74	81.4	81.4	82
EBR	480		54.36%				536.409513	537	597	656.7	656.7	657
WBL	0		0.00%				0	0	0	0	0	0
WBT	0	1	0.00%	0	0	0	0	0	0	0	0	0
WBR	0		0.00%				0	0	0	0	0	0
Total	2806											

INTID	11	SR-210 SB Ramps (NS)	5th Street (EW)									
NBL	0		0.00%				0	0	0	0	0	0
NBT	0	1	0.00%	0	0	0	0	0	0	0	0	0
NBR	0		0.00%				0	0	0	0	0	0
SBL	306		73.38%				409.9372662	410	414	455.4	455.4	456
SBT	5	417	1.20%	1532	58	558.64	6.698321343	7	7	7.7	7	7
SBR	106		25.42%				142.0044125	143	237	260.7	260.7	261
EBL	0		0.00%				0	0	0	0	0	0
EBT	946	1604	58.98%	3876	51	1174.02	692.4083042	693	1113	1224.3	1224.3	1225
EBR	658		41.02%				481.6116958	482	623	685.3	685.3	686
WBL	305		37.10%				391.5576642	392	479	526.9	526.9	527
WBT	517	822	62.90%	3214	75	1055.28	663.7223358	664	606	666.6	664	664
WBR	0		0.00%				0	0	0	0	0	0
Total	2843											

INTID	12	SR-210 NB Ramps (NS)	5th Street (EW)									
NBL	203		29.94%				282.0023304	283	266	292.6	283	283
NBT	0	678	0.00%	3118	40	941.86	0	0	2	2.2	2.2	3
NBR	475		70.06%				659.8576696	660	576	633.6	660	660
SBL	0		0.00%				0	0	0	0	0	0
SBT	0	1	0.00%	0	0	0	0	0	0	0	0	0
SBR	0		0.00%				0	0	0	0	0	0
EBL	197		16.06%				202.201956	203	317	348.7	348.7	349
EBT	1030	1227	83.94%	3970	75	1259.4	1057.198044	1058	1195	1314.5	1314.5	1315
EBR	0		0.00%				0	0	0	0	0	0
WBL	0		0.00%				0	0	0	0	0	0
WBT	591	855	69.12%	2769	50	872.63	603.1863509	604	779	856.9	856.9	857
WBR	264		30.88%				269.4436491	270	414	455.4	455.4	456
Total	2760											

INTID	13	SR-210 SB Ramps (NS)	San Bernardino Avenue (EW)									
NBL	29		8.58%				21.50976331	22	31	34.1	34.1	35
NBT	49	338	14.50%	910	2	250.7	36.34408284	37	50	55	55	55
NBR	260		76.92%				192.8461538	193	279	306.9	306.9	307
SBL	160		27.59%				312.1296552	313	220	242	313	313
SBT	304	580	52.41%	3561	68	1131.47	593.0463448	594	334	367.4	594	594
SBR	116		20.00%				226.294	227	194	213.4	227	227
EBL	135		14.50%				115.3474221	116	176	193.6	193.6	194
EBT	711	931	76.37%	2761	20	795.47	607.4964232	608	863	949.3	949.3	950
EBR	85		9.13%				72.62615467	73	89	97.9	97.9	98
WBL	134		22.75%				196.9617997	197	168	184.8	197	197
WBT	324	589	55.01%	2475	79	865.75	476.2359932	477	387	425.7	477	477
WBR	131		22.24%				192.5522071	193	215	236.5	236.5	237
Total	2438											

INTID	14	SR-210 NB Ramps (NS)	San Bernardino Avenue (EW)									
NBL	77		12.83%				78.18066667	79	117	128.7	128.7	129
NBT	468	600	78.00%	1960	32	609.2	475.176	476	541	595.1	595.1	596
NBR	55		9.17%				55.84333333	56	68	74.8	74.8	75
SBL	251		57.31%				335.1193836	336	266	292.6	336	336
SBT	21	438	4.79%	1777	42	584.79	28.03787671	29	24	26.4	29	29
SBR	166		37.90%				221.6327397	222	184	202.4	222	222
EBL	434		38.54%				647.3846181	648	531	584.1	648	648
EBT	527	1126	46.80%	5656	61	1679.62	786.1098934	787	609	669.9	787	787
EBR	165		14.65%				246.1254885	247	171	188.1	247	247
WBL	35		6.28%				100.9212747	101	37	40.7	101	101
WBT	338	557	60.68%	5217	79	1606.09	974.611167	975	473	520.3	975	975
WBR	184		33.03%				530.5575583	531	258	283.8	531	531
Total	2721											

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